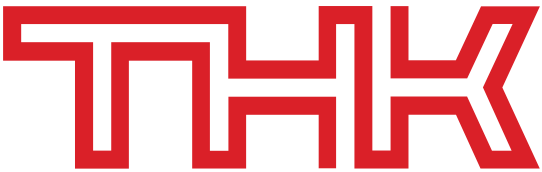

General Catalog

Linear Motion Systems

B Product Specifications

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THK Technical Support Site

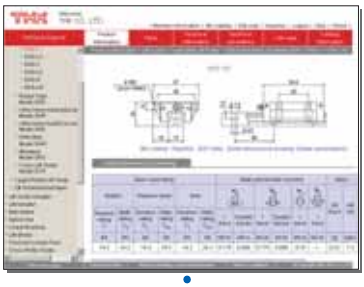
The THK Technical Support Site lets you access product information and technical support online. You will also find a search feature for locating desired products and a calculation feature for calculating service life. 2D CAD and 3D CAD data are also downloadable.

http://www.thk.com/

Enter here.

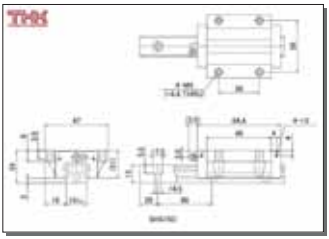
Product Information

View information on our products.
Search by model number, description, or any other criteria.



Detailed Dimensional Drawings

Check detailed product dimensions according to model number.



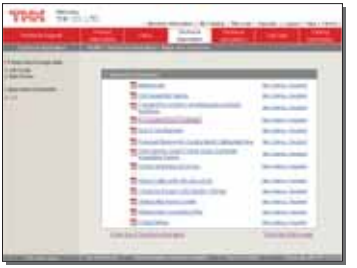
Detailed Specifications

Check detailed product specifications according to model number.

Available in 3 languages: Japanese,English,and German

Technical Information

View technical information, from application examples to research papers.



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View inquiries relating to products.
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Technical Calculation

Rated life (service life time) can be calculated simply by entering model number, application criteria, etc.

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Guide to the General Catalog

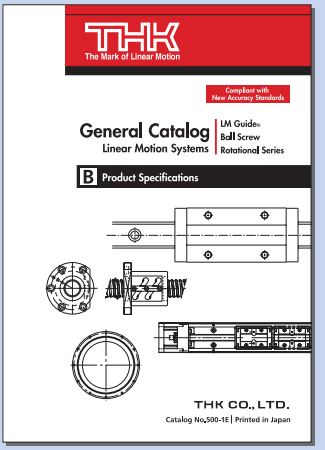
The THK General Catalog is in two volumes, A Technical Descriptions of the Products, and B Product Specifications.

A Product Technical Descriptions

A Technical Descriptions of the Products mainly contains product

- Features and Structure
- Point of Selection
- Point of Design
- Mounting Procedure and Maintenance
- Options
- Precautions on Use

Point of Selection include test data and service life calculation formulas for use when considering technical features in detail. Further, information relating generally to lubrication and grease-type products in special environments can be found conveniently together in Accessories for Lubrication



B Product Specifications

B Product Specifications contains dimensional drawings and tables according to product and model number.

All information containing product dimensional elements is given.

With two volumes, you can compare a page of product technical information with the product's dimensional drawings and tables to aid when considering specifications.

We at THK are sure you will be pleased in finding products among our abundant selection in the General Catalog that fit your needs.

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Cam Follower B-807

Roller Follower B-821

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B Product Specifications

A Technical Descriptions of the Products (Separate)

*** Please see the separate "A Technical Descriptions of the Products".**

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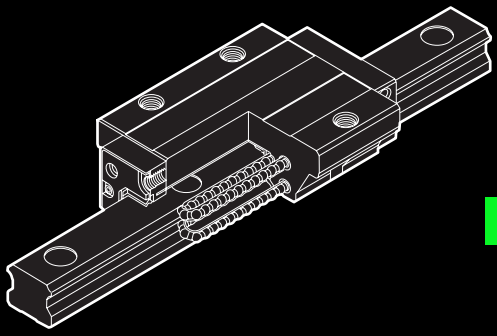


SHS

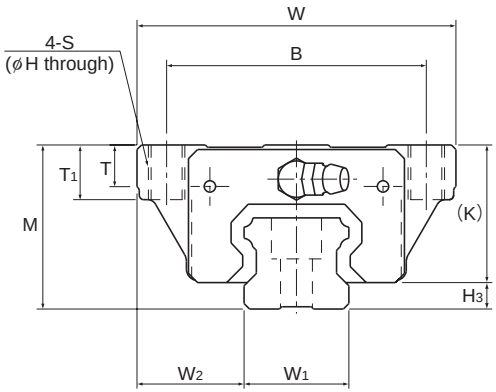
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SHS-C and SHS-LC



Model No.	Outer dimensions			LM block dimensions											Pilot hole for side nipple**		
	Height M	Width W	Length L	B	C	S	H	L_1	T	T_1	K	N	E	Grease nipple	e_0	f_0	D_0
SHS 15C SHS 15LC	24	47	64.4 79.4	38	30	M5	4.4	48 63	5.9	8	21	5.5	5.5	PB1021B	4	4	3
SHS 20C SHS 20LC	30	63	79 98	53	40	M6	5.4	59 78	7.2	10	25.4	6.5	12	B-M6F	4.3	5.3	3
SHS 25C SHS 25LC	36	70	92 109	57	45	M8	6.8	71 88	9.1	12	30.2	7.5	12	B-M6F	6	5.5	3
SHS 30C SHS 30LC	42	90	106 131	72	52	M10	8.5	80 105	11.5	15	35	8	12	B-M6F	5.5	6	5.2
SHS 35C SHS 35LC	48	100	122 152	82	62	M10	8.5	93 123	11.5	15	40.5	8	12	B-M6F	6.5	5.5	5.2
SHS 45C SHS 45LC	60	120	140 174	100	80	M12	10.5	106 140	14.1	18	51.1	10.5	16	B-PT1/8	8	8	5.2
SHS 55C SHS 55LC	70	140	171 213	116	95	M14	12.5	131 173	16	21	57.3	11	16	B-PT1/8	10	8	5.2
SHS 65C SHS 65LC	90	170	221 272	142	110	M16	14.5	175 226	18.8	24	71	19	16	B-PT1/8	10	12	5.2

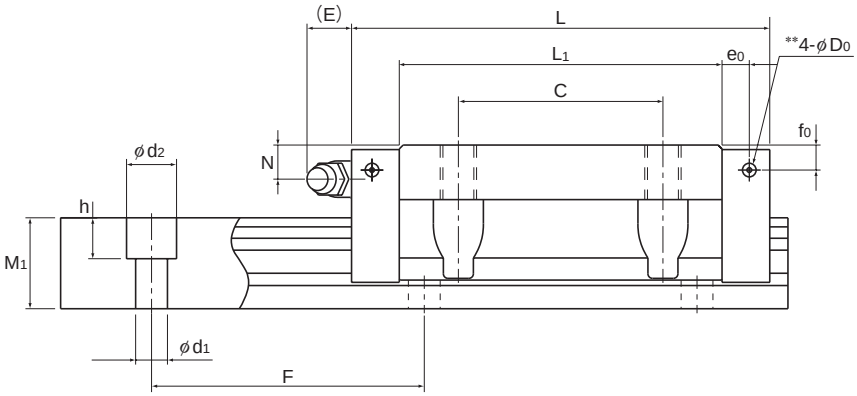
Model number coding

SHS25 LC 2 QZ KKHH C0 +1200L P T Z -II

- SHS25: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With steel tape
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



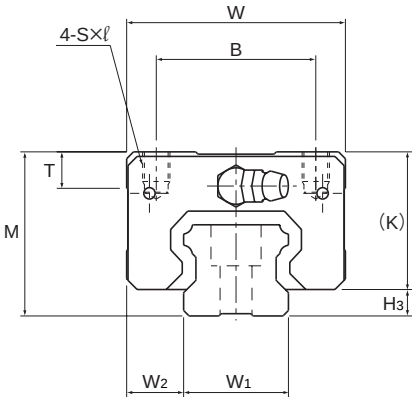
Unit: mm

		LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
		Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	H3	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	3	15	16	13	60	4.5×7.5×5.3	2500	14.2 17.2	24.2 31.9	0.175 0.296	0.898 1.43	0.175 0.296	0.898 1.43	0.16 0.212	0.23 0.29	1.3
	4.6	20	21.5	16.5	60	6×9.5×8.5	3000	22.3 28.1	38.4 50.3	0.334 0.568	1.75 2.8	0.334 0.568	1.75 2.8	0.361 0.473	0.46 0.61	2.3
	5.8	23	23.5	20	60	7×11×9	3000	31.7 36.8	52.4 64.7	0.566 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.72 0.89	3.2
	7	28	31	23	80	9×14×12	3000	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.34 1.66	4.5
	7.5	34	33	26	80	9×14×12	3000	62.3 72.9	96.6 127	1.36 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.9 2.54	6.2
	8.9	45	37.5	32	105	14×20×17	3090	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19	10.4
	12.7	53	43.5	38	120	16×23×20	3060	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.35 6.97	14.5
	19	63	53.5	53	150	18×26×22	3000	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	10.7 13.7	23.7

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-12.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SHS-V and SHS-LV



Model No.	Outer dimensions			LM block dimensions									Pilot hole for side nipple**		
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	e_0	f_0	D_0
SHS 15V SHS 15LV	24	34	64.4 79.4	26	26 34	M4×4	48 63	5.9	21	5.5	5.5	PB1021B	4	4	3
SHS 20V SHS 20LV	30	44	79 98	32	36 50	M5×5	59 78	8	25.4	6.5	12	B-M6F	4.3	5.3	3
SHS 25V SHS 25LV	36	48	92 109	35	35 50	M6×6.5	71 88	8	30.2	7.5	12	B-M6F	6	5.5	3
SHS 30V SHS 30LV	42	60	106 131	40	40 60	M8×8	80 105	8	35	8	12	B-M6F	5.5	6	5.2
SHS 35V SHS 35LV	48	70	122 152	50	50 72	M8×10	93 123	14.7	40.5	8	12	B-M6F	6.5	5.5	5.2
SHS 45V SHS 45LV	60	86	140 174	60	60 80	M10×15	106 140	14.9	51.1	10.5	16	B-PT1/8	8	8	5.2
SHS 55V SHS 55LV	70	100	171 213	75	75 95	M12×15	131 173	19.4	57.3	11	16	B-PT1/8	10	8	5.2
SHS 65V SHS 65LV	90	126	221 272	76	70 120	M16×20	175 226	19.5	71	19	16	B-PT1/8	10	12	5.2

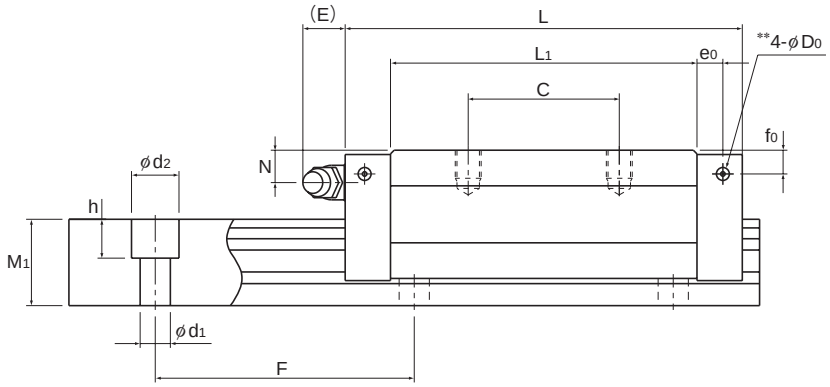
Model number coding

SHS30 V 2 QZ KKHH C1 +1240L P T Z -II

- SHS30: Model number
- V: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1240L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With steel tape
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

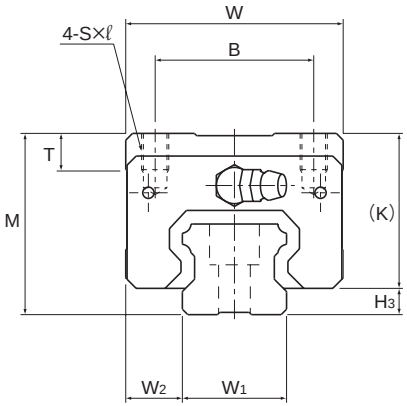


Unit: mm

		LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
		Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	H3	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	3	15	9.5	13	60	4.5×7.5×5.3	2500	14.2 17.2	24.2 31.9	0.175 0.296	0.898 1.43	0.175 0.296	0.898 1.43	0.16 0.212	0.19 0.22	1.3
	4.6	20	12	16.5	60	6×9.5×8.5	3000	22.3 28.1	38.4 50.3	0.334 0.568	1.75 2.8	0.334 0.568	1.75 2.8	0.361 0.473	0.35 0.46	2.3
	5.8	23	12.5	20	60	7×11×9	3000	31.7 36.8	52.4 64.7	0.566 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.54 0.67	3.2
	7	28	16	23	80	9×14×12	3000	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	0.94 1.16	4.5
	7.5	34	18	26	80	9×14×12	3000	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.4 1.84	6.2
	8.9	45	20.5	32	105	14×20×17	3090	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	2.54 3.19	10.4
	12.7	53	23.5	38	120	16×23×20	3060	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	4.05 5.23	14.5
	19	63	31.5	53	150	18×26×22	3000	205 253	320 408	8.26 13.3	40.4 62.6	8.26 13.3	40.4 62.6	9.4 11.9	8.41 10.7	23.7

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-12.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Models SHS-R and SHS-LR



Model No.	Outer dimensions			LM block dimensions									Pilot hole for side nipple**		
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	e_0	f_0	D_0
SHS 15R	28	34	64.4	26	26	M4×5	48	5.9	25	9.5	5.5	PB1021B	4	8	3
SHS 25R SHS 25LR	40	48	92 109	35	35 50	M6×8	71 88	8	34.2	11.5	12	B-M6F	6	9.5	3
SHS 30R SHS 30LR	45	60	106 131	40	40 60	M8×10	80 105	8	38	11	12	B-M6F	5.5	9	5.2
SHS 35R SHS 35LR	55	70	122 152	50	50 72	M8×12	93 123	14.7	47.5	15	12	B-M6F	6.5	12. 5	5.2
SHS 45R SHS 45LR	70	86	140 174	60	60 80	M10×17	106 140	14.9	61.1	20.5	16	B-PT1/8	8	18	5.2
SHS 55R SHS 55LR	80	100	171 213	75	75 95	M12×18	131 173	19.4	67.3	21	16	B-PT1/8	10	18	5.2

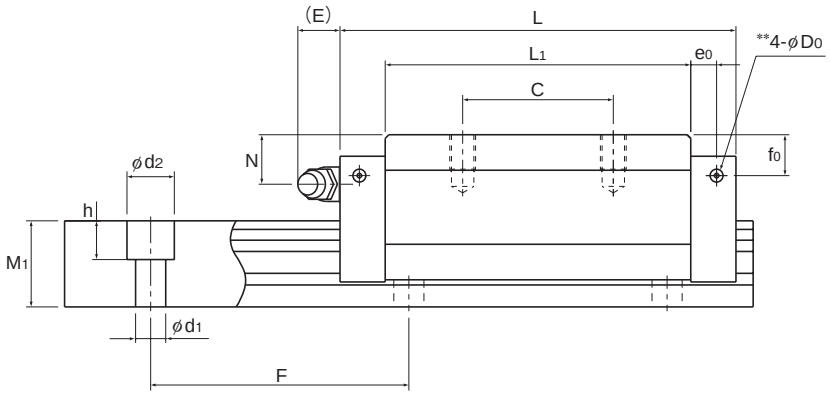
Model number coding

SHS45 LR 2 QZ KKHH C0 +1200L P T -II

- SHS45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Unit: mm

		LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
		Width		Height	Pitch		Length h*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	3	15	9.5	13	60	4.5×7.5×5.3	2500	14.2	24.2	0.175	0.898	0.175	0.898	0.16	0.22	1.3
	5.8	23	12.5	20	60	7×11×9	3000	31.7 36.8	52.4 64.7	0.556 0.848	2.75 3.98	0.566 0.848	2.75 3.98	0.563 0.696	0.66 0.8	3.2
	7	28	16	23	80	9×14×12	3000	44.8 54.2	66.6 88.8	0.786 1.36	4.08 6.6	0.786 1.36	4.08 6.6	0.865 1.15	1.04 1.36	4.5
	7.5	34	18	26	80	9×14×12	3000	62.3 72.9	96.6 127	1.38 2.34	6.76 10.9	1.38 2.34	6.76 10.9	1.53 2.01	1.8 2.34	6.2
	8.9	45	20.5	32	105	14×20×17	3090	82.8 100	126 166	2.05 3.46	10.1 16.3	2.05 3.46	10.1 16.3	2.68 3.53	3.24 4.19	10.4
	12.7	53	23.5	38	120	16×23×20	3060	128 161	197 259	3.96 6.68	19.3 31.1	3.96 6.68	19.3 31.1	4.9 6.44	5.05 6.57	14.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-12.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SHS variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

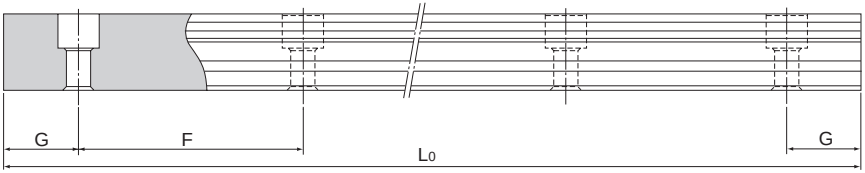


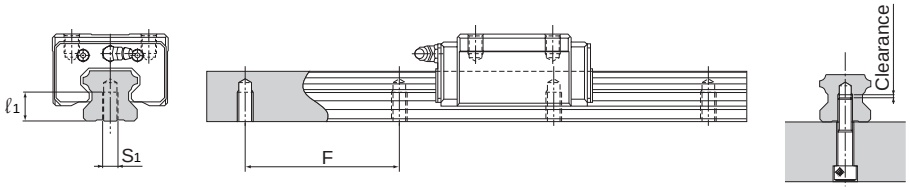
Table1 Standard Length and Maximum Length of the LM Rail for Model SHS Unit: mm

Model No.	SHS 15	SHS 20	SHS 25	SHS 30	SHS 35	SHS 45	SHS 55	SHS 65
LM rail standard length (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	60	60	60	80	80	105	120	150
G	20	20	20	20	20	22.5	30	35
Max length	2500	3000	3000	3000	3000	3090	3060	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Tapped-hole LM Rail Type of Model SHS

The model SHS variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection effect.



(1) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
(2) For standard pitches of the taps, see Table1 on B-12.

Table2 Dimensions of the LM Rail Tap

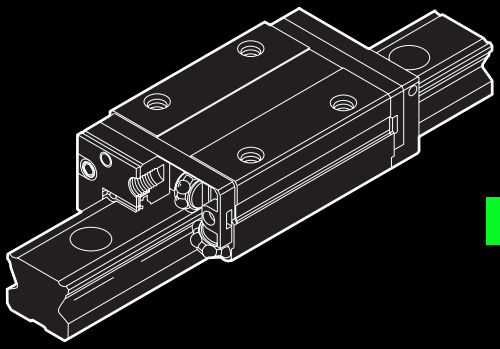
Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
SHS 15	M5	8
SHS 20	M6	10
SHS 25	M6	12
SHS 30	M8	15
SHS 35	M8	17
SHS 45	M12	24
SHS 55	M14	24
SHS 65	M20	30

Model number coding

SHS35 LC2UU +1000LH K

Symbol for tapped-hole LM rail type



SSR

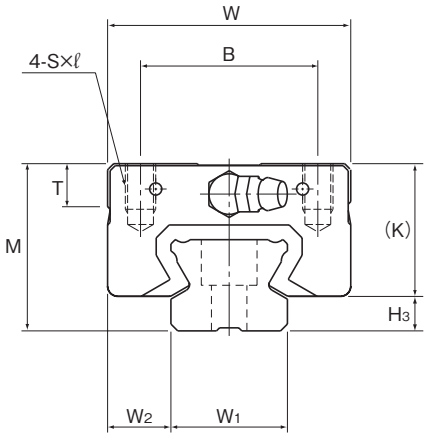
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SSR-XW and SSR-XWM



Model No.	Outer dimensions			LM block dimensions												Grease nipple	H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	f_0	e_0	D_0			
SSR 15XWY SSR 15XWMY	24	34	56.9	26	26	M4×7	39.9	6.5	19.5	4.5	5.5	2.7	4.5	3		PB1021B	4.5
SSR 20XW SSR 20XWM	28	42	66.5	32	32	M5×8	46.6	8.2	22	5.5	12	2.8	5.2	3		B-M6F	6
SSR 25XWY SSR 25XWMY	33	48	83	35	35	M6×9	59.8	8.4	26.2	6	12	3.3	7	3		B-M6F	6.8
SSR 30XW SSR 30XWM	42	60	97	40	40	M8×12	70.7	11.3	32.5	8	12	4.5	7.6	4		B-M6F	9.5
SSR 35XW	48	70	110.9	50	50	M8×12	80.5	13	36.5	8.5	12	4.7	8.8	4		B-M6F	11.5

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

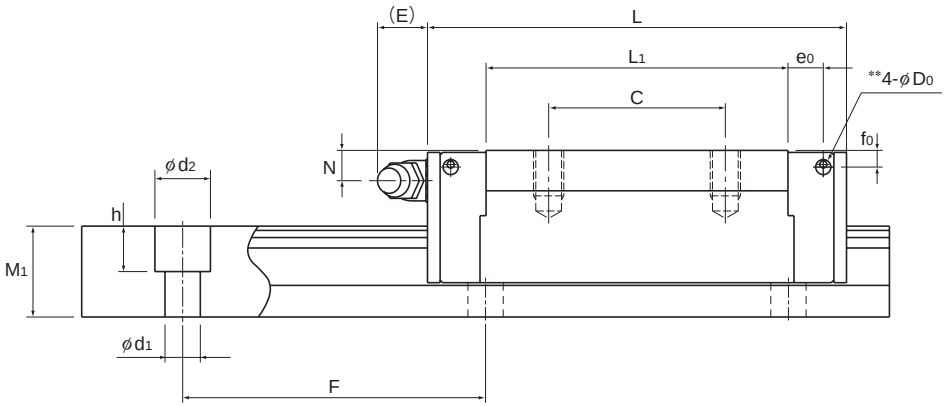
Model number coding

SSR25X W 2 UU C1 M +1200L Y P T M -Ⅱ

- SSR25X: Model number
- W: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- Y: Applied to only 15 and 25
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H)/Precision grade (P) Super precision grade (SP)/Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -Ⅱ: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

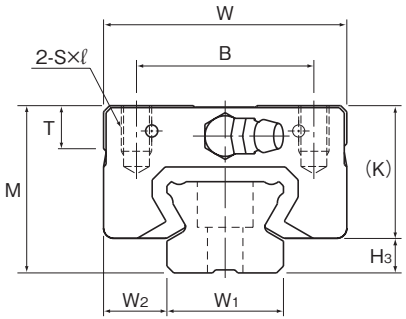
	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	9.5	12.5	60	4.5×7.5×5.3	2500 (1240)	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.15	1.2
	20	11	15.5	60	6×9.5×8.5	3000 (1480)	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.25	2.1
	23	12.5	18	60	7×11×9	3000 (2020)	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.4	2.7
	28	16	23	80	7×11×9	3000 (2520)	46.5	52.7	0.446	2.4	0.274	1.49	0.571	0.8	4.3
	34	18	27.5	80	9×14×12	3000	64.6	71.6	0.711	3.72	0.437	2.31	0.936	1.1	6.4

Note1) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-22.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Note2) The LM rail mounting hole of SSR15X is drilled for M4 screws as standard (with Y indication). If you order the hole to be drilled for M3 screws (without Y indication), contact THK. When replacing this model with model SR, pay attention to the dimension of the rail mounting hole.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SSR-XV and SSR-XVM



Model No.	Outer dimensions			LM block dimensions											
	Height M	Width W	Length L	B	S×ℓ	L1	T	K	N	E	f0	e0	D0	Grease nipple	H3
SSR 15XVY SSR 15XVMY	24	34	40.3	26	M4×7	23.3	6.5	19.5	4.5	5.5	2.7	4.5	3	PB1021B	4.5
SSR 20XV SSR 20XVM	28	42	47.7	32	M5×8	27.8	8.2	22	5.5	12	2.8	5.2	3	B-M6F	6
SSR 25XVY SSR 25XVMY	33	48	60	35	M6×9	36.8	8.4	26.2	6	12	3.3	7	3	B-M6F	6.8

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

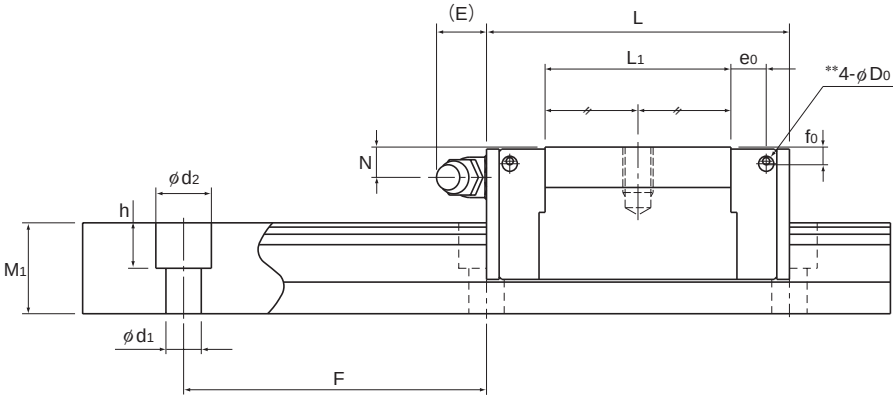
Model number coding

SSR25X V 2 UU C1 M +1200L Y P T M -Ⅲ

- SSR25X: Model number
- V: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- Y: Applied to only 15 and 25
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H)/Precision grade (P) Super precision grade (SP)/Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -Ⅲ: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 3 rails are used in parallel is 3 at a minimum.)



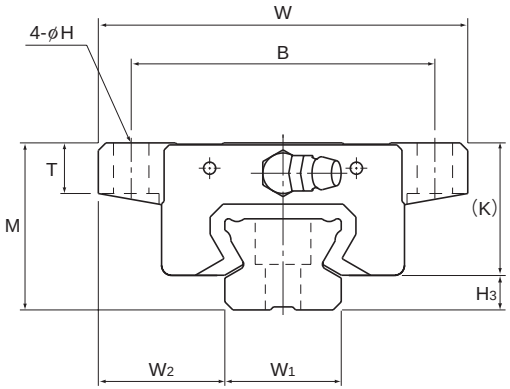
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	9.5	12.5	60	4.5×7.5×5.3	2500 (1240)	9.1	9.7	0.0303	0.192	0.0189	0.122	0.0562	0.08	1.2
	20	11	15.5	60	6×9.5×8.5	3000 (1480)	13.4	14.4	0.0523	0.336	0.0326	0.213	0.111	0.14	2.1
	23	12.5	18	60	7×11×9	3000 (2020)	21.7	22.5	0.104	0.661	0.0652	0.419	0.204	0.23	2.7

Note1) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-22.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other
Note2) The LM rail mounting hole of SSR15X is drilled for M4 screws as standard (with Y indication). If you order the hole to be drilled for M3 screws (without Y indication), contact THK. When replacing this model with model SR, pay attention to the dimension of the rail mounting hole.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model SSR-XTB



Model No.	Outer dimensions			LM block dimensions												H3
	Height M	Width W	Length L	B	C	H	L1	T	K	N	E	f0	e0	D0	Grease nipple	
SSR 15XTBY	24	52	56.9	41	26	4.5	39.9	6.1	20	4.5	5.5	2.7	4.5	3	PB1021B	4.5
SSR 20XTB	28	59	66.5	49	32	5.5	46.6	9	22	5.5	12	2.8	5.2	3	B-M6F	6
SSR 25XTBY	33	73	83	60	35	7	59.8	10	26.2	6	12	3.3	7	3	B-M6F	6.8

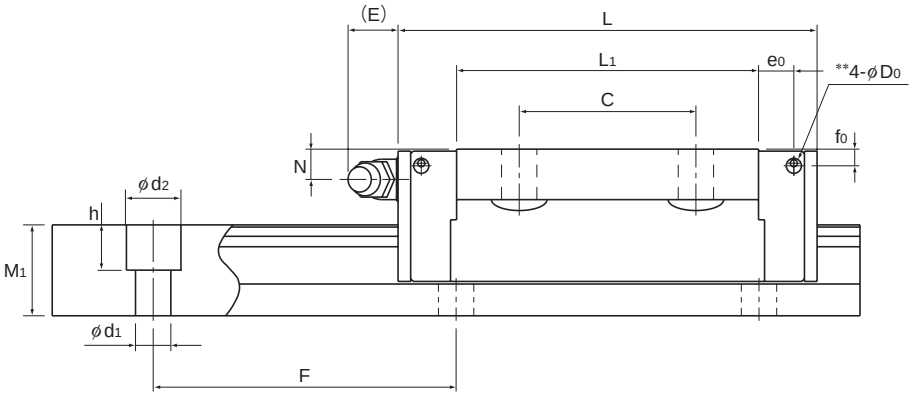
Model number coding

SSR15X TB 2 SS C1 +820L Y T -II

- SSR15X: Model number
- TB: Type of LM block
- 2: No. of LM blocks used on the same rail
- SS: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +820L: LM rail length (in mm)
- Y: Applied to only 15 and 25
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*3)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	18.5	12.5	60	4.5×7.5×5.3	2500 (1240)	14.7	16.5	0.0792	0.44	0.0486	0.274	0.0962	0.19	1.2
	20	19.5	15.5	60	6×9.5×8.5	3000 (1480)	19.6	23.4	0.138	0.723	0.0847	0.448	0.18	0.31	2.1
	23	25	18	60	7×11×9	3000 (2020)	31.5	36.4	0.258	1.42	0.158	0.884	0.33	0.53	2.7

Note1) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-22.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Note2) The LM rail mounting hole of SSR15X is drilled for M4 screws as standard (with Y indication). If you order the hole to be drilled for M3 screws (without Y indication), contact THK. When replacing this model with model SR, pay attention to the dimension of the rail mounting hole.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SSR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

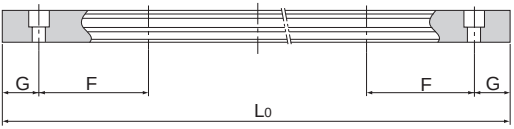


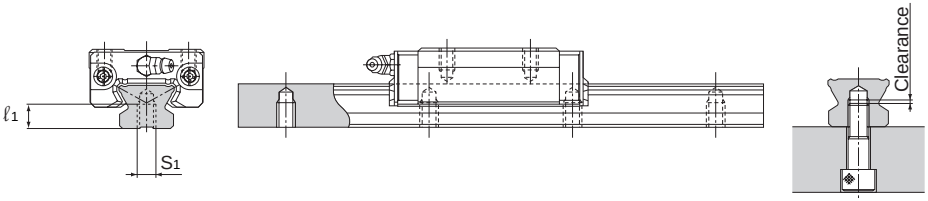
Table1 Standard Length and Maximum Length of the LM Rail Unit: mm

Model No.	SSR 15X	SSR 20X	SSR 25X	SSR 30X	SSR 35X
LM rail standard length (Lo)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1660 1720 1780 1840 1900 1960 2020 2080 2140	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1240 1300 1360 1420 1480 1540 1600 1660 1720 1780 1840 1900 1960 2020 2080 2140 2200 2260 2320 2380 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1640 1720 1800 1880 1960 2040 2120 2200 2280 2360 2440 2520 2600 2680 2760 2840 2920	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1640 1720 1800 1880 1960 2040 2120 2200 2280 2360 2440 2520 2600 2680 2760 2840 2920
Standard pitch F	60	60	60	80	80
G	20	20	20	20	20
Max length	2500 (1240)	3000 (1480)	3000 (2020)	3000 (2520)	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) The values in the parentheses indicate the maximum lengths of stainless steel types.

Tapped-hole LM Rail Type of Model SSR

The model SSR variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection effect.



(1) A tapped-hole LM rail type is available only for high accuracy or lower grades.
(2) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
(3) For standard pitches of the taps, see Table1 on B-22.

Table2 Dimensions of the LM Rail Tap

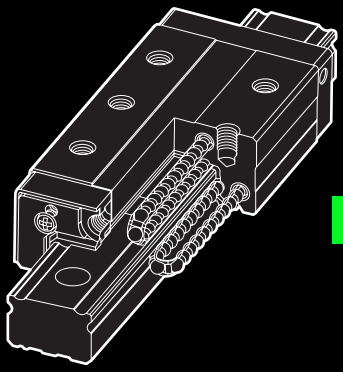
Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
SSR 15X	M5	7
SSR 20X	M6	9
SSR 25X	M6	10
SSR 30X	M8	14
SSR 35X	M8	16

Model number coding

SSR20X W2UU +1200LH K

Symbol for tapped-hole LM rail type



SNR/SNS

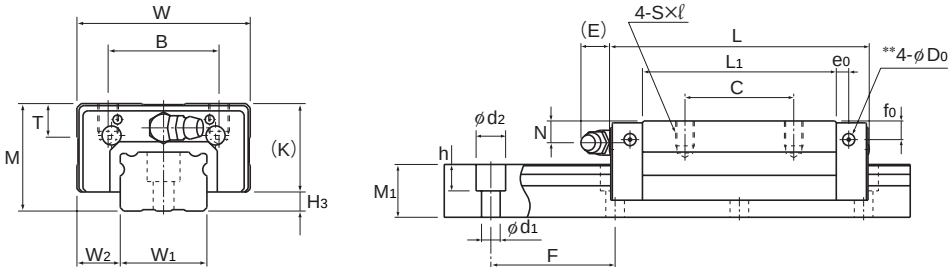
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SNR-R and SNR-LR



Model SNR-R

Model No.	Outer dimensions			LM block dimensions													Grease nipple	H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	f0	E	e0	D0				
SNR 25R SNR 25LR	31	50	83.6 102.8	32	35 50	M6×8	62.4 81.6	9.7	25.5	7	6	12	4	3.9	B-M6F	5.5
SNR 30R SNR 30LR	38	60	98 120.5	40	40 60	M8×10	72.1 94.6	9.7	31	7	7	12	6.5	3.9	B-M6F	7
SNR 35R SNR 35LR	44	70	110.3 135.8	50	50 72	M8×12	79 104.5	11.7	35	8	8	12	6	5.2	B-M6F	9
SNR 45R SNR 45LR	52	86	139 171.8	60	60 80	M10×17	105 137.8	14.7	40.4	10	8	16	8.5	5.2	B-PT1/8	11.5
SNR 55R SNR 55LR	63	100	163.3 200.5	65	75 95	M12×18	123.6 160.8	17.7	49	11	10	16	10	5.2	B-PT1/8	14
SNR 65R SNR 65LR	75	126	186.4 246.4	76	70 110	M16×20	143.6 203.6	21.6	60	16	15	16	9	8.2	B-PT1/8	15
SNR 85LR	90	156	302.8	100	140	M18×25	251	27.3	73	20	20	16	10	8.2	B-PT1/8	17

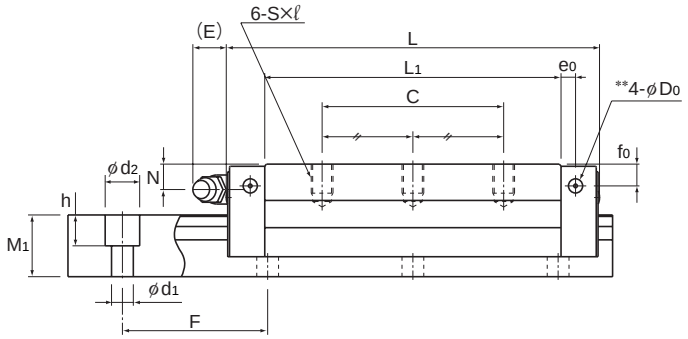
Model number coding

SNR45 LR 2 QZ KKHH C0 +1200L P T Z -II

- SNR45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)
  - High accuracy grade (H)/Precision grade (P)
  - Super precision grade (SP)/Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5)See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model SNR-LR

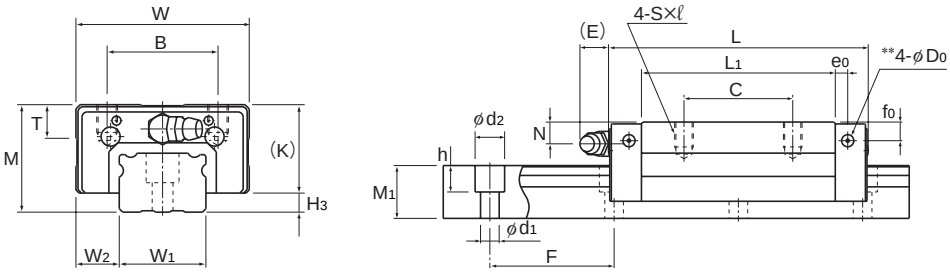
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
Width W1 0 -0.05	W2	Height M1	Pitch F	d1×d2×h	Length* Max	C kN	C0 kN	MA 1 block	MA Double blocks	MB 1 block	MB Double blocks	MC 1 block		LM block kg	LM rail kg/m
25	12.5	17	40	6×9.5×8.5	2500	48 57	79 101	0.682 1.14	3.62 5.55	0.427 0.708	2.25 3.4	0.868 1.1		0.4 0.6	3.1
28	16	21	80	7×11×9	3000	68 81	106 138	1.04 1.81	5.7 8.89	0.653 1.12	3.56 5.47	1.3 1.69		0.7 0.9	4.4
34	18	24.5	80	9×14×12	3000	90 108	144 188	1.61 2.68	8.64 13.6	1.01 1.67	5.39 8.49	2.13 2.79		1 1.4	6.2
45	20.5	29	105	14×20×17	3090	132 161	216 288	3.29 5.4	16 26.2	2.03 3.35	9.86 16.2	4.21 5.64		1.9 2.4	9.8
53	23.5	36.5	120	16×23×20	3060	177 214	292 383	4.99 8.41	25.7 40.9	3.11 5.22	16 25.3	6.69 8.78		3.1 4	14.5
63	31.5	43	150	18×26×22	3000	260 340	409 572	8.05 15.9	41.2 74.5	5.03 9.84	25.6 45.7	11 15.4		5.6 8	20.5
85	35.5	48	180	24×35×28	3000	550	887	30.3	142	18.7	87.6	31.9		14.8	29.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNS-R and SNS-LR



Model SNS-R

Model No.	Outer dimensions			LM block dimensions													H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	f0	E	e0	D0	Grease nipple		
SNS 25R SNS 25LR	31	50	83.6 102.8	32	35 50	M6×8	62.4 81.6	9.7	25.5	7	6	12	4	3.9	B-M6F		5.5
SNS 30R SNS 30LR	38	60	98 120.5	40	40 60	M8×10	72.1 94.6	9.7	31	7	7	12	6.5	3.9	B-M6F		7
SNS 35R SNS 35LR	44	70	110.3 135.8	50	50 72	M8×12	79 104.5	11.7	35	8	8	12	6	5.2	B-M6F		9
SNS 45R SNS 45LR	52	86	139 171.8	60	60 80	M10×17	105 137.8	14.7	40.4	10	8	16	8.5	5.2	B-PT1/8		11.5
SNS 55R SNS 55LR	63	100	163.3 200.5	65	75 95	M12×18	123.6 160.8	17.7	49	11	10	16	10	5.2	B-PT1/8		14
SNS 65R SNS 65LR	75	126	186.4 246.4	76	70 110	M16×20	143.6 203.6	21.6	60	16	15	16	9	8.2	B-PT1/8		15
SNS 85LR	90	156	302.8	100	140	M18×25	251	27.3	73	20	20	16	10	8.2	B-PT1/8		17

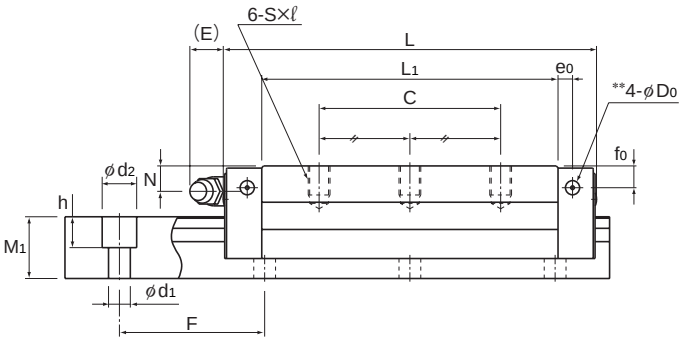
Model number coding

SNS45 LR 2 QZ KKHH C0 +1200L P T Z -II

- SNS45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
  - With plate cover or steel tape (*4)
- Z: Symbol for No. of rails used on the same plane (*5)
- -II

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



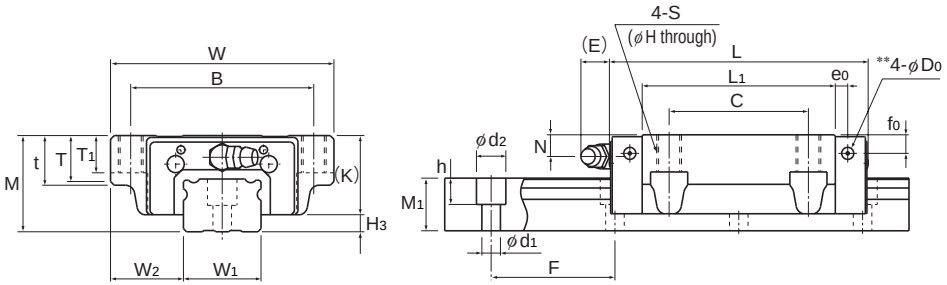
Model SNS-LR

Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width W_1 0 -0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	M_A 1 block	M_A Double blocks	M_B 1 block	M_B Double blocks	M_C 1 block	LM block kg	LM rail kg/m
	25	12.5	17	40	6×9.5×8.5	2500	37 44	61 78	0.544 0.915	2.88 4.41	0.504 0.847	2.67 4.09	0.648 0.826	0.4 0.6	3.1
	28	16	21	80	7×11×9	3000	52 62	81 106	0.821 1.43	4.5 7.04	0.761 1.33	4.17 6.53	0.962 1.25	0.7 0.9	4.4
	34	18	24.5	80	9×14×12	3000	69 83	110 144	1.27 2.11	6.81 10.7	1.17 1.96	6.32 10	1.56 2.05	1 1.4	6.2
	45	20.5	29	105	14×20×17	3090	101 123	167 222	2.63 4.29	12.7 20.8	2.43 3.97	11.8 19.3	3.15 4.21	1.9 2.4	9.8
	53	23.5	36.5	120	16×23×20	3060	136 164	225 295	3.96 6.66	20.4 32.4	3.67 6.17	19 30	4.97 6.52	3.1 4	14.5
	63	31.5	43	150	18×26×22	3000	199 261	315 441	6.4 12.7	32.7 59.1	5.93 11.7	30.3 54.8	8.24 11.5	5.6 8	20.5
	85	35.5	48	180	24×35×28	3000	422	679	23.9	112	22.1	104	23.7	14.8	29.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Models SNR-C and SNR-LC



Model SNR-C

Model No.	Outer dimensions			LM block dimensions															Grease nipple	H_3
	Height M	Width W	Length L	B	C	S	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0		
SNR 25C SNR 25LC	31	72	83.6 102.8	59	45	M8	6.8	62.4 81.6	16	14.8	12	25.5	7	6	12	4	3.9	B-M6F	5.5
SNR 30C SNR 30LC	38	90	98 120.5	72	52	M10	8.5	72.1 94.6	18	16.8	14	31	7	7	12	6.5	3.9	B-M6F	7
SNR 35C SNR 35LC	44	100	110.3 135.8	82	62	M10	8.5	79 104.5	20	18.8	16	35	8	8	12	6	5.2	B-M6F	9
SNR 45C SNR 45LC	52	120	139 171.8	100	80	M12	10.5	105 137.8	22	20.5	20	40.4	10	8	16	8.5	5.2	B-PT1/8	11.5
SNR 55C SNR 55LC	63	140	163.3 200.5	116	95	M14	12.5	123.6 160.8	24	22.5	22	49	11	10	16	10	5.2	B-PT1/8	14
SNR 65C SNR 65LC	75	170	186.4 246.4	142	110	M16	14.5	143.6 203.6	28	26	25	60	16	15	16	9	8.2	B-PT1/8	15
SNR 85LC	90	215	302.8	185	140	M20	17.6	251	34	32	28	73	20	20	16	10	8.2	B-PT1/8	17

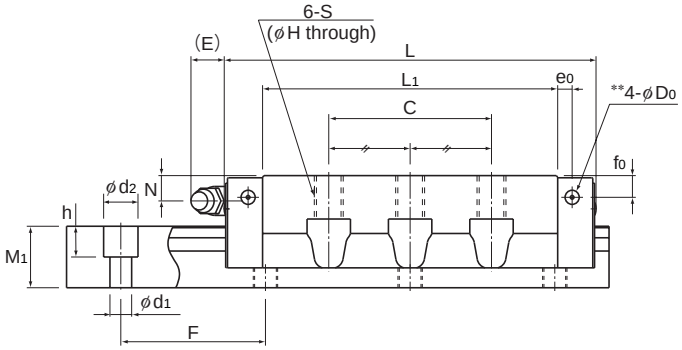
Model number coding

SNR45 LC 2 QZ KKHH C0 +1200L P T Z -II

- SNR45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model SNR-LC

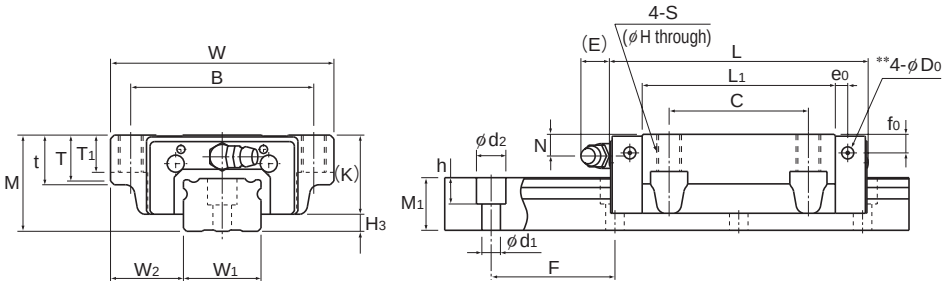
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
25	23.5	17	40	6×9.5×8.5	2500	48 57	79 101	0.682 1.14	3.62 5.55	0.427 0.708	2.25 3.4	0.868 1.1	0.6 0.8	3.1
28	31	21	80	7×11×9	3000	68 81	106 138	1.04 1.81	5.7 8.89	0.653 1.12	3.56 5.47	1.3 1.69	1 1.3	4.4
34	33	24.5	80	9×14×12	3000	90 108	144 188	1.61 2.68	8.64 13.6	1.01 1.67	5.39 8.49	2.13 2.79	1.5 2	6.2
45	37.5	29	105	14×20×17	3090	132 161	216 288	3.29 5.4	16 26.2	2.03 3.35	9.86 16.2	4.21 5.64	2.3 3.4	9.8
53	43.5	36.5	120	16×23×20	3060	177 214	292 383	4.99 8.41	25.7 40.9	3.11 5.22	16 25.3	6.69 8.78	3.6 5.5	14.5
63	53.5	43	150	18×26×22	3000	260 340	409 572	8.05 15.9	41.2 74.5	5.03 9.84	25.6 45.7	11 15.4	7.4 10.5	20.5
85	65	48	180	24×35×28	3000	550	887	30.3	142	18.7	87.6	31.9	20.0	29.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNS-C and SNS-LC



Model SNS-C

Model No.	Outer dimensions			LM block dimensions														Grease nipple	H_3
	Height M	Width W	Length L	B	C	S	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0		
SNS 25C SNS 25LC	31	72	83.6 102.8	59	45	M8	6.8	62.4 81.6	16	14.8	12	25.5	7	6	12	4	3.9	B-M6F	5.5
SNS 30C SNS 30LC	38	90	98 120.5	72	52	M10	8.5	72.1 94.6	18	16.8	14	31	7	7	12	6.5	3.9	B-M6F	7
SNS 35C SNS 35LC	44	100	110.3 135.8	82	62	M10	8.5	79 104.5	20	18.8	16	35	8	8	12	6	5.2	B-M6F	9
SNS 45C SNS 45LC	52	120	139 171.8	100	80	M12	10.5	105 137.8	22	20.5	20	40.4	10	8	16	8.5	5.2	B-PT1/8	11.5
SNS 55C SNS 55LC	63	140	163.3 200.5	116	95	M14	12.5	123.6 160.8	24	22.5	22	49	11	10	16	10	5.2	B-PT1/8	14
SNS 65C SNS 65LC	75	170	186.4 246.4	142	110	M16	14.5	143.6 203.6	28	26	25	60	16	15	16	9	8.2	B-PT1/8	15
SNS 85LC	90	215	302.8	185	140	M20	17.6	251	34	32	28	73	20	20	16	10	8.2	B-PT1/8	17

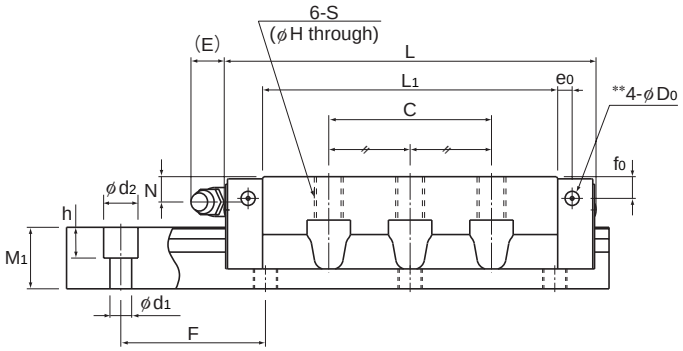
Model number coding

SNS45 LC 2 QZ KKHH C0 +1200L P T Z -II

- SNS45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
  - With plate cover or steel tape (*4)
- Z: Symbol for No. of rails used on the same plane (*5)
- -II

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model SNS-LC

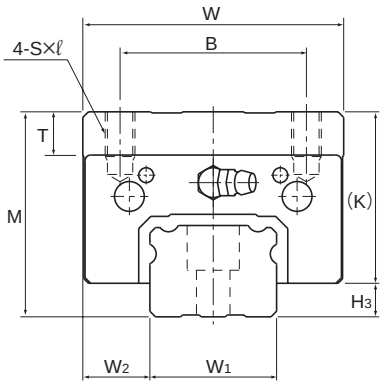
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width W_1 0 -0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	M_A 1 block	M_A Double blocks	M_B 1 block	M_B Double blocks	M_C 1 block	LM block kg	LM rail kg/m
25	23.5	17	40	6×9.5×8.5	2500	37 44	61 78	0.544 0.915	2.88 4.41	0.504 0.847	2.67 4.09	0.648 0.826	0.6 0.8	3.1
28	31	21	80	7×11×9	3000	52 62	81 106	0.821 1.43	4.5 7.04	0.761 1.33	4.17 6.53	0.962 1.25	1 1.3	4.4
34	33	24.5	80	9×14×12	3000	69 83	110 144	1.27 2.11	6.81 10.7	1.17 1.96	6.32 10	1.56 2.05	1.5 2	6.2
45	37.5	29	105	14×20×17	3090	101 123	167 222	2.63 4.29	12.7 20.8	2.43 3.97	11.8 19.3	3.15 4.21	2.3 3.4	9.8
53	43.5	36.5	120	16×23×20	3060	136 164	225 295	3.96 6.66	20.4 32.4	3.67 6.17	19 30	4.97 6.52	3.6 5.5	14.5
63	53.5	43	150	18×26×22	3000	199 261	315 441	6.4 12.7	32.7 59.1	5.93 11.7	30.3 54.8	8.24 11.5	7.4 10.5	20.5
85	65	48	180	24×35×28	3000	422	679	23.9	112	22.1	104	23.7	20.0	29.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNR-RH (Build to Order) and SNR-LRH (Build to Order)



Model No.	Outer dimensions			LM block dimensions												Grease nipple	H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	f_0	E	e_0	D_0			
SNR 35RH SNR 35LRH	55	70	110.3 135.8	50	50 72	M8×12	79 104.5	11.7	46	19	19	12	6	5.2		B-M6F	9
SNR 45RH SNR 45LRH	70	86	139 171.8	60	60 80	M10×17	105 137.8	14.7	58.4	28	26	16	8.5	5.2		B-PT1/8	11.5
SNR 55RH SNR 55LRH	80	100	163.3 200.5	75	75 95	M12×18	123.6 160.8	17.7	66	28	27	16	10	5.2		B-PT1/8	14

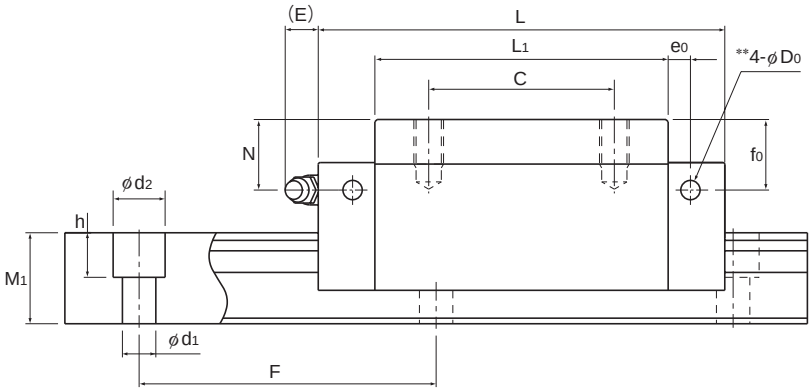
Model number coding

SNR35 RH 2 QZ KKHH C0 +920L H T Z -II

- SNR35: Model number
- RH: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +920L: LM rail length (in mm)
- H: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



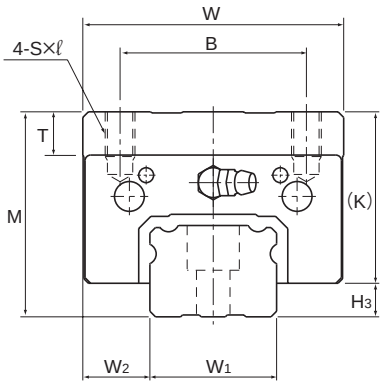
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
34	18	24.5	80	9×14×12	3000	90 108	144 188	1.61 2.68	8.64 13.6	1.01 1.67	5.39 8.49	2.13 2.79	1.5 2	6.2
45	20.5	29	105	14×20×17	3090	132 161	216 288	3.29 5.4	16 26.2	2.03 3.35	9.86 16.2	4.21 5.64	3.2 4.1	9.8
53	23.5	36.5	120	16×23×20	3060	177 214	292 383	4.99 8.41	25.7 40.9	3.11 5.22	16 25.3	6.69 8.78	4.7 6.2	14.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product.
THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNS-RH (Build to Order) and SNS-LRH (Build to Order)



Model No.	Outer dimensions			LM block dimensions												H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	f0	E	e0	D0	Grease nipple	
SNS 35RH SNS 35LRH	55	70	110.3 135.8	50	50 72	M8×12	79 104.5	11.7	46	19	19	12	6	5.2	B-M6F	9
SNS 45RH SNS 45LRH	70	86	139 171.8	60	60 80	M10×17	105 137.8	14.7	58.4	28	26	16	8.5	5.2	B-PT1/8	11.5
SNS 55RH SNS 55LRH	80	100	163.3 200.5	75	75 95	M12×18	123.6 160.8	17.7	66	28	27	16	10	5.2	B-PT1/8	14

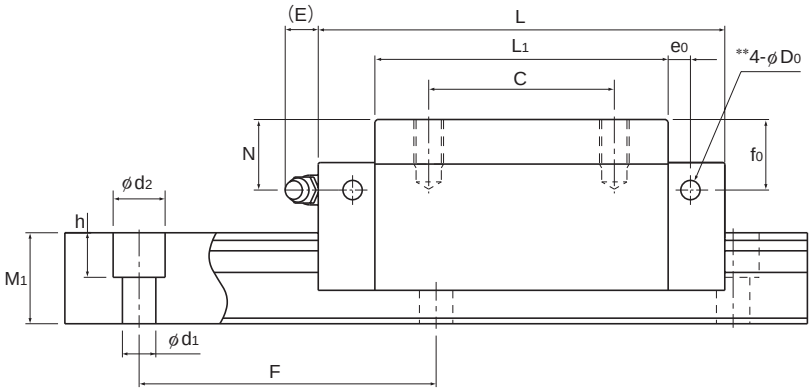
Model number coding

SNS35 RH 2 QZ KKHH C0 +920L H T Z -II

- SNS35: Model number
- RH: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +920L: LM rail length (in mm)
- H: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



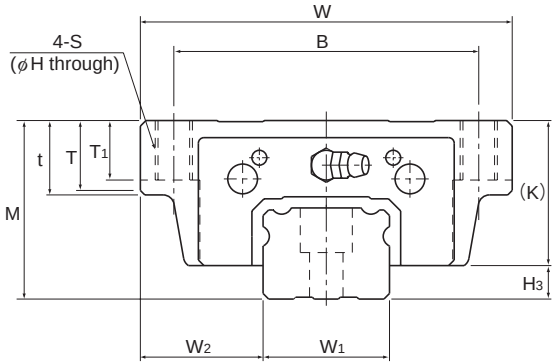
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
34	18	24.5	80	9×14×12	3000	69 83	110 144	1.27 2.11	6.81 10.7	1.17 1.96	6.32 10	1.56 2.05	1.5 2	6.2
45	20.5	29	105	14×20×17	3090	101 123	167 222	2.63 4.29	12.7 20.8	2.43 3.97	11.8 19.3	3.15 4.21	3.2 4.1	9.8
53	23.5	36.5	120	16×23×20	3060	136 164	225 295	3.96 6.66	20.4 32.4	3.67 6.17	19 30	4.97 6.52	4.7 6.2	14.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNR-CH (Build to Order) and SNR-LCH (Build to Order)



Model No.	Outer dimensions			LM block dimensions															Grease nipple	
	Height M	Width W	Length L	B	C	S	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0			H_3
SNR 35CH SNR 35LCH	48	100	110.3 135.8	82	62	M10	8.5	79 104.5	20	18.8	16	39	12	12	12	6	5.2		B-M6F	9
SNR 45CH SNR 45LCH	60	120	139 171.8	100	80	M12	10.5	105 137.8	22	20.5	20	48.4	18	16	16	8.5	5.2		B-PT1/8	11.5
SNR 55CH SNR 55LCH	70	140	163.3 200.5	116	95	M14	12.5	123.6 160.8	24	22.5	22	56	18	17	16	10	5.2		B-PT1/8	14

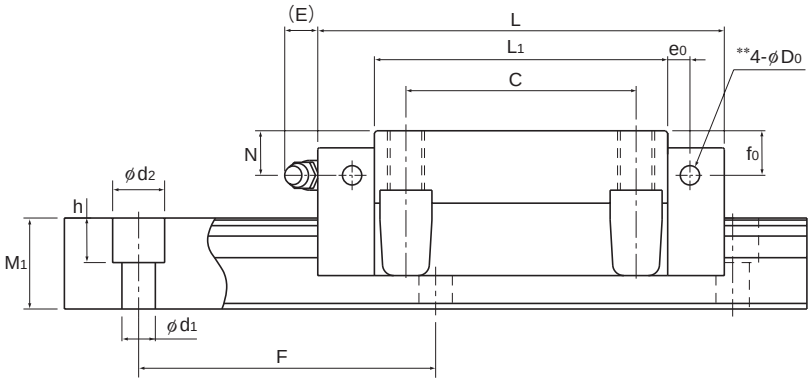
Model number coding

SNR45 LCH 2 QZ KK C0 +1000L P T Z -II

- SNR45: Model number
- LCH: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KK: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



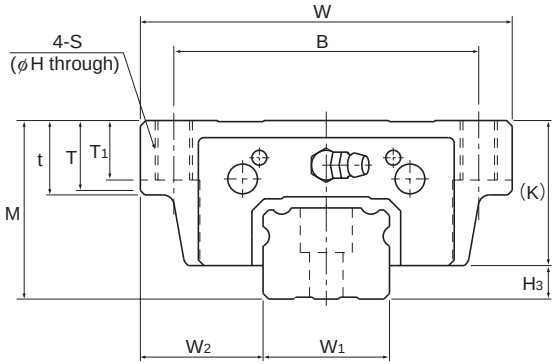
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
34	33	24.5	80	9×14×12	3000	90 108	144 188	1.61 2.68	8.64 13.6	1.01 1.67	5.39 8.49	2.13 2.79	1.7 2.2	6.2
45	37.5	29	105	14×20×17	3090	132 161	216 288	3.29 5.4	16 26.2	2.03 3.35	9.86 16.2	4.21 5.64	3 4.2	9.8
53	43.5	36.5	120	16×23×20	3060	177 214	292 383	4.99 8.41	25.7 40.9	3.11 5.22	16 25.3	6.69 8.78	4.4 6.5	14.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SNS-CH (Build to Order) and SNS-LCH (Build to Order)



Model No.	Outer dimensions			LM block dimensions															Grease nipple	
	Height M	Width W	Length L	B	C	S	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0			H_3
SNS 35CH SNS 35LCH	48	100	110.3 135.8	82	62	M10	8.5	79 104.5	20	18.8	16	39	12	12	12	6	5.2		B-M6F	9
SNS 45CH SNS 45LCH	60	120	139 171.8	100	80	M12	10.5	105 137.8	22	20.5	20	48.4	18	16	16	8.5	5.2		B-PT1/8	11.5
SNS 55CH SNS 55LCH	70	140	163.3 200.5	116	95	M14	12.5	123.6 160.8	24	22.5	22	56	18	17	16	10	5.2		B-PT1/8	14

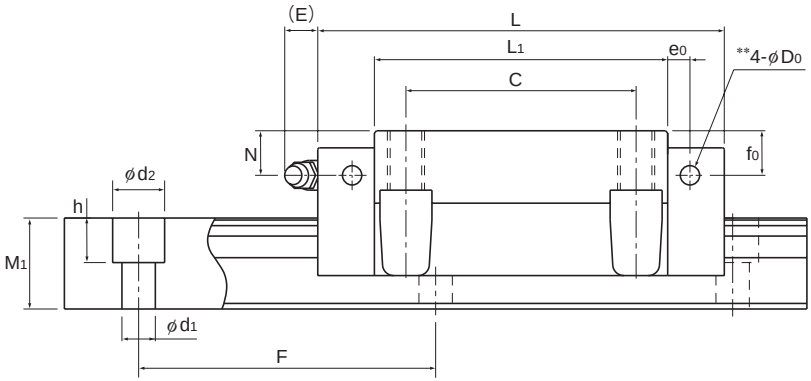
Model number coding

SNS45 LCH 2 QZ KK C0 +1000L P T Z -II

- SNS45: Model number
- LCH: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KK: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length *	C	C0	MA		MB		MC	LM block	LM rail
	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	34	33	24.5	80	9×14×12	3000	69 83	110 144	1.27 2.11	6.81 10.7	1.17 1.96	6.32 10	1.56 2.05	1.7 2.2	6.2
	45	37.5	29	105	14×20×17	3090	101 123	167 222	2.63 4.29	12.7 20.8	2.43 3.97	11.8 19.3	3.15 4.21	3 4.2	9.8
	53	43.5	36.5	120	16×23×20	3060	136 164	225 295	3.96 6.66	20.4 32.4	3.67 6.17	19 30	4.97 6.52	4.4 6.5	14.5

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-42.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SNR/SNS variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

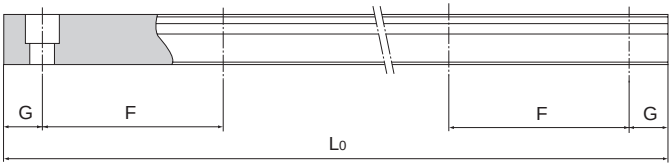
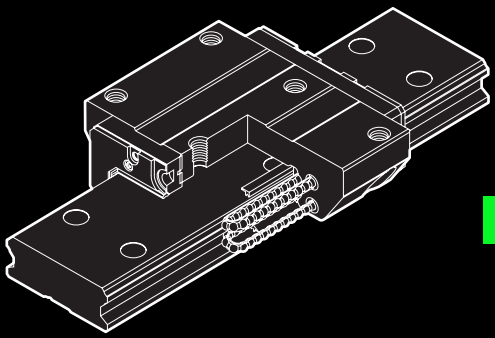


Table1 Standard Length and Maximum Length of the LM Rail for Models SNR/SNS Unit: mm

Model No.	SNR/SNS 25	SNR/SNS 30	SNR/SNS 35	SNR/SNS 45	SNR/SNS 55	SNR/SNS 65	SNR/SNS 85
LM rail standard length (L_o)	230 270 350 390 470 510 590 630 710 750 830 950 990 1070 1110 1190 1230 1310 1350 1430 1470 1550 1590 1710 1830 1950 2070 2190 2310 2430 2470	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620	1530 1890 2250 2610
Standard pitch F	40	80	80	105	120	150	180
G	15	20	20	22.5	30	35	45
Max length	2500	3000	3000	3090	3060	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



SHW

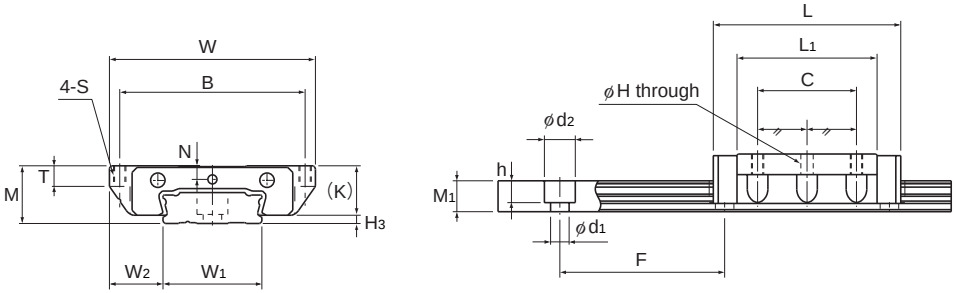
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SHW-CA



Models SHW12CAM and SHW14CAM

Model No.	Outer dimensions			LM block dimensions								
	Height	Width	Length									
	M	W	L	B	C	S	H	L_1	T	K	N	H_3
SHW 12CAM	12	40	37	35	18	M3	2.5	27	4	10	2.8	2
SHW 14CAM	14	50	45.5	45	24	M3	2.5	34	5	12	3.3	2
SHW 17CAM	17	60	51	53	26	M4	3.3	38	6	14.5	4	2.5
SHW 21CA	21	68	59	60	29	M5	4.4	43.6	8	17.7	5	3
SHW 27CA	27	80	72.8	70	40	M6	5.3	56.6	10	23.5	6	3
SHW 35CA	35	120	107	107	60	M8	6.8	83	14	31	7.6	4
SHW 50CA	50	162	141	144	80	M10	8.6	107	18	46	14	3.4

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

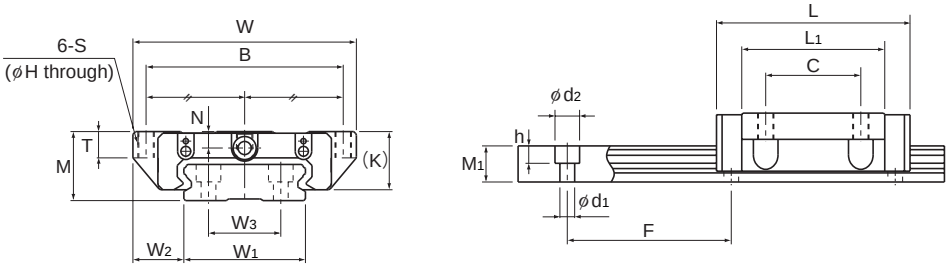
Model number coding

SHW17 CA 2 QZ UU C1 M +580L P M -II

- SHW17: Model number
- CA: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +580L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Models SHW17CAM and SHW21 to 50CA

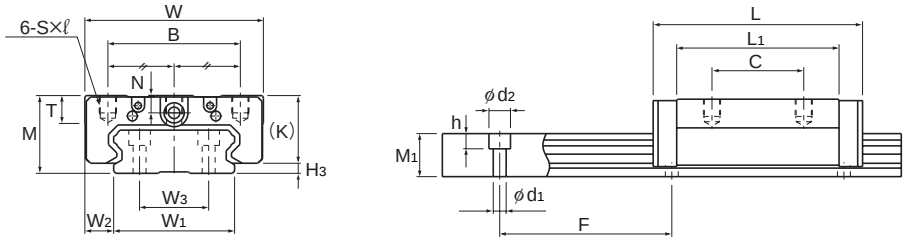
Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	18	11	—	6.6	40	4.5×7.5×5.3	1000	4.31	5.66	0.0228	0.12	0.0228	0.12	0.0405	0.05	0.8
	24	13	—	7.5	40	4.5×7.5×5.3	1430	7.05	8.98	0.0466	0.236	0.0466	0.236	0.0904	0.1	1.23
	33	13.5	18	8.6	40	4.5×7.5×5.3	1800	7.65	10.18	0.0591	0.298	0.0591	0.298	0.164	0.15	1.9
	37	15.5	22	11	50	4.5×7.5×5.3	1900	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.24	2.9
	42	19	24	15	60	4.5×7.5×5.3	3000	16	22.7	0.187	0.949	0.187	0.949	0.455	0.47	4.5
	69	25.5	40	19	80	7×11×9	3000	35.5	49.2	0.603	3	0.603	3	1.63	1.4	9.6
	90	36	60	24	80	9×14×12	3000	70.2	91.4	1.46	7.37	1.46	7.37	3.97	3.7	15

Note) If a grease nipple is required, indicate "with grease nipple;" if a greasing hole is required, indicate "with a tapped hole for greasing."
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-48.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SHW-CR and SHW-HR



Models SHW27 to 50CR

Model No.	Outer dimensions			LM block dimensions							
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	H3
SHW 12CRM	12	30	37	21	12	M3×3.5	27	4	10	2.8	2
SHW 12HRM	12	30	50.4	21	24	M3×3.5	40.4	4	10	2.8	2
SHW 14CRM	14	40	45.5	28	15	M3×4	34	5	12	3.3	2
SHW 17CRM	17	50	51	29	15	M4×5	38	6	14.5	4	2.5
SHW 21CR	21	54	59	31	19	M5×6	43.6	8	17.7	5	3
SHW 27CR	27	62	72.8	46	32	M6×6	56.6	10	23.5	6	3
SHW 35CR	35	100	107	76	50	M8×8	83	14	31	7.6	4
SHW 50CR	50	130	141	100	65	M10×15	107	18	46	14	3.4

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly corrosion resistance and environment.

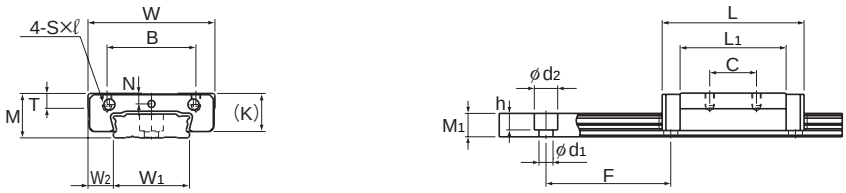
Model number coding

SHW27 CR 2 QZ KKHH C1 +820L P

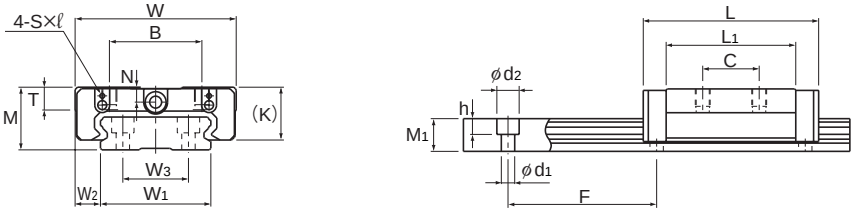
- SHW27: Model number
- CR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +820L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)
  High accuracy grade (H)
  Precision grade (P)
  Super precision grade (SP)
  Ultra precision grade (UP)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.

Note) Those models equipped with QZ Lubricator cannot have a grease nipple.



Models SHW12CRM, SHW12HRM and SHW14CRM



Models SHW17CRM and SHW21CR

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	18	6	—	6.6	40	4.5×7.5×5.3	1000	4.31	5.66	0.0228	0.12	0.0228	0.12	0.0405	0.04	0.8
	18	6	—	6.6	40	4.5×7.5×5.3	1000	5.56	8.68	0.0511	0.246	0.0511	0.246	0.0621	0.06	0.8
	24	8	—	7.5	40	4.5×7.5×5.3	1430	7.05	8.98	0.0466	0.236	0.0466	0.236	0.0904	0.08	1.23
	33	8.5	18	8.6	40	4.5×7.5×5.3	1800	7.65	10.18	0.0591	0.298	0.0591	0.298	0.164	0.13	1.9
	37	8.5	22	11	50	4.5×7.5×5.3	1900	8.24	12.8	0.0806	0.434	0.0806	0.434	0.229	0.19	2.9
	42	10	24	15	60	4.5×7.5×5.3	3000	16	22.7	0.187	0.949	0.187	0.949	0.455	0.36	4.5
	69	15.5	40	19	80	7×11×9	3000	35.5	49.2	0.603	3	0.603	3	1.63	1.2	9.6
	90	20	60	24	80	9×14×12	3000	70.2	91.4	1.46	7.37	1.46	7.37	3.97	3	15

Note) If a grease nipple is required, indicate "with grease nipple;" if a greasing hole is required, indicate "with a tapped hole for greasing."
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-48.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SHW variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

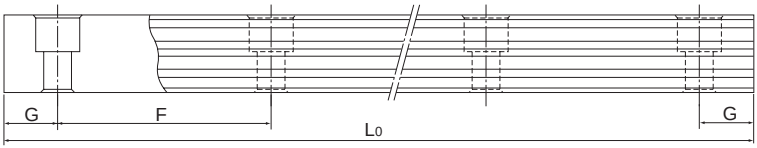
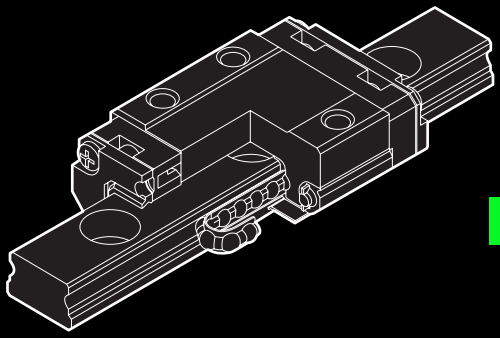


Table1 Standard Length and Maximum Length of the LM Rail for Model SHW Unit: mm

Model No.	SHW 12	SHW 14	SHW 17	SHW 21	SHW 27	SHW 35	SHW 50
LM rail standard length (L_0)	70 110 150 190 230 270 310 390 470	70 110 150 190 230 270 310 390 470 550 670	110 190 310 470 550	130 230 380 480 580 780	160 280 340 460 640 820	280 440 760 1000 1240 1560	280 440 760 1000 1240 1640 2040
Standard pitch F	40	40	40	50	60	80	80
G	15	15	15	15	20	20	20
Max length	1000	1430	1800	1900	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) Models SHW12, 14 and 17 are made of stainless steel.



SRS

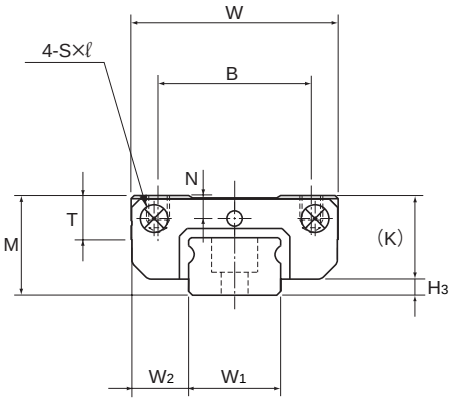
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SRS-M



Model No.	Outer dimensions			LM block dimensions							
	Height	Width	Length								
	M	W	L	B	C	S×ℓ	L_1	T	K	N	H_3
SRS 7M	8	17	23.4	12	8	M2×2.3	13.4	3.3	6.7	1.6	1.3
SRS 9M	10	20	30.8	15	10	M3×2.8	19.8	4.9	9.1	2.4	0.9
SRS 12M	13	27	34.4	20	15	M3×3.2	20.6	5.7	11	3	2
SRS 15M	16	32	43	25	20	M3×3.5	25.7	6.5	13.3	3	2.7
SRS 20M	20	40	50	30	25	M4×6	34	9	16.6	4	3.4
SRS 25M	25	48	77	35	35	M6×7	56	11	20	5	5

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

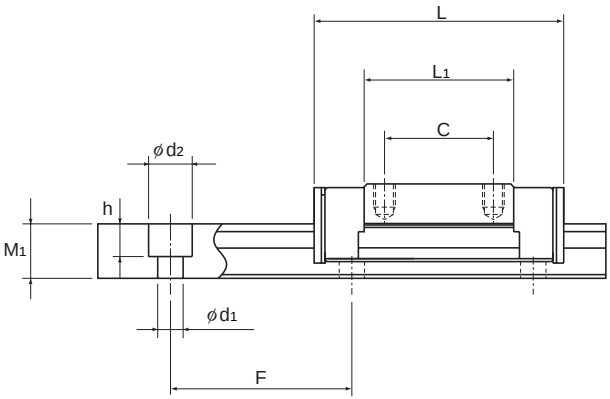
Model number coding

2 SRS20M QZ UU C1 +220L P M -II

- **2** — No. of LM blocks used on the same rail
- **SRS20M** — Model number
- **QZ** — With QZ Lubricator
- **UU** — Contamination protection accessory symbol (*1)
- **C1** — Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- **+220L** — LM rail length (in mm)
- **P** — Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- **M** — Stainless steel LM rail
- **-II** — Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	7 $^{0}_{-0.02}$	5	4.7	15	2.4×4.2×2.3	300	1.51	1.29	3.09	—	3.69	—	5.02	0.009	0.25
	9 $^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000	2.69	2.31	7.82	43.9	9.03	50.8	10.6	0.016	0.32
	12 $^{0}_{-0.02}$	7.5	7.5	25	3.5×6×4.5	1340	4	3.53	12	78.5	12	78.5	23.1	0.027	0.65
	15 $^{0}_{-0.02}$	8.5	9.5	40	3.5×6×4.5	1430	6.66	5.7	26.2	154	26.2	154	40.4	0.047	0.96
	20 $^{0}_{-0.03}$	10	11	60	6×9.5×8	1800	7.75	9.77	54.3	296	62.4	341	104	0.11	1.68
	23 $^{0}_{-0.03}$	12.5	15	60	7×11×9	1800	16.5	20.2	177	932	177	932	248	0.24	2.6

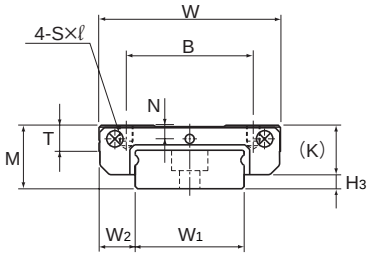
Note) If a grease nipple is required, indicate "with grease nipple". (available for models SRS 15M/15WM/20M/25M)
If a greasing hole is required, indicate "with greasing hole". (available for models SRS 7M/7WM/9M/9WM/12M/12WM).
The maximum length under "Length * " indicates the standard maximum length of an LM rail. (See B-54.)
Static Permissible Moment*
1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

SRS-G Basic Load Ratings

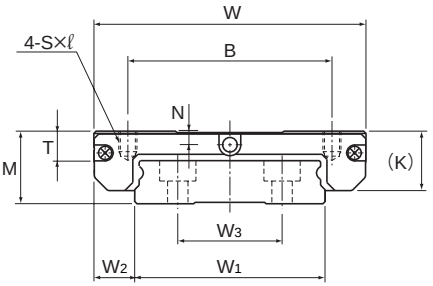
Model No.	Basic load rating	
	C kN	C_0 kN
SRS 9GM	2.07	2.32
SRS 12GM	3.36	3.55
SRS 15GM	5.59	5.72
SRS 20GM	5.95	9.40
SRS 25GM	13.3	22.3

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model SRS-WM



Models SRS7WM, 9WM and 12WM



Model SRS15WM

Model No.	Outer dimensions			LM block dimensions							
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	H_3
SRS 7WM	9	25	31	19	10	M3×2.8	20.4	3.8	7.2	1.8	1.8
SRS 9WM	12	30	39	21	12	M3×2.8	27	4.9	9.1	2.3	2.9
SRS 12WM	14	40	44.5	28	15	M3×3.5	30.9	5.7	11	3	3
SRS 15WM	16	60	55.5	45	20	M4×4.5	38.9	6.5	13.3	3	2.7

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

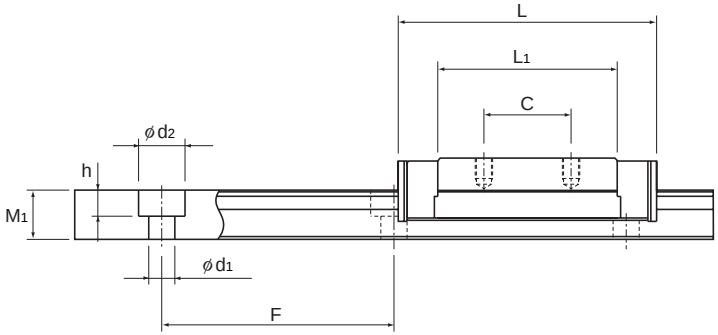
Model number coding

2 SRS15WM QZ UU C1 +550L P M -II

- 2: No. of LM blocks used on the same rail
- SRS15WM: Model number
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +550L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment N-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	14 $^{0}_{-0.02}$	5.5	—	5.2	30	3.5×6×3.2	400	2.01	1.94	6.47	—	7.71	—	14.33	0.018	0.56
	18 $^{0}_{-0.02}$	6	—	7.5	30	3.5×6×4.5	1000	3.29	3.34	14	78.6	16.2	91	31.5	0.031	1.01
	24 $^{0}_{-0.02}$	8	—	8.5	40	4.5×8×4.5	1430	5.48	5.3	26.4	143	26.4	143	66.5	0.055	1.52
	42 $^{0}_{-0.02}$	9	23	9.5	40	4.5×8×4.5	1800	9.12	8.55	51.2	290	51.2	290	176	0.13	2.87

Note) If a grease nipple is required, indicate "with grease nipple". (available for models SRS 15M/15WM/20M/25M)
If a greasing hole is required, indicate "with greasing hole". (available for models SRS 7M/7WM/9M/9WM/12M/12WM).
The maximum length under "Length * " indicates the standard maximum length of an LM rail. (See B-54.)
Static Permissible Moment*
1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

SRS-G Basic Load Ratings

Model No.	Basic load rating	
	C kN	C_0 kN
SRS 9WGM	2.67	3.35
SRS 12WGM	4.46	5.32
SRS 15WGM	7.43	8.59

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SRS variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

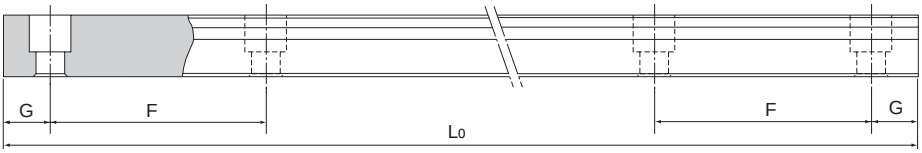
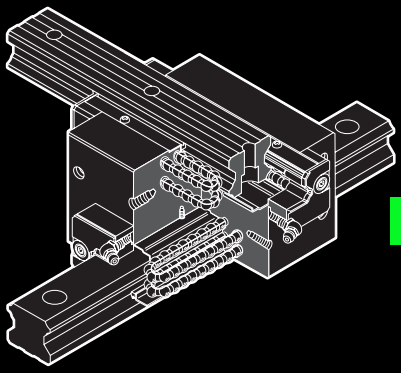


Table1 Standard Length and Maximum Length of the LM Rail for Model SRS Unit: mm

Model No.	SRS 7M	SRS 7WM	SRS 9M	SRS 9WM	SRS 12M	SRS 12WM	SRS 15M	SRS 15WM	SRS 20M	SRS 25M
LM rail standard length (L_o)	40 55 70 85 100 115 130	50 80 110 140 170 200 260 290	55 75 95 115 135 155 175 195 275 375	50 80 110 140 170 200 260 290 320	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 390 470 550	70 110 150 190 230 270 310 350 390 430 470 550 670 870	110 150 190 230 270 310 430 550 670 790	220 280 340 460 640 880 1000	220 280 340 460 640 880 1000
Standard pitch F	15	30	20	30	25	40	40	40	60	60
G	5	10	7.5	10	10	15	15	15	20	20
Max length	300	400	1000	1000	1340	1430	1430	1800	1800	1800

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



SCR

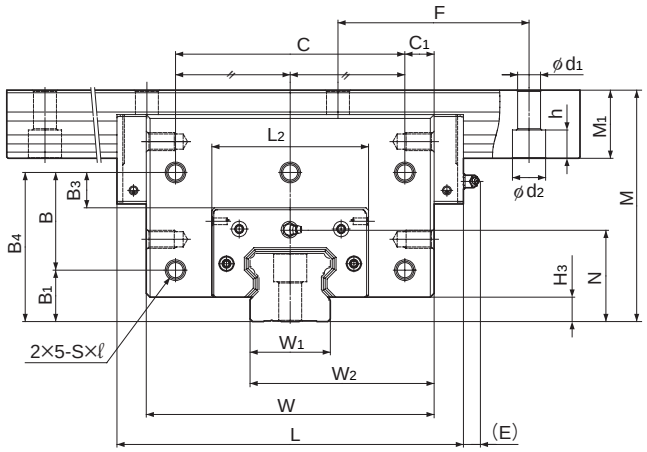
Caged Ball LM Guides

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SCR



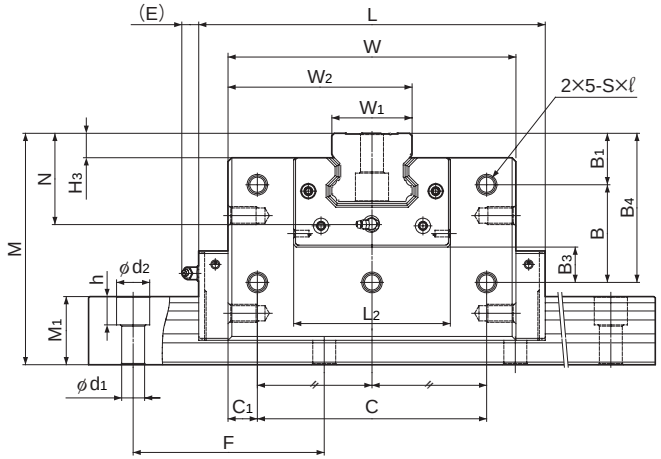
Model No.	Outer dimensions			LM block dimensions										
	Height M	Width W	Length L	B_1	B_3	B_4	B	C	C_1	S×ℓ	L_2	H_3	N	E
SCR 15S	47	48	64.4	—	11.3	34.8	—	20	14	M4×6	33.4	3	18.5	5.5
SCR 20S	57	59	79	—	13	42.5	—	30	14.5	M5×8	43	4.6	23.5	12
SCR 20	57	78	98	13	7.5	37	24	56	11	M5×8	43	4.6	23.5	12
SCR 25	70	88	109	18	9	44	26	64	12	M6×10	47.4	5.8	28.5	12
SCR 30	82	105	131	21	12	53	32	76	14.5	M6×10	58	7	34	12
SCR 35	95	123	152	24	14	61	37	90	16.5	M8×14	68	7.5	40	12
SCR 45	118	140	174	30	16.5	75	45	110	15	M10×15	84.6	8.9	49.5	16
SCR 65	180	226	272	40	27.5	116	76	180	23	M14×22	123	19	71	16

Model number coding

4 SCR25 QZ KKHH C0 +1200/1000L P

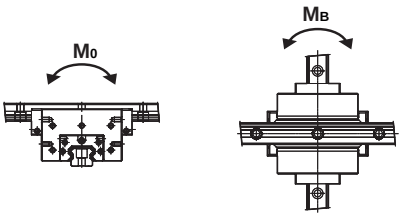
- **4** — Total No. of LM blocks
- **SCR25** — Model number
- **QZ** — With QZ Lubricator
- **KKHH** — Contamination protection accessory symbol (*1)
- **C0** — Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1) Medium preload (C0)
- **+1200/1000L** — LM rail length on the X axis (in mm) / LM rail length on the Y axis (in mm)
- **P** — Accuracy symbol (*3) Precision grade (P) Super precision grade (SP) Ultra precision grade (UP)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-122.



Unit: mm

		LM rail dimensions					Basic load rating		Static permissible moment		Mass	
	Grease nipple	Width W_1 $^{0}_{-0.05}$	W_2	Height M_1	Pitch F	Mounting hole $d_1 \times d_2 \times h$	C kN	C_0 kN	M_O kN-m	M_B kN-m	LM block kg	LM rail kg/m
	PB-1021B	15	31.5	13	60	4.5×7.5×5.3	14.2	24.2	0.16	0.296	0.54	1.3
	B-M6F	20	39.5	16.5	60	6×9.5×8.5	22.3	38.4	0.361	0.334	0.88	2.3
	B-M6F	20	49	16.5	60	6×9.5×8.5	28.1	50.3	0.473	0.568	1.7	2.3
	B-M6F	23	55.5	20	60	7×11×9	36.8	64.7	0.696	0.85	3.4	3.2
	B-M6F	28	66.5	23	80	9×14×12	54.2	88.8	1.15	1.36	4.6	4.5
	B-M6F	34	78.5	26	80	9×14×12	72.9	127	2.01	2.34	6.8	6.2
	B-PT1/8	45	92.5	32	105	14×20×17	100	166	3.53	3.46	10.8	10.4
	B-PT1/8	63	144.5	53	150	18×26×22	253	408	11.9	13.3	44.5	23.7



Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SCR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table.
The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

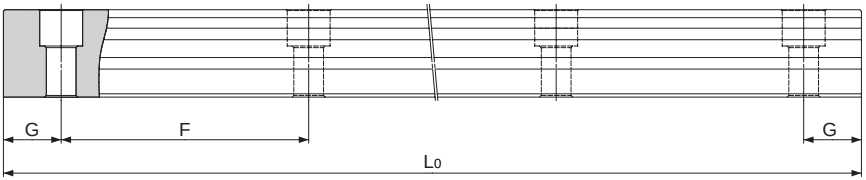


Table1 Standard Length and Maximum Length of the LM Rail for Model SCR Unit: mm

Model No.	SCR 15	SCR 20	SCR 25	SCR 30	SCR 35	SCR 45	SCR 65
LM rail standard length (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	1270 1570 2020 2620
Standard pitch F	60	60	60	80	80	105	150
G	20	20	20	20	20	22.5	35
Max length	2500	3000	3000	3000	3000	3090	3000

Tapped-hole LM Rail Type of Model SCR

The model SCR variations include a type with its LM rail bottom tapped. With the X-axis LM rail having tapped holes, this model can be secured with bolts from the top.

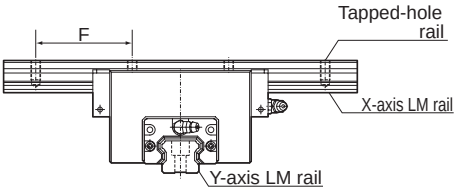


Table2 Dimensions of the LM Rail Tap

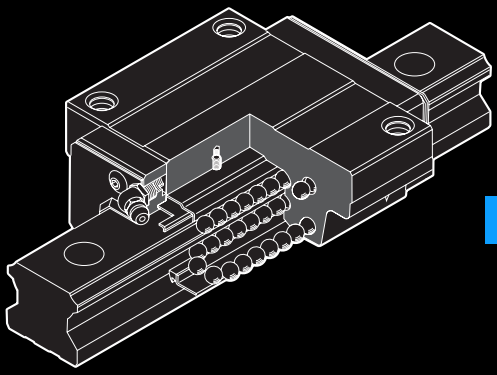
Unit: mm

Model No.	Tap diamete	Tap depth
15	M5	8
20	M6	10
25	M6	12
30	M8	15
35	M8	17
45	M12	20
65	M20	30

Model number coding

4 SCR35 KKHH C0 +1000L P K/1000L P

Symbol for tapped-hole LM rail type



HSR

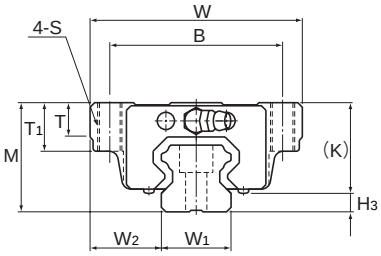
LM Guide

B Product Specifications

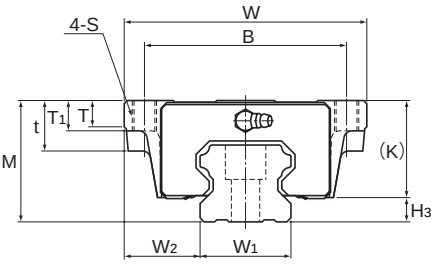
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models HSR-A and HSR-AM, Models HSR-LA and HSR-LAM



Models HSR15 to 35A/LA/AM/LAM



Models HSR45 to 85A/LA

Model No.	Outer dimensions			LM block dimensions											H3
	Height M	Width W	Length L	B	C	S	L1	t	T	T1	K	N	E	Grease nipple	
HSR 15A HSR 15AM	24	47	56.6	38	30	M5	38.8	—	7	11	19.3	4.3	5.5	PB1021B	3.5
HSR 20A HSR 20AM	30	63	74	53	40	M6	50.8	—	10	9.5	26	5	12	B-M6F	4
HSR 20LA HSR 20LAM	30	63	90	53	40	M6	66.8	—	10	9.5	26	5	12	B-M6F	4
HSR 25A HSR 25AM	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5
HSR 25LA HSR 25LAM	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5
HSR 30A HSR 30AM	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7
HSR 30LA HSR 30LAM	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7
HSR 35A HSR 35AM	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5
HSR 35LA HSR 35LAM	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5
HSR 45A HSR 45LA	60	120	139 170.8	100	80	M12	98 129.8	25	13	15	50	10	16	B-PT1/8	10
HSR 55A HSR 55LA	70	140	163 201.1	116	95	M14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13
HSR 65A HSR 65LA	90	170	186 245.5	142	110	M16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14
HSR 85A HSR 85LA	110	215	245.6 303	185	140	M20	178.6 236	55	28	30	94	23	16	B-PT1/8	16

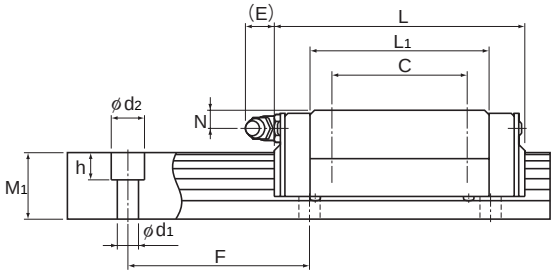
Model number coding

HSR25 A 2 QZ UU C0 M +1200L P T M -II

- HSR25: Model number
- A: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



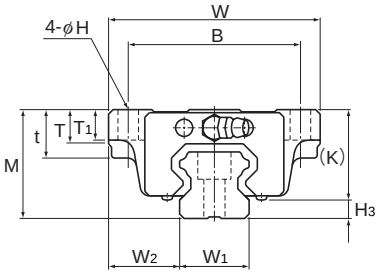
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27	0.47	2.3
	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459	0.75	3.3
	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751	1.3	4.8
	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6
	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2	2	6.6
	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43	2.8 3.3	11
	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28	4.5 5.7	15.1
	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7	8.5 10.7	22.5
	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7	17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-B, HSR-BM, HSR-LB and HSR-LBM



Model No.	Outer dimensions			LM block dimensions											H_3
	Height M	Width W	Length L	B	C	H	L_1	t	T	T_1	K	N	E	Grease nipple	
HSR 15B HSR 15BM	24	47	56.6	38	30	4.5	38.8	11	7	7	19.3	4.3	5.5	PB1021B	3.5
HSR 20B HSR 20BM	30	63	74	53	40	6	50.8	10	9.5	10	26	5	12	B-M6F	4
HSR 20LB HSR 20LBM	30	63	90	53	40	6	66.8	10	9.5	10	26	5	12	B-M6F	4
HSR 25B HSR 25BM	36	70	83.1	57	45	7	59.5	16	11	10	30.5	6	12	B-M6F	5.5
HSR 25LB HSR 25LBM	36	70	102.2	57	45	7	78.6	16	11	10	30.5	6	12	B-M6F	5.5
HSR 30B HSR 30BM	42	90	98	72	52	9	70.4	18	9	10	35	7	12	B-M6F	7
HSR 30LB HSR 30LBM	42	90	120.6	72	52	9	93	18	9	10	35	7	12	B-M6F	7
HSR 35B HSR 35BM	48	100	109.4	82	62	9	80.4	21	12	13	40.5	8	12	B-M6F	7.5
HSR 35LB HSR 35LBM	48	100	134.8	82	62	9	105.8	21	12	13	40.5	8	12	B-M6F	7.5
HSR 45B HSR 45LB	60	120	139 170.8	100	80	11	98 129.8	25	13	15	50	10	16	B-PT1/8	10
HSR 55B HSR 55LB	70	140	163 201.1	116	95	14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13
HSR 65B HSR 65LB	90	170	186 245.5	142	110	16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14
HSR 85B HSR 85LB	110	215	245.6 303	185	140	18	178.6 236	55	28	30	94	23	16	B-PT1/8	16

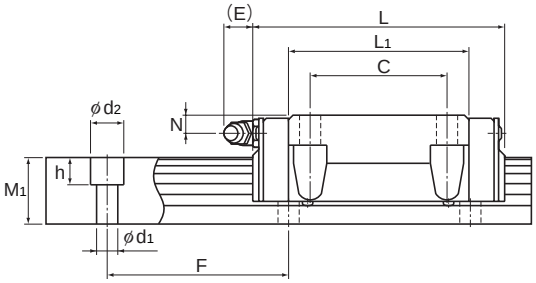
Model number coding

HSR25 B 2 QZ UU C0 M +1200L P T M -II

- HSR25: Model number
- B: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol); Light preload (C1); Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H); Precision grade (P)/Super precision grade (SP); Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



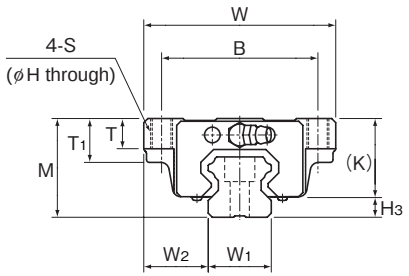
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27	0.47	2.3
	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459	0.75	3.3
	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751	1.3	4.8
	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6
	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2	2	6.6
	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43	2.8 3.3	11
	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28	4.5 5.7	15.1
	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7	8.5 10.7	22.5
	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7	17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-C Grade Ct



Model No.	Outer dimensions			LM block dimensions											
	Height	Width	Length											Grease nipple	
	M	W	L	B	C	S	H	L_1	T	T_1	K	N	E		H_3
HSR 15C (Ct)	24	47	56.6	38	30	M5	4.4	38.8	7	11	19.3	4.3	5.5	PB1021B	3.5
HSR 20C (Ct)	30	63	74	53	40	M6	5.4	50.8	10	9.5	26	5	12	B-M6F	4
HSR 25C (Ct)	36	70	83.1	57	45	M8	6.8	59.5	11	16	30.5	6	12	B-M6F	5.5
HSR 30C (Ct)	42	90	98	72	52	M10	8.5	70.4	9	18	35	7	12	B-M6F	7
HSR 35C (Ct)	48	100	109.4	82	62	M10	8.5	80.4	12	21	40.5	8	12	B-M6F	7.5

Model number coding

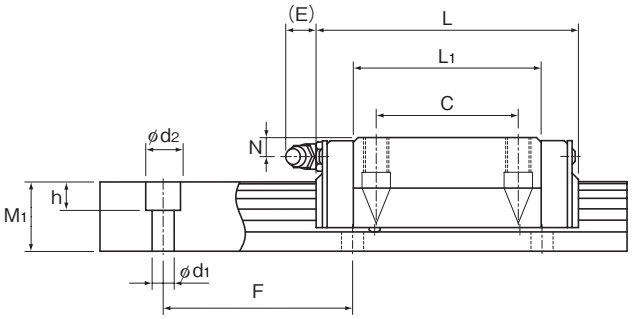
Block: **HSR25 C 1 SS Ct BLOCK**

- HSR25: Model number
- C: Type of LM block
- 1: This variant: 1
- SS: Contamination protection accessory symbol (*1)
- Ct: Accuracy symbol Indicates Ct Class
- BLOCK: Block symbol

Rail: **HSR25 -3000L Ct7 RAIL**

- -3000L: LM rail length (in mm)
- Ct7: Accuracy symbol Ct 7 Class (Ct7) / Ct 5 Class (Ct5)
- RAIL: Rail symbol

(*1) See contamination protection accessory on A-368.



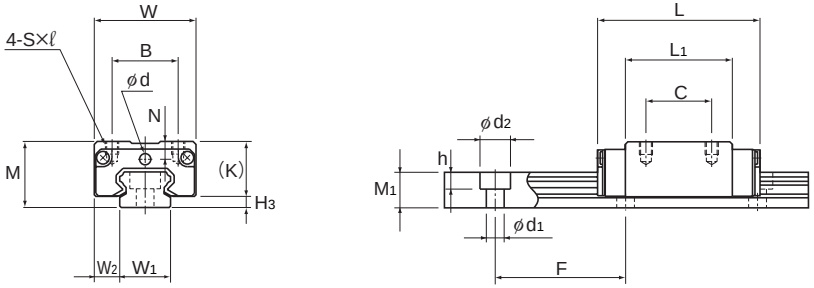
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length *	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	3000	8.33	13.5	0.0805	0.457	0.085	0.457	0.0844	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	3000	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
	23	23.5	22	60	7×11×9	3000	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
	28	31	26	80	9×14×12	3000	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
	34	33	29	80	9×14×12	3000	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (see B-82)
Static permissible moment*: static permissible moment value with 1 LM block

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-RM



Models HSR8RM and 10RM

Model No.	Outer dimensions			LM block dimensions										H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	E	Greasing hole d	Grease nipple	
HSR 8RM	11	16	24	10	10	M2×2.5	15	—	8.9	2.6	—	2.2	—	2.1
HSR 10RM	13	20	31	13	12	M2.6×2.5	20.1	—	10.8	3.5	—	2.5	—	2.2
HSR 12RM	20	27	45	15	15	M4×4.5	30.5	6	16.9	5.2	4	—	PB107	3.1

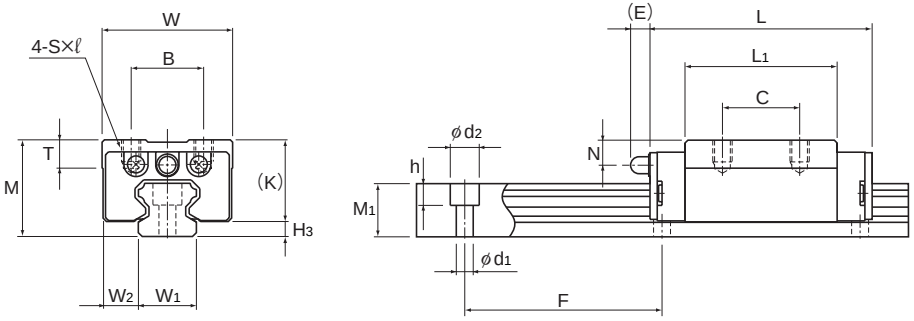
Model number coding

HSR12 R 2 UU C1 M +670L H T M -II

- HSR12: Model number
- R: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- M: Stainless steel LM block
- +670L: LM rail length (in mm)
- H: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model HSR12RM

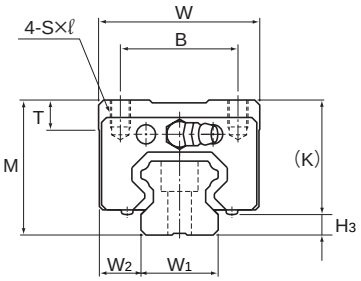
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	8	4	6	20	2.4×4.2×2.3	(275)	1.08	2.16	0.00492	0.0319	0.00492	0.0319	0.00727	0.012	0.3
	10	5	7	25	3.5×6×3.3	(470)	1.96	3.82	0.0123	0.0716	0.0123	0.0716	0.0162	0.025	0.45
	12	7.5	11	40	3.5×6×4.5	(670)	4.7	8.53	0.0409	0.228	0.0409	0.228	0.0445	0.08	0.83

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-R, HSR-RM, HSR-LR and HSR-LRM



Model No.	Outer dimensions			LM block dimensions									H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	
HSR 15R HSR 15RM	28	34	56.6	26	26	M4×5	38.8	6	23.3	8.3	5.5	PB1021B	3.5
HSR 20R HSR 20RM	30	44	74	32	36	M5×6	50.8	8	26	5	12	B-M6F	4
HSR 20LR HSR 20LRM	30	44	90	32	50	M5×6	66.8	8	26	5	12	B-M6F	4
HSR 25R HSR 25RM	40	48	83.1	35	35	M6×8	59.5	9	34.5	10	12	B-M6F	5.5
HSR 25LR HSR 25LRM	40	48	102.2	35	50	M6×8	78.6	9	34.5	10	12	B-M6F	5.5
HSR 30R HSR 30RM	45	60	98	40	40	M8×10	70.4	9	38	10	12	B-M6F	7
HSR 30LR HSR 30LRM	45	60	120.6	40	60	M8×10	93	9	38	10	12	B-M6F	7
HSR 35R HSR 35RM	55	70	109.4	50	50	M8×12	80.4	11.7	47.5	15	12	B-M6F	7.5
HSR 35LR HSR 35LRM	55	70	134.8	50	72	M8×12	105.8	11.7	47.5	15	12	B-M6F	7.5
HSR 45R HSR 45LR	70	86	139 170.8	60	60 80	M10×17	98 129.8	15	60	20	16	B-PT1/8	10
HSR 55R HSR 55LR	80	100	163 201.1	75	75 95	M12×18	118 156.1	20.5	67	21	16	B-PT1/8	13
HSR 65R HSR 65LR	90	126	186 245.5	76	70 120	M16×20	147 206.5	23	76	19	16	B-PT1/8	14
HSR 85R HSR 85LR	110	156	245.6 303	100	80 140	M18×25	178.6 236	29	94	23	16	B-PT1/8	16

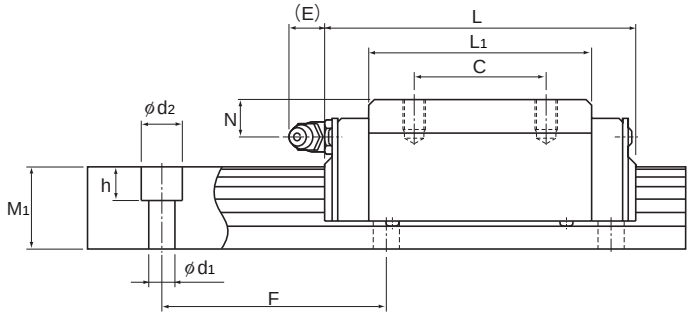
Model number coding

HSR35 R 2 QZ SS C0 M +1400L P T M -II

- HSR35: Model number
- R: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- SS: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1400L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



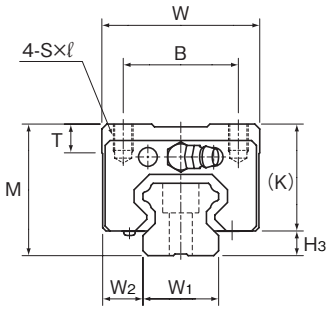
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	15	9.5	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844		0.18	1.5
	20	12	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.25	2.3
	20	12	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27		0.35	2.3
	23	12.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.54	3.3
	23	12.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459		0.67	3.3
	28	16	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		0.9	4.8
	28	16	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751		1.1	4.8
	34	18	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.5	6.6
	34	18	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2		2	6.6
	45	20.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43		2.6 3.1	11
	53	23.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28		4.3 5.4	15.1
	63	31.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7		7.3 9.3	22.5
	85	35.5	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7		13 16	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-R Grade Ct



Model No.	Outer dimensions			LM block dimensions									
	Height	Width	Length								Grease nipple	
	M	W	L	B	C	S×ℓ	L_1	T	K	N	E		H_3
HSR 15R (Ct)	28	34	56.6	26	26	M4×5	38.8	6	23.3	8.3	5.5	PB1021B	3.5
HSR 20R (Ct)	30	44	74	32	36	M5×6	50.8	8	26	5	12	B-M6F	4
HSR 25R (Ct)	40	48	83.1	35	35	M6×8	59.5	9	34.5	10	12	B-M6F	5.5
HSR 30R (Ct)	45	60	98	40	40	M8×10	70.4	9	38	10	12	B-M6F	7
HSR 35R (Ct)	55	70	109.4	50	50	M8×12	80.4	11.7	47.5	15	12	B-M6F	7.5

Model number coding

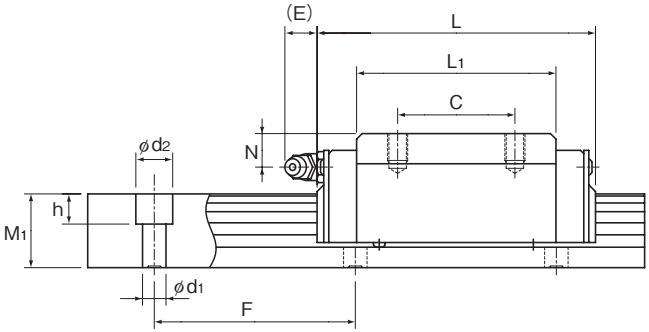
Block: **HSR35 R 1 SS Ct BLOCK**

- HSR35: Model number
- R: Type of LM block
- 1: This variant: 1
- SS: Contamination protection accessory symbol (*1)
- Ct: Accuracy symbol Indicates Ct Class
- BLOCK: Block symbol

Rail: **HSR25 -3000L Ct5 RAIL**

- HSR25: Model number
- -3000L: LM rail length (in mm)
- Ct5: Accuracy symbol Ct 7 Class (Ct7) / Ct 5 Class (Ct5)
- RAIL: Rail symbol

(*1) See contamination protection accessory on A-368.

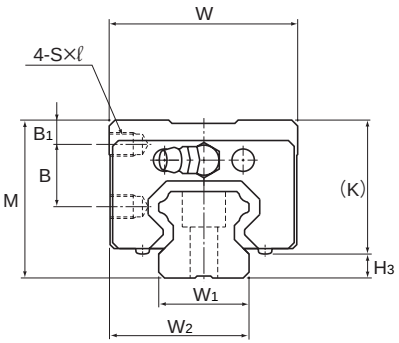


Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length *	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	9.5	15	60	4.5×7.5×5.3	3000	8.33	13.5	0.0805	0.457	0.085	0.457	0.0844	0.18	1.5
	20	12	18	60	6×9.5×8.5	3000	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.25	2.3
	23	12.5	22	60	7×11×9	3000	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.54	3.3
	28	16	26	80	9×14×12	3000	28	46.8	0.524	2.7	0.524	2.7	0.562	0.9	4.8
	34	18	29	80	9×14×12	3000	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.5	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (see B-82)
Static permissible moment*: static permissible moment value with 1 LM block

Models HSR-YR and HSR-YRM



Model No.	Outer dimensions			LM block dimensions									
	Height	Width	Length								Grease nipple		
	M	W	L	B_1	B	C	S×ℓ	L_1	K	N	E		H_3
HSR 15YR HSR 15YRM	28	33.5	56.6	4.3	11.5	18	M4×5	38.8	23.3	8.3	5.5	PB1021B	3.5
HSR 20YR HSR 20YRM	30	43.5	74	4	11.5	25	M5×6	50.8	26	5	12	B-M6F	4
HSR 25YR HSR 25YRM	40	47.5	83.1	6	16	30	M6×6	59.5	34.5	10	12	B-M6F	5.5
HSR 30YR HSR 30YRM	45	59.5	98	8	16	40	M6×9	70.4	38	10	12	B-M6F	7
HSR 35YR HSR 35YRM	55	69.5	109.4	8	23	43	M8×10	80.4	47	15	12	B-M6F	7.5
HSR 45YR	70	85.5	139	10	30	55	M10×14	98	60	20	16	B-PT1/8	10
HSR 55YR	80	99.5	163	12	32	70	M12×15	118	67	21	16	B-PT1/8	13
HSR 65YR	90	124.5	186	12	35	85	M16×22	147	76	19	16	B-PT1/8	14

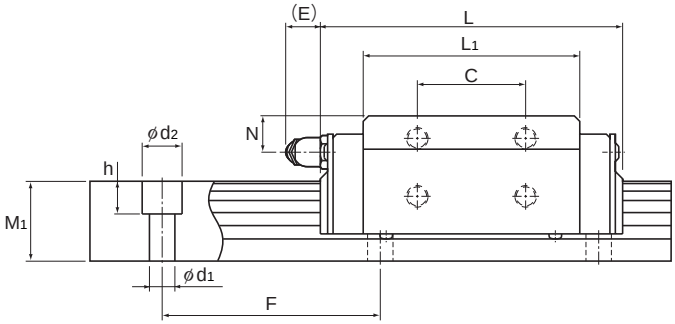
Model number coding

HSR25 YR 2 UU C0 M +1200L P T M -II

- HSR25: Model number
- YR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



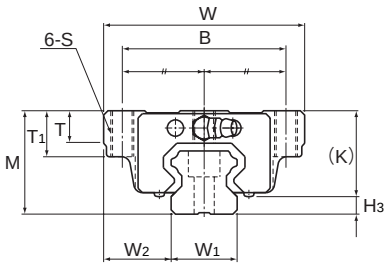
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC		LM block	LM rail
	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	15	24	15	60	4.5×7.5×5.3	3000 (1240)	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844		0.18	1.5
	20	31.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.25	2.3
	23	35	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.54	3.3
	28	43.5	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		0.9	4.8
	34	51.5	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.5	6.6
	45	65	38	105	14×20×17	3090	60	95.6	1.42	7.92	1.42	7.92	1.83		2.6	11
	53	76	44	120	16×23×20	3060	88.5	137	2.45	13.2	2.45	13.2	3.2		4.3	15.1
	63	93	53	150	18×26×22	3000	141	215	4.8	23.5	4.8	23.5	5.82		7.3	22.5

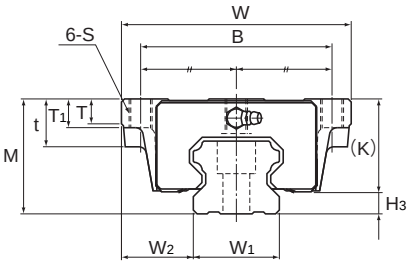
Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-CA, HSR-CAM, HSR-HA and HSR-HAM



Models HSR20 to 35CA/HA/CAM/HAM



Models HSR45 to 85CA/HA

Model No.	Outer dimensions			LM block dimensions												H3
	Height M	Width W	Length L	B	C	S	L1	t	T	T1	K	N	E	Grease nipple	
HSR 20CA HSR 20CAM	30	63	74	53	40	M6	50.8	—	9.5	10	26	5	12	B-M6F	4
HSR 20HA HSR 20HAM	30	63	90	53	40	M6	66.8	—	9.5	10	26	5	12	B-M6F	4
HSR 25CA HSR 25CAM	36	70	83.1	57	45	M8	59.5	—	11	16	30.5	6	12	B-M6F	5.5
HSR 25HA HSR 25HAM	36	70	102.2	57	45	M8	78.6	—	11	16	30.5	6	12	B-M6F	5.5
HSR 30CA HSR 30CAM	42	90	98	72	52	M10	70.4	—	9	18	35	7	12	B-M6F	7
HSR 30HA HSR 30HAM	42	90	120.6	72	52	M10	93	—	9	18	35	7	12	B-M6F	7
HSR 35CA HSR 35CAM	48	100	109.4	82	62	M10	80.4	—	12	21	40.5	8	12	B-M6F	7.5
HSR 35HA HSR 35HAM	48	100	134.8	82	62	M10	105.8	—	12	21	40.5	8	12	B-M6F	7.5
HSR 45CA HSR 45HA	60	120	139 170.8	100	80	M12	98 129.8	25	13	15	50	10	16	B-PT1/8	10
HSR 55CA HSR 55HA	70	140	163 201.1	116	95	M14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13
HSR 65CA HSR 65HA	90	170	186 245.5	142	110	M16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14
HSR 85CA HSR 85HA	110	215	245.6 303	185	140	M20	178.6 236	55	28	30	94	23	16	B-PT1/8	16

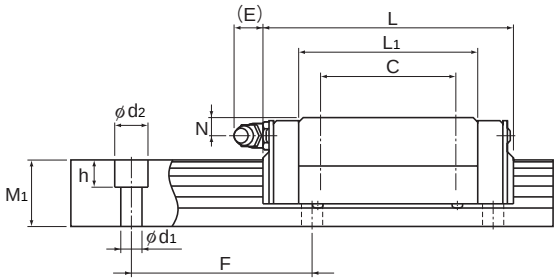
Model number coding

HSR25 HA 2 QZ KKHH C0 M +1300L P T M -II

- HSR25: Model number
- HA: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1300L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P) Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



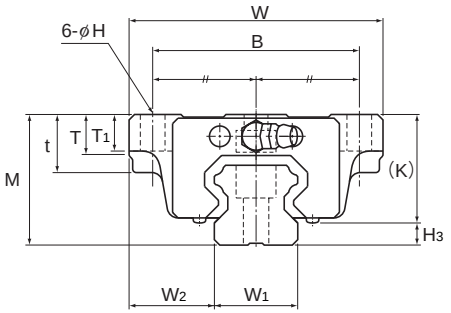
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201		0.35	2.3
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27		0.47	2.3
	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344		0.59	3.3
	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459		0.75	3.3
	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562		1.1	4.8
	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751		1.3	4.8
	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905		1.6	6.6
	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2		2	6.6
	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43		2.8 3.3	11
	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28		4.5 5.7	15.1
	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7		8.5 10.7	22.5
	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7		17 23	35.2

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-CB, HSR-CBM, HSR-HB and HSR-HBM



Model No.	Outer dimensions			LM block dimensions											H3
	Height M	Width W	Length L	B	C	H	L1	t	T	T1	K	N	E	Grease nipple	
HSR 20CB HSR 20CBM	30	63	74	53	40	6	50.8	10	9.5	10	26	5	12	B-M6F	4
HSR 20HB HSR 20HBM	30	63	90	53	40	6	66.8	10	9.5	10	26	5	12	B-M6F	4
HSR 25CB HSR 25CBM	36	70	83.1	57	45	7	59.5	16	11	10	30.5	6	12	B-M6F	5.5
HSR 25HB HSR 25HBM	36	70	102.2	57	45	7	78.6	16	11	10	30.5	6	12	B-M6F	5.5
HSR 30CB HSR 30CBM	42	90	98	72	52	9	70.4	18	9	10	35	7	12	B-M6F	7
HSR 30HB HSR 30HBM	42	90	120.6	72	52	9	93	18	9	10	35	7	12	B-M6F	7
HSR 35CB HSR 35CBM	48	100	109.4	82	62	9	80.4	21	12	13	40	8	12	B-M6F	7.5
HSR 35HB HSR 35HBM	48	100	134.8	82	62	9	105.8	21	12	13	40	8	12	B-M6F	7.5
HSR 45CB HSR 45HB	60	120	139 170.8	100	80	11	98 129.8	25	13	15	50	10	16	B-PT1/8	10
HSR 55CB HSR 55HB	70	140	163 201.1	116	95	14	118 156.1	29	13.5	17	57	11	16	B-PT1/8	13
HSR 65CB HSR 65HB	90	170	186 245.5	142	110	16	147 206.5	37	21.5	23	76	19	16	B-PT1/8	14
HSR 85CB HSR 85HB	110	215 110	245.6 303	185	140	18	178.6 236	55	28	30	94	23	16	B-PT1/8	16

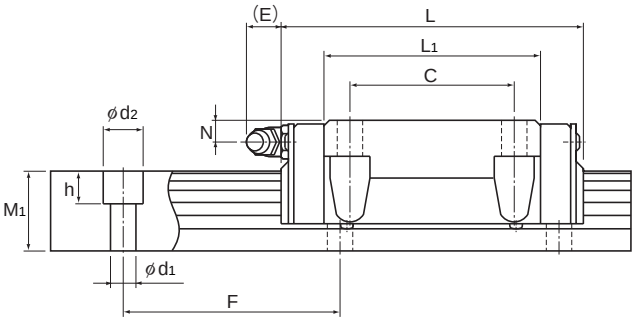
Model number coding

HSR35 CB 2 QZ ZZHH C0 M +1400L P T M -II

- HSR35: Model number
- CB: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- ZZHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1400L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol), High accuracy grade (H), Precision grade (P), Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



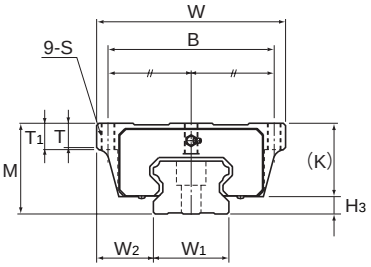
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	W1 ±0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
	20	21.5	18	60	6×9.5×8.5	3000 (1480)	21.3	31.8	0.323	1.66	0.323	1.66	0.27	0.47	2.3
	23	23.5	22	60	7×11×9	3000 (2020)	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
	23	23.5	22	60	7×11×9	3000 (2020)	27.2	45.9	0.529	2.74	0.529	2.74	0.459	0.75	3.3
	28	31	26	80	9×14×12	3000 (2520)	28	46.8	0.524	2.7	0.524	2.7	0.562	1.1	4.8
	28	31	26	80	9×14×12	3000 (2520)	37.3	62.5	0.889	4.37	0.889	4.37	0.751	1.3	4.8
	34	33	29	80	9×14×12	3000 (2520)	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6
	34	33	29	80	9×14×12	3000 (2520)	50.2	81.5	1.32	6.35	1.32	6.35	1.2	2	6.6
	45	37.5	38	105	14×20×17	3090	60 80.4	95.6 127	1.42 2.44	7.92 12.6	1.42 2.44	7.92 12.6	1.83 2.43	2.8 3.3	11
	53	43.5	44	120	16×23×20	3060	88.5 119	137 183	2.45 4.22	13.2 21.3	2.45 4.22	13.2 21.3	3.2 4.28	4.5 5.7	15.1
	63	53.5	53	150	18×26×22	3000	141 192	215 286	4.8 8.72	23.5 40.5	4.8 8.72	23.5 40.5	5.82 7.7	8.5 10.7	22.5
	85	65	65	180	24×35×28	3000	210 282	310 412	8.31 14.2	45.6 72.5	8.31 14.2	45.6 72.5	11 14.7	17 23	35.2

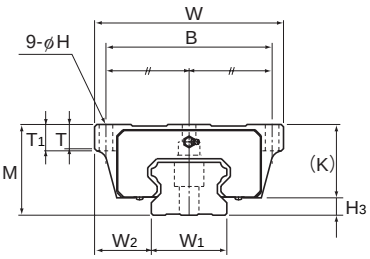
Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-HA, HSR-HB and HSR-HR



Models HSR100 to 150HA



Models HSR100 to 150HB

Model No.	Outer dimensions			LM block dimensions											
	Height	Width	Length										Grease nipple	
	M	W	L	B	C	H	S×ℓ	L_1	T	T_1	K	N	E		H_3
HSR 100HA	120	250	334	220	200	—	M18*	261	32	35	100	23	16	B-PT1/4	20.5
HSR 100HB		250		220		20	—		32	35					
HSR 100HR		200		130		—	M18×27		33	—					
HSR 120HA	130	290	365	250	210	—	M20*	287	34	38	110	26.5	16	B-PT1/4	20
HSR 120HB		290		250		22	—		34	38					
HSR 120HR		220		146		—	M20×30		33.7	—					
HSR 150HA	145	350	396	300	230	—	M24*	314	36	40	123	29	16	B-PT1/4	22.5
HSR 150HB		350		300		26	—		36	40					
HSR 150HR		266		180		—	M24×35		33	—					

Note) "*" indicates a through hole.

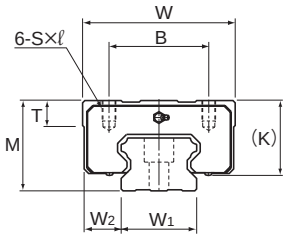
Model number coding

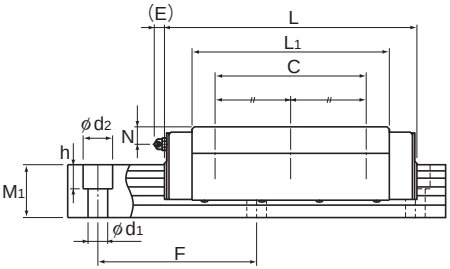
HSR150 HR 2 UU C1 +2350L H T -II

- HSR150: Model number
- HR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +2350L: LM rail length (in mm)
- H: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)





Models HSR100 to 150HR

Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	100	75 75 50	70	210	26×39×32	3000	351	506	19.4	98.2	19.4	98.2	22.4	32	49
	114	88 88 53	75	230	33×48×43	3000	429	612	25.9	129	25.9	129	31.1	43	61
	144	103 103 61	85	250	39×58×46	3000	518	728	33.6	167	33.6	167	45.2	62	87

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-82.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HSR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

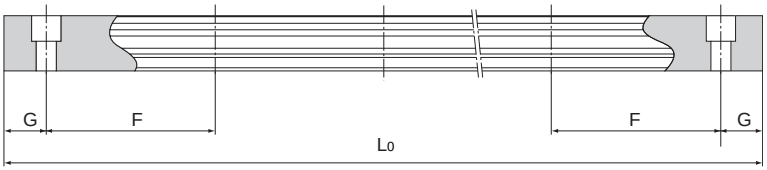


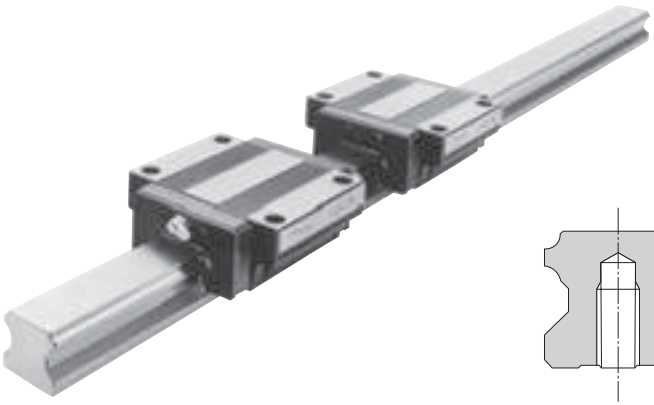
Table1 Standard Length and Maximum Length of the LM Rail for Model HSR Unit: mm

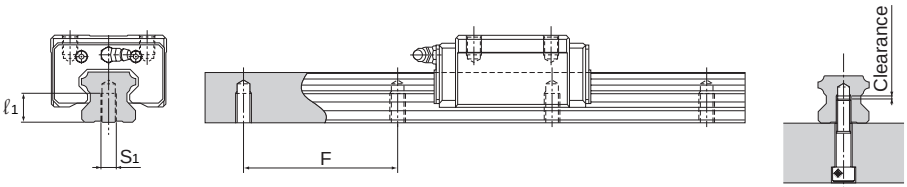
Model No.	HSR 8	HSR 10	HSR 12	HSR 15	HSR 20	HSR 25	HSR 30	HSR 35	HSR 45	HSR 55	HSR 65	HSR 85	HSR 100	HSR 120	HSR 150
LM rail standard length (L_0)	35 55 75 95 115 135 155 175 195 215 235 255 275	45 70 95 120 145 170 195 220 245 270 295 320 345 370 395 420 445 470	70 110 150 190 230 270 310 350 390 430 470 510 550 590 630 670	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620	1530 1890 2250 2610	1340 1760 2180 2600	1470 1930 2390	1600 2100 2350
Standard pitch F	20	25	40	60	60	60	80	80	105	120	150	180	210	230	250
G	7.5	10	15	20	20	20	20	20	22.5	30	35	45	40	45	50
Max length	(275)	(470)	(670)	3000 (1240)	3000 (1480)	3000 (2020)	3000 (2520)	3000 (2520)	3090	3060	3000	3000	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) The figures in the parentheses indicate the maximum lengths of stainless steel made models.
Note4) Ct7 and Ct5 grades are not applicable where the LM rail standard length appears in dimmed type for models HSR 15 to HSR 35.

Tapped-hole LM Rail Type of Model HSR

The model HSR variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection effect.





(1) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
(2) A tapped-hole LM rail type is available also for model HSR-YR.
(3) For standard pitches of the taps, see Table1 on B-82.

Table2 Dimensions of the LM Rail Tap

Unit: mm

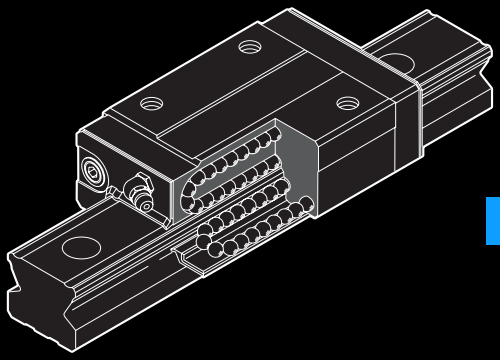
Model No.	S_1	Effective tap depth ℓ_1
HSR 15	M5	8
HSR 20	M6	10
HSR 25	M6	12
HSR 30	M8	15
HSR 35	M8	17
HSR 45	M12	24
HSR 55	M14	24
HSR 65	M20	30

Model number coding

HSR30 A2UU +1000LH K

Symbol for tapped-hole LM rail type

Note) Ct7 and Ct5 grades are not applicable.



SR

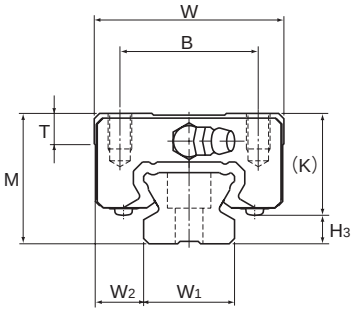
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SR-W, SR-WM, SR-V and SR-VM



Model No.	Outer dimensions			LM block dimensions									
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	E	Grease nipple	H3
SR 15W/WM SR 15V/VM	24	34	57 40.4	26	26 —	M4×7	39.5 22.9	5.7	19.5	6	5.5	PB1021B	4.5
SR 20W/WM SR 20V/VM	28	42	66.2 47.3	32	32 —	M5×8	46.7 27.8	7.2	22	6	12	B-M6F	6
SR 25WY/WMY SR 25VY/VMY	33	48	83 59.2	35	35 —	M6×9	59 35.2	7.7	26	7	12	B-M6F	7
SR 30W/WM SR 30V/VM	42	60	96.8 67.9	40	40 —	M8×12	69.3 40.4	8.5	32.5	8	12	B-M6F	9.5
SR 35W/WM SR 35V/VM	48	70	111 77.6	50	50 —	M8×12	79 45.7	12.5	36.5	8.5	12	B-M6F	11.5
SR 45W	60	86	126	60	60	M10×15	90.5	15	47.5	11.5	16	B-PT1/8	12.5
SR 55W	68	100	156	75	75	M12×20	117	16.7	54.5	12	16	B-PT1/8	13.5
SR 70T	85	126	194.6	90	90	M16×25	147.6	24.5	70	12	16	B-PT1/8	15
SR 85T	110	156	180	100	80	M18×30	130	25.5	91.5	27	12	A-PT1/8	18.5
SR 100T	120	178	200	120	100	M20×35	150	29.5	101	32	12	A-PT1/8	19
SR 120T	110	205	235	160	120	M20×35	180	24	95	14	13.5	B-PT1/4	15
SR 150T	135	250	280	200	160	M20×35	215	24	113	17	13.5	B-PT1/4	22

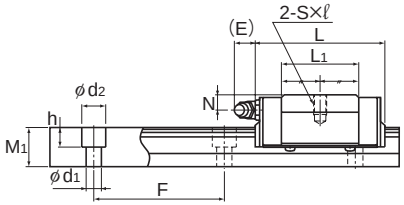
Model number coding

SR25 W 2 UU C0 M +1240L Y P T M -II

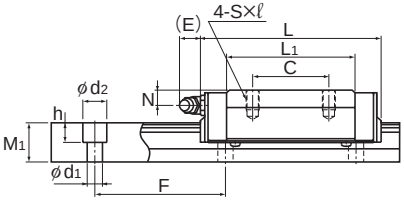
- SR25: Model number
- W: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +1240L: LM rail length (in mm)
- Y: Applied to only 25
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model SR-V



Model SR-W

Unit: mm

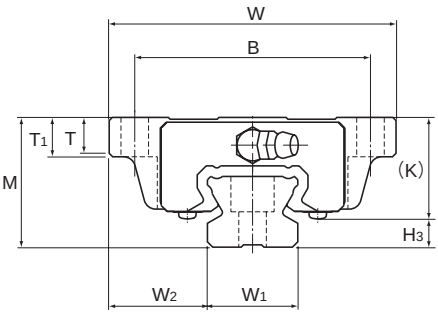
	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	15	9.5	12.5	60	3.5×6×4.5	2500 (2500)	9.51 5.39	19.3 11.1	0.0925 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654		0.2 0.12	1.2
	20	11	15.5	60	6×9.5×8.5	4000 (3000)	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11		0.3 0.2	2.1
	23	12.5	18	60	7×11×9	4000 (3000)	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201		0.4 0.3	2.7
	28	16	23	80	7×11×9	4000 (3000)	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352		0.8 0.5	4.3
	34	18	27.5	80	9×14×12	4000 (3000)	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576		1.2 0.8	6.4
	45	20.5	35.5	105	11×17.5×14	3500	55.3	101	1.1	5.96	0.679	3.69	1.77		2.2	11.3
	48	26	38	120	14×20×17	3000	89.1	157	2.27	11.3	1.39	6.98	2.87		3.6	12.8
	70	28	47	150	18×26×22	3000	156	266	2.54	13.2	2.18	11.3	4.14		7	22.8
	85	35.5	65.5	180	18×26×22	3000	120	224	2.54	15.1	1.25	7.47	5.74		10.1	34.9
	100	39	70.3	210	22×32×25	3000	148	283	3.95	20.9	1.95	10.3	8.55		14.1	46.4
	114	45.5	65	230	26×39×30	3000	279	377	5.83	32.9	2.87	16.2	13.7		—	—
	144	53	77	250	33×48×36	3000	411	537	9.98	55.8	4.92	27.5	24.3		—	—

Note1) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.
Those model numbers including and greater than SR85T are semi-standard models. If desiring these models, contact THK.
Models SR85T and SR100T are equipped with grease nipple on the side face of the LM block.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-90.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Note2) The LM rail mounting hole of SR15 is drilled for M3 screws as standard (without Y indication). If you order the hole to be drilled for M4 screws (with Y indication), contact THK. When replacing this model with model SSR, pay attention to the dimension of the rail mounting hole.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SR-TB, SR-TBM, SR-SB and SR-SBM



Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	H	L_1	T	T_1	K	N	E	Grease nipple	
SR 15TB/TBM SR 15SB/SBM	24	52	57 40.4	41	26 —	4.5	39.5 22.9	6.1	7	19.5	6	5.5	PB1021B	4.5
SR 20TB/TBM SR 20SB/SBM	28	59	66.2 47.3	49	32 —	5.5	46.7 27.8	8	9	22	6	12	B-M6F	6
SR 25TBY/TBMY SR 25SBY/SBMY	33	73	83 59.2	60	35 —	7	59 35.2	9.1	10	26	7	12	B-M6F	7
SR 30TB/TBM SR 30SB/SBM	42	90	96.8 67.9	72	40 —	9	69.3 40.4	8.7	10	32.5	8	12	B-M6F	9.5
SR 35TB/TBM SR 35SB/SBM	48	100	111 77.6	82	50 —	9	79 45.7	11.2	13	36.5	8.5	12	B-M6F	11.5
SR 45TB	60	120	126	100	60	11	90.5	12.8	15	47.5	11.5	16	B-PT1/8	12.5
SR 55TB	68	140	156	116	75	14	117	15.3	17	54.5	12	16	B-PT1/8	13.5

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

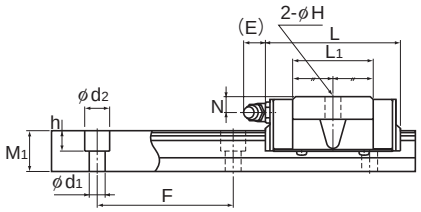
Model number coding

SR25 TB 2 UU C1 +1200L Y H T -II

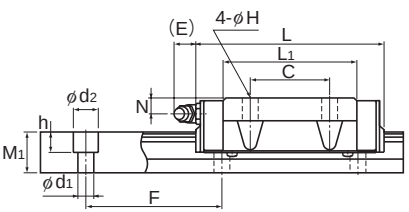
- SR25: Model number
- TB: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- Y: Applied to only 25
- H: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model SR-SB



Model SR-TB

Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
15	18.5	12.5	60	3.5×6×4.5	2500 (1240)	9.51 5.39	19.3 11.1	0.0925 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654	0.2 0.15	1.2
20	19.5	15.5	60	6×9.5×8.5	3000 (1480)	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11	0.4 0.3	2.1
23	25	18	60	7×11×9	3000 (2020)	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201	0.6 0.4	2.7
28	31	23	80	7×11×9	3000 (2520)	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352	1.1 0.8	4.3
34	33	27.5	80	9×14×12	3000 (2520)	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576	1.5 1	6.4
45	37.5	35.5	105	11×17.5×14	3000	55.3	101	1.1	5.96	0.679	3.69	1.77	2.5	11.3
48	46	38	120	14×20×17	3000	89.1	157	2.27	11.3	1.39	6.98	2.87	4.2	12.8

Note1) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-90.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Note2) The LM rail mounting hole of SR15 is drilled for M3 screws as standard (without Y indication). If you order the hole to be drilled for M4 screws (with Y indication), contact THK. When replacing this model with model SSR, pay attention to the dimension of the rail mounting hole.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

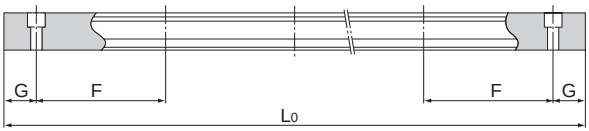


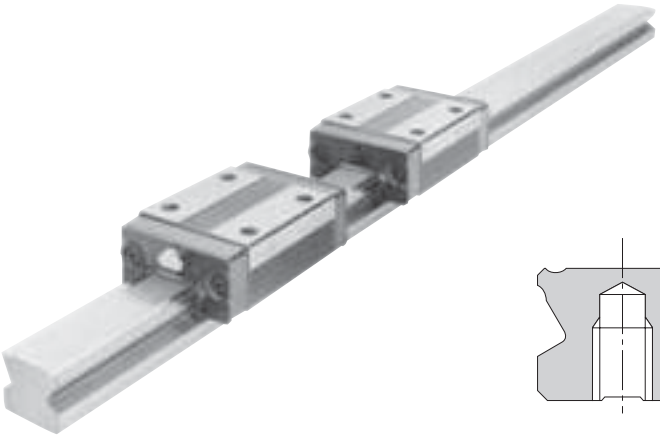
Table1 Standard Length and Maximum Length of the LM Rail for Model SR Unit: mm

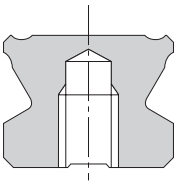
Model No.	SR 15	SR 20	SR 25	SR 30	SR 35	SR 45	SR 55	SR 70	SR 85	SR 100	SR 120	SR 150
LM rail standard length (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1660 1720 1780 1840 1900 1960 2020 2080 2140	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1660 1720 1780 1840 1900 1960 2020 2080 2140 2200 2260 2320 2380 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1640 1720 1800 1880 1960 2040 2120 2200 2280 2360 2440 2520 2600 2680 2760 2840 2920	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1640 1720 1800 1880 1960 2040 2120 2200 2280 2360 2440 2520 2600 2680 2760 2840 2920	570 675 780 885 990 1095 1200 1305 1410 1515 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985	780 900 1020 1140 1260 1380 1500 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940	1270 1570 2020 2620	1520 2060 2600	1550 1970 2600	1700 2390	1600 2100
Standard pitch F	60	60	60	80	80	105	120	150	180	210	230	250
G	20	20	20	20	20	22.5	30	35	40	40	45	50
Max length	2500 (1240)	3000 (1480)	3000 (2020)	3000 (2520)	3000 (2520)	3000	3000	3000	3000	3000	3000	3000

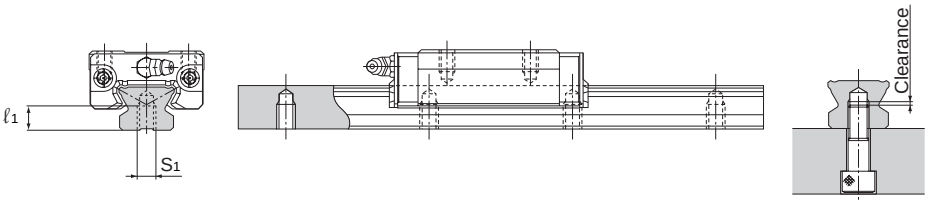
Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) Those model numbers including and greater than SR85T are semi-standard models. If desiring these models, contact THK.
Note4) The figures in the parentheses indicate the maximum lengths of stainless steel made models.

Tapped-hole LM Rail Type of Model SR

The model SR variations include a type with its LM rail bottom tapped. This type is useful when desiring to mount the LM Guide from the bottom of the base and when desiring to increase the contamination protection.







(1) A tapped-hole LM rail type is available only for high accuracy or lower grades.
(2) Determine the bolt length so that a clearance of 2 to 5 mm is secured between the bolt end and the bottom of the tap (effective tap depth). (See figure above.)
(3) For standard pitches of the taps, see Table1 on B-90.

Table2 Dimensions of the LM Rail Tap

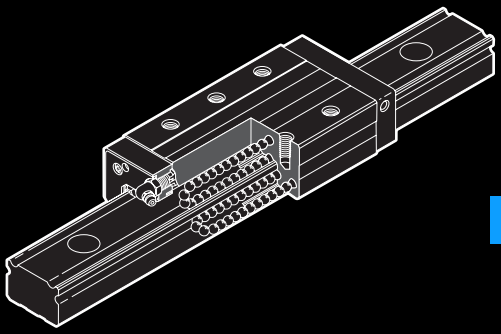
Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
SR 15	M5	7
SR 20	M6	9
SR 25	M6	10
SR 30	M8	14
SR 35	M8	16
SR 45	M12	20
SR 55	M14	22

Model number coding

SR30 W2UU +1000LH K

Symbol for tapped-hole LM rail type



NR/NRS

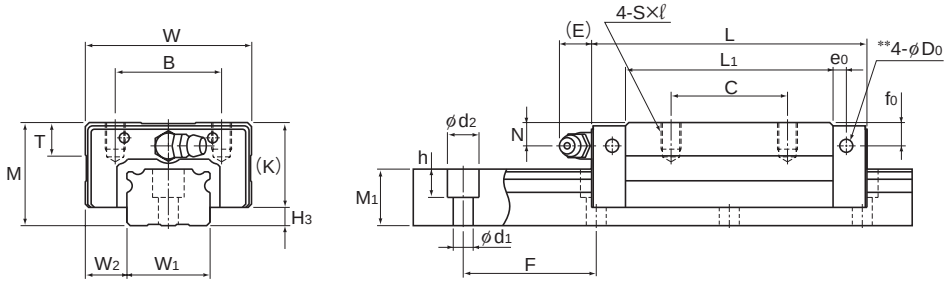
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models NR-R and NR-LR



Model NR-R

Model No.	Outer dimensions			LM block dimensions												Grease nipple	H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	f0	E	e0	D0			
NR 25XR NR 25XLR	31	50	82.8 102	32	35 50	M6×8	62.4 81.6	9.7	25.5	7	7	12	4	3.9		B-M6F	5.5
NR 30R NR 30LR	38	60	98 120.5	40	40 60	M8×10	70.9 93.4	9.7	31	7	7	12	5	3.9		B-M6F	7
NR 35R NR 35LR	44	70	109.5 135	50	50 72	M8×12	77.9 103.4	11.7	35	8	8	12	6	5.2		B-M6F	9
NR 45R NR 45LR	52	86	139 171	60	60 80	M10×17	105 137	14.7	40.5	10	8	16	7	5.2		B-PT1/8	11.5
NR 55R NR 55LR	63	100	162.8 200	65	75 95	M12×18	123.6 160.8	17.5	49	11	10	16	8	5.2		B-PT1/8	14
NR 65R NR 65LR	75	126	185.6 245.6	76	70 110	M16×20	143.6 203.6	21.5	60	16	15	16	9	8.2		B-PT1/8	15
NR 75R NR 75LR	83	145	218 274	95	80 130	M18×25	170.2 226.2	25.3	68	18	17	16	9	8.2		B-PT1/8	15
NR 85R NR 85LR	90	156	246.7 302.8	100	80 140	M18×25	194.9 251	27.3	73	20	20	16	10	8.2		B-PT1/8	17
NR 100R NR 100LR	105	200	288.8 328.8	130	150 200	M18×27	223.4 263.4	34.3	85	23	23	10	12	8.2		B-PT1/4	20

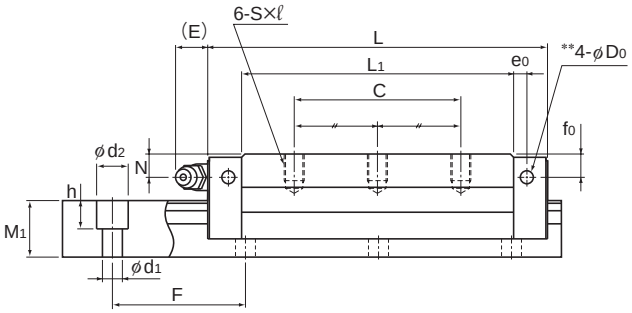
Model number coding

NR35 LR 2 QZ KKHH C0 +1240L P T Z -II

- NR35: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1240L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model NR-LR

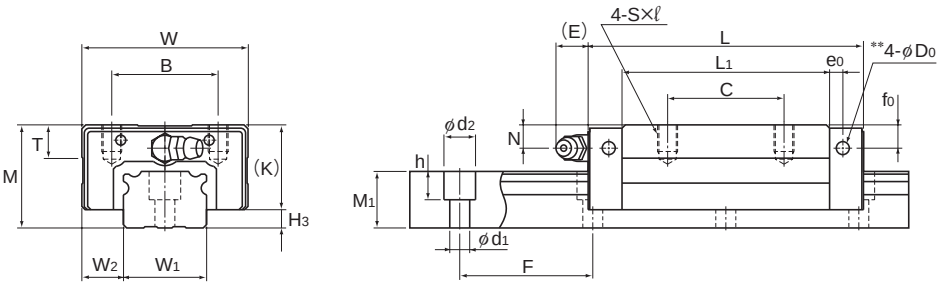
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
								M_A		M_B		M_C		
Width W_1 0 -0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	1 block	Double blocks	1 block	Double blocks	1 block	LM block kg	LM rail kg/m
25	12.5	17	40	6×9.5×8.5	2500	33 44	84.6 113	0.771 1.26	3.86 6.29	0.469 0.775	2.33 3.82	0.91 1.21	0.43 0.55	3.1
28	16	21	80	7×11×9	3000	48.7 64.9	122 162	1.26 2.18	6.63 10.6	0.778 1.33	4.05 6.47	1.47 1.95	0.74 1	4.3
34	18	24.5	80	9×14×12	3000	63.1 85.7	155 210	1.75 3.14	9.47 15.5	1.08 1.92	5.8 9.43	2.24 3.03	1.1 1.4	6.2
45	20.5	29	105	14×20×17	3090	96 126	231 303	3.37 5.93	17.7 28	2.07 3.59	10.8 16.9	4.45 5.82	2 2.8	9.8
53	23.5	36.5	120	16×23×20	3060	131 170	310 402	5.39 8.87	27.8 43.8	3.3 5.41	16.9 26.6	6.98 9.05	3.3 4.3	14.5
63	31.5	43	150	18×26×22	3000	189 260	436 600	8.76 16.8	44.7 79.9	5.39 10.1	27.3 48	11.6 15.9	6 8.7	20.3
75	35	44	150	22×32×26	3000	271 355	610 800	14.4 25.4	73.3 118	8.91 15.4	44.7 71.4	19.3 25.2	8.7 11.6	24.6
85	35.5	48	180	24×35×28	3000	336 435	751 972	20.3 34.7	102 160	12.4 21	62.6 96.2	26.8 34.6	12.3 15.8	30.5
100	50	57	210	26×39×32	2500	479 599	1040 1300	34 47.3	167 238	20.7 29.2	101 146	43.4 54.6	21.8 26.1	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models NRS-R and NRS-LR



Model NRS-R

Model No.	Outer dimensions			LM block dimensions												Grease nipple	H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	f0	E	e0	D0			
NRS 25XR NRS 25XLR	31	50	82.8 102	32	35 50	M6×8	62.4 81.6	9.7	25.5	7	7	12	4	3.9		B-M6F	5.5
NRS 30R NRS 30LR	38	60	98 120.5	40	40 60	M8×10	70.9 93.4	9.7	31	7	7	12	5	3.9		B-M6F	7
NRS 35R NRS 35LR	44	70	109.5 135	50	50 72	M8×12	77.9 103.4	11.7	35	8	8	12	6	5.2		B-M6F	9
NRS 45R NRS 45LR	52	86	139 171	60	60 80	M10×17	105 137	14.7	40.5	10	8	16	7	5.2		B-PT1/8	11.5
NRS 55R NRS 55LR	63	100	162.8 200	65	75 95	M12×18	123.6 160.8	17.5	49	11	10	16	8	5.2		B-PT1/8	14
NRS 65R NRS 65LR	75	126	185.6 245.6	76	70 110	M16×20	143.6 203.6	21.5	60	16	15	16	9	8.2		B-PT1/8	15
NRS 75R NRS 75LR	83	145	218 274	95	80 130	M18×25	170.2 226.2	25.3	68	18	17	16	9	8.2		B-PT1/8	15
NRS 85R NRS 85LR	90	156	246.7 302.8	100	80 140	M18×25	194.9 251	27.3	73	20	20	16	10	8.2		B-PT1/8	17
NRS 100R NRS 100LR	105	200	288.8 328.8	130	150 200	M18×27	223.4 263.4	34.3	85	23	23	10	12	8.2		B-PT1/4	20

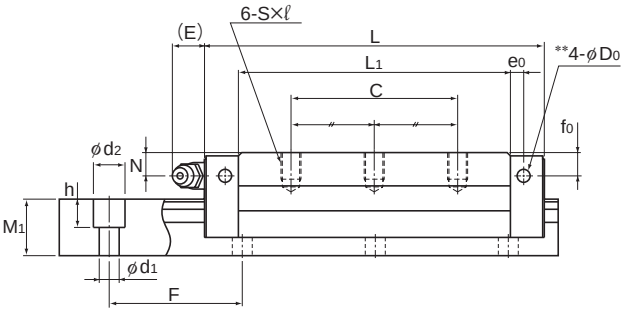
Model number coding

NRS45 LR 2 QZ ZZHH C0 +1200L P T Z -II

- NRS45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- ZZHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model NRS-LR

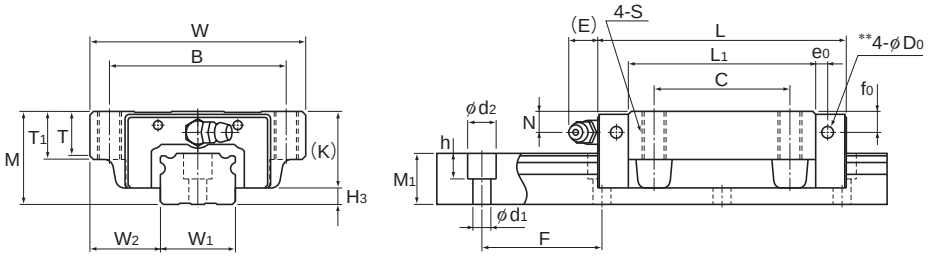
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
								MA		MB		MC			
Width W1 0 -0.05	W2	Height M1	Pitch F	d1×d2×h	Length* Max	C kN	C0 kN	1 block	Double blocks	1 block	Double blocks	1 block		LM block kg	LM rail kg/m
25	12.5	17	40	6×9.5×8.5	3000	25.9 34.5	59.8 79.7	0.568 0.926	2.84 4.6	0.568 0.926	2.84 4.6	0.633 0.846		0.43 0.55	3.1
28	16	21	80	7×11×9	3000	38.2 51	86.1 115	0.926 1.6	4.86 7.83	0.926 1.6	4.86 7.83	1.02 1.36		0.74 1	4.3
34	18	24.5	80	9×14×12	3000	49.5 67.2	109 148	1.28 2.29	6.92 11.3	1.28 2.29	6.92 11.3	1.54 2.09		1.1 1.4	6.2
45	20.5	29	105	14×20×17	3000	75.3 98.8	163 214	2.47 4.34	13 20.5	2.47 4.34	13 20.5	3.09 4.06		2 2.8	9.8
53	23.5	36.5	120	16×23×20	3000	103 133	220 284	3.97 6.49	20.5 32	3.97 6.49	20.5 32	4.86 6.28		3.3 4.3	14.5
63	31.5	43	150	18×26×22	3000	148 204	309 425	6.45 12.3	32.9 58.6	6.45 12.3	32.9 58.6	8.11 11.1		6 8.7	20.3
75	35	44	150	22×32×26	3000	212 278	431 566	10.6 18.6	53.8 87	10.6 18.6	53.8 87	13.4 17.6		8.7 11.6	24.6
85	35.5	48	180	24×35×28	3000	264 342	531 687	14.9 25.4	75.3 117	14.9 25.4	75.3 117	18.7 24.2		12.3 15.8	30.5
100	50	57	210	26×39×32	3000	376 470	737 920	25.1 34.6	123 174	25.1 34.6	123 174	30.4 38.1		21.8 26.1	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models NR-A and NR-LA



Model NR-A

Model No.	Outer dimensions			LM block dimensions													Grease nipple	H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	T1	K	N	f0	E	e0	D0			
NR 25XA NR 25XLA	31	72	82.8 102	59	45	M8×16	62.4 81.6	14.8	16	25.5	7	7	12	4	3.9		B-M6F	5.5
NR 30A NR 30LA	38	90	98 120.5	72	52	M10×18	70.9 93.4	16.8	18	31	7	7	12	5	3.9		B-M6F	7
NR 35A NR 35LA	44	100	109.5 135	82	62	M10×20	77.9 103.4	18.8	20	35	8	8	12	6	5.2		B-M6F	9
NR 45A NR 45LA	52	120	139 171	100	80	M12×22	105 137	20.5	22	40.5	10	8	16	7	5.2		B-PT1/8	11.5
NR 55A NR 55LA	63	140	162.8 200	116	95	M14×24	123.6 160.8	22.5	24	49	11	10	16	8	5.2		B-PT1/8	14
NR 65A NR 65LA	75	170	185.6 245.6	142	110	M16×28	143.6 203.6	26	28	60	16	15	16	9	8.2		B-PT1/8	15
NR 75A NR 75LA	83	195	218 274	165	130	M18×30	170.2 226.2	28	30	68	18	17	16	9	8.2		B-PT1/8	15
NR 85A NR 85LA	90	215	246.7 302.8	185	140	M20×34	194.9 251	32	34	73	20	20	16	10	8.2		B-PT1/8	17
NR 100A NR 100LA	105	260	288.8 328.8	220	150 200	M20×38	223.4 263.4	35	38	85	23	23	10	12	8.2		B-PT1/4	20

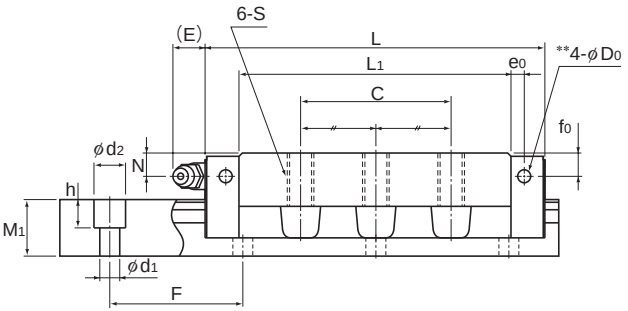
Model number coding

NR35 A 2 QZ KKHH C0 +1400L P T Z -II

- NR35 — Model number
- A — Type of LM block
- 2 — No. of LM blocks used on the same rail
- QZ — With QZ Lubricator
- KKHH — Contamination protection accessory symbol (*1)
- C0 — Radial clearance symbol (*2): Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1400L — LM rail length (in mm)
- P — Accuracy symbol (*3): Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T — Symbol for LM rail jointed use; With plate cover or steel tape (*4)
- Z — With plate cover or steel tape (*4)
- -II — Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model NR-LA

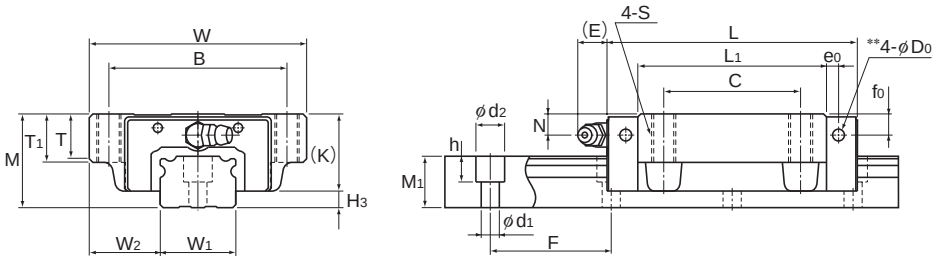
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
								M_A		M_B		M_C			
Width W_1 0 -0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	1 block	Double blocks	1 block	Double blocks	1 block		LM block kg	LM rail kg/m
25	23.5	17	40	6×9.5×8.5	3000	33 44	84.6 113	0.771 1.26	3.86 6.29	0.469 0.775	2.33 3.82	0.91 1.21		0.58 0.77	3.1
28	31	21	80	7×11×9	3000	48.7 64.9	122 162	1.26 2.18	6.63 10.6	0.778 1.33	4.05 6.47	1.47 1.95		1.1 1.4	4.3
34	33	24.5	80	9×14×12	3000	63.1 85.7	155 210	1.75 3.14	9.47 15.5	1.08 1.92	5.8 9.43	2.24 3.03		1.5 1.9	6.2
45	37.5	29	105	14×20×17	3000	96 126	231 303	3.37 5.93	17.7 28	2.07 3.59	10.8 16.9	4.45 5.82		2.7 3.5	9.8
53	43.5	36.5	120	16×23×20	3000	131 170	310 402	5.39 8.87	27.8 43.8	3.3 5.41	16.9 26.6	6.98 9.05		4.4 5.7	14.5
63	53.5	43	150	18×26×22	3000	189 260	436 600	8.76 16.8	44.7 79.9	5.39 10.1	27.3 48	11.6 15.9		7.6 10.9	20.3
75	60	44	150	22×32×26	3000	271 355	610 800	14.4 25.4	73.3 118	8.91 15.4	44.7 71.4	19.3 25.2		11.3 15	24.6
85	65	48	180	24×35×28	3000	336 435	751 972	20.3 34.7	102 160	12.4 21	62.6 96.2	26.8 34.6		16.2 20.7	30.5
100	80	57	210	26×39×32	3000	479 599	1040 1300	34 47.3	167 238	20.7 29.2	101 146	43.4 54.6		26.7 31.2	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models NRS-A and NRS-LA



Model NRS-A

Model No.	Outer dimensions			LM block dimensions													Grease nipple	H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	T_1	K	N	f_0	E	e_0	D_0			
NRS 25XA NRS 25XLA	31	72	82.8 102	59	45	M8×16	62.4 81.6	14.8	16	25.5	7	7	12	4	3.9	B-M6F	5.5
NRS 30A NRS 30LA	38	90	98 120.5	72	52	M10×18	70.9 93.4	16.8	18	31	7	7	12	5	3.9	B-M6F	7
NRS 35A NRS 35LA	44	100	109.5 135	82	62	M10×20	77.9 103.4	18.8	20	35	8	8	12	6	5.2	B-M6F	9
NRS 45A NRS 45LA	52	120	139 171	100	80	M12×22	105 137	20.5	22	40.5	10	8	16	7	5.2	B-PT1/8	11.5
NRS 55A NRS 55LA	63	140	162.8 200	116	95	M14×24	123.6 160.8	22.5	24	49	11	10	16	8	5.2	B-PT1/8	14
NRS 65A NRS 65LA	75	170	185.6 245.6	142	110	M16×28	143.6 203.6	26	28	60	16	15	16	9	8.2	B-PT1/8	15
NRS 75A NRS 75LA	83	195	218 274	165	130	M18×30	170.2 226.2	28	30	68	18	17	16	9	8.2	B-PT1/8	15
NRS 85A NRS 85LA	90	215	246.7 302.8	185	140	M20×34	194.9 251	32	34	73	20	20	16	10	8.2	B-PT1/8	17
NRS 100A NRS 100LA	105	260	288.8 328.8	220	150 200	M20×38	223.4 263.4	35	38	85	23	23	10	12	8.2	B-PT1/4	20

Model number coding

NRS45 LA 2 QZ SSHH C0 +2040L P T Z -II

- NRS45: Model number
- LA: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- SSHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +2040L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

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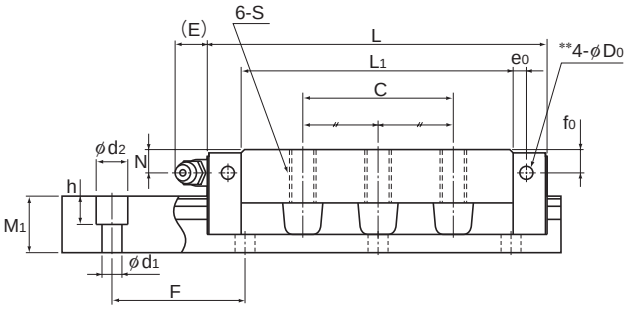


Model NRS-LA

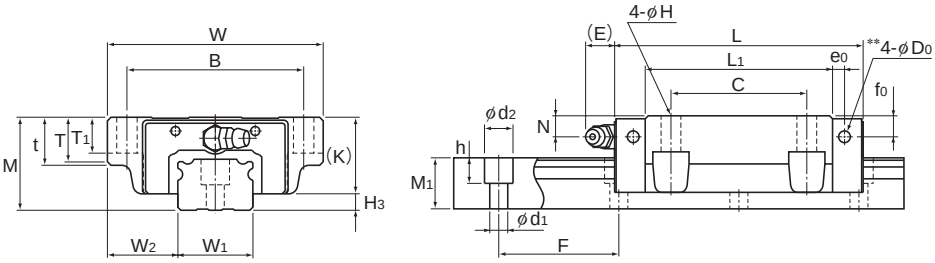
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
Width		Height	Pitch		Length*	C	C0	MA		MB		MC		LM block	LM rail
W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
25	23.5	17	40	6×9.5×8.5	3000	25.9 34.5	59.8 79.7	0.568 0.926	2.84 4.6	0.568 0.926	2.84 4.6	0.633 0.846		0.58 0.77	3.1
28	31	21	80	7×11×9	3000	38.2 51	86.1 115	0.926 1.6	4.86 7.83	0.926 1.6	4.86 7.83	1.02 1.36		1.1 1.4	4.3
34	33	24.5	80	9×14×12	3000	49.5 67.2	109 148	1.28 2.29	6.92 11.3	1.28 2.29	6.92 11.3	1.54 2.09		1.5 1.9	6.2
45	37.5	29	105	14×20×17	3000	75.3 98.8	163 214	2.47 4.34	13 20.5	2.47 4.34	13 20.5	3.09 4.06		2.7 3.5	9.8
53	43.5	36.5	120	16×23×20	3000	103 133	220 284	3.97 6.49	20.5 32	3.97 6.49	20.5 32	4.86 6.28		4.4 5.7	14.5
63	53.5	43	150	18×26×22	3000	148 204	309 425	6.45 12.3	32.9 58.6	6.45 12.3	32.9 58.6	8.11 11.1		7.6 10.9	20.3
75	60	44	150	22×32×26	3000	212 278	431 566	10.6 18.6	53.8 87	10.6 18.6	53.8 87	13.4 17.6		11.3 15	24.6
85	65	48	180	24×35×28	3000	264 342	531 687	14.9 25.4	75.3 117	14.9 25.4	75.3 117	18.7 24.2		16.2 20.7	30.5
100	80	57	210	26×39×32	3000	376 470	737 920	25.1 34.6	123 174	25.1 34.6	123 174	30.4 38.1		26.7 31.2	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models NR-B and NR-LB



Model NR-B

Model No.	Outer dimensions			LM block dimensions														Grease nipple	
	Height M	Width W	Length L	B	C	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0			H_3
NR 25XB NR 25XLB	31	72	82.8 102	59	45	7	62.4 81.6	16	14.8	12	25.5	7	7	12	4	3.9	B-M6F		5.5
NR 30B NR 30LB	38	90	98 120.5	72	52	9	70.9 93.4	18	16.8	14	31	7	7	12	5	3.9	B-M6F		7
NR 35B NR 35LB	44	100	109.5 135	82	62	9	77.9 103.4	20	18.8	16	35	8	8	12	6	5.2	B-M6F		9
NR 45B NR 45LB	52	120	139 171	100	80	11	105 137	22	20.5	20	40.5	10	8	16	7	5.2	B-PT1/8		11.5
NR 55B NR 55LB	63	140	162.8 200	116	95	14	123.6 160.8	24	22.5	22	49	11	10	16	8	5.2	B-PT1/8		14
NR 65B NR 65LB	75	170	185.6 245.6	142	110	16	143.6 203.6	28	26	25	60	16	15	16	9	8.2	B-PT1/8		15
NR 75B NR 75LB	83	195	218 274	165	130	18	170.2 226.2	30	28	26	68	18	17	16	9	8.2	B-PT1/8		15
NR 85B NR 85LB	90	215	246.7 302.8	185	140	18	194.9 251	34	32	28	73	20	20	16	10	8.2	B-PT1/8		17
NR 100B NR 100LB	105	260	288.8 328.8	220	150 200	20	223.4 263.4	38	35	32	85	23	23	10	12	8.2	B-PT1/4		20

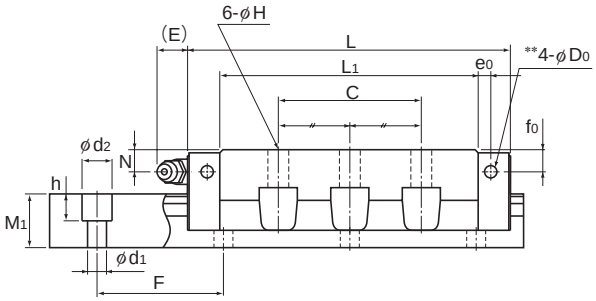
Model number coding

NR35 B 2 QZ DDHH C0 +1080L P T Z -II

- NR35: Model number
- B: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- DDHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1080L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
  - With plate cover or steel tape (*4)
- Z: With plate cover or steel tape (*4)
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Model NR-LB

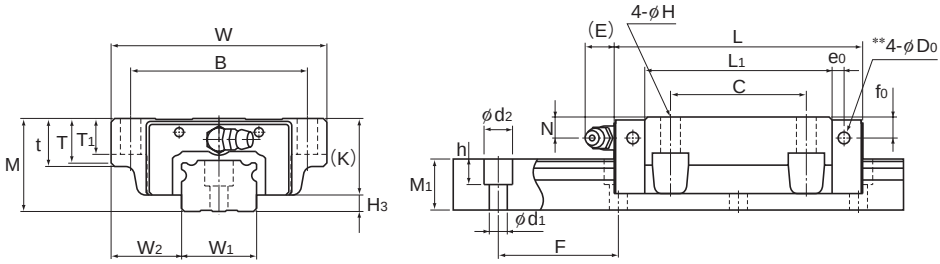
Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
Width W1 0 -0.05	W2	Height M1	Pitch F	d1×d2×h	Length* Max	C kN	C0 kN	MA 1 block	MA Double blocks	MB 1 block	MB Double blocks	MC 1 block	LM block kg	LM rail kg/m
25	23.5	17	40	6×9.5×8.5	3000	33 44	84.6 113	0.771 1.26	3.86 6.29	0.469 0.775	2.33 3.82	0.91 1.21	0.58 0.77	3.1
28	31	21	80	7×11×9	3000	48.7 64.9	122 162	1.26 2.18	6.63 10.6	0.778 1.33	4.05 6.47	1.47 1.95	1.1 1.4	4.3
34	33	24.5	80	9×14×12	3000	63.1 85.7	155 210	1.75 3.14	9.47 15.5	1.08 1.92	5.8 9.43	2.24 3.03	1.5 1.9	6.2
45	37.5	29	105	14×20×17	3000	96 126	231 303	3.37 5.93	17.7 28	2.07 3.59	10.8 16.9	4.45 5.82	2.7 3.5	9.8
53	43.5	36.5	120	16×23×20	3000	131 170	310 402	5.39 8.87	27.8 43.8	3.3 5.41	16.9 26.6	6.98 9.05	4.4 5.7	14.5
63	53.5	43	150	18×26×22	3000	189 260	436 600	8.76 16.8	44.7 79.9	5.39 10.1	27.3 48	11.6 15.9	7.6 10.9	20.3
75	60	44	150	22×32×26	3000	271 355	610 800	14.4 25.4	73.3 118	8.91 15.4	44.7 71.4	19.3 25.2	11.3 15	24.6
85	65	48	180	24×35×28	3000	336 435	751 972	20.3 34.7	102 160	12.4 21	62.6 96.2	26.8 34.6	16.2 20.7	30.5
100	80	57	210	26×39×32	3000	479 599	1040 1300	34 47.3	167 238	20.7 29.2	101 146	43.4 54.6	26.7 31.2	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models NRS-B and NRS-LB



Model NRS-B

Model No.	Outer dimensions			LM block dimensions														Grease nipple	
	Height	Width	Length																
	M	W	L	B	C	H	L_1	t	T	T_1	K	N	f_0	E	e_0	D_0			H_3
NRS 25XB NRS 25XLB	31	72	82.8 102	59	45	7	62.4 81.6	16	14.8	12	25.5	7	7	12	4	3.9	B-M6F		5.5
NRS 30B NRS 30LB	38	90	98 120.5	72	52	9	70.9 93.4	18	16.8	14	31	7	7	12	5	3.9	B-M6F		7
NRS 35B NRS 35LB	44	100	109.5 135	82	62	9	77.9 103.4	20	18.8	16	35	8	8	12	6	5.2	B-M6F		9
NRS 45B NRS 45LB	52	120	139 171	100	80	11	105 137	22	20.5	20	40.5	10	8	16	7	5.2	B-PT1/8		11.5
NRS 55B NRS 55LB	63	140	162.8 200	116	95	14	123.6 160.8	24	22.5	22	49	11	10	16	8	5.2	B-PT1/8		14
NRS 65B NRS 65LB	75	170	185.6 245.6	142	110	16	143.6 203.6	28	26	25	60	16	15	16	9	8.2	B-PT1/8		15
NRS 75B NRS 75LB	83	195	218 274	165	130	18	170.2 226.2	30	28	26	68	18	17	16	9	8.2	B-PT1/8		15
NRS 85B NRS 85LB	90	215	246.7 302.8	185	140	18	194.9 251	34	32	28	73	20	20	16	10	8.2	B-PT1/8		17
NRS 100B NRS 100LB	105	260	288.8 328.8	220	150 200	20	223.4 263.4	38	35	32	85	23	23	10	12	8.2	B-PT1/4		20

Model number coding

NRS45 B 2 QZ KKHH C0 +2040L P T Z -II

- NRS45: Model number
- B: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +2040L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
  - With plate cover or steel tape (*4)
- Z: Symbol for No. of rails used on the same plane (*5)
- -II

(*1) See contamination protection accessory on A-368. (*2) See A-113. (*3) See A-119.
(*4) Specify the plate cover or the steel tape. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

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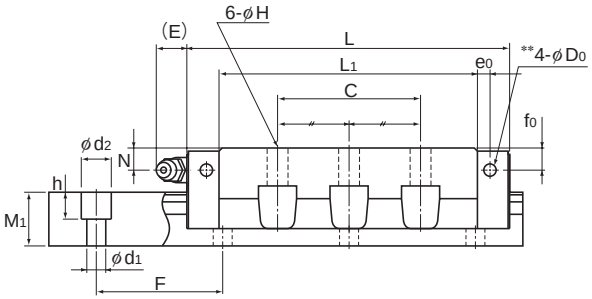


Model NRS-LB

Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
								MA		MB		MC		
Width W1 0 -0.05	W2	Height M1	Pitch F	d1×d2×h	Length* Max	C kN	C0 kN	1 block	Double blocks	1 block	Double blocks	1 block	LM block kg	LM rail kg/m
25	23.5	17	40	6×9.5×8.5	3000	25.9 34.5	59.8 79.7	0.568 0.926	2.84 4.6	0.568 0.926	2.84 4.6	0.633 0.846	0.58 0.77	3.1
28	31	21	80	7×11×9	3000	38.2 51	86.1 115	0.926 1.6	4.86 7.83	0.926 1.6	4.86 7.83	1.02 1.36	1.1 1.4	4.3
34	33	24.5	80	9×14×12	3000	49.5 67.2	109 148	1.28 2.29	6.92 11.3	1.28 2.29	6.92 11.3	1.54 2.09	1.5 1.9	6.2
45	37.5	29	105	14×20×17	3000	75.3 98.8	163 214	2.47 4.34	13 20.5	2.47 4.34	13 20.5	3.09 4.06	2.7 3.5	9.8
53	43.5	36.5	120	16×23×20	3000	103 133	220 284	3.97 6.49	20.5 32	3.97 6.49	20.5 32	4.86 6.28	4.4 5.7	14.5
63	53.5	43	150	18×26×22	3000	148 204	309 425	6.45 12.3	32.9 58.6	6.45 12.3	32.9 58.6	8.11 11.1	7.6 10.9	20.3
75	60	44	150	22×32×26	3000	212 278	431 566	10.6 18.6	53.8 87	10.6 18.6	53.8 87	13.4 17.6	11.3 15	24.6
85	65	48	180	24×35×28	3000	264 342	531 687	14.9 25.4	75.3 117	14.9 25.4	75.3 117	18.7 24.2	16.2 20.7	30.5
100	80	57	210	26×39×32	3000	376 470	737 920	25.1 34.6	123 174	25.1 34.6	123 174	30.4 38.1	26.7 31.2	42.6

Note) Pilot holes for side nipples** are not drilled through in order to prevent foreign material from entering the product. THK will mount grease nipples per your request. Therefore, do not use the side nipple pilot holes ** for purposes other than mounting a grease nipple.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-106.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of models NR/NRS variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

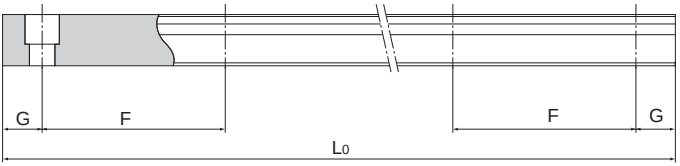
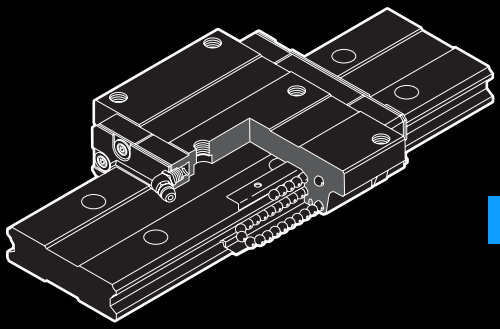


Table1 Standard Length and Maximum Length of the LM Rail for Models NR/NRS Unit: mm

Model No.	NR/NRS25X	NR/NRS30	NR/NRS35	NR/NRS45	NR/NRS55	NR/NRS65	NR/NRS75	NR/NRS85	NR/NRS100
LM rail standard length (L_0)	230 270 350 390 470 510 590 630 710 750 830 950 990 1070 1110 1190 1230 1310 1350 1430 1470 1550 1590 1710 1830 1950 2070 2190 2310 2430 2470	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940	1270 1570 2020 2620	1280 1580 2030 2630	1530 1890 2250 2610	1340 1760 2180 2600
Standard pitch F	40	80	80	105	120	150	150	180	210
G	15	20	20	22.5	30	35	40	45	40
Max length	3000	3000	3000	3000	3000	3000	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



HRW

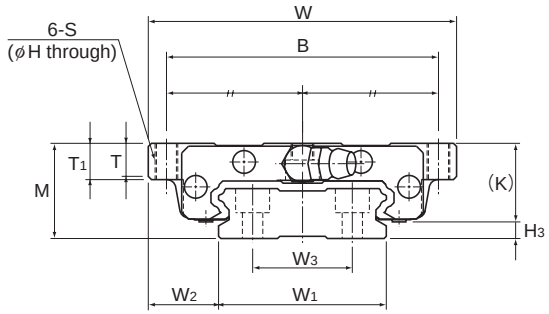
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models HRW-CA and HRW-CAM



Model No.	Outer dimensions			LM block dimensions											Grease nipple	H_3
	Height M	Width W	Length L	B	C	H	S	L_1	T	T_1	K	N	E			
HRW 17CA HRW 17CAM	17	60	50.8	53	26	3.3	M4	33.6	5.5	6	14.5	4	2	PB107	2.5
HRW 21CA HRW 21CAM	21	68	58.8	60	29	4.4	M5	40	7.3	8	18	4.5	12	B-M6F	3
HRW 27CA HRW 27CAM	27	80	72.8	70	40	5.3	M6	51.8	9.5	10	24	6	12	B-M6F	3
HRW 35CA HRW 35CAM	35	120	106.6	107	60	6.8	M8	77.6	13	14	31	8	12	B-M6F	4
HRW 50CA	50	162	140.5	144	80	8.6	M10	103.5	16.5	18	46.6	14	16	B-PT1/8	3.4
HRW 60CA	60	200	158.9	180	80	10.5	M12	117.5	23.5	25	53.5	15	16	B-PT1/8	6.5

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

Model number coding

HRW35 CA 2 UU C1 M +1000L P T M

- HRW35: Model number
- CA: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- M: Stainless steel LM block
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119.

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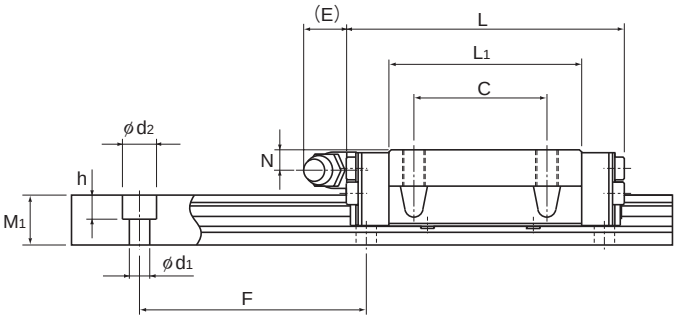


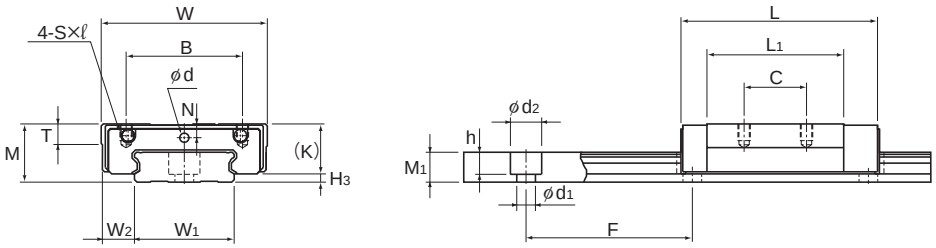
Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	33	13.5	18	9	40	4.5×7.5×5.3	1900 (800)	4.31	8.14	0.0417	0.244	0.0417	0.244	0.128	0.15	2.1
	37	15.5	22	11	50	4.5×7.5×5.3	1900 (1000)	6.18	11.5	0.0701	0.398	0.0701	0.398	0.194	0.25	2.9
	42	19	24	15	60	4.5×7.5×5.3	3000 (1200)	11.5	20.4	0.156	0.874	0.156	0.874	0.398	0.5	4.3
	69	25.5	40	19	80	7×11×9	3000	27.2	45.9	0.529	2.89	0.529	2.89	1.49	1.4	9.9
	90	36	60	24	80	9×14×12	3000	50.2	81.5	1.25	6.74	1.25	6.74	3.46	4	14.6
	120	40	80	31	105	11×17.5×14	3000	63.8	102	1.76	12.3	1.76	12.3	5.76	5.7	27.8

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-112.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HRW-CR, HRW-CRM and HRW-LRM



Models HRW12 and 14LRM

Model No.	Outer dimensions			LM block dimensions										
	Height	Width	Length									Greasing hole	Grease nipple	
	M	W	L	B	C	S×ℓ	L1	T	K	N	E	d		H3
HRW 12LRM	12	30	37	21	12	M3×3.5	27	4	10	2.8	—	2.2	—	2
HRW 14LRM	14	40	45.5	28	15	M3×4	32.9	5	12	3.3	—	2.2	—	2
HRW 17CR HRW 17CRM	17	50	50.8	29	15	M4×5	33.6	6	14.5	4	2	—	PB107	2.5
HRW 21CR HRW 21CRM	21	54	58.8	31	19	M5×6	40	8	18	4.5	12	—	B-M6F	3
HRW 27CR HRW 27CRM	27	62	72.8	46	32	M6×6	51.8	10	24	6	12	—	B-M6F	3
HRW 35CR HRW 35CRM	35	100	106.6	76	50	M8×8	77.6	14	31	8	12	—	B-M6F	4
HRW 50 CR	50	130	140.5	100	65	M10×15	103.5	18	46.6	14	16	—	B-PT1/8	3.4

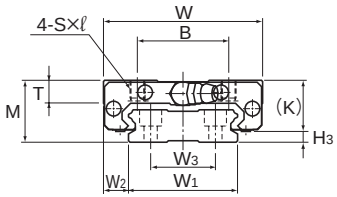
Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

Model number coding

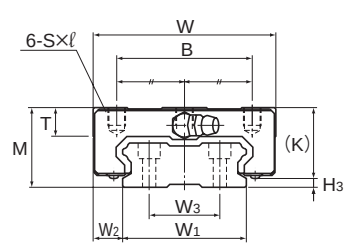
HRW27 CR 2 UU C1 M +820L P T M

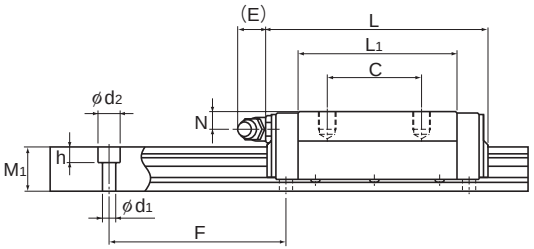
- HRW27: Model number
- CR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- M: Stainless steel LM block
- +820L: LM rail length (in mm)
- P: Symbol for LM rail jointed use — Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Stainless steel LM rail
- M: Stainless steel LM rail

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119.



Models HRW17 and 21CR/CRM





Models HRW27 to 50CR/CRM

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	18	6	—	6.5	40	4.5×8×4.5	(1000)	3.29	7.16	0.0262	0.138	0.013	0.069	0.051	0.045	0.79
	24	8	—	7.2	40	4.5×7.5×5.3	(1430)	5.38	11.4	0.0499	0.273	0.025	0.137	0.112	0.08	1.2
	33	8.5	18	9	40	4.5×7.5×5.3	1900 (800)	4.31	8.14	0.0417	0.244	0.0417	0.244	0.128	0.12	2.1
	37	8.5	22	11	50	4.5×7.5×5.3	1900 (1000)	6.18	11.5	0.0701	0.398	0.0701	0.398	0.194	0.19	2.9
	42	10	24	15	60	4.5×7.5×5.3	3000 (1200)	11.5	20.4	0.156	0.874	0.156	0.874	0.398	0.37	4.3
	69	15.5	40	19	80	7×11×9	3000	27.2	45.9	0.529	2.89	0.529	2.89	1.49	1.2	9.9
	90	20	60	24	80	9×14×12	3000	50.2	81.5	1.25	6.74	1.25	6.74	3.46	3.2	14.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-112.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HRW variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

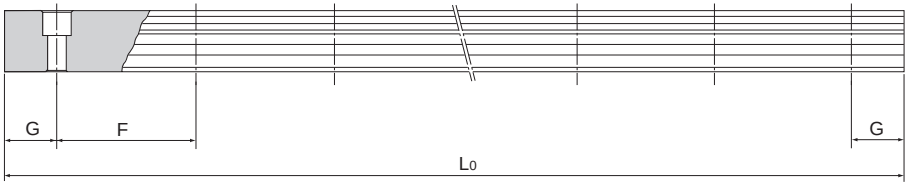
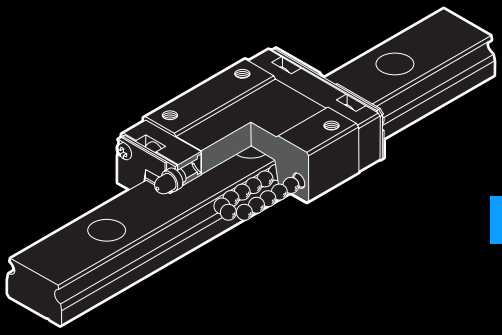


Table1 Standard Length and Maximum Length of the LM Rail for Model HRW Unit: mm

Model No.	HRW 12	HRW 14	HRW 17	HRW 21	HRW 27	HRW 35	HRW 50	HRW 60
LM rail standard length (L_o)	70 110 150 190 230 270 310 390 470	70 110 150 190 230 270 310 390 470 550 670	110 190 310 470 550	130 230 380 480 580 780	160 280 340 460 640 820	280 440 760 1000 1240 1560	280 440 760 1000 1240 1640 2040	570 885 1200 1620 2040 2460
Standard pitch F	40	40	40	50	60	80	80	105
G	15	15	15	15	20	20	20	22.5
Max length	(1000)	(1430)	1900 (800)	1900 (1000)	3000 (1200)	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) The figures in the parentheses indicate the maximum lengths of stainless steel made models.



RSR/RSR-W

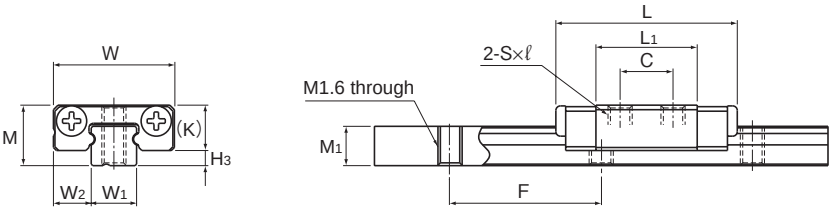
LM Guide

B Product Specifications

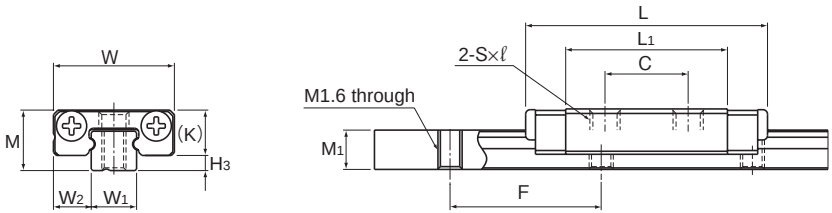
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models RSR-M and RSR-N



Model RSR3M



Model RSR3N

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSR 3M RSR 3N	4	8	12 16	—	3.5 5.5	M1.6×1.3 M2×1.3	6.7 10.7	—	3	—	—	—	—	1
RSR 5M RSR 5N	6	12	16.9 20.1	8 —	— 7	M2×1.5 M2.6×1.8	8.8 12	—	4.5	0.8	—	0.8	—	1.5

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.
Models RSR3M and 3N do not have an oil hole. When lubricating them, apply a lubricant directly to the LM rail raceways.
To secure the LM rail of models RSR5M and 5N, use cross-recessed head screws for precision equipment (No. 0 pan head screw, class 1) M2.

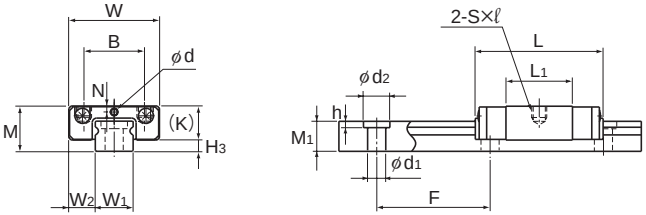
Model number coding

2 RSR5 M UU C1 +130L P M -Ⅱ

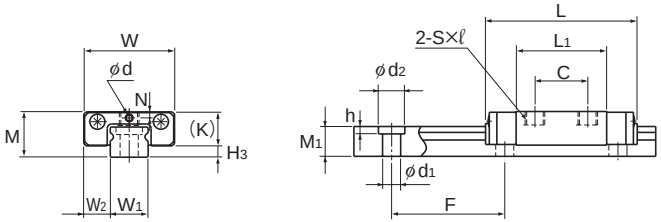
- 2: No. of LM blocks used on the same rail
- RSR5 M: Model number
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +130L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)
- M: Stainless steel LM rail
- -Ⅱ: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model RSR5M



Model RSR5N

Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	3 $^{0}_{-0.02}$	2.5	2.6	10	—	200	0.18 0.3	0.27 0.44	0.293 0.726	2.11 4.33	0.293 0.726	2.11 4.33	0.45 0.73		0.0011 0.0016	0.055
	5 $^{0}_{-0.02}$	3.5	4	15	2.4×3.5×1	200	0.32 0.55	0.59 0.96	0.884 1.84	6.51 11.9	0.884 1.84	6.51 11.9	1.53 2.49		0.003 0.004	0.14

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-120.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

● Recommended tightening torque when mounting the LM rail/block

Table1 shows recommended bolt tightening torques when mounting the LM block and LM rail of models RSR3M/3N.

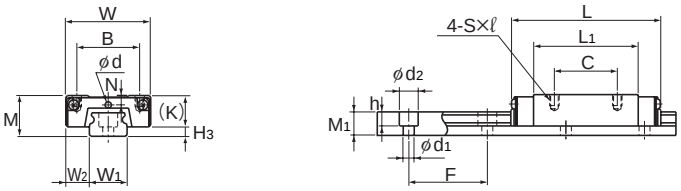
Table1 Recommended Tightening Torques of Mounting Bolts

Model No. of screw	Recommended tightening torque (N-m)
M1.6	0.09
M2	0.19

Note) Applicable to austenite stainless steel hexagonal-socket-head type bolts.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models RSR-M, RSR-KM, RSR-VM and RSR-N



Models RSR7 to 12N/7M/9KM/12VM

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSR 7M RSR 7N	8	17	23.4 33	12	8 13	M2×2.5	13.4 23	—	6.5	1.7	—	1.2	—	1.5
RSR 9KM RSR 9N	10	20	30.8 41	15	10 16	M3×3	19.8 29.8	—	7.8	2.4	—	1.5	—	2.2
RSR 12VM RSR 12N	13	27	35 47.7	20	15 20	M3×3.5	20.6 33.3	—	10	3	—	2	—	3
RSR 15VM RSR 15N	16	32	43 61	25	20 25	M3×4	25.7 43.5	—	12	3.5	3.6 3.7	—	PB107	4
RSR 20VM RSR 20N	25	46	66.5 86.3	38	38	M4×6	45.2 65	5.7	17.5	5	6.4	—	A-M6F	7.5

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

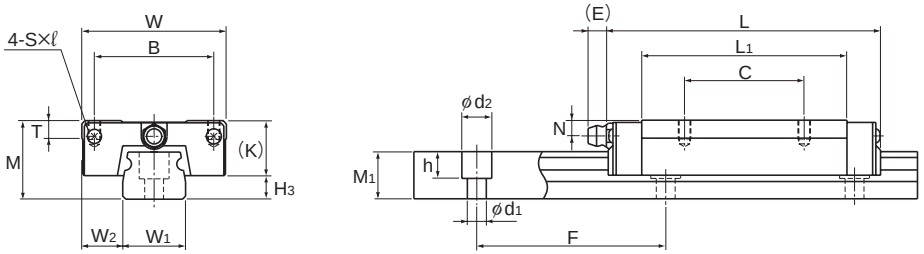
Model number coding

2 RSR15V M UU C1 +230L P M -II

- 2 — No. of LM blocks used on the same rail
- RSR15V — Model number
- M — Stainless steel LM rail
- UU — Contamination protection accessory symbol (*1)
- C1 — Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +230L — LM rail length (in mm)
- P — Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)
- -II — Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Models RSR15 and 20VM/N

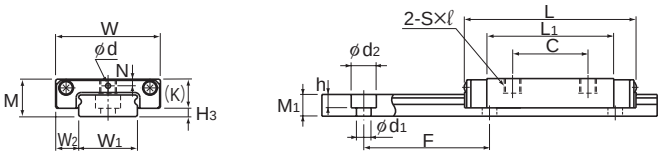
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	7 $^{0}_{-0.02}$	5	4.7	15	2.4×4.2×2.3	300	0.88 1.59	1.37 2.5	2.93 8.68	20.8 49.9	2.93 8.68	20.8 49.9	5 9.12	0.013 0.018	0.23
	9 $^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000	1.47 2.6	2.25 3.96	7.34 18.4	43.3 97	7.34 18.4	43.3 97	10.4 18.4	0.018 0.027	0.32
	12 $^{0}_{-0.025}$	7.5	7.5	25	3.5×6×4.5	1340	2.65 4.3	4.02 6.65	11.4 28.9	74.9 163	10.1 25.5	67.7 145	19.2 31.8	0.037 0.055	0.58
	15 $^{0}_{-0.025}$	8.5	9.5	40	3.5×6×4.5	1430	4.41 7.16	6.57 10.7	23.7 63.1	149 330	21.1 55.6	135 293	38.8 63	0.069 0.093	0.925
	20 $^{0}_{-0.03}$	13	15	60	6×9.5×8.5	1800	8.82 14.2	12.7 20.6	75.4 171	435 897	66.7 151	389 795	96.6 157	0.245 0.337	1.95

Note) The maximum length under “Length*” indicates the standard maximum length of an LM rail. (See B-120.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models RSR-WM (WV), RSR-WVM and RSR-WN



Models RSR3 to 7WM/WN

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
✻ RSR 3WM ✻ RSR 3WN	4.5	12	14.9 19.9	—	4.5 8	M2×1.7	8.5 13.3	—	3.5	0.8	—	0.8	—	1
✻ RSR 5WM ✻ RSR 5WN	6.5	17	22.1 28.1	—	6.5 11	M3×2.3	13.7 19.7	—	5	1.1	—	0.8	—	1.5
✻ RSR 7WM ✻ RSR 7WN	9	25	31 40.9	—	12 18	M4×3.5	20.4 30.3	—	7	1.6	—	1.2	—	2
RSR 9WV ✻ RSR 9WVM ✻ RSR 9WN	12	30	39 39 50.7	21 21 23	12 12 24	M2.6×3 M2.6×3 M3×3	27 27 38.7	—	7.8	2	—	1.6	—	4.2
RSR 12WV ✻ RSR 12WVM ✻ RSR 12WN	14	40	44.5 44.5 59.5	28	15 15 28	M3×3.5	30.9 30.9 45.9	4.5	10	3	—	2	—	4
RSR 14WV	15	50	50	35	18	M4×4.5	34.3	6	11.5	3	4	—	PB107	3.5
RSR 15WV ✻ RSR 15WVM ✻ RSR 15WN	16	60	55.5 55.5 74.5	45	20 20 35	M4×4.5	38.9 38.9 57.9	5.6	12	3.5	3	—	PB107	4

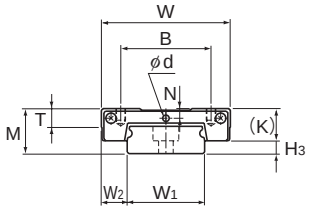
Note) ✻ indicates that since stainless steel is used in the LM block, LM rail and balls, these models are highly resistance to corrosion and environment.
To secure the LM rail of models RSR3WM and 3WN, use cross-recessed head screws for precision equipment (No. 0 pan head screw, class 1) M2.

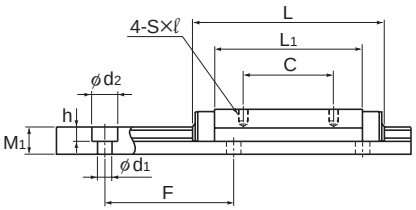
Model number coding

2 RSR12WV M UU C1 +310L H M

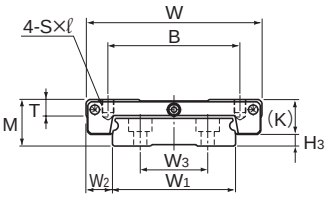
- 2: No. of LM blocks used on the same rail
- RSR12WV: Model number
- M: Contamination protection accessory symbol (*1)
- UU: Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1)
- C1: Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1)
- +310L: LM rail length (in mm)
- H: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)
- M: Stainless steel LM rail

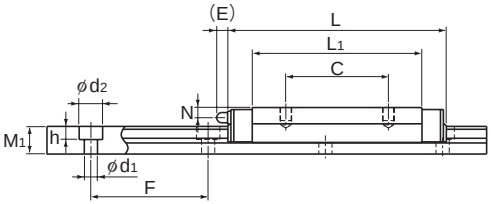
(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126.





Models RSR9 and 12WV/WVM/WN





Models RSR14WV and 15WV/WVM/WN

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment N-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	6 $^{0}_{-0.02}$	3	—	2.6	15	2.4×4×1.5	100	0.25 0.39	0.47 0.75	0.668 1.57	4.44 9.06	0.668 1.57	4.44 9.06	1.48 2.36	0.002 0.003	0.12
	10 $^{0}_{-0.025}$	3.5	—	4	20	3×5.5×3	200	0.51 0.75	0.96 1.4	1.97 4.06	13.1 23.5	1.97 4.06	13.1 23.5	4.89 7.13	0.007 0.01	0.28
	14 $^{0}_{-0.05}$	5.5	—	5.2	30	3.5×6×3.2	400	1.37 2.04	2.16 3.21	7.02 14.7	40.7 77.6	7.02 14.7	40.7 77.6	15.4 22.9	0.021 0.026	0.51
	18 $^{0}_{-0.05}$	6	—	7.5	30	3.5×6×4.5	1000	2.45 2.45 3.52	3.92 3.92 5.37	16 16 31	92.9 92.9 161	16 16 31	92.9 92.9 161	36 36 49.4	0.035 0.035 0.051	1.08
	24 $^{0}_{-0.05}$	8	—	8.5	40	4.5×8×4.5	1430	4.02 4.02 5.96	6.08 6.08 9.21	24.5 24.5 53.9	138 138 274	21.7 21.7 47.3	123 123 242	59.5 59.5 90.1	0.075 0.075 0.101	1.5
	30 $^{0}_{-0.05}$	5	—	9	40	4.5×7.5×5.3	1800	6.01	9.08	43.2	233	38.2	208	110	0.096	2
	42 $^{0}_{-0.05}$	9	23	9.5	40	4.5×8×4.5	1800	6.66 6.66 9.91	9.8 9.8 14.9	50.3 50.3 110	278 278 555	44.4 44.4 97.3	248 248 490	168 168 255	0.17 0.17 0.21	3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-120.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table2 shows the standard lengths and the maximum lengths of model RSR variations.

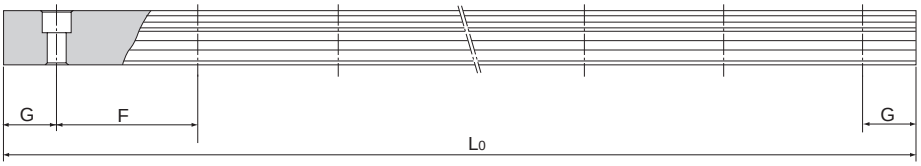
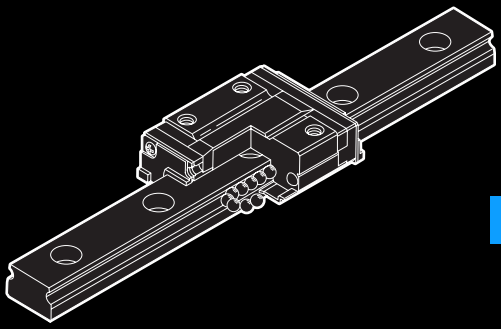


Table2 Standard Length and Maximum Length of the LM Rail for Model RSR/RSR-W Unit: mm

Model No.	RSR 3	RSR 5	RSR 7	RSR 9	RSR 12	RSR 15	RSR 20	RSR 3W	RSR 5W	RSR 7W	RSR 9W	RSR 12W	RSR 14W	RSR 15W
LM rail standard length (L_o)	30 40 60 80 100	40 55 70 100 130 160	40 55 70 85 100 130	55 75 95 115 135 155 175 195 275 375	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 350 390 430 470 550 670 870	220 280 340 460 640 880 1000	40 55 70	50 70 90 110 130 150 170	50 80 110 140 170 200 260 290	50 80 110 140 170 200 260 290 320	70 110 150 190 230 270 310 390 470 550	110 150 190 230 270 310 430 550 670 790	110 150 190 230 270 310 430 550 670 790
Standard pitch F	10	15	15	20	25	40	60	15	20	30	30	40	40	40
G	5	5	5	7.5	10	15	20	5	5	10	10	15	15	15
Max length	200	200	300	1000	1340	1430	1800	100	200	400	1000	1430	1800	1800

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) The LM rail mounting hole of model RSR3 is an M1.6 through hole.



RSR-Z

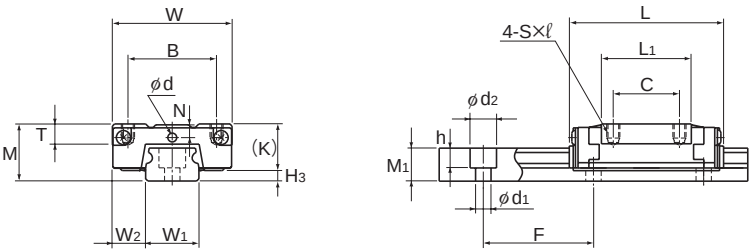
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model RSR-ZM



Models RSR7 to 12ZM

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSR 7ZM	8	17	23.4	12	8	M2×2.5	13.2	3.4	6.5	1.6	—	1.5	—	1.5
RSR 9ZM	10	20	30.8	15	10	M3×2.7	19.4	4.6	7.8	2.4	—	1.6	—	2.2
RSR 12ZM	13	27	35	20	15	M3×3.2	20.4	4.5	10.6	3.1	—	2	—	2.4
RSR 15ZM	16	32	43	25	20	M3×3.5	26.5	5.5	12.6	2.9	3.6	—	PB107	3.4

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

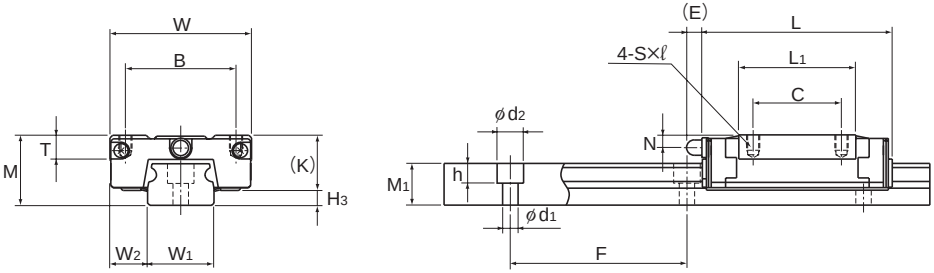
Model number coding

2 RSR15Z M UU C1 +230L P M -II

- 2: No. of LM blocks used on the same rail
- RSR15Z: Model number
- M: Stainless steel LM rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +230L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model RSR15ZM

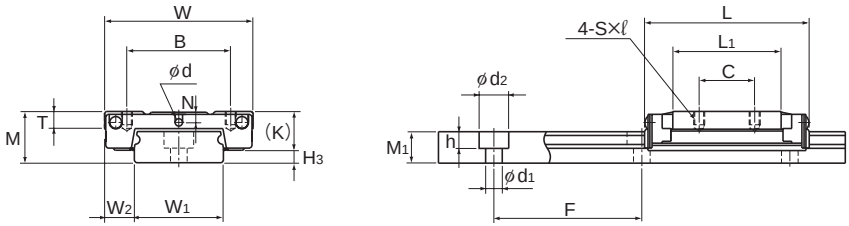
Unit: mm

LM rail dimensions							Basic load rating		Static permissible moment N-m*						Mass	
Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
7 $^{0}_{-0.02}$	5	4.7	15	2.4×4.2×2.3	300	0.88	1.37	2.93	20.7	2.93	20.7	5		0.008	0.23
9 $^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000	1.47	2.25	7.34	43	7.34	43	10.4		0.014	0.32
12 $^{0}_{-0.025}$	7.5	7.5	25	3.5×6×4.5	1340	2.65	4.02	11.4	74.9	10.1	67.7	19.2		0.028	0.58
15 $^{0}_{-0.025}$	8.5	9.5	40	3.5×6×4.5	1430	4.41	6.57	23.7	149	21.1	135	38.8		0.05	0.925

Note) The maximum length under “Length*” indicates the standard maximum length of an LM rail. (See B-126.)
Static permissible moment*: 1 block: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model RSR-WZM



Models RSR7 to 12WZM

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSR 7WZM	9	25	31.5	19	10	M3×2.5	19.7	3.4	7	1.8	—	1.6	—	2
RSR 9WZM	12	30	39	21	12	M3×2.8	27	3.9	9.1	2.3	—	1.6	—	2.9
RSR 12WZM	14	40	44.5	28	15	M3×3.6	29.3	4.5	10.6	3	—	2	—	3.4
RSR 15WZM	16	60	55.5	45	20	M4×4.5	39.3	5.4	12.6	3	3.6	—	PB107	3.4

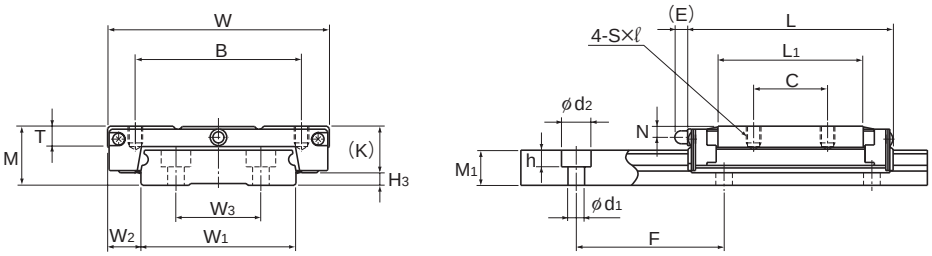
Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

Model number coding

2 RSR12WZ M SS C1 +390L H M

- 2: No. of LM blocks used on the same rail
- RSR12WZ: Model number
- M: Contamination protection accessory symbol (*1)
- SS: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +390L: LM rail length (in mm)
- H: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P)
- M: Stainless steel LM rail

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126.



Model RSR15WZM

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment N-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	14 $^{0}_{-0.05}$	5.5	—	5.2	30	3.5×6×3.2	400	1.37	2.16	6.54	42.1	6.54	42.1	15.4	0.018	0.51
	18 $^{0}_{-0.05}$	6	—	7.5	30	3.5×6×4.5	1000	2.45	3.92	16	92.9	16	92.9	36	0.03	1.08
	24 $^{0}_{-0.05}$	8	—	8.5	40	4.5×8×4.5	1430	4.02	6.08	24.5	138	21.7	123	59.5	0.06	1.5
	42 $^{0}_{-0.05}$	9	23	9.5	40	4.5×8×4.5	1800	6.66	9.8	50.3	278	44.4	248	168	0.135	3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-126.)
Static permissible moment*: 1 block: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model RSR-Z/WZ variations.

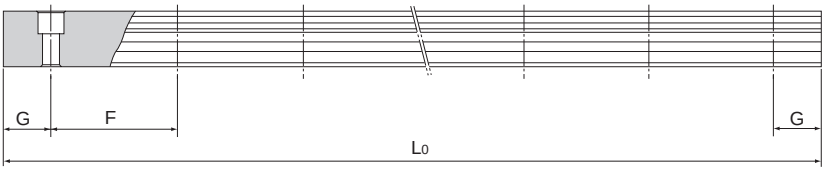
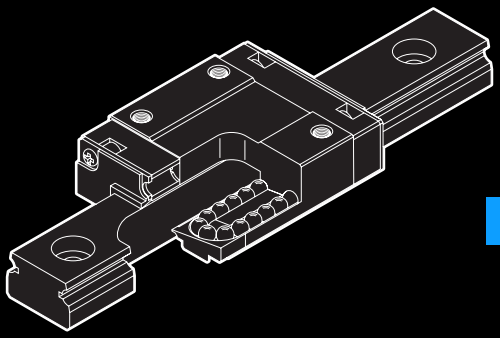


Table1 Standard Length and Maximum Length of the LM Rail for Model RSR-Z/WZ Unit: mm

Model No.	RSR 7Z	RSR 9Z	RSR 12Z	RSR 15Z	RSR 7WZ	RSR 9WZ	RSR 12WZ	RSR 15WZ
LM rail standard length (L_0)	40 55 70 85 100 130	55 75 95 115 135 155 175 195 275 375	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 350 390 430 470 550 670 870	50 80 110 140 170 200 260 290	50 80 110 140 170 200 260 290 320	70 110 150 190 230 270 310 390 470 550	110 150 190 230 270 310 430 550 670 790
Standard pitch F	15	20	25	40	30	30	40	40
G	5	7.5	10	15	10	10	15	15
Max length	300	1000	1340	1430	400	1000	1430	1800

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) The LM rails of these models are all made of stainless steel.



RSH

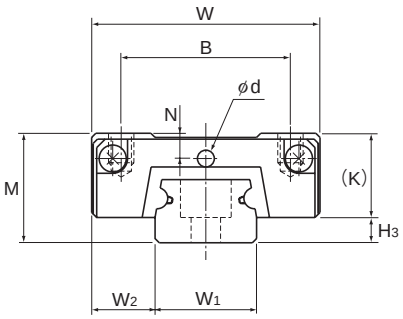
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models RSH-M, RSH-KM and RSH-VM



Model No.	Outer dimensions			LM block dimensions							
	Height	Width	Length							Greasing hole	
	M	W	L	B	C	S×ℓ	L_1	K	N	d	H_3
RSH 7M	8	17	23.4	12	8	M2×2.5	13.4	6.5	1.7	1.2	1.5
RSH 9KM	10	20	30.8	15	10	M3×3	19.8	7.8	2.4	1.5	2.2
RSH 12VM	13	27	35	20	15	M3×3.5	20.6	10	3	2	3

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

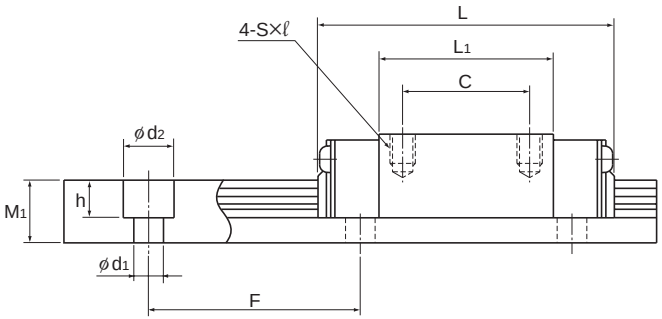
Model number coding

2 RSH9K M UU C1 +100L P M -II

- 2: No. of LM blocks used on the same rail
- RSH9K: Model number
- M: Contamination protection accessory symbol (*1)
- UU: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1)
- +100L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol), High accuracy grade (H), Precision grade (P)
- M: Stainless steel LM rail
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	$7\ {}^{0}_{-0.02}$	5	4.7	15	2.4×4.2×2.3	300	0.88	1.37	2.93	20.8	2.93	20.8	5	0.01	0.23
	$9\ {}^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000	1.47	2.25	7.34	43.3	7.34	43.3	10.4	0.018	0.32
	$12\ {}^{0}_{-0.025}$	7.5	7.5	25	3.5×6×4.5	1340	2.65	4.02	11.4	74.9	10.1	67.7	19.2	0.037	0.58

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-130.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model RSH variations.

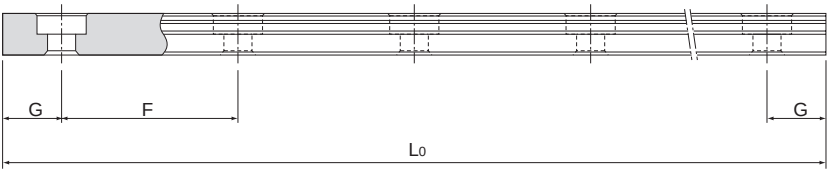
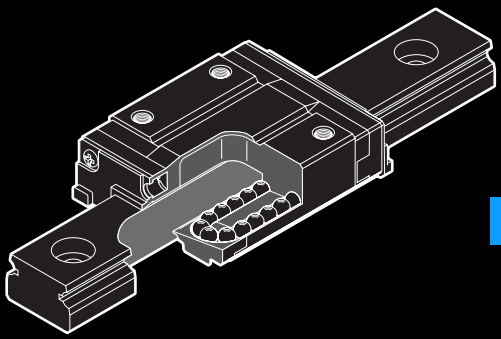


Table1 Standard Length and Maximum Length of the LM Rail for Model RSH Unit: mm

Model No.	RSH 7	RSH 9	RSH 12
LM rail standard length (L_0)	40 55 70 85 100 130	55 75 95 115 135 155 175 195 275 375	70 95 120 145 170 195 220 245 270 320 370 470 570
Standard pitch F	15	20	25
G	5	7.5	10
Max length	300	1000	1340

Note) The maximum length varies with accuracy grades. Contact THK for details.



RSH-Z

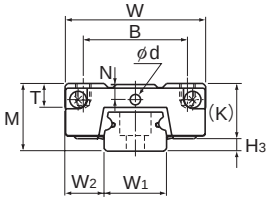
LM Guide

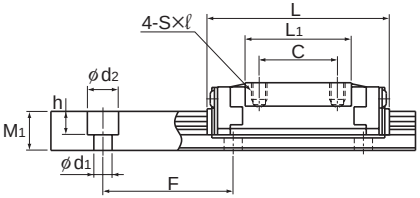
B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model RSH-ZM





Models RSH7 to 12ZM

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSH 7ZM	8	17	23.4	12	8	M2×2.5	13.2	3.4	6.5	1.6	—	1.5	—	1.5
RSH 9ZM	10	20	30.8	15	10	M3×2.8	19.4	4.6	7.8	2.4	—	1.6	—	2.2
RSH 12ZM	13	27	35	20	15	M3×3.2	20.4	4.5	10.6	3.1	—	2	—	2.4
RSH 15ZM	16	32	43	25	20	M3×3.5	26.5	5.5	12.6	2.9	3.6	—	PB107	3.4

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

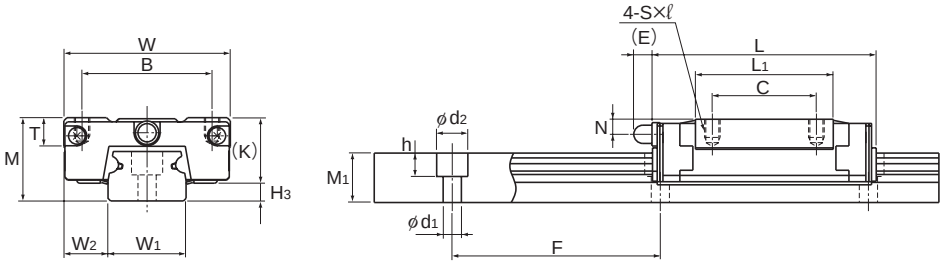
Model number coding

2 RSH15Z M UU C1 +230L P M -II

- 2: No. of LM blocks used on the same rail
- RSH15Z: Model number
- M: Stainless steel LM rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +230L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P)
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model RSH15ZM

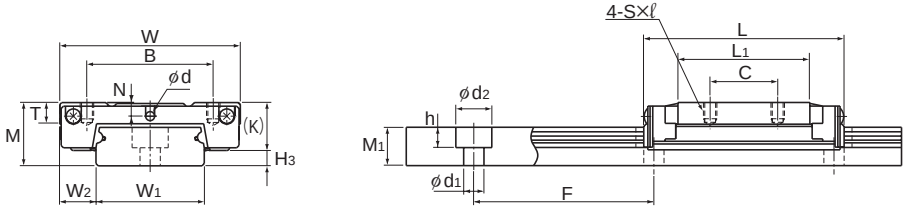
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	7 $^{0}_{-0.02}$	5	4.7	15	2.4×4.2×2.3	300	0.88	1.37	2.93	20.7	2.93	20.7	5	0.008	0.23
	9 $^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000	1.47	2.25	7.34	43	7.34	43	10.4	0.014	0.32
	12 $^{0}_{-0.025}$	7.5	7.5	25	3.5×6×4.5	1340	2.65	4.02	11.4	74.9	10.1	67.7	19.2	0.028	0.58
	15 $^{0}_{-0.025}$	8.5	9.5	40	3.5×6×4.5	1430	4.41	6.57	23.7	149	21.1	135	38.8	0.05	0.925

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-136.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model RSH-WZM



Models RSH7 to 12WZM

Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSH 7WZM	9	25	31.5	19	10	M3×2.5	19.7	3.4	7	1.8	—	1.5	—	2
RSH 9WZM	12	30	39	21	12	M3×2.8	27	3.9	9.1	2.3	—	1.6	—	2.9
RSH 12WZM	14	40	44.5	28	15	M3×3.6	29.3	4.5	10.6	3	—	2	—	3.4
RSH 15WZM	16	60	55.5	45	20	M4×4.5	39.3	5.4	12.6	3	3.6	—	PB107	3.4

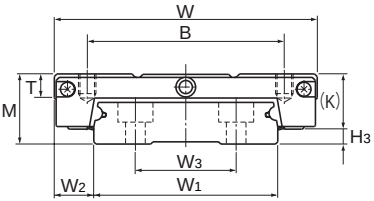
Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

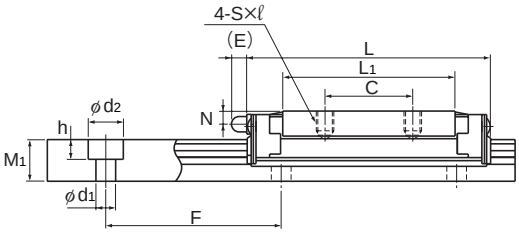
Model number coding

2 RSH9WZ M SS C1 +170L P M

- 2: No. of LM blocks used on the same rail
- RSH9WZ: Model number
- M: Contamination protection accessory symbol (*1)
- SS: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1)
- +170L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol) High accuracy grade (H) Precision grade (P)
- M: Stainless steel LM rail

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126.





Model RSH15WZM

Unit: mm

LM rail dimensions								Basic load rating		Static permissible moment N-m*						Mass	
Width				Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
W_1		W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
14	0 −0.05	5.5	—	5.2	30	3.5×6×3.2	400	1.37	2.16	6.54	42.1	6.54	42.1	15.4		0.018	0.51
18	0 −0.05	6	—	7.5	30	3.5×6×4.5	1000	2.45	3.92	16	92.9	16	92.9	36		0.03	1.08
24	0 −0.05	8	—	8.5	40	4.5×8×4.5	1430	4.02	6.08	24.5	138	21.7	123	59.5		0.06	1.5
42	0 −0.05	9	23	9.5	40	4.5×8×4.5	1800	6.66	9.8	50.3	278	44.4	248	168		0.135	3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-136.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model RSH-Z/WZ variations.

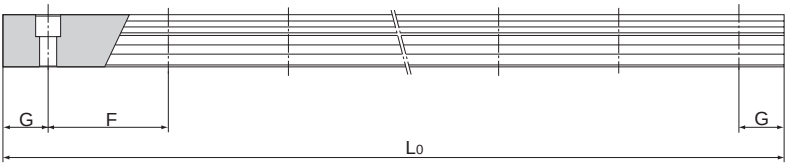
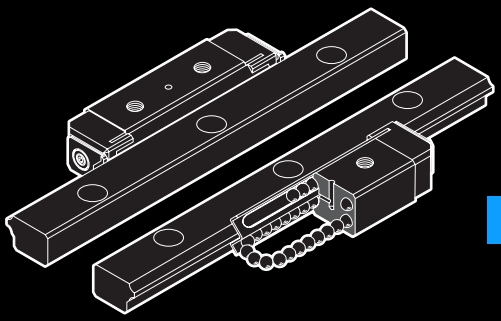


Table1 Standard Length and Maximum Length of the LM Rail for Model RSH-Z/WZ Unit: mm

Model No.	RSH 7Z	RSH 9Z	RSH 12Z	RSH 15Z	RSH 7WZ	RSH 9WZ	RSH 12WZ	RSH 15WZ
LM rail standard length (L_0)	40 55 70 85 100 130	55 75 95 115 135 155 175 195 275 375	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 350 390 430 470 550 670 870	50 80 110 140 170 200 260 290	50 80 110 140 170 200 260 290 320	70 110 150 190 230 270 310 390 470 550	110 150 190 230 270 310 430 550 670 790
Standard pitch F	15	20	25	40	30	30	40	40
G	5	7.5	10	15	10	10	15	15
Max length	300	1000	1340	1430	400	1000	1430	1800

Note) The maximum length varies with accuracy grades. Contact THK for details.



HR

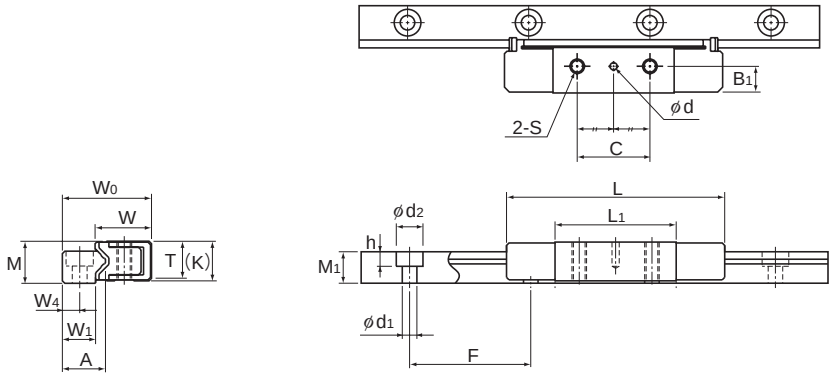
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models HR, HR-T, HR-M and HR-TM



Models HR918 and 918M

Model No.	Outer dimensions				LM block dimensions									
	Height	Width		Length									Greasing hole	
	M	W	W_0	L	B_1	C	H	S	h_2	L_1	T	K	d	D_1
HR 918 HR 918M	8.5	11.4	18	45	5.5	15	—	M3	—	25	7.5	8	1.5	—
HR 1123 HR 1123M	11	13.7	23	52	7	15	2.55	M3	3	30	9.5	10	2	5
HR 1530 HR 1530M	15	19.2	30	69	10	20	3.3	M4	3.5	40	13	14	2	6.5
HR 2042 HR 2042M	20	26.3	42	91.6	13	35	5.3	M6	5.5	56.6	17.5	19	3	10
HR 2042T HR 2042TM	20	26.3	42	110.7	13	50	5.3	M6	5.5	75.7	17.5	19	3	10
HR 2555 HR 2555M	25	33.3	55	121	16	45	6.8	M8	7	80	22.5	24	3	11
HR 2555T HR 2555TM	25	33.3	55	146.4	16	72	6.8	M8	7	105.4	22.5	24	3	11

Note) Symbol M indicates that stainless steel is used in the LM block, LM rail and balls. Those models marked with this symbol are therefore highly resistant to corrosion and environment.

Model number coding

2 HR2555 UU M +1000L P T M

- 2: No. of LM blocks used on the same rail
- HR2555: Model number
- UU: Contamination protection accessory symbol (*1)
- M: Stainless steel LM block
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*2) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- M: Stainless steel LM rail

(*1) See contamination protection accessory on A-368. (*2) See A-123.

Note) One set of model HR means a combination of two LM rails and an LM blocks used on the same plane.

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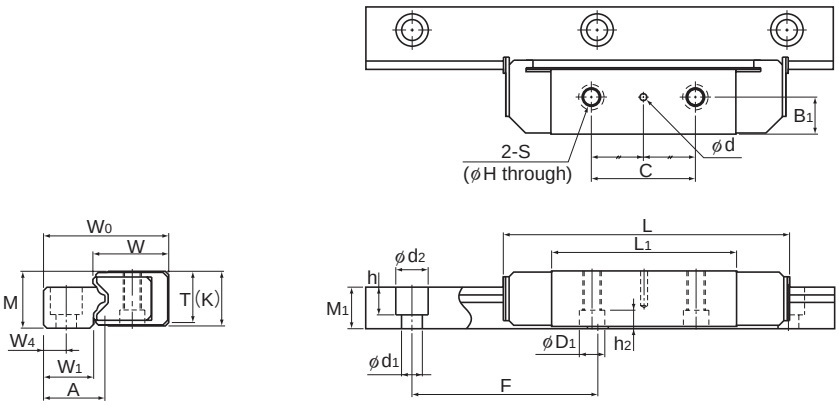


Models HR1123 to 2555M/T/TM

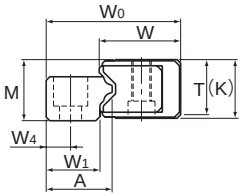
Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*				Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		LM block	LM rail
	W_1	W_4	A	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	kg	kg/m
	6.7	3.5	8.7	6.5	25	3×5.5×3	300	1.57	3.04	0.0229	0.17	0.0229	0.17	0.01	0.3
	9.5	5	11.6	8	40	3.5×6×4.5	500	2.35	4.31	0.0414	0.272	0.0414	0.272	0.03	0.5
	10.7	6	13.5	11	60	3.5×6×4.5	1600	4.31	7.65	0.0982	0.641	0.0982	0.641	0.08	1
	15.6	8	19.5	14.5	60	6×9.5×8.5	2200	9.9	17.2	0.308	1.91	0.308	1.91	0.13	1.8
	15.6	8	19.5	14.5	60	6×9.5×8.5	2200	13.6	22.9	0.53	2.99	0.53	2.99	0.26	1.8
	22	10	27	18	80	9×14×12	2600	18.6	30.5	0.783	4.41	0.783	4.41	0.43	3.2
	22	10	27	18	80	9×14×12	2600	25.1	40.8	1.33	6.95	1.33	6.95	0.5	3.2

Note) A moment in the direction M_C can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction M_C is omitted here.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-142.)
Static permissible moment*: Static permissible moment value with one set of model HR

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HR, HR-T, HR-M and HR-TM



Model No.	Outer dimensions				LM block dimensions									
	Height	Width		Length									Greasing hole	
	M	W	W_0	L	B_1	C	H	S	h_2	L_1	T	K	d	D_1
HR 3065 HR 3065T	30	40.3	65	145 173.5	19	50 80	8.6	M10	9	90 118.5	27.5	29	4	14
HR 3575 HR 3575T	35	44.9	75	154.8 182.5	21.5	60 92.5	10.5	M12	12	103.8 131.5	32	34	4	18
HR 4085 HR 4085T	40	50.4	85	177.8 215.9	24	70 110	12.5	M14	13	120.8 158.9	36	38	4	20
HR 50105 HR 50105T	50	63.4	105	227 274.5	30	85 130	14.5	M16	15.5	150 197.5	45	48	5	23
HR 60125	60	74.4	125	329	35	160	18	M20	18	236	55	58	5	26

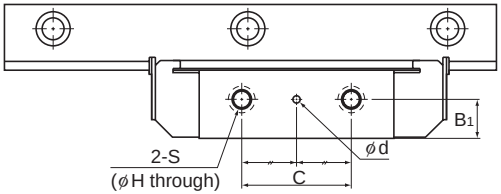
Model number coding

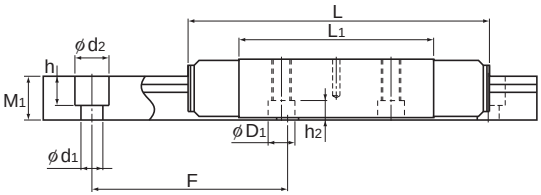
2 HR4085T UU +1500L P T

- 2: No. of LM blocks used on the same rail
- HR4085T: Model number
- UU: Contamination protection accessory symbol (*1)
- +1500L: LM rail length (in mm)
- P: Accuracy symbol (*2)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use

(*1) See contamination protection accessory on A-368. (*2) See A-123.

Note) One set of model HR means a combination of two LM rails and an LM blocks used on the same plane.





Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*				Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		LM block	LM rail
	W_1	W_4	A	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	kg	kg/m
	25	12	31.5	22.5	80	9×14×12	3000	24.2 32.1	38.6 51.6	1.11 1.89	6.72 10.4	1.11 1.89	6.72 10.4	0.7 0.9	4.6
	30.5	14.5	37	26	105	11×17.5×14	3000	30 40.2	47.8 63.6	1.53 2.59	8.84 13.5	1.53 2.59	8.84 13.5	1.05 1.4	6.4
	35	16	42.5	29	120	14×20×17	3000	44.1 59.5	68.6 91.7	2.64 4.48	14.4 23	2.64 4.48	14.4 23	1.53 1.7	8
	42	20	51.5	37	150	18×26×22	3000	70.7 96	107 143	5.15 8.74	28.9 45.7	5.15 8.74	28.9 45.7	3.06 3.5	12.1
	51	25	65	45	180	22×32×25	3000	141	206	14.3	79.6	14.3	79.6	7.5	19.3

Note) A moment in the direction M_C can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction M_C is omitted here.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-142.)
Static permissible moment*: Static permissible moment value with one set of model HR

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

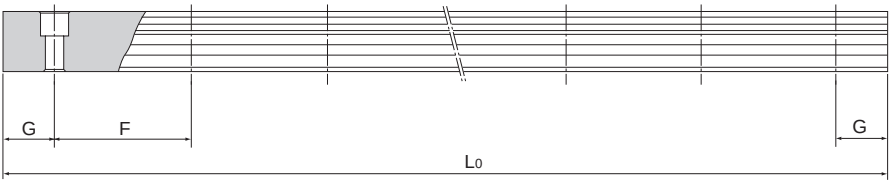


Table1 Standard Length and Maximum Length of the LM Rail for Model HR Unit: mm

Model No.	HR 918	HR 1123	HR 1530	HR 2042	HR 2555	HR 3065	HR 3575	HR 4085	HR 50105	HR 60125
LM rail standard length (L_0)	70 120 220 295	110 230 310 390	160 280 340 460 580	220 280 340 460 640	280 440 600 760 1000 1240	280 440 600 760 1000 1240	570 885 1200 1620 2040 2460	780 1020 1260 1500 1980 2580	1270 1570 2020 2620	1530 1890 2250 2610
Standard pitch F	25	40	60	60	80	80	105	120	150	180
G	10	15	20	20	20	20	22.5	30	35	45
Max length	300	500	1600	2200	2600	3000	3000	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

Accessories

[Dedicated Mounting Bolt]

Normally, when mounting the LM block to adjust a clearance, use the tapped hole provided on the LM block to secure it as shown in Fig.1.

The holes of the bolt (d_1 and D_1) must be machined so that they are greater by the adjustment allowance.

If it is inevitable to use the mounting method as indicated by Fig.2 for a structural reason, the dedicated mounting bolt as shown in Fig.3 is required for securing the LM block. Be sure to specify that the dedicated mounting bolt is required when ordering the LM Guide.

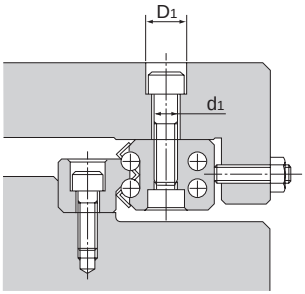


Fig.1

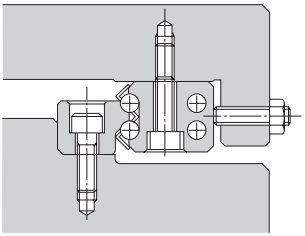


Fig.2

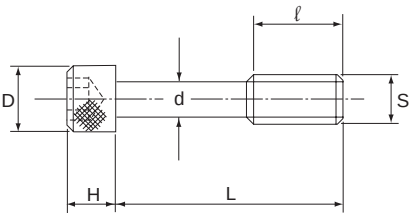
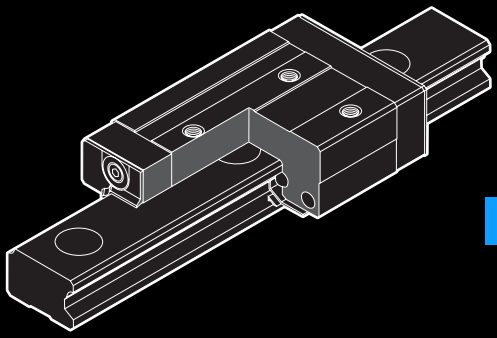


Fig.3

Table2 Dedicated Mounting Bolt Unit: mm

Model No.	S	d	D	H	L	ℓ	Supported model number
B 3	M3	2.4	5.5	3	17	5	HR 1530
B 5	M5	4.1	8.5	5	22	7	HR 2042
B 6	M6	4.9	10	6	28	9	HR 2555
B 8	M8	6.6	13	8	34	12	HR 3065
B 10	M10	8.3	16	10	39	15	HR 3575
B 12	M12	10.1	18	12	45	18	HR 4085
B 14	M14	11.8	21	14	55	21	HR 50105
B 16	M16	13.8	24	16	66	24	HR 60125



GSR

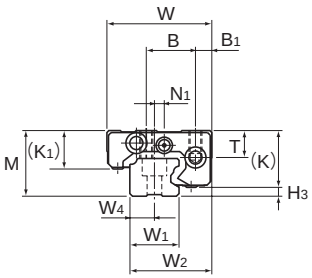
LM Guide

B Product Specifications

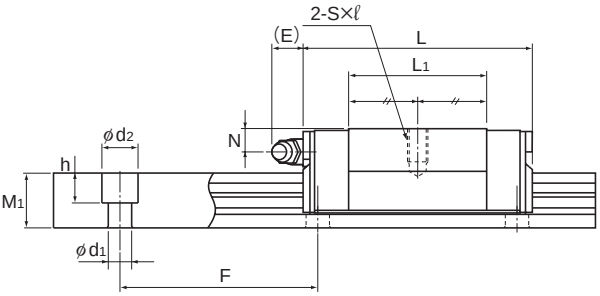
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models GSR-T and GSR-V



Model GSR15T/V



Models GSR15 to 25V

Model No.	Outer dimensions			LM block dimensions												H3
	Height M	Width W	Length L	B1	B	C	S×ℓ	L1	T	K	K1	N	N1	E	Grease nipple	
GSR 15T GSR 15V	20	32	59.8 47.1	5	15	26 —	M4×7	40.2 27.5	8.25	17.5	12	4.5	3	5.5	PB107	8
GSR 20T GSR 20V	24	43	74 58.1	7	20	30 —	M5×8	50.2 34.3	9.7	20.6	13.6	5	—	12	B-M6F	10.4
GSR 25T GSR 25V	30	50	88 69	7	23	40 —	M6×10	60.2 41.2	12.7	25.5	16.8	7	—	12	B-M6F	13.2
GSR 30T	33	57	103	8	26	45	M8×12	70.3	14.6	28.5	18	7	—	12	B-M6F	15
GSR 35T	38	68	117	9	32	50	M8×15	80.3	15.6	32.5	20.5	8	—	12	B-M6F	17.5

Model number coding

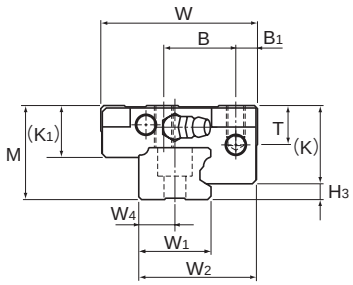
Combination of LM rail and LM block

GSR25 T 2 UU +1060L H T K

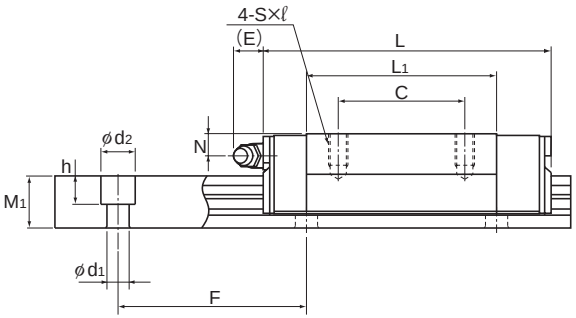
- GSR25: Model number
- T: Type of LM block
- 2: No. of LM blocks
- UU: Contamination protection accessory symbol (*1)
- +1060L: LM rail length (in mm)
- H: Accuracy symbol (*2) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)
- T: Symbol for LM rail jointed use
- K: Symbol for tapped-hole LM rail type

(*1) See contamination protection accessory on A-368. (*2) See A-124.

Note) One set of model GSR: This model number indicates that a single-rail unit constitutes one set.



Models GSR20 to 35T, Models GSR20V and 25V



Models GSR15 to 35T

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*				Mass	
	Width			Height	Pitch		Length*	C	C0	MA		MB		LM block	LM rail
	W1	W2	W4	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	kg	kg/m
	15	25	7.5	11.5	60	4.5×7.5×5.3	2000	5.69 4.31	8.43 5.59	0.0525 0.0252	0.292 0.158	0.0452 0.0218	0.252 0.136	0.13 0.08	1.2
	20	33	10	13	60	6×9.5×8.5	3000	9.22 7.01	13.2 8.82	0.102 0.0498	0.564 0.307	0.0885 0.0431	0.486 0.265	0.25 0.17	1.8
	23	38	11.5	16.5	60	7×11×9	3000	13.5 10.29	19 12.65	0.177 0.0858	0.965 0.522	0.152 0.0742	0.831 0.451	0.5 0.29	2.6
	28	44.5	14	19	80	9×14×12	3000	18.8	25.9	0.282	1.54	0.243	1.32	0.6	3.6
	34	54	17	22	80	11×17.5×14	3000	25.1	33.8	0.421	2.28	0.362	1.96	1	5

Note) A moment in the direction MC can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction MC is omitted here.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-148.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

LM block

GSR25 T UU

- GSR25: Model number
- T: Type of LM block
- UU: Contamination protection accessory symbol (*1)

LM rail

GSR25 -1060L H K

- GSR25: Model number
- -1060L: LM rail length (in mm)
- H: Symbol for tapped-hole LM rail type
- K: Accuracy symbol (*2)
  Normal grade (No Symbol)
  High accuracy grade (H)
  Precision grade (P)

(*1) See contamination protection accessory on A-368. (*2) See A-124.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model GSR variations.
In case the required quantity is large and the lengths are not the same, we recommend preparing an LM rail of the maximum length in stock. This is economical since it allows you to cut the rail to the desired length as necessary.

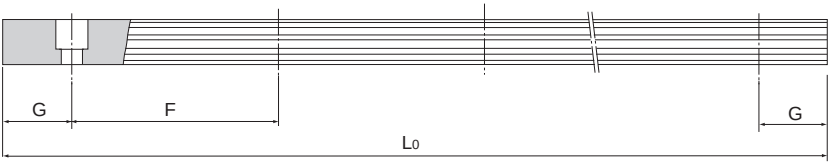


Table1 Standard Length and Maximum Length of the LM Rail for Model GSR Unit: mm

Model No.	GSR 15	GSR 20	GSR 25	GSR 30	GSR 35
LM rail standard length (L_0)	460 820 1060 1600	460 820 1060 1600	460 820 1060 1600	1240 1720 2200 3000	1240 1720 2200 3000
Standard pitch F	60	60	60	80	80
G	20	20	20	20	20
Max length	2000	3000	3000	3000	3000

Note) The maximum length varies with accuracy grades. Contact THK for details.

Tapped-hole LM Rail Type of Model GSR

- Since the bottom of the LM rail has a tapped hole, this model can easily be installed on an H-shape steel and channel.
- Since the top face of the LM rail has no mounting hole, the sealabilitiy is increased and entrance of foreign material (e.g., cutting chips) can be prevented.

(1) Determine the bolt length so that a clearance of 2 to 3 mm is secured between the bolt end and the bottom of the tap (effective tap depth).
(2) As shown in Fig.1, a tapered washer is also available that allows GSR to be mounted on a section steel.
(3) For model number coding, see B-146 to B-147.

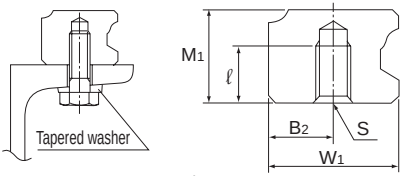
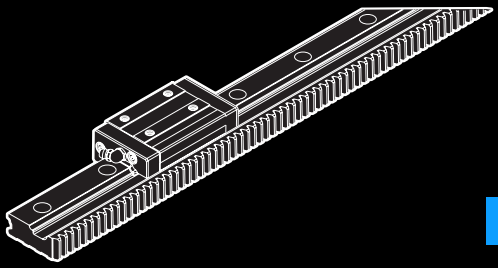


Fig.1

Table2 Tap Position and Depth Shape

Model No.	W_1	B_2	M_1	S×ℓ
GSR 15	15	7.5	11.5	M4×7
GSR 20	20	10	13	M5×8
GSR 25	23	11.5	16.5	M6×10
GSR 30	28	14	19	M8×12
GSR 35	34	17	22	M10×14



GSR-R

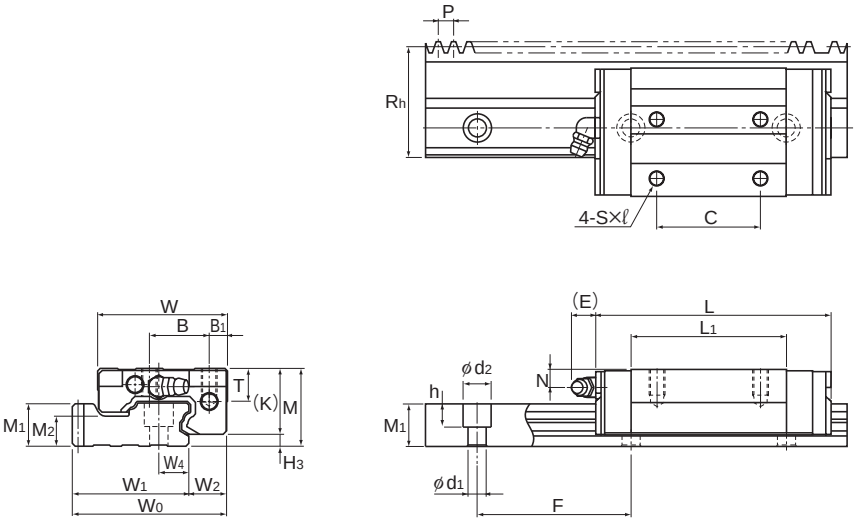
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical

Model GSR-R



Model GSR-T-R

Model No.	Rack			Outer dimensions				LM block dimensions										H3
	Reference pitch dimension P	Module	Pitch line height Rh	Height M	Width W	W0	Length L	B1	B	C	S×ℓ	L1	T	K	N	E	Grease nipple	
GSR 25T-R GSR 25V-R	6	1.91	43	30	50	59.91	88 69	7	23	40 —	M6×10	60.2 41.2	12.7	25.5	7	12	B-M6F	4.5
GSR 30T-R	8	2.55	48	33	57	67.05	103	8	26	45	M8×12	70.3	14.6	28.5	7	12	B-M6F	4.5
GSR 35T-R	10	3.18	57	38	68	80.18	117	9	32	50	M8×15	80.3	15.6	32.5	8	12	B-M6F	5.5

Note) A special type with a module pitch is also available. Contact THK for details.
For checking the pinion strength, see A-241.

Model number coding

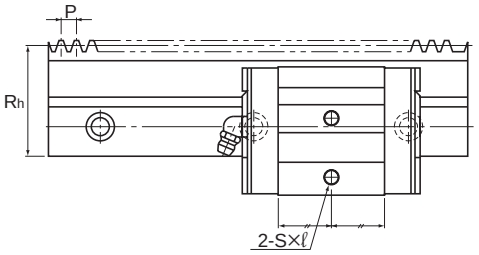
Single-rail LM Guide

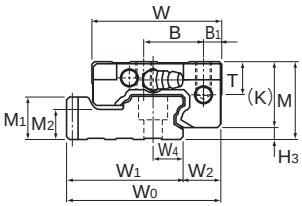
GSR25T 2 UU +5000L H R T

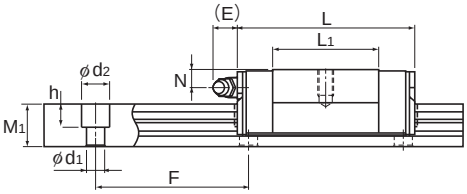
- GSR25T: Model number
- 2: No. of LM blocks
- UU: Contamination protection accessory symbol (*1)
- +5000L: LM rail length (in mm)
- H: Accuracy symbol (*2) Normal grade (No Symbol)/High accuracy grade (H)
- R: Symbol for rail with rack type R: Symbol for rail with rack type
- T: Symbol for LM rail jointed use

(*1) See contamination protection accessory on A-368. (*2) See A-125.

Note) This model number indicates that a single-rail unit constitutes one set.







Model GSR25V-R

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment N-m*				Mass	
	Width			Height	Pitch			C	C_0	M_A		M_B		LM block	LM rail
	W_1	W_2	W_4	M_1	F	M_2	$d_1 \times d_2 \times h$	kN	kN	1 block	Double blocks	1 block	Double blocks	kg	kg/m
	44.91	15	11.5	16.5	60	11.5	7×11×9	13.5 10.29	19 12.65	0.177 0.0858	0.965 0.522	0.152 0.0742	0.831 0.451	0.5 0.29	4.7
	50.55	16.5	14	19	80	12	9×14×12	18.8	25.9	0.282	1.54	0.243	1.32	0.6	5.9
	60.18	20	17	22	80	14.5	11×17.5×14	25.1	33.8	0.421	2.28	0.362	1.96	1	8.1

Note) A moment in the direction M_C can be received if two rails are used in parallel. However, since it depends on the distance between the two rails, the moment in the direction M_C is omitted here.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-152.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Model number coding

LM block

GSR25T UU

- GSR25T: Model number
- UU: Contamination protection accessory symbol (*1)

Rail with rack

GSR25-2004L H R

- R: Symbol for rail with rack type
- H: Accuracy symbol (*2)
  Normal grade (No Symbol)
  High accuracy grade (H)

(*1) See contamination protection accessory on A-368. (*2) See A-125.

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length of the LM Rail

Table1 shows the standard LM rail lengths of model GSR-R variations.
Since both end faces of the LM rail of model GSR-R are machined, it can be joined with another rail without additional machining.

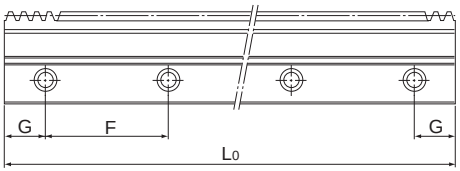
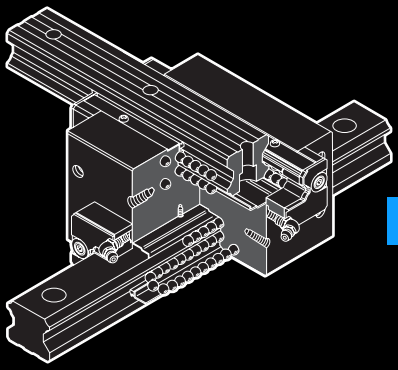


Table1 Standard Length of the LM Rail for Model GSR-R Unit: mm

Model No.	GSR 25-R		GSR 30-R		GSR 35-R	
LM rail Standard length (L_0)	1500	2004	1504	2000	1500	2000
Standard pitch F	60	60	80	80	80	80
G	30	42	32	40	30	40



CSR

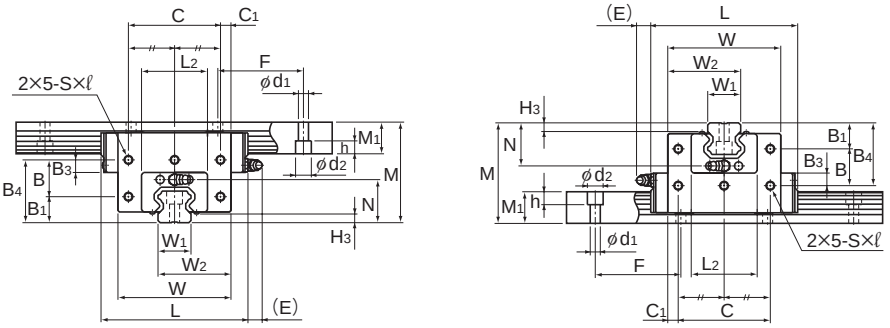
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model CSR



Models CSR20 to 45

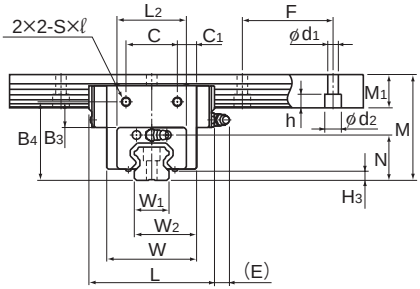
Model No.	Outer dimensions			LM block dimensions													H3
	Height M	Width W	Length L	B1	B3	B4	B	C	C1	S×ℓ	L2	H3	N	E	Grease nipple		
CSR 15	47	38.8	56.6	—	11.3	34.8	—	20	9.4	M4×6	32	3.5	19.5	5.5	PB1021B		3.5
CSR 20S CSR 20	57	50.8 66.8	74 90	— 13	13.3 7.8	42.5 37	— 24	30 56	10.4 5.4	M5×8	42	4	25	12	B-M6F		4
CSR 25S CSR 25	70	59.5 78.6	83.1 102.2	— 18	17 9	52 44	— 26	34 64	12.75 7.3	M6×10	46	5.5	30	12	B-M6F		5.5
CSR 30S CSR 30	82	70.4 93	98 120.6	— 21	20 12	61 53	— 32	40 76	15.2 8.5	M6×10	58	7	35	12	B-M6F		7
CSR 35	95	105.8	134.8	24	14	61	37	90	7.9	M8×14	68	7.5	40	12	B-M6F		7.5
CSR 45	118	129.8	170.8	30	16	75	45	110	9.9	M10×15	84	10	50	16	B-PT1/8		10

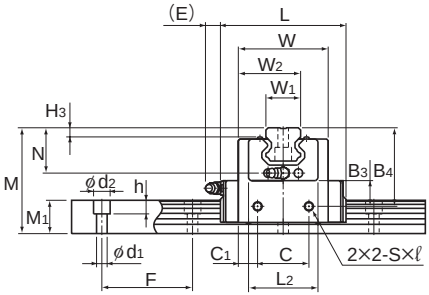
Model number coding

4 CSR25 UU C0 +1200/1000L P

- 4 — Total No. of LM blocks
- CSR25 — Model number
- UU — Contamination protection accessory symbol (*1)
- C0 — Radial clearance symbol (*2) Normal (No symbol)/Light preload (C1) Medium preload (C0)
- +1200/1000L — LM rail length on the X axis (in mm) / LM rail length on the Y axis (in mm)
- P — Accuracy symbol (*3) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-122.



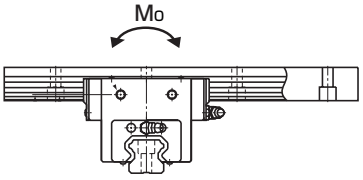


Models CSR15, 20S to 30S

Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment	Mass	
	Width W_1 ±0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	M_0 kN-m	LM block kg	LM rail kg/m
	15	26.9	15	60	4.5×7.5×5.3	2500	8.33	13.5	0.0805	0.34	1.5
	20	35.4 43.4	18	60	6×9.5×8.5	3000	13.8 21.3	23.8 31.8	0.19 0.27	0.73 1.3	2.3
	23	41.25 50.8	22	60	7×11×9	3000	19.9 27.2	34.4 45.9	0.307 0.459	1.2 2.2	3.3
	28	49.2 60.5	26	80	9×14×12	3000	28 37.3	46.8 62.5	0.524 0.751	2 3.6	4.8
	34	69.9	29	80	9×14×12	3000	50.2	81.5	1.2	5.3	6.6
	45	87.4	38	105	14×20×17	3090	80.4	127.5	2.43	9.8	11

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-156.)



Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model CSR variations.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

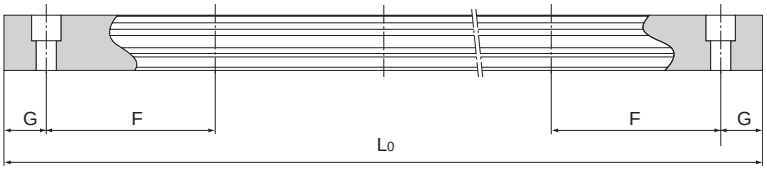


Table1 Standard Length and Maximum Length of the LM Rail for Model CSR Unit: mm

Model No.	CSR 15	CSR 20	CSR 25	CSR 30	CSR 35	CSR 45
LM rail standard length (L_o)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090
Standard pitch F	60	60	60	80	80	105
G	20	20	20	20	20	22.5
Max length	2500	3000	3000	3000	3000	3090

Note) The maximum length varies with accuracy grades. Contact THK for details.

Tapped-hole LM Rail Type of Model CSR

The model CSR variations include a type with its LM rail bottom tapped. With the X-axis LM rail having tapped holes, this model can be secured with bolts from the top.

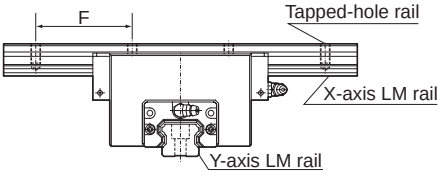


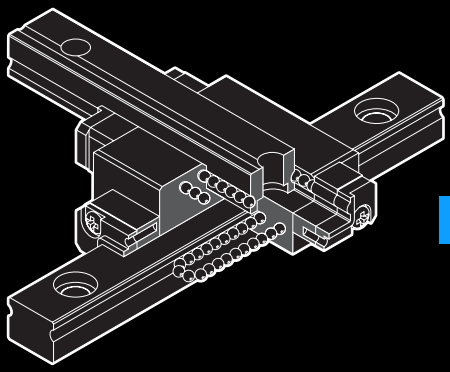
Table2 Dimensions of the LM Rail Tap Unit: mm

Model No.	S_1	Effective tap depth ℓ_1
15	M5	8
20	M6	10
25	M6	12
30	M8	15
35	M8	17
45	M12	24

Model number coding

4 CSR25 UU C0 +1200L P K/1000L P

Symbol for
tapped-hole LM rail type



MX

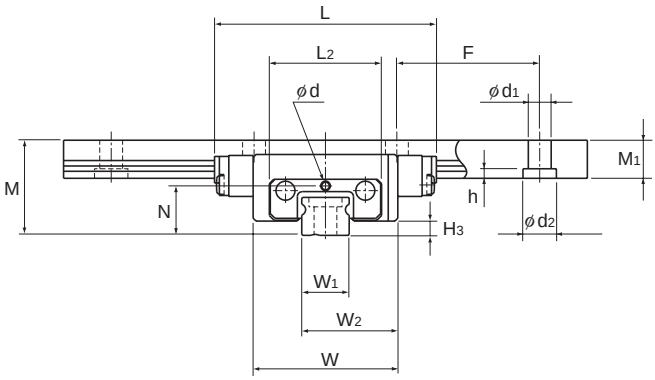
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model MX



Model No.	Outer dimensions			LM block dimensions			
	Height M	Width W	Length L	L_2	N	Greasing hole d	H_3
MX 5M	10	15.2	23.3	11.8	5.2	0.8	1.5
MX 7WM	14.5	30.2	40.8	24.6	7.4	1.2	2

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.

Model number coding

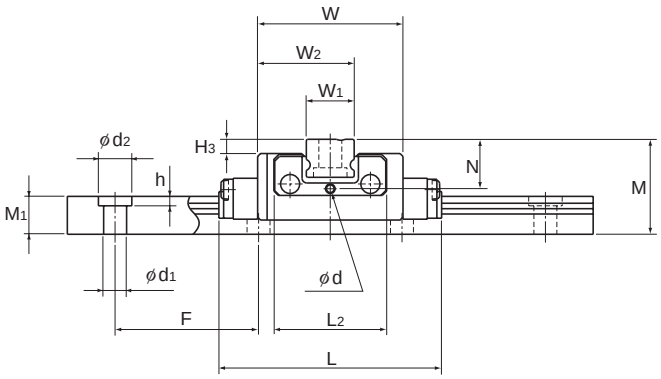
4 MX7W M UU C1 +120 / 100L P T M

- 4 — Total No. of LM blocks
- MX7W M — Model number
- UU — Contamination protection accessory symbol (*1)
- C1 — Radial clearance symbol (*2): Normal (No symbol), Light preload (C1)
- +120 — LM rail length on the X axis (in mm)
- 100L — LM rail length on the Y axis (in mm)
- P — Accuracy symbol (*3): Normal grade (No Symbol)/Precision grade (P)
- T — Symbol for LM rail jointed use
- M — LM rail is made of stainless steel

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-127.

Note) If the LM rail mount of a semi-standard model is of a tapped-hole LM rail type, add symbol "K" after the accuracy symbol.

Example: 4 MX7W M UU C1+120/100L P K T M
Add symbol K

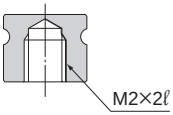


Unit: mm

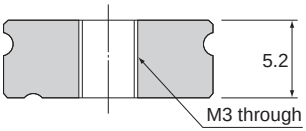
	LM rail dimensions						Basic load rating		Static Permissible Moment* N-m	Mass	
	Width W_1	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	M_0	LM block kg	LM rail kg/m
	$5\ ^{0}_{-0.02}$	10.1	4	15	2.4×3.5×1	200	0.59	1.1	2.57	0.01	0.14
	$14\ ^{0}_{-0.025}$	22.1	5.2	30	3.5×6×3.2	400	2.04	3.21	14.7	0.051	0.51

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-162.)
Static permissible moment*: static permissible moment value with 1 LM block

For the LM rail mounting hole, a tapped-hole LM rail type is available as semi-standard.



Model MX5M



Model MX7WM

When mounting the LM rail of model MX7WM, take into account the thread length of the mounting bolt in order not to let the bolt end stick out of the top face of the LM rail.

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model MX variations.

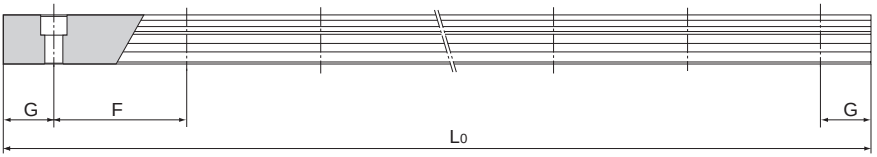
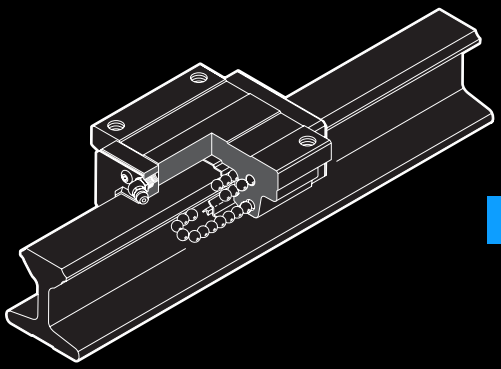


Table1 Standard Length and Maximum Length of the LM Rail for Model MX Unit: mm

Model No.	MX 5	MX 7W
LM rail standard length (L_0)	40 55 70 100 130 160	50 80 110 140 170 200 260 290
Standard pitch F	15	30
G	5	10
Max length	200	400

Note) The maximum length varies with accuracy grades. Contact THK for details.



JR

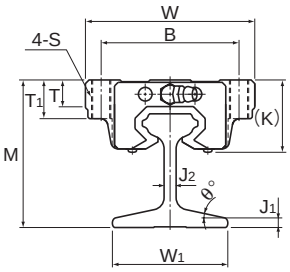
LM Guide

B Product Specifications

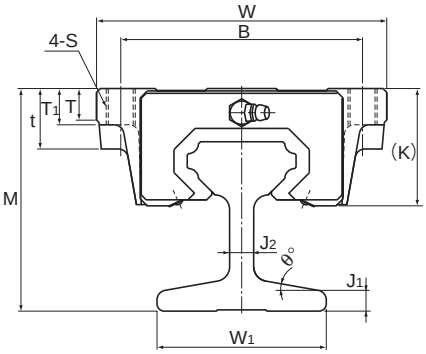
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models JR-A, JR-B and JR-R



Models JR25 and 35-A



Models JR45 and 55-A

Model No.	Outer dimensions			LM block dimensions											
	Height M	Width W	Length L	B	C	H	S×ℓ	L1	t	T	T1	K	N	E	Grease nipple
JR 25A	61	70		57	45	—	M8*		—	11	16	30.5	6		
JR 25B	61	70	83.1	57	45	7	—	59.5	16	11	10	30.5	6	12	B-M6F
JR 25R	65	48		35	35	—	M6×8		—	9	—	34.5	10		
JR 35A	73	100		82	62	—	M10*		—	12	21	40	8		
JR 35B	73	100	113.6	82	62	9	—	80.4	21	12	13	40	8	12	B-M6F
JR 35R	80	70		50	50	—	M8×12		—	11.7	—	47.4	15		
JR 45A	92	120		100	80	—	M12*		25	13	15	50	10		
JR 45B	92	120	145	100	80	11	—	98	25	13	15	50	10	16	B-PT1/8
JR 45R	102	86		60	60	—	M10×17		—	15	—	59.4	20		
JR 55A	114	140		116	95	—	M14*		29	13.5	17	57	11		
JR 55B	114	140	165	116	95	14	—	118	29	13.5	17	57	11	16	B-PT1/8
JR 55R	124	100		75	75	—	M12×18		—	20.5	—	67	21		

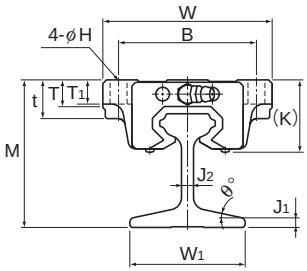
Note) "*" indicates a through hole.

Model number coding

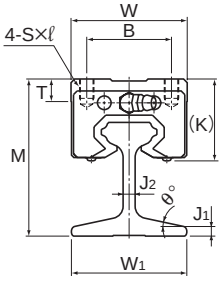
JR35 R 2 UU +1000L T

- JR35 — Model number
- R — Type of LM block
- 2 — No. of LM blocks used on the same rail
- UU — Contamination protection accessory symbol (*1)
- +1000L — LM rail length (in mm)
- T — Symbol for LM rail jointed use

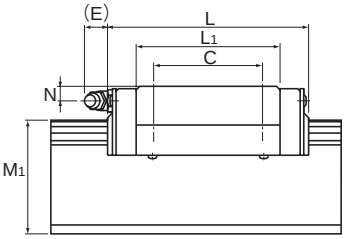
(*1) See contamination protection accessory on A-368.



Model JR-B



Model JR-R



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width				Height	Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	J_1	J_2	θ°	M_1	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	48	4	5	12	47	2000	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59 0.59 0.54	4.2
	54	7	8	10	54	4000	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6 1.6 1.5	8.6
	70	8	10	10	70	4000	60	95.6	1.42	7.92	1.42	7.92	1.83	2.8 2.8 2.6	15.2
	93	4.8	11.6	12	90	4000	88.5	137	2.45	13.2	2.45	13.2	3.2	4.5 4.5 4.3	18.3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-166.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model JR variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.

Table1 Standard Length and Maximum Length of the LM Rail for Model JR Unit: mm

Model No.	JR 25	JR 35	JR 45	JR 55
LM rail standard length (L_0)	1000 1500 2000	1000 2000 4000	1000 2000 4000	1000 2000 4000
Max length	2000	4000	4000	4000

Note1) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note2) For jointing two or more rails, a metal fitting like the one shown in Fig.1 is available. Contact THK for details.

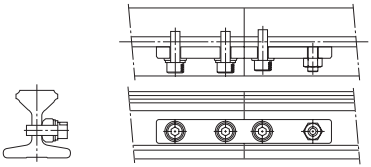
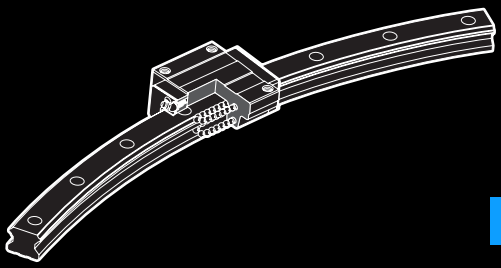


Fig.1



HCR

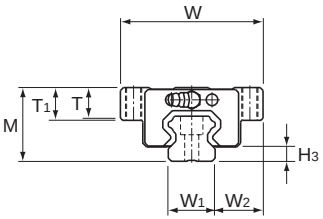
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

R Guide Model HCR



Model No.	Outer dimensions			LM block dimensions									H_3
	Height M	Width W	Length L	B	C	S	L_1	T	T_1	N	E	Grease nipple	
HCR 12A+60/100R	18	39	44.6	32	18	M4	30.5	4.5	5	3.4	3.5	PB1021B	3.1
HCR 15A+60/150R HCR 15A+60/300R HCR 15A+60/400R	24	47	56.2 56.4 56.5	38	24 28 28	M5	38.8	10.3	11	4.5	5.5	PB1021B	3.5
HCR 25A+60/500R HCR 25A+60/750R HCR 25A+60/1000R	36	70	83	57	45	M8	59.5	14.9	16	6	12	B-M6F	5.5
HCR 35A+60/600R HCR 35A+60/800R HCR 35A+60/1000R HCR 35A+60/1300R	48	100	109.2 109.3 109.3 109.3	82	58	M10	80.4	19.9	21	8	12	B-M6F	7.5
HCR 45A+60/800R HCR 45A+60/1000R HCR 45A+60/1200R HCR 45A+60/1600R	60	120	138.7 138.8 138.8 138.9	100	70	M12	98	23.9	25	10	16	B-PT1/8	10
HCR 65A+60/1000R HCR 65A+60/1500R HCR 65A+45/2000R HCR 65A+45/2500R HCR 65A+30/3000R	90	170	197.8 197.9 197.9 197.9 197.9	142	106	M16	147	34.9	37	19	16	B-PT1/8	14

Model number coding

HCR25A 2 UU +60 / 1000R T

- HCR25A — Model number
- 2 — No. of LM blocks used on the same rail
- UU — Contamination protection accessory symbol (*1)
- +60 — R-Guide center angle
- 1000R — LM rail length (in mm)
- T — Symbol for LM rail jointed use

(*1) See contamination protection accessory on A-368.

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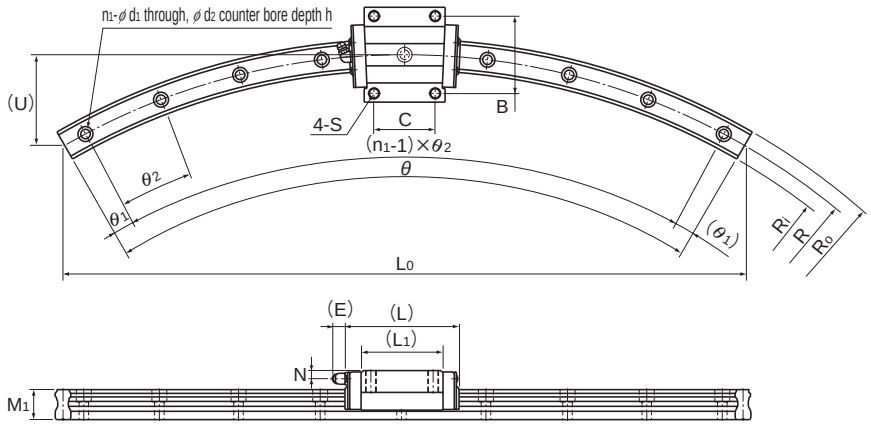
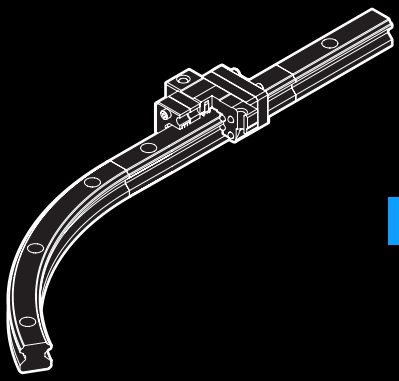


Unit: mm

LM rail dimensions													Basic load rating		Static permissible moment kN-m*				
					Width		Height						C	C_0	M_A		M_B		M_C
R	R_0	R_i	L_0	U	W_1	W_2	M_1	$d_1 \times d_2 \times h$	n_1	θ°	θ_1°	θ_2°	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block
100	106	94	100	13.4	12	13.5	11	3.5×6×5	3	60	7	23	4.7	8.53	0.0409	0.228	0.0409	0.228	0.0445
150	157.5	142.5	150	20.1					3		7	23	6.66	10.8					
300	307.5	292.5	300	40	15	16	15	4.5×7.5×5.3	5	60	6	12	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844
400	407.5	392.5	400	54					7		3	9	8.33	13.5					
500	511.5	488.5	500	67					9		2	7							
750	761.5	738.5	750	100	23	23.5	22	7×11×9	12	60	2.5	5	19.9	34.4	0.307	1.71	0.307	1.71	0.344
1000	1011.5	988.5	1000	134					15		2	4							
600	617	583	600	80					7		3	9							
800	817	783	800	107	34	33	29	9×14×12	11	60	2.5	5.5	37.3	61.1	0.782	3.93	0.782	3.93	0.905
1000	1017	983	1000	134					12		2.5	5							
1300	1317	1283	1300	174					17		2	3.5							
800	822.5	777.5	800	107					8		2	8							
1000	1022.5	977.5	1000	134	45	37.5	38	14×20×17	10	60	3	6	60	95.6	1.42	7.92	1.42	7.92	1.83
1200	1222.5	1177.5	1200	161					12		2.5	5							
1600	1622.5	1577.5	1600	214					15		2	4							
1000	1031.5	968.5	1000	134					8	60	2	8							
1500	1531.5	1468.5	1500	201					10	60	3	6							
2000	2031.5	1968.5	1531	152	63	53.5	53	18×26×22	12	45	0.5	4	141	215	2.45	13.2	2.45	13.2	3.2
2500	2531.5	2468.5	1913	190					13	45	1.5	3.5							
3000	3031.5	2968.5	1553	102					10	30	1.5	3							

Note) LM rail radiuses other than the radiuses in the above table are also available. Contact THK for details.
The R-Guide center angles in the table are maximum manufacturing angles. To obtain angles greater than them, rails must be additionally connected. Contact THK for details.
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223



HMG

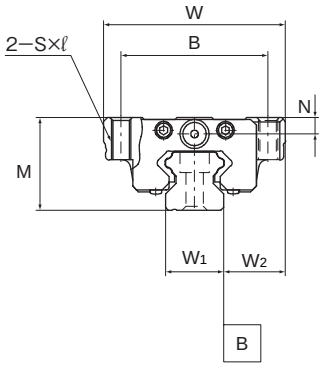
LM Guide

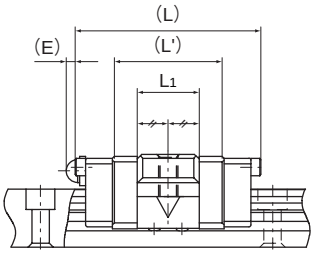
B Product Specifications

A Technical Descriptions of the Products (Separate)

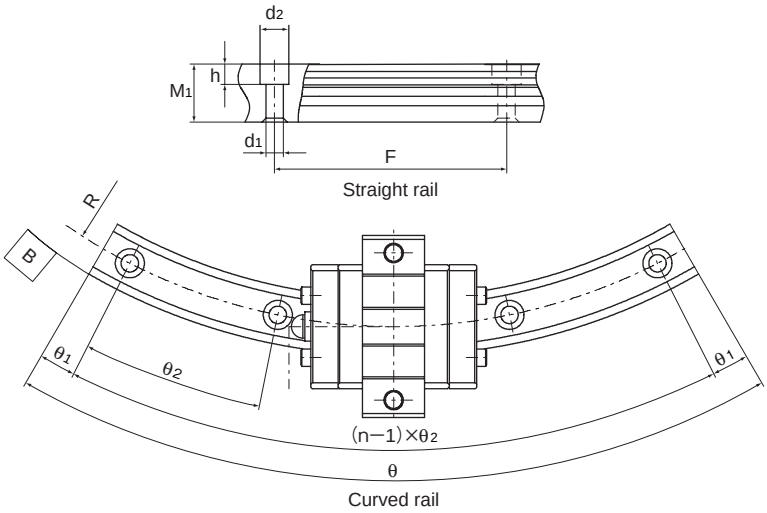
* Please see the separate "A Technical Descriptions of the Products".

Model HMG





Model No.	Outer dimensions				LM block dimensions					LM rail dimensions			
										LM rail			Height
	M	W	L	L´	B	S×ℓ	L_1	N	E	W_1	W_2	F	M_1
HMG15A	25	47	48	28.8	38	M5×11	16	4.3	5.5	15	16	60	15
HMG25A	36	70	62.2	42.2	57	M8×16	25.6	6	12	23	23.5	60	22
HMG35A	48	100	80.6	54.6	82	M10×21	32.6	8	12	34	33	80	29
HMG45A	60	120	107.6	76.6	100	M12×25	42.6	10	16	45	37.5	105	38
HMG65A	90	170	144.4	107.4	142	M16×37	63.4	19	16	63	53.5	150	53



Unit: mm

	Mounting hole	Curved rail					Basic dynamic load rating (C)	Basic static load rating (C_0)	
	$d_1 \times d_2 \times h$	R	n	θ°	θ_1°	θ_2°	Resultant load (C) kN	Straight section (Cost) kN	Curved section (Cor) kN
	4.5×7.5×5.3	150	3	60	7	23	2.56	4.23	0.44
		300	5	60	6	12			
		400	7	60	3	9			
	7×11×9	500	9	60	2	7	9.41	10.8	6.7
		750	12	60	2.5	5			
		1000	15	60	2	4			
	9×14×12	600	7	60	3	9	17.7	19	11.5
		800	11	60	2.5	5.5			
		1000	12	60	2.5	5			
		1300	17	60	2	3.5			
	14×20×17	800	8	60	2	8	28.1	29.7	18.2
		1000	10	60	3	6			
		1200	12	60	2.5	5			
		1600	15	60	2	4			
	18×26×22	1000	8	60	2	8	66.2	66.7	36.2
		1500	10	60	3	6			
		2000	12	45	0.5	4			
		2500	13	45	1.5	3.5			
		3000	10	30	1.5	3			

With HMG, a single LM block is capable of receiving moments in all directions.
Table 1 shows the permissible moment of an LM block in the M_A, M_B and M_C directions.

Table1 Static Permissible Moments of Model HMG

Unit: kN-m

Model No.	M_A		M_B		M_C	
	Straight section	Curved section	Straight section	Curved section	Straight section	Curved section
HMG15	0.008	0.007	0.008	0.01	0.027	0.003
HMG25	0.1	0.04	0.1	0.05	0.11	0.07
HMG35	0.22	0.11	0.22	0.12	0.29	0.17
HMG45	0.48	0.2	0.48	0.22	0.58	0.34
HMG65	1.47	0.66	1.47	0.73	1.83	0.94

Description of Each Option ⇒A-351 Dimensions⇒B-223

Jointed LM rail

[Level Difference Specification for the Joint]

An accuracy error in LM rail installation has influence on the service life of the product. When installing the LM rail, take care to minimize the level difference in the joint within the specification indicated in Table2. For the joint between curved rails and another between the curved section and the joint rail, we recommend using a flushing piece like the one shown in Fig.1. When using the flushing piece, place the fixed butt piece on the outer side, push the rail against the butt piece, and then adjust the level difference in the joint section by turning the adjustment screw from the inner side.

Table2 Level Difference Specification for the Joint

Unit: mm

Model No.	Ball raceway, side face	Upper face	Maximum clearance of the joint section
15	0.01	0.02	0.6
25	0.01	0.02	0.7
35	0.01	0.02	1.0
45	0.01	0.02	1.3
65	0.01	0.02	1.3

Note) Place the pin on the outer circumference and the bolt on the inner circumference.

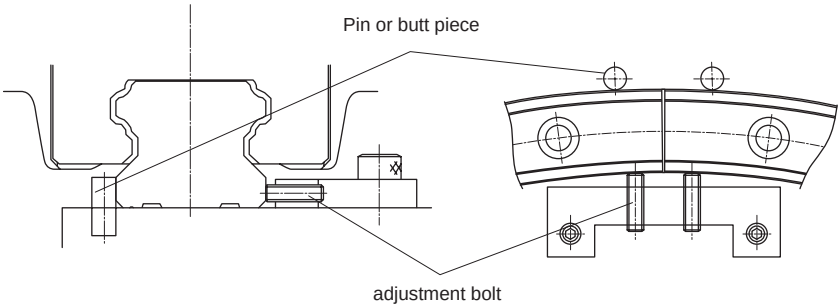


Fig.1 Flush piece

[About the Curved Section]

The curved section of model HMG has a clearance for a structural reason. Therefore, this model may not be used in applications where highly accurate feed is required. In addition, the curved section cannot withstand a large moment. When a large moment is applied, it is necessary to increase the number of LM blocks or LM rails. For permissible moment values, see Table1 on B-173.

[Jointed LM Rail]

Model HMG always requires a jointed rail where an LM block travels from the straight section to the curved section and where the curve is inverted such as an S curve. Take this into account when design the system.

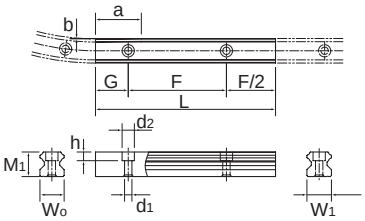


Table3 Dimension of the Jointed Rail Unit: mm

Model No.	Dimension of the jointed rail							
	Height	Pitch	Mounting hole	Width		Taper length	Taper depth	Radius
	M_1	F	$d_1 \times d_2 \times h$	W_1	W_0	a	b	R
15A	15	60	4.5×7.5×5.3	15	14.78	28	0.22	150
					14.89		0.11	300
					14.92		0.08	400
25A	22	60	7×11×9	23	22.83	42	0.17	500
					22.89		0.11	750
					22.92		0.08	1000
35A	29	80	9×14×12	34	33.77	54	0.23	600
					33.83		0.17	800
					33.86		0.14	1000
					33.9		0.1	1300
45A	38	105	14×20×17	45	44.71	76	0.29	800
					44.77		0.23	1000
					44.81		0.19	1200
					44.86		0.14	1600
65A	53	150	18×26×22	63	62.48	107	0.52	1000
					62.66		0.34	1500
					62.74		0.26	2000
					62.8		0.2	2500
					62.83		0.17	3000

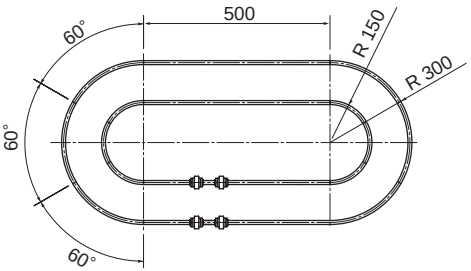


Fig.2 Examle of model No.

Model number coding

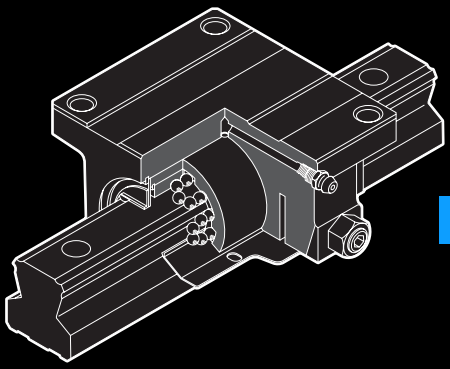
When 2 rails are used

HMG15A 2 UU C1 +1000L T + 60/150R 6T + 60/300R 6T - Ⅱ

- HMG15A: Model number
- 2: No. of LM blocks per rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol — Normal (No symbol); Light preload (C1)/Medium preload (C0)
- +1000L: Overall linear LM rail length per rail
- T: Symbol for linear LM rail joint
- 60/150R: Center angle of one inner curved rail
- 6T: No. of inner curved LM rails jointed
- 60/300R: Radius of outer curved rail
- 6T: Center angle of one outer curved rail
- Ⅱ: No. of outer curved LM rails jointed
- -: Symbol for No. of rails (*2)

(*1) See contamination protection accessory on A-368. (*2) See A-59.

Note) This model number indicates that an LM block and an LM rail constitute one set (i.e., the required number of sets when 2 rails are used is 2).
Model HMG does not have a seal as standard. For the model number above, Fig.2 applies.



NSR-TBC

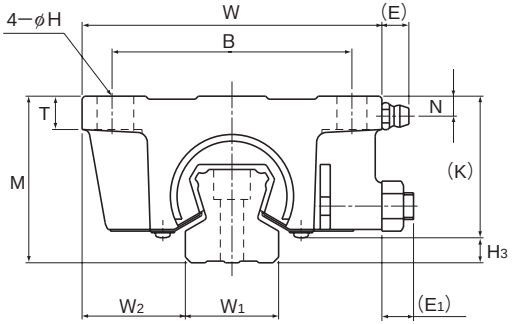
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model NSR-TBC



Model No.	Outer dimensions			LM casing dimensiones									
	Height	Width	Length								Grease nipple		
	M	W	L	B	C	H	T	K	N	E	E_1		H_3
NSR 20TBC	40	70	67	55	50	6.6	8	34.5	5.5	8.5	7	A-M6F	5.5
NSR 25TBC	50	90	78	72	60	9	10	43.5	6	8.5	7.5	A-M6F	6.5
NSR 30TBC	60	100	90	82	72	9	12	51	8	8.5	9.5	A-M6F	9
NSR 40TBC	75	120	110	100	80	11	13	64	10	8.5	12	A-M6F	10.5
NSR 50TBC	82	140	123	116	95	14	15	74	9	15	15	A-PT1/8	8
NSR 70TBC	105	175	150	150	110	14	18	95.5	10	15	16.5	A-PT1/8	9.5

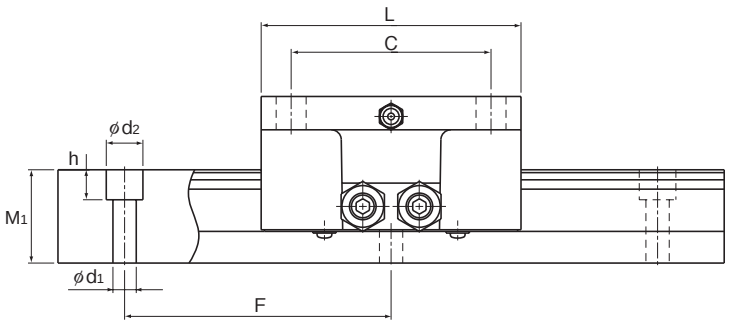
Model number coding

NSR50TBC 2 UU C1 +1200L P T -II

- NSR50TBC: Model number
- 2: No. of LM cases used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static Permissible Moment* kN-m		Mass	
	Width W_1 ±0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	M_A Double casings	M_B Double casings	LM casing kg	LM rail kg/m
	23	23.5	23	60	6×9.5×8.5	2200	9.41	18.6	0.31	0.27	0.62	3.1
	28	31	28	80	7×11×9	3000	14.9	26.7	0.53	0.46	1.13	4.7
	34	33	34.5	80	7×11×9	3000	22.5	38.3	0.85	0.74	1.8	7.2
	45	37.5	44.5	105	9×14×12	3000	37.1	62.2	1.7	1.5	3.5	12.2
	48	46	47.5	120	11×17.5×14	3000	55.1	87.4	2.7	2.4	5.2	14.3
	63	56	62	150	14×20×17	3000	90.8	152	9.8	4.9	9.4	27.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-180.)
Static permissible moment * : double caseings: static permissible moment value with 2 casings closely contacting with each other

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model NSR-TBC variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

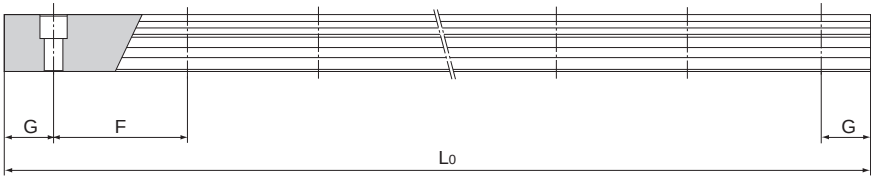
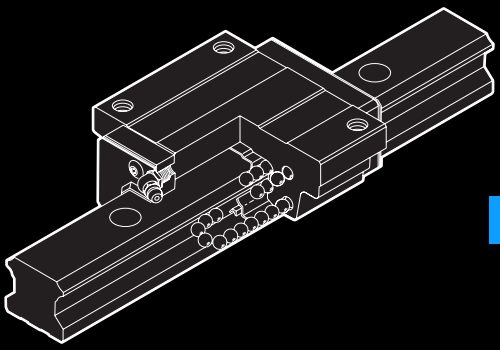


Table1 Standard Length and Maximum Length of the LM Rail for Model NSR-TBC Unit: mm

Model No.	NSR 20TBC	NSR 25TBC	NSR 30TBC	NSR 40TBC	NSR 50TBC	NSR 70TBC
LM rail standard length (L_o)	220 280 340 460 640 820 1000 1240 1600	280 440 600 760 1000 1240 1640 2040 2520 3000	280 440 600 760 1000 1240 1640 2040 2520 3000	570 885 1200 1620 2040 2460 2985	780 1020 1260 1500 1980 2580 2940	1270 1570 2020 2620
Standard pitch F	60	80	80	105	120	150
G	20	20	20	22.5	30	35
Max length	2200	3000	3000	3000	3000	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



HSR-M1

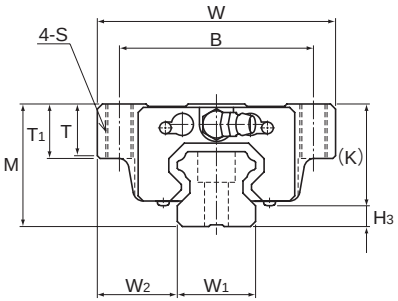
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models HSR-M1A and HSR-M1LA



Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S	L_1	T	T_1	K	N	E	Grease nipple	
HSR 15M1A	24	47	59.6	38	30	M5	38.8	6.5	11	19.3	4.3	5.5	PB1021B	3.5
HSR 20M1A HSR 20M1LA	30	63	76 92	53	40	M6	50.8 66.8	9.5	10	26	5	12	B-M6F	4
HSR 25M1A HSR 25M1LA	36	70	83.9 103	57	45	M8	59.5 78.6	11	16	30.5	6	12	B-M6F	5.5
HSR 30M1A HSR 30M1LA	42	90	98.8 121.4	72	52	M10	70.4 93	9	18	35	7	12	B-M6F	7
HSR 35M1A HSR 35M1LA	48	100	112 137.4	82	62	M10	80.4 105.8	12	21	40.5	8	12	B-M6F	7.5

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L_1 is the same.)

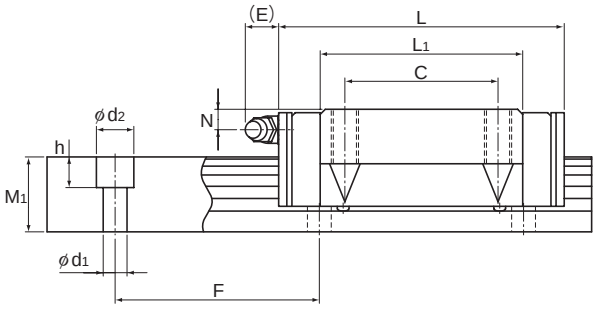
Model number coding

HSR25 M1 A 2 UU C1 +1240L P T -II

- HSR25: Model number
- M1: Type of LM block
- A: Symbol for high temperature type LM Guide
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1240L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



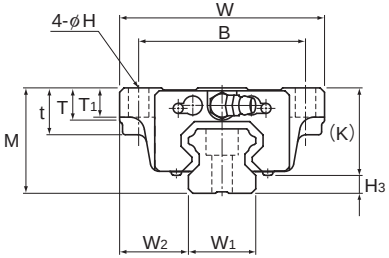
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3
	23	23.5	22	60	7×11×9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3
	28	31	26	80	9×14×12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8
	34	33	29	80	9×14×12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6

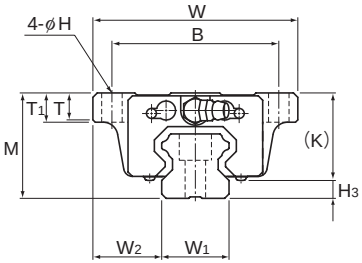
Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-M1B and HSR-M1LB



Models HSR15, 25 to 35M1B/M1LB



Models HSR20M1B/M1LB

Model No.	Outer dimensions			LM block dimensions											
	Height M	Width W	Length L	B	C	H	L_1	t	T	T_1	K	N	E	Grease nipple	H_3
HSR 15M1B	24	47	59.6	38	30	4.5	38.8	11	6.5	7	19.3	4.3	5.5	PB1021B	3.5
HSR 20M1B HSR 20M1LB	30	63	76 92	53	40	6	50.8 66.8	—	9.5	10	26	5	12	B-M6F	4
HSR 25M1B HSR 25M1LB	36	70	83.9 103	57	45	7	59.5 78.6	16	11	10	30.5	6	12	B-M6F	5.5
HSR 30M1B HSR 30M1LB	42	90	98.8 121.4	72	52	9	70.4 93	18	9	10	35	7	12	B-M6F	7
HSR 35M1B HSR 35M1LB	48	100	112 137.4	82	62	9	80.4 105.8	21	12	13	40.5	8	12	B-M6F	7.5

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L_1 is the same.)

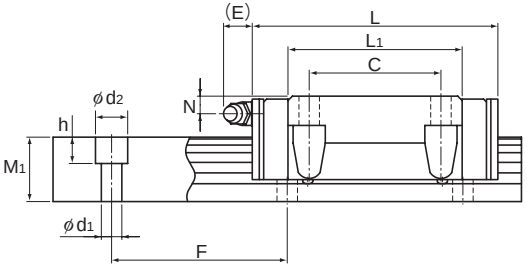
Model number coding

HSR20 M1 LB 2 UU C0 +1000L P T -II

- HSR20: Model number
- M1: Type of LM block
  - Symbol for high temperature type LM Guide
- LB: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



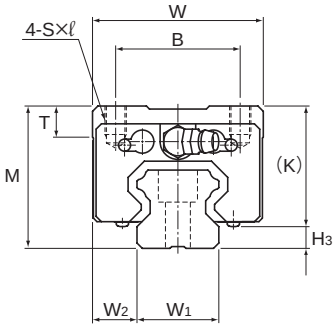
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3
	23	23.5	22	60	7×11×9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3
	28	31	26	80	9×14×12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8
	34	33	29	80	9×14×12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models HSR-M1R and HSR-M1LR



Model No.	Outer dimensions			LM block dimensions									
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Grease nipple	H_3
HSR 15M1R	28	34	59.6	26	26	M4×5	38.8	6	23.3	8.3	5.5	PB1021B	3.5
HSR 20M1R HSR 20M1LR	30	44	76 92	32	36 50	M5×6	50.8 66.8	8	26	5	12	B-M6F	4
HSR 25M1R HSR 25M1LR	40	48	83.9 103	35	35 50	M6×8	59.5 78.6	8	34.5	10	12	B-M6F	5.5
HSR 30M1R HSR 30M1LR	45	60	98.8 121.4	40	40 60	M8×10	70.4 93	8	38	10	12	B-M6F	7
HSR 35M1R HSR 35M1LR	55	70	112 137.4	50	50 72	M8×12	80.4 105.8	10	47.5	15	12	B-M6F	7.5

Note) The length L of the high temperature type LM Guide model HSR is longer than normal type of model HSR. (Dimension L_1 is the same.)

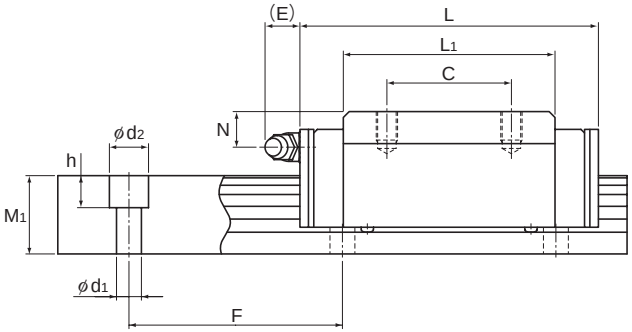
Model number coding

HSR35 M1 R 2 UU C0 +1080L P T -II

- HSR35: Model number
- M1: Type of LM block
- R: Symbol for high temperature type LM Guide
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1080L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



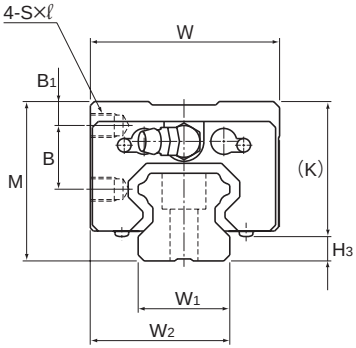
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	9.5	15	60	4.5×7.5×5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	12	18	60	6×9.5×8.5	1500	13.8 21.3	23.8 31.8	0.19 0.323	1.04 1.66	0.19 0.323	1.04 1.66	0.201 0.27	0.35 0.47	2.3
	23	12.5	22	60	7×11×9	1500	19.9 27.2	34.4 45.9	0.307 0.529	1.71 2.74	0.307 0.529	1.71 2.74	0.344 0.459	0.59 0.75	3.3
	28	16	26	80	9×14×12	1500	28 37.3	46.8 62.5	0.524 0.889	2.7 4.37	0.524 0.889	2.7 4.37	0.562 0.751	1.1 1.3	4.8
	34	18	29	80	9×14×12	1500	37.3 50.2	61.1 81.5	0.782 1.32	3.93 6.35	0.782 1.32	3.93 6.35	0.905 1.2	1.6 2	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Model HSR-M1YR



Model No.	Outer dimensions			LM block dimensions									H_3
	Height M	Width W	Length L	B_1	B	C	S×ℓ	L_1	K	N	E	Grease nipple	
HSR 15M1YR	28	33.5	59.6	4.3	11.5	18	M4×5	38.8	23.3	8.3	5.5	PB1021B	3.5
HSR 20M1YR	30	43.5	76	4	11.5	25	M5×6	50.8	26	5	12	B-M6F	4
HSR 25M1YR	40	47.5	83.9	6	16	30	M6×6	59.5	34.5	10	12	B-M6F	5.5
HSR 30M1YR	45	59.5	98.8	8	16	40	M6×9	70.4	38	10	12	B-M6F	7
HSR 35M1YR	55	69.5	112	8	23	43	M8×10	80.4	47	15	12	B-M6F	7.5

Note) The length L of the high temperature type LM Guide model HSR-YR is longer than normal type of model HSR-YR. (Dimension L_1 is the same.)

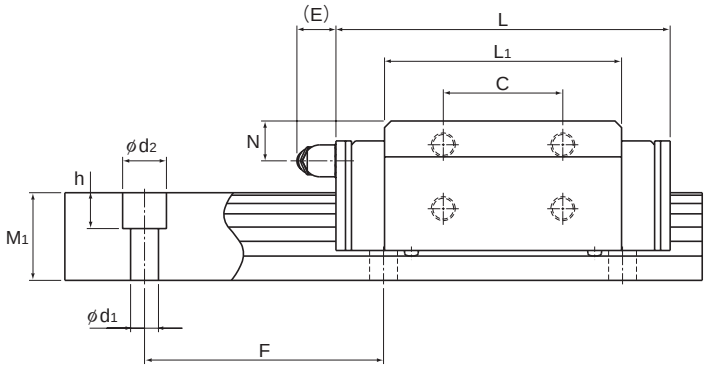
Model number coding

HSR25 M1 YR 2 UU C0 +1200L P T -II

- HSR25: Model number
- M1: Symbol for high temperature type LM Guide
- YR: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	24	15	60	4.5×7.5×5.3	1240	8.33	13.5	0.0805	0.457	0.0805	0.457	0.0844	0.2	1.5
	20	31.5	18	60	6×9.5×8.5	1500	13.8	23.8	0.19	1.04	0.19	1.04	0.201	0.35	2.3
	23	35	22	60	7×11×9	1500	19.9	34.4	0.307	1.71	0.307	1.71	0.344	0.59	3.3
	28	43.5	26	80	9×14×12	1500	37.3	62.5	0.524	2.7	0.524	2.7	0.562	1.3	4.8
	34	51.5	29	80	9×14×12	1500	37.3	61.1	0.782	3.93	0.782	3.93	0.905	1.6	6.6

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-190.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HSR-M1 variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

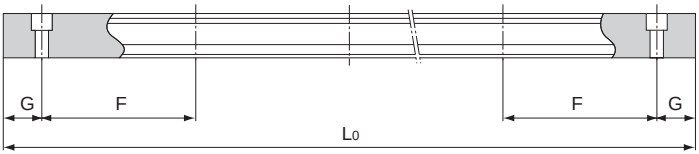
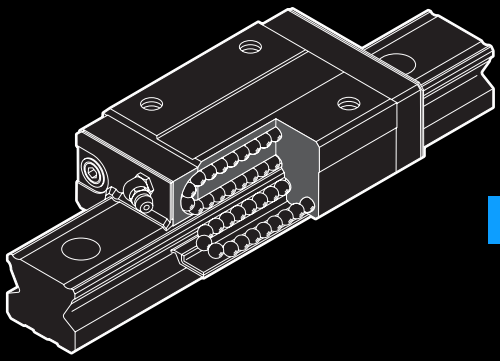


Table1 Standard Length and Maximum Length of the LM Rail for Model HSR-M1 Unit: mm

Model No.	HSR 15M1	HSR 20M1	HSR 25M1	HSR 30M1	HSR 35M1
LM rail standard length (L_0)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480
Standard pitch F	60	60	60	80	80
G	20	20	20	20	20
Max length	1240	1500	1500	1500	1500

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.
Note3) The values for HSR-M1 also apply to HSR-M1YR.



SR-M1

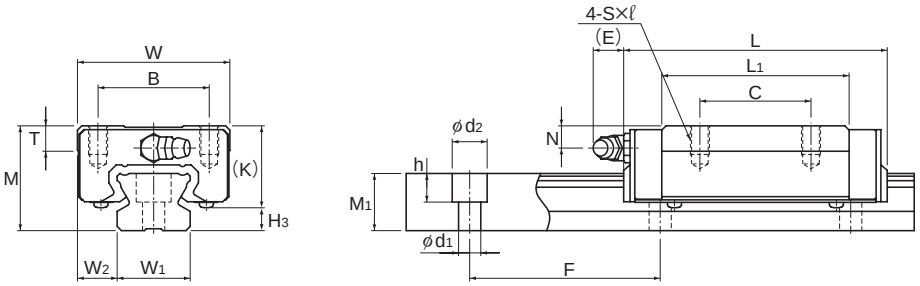
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SR-M1W and SR-M1V



Model SR-M1W

Model No.	Outer dimensions			LM block dimensions									
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	E	Grease nipple	H3
SR 15M1W SR 15M1V	24	34	57 40.4	26	26 —	M4×7	39.5 22.9	6	19.5	6	5.5	PB1021B	4.5
SR 20M1W SR 20M1V	28	42	66.2 47.3	32	32 —	M5×8	46.7 27.8	7.5	22	6	12	B-M6F	6
SR 25M1WY SR 25M1VY	33	48	83 59.2	35	35 —	M6×9	59 35.2	8	26	7	12	B-M6F	7
SR 30M1W SR 30M1V	42	60	96.8 67.9	40	40 —	M8×12	69.3 40.4	9	32.5	8	12	B-M6F	9.5
SR 35M1W SR 35M1V	48	70	111 77.6	50	50 —	M8×12	79 45.7	13	36.5	8.5	12	B-M6F	11.5

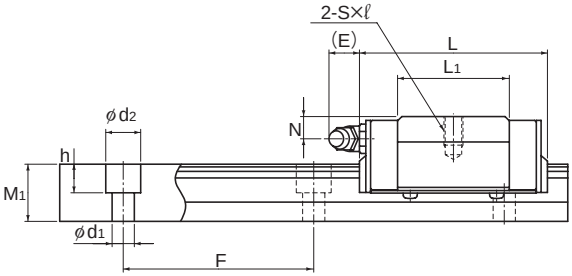
Model number coding

SR30 M1 W 2 UU C0 +1160L P T -II

- SR30: Model number
- M1: Symbol for high temperature type LM Guide
- W: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1160L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model SR-M1V

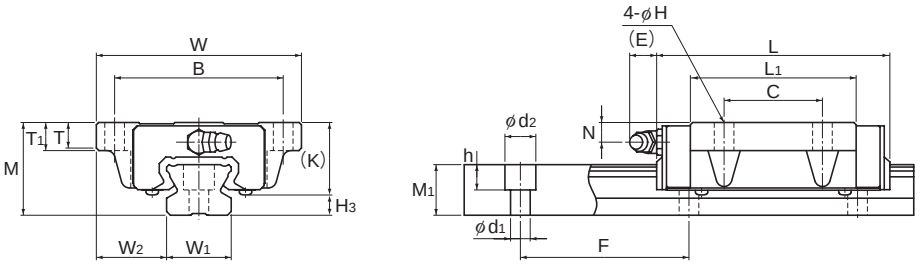
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	15	9.5	12.5	60	3.5×6×4.5	1240	9.51 5.39	19.3 11.1	0.0925 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654		0.2 0.12	1.2
	20	11	15.5	60	6×9.5×8.5	1500	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11		0.3 0.2	2.1
	23	12.5	18	60	7×11×9	1500	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201		0.4 0.3	2.7
	28	16	23	80	7×11×9	1500	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352		0.8 0.5	4.3
	34	18	27.5	80	9×14×12	1500	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576		1.2 0.8	6.4

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-196.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SR-M1TB and SR-M1SB



Model SR-M1TB

Model No.	Outer dimensions			LM block dimensions										H3
	Height M	Width W	Length L	B	C	H	L1	T	T1	K	N	E	Grease nipple	
SR 15M1TB SR 15M1SB	24	52	57 40.4	41	26 —	4.5	39.5 22.9	6.1	7	19.5	6	5.5	PB1021B	4.5
SR 20M1TB SR 20M1SB	28	59	66.2 47.3	49	32 —	5.5	46.7 27.8	8	9	22	6	12	B-M6F	6
SR 25M1TBY SR 25M1SBY	33	73	83 59.2	60	35 —	7	59 35.2	9	10	26	7	12	B-M6F	7
SR 30M1TB SR 30M1SB	42	90	96.8 67.9	72	40 —	9	69.3 40.4	8.7	10	32.5	8	12	B-M6F	9.5
SR 35M1TB SR 35M1SB	48	100	111 77.6	82	50 —	9	79 45.7	11.2	13	36.5	8.5	12	B-M6F	11.5

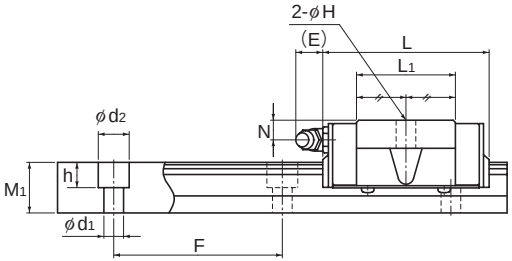
Model number coding

SR30 M1 W 2 UU C0 +1000L P T -II

- SR30: Model number
- M1: Symbol for high temperature type LM Guide
- W: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1000L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Model SR-M1SB

Unit: mm

LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
								M_A		M_B		M_C		
Width W_1 ±0.05	W_2	Height M_1	Pitch F	$d_1 \times d_2 \times h$	Length* Max	C kN	C_0 kN	1 block	Double blocks	1 block	Double blocks	1 block	LM block kg	LM rail kg/m
15	18.5	12.5	60	3.5×6×4.5	1240	9.51 5.39	19.3 11.1	0.0926 0.0326	0.516 0.224	0.0567 0.0203	0.321 0.143	0.113 0.0654	0.2 0.12	1.2
20	19.5	15.5	60	6×9.5×8.5	1500	12.5 7.16	25.2 14.4	0.146 0.053	0.778 0.332	0.0896 0.0329	0.481 0.21	0.194 0.11	0.3 0.2	2.1
23	25	18	60	7×11×9	1500	20.3 11.7	39.5 22.5	0.286 0.103	1.52 0.649	0.175 0.0642	0.942 0.41	0.355 0.201	0.4 0.3	2.7
28	31	23	80	7×11×9	1500	30 17.2	56.8 32.5	0.494 0.163	2.55 1.08	0.303 0.102	1.57 0.692	0.611 0.352	0.8 0.5	4.3
34	33	27.5	80	9×14×12	1500	41.7 23.8	77.2 44.1	0.74 0.259	4.01 1.68	0.454 0.161	2.49 1.07	1.01 0.576	1.2 0.8	6.4

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-196.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SR-M1 variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

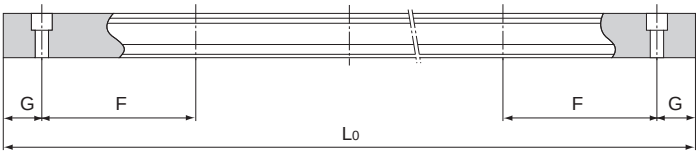
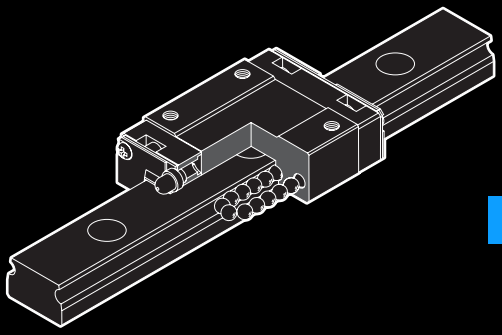


Table1 Standard Length and Maximum Length of the LM Rail for Model SR-M1 Unit: mm

Model No.	SR 15M1	SR 20M1	SR 25M1	SR 30M1	SR 35M1
LM rail standard length (L_o)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1240 1300 1360 1420 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480
Standard pitch F	60	60	60	80	80
G	20	20	20	20	20
Max length	1240	1500	1500	1500	1500

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



RSR-M1

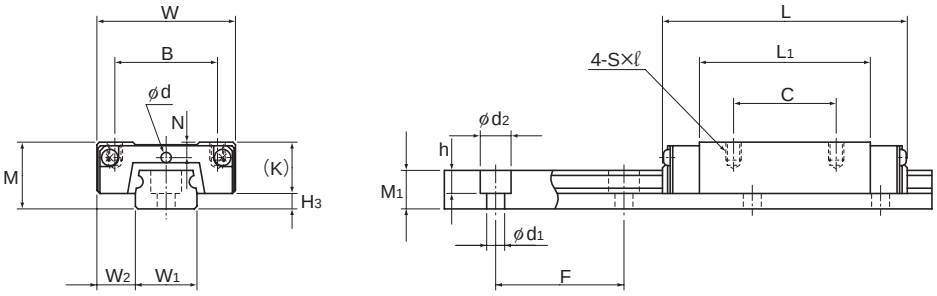
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models RSR-M1K, RSR-M1V and RSR-M1N



Models RSR9M1K/9M1N and RSR12M1V/M1N

Model No.	Outer dimensions			LM block dimensions										
	Height	Width	Length								Greasing hole	Grease nipple	
	M	W	L	B	C	S×ℓ	L1	T	K	N	E	d		H3
RSR 9M1K RSR 9M1N	10	20	30.8 41	15	10 16	M3×3	19.8 29.8	—	7.8	—	—	—	—	2.2
RSR 12M1V RSR 12M1N	13	27	35 47.7	20	15 20	M3×3.5	20.6 33.3	—	10	3	—	2	—	3
RSR 15M1V RSR 15M1N	16	32	43 61	25	20 25	M3×4	25.7 43.5	—	12	3.5	3.6 3.7	—	PB107	4
RSR 20M1V RSR 20M1N	25	46	66.5 86.3	38	38	M4×6	45.2 65	5.7	17.5	5	6.4	—	A-M6F	7.5

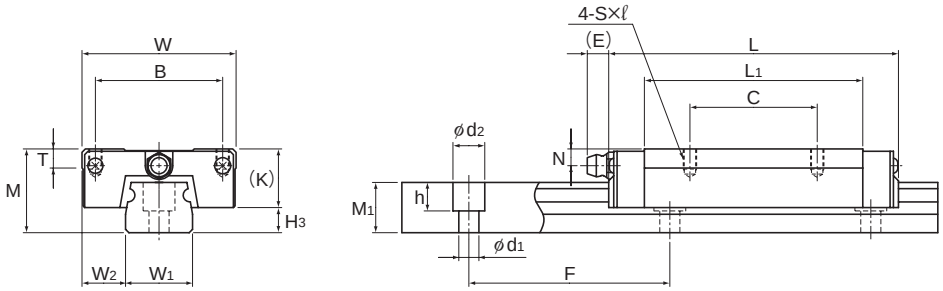
Model number coding

2 RSR15 M1 V UU C1 +230L P T -II

- **2** — No. of LM blocks used on the same rail
- **RSR15** — Model number
- **M1** — Symbol for high temperature type LM Guide
- **V** — Type of LM block
- **UU** — Contamination protection accessory symbol (*1)
- **C1** — Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- **+230L** — LM rail length (in mm)
- **P** — Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- **T** — Symbol for LM rail jointed use
- **-II** — Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Models RSR15 and 20M1V/M1N

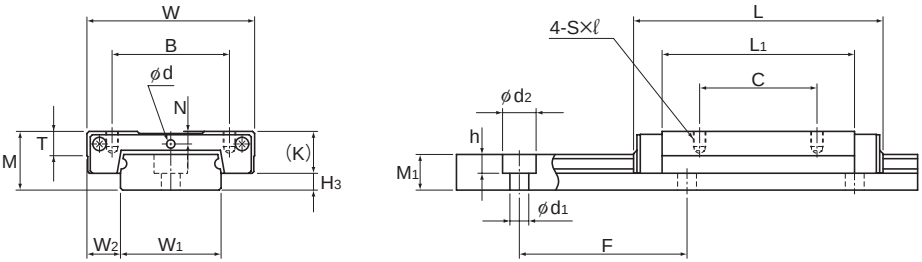
Unit: mm

LM rail dimensions							Basic load rating		Static permissible moment N-m*						Mass	
Width		Height	Pitch		Length*		C	C_0	M_A		M_B		M_C		LM block	LM rail
W_1	W_2	M_1	F	$d_1 \times d_2 \times h$	Max		kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
9 $^{0}_{-0.02}$	5.5	5.5	20	3.5×6×3.3	1000		1.47 2.6	2.25 3.96	7.34 18.4	43.3 97	7.34 18.4	43.3 97	10.4 18.4		0.018 0.027	0.32
12 $^{0}_{-0.025}$	7.5	7.5	25	3.5×6×4.5	1340		2.65 4.3	4.02 6.65	11.4 28.9	74.9 163	10.1 25.5	67.7 145	19.2 31.8		0.037 0.055	0.58
15 $^{0}_{-0.025}$	8.5	9.5	40	3.5×6×4.5	1430		4.41 7.16	6.57 10.7	23.7 63.1	149 330	21.1 55.6	135 293	38.8 63		0.069 0.093	0.925
20 $^{0}_{-0.03}$	13	15	60	6×9.5×8.5	1800		8.82 14.2	12.7 20.6	75.4 171	435 897	66.7 151	389 795	96.6 157		0.245 0.337	1.95

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-202.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models RSR-M1WV and RSR-M1WN



Models RSR9 and 12M1WV/M1WN

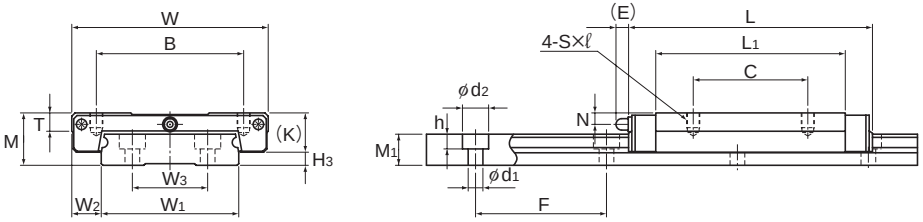
Model No.	Outer dimensions			LM block dimensions										H_3
	Height M	Width W	Length L	B	C	S×ℓ	L_1	T	K	N	E	Greasing hole d	Grease nipple	
RSR 9M1WV RSR 9M1WN	12	30	39 50.7	21 23	12 24	M2.6×3 M3×3	27 38.7	—	7.8	2	—	1.6	—	4.2
RSR 12M1WV RSR 12M1WN	14	40	44.5 59.5	28	15 28	M3×3.5	30.9 45.9	4.5	10	3	—	2	—	4
RSR 15M1WV RSR 15M1WN	16	60	55.5 74.5	45	20 35	M4×4.5	38.9 57.9	5.6	12	3.5	3	—	PB107	4

Model number coding

2 RSR12 M1 WN UU C1 +310L P T

- **2** — No. of LM blocks used on the same rail
- **RSR12** — Model number
- **M1** — Symbol for high temperature type LM Guide
- **WN** — Type of LM block
- **UU** — Contamination protection accessory symbol (*1)
- **C1** — Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- **+310L** — LM rail length (in mm)
- **P** — Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- **T** — Symbol for LM rail jointed use

(*1) See contamination protection accessory on A-368. (*2) See A-114. (*3) See A-126.



Models RSR15M1WV/M1WN

Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment N-m*					Mass	
	Width			Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1	W_2	W_3	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	18 $^{0}_{-0.05}$	6	—	7.5	30	3.5×6×4.5	1000	2.45 3.52	3.92 5.37	16 31	92.9 161	16 31	92.9 161	36 49.4	0.035 0.051	1.08
	24 $^{0}_{-0.05}$	8	—	8.5	40	4.5×8×4.5	1340	4.02 5.96	6.08 9.21	24.5 53.9	138 274	21.7 47.3	123 242	59.5 90.1	0.075 0.101	1.5
	42 $^{0}_{-0.05}$	9	23	9.5	40	4.5×8×4.5	1430	6.66 9.91	9.8 14.9	50.3 110	278 555	44.4 97.3	248 490	168 255	0.17 0.21	3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-202.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model RSR-M1 variations.

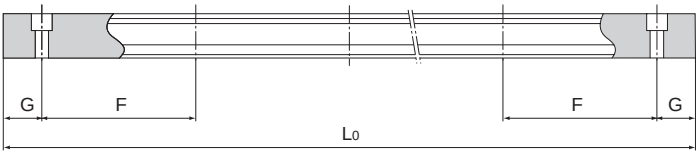
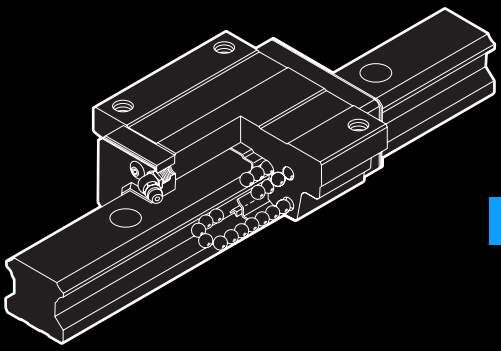


Table1 Standard Length and Maximum Length of the LM Rail for Model RSR-M1 Unit: mm

Model No.	RSR 9M1	RSR 12M1	RSR 15M1	RSR 20M1	RSR 9M1W	RSR 12M1W	RSR 15M1W
LM rail standard length (L_o)	55 75 95 115 135 155 175 195 275 375	70 95 120 145 170 195 220 245 270 320 370 470 570	70 110 150 190 230 270 310 350 390 430 470 550 670 870	220 280 340 460 640 880 1000	50 80 110 140 170 200 260 290 320	70 110 150 190 230 270 310 390 470 550	110 150 190 230 270 310 430 550 670 790
Standard pitch F	20	25	40	60	30	40	40
G	7.5	10	15	20	10	15	15
Max length	1000	1340	1430	1800	1000	1430	1800

Note) The maximum length varies with accuracy grades. Contact THK for details.



HSR-M2

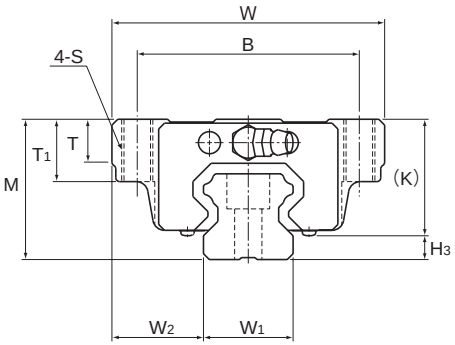
LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model HSR-M2A



Model No.	Outer dimensions			LM block dimensions										
	Height	Width	Length										Grease nipple	
	M	W	L	B	C	S	L_1	T	T_1	K	N	E		H_3
HSR 15M2A	24	47	56.6	38	30	M5	38.8	6.5	11	19.3	4.3	5.5	PB1021B	3.5
HSR 20M2A	30	63	74	53	40	M6	50.8	9.5	10	26	5	12	B-M6F	4
HSR 25M2A	36	70	83.1	57	45	M8	59.5	11	16	30.5	6	12	B-M6F	5.5

Note) For the high corrosion resistance type LM Guide, a stainless steel end plate is optionally available. (symbol…I)

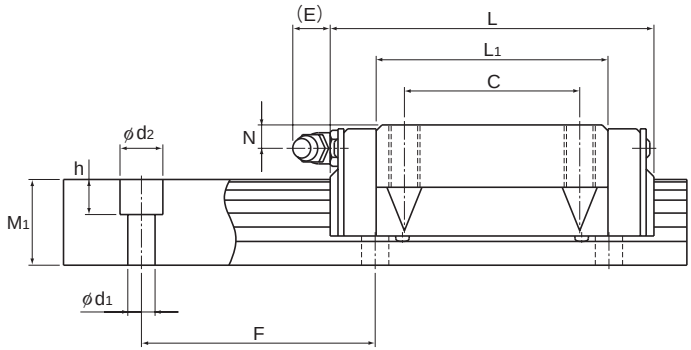
Model number coding

HSR20M2 A 2 UU C1 I +820L P T -II

- HSR20M2: Model number (high corrosion resistance type LM Guide)
- A: Type of LM block
- 2: No. of LM blocks used on the same rail
- UU: Contamination protection accessory symbol (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- I: End plate is made of stainless steel
- +820L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment N-m*					Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C	LM block	LM rail
	W_1 ±0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	15	16	15	60	4.5×7.5×5.3	1000	2.33	2.03	12.3	70.3	12.3	70.3	10.8	0.2	1.5
	20	21.5	18	60	6×9.5×8.5	1000	3.86	3.57	29	160	29	160	26.5	0.35	2.3
	23	23.5	22	60	7×11×9	1000	5.57	5.16	46.9	261	46.9	261	45.1	0.59	3.3

Note) The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-206.)
The basic load rating of the high corrosion resistance type LM Guide is smaller than ordinary stainless steel LM Guides.
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model HSR-M2 variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

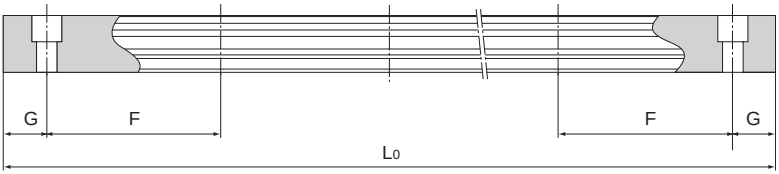
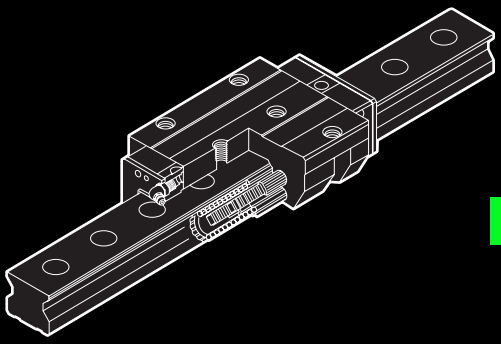


Table1 Standard Length and Maximum Length of the LM Rail for Model HSR-M2 Unit: mm

Model No.	HSR 15M2	HSR 20M2	HSR 25M2
LM rail standard length (L_o)	160 280 460 640	280 460 640 820	280 460 640 820 1000
Standard pitch F	60	60	60
G	20	20	20
Max length	1000	1000	1000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



SRG

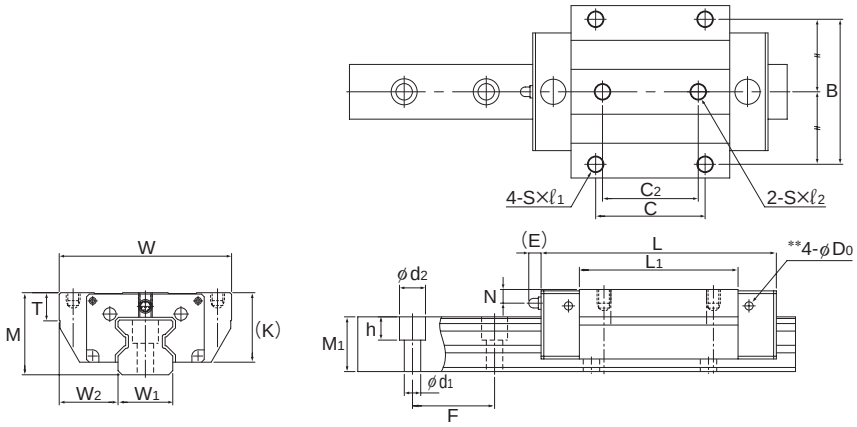
Caged Roller LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models SRG-A, SRG-LA, SRG-C and SRG-LC



Models SRG15A and 20A/LA

Model No.	Outer dimensions			LM block dimensions																	Grease nipple
	Height M	Width W	Length L	B	C	C_2	S	H	ℓ_1	ℓ_2	L_1	T	T_1	K	N	E	e_0	f_0	D_0		
SRG 15A	24	47	69	38	30	26	M5	—	8	7.5	45	7	—	20	4	4.5	—	—	2.9		PB107
SRG 20A SRG 20LA	30	63	86 106	53	40	35	M6	—	10	9	58 78	10	—	25.4	5	4.5	—	—	2.9		PB107
SRG 25C SRG 25LC	36	70	95.5 115	57	45	40	M8	6.8	—	—	65.5 85.1	9.5	10	31.5	5.5	12	6	6.4	5.2		B-M6F
SRG 30C SRG 30LC	42	90	111 135	72	52	44	M10	8.5	—	—	75 99	12	14	37	6.5	12	6	6.2	5.2		B-M6F
SRG 35C SRG 35LC	48	100	125 155	82	62	52	M10	8.5	—	—	82.2 112.2	11.5	10	42	6.5	12	6	6.5	5.2		B-M6F
SRG 45C SRG 45LC	60	120	155 190	100	80	60	M12	10.5	—	—	107 142	14.5	15	52	10	16	7	7	5.2		B-PT1/8
SRG 55C SRG 55LC	70	140	185 235	116	95	70	M14	12.5	—	—	129.2 179.2	17.5	18	60	12	16	9	7.7	5.2		B-PT1/8
SRG 65LC	90	170	303	142	110	82	M16	14.5	—	—	229.8	19.5	20	78.5	17	16	9	12.4	5.2		B-PT1/8

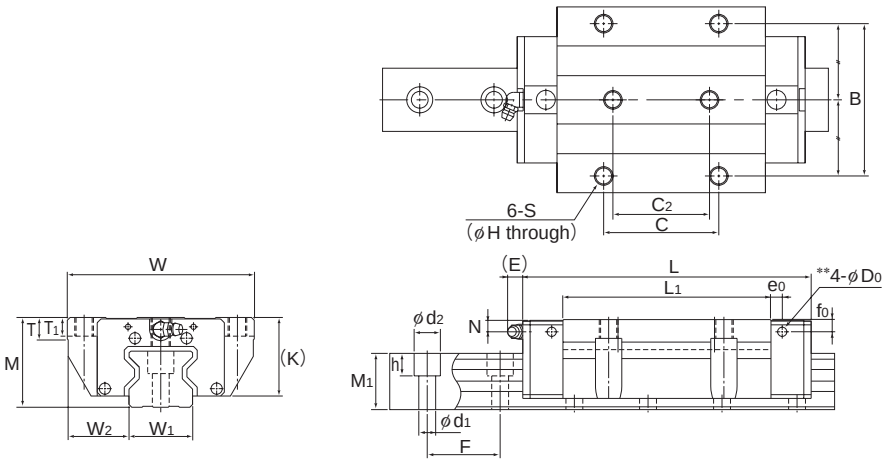
Model number coding

SRG45 LC 2 QZ KKHH C0 +1200L P T Z -II

- SRG45: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.



Models SRG25 to 65C/LC

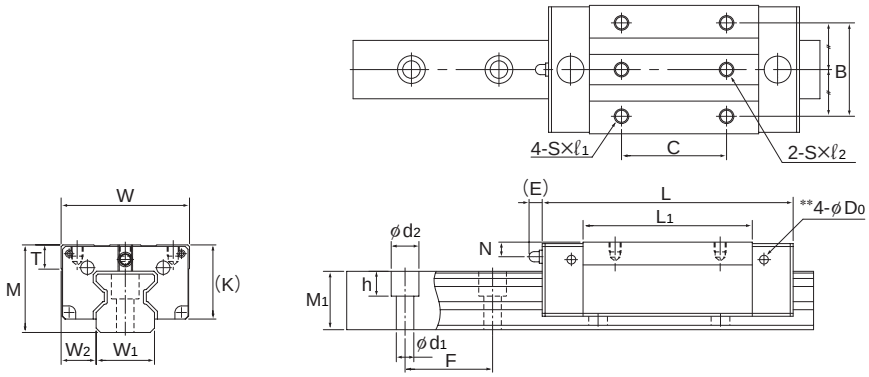
Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C_0	M_A		M_B		M_C		LM block	LM rail
H_3	W_1 0 -0.05	W_2	M_1	F	$d_1 \times d_2 \times h$	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
4	15	16	15.5	30	4.5×7.5×5.3	2500	11.3	25.8	0.21	—	0.21	—	0.24		0.20	1.58
4.6	20	21.5	20	30	6×9.5×8.5	3000	21 26.7	46.9 63.8	0.48 0.88	—	0.48 0.88	—	0.58 0.79		0.42 0.57	2.58
4.5	23	23.5	23	30	7×11×9	3000	27.9 34.2	57.5 75	0.641 1.07	3.7 5.74	0.641 1.07	3.7 5.74	0.795 1.03		0.7 0.9	3.6
5	28	31	26	40	9×14×12	3000	39.3 48.3	82.5 108	1.02 1.76	6.21 9.73	1.02 1.76	6.21 9.73	1.47 1.92		1.2 1.6	4.4
6	34	33	30	40	9×14×12	3000	59.1 76	119 165	1.66 3.13	10.1 17	1.66 3.13	10.1 17	2.39 3.31		1.9 2.4	6.9
8	45	37.5	37	52.5	14×20×17	3090	91.9 115	192 256	3.49 6.13	20 32.2	3.49 6.13	20 32.2	4.98 6.64		3.7 4.5	11.6
10	53	43.5	43	60	16×23×20	3060	131 167	266 366	5.82 10.8	33 57	5.82 10.8	33 57	8.19 11.2		5.9 7.8	15.8
11.5	63	53.5	54	75	18×26×22	3000	278	599	22.7	120	22.7	120	22.1		16.4	23.7

Note) The greasing hole on the top face and the pilot hole of the side nipple** are not drilled through in order to prevent foreign material from entering the block.
See B-257 for details.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-212.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Models SRG-V, SRG-LV, SRG-R and SRG-LR



Models SRG15V and 20V/LV

Model No.	Outer dimensions			LM block dimensions														Grease nipple
	Height M	Width W	Length L	B	C	S	ℓ	ℓ1	ℓ2	L1	T	K	N	E	e0	f0	D0	
SRG 15V	24	34	69	26	26	M4	—	5	7.5	45	6	20	4	4.5	—	—	2.9	PB107
SRG 20V SRG 20LV	30	44	86 106	32	36 50	M5	—	7	9	58 78	8	25.4	5	4.5	—	—	2.9	PB107
SRG 25R SRG 25LR	40	48	95.5 115	35	35 50	M6	9	—	—	65.5 85.1	9.5	35.5	9.5	12	6	10.4	5.2	B-M6F
SRG 30R SRG 30LR	45	60	111 135	40	40 60	M8	10	—	—	75 99	12	40	9.5	12	6	9.2	5.2	B-M6F
SRG 35R SRG 35LR	55	70	125 155	50	50 72	M8	12	—	—	82.2 112.2	18.5	49	13.5	12	6	13.5	5.2	B-M6F
SRG 45R SRG 45LR	70	86	155 190	60	60 80	M10	20	—	—	107 142	24.5	62	20	16	7	17	5.2	B-PT1/8
SRG 55R SRG 55LR	80	100	185 235	75	75 95	M12	18	—	—	129.2 179.2	27.5	70	22	16	9	22	5.2	B-PT1/8
SRG 65LV	90	126	303	76	120	M16	20	—	—	229.8	19.5	78.5	17	16	9	12.4	5.2	B-PT1/8

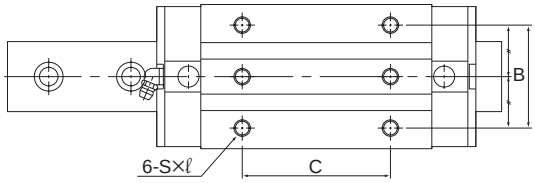
Model number coding

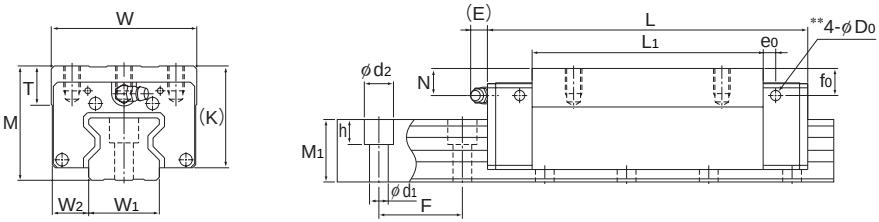
SRG45 LR 2 QZ KKHH C0 +1200L P T Z -II

- SRG45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  - Normal grade (No Symbol)/High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.





Models SRG25 to 65R/LR/LV

Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
H3	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
4	15	9.5	15.5	30	4.5×7.5×5.3	2500	11.3	25.8	0.21	—	0.21	—	0.24	0.15	1.58
4.6	20	12	20	30	6×9.5×8.5	3000	21 26.7	46.9 63.8	0.48 0.88	—	0.48 0.88	—	0.58 0.79	0.28 0.38	2.58
4.5	23	12.5	23	30	7×11×9	3000	27.9 34.2	57.5 75	0.641 1.07	3.7 5.74	0.641 1.07	3.7 5.74	0.795 1.03	0.6 0.8	3.6
5	28	16	26	40	9×14×12	3000	39.3 48.3	82.5 108	1.02 1.76	6.21 9.73	1.02 1.76	6.21 9.73	1.47 1.92	0.9 1.2	4.4
6	34	18	30	40	9×14×12	3000	59.1 76	119 165	1.66 3.13	10.1 17	1.66 3.13	10.1 17	2.39 3.31	1.6 2.1	6.9
8	45	20.5	37	52.5	14×20×17	3090	91.9 115	192 256	3.49 6.13	20 32.2	3.49 6.13	20 32.2	4.98 6.64	3.2 4.1	11.6
10	53	23.5	43	60	16×23×20	3060	131 167	266 366	5.82 10.8	33 57	5.82 10.8	33 57	8.19 11.2	5 6.9	15.8
11.5	63	31.5	54	75	18×26×22	3000	278	599	22.7	120	22.7	120	22.1	12.1	23.7

Note) The greasing hole on the top face and the pilot hole of the side nipple** are not drilled through in order to prevent foreign material from entering the block.
See B-257 for details.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-212.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SRG variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

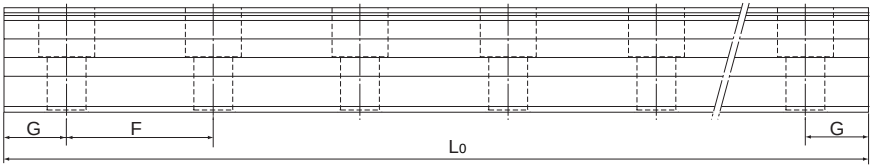
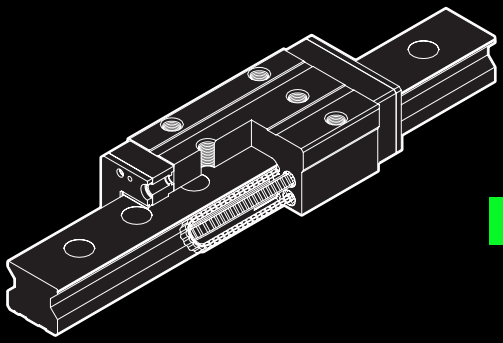


Table1 Standard Length and Maximum Length of the LM Rail for Model SRG Unit: mm

Model No.	SRG 15	SRG 20	SRG 25	SRG 30	SRG 35	SRG 45	SRG 55	SRG 65
LM rail standard length (L_o)	160 220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1360 1480 1600 1720 1840 1960 2080 2200	220 280 340 400 460 520 580 640 700 760 820 940 1000 1060 1120 1180 1240 1300 1360 1420 1480 1540 1600 1720 1840 1960 2080 2200 2320 2440	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	30	30	30	40	40	52.5	60	75
G	20	20	20	20	20	22.5	30	35
Max length	2500	3000	3000	3000	3000	3090	3060	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



SRN

Caged Roller LM Guide

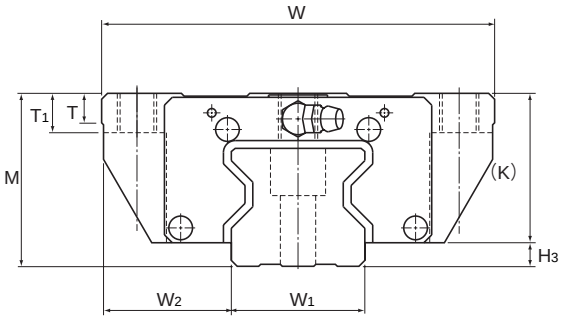
B Product Specifications

A Technical Descriptions of the Products (Separate)

Technical Descriptions

* Please see the separate "A Technical Descriptions of the Products".

Models SRN-C and SRN-LC



Model No.	Outer dimensions			LM block dimensions																H3
	Height M	Width W	Length L	B	C	C2	S	H	L1	T	T1	K	N	E	e0	f0	D0	Grease nipple		
SRN 35C SRN 35LC	44	100	125 155	82	62	52	M10	8.5	82.2 112.2	7.5	10	38	6.5	12	8	6.5	5.2	B-M6F		6
SRN 45C SRN 45LC	52	120	155 190	100	80	60	M12	10.5	107 142	7.5	15	45	7	12	8.5	7	5.2	B-M6F		8
SRN 55C SRN 55LC	63	140	185 235	116	95	70	M14	12.5	129 179.2	10.5	18	53	8	16	10	8	5.2	PT1/8		10
SRN 65LC	75	170	303	142	110	82	M16	14.5	229.8	19.5	20	65	14	16	9	11	5.2	PT1/8		11.5

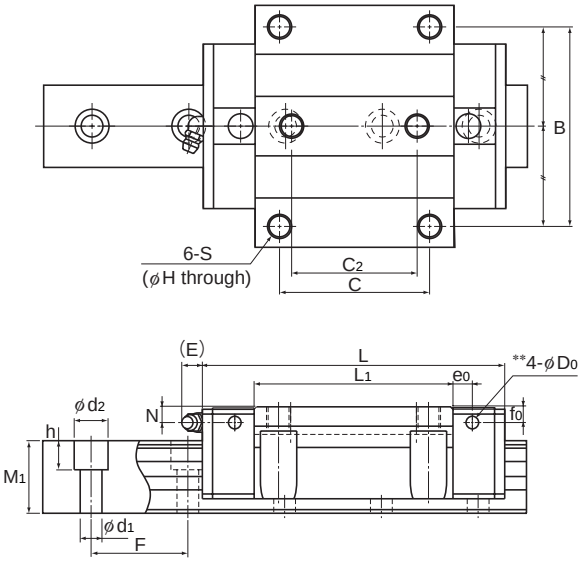
Model number coding

SRN45 C 2 KK C0 +1160L P T Z -II

- SRN45 — Model number
- C — Type of LM block
- 2 — No. of LM blocks used on the same rail
- KK — Contamination protection accessory symbol (*1)
- C0 — Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1160L — LM rail length (in mm)
- P — Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T — Symbol for LM rail jointed use
- Z — With plate cover
- -II — Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)

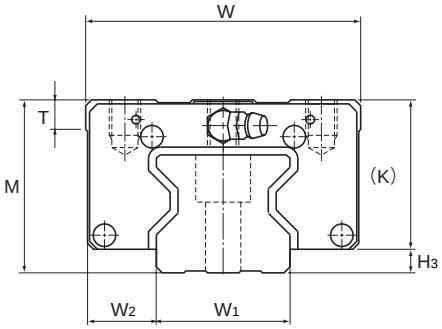


Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*						Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC		LM block	LM rail
	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block		kg	kg/m
	34	33	30	40	9×14×12	3000	59.1 76	119 165	1.66 3.13	10.1 17	1.66 3.13	10.1 17	2.39 3.31		1.6 2	6.9
	45	37.5	36	52.5	14×20×17	3090	91.9 115	192 256	3.49 6.13	20 32.2	3.49 6.13	20 32.2	4.98 6.64		3 3.6	11.3
	53	43.5	43	60	16×23×20	3060	131 167	266 366	5.82 10.8	33 57	5.82 10.8	33 57	8.19 11.2		4.9 6.4	15.8
	63	53.5	49	75	18×26×22	3000	278	599	22.7	120	22.7	120	22.1		12.7	21.3

Note) The greasing hole on the top face and the pilot hole of the side nipple** are not drilled through in order to prevent foreign material from entering the block.
See B-258 for details.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-218.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Models SRN-R and SRN-LR



Model No.	Outer dimensions			LM block dimensions												H3
	Height M	Width W	Length L	B	C	S×ℓ	L1	T	K	N	E	e0	f0	D0	Grease nipple	
SRN 35R SRN 35LR	44	70	125 155	50	50 72	M8×9	82.2 112.2	7.5	38	6.5	12	8	6.5	5.2	B-M6F	6
SRN 45R SRN 45LR	52	86	155 190	60	60 80	M10×11	107 142	7.5	45	7	12	8.5	7	5.2	B-M6F	8
SRN 55R SRN 55LR	63	100	185 235	75	75 95	M12×13	129 179.2	10.5	53	8	16	10	8	5.2	PT1/8	10
SRN 65LR	75	126	303	76	120	M16×16	229.8	19.5	65	14	16	9	11	5.2	PT1/8	11.5

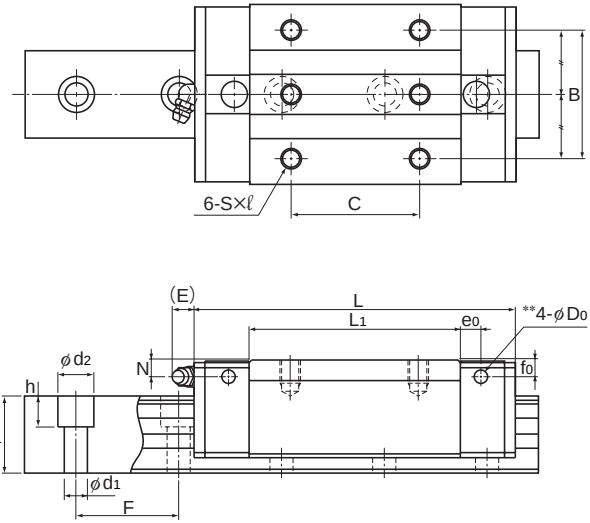
Model number coding

SRN45 LR 2 KK C0 +1200L P T Z -II

- SRN45: Model number
- LR: Type of LM block
- 2: No. of LM blocks used on the same rail
- KK: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2)
  Normal (No symbol)
  Light preload (C1)
  Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3)
  Normal grade (No Symbol)/High accuracy grade (H)
  Precision grade (P)/Super precision grade (SP)
  Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-119. (*4) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)



Unit: mm

	LM rail dimensions						Basic load rating		Static permissible moment kN-m*					Mass	
	Width		Height	Pitch		Length*	C	C0	MA		MB		MC	LM block	LM rail
	W1 0 -0.05	W2	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	34	18	30	40	9×14×12	3000	59.1 76	119 165	1.66 3.13	10.1 17	1.66 3.13	10.1 17	2.39 3.31	1.1 1.4	6.9
	45	20.5	36	52.5	14×20×17	3090	91.9 115	192 256	3.49 6.13	20 32.2	3.49 6.13	20 32.2	4.98 6.64	1.9 2.5	11.3
	53	23.5	43	60	16×23×20	3060	131 167	266 366	5.82 10.8	33 57	5.82 10.8	33 57	8.19 11.2	3.2 4.5	15.8
	63	31.5	49	75	18×26×22	3000	278	599	22.7	120	22.7	120	22.1	9.4	21.3

Note) The greasing hole on the top face and the pilot hole of the side nipple** are not drilled through in order to prevent foreign material from entering the block.
See B-258 for details.
The maximum length under "Length*" indicates the standard maximum length of an LM rail. (See B-218.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SRN variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

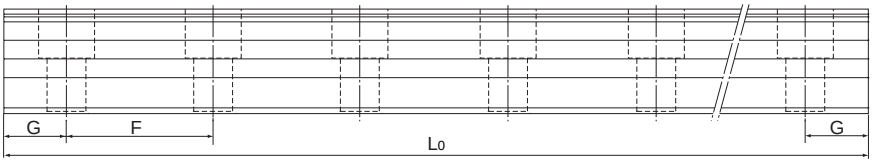
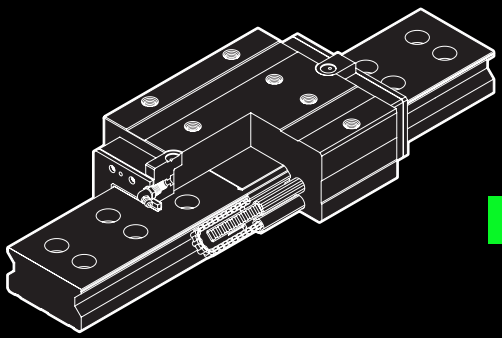


Table1 Standard Length and Maximum Length of the LM Rail for Model SRN Unit: mm

Model No.	SRN 35	SRN 45	SRN 55	SRN 65
LM rail standard length (L_o)	280 360 440 520 600 680 760 840 920 1000 1080 1160 1240 1320 1400 1480 1560 1640 1720 1800 1880 1960 2040 2200 2360 2520 2680 2840 3000	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985 3090	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	40	52.5	60	75
G	20	22.5	30	35
Max length	3000	3090	3060	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.



SRW

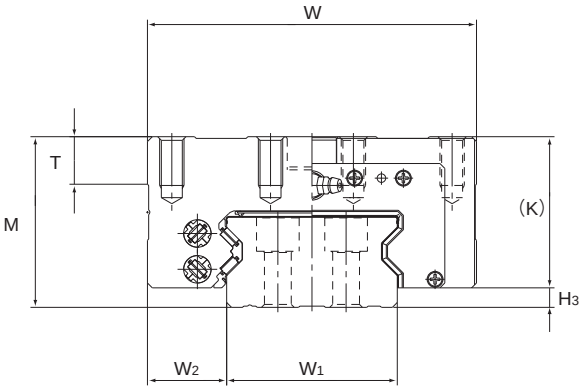
Caged Roller LM Guide

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SRW-LR



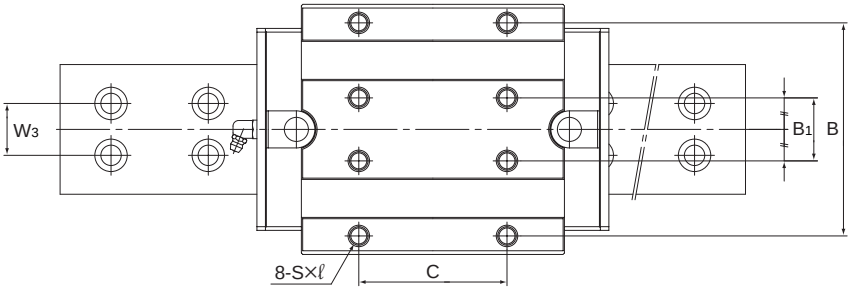
Model No.	Outer dimensions			LM block dimensions														H3
	Height M	Width W	Length L	B	B1	C	S×ℓ	L1	T	K	N	E	e0	f0	D0	Grease nipple		
SRW 70LR	70	135	190	115	34	80	M10×20	142	20	62	20	16	7	17	5.2	B-PT1/8		8
SRW 85LR	80	165	235	140	40	95	M12×19	179.2	28	70	22	16	9	17.7	5.2	B-PT1/8		10
SRW 100LR	100	200	303	172	50	110	M14×20	229.8	20	88.5	27	16	9	22.4	5.2	B-PT1/8		11.5

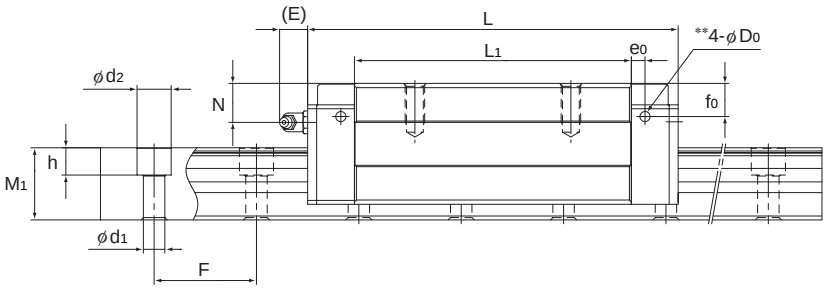
Model number coding

SRW70LR 2 QZ KKHH C0 +1200L P T Z -II

- SRW70LR: Model number
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator
- KKHH: Contamination protection accessory symbol (*1)
- C0: Radial clearance symbol (*2) Normal (No symbol) Light preload (C1) Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)/Super precision grade (SP) Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With plate cover
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See contamination protection accessory on A-368. (*2) See A-115. (*3) See A-128. (*4) See A-59.





Unit: mm

	LM rail dimensions							Basic load rating		Static permissible moment kN-m*					Mass	
	Width			Height	Pitch		Length *	C	C0	MA		MB		MC	LM block	LM rail
	W1 0 -0.05	W2	W3	M1	F	d1×d2×h	Max	kN	kN	1 block	Double blocks	1 block	Double blocks	1 block	kg	kg/m
	70	32.5	28	37	52.5	11×17.5×14	3090	115	256	6.13	32.2	6.13	32.2	10.2	6.3	18.6
	85	40	32	43	60	14×20×17	3060	167	366	10.8	57	10.8	57	17.5	11.0	26.7
	100	50	38	54	75	16×23×20	3000	278	599	22.7	120	22.7	120	33.9	21.6	35.9

Note) 1. Model SRW is attached with “SS” as standard.
2. This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
3. For the standard LM rail length, see Table1 on B-222.
4. The greasing hole on the top face and the pilot hole of the side nipple** are not drilled through in order to prevent foreign material from entering the block.
For details, see B-259.
5. The removing/mounting jig is not provided as standard. When desiring to use it, contact THK.

The maximum length under “Length*” indicates the standard maximum length of an LM rail. (See B-222.)
Static permissible moment*: 1 block: static permissible moment value with 1 LM block
Double blocks: static permissible moment value with 2 blocks closely contacting with each other

Description of Each Option ⇒A-351 Dimensions⇒B-223

Standard Length and Maximum Length of the LM Rail

Table1 shows the standard lengths and the maximum lengths of model SRW variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used.
For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.
If desiring connected use of this model, be sure to indicate the overall length so that we can manufacture the product without leaving a level difference in the joint.

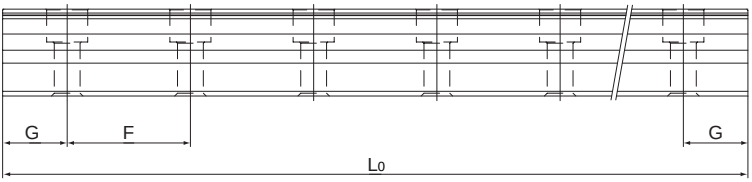


Table1 Standard Length and Maximum Length of the LM Rail for Model SRW Unit: mm

Model No.	SRW 70	SRW 85	SRW 100
LM rail standard length (L_0)	570 675 780 885 990 1095 1200 1305 1410 1515 1620 1725 1830 1935 2040 2145 2250 2355 2460 2565 2670 2775 2880 2985	780 900 1020 1140 1260 1380 1500 1620 1740 1860 1980 2100 2220 2340 2460 2580 2700 2820 2940 3060	1270 1570 2020 2620
Standard pitch F	52.5	60	75
G	22.5	30	35
Max length	3090	3060	3000

Note1) The maximum length varies with accuracy grades. Contact THK for details.
Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

LM Guide
Options

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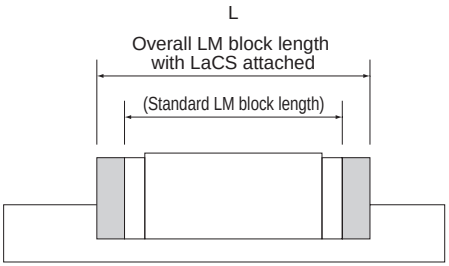
Dimensions of Each Model with an Option Attached

The LM Block Dimension (Dimension L) with LaCS and Seals Attached



Unit: mm

Model No.			L								
		Standard overall length	UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SHS	15C/V/R	64.4	64.4	64.4	69.8	66.8	72.2	78.6	84	79.8	85.2
	15LC/LV	79.4	79.4	79.4	84.8	81.8	87.2	93.6	99	94.8	100.2
	20C/V	79	79	79	85.4	83	89.4	93.6	100	96	102.4
	20LC/LV	98	98	98	104.4	102	108.4	112.6	119	115	121.4
	25C/V/R	92	92	92	101.6	100.4	107.6	112	119.2	114.4	121.6
	25LC/LV/LR	109	109	109	118.6	117.4	124.6	129	136.2	131.4	138.6
	30C/V/R	106	106	106	116	113.8	122.4	129.4	138	131.8	140.4
	30LC/LV/LR	131	131	131	141	138.8	147.4	154.4	163	156.8	165.4
	35C/V/R	122	122	122	134.8	132.4	142.2	148	157.8	150.4	160.2
	35LC/LV/LR	152	152	152	164.8	162.4	172.2	178	187.8	180.4	190.2
	45C/V/R	140	140	140	152.8	151.2	161	169	178.8	172.2	182
	45LC/LV/LR	174	174	174	186.8	185.2	195	203	212.8	206.2	216
	55C/V/R	171	171	171	186.6	184.2	195.4	202	213.2	205.2	216.4
	55LC/LV/LR	213	213	213	228.6	226.2	237.4	244	255.2	247.2	258.4
	65C/V	221	221	221	238.6	236.2	248.6	258	270.4	261.2	273.6
	65LC/LV	272	272	272	289.6	287.2	299.6	309	321.4	312.2	324.6
SSR	15XVY	40.3	40.3	40.3	47.3	44.9	50.7	59.5	65.3	60.7	66.5
	15XWY/XTBY	56.9	56.9	56.9	63.9	61.5	67.3	76.1	81.9	77.3	83.1
	20XV	47.7	47.7	47.7	54.6	53.4	60.3	67.7	74.6	70.1	77
	20XW/XTB	66.5	66.5	66.5	73.4	72.2	79.1	86.5	93.4	88.9	95.8
	25XVY	60	60	60	67.4	65.7	73.1	80	87.4	82.4	89.8
	25XWY/XTBY	83	83	83	90.4	88.7	96.1	103	110.4	105.4	112.8
	30XW	97	97	97	105.1	102.7	110.8	121	129.1	123.4	131.5
	35XW	110.9	110.9	110.9	119.9	117.7	126.7	136.9	145.9	139.3	148.3
SNR/ SNS	25R/C	82.8	82.8	82.8	90.4	89.2	96.8	100.1	107.7	102.5	110.1
	25LR/LC	102	102	102	109.6	108.4	116	119.3	126.9	121.7	129.3
	30R/C	98	98	98	107.8	104.4	114.2	118.5	128.3	120.9	130.7
	30LR/LC	120.5	120.5	120.5	130.3	126.9	136.7	141	150.8	143.4	153.2
	35R/C	109.5	109.5	109.5	119.7	117.1	127.3	131.1	141.3	133.5	143.7
	35LR/LC	135	135	135	145.2	142.6	152.8	156.6	166.8	159	169.2
	45R/C	138.2	138.2	138.2	148.4	146.6	156.8	163.2	173.4	166.4	176.6
	45LR/LC	171	171	171	181.2	179.4	189.6	196	206.2	199.2	209.4
	55R/C	163.3	163.3	163.3	172.7	171.1	181.3	187.8	198	191	201.2
	55LR/LC	200.5	200.5	200.5	209.9	208.3	218.5	225	235.2	228.2	238.4

Unit: mm

Model No.			L								
		Standard overall length	UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SNR/ SNS	65R/C	186	186	186	196.2	194.2	204.8	214.3	224.9	217.5	228.1
	65LR/LC	246	246	246	256.2	254.2	264.8	274.3	284.9	277.5	288.1
	85LR/LC	302.8	302.8	302.8	313.8	311.8	322.8	—	—	—	—
SHW	12CAM/CRM	37	37	37	—	—	—	—	—	—	—
	12HRM	50.4	50.4	50.4	—	—	—	—	—	—	—
	14CAM/CRM	45.5	45.5	45.5	—	—	—	—	—	—	—
	17CAM/CRM	51	51	51	54	53.4	56.4	—	—	—	—
	21CA/CR	59	59	59	64	63.2	68.2	75.6	80.6	77.2	82.2
	27CA/CR	72.8	72.8	72.8	78.6	77.8	83.6	89.4	95.2	91.8	97.6
	35CA/CR	107	107	107	114.4	112	119.4	129	136.4	131.4	138.8
	50CA/CR	141	141	141	149.2	147.4	155.6	166	174.2	168.4	176.6
SRS	7	23.4	23.4	23.4	—	—	—	—	—	—	—
	7W	31	31	31	—	—	—	—	—	—	—
	9	30.8	30.8	30.8	—	—	—	—	—	—	—
	9W	39	39	39	—	—	—	—	—	—	—
	12	34.4	34.4	34.4	—	—	—	—	—	—	—
	12W	44.5	44.5	44.5	—	—	—	—	—	—	—
	15	43	43	43	—	—	—	—	—	—	—
	15W	55.5	55.5	55.5	—	—	—	—	—	—	—
	20	50	50	50	—	—	—	67.2	—	—	—
	25	77	77	77	—	—	—	95.2	—	—	—
SCR	15S	64.4	64.4	64.4	69.8	66.8	72.2	78.9	84.4	79.9	85.2
	20S	79	79	79	85.4	83	89.4	94	100	96	102.5
	20	98	98	98	104.4	102	108.4	113	119	115	121.5
	25	109	109	109	118.6	117.4	124.6	129	136.2	131.4	138.6
	30	131	131	131	141	138.8	147.4	154.4	163	156.8	165.4
	35	152	152	152	164.8	162.4	172.2	178	187.8	180.4	190.2
	45	174	174	174	186.8	185.2	195	203	212.8	206.2	216
	65	272	272	272	289.6	287.2	299.6	309	321.4	312.2	324.6
HSR	8RM	24	24	—	—	—	—	—	—	—	—
	10RM	31	31	—	—	—	—	—	—	—	—
	12RM	45	45	—	—	—	—	—	—	—	—
	15A/B/R/YR	56.6	56.6	56.6	61.8	58.2*	63.4*	76	81.2	77.2	82.4
	20A/B/R/CA/CB/YR	74	74	74	80.6	76.6	83.2	92	98.6	95.2	101.8
	20LA/LB/LR/HA/HB	90	90	90	96.6	92.6	99.2	108	114.6	111.2	117.8
	25A/B/R/CA/CB/YR	83.1	83.1	83.1	90.7	86.7	94.3	101	108.6	105.3	112.9
	25LA/LB/LR/HA/HB	102.2	102.2	102.2	109.8	105.8	113.4	120.1	127.7	124.4	132
	30A/B/R/CA/CB/YR	98	98	98	105.6	101.6	109.2	119.9	127.5	124.2	131.8
	30LA/LB/LR/HA/HB	120.6	120.6	120.6	128.2	124.2	131.8	142.5	150.1	146.8	154.4
	35A/B/R/CA/CB/YR	109.4	109.4	109.4	117	113	120.6	132.4	140	135.6	143.2
	35LA/LB/LR/HA/HB	134.8	134.8	134.8	142.4	138.4	146	157.8	165.4	161	168.6
	45A/B/R/CA/CB/YR	139	139	139	146.2	144.2	151.4	—	—	—	—
	45LA/LB/LR/HA/HB	170.8	170.8	170.8	178	176	183.2	—	—	—	—
	55A/B/R/CA/CB/YR	163	163	163	170.2	168.2	175.4	—	—	—	—
	55LA/LB/LR/HA/HB	201.1	201.1	201.1	208.3	206.3	213.5	—	—	—	—
	65A/B/R/CA/CB/YR	186	186	186	193.2	191.2	198.4	—	—	—	—
	65LA/LB/LR/HA/HB	245.5	245.5	245.5	252.7	250.7	257.9	—	—	—	—
	85A/B/R/CA/CB/YR	245.6	245.6	245.6	252.8	252.4	259.6	—	—	—	—
	85LA/LB/LR/HA/HB	303	303	303	310.2	309.8	317	—	—	—	—
	100HA/HB/HR	334	334	334	—	—	—	—	—	—	—
	120HA/HB/HR	365	365	365	—	—	—	—	—	—	—
	150HA/HB/HR	396	396	396	—	—	—	—	—	—	—

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SR	15W/TB	57	57	57	62.2	58.4*	63.6*	—	—	—	—
	15V/SB	40.4	40.4	40.4	45.6	41.8*	47*	—	—	—	—
	20W/TB	66.2	66.2	66.2	72.8	70.6*	77.2*	—	—	—	—
	20V/SB	47.3	47.3	47.3	53.9	51.7*	58.3*	—	—	—	—
	25WY/TBY	83	83	83	90.6	87.4	95	—	—	—	—
	25VY/SBY	59.2	59.2	59.2	66.8	63.6	71.2	—	—	—	—
	30W/TB	96.8	96.8	96.8	104.4	99.4	107	—	—	—	—
	30V/SB	67.9	67.9	67.9	75.5	70.5	78.1	—	—	—	—
	35W/TB	111	111	111	118.6	113.6	121.2	—	—	—	—
	35V/SB	77.6	77.6	77.6	85.2	80.2	87.8	—	—	—	—
	45W/TB	126	126	126	134.6	129.4	138	—	—	—	—
	55W/TB	156	156	156	164.6	159.4	168	—	—	—	—
	70T	194.6	194.6	194.6	201.8	200.8	208	—	—	—	—
	85T	180	180	180	—	—	—	—	—	—	—
	100T	200	200	200	—	—	—	—	—	—	—
	120T	235	235	235	—	—	—	—	—	—	—
	150T	280	280	280	—	—	—	—	—	—	—
NR/ NRS	25XR/XA/XB	82.8	82.8	82.8	90.4	89.2	96.8	100.1	107.7	102.5	110.1
	25XLR/XLA/XLB	102	102	102	109.6	108.4	116	119.3	126.9	121.7	129.3
	30R/A/B	98	98	98	107	104.4	113.4	119.3	128.3	121.7	130.7
	30LR/LA/LB	120.5	120.5	120.5	129.5	126.9	135.9	141.8	150.8	144.2	153.2
	35R/A/B	109.5	109.5	109.5	119.7	117.1	127.3	131.1	141.3	133.5	143.7
	35LR/LA/LB	135	135	135	145.2	142.6	152.8	156.6	166.8	159	169.2
	45R/A/B	139	139	139	149.2	147.4	157.6	164.4	174.6	167.6	177.8
	45LR/LA/LB	171	171	171	181.2	179.4	189.6	196.4	206.6	199.6	209.8
	55R/A/B	162.8	162.8	162.8	173	171.4	181.6	188.1	198.3	191.3	201.5
	55LR/LA/LB	200	200	200	210.2	208.6	218.8	225.3	235.5	228.5	238.7
	65R/A/B	185.6	185.6	185.6	196.2	194.2	204.8	214.9	225.5	218.1	228.7
	65LR/LA/LB	245.6	245.6	245.6	256.2	254.2	264.8	274.9	285.5	278.1	288.7
	75R/A/B	218	218	218	229	226.6	237.6	—	—	—	—
	75LR/LA/LB	274	274	274	285	282.6	293.6	—	—	—	—
	85R/A/B	246.7	246.7	246.7	257.7	256.1	267.1	—	—	—	—
	85LR/LA/LB	302.8	302.8	302.8	313.8	312.2	323.2	—	—	—	—
	100R/A/B	288.8	288.8	288.8	297.8	295.6	307.2	—	—	—	—
	100LR/LA/LB	328.8	328.8	328.8	337.8	335.6	347.2	—	—	—	—
HRW	12LRM	37	37	37	—	—	—	—	—	—	—
	14LRM	45.5	45.5	45.5	—	—	—	—	—	—	—
	17CA/CR	50.8	50.8	—	54.8	54.4	60.2	—	—	—	—
	21CA/CR	58.8	58.8	—	64.2	62.8	69	—	—	—	—
	27CA/CR	72.8	72.8	72.8	79	75.6	81.8	—	—	—	—
	35CA/CR	106.6	106.6	106.6	113.8	112	119.2	—	—	—	—
	50CA/CR	140.5	140.5	140.5	147.7	143.3	150.5	—	—	—	—
	60CA	158.9	158.9	158.9	169.7	165.1	175.9	—	—	—	—
RSR/ RSR-W	3 M	12	—	—	—	—	—	—	—	—	—
	3N	16	—	—	—	—	—	—	—	—	—
	3WM	14.1	14.9	—	—	—	—	—	—	—	—
	3WN	19.1	19.9	—	—	—	—	—	—	—	—
	5 M	15.5	16.9	—	—	—	—	—	—	—	—
	5N	18.7	20.1	—	—	—	—	—	—	—	—
	5WM	20.7	22.1	—	—	—	—	—	—	—	—
	5WN	26.7	28.1	—	—	—	—	—	—	—	—
	7 M	22	23.4	—	—	—	—	—	—	—	—

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
RSR/ RSR-W	7N	31.6	33	—	—	—	—	—	—	—	—
	7WM	30	31	—	—	—	—	—	—	—	—
	7WN	39.9	40.9	—	—	—	—	—	—	—	—
	9KM	27.8	30.8	—	—	—	—	—	—	—	—
	9N	37.8	41	—	—	—	—	—	—	—	—
	9WV	36	39	—	—	—	—	—	—	—	—
	9WVM	36	39	—	—	—	—	—	—	—	—
	9WN	47.7	50.7	—	—	—	—	—	—	—	—
	12VM	31	35	—	—	—	—	—	—	—	—
	12N	43.7	47.7	—	—	—	—	—	—	—	—
	12WV	41.3	44.5	—	—	—	—	—	—	—	—
	12WVM	41.3	44.5	—	—	—	—	—	—	—	—
	12WN	56.3	59.5	—	—	—	—	—	—	—	—
	14WV	47.3	50	—	—	—	—	—	—	—	—
	15VM	38.9	43	—	—	—	—	—	—	—	—
	15N	56.5	61	—	—	—	—	—	—	—	—
	15WV	51.5	55.5	—	—	—	—	—	—	—	—
	15WVM	51.5	55.5	—	—	—	—	—	—	—	—
	15WN	70.5	74.5	—	—	—	—	—	—	—	—
	20VN	61.5	66.5	—	—	—	—	—	—	—	—
	20N	81.3	86.3	—	—	—	—	—	—	—	—
RSR-Z/ WZ	7ZM	21.6	23.4	—	—	—	—	—	—	—	—
	9ZM	29.1	30.8	—	—	—	—	—	—	—	—
	12ZM	32.6	35	35	—	—	—	—	—	—	—
	15ZM	40.2	43	43	—	—	—	—	—	—	—
	7WZM	29.2	31.5	—	—	—	—	—	—	—	—
	9WZM	37.6	39	39	—	—	—	—	—	—	—
	12WZM	42.1	44.5	44.5	—	—	—	—	—	—	—
	15WZM	53.1	55.5	55.5	—	—	—	—	—	—	—
RSH	7M	20.4	23.4	—	—	—	—	—	—	—	—
	9KM	27.8	30.8	—	—	—	—	—	—	—	—
	12VM	31	35	—	—	—	—	—	—	—	—
RSH-Z/ WZ	7ZM	20.4	23.4	—	—	—	—	—	—	—	—
	9ZM	29.1	30.8	—	—	—	—	—	—	—	—
	12ZM	32.6	35	35	—	—	—	—	—	—	—
	15ZM	40.2	43	43	—	—	—	—	—	—	—
	7WZM	28	31.5	—	—	—	—	—	—	—	—
	9WZM	37.6	39	39	—	—	—	—	—	—	—
	12WZM	42.1	44.5	44.5	—	—	—	—	—	—	—
	15WZM	53.1	55.5	55.5	—	—	—	—	—	—	—
HR	918	45	45	—	—	—	—	—	—	—	—
	1123	52	52	—	—	—	—	—	—	—	—
	1530	69	69	—	—	—	—	—	—	—	—
	2042	91.6	91.6	—	—	—	—	—	—	—	—
	2042T	110.7	110.7	—	—	—	—	—	—	—	—
	2555	121	121	—	—	—	—	—	—	—	—
	2555T	146.4	146.4	—	—	—	—	—	—	—	—
	3065	145	145	—	—	—	—	—	—	—	—
	3065T	173.5	173.5	—	—	—	—	—	—	—	—
	3575	154.8	154.8	—	—	—	—	—	—	—	—
	3575T	182.5	182.5	—	—	—	—	—	—	—	—
	4085	177.8	177.8	—	—	—	—	—	—	—	—

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HR	4085T	215.9	215.9	—	—	—	—	—	—	—	—
	50105	227	227	—	—	—	—	—	—	—	—
	50105T	274.5	274.5	—	—	—	—	—	—	—	—
	60125	329	329	—	—	—	—	—	—	—	—
GSR	15T	59.8	59.8	59.8	65	65.8	71	—	—	—	—
	15V	47.1	47.1	47.1	52.3	53.1	58.3	—	—	—	—
	20T	74	74	74	80.6	77.6	84.2	—	—	—	—
	20V	58.1	58.1	58.1	64.7	61.7	68.3	—	—	—	—
	25T	88	88	88	95	91.6	98.6	—	—	—	—
	25V	69	69	69	76	72.6	79.6	—	—	—	—
	30T	103	103	103	110.6	107.2	114.8	—	—	—	—
	35T	117	117	117	124.6	121.2	128.8	—	—	—	—
GSR-R	25T-R	88	88	88	95	91.6	98.6	—	—	—	—
	25V-R	69	69	69	76	72.6	79.6	—	—	—	—
	30T-R	103	103	103	110.6	107.2	114.8	—	—	—	—
	35T-R	117	117	117	124.6	121.2	128.8	—	—	—	—
CSR	15	56.6	56.6	56.6	61.8	58.2*	63.4*	—	—	—	—
	20S	74	74	74	80.6	76.6	83.2	—	—	—	—
	20	90	90	90	96.6	92.6	99.2	—	—	—	—
	25S	83.1	83.1	83.1	90.7	86.7	94.3	—	—	—	—
	25	102.2	102.2	102.2	109.8	105.8	113.4	—	—	—	—
	30S	98	98	98	105.6	101.6	109.2	—	—	—	—
	30	120.6	120.6	120.6	128.2	124.2	131.8	—	—	—	—
	35	134.8	134.8	134.8	142.4	138.4	146	—	—	—	—
	45	170.8	170.8	170.8	178	176	183.2	—	—	—	—
MX	5M	22.3	23.3	—	—	—	—	—	—	—	—
	7WM	39.8	40.8	—	—	—	—	—	—	—	—
JR	25A/B/R	83.1	83.1	83.1	90.7	89.4	97	—	—	—	—
	35A/B/R	113.6	113.6	113.6	125.6	122	134*	—	—	—	—
	45A/B/R	145	145	145	159	150.8	164.8*	—	—	—	—
	55A/B/R	165	165	165	175.4	170.4	180.8*	—	—	—	—
HCR	12A+60/100R	44.6	44.6	—	—	—	—	—	—	—	—
	15A+60/150R	56.2	56.2	56.2	61.8	57.8	63	—	—	—	—
	15A+60/300R	56.4	56.4	56.4	62	58	63.2	—	—	—	—
	15A+60/400R	56.5	56.5	56.5	62.1	58.1	63.3	—	—	—	—
	25A+60/500R	83	83	83	90.6	86.6	94.2	—	—	—	—
	25A+60/750R	83	83	83	90.6	86.6	94.2	—	—	—	—
	25A+60/1000R	83	83	83	90.6	86.6	94.2	—	—	—	—
	35A+60/600R	109.2	109.2	109.2	116.7	112.7	120.3	—	—	—	—
	35A+60/800R	109.3	109.3	109.3	116.8	112.8	120.4	—	—	—	—
	35A+60/1000R	109.3	109.3	109.3	116.8	112.8	120.4	—	—	—	—
	35A+60/1300R	109.3	109.3	109.3	116.8	112.8	120.4	—	—	—	—
	45A+60/800R	138.7	138.7	138.7	145.9	143.9	151.1	—	—	—	—
	45A+60/1000R	138.8	138.8	138.8	146	144	151.2	—	—	—	—
	45A+60/1200R	138.8	138.8	138.8	146	144	151.2	—	—	—	—
	45A+60/1600R	138.9	138.9	138.9	146.1	144.1	151.3	—	—	—	—
	65A+60/1000R	197.8	197.8	197.8	204.7	202.7	209.9	—	—	—	—
	65A+60/1500R	197.9	197.9	197.9	204.8	202.8	210	—	—	—	—
	65A+60/2000R	197.9	197.9	197.9	204.8	202.8	210	—	—	—	—
	65A+60/2500R	197.9	197.9	197.9	204.9	202.9	210.1	—	—	—	—
	65A+60/3000R	197.9	197.9	197.9	204.9	202.9	210.1	—	—	—	—
HMG	15A	48	48	—	—	—	—	—	—	—	—

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
HMG	25A	62.2	62.2	—	—	—	—	—	—	—	—
	35A	80.6	80.6	—	—	—	—	—	—	—	—
	45A	107.6	107.6	—	—	—	—	—	—	—	—
	65A	144.4	144.4	—	—	—	—	—	—	—	—
NSR-TBC	20TBC	67	67	—	—	—	—	—	—	—	—
	25TBC	78	78	—	—	—	—	—	—	—	—
	30TBC	90	90	—	—	—	—	—	—	—	—
	40TBC	110	110	110	—	—	—	—	—	—	—
	50TBC	123	123	123	—	—	—	—	—	—	—
	70TBC	150	150	150	—	—	—	—	—	—	—
HSR-M1	15M1A/M1B/M1R/M1YR	59.6	59.6	59.6	—	—	—	—	—	—	—
	20M1A/M1B/M1R/M1YR	76	76	76	—	—	—	—	—	—	—
	20M1LA/M1LB/M1LR	92	92	92	—	—	—	—	—	—	—
	25M1A/M1B/M1R/M1YR	83.9	83.9	83.9	—	—	—	—	—	—	—
	25M1LA/M1LB/M1LR	103	103	103	—	—	—	—	—	—	—
	30M1A/M1B/M1R/M1YR	98.8	98.8	98.8	—	—	—	—	—	—	—
	30M1LA/M1LB/M1LR	121.4	121.4	121.4	—	—	—	—	—	—	—
	35M1A/M1B/M1R/M1YR	112	112	112	—	—	—	—	—	—	—
	35M1LA/M1LB/M1LR	137.4	137.4	137.4	—	—	—	—	—	—	—
SR-M1	15M1W/M1TB	57	57	57	—	—	—	—	—	—	—
	15M1V/M1SB	40.4	40.4	40.4	—	—	—	—	—	—	—
	20M1W/M1TB	66.2	66.2	66.2	—	—	—	—	—	—	—
	20M1V/M1SB	47.3	47.3	47.3	—	—	—	—	—	—	—
	25M1W/M1TB	83	83	83	—	—	—	—	—	—	—
	25M1V/M1SB	59.2	59.2	59.2	—	—	—	—	—	—	—
	30M1W/M1TB	96.8	96.8	96.8	—	—	—	—	—	—	—
	30M1V/M1SB	67.9	67.9	67.9	—	—	—	—	—	—	—
	35M1W/M1TB	111	111	111	—	—	—	—	—	—	—
	35M1V/M1SB	77.6	77.6	77.6	—	—	—	—	—	—	—
RSR-M1	9M1K	27.8	30.8	—	—	—	—	—	—	—	—
	9M1N	37.8	41	—	—	—	—	—	—	—	—
	9M1WV	36	39	—	—	—	—	—	—	—	—
	9M1WN	47.7	50.7	—	—	—	—	—	—	—	—
	12M1V	31	35	—	—	—	—	—	—	—	—
	12M1N	43.7	47.7	—	—	—	—	—	—	—	—
	12M1WV	41.3	44.5	—	—	—	—	—	—	—	—
	12M1WN	56.3	59.5	—	—	—	—	—	—	—	—
	15M1V	38.9	43	—	—	—	—	—	—	—	—
	15M1N	56.5	61	—	—	—	—	—	—	—	—
	15M1WV	51.5	55.5	—	—	—	—	—	—	—	—
	15M1WN	70.5	74.5	—	—	—	—	—	—	—	—
	20M1V	61.5	66.5	—	—	—	—	—	—	—	—
	20M1N	81.3	86.3	—	—	—	—	—	—	—	—
HSR-M2	15M2A	56.6	56.6	56.6	—	—	—	—	—	—	—
	20M2A	74	74	74	—	—	—	—	—	—	—
	25M2A	83.1	83.1	83.1	—	—	—	—	—	—	—
SRG	15A/V	69	69	69	71	—	—	—	—	—	—
	20A/V	86	86	86	88	91.4	93.4	106.6	108.6	109	111
	20LA/LV	106	106	106	108	111.4	113.4	126.6	128.6	129	131
	25C/R	95.5	95.5	95.5	100.5	100.5	105.5	115.3	120.3	117.7	122.7
	25LC/LR	115.1	115.1	115.1	120.1	120.1	125.1	134.9	139.9	137.6	142.3
	30C/R	111	111	111	118	116	123	130.8	137.8	133.2	140.2

Unit: mm

Model No.		Standard overall length	L								
			UU	SS	DD	ZZ	KK	SSHH	DDHH	ZZHH	KKHH
SRG	30LC/LR	135	135	135	142	140	147	154.8	161.8	157.2	164.2
	35C/R	125	125	125	132.8	133.4	141.4	148.6	151	151	159
	35LC/LR	155	155	155	162.8	163.4	171.2	178.6	181	181	188.8
	45C/R	155	155	155	164.2	164.2	173.4	182	185.2	185.5	194.5
	45LC/LR	190	190	190	199.2	199.2	208.4	217	220.2	220.2	229.4
	55C/R	185	185	185	194.2	194.2	203.4	212	215.2	215.5	224.5
	55LC/LR	235	235	235	244.2	244.2	253.4	262	265.2	265.2	274.4
	65LC/LV	303	303	303	314.2	314.2	325.4	335.4	338.6	338.6	349.8
SRN	35C/R	125	125	125	132.8	133.4	141.4	148.6	151	151	159
	35LC/LR	155	155	155	162.8	163.4	171.2	178.6	181	181	188.8
	45C/R	155	155	155	164.2	164.2	173.4	182	185.2	185.5	194.5
	45LC/LR	190	190	190	199.2	199.2	208.4	217	220.2	220.2	229.4
	55C/R	185	185	185	194.2	194.2	203.4	212	215.2	215.5	224.5
	55LC/LR	235	235	235	244.2	244.2	253.4	262	265.2	265.2	274.4
	65LC/LR	303	303	303	314.2	314.2	325.4	335.4	338.6	338.6	349.8
SRW	70LR	190	190	190	199.2	197.2	206.4	217	226.2	220.2	229.4
	85LR	235	235	235	244.2	242.2	251.4	262	271.2	265.2	274.4
	100LR	303	303	303	314.2	311.4	322.6	335.4	346.6	338.6	349.8

A grease nipple cannot be attached. Contact THK for details.

Model number coding

SHS25 LC 2 QZ KKHH C0 +1200L P T Z -II

- SHS25: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator (*1)
- KKHH: Contamination protection accessory symbol (*2)
- C0: Radial clearance symbol (*3)
  - Normal (No symbol)
  - Light preload (C1)
  - Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*4)
  - Normal grade (No Symbol)
  - High accuracy grade (H)
  - Precision grade (P)/Super precision grade (SP)
  - Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With steel tape
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See A-361. (*2) See A-368. (*3) See A-113. (*4) See A-118. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

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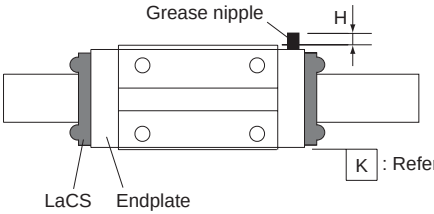
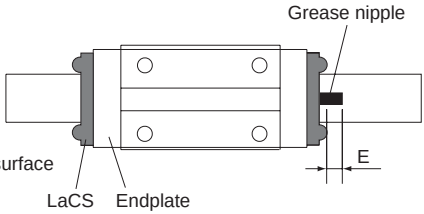
Incremental Dimension with Grease Nipple (When LaCS is Attached)



Grease nipple mounting location
for models SHS, SSR, SNR/SNS, SRG and NR/NRS



Grease nipple mounting location
for models SHW, SRS and HSR

Unit: mm

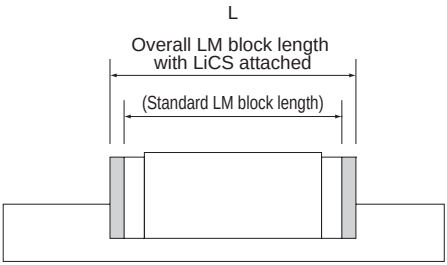
Model No.		Incremental dimension with grease nipple H	Nipple type
SHS	15C/LC	—	PB107
	15R/V/LV	4.7	PB107
	20C/LC	—	PB107
	20V/LV	4.5	PB107
	25C/LC	—	PB107
	25R/LR/V/LV	4.7	PB107
	30C/LC	—	A-M6F
	30R/LR/V/LV	7.4	A-M6F
	35C/LC	—	A-M6F
	35R/LR/V/LV	7.4	A-M6F
	45C/LC	—	A-M6F
	45R/LR/V/LV	7.7	A-M6F
	55C/LC	—	A-M6F
	55R/LR/V/LV	7.4	A-M6F
	65C/LC	—	A-M6F
	65V/LV	6.9	A-M6F
SSR	15XVY/XWY	4.4	PB107
	15XTBY	—	PB107
	20XV/XW	4.6	PB107
	20XTB	—	PB107
	25XVY/XWY	4.5	PB107
	25XTBY	—	PB107
	30XW	5	PB1021B
	35XW	5	PB1021B
SNR/SNS	25C/LC	—	PB1021B
	25R/LR	4.9	PB1021B
	30C/LC	—	PB1021B
	30R/LR	4.5	PB1021B
	35C/LC	—	A-M6F
	35R/LR	7.8	A-M6F
	45C/LC	—	A-M6F
	45R/LR	7.9	A-M6F
	55C/LC	—	A-M6F
	55R/LR	7.7	A-M6F
	65C/LC	—	A-PT1/8
	65R/LR	15.8	A-PT1/8

Unit: mm

Model No.		Incremental dimension with grease nipple E	Nipple type
SHW	21CA/CR	4.2	PB1021B
	27CA/CR	10.7	B-M6F
	35CA/CR	10.0	B-M6F
	50CA/CR	21	B-PT1/8
SRS	25	4	PB1021B
HSR	15A/B/R/YR	2.9	PB1021B
	20A/B/R/CA/CB/YR	9.4	B-M6F
	20LA/LB/LR/HA/HB	9.4	B-M6F
	25A/B/R/CA/CB/YR	9	B-M6F
	25LA/LB/LR/HA/HB	9	B-M6F
	30A/B/R/CA/CB/YR	9	B-M6F
	30LA/LB/LR/HA/HB	9	B-M6F
	35A/B/R/CA/CB/YR	8	B-M6F
	35LA/LB/LR/HA/HB	8	B-M6F
NR/NRS	25A/B/LA/LB	—	PB1021B
	25R/LR	4.8	PB1021B
	30A/B/LA/LB	—	PB1021B
	30R/LR	4.5	PB1021B
	35A/B/LA/LB	—	A-M6F
	35R/LR	7.4	A-M6F
	45A/B/LA/LB	—	A-M6F
	45R/LR	7.4	A-M6F
	55A/B/LA/LB	—	A-M6F
	55R/LR	6.9	A-M6F
	65A/B/LA/LB	—	A-PT1/8
	65R/LR	15.3	A-PT1/8
SRG	35LC	—	A-M6F
	35LR	7.2	A-M6F
	45LC	—	A-M6F
	45LR	7.2	A-M6F
	55LC	—	A-M6F
	55LR	7.2	A-M6F
	65LC	—	A-M6F
	65LR	6.2	A-M6F

Note1) When desiring the mounting location for the grease nipple other than the above, contact THK.
Note2) Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring both QZ Lubricator and a grease nipple, contact THK.
Note3) When desiring a grease nipple for model SHW or SRS without QZ Lubricator, indicate “with grease nipple” when placing an order. (If not, a grease nipple will not be attached.)
Note4) Model HSR15 attached with ZZ or KK cannot have a grease nipple. Contact THK for details.

LM Block Dimension (Dimension L) with LiCS Attached



Unit: mm

Model No.			L	
		Standard overall length	GG	PP
SSR	15XVY	40.3	48.7	48.7
	15XWY/XTBY	56.9	65.3	65.3
	20XV	47.7	55.8	55.8
	20XW/XTB	66.5	74.6	74.6
	25XVY	60	67.6	67.6
	25XWY/XTBY	83	90.6	90.6
	30XW	97	106.7	106.7
	35XW	110.9	121.7	121.7
SRG	15A	67	77	77
	15V	67	77	77

Model number coding

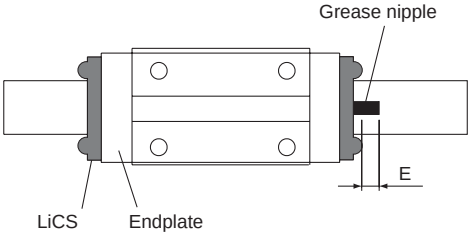
SSR20 XW 2 GG C1 +600L P T -II

- SSR20: Model number
- XW: Type of LM block
- 2: No. of LM blocks used on the same rail
- GG: With LiCS (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol) / Light preload (C1) / Medium preload (C0)
- +600L: LM rail length (in mm)
- P: Accuracy symbol (*3) — Normal grade (No Symbol)/High accuracy grade (H) / Precision grade (P) /Super precision grade (SP) / Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- -II: Symbol for No. of rails used on the same plane (*4)

(*1) See A-355 (*2) See A-113 (*3) See A-118 (*4) SeeA-59

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Incremental Dimension with Grease Nipple (When LiCS is Attached)



Location for Mounting the Grease Nipple

Unit: mm

Model No.		Incremental dimension with grease nipple E	Nipple type
SSR	15XVY	2.9	PB1021B
	15XWY/XTBY	2.9	PB1021B
	20XV	9	B-M6F
	20XW/XTB	9	B-M6F
	25XVY	9	B-M6F
	25XWY/XTBY	9	B-M6F
	30XW	9	B-M6F
	35XW	8	B-M6F
SRG	15A	4.5	PB107
	15V	4.5	PB107

Model number coding

SSR20 XW 2 GG C1 +600L H -II

- SSR20: Model number
- XW: Type of LM block
- 2: No. of LM blocks used on the same rail
- GG: With LiCS (*1)
- C1: Radial clearance symbol (*2) — Normal (No symbol); Light preload (C1); Medium preload (C0)
- +600L: LM rail length (in mm)
- H: Accuracy symbol (*3) — Normal grade (No Symbol); High accuracy grade (H)/Precision grade (P); Super precision grade (SP)/Ultra precision grade (UP)
- -II: Symbol for No. of rails used on the same plane (*4)

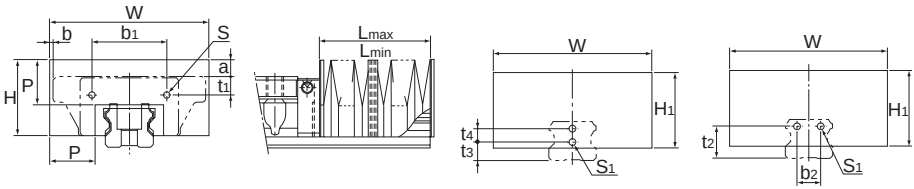
(*1) See A-355 (*2) See A-113 (*3) See A-118 (*4) SeeA-59

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Bellows

[Dedicated Bellows JSH for Model SHS]

The table below shows the dimensions of dedicated bellows JSH for model SHS. Specify the corresponding model number of the desired bellows from the table.



Models SHS15 to 30 Models SHS35 to 65

Unit: mm

Model No.		Main dimensions												Supported model numbers	
		W	H	H_1	P	b_1	C	V	R	b_2	t_2	t_3	t_4		
JSH	15	53	26	26	15	22.4	4	4	8	—	—	8	—	SHS	15
	20	60	30	30	17	27.6	7.5	7.5	—	—	—	8	6		20
	25	75	36	36	20	38	9.1	9.1	13.1	—	—	9	7		25
	30	80	38	38	20	44	11	11	14	—	—	11	8		30
	35	86	40.5	40.5	20	50	11	11	18	20	21.5	—	—		35
	45	97	46	46	20	64.6	13.5	13.5	23.5	26	26.5	—	—		45
	55	105	48	48	20	68	13	13	23	30	31.5	—	—		55
	65	126	63	63	25	80	18	18	—	34	45	—	—		65

Unit: mm

Supported model numbers		Other dimensions								A Lmax / Lmin
		Mounting bolt		a			b			
		S	S_1	C	V	R	C	V	R	
SHS	15	M2×8ℓ	M4×8ℓ	5	5	1	3	9.5	9.5	5
	20	M2.6×8ℓ	M3×6ℓ	5	5	—	−1.5	8	—	6
	25	M3×8ℓ	M3×6ℓ	6	6	2	2.5	13.5	13.5	7
	30	M3×10ℓ	M3×6ℓ	3	3	0	−5	10	10	7
	35	M4×10ℓ	M4×8ℓ	0	0	−7	−7	8	8	7
	45	M4×12ℓ	M4×8ℓ	−5	−5	−15	−11.7	5.5	5.5	7
	55	M5×12ℓ	M5×10ℓ	−9	−9	−19	−17.5	2.5	2.5	7
	65	M6×14ℓ	M6×12ℓ	−8	−8	—	−22	0	—	9

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSH35 - 60/420

Model number of bellows for SHS35

Dimensions of the bellows (length when compressed / length when extended)

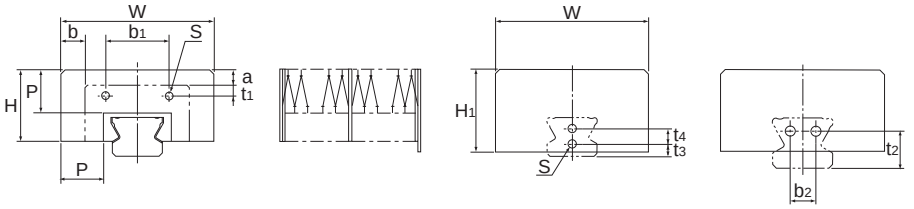
Note) The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate

[Dedicated Bellows JSSR-X for Model SSR]

The table below shows the dimensions of dedicated bellows JSSR-X for model SSR. Specify the corresponding model number of the desired bellows from the table.



Models SSR15X to 25X Models SSR30X and 35X

Unit: mm

Model No.		Main dimensions														A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S	a	b XW/XV	b XTB			
JSSR	15X	51	24	26	15	20.5	4.7	—	—	8	—	M3×5ℓ	5	8.5	−0.5	5	SSR	15X
	20X	58	26	30	15	25	4.2	—	—	6	6	M3×5ℓ	4	8	−0.5	5		20X
	25X	71	33	38	20	29	5	—	—	6	7	M3×5ℓ	7	11.5	−1	7		25X
	30X	76	37.5	37.5	20	35	9	12	17	—	—	M4×6ℓ	3	8	—	7		30X
	35X	84	39	39	20	44	7	14	20	—	—	M5×10ℓ	2	7	—	7		35X

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSSR35X - 60/420

- JSSR35X: Model number of bellows for SSR35X
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

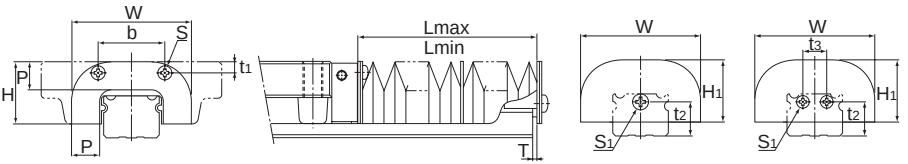
Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows JSN for Models SNR and SNS]

For models SNR/SNS-C, SNR/SNS-LC, SNR/SNS-R and SNR/SNS-LR, a simplified bellows is available. Attach the simplified bellows when the LM Guide is used in locations subject to a coolant or the like. To gain a higher contamination protection effect, attach a telescopic cover outside the simplified bellows after the bellows is mounted.



Models SNR25 to 45 Models SNR55 and 65

Unit: mm

Model No.		Main dimensions											A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b	t_1	t_2	t_3	Mounting bolt S	Mounting bolt S_1	T			
JSN	25	50	25.5	24.5	10	26.6	4.6	13	—	M3×5ℓ	M4×4ℓ	1.5	7	SNR/SNS	25
	30	60	31	30	14	34	5.5	17	—	M4×8ℓ	M4×4ℓ	1.5	9		30
	35	70	35	34	15	36	6	20.5	—	M4×8ℓ	M5×4ℓ	2	10		35
	45	86	40.5	39.5	17	47	6.5	24	—	M5×10ℓ	M5×4ℓ	2	10		45
	55	100	49	48	19.5	54	10	29.5	18	M5×10ℓ	M5×4ℓ	2	13		55
	65	126	60	59	22	64	13.5	36.2	20	M6×12ℓ	M6×5ℓ	3.2	13		65
	85	156	70.5	70.5	30	110	15.5	39.5	28	M6×12ℓ	M6×5ℓ	3.2	20		85

Note1) When desiring to use the simplified bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the simplified bellows, contact THK.
Note3) For the bellows for models SNR/SNS-CH, SNR/SNS-LCH, SNR/SNS-RH and SNR/SNS-LRH, contact THK.
Note4) When using the simplified bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the simplified bellows is required when ordering the LM Guide.

Model number coding

JSN25 - 60/420

Model number of bellows for SNR/SNS25

Dimensions of the bellows (length when compressed / length when extended)

Note) The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate

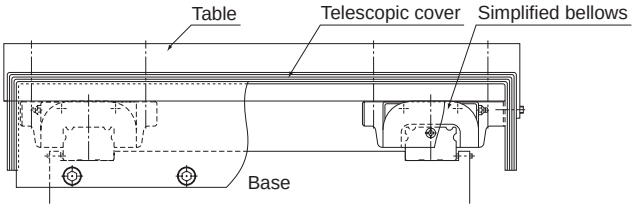
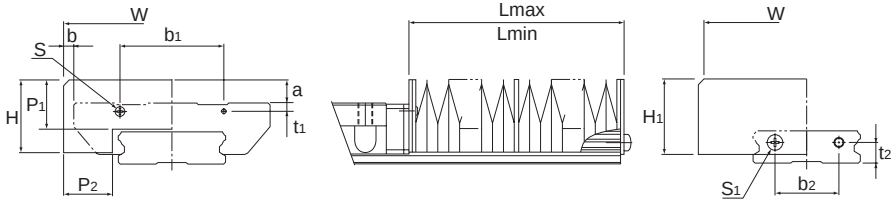


Fig.1 Example of Mounting the Simplified Bellows

[Dedicated Bellows JSHW for Model SHW]

The table below shows the dimensions of dedicated bellows JSHW for model SHW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions									Supported model numbers	
		W	H	H1	P1	P2	b1	t1	b2	t2		
JSHW	17	68	22	23	15	15.4	39	2.6	18	6	SHW	17
	21	75	25	26	17	17	35.8	2.9	22	7		21
	27	85	33.5	33.5	20	20	25	3.5	20	10		27
	35	120	35	35	20	20	75	7.5	40	13		35
	50	164	42	42	20	20	89.4	14	50	16		50

Unit: mm

Model No.		Other dimensions					
		Mounting bolt		a	b		$\left(\frac{A}{\frac{Lmax}{Lmin}}\right)$
		*S	S1		Model CA	Model CR	
JSHW	17	M2×4ℓ	M3×6ℓ	8	4	9	5
	21	M2×5ℓ	M3×6ℓ	8	3.5	10.5	6
	27	M2.6×6ℓ	M3×6ℓ	10	2.5	11.5	7
	35	M3×8ℓ	M3×6ℓ	6	0	10	7
	50	M4×12ℓ	M4×8ℓ	—	1	17	7

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) For the mounting bolts marked with "*", use tapping screws.
Note4) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSHW21 - 60/360

Model number of bellows for SHW21

Dimensions of the bellows (length when compressed / length when extended)

Note) The length of the bellows is calculated as follow.

$Lmin = \frac{S}{(A-1)}$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

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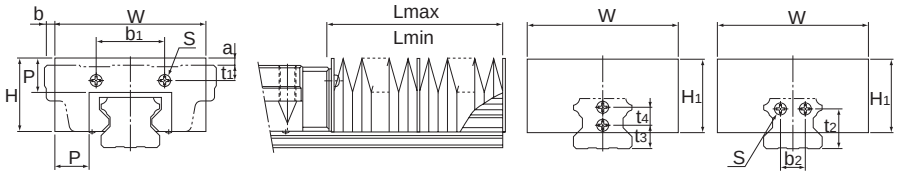
[Dedicated Bellows JH for Model HSR]

The table below shows the dimensions of dedicated bellows JH for model HSR. Specify the corresponding model number of the desired bellows from the table.



Models HSR15 to 30 Models HSR35 to 85

Unit: mm

Model No.		Main dimensions																A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b_1	t_1 A/B	t_1 R	b_2	t_2	t_3	t_4	Mounting bolt S	a A/B	a R	b A/B	b R			
JH	15	55	27	30	15	25	2.5	6.5	—	—	10	—	*M4×8ℓ	7.5	3.5	−4	−10.5	5	HSR	15
	20	66	32	35	17	34	5	5	—	—	6	8	M3×6ℓ	7	7	−1.5	−11	6		20
	25	78	38	38	20	30	7	11	—	—	10	8	M3×6ℓ	8.5	4.5	−4	−15	7		25
	30	84	42	42	20	40	8	11	—	—	11	10	M4×8ℓ	7	4	3	−12	7		30
	35	88	43	43	20	40	9	16	14	23	—	—	M4×8ℓ	4	—	6	−9	7		35
	45	100	51	51	20	58	10	20	20	29	—	—	M5×10ℓ	—	—	10	−7	7		45
	55	108	54	54	20	66	11	21	26	35	—	—	M5×10ℓ	—	—	16	−4	7		55
	65	132	68	68	20	80	19	19	32	42	—	—	M6×12ℓ	—	—	19	−3	7		65
	85	170	88	88	30	105	23	23	44	50	—	—	M6×12ℓ	—	—	22.5	−7	10		85

Note1) For model JH15's location marked with "*", mounting bolts are used only on the LM rail side while the LM block side uses M2 x 5 (nominal) tapping screws.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note3) For lubrication when using the dedicated bellows, contact THK.
Note4) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JH25 - 60/420

- JH25: Model number of bellows for HSR25
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

Note) The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

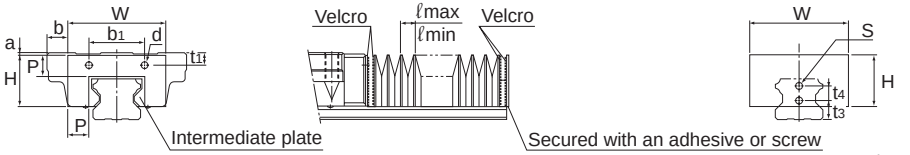
$L_{max} = L_{min} \cdot A$ A: Extension rate

[Dedicated Bellows DH for Model HSR]

For models HSR15, 20 and 25, bellows DH, which has the following features, is also available other than the dedicated bellows JH. Specify the corresponding model number of the desired bellows from the table.

● Features

(1) Has a width and height smaller than the conventional product so that any part of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) Has an intermediate plate for each crest so that it will not easily lift and the bellows can be used with vertical mount, wall mount and slant mount.
(3) Operable at high speed, at up to 120 m/min.
(4) Since a Velcro tape can be used to install the bellows, a regular-size model can be cut to the desired length, or two or more regular-size bellows can be taped together.
(5) Can be installed using screws just as bellows JH.
In this case, a plate (thickness: 1.6 mm) must be placed between the bellows and the LM bock. Contact THK for details.



Unit: mm

Model No.		Main dimensions																		Supported model numbers	
						t_1					a		b				Extension rate		Factor		
		W	H	P	b_1	A/B	R	t_3	t_4	d	A/B	R	A/B	R	ℓmax	ℓmin	A	E	k		
DH	15	35	19.5	8.5	25	2.5	6.5	10	—	3.5	0	4	6	−0.5	10	2.5	4	2	1.2	HSR	15
	20	45	25	10	34	5	5	6	8	4	0	0	9	−0.5	13	2.5	5	2	1.3		20
	25	52	29.5	12	30	7	11	10	8	4	0	4	9	−2	15	3	5	2	1.3		25

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

DH20 - 50/250

Model number of bellows for HSR20
Dimensions of the bellows (length when compressed / length when extended)

Note) The maximum length of the bellows itself is calculated as follows.
Lmax (Lmin) = ℓmax (ℓmim) ×200
Example of calculating bellows dimensions:
When the stroke of model HSR20 is: ℓs=530mm

$$Lmin = \frac{\ell s}{(A-1)} = \frac{530}{4} = 132.5 \fallingdotseq 135$$

$$Lmax = A \cdot Lmin = 5 \times 135 = 675$$

Number of required crests n

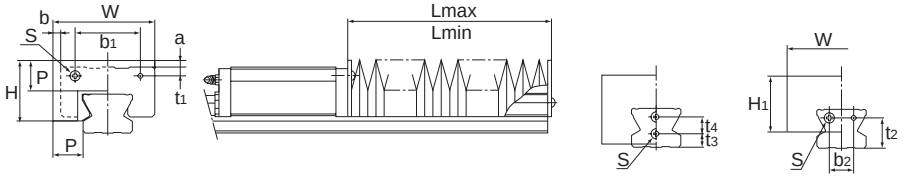
$$n = \frac{Lmax}{P \cdot k} = \frac{675}{10 \times 1.3} = 51.9 \fallingdotseq 52 \text{ crests}$$

$$Lmin = n \cdot \ell min + E = 52 \times 2.5 + 2 = 132$$

(E indicates the plate thickness of 2)
Therefore, the model number of the required bellows is DH20-132/675.

[Dedicated Bellows JS for Model SR]

The table below shows the dimensions of dedicated bellows JS for model SR. Specify the corresponding model number of the desired bellows from the table.



Models SR15 to 25 Models SR30 to 70

Unit: mm

Model No.		Main dimensions														A Lmax/Lmin	Supported model numbers	
		W	H	H1	P	b1	t1	b2	t2	t3	t4	Mounting bolt S	a	b W/V	b TB/SB			
JS	15	51	24	26	15	22	3.4	—	—	8	—	M3×6ℓ	5	8.5	−0.5	5	SR	15
	20	58	26	30	15	25	4.2	—	—	6	6	M3×6ℓ	4	8	−0.5	5		20
	25	71	33	38	20	29	5	—	—	6	7	M3×6ℓ	7	11.5	−1	7		25
	30	76	37.5	37.5	20	42	5	12	17	—	—	M4×8ℓ	3	8	−7	7		30
	35	84	39	39	20	44	6.5	14	20	—	—	M5×10ℓ	1.5	7	−8	7		35
	45	95	47.5	47.5	20	60	8	22	27	—	—	M5×10ℓ	−1.5	5	−12.5	7		45
	55	108	55.5	55.5	25	70	10	24	28	—	—	M6×12ℓ	−0.5	4	−16	9		55
	70	144	67	67	30	90	13	34	35	—	—	M6×12ℓ	−3	9	—	10		70

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JS55 - 60/540

Model number of bellows for SR55

Dimensions of the bellows (length when compressed / length when extended)

Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

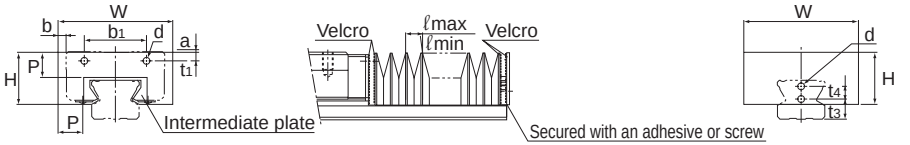
$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows DS for Model SR]

For models SR15, 20 and 25, bellows DS, which has the following features, is also available other than the dedicated bellows JS. Specify the corresponding model number of the desired bellows from the table.

● Features

(1) Has a width and height smaller than the conventional product so that any part of the bellows does not stick out of the top face of the LM block. The extension rate is equal to or greater than that of the conventional type.
(2) Has an intermediate plate for each crest so that it will not easily lift and the bellows can be used with vertical mount, wall mount and slant mount.
(3) Operable at high speed, at up to 120 m/min.
(4) Since a Velcro tape can be used to install the bellows, a regular-size model can be cut to the desired length, or two or more regular-size bellows can be taped together.
(5) Can be installed using screws just as the conventional type.
In this case, a plate (thickness: 1.6 mm) must be placed between the bellows and the LM bock. Contact THK for details.



Unit: mm

Model No.		Main dimensions													Extension rate		Factor	Supported model numbers	
		W	H	P	b_1	t_1	t_3	t_4	d	a	b W/V	b TB/SB	ℓmax	ℓmin	A	E	k		
DS	15	38	19	10	22	3.4	8	—	3.5	0	7	2	13	2.5	5	2	1.3	SR	15
	20	49	22	10	25	4.2	6	6	4	0	5	3.5	13	2.5	5	2	1.3		20
	25	56	26	12	29	5	6	7	4	0	8.5	4	15	3	5	2	1.3		25

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

DS20 - 50/250

Model number of bellows for SR20
Dimensions of the bellows (length when compressed / length when extended)

Note) The maximum length of the bellows itself is calculated as follows.
Lmax (Lmin) = ℓmax (ℓmin) ×200
Example of calculating bellows dimensions:
When the stroke of model SR20 is: ℓs=530mm

$$Lmin = \frac{\ell s}{(A-1)} = \frac{530}{4} = 132.5 \fallingdotseq 135$$

$$Lmax = A \cdot Lmin = 5 \times 135 = 675$$

Number of required crests n

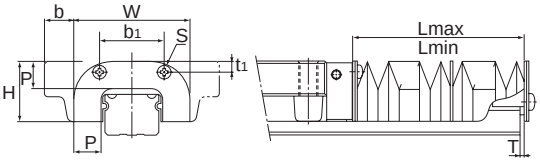
$$n = \frac{Lmax}{P \cdot k} = \frac{675}{10 \times 1.3} = 51.9 \fallingdotseq 52 \text{ crests}$$

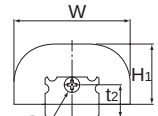
$$Lmin = n \cdot \ell min + E = 52 \times 2.5 + 2 = 132$$

(E indicates the plate thickness of 2)
Therefore, the model number of the required bellows is DH20-132/675.

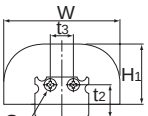
[Simplified Bellows JN Dedicated for Models NR/NRS]

For models NR/NRS, a simplified bellows is available. To gain a higher contamination protection effect, attach a telescopic cover outside the simplified bellows after the bellows is mounted.





Models NR/NRS 25X to 45



Models NR/NRS 55 to 100

Unit: mm

Model No.		Main dimensions												A Lmax/Lmin	Supported model numbers	
										Mounting bolt		b A,LA B,LB	T			
		W	H	H1	P	b1	t1	t2	t3	S	S1					
JN	25	48	25.5	25.5	10	26.6	4.6	13	—	M3×5ℓ	M4×4ℓ	11	1.5	7	NR/NRS	25X
	30	60	31	31	14	34	5.5	17	—	M4×8ℓ	M4×4ℓ	15	1.5	9		30
	35	70	35	35	15	36	6	20.5	—	M4×8ℓ	M5×4ℓ	15	2	10		35
	45	86	40.5	40.5	17	47	6.5	24	—	M5×10ℓ	M5×4ℓ	17	2	10		45
	55	100	49	49	20	54	10	29.5	18	M5×10ℓ	M5×4ℓ	20	2	13		55
	65	126	57.5	57.5	20	64	13.5	36.2	20	M6×12ℓ	M6×5ℓ	22	3.2	13		65
	75	145	64	64	30	80	10.5	34.2	26	M6×12ℓ	M6×5ℓ	25	3.2	20		75
	85	156	70.5	70.5	30	110	15.5	39.5	28	M6×12ℓ	M6×5ℓ	39.5	3.2	20		85
	100	200	82	82	30	140	15	40	34	M8×16ℓ	M6×5ℓ	30	3.2	20		100

Note1) When desiring to use the simplified bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the simplified bellows, contact THK.
Note3) When using the simplified bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the simplified bellows is required when ordering the LM Guide.

Model number coding

JN25 - 60/420

Model number of bellows for NR/NRS25X

Dimensions of the bellows (length when compressed / length when extended)

Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

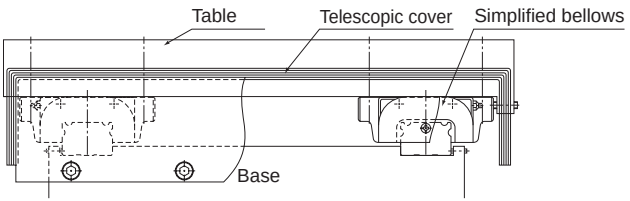
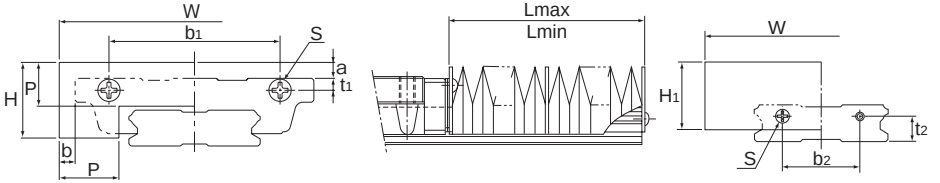


Fig.2 Example of Mounting the Simplified Bellows

[Dedicated Bellows JHRW for Model HRW]

The table below shows the dimensions of dedicated bellows JHRW for model HRW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions										b		A (Lmax/Lmin)	Supported model numbers	
		W	H	H_1	P	b_1	t_1	b_2	t_2	Mounting bolt S	a	Model CA	Model CR			
JHRW	17	68	22	23	15	43	3	18	6	*M3×6ℓ	8	4	9	5	HRW	17
	21	75	25	26	17	48	3	22	7	M3×6ℓ	8	3.5	10.5	6		21
	27	85	33.5	33.5	20	48	3	20	10	M3×6ℓ	10	2.5	11.5	7		27
	35	120	35	35	20	75	3.5	40	13	M3×6ℓ	6	0	10	7		35
	50	164	42	42	20	100	9	50	16	M4×8ℓ	−3	1	17	7		50

Note1) For model JHRW17's location marked with "*", mounting bolts are used only on the LM rail side while the LM block side uses M2.5 x 8 (nominal) tapping screws.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note3) For lubrication when using the dedicated bellows, contact THK.
Note4) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JHRW21 - 60/360

Model number of bellows for HRW21

Dimensions of the bellows (length when compressed / length when extended)

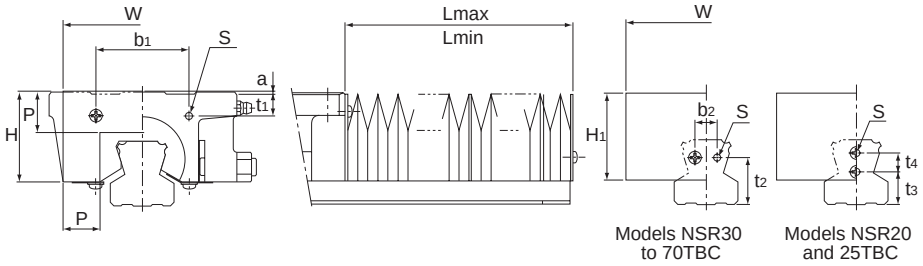
Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate

[Dedicated Bellows J for Model NSR-TBC]

The table below shows the dimensions of dedicated bellows J for model NSR-TBC. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions												A (Lmax/Lmin)	Supported model numbers	
		W	H	H1	P	b1	t1	b2	t2	t3	t4	Mounting bolt S	a			
J	20	65	39	43	20	26	8	—	—	9	8	M4×8ℓ	8	7	NSR	20TBC
	25	75	43	45	20	40	11	—	—	12	8	M4×8ℓ	3	7		25TBC
	30	85	46	46	20	50	12	12	25	—	—	M4×8ℓ	—	7		30TBC
	40	115	59	59	25	60	13	16	32	—	—	M5×10ℓ	—	9		40TBC
	50	115	66	66	25	75	11	20	32	—	—	M5×10ℓ	—	9		50TBC
	70	124	84	78	25	96	16	36	40	—	—	M6×12ℓ	—	9		70TBC

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

J50 - 60/540

- J50: Model number of bellows for NSR50TBC
- 60/540: Dimensions of the bellows (length when compressed / length when extended)

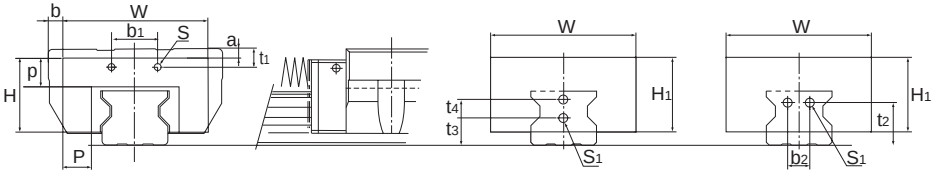
Note) The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$$Lmax = Lmin \cdot A$$ A: Extension rate

[Dedicated Bellows JSRG for Model SRG]

The table below shows the dimensions of dedicated bellows JSRG for model SRG. Specify the corresponding model number of the desired bellows from the table.



Models SRG15 and 30 Models SRG35 to 65

Unit: mm

Model No.		Main dimensions																		A Lmax/Lmin	Supported model numbers	
		W	H	H_1	P	p	b_1	t_1 A/C	t_1 R/V	b_2	t_2	t_3	t_4	Screw size S	Mounting bolt S_1	a A/C	a R/V	b A/C	b R/V			
JSRG	15	55	27	27	14.2	12.7	28	10.3	10.3	—	—	10.6	—	M2	M4	7	7	4	10.5	5	SRG	15
	20	66	32	32	17	15	38.5	9.6	9.6	—	—	7.4	8	M2	M3	6.6	6.6	1.5	11	6		20
	25	78	38	38	23	18	27.6	3.9	7.9	—	—	10	8	M2	M3×6ℓ	−6.5	−2.5	4	15	6		25
	30	84	42	42	22	19	37.4	10.4	13.4	—	—	11	10	M3	M4×8ℓ	−5	−2	3	12	7		30
	35	88	42	42	22	15	35	5	12	13	23	—	—	M3	M4×4ℓ	0	7	6	−9	5		35
	40	100	51	51	20	20	32	7	17	15	29	—	—	M3	M5×4ℓ	0	10	10	−7	7		45
	50	108	57	57	20	20	36	10	20	25	35	—	—	M3	M5×4ℓ	3	13	16	−4	7		55
	65	132	75.5	75.5	28.5	25	46	9	9	28	42	—	—	M4	M6×5ℓ	3	3	19	−3	9		65

Note1) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.
Note2) For lubrication when using the dedicated bellows, contact THK.
Note3) When using the dedicated bellows, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

JSRG35 - 60/420

- JSRG35: Model number of bellows for SRG35
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

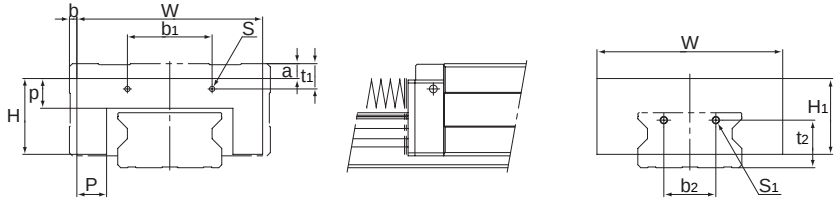
Note) The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate

[Dedicated Bellows JSRW for Model SRW]

The table below shows the dimensions of dedicated bellows JSRW for model SRW. Specify the corresponding model number of the desired bellows from the table.



Unit: mm

Model No.		Main dimensions														Supported model numbers	
		W	H	H_1	P	p	b_1	t_1	b_2	t_2	Screw size S	Mounting bolt S_1	a	b	A (Lmax / Lmin)		
JSRW	70	125	51	51	20	20	57	17	35	32	M3	M5×4L	10	5	7	SRW	70
	85	138	57	57	20	20	68	20	42	36	M3	M5×4L	13	13.5	7		85
	100	169	75.5	75.5	28.5	25	83	19	50	46	M4	M6×5L	13	15.5	9		100

Note1) For lubrication when using the dedicated bellows, contact THK.
Note2) When desiring to use the dedicated bellows other than in horizontal mount (i.e., vertical, wall and inverted mount), or when desiring a heat-resistant type of bellows, contact THK.

Model number coding

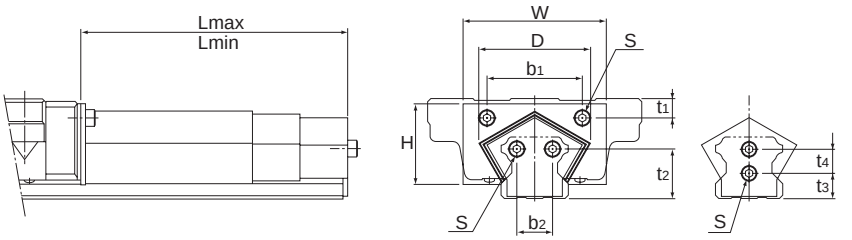
JSRW70 - 60/420

- JSRW70: Model number of bellows for SRW70
- 60/420: Dimensions of the bellows (length when compressed / length when extended)

LM Cover

[Dedicated LM Cover TPH for Model HSR]

The tables below show the dimensions of dedicated LM cover TPH for model HSR. Specify the corresponding model number of the desired bellows from the table.



Models HSR25 and 30

Unit: mm

Model No.		Main dimensions										Supported model numbers	
		W	D (max)	H	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S		
TPH	25	55	42	28	30	7	—	—	10	8	M3×6ℓ	HSR	25
	30	60	48	34	40	8	—	—	11	10	M4×8ℓ		30
	35	70	55	38	40	9	14	23	—	—	M4×8ℓ		35
	45	90	75	48	58	10	20	29	—	—	M5×10ℓ		45
	55	100	88	55	66	11	26	35	—	—	M5×10ℓ		55

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPH	25	3	200	530	330
		3	150	380	230
		3	100	230	130
	30	3	250	680	430
		3	200	530	330
		3	150	380	230
	35	3	300	830	530
		3	250	680	430
		3	200	530	330
		3	150	380	230

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPH	45	3	350	980	630
		3	300	830	530
		3	250	680	430
		3	200	530	330
	55	4	400	1460	1060
		4	350	1330	980
		4	300	1060	760
		4	250	860	610

Note1) For lubrication when using the dedicated LM cover, contact THK.
Note2) When using the dedicated LM cover, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

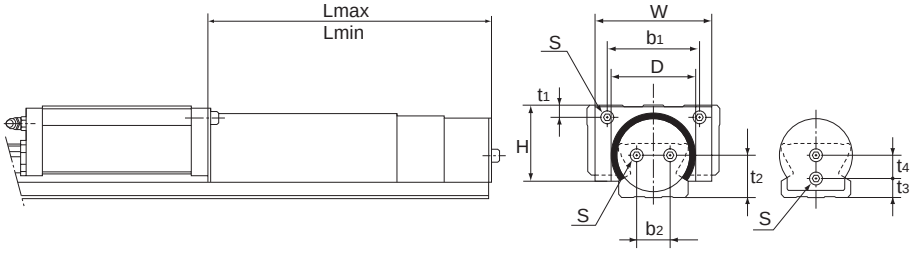
Model number coding

TPH55 - 400/1460

- TPH55: Model number of LM cover for HSR55
- 400: Lmin (cover length when compressed)
- 1460: Lmax (cover length when extended)

[Dedicated LM Cover TPS for Model SR]

The tables below show the dimensions of dedicated LM cover TPS for model SR. Specify the corresponding model number of the desired bellows from the table.



Models SR30 to 55 Model SR25

Unit: mm

Model No.		Main dimensions										Supported model numbers	
		W	D (max)	H	b_1	t_1	b_2	t_2	t_3	t_4	Mounting bolt S		
TPS	25	42	30	26.5	29	5	—	—	6	7	M3×6ℓ	SR	25
	30	54	37	34.5	42	5	12	17	—	—	M4×8ℓ		30
	35	64	42	38	44	6.5	14	20	—	—	M5×10ℓ		35
	45	76	55	48	60	8	22	27	—	—	M5×10ℓ		45
	55	90	61	54.5	70	10	24	28	—	—	M6×12ℓ		55

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPS	25	3	200	530	330
		3	150	380	230
		3	100	230	130
	30	3	250	680	430
		3	200	530	330
		3	150	380	230
	35	3	300	830	530
		3	250	680	430
		3	200	530	330
		3	150	380	230

Unit: mm

Model No.		Stage	L		Stroke
			min	max	
TPS	45	3	350	980	630
		3	300	830	530
		3	250	680	430
		3	200	530	330
	55	4	400	1460	1060
		4	350	1330	980
		4	300	1060	760
		4	250	860	610

Note1) For lubrication when using the dedicated LM cover, contact THK.
Note2) When using the dedicated LM cover, the LM block and LM rail need to be machined so that the bellows can be mounted. Be sure to indicate that the dedicated bellows is required when ordering the LM Guide.

Model number coding

TPS55 - 400/1460

- TPS55: Model number of LM cover for SR55
- 400: Lmin (cover length when compressed)
- 1460: Lmax (cover length when extended)

Cap C

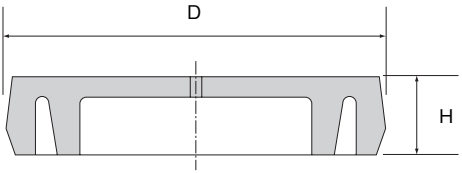
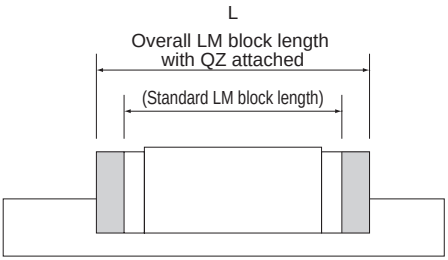


Table1 List of Model Numbers Supported for the Dedicated Cap C for LM Rail Mounting Holes

Model No.	Bolt used	Main dimensions (mm)		Supported model number														
		D	H	SSR	SCR	SR	SNR SNS	NR NRS	SHS HSR CSR HCR	HMG	SHW HRW	SRG SRN	GSR	HR	SRS RSR RSH	SRS-W RSR-W RSH-W	NSR-TBC	SRW
C3	M3	6.3	1.2	—	—	15	—	—	12	—	—	—	—	1123 1530	12 15	9	—	—
C4	M4	7.8	1.0	15Y	—	—	—	—	15	15	12, 14, 17, 21, 27	15	15	—	14	—	—	—
C5	M5	9.8	2.4	20	—	20	25	25X	20	—	—	20	20	2042	20	—	20	—
C6	M6	11.4	2.7	25Y 30	25	25Y 30	30	30	25	25	35	25	25	—	25	—	25 30	—
C8	M8	14.4	3.7	35	30 35	35	35	35	30 35	35	50	30 35	30	2555 3065	—	—	40	—
C10	M10	18.0	3.7	—	—	45	—	—	—	—	60	—	35	3575	—	—	50	70
C12	M12	20.5	4.7	—	45	55	45	45	45	45	—	45	—	4085	—	—	70	85
C14	M14	23.5	5.7	—	—	—	55	55	55	—	—	55	—	—	—	—	—	100
C16	M16	26.5	5.7	—	65	70 85	65	65	65	65	—	65	—	50105	—	—	—	—
C22	M22	35.5	5.7	—	—	—	—	85	85	—	—	—	—	—	—	—	—	—

Note) The dedicated cap for the LM rail mounting hole can be made of other materials (e.g., metal). Contact THK for details.

LM Block Dimension (Dimension L) with QZ Attached



Unit: mm

Model No.			L								
		Standard overall length	QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SHS	15C/V/R	64.4	84.4	84.4	89.8	86.8	92.2	100	105.4	101.2	106.6
	15LC/LV	79.4	99.4	99.4	104.8	101.8	107.2	115	120.4	116.2	121.6
	20C/V	79	99	99	105.4	103	109.4	115.4	121.8	117.8	124.2
	20LC/LV	98	118	118	124.4	122	128.4	134.4	140.8	136.8	143.2
	25C/V/R	92	114.4	114.4	121.6	120.4	127.6	132	139.2	134.4	141.6
	25LC/LV/LR	109	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30C/V/R	106	127.4	127.4	136	133.8	142.4	149.4	158	151.8	160.4
	30LC/LV/LR	131	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35C/V/R	122	145	145	154.8	152.4	162.2	168	177.8	170.4	180.2
	35LC/LV/LR	152	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45C/V/R	140	173	173	182.8	181.2	191	199	208.8	202.2	212
	45LC/LV/LR	174	207	207	216.8	215.2	225	233	242.8	236.2	246
	55C/V/R	171	205.4	205.4	216.6	214.2	225.4	232	243.2	235.2	246.4
	55LC/LV/LR	213	247.4	247.4	258.6	256.2	267.4	274	285.2	277.2	288.4
	65C/V	221	256.2	256.2	268.6	266.2	278.6	288	300.4	291.2	303.6
	65LC/LV	272	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6
SSR	15XVY	40.3	59.3	59.3	65.1	62.7	68.5	75.5	81.3	76.7	82.5
	15XWY/XTBY	56.9	75.9	75.9	81.7	79.3	85.1	92.1	97.9	93.3	99.1
	20XV	47.7	66.2	66.2	73.1	72.1	79	83.7	90.6	86.1	93
	20XW/XTB	66.5	85	85	91.9	90.9	97.8	102.5	109.4	104.9	111.8
	25XVY	60	82.6	82.6	90	88.4	95.8	100	107.4	102.4	109.8
	25XWY/XTBY	83	105.6	105.6	113	111.4	118.8	123	130.4	125.4	132.8
	30XW	97	119.7	119.7	127.8	125.4	133.5	141	149.1	143.4	151.5
	35XW	110.9	134.3	134.3	143.3	141.3	150.3	156.9	165.9	159.3	168.3
SNR/ SNS	25R/C	82.8	105.2	105.2	112.8	110.9	118.5	122.5	130.1	124.9	132.5
	25LR/LC	102	124.4	124.4	132	130.1	137.7	141.7	149.3	144.1	151.7
	30R/C	98	121.2	121.2	131	126.9	136.7	141.7	151.5	144.1	153.9
	30LR/LC	120.5	143.7	143.7	153.5	149.4	159.2	164.2	174	166.6	176.4
	35R/C	109.5	142.7	142.7	152.9	149.5	159.7	164.3	174.5	166.7	176.9
	35LR/LC	135	168.2	168.2	178.4	175	185.2	189.8	200	192.2	202.4
	45R/C	138.2	171.4	171.4	181.6	179	189.2	196.4	206.6	199.6	209.8
	45LR/LC	171	204.2	204.2	214.4	211.8	222	229.2	239.4	232.4	242.6
	55R/C	163.3	204.5	204.5	214.7	213.2	223.4	231	241.2	234.2	244.4
	55LR/LC	200.5	241.7	241.7	251.9	250.4	260.6	268.2	278.4	271.4	281.6
	65R/C	186	227.6	227.6	238.2	236.3	246.9	257.5	268.1	260.7	271.3
	65LR/LC	246	287.6	287.6	298.2	296.3	306.9	317.5	328.1	320.7	331.3
SHW	12CAM/CRM	37	47	47	—	—	—	—	—	—	—
	12HRM	50.4	60.4	60.4	—	—	—	—	—	—	—

Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
SHW	14CAM/CRM	45.5	55.5	55.5	—	—	—	—	—	—	—
	17CAM/CRM	51	63	63	66	65.4	68.4	—	—	—	—
	21CA/CR	59	75	75	80	77.8	82.8	91.6	96.6	93.2	98.2
	27CA/CR	72.8	92.8	92.8	98.6	96.4	102.2	109.4	115.2	111.8	117.6
	35CA/CR	107	127	127	134.4	132	134.4	149	156.4	151.4	158.8
	50CA/CR	141	161	161	169.2	167.4	175.6	186	194.2	188.4	196.6
SRS	7	23.4	33.4	33.4	—	—	—	—	—	—	—
	7W	31	41	41	—	—	—	—	—	—	—
	9	30.8	40.8	40.8	—	—	—	—	—	—	—
	9W	39	49	49	—	—	—	—	—	—	—
	12	34.4	44.4	44.4	—	—	—	—	—	—	—
	12W	44.5	54.5	54.5	—	—	—	—	—	—	—
	15	43	55	55	—	—	—	—	—	—	—
	15W	55.5	67.5	67.5	—	—	—	—	—	—	—
	20	50	66	66	—	—	—	83.2	—	—	—
	25	77	97	97	—	—	—	115.2	—	—	—
SCR	15S	64.4	84.4	84.4	89.8	86.8	92.2	100.4	105.4	101.4	106.9
	20S	79	99	99	105.4	103	109.4	115.5	122	118	124.5
	20	98	118	118	124.4	122	128.4	134.5	141	137	143.5
	25	109	131.4	131.4	138.6	137.4	144.6	149	156.2	151.4	158.6
	30	131	152.4	152.4	161	158.8	167.4	174.4	183	176.8	185.4
	35	152	175	175	184.8	182.4	192.2	198	207.8	200.4	210.2
	45	174	207	207	216.8	215.2	225	233	242.8	236.2	246
	65	272	307.2	307.2	319.6	317.2	329.6	339	351.4	342.2	354.6
HSR	15A/B/R/YR	56.6	79.6	79.6	87.6	84.2	92.2	98.8	106.8	100.0	108.0
	20A/B/R/CA/CB/YR	74	96.2	96.2	104.4	102	110.2	113.6	121.8	116	124.2
	20LA/LB/LR/HA/HB	90	112.2	112.2	120.4	118	126.2	129.6	137.8	132	140.2
	25A/B/R/CA/CB/YR	83.1	104.1	104.1	112.1	109.8	117.8	121.4	129.4	123.8	131.8
	25LA/LB/LR/HA/HB	102.2	123.2	123.2	131.2	128.9	136.9	140.5	148.5	142.9	150.9
	30A/B/R/CA/CB/YR	98	119	119	127	124.7	132.7	140.3	148.3	142.7	150.7
	30LA/LB/LR/HA/HB	120.6	141.6	141.6	149.6	147.3	155.3	162.9	170.9	165.3	173.3
	35A/B/R/CA/CB/YR	109.4	132.2	132.2	142	139	148.8	154.6	164.4	157	166.8
	35LA/LB/LR/HA/HB	134.8	157.6	157.6	167.4	164.4	174.2	180	189.8	182.4	192.2
	45A/B/R/CA/CB/YR	139	174.8	174.8	181.6	176.6	186.4	—	—	—	—
	45LA/LB/LR/HA/HB	170.8	206.6	206.6	213.4	208.4	218.2	—	—	—	—
	55A/B/R/CA/CB/YR	163	197.2	197.2	208.4	202	213.2	—	—	—	—
	55LA/LB/LR/HA/HB	201.1	235.3	235.3	246.5	240.1	251.3	—	—	—	—
	65A/B/R/CA/CB/YR	186	221.4	221.4	233.8	226.6	239	—	—	—	—
	65LA/LB/LR/HA/HB	245.5	280.9	280.9	293.3	286.1	298.5	—	—	—	—
NR/ NRS	25XR/XA/XB	82.8	105.2	105.2	112.8	110.9	118.5	122.5	130.1	124.9	132.5
	25XLR/XLA/XLB	102	124.4	124.4	132	130.1	137.7	141.7	149.3	144.1	151.7
	30R/A/B	98	120.4	120.4	129.4	126.1	135.1	141.7	150.7	144.1	153.1
	30LR/LA/LB	120.5	142.9	142.9	151.9	148.6	157.6	164.2	173.2	166.6	175.6
	35R/A/B	109.5	142.7	142.7	152.9	149.5	159.7	164.3	174.5	166.7	176.9
	35LR/LA/LB	135	168.2	168.2	178.4	175	185.2	189.8	200	192.2	202.4
	45R/A/B	139	172.2	172.2	182.4	179.8	190	197.6	207.8	200.8	211
	45LR/LA/LB	171	204.2	204.2	214.4	211.8	222	229.6	239.8	232.8	243
	55R/A/B	162.8	204.8	204.8	215	213.5	223.7	231.3	241.5	234.5	244.7
	55LR/LA/LB	200	242	242	252.2	250.7	260.9	268.5	278.7	271.7	281.9
	65R/A/B	185.6	227.6	227.6	238.2	236.3	246.9	258.1	268.7	261.3	271.9
	65LR/LA/LB	245.6	287.6	287.6	298.2	296.3	306.9	318.1	328.7	321.3	331.9

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Unit: mm

Model No.		Standard overall length	L								
			QZUU	QZSS	QZDD	QZZZ	QZKK	QZSSHH	QZDDHH	QZZZHH	QZKKHH
RSR	9	31	40.8	—	—	—	—	—	—	—	—
	9N	41	50.8	—	—	—	—	—	—	—	—
	9W	39	49	—	—	—	—	—	—	—	—
	9WN	51	60.7	—	—	—	—	—	—	—	—
RSR	12	35	45	—	—	—	—	—	—	—	—
	12N	47.5	57.7	—	—	—	—	—	—	—	—
	12W	44.5	54.5	—	—	—	—	—	—	—	—
	12WN	59.5	69.5	—	—	—	—	—	—	—	—
	15	43	55	—	—	—	—	—	—	—	—
	15N	61	72.7	—	—	—	—	—	—	—	—
	15W	55.5	67.5	—	—	—	—	—	—	—	—
	15WN	74.5	86.5	—	—	—	—	—	—	—	—
SRG	15A/V	69	92	92	94	—	—	—	—	—	—
	20A/V	86	109	109	111	112.4	114.4	126.6	128.6	129	131
	20LA/LV	106	129	129	131	132.4	134.4	146.6	148.6	149	151
	25C/R	95.5	125.5	125.5	130.5	130.5	135.5	145.3	151.7	147.7	154.1
	25LC/LR	115.1	145.1	145.1	150.1	150.1	155.1	164.9	171.3	167.3	173.7
	30C/R	111	141	141	148	146	153	160.8	169.2	164.6	171.6
	30LC/LR	135	165	165	172	170	177	184.8	193.2	188.6	195.6
	35C/R	125	155	155	162.8	163.4	171.2	178.6	186.4	181	188.8
	35LC/LR	155	185	185	192.8	193.4	201.2	208.6	216.4	211	218.8
	45C/R	155	185	185	194.2	194.2	203.4	212	221.2	215.2	224.5
	45LC/LR	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	55C/R	185	225	225	234.2	234.2	243.4	252	261.2	255.2	264.4
	55LC/LR	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	65LC/LV	303	343	343	354.2	354.2	365.4	375.4	386.6	378.6	389.8
SRN	35C/R	125	155	155	162.8	163.4	171.2	178.6	186.4	181	188.8
	35LC/LR	155	185	185	192.8	193.4	201.2	208.6	216.4	211	218.8
	45C/R	155	185	185	194.2	194.2	203.4	212	221.2	215.2	224.5
	45LC/LR	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	55C/R	185	225	225	234.2	234.2	243.4	252	261.2	255.2	264.4
	55LC/LR	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	65LC/LR	303	343	343	354.2	354.2	365.4	375.4	386.6	378.6	389.8
SRW	70	190	220	220	229.2	229.2	238.4	247	256.2	250.2	259.4
	85	235	275	275	284.2	284.2	293.4	302	311.2	305.2	314.4
	100	303	343	343	354.2	354.2	365.4	375.4	386.6	378.6	389.8

Model number coding

SHS25 LC 2 QZ KKHH C0 +1200L P T Z -II

- SHS25: Model number
- LC: Type of LM block
- 2: No. of LM blocks used on the same rail
- QZ: With QZ Lubricator (*1)
- KKHH: Contamination protection accessory symbol (*2)
- C0: Radial clearance symbol (*3) — Normal (No symbol), Light preload (C1), Medium preload (C0)
- +1200L: LM rail length (in mm)
- P: Accuracy symbol (*4) — Normal grade (No Symbol), High accuracy grade (H), Precision grade (P)/Super precision grade (SP), Ultra precision grade (UP)
- T: Symbol for LM rail jointed use
- Z: With steel tape
- -II: Symbol for No. of rails used on the same plane (*5)

(*1) See A-361. (*2) See A-368. (*3) See A-113. (*4) See A-118. (*5) See A-59.

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)
Those models equipped with QZ Lubricator cannot have a grease nipple.

Lubrication Adapter

An oil lubricant-only lubrication adapter is available for models NR/NRS.
Even if the LM Guide is installed in an orientation where oil lubrication is difficult, such as wall mount and inversed mount, the adapter is capable of feeding a constant quantity of lubricant to the four raceways.

[Features]

The dedicated lubrication adapter for models NR-NRS is built in with a constant quantity distributor. Therefore, the adapter can accurately feed a constant quantity of lubricant to each raceway regardless of the mounting orientation.
The adapter is economical since it is capable of constantly feeding the optimum amount of lubricant and helping eliminate the supply of surplus lubricant.
To provide pipe arrangement, simply connect an intermittent lubrication pump widely used for ordinary machine tools to the greasing holes (M8) on the front and the side of the lubrication adapter.

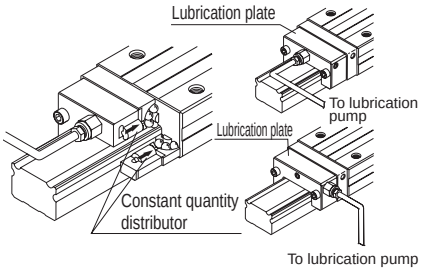

Fig.3 Structural Drawing

[Specifications]

Viscosity range of lubricant used	32 to 64 mm²/s recommended
Discharge	0.03×4, 0.06×4cc/1shot
Diameter of pipe connected	ϕ4, ϕ6
Material	Aluminum alloy

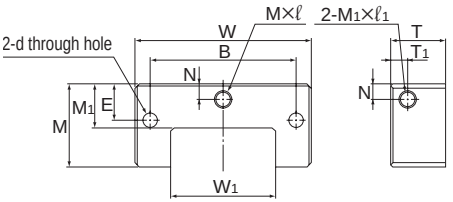

Fig.4

Table2 Dimension Table for Lubrication Adapter Unit: mm

Model No.	Main dimensions												Quantity per shot (cc/shot)
	Width W	Height M	T	W_1	M_1	B	E	N	T_1	d	M×ℓ	M_1×ℓ_1	
A30N	56	29	25	29	14.5	46	14	5	5.3	3.5	M8×8	M8×8	0.03×4
A35N	66	33	25	35	17	54	16.5	6	5.3	4.5	M8×8	M8×8	
A45N	81	38	25	48	20	67	16.5	7	7.8	6.6	M8×8	M8×8	
A55N	94	45.5	25	56	22	76	20.5	7	7.8	6.6	M8×8	M8×8	0.06×4
A65N	119	55.5	25	67	26.3	92	25.5	11.5	7.8	9	M8×8	M8×8	
A85N	147	68.5	25	92	34	114	32	15.5	7.8	9	M8×8	M8×8	

End Piece EP

For those models whose balls may fall if the LM rail is pulled out of the LM block, an end piece is attached to the product to prevent the LM block from being removed from the LM rail.
For models that can use the end piece, see the table below.
If removing the end piece when using the LM Guide, be sure that the LM block will not overshoot.
The end piece can also be used as a fixing jig for a steel tape, and is available also for the LM rail of models SSR, SR and HSR.

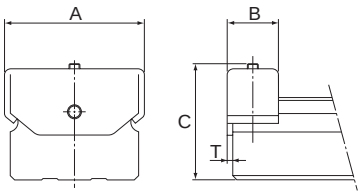

Fig.5 End Piece EP for Models NR/NRS

Table3 Dimension Table for End Piece EP for Models NR/NRS
Unit: mm

Model No.	A	B	C	T
NR/NRS 25X	26	14	25	1.5
NR/NRS 30	31	14	31	1.5
NR/NRS 35	38	16	32.5	2
NR/NRS 45	49	18	41	2
NR/NRS 55	57	20	46.5	2
NR/NRS 65	69.4	22	59	3.2
NR/NRS 75	81.7	28	56	3.2
NR/NRS 85	91.4	22	68	3.2
NR/NRS 100	106.4	25	73	3.2

Greasing Hole

[Grease Nipple and Greasing Hole for Models SHW and SRS]

Models SHW and SRS do not have a grease nipple as standard. Installation of a grease nipple and the drilling of a greasing hole is performed at THK. When ordering SHW and SRS, indicate that the desired model requires a grease nipple or greasing hole. (For greasing hole dimensions and supported grease nipple types and dimensions, see Table4.)

When using SHW and SRS under harsh conditions, use QZ Lubricator* (optional) or Laminated Contact Scraper LaCS* (optional).

Note1) Grease nipple is not available for models SHW12, SHW14, SRS9M, SRS9WM, SRS12M and SRS12WM. They can have a greasing hole.
Note2) Using a greasing hole other than for greasing may cause damage.
Note3) For QZ Lubricator*, see A-361. For Laminated Contact Scraper LaCS*, see A-353.
Note4) When desiring a grease nipple for a model attached with QZ Lubricator, contact THK.

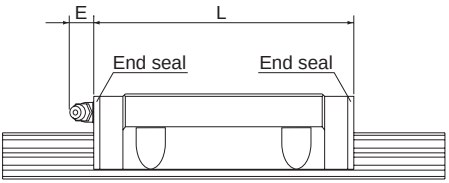

Fig.6 Dimensions of the Grease Nipple for Model SHW

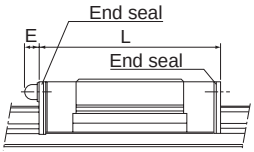

Fig.7 Dimensions of the Grease Nipple for Model SRS

Note) For the L dimension, see the corresponding specification table.

Table4 Table of Grease Nipple and Greasing Hole Dimensions

Unit: mm

Model No.		E	Grease nipple or greasing hole
SHW	12	—	ϕ2.2 drilled hole
	14	—	ϕ2.2 drilled hole
	17	5	PB107
	21	5.5	PB1021B
	27	12	B-M6F
	35	12	B-M6F
	50	16	B-PT1/8
SRS	9M	—	ϕ1.5 drilled hole
	9WM	—	ϕ1.6 drilled hole
	12M	—	ϕ2.0 drilled hole
	12WM	—	ϕ2.0 drilled hole
	15M	4.0 (5.0)	PB107
	15WM	4.0 (5.0)	PB107
	20M	3.5 (5.0)	PB107
	25M	4.0 (5.5)	PB1021B

Note) Figures in the parentheses indicate dimensions without a seal.

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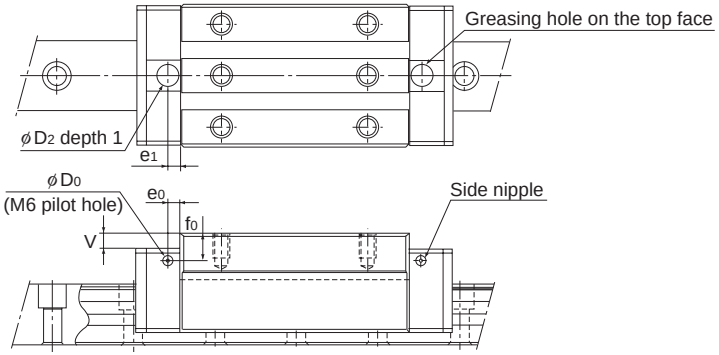
[Greasing Hole for Model SRG]

Model SRG allows lubrication from both the side and top faces of the LM block. The greasing hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the greasing hole, contact THK.

When using the greasing hole on the top face of models SRG-R and SRG-LR, a greasing adapter is separately required. Contact THK for details.



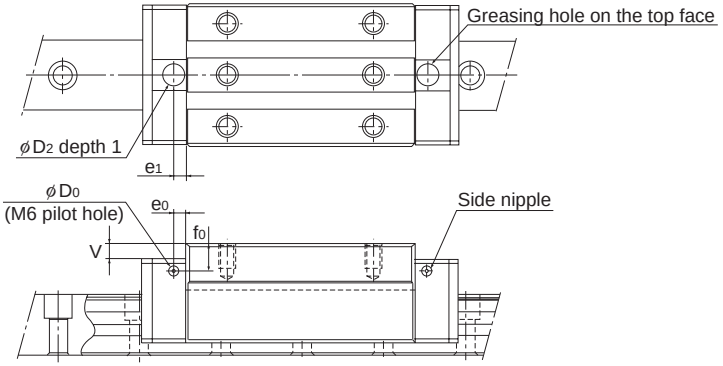
Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Greasing hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRG	15A 15V	4	4	2.9	PB107	9.2	(P6)	0.5	5.5
	20A 20LA	4	5	2.9	PB107	9.2	(P6)	0.5	6.5
	20V 20LV	4	5	2.9	PB107	9.2	(P6)	0.5	6.5
	25C 25LC	6	6.3	5.2	M6F	10.2	(P7)	0.5	6
	25R 25LR	6	10.3	5.2	M6F	10.2	(P7)	4.5	6
	30C 30LC	6	5.8	5.2	M6F	10.2	(P7)	0.4	6
	30R 30LR	6	8.8	5.2	M6F	10.2	(P7)	3.4	6
	35C 35LC	6	6	5.2	M6F	10.2	(P7)	0.4	6
	35R 35LR	6	13	5.2	M6F	10.2	(P7)	7.4	6
	45C 45LC	7	7	5.2	M6F	10.2	(P7)	0.4	7
	45R 45LR	7	17	5.2	M6F	10.2	(P7)	10.4	7
	55C 55LC	9	8.5	5.2	M6F	10.2	(P7)	0.4	11
	55R 55LR	9	18.5	5.2	M6F	10.2	(P7)	10.4	11
	65LC	9	13.5	5.2	M6F	10.2	(P7)	0.4	10
	65LV	9	13.5	5.2	M6F	10.2	(P7)	0.4	10

Note) The greasing interval is longer than that of full-roller types because of the roller cage effect. However, the actual greasing interval may vary depending on the service environment, such as a high load and high speed. Contact THK for details.

[Greasing Hole for Model SRN]

Model SRN allows lubrication from both the side and top faces of the LM block. The greasing hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the greasing hole, contact THK.



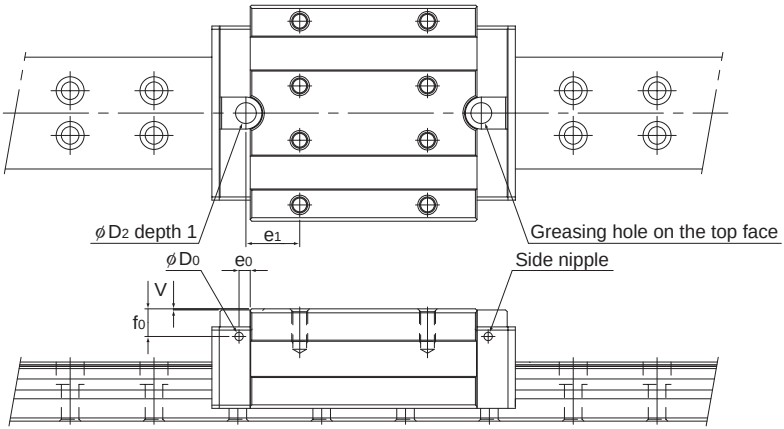
Unit: mm

Model No.		Pilot hole for side nipple			Applicable nipple	Greasing hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRN	35C 35LC	8	6.5	5.2	M6F	10.2	(P7)	0.4	6
	35R 35LR	8	6.5	5.2	M6F	10.2	(P7)	0.4	6
	45C 45LC	8.5	7	5.2	M6F	10.2	(P7)	0.4	7
	45R 45LR	8.5	7	5.2	M6F	10.2	(P7)	0.4	7
	55C 55LC	10	8	5.2	M6F	10.2	(P7)	0.4	11
	55R 55LR	10	8	5.2	M6F	10.2	(P7)	0.4	11
	65LC	9	11	5.2	M6F	10.2	(P7)	0.4	10
	65LR	9	11	5.2	M6F	10.2	(P7)	0.4	10

Note) The greasing interval is longer than that of full-roller types because of the roller cage effect. However, the actual greasing interval may vary depending on the service environment, such as a high load and high speed. Contact THK for details.

[Greasing Hole for Model SRW]

Model SRW allows lubrication from both the side and top faces of the LM block. The greasing hole of standard types is not drilled through in order to prevent foreign material from entering the LM block. When using the greasing hole, contact THK.



Unit: mm

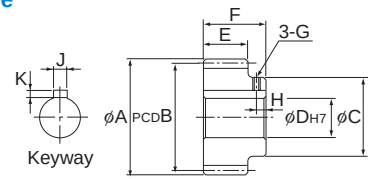
Model No.		Pilot hole for side nipple			Applicable nipple	Greasing hole on the top face			
		e_0	f_0	D_0		D_2	(O-ring)	V	e_1
SRW	70	7	17	5.2	M6F	13	(P10)	0.4	33.7
	85	9	17.7	5.2	M6F	13	(P10)	0.4	42.75
	100	9	22.4	5.2	M6F	13	(P10)	0.4	55

Note) The greasing interval is longer than that of full-roller types because of the roller cage effect. However, the actual greasing interval may vary depending on the service environment, such as a high load and high speed. Contact THK for details.

Rack and Pinion

[Pinion for rack - type A]

The keyway worked type



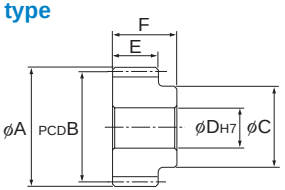
Unit: mm

Model No.	Pitch	Number of teeth	Tip circle diameter A	Meshing PCD B	Boss diameter C	Hole diameter D	Tooth width E	Overall length F	G	H	Keyway J×K	Supported model numbers
GP 6-20A	6	20	42.9	39	30	18	16.5	24.5	M3	4	6×2.8	GSR 25-R
GP 6-25A		25	51.9	48	35	18						
GP 8-20A	8	20	57.1	52	40	20	19	26	M3	5	8×3.3	GSR 30-R
GP 8-25A		25	69.1	64	40	20			M4			
GP10-20A	10	20	70.4	64	45	25	22	30	M4	5	8×3.3	GSR 35-R
GP10-25A		25	86.4	80	60	25					10×3.3	

Note1) When placing an order, specify the model number from the table.
Note2) Non-standard pinions with different numbers of teeth are also available upon request. Contact THK for details.

[Pinion for rack - type C]

The reworkable hole diameter type

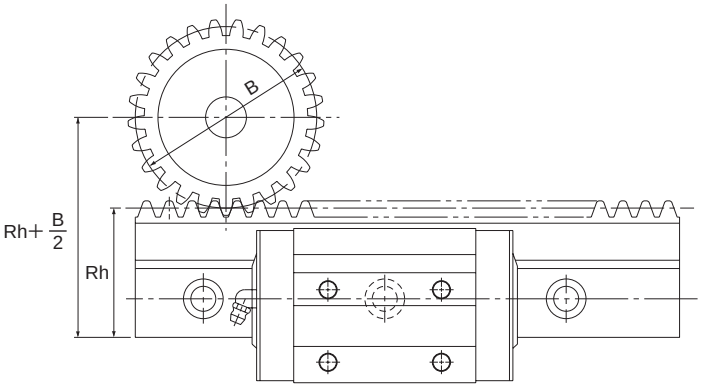


Unit: mm

Model No.	Pitch	Number of teeth	Tip circle diameter A	Meshing PCD B	Boss diameter C	Hole diameter D	Tooth width E	Overall length F	Supported model numbers
GP 6-20C	6	20	42.9	39	30	12	16.5	24.5	GSR 25-R
GP 6-25C		25	51.9	48	35	15			
GP 8-20C	8	20	57.1	52	40	18	19	26	GSR 30-R
GP 8-25C		25	69.1	64	40	18			
GP10-20C	10	20	70.4	64	45	18	22	30	GSR 35-R
GP10-25C		25	86.4	80	60	18			

Note1) When placing an order, specify the model number from the table.
Note2) Non-standard pinions with different numbers of teeth are also available upon request. Contact THK for details.

[The dimension when the LM rail is used in combination with a pinion]



Unit: mm

Model GSR Model No.	Pinion Model No.	LM rail Pitch line height Rh	Pinion Meshing PCD B	Rh+B/2
GSR 25-R	GP 6-20A	43	39	62.5
	GP 6-20C			
	GP 6-25A		48	67
	GP 6-25C			
GSR 30-R	GP 8-20A	48	52	74
	GP 8-20C			
	GP 8-25A		64	80
	GP 8-25C			
GSR 35-R	GP 10-20A	57	64	89
	GP 10-20C			
	GP 10-25A		80	97
	GP 10-25C			

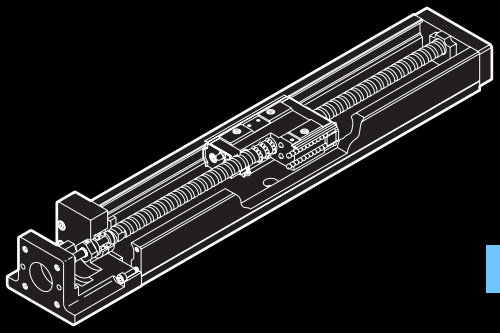
LM Guide Actuator

THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".



KR

LM Guide Actuator

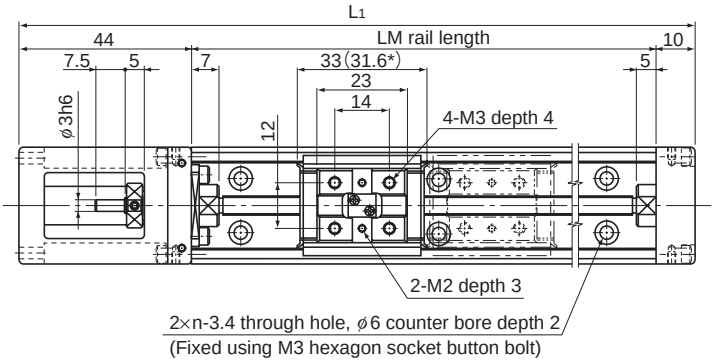
B Product Specifications

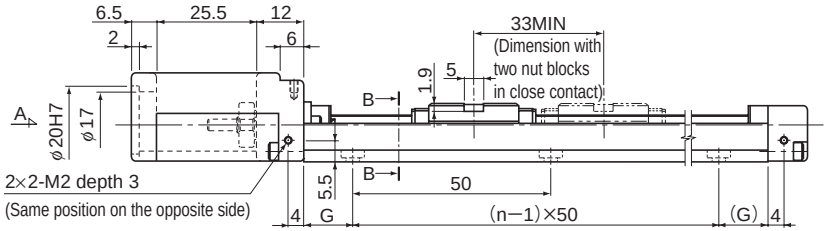
A Technical Descriptions of the Products (Separate)

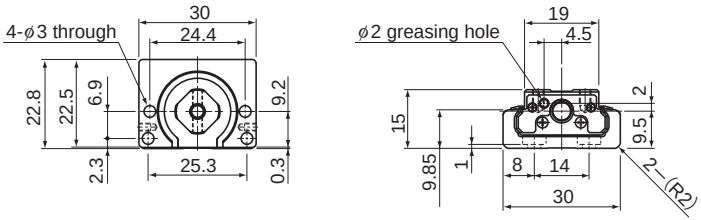
* Please see the separate "A Technical Descriptions of the Products".

Model KR15 Standard Type

Model KR15□□A (with a Single Nut Block)
Model KR15□□B (with Two Nut Blocks)







A arrow view

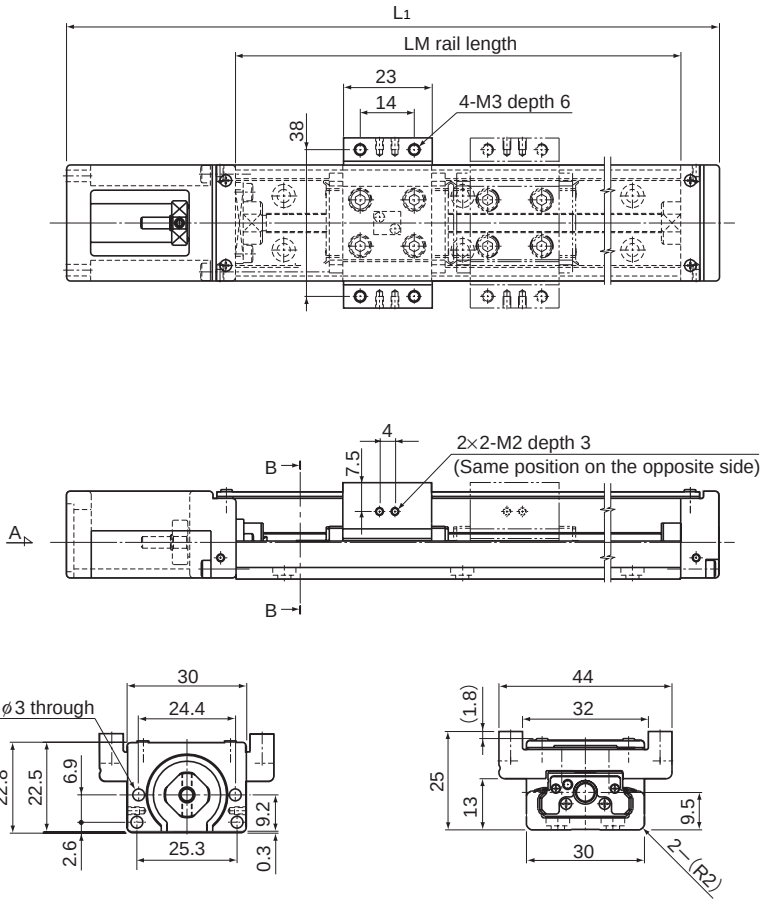
B-B cross section

LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		G (mm)	n	Overall main unit mass (kg)	
		Type A	Type B			Type A	Type B
75	129	31.4	—	12.5	2	0.19	—
100	154	56.4	—	25	2	0.22	—
125	179	81.4	48.4	12.5	3	0.25	0.292
150	204	106.4	73.4	25	3	0.28	0.322
175	229	131.4	98.4	12.5	4	0.31	0.352
200	254	156.4	123.4	25	4	0.34	0.382

Note1) The available stroke range of model KR15□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 64.6 mm.

Model KR15 (with a Cover)

Model KR15□□A (with a Single Nut Block)
Model KR15□□B (with Two Nut Blocks)



A arrow view

B-B cross section

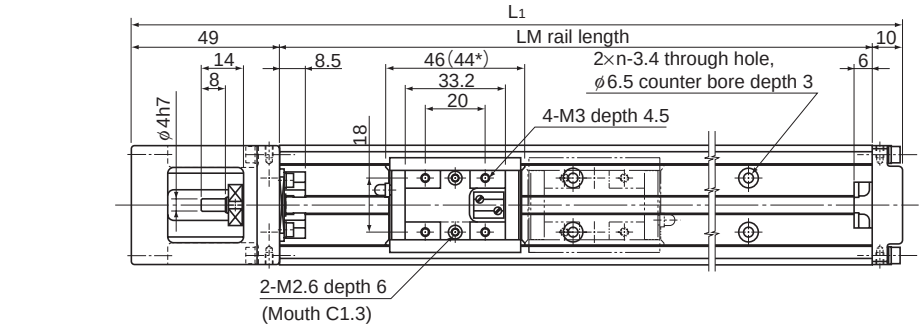
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
75	129	31.4	—	0.23	—
100	154	56.4	—	0.26	—
125	179	81.4	48.4	0.3	0.364
150	204	106.4	73.4	0.33	0.394
175	229	131.4	98.4	0.36	0.424
200	254	156.4	123.4	0.4	0.464

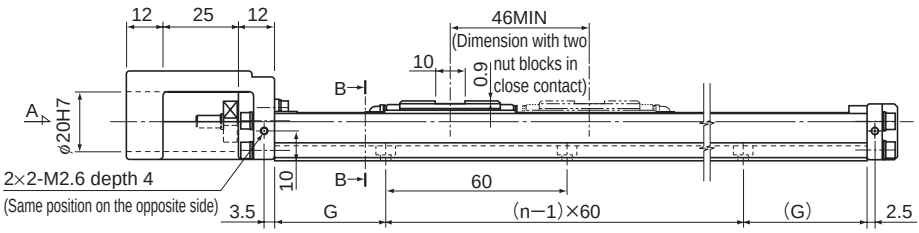
Note) The available stroke range of model KR15□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

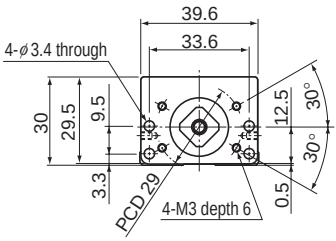
Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR20 Standard Type

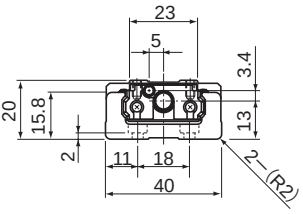
Model KR20□□A (with a Single Nut Block)
Model KR20□□B (with Two Nut Blocks)







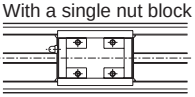
A arrow view



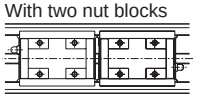
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

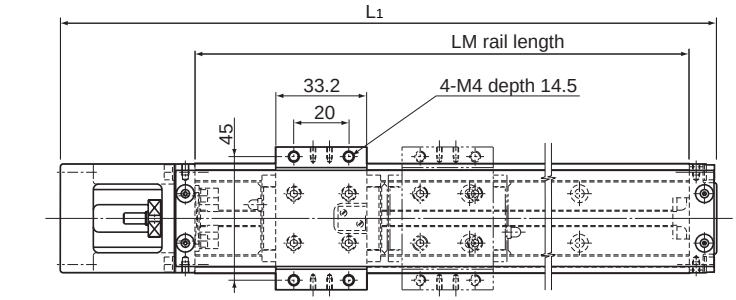


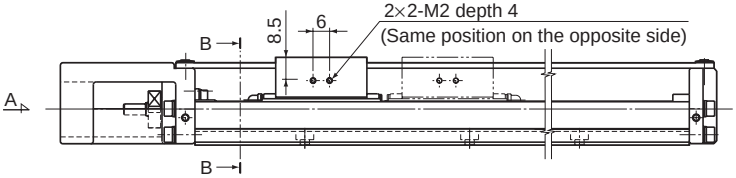
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		G (mm)	n	Overall main unit mass (kg)	
		Type A	Type B			Type A	Type B
100	159	41.5	—	20	2	0.45	—
150	209	91.5	45.5	15	3	0.58	0.655
200	259	141.5	95.5	40	3	0.72	0.795

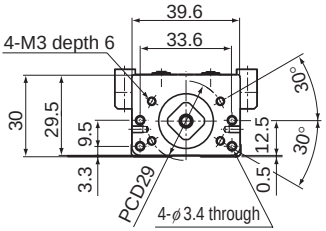
Note1) The available stroke range of model KR2001B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 90mm.

Model KR20 (with a Cover)

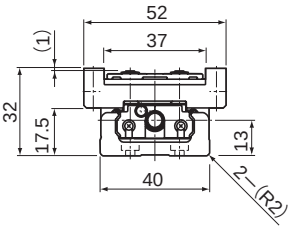
Model KR20□□A (with a Single Nut Block)
Model KR20□□B (with Two Nut Blocks)







A arrow view



B-B cross section

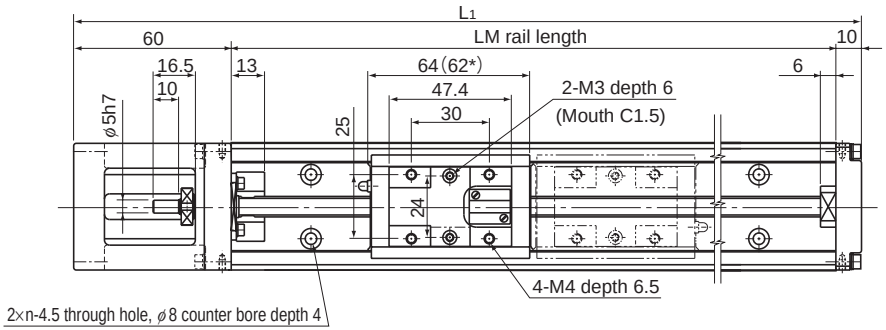
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
100	159	41.5	—	0.51	—
150	209	91.5	45.5	0.66	0.78
200	259	141.5	95.5	0.8	0.92

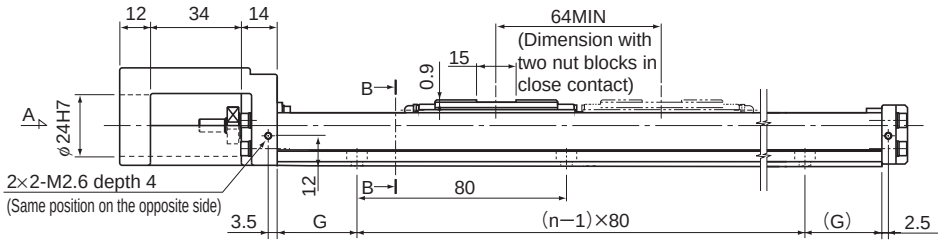
Note) The available stroke range of model KR2001B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

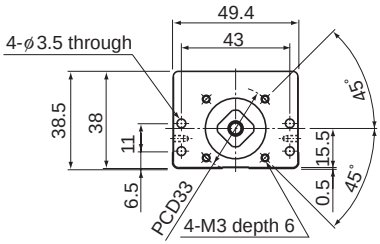
Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR26 Standard Type

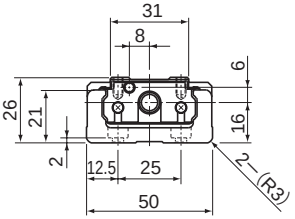
Model KR26□□A (with a Single Nut Block)
Model KR26□□B (with Two Nut Blocks)







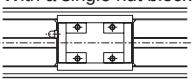
A arrow view



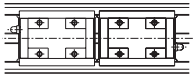
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

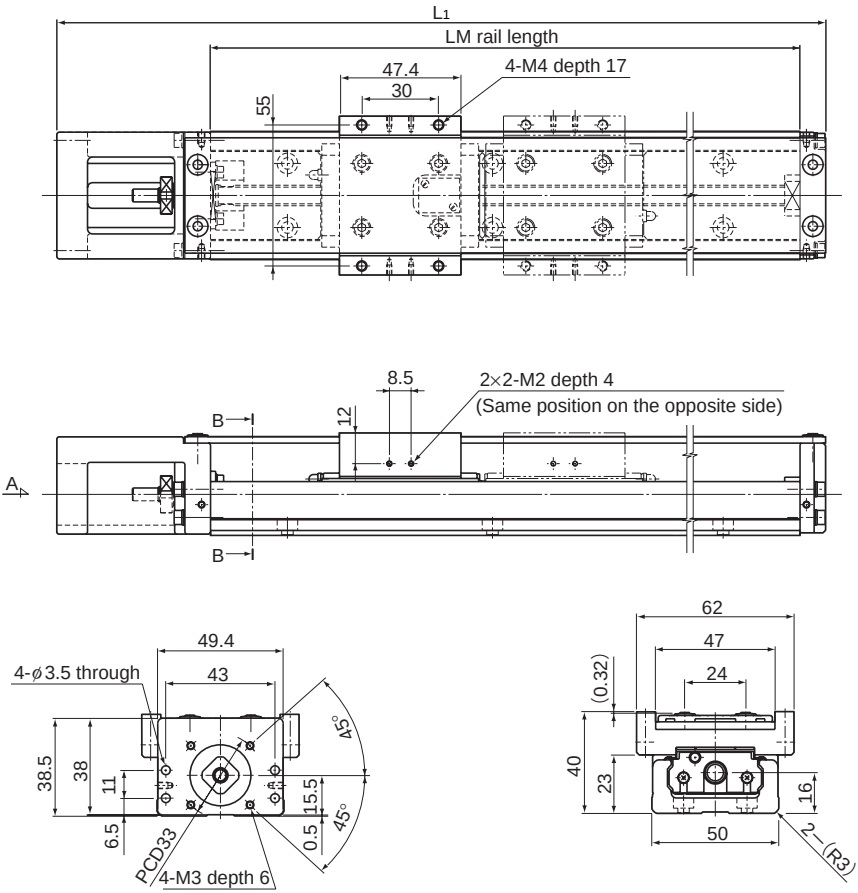


LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		G (mm)	n	Overall main unit mass (kg)	
		Type A	Type B			Type A	Type B
150	220	69	—	35	2	0.99	—
200	270	119	55	20	3	1.2	1.38
250	320	169	105	45	3	1.41	1.59
300	370	219	155	30	4	1.62	1.8

Note1) The available stroke range of model KR2602B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 126mm.

Model KR26 (with a Cover)

Model KR26□□A (with a Single Nut Block)
Model KR26□□B (with Two Nut Blocks)



A arrow view

B-B cross section

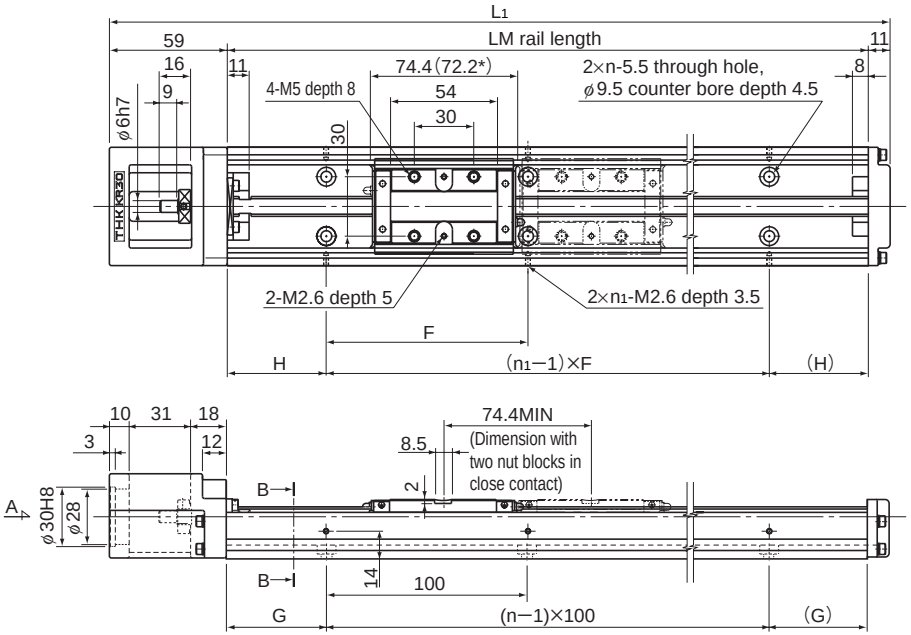
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
150	220	69	—	1.12	—
200	270	119	55	1.34	1.605
250	320	169	105	1.56	1.825
300	370	219	155	1.78	2.045

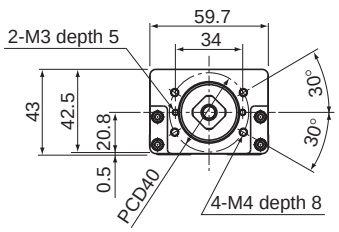
Note) The available stroke range of model KR2602B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

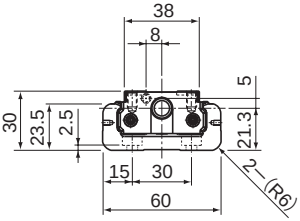
Model KR30H Standard Type

Model KR30H□□A (with a Single Long Nut Block)
Model KR30H□□B (with Two Long Nut Blocks)

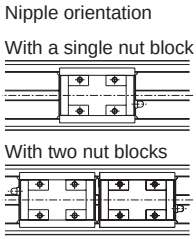




A arrow view



B-B cross section

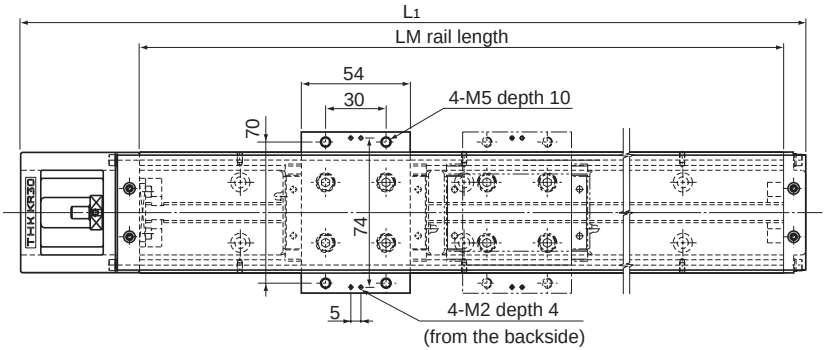


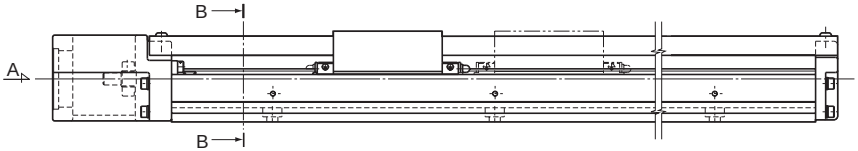
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B						Type A	Type B
150	220	58.8	—	25	25	100	2	2	1.4	—
200	270	108.8	—	50	50	100	2	2	1.6	—
300	370	208.8	134.4	50	50	200	3	2	2.2	2.5
400	470	308.8	234.4	100	50	200	4	2	2.7	3
500	570	408.8	334.4	50	50	200	5	3	3.2	3.5
600	670	508.8	434.4	100	50	200	6	3	3.8	4.1

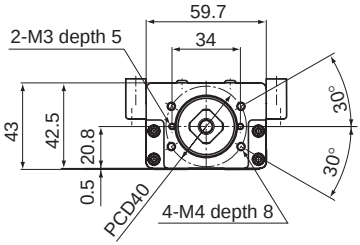
Note1) The available stroke range of model KR30H □□ B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 146.6mm.

Model KR30H (with a Cover)

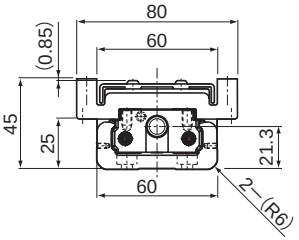
Model KR30H□□A (with a Single Long Nut Block)
Model KR30H□□B (with Two Long Nut Blocks)







A arrow view



B-B cross section

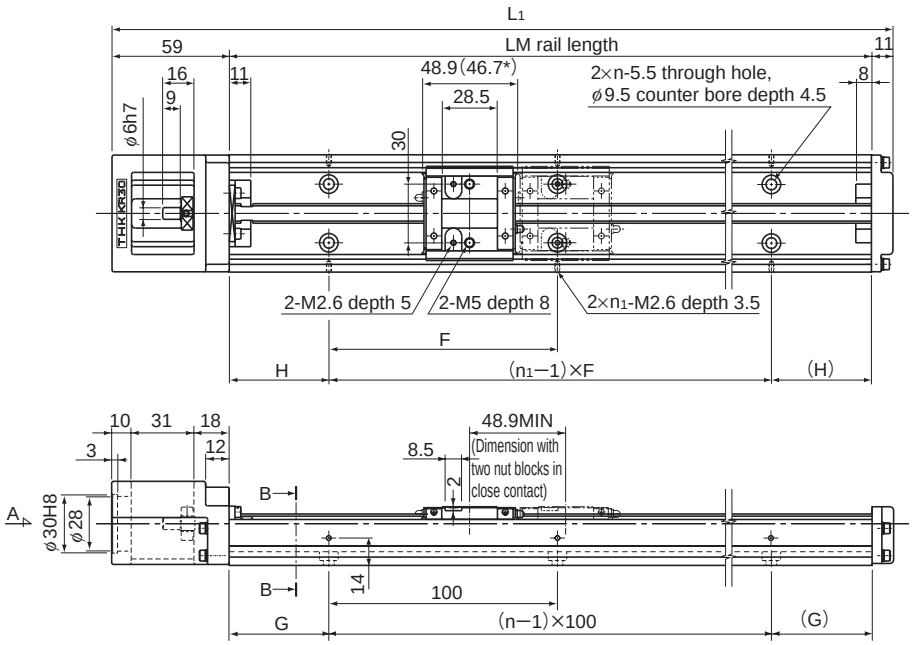
LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
150	220	58.8	—	1.6	—
200	270	108.8	—	1.8	—
300	370	208.8	134.4	2.4	2.83
400	470	308.8	234.4	3	3.43
500	570	408.8	334.4	3.5	3.93
600	670	508.8	434.4	4.1	4.53

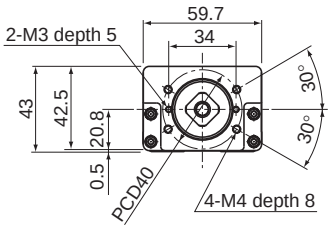
Note) The available stroke range of model KR30H□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

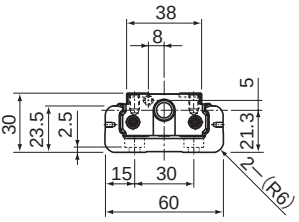
Model KR30H Standard Type

Model KR30H□□C (with a Single Short Nut Block)
Model KR30H□□D (with Two Short Nut Blocks)

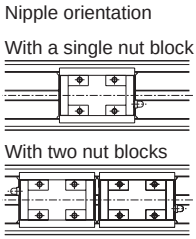




A arrow view



B-B cross section

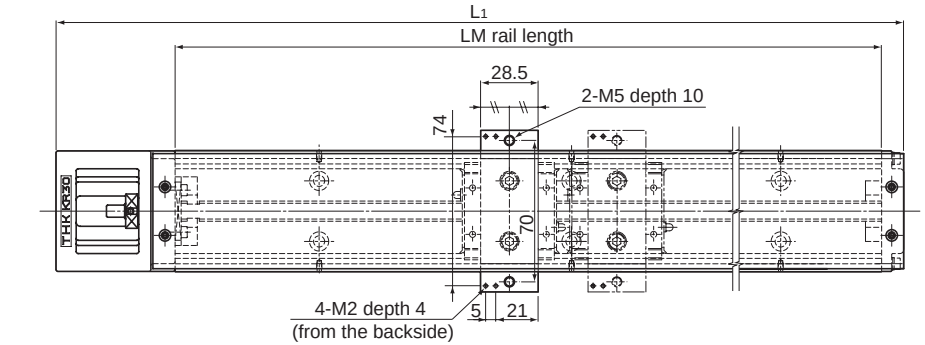


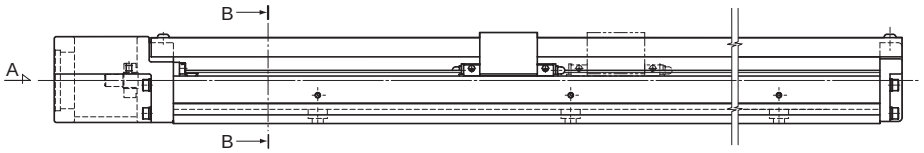
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D						Type C	Type D
150	220	84.3	35.4	25	25	100	2	2	1.3	1.47
200	270	134.3	85.4	50	50	100	2	2	1.5	1.67
300	370	234.3	185.4	50	50	200	3	2	2.1	2.27
400	470	334.3	285.4	100	50	200	4	2	2.6	2.77
500	570	434.3	385.4	50	50	200	5	3	3.1	3.27
600	670	534.3	485.4	100	50	200	6	3	3.7	3.87

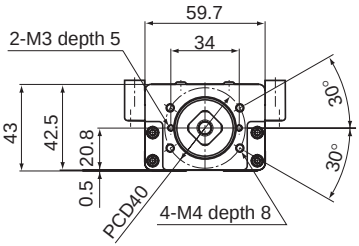
Note1) The available stroke range of model KR30H □□ D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type D, it is 95.6mm.

Model KR30H (with a Cover)

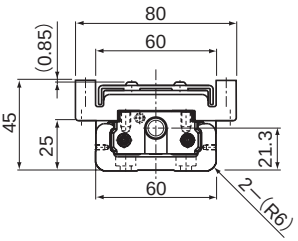
Model KR30H□□C (with a Single Short Nut Block)
Model KR30H□□D (with Two Short Nut Blocks)







A arrow view



B-B cross section

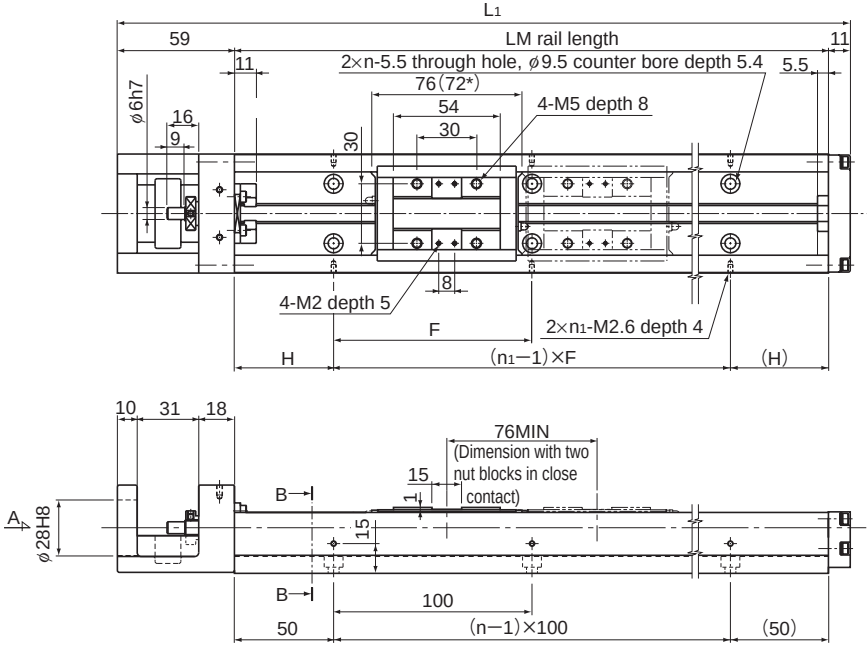
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type C	Type D	Type C	Type D
150	220	84.3	35.4	1.4	1.64
200	270	134.3	85.4	1.6	1.84
300	370	234.3	185.4	2.2	2.44
400	470	334.3	285.4	2.8	3.04
500	570	434.3	385.4	3.3	3.54
600	670	534.3	485.4	3.9	4.14

Note) The available stroke range of model KR30H□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

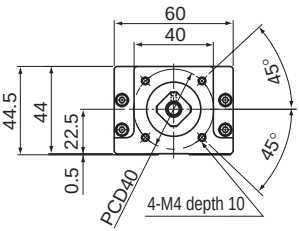
Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR33 Standard Type

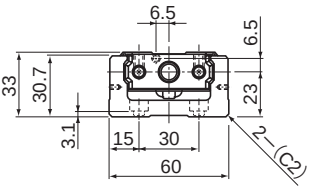
Model KR33□□A (with a Single Long Nut Block)
Model KR33□□B (with Two Long Nut Blocks)



(25 if the LM rail length is 150) (25 if the LM rail length is 150)



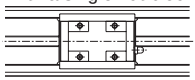
A arrow view



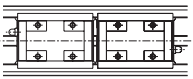
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

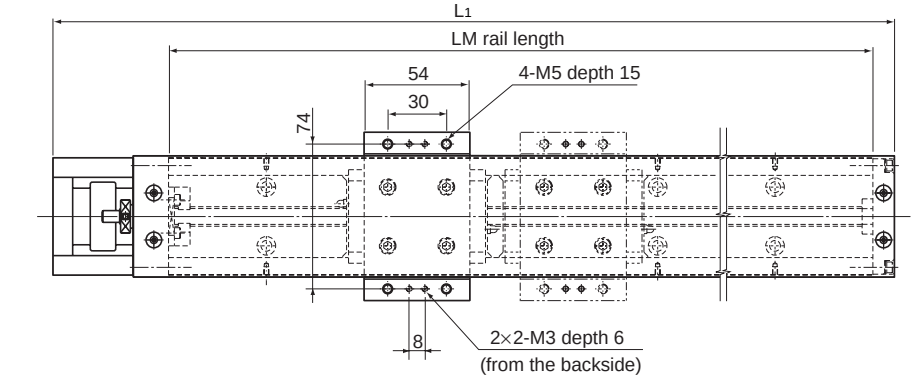


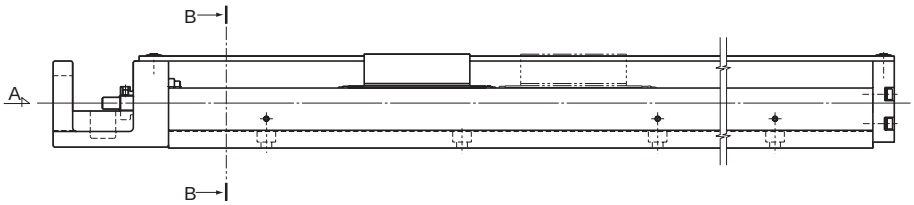
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B					Type A	Type B
150	220	61.5	—	25	100	2	2	1.7	—
200	270	111.5	—	50	100	2	2	2	—
300	370	211.5	135.5	50	200	3	2	2.6	2.95
400	470	311.5	235.5	100	200	4	2	3.2	3.55
500	570	411.5	335.5	50	200	5	3	3.9	4.25
600	670	511.5	435.5	100	200	6	3	4.5	4.85

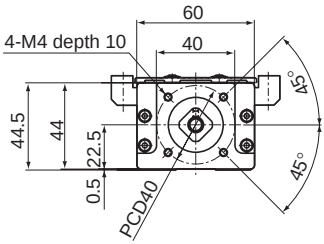
Note1) The available stroke range of model KR33□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 148mm.

Model KR33 (with a Cover)

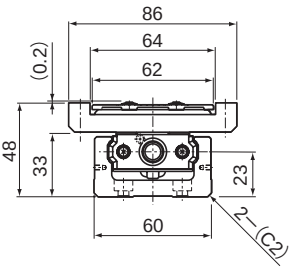
Model KR33□□A (with a Single Long Nut Block)
Model KR33□□B (with Two Long Nut Blocks)







A arrow view



B-B cross section

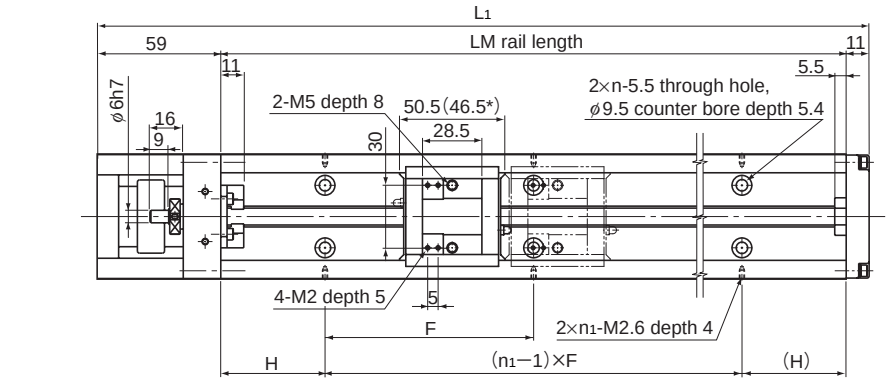
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
150	220	61.5	—	1.9	—
200	270	111.5	—	2.2	—
300	370	211.5	135.5	2.8	3.28
400	470	311.5	235.5	3.5	3.98
500	570	411.5	335.5	4.2	4.68
600	670	511.5	435.5	4.8	5.28

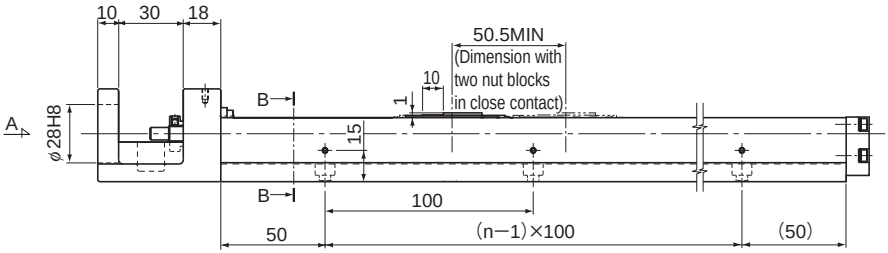
Note) The available stroke range of model KR33□□B indicates the value when two nut blocks are used in close contact with each other.
It must be noted that the cover-mounting bolt is 0.2 mm higher than the top face of the top table.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

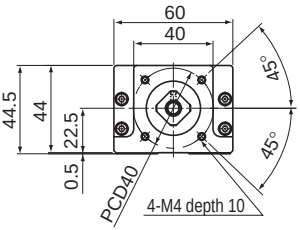
Model KR33 Standard Type

Model KR33□□C (with a Single Short Nut Block)
Model KR33□□D (with Two Short Nut Blocks)

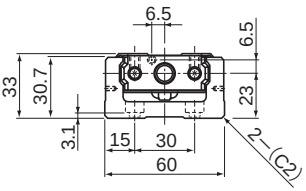




(25 if the LM rail length is 150) (25 if the LM rail length is 150)



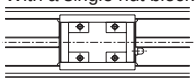
A arrow view



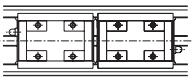
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

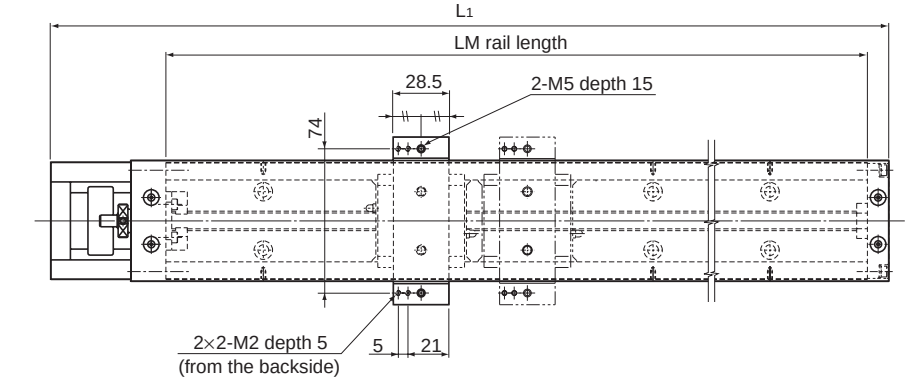


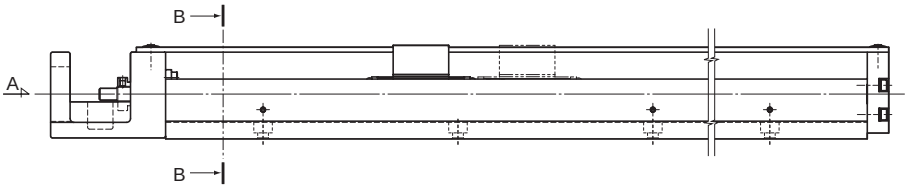
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D					Type C	Type D
150	220	87	36.5	25	100	2	2	1.6	1.83
200	270	137	86.5	50	100	2	2	1.9	2.13
300	370	237	186.5	50	200	3	2	2.5	2.73
400	470	337	286.5	100	200	4	2	3.1	3.33
500	570	437	386.5	50	200	5	3	3.8	4.03
600	670	537	486.5	100	200	6	3	4.4	4.63

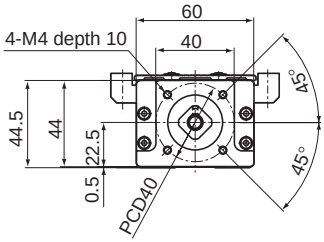
Note1) The available stroke range of model KR33□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type D, it is 97mm.

Model KR33 (with a Cover)

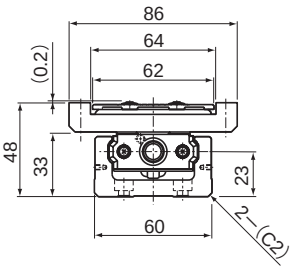
Model KR33□□C (with a Single Short Nut Block)
Model KR33□□D (with Two Short Nut Blocks)







A arrow view



B-B cross section

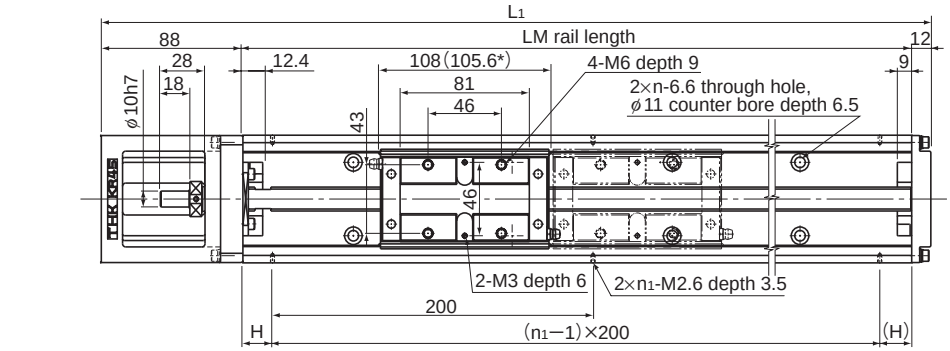
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type C	Type D	Type C	Type D
150	220	87	36.5	1.7	2
200	270	137	86.5	2.1	2.4
300	370	237	186.5	2.7	3
400	470	337	286.5	3.3	3.6
500	570	437	386.5	4	4.3
600	670	537	486.5	4.7	5

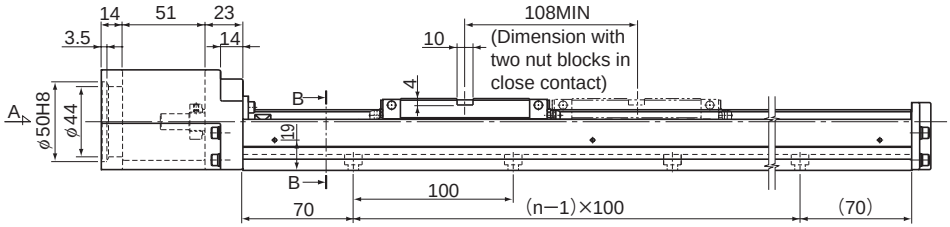
Note) The available stroke range of model KR33□□D indicates the value when two nut blocks are used in close contact with each other.
It must be noted that the cover-mounting bolt is 0.2 mm higher than the top face of the top table.
For model number coding, see B-290.

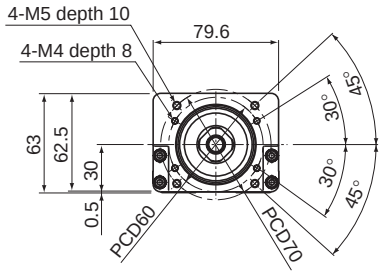
Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR45H Standard Type

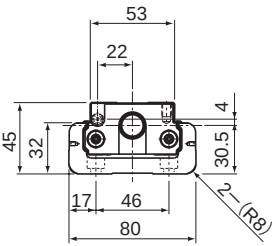
Model KR45H□□A (with a Single Long Nut Block)
Model KR45H□□B (with Two Long Nut Blocks)



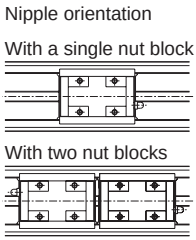




A arrow view



B-B cross section

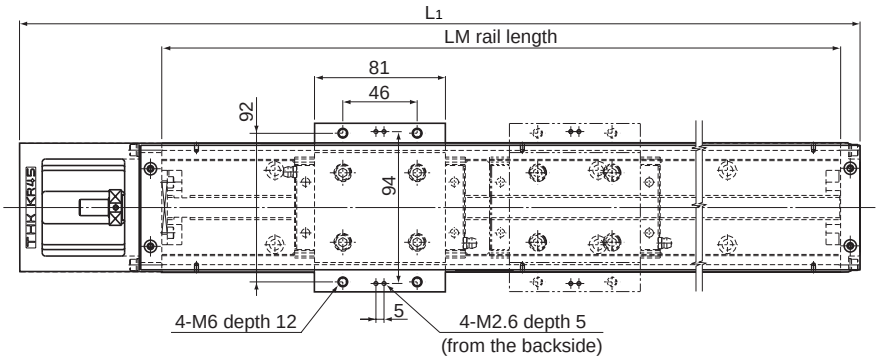


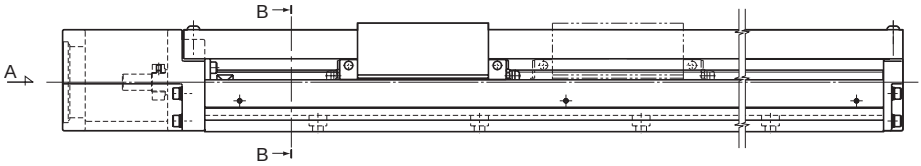
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B				Type A	Type B
340	440	213	105	70	3	2	5.1	6.05
440	540	313	205	20	4	3	6.1	7.05
540	640	413	305	70	5	3	7.1	8.05
640	740	513	405	20	6	4	8.1	9.05
740	840	631	505	70	7	4	9.1	10.05
840	940	713	605	20	8	5	10.1	11.05
940	1040	813	705	70	9	5	11.2	12.15

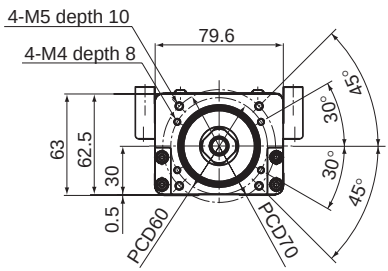
Note1) The available stroke range of model KR45H □□ B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 213.6mm.

Model KR45H (with a Cover)

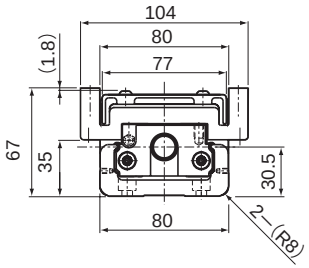
Model KR45H□□A (with a Single Long Nut Block)
Model KR45H□□B (with Two Long Nut Blocks)







A arrow view



B-B cross section

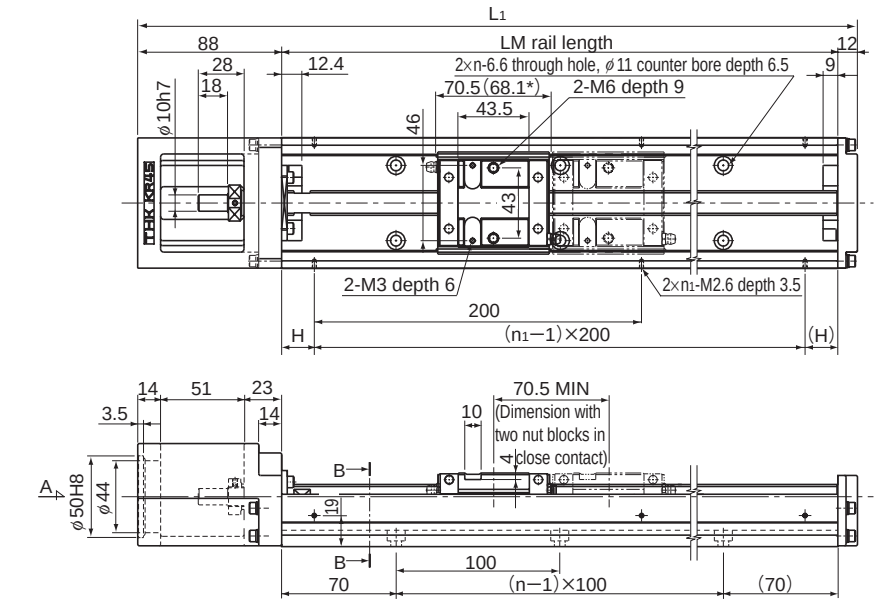
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
340	440	213	105	5.7	7.01
440	540	313	205	6.8	8.11
540	640	413	305	7.9	9.21
640	740	513	405	9	10.31
740	840	613	505	10.1	11.41
840	940	713	605	11.2	12.51
940	1040	813	705	12.3	13.61

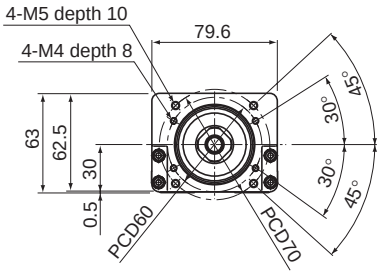
Note) The available stroke range of model KR45H□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

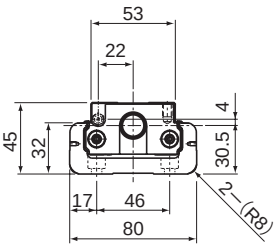
Model KR45H Standard Type

Model KR45H□□C (with a Single Short Nut Block)
Model KR45H□□D (with Two Short Nut Blocks)





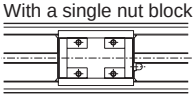
A arrow view



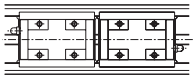
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

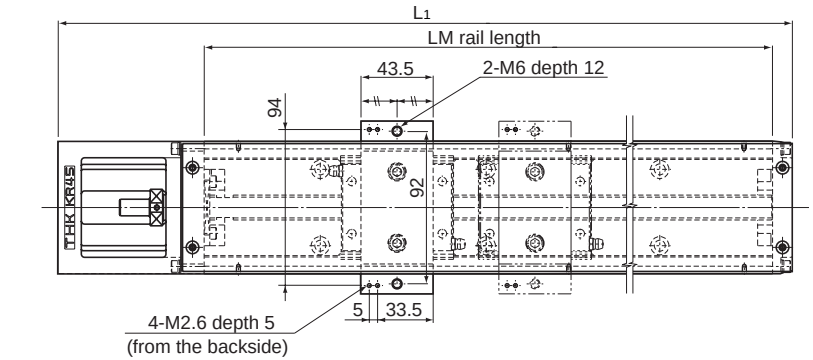


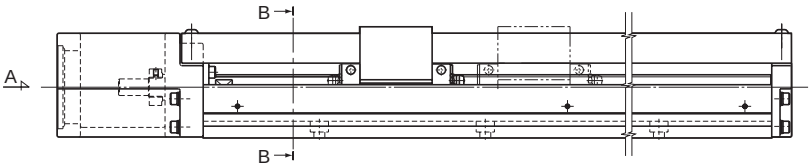
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D				Type C	Type D
340	440	250.5	180	70	3	2	4.7	5.23
440	540	350.5	280	20	4	3	5.7	6.23
540	640	450.5	380	70	5	3	6.7	7.23
640	740	550.5	480	20	6	4	7.7	8.23
740	840	650.5	580	70	7	4	8.7	9.23
840	940	750.5	680	20	8	5	9.7	10.23
940	1040	850.5	780	70	9	5	10.8	11.33

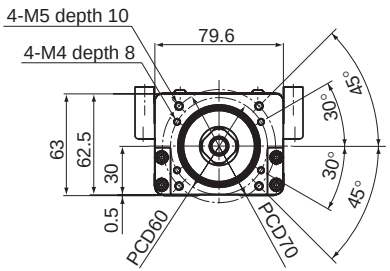
Note) The available stroke range of model KR45H□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note) * indicates the block length when calculating the available stroke range. With type D, it is 138.6mm.

Model KR45H (with a Cover)

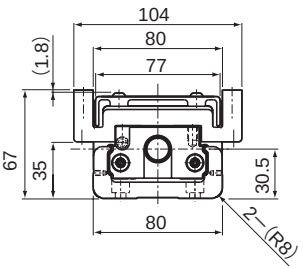
Model KR45H□□C (with a Single Short Nut Block)
Model KR45H□□D (with Two Short Nut Blocks)







A arrow view



B-B cross section

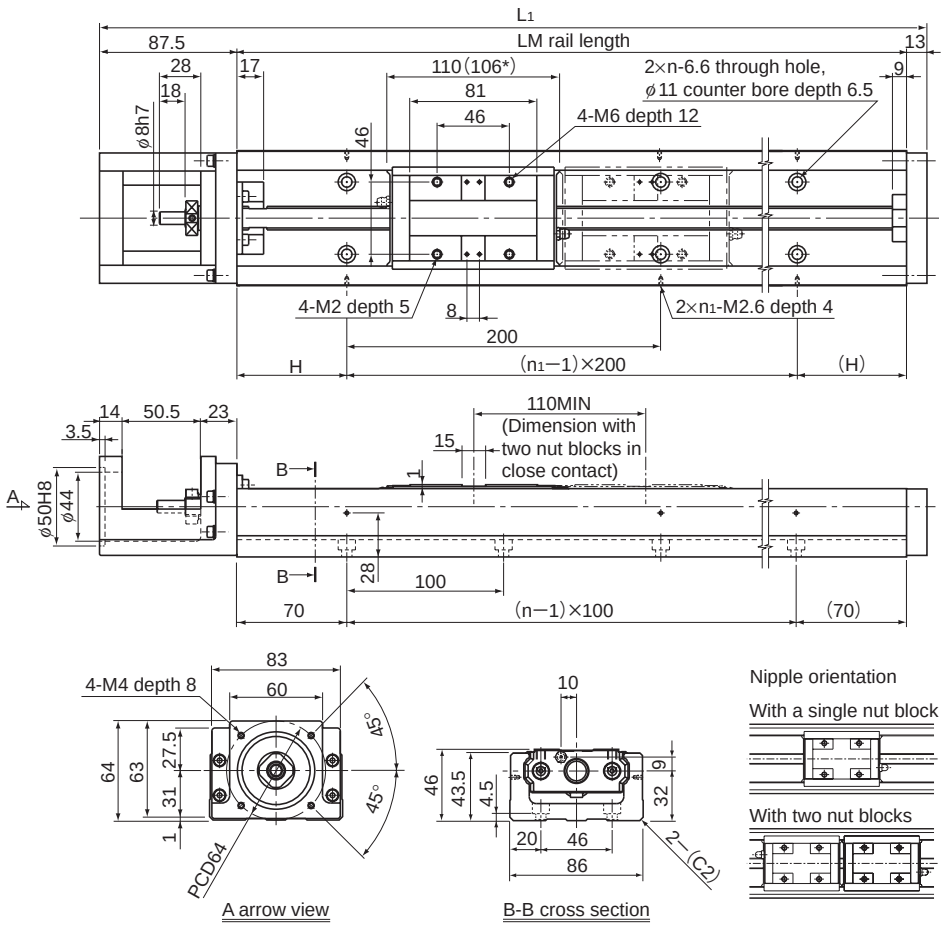
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type C	Type D	Type C	Type D
340	440	250.5	180	5.1	5.82
440	540	350.5	280	6.2	6.92
540	640	450.5	380	7.3	8.02
640	740	550.5	480	8.4	9.12
740	840	650.5	580	9.5	10.22
840	940	750.5	680	10.6	11.32
940	1040	850.5	780	11.7	12.42

Note) The available stroke range of model KR45H□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR46 Standard Type

Model KR46□□A (with a Single Long Nut Block)
Model KR46□□B (with Two Long Nut Blocks)

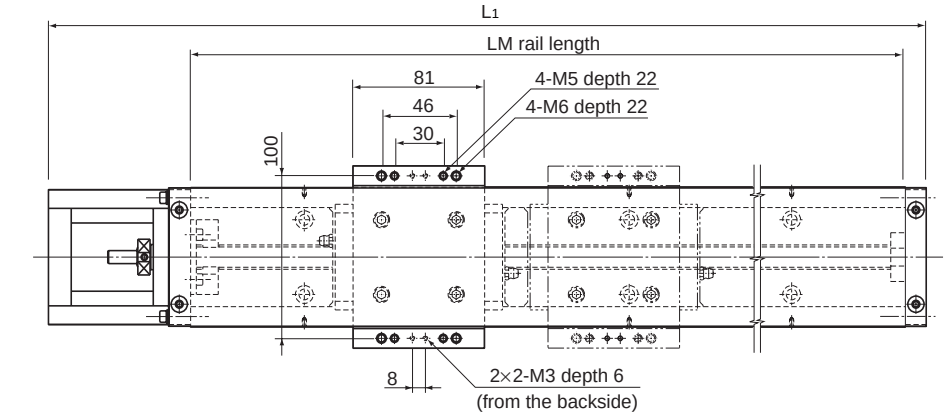


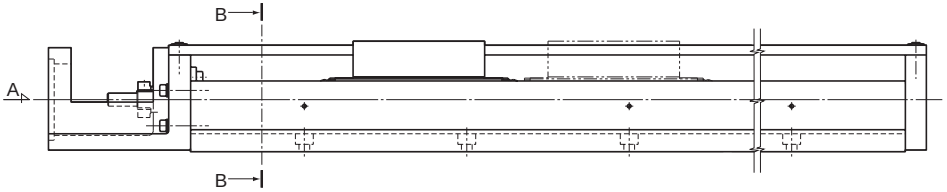
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B				Type A	Type B
340	440.5	208	98	70	3	2	7.7	8.9
440	540.5	308	198	20	4	3	9	10.2
540	640.5	408	298	70	5	3	10.3	11.5
640	740.5	508	398	20	6	4	11.6	12.8
740	840.5	608	498	70	7	4	12.8	14
840	940.5	708	598	20	8	5	14.1	15.3
940	1040.5	808	698	70	9	5	15.3	16.5

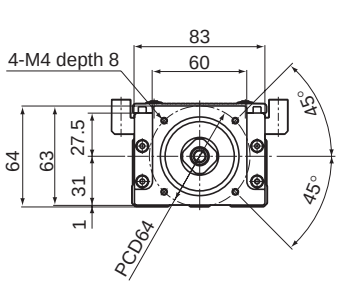
Note1) The available stroke range of model KR46□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 216mm.

Model KR46 (with a Cover)

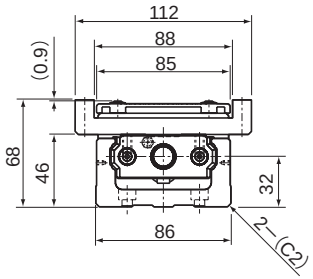
Model KR46□□A (with a Single Long Nut Block)
Model KR46□□B (with Two Long Nut Blocks)







A arrow view



B-B cross section

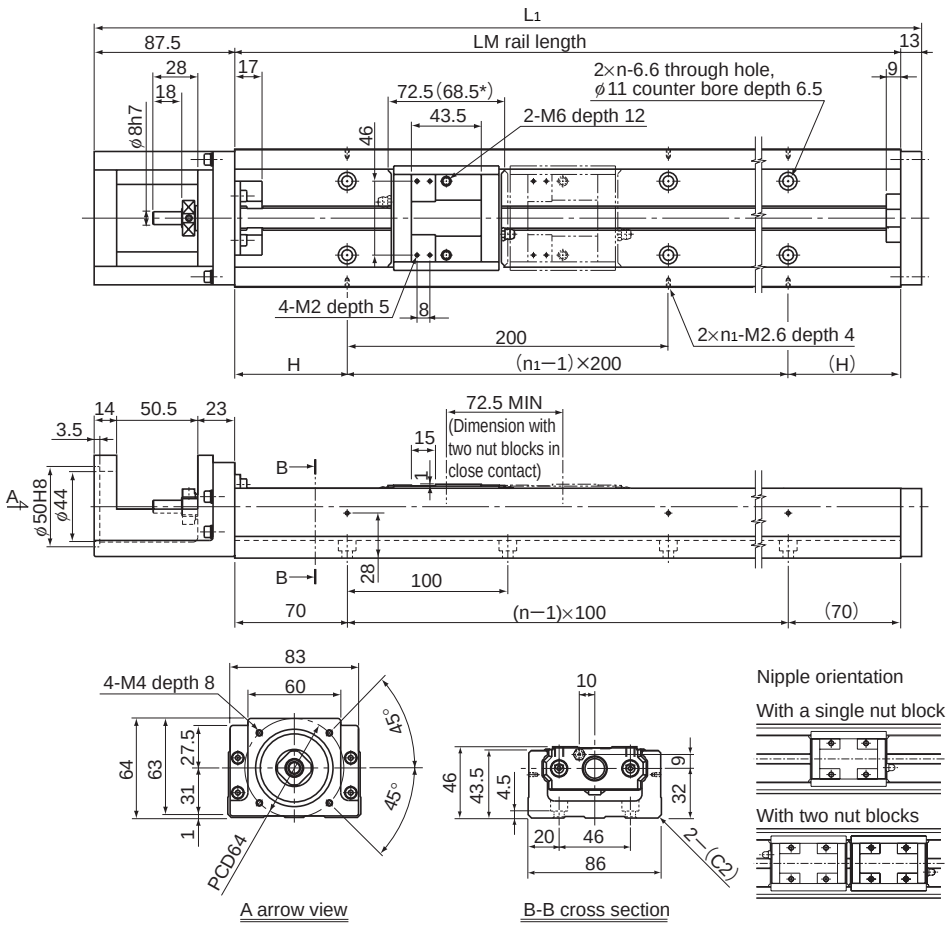
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
340	440.5	208	98	8.3	9.79
440	540.5	308	198	9.7	11.19
540	640.5	408	298	11	12.49
640	740.5	508	398	12.4	13.89
740	840.5	608	498	13.7	15.19
840	940.5	708	598	15	16.49
940	1040.5	808	698	16.3	17.79

Note) The available stroke range of model KR46□□B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model KR46 Standard Type

Model KR46□□C (with a Single Short Nut Block)
Model KR46□□D (with Two Short Nut Blocks)



A arrow view

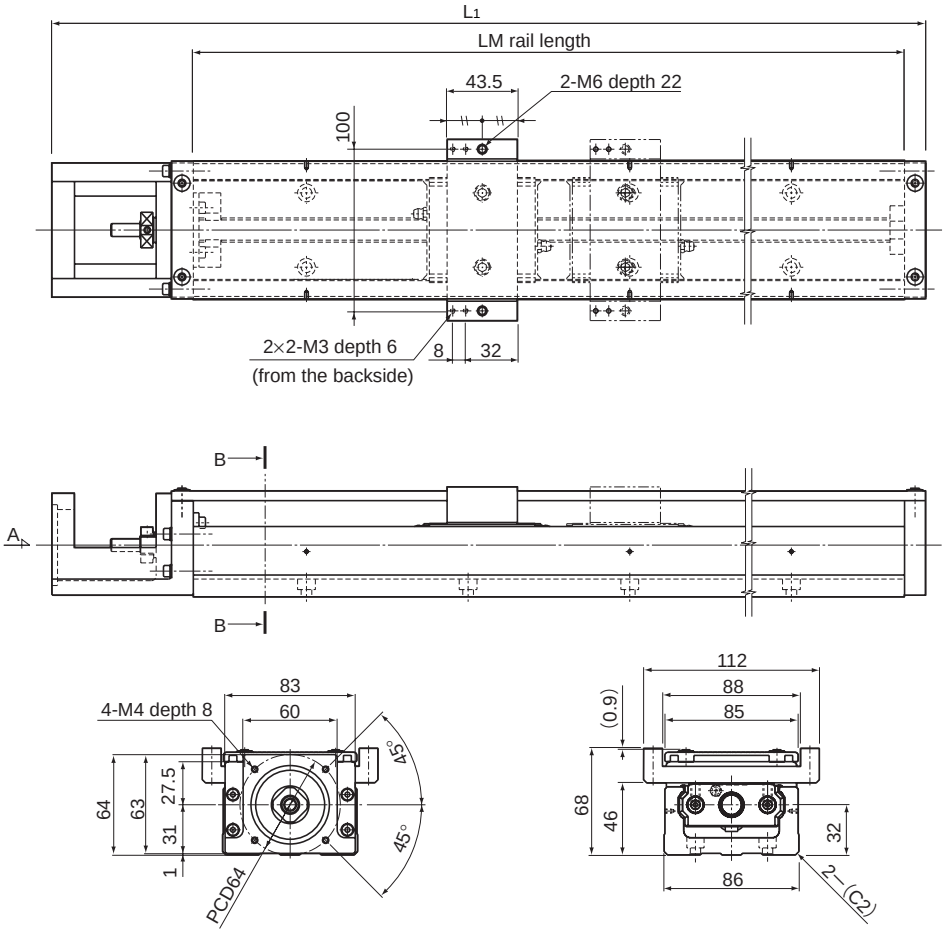
B-B cross section

LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D				Type C	Type D
340	440.5	245.5	173	70	3	2	7.3	8.1
440	540.5	345.5	273	20	4	3	8.6	9.4
540	640.5	445.5	373	70	5	3	9.9	10.7
640	740.5	545.5	473	20	6	4	11.2	12
740	840.5	645.5	573	70	7	4	12.4	13.2
840	940.5	745.5	673	20	8	5	13.7	14.5
940	1040.5	845.5	773	70	9	5	14.9	15.7

Note) The available stroke range of model KR46□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note) * indicates the block length when calculating the available stroke range. With type D, it is 141mm.

Model KR46 (with a Cover)

Model KR46□□C (with a Single Short Nut Block)
Model KR46□□D (with Two Short Nut Blocks)



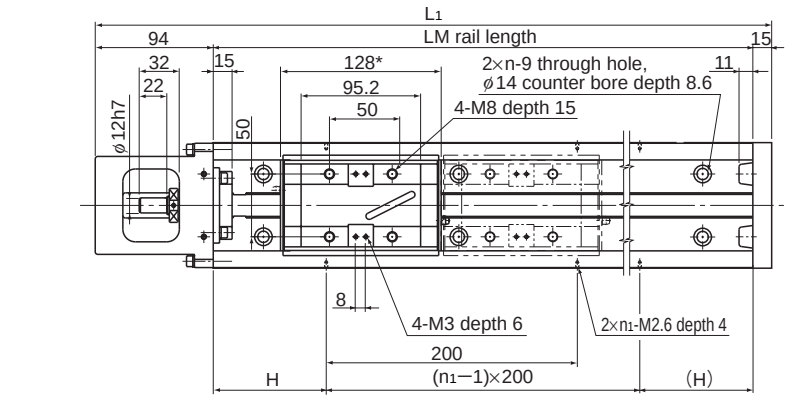
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type C	Type D	Type C	Type D
340	440.5	245.5	173	7.8	8.79
440	540.5	345.5	273	9.1	10.09
540	640.5	445.5	373	10.5	11.49
640	740.5	545.5	473	11.9	12.89
740	840.5	645.5	573	13.2	14.19
840	940.5	745.5	673	14.5	15.49
940	1040.5	845.5	773	15.8	16.79

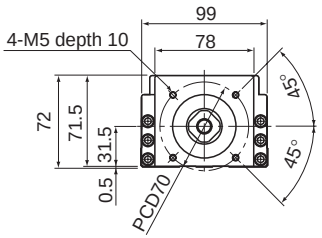
Note) The available stroke range of model KR46□□D indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

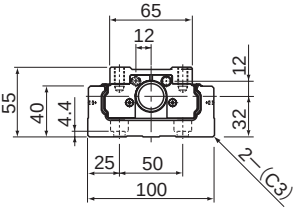
Model KR55 Standard Type

Model KR5520A (with a Single Nut Block)
Model KR5520B (with Two Nut Blocks)





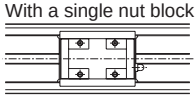
A arrow view



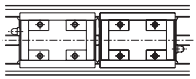
B-B cross section

Nipple orientation

With a single nut block



With two nut blocks

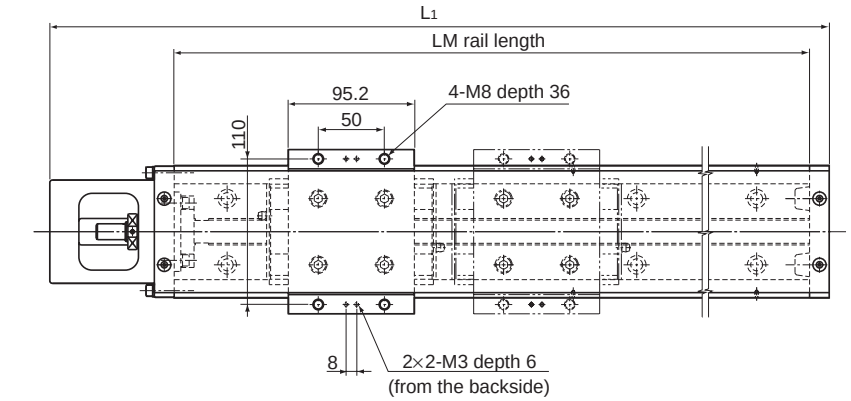


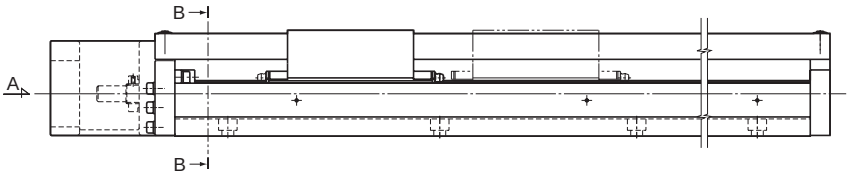
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B					Type A	Type B
980	1089	826	698	90	40	7	5	19.9	21.6
1080	1189	926	798	40	15	8	6	21.7	23.4
1180	1289	1026	898	90	65	8	6	23.4	25.1
1280	1389	1126	998	40	40	9	7	25.1	26.8
1380	1489	1226	1098	90	15	10	7	26.9	28.6

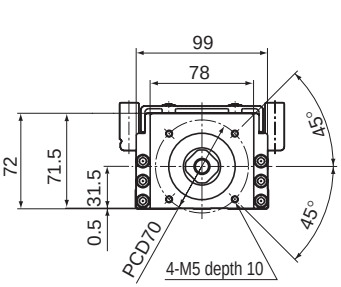
Note) The available stroke range of model KR5520B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Model KR55 (with a Cover)

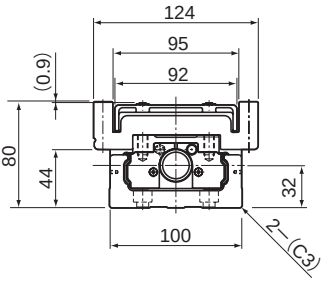
Model KR5520A (with a Single Nut Block)
Model KR5520B (with Two Nut Blocks)







A arrow view



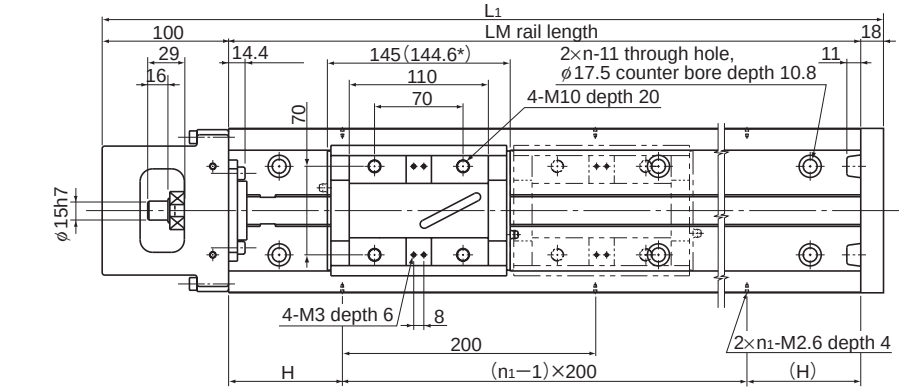
B-B cross section

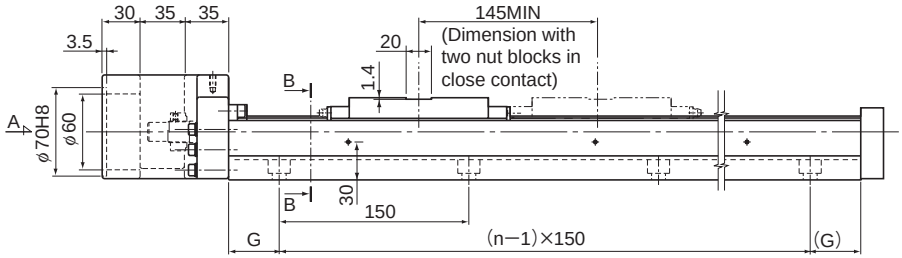
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
980	1089	826	698	22.7	26.2
1080	1189	926	798	24.6	28.1
1180	1289	1026	898	26.4	29.9
1280	1389	1126	998	28.1	31.6
1380	1489	1226	1098	30	33.5

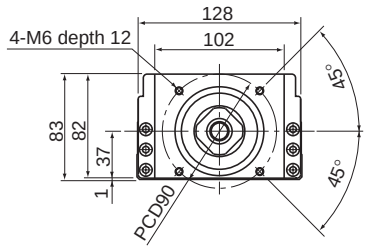
Note) The available stroke range of model KR5520B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

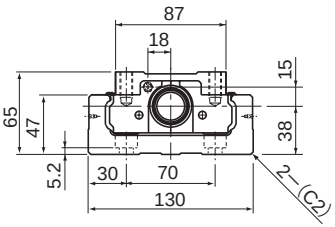
Model KR65 Standard Type

Model KR6525A (with a Single Nut Block)
Model KR6525B (with Two Nut Blocks)



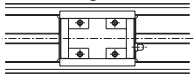




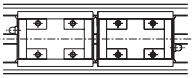


Nipple orientation

With a single nut block



With two nut blocks



A arrow view

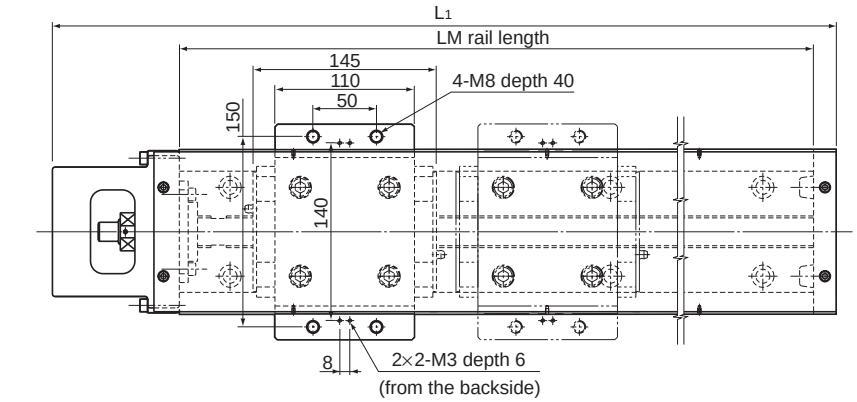
B-B cross section

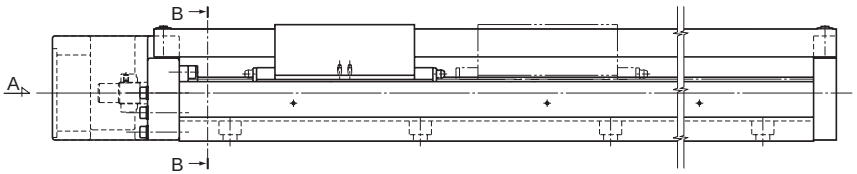
LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B					Type A	Type B
980	1098	810	665	90	40	7	5	31.6	34.6
1180	1298	1010	865	90	65	8	6	37	40
1380	1498	1210	1065	90	90	9	7	42.4	45.4
1680	1798	1510	1365	40	90	11	9	50.5	53.5

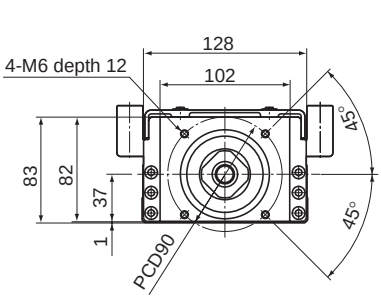
Note1) The available stroke range of model KR6525B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.
Note2) * indicates the block length when calculating the available stroke range. With type B, it is 289.6mm.

Model KR65 (with a Cover)

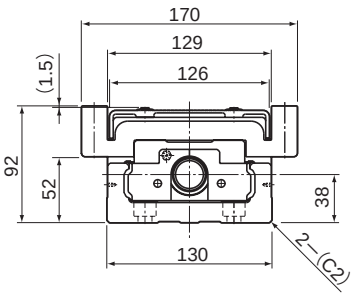
Model KR6525A (with a Single Nut Block)
Model KR6525B (with Two Nut Blocks)







A arrow view



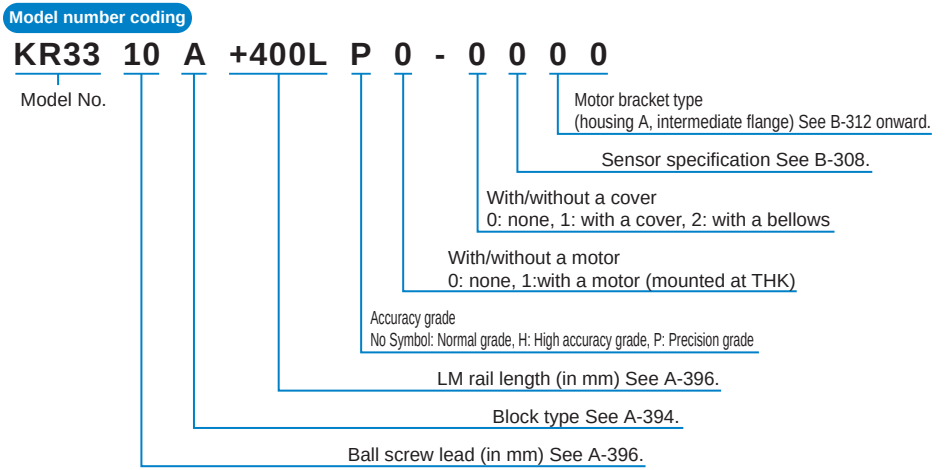
B-B cross section

LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		Overall main unit mass (kg)	
		Type A	Type B	Type A	Type B
980	1098	810	665	36.3	43
1180	1298	1010	865	42	48.7
1380	1498	1210	1065	47.6	54.3
1680	1798	1510	1365	56.1	62.8

Note) The available stroke range of model KR6525B indicates the value when two nut blocks are used in close contact with each other.
For model number coding, see B-290.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model number coding

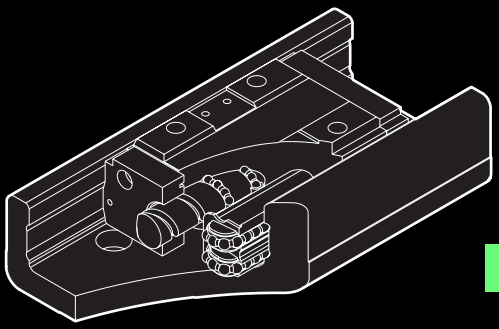


Mass of Moving Element

Table1 shows the mass of the nut block and sub table of model KR.

Table1 Mass of the Nut Block and Sub Table of KR Unit: kg

Model No.	Block A (long block) type		Block C (short block) type	
	Nut block	Sub table	Nut block	Sub table
KR15	0.042	0.022	—	—
KR20	0.075	0.045	—	—
KR26	0.180	0.085	—	—
KR30H	0.30	0.13	0.17	0.07
KR33	0.35	0.13	0.23	0.07
KR45H	0.95	0.36	0.53	0.19
KR46	1.20	0.29	0.80	0.19
KR55	1.70	1.80	—	—
KR65	3.00	3.70	—	—



SKR

Caged Ball LM Guide Actuator

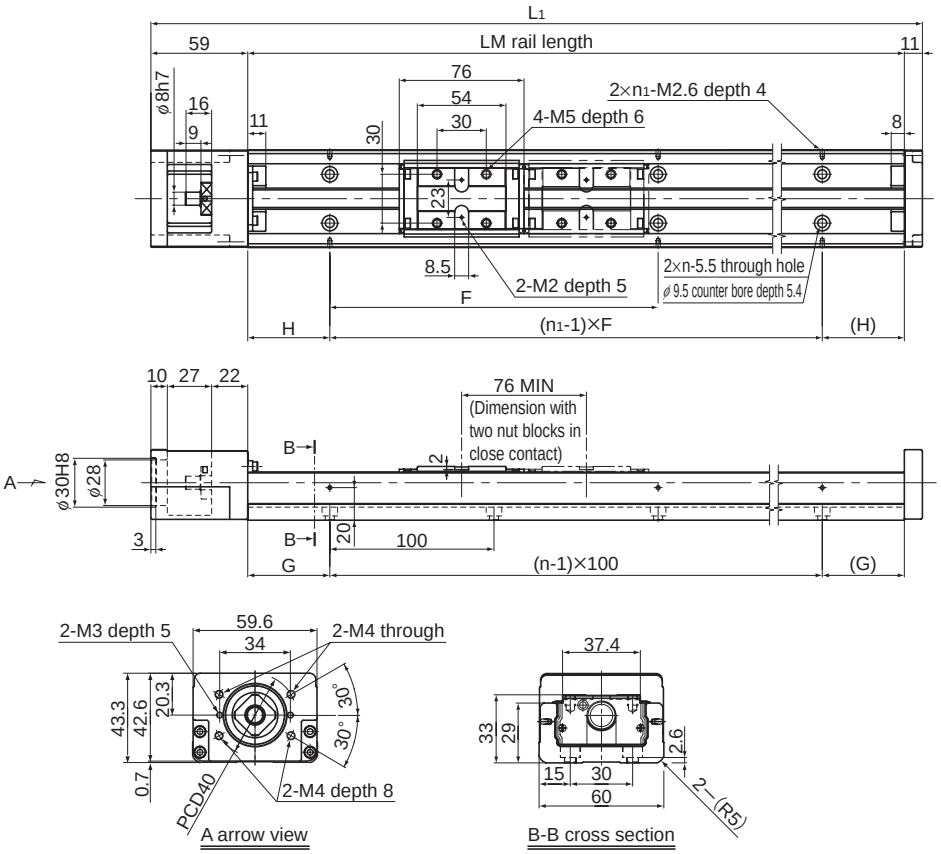
B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SKR33 Standard Type

Model SKR33□□A (with a Single Long Block)
Model SKR33□□B (with Two Long Blocks)

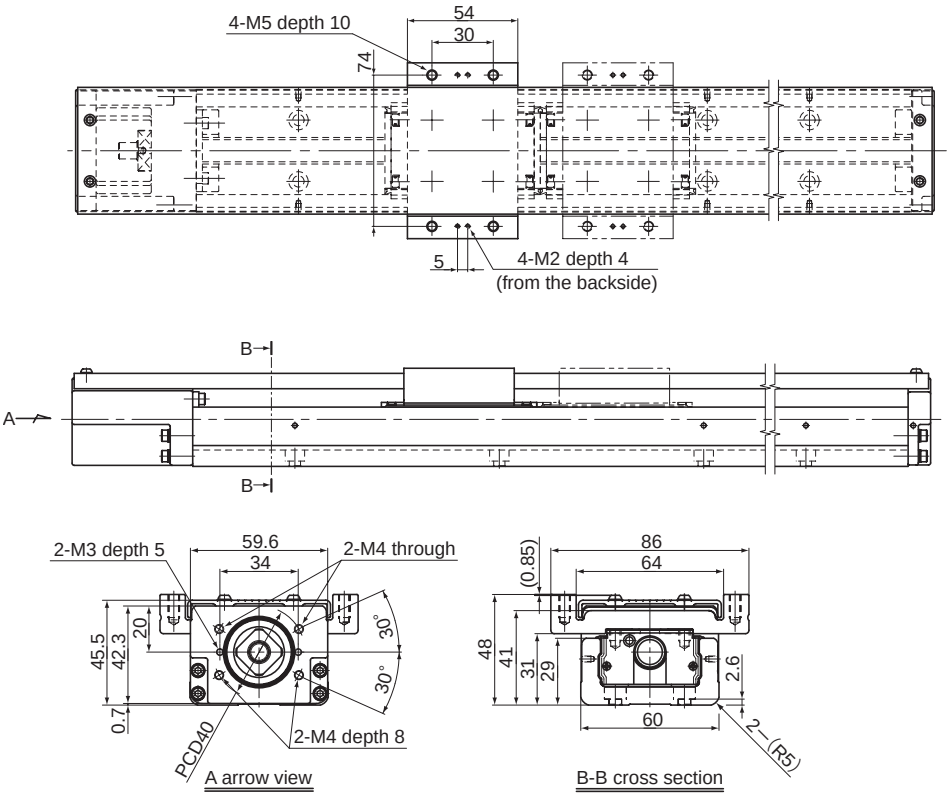


LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B						Type A	Type B
150	220	55	—	25	25	100	2	2	1.7	—
200	270	105	—	50	50	100	2	2	2.1	—
300	370	205	129	50	50	200	3	2	2.8	3.1
400	470	305	229	100	50	200	4	2	3.5	3.8
500	570	405	329	50	50	200	5	3	4.2	4.5
600	670	505	429	100	50	200	6	3	5.0	5.3
700	770	605	529	50	50	200	7	4	5.7	6.0

Note) The available stroke range of model SKR 33 □□ B indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Model SKR33 (with a Cover)

Model SKR33□□A (with a Single Long Block)
Model SKR33□□B (with Two Long Blocks)



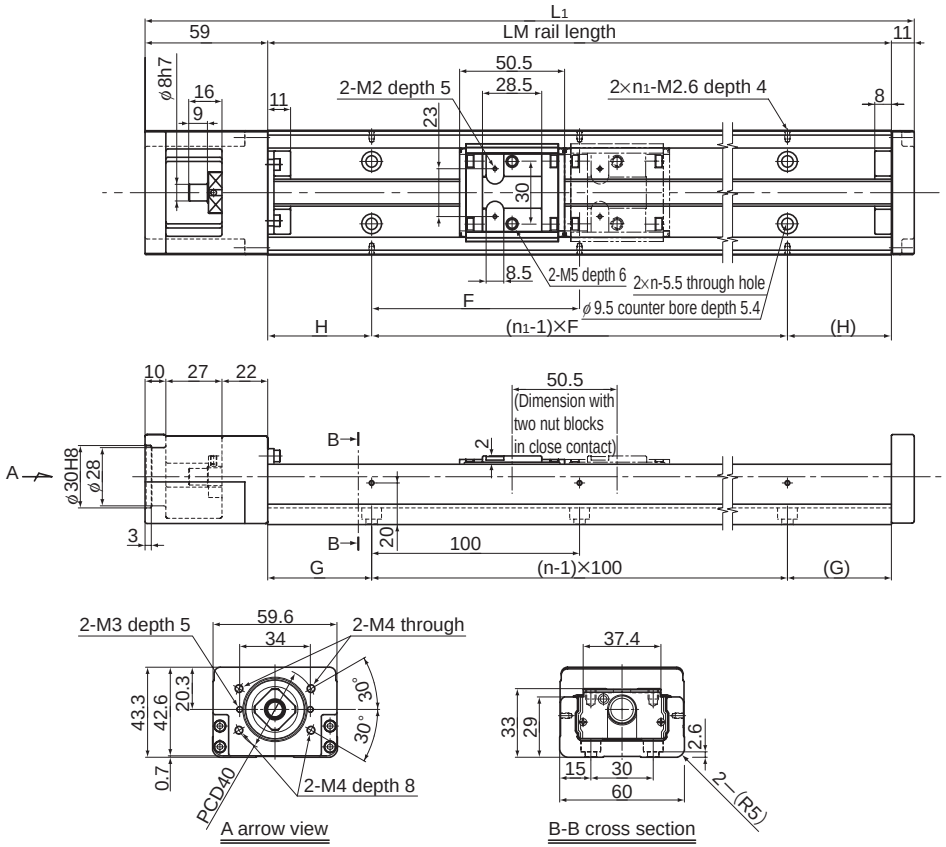
LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n_1	Overall main unit mass (kg)	
		Type A	Type B						Type A	Type B
150	220	55	—	25	25	100	2	2	1.9	—
200	270	105	—	50	50	100	2	2	2.3	—
300	370	205	129	50	50	200	3	2	3.1	3.5
400	470	305	229	100	50	200	4	2	3.8	4.2
500	570	405	329	50	50	200	5	3	4.6	5.0
600	670	505	429	100	50	200	6	3	5.3	5.7
700	770	605	529	50	50	200	7	4	6.1	6.5

Note) The available stroke range of model SKR 33 □□ B indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model SKR33 Standard Type

Model SKR33□□C (with a Single Short Block)
Model SKR33□□D (with Two Short Blocks)

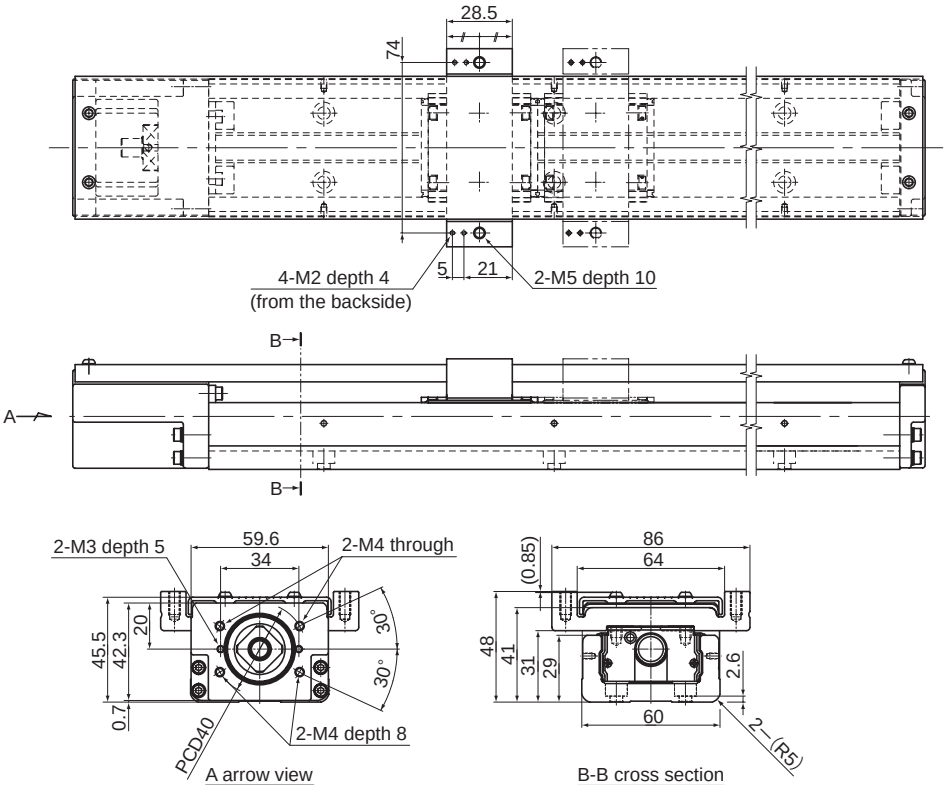


LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D						Type C	Type D
150	220	80.5	30	25	25	100	2	2	1.6	1.8
200	270	130.5	80	50	50	100	2	2	2.0	2.1
300	370	230.5	180	50	50	200	3	2	2.7	2.8
400	470	330.5	280	100	50	200	4	2	3.4	3.6
500	570	430.5	380	50	50	200	5	3	4.1	4.3
600	670	530.5	480	100	50	200	6	3	4.8	5.0
700	770	630.5	580	50	50	200	7	4	5.5	5.7

Note) The available stroke range of model SKR33 □□ D indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Model SKR33 (with a Cover)

Model SKR33□□C (with a Single Short Block)
Model SKR33□□D (with Two Short Blocks)



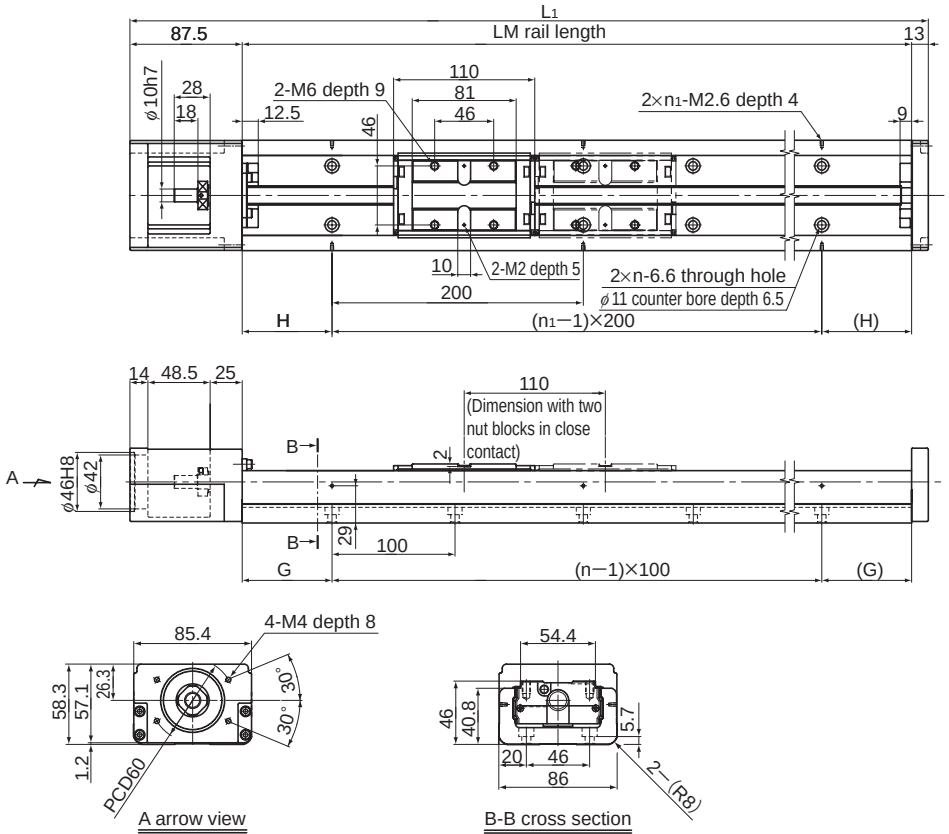
LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		H (mm)	G (mm)	F (mm)	n	n_1	Overall main unit mass (kg)	
		Type C	Type D						Type C	Type D
150	220	80.5	30	25	25	100	2	2	1.8	2.0
200	270	130.5	80	50	50	100	2	2	2.2	2.3
300	370	230.5	180	50	50	200	3	2	2.9	3.1
400	470	330.5	280	100	50	200	4	2	3.7	3.8
500	570	430.5	380	50	50	200	5	3	4.4	4.6
600	670	530.5	480	100	50	200	6	3	5.2	5.3
700	770	630.5	580	50	50	200	7	4	5.9	6.1

Note) The available stroke range of model SKR33 □□ D indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model SKR46 Standard Type

Model SKR46□□A (with a Single Long Block)
Model SKR46□□B (with Two Long Blocks)

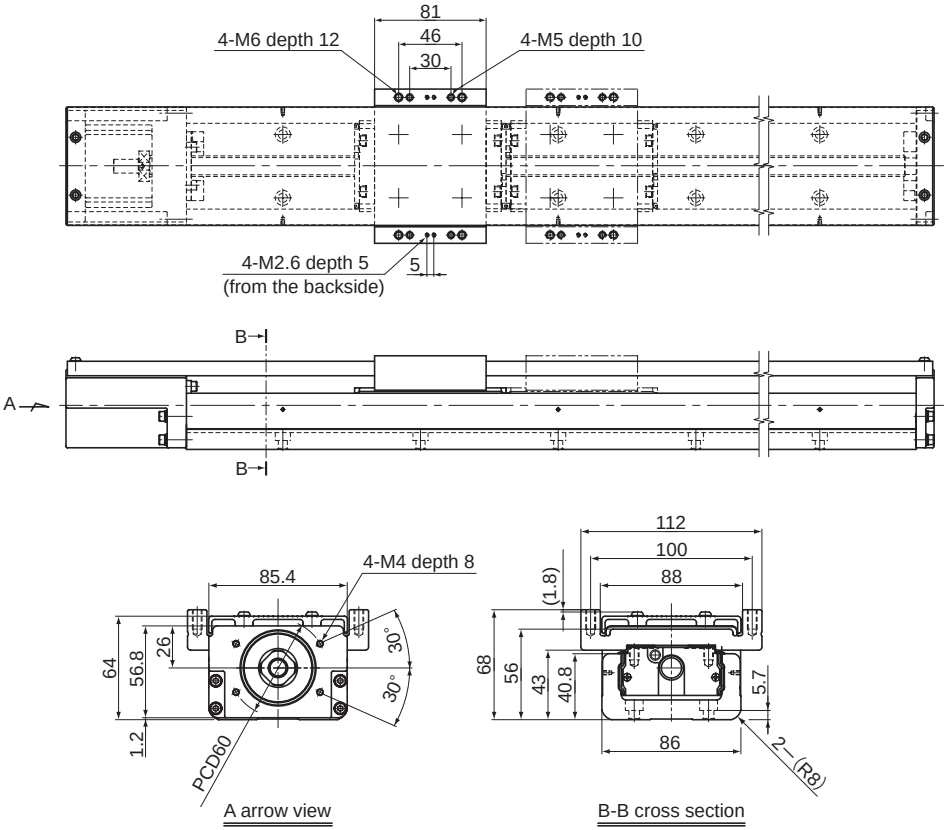


LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n1	Overall main unit mass (kg)	
		Type A	Type B					Type A	Type B
340	440.5	208.5	98.5	70	70	3	2	6.4	7.4
440	540.5	308.5	198.5	20	70	4	3	7.8	8.7
540	640.5	408.5	298.5	70	70	5	3	9.2	10.1
640	740.5	508.5	398.5	20	70	6	4	10.6	11.5
740	840.5	608.5	498.5	70	70	7	4	12.0	12.9
940	1040.5	808.5	698.5	70	70	9	5	14.8	15.7

Note) The available stroke range of model SKR 46 □□ B indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Model SKR46 (with a Cover)

Model SKR46□□A (with a Single Long Block)
Model SKR46□□B (with Two Long Blocks)

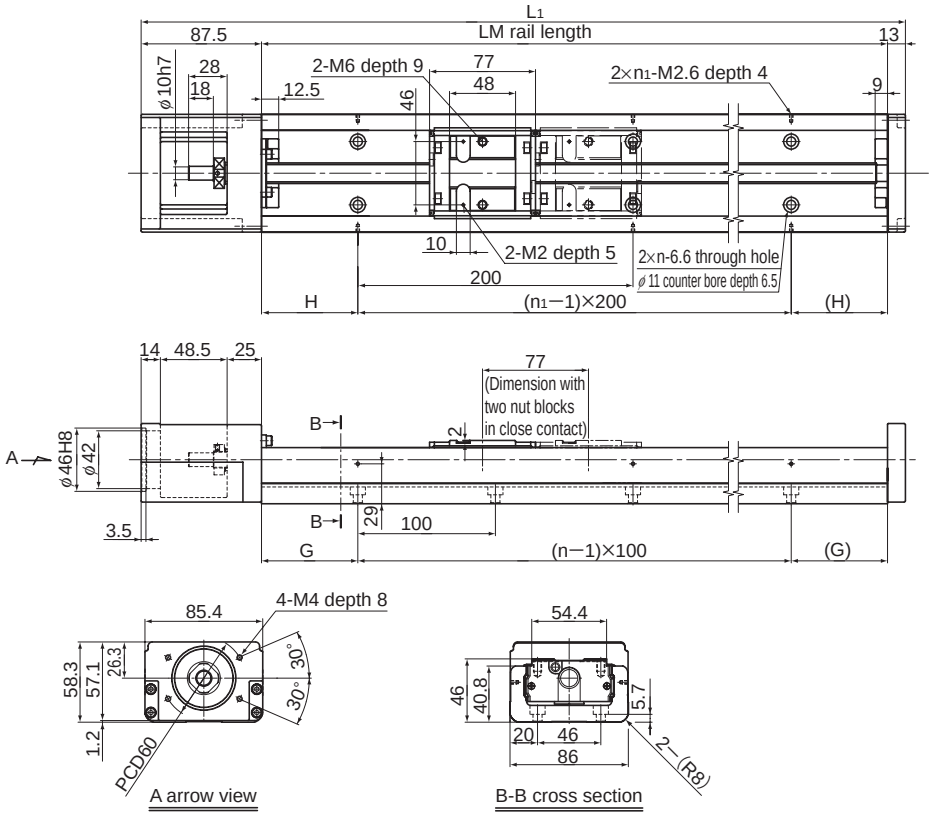


LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n_1	Overall main unit mass (kg)	
		Type A	Type B					Type A	Type B
340	440.5	208.5	98.5	70	70	3	2	7.1	8.3
440	540.5	308.5	198.5	20	70	4	3	8.6	9.8
540	640.5	408.5	298.5	70	70	5	3	10.0	11.3
640	740.5	508.5	398.5	20	70	6	4	11.5	12.7
740	840.5	608.5	498.5	70	70	7	4	13.0	14.2
940	1040.5	808.5	698.5	70	70	9	5	16.0	17.2

Note) The available stroke range of model SKR 46 □□ B indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Model SKR46 Standard Type

Model SKR46□□C (with a Single Short Block)
Model SKR46□□D (with Two Short Blocks)

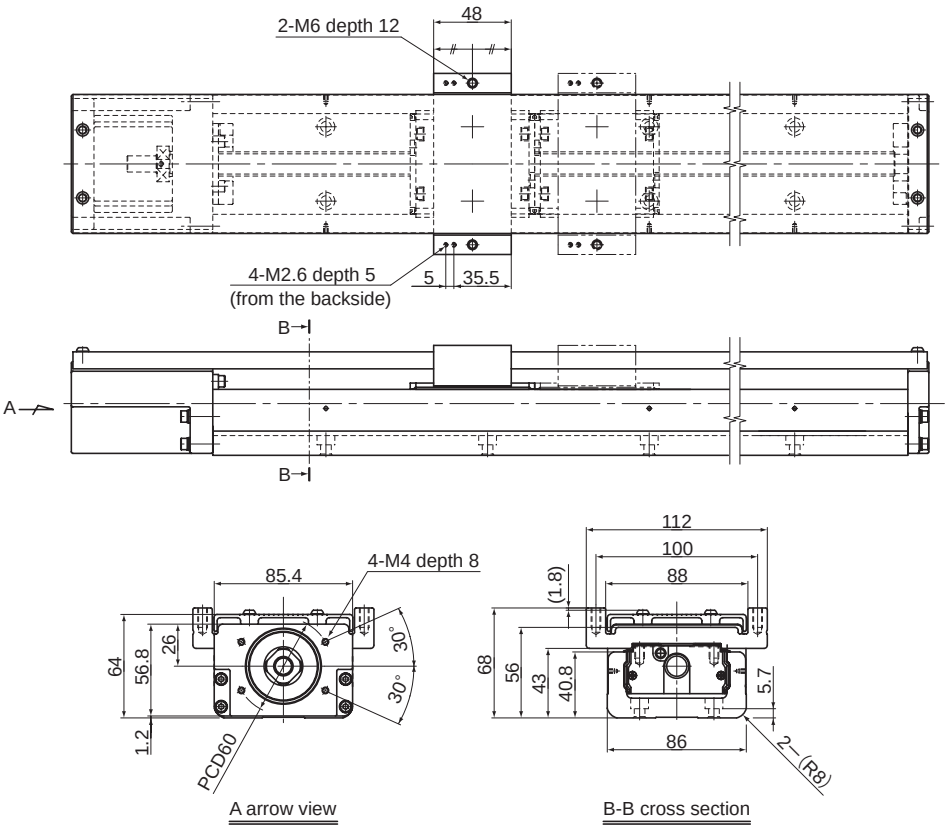


LM rail length (mm)	Overall length L1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n1	Overall main unit mass (kg)	
		Type C	Type D					Type C	Type D
340	440.5	241.5	164.5	70	70	3	2	6.1	6.7
440	540.5	341.5	264.5	20	70	4	3	7.5	8.1
540	640.5	441.5	364.5	70	70	5	3	8.9	9.5
640	740.5	541.5	464.5	20	70	6	4	10.3	10.8
740	840.5	641.5	564.5	70	70	7	4	11.7	12.2
940	1040.5	841.5	764.5	70	70	9	5	14.5	15.0

Note) The available stroke range of model SKR46 □□ D indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Model SKR46 (with a Cover)

Model SKR46□□C (with a Single Short Block)
Model SKR46□□D (with Two Short Blocks)



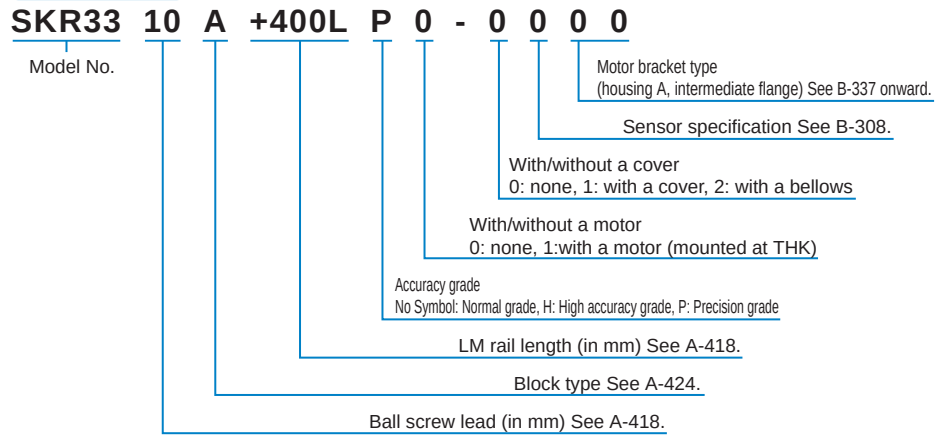
LM rail length (mm)	Overall length L_1(mm)	Available stroke range (mm)		H (mm)	G (mm)	n	n_1	Overall main unit mass (kg)	
		Type C	Type D					Type C	Type D
340	440.5	241.5	164.5	70	70	3	2	6.6	7.4
440	540.5	341.5	264.5	20	70	4	3	8.1	8.9
540	640.5	441.5	364.5	70	70	5	3	9.6	10.3
640	740.5	541.5	464.5	20	70	6	4	11.0	11.8
740	840.5	641.5	564.5	70	70	7	4	12.5	13.3
940	1040.5	841.5	764.5	70	70	9	5	15.5	16.3

Note) The available stroke range of model SKR46 □□ D indicates the value when two blocks are used in close contact with each other.
For model number coding, see B-300.

Description of Each Option⇒A-430 Dimensions⇒B-301

Model Number Coding

Model number coding



Mass of Moving Element

Table1 shows the mass of the nut block and sub table of model SKR.

Table1 Mass of the Nut Block and Sub Table of SKR Unit: kg

Model No.	Block A (long block) type		Block C (short block) type	
	Nut block	Sub table	Nut block	Sub table
SKR33	0.31	0.13	0.17	0.07
SKR46	0.91	0.34	0.57	0.20

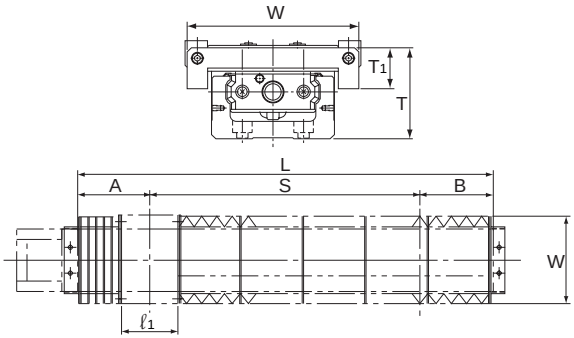
LM Guide Actuator

Options

Bellows

For model KR, a bellows is available for contamination protection in addition to a cover.

[Block A Type]



Unit: mm

Model No.	LM rail length L	Stroke length S	MIN/MAX	Motor side A	Counter-motor side B	ℓ1	W	T	T1
KR15	75	25	12.5/37.5	25		23	49	23.5	15.5
	100	37	19/56	31.5					
	125	50	25/75	38.5					
	150	62	31.5/93.5	44					
	175	75	37.5/112.5	50					
	200	87	44/131	56.5					
KR20	100	35	14.4/50.4	33	32.2	33.2	60	30	20
	150	63	25.9/88.9	44.5	43.8				
	200	91	36.9/127.9	55.5	54.7				
KR26	150	57	20.3/80.3	45		47.4	74	38	20
	200	87	30.3/120.3	55					
	250	115	40.3/160.3	65					
	300	145	50.3/200.3	75					
KR30H	150	58	16/74	46		54	80	39	17.5
	200	92	24/116	54					
	300	160	40/200	70					
	400	226	57/283	87					
	500	290	75/365	105					
	600	358	91/449	121					
KR33	150	57	14/76	48	45	54	84	44.5	20
	200	104	17/123	48	48				
	300	180	30/210	59	61				
	400	260	40/300	69	71				
	500	330	55/385	84	86				
	600	410	65/475	94	96				

Model No.	LM rail length L	Stroke length S	MIN/MAX	Motor side A	Counter-motor side B	ℓ_1	W	T	T_1
KR45H	340	190	30/220	74.5	75.5	81	104	56	28
	440	270	40/310	84.5	85.5				
	540	340	55/395	99.5	100.5				
	640	420	65/485	109.5	110.5				
	740	500	75/575	119.5	120.5				
	840	580	85/665	129.5	130.5				
	940	650	100/750	144.5	145.5				
KR46	340	178	29.5/207.5	81	81	81	110	56	20
	440	258	39.5/297.5	91	91				
	540	328	54.5/382.5	106	106				
	640	418	59.5/477.5	111	111				
	740	488	74.5/562.5	126	126				
	940	648	94.5/742.5	146	146				
KR55	980	770	55.4/825.4	105	105	95.2	154	77	42
	1080	856	62.4/918.4	112	112				
	1180	944	68.4/1012.4	118	118				
	1280	1030	75.4/1105.4	125	125				
	1380	1116	82.4/1198.4	132	132				
KR65	980	746.5	58/804.5	115	118.5	110	184	87	49
	1180	914.5	74/988.5	131	134.5				
	1380	1082.5	90/1172.5	147	150.5				
	1680	1334.5	114/1448.5	171	174.5				

Note) For use other than in horizontal mount (e.g., vertical mount and wall mount), the extension rate differs from the specification value. Contact THK for details.

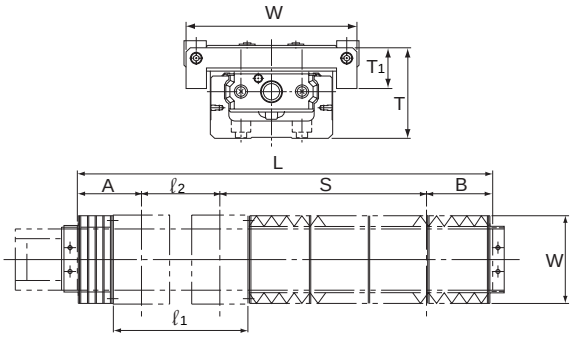
Note : The length of the bellows is calculated as follow.

$$Lmin = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$Lmax = Lmin \cdot A$ A: Extension rate (see right table)

Model No.	A (extension rate)
KR15	3
KR20	3
KR26	4
KR30H	5
KR33	7
KR45H	7
KR46	7
KR55	13
KR65	13

[Block B Type]



Unit: mm

Model No.	LM rail length L	Stroke length S	MIN/MAX	Motor side A	Counter-motor side B	ℓ1	ℓ2	W	T	T1
KR15	125	33	17/50	29.5		56	33	49	23.5	15.5
	150	46	23/69	35.5						
	175	58	29.5/87.5	42						
	200	71	35.5/106.5	48						
KR20	150	38	15.4/53.4	34	33.2	79.2	46	60	30	20
	200	66	26.4/92.4	45	44.2					
KR26	200	46	17.8/68.8	42.5		111.4	64	74	38	20
	250	77	27.8/108.8	52.5						
	300	107	37.8/148.8	62.5						
KR30H	200	40	12.8/52.8	42.8		128.4	74.4	80	39	17.5
	300	108	28.8/136.8	58.8						
	400	176	44.8/220.8	74.8						
	500	240	62.8/302.8	92.8						
	600	308	78.8/386.8	108.8						
KR33	300	114	25/139	54	56	130	76	84	44.5	20
	400	194	35/229	64	66					
	500	264	50/321	79	81					
	600	344	60/404	89	91					
KR45H	340	102	20/122	64.5	65.5	189	108	104	56	28
	440	182	30/212	74.5	75.5					
	540	252	45/297	89.5	90.5					
	640	332	55/387	99.5	100.5					
	740	412	65/477	109.5	110.5					
	840	492	75/567	119.5	120.5					
	940	572	85/657	129.5	130.5					
KR46	340	90	15.5/111.5	73	67	191	110	110	56	20
	440	168	29.5/197.5	81	81					
	540	248	39.5/287.5	91	91					
	640	318	54.5/372.5	106	106					
	740	408	59.5/467.5	111	111					
	940	548	89.5/637.5	141	141					

Model No.	LM rail length L	Stroke length S	MIN/MAX	Motor side A	Counter-motor side B	ℓ_1	ℓ_2	W	T	T_1
KR55	980	652	50.4/702.4	100	100	223.1	128	154	77	42
	1080	738	57.4/795.4	107	107					
	1180	826	63.4/889.4	113	113					
	1280	912	70.4/982.4	120	120					
	1380	998	77.4/1075.4	127	127					
KR65	980	625.5	46/671.5	103	106.5	225	145	184	87	49
	1180	795.5	61/856.5	118	121.5					
	1380	959.5	79/1038.5	136	139.5					
	1680	1211.5	103/1314.5	160	163.5					

Note) For use other than in horizontal mount (e.g., vertical mount and wall mount), the extension rate differs from the specification value. Contact THK for details.

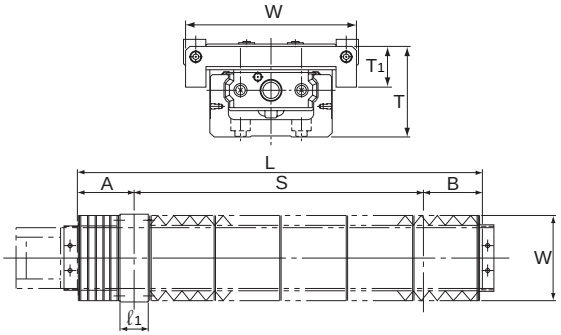
Note : The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate (see right table)

Model No.	A (extension rate)
KR15	3
KR20	3
KR26	4
KR30H	5
KR33	7
KR45H	7
KR46	7
KR55	13
KR65	13

[Block C Type]



Unit: mm

Model No.	LM rail length L	Stroke length S	MIN/MAX	Motor side A	Counter-motor side B	ℓ1	W	T	T1
KR30H	150	73	21.25/94.25	38.5		28.5	80	39	17.5
	200	107	29.25/136.25	46.5					
	300	175	45.25/220.25	62.5					
	400	243	61.25/304.25	78.5					
	500	307	79.25/386.25	96.5					
	600	375	95.25/470.25	112.5					
KR33	150	78.7	17/98.5	36	35.3	28.5	84	44.5	20
	200	119.4	23/142.5	39.3	41.3				
	300	195.4	35/230.5	51.3	53.3				
	400	269.4	48/317.5	64.3	66.3				
	500	345.4	60/405.5	76.3	78.3				
	600	425.4	70/495.5	86.3	88.3				
KR45H	340	219	34.25/253.25	60	61	43.5	104	56	28
	440	299	44.25/343.25	70	71				
	540	369	59.25/428.25	85	86				
	640	449	69.25/518.25	95	96				
	740	529	79.25/608.25	105	106				
	840	609	89.25/698.25	115	116				
	940	679	104.25/783.25	130	131				
KR46	340	205.4	34.5/240	67.3	67.3	43.5	110	56	20
	440	279.4	47.5/327	80.3	80.3				
	540	355.4	59.5/415	92.3	92.3				
	640	439.4	67.5/507	100.3	100.3				
	740	509.4	82.5/592	115.3	115.3				
	940	675.4	99.5/775	132.3	132.3				

Note) For use other than in horizontal mount (e.g., vertical mount and wall mount), the extension rate differs from the specification value. Contact THK for details.

Note : The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate (see right table)

Model No.	A (extension rate)
KR30H	5
KR33	7
KR45H	7
KR46	7

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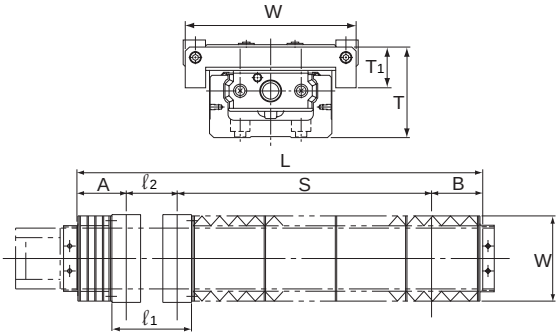
[Block D Type]



Unit: mm

Model No.	LM rail length L	Stroke length: S	MIN/MAX	Motor side A	Counter-motor side B	ℓ1	ℓ2	W	T	T1
KR30H	150	40	13.3/53.3	30.55		77.4	48.9	80	39	17.5
	200	74	21.3/95.3	38.55						
	300	142	37.3/179.3	54.55						
	400	210	53.3/263.3	70.55						
	500	274	71.3/345.3	88.55						
	600	342	87.3/429.3	104.55						
KR33	150	31.2	14/51	36	32.3	79	50.5	84	44.5	20
	200	78.2	17/98	36	35.3					
	300	154.9	30/185	46.3	48.3					
	400	234.9	40/275	56.3	58.3					
	500	304.9	55/360	71.3	73.3					
	600	384.9	65/450	81.3	83.3					
KR45H	340	167	25/192	50.75	51.75	114	70.5	104	56	28
	440	247	35/282	60.75	61.75					
	540	317	50/367	75.75	76.75					
	640	397	60/457	85.75	86.75					
	740	477	70/547	95.75	96.75					
	840	557	80/637	105.75	106.75					
	940	627	95/722	120.75	121.75					
KR46	340	142.9	29.5/167.5	62.3	62.3	116	72.5	110	56	20
	440	222.9	39.5/262.5	72.3	72.3					
	540	292.9	54.5/347.5	87.3	87.3					
	640	382.9	59.5/442.5	92.3	92.3					
	740	452.9	74.5/527.5	107.3	107.3					
	940	612.9	94.5/707.5	127.3	127.3					

Note) For use other than in horizontal mount (e.g., vertical mount and wall mount), the extension rate differs from the specification value. Contact THK for details.

Note : The length of the bellows is calculated as follow.

$$L_{min} = \frac{S}{(A-1)}$$ S: Stroke length (mm)

$L_{max} = L_{min} \cdot A$ A: Extension rate (see right table)

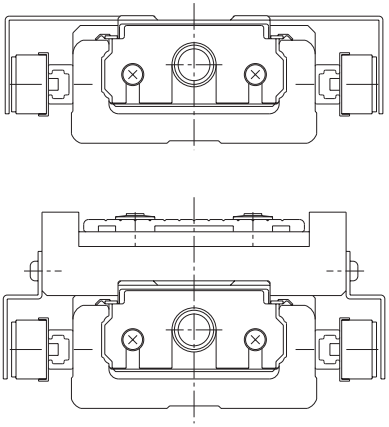
Model No.	A (extension rate)
KR30H	5
KR33	7
KR45H	7
KR46	7

Sensor

Optional proximity sensors and photo sensors are available for models KR and SKR. Models equipped with a sensor are also provided with a dedicated sensor rail/sensor dog (detecting plate).

Some models with a short rail are attached with a sensor and sensor rail on both sides. See the table below.

[Example of Installation]



Model No.	Rail length
KR15A	75L
	100L
KR15B	125L
KR20A	75L
	100L
	125L
KR20B	125L
	150L
KR26A	100L
	125L
	150L
KR26B	175L
	200L

Table1 With/without a sensor

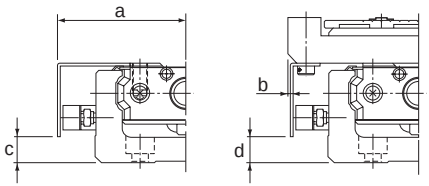
Symbol	Description	Type	Accessory
0	None	—	—
1	With sensor rail	—	Mounting screw
2	Photo Sensor	EE-SX671 (Omron)	Mounting screw/nut, detecting plate, sensor rail, mounting plate, connector (EE-1001)
4	Proximity Sensor a-contact (ON when close)	GL-12F (SUNX)	Mounting screw/nut, detecting plate, sensor rail, fixture (MS-GL12)
5	Proximity Sensor a-contact (ON when close)	GXL-N12F (SUNX)	Mounting screw/nut, detecting plate, sensor rail, fixture (MS-GXL12)
6	Photo Sensor	EE-SX674 (Omron)	Mounting screw/nut, detecting plate, sensor rail, mounting plate, connector (EE-1001)
7	Proximity Sensor a-contact (ON when close)	APM-D3A1-001 (Yamatake)	Mounting screw/nut, detecting plate, sensor rail
8	Proximity Sensor a-contact (ON when close)	GL-N12F (SUNX)	Mounting screw/nut, detecting plate, sensor rail
9	Proximity Sensor b-contact (ON when away)	GL-N12FB (SUNX)	Mounting screw/nut, detecting plate, sensor rail
A	Proximity Sensor b-contact (ON when away)	GXL-N12FB (SUNX)	Mounting screw/nut, detecting plate, sensor rail, fixture (MS-GXL12)
B	Proximity Sensor b-contact (ON when away)	APM-D3B1-003 (Yamatake)	Mounting screw/nut, detecting plate, sensor rail
C	Proximity Sensor a-contact (1 unit), b-contact (2 units)	GL-N12F (1 unit), GL-N12FB (2 units)	Mounting screw/nut, detecting plate, sensor rail
D	Proximity Sensor a-contact (1 unit), b-contact (2 units)	GXL-N12F (1 unit), GXL-N12FB (2 units)	Mounting screw/nut, detecting plate, sensor rail, fixture (MS-GXL12)
E	Proximity Sensor a-contact (1 unit), b-contact (2 units)	APM-D3A1-001 (1 unit), APM-D3B1-003 (2 units)	Mounting screw/nut, detecting plate, sensor rail

[Proximity Sensor]

APM-D3A1-001 (Yamatake)	3 units
APM-D3B1-003 (Yamatake)	3 units
GL-12F (SUNX)	3 units
GXL-N12F (SUNX)	3 units
GX-N12F (SUNX)	3 units
GL-N12FB (SUNX)	3 units
GXL-N12FB (SUNX)	3 units

● **Proximity Sensor: APM-D3A1-001 APM-D3B1-003 (Yamatake)**

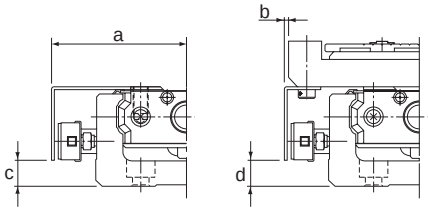
Unit: mm



Model No.	a	b	c	d
KR15	27.8	−5.8	1.4	1.4
KR20	32.5	6.6	6	6
KR26	37.5	6.4	8	8
KR30H	43.3	3.3	8.8	9
KR33	42.5	−0.6	8.8	9
KR45H	53.2	1.2	14	14
KR46	55.4	−0.6	21.8	22
KR55	62.4	0.4	22	22
KR65	77.4	−7.5	25.1	25
SKR33	43.05	0.3	14.8	15
SKR46	56.2	0.2	26.8	22

● **Proximity Sensor: GL-12F, GL-N12F, GXL-N12F, GL-N12FB, GXL-N12FB (SUNX)**

Unit: mm



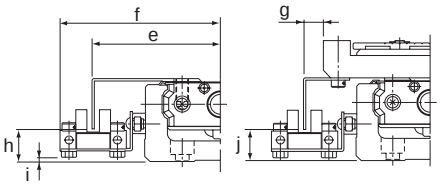
Model No.	a	b	c	d
KR20	34	8	3.6	4
KR26	39	7.9	6	6
KR30H	45	5	8.8	9
KR33	44.5	1.5	8.8	9
KR45H	54.8	2.8	13.8	14
KR46	57.4	1.5	21.8	22
KR55	63.5	1.5	22	22
KR65	79	−6	25.1	25
SKR33	44.7	2	13.8	14
SKR46	57.7	1.8	24.8	22

[Photo Sensor]

EE-SX671 (Omron)	3 units
EE-SX674 (Omron)	3 units
Connector EE-1001 (Omron)	3 units

Note) The connector is a standard attachment to the photo sensor.

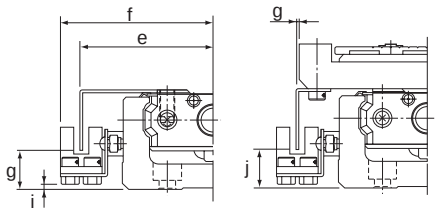
● Photo Sensor: EE-SX671 (Omron)



Unit: mm

Model No.	e	f	g	h	i	j
KR20	41	54	15	9.5	1	9.5
KR26	46	58.5	15	11.5	3	11.5
KR30H	51.3	64.3	11.3	13.8	1.4	13.5
KR33	50.8	63.7	7.8	12.8	1.6	13
KR45H	61.2	74.2	9.3	18.3	6.4	18.5
KR46	63.6	76.6	7.6	25.8	14.6	26
KR55	70.7	83.5	8.6	24.5	13.6	25
KR65	85.5	98.5	0.6	28.1	16.6	28
SKR33	51.1	63.6	8.3	18.8	7.4	19.5
SKR46	64.1	76.6	8.3	29.8	16.4	26.5

● Photo Sensor: EE-SX674 (Omron)

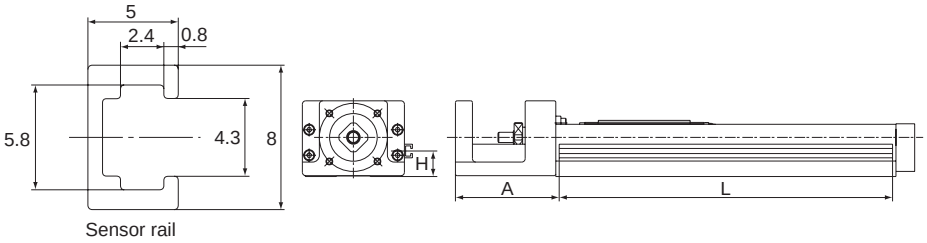


Unit: mm

Model No.	e	f	g	h	i	j
KR20	38.5	45	12.5	11	0.8	11
KR26	43.5	50	12.5	13	2.8	13
KR30H	46.2	52.8	6.3	13.8	1.1	14
KR33	43.9	50.3	0.9	12.8	1.6	13
KR45H	56.2	62.7	4.2	19	6.1	19
KR46	56.7	63.2	0.7	25.8	14.6	26
KR55	63.8	70.1	1.8	24.5	13.6	25
KR65	78.8	85.1	−6.2	28.1	16.6	28
SKR33	45.9	52.1	3.3	17.8	7.1	20
SKR46	58.9	65.1	3.2	28.8	16.1	27

[Sensor Rail]

The sensor rail can be attached alone.



Sensor rail

Unit: mm

Model No.	Rail length	H	A	L
KR15	75	5.5	37.5	88
	100			113
	125			138
	150			163
	175			188
	200			213
KR20	100	10	43	111
	150			161
	200			211
KR26	150	12	54	161
	200			211
	250			261
	300			311
KR30H	150	14	61	146
	200			196
	300			296
	400			396
	500			496
	600			596
KR33	150	15	61	146
	200			196
	300			296
	400			396
	500			496
	600			596
KR45H	340	19	90	336
	440			436
	540			536
	640			636
	740			736
	840			836
	940			936

Unit: mm

Model No.	Rail length	H	A	L
KR46	340	28	89.5	336
	440			436
	540			536
	640			636
	740			736
	940			936
KR55	980	27	96	976
	1080			1076
	1180			1176
	1280			1276
	1380			1376
KR65	980	30	102	976
	1180			1176
	1380			1376
	1680			1676
SKR33	150	20	61	146
	200			196
	300			296
	400			396
	500			496
	600			596
	700			696
SKR46	340	29	89.5	336
	440			436
	540			536
	640			636
	740			736
	940			936

Motor Bracket

[Motors Used in Model KR and Corresponding Motor Brackets]

For model KR, motor brackets are available that allow different motors to be attached. Each motor bracket model has an administration number according to the motor to be used. Specify the corresponding administration number when placing an order.

Table2 Table of Motors Used and Corresponding Motor Brackets

Motor model No.					Model No. Dimension angle	KR15	KR20	KR26	KR30H	KR33	KR45H	KR46	KR55	KR65
AC servomotor	Yaskawa Electric	Σ-mini		SGMM-A1 (10W)	□25	0B	3N	0N	—	—	—	—	—	—
				SGMM-A2 (20W)		0B	3N	0N	—	—	—	—	—	—
				SGMM-A3 (30W)		—	3N	0N	—	—	—	—	—	—
		Σ-Ⅱ		SGMAH-A3 (30W)	□40	—	0B	0B	0B	5H	0B	0F	—	—
				SGMAH-A5 (50W)		—	0B	0B	0B	5H	0B	0F	—	—
				SGMAH-01 (100W)		—	—	—	0B	5H	0B	0F	—	—
				SGMPH-01 (100W)	□60	—	—	—	—	—	0D	40	00	0A
				SGMAH-02 (200W)		—	—	—	—	—	0D	40	00	0A
				SGMAH-04 (400W)		—	—	—	—	—	0D	40	00	0A
				SGMPH-02 (200W)	□80	—	—	—	—	—	—	—	0B	00
				SGMPH-04 (400W)		—	—	—	—	—	—	—	0B	00
				SGMAH-08 (750W)		—	—	—	—	—	—	—	0B	0G
	Mitsubishi Electric	MELSERVO	J2-Jr	HC-AQ013 (10W)	□28	0A	3M	0M	—	—	—	—	—	—
				HC-AQ023 (20W)		0A	3M	0M	—	—	—	—	—	—
				HC-AQ033 (30W)		—	3M	0M	—	—	—	—	—	—
			J2 Super	HC-MFS053 (50W)	□40	—	0B	0B	0B	5H	0B	0F	—	—
				HC-MFS13 (100W)		—	—	—	0B	5H	0B	0F	—	—
				HC-MFS23 (200W)	□60	—	—	—	—	—	0D	40	00	0A
				HC-KFS23 (200W)		—	—	—	—	—	0D	40	00	0A
				HC-MFS43 (400W)		—	—	—	—	—	0D	40	00	0A
				HC-KFS43 (400W)		—	—	—	—	—	0D	40	00	0A
				HC-MFS73 (750W)	□80	—	—	—	—	—	—	—	0B	0G
				HC-KFS73 (750W)		—	—	—	—	—	—	—	0B	0G
	Matsushita Electric	MINAS A		MSMA3A (30W)	□38	—	0A	0A	0A	5K	0A	0G	—	—
				MSMA5A (50W)		—	0A	0A	0A	5K	0A	0G	—	—
				MSMA01 (100W)		—	—	—	0A	5K	0A	0G	—	—
				MQMA01 (100W)	□60	—	—	—	—	—	0C	30	—	—
				MSMA02 (200W)		—	—	—	—	—	0C	30	—	—
				MSMA04 (400W)		—	—	—	—	—	0C	30	—	—
				MSMA08 (750W)	□80	—	—	—	—	—	—	—	0A	2B
	SANYO Electric	SANMOTION Q1		Q1AA04003D (30W)	□40	—	0B	0B	0B	5H	0B	0F	—	—
				Q1AA04005D (50W)		—	0B	0B	0B	5H	0B	0F	—	—
				Q1AA04010D (100W)		—	—	—	0B	5H	0B	0F	—	—
				Q1AA06020D (200W)	□60	—	—	—	—	—	0D	40	00	0A
				Q1AA06040D (400W)		—	—	—	—	—	0D	40	00	0A
				Q1AA07075D (750W)	□76	—	—	—	—	—	—	—	0A	2B

Motor model No.					Model No. Dimension angle	KR15	KR20	KR26	KR30H	KR33	KR45H	KR46	KR55	KR65
AC servomotor	Omron	OMNUC W		R88M-W03030 (30W)	□40	—	0B	0B	0B	5H	0B	0F	—	—
				R88M-W05030 (50W)		—	0B	0B	0B	5H	0B	0F	—	—
				R88M-W10030 (100W)		—	—	—	0B	5H	0B	0F	—	—
				R88M-W20030 (200W)	□60	—	—	—	—	—	0D	40	00	0A
				R88M-W40030 (400W)		—	—	—	—	—	0D	40	00	0A
				R88M-W75030 (750W)	□80	—	—	—	—	—	—	—	0B	0G
	Fanuc	βis series		β0.2/5000is (50W)	□40	—	0B	0B	0B	5H	0B	0F	—	—
				β0.3/5000is (100W)		—	—	—	0B	5H	0B	0F	—	—
				β0.4/5000is (125W)	□60	—	—	—	—	—	0D	40	00	0A
				β0.5/5000is (200W)		—	—	—	—	—	0D	40	00	0A
				β1/5000is (400W)		—	—	—	—	—	0D	40	00	0A
Stepping motor	Oriental Motor	αStep		ASC3*	□28	0D	0F	0F	—	—	—	—	—	—
				AS 46, ASC46	□42	—	0E	0E	XC	5I	—	—	—	—
				AS 6*, ASC66	□60	—	—	—	0E	5G	0F	10	—	—
				AS 9*	□85	—	—	—	—	—	—	—	0G	2F
		5 phase	PMU	PMU33/35 (PMM33/35)	□28	0D	0F	0F	—	—	—	—	—	—
				PMC33/35 (PMM33/35)		0D	0F	0F	—	—	—	—	—	—
			RK	RK54□	□42	—	0E	0E	XC	5I	—	—	—	—
				RK56□	□60	—	—	—	0E	5G	0F	10	—	—
				RK59□	□85	—	—	—	—	—	—	—	0G	2F
		2 phase	UMK	UMK24* (PK24*)	□42	—	0E	0E	XC	5I	—	—	—	—
				UMK26* (PK26*)	□56.4	—	—	—	0D	5F	—	—	—	—

Note1) The symbols in the table each indicate the last two digits of an administration number.
Note2) For the coupling for mounting a motor in the table, contact THK.
Note3) Model KR15 has a limit in input torque. The permissible input torque for model KR1501 is 51 N-mm at a maximum and that for model KR1502 is 103 N-mm at a maximum. If the maximum torque of the motor mounted to model KR15 exceeds the permissible input torque, take a safety measure such as setting a torque limit.

[Motor Bracket Dimensional Table for Model KR]

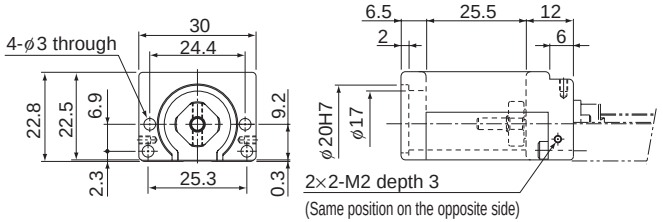
● **For Model KR15**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

■Housing A

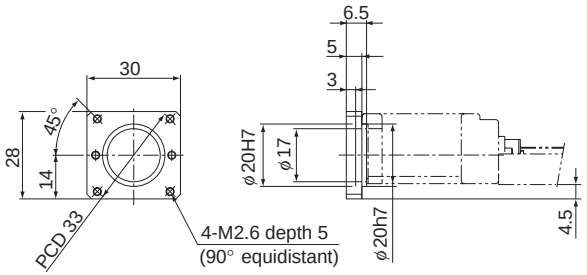
—
00



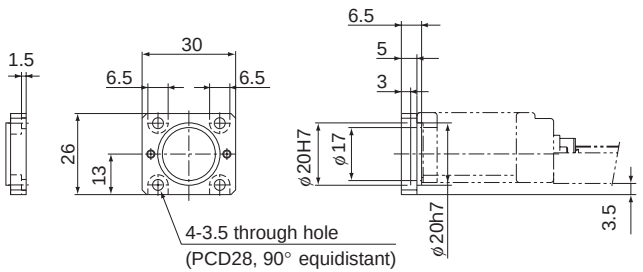
■Intermediate Flange

Each intermediate flange is made of steel and provided with THK AP-C treatment, a surface treatment for high corrosion resistance.

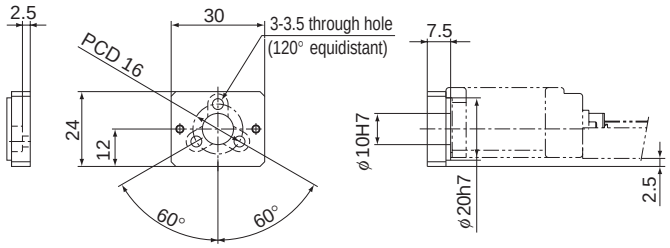
F15-A
0A



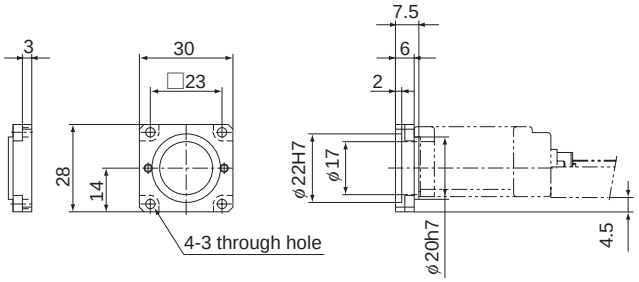
F15-B
0B



F15-C
0C



F15-D
0D



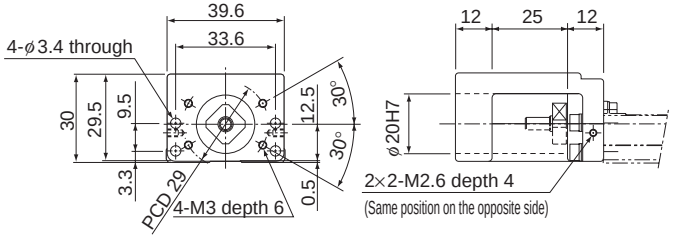
● **For Model KR20**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

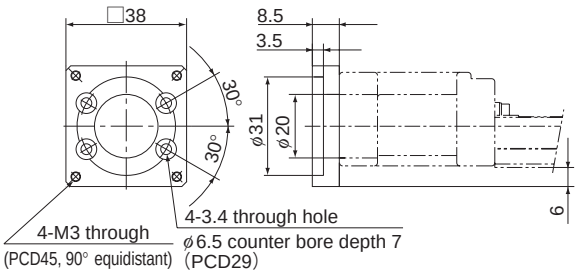
■Housing A

—
00

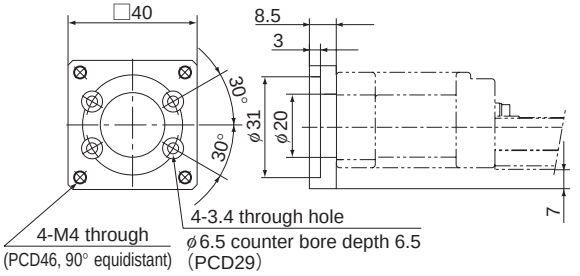


■Intermediate Flange

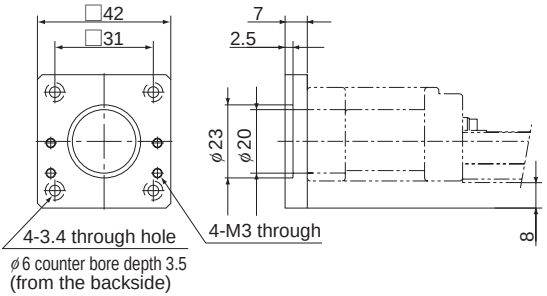
F20-A
0A



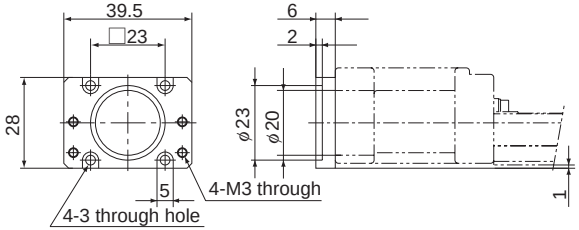
F20-B
0B



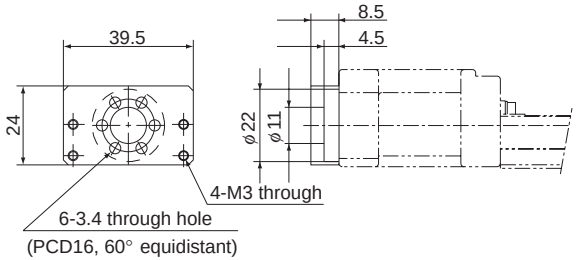
F20-E
0E



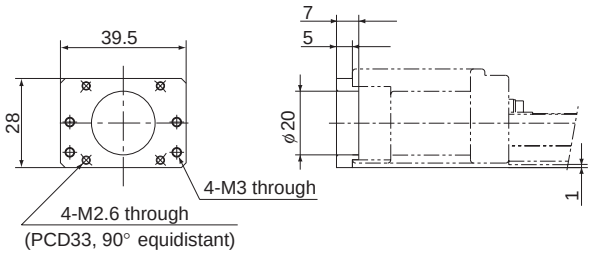
F20-F
0F



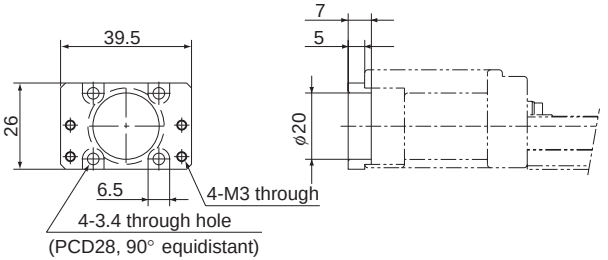
F20-G
0G



F20-M
3M



F20-N
3N


39.5
26
7
5
ø20
6.5
4-M3 through
4-3.4 through hole
(PCD28, 90° equidistant)

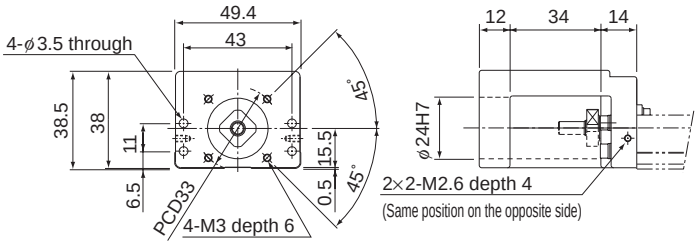
● For Model KR26

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

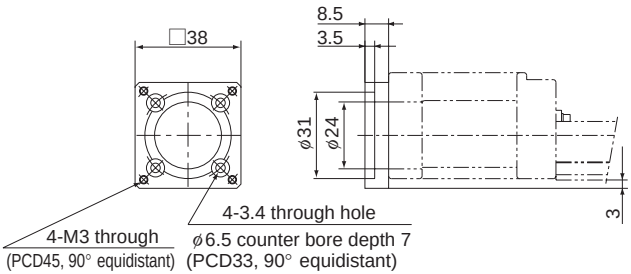
■Housing A

—
00

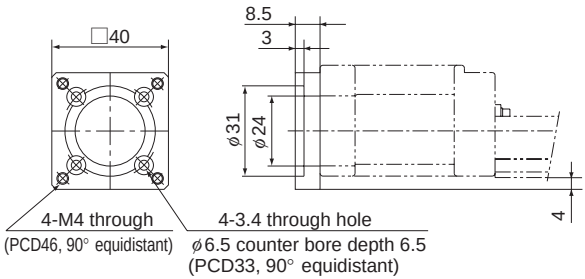


■Intermediate Flange

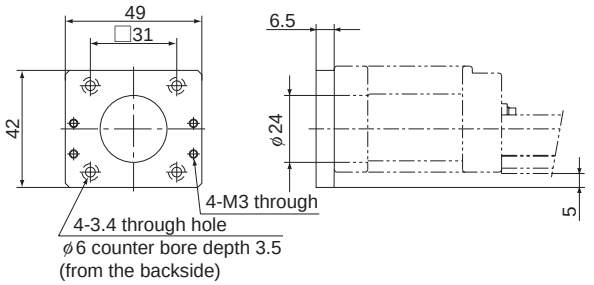
F26-A
0A



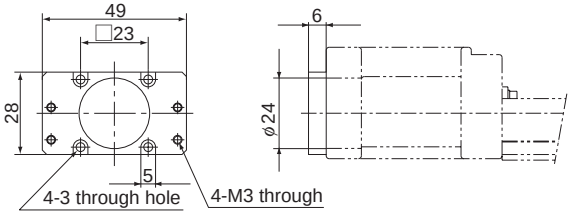
F26-B
0B



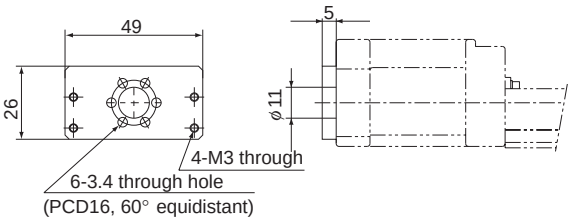
F26-E
0E



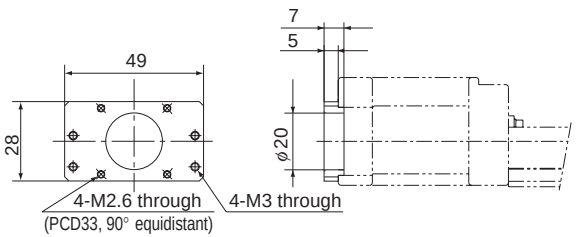
F26-F
0F



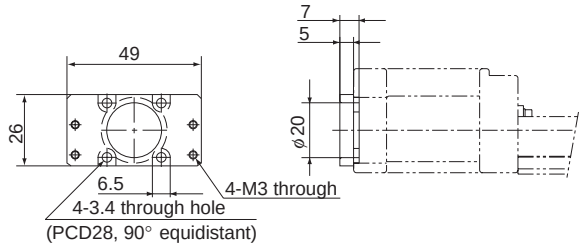
F26-G
0G



F26-M
0M



F26-N
0N


49
26
6.5
4-M3 through
4-3.4 through hole
(PCD28, 90° equidistant)
7
5
ø20

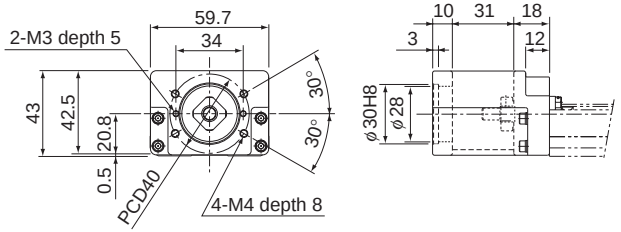
● **For Model KR30H**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

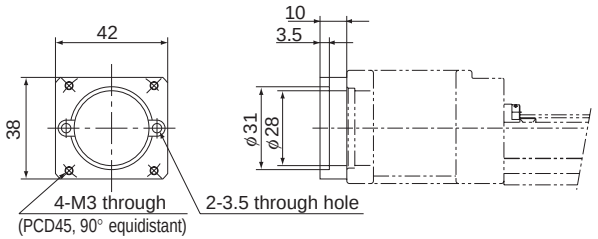
■Housing A

—
00

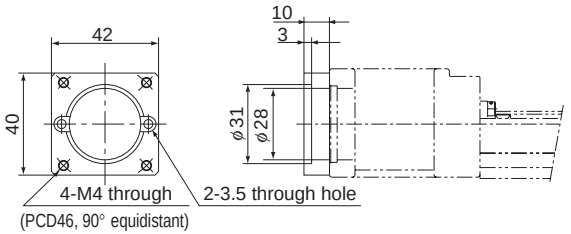


■Intermediate Flange

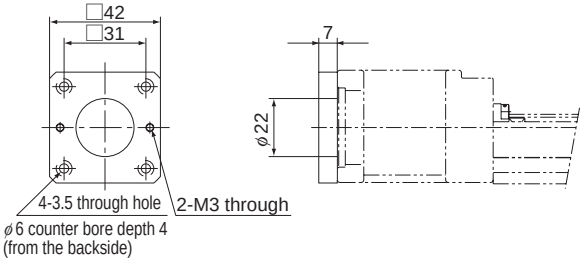
F30-A
0A



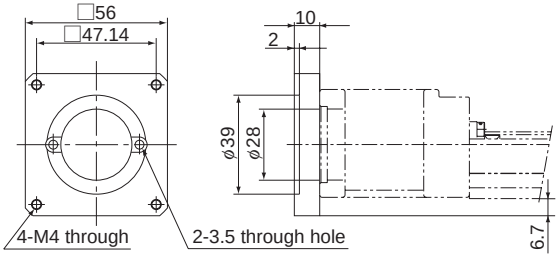
F30-B
0B



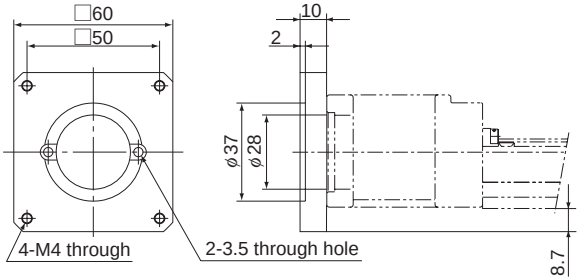
F30-C
XC



F30-D
0D



F30-E
0E



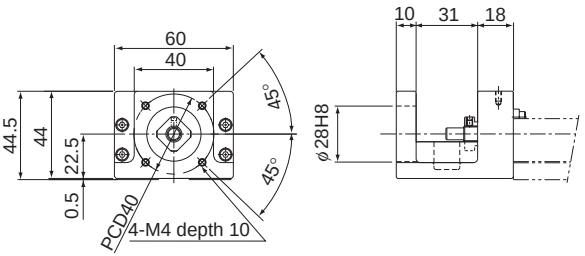
● **For Model KR33**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

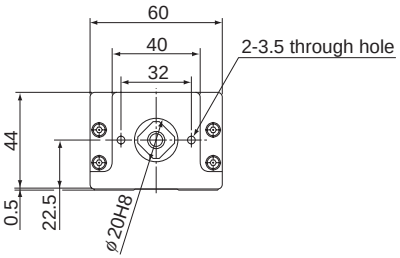
Note) "-" for intermediate flange model number indicates that only housing A is attached.

■Housing A

—
00



—
10



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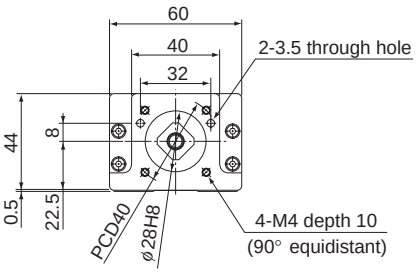
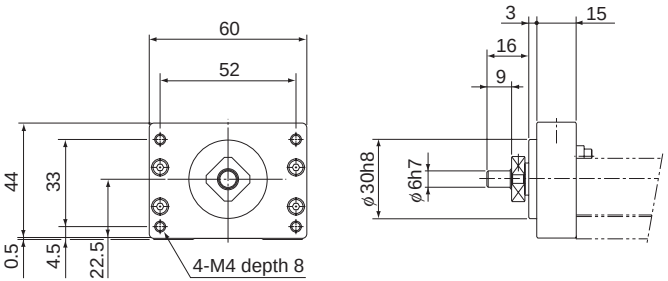
50



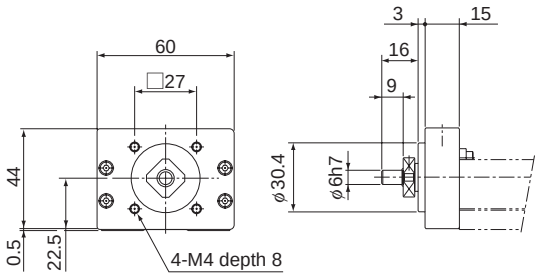
■Housing A for a Separate Motor

—
30



■Turnaround Housing A

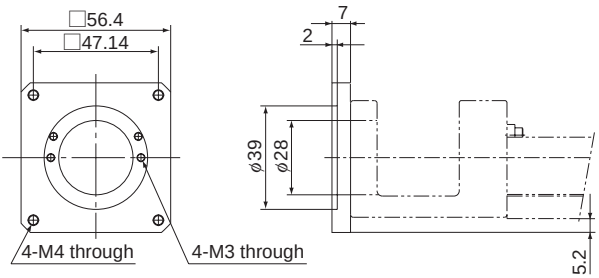
—
40



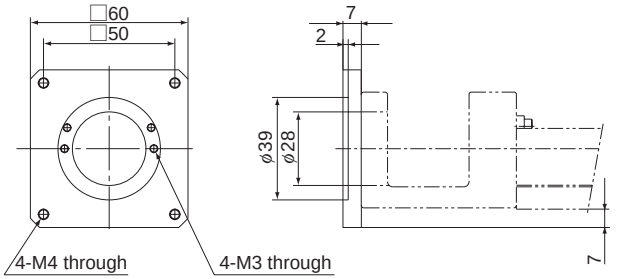
■Intermediate Flange

Each intermediate flange is made of steel and provided with THK AP-C treatment, a surface treatment for high corrosion resistance.

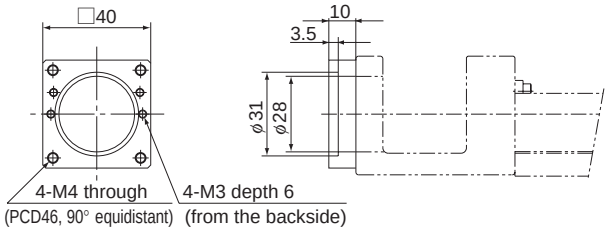
F33-F
5F



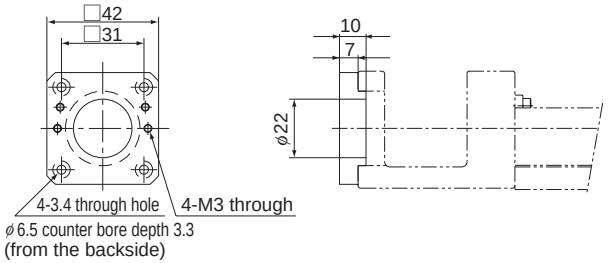
F33-G
5G



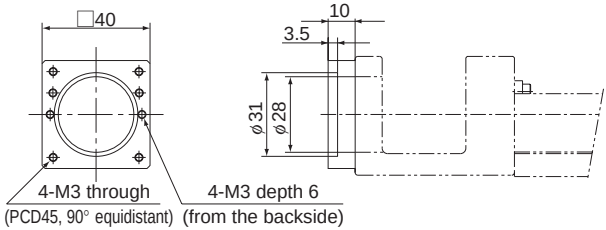
F33-H
5H



F33-I
5I



F33-K
5K



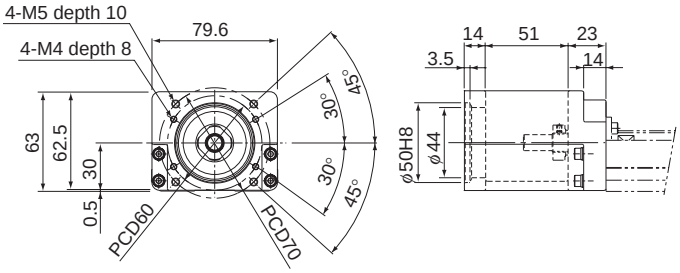
● For Model KR45H

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

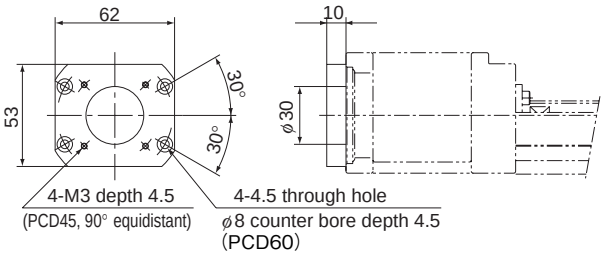
■Housing A

—
00

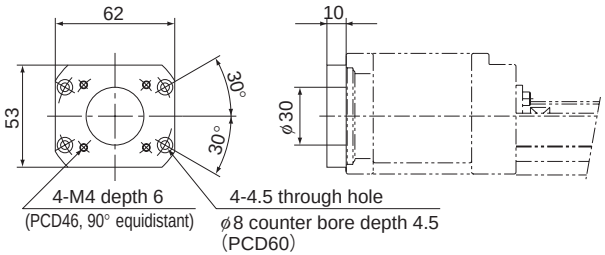


■Intermediate Flange

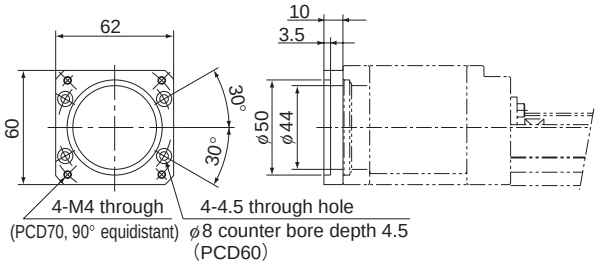
F45-A
0A



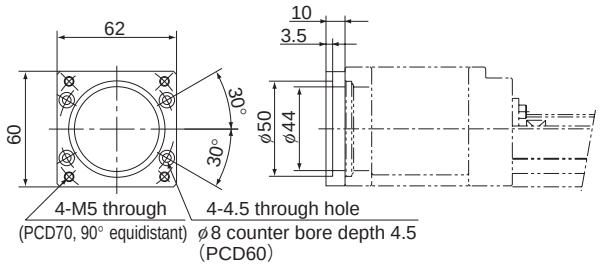
F45-B
0B



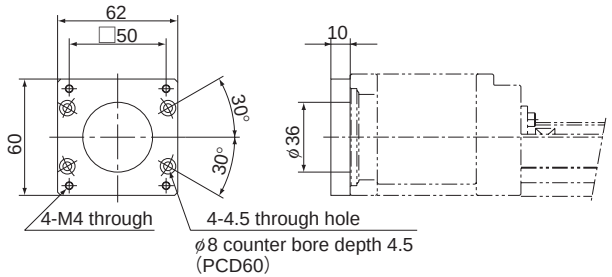
F45-C
0C



F45-D
0D



F45-F
0F



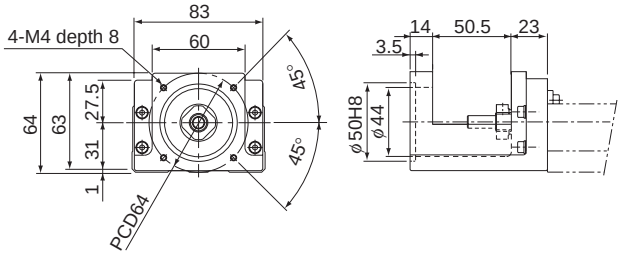
● **For Model KR46**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

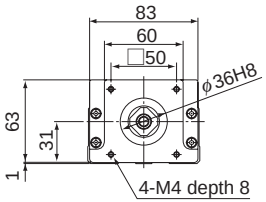
Note) "-" for intermediate flange model number indicates that only housing A is attached.

■Housing A

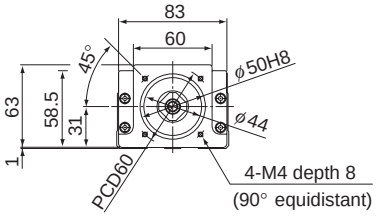
—
00



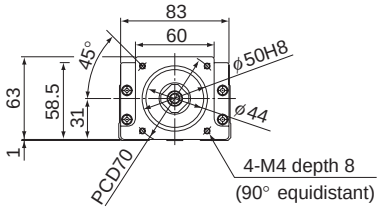
—
10



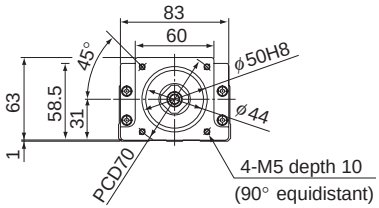
—
20



—
30

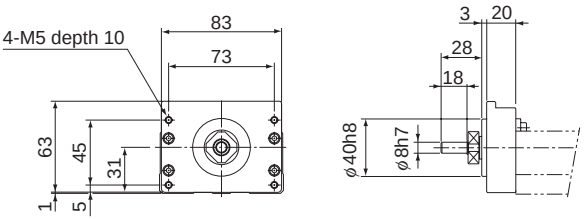


—
40



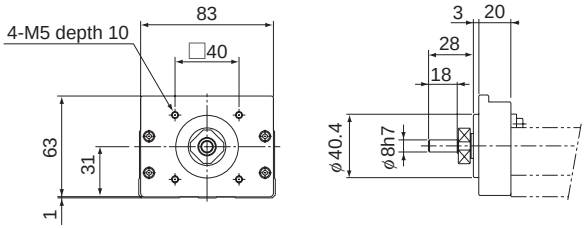
■Housing A for a Separate Motor

—
50



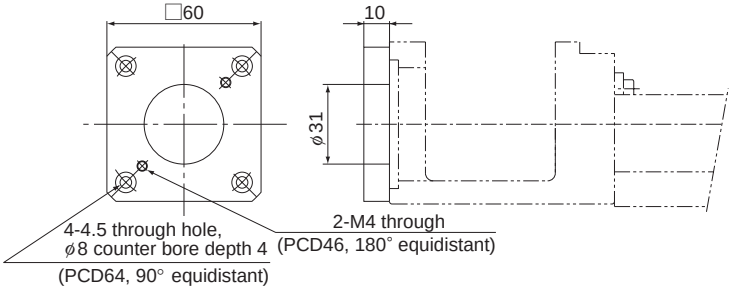
■Turnaround Housing A

—
60

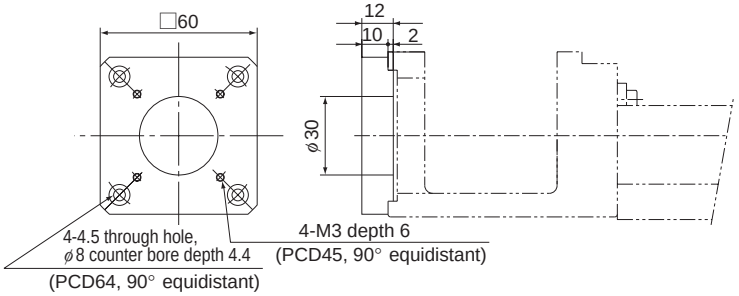


■Intermediate Flange

F46-F
0F



F46-G
0G



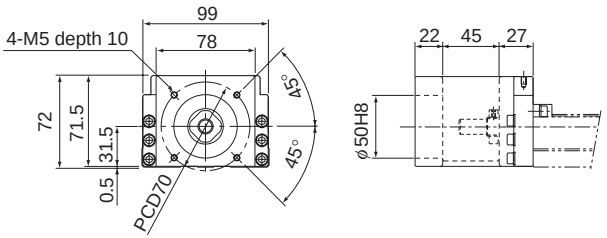
● For Model KR55

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

■Housing A

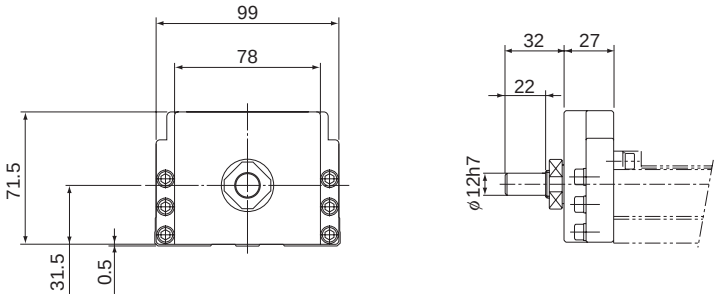
—
00



■Turnaround Housing A

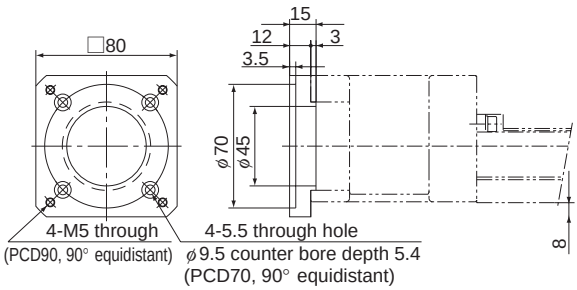
Note) Indicate the mounting holes when placing an order.

—
10

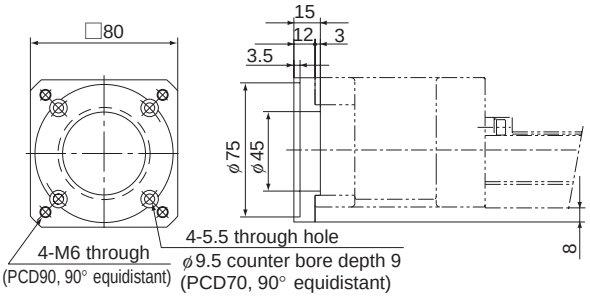


■Intermediate Flange

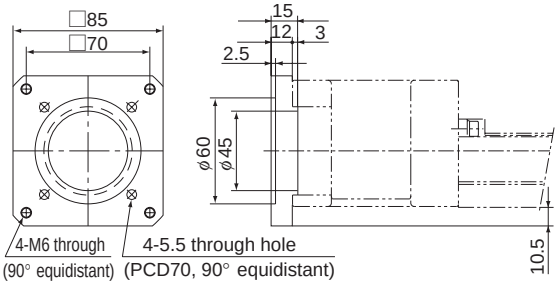
F55-A
0A



F55-B
0B



F55-G
0G



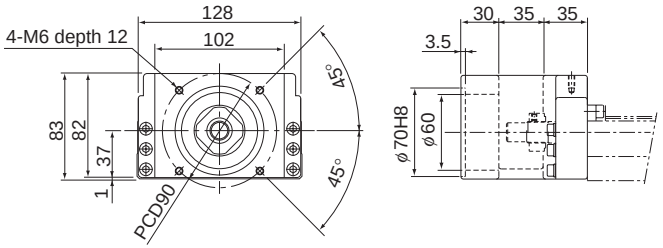
● For Model KR65

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

■Housing A

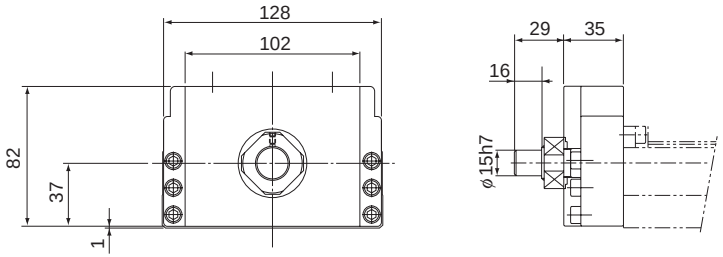
—
00



■Turnaround Housing A

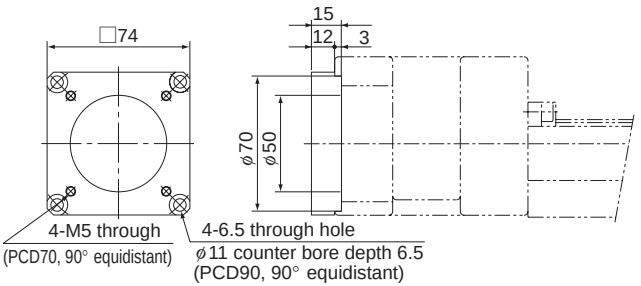
Note) Indicate the mounting holes when placing an order.

—
10

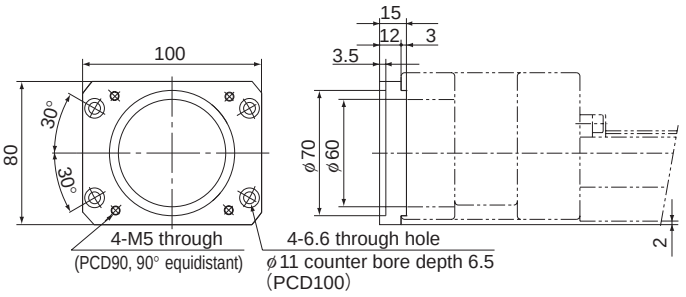


■Intermediate Flange

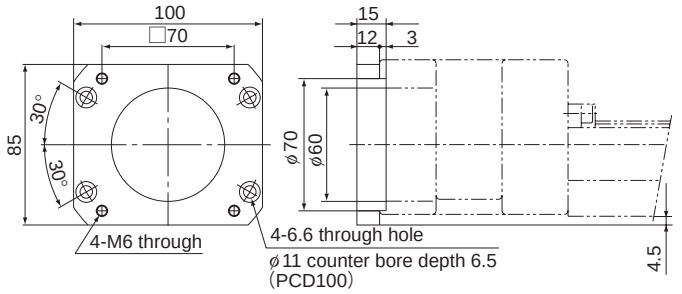
F65-A
0A



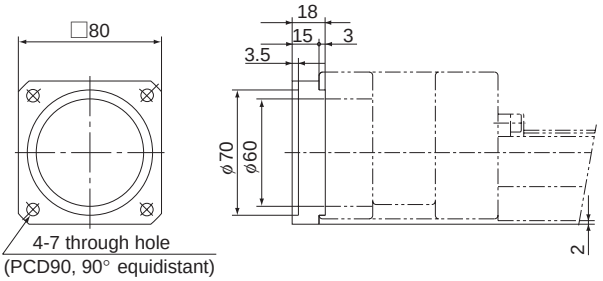
F65-B
2B



F65-F
2F

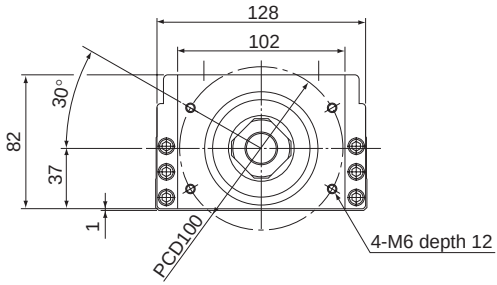


F65-G
0G



■Housing A

—
20



[Motors Used in Model SKR and Corresponding Motor Brackets]

Several types of intermediate flanges for mounting motors are available for model SKR. Each intermediate flange model has an administration number according to the motor to be used and to the actuator model number. Specify the corresponding administration number when placing an order.

Table3 Table of Motors Used and Corresponding Motor Brackets

Motor model No.					Flange angle	SKR33	SKR46
Servomotor	Yaskawa Electric	Σ-Ⅱ		SGMAH-A3 (30W)	□40	0H	0F
				SGMAH-A5 (50W)		0H	0F
				SGMAH-01 (100W)		0H	0F
				SGMPH-01 (100W)	□60	—	04
				SGMAH-02 (200W)		—	04
				SGMAH-04 (400W)		—	04
	Mitsubishi Electric	MELSERVO	J2 Super	HC-MFS 053 (50W)	□40	0H	0F
				HC-KFS 053 (50W)		0H	0F
				HC-MFS 13 (100W)		0H	0F
				HC-KFS 13 (100W)		0H	0F
				HC-MFS 23 (200W)	□60	—	04
				HC-KFS 23 (200W)		—	04
				HC-MFS 43 (400W)		—	04
				HC-KFS 43 (400W)		—	04
	Matsushita Electric	MINAS A		MSMA 3A (30W)	□38	0K	0G
				MSMA 5A (50W)		0K	0G
				MSMA 01 (100W)		0K	0G
				MQMA 01 (100W)	□60	—	03
				MSMA 02 (200W)		—	03
				MSMA 04 (400W)		—	03
	SANYO Electric	SANMOTION Q1		Q1AA04003D (30W)	□40	0H	0F
				Q1AA04005D (50W)		0H	0F
				Q1AA04010D (100W)		0H	0F
				Q1AA06020D (200W)	□60	—	04
				Q1AA06040D (400W)		—	04
	Omron	OMNUC W		R88M-W03030 (30W)	□40	0H	0F
				R88M-W05030 (50W)		0H	0F
				R88M-W10030 (100W)		0H	0F
				R88M-W20030 (200W)	□60	—	04
				R88M-W40030 (400W)		—	04
	Fanuc	βis series		β0.2/5000is (50W)	□40	0H	0F
				β0.3/5000is (100W)		0H	0F
				β0.4/5000is (125W)	□60	—	04
				β0.5/5000is (200W)		—	04
				β1/5000is (400W)		—	04
Stepping motor	Oriental Motor	α Step		AS 46, ASC46	□42	0I	—
				AS 6□, ASC66	□60	0G	01
		5 phase	RK	RK54□	□42	0I	—
				RK56□	□60	0G	01
		2 phase	UMK	UMK24□	□42	0I	—
				UMK26□	□56.4	0F	—
			CSK	CSK24□	□42	0I	—
				CSK26□	□56.4	0F	—

Note1) The symbols in the table each indicate the last two digits of an administration number.
Note2) For the coupling for mounting a motor in the table, contact THK.

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[Motor bracket dimensional table for model SKR]

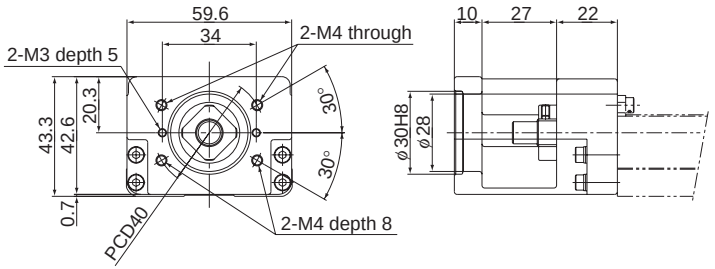
● **For Model SKR33**

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

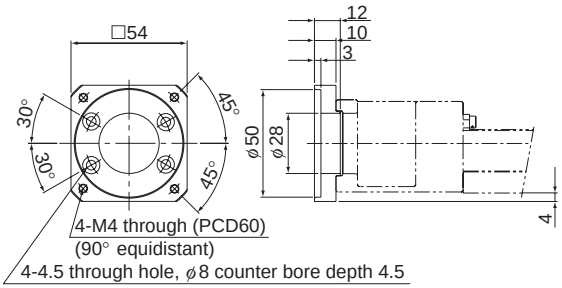
■Housing A

—
00

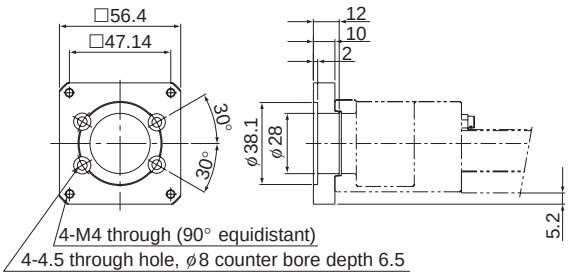


■Intermediate Flange

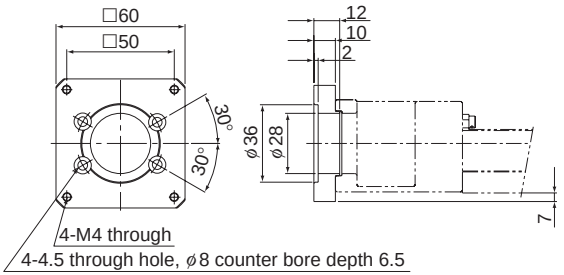
—
0B



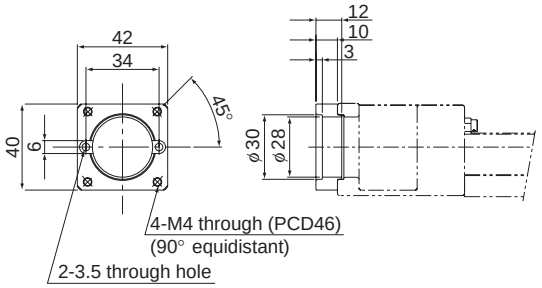
—
0F



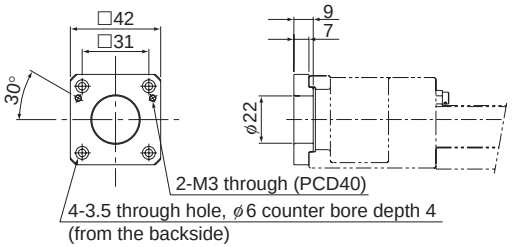
—
0G


□60
□50
30°
30°
12
10
2
ø36
ø28
7
4-M4 through
4-4.5 through hole, ø8 counter bore depth 6.5

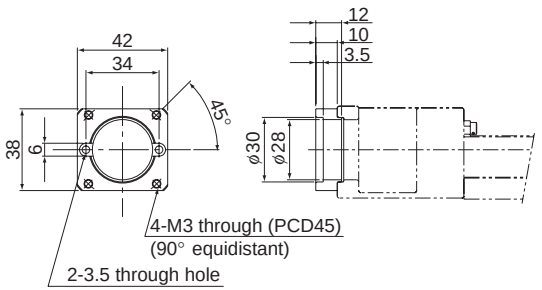
—
0H


42
34
45°
40
6
12
10
3
ø30
ø28
4-M4 through (PCD46)
(90° equidistant)
2-3.5 through hole

—
0I


□42
□31
30°
9
7
ø22
2-M3 through (PCD40)
4-3.5 through hole, ø6 counter bore depth 4
(from the backside)

—
0K


42
34
45°
38
6
12
10
3.5
ø30
ø28
4-M3 through (PCD45)
(90° equidistant)
2-3.5 through hole

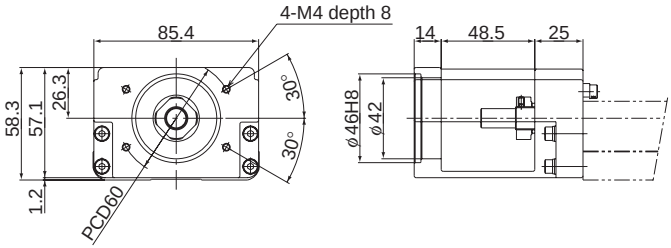
● For Model SKR46

F□□-□	···Intermediate flange model number
□□	···Last two digits of administration number

Note) "-" for intermediate flange model number indicates that only housing A is attached.

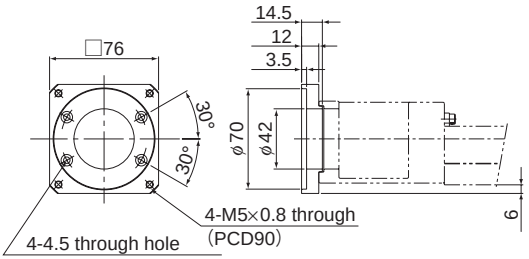
■Housing A

—
00

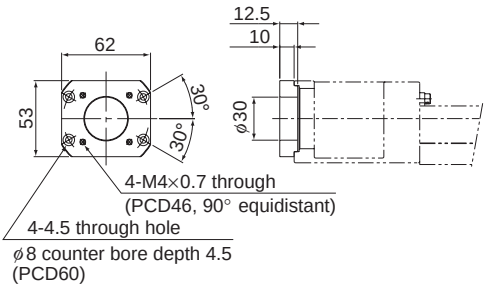


■Intermediate Flange

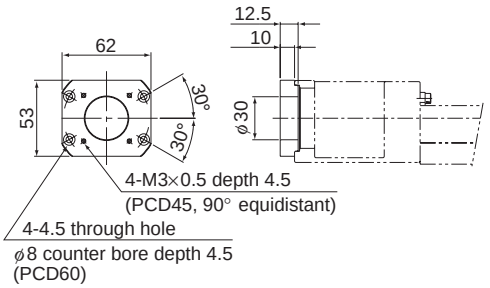
—
0A



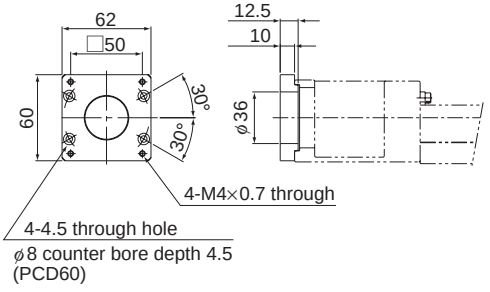
—
0F



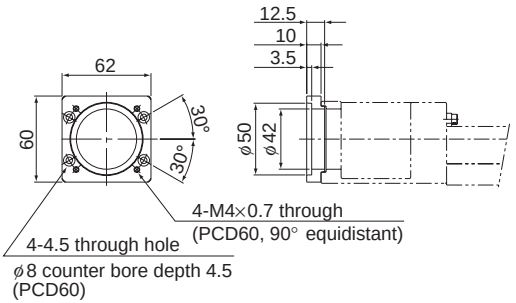
—
0G


62
53
30°
30°
12.5
10
ø30
4-M3×0.5 depth 4.5
(PCD45, 90° equidistant)
4-4.5 through hole
ø8 counter bore depth 4.5
(PCD60)

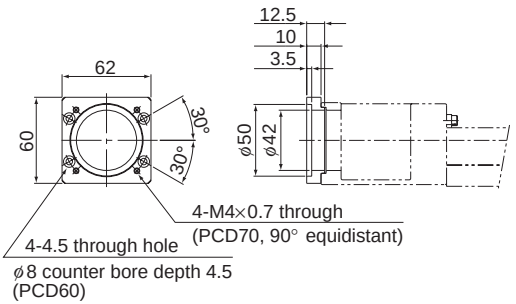
—
01


62
□50
60
30°
30°
12.5
10
ø36
4-M4×0.7 through
4-4.5 through hole
ø8 counter bore depth 4.5
(PCD60)

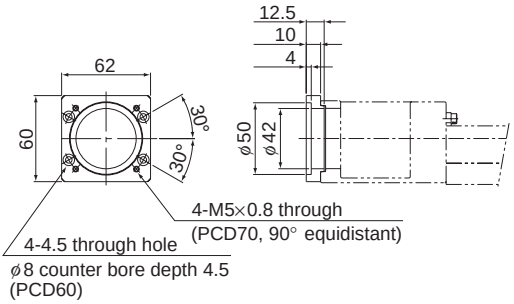
—
02


62
60
30°
30°
12.5
10
3.5
ø50
ø42
4-M4×0.7 through
(PCD60, 90° equidistant)
4-4.5 through hole
ø8 counter bore depth 4.5
(PCD60)

—
03


62
60
30°
30°
12.5
10
3.5
ø50
ø42
4-M4×0.7 through
(PCD70, 90° equidistant)
4-4.5 through hole
ø8 counter bore depth 4.5
(PCD60)

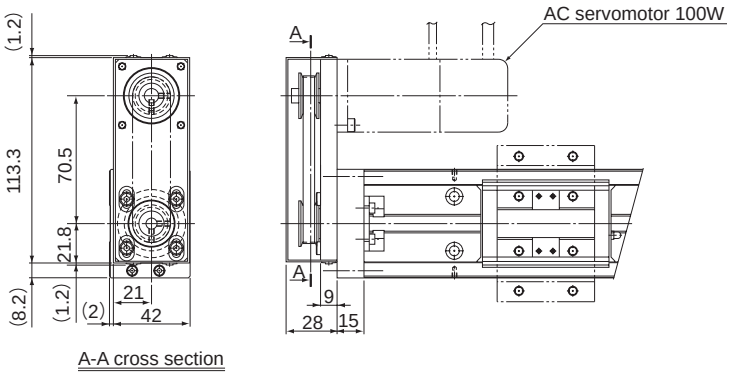
—
04


12.5
10
4
62
60
30°
30°
ø50
ø42
4-M5×0.8 through
(PCD70, 90° equidistant)
4-4.5 through hole
ø8 counter bore depth 4.5
(PCD60)

Motor Wrap Type (for Reference)

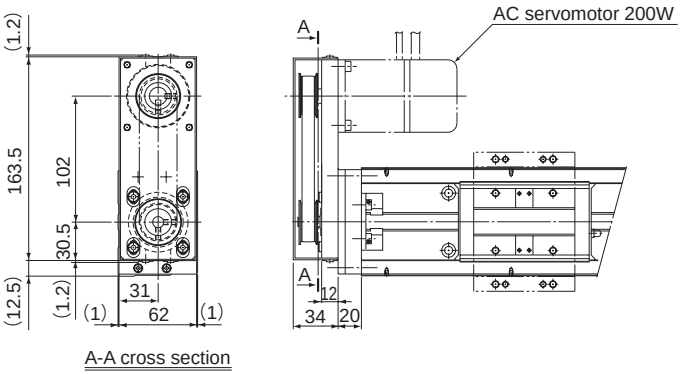
Motor wrap types are available that allow the motor to be turned around in order to minimize the dimension in the longitudinal direction. Contact THK for details. (Pulley ratio: 1:1)

[Example of Motor Turnaround with Model KR33]



A-A cross section

[Example of Motor Turnaround with Model KR46]



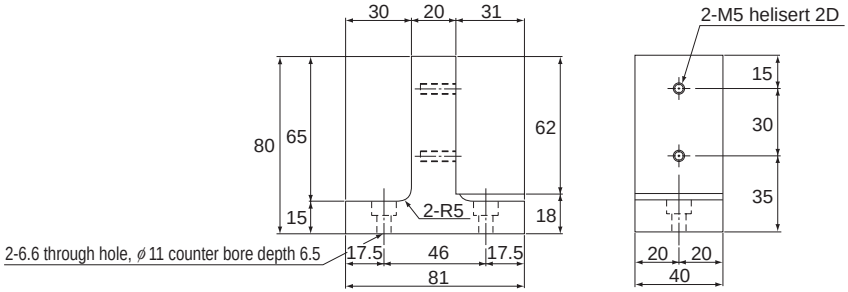
A-A cross section

Note) The specifications vary according to the motor. Contact THK for details.

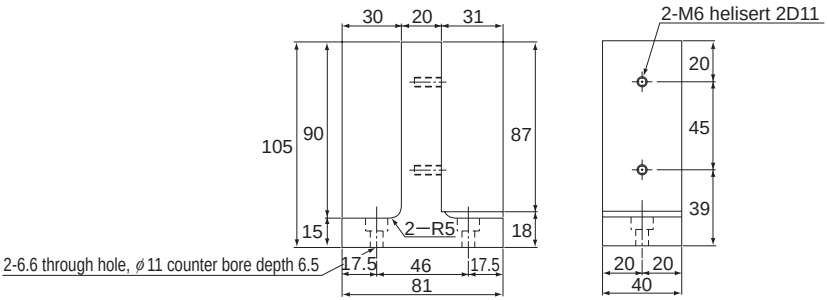
XY Bracket (for Reference)

Brackets for installing models KR33 and 46 only are available as standard. The brackets use aluminum to reduce the weights and keep the inertia as low as possible.

[KR-008XS (for Model KR33, Single-Shaft Type)]

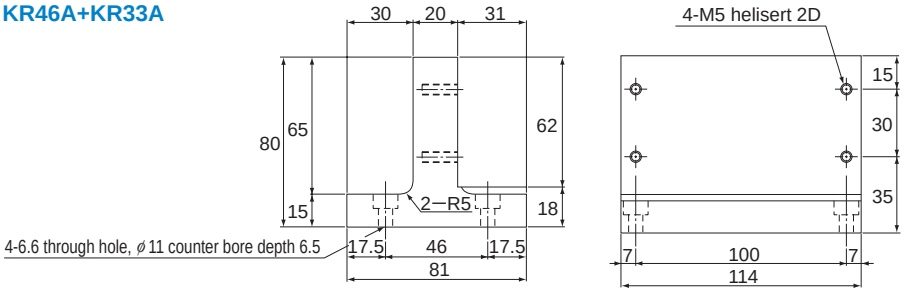


[KR-008XL (for Model KR46, Single-Shaft Type)]



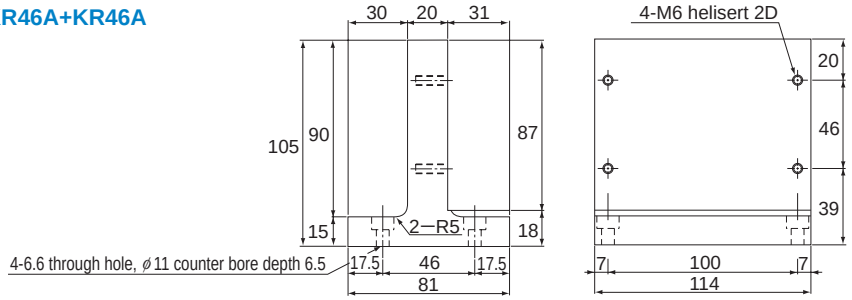
[KR-003XS (for Model KR33, LM Rail Fixed)]

KR46A+KR33A



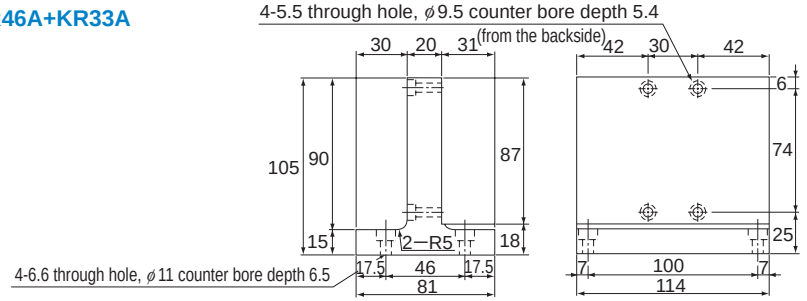
[KR-003XL (for Model KR46, LM Rail Fixed)]

KR46A+KR46A

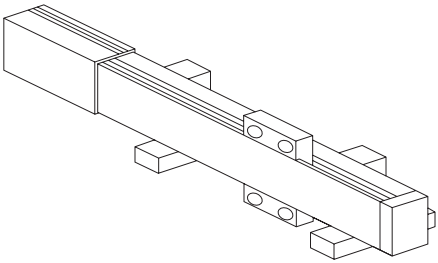


[KR-002XS (for Model KR33, Slider Fixed)]

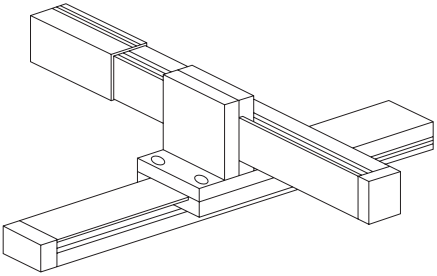
KR46A+KR33A



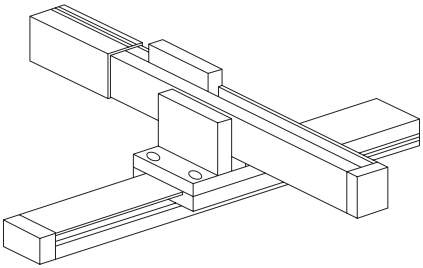
[Example of Combinations]



For single shaft



Slider fixed



Rail fixed

LM Actuator

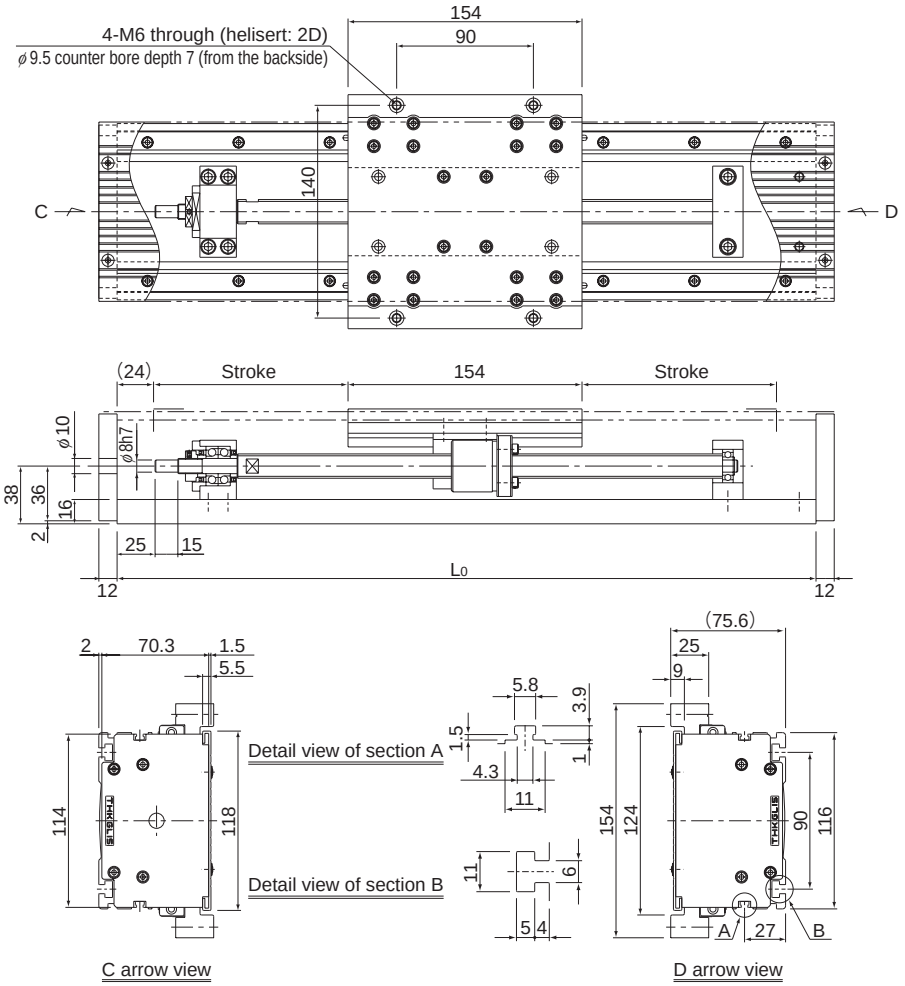
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

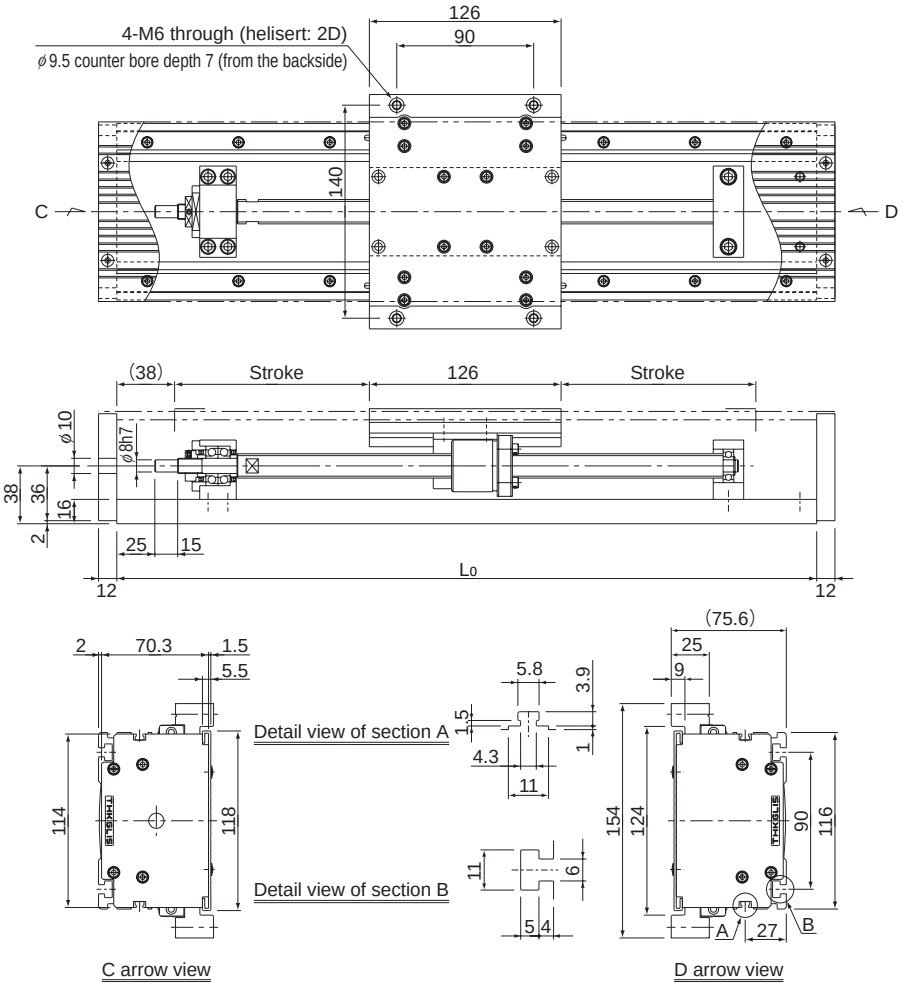
Ball Screw Drive Type Long Table Type of Model GL15



Base length L_0 (mm)	340	460	580	700	820	1060	1240	1420
Stroke (mm)	100	220	340	460	580	820	1000	1180
Mass (kg)	5.7	6.8	7.9	9.0	10.2	12.4	14.1	15.8

* Mass of moving element (table): 1.7 (kg)
For model number coding, see B-356.

Ball Screw Drive Type Short Table Type of Model GL15

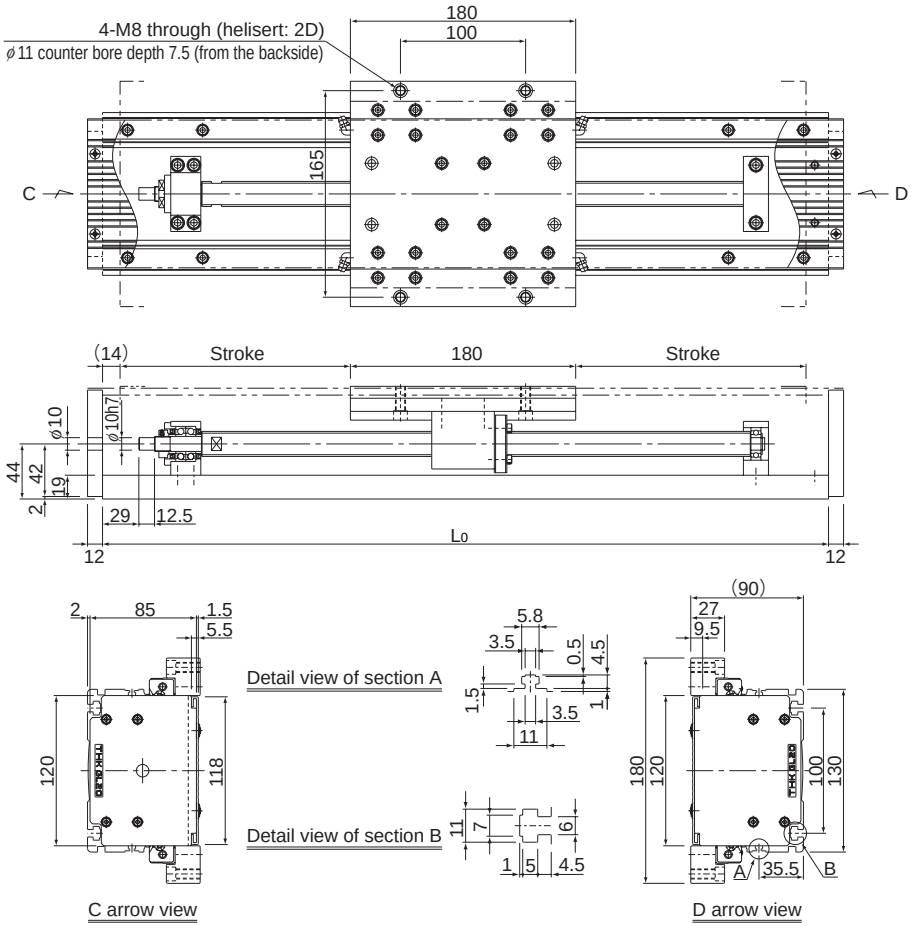


Base length L_0 (mm)	340	460	580	700	820	1060	1240	1420
Stroke (mm)	100	220	340	460	580	820	1000	1180
Mass (kg)	6.0	7.1	8.3	9.4	10.5	12.8	14.5	16.1

* Mass of moving element (table): 1.4 (kg)
For model number coding, see B-356.

Description of Each Option⇒A-444 Dimensions⇒B-358

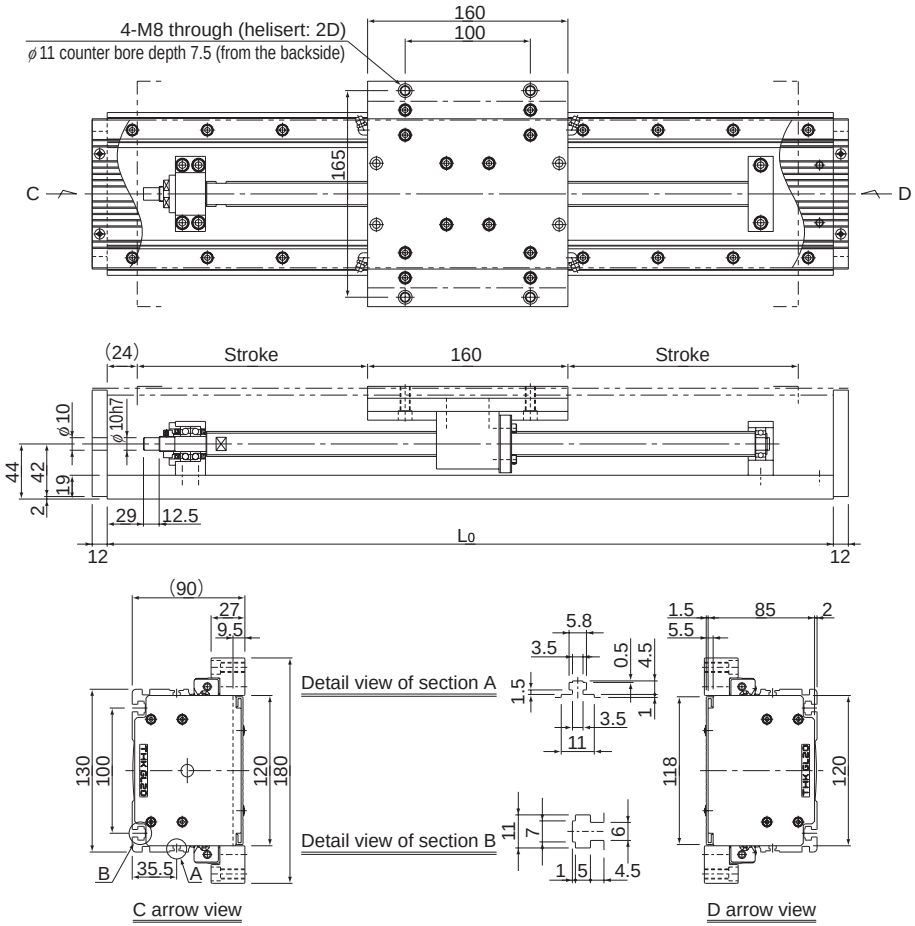
Ball Screw Drive Type Long Table Type of Model GL20



Base length L_0 (mm)	460	580	700	820	1060	1240	1420	1600	1780
Stroke (mm)	200	320	440	560	800	980	1160	1340	1520
Mass (kg)	9.6	11.2	12.8	14.3	17.9	20.3	22.7	25.0	27.4

* Mass of moving element (table): 3 (kg)
For model number coding, see B-356.

Ball Screw Drive Type Short Table Type of Model GL20

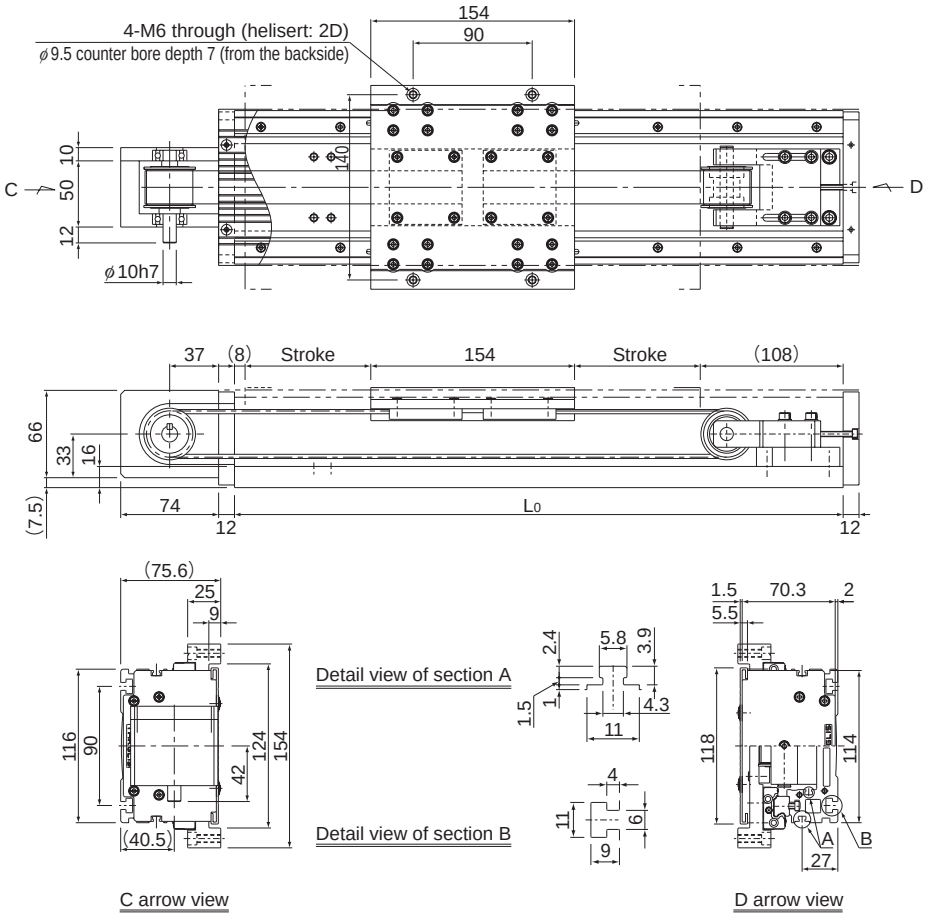


Base length L_0 (mm)	460	580	700	820	1060	1240	1420	1600	1780
Stroke (mm)	200	320	440	560	800	980	1160	1340	1520
Mass (kg)	9.6	11.2	12.8	14.3	17.9	20.3	22.7	25.0	27.4

* Mass of moving element (table): 2.6 (kg)
For model number coding, see B-356.

Description of Each Option⇒A-444 Dimensions⇒B-358

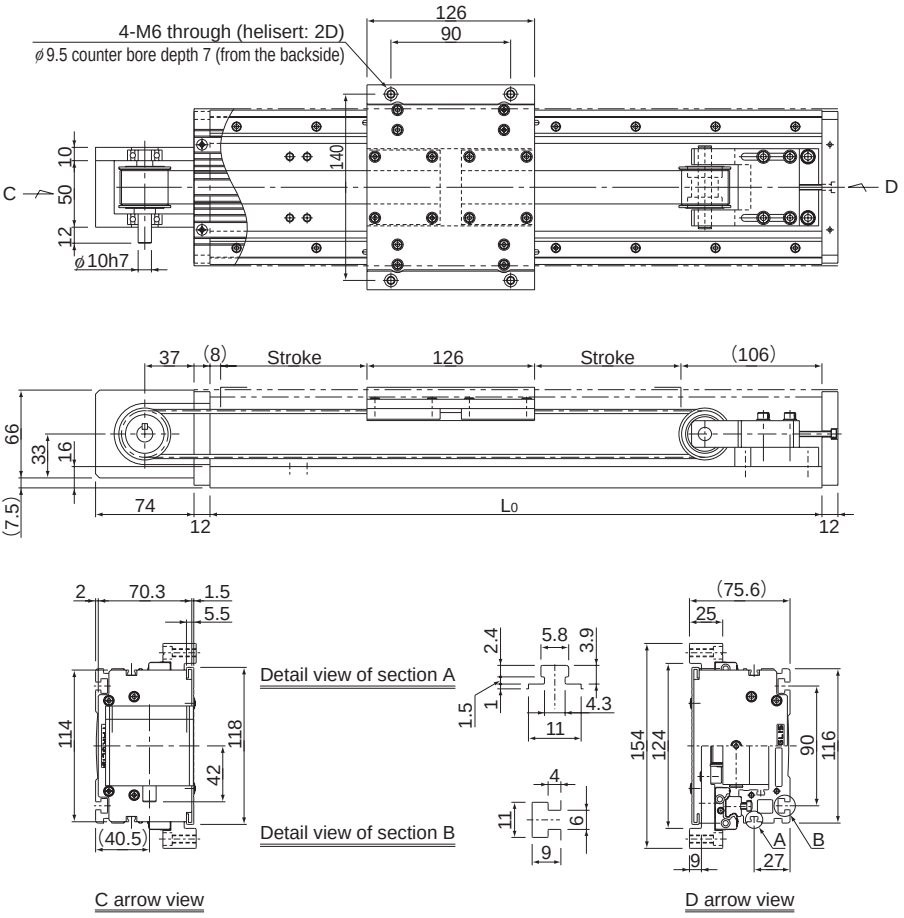
Belt Drive Type Long Table Type of Model GL15



Base length L_0 (mm)	340	460	580	700	820	1060	1240	1420	1600	1780	1960
Stroke (mm)	70	190	310	430	550	790	970	1150	1330	1510	1690
Mass (kg)	7.9	8.8	9.8	10.8	11.8	13.7	15.2	16.6	18.1	19.6	21.0

* Mass of moving element (table): 1.7 (kg)
For model number coding, see B-356.

Belt Drive Type Short Table Type of Model GL15

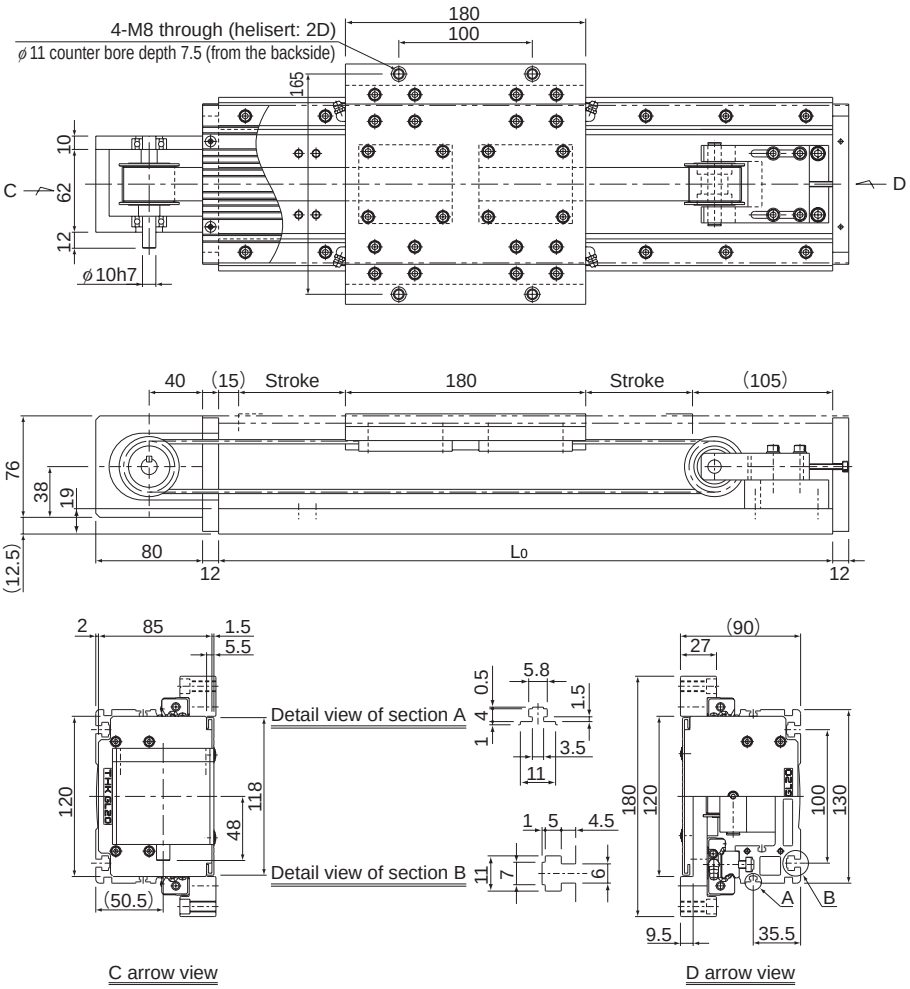


Base length L_0 (mm)	340	460	580	700	820	1060	1240	1420	1600	1780	1960
Stroke (mm)	100	220	340	460	580	820	1000	1180	1360	1540	1720
Mass (kg)	7.0	8.0	9.0	9.9	10.9	12.9	14.3	15.8	17.3	18.7	20.2

* Mass of moving element (table): 1.3 (kg)
For model number coding, see B-356.

Description of Each Option⇒A-444 Dimensions⇒B-358

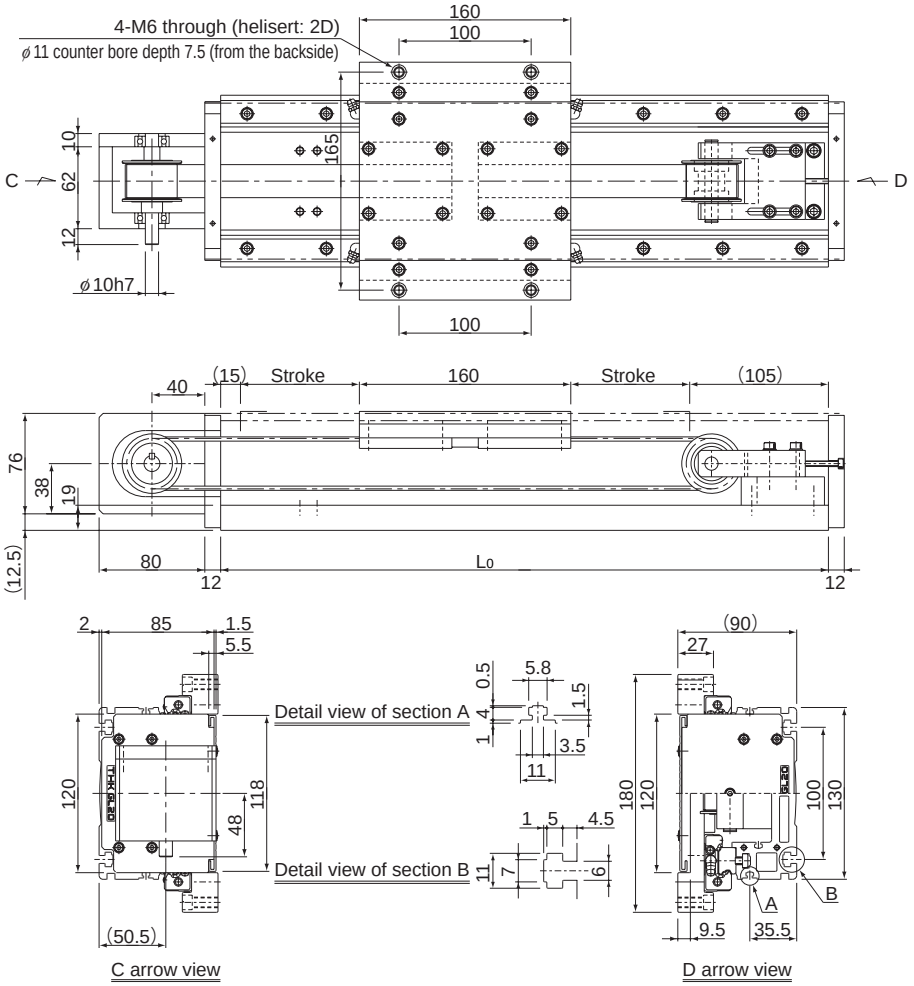
Belt Drive Type Long Table Type of Model GL20



Base length L_o (mm)	460	580	700	820	1060	1240	1420	1600	1780	1960	2200	2320	2500	3000
Stroke (mm)	160	280	400	520	760	940	1120	1300	1480	1660	1900	2020	2200	2700
Mass (kg)	11.5	12.8	14.2	15.5	18.1	20.1	22.1	24.1	26.1	28.1	30.7	32.0	34.0	39.6

* Mass of moving element (table): 2.8 (kg)
For model number coding, see B-356.

Belt Drive Type Short Table Type of Model GL20



Base length L_0 (mm)	460	580	700	820	1060	1240	1420	1600	1780	1960	2200	2320	2500	3000
Stroke (mm)	180	300	420	540	780	960	1140	1320	1500	1680	1920	2040	2220	2720
Mass (kg)	11.2	12.5	13.8	15.2	17.8	19.8	21.8	23.8	25.8	27.7	30.4	31.7	33.7	39.2

* Mass of moving element (table): 2.3 (kg)
For model number coding, see B-356.

Description of Each Option⇒A-444 Dimensions⇒B-358

Model Number Coding

Model number coding

GL□□-□□□-□4-□-□-□-□-□-□□□□

- Model number: GL15, GL20
- Base length: 0.34: 340mm to 300: 3000mm
- Symbol for LM block: V4: Short type, T4: Long type
- Symbol for top table: S: Short type (V4 only), L: Long type (T4 only)
- Symbol for drive method:
  - B05: Ball screw lead 5mm
  - B16: Ball screw lead 16mm (Model GL15 only)
  - B20: Ball screw lead 20mm (Model GL20 only)
  - B30: Ball screw lead 30mm (Model GL15 only)
  - B40: Ball screw lead 40mm (Model GL20 only)
  - E : Belt drive
- Symbol for Endplate (Ball Screw drive type only): No Symbol: Without Endplate, P: With Endplate
- Cover symbol: No Symbol: None, C: With Cover, J: With Bellows
- Assembly symbol: ASSY: Assembly and adjustment done; KIT : Without assembly and adjustment

Model number coding

Example 1 (finished assembly)

GL15-082-T4-L-B30-P-J-ASSY

Example 2 (kit parts)

GL20-070-T4-L-E-C-KIT

Note) Kit parts that are not assembled or adjusted are delivered as a whole.

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Bellows

For model GL, a bellows is available for contamination protection in addition to a cover.

[Model GL15]

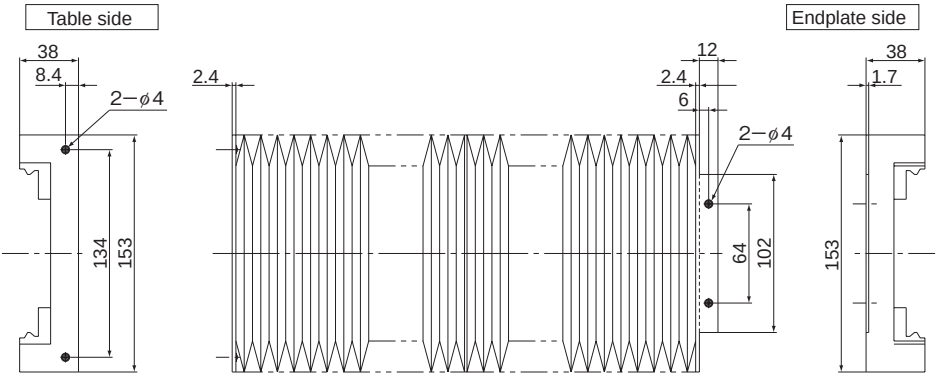


Fig.1 External Dimensions of the Bellows

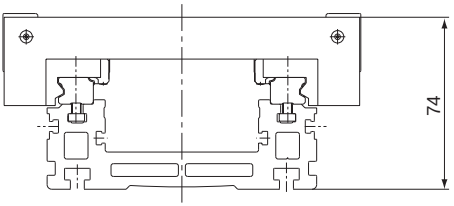


Fig.2 Mounting Height of the Bellows

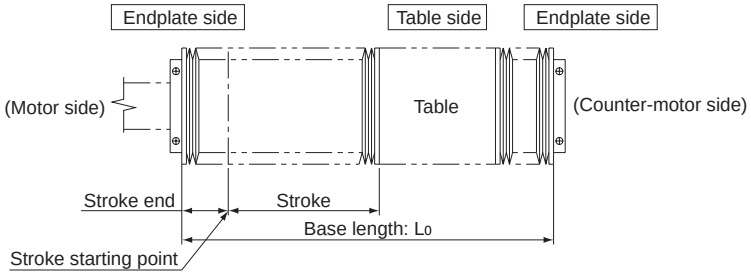


Fig.3 Schematic Drawing of Mounting the Bellows

Table1 Stroke of the Ball Screw Drive Type of Model GL15

Base length: L_0 (mm)		340	460	580	700	820	1060	1240	1420
Stroke (mm)		100	220	340	455	560	770	910	1070
Stroke starting point (mm)	Type S	57	57	57	59.5	67	82	102	112
	Type L	43	43	43	45.5	53	68	88	98

Table2 Stroke of the Belt Drive Type of Model GL15

Base length: L_0 (mm)		340	460	580	700	820	1060	1240	1420	1600	1780	1960
Stroke (mm)	Type S	78	188	308	408	508	728	868	1008	1148	1288	1488
	Type L	50	160	280	380	480	700	840	980	1120	1260	1400
Stroke starting point (mm)		30	40	50	65	80	105	125	145	165	185	205

* The stroke starting point has the same dimensions for both the S-shape table and the L-shape table.

[Model GL20]

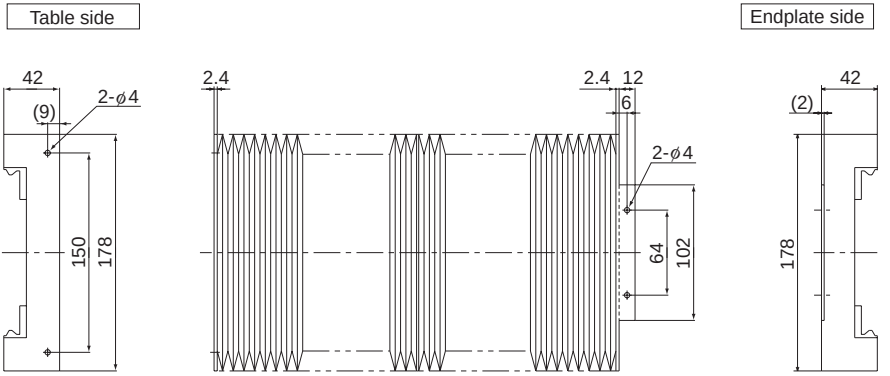


Fig.4 External Dimensions of the Bellows

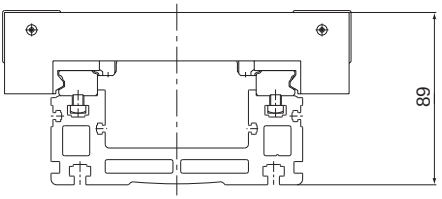


Fig.5 Mounting Height of the Bellows

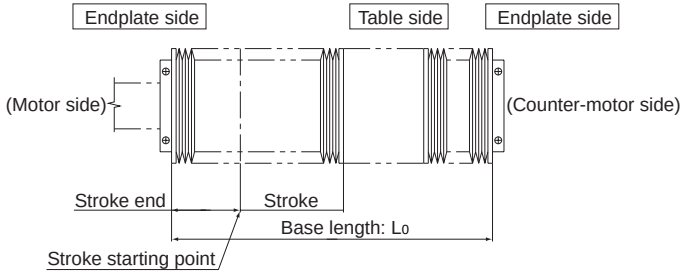


Fig.6 Schematic Drawing of Mounting the Bellows

Table3 Stroke of the Ball Screw Drive Type of Model GL20

Base length: L_0 (mm)		460	580	700	820	1060	1240	1420	1600	1780
Stroke (mm)		200	320	440	560	780	940	1100	1260	1400
Stroke starting point (mm)	Type S	50	50	50	50	60	70	80	90	110
	Type L	40	40	40	40	50	60	70	80	100

Table4 Stroke of the Belt Drive Type of Model GL20

Base length: L_0 (mm)		460	580	700	820	1060	1240	1420	1600	1780	1960	2200	2320	2500	3000
Stroke (mm)	Type S	160	260	360	460	680	840	1110	1160	1300	1440	1640	1720	1860	2280
	Type L	140	240	340	440	660	820	990	1140	1280	1420	1620	1700	1840	2260
Stroke starting point (mm)		40	50	80	100	110	120	125	145	160	180	200	220	240	280

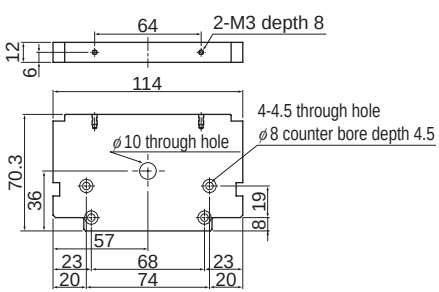
* The stroke starting point has the same dimensions for both the S-shape table and the L-shape table.

Precautions on Using the Bellows

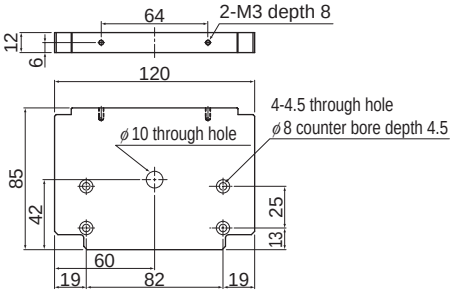
When mounting a bellows longer than the table of model GL onto the table for model GL, secure an area that sticks out of the table's longitudinal length by at least 1 mm.

Endplate

With the ball screw drive type of model GL, the end plate on the motor mounting side is machined according to the motor used. Indicate the motor to be used when placing an order to THK.



Model GL15



Model GL20

Plate nut for mounting the base

For model GL, a plate nut for mounting the base is available. It is attached as standard when mode GL is delivered.

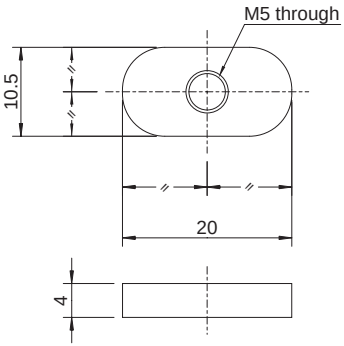


Fig.7 Plate Nut

Table5 Number of Plate Nuts for Mounting the Base

Standard base length (mm)	340	460	580	700	820	1060	1240	1420	1600	1780	1960	2200	2320	2500	3000
Pcs	4	4	6	6	8	10	10	12	14	14	16	16	18	18	20

Ball Spline

THK General Catalog

Ball Spline

THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

*** Please see the separate "A Technical Descriptions of the Products".**

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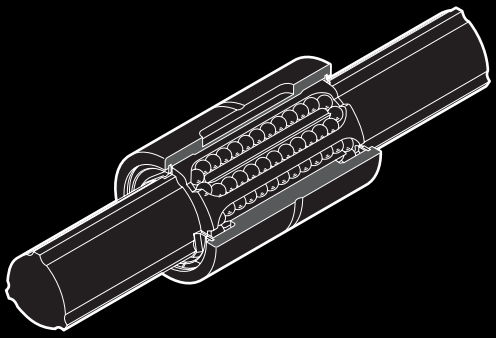


High Torque Type Ball Spline
Models LBS, LBST, LBF, LBR and LBH

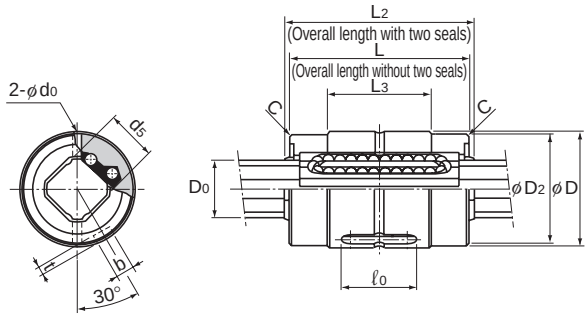
Ball Spline

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Miniature Ball Spline



Models LBS6 and 8

Model No.	Spline nut dimensions										
	Outer diameter		Length		L_2	L_3	D_2	Keyway dimensions			
	D	Tolerance	L	Tolerance				b H8	t +0.05 0	ℓ_0	C
LBS 6	12	0 −0.011	20	0 −0.2	20.8	11	11.5	2	0.8	10	0.3
LBS 8	16		25		26.4	14.5	15.5	2.5	1.2	12.5	0.3
LBS 10	19	0 −0.013	30		—	—	—	3	1.5	17	0.3

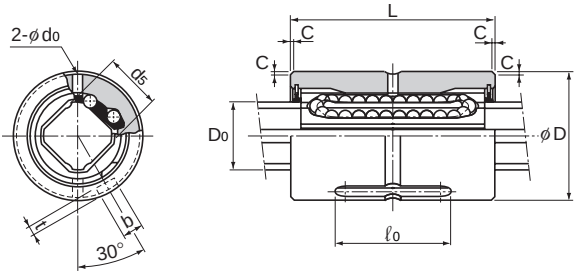
Note) Models LBS6 and 8 are of end cap type.
Keep the end caps of models LBS6 and 8 from impact.
THK does not offer a high temperature type of miniature Ball Spline.

Model number coding

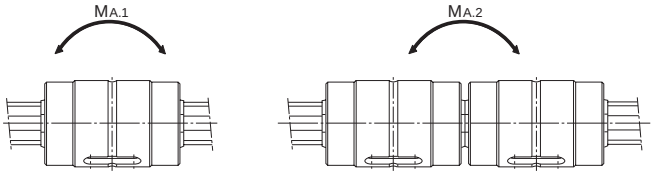
2 LBS6 UU CL +200L H

- **2** — Number of spline nuts on one shaft (no symbol for one nut)
- **LBS6** — Model No.
- **UU** — Contamination protection accessory symbol (*1)
- **CL** — Symbol for clearance in the rotational direction (*2)
- **+200L** — Overall spline shaft length (in mm)
- **H** — Accuracy symbol (*3)

(*1) See A-509. (*2) See A-481. (*3) See A-482.



Model LBS10



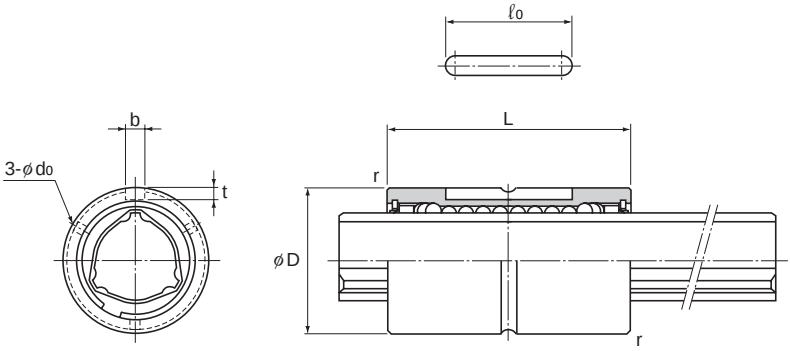
Unit: mm

	Greasing hole	Spline shaft outer diameter		Basic torque rating		Basic load rating (radial)		Static permissible moment		Mass	
	d_0	D_0	d_5	C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut g	Spline shaft kg/m
	1.2	6	5.3	1.53	2.41	0.637	0.785	2.2	19.4	6.6	0.22
	1.2	8	7.3	4.07	6.16	1.18	1.42	5.1	39.6	15.4	0.42
	1.5	10	8.3	7.02	10.4	1.62	1.96	8.1	67.6	36.7	0.55

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
(Single spline nut configuration is not stable in accuracy. We recommend using two spline nuts in close contact with each other.)
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBS (Medium Load Type)



Model No.	Spline nut dimensions								
	Outer diameter		Length		Keyway dimensions				Greasing hole
	D	Tolerance	L	Tolerance	b H8	t +0.05 0	ℓ0	r	d0
LBS 15	23	0 −0.013	40	0 −0.2	3.5	2	20	0.5	2
○● LBS 20	30	0 −0.016	50		4	2.5	26	0.5	2
○● LBS 25	37		60	0 −0.3	5	3	33	0.5	2
○● LBS 30	45		70		7	4	41	1	3
○● LBS 40	60	0 −0.019	90		10	4.5	55	1	3
○● LBS 50	75		100		15	5	60	1.5	4
○● LBS 70	100	0 −0.022	110		18	6	68	2	4
○● LBS 85	120		140	0 −0.4	20	7	80	2.5	5
○● LBS 100	140	0 −0.025	160		28	9	93	3	5

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).

(Example) LBS20 A CL+500L H
High temperature symbol

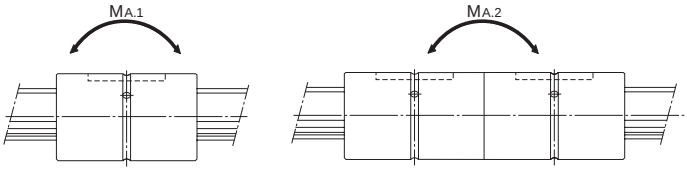
●: indicates model numbers for which felt seal types are available (see A-509).
A felt seal cannot be attached to Ball Spline models using metal retainer.

Model number coding

2 LBS40 UU CL +1000L P K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBS40: Model No.
- UU: Contamination protection accessory symbol (*1)
- CL: Symbol for clearance in the rotational direction (*2)
- +1000L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-381.



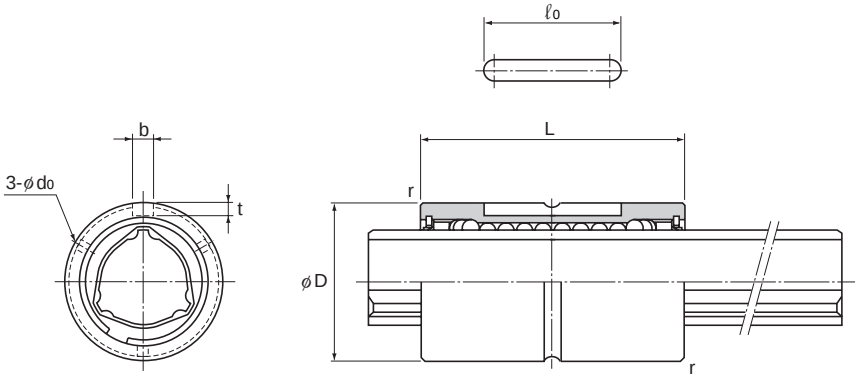
Unit: mm

	Basic torque rating		Basic load rating (radial)		Static permissible moment		Mass	
	C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut kg	Spline shaft kg/m
	30.4	74.5	4.4	8.4	25.4	185	0.06	1
	74.5	160	7.8	14.9	60.2	408	0.14	1.8
	154	307	13	23.5	118	760	0.25	2.7
	273	538	19.3	33.8	203	1270	0.44	3.8
	599	1140	31.9	53.4	387	2640	1	6.8
	1100	1940	46.6	73	594	4050	1.7	10.6
	2190	3800	66.4	102	895	6530	3.1	21.3
	3620	6360	90.5	141	2000	12600	5.5	32
	5190	12600	126	237	3460	20600	9.5	45

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
(Single LBS-unit configuration is not stable in accuracy. We recommend using a single LBST unit or two LBS units in close contact with each other.)
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBST (Heavy Load Type)



Model No.	Spline nut dimensions								
	Outer diameter		Length		Keyway dimensions				Greasing hole
	D	Tolerance	L	Tolerance	b H8	t +0.05 0	ℓo	r	do
○● LBST 20	30	0 −0.016	60	0 −0.2	4	2.5	26	0.5	2
○● LBST 25	37		70	0 −0.3	5	3	33	0.5	2
○● LBST 30	45		80		7	4	41	1	3
○● LBST 40	60	0 −0.019	100		10	4.5	55	1	3
○● LBST 50	75		112		15	5	60	1.5	4
○ LBST 60	90	0 −0.022	127		18	6	68	1.5	4
○● LBST 70	100		135		18	6	68	2	4
○● LBST 85	120		155	0 −0.4	20	7	80	2.5	5
○● LBST 100	140	0 −0.025	175		28	9	93	3	5
○ LBST 120	160		200	0 −0.5	28	9	123	3.5	6
○ LBST 150	205	0 −0.029	250		32	10	157	3.5	6

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).

(Example) LBST25 A CM+400L H
High temperature symbol

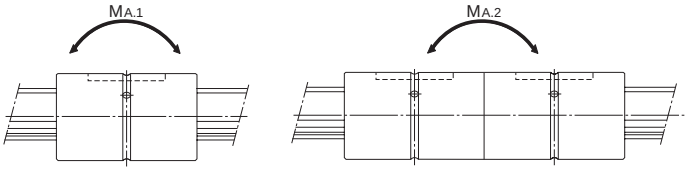
●: indicates model numbers for which felt seal types are available (see A-509).
A felt seal cannot be attached to Ball Spline models using metal retainer.

Model number coding

2 LBST50 UU CM +800L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBST50: Model No.
- UU: Contamination protection accessory symbol (*1)
- CM: Symbol for clearance in the rotational direction (*2)
- +800L: Overall spline shaft length (in mm)
- H: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-381.



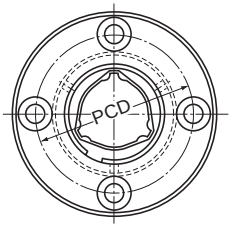
Unit: mm

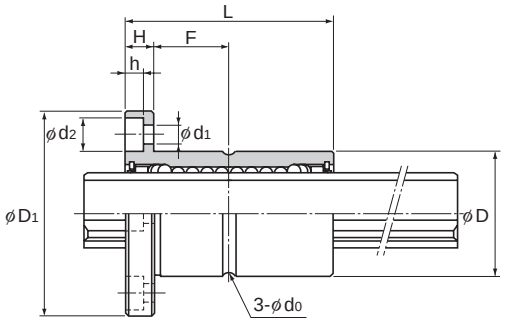
	Basic torque rating		Basic load rating (radial)		Static permissible moment		Mass	
	C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut kg	Spline shaft kg/m
	90.2	213	9.4	20.1	103	632	0.17	1.8
	176	381	14.9	28.7	171	1060	0.29	2.7
	312	657	22.5	41.4	295	1740	0.5	3.8
	696	1420	37.1	66.9	586	3540	1.1	6.8
	1290	2500	55.1	94.1	941	5610	1.9	10.6
	1870	3830	66.2	121	1300	8280	3.3	15.6
	3000	6090	90.8	164	2080	11800	3.8	21.3
	4740	9550	119	213	3180	17300	6.1	32
	6460	14400	137	271	4410	25400	10.4	45
	8380	19400	148	306	5490	32400	12.9	69.5
	13900	32200	196	405	8060	55400	28	116.6

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBF (Medium Load Type)





Model No.	Spline nut dimensions									
	Outer diameter		Length		Flange diameter		H	F	Greasing hole	PCD
	D	Tolerance	L	Tolerance	D_1	Tolerance			d_0	
LBF 15	23	0 −0.013	40	0 −0.2	43	0 −0.2	7	13	2	32
○● LBF 20	30	0 −0.016	50		49		7	18	2	38
○● LBF 25	37		60	0 −0.3	60		9	21	2	47
○● LBF 30	45		70		70		10	25	3	54
○● LBF 40	57	0 −0.019	90		90		14	31	3	70
○● LBF 50	70		100		108	0 −0.3	16	34	4	86
○ LBF 60	85		127		124		18	45.5	4	102
○● LBF 70	95	0 −0.022	110		142		20	35	4	117
○● LBF 85	115		140	0 −0.4	168		22	48	5	138
○● LBF 100	135	0 −0.025	160		195	0 −0.4	25	55	5	162

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).

(Example) LBF20 A CL+500L H

High temperature symbol

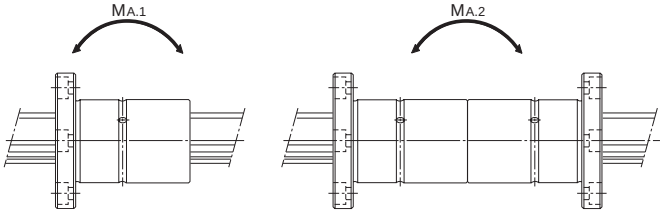
●: indicates model numbers for which felt seal types are available (see A-509).
A felt seal cannot be attached to Ball Spline models using metal retainer.

Model number coding

2 LBF20 DD CL +900L P K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBF20: Model No.
- DD: Contamination protection accessory symbol (*1)
- CL: Symbol for clearance in the rotational direction (*2)
- +900L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-381.



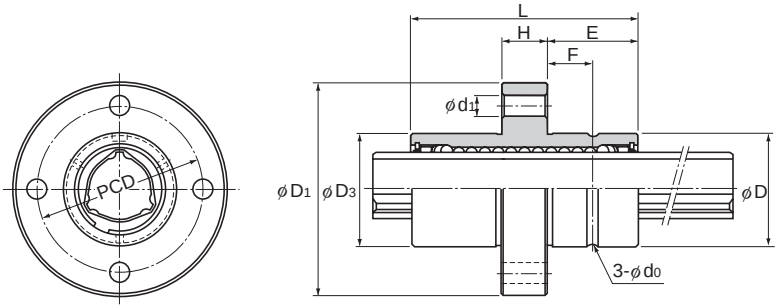
Unit: mm

	Mounting hole $d_1 \times d_2 \times h$	Basic torque rating		Basic load rating (radial)		Static permissible moment		Mass	
		C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut kg	Spline shaft kg/m
	4.5×8×4.4	30.4	74.5	4.4	8.4	25.4	185	0.11	1
	4.5×8×4.4	74.5	160	7.8	14.9	60.2	408	0.2	1.8
	5.5×9.5×5.4	154	307	13	23.5	118	760	0.36	2.7
	6.6×11×6.5	273	538	19.3	33.8	203	1270	0.6	3.8
	9×14×8.6	599	1140	31.9	53.4	387	2640	1.2	6.8
	11×17.5×11	1100	1940	46.6	73	594	4050	1.9	10.6
	11×17.5×11	1870	3830	66.2	121	1300	8280	3.5	15.6
	14×20×13	2190	3800	66.4	102	895	6530	3.6	21.3
	16×23×15.2	3620	6360	90.5	141	2000	12600	6.2	32
	18×26×17.5	5910	12600	126	237	3460	20600	11	45

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
(Single spline nut configuration is not stable in accuracy. We recommend using two spline nuts in close contact with each other.)
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBR



Model No.	Spline nut dimensions								
	Outer diameter		Outer diameter	Length		Flange diameter			
	D	Tolerance	D3	L	Tolerance	D1	H	E	PCD
LBR 15	25	0 −0.013	25.35	40	0 −0.2	45.4	9	15.5	34
○● LBR 20	30	0 −0.016	30.35	60		56.4	12	24	44
○● LBR 25	40		40.35	70	0 −0.3	70.4	14	28	54
○● LBR 30	45		45.4	80		75.4	16	32	61
○● LBR 40	60	0 −0.019	60.4	100		96.4	18	41	78
○● LBR 50	75		75.4	112		112.4	20	46	94
○ LBR 60	90	0 −0.022	90.5	127		134.5	22	52.5	112
○● LBR 70	95		95.6	135		140.6	24	55.5	117
○● LBR 85	120		120.6	155	0 −0.4	170.6	26	64.5	146
○● LBR 100	140	0 −0.025	140.6	175		198.6	34	70.5	170

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).

(Example) LBR40 A CM+600L H
High temperature symbol

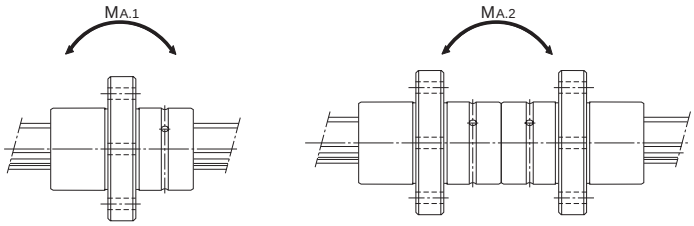
●: indicates model numbers for which felt seal types are available (see A-509).
A felt seal cannot be attached to Ball Spline models using metal retainer.

Model number coding

2 LBR30 UU CM +700L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBR30: Model No.
- UU: Contamination protection accessory symbol (*1)
- CM: Symbol for clearance in the rotational direction (*2)
- +700L: Overall spline shaft length (in mm)
- H: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-381.



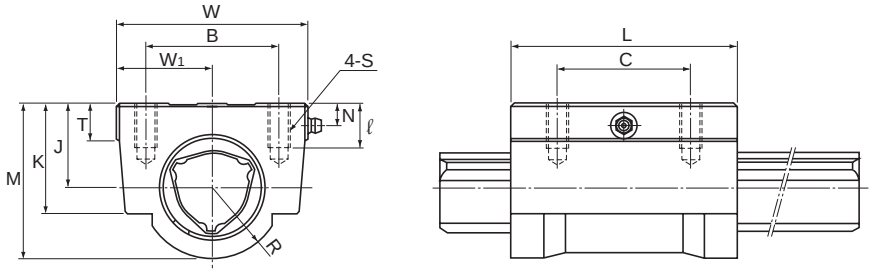
Unit: mm

	Mounting hole d_1	F	Greasing hole d_0	Basic torque rating C_T N-m	Basic torque rating C_{0T} N-m	Basic load rating (radial) C kN	Basic load rating (radial) C_0 kN	Static permissible moment $M_{A.1}$** N-m	Static permissible moment $M_{A.2}$** N-m	Mass Spline Nut kg	Mass Spline shaft kg/m
	4.5	7.5	2	30.4	74.5	4.4	8.4	25.4	185	0.14	1
	5.5	12	2	90.2	213	9.4	20.1	103	632	0.33	1.8
	5.5	14	2	176	381	14.9	28.7	171	1060	0.54	2.7
	6.6	16	3	312	657	22.5	41.4	295	1740	0.9	3.8
	9	20.5	3	696	1420	37.1	66.9	586	3540	1.7	6.8
	11	23	4	1290	2500	55.1	94.1	941	5610	2.7	10.6
	11	26	4	1870	3830	66.2	121	1300	8280	3.7	15.6
	14	27	4	3000	6090	90.8	164	2080	11800	6	21.3
	16	32	5	4740	9550	119	213	3180	17300	8.3	32
	18	35	5	6460	14400	137	271	4410	25400	14.2	45

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBH



Model No.	Spline nut dimensions									
	Height M	Width W	Length L	B	C	S×ℓ	J ±0.15	W_1 ±0.15	T	K
○ LBH 15	29	34	43	26	26	M4×10	15	17	6	20
○● LBH 20	38	48	62	35	35	M6×12	20	24	7	26
○● LBH 25	47.5	60	73	40	40	M8×16	25	30	8	33
○● LBH 30	57	70	83	50	50	M8×16	30	35	10	39
○● LBH 40	70	86	102	60	60	M10×20	38	43	15	50
○● LBH 50	88	100	115	75	75	M12×25	48	50	18	63

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).
(Example) LBH30 A CM+600L H
High temperature symbol

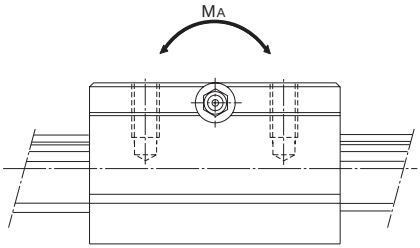
●: indicates model numbers for which felt seal types are available (see A-509).
A felt seal cannot be attached to Ball Spline models using metal retainer.

Model number coding

2 LBH40 UU CL +700L P K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBH40: Model No.
- UU: Contamination protection accessory symbol (*1)
- CL: Symbol for clearance in the rotational direction (*2)
- +700L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-381.



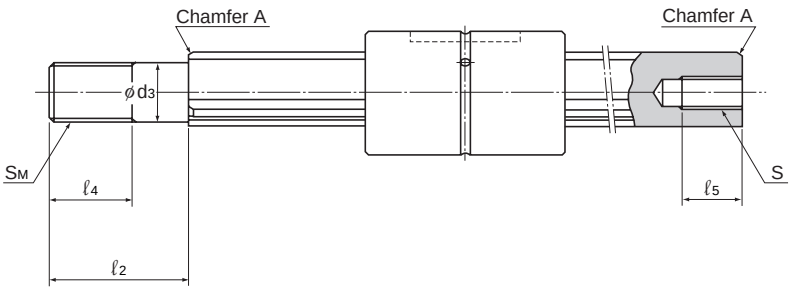
Unit: mm

	R	N	Grease nipple	Basic torque rating C_T N-m	Basic torque rating C_{0T} N-m	Basic load rating (radial) C kN	Basic load rating (radial) C_0 kN	Static permissible moment M_A** N-m	Mass Spline Nut kg	Mass Spline shaft kg/m
	14	5	ϕ4 drive Nipple	30.4	74.5	4.4	8.4	25.4	0.23	1
	18	7	A-M6F	90.2	213	9.4	20.1	103	0.58	1.8
	22	6	A-M6F	176	381	14.9	28.7	171	1.1	2.7
	26	8	A-M6F	312	657	22.5	41.4	295	1.73	3.8
	32	10	A-M6F	696	1420	37.1	66.9	586	3.18	6.8
	40	13.5	A-PT1/8	1290	2500	55.1	94.1	941	5.1	10.6

Note) **M_A indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LBS with Recommended Shaft End Shape



Unit: mm

Model No.	d_3	Tolerance	ℓ_2	S_M	ℓ_4	$S \times \ell_5$
LBS 15	10	$^{0}_{-0.015}$	23	M10×1.25	14	M6×10
LBS 20	14	$^{0}_{-0.018}$	30	M14×1.5	18	M8×15
LBS 25	18		42	M18×1.5	25	M10×18
LBS 30	20	$^{0}_{-0.021}$	46	M20×1.5	27	M12×20
LBS 40	30		70	M30×2	40	M18×30
LBS 50	36	$^{0}_{-0.025}$	80	M36×3	46	M20×35

Note) For details of chamfer A, see B-382.

Spline Shaft

Spline shafts are divided in shape into precision solid spline shaft, special spline shaft and hollow spline shaft (type K), as described on A-488.
Since production of a spline shaft with a specific shape is performed at your request, provide a drawing of the desired shaft shape when asking an estimate or placing an order.

[Sectional Shape of the Spline Shaft]

Table1 shows the sectional shape of a spline shaft. If the spline shaft ends need to be cylindrical, the minor diameter (ϕd) value should not be exceeded if possible.

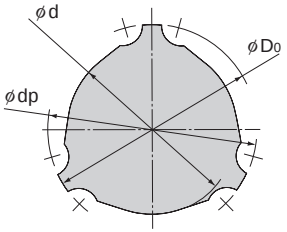


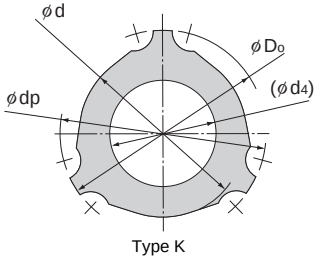
Table1 Sectional Shape of the Spline Shaft Unit: mm

Nominal shaft diameter	15	20	25	30	40	50	60	70	85	100	120	150
Minor diameter ϕ d	11.7	15.3	19.5	22.5	31	39	46.5	54.5	67	81	101	130
Major diameter ϕ D_0	14.5	19.7	24.5	29.6	39.8	49.5	60	70	84	99	117	147
Ball center-to-center diameter ϕ dp	15	20	25	30	40	50	60	70	85	100	120	150
Mass (kg/m)	1	1.8	2.7	3.8	6.8	10.6	15.6	21.3	32	45	69.5	116.6

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Hole Shape of the Standard Hollow Type Spline Shaft]

Table2 shows the hole shape of the standard hollow type spline shaft. Use this table when a requirement such as piping, wiring, air-vent or weight reduction needs to be met.



Type K

Table2 Sectional Shape of the Standard Hollow Type Spline Shaft Unit: mm

Nominal shaft diameter	20	25	30	40	50	60	70	85	100	120	150
Minor diameter ϕ d	15.3	19.5	22.5	31	39	46.5	54.5	67	81	101	130
Major diameter ϕ D_0	19.7	24.5	29.6	39.8	49.5	60	70	84	99	117	147
Ball center-to-center diameter ϕ dp	20	25	30	40	50	60	70	85	100	120	150
Hole diameter (ϕ d_4)	6	8	12	18	24	30	35	45	56	60	80
Mass (kg/m)	1.6	2.3	2.9	4.9	7	10	13.7	19.5	25.7	47.3	77.1

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Chamfering of the Spline Shaft Ends]

To facilitate the insertion of the spline shaft into a spline nut, the shaft ends are normally chamfered with dimensions as indicated below unless otherwise specified.

● Chamfer A

If the spline shaft ends are stepped, tapped or drilled for specific use, they are machined with chamfer A dimensions indicated in Table3.

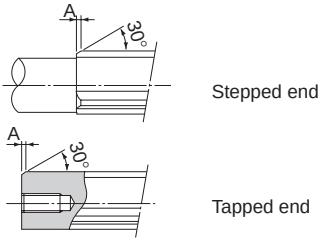


Fig.1 Chamfer A

● Chamfer B

If either end of the spline shaft is not used, such as cantilever support, it is machined with chamfer B dimensions indicated in Table3.

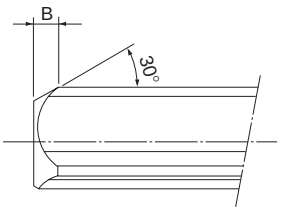


Fig.2 Chamfer B

Table3 Chamfer Dimensions of Spline Shaft Ends Unit: mm

Nominal shaft diameter	15	20	25	30	40	50	60	70	85	100	120	150
Chamfer A	1	1	1.5	2.5	3	3.5	5	6.5	7	7	7.5	8
Chamfer B	3.5	4.5	5.5	7	8.5	10	13	15	16	17	17	18

Note) Spline shafts with nominal diameters 6, 8 and 10 are chamfered to C0.5.

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[Length of Imperfect Area of a Special Spline Shaft]

If the middle area or the end of a spline shaft is to be thicker than the minor diameter (ϕd), an imperfect spline area is required to secure a recess for grinding. Table4 shows the relationship between the length of the incomplete section (S) and the flange diameter (ϕdf).
(This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.)

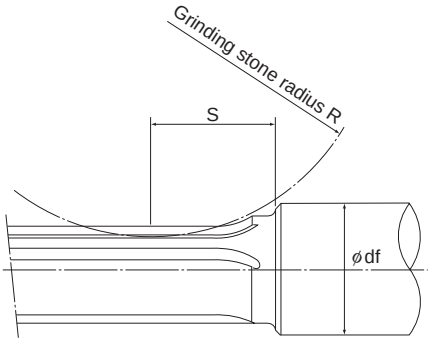


Table4 Length of Imperfect Spline Area: S

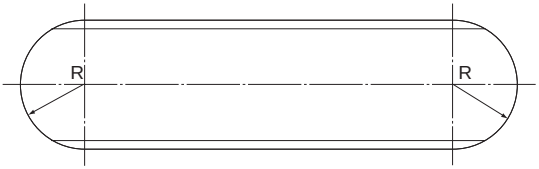
Unit: mm

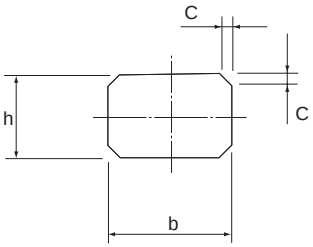
Flange diameter ϕdf / Nominal shaft diameter	15	20	25	30	35	40	50	60	80	100	120	140	160	180	200
15	26	40	48	55	60	—	—	—	—	—	—	—	—	—	—
20	—	30	45	54	61	67	—	—	—	—	—	—	—	—	—
25	—	—	33	47	56	62	73	—	—	—	—	—	—	—	—
30	—	—	—	35	48	57	69	79	—	—	—	—	—	—	—
40	—	—	—	—	—	39	59	71	88	—	—	—	—	—	—
50	—	—	—	—	—	—	42	61	82	96	—	—	—	—	—
60	—	—	—	—	—	—	—	45	75	91	103	—	—	—	—
70	—	—	—	—	—	—	—	—	65	85	99	109	—	—	—
85	—	—	—	—	—	—	—	—	34	72	90	102	—	—	—
100	—	—	—	—	—	—	—	—	—	52	79	95	106	—	—
120	—	—	—	—	—	—	—	—	—	—	54	81	97	108	—
150	—	—	—	—	—	—	—	—	—	—	—	30	72	91	104

* This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.

Accessories

Ball Spline models LBS and LBST are provided with a standard key as indicated in Table5.





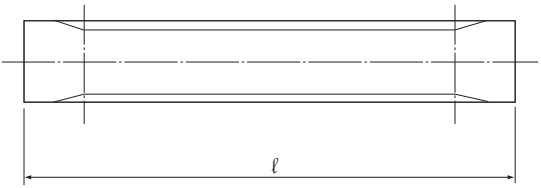
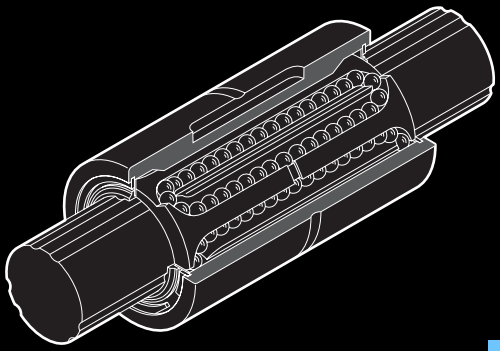


Table5 Standard Keys for Models LBS and LBST Unit: mm

Nominal shaft diameter	Width b		Height h		Length ℓ		R	C
		Tolerance(p7)		Tolerance(h7)		Tolerance(h12)		
LBS 6	2	+0.016 +0.006	1.3	0 −0.025	10	0 −0.150	1	0.3
LBS 8	2.5		2		12.5	0 −0.180	1.25	
LBS 10	3		2.5		17		1.5	
LBS 15	3.5	+0.024 +0.012	3.5	0 −0.030	20	0 −0.210	1.75	0.5
LBS 20 LBST 20	4		4		26		2	
LBS 25 LBST 25	5		5		33	0 −0.250	2.5	
LBS 30 LBST 30	7	+0.030 +0.015	7	0 −0.036	41		3.5	
LBS 40 LBST 40	10		8		55	0 −0.300	5	0.8
LBS 50 LBST 50	15	+0.036 +0.018	10		60		7.5	
LBST 60 LBS 70 LBST 70	18		12	0 −0.043	68		9	1.2
LBS 85 LBST 85	20	+0.043 +0.022	13		80	0 −0.350	14	
LBS 100 LBST 100	28		18		93	0 −0.400	14	
LBST 120	28		18		123		14	
LBST 150	32	+0.051 +0.026	20	0 −0.052	157		16	2



Medium Torque Type Ball Spline
Models LT and LF

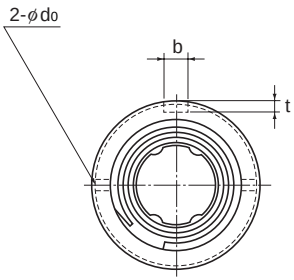
Ball Spline

B Product Specifications

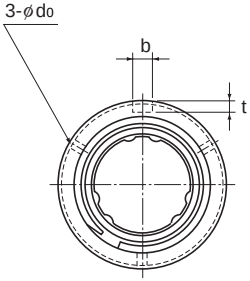
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

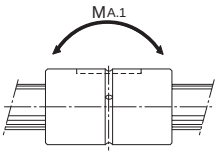
Model LT



Model LT13 or smaller



Model LT16 or greater



Model No.	Spline nut dimensions								
	Outer diameter		Length		b H8	Keyway dimensions		r	Greasing hole
	D	Tolerance	L	Tolerance		t +0.05 0	ℓ0		d0
Note) LT 4	10	0 −0.009	16	0 −0.2	2	1.2	6	0.5	—
Note) LT 5	12	0 −0.011	20		2.5	1.2	8	0.5	—
LT 6	14		25		2.5	1.2	10.5	0.5	1
LT 8	16		25		2.5	1.2	10.5	0.5	1.5
LT 10	21	0 −0.013	33		3	1.5	13	0.5	1.5
LT 13	24		36		3	1.5	15	0.5	1.5
○ LT 16	31		50		3.5	2	17.5	0.5	2
○ LT 20	35	0 −0.016	63		4	2.5	29	0.5	2
○ LT 25	42		71	0 −0.3	4	2.5	36	0.5	3
○ LT 30	47		80		4	2.5	42	0.5	3
○ LT 40	64	0 −0.019	100		6	3.5	52	0.5	4
○ LT 50	80		125		8	4	58	1	4
○ LT 60	90	0 −0.022	140	0 −0.4	12	5	67	1	5
○ LT 80	120		160		16	6	76	2	5
○ LT 100	150	0 −0.025	185		20	7	110	2.5	5

Note) Models LT4 and 5 do not have a retainer. Do not remove the shaft from the spline nut. (It will cause balls to fall off.)
○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100°C).

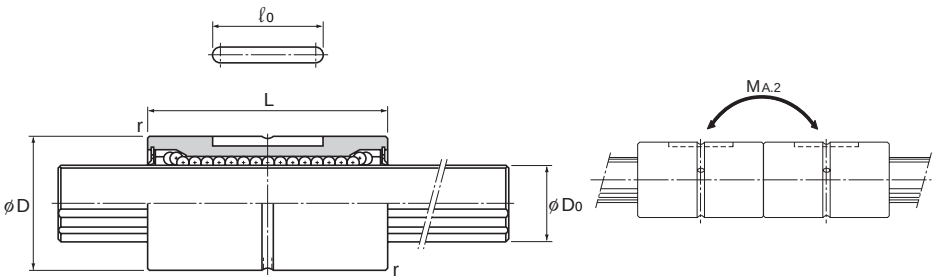
(Example) LT20 A CL+500L H
High temperature symbol

Model number coding

2 LT30 UU CL +500L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LT30: Model No.
- UU: Contamination protection accessory symbol (*1)
- CL: Symbol for clearance in the rotational direction (*2)
- +500L: Overall spline shaft length (in mm)
- H: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-391.



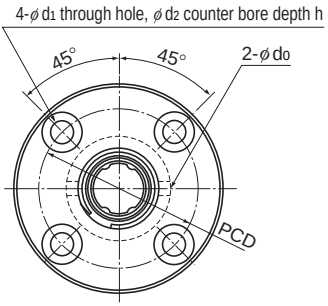
Unit: mm

	Spline shaft diameter	Rows of balls	Basic torque rating		Basic Load Rating		Static permissible moment		Mass	
	D_0 h7		C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut g	Spline shaft kg/m
	4	4	0.59	0.78	0.44	0.61	0.88	6.4	5.2	0.1
	5	4	0.88	1.37	0.66	0.88	1.5	11.6	9.1	0.15
	6	4	0.98	1.96	1.18	2.16	4.9	36.3	17	0.23
	8	4	1.96	2.94	1.47	2.55	5.9	44.1	18	0.4
	10	4	3.92	7.84	2.84	4.9	15.7	98	50	0.62
	13	4	5.88	10.8	3.53	5.78	19.6	138	55	1.1
	16	6	31.4	34.3	7.06	12.6	67.6	393	165	1.6
	20	6	56.9	55.9	10.2	17.8	118	700	225	2.5
	25	6	105	103	15.2	25.8	210	1140	335	3.9
	30	6	171	148	20.5	34	290	1710	375	5.6
	40	6	419	377	37.8	60.5	687	3760	1000	9.9
	50	6	842	769	60.9	94.5	1340	7350	1950	15.5
	60	6	1220	1040	73.5	111.7	1600	9990	2500	22.3
	80	6	2310	1920	104.9	154.8	2510	16000	4680	39.6
	100	6	3730	3010	136.2	195	3400	24000	9550	61.8

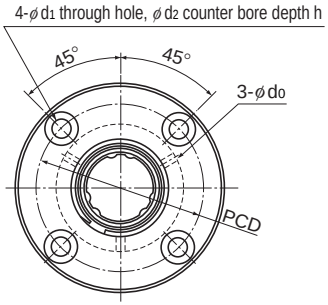
Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
(Single LT-unit configuration is not stable in accuracy. We recommend using two units in close contact with each other.)
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LF



Model LF13 or smaller



Model LF16 or greater

Model No.	Spline nut dimensions													
	Outer diameter		Length		Flange diameter		H	F	C	r	Greasing hole	PCD	Mounting hole	
	D	Tolerance	L	Tolerance	D_1	Tolerance					d_0			$d_1 \times d_2 \times h$
LF 6	14	0 −0.011	25	0 −0.2	30	0 −0.2	5	7.5	0.5	0.5	1.5	22	3.4×6.5×3.3	
LF 8	16		25		32		5	7.5	0.5	0.5	1.5	24	3.4×6.5×3.3	
LF 10	21	0 −0.013	33		42		6	10.5	0.5	0.5	1.5	32	4.5×8×4.4	
LF 13	24		36		44		7	11	0.5	0.5	1.5	33	4.5×8×4.4	
○ LF 16	31		50		51		7	18	0.5	0.5	2	40	4.5×8×4.4	
○ LF 20	35	0 −0.016	63		58		9	22.5	0.5	0.5	2	45	5.5×9.5×5.4	
○ LF 25	42		71	0 −0.3	65		9	26.5	0.5	0.5	3	52	5.5×9.5×5.4	
○ LF 30	47		80		75		10	30	0.5	0.5	3	60	6.6×11×6.5	
○ LF 40	64	0 −0.019	100		100		14	36	1	0.5	4	82	9×14×8.6	
○ LF 50	80		125		124		16	46.5	1	1	4	102	11×17.5×11	

Note) ○: indicates model numbers for which high temperature types are available (with metal retainer; service temperature: up to 100℃).

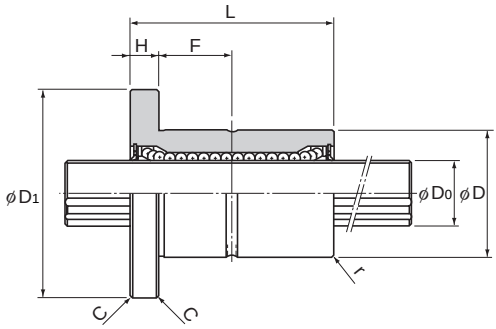
(Example) LF30 A CL+700L H
High temperature symbol

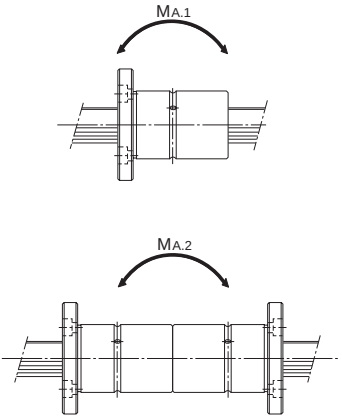
Model number coding

2 LF20 UU CM +400L P N

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LF20: Model No.
- UU: Contamination protection accessory symbol (*1)
- CM: Symbol for clearance in the rotational direction (*2)
- +400L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*3)
- N: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-391.





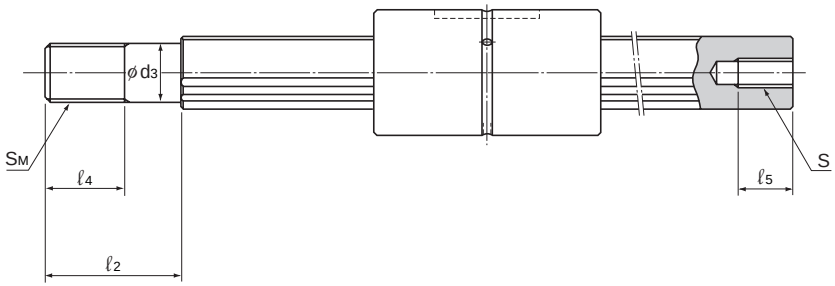
Unit: mm

	Spline shaft diameter	Rows of balls	Basic torque rating		Basic load rating		Static permissible moment		Mass	
	D_0 h7		C_T N-m	C_{0T} N-m	C kN	C_0 kN	$M_{A.1}$** N-m	$M_{A.2}$** N-m	Spline Nut g	Spline shaft kg/m
	6	4	0.98	1.96	1.18	2.16	4.9	36.3	35	0.23
	8	4	1.96	2.94	1.47	2.55	5.9	44.1	37	0.4
	10	4	3.92	7.84	2.84	4.9	15.7	98	90	0.62
	13	4	5.88	10.8	3.53	5.78	19.6	138	110	1.1
	16	6	31.4	34.3	7.06	12.6	67.6	393	230	1.6
	20	6	56.9	55.9	10.2	17.8	118	700	330	2.5
	25	6	105	103	15.2	25.8	210	1140	455	3.9
	30	6	171	148	20.5	34	290	1710	565	5.6
	40	6	419	377	37.8	60.5	687	3760	1460	9.9
	50	6	842	769	60.9	94.5	1340	7350	2760	15.5

Note) **$M_{A.1}$indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
**$M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
(Single LF-unit configuration is not stable in accuracy. We recommend using two units in close contact with each other.)
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Model LT with Recommended Shaft End Shape



Unit: mm

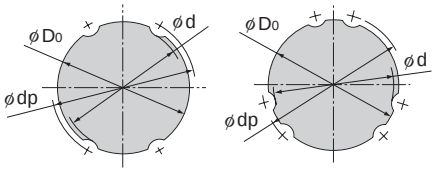
Model No.	d_3	Tolerance	ℓ_2	S_M	ℓ_4	$S \times \ell_5$
LT 6	5	$^{0}_{-0.012}$	12	M5×0.8	7	M2.5×4
LT 8	6		14	M6×1	8	M3×5
LT 10	8	$^{0}_{-0.015}$	18	M8×1	11	M4×6
LT 13	10		23	M10×1.25	14	M5×8
LT 16	14	$^{0}_{-0.018}$	30	M14×1.5	18	M6×10
LT 20	16		38	M16×1.5	22	M8×15
LT 25	22	$^{0}_{-0.021}$	50	M22×1.5	28	M10×18
LT 30	27		60	M27×2	34	M14×25
LT 40	36	$^{0}_{-0.025}$	80	M36×3	45	M18×30
LT 50	45		100	M45×4.5	58	M22×40

Spline Shaft

Spline shafts are divided in shape into precision solid spline shaft, special spline shaft and hollow spline shaft (types K and N), as described on A-493.
Since production of a spline shaft with a specific shape is performed at your request, provide a drawing of the desired shaft shape when asking an estimate or placing an order.

[Sectional Shape of the Spline Shaft]

Table1 shows the sectional shape of a spline shaft. If the spline shaft ends need to be cylindrical, the minor diameter (ϕd) value should not be exceeded if possible.



Model LT13 or smaller Model LT16 or greater

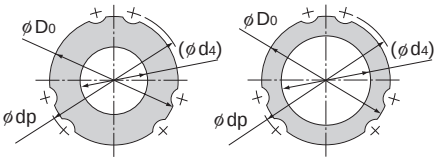
Table1 Sectional Shape of the Spline Shaft Unit: mm

Nominal shaft diameter	4	5	6	8	10	13	16	20	25	30	40	50	60	80	100
Minor diameter ϕ d	3.5	4.5	5	7	8.5	11.5	14.5	18.5	23	28	37.5	46.5	56.5	75.5	95
Major diameter ϕ D0 h7	4	5	6	8	10	13	16	20	25	30	40	50	60	80	100
Ball center-to-center diameter ϕ dp	4.6	5.7	7	9.3	11.5	14.8	17.8	22.1	27.6	33.2	44.2	55.2	66.3	87.9	109.5
Mass(kg/m)	0.1	0.15	0.23	0.4	0.62	1.1	1.6	2.5	3.9	5.6	9.9	15.5	22.3	39.6	61.8

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Hole Shape of the Standard Hollow Type Spline Shaft]

Table2 shows the hole shape of the standard hollow type spline shaft (types K and N).
Use this table when a requirement such as piping, wiring, air-vent or weight reduction needs to be met.



Type K (Thick) Type N (Thin)

Table2 Sectional Shape of the Standard Hollow Type Spline Shaft Unit: mm

Nominal shaft diameter		6	8	10	13	16	20	25	30	40	50	60	80	100
Major diameter ϕ D0		6	8	10	13	16	20	25	30	40	50	60	80	100
Ball center-to-center diameter ϕ dp		7	9.3	11.5	14.8	17.8	22.1	27.6	33.2	44.2	55.2	66.3	87.9	109.5
Type K	Hole diameter (ϕ d4)	2.5	3	4	5	7	10	12	16	22	25	32	52.5	67.5
	Mass(kg/m)	0.2	0.35	0.52	0.95	1.3	1.8	3	4	6.9	11.6	16	22.6	33.7
Type N	Hole diameter (ϕ d4)	—	—	—	—	11	14	18	21	29	36	—	—	—
	Mass(kg/m)	—	—	—	—	0.8	1.3	1.9	2.8	4.7	7.4	—	—	—

Note) The standard hollow type Spline Shaft is divided into types K and N. Indicate "K" or "N" at the end of the model number to distinguish between them when placing an order.

[Length of Imperfect Area of a Special Spline Shaft]

If the middle area or the end of a spline shaft is to be thicker than the minor diameter (ϕd), an imperfect spline area is required to secure a recess for grinding. Table3 shows the relationship between the length of the incomplete section (S) and the flange diameter (ϕdf).
(This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.)

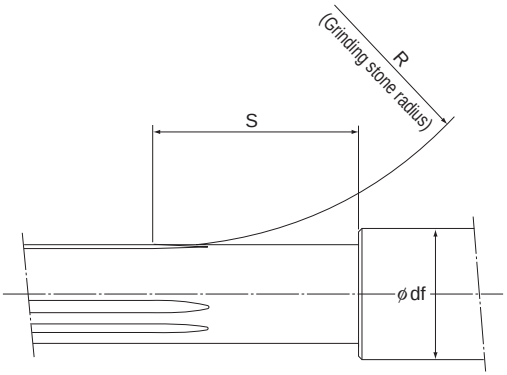


Table3 Length of Imperfect Spline Area: S Miniature type

Unit: mm

Flange diameter ϕdf / Nominal shaft diameter	4	5	6	8	10
4	13	20	24	31	—
5	—	14	21	28	33

Standard Type

Unit: mm

Flange diameter ϕdf / Nominal shaft diameter	6	8	10	13	16	20	25	30	40	50	60	80	100	120	140	160
6	18	28	33	39	—	—	—	—	—	—	—	—	—	—	—	—
8	—	18	28	35	41	—	—	—	—	—	—	—	—	—	—	—
10	—	—	19	31	38	45	—	—	—	—	—	—	—	—	—	—
13	—	—	—	21	36	46	56	—	—	—	—	—	—	—	—	—
16	—	—	—	—	23	40	53	62	—	—	—	—	—	—	—	—
20	—	—	—	—	—	23	43	55	71	—	—	—	—	—	—	—
25	—	—	—	—	—	—	28	49	72	88	—	—	—	—	—	—
30	—	—	—	—	—	—	—	29	62	80	95	—	—	—	—	—
40	—	—	—	—	—	—	—	—	32	63	81	107	—	—	—	—
50	—	—	—	—	—	—	—	—	—	35	65	96	118	—	—	—
60	—	—	—	—	—	—	—	—	—	—	38	87	114	134	—	—
80	—	—	—	—	—	—	—	—	—	—	—	42	89	115	135	—
100	—	—	—	—	—	—	—	—	—	—	—	—	44	90	116	136

* This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.

Accessories

Ball Spline model LT is provided with a standard key as indicated in Table4.

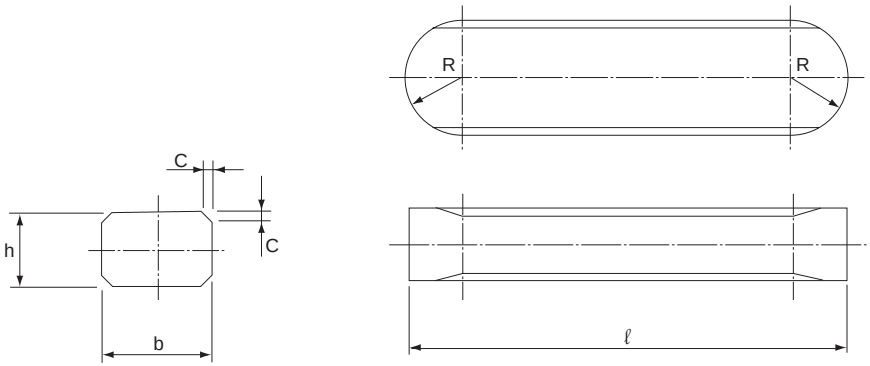
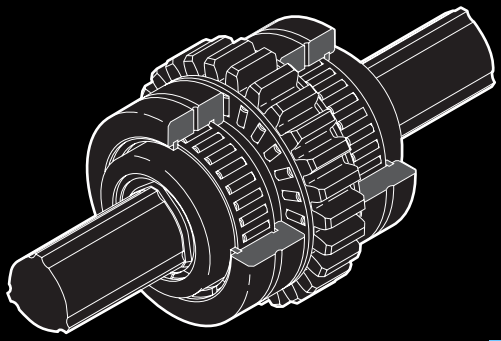


Table4 Standard Key for Model LT Unit: mm

Nominal shaft diameter	Width b		Height h		Length ℓ		R	C
		Tolerance(p7)		Tolerance(h7)		Tolerance(h12)		
LT 4	2	+0.016 +0.006	2	0 −0.025	6	0 −0.120	1	0.3
LT 5	2.5		2.5		8	0 −0.150	1.25	0.5
LT 6 LT 8	2.5		2.5		10.5	0 −0.180	1.25	0.5
LT 10	3		3		13		1.5	
LT 13	3		3		15		1.5	
LT 16	3.5	+0.024 +0.012	3.5	0 −0.030	17.5		1.75	
LT 20	4		4		29	0 −0.210	2	
LT 25	4		4		36	0 −0.250	2	
LT 30	4		4		42		2	
LT 40	6		6		52	0 −0.300	3	
LT 50	8	+0.030 +0.015	7	0 −0.036	58		4	
LT 60	12	+0.036 +0.018	8		67		6	0.8
LT 80	16		10		76		8	
LT 100	20	+0.043 +0.022	13	0 −0.043	110	0 −0.350	10	



Rotary Ball Spline With Geared type
Models LBG and LBGT

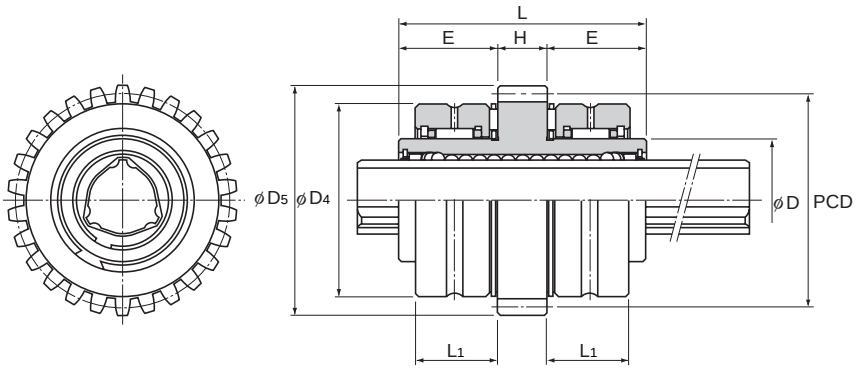
Ball Spline

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model LBG



Model No.	Spline nut dimensions									
	Spline nut outer diameter		Length		Outer diameter		Width		H	E
	D	Tolerance	L	Tolerance	D_4	Tolerance	L_1	Tolerance		
● LBG 20	30	0 −0.009	60	0 −0.2	47	0 −0.011	20	0 −0.16	12	24
● LBG 25	40	0 −0.011	70		60	0 −0.013	23	0 −0.19	14	28
● LBG 30	45		80		65		27		16	32
● LBG 40	60	0 −0.013	100		85	0 −0.015	31	0 −0.25	18	41
● LBG 50	75		112	0 −0.3	100		32		20	46
LBG 60	90	0 −0.015	127		120		38		22	52.5
● LBG 85	120		155		150	0 −0.025	40		26	64.5

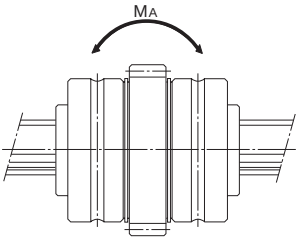
Note) ●: indicates model numbers for which felt seal types are available (see A-509).

Model number coding

2 LBG50 UU CM +700L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBG50: Model No.
- UU: Contamination protection accessory symbol (*1)
- CM: Symbol for clearance in the rotational direction (*2)
- +700L: Overall spline shaft length (in mm)
- H: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-400.



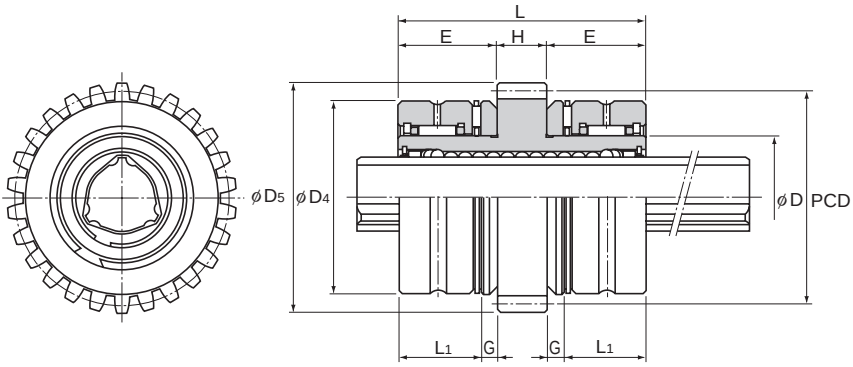
Unit: mm

	Gear specifications*				Basic torque rating		Basic load rating		Static permissible moment	Mass	
	Tip circle diameter D_5	Standard pitch diameter PCD	Module m	Number of teeth z	C_T N-m	C_{0T} N-m	C kN	C_0 kN	M_A** N-m	Spline nut unit kg	Spline shaft kg/m
	56	52	2	26	90.2	213	9.4	20.1	103	0.61	1.8
	70	65	2.5	26	176	381	14.9	28.7	171	1.4	2.7
	75	70	2.5	28	312	657	22.5	41.4	295	2.1	3.8
	96	90	3	30	696	1420	37.1	66.9	586	3	6.8
	111	105	3	35	1290	2500	55.1	94.1	941	4.1	10.6
	133	126	3.5	36	1870	3830	66.2	121	1300	6.3	15.6
	168	160	4	40	4740	9550	119	213	3180	11.8	32

Note) *The gear specifications in the table represent the dimensions with maximum module.
Special gear types such as helical gear and worm gear can also be manufactured at your request.
**M_A indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Type LBGT



Model No.	Spline nut dimensions										
	Spline nut outer diameter		Length		Outer diameter		Width		Thrust raceway width		
	D	Tolerance	L	Tolerance	D_4	Tolerance	L_1	Tolerance	G	H	E
● LBGT 20	30	0 −0.009	60	0 −0.2	47	0 −0.011	20	0 −0.16	4	12	24
● LBGT 25	40	0 −0.011	70		60	0 −0.013	23	0 −0.19	5	14	28
● LBGT 30	45		80		65		27		5	16	32
● LBGT 40	60	0 −0.013	100		85	0 −0.015	31	0 −0.25	8	18	41
● LBGT 50	75		112	0 −0.3	100		32		10	20	46
LBGT 60	90	0 −0.015	127		120		38		12	22	52.5
● LBGT 85	120		155		150	0 −0.025	40		16	26	64.5

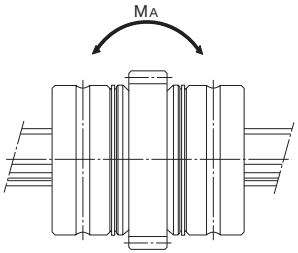
Note) ●: indicates model numbers for which felt seal types are available (see A-509).

Model number coding

2 LBGT40 UU CL +700L P K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBGT40: Model No.
- UU: Contamination protection accessory symbol (*1)
- CL: Symbol for clearance in the rotational direction (*2)
- +700L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*3)
- K: Symbol for standard hollow spline shaft (*4)

(*1) See A-509. (*2) See A-481. (*3) See A-482. (*4) See B-400.



Unit: mm

	Gear specifications*				Basic torque rating		Basic load rating		Static permissible moment	Mass	
	Tip circle diameter D_5	Standard pitch diameter PCD	Module m	Number of teeth z	C_T N-m	C_{0T} N-m	C kN	C_0 kN	M_A** N-m	Spline nut unit kg	Spline shaft kg/m
	56	52	2	26	90.2	213	9.4	20.1	103	0.67	1.8
	70	65	2.5	26	176	381	14.9	28.7	171	1.5	2.7
	75	70	2.5	28	312	657	22.5	41.4	295	2.2	3.8
	96	90	3	30	696	1420	37.1	66.9	586	3.3	6.8
	111	105	3	35	1290	2500	55.1	94.1	941	4.8	10.6
	133	126	3.5	36	1870	3830	66.2	121	1300	7.2	15.6
	168	160	4	40	4740	9550	119	213	3180	13.4	32

Note) *The gear specifications in the table represent the dimensions with maximum module.
Special gear types such as helical gear and worm gear can also be manufactured at your request.
**M_A indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Spline Shaft

Spline shafts are divided in shape into precision solid spline shaft, special spline shaft and hollow spline shaft (type K), as described on A-488.
Since production of a spline shaft with a specific shape is performed at your request, provide a drawing of the desired shaft shape when asking an estimate or placing an order.

[Sectional Shape of the Spline Shaft]

Table1 shows the sectional shape of a spline shaft. If the spline shaft ends need to be cylindrical, the minor diameter (ϕd) value should not be exceeded if possible.

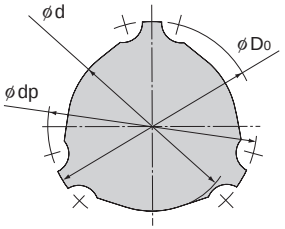


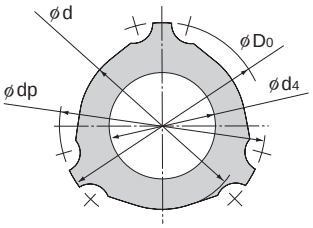
Table1 Sectional Shape of the Spline Shaft Unit: mm

Nominal shaft diameter	20	25	30	40	50	60	85
Minor diameter ϕ d	15.3	19.5	22.5	31	39	46.5	67
Major diameter ϕ D_0	19.7	24.5	29.6	39.8	49.5	60	84
Ball center-to-center diameter ϕ dp	20	25	30	40	50	60	85
Mass (kg/m)	1.8	2.7	3.8	6.8	10.6	15.6	32

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Hole Shape of the Standard Hollow Type Spline Shaft]

Table2 shows the hole shape of the standard hollow type spline shaft (type K) for models LBG and LBGT.
Use this table when a requirement such as piping, wiring, air-vent or weight reduction needs to be met.



Type K

Table2 Sectional Shape of the Standard Hollow Type Spline Shaft Unit: mm

Nominal shaft diameter	20	25	30	40	50	60	85
Minor diameter ϕ d	15.3	19.5	22.5	31	39	46.5	67
Major diameter ϕ D_0	19.7	24.5	29.6	39.8	49.5	60	84
Ball center-to-center diameter ϕ dp	20	25	30	40	50	60	85
Hole diameter ϕ d_4	6	8	12	18	24	30	45
Mass (kg/m)	1.6	2.3	2.9	4.9	7	10	19.5

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Chamfering of the Spline Shaft Ends]
For details,see B-382.

[Length of Imperfect Area of a Special Spline Shaft]
If the middle area or the end of a spline shaft is to be thicker than the minor diameter (ϕd), an imperfect spline area is required to secure a recess for grinding. Table3 shows the relationship between the length of the incomplete section (S) and the flange diameter (ϕdf).
(This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.)

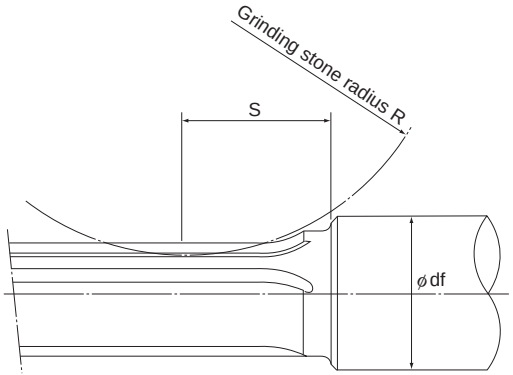
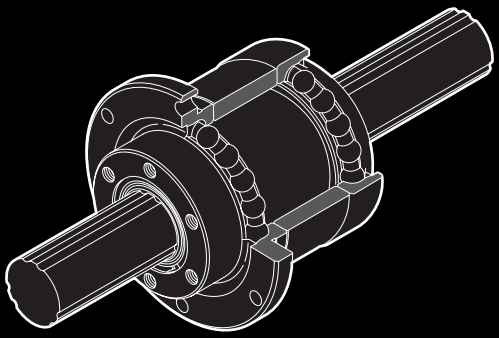


Table3 Length of Imperfect Spline Area: S Unit: mm

Flange diameter ϕdf / Nominal shaft diameter	20	25	30	35	40	50	60	80	100	120	140
20	25	36	43	48	53	—	—	—	—	—	—
25	—	32	46	55	62	73	—	—	—	—	—
30	—	—	35	48	56	69	78	—	—	—	—
40	—	—	—	—	38	59	71	88	—	—	—
50	—	—	—	—	—	42	61	82	96	—	—
60	—	—	—	—	—	—	45	74	91	102	—
70	—	—	—	—	—	—	—	64	85	98	108
85	—	—	—	—	—	—	—	34	72	90	102



Rotary Ball Spline With Support Bearing type
Models LTR and LTR-A

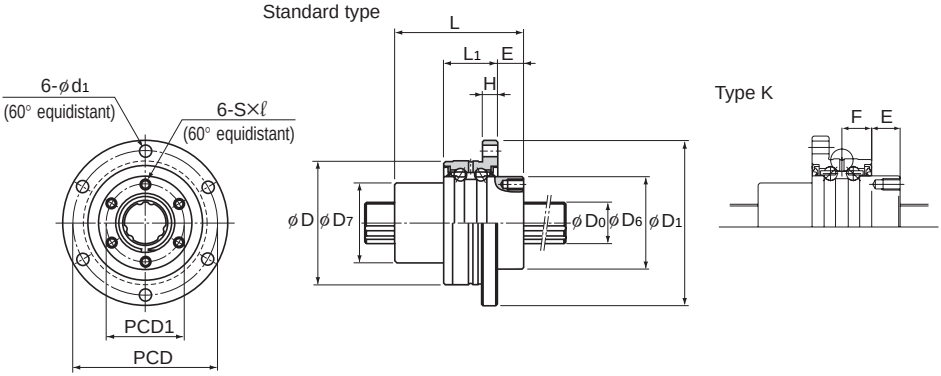
Ball Spline

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model LTR-A Compact Type



Model LTR16A or greater

Model No.	Spline nut dimensions														
	Outer diameter		Length	Flange diameter	D_6 h7	D_7	H	L_1	Stan-dard type	Type K	Oil hole position		PCD	PCD1	
	D	Tolerance	L	D_1					E	E	F	E_1			S×ℓ
LTR 8A	32	−0.009 −0.025	25	44	24	16	3	10.5	6	8.5	4	3	38	19	M2.6×3
LTR 10A	36		33	48	28	21	3	10.5	9	11.5	4	—	42	23	M3×4
LTR 16A	48		50	64	36	31	6	21	10	10	10.5	—	56	30	M4×6
LTR 20A	56	−0.010 −0.029	63	72	43.5	35	6	21	12	12	10.5	—	64	36	M5×8
LTR 25A	66		71	86	52	42	7	25	13	13	12.5	—	75	44	M5×8
LTR 32A	78		80	103	63	52	8	25	17	17	12.5	—	89	54	M6×10
LTR 40A	100	−0.012 −0.034	100	130	79.5	64	10	33	20	20	16.5	—	113	68	M6×10

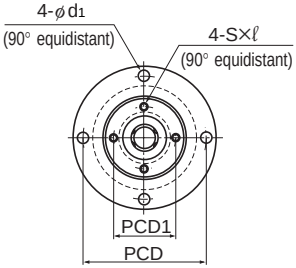
Model number coding

2 LTR32A K UU ZZ CL +500L P K

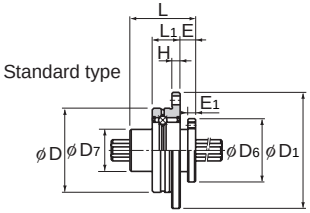
- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LTR32A: Model No.
- K: Flange orientation symbol(*1)
- UU: Spline nut contamination protection accessory symbol(*2)
- ZZ: Support bearings contamination protection accessory symbol(*3)
- CL: Symbol for clearance in the rotational direction(*4)
- +500L: Overall spline shaft length (in mm)
- P: Accuracy symbol (*5)
- K: Symbol for standard hollow spline shaft (*6)

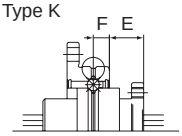
(*2) See A-509. (*3) See A-509. (*4) See A-481. (*5) See A-482. (*6) See B-408.

(*1) No Symbol: standard K: flange inversed

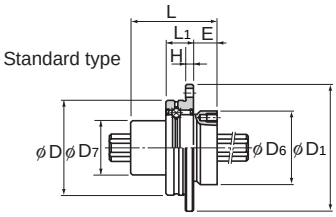


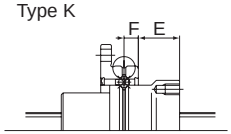
Model LTR8A Model LTR10A





Model LTR8A



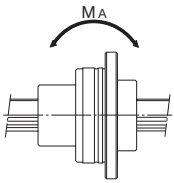


Model LTR10A

Unit: mm

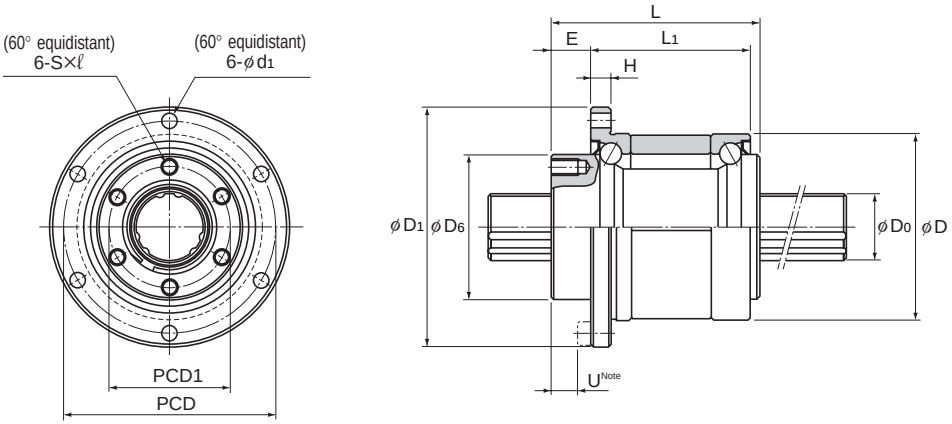
	d1	Spline shaft diameter D0 h7	Rows of balls	Basic torque rating CT N-m	Basic torque rating C0T N-m	Basic load rating C KN	Basic load rating C0 KN	Static permissible moment MA** N-m	Support bearing basic load rating C kN	Support bearing basic load rating C0 kN	Mass Spline Nut kg	Mass Spline shaft kg/m
	3.4	8	4	1.96	2.94	1.47	2.55	5.9	0.69	0.24	0.08	0.4
	3.4	10	4	3.92	7.84	2.84	4.9	15.7	0.77	0.3	0.13	0.62
	4.5	16	6	31.3	34.3	7.05	12.6	67.6	6.7	6.4	0.35	1.6
	4.5	20	6	56.8	55.8	10.2	17.8	118	7.4	7.8	0.51	2.5
	5.5	25	6	105	103	15.2	25.8	210	9.7	10.6	0.79	3.9
	6.6	32	6	180	157	20.5	34	290	10.5	12.5	1.25	5.6
	9	40	6	418	377	37.8	60.4	687	16.5	20.7	2.51	9.9

Note) **MA indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure below.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.



Description of Each Option⇒A-509

Model LTR



Model No.	Spline nut dimensions										
	Outer diameter		Length	Flange diameter							
	D	Tolerance	L	D1	D6 h7	H	L1	E	PCD	PCD1	S×ℓ
LTR 16	52	0 −0.007	50	68	39.5	5	37	10	60	32	M5×8
LTR 20	56		63	72	43.5	6	48	12	64	36	M5×8
LTR 25	62		71	78	53	6	55	13	70	45	M6×8
LTR 32	80		80	105	65.5	9	60	17	91	55	M6×10
LTR 40	100	0 −0.008	100	130	79.5	11	74	23	113	68	M6×10
LTR 50	120		125	156	99.5	12	97	25	136	85	M10×15
LTR 60	134	0 −0.009	140	170	115	12	112	25	150	100	M10×15

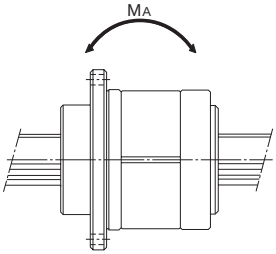
Model number coding

2 LTR50 K UU ZZ CM +1000L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LTR50: Model No.
- K: Flange orientation symbol(*1)
- UU: Spline nut contamination protection accessory symbol(*2)
- ZZ: Support bearings contamination protection accessory symbol(*3)
- CM: Symbol for clearance in the rotational direction(*4)
- +1000L: Overall spline shaft length (in mm)
- H: Accuracy symbol (*5)
- K: Symbol for standard hollow spline shaft (*6)

(*2) See A-509. (*3) See A-509. (*4) See A-481. (*5) See A-482. (*6) See B-408.

(*1) No Symbol: standard K: flange inversed



Unit: mm

			Spline shaft diameter		Basic torque rating		Basic load rating		Static permissible moment	Support bearing basic load rating		Mass	
	d_1	U^{Note}	D_0 h7	Rows of balls	C_T N-m	C_{0T} N-m	C KN	C_0 KN	M_A** N-m	C kN	C_0 kN	Spline Nut kg	Spline shaft kg/m
	4.5	5	16	6	31.4	34.3	7.06	12.6	67.6	12.7	11.8	0.51	1.6
	4.5	7	20	6	56.9	55.9	10.2	17.8	118	16.3	15.5	0.7	2.5
	4.5	8	25	6	105	103	15.2	25.8	210	17.6	18	0.93	3.9
	6.6	10	32	6	180	157	20.5	34	290	20.1	24	1.8	5.6
	9	13	40	6	419	377	37.8	60.5	687	37.2	42.5	3.9	9.9
	11	13	50	6	842	769	60.9	94.5	1340	41.7	54.1	6.7	15.5
	11	13	60	6	1220	1040	73.5	111.7	1600	53.1	68.4	8.8	22.3

Note) **M_A indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
Dimension U represents the dimension from the head of the hexagonal-socket-head type bolt to the spline nut end.
For details on the maximum lengths of ball spline shafts by accuracy, please see B-410.

Description of Each Option⇒A-509

Spline Shaft

Spline shafts are divided in shape into precision solid spline shaft, special spline shaft and hollow spline shaft (types K and N), as described on A-493.
Since production of a spline shaft with a specific shape is performed at your request, provide a drawing of the desired shaft shape when asking an estimate or placing an order.

[Sectional Shape of the Spline Shaft]

Table1 shows the sectional shape of a spline shaft. If the spline shaft ends need to be cylindrical, the minor diameter (ϕd) value should not be exceeded if possible.

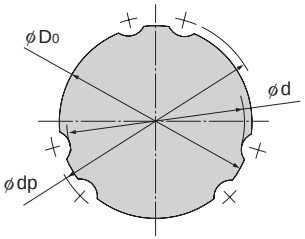


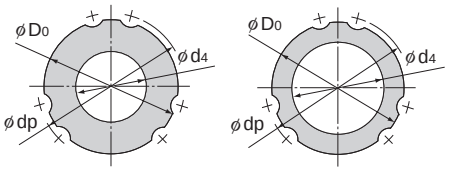
Table1 Sectional Shape of the Spline Shaft Unit: mm

Nominal shaft diameter	8	10	16	20	25	32	40	50	60
Minor diameter ϕ d	7	8.5	14.5	18.5	23	30	37.5	46.5	56.5
Major diameter ϕ D_0 h7	8	10	16	20	25	32	40	50	60
Ball center-to-center diameter ϕ dp	9.3	11.5	17.8	22.1	27.6	35.2	44.2	55.2	66.3
Mass (kg/m)	0.4	0.62	1.6	2.5	3.9	5.6	9.9	15.5	22.3

* The minor diameter ϕd must be a value at which no groove is left after machining.

[Hole Shape of the Standard Hollow Type Spline Shaft]

Table2 shows the hole shape of the standard hollow type spline shaft (types K and N).
Use this table when a requirement such as piping, wiring, air-vent or weight reduction needs to be met.



Type K (Thick) Type N (Thin)

Table2 Sectional Shape of the Standard Hollow Type Spline Shaft Unit: mm

Nominal shaft diameter		8	10	16	20	25	32	40	50	60
Major diameter ϕ D_0		8	10	16	20	25	32	40	50	60
Ball center-to-center diameter ϕ dp		9.3	11.5	17.8	22.1	27.6	35.2	44.2	55.2	66.3
Type K	Hole diameter ϕ d_4	3	4	7	10	12	18	22	25	32
	Mass(kg/m)	0.35	0.52	1.3	1.8	3	4.3	6.9	11.6	16
Type N	Hole diameter ϕ d_4	—	—	11	14	18	23	29	36	—
	Mass(kg/m)	—	—	0.8	1.3	1.9	3.1	4.7	7.4	—

Note) The standard hollow type Spline Shaft is divided into types K and N. Indicate "K" or "N" at the end of the model number to distinguish between them when placing an order.

[Chamfering of the Spline Shaft Ends]
For details,see B-382.

[Length of Imperfect Area of a Special Spline Shaft]
If the middle area or the end of a spline shaft is to be thicker than the minor diameter (ϕd), an imperfect spline area is required to secure a recess for grinding. Table3 shows the relationship between the length of the incomplete section (S) and the flange diameter (ϕdf).
(This table does not apply to overall length of 1,500 mm or greater. Contact THK for details.)

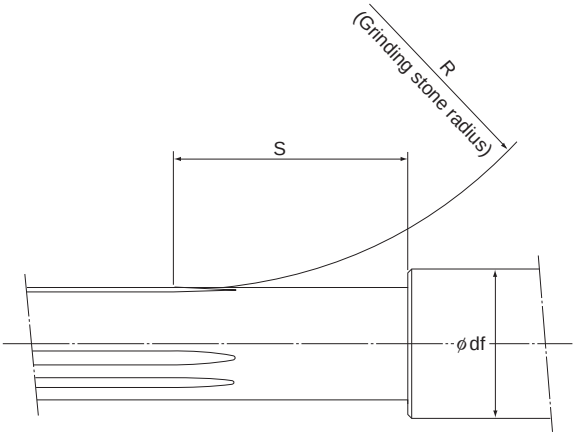


Table3 Length of Imperfect Spline Area: S Unit: mm

Flange diameter ϕdf / Nominal shaft diameter	6	8	10	13	16	20	25	30	40	50	60	80	100	120	140	160
8	—	16	24	30	35	—	—	—	—	—	—	—	—	—	—	—
10	—	—	17	27	32	37	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	21	36	46	54	—	—	—	—	—	—	—	—
20	—	—	—	—	—	21	38	48	62	—	—	—	—	—	—	—
25	—	—	—	—	—	—	23	39	56	67	—	—	—	—	—	—
32	—	—	—	—	—	—	—	24	49	62	72	—	—	—	—	—
40	—	—	—	—	—	—	—	—	27	50	63	81	—	—	—	—
50	—	—	—	—	—	—	—	—	—	29	51	74	89	—	—	—
60	—	—	—	—	—	—	—	—	—	—	28	56	71	82	—	—

Maximum Manufacturing Length by Accuracy

Table1 and Table2 show the maximum manufacturing lengths of ball spline shafts by accuracy.

Table1 Maximum Manufacturing Length of Models LBS, LBST, LBF, LBR, LBH, LBG and LBGT by Accuracy Unit: mm

Nominal shaft diameter	Accuracy		
	Normal grade (No symbol)	High accuracy grade (H)	Precision Grade (P)
6	200	150	100
8	600	200	150
10	600	400	300
15	1800	600	600
20	1800	700	700
25	3000	1400	1400
30	3000	1400	1400
40	3000	1400	1400
50	3000	1400	1400
60	3800	2500	2000
70	3800	2500	2000
85	3800	3000	3000
100	4000	3000	3000
120	3000	3000	3000
150	3000	3000	3000

Table2 Maximum Manufacturing Length of Models LT, LF, LTR and LTR-A by Accuracy Unit: mm

Nominal shaft diameter	Accuracy		
	Normal grade (No symbol)	High accuracy grade (H)	Precision Grade (P)
4	600	200	200
5	600	315	200
6	600	400	315
8	1000	500	400
10	1000	630	500
13	1000	800	630
16	2000	1000	1000
20	2000	1500	1000
25	3000	1500	1000
30	3000	1600	1250
40	3000	2000	1520
50	3000	2000	1500
60	4000	2000	2000
80	4000	2000	2000
100	4000	3000	3000

1. The length in the table represents the overall shaft length.
2. With standard hollow shaft type (K), the values in the table apply.
3. With standard hollow shaft type (N), the available maximum length for both the normal grade and the high accuracy grade is up to the length defined for the precision grade in the table.

Spline Nut

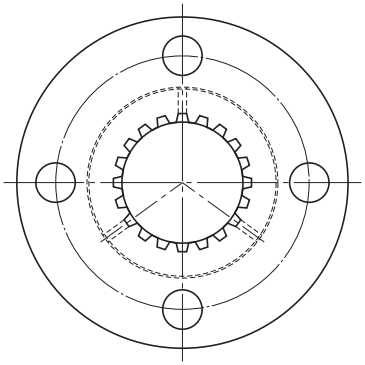
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model DPM



Spline Nut Model No.	Outer dimensions			Spline nut dimensions						
	Outer diameter		Length	Flange diameter						
	D	Tolerance h9	L	D_1	H	B	PCD	r	F	d
DPM 1220	22	0 −0.052	20	44	6	5.4	31	1.5	7	1.5
DPM 1230			30							
DPM 1520	22		20	44	6	5.4	31	1.5	7	1.5
DPM 1530			30							
DPM 1723	28		23	51	7	6.6	38	1.5	8	1.5
DPM 1735			35							
DPM 2028	32	0 −0.062	28	56	7	6.6	42	1.5	10.5	1.5
DPM 2040			40							
DPM 2536	36		36	61	8	6.6	47	2	14	2
DPM 2550			50							
DPM 3040	44		40	76	10	9	58	2	15	2
DPM 3056			56							
DPM 3544	52	0 −0.074	44	84	10	9	66	2.5	17	2.5
DPM 3560			60							
DPM 4050	58		50	98	12	11	76	2.5	19	3
DPM 4068			68							
DPM 4555	64		55	104	12	11	80	2.5	21.5	3
DPM 4575			75							
DPM 5060	68		60	109	12	11	85	2.5	24	3.5
DPM 5080			80							

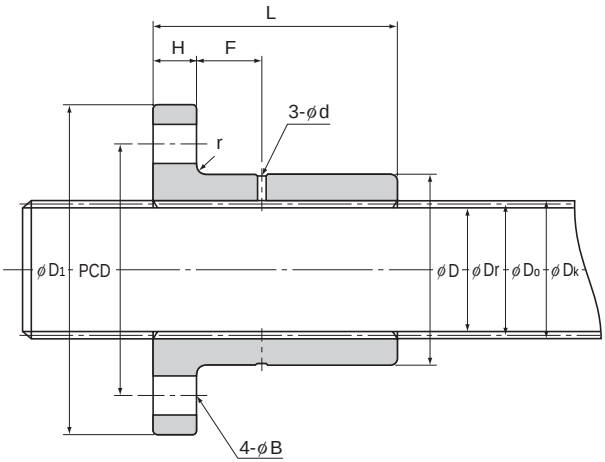
Note) The dynamic permissible torque (T) indicates the torque at which the contact surface pressure on the spline teeth is 9.8 N/mm^2.
Clearance in the rotational direction: $\alpha \leqq 20'$ MAX

Model number coding

Combination of spline nut and spline shaft

2 DPM2040 +360L

- 2: Number of spline nuts used on the same shaft
- DPM2040: Model No. of spline nut
- +360L: Overall spline shaft length (in mm)



Unit: mm

Spline shaft Model No.	Spline details				Standard shaft length	Maximum shaft length	Dynamic permissible torque T^{Note} N-m	Mass	
	Pitch diameter D_0	Major diameter D_k	Minor diameter D_r	Number of teeth Z				Spline Nut g	Spline Shaft kg/m
SS 12	12	12.8	10.9	16	1500	1500	17.6 26.5	80 90	0.9
SS 15	15	16.1	13.5	16	1500	2000	30.4 46.1	70 80	1.4
SS 17	17	18.2	15.4	16	1500	2000	43.1 65.7	120 150	1.7
SS 20	20	21.5	18.3	16	1500	3200	70.6 100	160 200	2.5
SS 25	25	26.9	22.6	16	1500	3200	152 211	220 270	3.8
SS 30	30	31.8	28.2	20	1500	3200	212 297	400 480	5.5
SS 35	35	37.1	32.8	20	1500	3200	325 443	560 670	7.5
SS 40	40	42.4	37.5	20	1500	3200	480 673	830 970	9.8
SS 45	45	47.7	42.1	20	1500	3200	680 927	980 1110	12.4
SS 50	50	53	46.8	20	1500	3200	910 1220	1080 1290	15.4

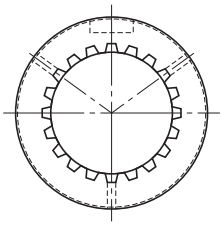
Model number coding

Spline shaft

SS20 +1500L

- SS20: Model number of spline shaft
- +1500L: Overall spline shaft length (in mm)

Model DP



Spline Nut Model No.	Outer dimensions			Spline nut dimensions					
	Outer diameter		L	Keyway dimensions					
	D	Tolerance h9	0 −0.3	b	Tolerance N9	t	ℓ	d	r
DP 12	22	0 −0.052	22	4	0 −0.030	2	16	1.5	1
DP 15	22		22	4		2	16	1.5	1
DP 17	28		26	5		2.5	18	1.5	1
DP 20	32	0 −0.062	31	7	0 −0.036	2.5	22	1.5	1
DP 25	36		40	7		2.5	26	2	1
DP 30	44		45	10		4	32	2	1.5
DP 35	52	0 −0.074	49	12	0 −0.043	4.5	40	2.5	1.5
DP 40	58		57	15		5	42	3	1.5
DP 45	64		62	15		5	48	3	1.5
DP 50	68		67	15		5	52	3.5	1.5

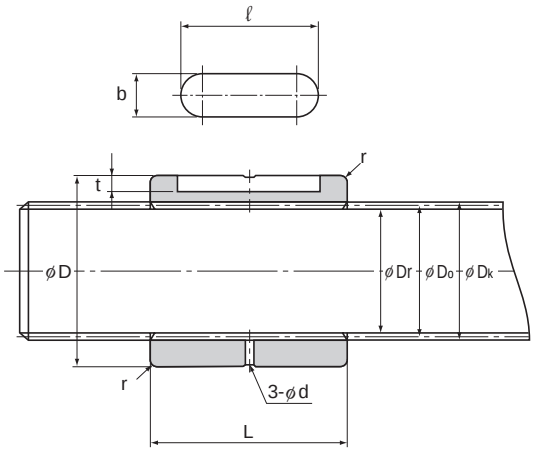
Note) The dynamic permissible torque (T) indicates the torque at which the contact surface pressure on the spline teeth is 9.8 N/mm².
Clearance in the rotational direction: $\alpha \leqq 20'$ MAX

Model number coding

Combination of spline nut and spline shaft

2 DP20 +360L

- 2: Number of spline nuts used on the same shaft
- DP20: Model No. of spline nut
- +360L: Overall spline shaft length (in mm)



Unit: mm

Model No.	Spline details				Standard shaft length	Maximum shaft length	Dynamic permissible torque	Mass	
	Pitch diameter D_0	Major diameter D_k	Minor diameter D_r	Number of teeth Z			T^{Note} N-m	Spline Nut g	Spline Shaft kg/m
SS 12	12	12.8	10.9	16	1500	1500	19.6	40	0.9
SS 15	15	16.1	13.5	16	1500	2000	33.3	30	1.4
SS 17	17	18.2	15.4	16	1500	2000	48	65	1.7
SS 20	20	21.5	18.3	16	1500	3200	77.5	100	2.5
SS 25	25	26.9	22.6	16	1500	3200	169	135	3.8
SS 30	30	31.8	28.2	20	1500	3200	238	230	5.5
SS 35	35	37.1	32.8	20	1500	3200	362	360	7.5
SS 40	40	42.4	37.5	20	1500	3200	547	510	9.8
SS 45	45	47.7	42.1	20	1500	3200	767	640	12.4
SS 50	50	53	46.8	20	1500	3200	1020	710	15.4

Model number coding

Spline shaft

SS20 +1500L

Overall spline shaft length (in mm)

Model number of spline shaft

Linear Bushing

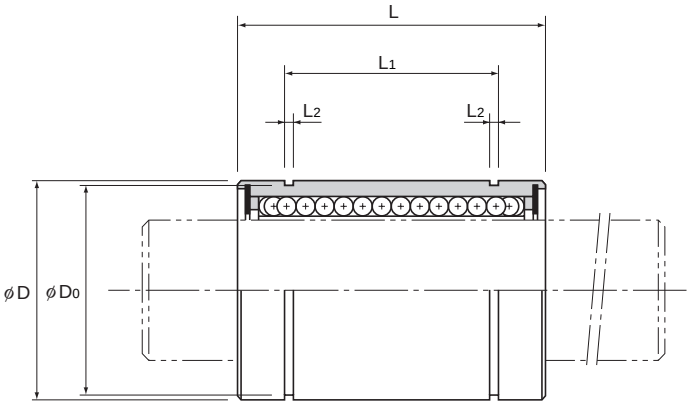
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model LM

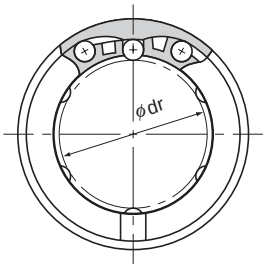


Model No.			Ball rows	Main						
				Inscribed bore diameter			Outer diameter		Length	
					Tolerance			Tolerance		
Standard type	Clearance-adjustable type	Open type		dr	Precision	Upper	D	Precision/ high	L	Tolerance
LM 3	—	—	4	3	0 −0.005	0 −0.008	7	0 −0.009	10	0 −0.12
LM 4	—	—	4	4			8		12	
LM 5	—	—	4	5			10		15	
LM 6	LM 6-AJ	—	4	6	0 −0.006	0 −0.009	12	0 −0.011	19	0 −0.2
LM 8S	LM 8S-AJ	—	4	8			15		17	
LM 8	LM 8-AJ	—	4	8			15		24	
LM 10	LM 10-AJ	—	4	10			19	0 −0.013	29	
LM 12	LM 12-AJ	LM 12-OP	4	12			21		30	
LM 13	LM 13-AJ	LM 13-OP	4	13			23		32	
LM 16	LM 16-AJ	LM 16-OP	5	16			28		37	
LM 20	LM 20-AJ	LM 20-OP	5	20	0 −0.007	0 −0.010	32	0 −0.016	42	
LM 25	LM 25-AJ	LM 25-OP	6	25			40		59	0 −0.3
LM 30	LM 30-AJ	LM 30-OP	6	30			45		64	
LM 35	LM 35-AJ	LM 35-OP	6	35	0 −0.008	0 −0.012	52	0 −0.019	70	
LM 40	LM 40-AJ	LM 40-OP	6	40			60		80	
LM 50	LM 50-AJ	LM 50-OP	6	50			80	0 −0.022	100	
LM 60	LM 60-AJ	LM 60-OP	6	60	0 −0.009	0 −0.015	90		110	

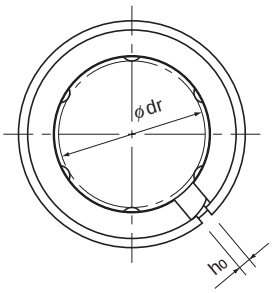
Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If the ambient temperature exceeds 80℃, use the type equipped with a metal retainer (model LM-GA).
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LM13 UU
Seal attached on both ends of the nut

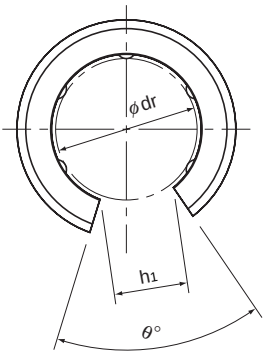
The accuracy of clearance-adjustable types (-AJ) and open types (-OP) in inscribed bore diameter and outer diameter indicates the value before division.



Model LM



Model LM-AJ



Model LM-OP

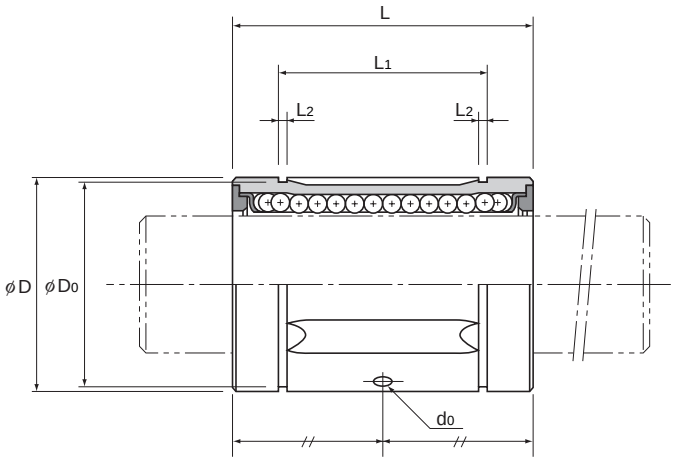
Unit: mm

dimensions								Eccentricity (max) μm		Radial clearance tolerance	Basic load rating		Mass
	L_1	Tolerance	L_2	D_0	h_0	h_1	θ°	Precision	Upper	μm	C N	C_0 N	g
	—	—	—	—	—	—	—	4	8	−2	88.2	108	1.4
	—	—	—	—	—	—	—	4	8	−3	88.2	127	1.9
	10.2	0 −0.2	1.1	9.6	—	—	—	4	8	−3	167	206	4
	13.5		1.1	11.5	1	—	—	8	12	−5	206	265	8
	11.5		1.1	14.3	1	—	—	8	12	−5	176	225	11
	17.5		1.1	14.3	1	—	—	8	12	−5	265	402	16
	22		1.3	18	1	—	—	8	12	−5	373	549	30
	23		1.3	20	1.5	8	80	8	12	−5	412	598	31.5
	23		1.3	22	1.5	9	80	8	12	−7	510	775	43
	26.5		1.6	27	1.5	11	60	8	12	−7	775	1180	69
	30.5		1.6	30.5	1.5	11	60	10	15	−9	863	1370	87
	41	0 −0.3	1.85	38	2	12	50	10	15	−9	980	1570	220
	44.5		1.85	43	2.5	15	50	10	15	−9	1570	2750	250
	49.5		2.1	49	2.5	17	50	12	20	−13	1670	3140	390
	60.5		2.1	57	3	20	50	12	20	−13	2160	4020	585
	74		2.6	76.5	3	25	50	12	20	−13	3820	7940	1580
	85		3.15	86.5	3	30	50	17	25	−16	4710	10000	2000

Note) When using the Linear Bushing on a single shaft, use two or more units (instead of one unit) on the same shaft to avoid a moment load, and secure a large distance between the units.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LM-GA (Metal Retainer Type)

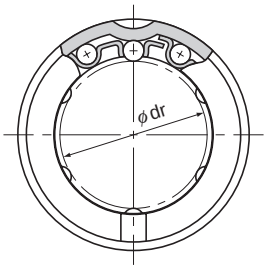


Model No.			Ball rows	Main						
				Inscribed bore diameter			Outer diameter		Length	
					Tolerance			Tolerance		
Standard type	Clearance-adjustable type	Open type		dr	Precision	Upper	D	Precision/ high	L	Tolerance
LM 6GA	—	—	3	6	0 −0.006	0 −0.009	12	0 −0.011	19	0 −0.2
LM 8SGA	—	—	3	8			15		17	
LM 8GA	—	—	3	8			15		24	
LM 10GA	—	—	3	10			19	0 −0.013	29	
LM 12GA	LM 12GA-AJ	LM 12GA-OP	4	12			21		30	
LM 13GA	LM 13GA-AJ	LM 13GA-OP	4	13			23		32	
LM 16GA	LM 16GA-AJ	LM 16GA-OP	4	16			28		37	
LM 20GA	LM 20GA-AJ	LM 20GA-OP	5	20	0 −0.007	0 −0.010	32	0 −0.016	42	
LM 25GA	LM 25GA-AJ	LM 25GA-OP	5	25			40		59	0 −0.3
LM 30GA	LM 30GA-AJ	LM 30GA-OP	6	30			45		64	
LM 35GA	LM 35GA-AJ	LM 35GA-OP	6	35	0 −0.008	0 −0.012	52	0 −0.019	70	
LM 38GA	LM 38GA-AJ	LM 38GA-OP	6	38			57		76	
LM 40GA	LM 40GA-AJ	LM 40GA-OP	6	40			60		80	
LM 50GA	LM 50GA-AJ	LM 50GA-OP	6	50			80	0 −0.022	100	
LM 60GA	LM 60GA-AJ	LM 60GA-OP	6	60	0 −0.009	0 −0.015	90		110	
LM 80GA	LM 80GA-AJ	LM 80GA-OP	6	80			120		140	0 −0.4
LM 100GA	LM 100GA-AJ	LM 100GA-OP	6	100	0 −0.010	0 −0.020	150	0 −0.025	175	
LM 120A	LM 120A-AJ	LM 120A-OP	8	120			180		200	

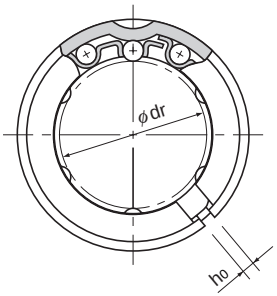
Note) If requiring a type equipped with a seal, indicate it when placing an order. (seal heat resistance: 80℃.)

(Example) LM50GA UU
Seal attached on both ends of the nut

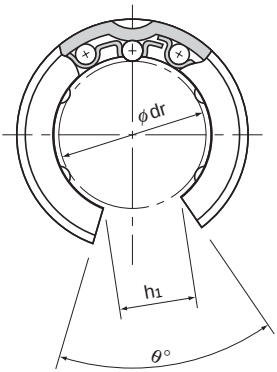
The accuracy of clearance-adjustable types (-AJ) and open types (-OP) in inscribed bore diameter and outer diameter indicates the value before division.



Model LM-GA



Model LM-GA-AJ



Model LM-GA-OP

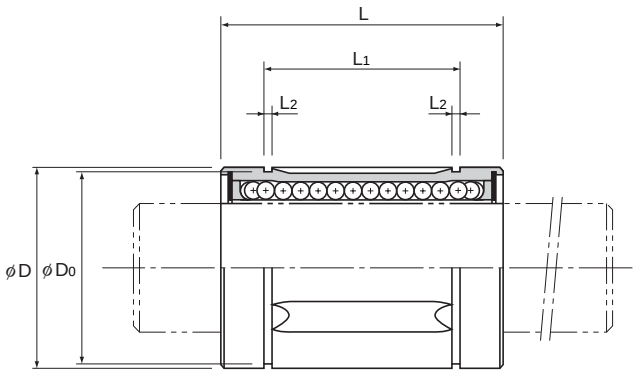
Unit: mm

dimensions								Greasing hole	Eccentricity (max) μm		Radial clearance tolerance	Basic load rating		Mass
	L_1	Tolerance	L_2	D_0	h_0	h_1	θ°	d_0	Precision	Upper	μm	C N	C_0 N	g
	13.5	0 −0.2	1.1	11.5	—	—	—	—	8	12	−5	206	265	8
	11.5		1.1	14.3	—	—	—	—	8	12	−5	176	225	11
	17.5		1.1	14.3	—	—	—	—	8	12	−5	265	402	16
	22		1.3	18	—	—	—	2	8	12	−5	373	549	30
	23		1.3	20	1.5	7.5	80	2	8	12	−5	412	598	31.5
	23		1.3	22	1.5	9	80	2	8	12	−7	510	775	43
	26.5		1.6	27	1.5	11	60	2.3	8	12	−7	775	1180	69
	30.5		1.6	30.5	2	11	60	2.3	10	15	−9	863	1370	87
	41	0 −0.3	1.85	38	2	13	60	3	10	15	−9	980	1570	220
	44.5		1.85	43	2.5	15	50	3	10	15	−9	1570	2750	250
	49.5		2.1	49	2.5	17	50	3	12	20	−13	1670	3140	390
	58.5		2.1	54.5	3	18	50	3	12	20	−13	2160	4020	565
	60.5		2.1	57	3	20	50	3	12	20	−13	2160	4020	585
	74		2.6	76.5	3	25	50	3	12	20	−13	3820	7940	1580
	85		3.15	86.5	3	30	50	4	17	25	−16	4710	10000	2000
	105.5	0 −0.4	4.15	116	3	40	50	4	17	25	−16	7350	16000	4520
	125.5		4.15	145	3	50	50	4	20	30	−20	14100	34800	8600
	158.6		4.15	175	4	85	80	5	20	30	−25	16400	40000	15000

Note) When using the Linear Bushing on a single shaft, use two or more units (instead of one unit) on the same shaft to avoid a moment load, and secure a large distance between the units.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LM-MG (Stainless Steel Type)



Model No.			Ball	Main						
				Inscribed bore diameter			Outer diameter		Length	
					Tolerance			Tolerance		
Standard type	Clearance-adjustable type	Open type	rows	dr	Precision	Upper	D	Precision/ high	L	Tolerance
LM 3M	—	—	4	3	0 −0.005	0 −0.008	7	0 −0.009	10	0 −0.12
LM 4M	—	—	4	4			8		12	
LM 5M	—	—	4	5			10		15	
✻ LM 6MG	LM 6MG-AJ	—	4	6	0 −0.006	0 −0.009	12	0 −0.011	19	0 −0.2
✻ LM 8SMG	LM 8SMG-AJ	—	4	8			15		17	
✻ LM 8MG	✻ LM 8MG-AJ	—	4	8			15		24	
✻ LM 10MG	✻ LM 10MG-AJ	—	4	10			19	0 −0.013	29	
✻ LM 12MG	✻ LM 12MG-AJ	—	4	12			21		30	
✻ LM 13MG	✻ LM 13MG-AJ	✻ LM 13MG-OP	4	13			23		32	
✻ LM 16MG	✻ LM 16MG-AJ	✻ LM 16MG-OP	4	16			28		37	
✻ LM 20MG	✻ LM 20MG-AJ	✻ LM 20MG-OP	5	20	0 −0.007	0 −0.010	32	0 −0.016	42	0 −0.3
✻ LM 25MG	✻ LM 25MG-AJ	✻ LM 25MG-OP	5	25			40		59	
✻ LM 30MG	✻ LM 30MG-AJ	✻ LM 30MG-OP	6	30			45		64	
✻ LM 35MG	✻ LM 35MG-AJ	✻ LM 35MG-OP	6	35	0 −0.008	0 −0.012	52	0 −0.019	70	
✻ LM 40MG	✻ LM 40MG-AJ	✻ LM 40MG-OP	6	40			60		80	

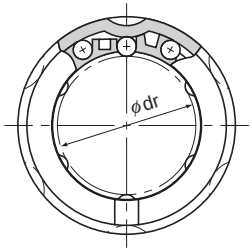
Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If the ambient temperature exceeds 80℃, use the type equipped with a metal retainer and indicate "A" at the end of the model number.
(For those marked with ✻ in the table, metal retainers are available.)
(Metal retainer types of models LM6MG, 8SMG and 8MG each have 3 rows of balls.)

(Example) LM30MG A
A — High temperature symbol

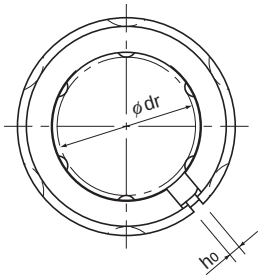
If requiring a type equipped with a seal, indicate it when placing an order. (seal heat resistance: 80℃.)
For an open type, only type A is available.

(Example) LM30MG UU
UU — Seal attached on both ends of the nut

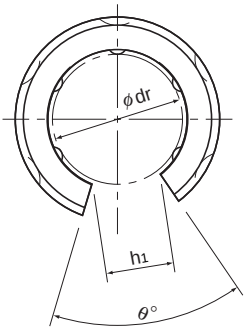
The accuracy of clearance-adjustable types (-AJ) and open types (-OP) in inscribed bore diameter and outer diameter indicates the value before division.



Model LM-MG



Model LM-MG-AJ



Model LM-MG-OP

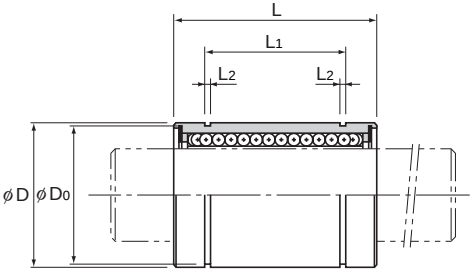
Unit: mm

dimensions							Eccentricity (max) μm		Radial clearance tolerance	Basic load rating		Mass
L_1	Tolerance	L_2	D_0	h_0	h_1	θ°	Precision	Upper	μm	C N	C_0 N	g
—	—	—	—	—	—	—	4	8	−2	88.2	108	1.4
—	—	—	—	—	—	—	4	8	−3	88.2	127	1.9
10.2	0 −0.2	1.1	9.6	—	—	—	4	8	−3	167	206	4
13.5		1.1	11.5	1	—	—	8	12	−5	206	265	8
11.5		1.1	14.3	1	—	—	8	12	−5	176	225	11
17.5		1.1	14.3	1	—	—	8	12	−5	265	402	16
22		1.3	18	1	—	—	8	12	−5	373	549	30
23		1.3	20	1.5	—	—	8	12	−5	412	598	31.5
23		1.3	22	1.5	9	80	8	12	−7	510	775	43
26.5		1.6	27	1.5	11	80	8	12	−7	775	1180	69
30.5		1.6	30.5	1.5	11	60	10	15	−9	863	1370	87
41	0 −0.3	1.85	38	2	12	50	10	15	−9	980	1570	220
44.5		1.85	43	2.5	15	50	10	15	−9	1570	2750	250
49.5		2.1	49	2.5	17	50	12	20	−13	1670	3140	390
60.5		2.1	57	3	20	50	12	20	−13	2160	4020	585

Note) Since the nut and the balls use stainless steel, these models are highly resistant to corrosion and environment.
Stainless-steel type does not have an oil hole (OA type specification is required).
When using the Linear Bushing on a single shaft, use two or more units (instead of one unit) on the same shaft to avoid a moment load, and secure a large distance between the units.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LME



Model No.			Ball rows	Main					
				Inscribed bore diameter		Outer diameter		Length	
Standard type	Clearance-adjustable type	Open type		dr	Tolerance	D	Tolerance	L	Tolerance
LME 5	LME 5-AJ	—	4	5	+0.008 0	12	0 −0.008	22	0 −0.2
LME 8	LME 8-AJ	—	4	8		16		25	
LME 12	LME 12-AJ	LME 12-OP	4	12		22	0 −0.009	32	
LME 16	LME 16-AJ	LME 16-OP	5	16	+0.009 −0.001	26		36	
LME 20	LME 20-AJ	LME 20-OP	5	20		32	0 −0.011	45	
LME 25	LME 25-AJ	LME 25-OP	6	25	+0.011 −0.001	40		58	0 −0.3
LME 30	LME 30-AJ	LME 30-OP	6	30		47		68	
LME 40	LME 40-AJ	LME 40-OP	6	40	+0.013 −0.002	62	0 −0.013	80	
LME 50	LME 50-AJ	LME 50-OP	6	50		75		100	
LME 60	LME 60-AJ	LME 60-OP	6	60		90	0 −0.015	125	0 −0.4
LME 80	LME 80-AJ	LME 80-OP	6	80	+0.016 −0.004	120		165	

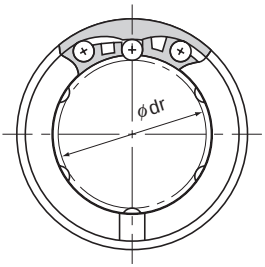
Note) Since Linear Bushing models LME50 or smaller models are incorporated with a synthetic resin retainer, do not use them at temperature exceeding 80℃.
If the ambient temperature exceeds 80℃, use the type equipped with a metal retainer and indicate "A" at the end of the model number.

(Example) LME20G A
High temperature symbol

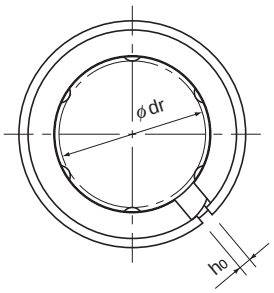
If requiring a type equipped with a seal, indicate it when placing an order. (seal heat resistance: 80℃.)

(Example) LME16 UU
Seal attached on both ends of the nut

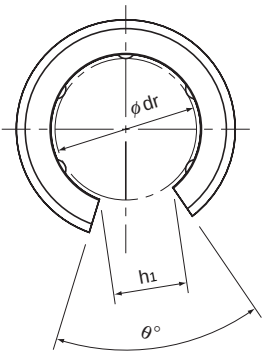
The accuracy of clearance-adjustable types (-AJ) and open types (-OP) in inscribed bore diameter and outer diameter indicates the value before division.



Model LME



Model LME-AJ



Model LME-OP

Unit: mm

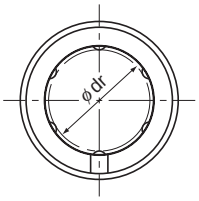
dimensions								Eccentricity (max)	Radial clearance tolerance	Basic load rating		Mass
	L_1	Tolerance	L_2	D_0	h_0	h_1	θ°	μm	μm	C N	C_0 N	g
	14.5	0 −0.2	1.1	11.5	1	—	—	12	−5	206	265	11
	16.5		1.1	15.2	1	—	—	12	−5	265	402	20
	22.9		1.3	21	1.5	7.5	78	12	−7	510	775	41
	24.9		1.3	24.9	1.5	10	78	12	−7	775	1180	57
	31.5		1.6	30.3	2	10	60	15	−9	863	1370	91
	44.1	0 −0.3	1.85	37.5	2	12.5	60	15	−9	980	1570	215
	52.1		1.85	44.5	2	12.5	50	15	−9	1570	2750	325
	60.6		2.15	59	3	16.8	50	17	−13	2160	4020	705
	77.6		2.65	72	3	21	50	17	−13	3820	7940	1130
	101.7	0 −0.4	3.15	86.5	3	27.2	54	20	−16	4710	10000	2220
	133.7		4.15	116	3	36.3	54	20	−16	7350	16000	5140

Note) If a metal retainer is used, the Linear Bushing has the shape as shown below.
When using the Linear Bushing on a single shaft, use two or more units (instead of one unit) on the same shaft to avoid a moment load, and secure a large distance between the units.

Model LME-GA

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LM-L

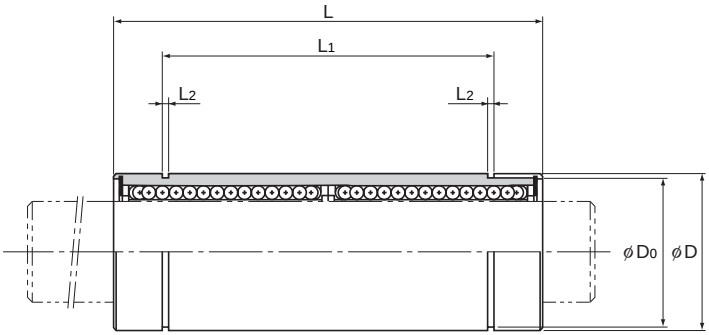


Model LM-L

Model No. Standard type	Ball rows	Main					
		Inscribed bore diameter		Outer diameter		Length	
		dr	Tolerance	D	Tolerance	L	Tolerance
LM 3L	4	3	0 −0.010	7	0 −0.013	19	0 −0.3
LM 4L	4	4		8		23	
LM 5L	4	5		10		29	
LM 6L	4	6		12		35	
LM 8L	4	8		15		45	
LM 10L	4	10		19	0 −0.016	55	
LM 12L	4	12		21		57	
LM 13L	4	13		23		61	
LM 16L	5	16		28		70	
LM 20L	5	20	0 −0.012	32	0 −0.019	80	
LM 25L	6	25		40		112	0 −0.4
LM 30L	6	30		45		123	
LM 35L	6	35	0 −0.015	52	0 −0.022	135	
LM 40L	6	40		60		154	
LM 50L	6	50		80		192	
LM 60L	6	60	0 −0.020	90	0 −0.025	211	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LM13L UU
Seal attached on both ends of the nut



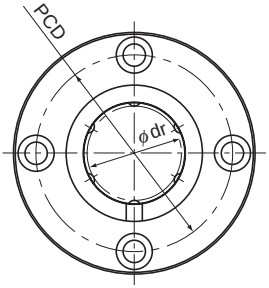
Unit: mm

dimensions				Eccentricity (max)	Radial clearance tolerance	Basic load rating		Mass
L_1	Tolerance	L_2	D_0	μm	μm	C N	C_0 N	g
—	—	—	—	10	−2	139	216	3
—		—	—	10	−3	139	254	4
20	0 −0.3	1.1	9.6	10	−3	263	412	8
27		1.1	11.5	15	−5	324	529	16
35		1.1	14.3	15	−5	431	784	31
44		1.3	18	15	−5	588	1100	62
46		1.3	20	15	−5	657	1200	80
46		1.3	22	15	−7	814	1570	90
53		1.6	27	15	−7	1230	2350	145
61		1.6	30.5	20	−9	1400	2750	180
82	0 −0.4	1.85	38	20	−9	1560	3140	440
89		1.85	43	20	−9	2490	5490	580
99		2.1	49	25	−13	2650	6270	795
121		2.1	57	25	−13	3430	8040	1170
148		2.6	76.5	25	−13	6080	15900	3100
170		3.15	86.5	25	−16	7650	20000	3500

Note) A stainless steel type is also available. Contact THK for details.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMF

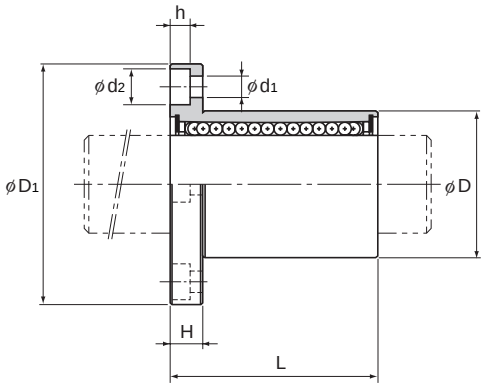


Model LMF

Model No.	Ball rows	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type		dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMF 6	4	6	0 −0.009	12	0 −0.011	19	0 −0.2	28	0 −0.2
LMF 8S	4	8		15		17		32	
LMF 8	4	8		15		24		32	
LMF 10	4	10		19	0 −0.013	29		39	
LMF 12	4	12		21		30		42	
LMF 13	4	13		23		32		43	
LMF 16	5	16		28		37		48	
LMF 20	5	20	0 −0.010	32	0 −0.016	42		54	
LMF 25	6	25		40		59	0 −0.3	62	
LMF 30	6	30		45		64		74	
LMF 35	6	35	0 −0.012	52	0 −0.019	70		82	
LMF 40	6	40		60		80		96	0 −0.3
LMF 50	6	50		80		100		116	
LMF 60	6	60	0 −0.015	90	0 −0.022	110		134	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMF25 UU
Seal attached on both ends of the nut

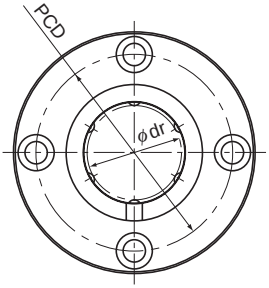


Unit: mm

				Flange perpendicularity	Eccentricity (max)	Radial clearance tolerance	Basic load rating		
	H	PCD	Mounting hole $d_1 \times d_2 \times h$	μm	μm	μm	C N	C_0 N	Mass g
	5	20	3.4×6.5×3.3	12	12	−5	206	265	26.5
	5	24	3.4×6.5×3.3	12	12	−5	176	225	34
	5	24	3.4×6.5×3.3	12	12	−5	265	402	40
	6	29	4.5×8×4.4	12	12	−5	373	549	78
	6	32	4.5×8×4.4	12	12	−5	412	598	76
	6	33	4.5×8×4.4	12	12	−7	510	775	94
	6	38	4.5×8×4.4	12	12	−7	775	1180	134
	8	43	5.5×9.2×5.4	15	15	−9	863	1370	180
	8	51	5.5×9.2×5.4	15	15	−9	980	1570	340
	10	60	6.6×11×6.5	15	15	−9	1570	2750	460
	10	67	6.6×11×6.5	20	20	−13	1670	3140	795
	13	78	9×14×8.6	20	20	−13	2160	4020	1054
	13	98	9×14×8.6	20	20	−13	3820	7940	2200
	18	112	11×17.5×10.8	25	25	−13	4710	10000	2960

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMF-M (Stainless Steel Type)

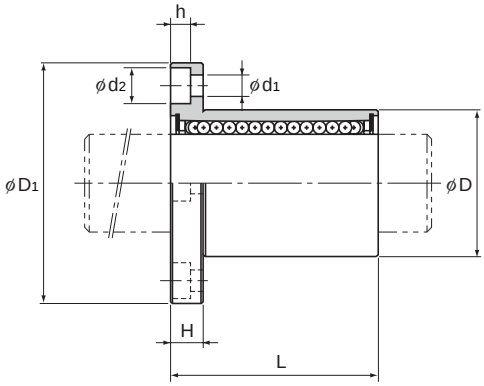


Model LMF-M

Model No.	Ball rows	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type		dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMF 6M	4	6	0 −0.009	12	0 −0.011	19	0 −0.2	28	0 −0.2
LMF 8SM	4	8		15		17		32	
LMF 8M	4	8		15		24		32	
LMF 10M	4	10		19	0 −0.013	29		39	
LMF 12M	4	12		21		30		42	
LMF 13M	4	13		23		32		43	
LMF 16M	5	16		28		37		48	
LMF 20M	5	20	0 −0.010	32	0 −0.016	42	0 −0.3	54	
LMF 25M	6	25		40		59		62	
LMF 30M	6	30		45		64		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMF20M UU
Seal attached on both ends of the nut



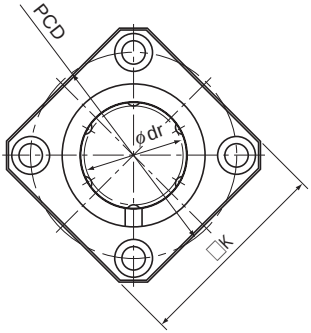
Unit: mm

				Flange perpendicularity	Eccentricity (max)	Radial clearance tolerance	Basic load rating		
	H	PCD	Mounting hole $d_1 \times d_2 \times h$	μm	μm	μm	C N	C_0 N	Mass g
	5	20	3.4×6.5×3.3	12	12	−5	206	265	26.5
	5	24	3.4×6.5×3.3	12	12	−5	176	225	34
	5	24	3.4×6.5×3.3	12	12	−5	265	402	40
	6	29	4.5×8×4.4	12	12	−5	373	549	78
	6	32	4.5×8×4.4	12	12	−5	412	598	76
	6	33	4.5×8×4.4	12	12	−7	510	775	94
	6	38	4.5×8×4.4	12	12	−7	775	1180	134
	8	43	5.5×9.2×5.4	15	15	−9	863	1370	180
	8	51	5.5×9.2×5.4	15	15	−9	980	1570	340
	10	60	6.6×11×6.5	15	15	−9	1570	2750	460

Note) Since the nut and the balls use stainless steel, these models are highly resistant to corrosion and environment.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMK

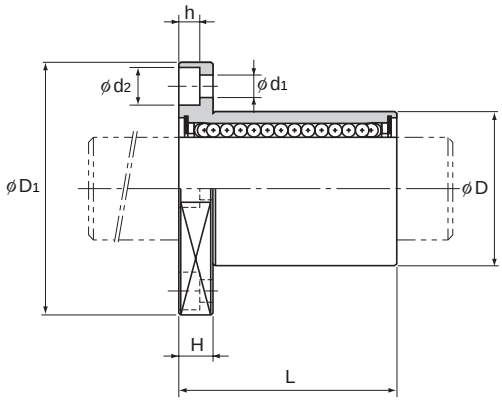


Model LMK

Model No.	Ball rows	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type		dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMK 6	4	6	0 −0.009	12	0 −0.011	19	0 −0.2	28	0 −0.2
LMK 8S	4	8		15		17		32	
LMK 8	4	8		15		24		32	
LMK 10	4	10		19	0 −0.013	29		39	
LMK 12	4	12		21		30		42	
LMK 13	4	13		23		32		43	
LMK 16	5	16		28		37		48	
LMK 20	5	20	0 −0.010	32	0 −0.016	42		54	
LMK 25	6	25		40		59	0 −0.3	62	
LMK 30	6	30		45		64		74	
LMK 35	6	35	0 −0.012	52	0 −0.019	70		82	
LMK 40	6	40		60		80		96	0 −0.3
LMK 50	6	50		80		100		116	
LMK 60	6	60	0 −0.015	90	0 −0.022	110		134	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMK13 UU
Seal attached on both ends of the nut

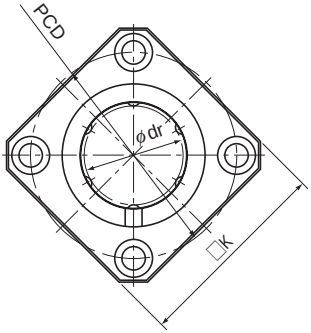


Unit: mm

					Flange perpendicularity	Eccentricity (max)	Radial clearance tolerance	Basic load rating		
	K	H	PCD	Mounting hole $d_1 \times d_2 \times h$	µm	µm	µm	C N	C_0 N	Mass g
	22	5	20	3.4×6.5×3.3	12	12	−5	206	265	18.5
	25	5	24	3.4×6.5×3.3	12	12	−5	176	225	23
	25	5	24	3.4×6.5×3.3	12	12	−5	265	402	29
	30	6	29	4.5×8×4.4	12	12	−5	373	549	61
	32	6	32	4.5×8×4.4	12	12	−5	412	598	56
	34	6	33	4.5×8×4.4	12	12	−7	510	775	75
	37	6	38	4.5×8×4.4	12	12	−7	775	1180	104
	42	8	43	5.5×9.2×5.4	15	15	−9	863	1370	145
	50	8	51	5.5×9.2×5.4	15	15	−9	980	1570	300
	58	10	60	6.6×11×6.5	15	15	−9	1570	2750	375
	64	10	67	6.6×11×6.5	20	20	−13	1670	3140	692
	75	13	78	9×14×8.6	20	20	−13	2160	4020	864
	92	13	98	9×14×8.6	20	20	−13	3820	7940	2020
	106	18	112	11×17.5×10.8	25	25	−13	4710	10000	2520

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMK-M (Stainless Steel Type)

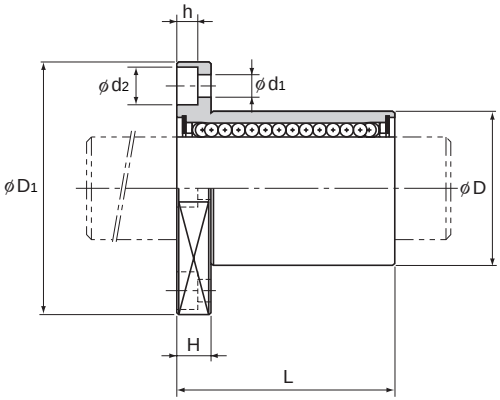


Model LMK-M

Model No.	Ball rows	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type		dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMK 6M	4	6	0 −0.009	12	0 −0.011	19	0 −0.2	28	0 −0.2
LMK 8SM	4	8		15		17		32	
LMK 8M	4	8		15		24		32	
LMK 10M	4	10		19	0 −0.013	29		39	
LMK 12M	4	12		21		30		42	
LMK 13M	4	13		23		32		43	
LMK 16M	5	16		28		37		48	
LMK 20M	5	20	0 −0.010	32	0 −0.016	42	0 −0.3	54	
LMK 25M	6	25		40		59		62	
LMK 30M	6	30		45		64		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMK25M UU
Seal attached on both ends of the nut



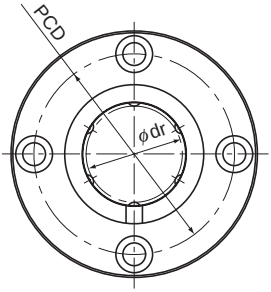
Unit: mm

					Flange perpendicularity	Eccentricity (max)	Radial clearance tolerance	Basic load rating		
	K	H	PCD	Mounting hole $d_1 \times d_2 \times h$	µm	µm	µm	C N	C_0 N	Mass g
	22	5	20	3.4×6.5×3.3	12	12	−5	206	265	18.5
	25	5	24	3.4×6.5×3.3	12	12	−5	176	225	23
	25	5	24	3.4×6.5×3.3	12	12	−5	265	402	29
	30	6	29	4.5×8×4.4	12	12	−5	373	549	61
	32	6	32	4.5×8×4.4	12	12	−5	412	598	56
	34	6	33	4.5×8×4.4	12	12	−7	510	775	75
	37	6	38	4.5×8×4.4	12	12	−7	775	1180	104
	42	8	43	5.5×9.2×5.4	15	15	−9	863	1370	145
	50	8	51	5.5×9.2×5.4	15	15	−9	980	1570	300
	58	10	60	6.6×11×6.5	15	15	−9	1570	2750	375

Note) Since the nut and the balls use stainless steel, these models are highly resistant to corrosion and environment.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMF-L

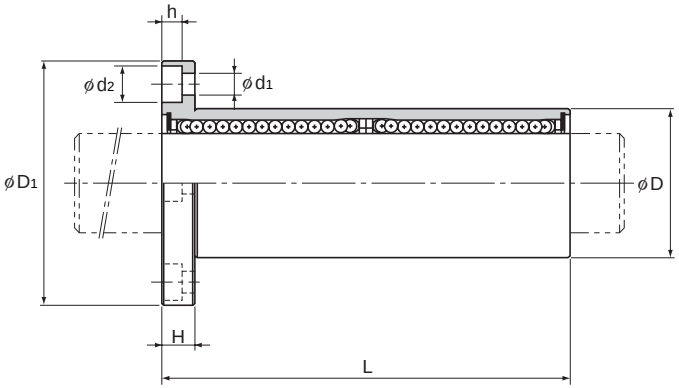


Model LMF-L

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMF 6L	4	6	0 −0.010	12	0 −0.013	35	0 −0.3	28	0 −0.2
LMF 8L	4	8		15		45		32	
LMF 10L	4	10		19	0 −0.016	55		39	
LMF 12L	4	12		21		57		42	
LMF 13L	4	13		23		61		43	
LMF 16L	5	16		28		70		48	
LMF 20L	5	20	0 −0.012	32	0 −0.019	80		54	
LMF 25L	6	25		40		112	0 −0.4	62	
LMF 30L	6	30		45		123		74	
LMF 35L	6	35	0 −0.015	52	0 −0.022	135		82	
LMF 40L	6	40		60		154		96	0 −0.3
LMF 50L	6	50		80		192		116	
LMF 60L	6	60	0 −0.020	90	0 −0.025	211		134	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMF35L UU
Seal attached on both ends of the nut

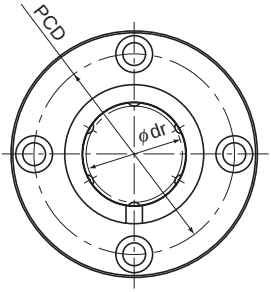


Unit: mm

				Flange perpendicularity	Eccentricity (max)	Radial clearance	Basic load rating		
			Mounting hole			tolerance	C	C_0	Mass
	H	PCD	$d_1 \times d_2 \times h$	μm	μm	μm	N	N	g
	5	20	3.4×6.5×3.3	15	15	−5	324	529	32
	5	24	3.4×6.5×3.3	15	15	−5	431	784	53
	6	29	4.5×8×4.4	15	15	−5	588	1100	105
	6	32	4.5×8×4.4	15	15	−5	657	1200	100
	6	33	4.5×8×4.4	15	15	−7	814	1570	130
	6	38	4.5×8×4.4	15	15	−7	1230	2350	187
	8	43	5.5×9.2×5.4	20	20	−9	1400	2750	260
	8	51	5.5×9.2×5.4	20	20	−9	1560	3140	515
	10	60	6.6×11×6.5	20	20	−9	2490	5490	655
	10	67	6.6×11×6.5	25	25	−13	2650	6270	970
	13	78	9×14×8.6	25	25	−13	3430	8040	1560
	13	98	9×14×8.6	25	25	−13	6080	15900	3500
	18	112	11×17.5×10.8	25	25	−13	7650	20000	4500

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMF-ML (Stainless Steel Type)

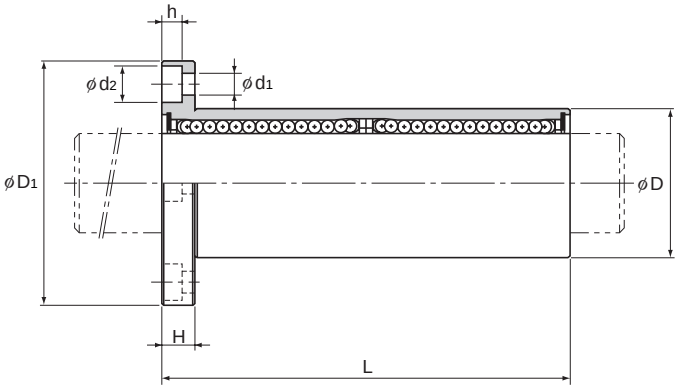


Model LMF-ML

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMF 6ML	4	6	0 −0.010	12	0 −0.013	35	0 −0.3	28	0 −0.2
LMF 8ML	4	8		15		45		32	
LMF 10ML	4	10		19	0 −0.016	55		39	
LMF 12ML	4	12		21		57		42	
LMF 13ML	4	13		23		61		43	
LMF 16ML	5	16		28		70		48	
LMF 20ML	5	20	0 −0.012	32	0 −0.019	80		54	
LMF 25ML	6	25		40		112	0 −0.4	62	
LMF 30ML	6	30		45		123		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMF13ML UU
Seal attached on both ends of the nut



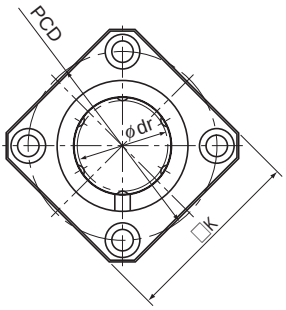
Unit: mm

				Flange perpendicularity	Eccentricity (max)	Radial clearance	Basic load rating		
	H	PCD	Mounting hole $d_1 \times d_2 \times h$	μm	μm	tolerance μm	C N	C_0 N	Mass g
	5	20	3.4×6.5×3.3	15	15	−5	324	529	32
	5	24	3.4×6.5×3.3	15	15	−5	431	784	53
	6	29	4.5×8×4.4	15	15	−5	588	1100	105
	6	32	4.5×8×4.4	15	15	−5	657	1200	100
	6	33	4.5×8×4.4	15	15	−7	814	1570	130
	6	38	4.5×8×4.4	15	15	−7	1230	2350	187
	8	43	5.5×9.2×5.4	20	20	−9	1400	2750	260
	8	51	5.5×9.2×5.4	20	20	−9	1560	3140	515
	10	60	6.6×11×6.5	20	20	−9	2490	5490	655

Note) Since the nut and the balls use stainless steel, these models are highly resistant to corrosion and environment.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMK-L

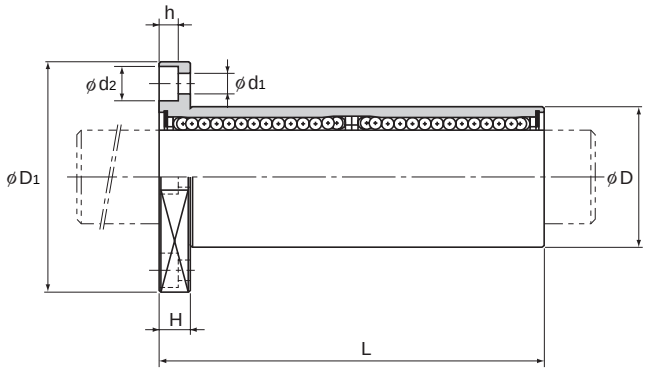


Model LMK-L

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMK 6L	4	6	0 −0.010	12	0 −0.013	35	0 −0.3	28	0 −0.2
LMK 8L	4	8		15		45		32	
LMK 10L	4	10		19	0 −0.016	55		39	
LMK 12L	4	12		21		57		42	
LMK 13L	4	13		23		61		43	
LMK 16L	5	16		28		70		48	
LMK 20L	5	20	0 −0.012	32	0 −0.019	80		54	
LMK 25L	6	25		40		112	0 −0.4	62	
LMK 30L	6	30		45		123		74	
LMK 35L	6	35	0 −0.015	52	0 −0.022	135		82	
LMK 40L	6	40		60		154		96	0 −0.3
LMK 50L	6	50		80		192		116	
LMK 60L	6	60	0 −0.020	90	0 −0.025	211		134	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMK50L UU
Seal attached on both ends of the nut

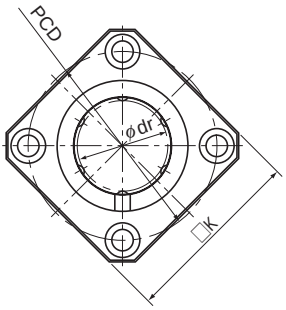


Unit: mm

					Flange perpendicularity	Eccentricity (max)	Radial clearance	Basic load rating		
	K	H	PCD	Mounting hole $d_1 \times d_2 \times h$	µm	µm	tolerance µm	C N	C_0 N	Mass g
	22	5	20	3.4×6.5×3.3	15	15	−5	324	529	26
	25	5	24	3.4×6.5×3.3	15	15	−5	431	784	46
	30	6	29	4.5×8×4.4	15	15	−5	588	1100	88
	32	6	32	4.5×8×4.4	15	15	−5	657	1200	82
	34	6	33	4.5×8×4.4	15	15	−7	814	1570	108
	37	6	38	4.5×8×4.4	15	15	−7	1230	2350	160
	42	8	43	5.5×9.2×5.4	20	20	−9	1400	2750	230
	50	8	51	5.5×9.2×5.4	20	20	−9	1560	3140	475
	58	10	60	6.6×11×6.5	20	20	−9	2490	5490	575
	64	10	67	6.6×11×6.5	25	25	−13	2650	6270	870
	75	13	78	9×14×8.6	25	25	−13	3430	8040	1380
	92	13	98	9×14×8.6	25	25	−13	6080	15900	3300
	106	18	112	11×17.5×10.8	25	25	−13	7650	20000	4060

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMK-ML (Stainless Steel Type)

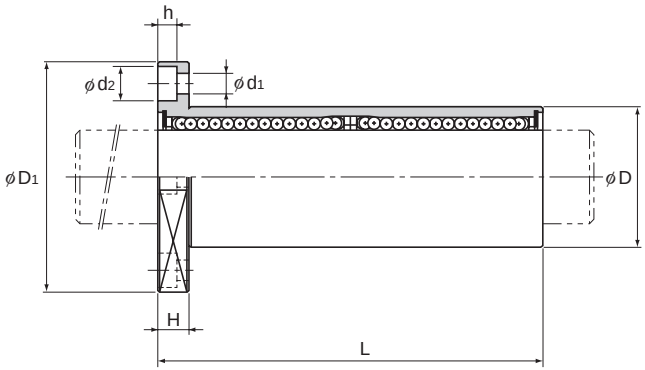


Model LMK-ML

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMK 6ML	4	6	0 −0.010	12	0 −0.013	35	0 −0.3	28	0 −0.2
LMK 8ML	4	8		15		45		32	
LMK 10ML	4	10		19	0 −0.016	55		39	
LMK 12ML	4	12		21		57		42	
LMK 13ML	4	13		23		61		43	
LMK 16ML	5	16		28		70		48	
LMK 20ML	5	20	0 −0.012	32	0 −0.019	80		54	
LMK 25ML	6	25		40		112	0 −0.4	62	
LMK 30ML	6	30		45		123		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMK8ML UU
Seal attached on both ends of the nut



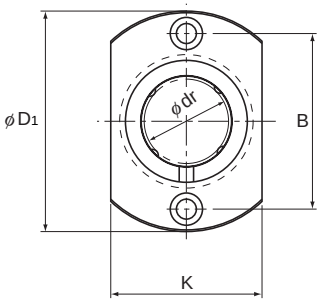
Unit: mm

					Flange perpendicularity	Eccentricity (max)	Radial clearance	Basic load rating		
	K	H	PCD	Mounting hole $d_1 \times d_2 \times h$	µm	µm	tolerance µm	C N	C_0 N	Mass g
	22	5	20	3.4×6.5×3.3	15	15	−5	324	529	26
	25	5	24	3.4×6.5×3.3	15	15	−5	431	784	46
	30	6	29	4.5×8×4.4	15	15	−5	588	1100	88
	32	6	32	4.5×8×4.4	15	15	−5	657	1200	82
	34	6	33	4.5×8×4.4	15	15	−7	814	1570	108
	37	6	38	4.5×8×4.4	15	15	−7	1230	2350	160
	42	8	43	5.5×9.2×5.4	20	20	−9	1400	2750	230
	50	8	51	5.5×9.2×5.4	20	20	−9	1560	3140	475
	58	10	60	6.6×11×6.5	20	20	−9	2490	5490	575

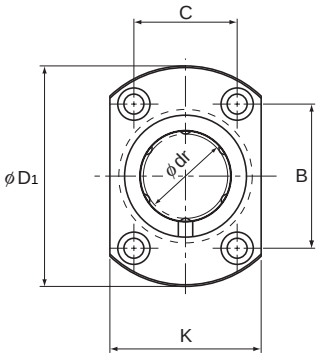
Note) Since the nut and the balls use stainless steel, these models are highly resistant to corrosion and environment.

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMH



Models LMH6 to 13

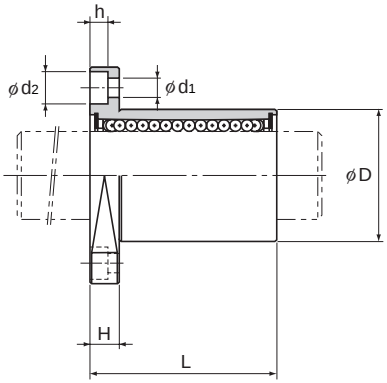


Models LMH16 to 30

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMH 6	4	6	0 −0.009	12	0 −0.011	19	0 −0.2	28	0 −0.2
LMH 8	4	8		15		24		32	
LMH 10	4	10		19	0 −0.013	29		39	
LMH 12	4	12		21		30		42	
LMH 13	4	13		23		32		43	
LMH 16	5	16		28		37		48	
LMH 20	5	20	0 −0.010	32	0 −0.016	42		54	
LMH 25	6	25		40		59	0 −0.3	62	
LMH 30	6	30		45		64		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMH16 UU
Seal attached on both ends of the nut

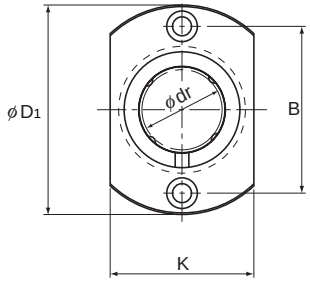


Unit: mm

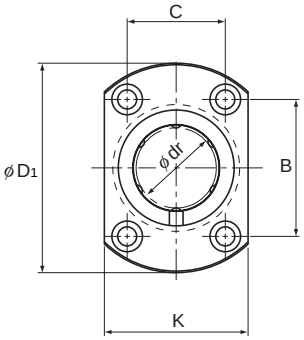
						Flange	Eccentricity (max)	Radial clearance	Basic load rating		
					Mounting hole	perpendicularity		tolerance	C	C_0	Mass
	K	H	B	C	$d_1 \times d_2 \times h$	μm	μm	μm	N	N	g
	18	5	20	—	3.4×6.5×3.3	12	12	−5	206	265	18
	21	5	24	—	3.4×6.5×3.3	12	12	−5	265	402	28
	25	6	29	—	4.5×8×4.4	12	12	−5	373	549	50
	27	6	32	—	4.5×8×4.4	12	12	−5	412	598	55
	29	6	33	—	4.5×8×4.4	12	12	−7	510	775	70
	34	6	31	22	4.5×8×4.4	12	12	−7	775	1180	95
	38	8	36	24	5.5×9.2×5.4	15	15	−9	863	1370	150
	46	8	40	32	5.5×9.2×5.4	15	15	−9	980	1570	275
	51	10	49	35	6.6×11×6.5	15	15	−9	1570	2750	350

Description of Each Option⇒A-549 Dimensions⇒B-461

Model LMH-L



Models LMH6L to 13L

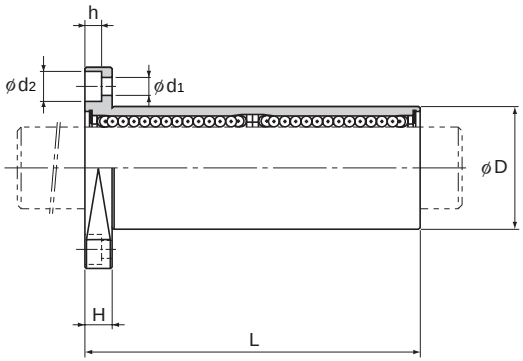


Models LMH16L to 30L

Model No.	Ball	Main dimensions							
		Inscribed bore diameter		Outer diameter		Length		Flange diameter	
Standard type	rows	dr	Tolerance	D	Tolerance	L	Tolerance	D_1	Tolerance
LMH 6L	4	6	0 −0.010	12	0 −0.013	35	0 −0.3	28	0 −0.2
LMH 8L	4	8		15		45		32	
LMH 10L	4	10		19	0 −0.016	55		39	
LMH 12L	4	12		21		57		42	
LMH 13L	4	13		23		61		43	
LMH 16L	5	16		28		70		48	
LMH 20L	5	20	0 −0.012	32	0 −0.019	80		54	
LMH 25L	6	25		40		112	0 −0.4	62	
LMH 30L	6	30		45		123		74	

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
If requiring a type equipped with a seal, indicate it when placing an order.

(Example) LMH20L UU
Seal attached on both ends of the nut

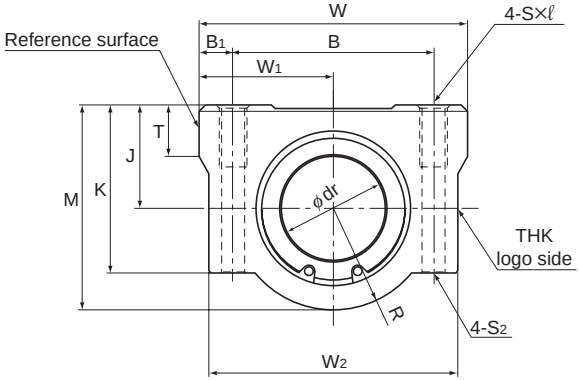


Unit: mm

						Flange	Eccentricity (max)	Radial clearance	Basic load rating		
					Mounting hole	perpendicularity		tolerance	C	C_0	Mass
	K	H	B	C	$d_1 \times d_2 \times h$	µm	µm	µm	N	N	g
	18	5	20	—	3.4×6.5×3.3	15	15	−5	324	529	28
	21	5	24	—	3.4×6.5×3.3	15	15	−5	431	784	40
	25	6	29	—	4.5×8×4.4	15	15	−5	588	1100	75
	27	6	32	—	4.5×8×4.4	15	15	−5	657	1200	82
	29	6	33	—	4.5×8×4.4	15	15	−7	814	1570	107
	34	6	31	22	4.5×8×4.4	15	15	−7	1230	2350	143
	38	8	36	24	5.5×9.2×5.4	20	20	−9	1400	2750	225
	46	8	40	32	5.5×9.2×5.4	20	20	−9	1560	3140	450
	51	10	49	35	6.6×11×6.5	20	20	−9	2490	5490	575

Description of Each Option⇒A-549 Dimensions⇒B-461

Models SC6 to 30



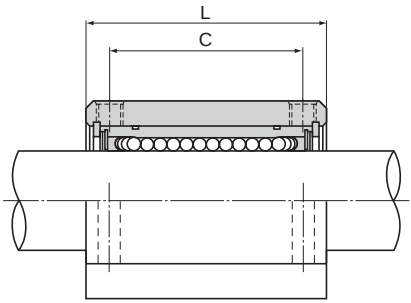
Models SC6 to 30

Model No.	Outer dimensions			LM casing dimensiones						
	Height	Width	Length	Mounting hole position			Tap	Through bolt	Center height	
	M	W	L	B	B_1	C	S×ℓ	model No,S_2	J ±0.02	W_1 ±0.02
SC 6UU	18	30	25	20	5	15	M4×8	M3	9	15
SC 8UU	22	34	30	24	5	18	M4×8	M3	11	17
SC 10UU	26	40	35	28	6	21	M5×12	M4	13	20
SC 12UU	29	42	36	30.5	5.75	26	M5×12	M4	15	21
SC 13UU	30	44	39	33	5.5	26	M5×12	M4	15	22
SC 16UU	38.5	50	44	36	7	34	M5×12	M4	19	25
SC 20UU	42	54	50	40	7	40	M6×12	M5	21	27
SC 25UU	51.5	76	67	54	11	50	M8×18	M6	26	38
SC 30UU	59.5	78	72	58	10	58	M8×18	M6	30	39

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.

Example of Model Number for Use in Combination with Linear Bushing Units

Linear Bushing to be combined	Examle of model No.	
Both end attached with seal	SC 13UU	Standard stock
Without seal	SC 13	Build to order
Made of stainless steel; both end attached with seal	SC 13MUU	Build to order

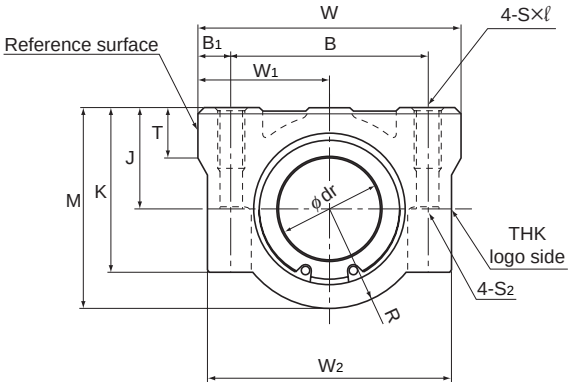


Unit: mm

							Model No. of Linear Bushing to be combined	Basic load rating		Unit
					Inscribed bore diameter			C	C_0	Mass
	K	W_2	T	R	dr	Tolerance		N	N	g
	15	28	6	9	6	0 −0.009	LM6UU	206	265	34
	18	32	6	11	8		LM8UU	265	402	52
	22	37	8	13	10		LM10UU	373	549	92
	25	39	8	14	12		LM12UU	412	598	102
	26	41	8	15	13		LM13UU	510	775	123
	35	46	9	19.5	16		LM16UU	775	1180	189
	36	52	11	21	20	0 −0.010	LM20UU	863	1370	237
	41	68	12	25.5	25		LM25UU	980	1570	555
	49	72	15	29.5	30		LM30UU	1570	2750	685

Description of Each Option⇒A-549 Dimensions⇒B-461

Models SC35 to 50



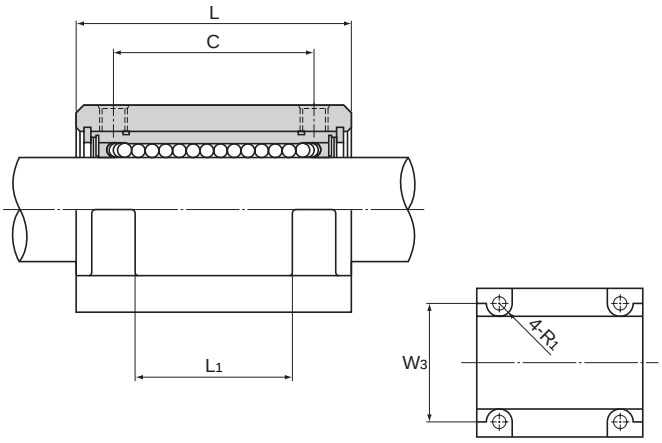
Models SC35 to 50

Model No.	Outer dimensions			LM casing dimensiones							
	Height	Width	Length	Mounting hole position			Tap	Through bolt	Center height		
	M	W	L	B	B_1	C	S×ℓ	model No,S_2	J ±0.02	W_1 ±0.02	K
SC 35UU	68	90	80	70	10	60	M8×18	M6	34	45	54
SC 40UU	78	102	90	80	11	60	M10×25	M8	40	51	62
SC 50UU	102	122	110	100	11	80	M10×25	M8	52	61	80

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.
(Model SC50 does not include a stainless type.)

Example of Model Number for Use in Combination with Linear Bushing Units

Linear Bushing to be combined	Examle of model No.	
Both end attached with seal	SC 40UU	Standard stock
Without seal	SC 40	Build to order
Made of stainless steel; both end attached with seal	SC 40MUU	Build to order

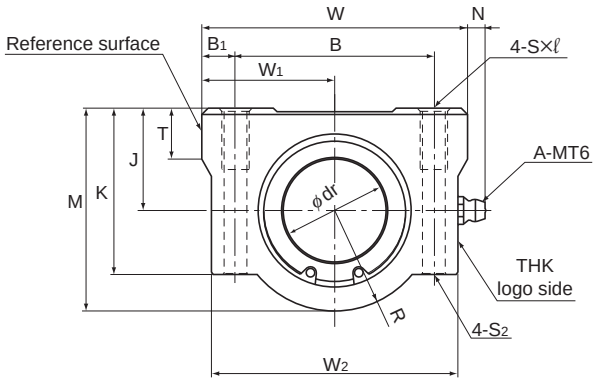


Unit: mm

									Model No. of Linear Bushing to be combined	Basic load rating		Unit
							Inscribed bore diameter			C	C_0	Mass
	W_2	W_3	L_1	T	R	R_1	dr	Tolerance		N	N	g
	85	60	42	18	34	5	35	0 −0.012	LM35UU	1670	3140	1100
	96	80	44	20	38	8	40		LM40UU	2160	4020	1600
	116	100	64	25	50	8	50		LM50UU	3820	7940	3350

Description of Each Option⇒A-549 Dimensions⇒B-461

Model SL



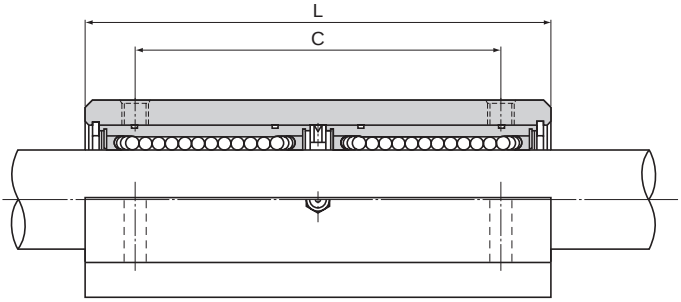
Model SL

Model No.	Outer dimensions			LM casing dimensiones						
	Height	Width	Length	Mounting hole position			Tap	Through bolt	Center height	
	M	W	L	B	B_1	C	S×ℓ	model No,S_2	J ±0.02	W_1 ±0.02
SL 6UU	18	30	48	20	5	36	M4×8	M3	9	15
SL 8UU	22	34	58	24	5	42	M4×8	M3	11	17
SL 10UU	26	40	68	28	6	46	M5×12	M4	13	20
SL 12UU	29	42	70	30.5	5.75	50	M5×12	M4	15	21
SL 13UU	30	44	75	33	5.5	50	M5×12	M4	15	22
SL 16UU	38.5	50	85	36	7	60	M5×12	M4	19	25
SL 20UU	42	54	96	40	7	70	M6×12	M5	21	27
SL 25UU	51.5	76	130	54	11	100	M8×18	M6	26	38
SL 30UU	59.5	78	140	58	10	110	M8×18	M6	30	39

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.

Example of Model Number for Use in Combination with Linear Bushing Units

Linear Bushing to be combined	Examle of model No.	
Both end attached with seal	SL 13UU	Standard stock
Without seal	SL 13	Build to order
Made of stainless steel; both end attached with seal	SL 13MUU	Build to order

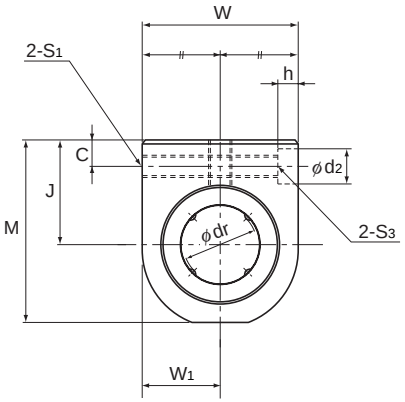


Unit: mm

								Model No. of Linear Bushing to be combined	Basic load rating		Unit
						Inscribed bore diameter			C	C_0	Mass
	K	W_2	T	R	N	dr	Tolerance		N	N	g
	15	28	6	9	7	6	0 −0.009	LM6U	324	529	68
	18	32	6	11	7	8		LM8U	431	784	105
	22	37	8	13	7	10		LM10U	588	1100	185
	25	39	8	14	6.5	12		LM12U	657	1200	205
	26	41	8	15	6.5	13		LM13U	814	1570	242
	35	46	9	19.5	6	16		LM16U	1230	2350	403
	36	52	11	21	7	20	0 −0.010	LM20U	1400	2750	520
	41	68	12	25.5	4	25		LM25U	1560	3140	1120
	49	72	15	29.5	5	30		LM30U	2490	5490	1440

Description of Each Option⇒A-549 Dimensions⇒B-461

Model SH



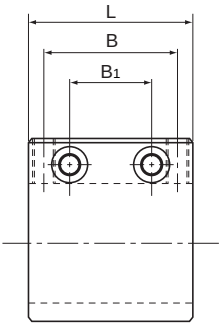
Model SH

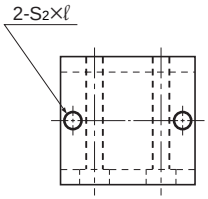
Model No.	Outer dimensions			LM casing dimensiones					
	Height	Width	Length	Mounting hole position			Tap		Through bolt
	M	W	L	B	B1	C	S1	S2×ℓ	model No,S3
SH 3UU	14	10	13	—	8	3	M3	M3×5.5	M2
SH 4UU	16	12	15	—	10	3	M3	M3×6	M2
SH 5UU	18	14	17	—	12	3	M3	M3×6	M2
SH 6UU	22	16	24	18	9	5	M4	M4×8	M3
SH 8UU	26	20	27	20	10	5	M4	M5×8.5	M3
SH 10UU	32	26	35	27	15	6	M5	M6×9.5	M4
SH 12UU	34	28	35	27	15	6	M5	M6×9.5	M4
SH 13UU	36	30	36	28	16	6	M5	M6×9.5	M4
SH 16UU	42	36	40	32	18	6	M5	M6×10	M4
SH 20UU	49	42	44	36	22	7	M6	M6×12	M5

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.

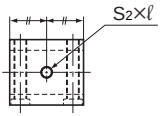
Example of Model Number for Use in Combination with Linear Bushing Units

Linear Bushing to be combined	Examle of model No.	
Both end attached with seal	SH 13UU	Standard stock
Without seal	SH 13	Build to order
Made of stainless steel; both end attached with seal	SH 13MUU	Build to order





Top surface of models SH6 to SH20



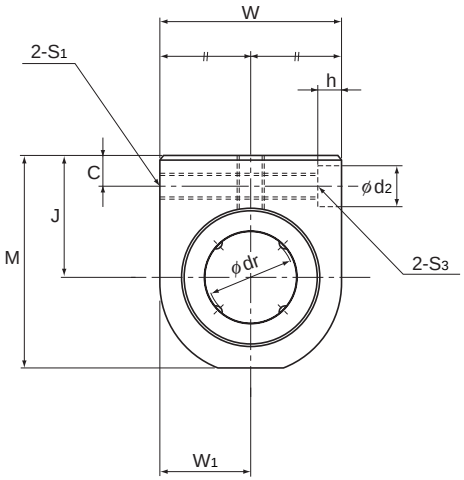
Top surface of models SH3 to SH5

Unit: mm

	Center height J ±0.02	W1 ±0.02	d2	h	Inscribed bore diameter dr	Inscribed bore diameter Tolerance	Model No. of Linear Bushing to be combined	Basic load rating C N	Basic load rating C0 N	Unit Mass g
	9	5	4.2	1.5	3	0 −0.008	LM3UU	88.2	108	4.5
	10	6	4.2	1.5	4		LM4UU	88.2	127	7
	11	7	4.2	1.5	5		LM5UU	167	206	11
	14	8	6.5	3.3	6	0 −0.009	LM6UU	206	265	21.6
	16	10	6.5	3.3	8		LM8UU	265	402	32
	19	13	8	4.4	10		LM10UU	373	549	65
	20	14	8	4.4	12		LM12UU	412	598	81
	21	15	8	4.4	13		LM13UU	510	775	90
	24	18	8	4.4	16		LM16UU	775	1180	150
	28	21	9.5	5.4	20	0 −0.010	LM20UU	863	1370	215

Description of Each Option⇒A-549 Dimensions⇒B-461

Model SH-L



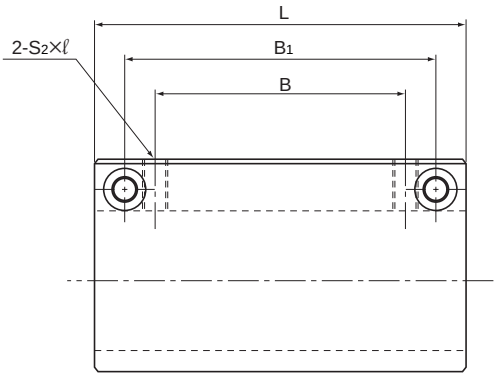
Model SH-L

Model No.	Outer dimensions			LM casing dimensiones					
	Height	Width	Length	Mounting hole position			Tap		Through bolt
	M	W	L	B	B_1	C	S_1	$S_2 \times \ell$	model No,S_3
SH 3LUU	14	10	23	10	18	3	M3	M3×5.5	M2
SH 4LUU	16	12	27	14	22	3	M3	M3×6	M2
SH 5LUU	18	14	32	18	26	3	M3	M3×6	M2
SH 6LUU	22	16	40	20	30	5	M4	M4×8	M3
SH 8LUU	26	20	52	30	42	5	M4	M5×8.5	M3
SH 10LUU	32	26	60	36	50	6	M5	M6×9.5	M4
SH 12LUU	34	28	62	36	50	6	M5	M6×9.5	M4
SH 13LUU	36	30	66	40	54	6	M5	M6×9.5	M4
SH 16LUU	42	36	76	52	66	6	M5	M6×10	M4
SH 20LUU	49	42	86	58	72	7	M6	M6×12	M5

Note) Since this model contains a synthetic resin retainer, do not use it at temperature exceeding 80℃.
A stainless steel Linear Bushing model LM-MG, which is highly corrosion resistant, can also be incorporated at your request.

Example of Model Number for Use in Combination with Linear Bushing Units

Linear Bushing to be combined	Examle of model No.	
Both end attached with seal	SH 13LUU	Standard stock
Without seal	SH 13L	Build to order
Made of stainless steel; both end attached with seal	SH 13MLUU	Build to order

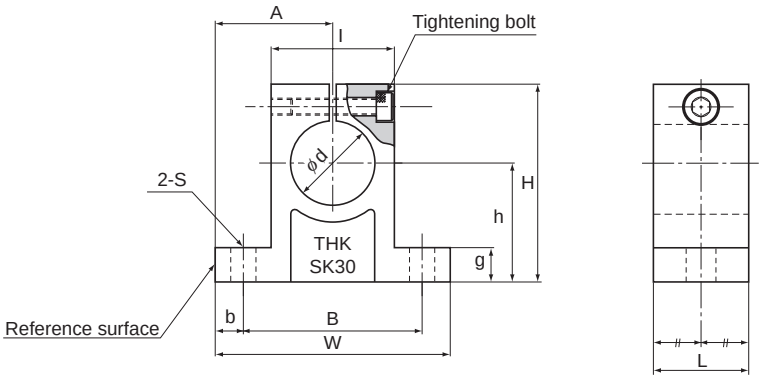


Unit: mm

Center height J ±0.02	W1 ±0.02	d2	h	Inscribed bore diameter dr	Inscribed bore diameter Tolerance	Model No. of Linear Bushing to be combined	Basic load rating C N	Basic load rating C0 N	Unit Mass g
9	5	4.2	1.5	3	0 −0.008	LM3U	139	216	8.5
10	6	4.2	1.5	4		LM4U	139	254	13
11	7	4.2	1.5	5		LM5U	263	412	22
14	8	6.5	3.3	6	0 −0.009	LM6U	324	529	35
16	10	6.5	3.3	8		LM8U	431	784	65
19	13	8	4.4	10		LM10U	588	1100	125
20	14	8	4.4	12		LM12U	657	1200	155
21	15	8	4.4	13		LM13U	814	1570	190
24	18	8	4.4	16		LM16U	1230	2350	295
28	21	9.5	5.4	20	0 −0.010	LM20U	1400	2750	425

Description of Each Option⇒A-549 Dimensions⇒B-461

Model SK



Unit: mm

Model No.	Main dimensions													Mass
	H	W	L	B	S	Mounting bolt model No.	h ±0.02	A ±0.05	b	g	l	Shaft diameter d	Tightening bolt model No.	g
SK 10	32.8	42	14	32	5.5	M5	20	21	5	6	18	10	M4	24
SK 12	37.5	42	14	32	5.5	M5	23	21	5	6	20	12	M4	30
SK 13	37.5	42	14	32	5.5	M5	23	21	5	6	20	13	M4	30
SK 16	44	48	16	38	5.5	M5	27	24	5	8	25	16	M4	40
SK 20	51	60	20	45	6.6	M6	31	30	7.5	10	30	20	M5	70
SK 25	60	70	24	56	6.6	M6	35	35	7	12	38	25	M6	130
SK 30	70	84	28	64	9	M8	42	42	10	12	44	30	M6	180
SK 35	83	98	32	74	11	M10	50	49	12	15	50	35	M8	270
SK 40	96	114	36	90	11	M10	60	57	12	15	60	40	M8	420

Dedicated Shafts for Model LM

The LM shaft of the Linear Bushing needs to be manufactured with much consideration for hardness, surface roughness and dimensional accuracy of the shaft since balls roll directly on it.
THK manufactures dedicated LM shafts for the Linear Bushing. See the specification table for standard LM shafts on B-460.
Among other factors, the surface hardness of an LM shaft affects the service life of your Linear Bushing system most significantly. Therefore, take much care in selecting a material and a heat treatment method when assembling the system. In addition, as the surface hardness of the LM shaft greatly affects the service life as stated above, use care in selecting and/or handling a material and heat treatment.

[Material]

Generally, the following materials are used for surface hardening through induction-hardening.

- SUJ2 (JIS G 4805: high-carbon chromium bearing steel)
- SK3 to 6 (JIS G 4401: carbon tool steel)
- S55C (JIS G 4051: carbon steel for machine structural use)

For special applications, martensite stainless steel SUS440C, which is corrosion resistant, may also be used.

[Hardness]

We recommend surface hardness of 58 HRC (≒653 HV) or higher. The depth of the hardened layer is determined by the size of the Linear Bushing; we recommend approximately 2 mm for general use.

[Surface Roughness]

To achieve smooth motion, the surface should preferably be finished to 0.40a or less.

[Dimensions of Hollow LM Shafts]

If a hollow LM shaft is required for purposes such as weight reduction, use the desired material from Table1 for the dimensions of hollow LM shafts that THK keeps in stock.
Models marked with " ∗ " are build-to-order items.

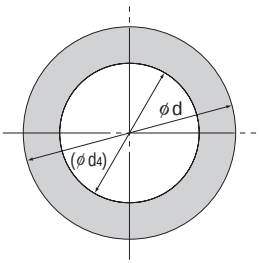


Table1 Dimensions of Hollow LM Shafts

Unit: mm

Supported model numbers	LM shaft outer diameter d	Inner diameter (ϕd_4)	Mass (kg/m)
LM 8	8	3	0.4
LM 10	10	4	0.6
LM 12	12	6	0.7
LM 13	13	7	0.8
LM 16	16	9	1.1
LM 20	20	10	1.9
LM 20	20	14	1.3
LM 25	25	15	2.5
LM 30	30	16	4
LM 35	35	20	5.1
∗ LM 38	38	22	6
LM 40	40	22	6.9
LM 50	50	25	11.6
LM 60	60	32	16
∗ LM 80	80	52.5	22.6
∗ LM 100	100	67.5	33.7

Standard LM Shafts

THK manufactures high quality, dedicated LM shafts for Linear Bushing model LM series.

Model number coding

SF25 g6 -500L K

- SF25: Model number
- g6: LM shaft outer diameter tolerance
- -500L: Overall LM shaft length (in mm)
- K: Special symbol*

Special symbol*
no symbol: solid shaft K: standard hollow shaft
M: special material F: with surface treatment

*If two or more symbols are given, they are shown in an alphabetical order.

(1) [Major materials]
THK5SP (THK standard material)
SUJ2 (high-carbon chromium bearing steel)
[Hardness]
HRC58 to 64
[Hardened layer depth]
0.8 to 2.5mm(varies with shaft diameter)
[Surface roughness]
0.20a to 0.40a
[Straightness of the LM shaft]
50 μm/300 mm or less

(2) Precision-grade LM shafts with shaft diameter tolerance of g5 or h5 are also manufactured as standard.

(3) Corrosion resistance, martensite stainless steel LM shafts are also available.

(4) When asking an estimate or placing an order, refer to the model number coding shown on the left.

Model No.	Shaft diameter		Overall LM shaft length: L mm														Supported model numbers
	d	Tolerance g6 μm	100	200	300	400	500	600	700	800	1000	1200	1300	1500	2000	3000	
SF 3	3	-2 -8	◎	◎													LM 3
SF 4	4	-4 -12	◎	◎													LM 4
SF 5	5		◎	◎	◎												LM 5
SF 6	6		◎	◎	◎	◎											LM 6
SF 8	8	-5 -14	◎	◎	◎	◎	◎										LM 8, 8S
SF 10	10		◎	◎	◎	◎	◎	◎	◎	◎							LM 10
SF 12	12	-6 -17		◎	◎	◎	◎	◎		◎	◎						LM 12
SF 13	13		◎	◎	◎	◎	◎	◎	◎	◎	◎						LM 13
SF 16	16		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		◎			LM 16
SF 20	20	-7 -20		◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			LM 20
SF 25	25			◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎			LM 25
SF 30	30				◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎		LM 30
SF 35	35	-9 -25					◎	◎		◎	◎	◎		◎	◎		LM 35
SF 38	38							○			○	○			○		LM 38
SF 40	40						◎	◎	◎	◎	◎	◎	◎	◎	◎	○	LM 40
SF 50	50						◎	◎		◎	◎	◎	◎	◎	◎	○	LM 50
SF 60	60	-10 -29									○	○			○	○	LM 60
SF 80	80										○	○			○	○	LM 80
SF 100	100	-12 -34									○	○			○	○	LM 100

Note) ◎ indicates standard stock; ○ indicates semi-standard stock.

Felt Seal Model FLM

Linear Bushing model LM series include types equipped with a special synthetic rubber seal (LM⋯UU, U). If there is a need for additional contamination protection, or a need to lower the seal resistance, use the felt seal model FLM. (See Table1.)

[Dimensions of the Felt Seal]

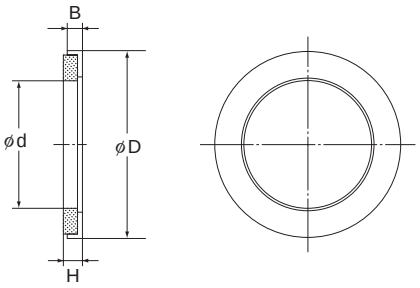


Table1 Major Dimensions of FLM

Unit: mm

Supported model numbers	Main dimensions				Supoprted linear bushing model
	d	D	B	H	
FLM 6	6	12	2	2	LM 6
FLM 8	8	15	2	2	LM 8
FLM 10	10	19	3	3	LM 10
FLM 12	12	21	3	3	LM 12
FLM 13	13	23	3	3	LM 13
FLM 16	16	28	4	5	LM 16
FLM 20	20	32	4	5	LM 20
FLM 25	25	40	5	6	LM 25
FLM 30	30	45	5	5	LM 30
FLM 35	35	52	5	6	LM 35
FLM 38	38	57	5	6	LM 38
FLM 40	40	60	5	6	LM 40
FLM 50	50	80	10	11	LM 50
FLM 60	60	90	10	11	LM 60
FLM 80	80	120	10	11	LM 80
FLM 100	100	150	10	11	LM 100

LM Stroke

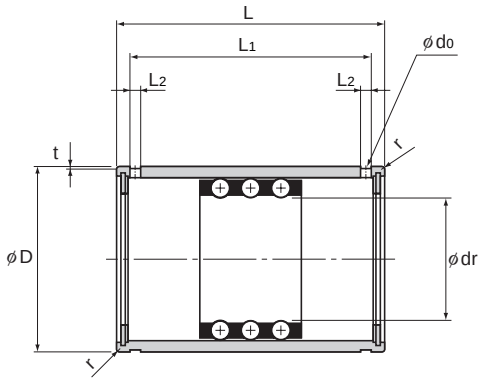
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

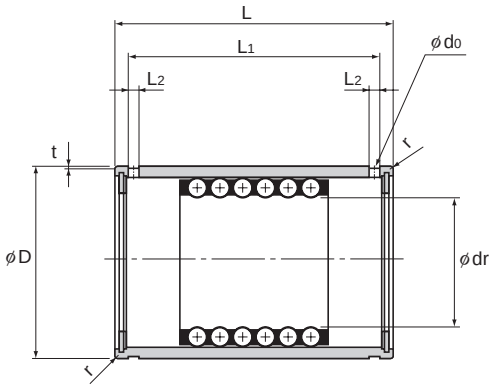
* Please see the separate "A Technical Descriptions of the Products".

Models ST / ST-B



Model ST
(For light load)

Model No.	Maximum stroke	Inscribed bore diameter		Outer diameter	
		dr	Tolerance	D	Tolerance
ST 6	14	6	+0.018 +0.010	12	0 −0.008
ST 8 ST 8B	24 8	8	+0.022 +0.013	15	
ST 10 ST 10B	30 8	10		19	0 −0.009
ST 12 ST 12B	32 8	12	+0.027 +0.016	23	
ST 16 ST 16B	40 16	16		28	
ST 20 ST 20B	54 28	20	+0.033 +0.020	32	0 −0.011
ST 25 ST 25B	54 28	25		37	
ST 30 ST 30B	82 44	30		45	
ST 35 ST 35B	92 54	35	+0.041 +0.025	52	0 −0.013

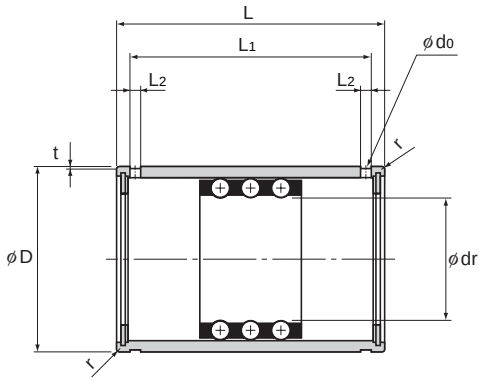


Model ST-B
(For medium load)

Unit: mm

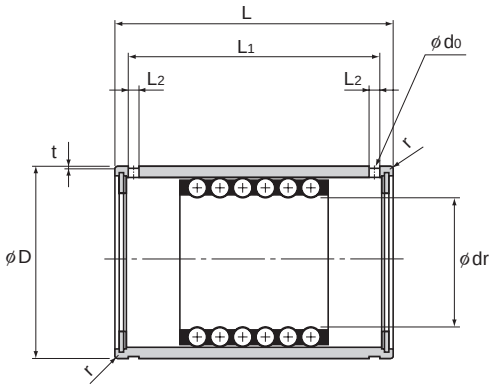
	Length							Basic dynamic load rating	Basic static load rating	Mass
	L	Tolerance	L_1	L_2	t	d_0	r	C kN	C_0 kN	g
	19	0 −0.2	13.5	1.1	0.25	—	0.3	0.98	0.23	8
	24		20.1	1.5	0.5	1.5	0.5	0.98 2.06	0.27 0.55	16.4 17.6
	30		25.7	1.5	0.5	1.5	0.5	2.35 4.61	0.62 1.27	31.5 34.5
	32		27.5	1.5	0.5	1.5	0.5	4.02 8.14	1.08 2.25	47 53.5
	37		32.1	1.5	0.5	1.5	0.5	4.02 8.04	1.27 2.65	77 85
	45		39.8	2	0.5	2	0.5	4.12 8.33	1.57 3.24	109 120
	45	0 −0.3	39.8	2	0.5	2	1	4.12 8.14	1.76 3.63	128 142
	65		58.5	2.5	0.5	2.5	1	9.31 18.7	4.12 8.14	240 275
	70		63.5	2.5	0.7	2.5	1.5	9.41 18.7	4.51 9.02	370 410

Models ST / ST-B



Model ST
(For light load)

Model No.	Maximum stroke	Inscribed bore diameter		Outer diameter	
		dr	Tolerance	D	Tolerance
ST 40 ST 40B	108 66	40	+0.041 +0.025	60	0 −0.013
ST 45 ST 45B	108 66	45		65	
ST 50 ST 50B	138 88	50		72	
ST 55 ST 55B	138 88	55	+0.049 +0.030	80	
ST 60 ST 60B	138 88	60		85	0 −0.015
ST 70 ST 70B	138 88	70		95	
ST 80 ST 80B	132 76	80		110	
ST 90 ST 90B	132 76	90	+0.058 +0.036	120	
ST 100 ST 100B	132 76	100		130	0 −0.018

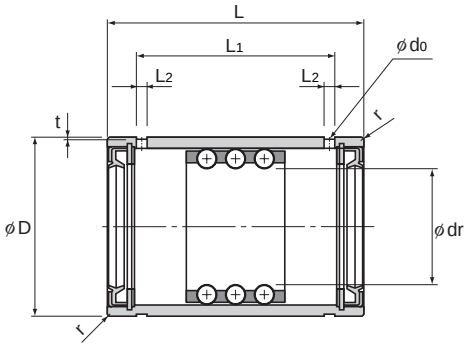


Model ST-B
(For medium load)

Unit: mm

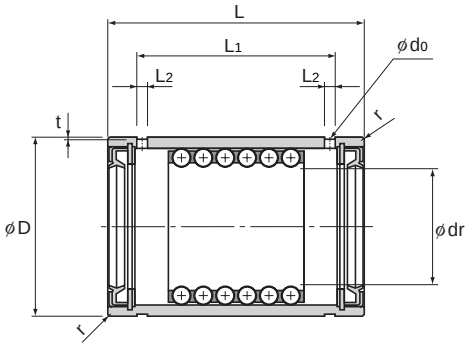
	Length							Basic dynamic load rating	Basic static load rating	Mass
	L	Tolerance	L_1	L_2	t	d_0	r	C kN	C_0 kN	g
	80	0 −0.3	73.3	2.5	0.7	2.5	1.5	12.5 25	6.18 12.4	570 635
	80		73.3	2.5	0.7	2.5	1.5	12.6 25.2	6.76 13.5	625 695
	100		92.4	3	1	3	1.5	16.3 32.5	8.82 17.7	910 1020
	100		92.4	3	1	3	2	16.6 33	9.71 19.3	1270 1380
	100		92.4	3	1	3	2	16.8 33.6	10.5 21	1360 1480
	100	0 −0.4	92.4	3	1	3	2	16.9 33.8	11.7 23.3	1530 1670
	100		92	3	1.5	3	2	21.3 42.5	15.3 30.6	2220 2430
	100		92	3	1.5	3	2	21.7 43.3	16.9 33.7	2440 2670
	100		92	3	1.5	3	2	22 43.9	18.3 36.8	2670 2910

Models ST···UU/ST···UUB



Model ST···UU
(For light load)

Model No.	Maximum stroke	Inscribed bore diameter		Outer diameter	
		dr	Tolerance	D	Tolerance
ST 8UU	14	8	+0.022 +0.013	15	0 −0.008
ST 10UU	16	10		19	0 −0.009
ST 12UU	17	12	+0.027 +0.016	23	
ST 16UU	24	16		28	
ST 20UU ST 20UUB	32 12	20	+0.033 +0.020	32	0 −0.011
ST 25UU ST 25UUB	32 12	25		37	
ST 30UU ST 30UUB	65 27	30		45	
ST 35UU ST 35UUB	75 37	35	+0.041 +0.025	52	0 −0.013
ST 40UU ST 40UUB	91 49	40		60	
ST 45UU ST 45UUB	91 49	45		65	

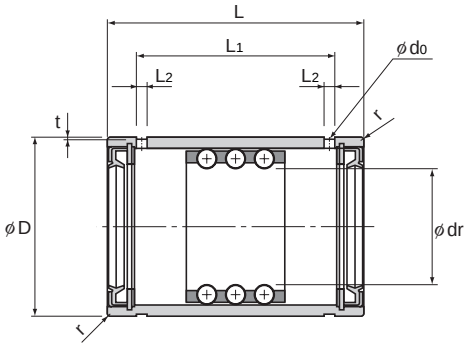


Model ST···UUB
(For medium load)

Unit: mm

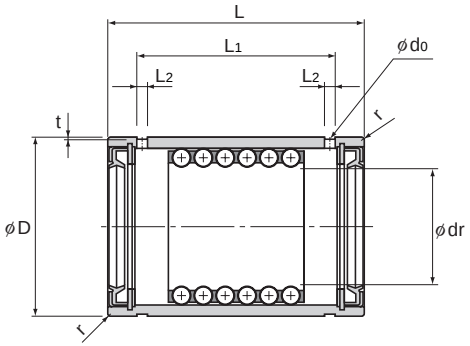
	Length							Basic dynamic load rating	Basic static load rating	Mass
	L	Tolerance	L1	L2	t	d0	r	C kN	C0 kN	g
	24	0 −0.2	15.3	1.5	0.5	1.5	0.5	0.98	0.27	17
	30		18.5	1.5	0.5	1.5	0.5	2.35	0.62	31
	32		20.1	1.5	0.5	1.5	0.5	4.02	1.08	49
	37		24.1	1.5	0.5	1.5	0.5	4.02	1.27	80
	45		30.8	2	0.5	2	0.5	4.12 8.33	1.57 3.24	112 125
	45	0 −0.3	30.8	2	0.5	2	1	4.12 8.14	1.76 3.63	132 145
	65		50.1	2.5	0.5	2.5	1	9.31 18.7	4.12 8.14	245 280
	70		55.1	2.5	0.7	2.5	1.5	9.41 18.7	4.51 9.02	375 420
	80		64.9	2.5	0.7	2.5	1.5	12.5 25	6.18 12.4	580 640
	80		64.9	2.5	0.7	2.5	1.5	12.6 25.2	6.76 13.5	635 705

Models ST···UU/ST···UUB



Model ST···UU
(For light load)

Model No.	Maximum stroke	Inscribed bore diameter		Outer diameter	
		dr	Tolerance	D	Tolerance
ST 50UU ST 50UUB	120 70	50	+0.041 +0.025	72	0 −0.013
ST 55UU ST 55UUB	120 70	55	+0.049 +0.030	80	
ST 60UU ST 60UUB	120 70	60		85	0 −0.015
ST 70UU ST 70UUB	120 70	70		95	
ST 80UU ST 80UUB	114 58	80		110	
ST 90UU ST 90UUB	114 58	90	+0.058 +0.036	120	
ST 100UU ST 100UUB	114 58	100		130	0 −0.018

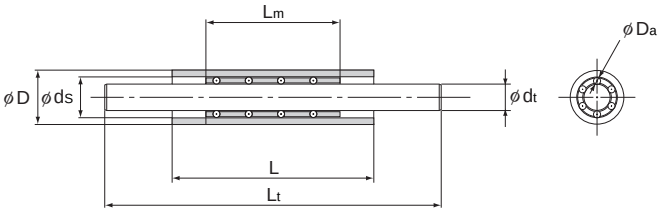


Model ST···UUB
(For medium load)

Unit: mm

	Length		L1	L2	t	d0	r	Basic dynamic load rating C kN	Basic static load rating C0 kN	Mass g
	L	Tolerance								
	100	0 −0.3	83.4	3	1	3	1.5	16.3 32.5	8.82 17.7	920 1030
	100		83.4	3	1	3	2	16.6 33	9.71 19.3	1280 1400
	100		83.4	3	1	3	2	16.8 33.6	10.5 21	1370 1490
	100	0 −0.4	83.4	3	1	3	2	16.9 33.8	11.7 23.3	1540 1680
	100		83	3	1.5	3	2	21.3 42.5	15.3 30.6	2240 2450
	100		83	3	1.5	3	2	21.7 43.3	16.9 33.7	2470 2700
	100		83	3	1.5	3	2	22 43.9	18.3 36.8	2700 2940

Model MST



Combined model No.	Ball cage					Nut	
	Model No.	D_a	L_m (A)	Permissible load C_0 N	Mass g	Model No.	D
MST 3-A・B・C	M3510 M3515 M3520	1	10 15 20	68.6 98 137	0.7 1.1 1.4	S5710 S5720 S5730	$7\ {}^{0}_{-0.006}$
MST 4-A・B・C	M4610 M4615 M4620	1	10 15 20	78.4 118 157	0.9 1.4 1.9	S6810 S6820 S6830	$8\ {}^{0}_{-0.006}$
MST 5-A・B・C	M5710 M5715 M5720	1	10 15 20	98 137 186	1.1 1.7 2.3	S71010 S71020 S71030	$10\ {}^{0}_{-0.006}$
MST 6-A・B・C	M6810 M6815 M6820	1	10 15 20	108 157 216	1.2 2.0 2.6	S81120 S81130 S81140	$11\ {}^{0}_{-0.011}$

Note) If the radial clearance needs to be zero or below, add symbol "C1" at the end of the model number.

(Example) MST5-203080 C1

- C1: Combined radial clearance Symbol for zero or below
- MST5-203080: Combination of models M5720, S71030 and T580.

Model number coding

MST 4-10 20 60 M

- MST: Combined model number (ball cage): M4610 (nut): S6820 (ST shaft): T460 Combination of these components
- 4: ST shaft outer diameter dimension (mm)
- 10: Ball cage length (mm) (A)
- 20: Nut length (mm) (B)
- 60: ST shaft length (mm) (C)
- M: Using stainless steel

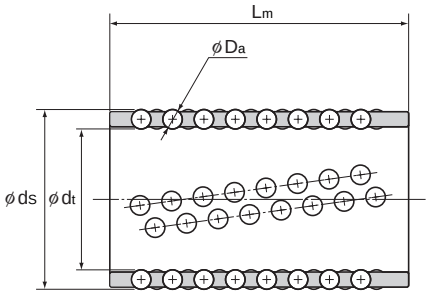
Note) The model numbers of ball cage, nut and ST shaft are indicated in the corresponding specification table.

dammy

Unit: mm

Nut				ST shaft				Combined radial clearance
	d_s	L (B)	Mass g	Model No.	d_t	L_t (C)	Mass g	μm
	5 ±0.002	10 20 30	1.4 2.9 4.5	T350 T360	3 $^{0}_{-0.003}$	50 60	2.8 3.3	−2 to +5
	6 ±0.002	10 20 30	1.7 3.6 5.0	T450 T460	4 $^{0}_{-0.003}$	50 60	4.5 5.6	−2 to +5
	7 ±0.002	10 20 30	2.9 6.3 10.0	T550 T580	5 $^{0}_{-0.003}$	50 80	7.1 12.6	−2 to +5
	8 ±0.002	20 30 40	7.1 10.0 12.6	T650 T680	6 $^{0}_{-0.003}$	50 80	10.0 16.6	−2 to +5

Models KS / BS



Unit: mm

Combined model No.	Main dimensions				Radial clearance tolerance	Basic load rating		Mass
	d_t	D_a (inch)	d_s	L_m	μm	C kN	C_0 kN	g
KS 1955	19	3	25	55	−7	10.3	3.82	31.7
BS 1955	19	3.175 (1/8)	25.35	55	−7	11.7	4.22	33.2
KS 2260	22	3	28	60	−7	10.7	4.22	37.6
BS 2260	22	3.175 (1/8)	28.35	60	−7	12.2	4.71	39.1
KS 2565	25	3	31	65	−7	11.7	5	45.4
BS 2565	25	3.175 (1/8)	31.35	65	−7	13.2	5.59	47.1
KS 2870	28	4	36	70	−9	18	7.65	80.4
BS 2870	28	3.969 (5/32)	35.938	70	−9	17.7	7.55	80.0
KS 3275	32	4	40	75	−9	19.7	9.12	96.5
BS 3275	32	3.969 (5/32)	39.938	75	−9	19.3	8.92	96.0
KS 3880	38	5	48	80	−10	25	12	156
BS 3880	38	4.762 (3/16)	47.525	80	−10	22.5	10.9	150

Note) The outer surface of model BS has a groove to help distinguish it from KS.
Shafts for models KS and BS are also manufactured. Contact THK for details.

Precision Linear Pack

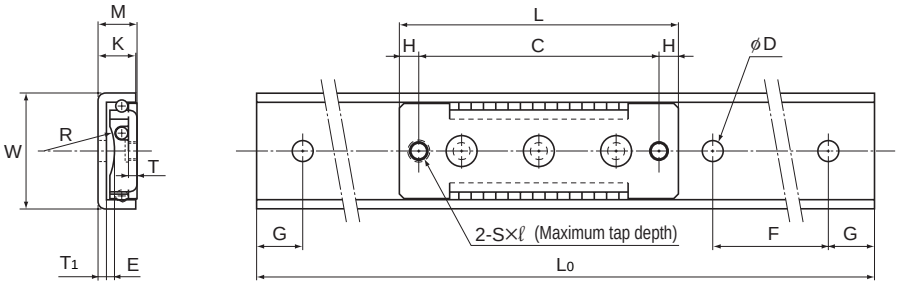
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model ER



Model No.	Inner block dimensions									
	Width W	Height M ±0.05	Length L	C	H	E	R	S	Maximum tap depth ℓ	T
ER 513	13	4.5	22	7	7.5	1.1	4.2	M2	1.3	0.9
ER 616	15.6	6	36	29	3.5	1.7	9.2	M3	1.8	1.1
ER 920	20	8.5	46	40	3	2.3	7.3	M3	2.5	1.9
ER 1025	25	10	56	48	4	2.9	9.3	M4	2.8	2.2

Model number coding

2 ER616 C1 +95L

- 2 — Number of inner blocks used on the same rail
- ER616 — Model number
- C1 — Radial clearance symbol (*1)
- +95L — Outer rail length (in mm)

(*1) See A-569.

dammy

Unit: mm

	Outer rail dimensions						Basic load rating		Mass	
	K	T_1	D	L_0	F	G	C N	C_0 N	Inner block g	Outer rail g/m
	4	1.1	2.4	40, 60, 80	20	10	54.9	72.5	2.4	166
	5.5	1.4	2.9	45, 70, 95	25	10	71.6	125	5.6	268
	7.5	1.9	3.5	50, 80, 110	30	10	144	201	14.4	474
	9	2.2	4.5	60, 100, 140	40	10	215	315	27	677

Note) To fix the outer rail of models ER513 and ER616, use cross-recessed screws for precision equipment (No. 0 screw).

Model No.	Type	Nominal name of screw × pitch
ER 513	No. 0 pan-head screw (class 1)	M2×0.4
ER 616		M2.6×0.45

Japan Camera Industry Association Standard JCIS 10-70
Cross-recessed screw for precision equipment (No. 0 screw)

Cross Roller Guide/Ball Guide

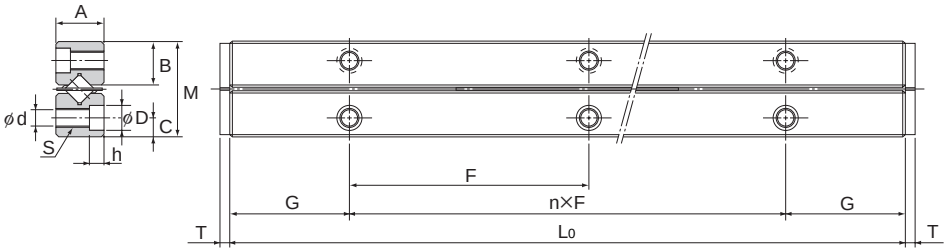
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Cross Roller Guide Model VR (VR1)



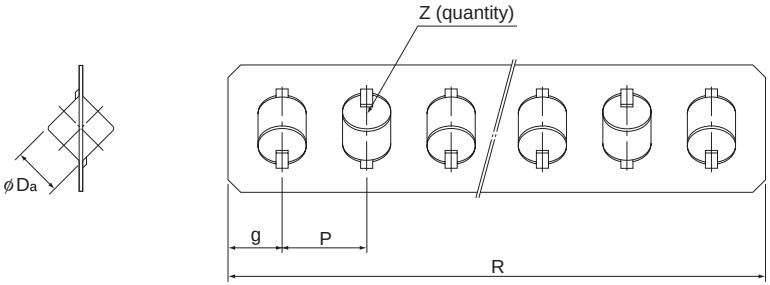
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L0	n×F	G	B	C	S	d
VR 1-20×5Z	12	8.5	4	20	1×10	5	3.9	1.8	M2	1.65
VR 1-30×7Z	22			30	2×10					
VR 1-40×10Z	27			40	3×10					
VR 1-50×13Z	32			50	4×10					
VR 1-60×16Z	37			60	5×10					
VR 1-70×19Z	42			70	6×10					
VR 1-80×21Z	52			80	7×10					

Model number coding

VR1 -30 H × 8Z

- VR1: Combined model number (for Ball Guide: VB)
- -30: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 40/50)
- H: Accuracy symbol
- 8Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	Cz	C0z	
	D	h	T	Da	R	g	P	Z	μm	kN	kN	kg/m
3	1.4	1.6	1.5	14	2	2.5	5	−2	0.098	0.069	0.11
				19			7				
				26.5			10				
				34			13				
				41.5			16				
				49			19				
				54			21				

Note) When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

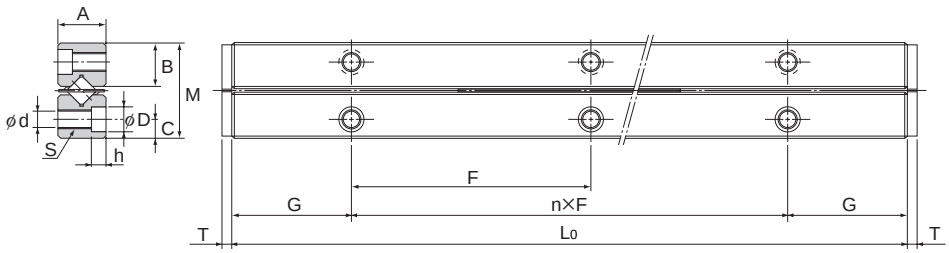
(Example) VB1-50H x 12Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR1M)
To fix the dedicated rail of model VR1, use cross-recessed screws for precision equipment (No. 0 screw).

Model No.	Type	Nominal name of screw × pitch
For model VR1	No. 0 pan-head screw (class 3)	M1.4×0.3

Japan Camera Industry Association Standard JCIS 10-70
Cross-recessed screw for precision equipment (No. 0 screw)

Cross Roller Guide Model VR (VR2)



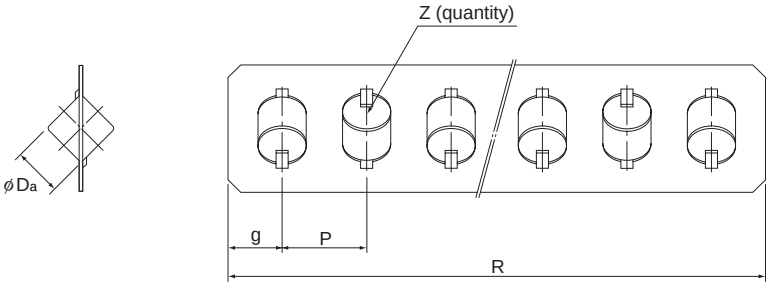
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR 2- 30×5Z	18	12	6	30	1×15	7.5	5.6	2.5	M3	2.55
VR 2- 45×8Z	24			45	2×15					
VR 2- 60×11Z	30			60	3×15					
VR 2- 75×13Z	44			75	4×15					
VR 2- 90×16Z	50			90	5×15					
VR 2-105×18Z	64			105	6×15					
VR 2-120×21Z	70			120	7×15					
VR 2-135×23Z	84			135	8×15					
VR 2-150×26Z	90			150	9×15					
VR 2-165×29Z	96			165	10×15					
VR 2-180×32Z	102			180	11×15					

Model number coding

VR2 -30 H × 6Z

- VR2: Combined model number (for Ball Guide: VB)
- -30: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 90/105)
- H: Accuracy symbol
- 6Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	Cz	C0z	
	D	h	T	Da	R	g	P	Z	μm	kN	kN	kg/m
	4.4	2	1.5	2	21	2.5	4	5	−3	0.176	0.127	0.23
					33			8				
					45			11				
					53			13				
					65			16				
					73			18				
					85			21				
					93			23				
					105			26				
					117			29				
					129			32				

Note) When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB2-90H x 15Z
Number of balls

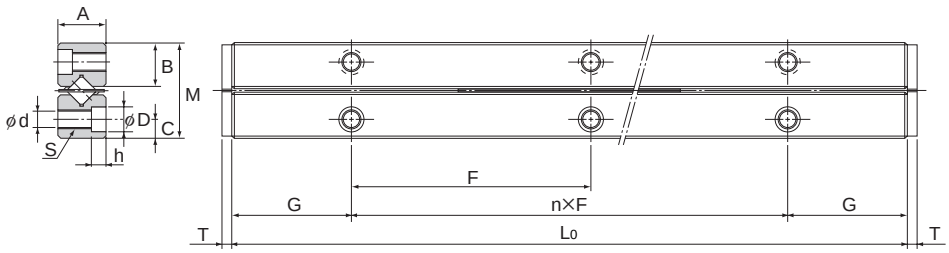
The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR2M)
To fix the dedicated rail of model VR2, use cross-recessed screws for precision equipment (No. 0 screw).

Model No.	Type	Nominal name of screw × pitch
For model VR2	Pan Head Screw	M2×0.4

Cross-recessed screw JIS B 1111 (pan head screw)

Description of Each Option⇒A-581 Dimensions⇒B-499

Cross Roller Guide Model VR (VR3)



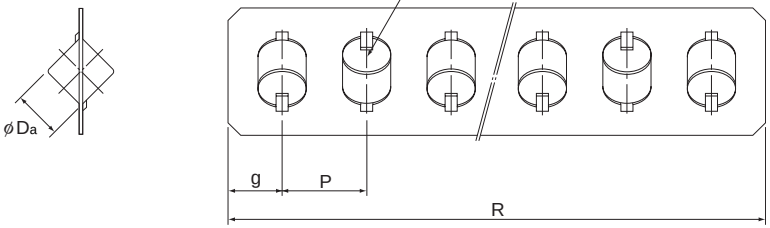
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR 3- 50×7Z	28	18	8	50	1×25	12.5	8.3	3.5	M4	3.3
VR 3- 75×10Z	48			75	2×25					
VR 3-100×14Z	58			100	3×25					
VR 3-125×17Z	78			125	4×25					
VR 3-150×21Z	88			150	5×25					
VR 3-175×24Z	108			175	6×25					
VR 3-200×28Z	118			200	7×25					
VR 3-225×31Z	138			225	8×25					
VR 3-250×35Z	148			250	9×25					
VR 3-275×38Z	168			275	10×25					
VR 3-300×42Z	178			300	11×25					

Model number coding

VR3 -75 H × 9Z

- VR3: Combined model number (for Ball Guide: VB)
- -75: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 100/125)
- H: Accuracy symbol
- 9Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

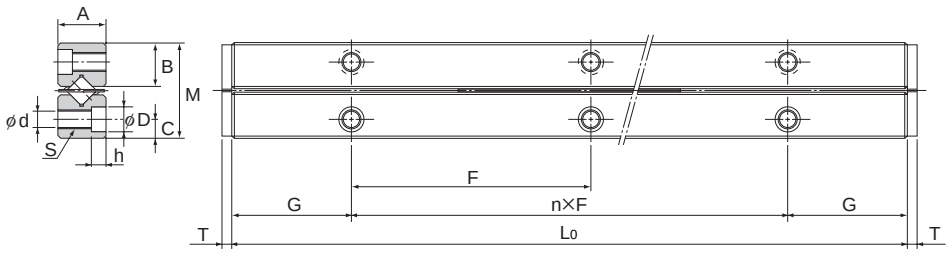
dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	Cz	C0z	
	D	h	T	Da	R	g	P	Z	μm	kN	kN	kg/m
					36			7				
					51			10				
					71			14				
					86			17				
					106			21				
	6	3.1	2	3	121	3	5	24	−4	0.363	0.275	0.45
					141			28				
					156			31				
					176			35				
					191			38				
					211			42				

Note) When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB3-150H x 20Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR3M)

Cross Roller Guide Model VR (VR4)



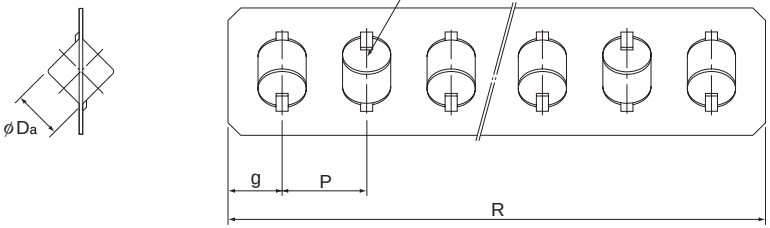
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR 4- 80×7Z	58	22	11	80	1×40	20	10.2	4.5	M5	4.3
VR 4-120×11Z	82			120	2×40					
VR 4-160×15Z	106			160	3×40					
VR 4-200×19Z	130			200	4×40					
VR 4-240×23Z	154			240	5×40					
VR 4-280×27Z	178			280	6×40					
VR 4-320×31Z	202			320	7×40					
VR 4-360×35Z	226			360	8×40					
VR 4-400×39Z	250			400	9×40					
VR 4-440×43Z	274			400	10×40					
VR 4-480×47Z	298			480	11×40					

Model number coding

VR4 -80 P × 9Z

- 9Z: Number of rollers or balls
- P: Accuracy symbol
- -80: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 120/160)
- VR4: Combined model number (for Ball Guide: VB)

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

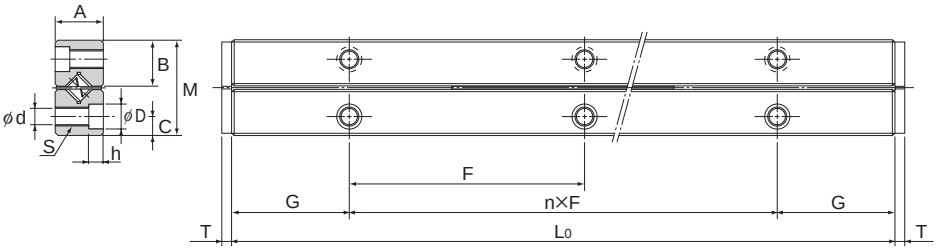
dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	Cz	C0z	
	D	h	T	Da	R	g	P	Z	μm	kN	kN	kg/m
	8	4.2	2	4	51	4.5	7	7	−5	0.764	0.637	0.8
					79			11				
					107			15				
					135			19				
					163			23				
					191			27				
					219			31				
					247			35				
					275			39				
					303			43				
					331			47				

Note) When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB4-200H x 17Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR4M)

Cross Roller Guide Model VR (VR6)



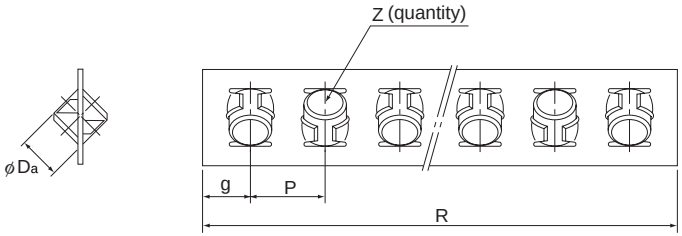
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR 6-100×7Z	56	30	15	100	1×50	25	14.4	6	M6	5.2
VR 6-150×10Z	96			150	2×50					
VR 6-200×13Z	136			200	3×50					
VR 6-250×17Z	156			250	4×50					
VR 6-300×20Z	196			300	5×50					
VR 6-350×24Z	216			350	6×50					
VR 6-400×27Z	256			400	7×50					
VR 6-450×31Z	276			450	8×50					
VR 6-500×34Z	316			500	9×50					
VR 6-550×38Z	336			550	10×50					
VR 6-600×41Z	376			600	11×50					

Model number coding

VR6 -100 P × 6Z

- VR6: Combined model number (for Ball Guide: VB)
- -100: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 300/400)
- P: Accuracy symbol
- 6Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

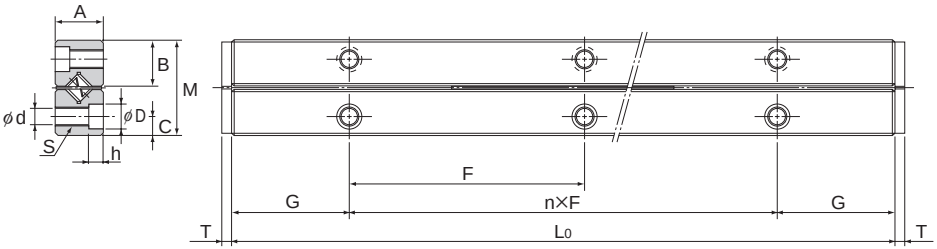
dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	C_z	C_{0z}	
	D	h	T	D_a	R	g	P	Z	μm	kN	kN	kg/m
	9.5	5.2	3.2	6	72	6	10	7	−7	1.91	1.76	1.5
					102			10				
					132			13				
					172			17				
					202			20				
					242			24				
					272			27				
					312			31				
					342			34				
					382			38				
					412			41				

Note) When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB6-300H x18Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR6M)

Cross Roller Guide Model VR (VR9)



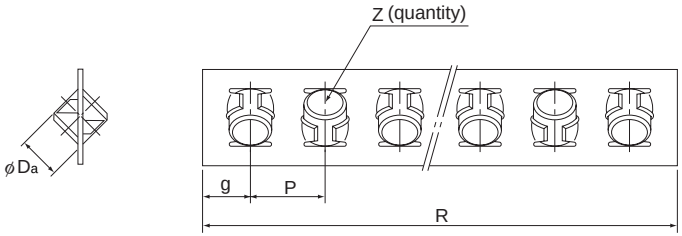
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR 9- 200×10Z	118	40 (40.74)	20	200	1×100	50	19.2	8	M8	6.8
VR 9- 300×15Z	178			300	2×100					
VR 9- 400×20Z	238			400	3×100					
VR 9- 500×25Z	298			500	4×100					
VR 9- 600×30Z	358			600	5×100					
VR 9- 700×35Z	418			700	6×100					
VR 9- 800×40Z	478			800	7×100					
VR 9- 900×45Z	538			900	8×100					
VR 9-1000×50Z	598			1000	9×100					
VR 9-1100×55Z	658			1100	10×100					
VR 9-1200×60Z	718			1200	11×100					

Model number coding

VR9 -600 H × 30Z

- 30Z: Number of rollers or balls
- H: Accuracy symbol
- -600: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 300/400)
- VR9: Combined model number (for Ball Guide: VB)

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	C_z	C_{0z}	
	D	h	T	D_a	R	g	P	Z	μm	kN	kN	kg/m
	10.5	6.2	4	9 (9.525)	141	7.5	14	10	−10	4.31	4.36	3.2
					211			15				
					281			20				
					351			25				
					421			30				
					491			35				
					561			40				
					631			45				
					701			50				
					771			55				
					841			60				

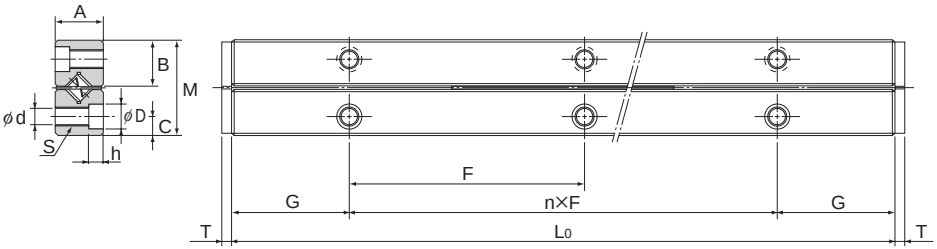
Note) The dimensions in the parentheses above indicate the dimensions of the Ball Guide.
When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB9-700H x 33Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR9M)

Description of Each Option⇒A-581 Dimensions⇒B-499

Cross Roller Guide Model VR (VR12)



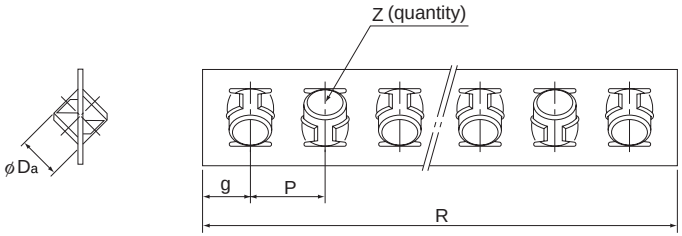
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR12- 200× 7Z	110	58 (57.86)	28	200	1×100	50	28	12	M10	8.5
VR12- 300×10Z	190			300	2×100					
VR12- 400×14Z	230			400	3×100					
VR12- 500×17Z	310			500	4×100					
VR12- 600×21Z	350			600	5×100					
VR12- 700×24Z	430			700	6×100					
VR12- 800×28Z	470			800	7×100					
VR12- 900×31Z	550			900	8×100					
VR12-1000×34Z	630			1000	9×100					
VR12-1100×38Z	670			1100	10×100					
VR12-1200×41Z	750			1200	11×100					

Model number coding

VR12 -200 P × 9Z

- VR12 -200 P × 9Z — Combined model number (for Ball Guide: VB)
- -200 — Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 300/400)
- P — Accuracy symbol
- 9Z — Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

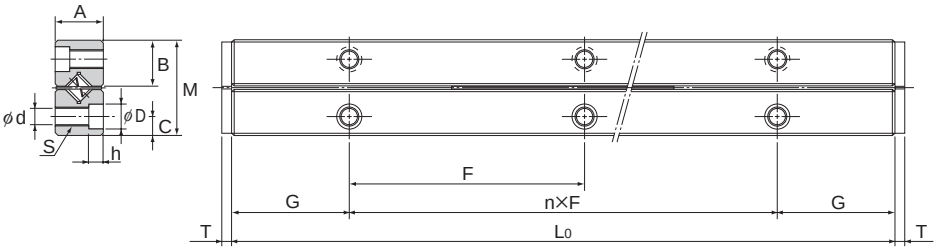
dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	C_z	C_{0z}	
	D	h	T	D_a	R	g	P	Z	μm	kN	kN	kg/m
	14	8.2	5	12 (11.906)	145	12.5	20	7	−13	7.25	7.65	5.3
					205			10				
					285			14				
					345			17				
					425			21				
					485			24				
					565			28				
					625			31				
					685			34				
					765			38				
					825			41				

Note) The dimensions in the parentheses above indicate the dimensions of the Ball Guide.
When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB12-700H x 20Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR12M)

Cross Roller Guide Model VR (VR15)



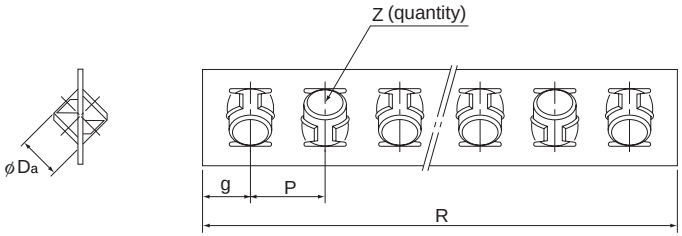
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR15- 300× 8Z	190	71 (71.11)	36	300	2×100	50	34.4	14	M12	10.5
VR15- 400×11Z	240			400	3×100					
VR15- 500×13Z	340			500	4×100					
VR15- 600×16Z	390			600	5×100					
VR15- 700×19Z	440			700	6×100					
VR15- 800×22Z	490			800	7×100					
VR15- 900×25Z	540			900	8×100					
VR15-1000×27Z	640			1000	9×100					
VR15-1100×30Z	690			1100	10×100					
VR15-1200×33Z	740			1200	11×100					

Model number coding

VR15 -300 H × 10Z

- VR15: Combined model number (for Ball Guide: VB)
- -300: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 300/400)
- H: Accuracy symbol
- 10Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.



Unit: mm

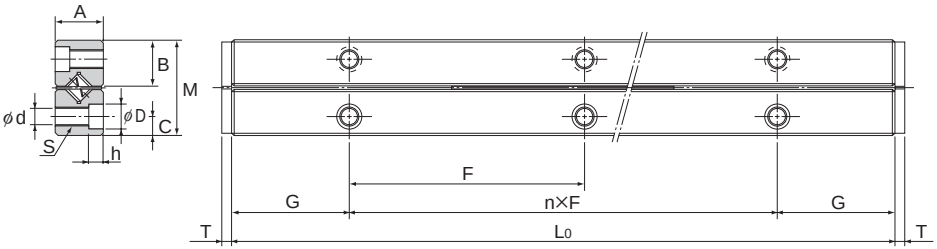
dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	C_z	C_{0z}	
	D	h	T	D_a	R	g	P	Z	μm	kN	kN	kg/m
	17.5	10.2	6	15 (15.081)	205	15	25	8	−16	11.3	12.4	8.3
					280			11				
					330			13				
					405			16				
					480			19				
					555			22				
					630			25				
					680			27				
					755			30				
					830			33				

Note) The dimensions in the parentheses above indicate the dimensions of the Ball Guide.
When desiring a Ball Guide in combination with a ball cage, refer to Ball Cage Model B on B-498 and indicate the required number of balls.

(Example) VB15-800H x 20Z
Number of balls

The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR15M)

Cross Roller Guide Model VR (VR18)



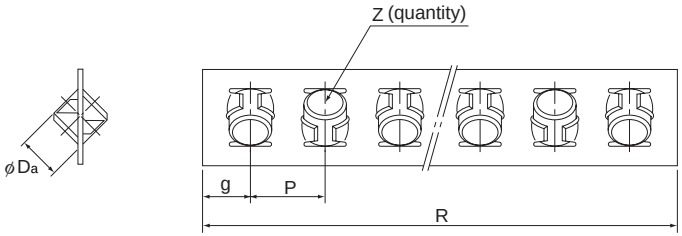
Model No.	Maximum stroke	Main								
		Combined dimensions			Mounting					
		M	A	L_0	n×F	G	B	C	S	d
VR18- 300× 6Z	228	83	40	300	2×100	50	40.2	18	M14	12.5
VR18- 400× 9Z	248			400	3×100					
VR18- 500×11Z	328			500	4×100					
VR18- 600×13Z	408			600	5×100					
VR18- 700×16Z	428			700	6×100					
VR18- 800×18Z	508			800	7×100					
VR18- 900×20Z	588			900	8×100					
VR18-1000×23Z	608			1000	9×100					
VR18-1100×25Z	688			1100	10×100					
VR18-1200×27Z	768			1200	11×100					

Model number coding

VR18 -400 H × 10Z

- VR18: Combined model number (for Ball Guide: VB)
- -400: Dedicated rail dimension in mm (example of indication for a combination of different overall lengths: 300/400)
- H: Accuracy symbol
- 10Z: Number of rollers or balls

Note) "One set" in the model No. above indicates a combination of four rails and two cages.

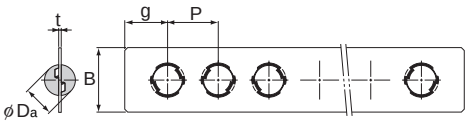


Unit: mm

dimensions								Permissible preload	Basic load rating (per roller)		Mass (rail)
dimensions							No. of rollers	δ	C_z	C_{0z}	
	D	h	T	D_a	R	g	P	Z	μm	kN	kN	kg/m
	20	12.2	6	18	186	18	30	6	−18	15.9	17.8	10.5
					276			9				
					336			11				
					396			13				
					486			16				
					546			18				
					606			20				
					696			23				
					756			25				
					816			27				

Note) The mass in the table indicates the value per rail/m.
Stainless steel type with high corrosion resistance is also available. (symbol M, e.g., VR18M)

Ball Cage Model B



Unit: mm

Model No.	Main dimensions					Basic load rating (per ball)		Combined rail
	D_a	t	B	P	g	C_z N	C_{oz} N	
B 1	1.5	0.2	3.5	2.5	2	7.84	21.6	V1
B 2	2	0.3	5	4	3	12.7	39.2	V2
B 3	3	0.4	7	6	4.5	27.5	87.3	V3
B 4	4	0.5	9	7	4.5	45.1	155	V4
B 6	6	0.6	13.5	10	6	98	353	V6
B 9	9.525	1	19	14	8.5	216	784	V9
B 12	11.906	1	25	20	12.5	324	1420	V12
B 15	15.081	1.2	31	25	15	490	2160	V15

Dedicated Mounting Bolt

To mount the rail where normal clearance is to be adjusted, use the screw hole drilled on the rail as shown in Fig.1. The holes of the bolt (d_1 and D_1) must be machined so that they are greater by the adjustment allowance.

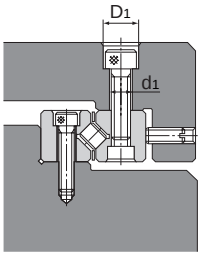


Fig.1

If it is inevitable to adopt a mounting method like the one shown in Fig.2 for a structural reason, use the dedicated mounting bolt (S) indicated in Fig.3.

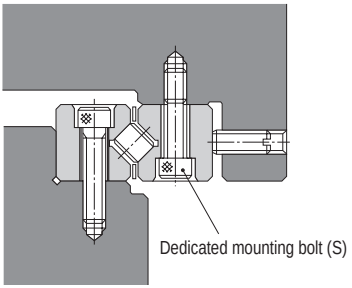


Fig.2

Table1 Dedicated Mounting Bolt

Unit: mm

Model No.	S	d	D	H	L	B	Supported rail
S 3	M3	2.3	5	3	12	2.5	V3
S 4	M4	3.1	5.8	4	15	3	V4
S 6	M5	3.9	8	5	20	4	V6
S 9	M6	4.6	8.5	6	30	5	V9
S 12	M8	6.25	11.3	8	40	6	V12
S 15	M10	7.9	13.9	10	45	8	V15
S 18	M12	9.6	15.8	12	50	10	V18

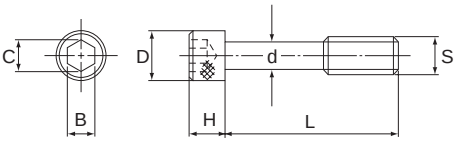
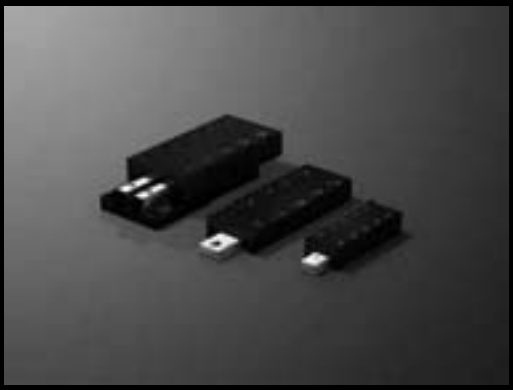


Fig.3 Dedicated Mounting Bolt



Cross Roller Table

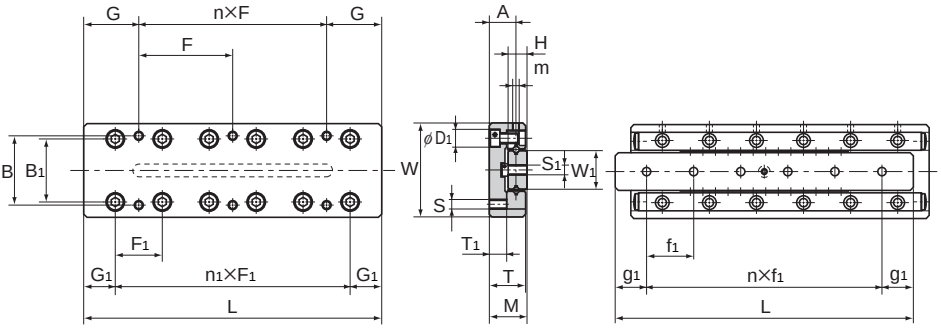
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model VRT Miniature Type (Tapped Base Type)

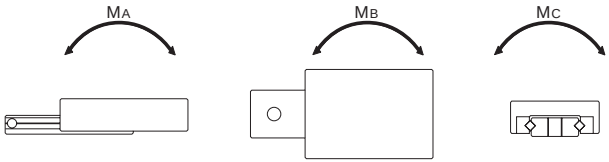


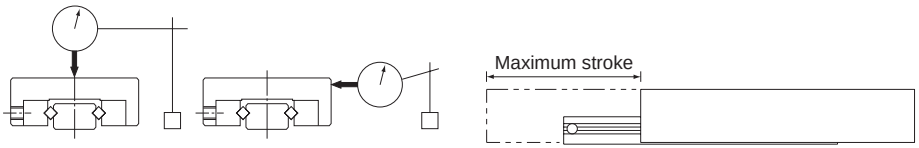
Model No.	Main dimensions					Table surface dimensions							
	Maximum stroke	Width W ±0.1	Height M ±0.1	Length L	Mass g	Table mounting tap position							
						B	n×F	G	S	n1×F1	B1	D1	G1
VRT 1025	12	20	8	25	23	14	1×18	3.5	M2.6	1×10	12.4	4.1	7.5
VRT 1035	18			35	32		1×28	3.5		2×10			
VRT 1045	25			45	42		1×20	12.5		3×10			
VRT 1055	32			55	52		1×30	12.5		4×10			
VRT 1065	40			65	62		2×20	12.5		5×10			
VRT 1075	45			75	72		1×30	22.5		6×10			
VRT 1085	50			85	82		2×30	12.5		7×10			
VRT 2035	18	30	12	35	78	22	1×28	3.5	M3	1×15	20	6	10
VRT 2050	30			50	113		1×43	3.5		2×15			
VRT 2065	40			65	147		1×30	17.5		3×15			
VRT 2080	50			80	184		1×45	17.5		4×15			
VRT 2095	60			95	220		2×30	17.5		5×15			
VRT 2110	70			110	257		1×45	32.5		6×15			
VRT 2125	80			125	290		2×45	17.5		7×15			
VRT 3055	30	40	16	55	229	30	1×40	7.5	M4	1×25	28.4	7.5	15
VRT 3080	45			80	336		1×65	7.5		2×25			
VRT 3105	60			105	442		1×50	27.5		3×25			
VRT 3130	75			130	551		1×75	27.5		4×25			
VRT 3155	90			155	657		2×50	27.5		5×25			
VRT 3180	105			180	766		1×75	52.5		6×25			
VRT 3205	130			205	871		2×75	27.5		7×25			

Note) All stainless steel type with high corrosion resistance is also available.

(Example) VRT 2035 M

Symbol for stainless steel type



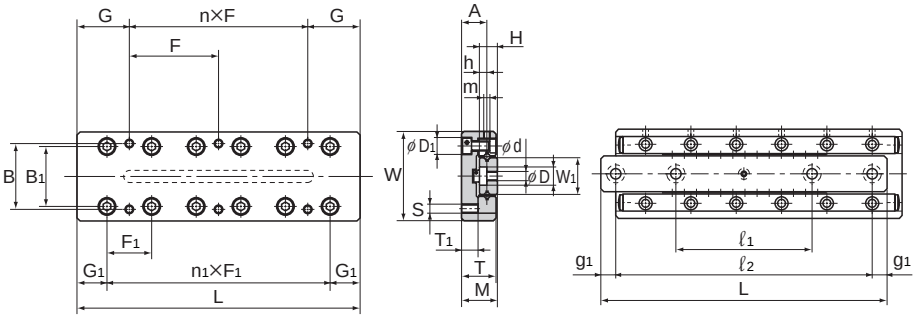


Accuracy: ΔC Accuracy: ΔD

Unit: mm

Side surface dimensions							Base surface dimensions Mounting hole position			Basic load rating		Static permissible moment			Accuracy μm	
T	T_1	H	W_1	A	m	S_1	n×f_1	g_1	No. of rollers Z	C kN	C_0 kN	M_A N-m	M_B N-m	M_C N-m	ΔC	ΔD
7.5	3.5	4	6.7	5.5	M2	M2.6	2×7.5	5	5	0.28	0.27	0.75	0.46	0.69	2	4
							2×10	7.5	7	0.38	0.41	1.23	0.85	1.03		
							3×10		10	0.56	0.69	2.18	1.67	1.72		5
							4×10		12	0.65	0.82	2.97	2.35	2.06		
							5×10		14	0.73	0.96	3.87	3.17	2.4		
							6×10		18	0.87	1.27	6.05	5.16	3.19		
							7×10		20	0.94	1.37	7.32	6.37	3.43		
11.5	5.5	6	12.2	8.5		M3	1×20	10	5	0.51	0.51	2.29	1.37	2.21		4
							2×15		7	0.69	0.76	3.76	2.65	3.32		
							3×15		9	0.85	0.98	5.62	4.22	4.25		5
							4×15		12	0.98	1.27	9.1	7.26	5.52		
							5×15		14	1.18	1.57	11.8	9.71	6.8		
							6×15		17	1.47	2.06	16.7	14.1	8.93		
							7×15		19	1.57	2.25	20.4	17.5	9.77		
15.5	7.5	8	16	11.5		M4	1×35	15	6	1.27	1.37	9.85	6.57	7.97	3	6
							2×35		10	2.16	2.84	22.2	17	16.5		
							3×25		13	2.94	4.22	34.8	28.1	24.4		
							4×25		17	3.63	5.69	55.8	47.1	33.3		
							5×25		20	3.92	6.37	74.7	64.6	36.9		
							6×25		24	4.02	6.57	104	92.3	38.1		
							7×25		26	4.22	7.16	120	107	41.5		

Model VRT-A Miniature Type (Tapped Base Type)

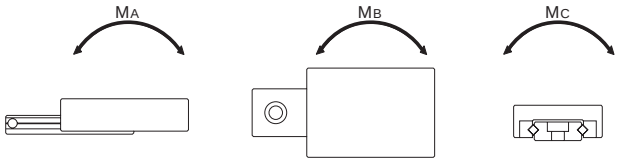


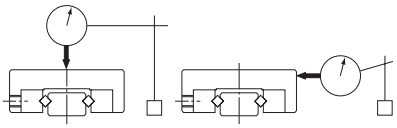
Model No.	Main dimensions					Table surface dimensions							
	Maximum stroke	Width W ±0.1	Height M ±0.1	Length L	Mass g	Table mounting tap position							
						B	n×F	G	S	n1×F1	B1	D1	G1
VRT 1025A	12	20	8	25	23	14	1×18	3.5	M2.6	1×10	12.4	4.1	7.5
VRT 1035A	18			35	32		1×28	3.5		2×10			
VRT 1045A	25			45	42		1×20	12.5		3×10			
VRT 1055A	32			55	52		1×30	12.5		4×10			
VRT 1065A	40			65	62		2×20	12.5		5×10			
VRT 1075A	45			75	72		1×30	22.5		6×10			
VRT 1085A	50			85	82		2×30	12.5		7×10			
VRT 2035A	18	30	12	35	78	22	1×28	3.5	M3	1×15	20	6	10
VRT 2050A	30			50	113		1×43	3.5		2×15			
VRT 2065A	40			65	147		1×30	17.5		3×15			
VRT 2080A	50			80	181		1×45	17.5		4×15			
VRT 2095A	60			95	217		2×30	17.5		5×15			
VRT 2110A	70			110	254		1×45	32.5		6×15			
VRT 2125A	80			125	287		2×45	17.5		7×15			
VRT 3055A	30	40	16	55	226	30	1×40	7.5	M4	1×25	28.4	7.5	15
VRT 3080A	45			80	333		1×65	7.5		2×25			
VRT 3105A	60			105	439		1×50	27.5		3×25			
VRT 3130A	75			130	548		1×75	27.5		4×25			
VRT 3155A	90			155	652		2×50	27.5		5×25			
VRT 3180A	105			180	761		1×75	52.5		6×25			
VRT 3205A	130			205	866		2×75	27.5		7×25			

Note) All stainless steel type with high corrosion resistance is also available.

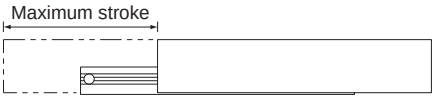
(Example) VRT 2035A M

Symbol for stainless steel type





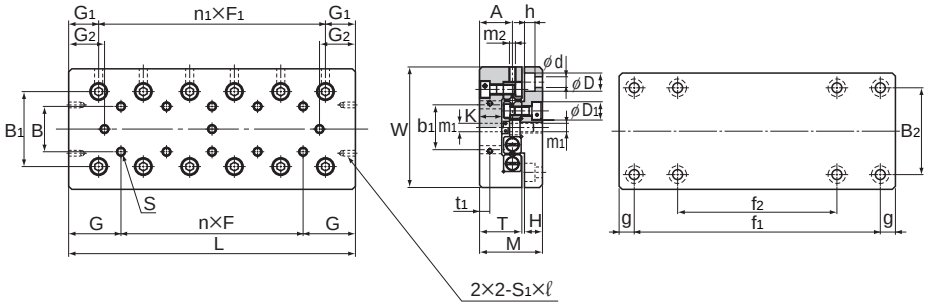
Accuracy: ΔC Accuracy: ΔD



Unit: mm

Side surface dimensions						Base surface dimensions Mounting hole position					Basic load rating		Static permissible moment			Accuracy μm	
T	T_1	H	W_1	A	m	d×D×h	ℓ_1	ℓ_2	g_1	No. of rollers Z	C kN	C_0 kN	M_A N-m	M_B N-m	M_C N-m	ΔC	ΔD
7.5	3.5	4	6.7	5.5	M2	2.5×4.1×2.2	—	18	3.5	5	0.28	0.27	0.75	0.46	0.69	2	4
							—	25	5	7	0.38	0.41	1.23	0.85	1.03		
							25	38	3.5	10	0.56	0.69	2.18	1.67	1.72		5
							29	48	3.5	12	0.65	0.82	2.97	2.35	2.06		
							31	55	5	14	0.73	0.96	3.87	3.17	2.4		
							35	65	5	18	0.87	1.27	6.05	5.16	3.19		
							40	75	5	20	0.94	1.37	7.32	6.37	3.43		
11.5	5.5	6	12.2	8.5		3.5×6×3.2	—	25	5	5	0.51	0.51	2.29	1.37	2.21		4
							—	35	7.5	7	0.69	0.76	3.76	2.65	3.32		
							33	55	5	9	0.85	0.98	5.62	4.22	4.25		5
							40	70	5	12	0.98	1.27	9.1	7.26	5.52		
							45	85	5	14	1.18	1.57	11.8	9.71	6.8		
							50	95	7.5	17	1.47	2.06	16.7	14.1	8.93		
							55	110	7.5	19	1.57	2.25	20.4	17.5	9.77		
15.5	7.5	8	16	11.5		4.5×7.5×4.2	—	40	7.5	6	1.27	1.37	9.85	6.57	7.97		
							43	68	6	10	2.16	2.84	22.2	17	16.5		
							55	90	7.5	13	2.94	4.22	34.8	28.1	24.4	3	6
							65	115		17	3.63	5.69	55.8	47.1	33.3		
							95	140		20	3.92	6.37	74.7	64.6	36.9		
							85	165		24	4.02	6.57	104.3	92.3	38.1		
							90	190		26	4.22	7.16	120.8	107.9	41.5		

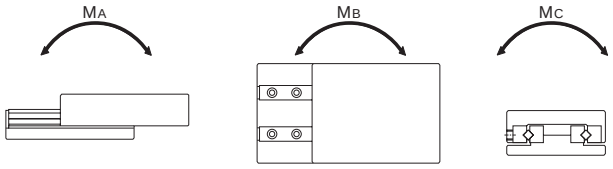
Model VRU

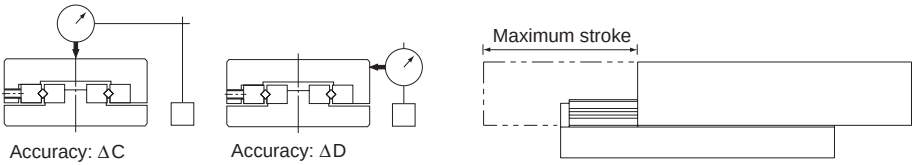


Model No.	Main dimensions					Table surface dimensions										
	Maximum stroke	Width W -0.2 -0.4	Height M ±0.1	Length L	Mass(Note) kg	Table mounting tap position				Side surface mounting tap position						
						B	n×F	G	S	B1	n1×F1	G1	G2	b1	t1	S1×ℓ
VRU 1025	12	30	17	25	0.08(0.04)	10	—	12.5	M2	18.4	1×10	7.5	2.5	12	2.5	M2×4
VRU 1035	18			35	0.11(0.05)		1×10				2×10		4.5			
VRU 1045	25			45	0.15(0.07)		2×10				3×10		6			
VRU 1055	32			55	0.18(0.09)		3×10				4×10		7.5			
VRU 1065	40			65	0.21(0.1)		4×10				5×10		8.5			
VRU 1075	45			75	0.24(0.12)		5×10				6×10		11			
VRU 1085	50			85	0.27(0.13)		6×10				7×10		13.5			
VRU 2035	18	40	21	35	0.2(0.09)	15	—	17.5	M3	25	1×15	10	3	16	3.4	
VRU 2050	30			50	0.26(0.13)		1×15				2×15		4.5			
VRU 2065	40			65	0.34(0.17)		2×15				3×15		7			
VRU 2080	50			80	0.42(0.21)		3×15				4×15		9.5			
VRU 2095	60			95	0.5(0.25)		4×15				5×15		12			
VRU 2110	70			110	0.58(0.29)		5×15				6×15		14.5			
VRU 2125	80			125	0.66(0.33)		6×15				7×15		17			

Note) Stainless steel type with high corrosion resistance is also available.
The value in the parentheses represents the mass of a stainless steel type.

(Example) VRU 2035 M
Symbol for stainless steel type
(table base: aluminum)

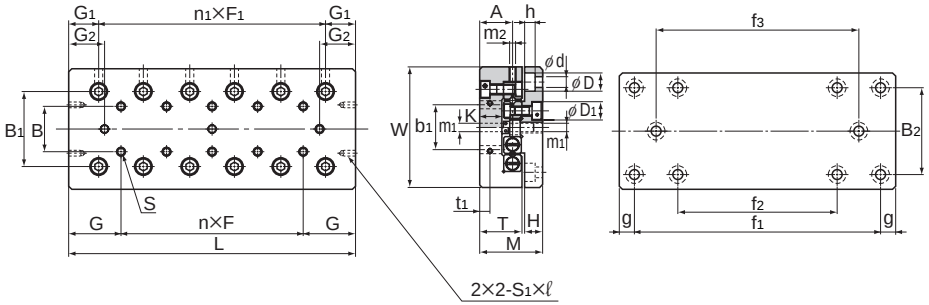




Unit: mm

									Base surface dimensions Mounting hole position				Basic load rating		Static permissible moment			Accuracy μm	
	T	H	K	d×D×h	D_1	m_1	A	m_2	B_2	f_1	f_2	g	No. of rollers Z	C kN	C_0 kN	M_A N-m	M_B N-m	M_C N-m	ΔC	ΔD
	11	5.5	6.5	2.55×4.1×2.5	4.1	M2	9	M2	22	18	—	3.5	5	0.28	0.27	0.75	0.46	1.24	2	4
										28	—		7	0.38	0.41	1.23	0.85	1.85		
										38	—		10	0.56	0.69	2.18	1.67	3.09		5
										48	28		12	0.65	0.82	2.97	2.35	3.71		
										58	38		14	0.73	0.96	3.87	3.17	4.33		
										68	48		18	0.87	1.27	6.05	5.16	5.74		
										78	58		20	0.94	1.37	7.32	6.34	6.18		
	14	6.5	7.5	3.5×6×3.5	6	M3	11	M3	30	25	—	5	5	0.51	0.51	2.29	1.4	3.06		4
										40	—		7	0.69	0.76	3.76	2.6	4.59		
										55	—		9	0.85	0.98	5.62	4.17	5.89		5
										70	40		12	1.18	1.57	9.1	7.22	9.42		
										85	55		14	1.27	1.76	11.8	9.7	10.5		
										100	70		17	1.47	2.06	16.7	14.1	12.3	3	6
										115	85		19	1.57	2.25	20.4	17.5	13.5		

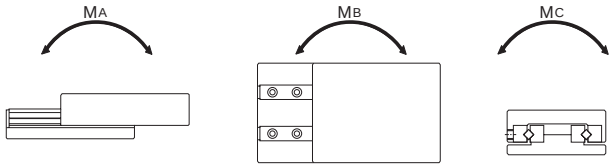
Model VRU

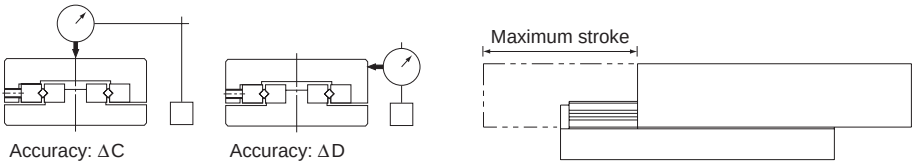


Model No.	Main dimensions					Table surface dimensions										
						Table mounting tap position				Side surface mounting tap position						
	Maximum stroke	Width W ±0.1	Height M ±0.1	Length L	Mass* kg	B	n×F	G	S	B1	n1×F1	G1	G2	b1	t1	S1×ℓ
VRU 3055	30	60	28	55	0.57(0.3)	25	—	27.5	M4	39	1×25	15	5.5	40	5.5	M3×6
VRU 3080	45			80	0.8(0.4)		1×25				2×25		10.5			
VRU 3105	60			105	1.03(0.6)		2×25				3×25		15.5			
VRU 3130	75			130	1.26(0.7)		3×25				4×25		20.5			
VRU 3155	90			155	1.49(0.9)		4×25				5×25		25.5			
VRU 3180	105			180	1.72(1)		5×25				6×25		30.5			
VRU 3205	130			205	1.95(1.1)		6×25				7×25		30.5			
VRU 4085	50	80	35	85	1.5(0.8)	40	—	42.5	M5	53	1×40	22.5	10.5	55	6.5	
VRU 4125	75			125	2.3(1.2)		1×40				2×40		18			
VRU 4165	105			165	3.1(1.5)		2×40				3×40		23			
VRU 4205	135			205	3.8(1.9)		3×40				4×40		30.5			
VRU 4245	155			245	4.6(2.2)		4×40				5×40		38			
VRU 4285	185			285	5.3(2.6)		5×40				6×40		43			

Note) Stainless steel type with high corrosion resistance is also available.
The value in the parentheses represents the mass of a stainless steel type.

(Example) VRU 3080 M
Symbol for stainless steel type
(table base: aluminum)

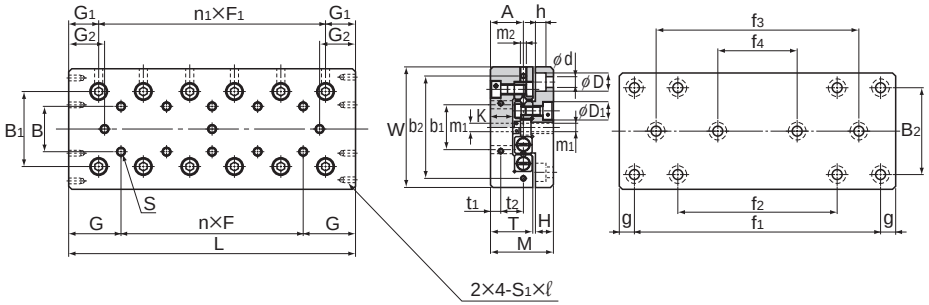




Unit: mm

									Base surface dimensions Mounting hole position					Basic load rating		Static permissible moment			Accuracy μm	
	T	H	K	d×D×h	D_1	m_1	A	m_2	B_2	f_1	f_2	f_3	g	No. of rollers Z	C kN	C_0 kN	M_A N-m	M_B N-m	M_C N-m	ΔC	ΔD
	18.5	9	10	4.5×7.5×5	7.5	M4	14.5	M4	40	35	—	—	10	6	1.47	1.67	9.85	6.54	15.5	2	5
										60	—	—		10	2.06	2.75	22.2	17	25.6		
										85	—	—		13	2.35	3.33	34.8	28.1	31.1	3	6
										110	—	—		17	2.94	4.41	55.8	47.1	41.2		
										135	—	85		20	3.53	5.49	74.7	64.6	51.2		
										160	—	110		24	4.02	6.57	104	92.3	61.3		7
										185	85	135		26	4.22	7.16	120	107	66.8		
	24	10.5	12.5	5.5×9.5×6	9.5		18.5		60	65	—	—	10	7	3.53	4.8	48.7	33.7	64	2	5
										80	—	—	22.5	11	5.2	8.04	101	79.1	107	3	6
										120	—	—		14	6.77	11.3	153	125	150		7
										160	80	—		18	8.14	14.5	239	204	193		
										200	120	—		22	9.42	17.7	344	302	235		
										240	160	—		26	10.7	20.9	468	418	278		

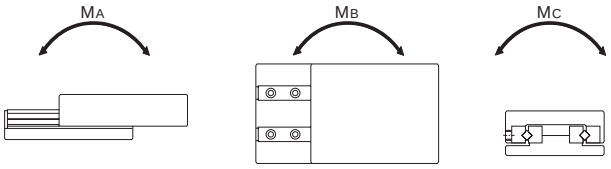
Model VRU

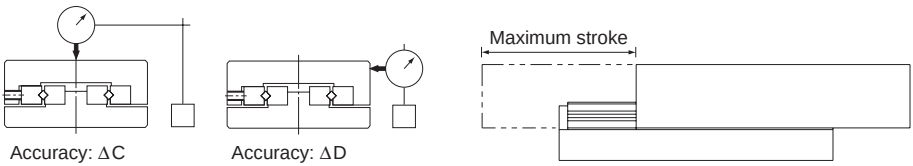


Model No.	Main dimensions					Table surface dimensions											
	Maximum stroke	Width W ±0.1	Height M ±0.1	Length L	Mass* kg	Table mounting tap position				Side surface mounting tap position							
						B	n×F	G	S	B_1	$n_1×F_1$	G_1	G_2	b_1	b_2	t_1	t_2	$S_1×\ell$
VRU 6110	60	100	45	110	3.2(1.7)	50	—	55	M6	63	1×50	30	16	60	92	8	15	M4×8
VRU 6160	95			160	4.6(2.5)		1×50				2×50		23.5					
VRU 6210	130			210	6(3.2)		2×50				3×50		31					
VRU 6260	165			260	7.4(4)		3×50				4×50		38.5					
VRU 6310	200			310	8.7(4.8)		4×50				5×50		46					
VRU 6360	235			360	10.1(5.6)		5×50				6×50		53.5					
VRU 6410	265			410	11.5(6.4)		6×50				7×50		63.5					
VRU 9210	130	145	60	210	12(7.1)	85	—	105	M8	96	1×100	55	27	90	135	11	20	
VRU 9310	180			310	17.6(7.9)		1×100				2×100		52					
VRU 9410	350			410	23.2(—)		2×100				3×100		17					
VRU 9510	450			510	28.8(—)		3×100				4×100							
VRU 9610	550			610	34.4(—)		4×100				5×100							
VRU 9710	650			710	40(—)		5×100				6×100							
VRU 9810	750			810	45.6(—)		6×100				7×100							
* VRU 9910	850			910	51.2(—)		7×100				8×100							
* VRU 91010	950			1010	56.8(—)		8×100				9×100							

Note) Stainless steel type with high corrosion resistance is also available.
The value in the parentheses represents the mass of a stainless steel type.
Models VRU9910 and VRU91010 are build to order.

(Example) VRU 6310 M
Symbol for stainless steel type
(table base: aluminum)





Unit: mm

									Base surface dimensions Mounting hole position						Basic load rating		Static permissible moment			Accuracy μm	
	T	H	K	d×D×h	D_1	m_1	A	m_2	B_2	f_1	f_2	f_3	f_4	g	No. of rollers Z	C kN	C_0 kN	M_A N-m	M_B N-m	M_C N-m	ΔC	ΔD
	31	13	15	7×11×7	11	M5	23.5	M5	60	90	—	—	—	10	6	7.45	10.6	121	80.5	158	3	6
										140	—	—	—		9	9.31	14.1	231	171	211	3	6
										190	—	90	—		13	12.5	21.1	428	345	317	3	7
										240	—	140	—		16	15.6	28.2	616	516	423	3	7
										290	—	190	—		19	17.1	31.8	838	720	476	4	8
										340	140	240	—		22	19.8	38.8	1090	958	582	4	8
										390	190	290	—		26	22.5	45.9	1480	1320	688	4	8
	43	16	21	9×14×9	14	M8	32	M6	90	100	—	—	—	55	9	20.9	34.9	837	622	838	3	7
										200	—	—	—		14	31.9	61.1	1760	1440	1460	3	7
										300	—	100	—		15	31.9	61.1	1990	1650	1460	4	8
										400	—	200	—		19	38.4	78.5	3030	2600	1880	4	8
										500	100	300	—		22	44.7	96	3950	3460	2300	4	9
										600	200	400	—		26	50.6	114	5380	4810	2730	4	9
										700	300	500	100		29	53.5	123	6600	5960	2940	5	10
										800	400	600	200		33	59.1	139	8410	7680	3340	5	10
										900	500	700	300		37	64.6	157	10400	9620	3760	5	10

Linear Ball Slide

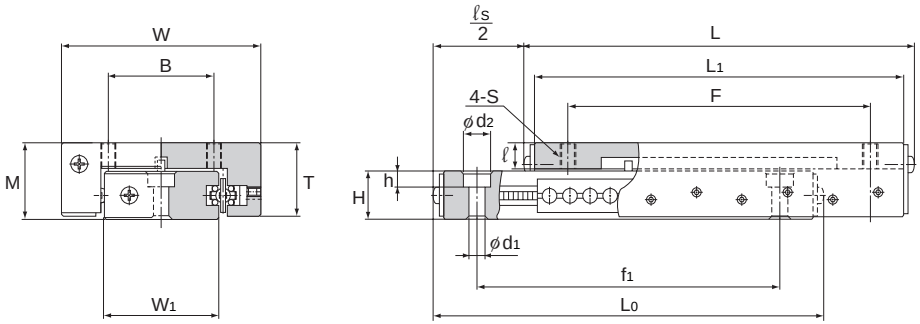
THK General Catalog

B Product Specifications

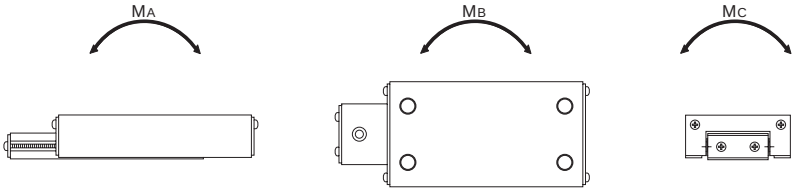
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model LSP



Model No.	Slider dimensions								
	Max. Stroke ℓs	Height M ±0.25	Width W ±0.25	Length L	T	L1	B	F	S×ℓ
LSP 1340	15	13	25	42.6	12.5	39	11	30	M3×5
LSP 1365	25	13	25	67.6	12.5	64	11	55	M3×5
LSP 1390	50	13	25	92.6	12.5	89	11	80	M3×5
LSP 2050	25	20	44	54	18.3	47	20	35	M5×8.4
LSP 2080	50	20	44	84	18.3	77	20	65	M5×8.4
LSP 20100	75	20	44	104	18.3	97	20	85	M5×8.4
LSP 25100	50	25	66	105.2	24	97	35	75	M5×8.5
LSP 25125	75	25	66	130.2	24	122	35	100	M5×8.5
LSP 25150	100	25	66	155.2	24	147	35	125	M5×8.5

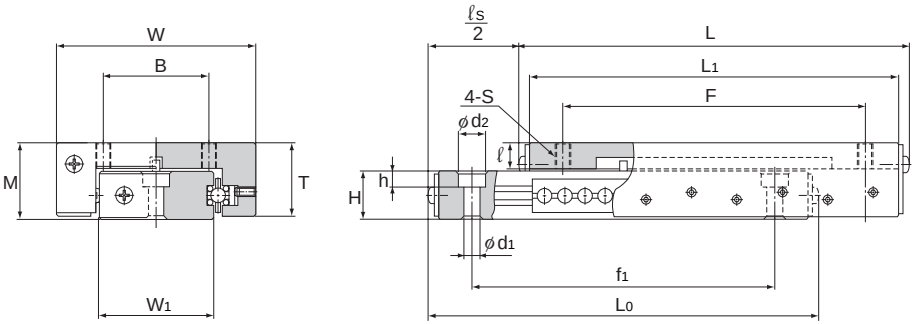


Unit: mm

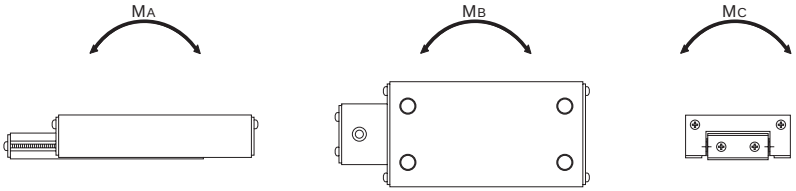
	Base dimensions					Static permissible moment*		Basic load rating		Mass
	Width W_1	Height H	$d_1 \times d_2 \times h$	Length L_0	f_1	M_A, M_B N-m	M_C N-m	C N	C_0 N	g
	12.2	7.7	3.3×6×3.3	42.6	30	0.88	0.49	68.6	118	37
	12.2	7.7	3.3×6×3.3	67.6	55	1.76	0.98	118	206	60
	12.2	7.7	3.3×6×3.3	92.6	80	3.04	1.27	157	275	85
	22.3	11	5.3×9×5.3	54	35	1.37	2.25	157	284	114
	22.3	11	5.3×9×5.3	84	65	3.53	4.51	304	559	184
	22.3	11	5.3×9×5.3	104	85	5	5.69	392	706	231
	38	16	5.3×9×5.3	105.2	75	9.22	14.5	588	1069	433
	38	16	5.3×9×5.3	130.2	100	12.9	18.1	735	1333	547
	38	16	5.3×9×5.3	155.2	125	17.5	21.9	882	1598	652

Note) *M_A, M_B and M_C each indicate the permissible moment per LM system, as shown in the figure above.

Model LS



Model No.	Slider dimensions								
	Max. Stroke ℓs	Height M ±0.25	Width W ±0.25	Length L	T	L1	B	F	S×ℓ
LS 827	13	8	14.2	29.6	7.6	26	5.5	16	M2×2.7
LS 852	25	8	14.2	54.6	7.6	51	5.5	41	M2×2.7
LS 877	50	8	14.2	79.6	7.6	76	5.5	66	M2×2.7
LS 1027	13	10	19	29.6	9.2	26	8.5	16	M3×3.2
LS 1052	25	10	19	54.6	9.2	51	8.5	41	M3×3.2
LS 1077	50	10	19	79.6	9.2	76	8.5	66	M3×3.2

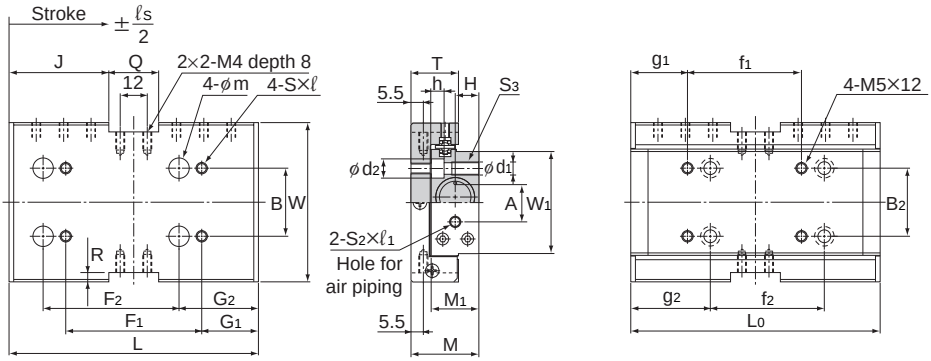


Unit: mm

	Base dimensions					Static permissible moment*		Basic load rating		Mass
	Width W_1	Height H	$d_1 \times d_2 \times h$	Length L_0	f_1	M_A, M_B N-m	M_C N-m	C N	C_0 N	g
	6.2	4.7	2.2×3.9×1.4	29.6	19	0.2	0.29	39.2	68.6	9
	6.2	4.7	2.2×3.9×1.4	54.6	35	0.49	0.39	68.6	118	15
	6.2	4.7	2.2×3.9×1.4	79.6	60	0.88	0.59	98	167	21
	9.6	6.2	3.3×6×3.1	29.6	19	0.29	0.59	58.8	108	13
	9.6	6.2	3.3×6×3.1	54.6	35	0.78	1.08	108	186	23
	9.6	6.2	3.3×6×3.1	79.6	60	1.47	1.57	157	275	34

Note) *M_A, M_B and M_C each indicate the permissible moment per LM system, as shown in the figure above.

Model LSC



Model No.	Max. Stroke ℓs +0.5 0	Cylinder Inner diameter	Slider dimensions					
			Theoretical thrust (at 500 kPa) N	Height M ±0.05	Width W	L	T	B
LSC 1015	15	10	38.2	25	50	80	24	20
LSC 1515	15	15	86.3	30	70	80	21	30
LSC 1530	30	15	86.3	30	70	110	21	30
LSC 1550	50	15	86.3	30	70	150	21	30

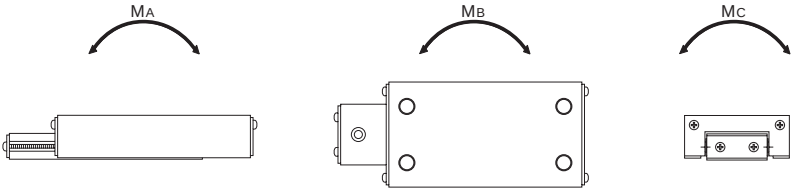
Model No.	L0	B2	Slider dimensions				Base dimensions		
			f2	g2	f1	g1	d1×d2×h	A	S3
LSC 1015	80	20	40	20	—	—	3.3×5.5×3.5	13	M4
LSC 1515	80	30	40	21	23	29.5	5.2×9×5.5	17	M6
LSC 1530	110	30	60	25	40	35	5.2×9×5.5	17	M6
LSC 1550	150	30	100	25	78	36	5.2×9×5.5	17	M6

Model number coding

LSC1515 B S L

- LSC1515: Model number
- B: With unit base
- S: With external stopper
- L: With limit switch

Note) Unit base, external stopper and limit switch are not available for model LSC1015.
The speed controller is optional.



Unit: mm

Slider dimensions										
	F_1	G_1	S×ℓ	m	G_2	F_2	J	Q	R	M_1
	40	20	M4×7	5.5	12.5	40	—	—	—	16.5
	40	19	M5×8	9	28.5	40	29	22	4	21
	60	25	M5×8	9	35	60	44	22	4	21
	100	25	M5×8	9	50	50	64	22	4	21

Base dimensions				Static permissible moment*		Basic load rating		Mass
	W_1	H	S_2×ℓ_1	M_A, M_B N-m	M_C N-m	C N	C_0 N	kg
	31.2	5.5	M5×5	4.9	7.45	392	676	0.25
	45	10.5	M5×4.5	4.9	11.1	392	676	0.37
	45	10.5	M5×4.5	8.43	15.4	549	951	0.52
	45	10.5	M5×4.5	15.4	22.1	794	1350	0.72

Note) *M_A, M_B and M_C each indicate the permissible moment per LM system, as shown in the figure above.

Speed Controller

Fig.1 shows the shape of the speed controller.

Note) The speed controller is optional.
(control method: meter out)

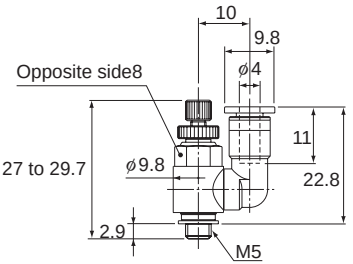


Fig.1 Shape of the Speed Controller (common to all model numbers)

Dedicated Unit Base Model B

With Linear Ball Slide model LSC, a limit switch for detecting the stroke end can be mounted using a dedicated unit base (Fig.2). When fine positioning is required, a dedicated stopper can be mounted on the unit base to adjust the position. (excluding model LSC1015)

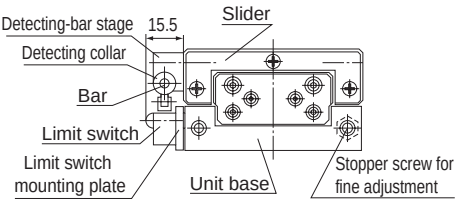
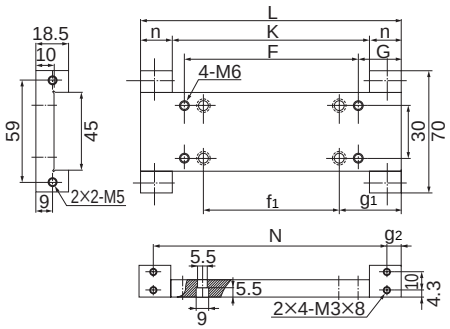
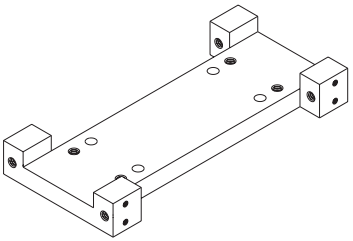


Fig.2 Unit Base and Limit Switch Installation





Unit: mm

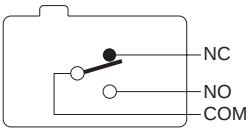
Unit base Model B	Unit base dimensions									Mass
	Length L	F	G	f_1	g_1	K	n	N	g_2	kg
LSC1515	80	40	21	23	29.5	56	12	68	6	0.12
LSC1530	110	60	25	40	35	74	18	94	8	0.16
LSC1550	150	100	25	78	36	114	18	134	8	0.21

Limit Switch

The specifications of the limit switch are as follows.

<Limit switch specifications>

Type	D2VW-5L2A-1 (Omron)
Contact type	contact (1C contact)



<Rated Specifications>

Type	Rated voltage (V)		Non-inductive load (A)				Inductive load (A)	
			Resistance load		Ramp load		Inductive load	
			Normally closed	Normally open	Normally closed	Normally open	Normally closed	Normally open
D2VW-5	AC	125	5		0.5		4	
		250	5		0.5		4	
	DC	30	5		3		4	
		125	0.4		0.1		0.4	

Note1) The above figures indicate the constant current.
Note2) Inductive load refers to power factor of 0.7 or greater (alternate current) and time constant of 7 ms or less (direct current).
Note3) Ramp load implies a rush current 10 times greater.
Note4) The above rated values apply when a test is conducted with the following conditions in accordance with JIS C 4505.
(1) Ambient temperature: 20℃± 2℃
(2) Ambient humidity: 65% ± 5% RH
(3) Operating frequency: 30 times/min

Note) For applications under a minute load (5 to 24 VDC), a minute-load type is available. Contact THK for details.

LM Roller

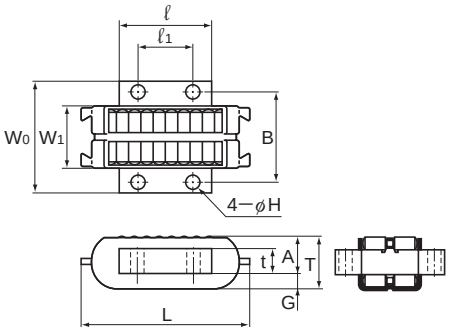
THK General Catalog

B Product Specifications

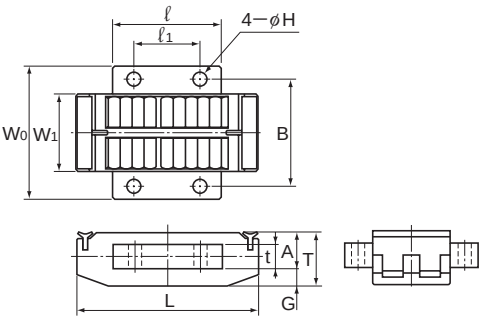
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models LR and LR-Z



Model LR

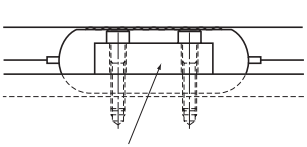


Model LR-Z

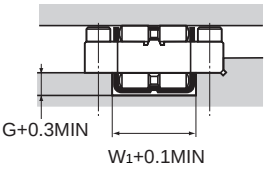
Unit: mm

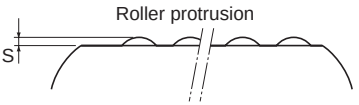
Model No.	Main dimensions													Mass	Basic dynamic load rating	Basic static load rating
	W_1 0 −0.1	Length L	Thick-ness T	Width W_0	A	t	G	ℓ 0 −0.2	Mounting hole pitch ℓ_1	Mounting hole pitch B	H	S	Mounting bolt	g	C kN	C_0 kN
LR 1547Z	15	47	16	30	11	7	5	20	12	23	3.4	0.2	M3*	60	15.2	17.6
LR 2055Z	20	55	17.3	36	12	8	5.3	30	18	29	4.5	0.2	M4*	110	26	37.8
LR 2565Z	25	65	20.6	45	14	9	6.6	35	20	36	5.5	0.1	M5*	190	40.4	61.1
LR 3275Z	32	75	21.6	55	15	10	6.6	45	27	44	5.5	0.1	M5*	320	52.5	91
LR 4095	40	95	30	68	21	14	9	55	35	54	6.6	0.3	M6	800	84.5	140
LR 50130	50	130	42	82	30	20	12	78	50	66	9	0.3	M8	1810	149	255

Note) Using a hexagonal-socket-head type bolt as the mounting bolt marked with * may cause interference.

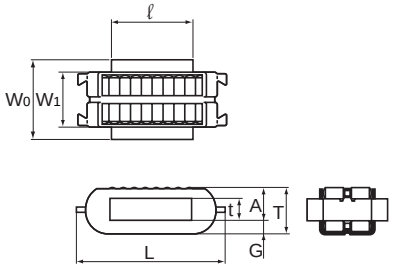


Model LR or LR-Z

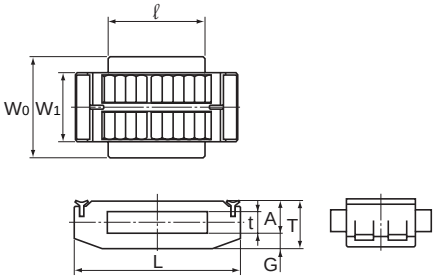




Models LRA and LRA-Z



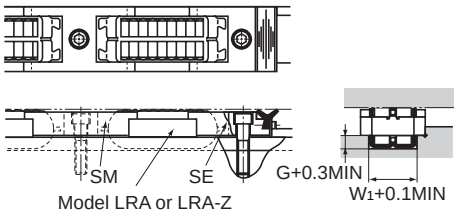
Model LRA



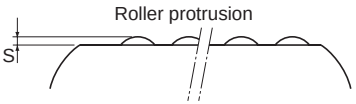
Model LRA-Z

Unit: mm

Model No.	Main dimensions									Mass	Basic dynamic load rating	Basic static load rating
	W_1 $^{0}_{-0.1}$	Length L	Thick-ness T	Width W_0	A	t	G	ℓ $^{0}_{-0.2}$	S	g	C kN	C_0 kN
LRA 1547Z	15	47	16	22.2	11	7	5	20	0.2	54	15.2	17.6
LRA 2055Z	20	55	17.3	30	12	8	5.3	30	0.2	104	26	37.8
LRA 2565Z	25	65	20.6	38.1	14	9	6.6	35	0.1	180	40.4	61.1
LRA 3275Z	32	75	21.6	45	15	10	6.6	45	0.1	310	52.5	91
LRA 4095	40	95	30	55	21	14	9	55	0.3	740	84.5	140
LRA 50130	50	130	42	76.2	30	20	12	78	0.3	1770	149	255

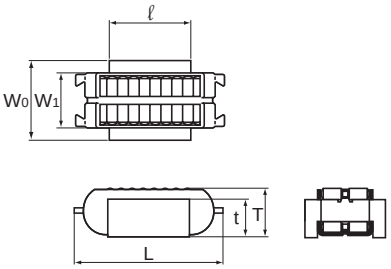


Model LRA or LRA-Z

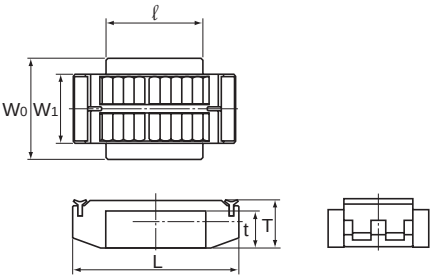


Description of Each Option⇒A-617 Dimensions⇒B-528

Models LRB and LRB-Z



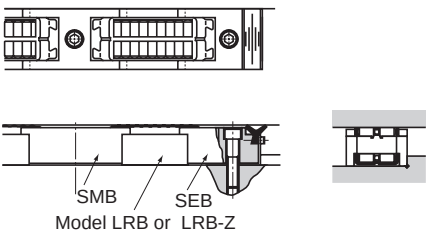
Model LRB

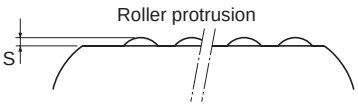


Model LRB-Z

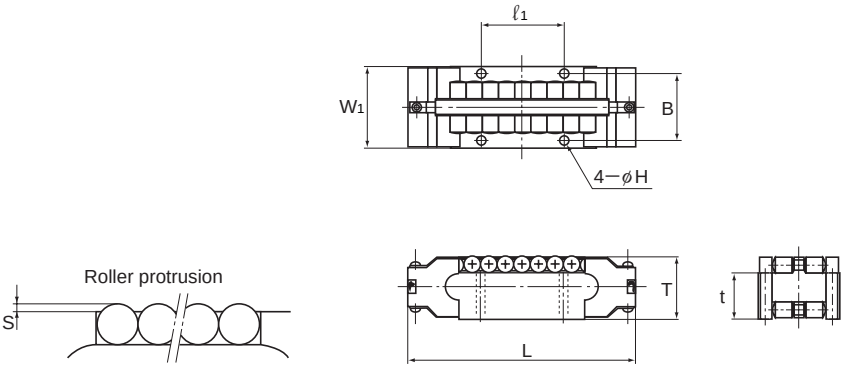
Unit: mm

Model No.	Main dimensions							Mass	Basic dynamic load rating	Basic static load rating
	W_1 0 −0.1	Length L	Width W_0	Thick-ness T	t	ℓ 0 −0.2	S	g	C kN	C_0 kN
LRB 1547Z	15	47	22.2	17	13	20	0.2	60	15.2	17.6
LRB 2055Z	20	55	30	18	14	30	0.2	117	26	37.8
LRB 2565Z	25	65	38.1	21	16	35	0.1	205	40.4	61.1
LRB 3275Z	32	75	45	22	17	45	0.1	340	52.5	91
LRB 4095	40	95	55	31	24	55	0.3	800	84.5	140
LRB 50130	50	130	76.2	43	33	78	0.3	1970	149	255



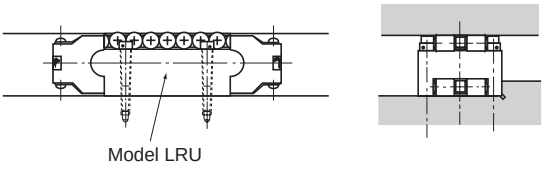


Model LRU



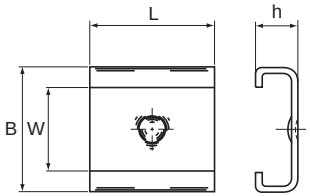
Unit: mm

Model No.	Main dimensions									Mass	Basic dynamic load rating	Basic static load rating
	Thick-ness	Width			Length						C	C_0
	T	W_1	Toler-ance	t	L	ℓ_1	B	H	S	kg	kN	kN
LRU 22.2	14.283	22.23	0 −0.050	10.48	51	19.05	17.07	3	0.253	0.09	11.9	14.5
LRU 25.4	19.05	25.4	0 −0.050	13.97	73	25.4	20.6	3.4	0.2	0.22	28.1	39.8
LRU 38.1	28.573	38.1	0 −0.050	20.953	101.6	38.1	30.96	4.5	0.22	0.7	59.4	88.2
LRU 50.8	38.098	50.8	0 −0.075	27.938	139.7	50.8	41.28	5.6	0.46	1.7	103	159
LRU 76.2	57.15	76.2	0 −0.075	41.15	206.4	76.2	61.9	6.6	0.5	5.7	245	402



Description of Each Option⇒A-617 Dimensions⇒B-528

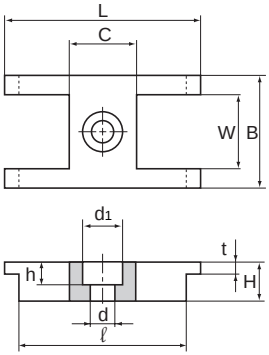
Spring Pad Model PA



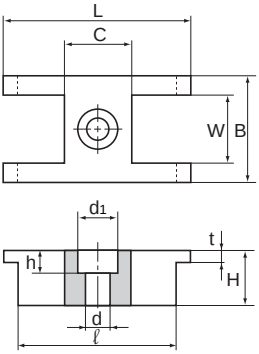
Unit: mm

Model No.	Main dimensions				Installation related dimensions(see A-618)					Maximum permissible load	Spring constant	Supported LM Roller
	W	B	L	h	H	S +0.15 +0.05	F	P	Adjust-ment bolt	kN	kN/mm	
PA 15	15	22.2	20	9	21	22.2	11.5	65	M5	1.02	5.4	LRA 1547Z
PA 20	20	30	30	9.5	22.5	30	12	75	M6	2.74	7.5	LRA 2055Z
PA 25	25	38.1	35	12	27	38.1	14.5	90	M8	4.11	9.1	LRA 2565Z
PA 32	32	45	45	12.5	28.5	45	15	100	M8	4.11	11.2	LRA 3275Z
PA 40	40	55	55	16	38	55	18.5	126	M10	4.8	15.3	LRA 4095
PA 50	50	76.2	78	21	52	76.2	23.5	170	M12	6.86	15.5	LRA 50130

Fixtures Models SM/SMB



Model SM

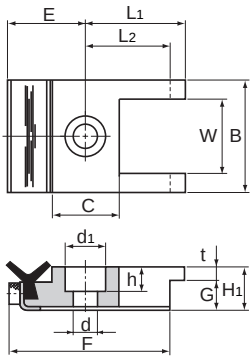


Model SMB

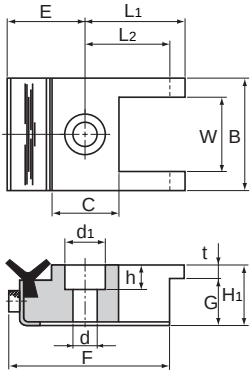
Unit: mm

Model No.	Main dimensions										Mass
	W	B	L	C	ℓ	H	t	d	d_1	h	g
SM 15	15	22.2	53	16	45	9	3	5.5	9.5	5.4	38
SMB 15	15	22.2	53	16	45	15	3	5.5	9.5	5.4	60
SM 20	20	30	53	18	45	10	3	6.6	11	6.5	60
SMB 20	20	30	53	18	45	16	3	6.6	11	6.5	95
SM 25	25	38.1	65	23	55	12	4	9	14	8.6	115
SMB 25	25	38.1	65	23	55	19	4	9	14	8.6	120
SM 32	32	45	65	23	55	13	4	9	14	8.6	135
SMB 32	32	45	65	23	55	20	4	9	14	8.6	215
SM 40	40	55	81	28	71	19	6	11	17.5	10.8	290
SMB 40	40	55	81	28	71	29	6	11	17.5	10.8	455
SM 50	50	76.2	102	38	92	28	9	14	20	13	890
SMB 50	50	76.2	102	38	92	41	9	14	20	13	1320

Fixtures Models SE/SEB



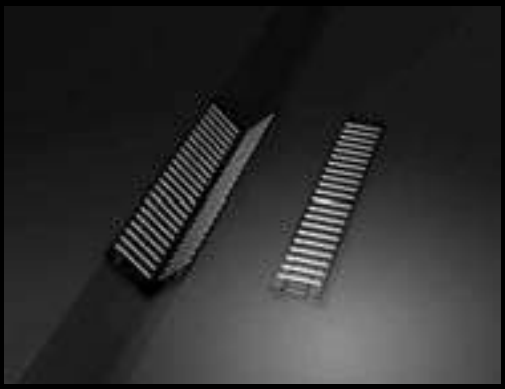
Model SE



Model SEB

Unit: mm

Model No.	Main dimensions													Mass
	W	B	L_1	L_2	E	F	C	H_1	G	t	d	d_1	h	g
SE 15	15	22.2	26.5	22.5	18	40.5	16	10	7	3	5.5	9.5	5.4	35
SEB 15	15	22.2	26.5	22.5	18	40.5	16	16	13	3	5.5	9.5	5.4	64
SE 20	20	30	26.5	22.5	19	41.5	18	11	8	3	6.6	11	6.5	60
SEB 20	20	30	26.5	22.5	19	41.5	18	17	14	3	6.6	11	6.5	105
SE 25	25	38.1	32.5	27.5	21.5	49	23	13	9	4	9	14	8.6	110
SEB 25	25	38.1	32.5	27.5	21.5	49	23	20	16	4	9	14	8.6	175
SE 32	32	45	32.5	27.5	21.5	49	23	14	10	4	9	14	8.6	140
SEB 32	32	45	32.5	27.5	21.5	49	23	21	17	4	9	14	8.6	220
SE 40	40	55	40.5	35.5	24	59.5	28	20	14	6	11	17.5	10.8	295
SEB 40	40	55	40.5	35.5	24	59.5	28	30	24	6	11	17.5	10.8	415
SE 50	50	76.2	51	46	29	75	38	29	20	9	14	20	13	840
SEB 50	50	76.2	51	46	29	75	38	42	33	9	14	20	13	1245



Flat Roller

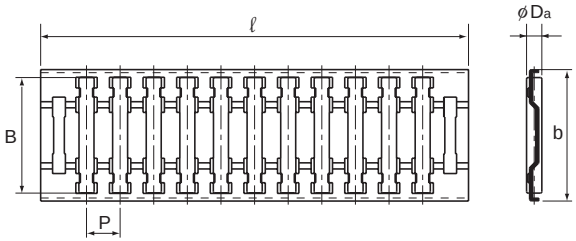
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model FT



Unit: mm

Model No.	Main dimensions		Roller dimensions				Basic dynamic load rating	Basic static load rating	Mass
	Width	Length	Diameter	Length	No. of rollers	Pitch	C	C_0	
	b	ℓ	D_a	B	Z	P	kN	kN	g
FT 2010-32	10	32	2	7.8	7	4	5.2	10.4	1.9
FT 2515-45	15	45	2.5	11.8	7	4.75	10.9	25.2	5.6
FT 3020-60	20	60	3	15.8	8	5.51	17.4	42.8	12.5
FT 3525-75	25	75	3.5	19.8	8	7	27.4	72.7	23
FT 4030-150	30	150	4	25.8	18	7.3	55.7	176	73
FT 4035-150	35	150	4	30.8	18	7.3	64.2	212	86
FT 4026V-150	26	150	2.828	22.8	22	6	45.1	155	45
FT 5038-250	38	250	5	32.8	21	11	109	387	195
FT 5043-250	43	250	5	37.8	21	11	122	449	200
FT 5030V-250	30	250	3.535	21.8	33	7	78	290	103
FT 10054-400	54	400	10	46	24	15.8	279	1000	870
FT 10080-500	80	500	10	71.8	29	16	459	1900	1610
FT 10060V-500	60	500	7.071	52.8	35	13.5	301	1270	870

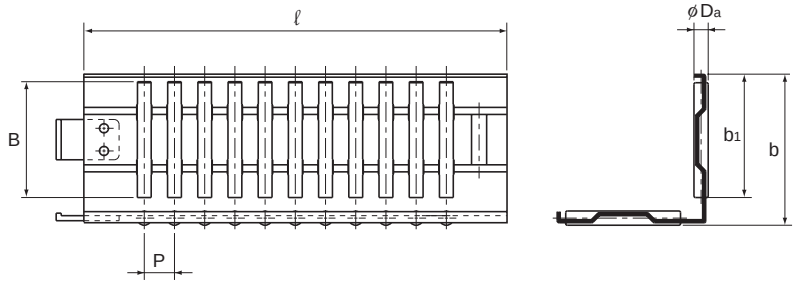
Model number coding

FT5038 P1 -750L

Model number — Accuracy indication symbol (*1) — Overall cage length (in mm)

(*1) See A-628.

Model FTW



Unit: mm

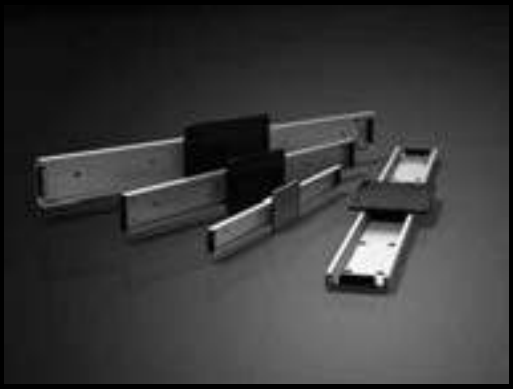
Model No.	Main dimensions			Roller dimensions				Basic dynamic load rating	Basic static load rating	Mass
	Width		Length	Diameter	Length	No. of rollers	Pitch	C	C_0	
	b	b_1	ℓ	D_a	B	Z	P	kN	kN	g
FTW 4030V-150	30	24.5	150	2.828	22.8	22×2	6	59	220	94
FTW 5045-250	45	35.5	250	5	32.8	21×2	11.1	142	548	410
FTW 5050-250	50	40.5	250	5	37.8	23×2	10	160	634	460
FTW 5035V-250	35	29	250	3.535	26.8	33×2	7	102	411	220
FTW 6022.4-320	22.4	14.4	320	6	12.8	16×2	19	53	141	180
FTW 10036V-380	36	26.6	380	7.071	25	23×2	16	149	507	700
FTW 10043.5V-380	43.5	34	380	7.071	31.8	23×2	16	182	660	845
FTW 10070V-500	70	56.5	500	7.071	52.8	35×2	13.5	394	1804	1790

Model number coding

FTW5050 P1 -750L

- FTW5050: Model number
- P1: Accuracy indication symbol (*1)
- -750L: Overall cage length (in mm)

(*1) See A-628.



Slide Pack

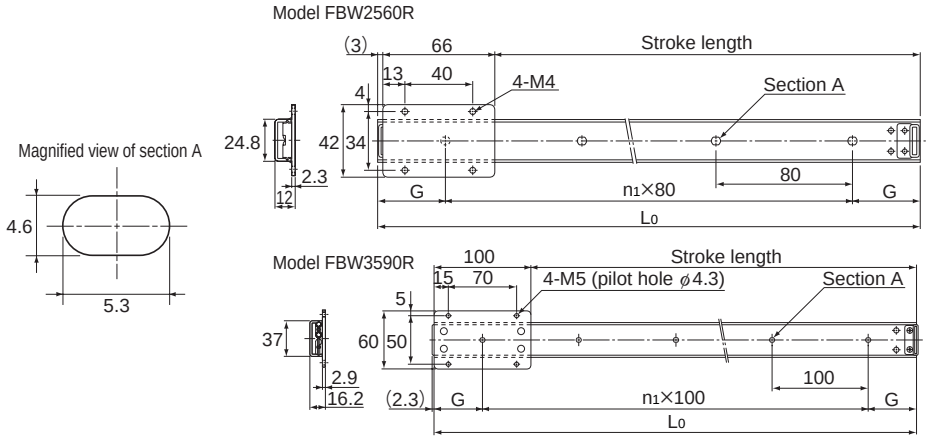
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models FBW 2560R and 3590R



[Model FBW 2560R (Made of Stainless Steel)]

Unit: mm

Slide rail length L_0	Main dimensions		Stroke length		Slide rail mass g (70)
	n_1	G	Without seal	With seal	
160	1	40	88	83	70
240	2	40	168	163	110
320	3	40	248	243	140
400	4	40	328	323	180
480	5	40	408	403	210
560	6	40	488	483	250
640	7	40	568	563	290
720	8	40	648	643	320
800	9	40	728	723	360
880	10	40	808	803	390
960	11	40	888	883	430
1040	12	40	968	963	460
1200	14	40	1128	1123	540

Note) THK also manufactures a long-size type at your request.
The values in the parentheses each indicate a slider mass.

[Model FBW 3590R]

Unit: mm

Slide rail length L_0	Main dimensions		Stroke length		Slide rail mass g (250)
	n_1	G	Without seal	With seal	
300	2	50	200	195	260
350	3	25	250	245	300
400	3	50	300	295	350
450	4	25	350	345	390
500	4	50	400	395	430
550	5	25	450	445	480
600	5	50	500	495	520
650	6	25	550	545	560
700	6	50	600	595	600
750	7	25	650	645	650
800	7	50	700	695	690
900	8	50	800	795	780
1000	9	50	900	895	860
1200	11	50	1100	1095	1000
1500	14	50	1400	1395	1300
1800	17	50	1700	1695	1600

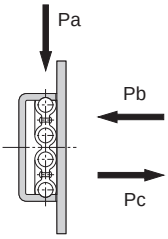
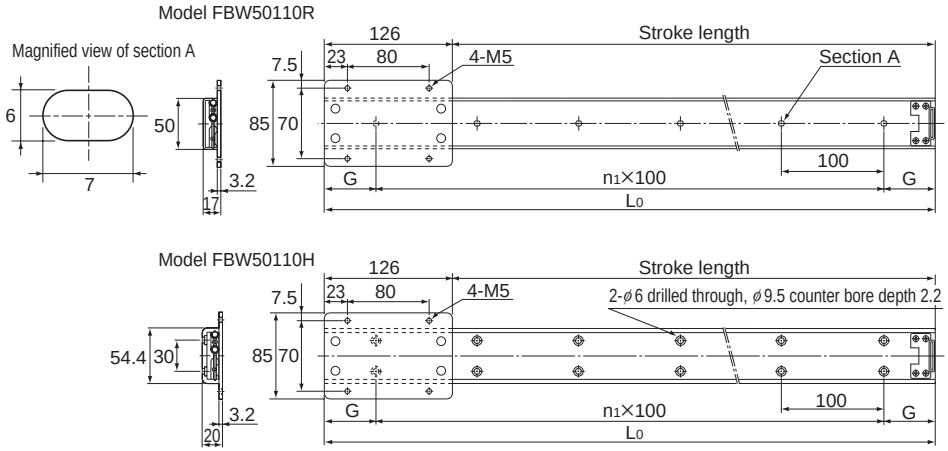


Table1 Static Permissible Load Unit: N

Model No.	Static permissible load		
	Pa	Pb	Pc
FBW 2560R	590	150	70
FBW 3590R	880	200	100
FBW 50110R	1960	500	390
FBW 50110H			

Models FBW 50110R and 50110H



[Models FBW 50110R and 50110H]

Unit: mm

Slide rail length L_0	Main dimensions		Stroke length		Slide rail mass g	
	n_1	G	Without seal	With seal	FBW50110R (420)	FBW50110H (420)
300	2	50	170	164	360	740
350	3	25	220	214	420	870
400	3	50	270	264	480	990
450	4	25	320	314	540	1100
500	4	50	370	364	600	1200
600	5	50	470	464	720	1400
700	6	50	570	564	840	1700
800	7	50	670	664	960	2000
900	8	50	770	764	1100	2200
1000	9	50	870	864	1200	2500
1200	11	50	1070	1064	1400	3000
1500	14	50	1370	1364	1800	3700
1800	17	50	1670	1664	2200	4400

Note) THK also manufactures a long-size type at your request.
The values in the parentheses each indicate a slider mass.

Model number coding

2 FBW50110R UU +800L - T

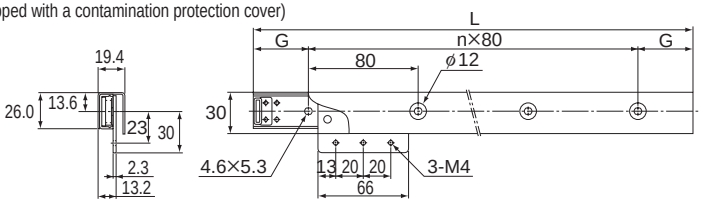
- 2: No. of sliders connected on the same rail (no symbol for a single slider)
- FBW50110R: Model number
- UU: With seal (no symbol for without seal)
- +800L: Overall slide rail length (in mm)
- T: Jointed slide rails symbol

Slide Pack

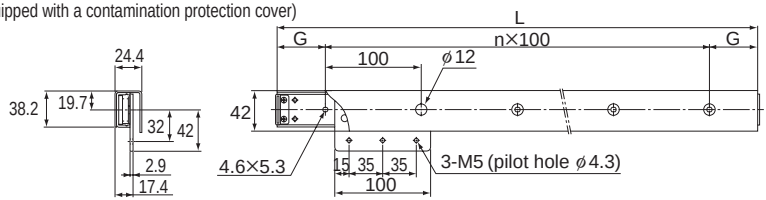
Metal Dustproof Cover

For Slide Pack model FBW, steel covers that cover the whole slide rail to prevent foreign material from entering the slide are available.

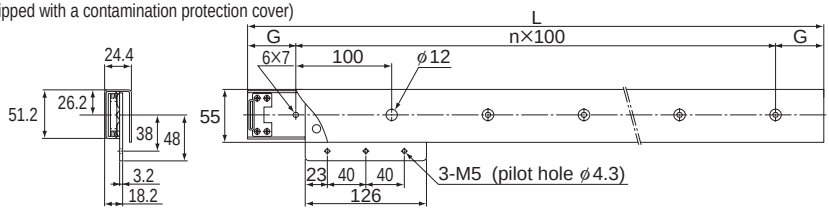
Model FBW2560RG
(Equipped with a contamination protection cover)



Model FBW3590RG
(Equipped with a contamination protection cover)



Model FBW50110RG
(Equipped with a contamination protection cover)



Note) For models equipped with a contamination protection cover, the rubber seal is not available.

Installation

[Groove Dimensions]

Fig.1 shows the dimensions of grooves for applications where model FBW-R (H) is installed in a groove.

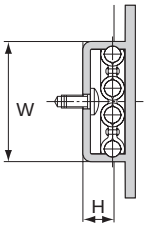


Fig.1

Unit: mm

Model No.	W	H
FBW 2560R	24.8 +0.15 +0.1	7.4
FBW 3590R	37 +0.15 +0.1	10
FBW 50110R	50 +0.15 +0.1	10
FBW 50110H	54.4 +0.15 +0.1	13

Slide Rail

THK General Catalog

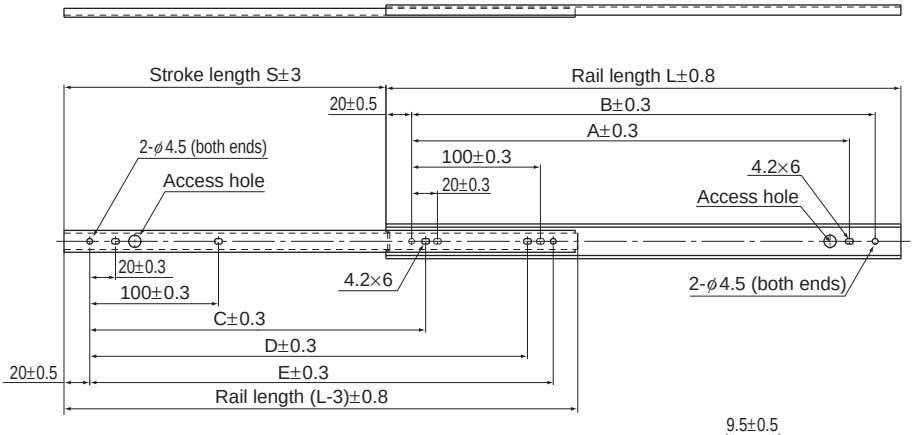
B Product Specifications

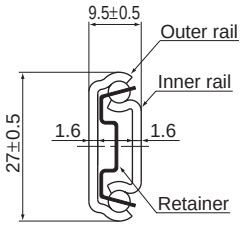
Dimensional Drawing, Dimensional Table

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model FBL 27S





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions					Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	Inner rail	Outer rail		
200	135	140.0	160.0	—	140.0	160.0	5	5	260	0.32
250	185	190.0	210.0	150.0	190.0	210.0	6	5	240	0.40
300	222	240.0	260.0	190.0	240.0	260.0	6	5	240	0.48
350	260	290.0	310.0	225.0	290.0	310.0	6	5	230	0.56
400	297	340.0	360.0	265.0	340.0	360.0	6	5	210	0.64
450	334	390.0	410.0	300.0	390.0	410.0	6	5	200	0.72
500	371	440.0	460.0	337.0	440.0	460.0	6	5	180	0.80

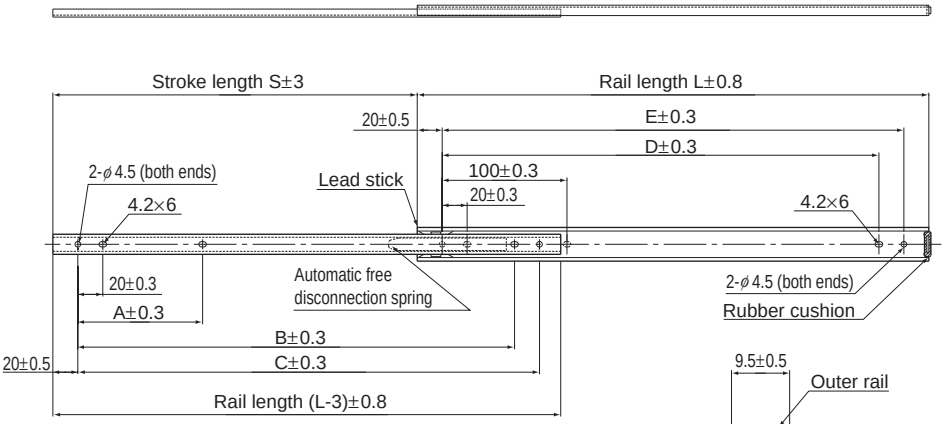
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

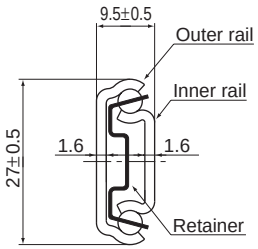
Model number coding

FBL27S +300L

Model number — Overall rail length (in mm)

Model FBL 27S-P14





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions					Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	Inner rail	Outer rail		
200	116	65.0	—	170.0	140.0	160.0	4	5	260	0.32
250	152	100.0	—	210.0	190.0	210.0	4	5	240	0.40
300	202	100.0	—	260.0	240.0	260.0	4	5	240	0.48
350	251	100.0	—	310.0	290.0	310.0	4	5	230	0.56
400	297	100.0	—	360.0	340.0	360.0	4	5	210	0.64
450	332	100.0	390.0	410.0	390.0	410.0	5	5	210	0.72
500	371	100.0	440.0	460.0	440.0	460.0	5	5	200	0.80
550	407	100.0	490.0	510.0	490.0	510.0	5	5	180	0.80

Note) The permissible load and the mass each indicate the value for a pair of 2 units.

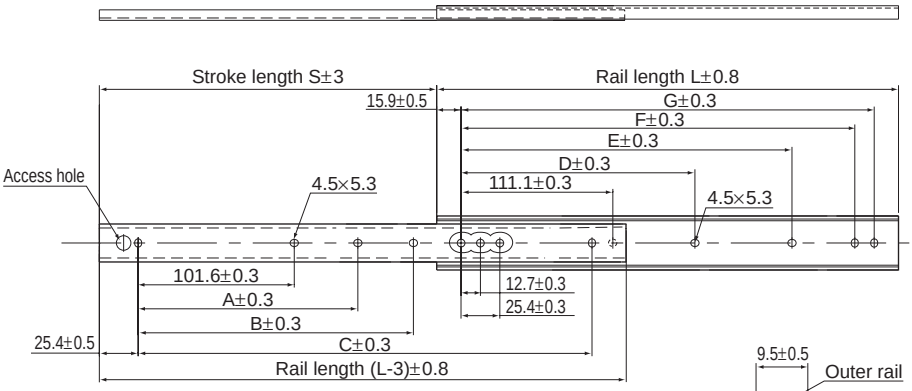
Model number coding

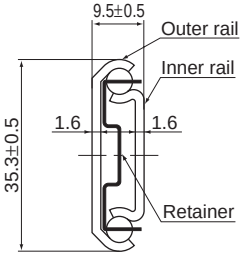
FBL27S-P14 +500L

Model number — Overall rail length (in mm)

Slide Rail

Model FBL 35S





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

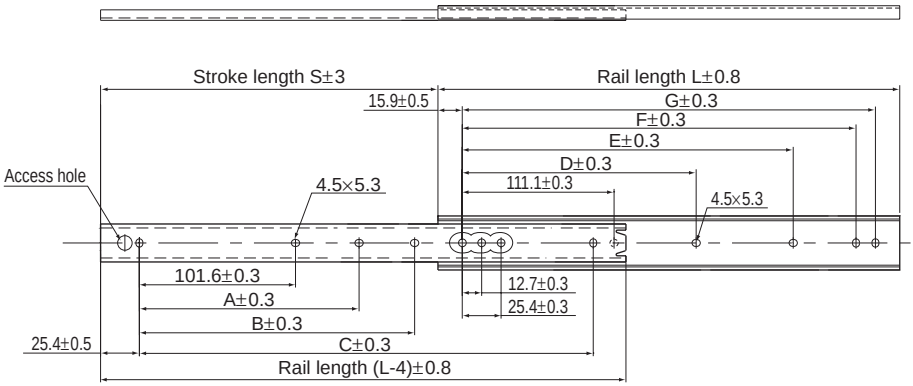
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

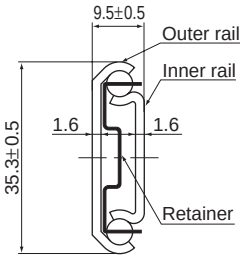
Model number coding

FBL35S +457L

Model number — Overall rail length (in mm)

Model FBL 35M





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

Note) The permissible load and the mass each indicate the value for a pair of 2 units.

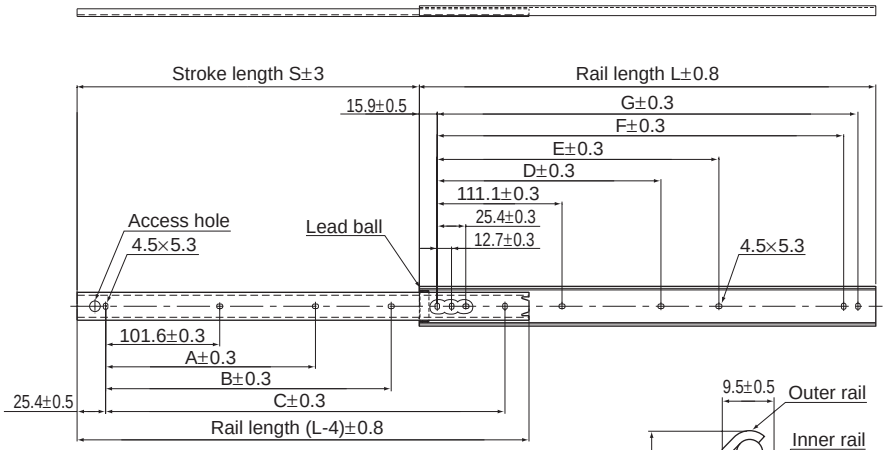
Model number coding

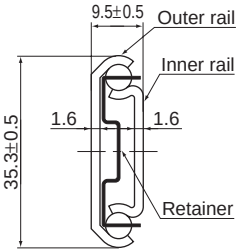
FBL35M +406L

Model number — Overall rail length (in mm)

Slide Rail

Model FBL 35J





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	229	—	152.4	254.0	—	149.2	260.3	273.0	4	7	490	0.6
356	279	—	203.2	304.8	—	200.0	311.1	323.8	4	7	400	0.7
406	305	—	254.0	355.6	—	250.8	361.9	374.6	4	7	390	0.8
457	330	203.2	304.8	406.4	212.7	301.6	412.7	425.4	5	8	380	0.9
508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	5	8	330	1.0
559	406	254.0	406.4	508.0	263.5	403.2	514.3	527.0	5	8	320	1.1
610	432	279.4	457.2	558.8	288.9	454.0	565.1	577.8	5	8	310	1.2
660	483	304.8	508.0	609.6	314.3	504.8	615.9	628.6	5	8	280	1.3
711	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	5	8	270	1.4

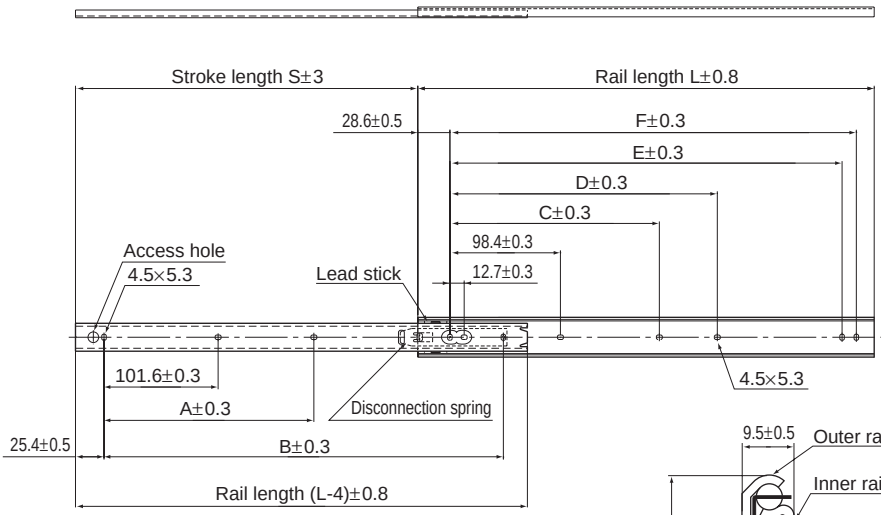
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

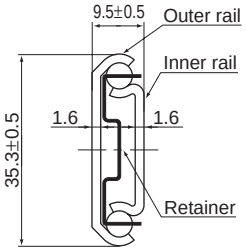
Model number coding

FBL35J +660L

Model number — Overall rail length (in mm)

Model FBL 35J-P13





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Inner rail	Outer rail		
305	224	152.4	—	136.5	—	247.6	260.3	3	6	490	0.6
356	275	203.2	—	187.3	—	298.4	311.1	3	6	400	0.72
406	315	254.0	—	238.1	—	349.2	361.9	3	6	390	0.84
457	330	203.2	406.4	200.0	228.9	400.0	412.7	4	7	380	0.96
508	381	228.6	457.2	225.4	339.7	450.8	463.5	4	7	330	1.04
559	406	254.0	508.0	250.8	390.5	501.6	514.3	4	7	320	1.16
610	432	279.4	558.8	276.2	441.3	552.4	565.1	4	7	310	1.24
660	483	304.8	609.6	301.6	492.1	603.2	615.9	4	7	280	1.36
711	493	330.2	660.4	327.0	542.9	654.0	666.7	4	7	270	1.48

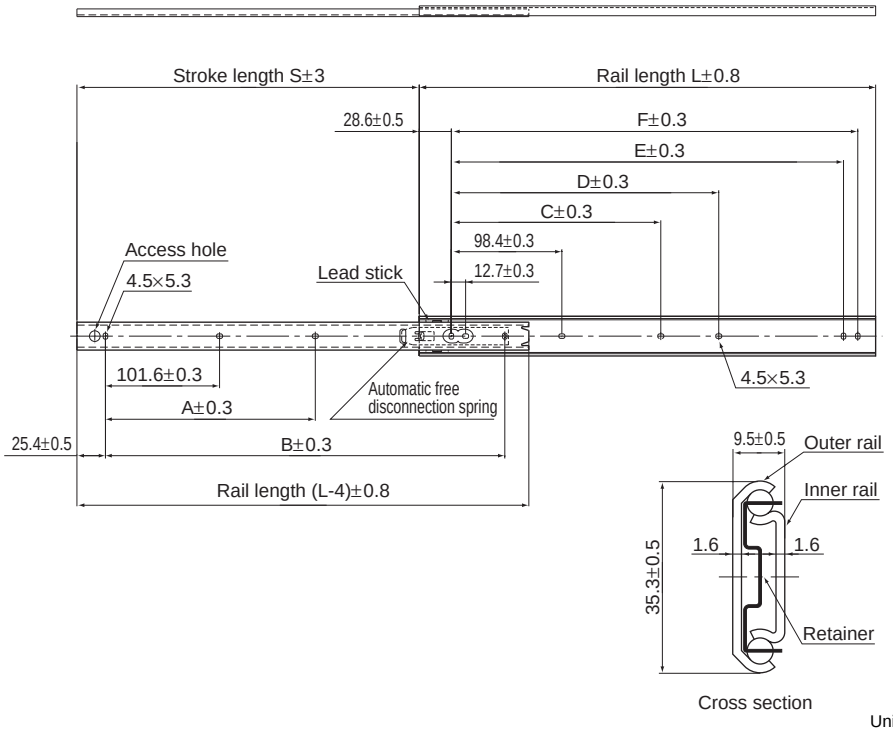
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL35J-P13 +559L

Model number — Overall rail length (in mm)

Model FBL 35J-P14



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Inner rail	Outer rail		
305	224	152.4	—	136.5	—	247.6	260.3	3	6	490	0.6
356	275	203.2	—	187.3	—	298.4	311.1	3	6	400	0.72
406	315	254.0	—	238.1	—	349.2	361.9	3	6	390	0.84
457	330	203.2	406.4	200.0	228.9	400.0	412.7	4	7	380	0.96
508	381	228.6	457.2	225.4	339.7	450.8	463.5	4	7	330	1.04
559	406	254.0	508.0	250.8	390.5	501.6	514.3	4	7	320	1.16
610	432	279.4	558.8	276.2	441.3	552.4	565.1	4	7	310	1.24
660	483	304.8	609.6	301.6	492.1	603.2	615.9	4	7	280	1.36
711	493	330.2	660.4	327.0	542.9	654.0	666.7	4	7	270	1.48

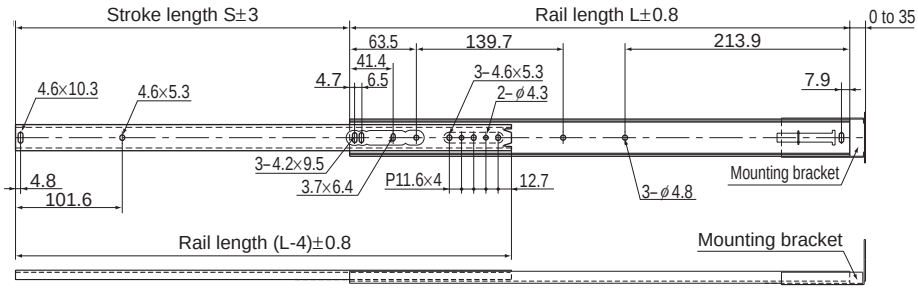
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

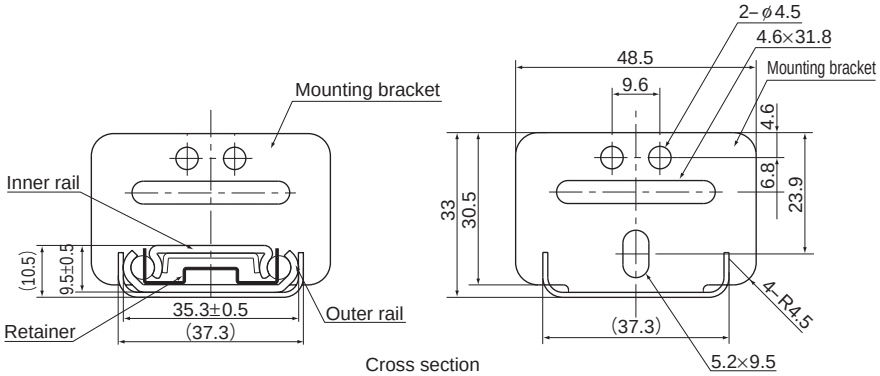
Model number coding

FBL35J-P14 +559L

Model number — Overall rail length (in mm)

Model FBL 35B





Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole		Permissible load N/pair	Mass kg/pair
		Inner rail	Outer rail		
324	216	7	7	115	0.8
375	267	7	7	105	0.92
425	305	7	7	100	1
476	318	7	7	90	1.12
527	368	7	7	83	1.24
578	419	7	7	73	1.32
629	445	7	7	66	1.44
679	495	7	7	61	1.6

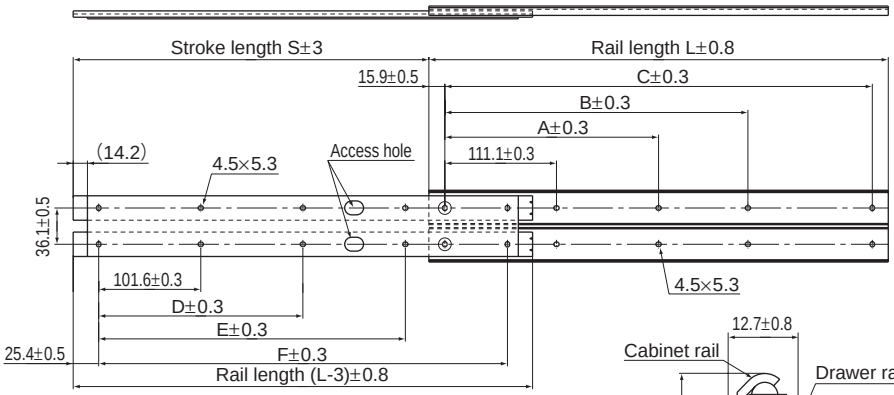
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

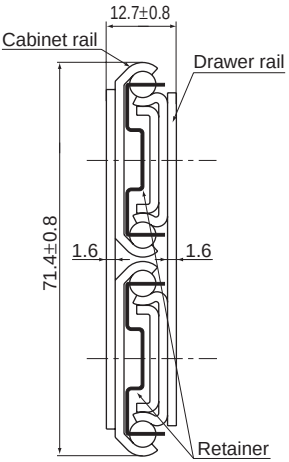
Model number coding

FBL35B +375L

Model number — Overall rail length (in mm)

Model FBL 35T





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Inner rail	Outer rail		
305	227	—	149.2	273.0	—	152.8	254.4	4	4	1120	2.16
356	278	—	200.0	323.8	—	203.6	305.2	4	4	1070	2.56
406	303	—	250.8	374.6	—	254.4	356.0	4	4	1020	2.96
457	354	212.7	301.6	425.4	203.2	305.2	406.8	5	5	1000	3.3
508	367	238.1	352.4	476.2	228.6	356.0	457.6	5	5	971	3.64
559	430	263.5	403.2	527.0	254.0	406.8	508.4	5	5	922	4.04
610	456	288.9	454.0	577.8	279.4	457.6	559.2	5	5	873	4.32
660	468	314.3	504.8	628.6	304.8	508.4	610.0	5	5	843	4.72
711	506	339.7	555.6	679.4	330.2	559.2	660.8	5	5	784	5.1

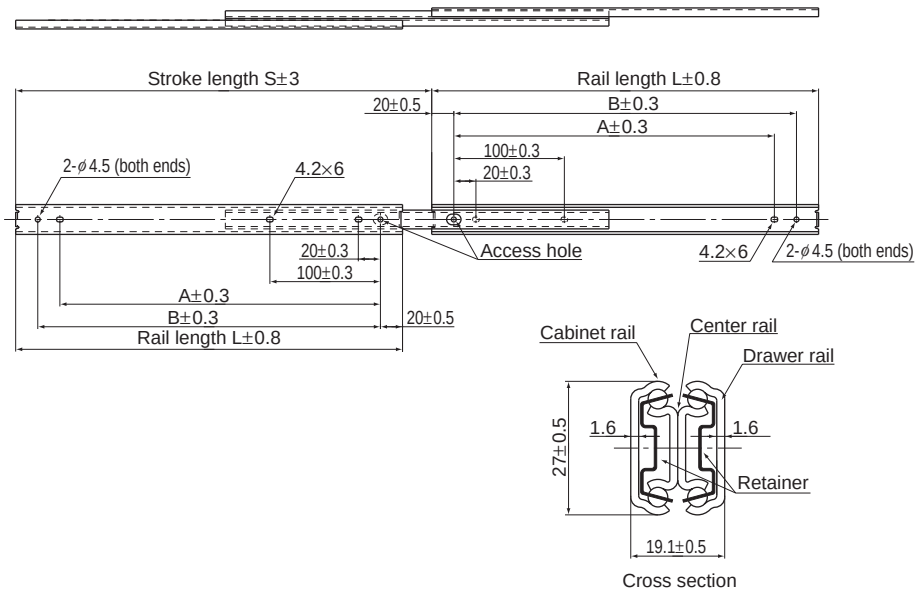
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL35T +559L

Model number — Overall rail length (in mm)

Model FBL 27D



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions		Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	Drawer rail	Cabinet rail		
200	229	140.0	160.0	5	5	370	0.64
250	276	190.0	210.0	5	5	360	0.8
300	327	240.0	260.0	5	5	350	0.96
350	376	290.0	310.0	5	5	330	1.12
400	426	340.0	360.0	5	5	310	1.28
450	475	390.0	410.0	5	5	290	1.46
500	524	440.0	460.0	5	5	280	1.6

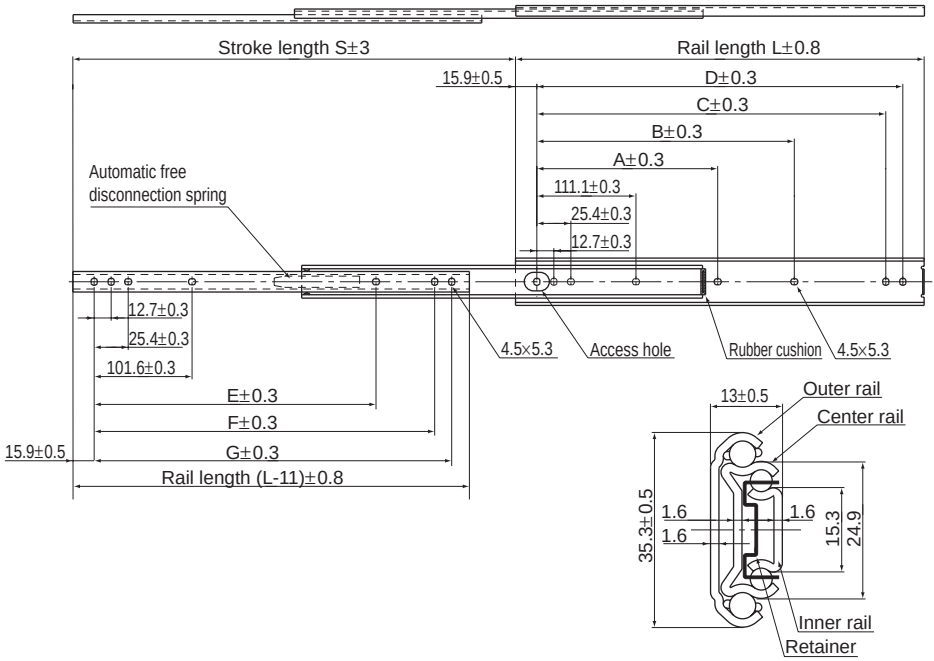
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL27D +200L

Model number Overall rail length (in mm)

Model FBL 35E-P14



Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	—	149.2	260.3	273.0	233.1	254.0	266.7	7	7	294	0.88
356	381	—	200.0	311.1	323.8	258.5	304.8	317.5	7	7	284	1.04
406	432	—	250.8	361.9	374.6	283.9	355.6	368.3	7	7	275	1.16
457	483	212.7	301.6	412.7	425.4	309.3	406.4	419.1	7	8	255	1.32
508	533	238.1	352.4	463.5	476.2	334.7	457.2	469.9	7	8	235	1.48

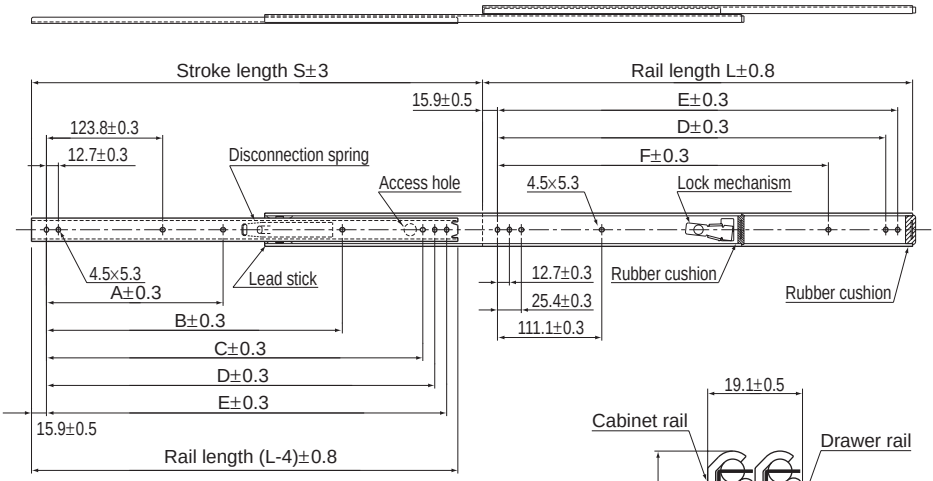
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

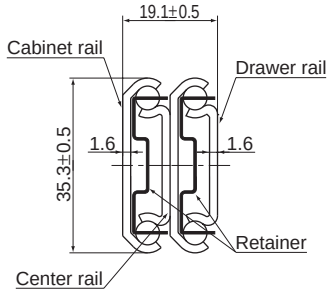
Model number coding

FBL35E-P14 +508L

Model number — Overall rail length (in mm)

Model FBL 35G-P13





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Drawer rail	Cabinet rail		
305	327	—	—	—	260.3	273.0	—	5	6	623	1.2
356	378	—	—	298.4	311.1	323.8	—	6	6	586	1.4
406	429	—	—	349.2	361.9	374.6	250.8	6	7	555	1.6
457	480	212.7	—	400.0	412.7	425.4	301.6	7	7	516	1.8
508	530	238.1	365.1	450.8	463.5	476.2	352.4	8	7	475	2
559	581	263.5	415.9	501.6	514.3	527.0	403.2	8	7	444	2.2
610	632	288.9	466.7	552.4	565.1	577.8	454.0	8	7	413	2.4
660	683	314.3	517.5	603.2	615.9	628.6	504.8	8	7	382	2.6
711	734	339.7	568.3	654.0	666.7	679.4	555.6	8	7	355	2.8

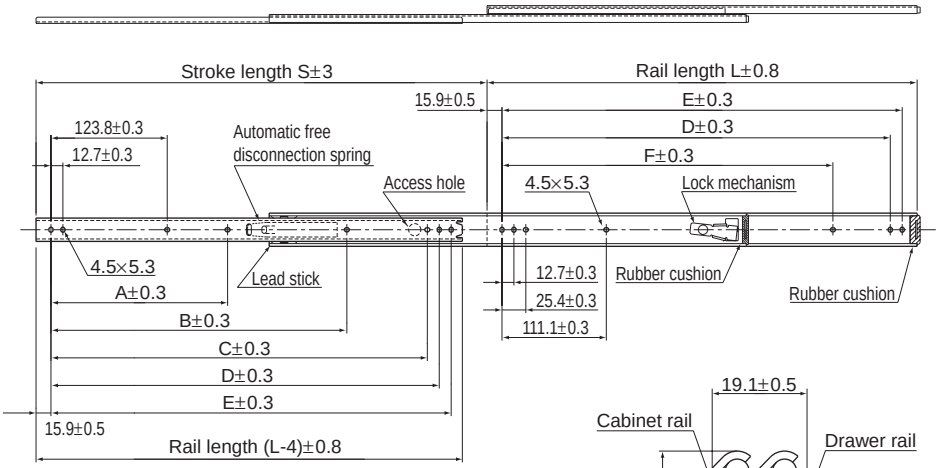
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

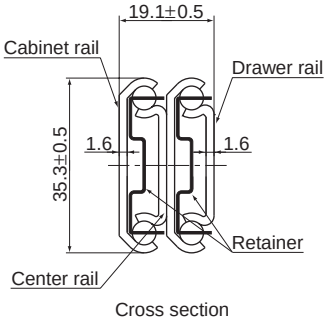
Model number coding

FBL35G-P13 +356L

Model number — Overall rail length (in mm)

Model FBL 35G-P14





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions						Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	Drawer rail	Cabinet rail		
305	327	—	—	—	260.3	273.0	—	5	6	623	1.2
356	378	—	—	298.4	311.1	323.8	—	6	6	586	1.4
406	429	—	—	349.2	361.9	374.6	250.8	6	7	555	1.6
457	480	212.7	—	400.0	412.7	425.4	301.6	7	7	516	1.8
508	530	238.1	365.1	450.8	463.5	476.2	352.4	8	7	475	2
559	581	263.5	415.9	501.6	514.3	527.0	403.2	8	7	444	2.2
610	632	288.9	466.7	552.4	565.1	577.8	454.0	8	7	413	2.4
660	683	314.3	517.5	603.2	615.9	628.6	504.8	8	7	382	2.6
711	734	339.7	568.3	654.0	666.7	679.4	555.6	8	7	355	2.8

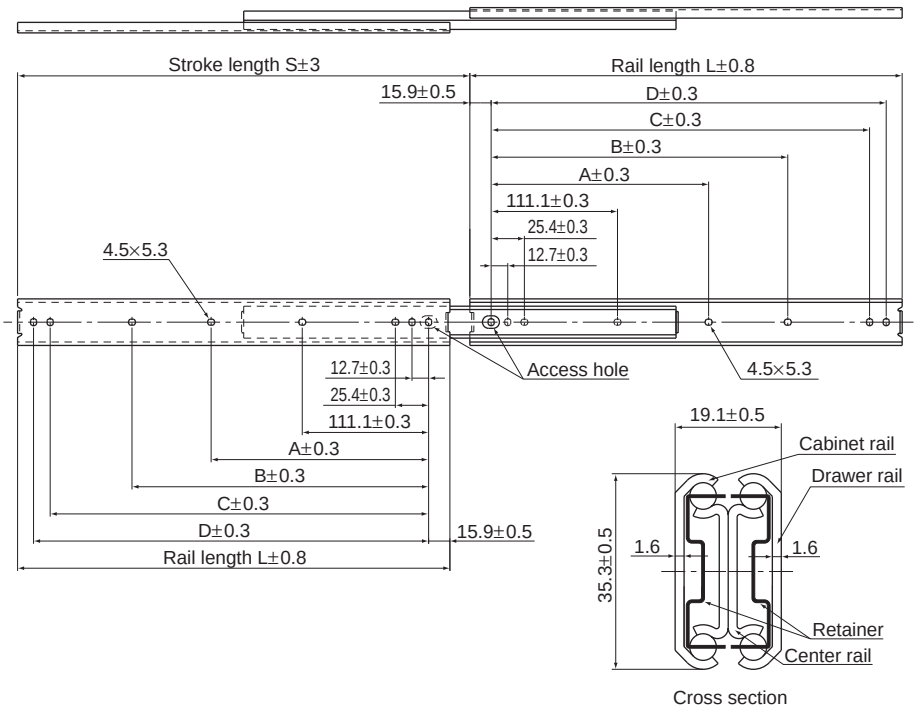
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL35G-P14 +610L

Model number — Overall rail length (in mm)

Model FBL 35D



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions				Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	Drawer rail	Cabinet rail		
305	327	—	149.2	260.3	273.0	7	7	588	1.28
356	378	—	200.0	311.1	323.8	7	7	578	1.48
406	429	—	250.8	361.9	374.6	7	7	559	1.72
457	480	212.7	301.6	412.7	425.4	8	8	549	1.96
508	530	238.1	352.4	463.5	476.2	8	8	529	2.12
559	581	263.5	403.2	514.3	527.0	8	8	500	2.4
610	632	288.9	454.0	565.1	577.8	8	8	480	2.56
660	683	314.3	504.8	615.9	628.6	8	8	461	2.8
711	734	339.7	555.6	666.7	679.4	8	8	441	3

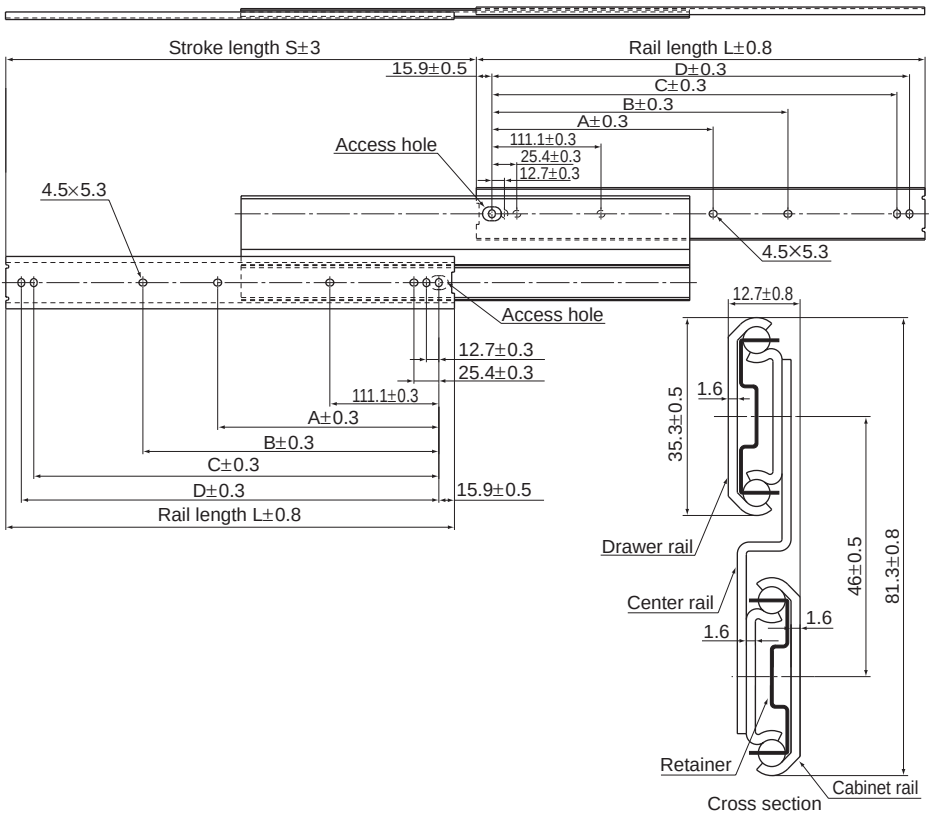
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL35D +711L

Model number — Overall rail length (in mm)

Model FBL 35W



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions				Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	Drawer rail	Cabinet rail		
305	327	—	149.2	260.4	273.1	7	7	706	1.68
356	378	—	200.0	311.2	323.9	7	7	676	2
406	429	—	250.8	362.0	374.7	7	7	637	2.32
457	480	225.4	301.6	412.8	425.5	8	8	598	2.64
508	530	250.8	352.4	463.6	476.3	8	8	569	2.88
559	581	276.2	403.2	514.4	527.1	8	8	520	3.2
610	632	301.6	454.0	565.2	577.9	8	8	480	3.52
660	683	327.0	504.8	616.0	628.7	8	8	422	3.84
711	734	352.4	555.6	666.8	679.5	8	8	353	4.12

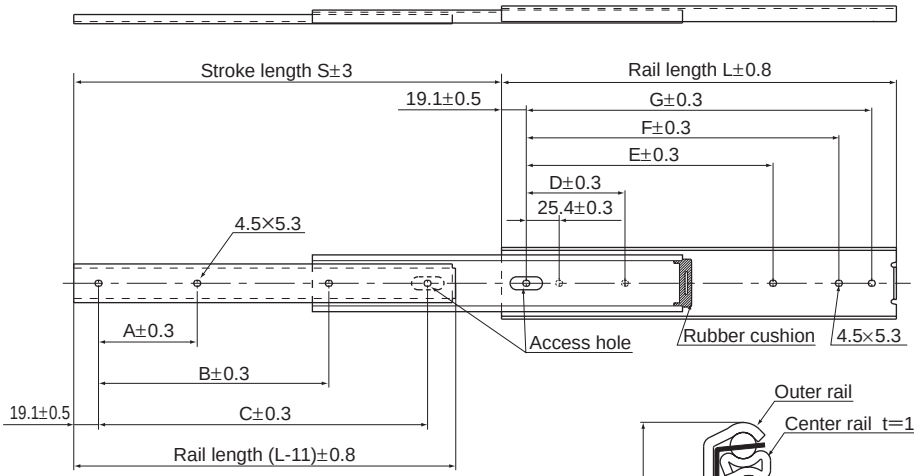
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

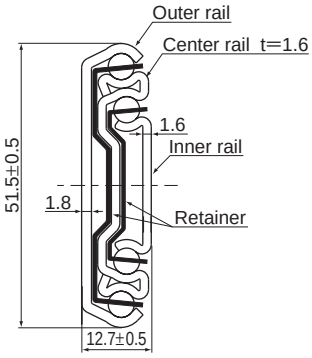
Model number coding

FBL35W +356L

Model number — Overall rail length (in mm)

Model FBL 51H





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	4	6	850	1.46
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	4	6	820	1.72
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	4	6	770	1.89
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	4	6	580	3.86

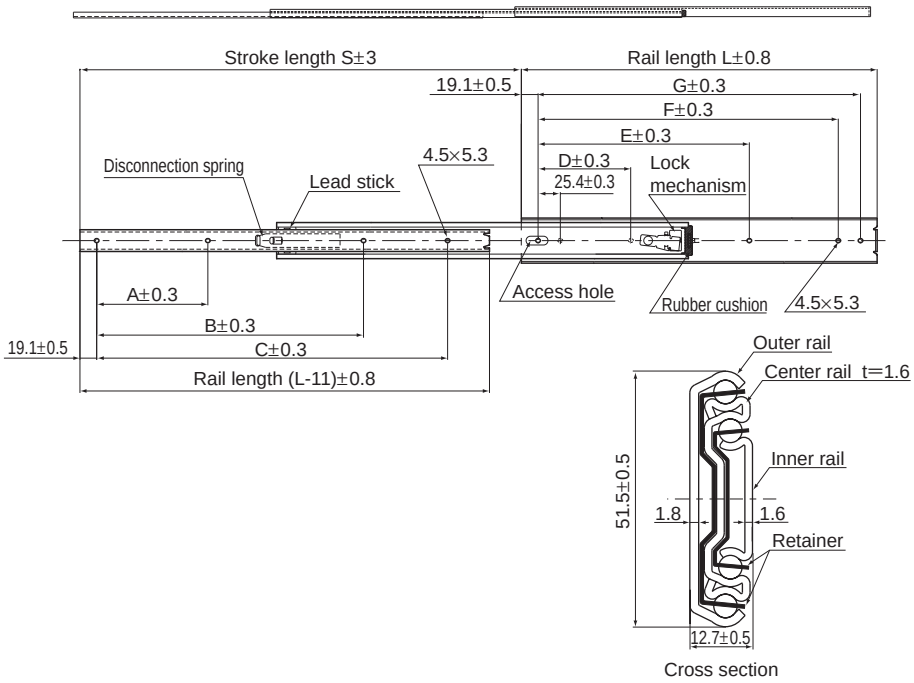
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL51H +610L

Model number — Overall rail length (in mm)

Model FBL 51H-P13



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	190.5	76.2	190.5	241.3	266.7	3	6	850	1.46
356	381	101.6	—	266.7	88.9	215.9	292.1	317.5	3	6	820	1.72
406	432	127.0	—	304.8	127.0	241.3	342.9	368.3	3	6	770	1.89
457	483	127.0	317.5	368.3	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	355.6	406.4	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	381.0	457.2	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	430.8	508.0	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	457.2	558.8	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	508.0	609.6	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	533.4	660.4	228.6	469.9	698.5	723.9	4	6	580	3.86

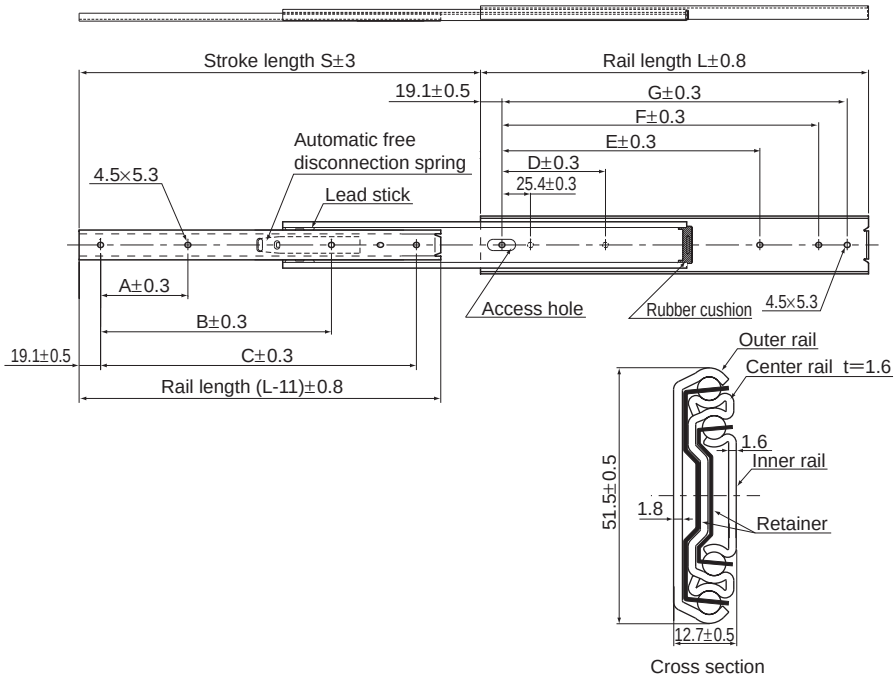
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL51H-P13 +559L

Model number — Overall rail length (in mm)

Model FBL 51H-P14



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	850	1.46
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	820	1.72
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	770	1.89
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	730	2.26
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	710	2.52
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	690	2.72
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	660	3.00
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	630	3.25
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	610	3.54
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	580	3.86

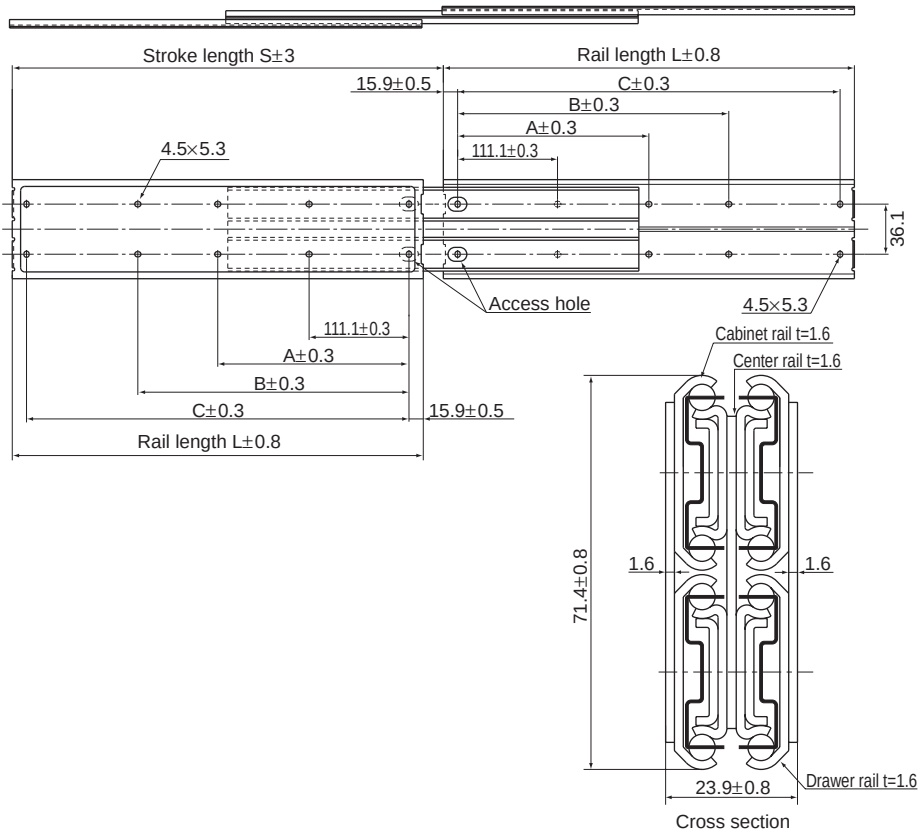
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL51H-P14 +305L

Model number — Overall rail length (in mm)

Model FBL 35K



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	Drawer rail	Cabinet rail		
305	327	—	149.2	273.0	4	4	2670	4.04
356	378	—	200.0	323.8	4	4	2630	4.8
406	429	—	250.8	374.6	4	4	2540	5.6
457	480	212.7	301.6	425.4	5	5	2450	6.04
508	530	238.1	352.4	476.2	5	5	2360	6.92
559	581	263.5	403.2	527.0	5	5	2250	7.56
610	632	288.9	454.0	577.8	5	5	2120	8.4
660	683	314.3	504.8	628.6	5	5	1960	9
711	734	339.7	555.6	679.4	5	5	1780	9.68

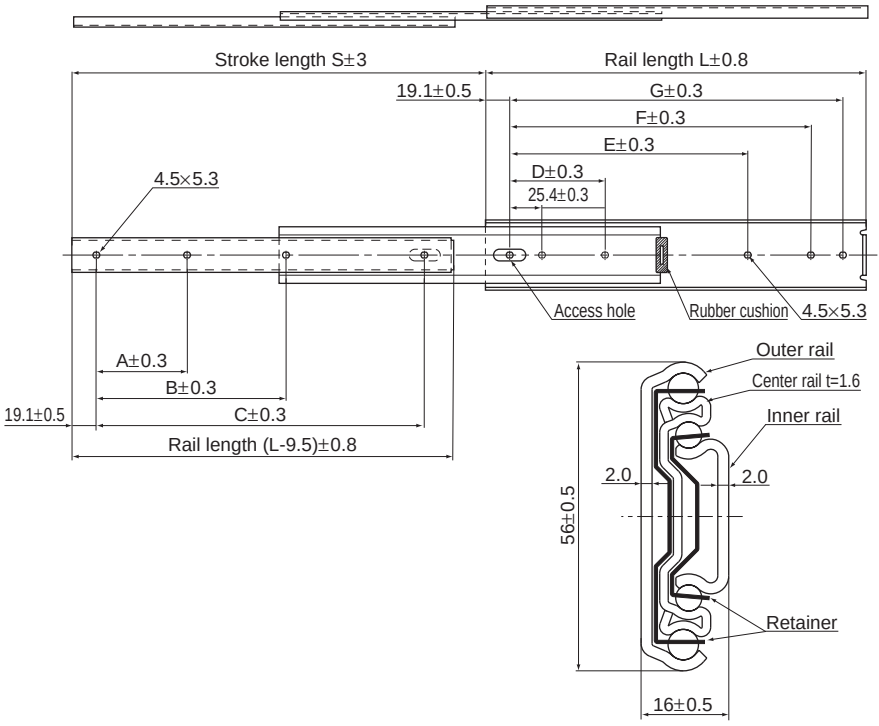
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL35K +711L

Model number — Overall rail length (in mm)

Model FBL 56H



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	177.8	254.0	76.2	190.5	241.3	266.7	4	6	961	1.76
356	381	101.6	203.2	304.8	88.9	215.9	292.1	317.5	4	6	951	2.04
406	432	127.0	228.6	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	127.0	279.4	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	304.8	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	330.2	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	381.0	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	406.4	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	431.8	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	457.2	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

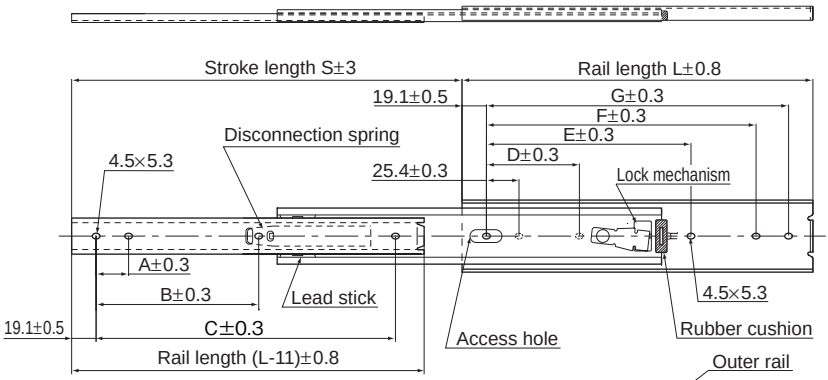
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

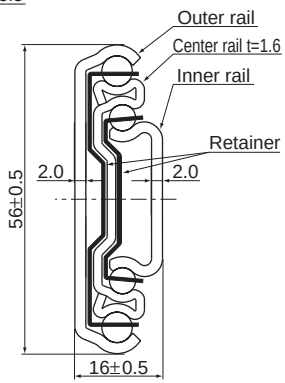
Model number coding

FBL56H +406L

Model number — Overall rail length (in mm)

Model FBL 56H-P13





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	961	1.76
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	951	2.04
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

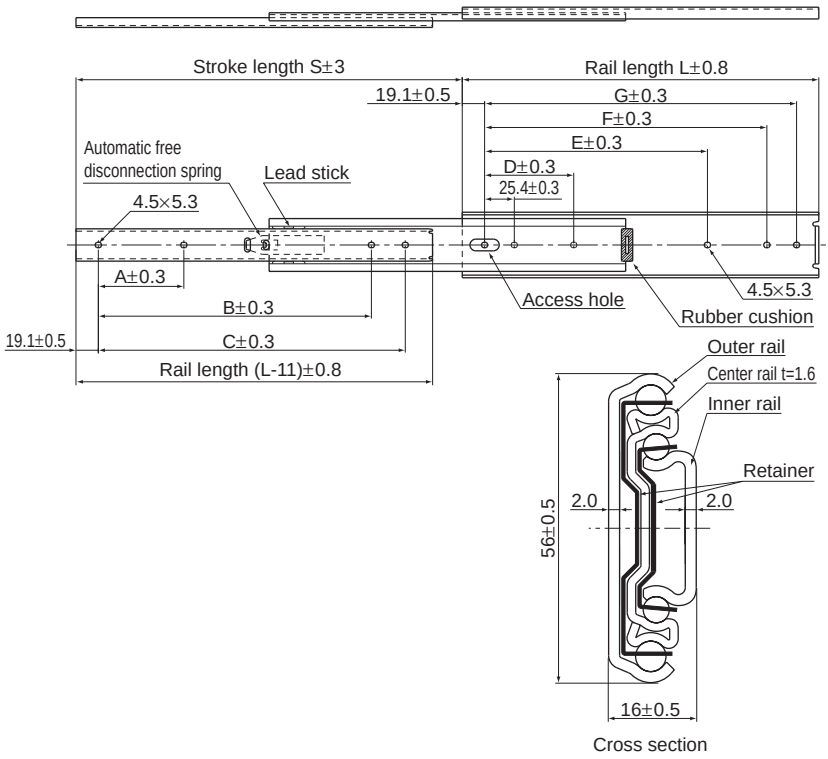
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

Model number coding

FBL56H-P13 +762L

Model number — Overall rail length (in mm)

Model FBL 56H-P14



Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions							Mounting hole		Permissible load N/pair	Mass kg/pair
		A	B	C	D	E	F	G	Inner rail	Outer rail		
305	330	76.2	—	254.0	76.2	190.5	241.3	266.7	3	6	961	1.76
356	381	127.0	—	304.8	88.9	215.9	292.1	317.5	3	6	951	2.04
406	432	152.4	317.5	355.6	127.0	241.3	342.9	368.3	4	6	941	2.36
457	483	177.8	368.3	406.4	127.0	292.1	393.7	419.1	4	6	922	2.64
508	533	152.4	419.1	457.2	152.4	317.5	444.5	469.9	4	6	902	2.96
559	584	177.8	469.9	508.0	177.8	342.9	495.3	520.7	4	6	882	3.24
610	635	177.8	520.7	558.8	177.8	393.7	546.1	571.5	4	6	863	3.6
660	686	203.2	571.5	609.6	203.2	419.1	596.9	622.3	4	6	843	3.84
711	737	228.6	622.3	660.4	228.6	444.5	647.7	673.1	4	6	824	4.06
762	787	228.6	673.1	711.2	228.6	469.9	698.5	723.9	4	6	784	4.44

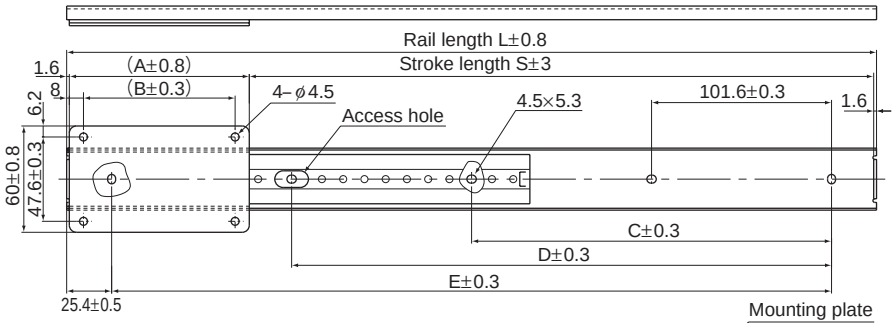
Note) The permissible load and the mass each indicate the value for a pair of 2 units.

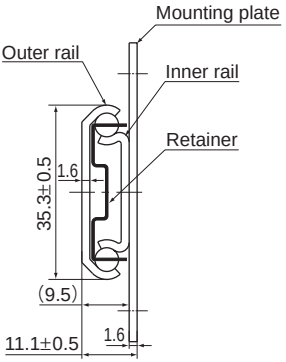
Model number coding

FBL56H-P14 +457L

Model number — Overall rail length (in mm)

Model FBL 35F





Unit: mm

Mounting plate	Model No.	#3	#4	#5	#6	#7	#8	Dimension of the outer rail mounting hole (±0.3)		
	Length (A±0.8)	76.2	101.6	127	152.4	177.8	203.2			
Rail length L(±0.8)		Stroke length S (±3) * Varies with the combination with the mounting plate above.						C	D	E
305		225.4	200.0	174.6	149.2	—	—	—	152.4	254.0
356		276.2	250.8	225.4	200.0	174.6	149.2	—	203.2	304.8
406		327.0	301.6	276.2	250.8	225.4	200.0	—	254.0	355.6
457		377.8	352.4	327.0	301.6	276.2	250.8	203.2	304.8	406.4
508		428.6	403.2	377.8	352.4	327.0	301.6	228.6	355.6	457.2
559		479.4	454.0	428.6	403.2	377.8	352.4	254.0	406.4	508.0
610		530.2	504.8	479.4	454.0	428.6	403.2	279.4	457.2	558.8
660		581.0	555.6	530.2	504.8	479.4	454.0	304.8	508.0	609.6
711		631.8	606.4	581.0	555.6	530.2	504.8	330.2	558.8	660.4
762		682.6	657.2	631.8	606.4	581.0	555.6	355.6	609.6	711.2
Pitch of the mounting plate mounting hole (B±0.3)		60.2	85.6	111.0	136.4	161.8	187.2	—	—	—
Permissible load (N/pair)		294	392	490	588	686	784	—	—	—

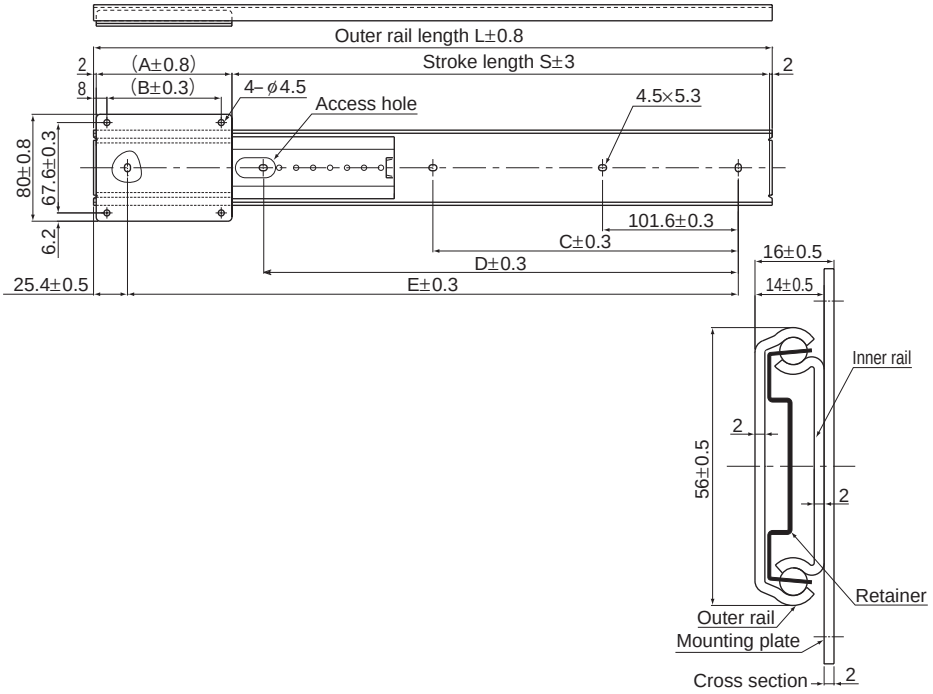
Note) The permissible load indicates the value for a pair of 2 units.

Model number coding

FBL35F +356L #5

- FBL35F: Model number
- +356L: Overall rail length (in mm)
- #5: Model number of mounting plate

Model FBL 56F



Unit: mm

Mounting plate	Model No.	#3	#4	#5	#6	#7	#8	Dimension of the outer rail mounting hole (±0.3)		
	Length (A±0.8)	76.2	101.6	127	152.4	177.8	203.2			
Rail length L(±0.8)		Stroke length S (±3) * Varies with the combination with the mounting plate above.						C	D	E
305		224.6	199.2	173.8	148.4	—	—	—	152.4	254.0
356		275.4	250.0	224.6	199.2	173.8	148.4	—	203.2	304.8
406		326.2	300.8	275.4	250.0	224.6	199.2	—	254.0	355.6
457		377.0	351.6	326.2	300.8	275.4	250.0	203.2	304.8	406.4
508		427.8	402.4	377.0	351.6	326.2	300.8	228.6	355.6	457.2
559		478.6	453.2	427.8	402.4	377.0	351.6	254.0	406.4	508.0
610		529.4	504.0	478.6	453.2	427.8	402.4	279.4	457.2	558.8
660		580.2	554.8	529.4	504.0	478.6	453.2	304.8	508.0	609.6
711		631.0	605.6	580.2	554.8	529.4	504.0	330.2	558.8	660.4
762		681.8	656.4	631.0	605.6	580.2	554.8	355.6	609.6	711.2
Pitch of the mounting plate mounting hole (B±0.3)		60.2	85.6	111.0	136.4	161.8	187.2	—	—	—
Permissible load (N/pair)		588	784	980	1176	1372	1568	—	—	—

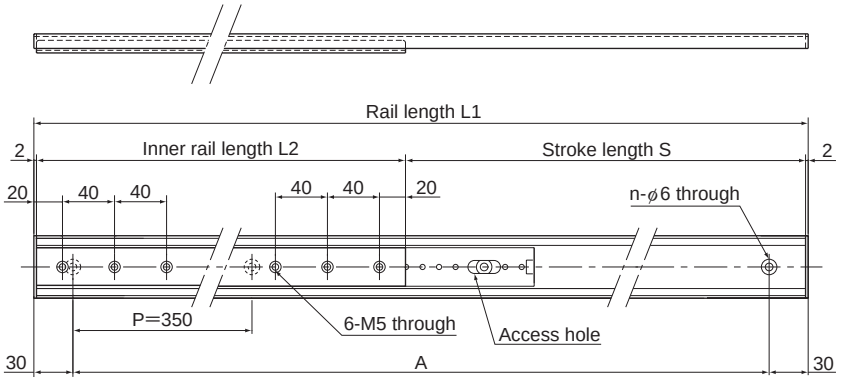
Note) The permissible load indicates the value for a pair of 2 units.

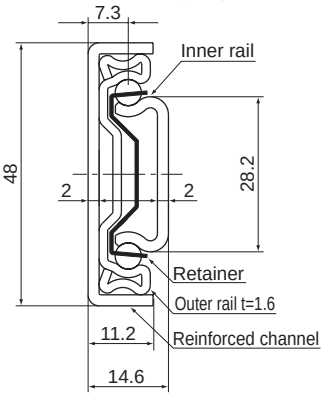
Model number coding

FBL56F +305L #6

- FBL56F: Model number
- +305L: Overall rail length (in mm)
- #6: Model number of mounting plate

Model FBL 48DR





Cross section

Unit: mm

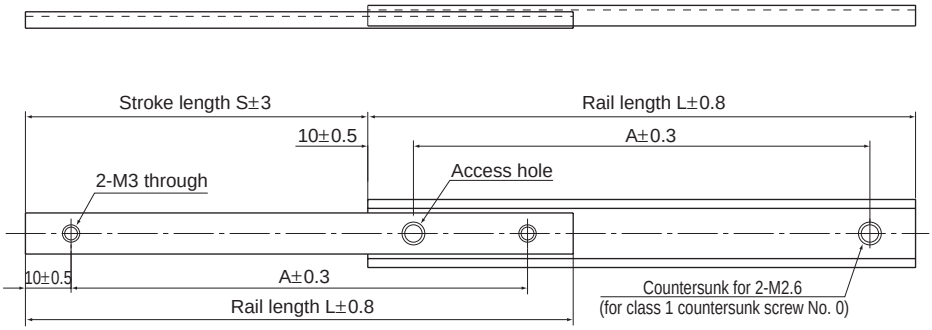
Outer rail length L1	Inner rail length L2	Stroke length S	Mounting hole pitch A	No. of mounting holes n
1110	496	610	P350×3	4
1110	696	410	P350×3	4
1460	496	960	P350×4	5
1460	696	760	P350×4	5
1810	696	1110	P350×5	6
2160	496	1660	P350×6	7
2160	696	1460	P350×6	7

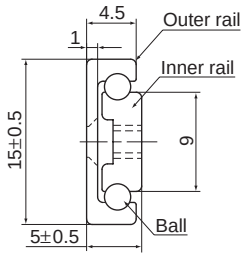
Model number coding

FBL48DR +1810/696L

Model number — Overall rail length (in mm)

Model E15





Cross section

Unit: mm

Rail length L(±0.8)	Stroke S (±3)	Mounting hole dimensions A±0.3	Permissible load N/pair
50	20	30.0	5
80	45	60.0	8
100	60	80.0	10
120	75	100.0	10

Note) The permissible load indicates the value for a pair of 2 units.

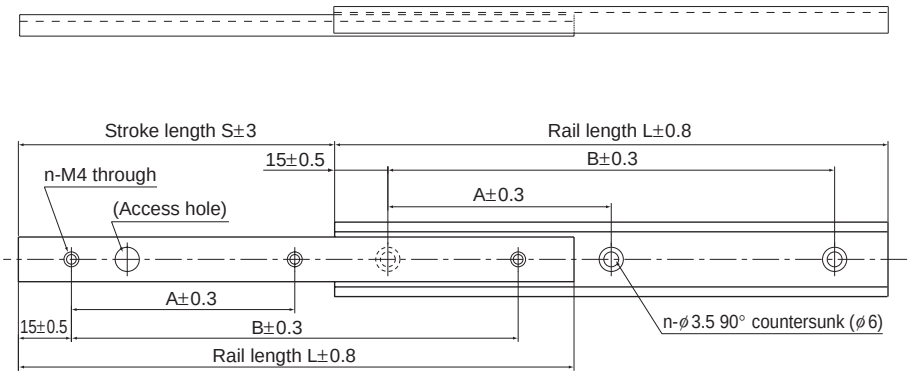
Model number coding

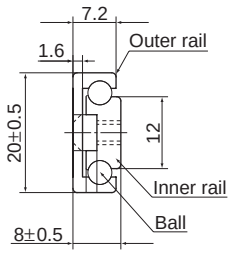
E15 +100L

Model number Overall rail length (in mm)

Slide Rail

Model E20





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Permissible load N/pair
		A±0.3	B±0.3	n (pcs)	
80	45	50.0	—	2	20
100	60	70.0	—	2	30
150	85	60.0	120.0	3	80
200	120	85.0	170.0	3	140
300	180	135.0	270.0	3	145

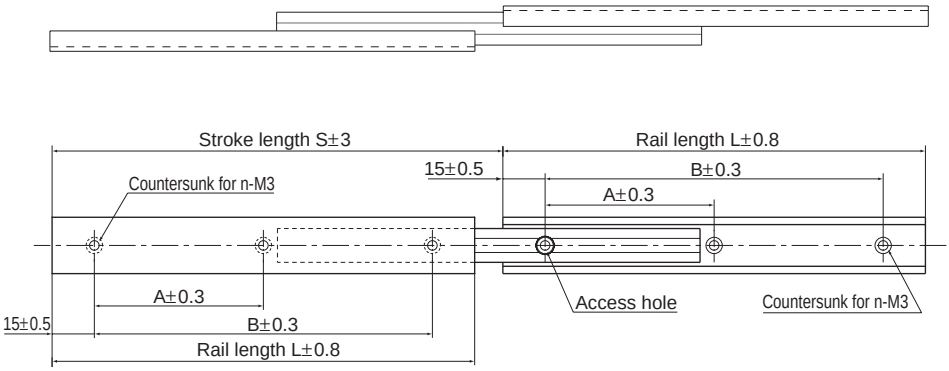
Note) The permissible load indicates the value for a pair of 2 units.

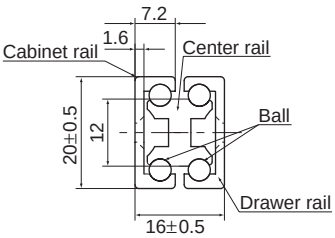
Model number coding

E20 +150L

Model number Overall rail length (in mm)

Model D20





Cross section

Unit: mm

Rail length L (±0.8)	Stroke S (±3)	Mounting hole dimensions			Permissible load N/pair
		A±0.3	B±0.3	n (pcs)	
80	80	50.0	—	2	20
100	100	70.0	—	2	30
150	160	60.0	120.0	3	80
200	223	85.0	170.0	3	140
300	345	135.0	270.0	3	145

Note) The permissible load indicates the value for a pair of 2 units.

Model number coding

D20 +300L

Model number Overall rail length (in mm)

Ball Screw

THK General Catalog

Ball Screw

THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

*** Please see the separate "A Technical Descriptions of the Products".**

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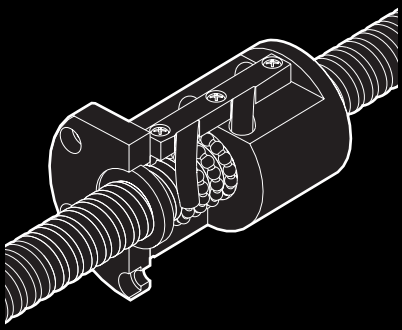


Precision, Caged Ball Screw
Models SBN, SBK and HBN

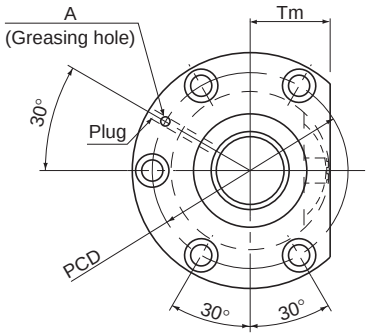
Ball Screw

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model SBN



Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
○ SBN 3210-7	32	10	33.75	26.4	1×3.5	43	73.1	836.7
○ SBN 3212-5	32	12	34	26.1	1×2.5	37.4	58.7	612.2
○ SBN 3610-7	36	10	37.75	30.4	1×3.5	45.6	82.3	920.9
○ SBN 3612-7	36	12	38	30.1	1×3.5	53.2	92.6	934.5
○ SBN 3616-5	36	16	38	30.1	1×2.5	39.7	66.4	676
○ SBN 4012-5	40	12	42	34.1	1×2.5	42	73.6	735.4
○ SBN 4016-5	40	16	42	34.1	1×2.5	41.9	73.8	736.6
○ SBN 4512-5	45	12	47	39.2	1×2.5	44.4	82.9	809.1
○ SBN 4516-5	45	16	47	39.2	1×2.5	44.3	83.1	810.1
○ SBN 5012-5	50	12	52	44.1	1×2.5	46.6	92.2	880.9
○ SBN 5016-5	50	16	52	44.1	1×2.5	46.6	92.4	881.7
○ SBN 5020-5	50	20	52	44.1	1×2.5	46.5	92.6	882.8

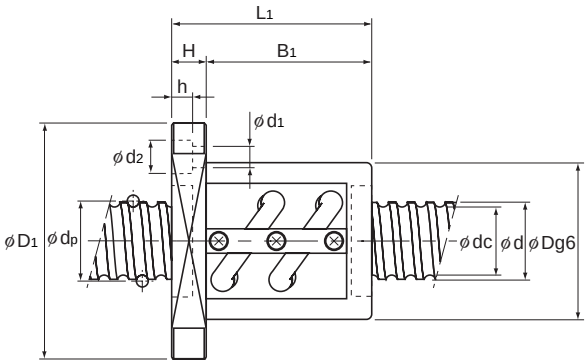
Note) With model SBN, the raising of both ends of the thread groove is not available. When designing your system this way, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring. For dimensions of the ball screw nut with either accessory being attached, see B-778.

Model number coding

SBN4012-5 RR G0 +1400L C5

- SBN4012-5: Model number
- RR: Seal symbol (*1)
- G0: Clearance in the axial direction (G0 for all SBN variations) (*2)
- +1400L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Unit: mm

	Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	$d_1 \times d_2 \times h$	Tm	Greasing hole A	kg·cm²/mm	kg	kg/m
	74	108	120	15	105	90	9×14×8.5	38	M6	8.08×10^{-3}	3.1	3.6
	76	121	117	18	99	98	11×17.5×11	39	M6	8.08×10^{-3}	3.7	3.5
	77	120	123	18	105	98	11×17.5×11	40	M6	1.29×10^{-2}	3.8	5.0
	81	124	140	18	122	102	11×17.5×11	42	M6	1.29×10^{-2}	4.7	4.8
	81	124	140	18	122	102	11×17.5×11	42	M6	1.29×10^{-2}	4.7	5.6
	84	126	119	18	101	104	11×17.5×11	43	M6	1.97×10^{-2}	4.2	6.4
	84	126	144	18	126	104	11×17.5×11	43	M6	1.97×10^{-2}	4.9	7.3
	90	130	119	18	101	110	11×17.5×11	46	PT 1/8	3.16×10^{-2}	4.6	8.6
	90	130	140	18	122	110	11×17.5×11	46	PT 1/8	3.16×10^{-2}	5.3	9.6
	95	141	119	22	97	117	14×20×13	48	PT 1/8	4.82×10^{-2}	5.3	11.1
	95	141	143	22	121	117	14×20×13	48	PT 1/8	4.82×10^{-2}	6.1	12.2
	95	141	169	22	147	117	14×20×13	48	PT 1/8	4.82×10^{-2}	7.0	12.8

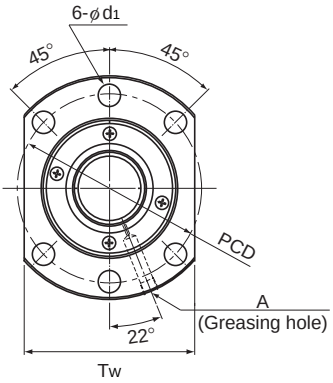
Note) The rigidity values in the table represent the spring constants obtained from the load and the elastic deformation when providing a preload 10% of the basic dynamic load rating (Ca) and applying an axial load three times greater than the preload.
These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the value in the table as the actual value.
If the applied preload (Fa_0) is not 0.1 Ca, the rigidity value (K_N) is obtained from the following equation.

$$K_N = K\left(\frac{Fa_0}{0.1Ca}\right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table.

Description of Each Option⇒A-815 Dimensions⇒B-777

Model SBK



Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm
SBK 3620-7.6	36	20	37.75	30.4	2×3.8	48.5	85	870
SBK 4020-7.6	40	20	42	34.1	2×3.8	59.7	112.7	970
SBK 4030-7.6	40	30	42	34.1	2×3.8	59.2	107.5	970
SBK 5020-7.6	50	20	52	44.1	2×3.8	66.8	141.9	1170
SBK 5030-7.6	50	30	52	44.1	2×3.8	66.5	135	1170
SBK 5036-7.6	50	36	52	44.1	2×3.8	65.9	135	1170
SBK 5520-7.6	55	20	57	49.1	2×3.8	69.8	156.4	1250
SBK 5530-7.6	55	30	57	49.1	2×3.8	69.2	147	1250
SBK 5536-7.6	55	36	57	49.1	2×3.8	69.1	148.7	1260

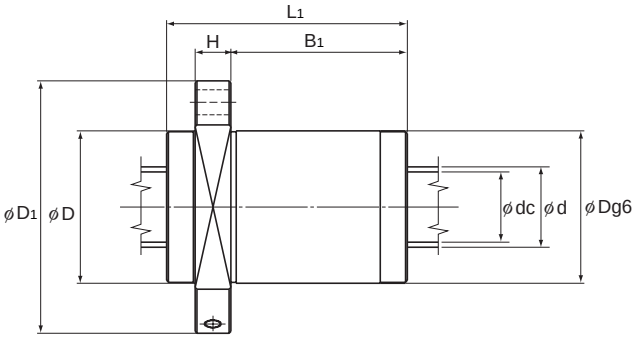
Note) With model SBK, the raising of both ends of the thread groove is not available. When designing your system this way, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring. For dimensions of the ball screw nut with either accessory being attached, see B-778.

Model number coding

SBK3620-7.6 RR G0 +1500L C5

- SBK3620-7.6: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +1500L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Unit: mm

	Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	d_1	T_W	Greasing hole A	kg·cm²/mm	kg	kg/m
	73	114	110	18	81	93	11	86	PT 1/8	1.29×10^{-2}	3.4	5.0
	80	136	110	20	79	112	14	103	PT 1/8	1.97×10^{-2}	4.5	5.7
	80	136	148	20	117	112	14	103	PT 1/8	1.97×10^{-2}	5.6	7.0
	90	146	110	22	77	122	14	110	PT 1/8	4.82×10^{-2}	5.3	10.2
	90	146	149	22	116	122	14	110	PT 1/8	4.82×10^{-2}	6.6	11.9
	90	146	172	22	139	122	14	110	PT 1/8	4.82×10^{-2}	7.4	12.5
	96	152	110	22	77	128	14	114	PT 1/8	7.05×10^{-2}	5.7	13.0
	96	152	149	22	116	128	14	114	PT 1/8	7.05×10^{-2}	7.2	14.8
	96	152	172	22	139	128	14	114	PT 1/8	7.05×10^{-2}	8.1	15.5

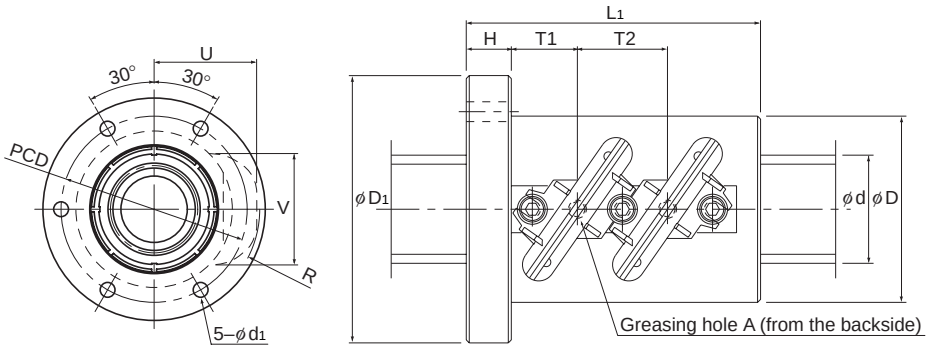
Note) The rigidity values in the table represent the spring constants obtained from the load and the elastic deformation when providing a preload 10% of the basic dynamic load rating (Ca) and applying an axial load three times greater than the preload.
These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the value in the table as the actual value.
If the applied preload (Fa_0) is not 0.1 Ca, the rigidity value (K_N) is obtained from the following equation.

$$K_N = K\left(\frac{Fa_0}{0.1Ca}\right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table.

Description of Each Option⇒A-815 Dimensions⇒B-777

Model HBN



Models HBN3210 to 3612

Model No.	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Permissible load* Fp kN	Rigidity K N/μm
HBN 3210-5	32	10	34	26	2×2.5	102.9	191.3	31.9	1077
HBN 3610-5	36	10	38	30	2×2.5	108.2	220.4	33.5	1176
HBN 3612-5	36	12	38.4	29	2×2.5	141.1	267.7	43.7	1207
HBN 4010-7.5	40	10	42	34	3×2.5	162.6	336	50.4	1910
HBN 4012-7.5	40	12	42.4	33	3×2.5	212.4	441.6	65.8	1922
HBN 5010-7.5	50	10	52	44	3×2.5	179.1	462.7	55.5	2279
HBN 5012-7.5	50	12	52.4	43	3×2.5	235.7	572.2	73.1	2345
HBN 5016-7.5	50	16	53	39.6	3×2.5	379.6	820.9	117.7	2392
HBN 6316-7.5	63	16	66	52.6	3×2.5	427.1	1043.8	132.4	2898
HBN 6316-10.5	63	16	66	52.6	3×3.5	577.1	1461.3	178.9	4029
HBN 6320-7.5	63	20	66.5	49.6	3×2.5	578.8	1283.1	179.4	3030

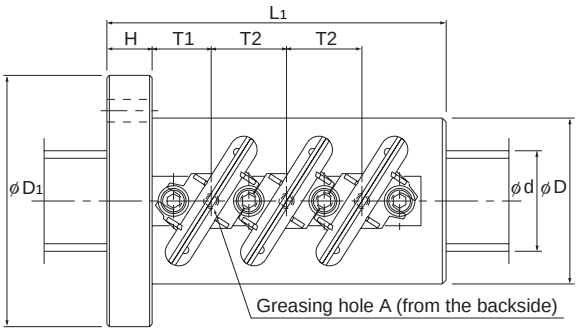
Note) The permissible load Fp* indicates the maxim axial load that the Ball Screw can receive.
This model is capable of achieving a longer service life than the conventional Ball Screw under a high load.
For the axial clearance, this model has clearance G2 as the standard. Other clearance is also available at your request.
Contact THK for details.

Model number coding

HBN3210-5 RR G2 +1200L C7

- HBN3210-5: Model number
- RR: Seal symbol (*1)
- G2: Symbol for clearance in the axial direction (*2)
- +1200L: Overall screw shaft length (in mm)
- C7: Accuracy symbol (*3)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Models HBN4010 to 6320

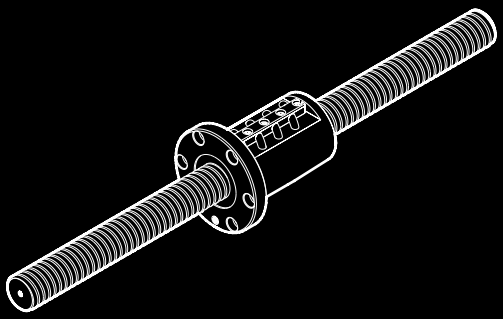
Unit: mm

	Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	PCD	d_1	T1	T2	U_{MAX}	V_{MAX}	R_{MAX}	Greasing hole A	kg·cm²/mm	kg	kg/m
	58	85	98	15	71	6.6	22	30	43	46	43.5	M6	8.08×10^{-3}	1.8	2.9
	62	89	98	15	75	6.6	22	30	45	50	46	M6	1.29×10^{-2}	1.9	4.2
	66	100	116	18	82	9	26	36	49	52.5	50	M6	1.29×10^{-2}	2.8	3.2
	66	100	135	18	82	9	23.5	30	46.5	54	48	M6	1.97×10^{-2}	2.9	5.7
	70	104	152	18	86	9	26	36	51	56	52	M6	1.97×10^{-2}	3.7	4.6
	78	112	135	18	94	9	23.5	30	52	63.5	54.5	M6	4.82×10^{-2}	3.7	10.2
	80	114	152	18	96	9	26	36	56	66	58.5	M6	4.82×10^{-2}	4.4	8.9
	95	135	211	28	113	9	37.5	48	64.5	69.6	65.2	PT 1/8	4.82×10^{-2}	10.0	5.0
	105	139	211	28	122	9	37.5	48	70.5	82	72.5	PT 1/8	1.21×10^{-1}	10.6	11.5
	105	139	259	28	122	9	53.5	64	70.5	82	73	PT 1/8	1.21×10^{-1}	17.4	11.5
	117	157	252	32	137	11	44	60	79	86.5	80	PT 1/8	1.21×10^{-1}	17.2	8.1

Note) The rigidity values in the table represent the spring constants obtained from the load and the elastic deformation when providing an axial load, 30% of the basic dynamic load rating (Ca).
These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the value in the table as the actual value.
If the axial load (Fa) is not 0.3 Ca, the rigidity value (K_N) is obtained from the following equation.

$$K_N = K\left(\frac{Fa}{0.3Ca}\right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table.



Standard-Stock Precision Ball Screw Unfinished Shaft Ends
Models BIF, BNFN, MDK, MBF and BNF

Ball Screw

B Product Specifications

Dimensional Drawing, Dimensional Table

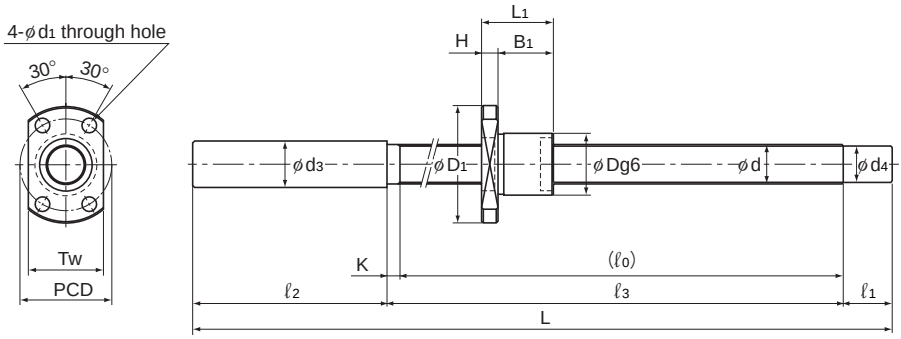
Options

A Technical Descriptions of the Products (Separate)

Technical Descriptions

* Please see the separate "A Technical Descriptions of the Products".

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	
						Ca	C0a				
	d	Ph	dp	dc	Rows x turns	kN	kN	D	D1	L1	H
MDK 0401-3	4	1	4.15	3.4	3×1	0.29	0.42	9	19	13	3
MBF 0401-3.7	4	1	4.15	3.2	1×3.7	0.59	0.93	11	24	18	4
MDK 0601-3	6	1	6.2	5.3	3×1	0.54	1	11	23	14.5	3.5
MBF 0601-3.7	6	1	6.15	5.2	1×3.7	0.74	1.5	13	30	21	5

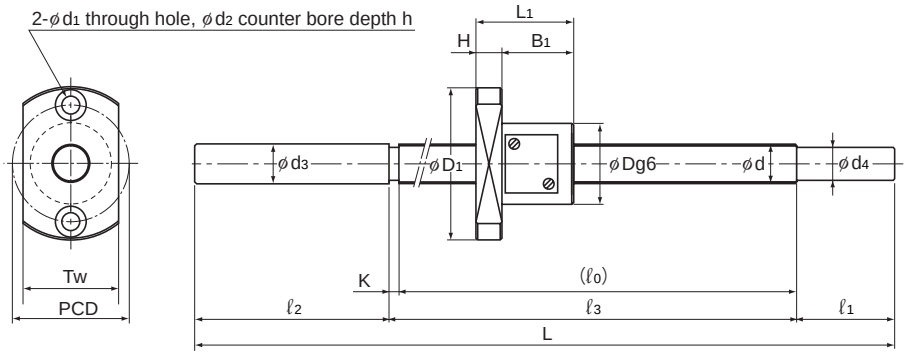
Note) Models MDK/MBF 0401 and 0601 are not provided with a labyrinth seal.

Model number coding

MDK0401-3 GT +95L C5 A

- MDK0401-3: Model number
- GT: Symbol for clearance in the axial direction (*1)
- +95L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*2)
- A: Symbol for standard-stock type (A: with unfinished shaft ends)

(*1) See A-685. (*2) See A-678.



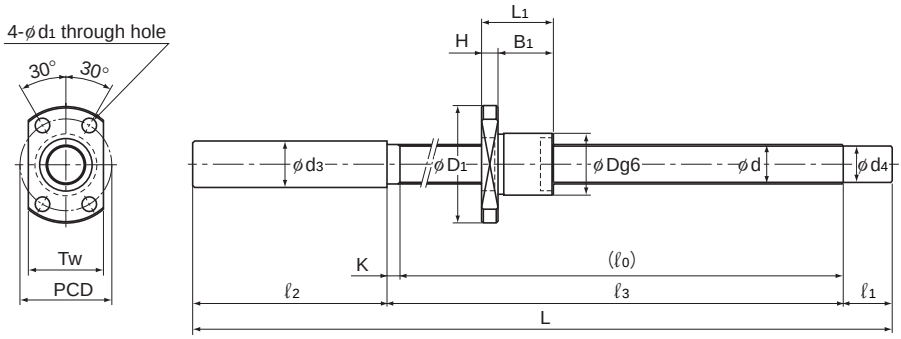
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions								Nut mass	Shaft mass
	B_1	PCD	d_1	d_2	h	Tw	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4	K	kg	kg/m
	10	14	2.9	—	—	13	A	95	47	10	35	50	6.2	3.2	3	0.01	0.07
								115	67	10	35	70	6.2	3.2	3	0.01	0.07
								145	97	10	35	100	6.2	3.2	3	0.01	0.07
	14	17	3.4	6.5	2.5	13	A	90	48	10	30	50	4.3	3.2	2	0.02	0.07
								110	68	10	30	70	4.3	3.2	2	0.02	0.07
								130	88	10	30	90	4.3	3.2	2	0.02	0.07
	11	17	3.4	—	—	15	A	120	67	10	40	70	8.2	5.3	3	0.02	0.14
								150	97	10	40	100	8.2	5.3	3	0.02	0.14
								180	127	10	40	130	8.2	5.3	3	0.02	0.14
	16	21.5	3.4	6.5	3	17	A	131	58	20	50	61	6.3	5.2	3	0.04	0.14
								161	88	20	50	91	6.3	5.2	3	0.04	0.14
								201	128	20	50	131	6.3	5.2	3	0.04	0.14

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Outer diameter D	Flange diameter D1	Overall length L1	H
MDK 0801-3	8	1	8.2	7.3	3×1	0.64	1.4	13	26	15	4
MDK 0802-3	8	2	8.3	7	3×1	1.4	2.3	15	28	22	5
MBF 0802-3.7	8	2	8.3	6.4	1×3.7	2.5	4.2	20	40	28	6

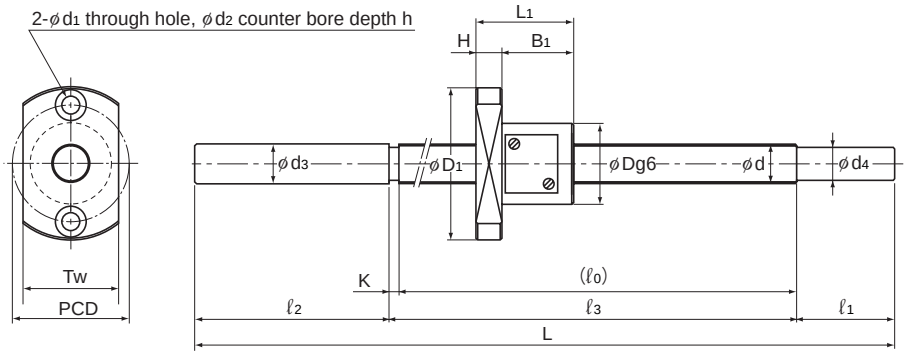
Note) Model MDK 0801 is not provided with a labyrinth seal.

Model number coding

MBF0802-3.7 RR GT +218L C5 A

- MBF0802-3.7: Model number
- RR: Seal symbol (*1)
- GT: Symbol for clearance in the axial direction (*2)
- +218L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (A: with unfinished shaft ends)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



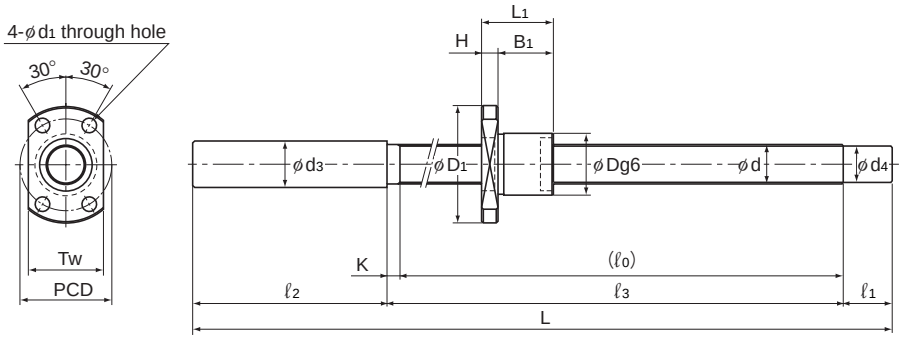
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions									Nut mass	Shaft mass
	B_1	PCD	d_1	d_2	h	Tw	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4	K	kg	kg/m
	11	20	3.4	—	—	17	A	130	67	15	45	70	10.2	7.3	3	0.02	0.29
								160	97	15	45	100	10.2	7.3	3	0.02	0.29
								190	127	15	45	130	10.2	7.3	3	0.02	0.29
								240	177	15	45	180	10.2	7.3	3	0.02	0.29
	17	22	3.4	—	—	19	A	140	76	15	45	80	10.2	7	4	0.04	0.27
								170	106	15	45	110	10.2	7	4	0.04	0.27
								200	136	15	45	140	10.2	7	4	0.04	0.27
								250	186	15	45	190	10.2	7	4	0.04	0.27
	22	30	4.5	8	4	24	A	168	85	25	55	88	8.3	6.2	3	0.1	0.19
								193	110	25	55	113	8.3	6.2	3	0.1	0.19
								218	135	25	55	138	8.3	6.2	3	0.1	0.19

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model MDK

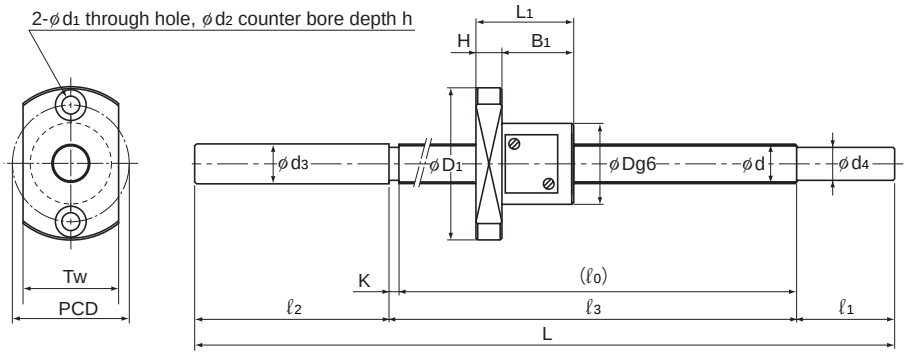
Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	
						Ca	C0a				
	d	Ph	dp	dc	Rows x turns	kN	kN	D	D1	L1	H
MDK 1002-3	10	2	10.3	9	3×1	1.5	2.9	17	34	22	5
MBF 1002-3.7	10	2	10.3	8.6	1×3.7	2.8	5.3	23	43	28	6
MDK 1202-3	12	2	12.3	11	3×1	1.7	3.6	19	36	22	5
MBF 1202-3.7	12	2	12.3	10.6	1×3.7	3	6.5	25	47	30	8

Model number coding

MDK1202-3 RR GT +165L C5 A

- MDK1202-3: Model number
- RR: Seal symbol (*1)
- GT: Symbol for clearance in the axial direction (*2)
- +165L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (A: with unfinished shaft ends)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



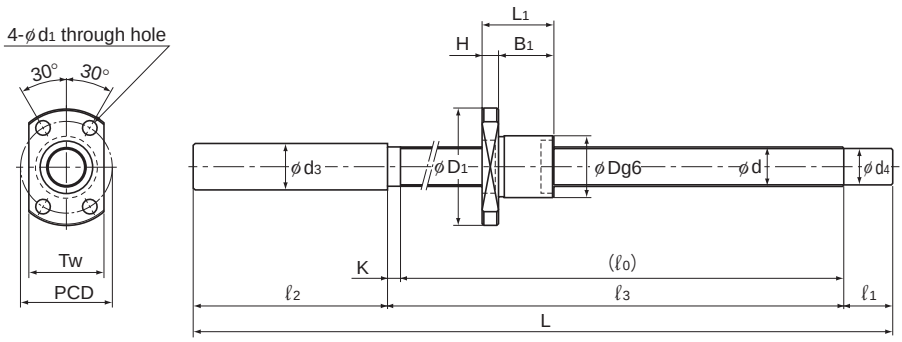
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions								Nut mass	Shaft mass
	B_1	PCD	d_1	d_2	h	Tw	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4	K	kg	kg/m
	17	26	4.5	—	—	21	A	160	86	15	55	90	12.2	9	4	0.05	0.47
								210	136	15	55	140	12.2	9	4	0.05	0.47
								260	186	15	55	190	12.2	9	4	0.05	0.47
								310	236	15	55	240	12.2	9	4	0.05	0.47
	22	33	4.5	8	4	27	A	183	95	25	60	98	10.3	8.2	3	0.11	0.36
								223	135	25	60	138	10.3	8.2	3	0.11	0.36
								273	185	25	60	188	10.3	8.2	3	0.11	0.36
	17	28	4.5	—	—	23	A	165	86	15	60	90	14.2	11	4	0.05	0.71
								215	136	15	60	140	14.2	11	4	0.05	0.71
								265	186	15	60	190	14.2	11	4	0.05	0.71
								315	236	15	60	240	14.2	11	4	0.05	0.71
								365	286	15	60	290	14.2	11	4	0.05	0.71
	22	36	5.5	9.5	5.5	29	A	210	117	30	60	120	12.3	10.2	3	0.15	0.58
								235	142	30	60	145	12.3	10.2	3	0.15	0.58
								285	192	30	60	195	12.3	10.2	3	0.15	0.58

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model MDK

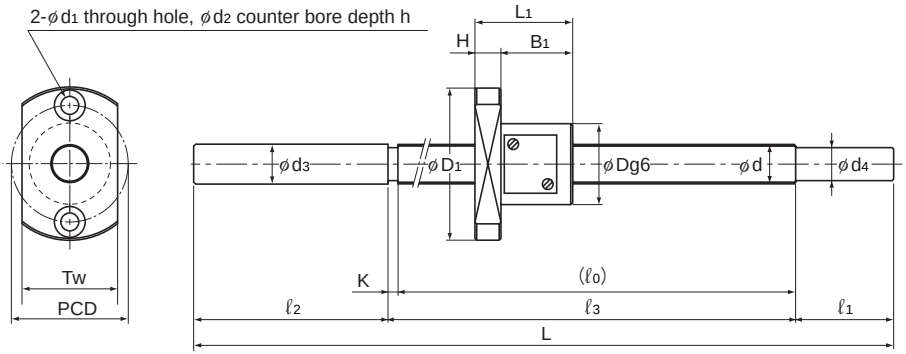
Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	
						Ca	C0a				
	d	Ph	dp	dc	Rows x turns	kN	kN	D	D1	L1	H
MDK 1402-3	14	2	14.3	13	3×1	1.8	4.3	21	40	23	6
MBF 1402-3.7	14	2	14.3	12.5	1×3.7	3.3	7.5	26	48	30	8

Model number coding

MBF1402-3.7 RR GT +245L C3 A

- MBF1402-3.7: Model number
- RR: Seal symbol (*1)
- GT: Symbol for clearance in the axial direction (*2)
- +245L: Overall screw shaft length (in mm)
- C3: Accuracy symbol (*3)
- A: Symbol for standard-stock type (A: with unfinished shaft ends)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



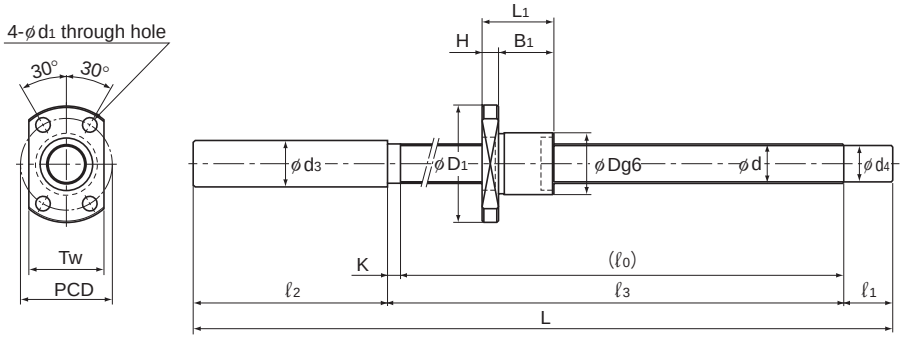
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions								Nut mass	Shaft mass
	B_1	PCD	d_1	d_2	h	Tw	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4	K	kg	kg/m
	17	31	5.5	—	—	26	A	175	86	25	60	90	15.2	13	4	0.07	1.0
								225	136	25	60	140	15.2	13	4	0.07	1.0
								275	186	25	60	190	15.2	13	4	0.07	1.0
								325	236	25	60	240	15.2	13	4	0.07	1.0
								425	336	25	60	340	15.2	13	4	0.07	1.0
	22	37	5.5	9.5	5.5	32	A	205	102	40	60	105	14.3	12.2	3	0.16	0.85
								245	142	40	60	145	14.3	12.2	3	0.16	0.85
								295	192	40	60	195	14.3	12.2	3	0.16	0.85
								345	242	40	60	245	14.3	12.2	3	0.16	0.85

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model MDK

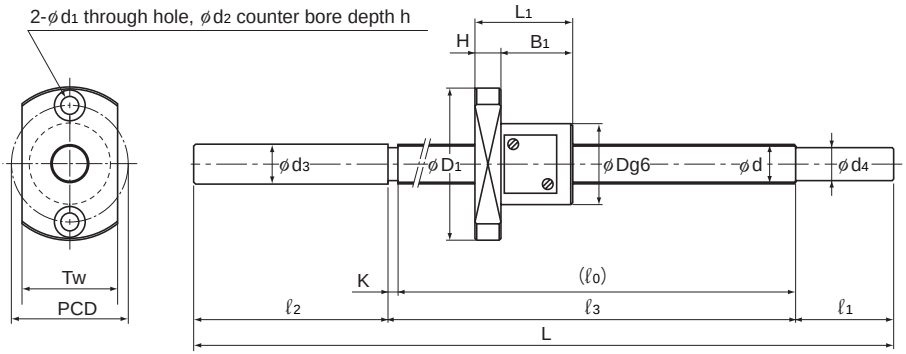
Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	
						Ca	C0a				
	d	Ph	dp	dc	Rows x turns	kN	kN	D	D1	L1	H
MDK 1404-3	14	4	14.65	11.9	3×1	4.2	7.6	26	45	33	6
MBF 1404-3.7	14	4	14.3	11.8	1×3.7	5.7	11.1	30	54	38	8
MDK 1405-3	14	5	14.75	11.2	3×1	7	11.6	26	45	42	10

Model number coding

MDK1404-3 RR G2 +240L C7 A

- MDK1404-3: Model number
- RR: Seal symbol (*1)
- G2: Symbol for clearance in the axial direction (*2)
- +240L: Overall screw shaft length (in mm)
- C7: Accuracy symbol (*3)
- A: Symbol for standard-stock type (A: with unfinished shaft ends)

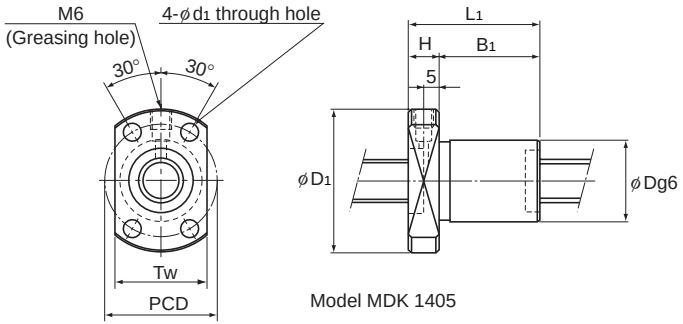
(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model MBF

Unit: mm

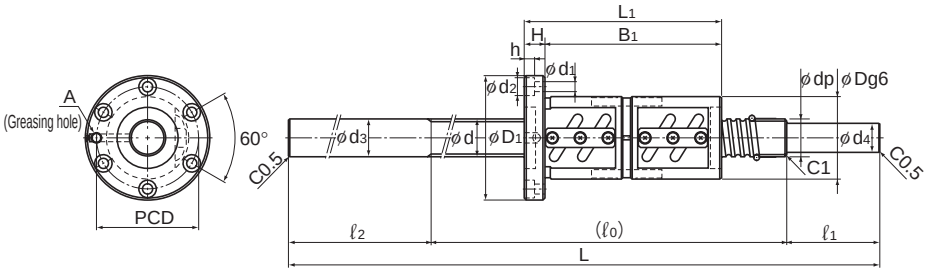
Dimensions							Screw shaft dimensions								Nut mass	Shaft mass
B1	PCD	d1	d2	h	Tw	Standard-stock symbol	Overall length L	ℓ0	ℓ1	ℓ2	ℓ3	d3	d4	K	kg	kg/m
27	36	5.5	—	—	28	A	240	150	25	60	155	15.2	11.9	5	0.14	0.8
							290	200	25	60	205	15.2	11.9	5	0.14	0.8
							340	250	25	60	255	15.2	11.9	5	0.14	0.8
							440	350	25	60	355	15.2	11.9	5	0.14	0.8
							540	450	25	60	455	15.2	11.9	5	0.14	0.8
30	42	5.5	9.5	5.5	34	A	233	129	40	60	133	14.3	11.2	4	0.25	1.2
							293	189	40	60	193	14.3	11.2	4	0.25	1.2
							353	249	40	60	253	14.3	11.2	4	0.25	1.2
							413	309	40	60	313	14.3	11.2	4	0.25	1.2
32	36	5.5	—	—	28	A	250	160	25	60	165	14	11.2	5	0.19	1.2
							300	210	25	60	215	14	11.2	5	0.19	1.2
							350	260	25	60	265	14	11.2	5	0.19	1.2
							450	360	25	60	365	14	11.2	5	0.19	1.2
							550	460	25	60	465	14	11.2	5	0.19	1.2



Model MDK 1405

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

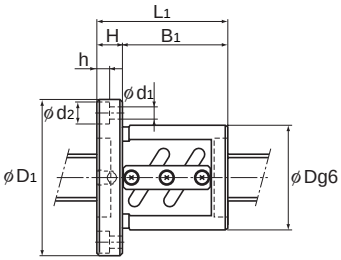
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 1605-2.5 BNF 1605-2.5 BIF 1605-5	16	5	16.75	13.2	1×2.5	7.4	13.9	390 — 390	40	60	76 41 56	0.6 0.37 0.48
BNFN 1810-2.5 BNF 1810-2.5 BIF 1810-3	18	10	18.8	15.5	1×2.5 1×2.5 1×1.5	7.8 7.8 5.1	15.9 15.9 9.6	390 — 250	42	65	119 69 75	1.0 0.67 0.75
BNFN 2005-5 BNF 2005-5 BIF 2005-5	20	5	20.75	17.2	2×2.5 2×2.5 1×2.5	15.1 15.1 8.3	35 35 17.4	740 — 440	44	67	106 56 56	0.9 0.57 0.57

Model number coding

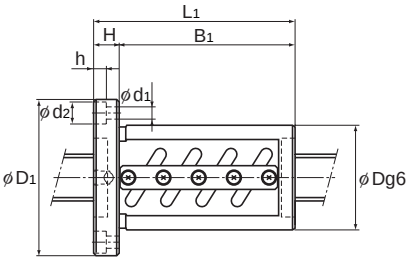
BNFN2005-5 RR G0 +610L C5 A

- BNFN2005-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +610L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF



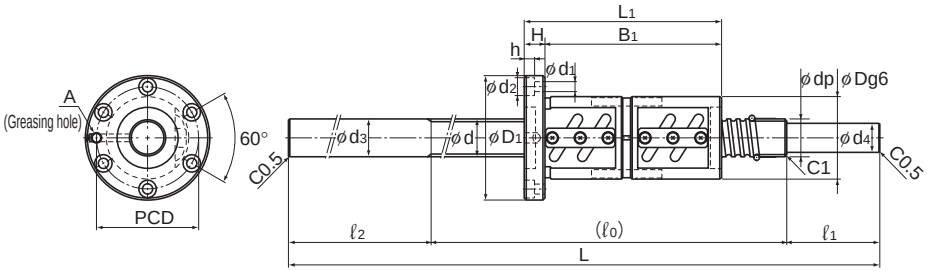
Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	10	66 31 46	50	4.5	8	4.5	M6	A	410	200	50	160	16	12.8	0.92
									510	300	50	160	16	12.8	0.92
									610	400	50	160	16	12.8	0.92
									710	500	50	160	16	12.8	0.92
	12	107 57 63	53	5.5	9.5	5.5	M6	A	410	200	50	160	18	15.3	1.62
									510	300	50	160	18	15.3	1.62
									610	400	50	160	18	15.3	1.62
									710	500	50	160	18	15.3	1.62
									810	600	50	160	18	15.3	1.62
	11	95 45 45	55	5.5	9.5	5.5	M6	A	410	200	50	160	20	15.3	1.65
									510	300	50	160	20	15.3	1.65
									610	400	50	160	20	15.3	1.65
									710	500	50	160	20	15.3	1.65
									810	600	50	160	20	16.8	1.65
									1010	800	50	160	20	16.8	1.65
								B	610	300	50	260	20	16.8	1.65
									710	400	50	260	20	16.8	1.65

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

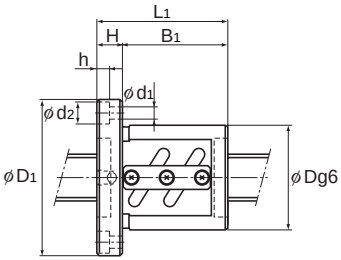
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 2505-5 BNF 2505-5 BIF 2505-5	25	5	25.75	22.2	2×2.5 2×2.5 1×2.5	16.7 16.7 9.2	44 44 22	830 — 440	50	73	105 55 55	1.2 0.75 0.75
BNFN 2510A-2.5 BNF 2510A-2.5 BIF 2510A-5	25	10	26.3	21.4	1×2.5	15.8	33	780 — 780	58	85	120 70 100	2.0 1.43 1.87

Model number coding

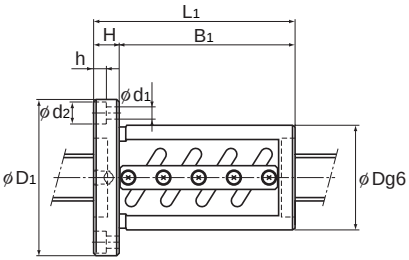
BIF2505-5 RR G0 +720L C5 B

- BIF2505-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +720L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- B: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF



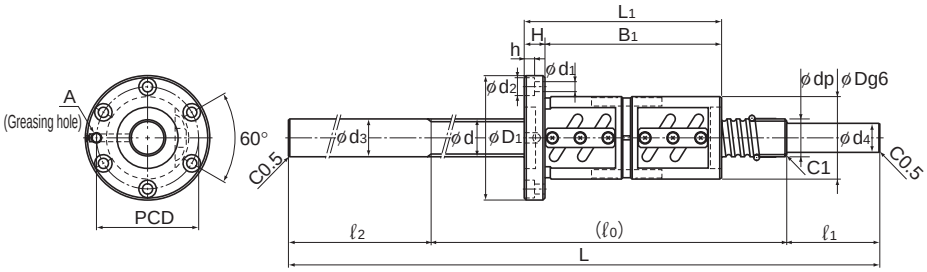
Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	11	94 44 44	61	5.5	9.5	5.5	M6	A	520	300	60	160	25	20.3	2.84
									620	400	60	160	25	20.3	2.84
									720	500	60	160	25	20.3	2.84
									820	600	60	160	25	20.3	2.84
									1020	800	60	160	25	21.8	2.84
									1220	1000	60	160	25	21.8	2.84
									1420	1200	60	160	25	21.8	2.84
								B	720	400	60	260	25	21.8	2.84
									820	500	60	260	25	21.8	2.84
	18	102 52 82	71	6.6	11	6.5	M6	A	620	400	60	160	25	20.3	2.68
									820	600	60	160	25	20.3	2.68
									1020	800	60	160	25	20.3	2.68
									1220	1000	60	160	25	20.3	2.68
									1420	1200	60	160	25	20.3	2.68

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

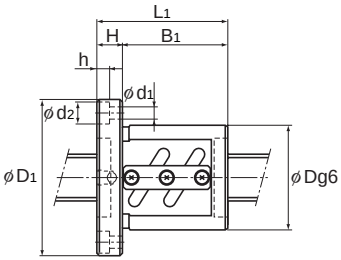
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 2806-5	28	6	28.75	25.2	2×2.5	17.5	49.4	880	55	85	122	1.7
BNF 2806-5					2×2.5	17.5	49.4	—			68	1.13
BIF 2806-5					1×2.5	9.6	24.6	490			68	1.0
BIF 2806-10					2×2.5	17.5	49.4	880			104	1.57
BNFN 3205-5	32	5	32.75	29.2	2×2.5	18.5	56.4	930	58	85	106	1.54
BNF 3205-5					2×2.5	18.5	56.4	—			56	0.93
BIF 3205-5					1×2.5	10.2	28.1	490			56	0.87
BIF 3205-10					2×2.5	18.5	56.4	930			86	1.32

Model number coding

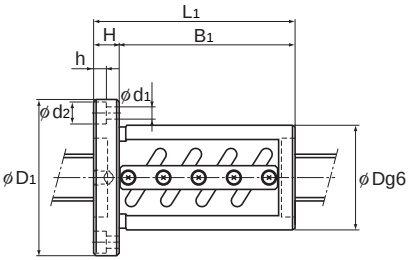
BNFN2806-5 RR G0 +1020L C5 A

- BNFN2806-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +1020L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF



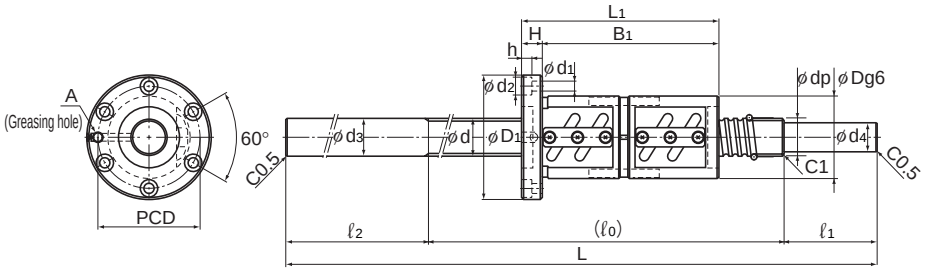
Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	12	110 56 56 92	69	6.6	11	6.5	M6	A	520	300	60	160	28	20.3	3.89
									620	400	60	160	28	20.3	3.89
									720	500	60	160	28	20.3	3.89
									920	700	60	160	28	20.3	3.89
									1020	800	60	160	28	24.8	3.89
									1220	1000	60	160	28	24.8	3.89
									1420	1200	60	160	28	24.8	3.89
								B	720	400	70	250	28	24.8	3.89
									920	500	70	350	28	24.8	3.89
									1100	700	70	330	28	24.8	3.89
	12	94 44 44 74	71	6.6	11	6.5	M6	A	730	500	70	160	32	25.3	5.03
									930	700	70	160	32	25.3	5.03
									1230	1000	70	160	32	25.3	5.03
									1430	1200	70	160	32	25.3	5.03
									1630	1400	70	160	32	27.8	5.03
									1830	1600	70	160	32	27.8	5.03

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

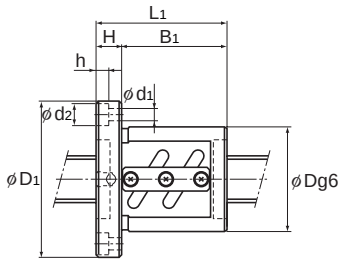
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 3206-5	32	6	33	28.4	2×2.5	25.2	70.4	1270	62	89	123	2.0
BNF 3206-5					2×2.5	25.2	70.4	—			63	1.2
BIF 3206-5					1×2.5	13.9	35.2	690			63	1.2
BIF 3206-10					2×2.5	25.2	70.4	1270			99	1.76
BNFN 3210A-5	32	10	33.75	26.4	2×2.5	47.2	112.7	2350	74	108	190	5.5
BNF 3210A-5					2×2.5	47.2	112.7	—			100	2.8
BIF 3210A-5					1×2.5	26.1	56.2	1270			100	2.8

Model number coding

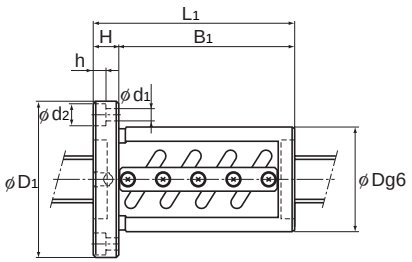
BNFN3206-5 RR G0 +1100L C5 B

- BNFN3206-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +1100L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- B: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF



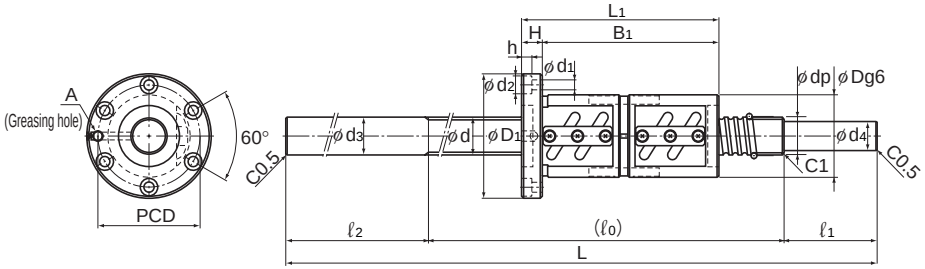
Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	12	111 51 51 87	75	6.6	11	6.5	M6	A	730	500	70	160	32	25.3	4.63
									930	700	70	160	32	25.3	4.63
									1230	1000	70	160	32	25.3	4.63
									1430	1200	70	160	32	25.3	4.63
									1630	1400	70	160	32	27.8	4.63
									1830	1600	70	160	32	27.8	4.63
								B	930	500	70	360	32	27.8	4.63
									1100	700	70	330	32	27.8	4.63
									1430	1000	70	360	32	27.8	4.63
	15	175 85 85	90	9	14	8.5	M6	A	730	500	70	160	32	25.3	3.66
									930	700	70	160	32	25.3	3.66
									1430	1200	70	160	32	25.3	3.66
									1830	1600	70	160	32	25.3	3.66

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

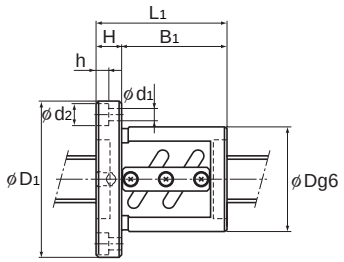
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 3610-5	36	10	37.75	30.5	2×2.5	50.1	126.4	2500	75	120	201	6.0
BNF 3610-5					2×2.5	50.1	126.4	—			111	3.4
BIF 3610-5					1×2.5	27.6	63.3	1370			111	3.4
BIF 3610-10					2×2.5	50.1	126.4	2500			171	4.8
BNFN 4010-5	40	10	41.75	34.4	2×2.5	52.7	141.1	2650	82	124	193	6.8
BNF 4010-5					2×2.5	52.7	141.1	—			103	3.58
BIF 4010-5					1×2.5	29	70.4	1470			103	3.58
BIF 4010-10					2×2.5	52.7	141.1	2650			163	5.18

Model number coding

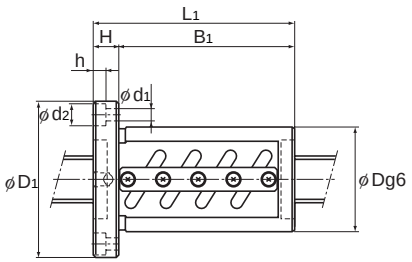
BIF3610-5 RR G0 +1830L C5 A

- BIF3610-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +1830L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF



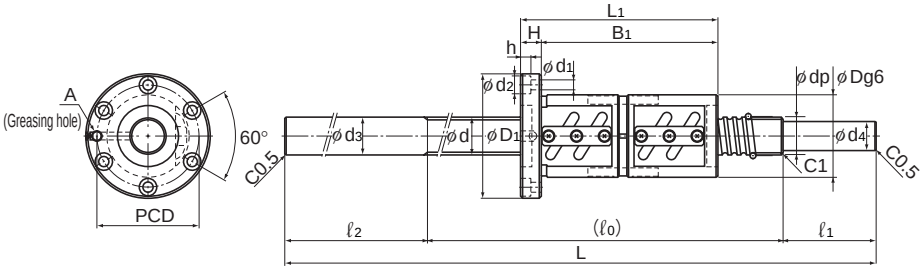
Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	18	183 93 93 153	98	11	17.5	11	M6	A	730	500	70	160	36	30.3	5.03
									930	700	70	160	36	30.3	5.03
									1430	1200	70	160	36	30.3	5.03
									1830	1600	70	160	36	30.3	5.03
								B	930	500	100	330	36	30.3	5.03
									1100	700	100	300	36	30.3	5.03
									1830	1200	100	530	36	30.3	5.03
	18	175 85 85 145	102	11	17.5	11	M6	A	1230	1000	70	160	40	30.3	6.59
									1730	1500	70	160	40	30.3	6.59
									2030	1800	70	160	40	30.3	6.59
									2230	2000	70	160	40	30.3	6.59

Description of Each Option⇒A-815 Dimensions⇒B-777

Unfinished Shaft Ends



Model BNFN

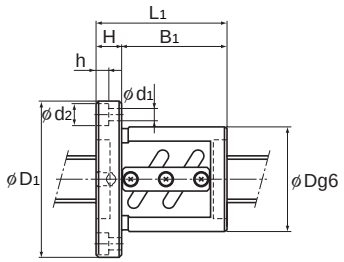
Model No.	Ball screw specifications								Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Applied preload	Outer diameter	Flange diameter	Overall length	Mass
						Ca	C0a					
	d	Ph	dp	dc	Rows x turns	kN	kN	N	D	D1	L1	kg
BNFN 4012-5	40	12	42	34.1	2×2.5	61.6	158.8	3090	84	126	227	6.3
BNF 4012-5					2×2.5	61.6	158.8	—			119	4.2
BIF 4012-5					1×2.5	33.9	79.2	1720			119	4.2
BIF 4012-10					2×2.5	61.6	158.8	3090			191	6.24
BNFN 5010-5	50	10	51.75	44.4	2×2.5	58.2	176.4	2890	93	135	193	7.2
BNF 5010-5					2×2.5	58.2	176.4	—			103	4.4
BIF 5010-5					1×2.5	32	88.2	1620			103	4.4
BIF 5010-10					2×2.5	58.2	176.4	2890			163	6.35

Model number coding

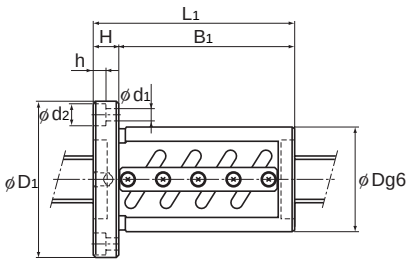
BNFN4012-5 RR G0 +1230L C5 A

- BNFN4012-5: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +1230L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*3)
- A: Symbol for standard-stock type (symbol A or B)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Model BNF

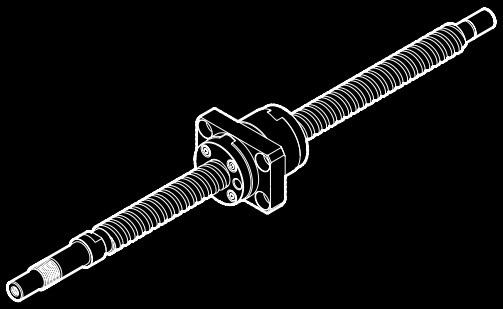


Model BIF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass
	H	B_1	PCD	d_1	d_2	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	d_3	d_4	kg/m
	18	209 101 101 173	104	11	17.5	11	M6	A	1230	1000	70	160	40	30.3	6.39
									1730	1500	70	160	40	30.3	6.39
									2030	1800	70	160	40	30.3	6.39
									2230	2000	70	160	40	30.3	6.39
								B	1730	1200	100	430	40	33.8	6.39
									2030	1200	100	730	40	33.8	6.39
	18	175 85 85 145	113	11	17.5	11	PT 1/8	A	1300	1000	100	200	50	40.3	11.36
									1800	1500	100	200	50	40.3	11.36
									2300	2000	100	200	50	40.3	11.36
									2800	2500	100	200	50	40.3	11.36

Description of Each Option⇒A-815 Dimensions⇒B-777



Standard-Stock Precision Ball Screw Finished Shaft Ends
Model BNK

Ball Screw

B Product Specifications

Dimensional Drawing, Dimensional Table

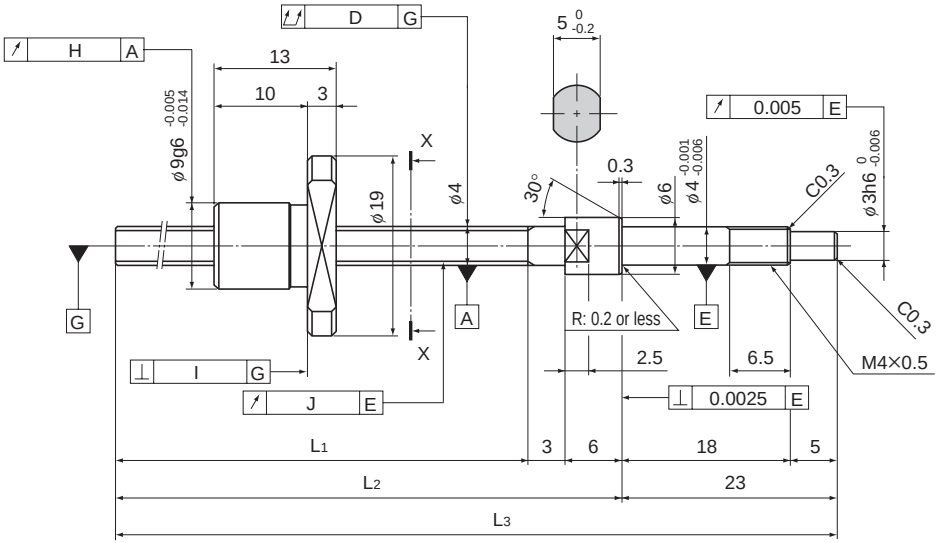
Options

A Technical Descriptions of the Products (Separate)

Technical Descriptions

* Please see the separate "A Technical Descriptions of the Products".

BNK0401-3 Shaft diameter: 4; lead: 1

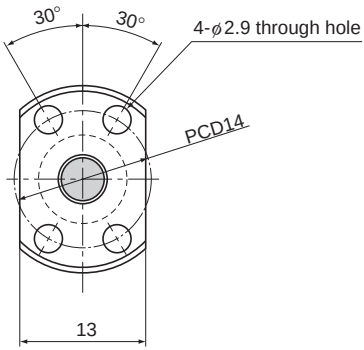


Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0401-3G0+77LC3Y	20	45	54	77
BNK 0401-3G0+77LC5Y				
BNK 0401-3G2+77LC7Y				
BNK 0401-3G0+97LC3Y	40	65	74	97
BNK 0401-3G0+97LC5Y				
BNK 0401-3G2+97LC7Y				
BNK 0401-3G0+127LC3Y	70	95	104	127
BNK 0401-3G0+127LC5Y				
BNK 0401-3G2+127LC7Y				

Note) A stainless steel type is also available for model BNK0401. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK0401-3G0+77LC3Y M
Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

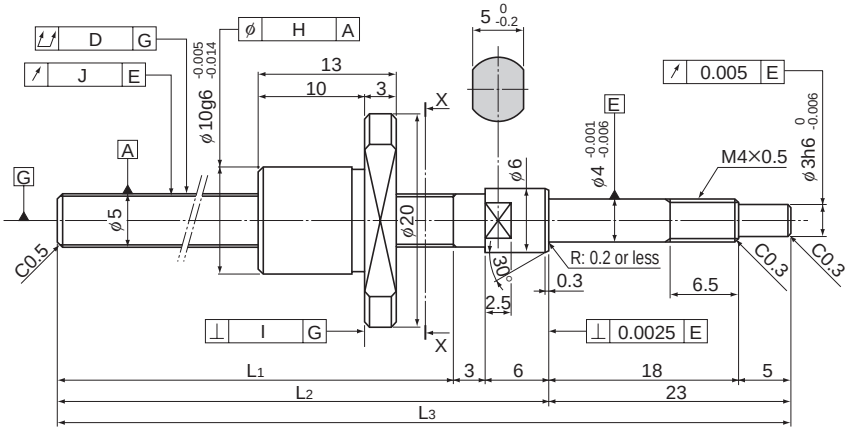
Ball Screw Specifications			
Lead (mm)	1		
BCD(mm)	4.15		
Thread minor diameter (mm)	3.4		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	0.29	0.29	0.29
Basic static load rating C0a(kN)	0.42	0.42	0.42
Preload torque (N-m)	to 9.8×10^{-3}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	35		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy		Nut mass kg	Shaft mass kg/m
					Representative travel distance error	Fluctuation		
	0.015	0.009	0.008	0.008	±0.008	0.008	0.01	0.07
	0.025	0.012	0.01	0.01	±0.018	0.018	0.01	0.07
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.01	0.07
	0.02	0.009	0.008	0.008	±0.008	0.008	0.01	0.07
	0.025	0.012	0.01	0.01	±0.018	0.018	0.01	0.07
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.01	0.07
	0.025	0.009	0.008	0.008	±0.008	0.008	0.01	0.07
	0.035	0.012	0.01	0.01	±0.018	0.018	0.01	0.07
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.01	0.07

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK0501-3 Shaft diameter: 5; lead: 1

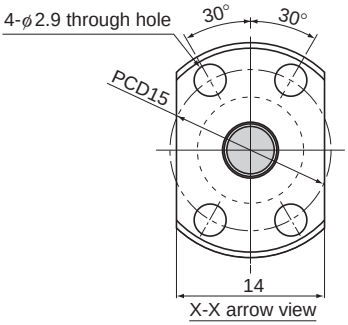


Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0501-3G0+77LC3Y	20	45	54	77
BNK 0501-3G0+77LC5Y				
BNK 0501-3G2+77LC7Y				
BNK 0501-3G0+97LC3Y	40	65	74	97
BNK 0501-3G0+97LC5Y				
BNK 0501-3G2+97LC7Y				
BNK 0501-3G0+127LC3Y	70	95	104	127
BNK 0501-3G0+127LC5Y				
BNK 0501-3G2+127LC7Y				

Note) A stainless steel type is also available for model BNK0501. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK0501-3G0+77LC3Y M
Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



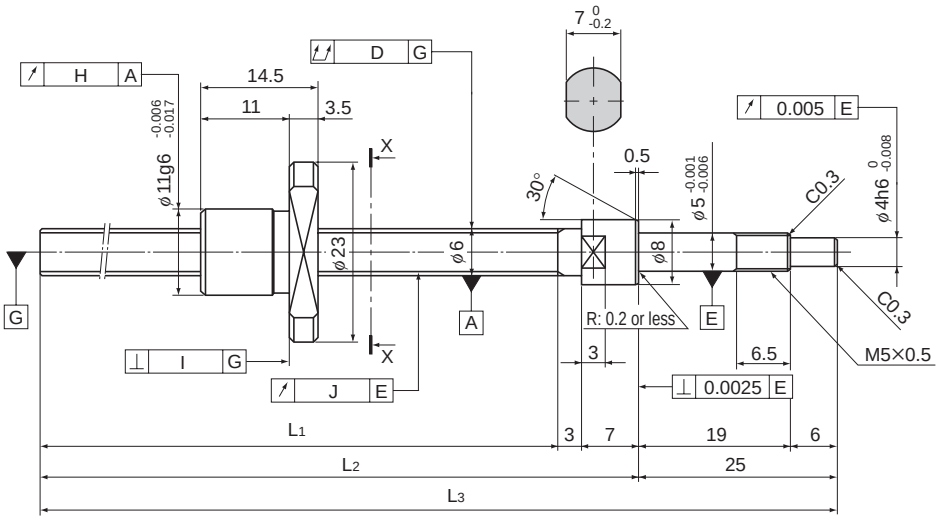
Ball Screw Specifications			
Lead (mm)	1		
BCD(mm)	5.15		
Thread minor diameter (mm)	4.4		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	0.32	0.32	0.32
Basic static load rating C0a(kN)	0.55	0.55	0.55
Preload torque (N-m)	to 9.8×10^{-3}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	47		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.015	0.009	0.008	0.008	±0.008	0.008	0.012	0.11
	0.025	0.012	0.01	0.01	±0.018	0.018	0.012	0.11
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.012	0.11
	0.02	0.009	0.008	0.008	±0.008	0.008	0.012	0.11
	0.025	0.012	0.01	0.01	±0.018	0.018	0.012	0.11
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.012	0.11
	0.025	0.009	0.008	0.008	±0.008	0.008	0.012	0.11
	0.035	0.012	0.01	0.01	±0.018	0.018	0.012	0.11
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.012	0.11

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK0601-3 Shaft diameter: 6; lead: 1

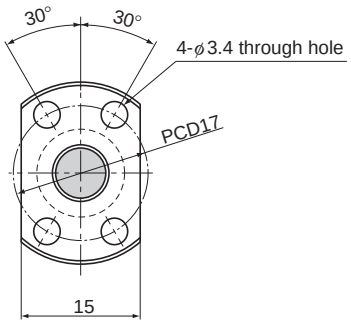


Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0601-3G0+100LC3Y	40	65	75	100
BNK 0601-3G0+100LC5Y				
BNK 0601-3G2+100LC7Y				
BNK 0601-3G0+130LC3Y	70	95	105	130
BNK 0601-3G0+130LC5Y				
BNK 0601-3G2+130LC7Y				
BNK 0601-3G0+160LC3Y	100	125	135	160
BNK 0601-3G0+160LC5Y				
BNK 0601-3G2+160LC7Y				

Note) A stainless steel type is also available for model BNK0501. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK0601-3G0+100LC3Y M
Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

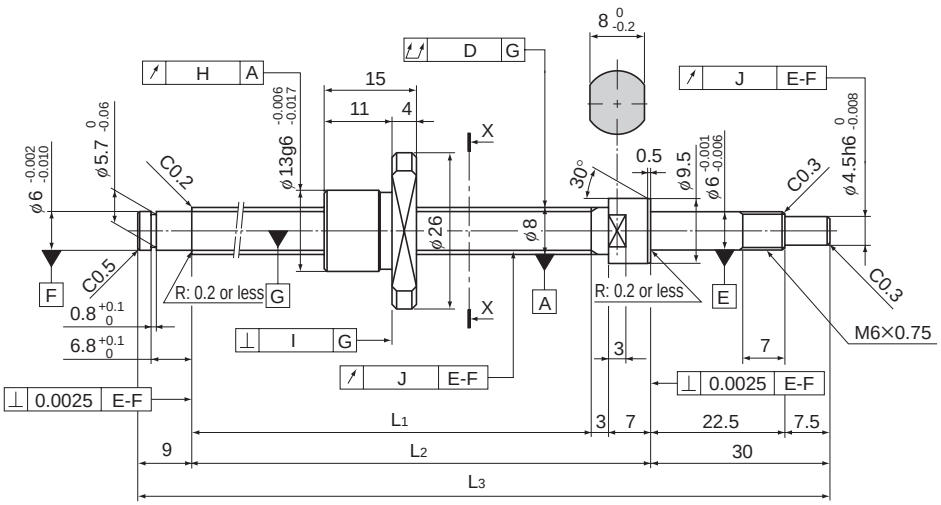
Ball Screw Specifications			
Lead (mm)	1		
BCD(mm)	6.2		
Thread minor diameter (mm)	5.3		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	0.54	0.54	0.54
Basic static load rating C0a(kN)	0.94	0.94	0.94
Preload torque (N-m)	to 1.3×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	60		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy		Nut mass kg	Shaft mass kg/m
					Representative travel distance error	Fluctuation		
	0.015	0.009	0.008	0.008	±0.008	0.008	0.017	0.14
	0.025	0.012	0.01	0.01	±0.018	0.018	0.017	0.14
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.017	0.14
	0.02	0.009	0.008	0.008	±0.008	0.008	0.017	0.14
	0.035	0.012	0.01	0.01	±0.018	0.018	0.017	0.14
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.017	0.14
	0.025	0.009	0.008	0.008	±0.01	0.008	0.017	0.14
	0.035	0.012	0.01	0.01	±0.02	0.018	0.017	0.14
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.017	0.14

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK0801-3 Shaft diameter: 8; lead: 1

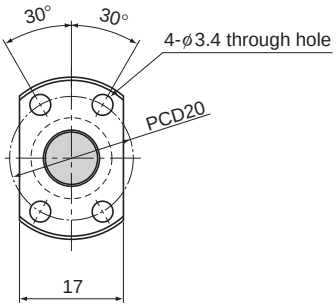


Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0801-3G0+115LC3Y	40	66	76	115
BNK 0801-3G0+115LC5Y				
BNK 0801-3G2+115LC7Y				
BNK 0801-3G0+145LC3Y	70	96	106	145
BNK 0801-3G0+145LC5Y				
BNK 0801-3G2+145LC7Y				
BNK 0801-3G0+175LC3Y	100	126	136	175
BNK 0801-3G0+175LC5Y				
BNK 0801-3G2+175LC7Y				
BNK 0801-3G0+225LC3Y	150	176	186	225
BNK 0801-3G0+225LC5Y				
BNK 0801-3G2+225LC7Y				

Note) A stainless steel type is also available for model BNK0601. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK0801-3G0+115LC3Y M
Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

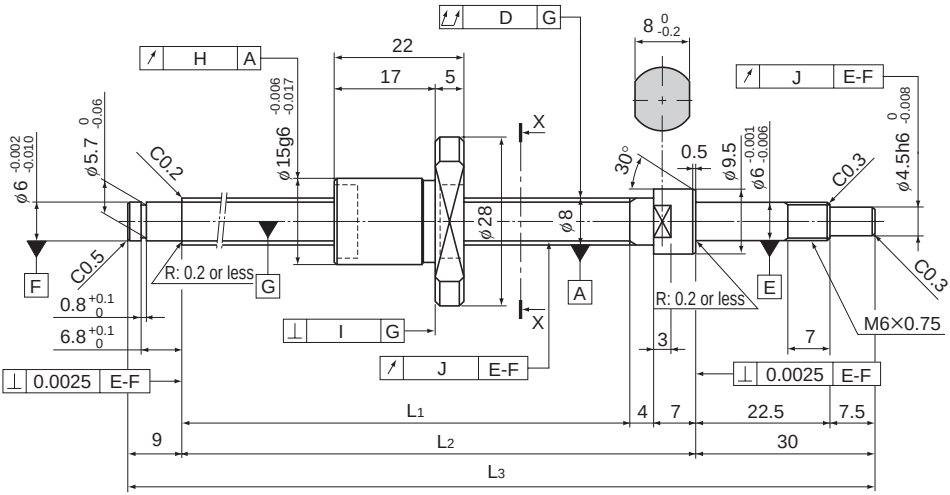
Ball Screw Specifications			
Lead (mm)	1		
BCD(mm)	8.2		
Thread minor diameter (mm)	7.3		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	0.64	0.64	0.64
Basic static load rating C0a(kN)	1.4	1.4	1.4
Preload torque (N-m)	to 1.8×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	80		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy		Nut mass kg	Shaft mass kg/m
					Representative travel distance error	Fluctuation		
	0.025	0.009	0.008	0.008	±0.008	0.008	0.024	0.29
	0.025	0.012	0.01	0.01	±0.018	0.018	0.024	0.29
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.024	0.29
	0.03	0.009	0.008	0.008	±0.008	0.008	0.024	0.29
	0.035	0.012	0.01	0.01	±0.018	0.018	0.024	0.29
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.024	0.29
	0.03	0.009	0.008	0.008	±0.01	0.008	0.024	0.29
	0.035	0.012	0.01	0.01	±0.02	0.018	0.024	0.29
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.024	0.29
	0.035	0.009	0.008	0.008	±0.01	0.008	0.024	0.29
	0.05	0.012	0.01	0.01	±0.02	0.018	0.024	0.29
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.024	0.29

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK0802-3 Shaft diameter: 8; lead: 2

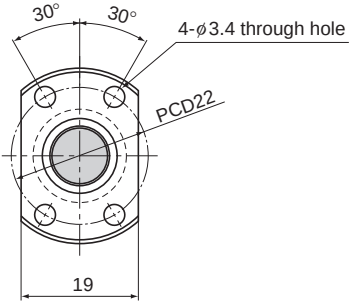


Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0802-3RRG0+125LC3Y	40	75	86	125
BNK 0802-3RRG0+125LC5Y				
BNK 0802-3RRG2+125LC7Y				
BNK 0802-3RRG0+155LC3Y	70	105	116	155
BNK 0802-3RRG0+155LC5Y				
BNK 0802-3RRG2+155LC7Y				
BNK 0802-3RRG0+185LC3Y	100	135	146	185
BNK 0802-3RRG0+185LC5Y				
BNK 0802-3RRG2+185LC7Y				
BNK 0802-3RRG0+235LC3Y	150	185	196	235
BNK 0802-3RRG0+235LC5Y				
BNK 0802-3RRG2+235LC7Y				

Note) A stainless steel type is also available for model BNK0801. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK0802-3RRG0+125LC3Y M
Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

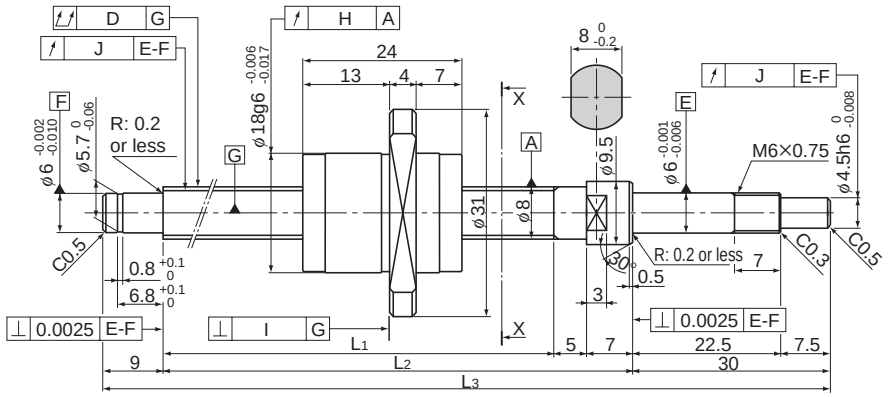
Ball Screw Specifications			
Lead (mm)	2		
BCD(mm)	8.3		
Thread minor diameter (mm)	7		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	1.4	1.4	1.4
Basic static load rating C0a(kN)	2.3	2.3	2.3
Preload torque (N-m)	to 2×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	100		
Circulation method	Deflector		

Unit: mm

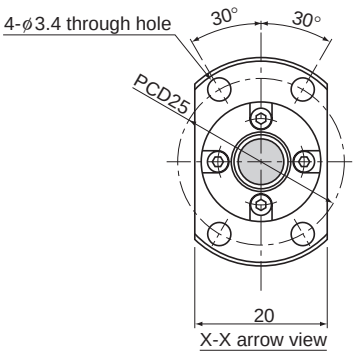
	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy		Nut mass kg	Shaft mass kg/m
					Representative travel distance error	Fluctuation		
	0.025	0.009	0.008	0.008	±0.008	0.008	0.034	0.27
	0.025	0.012	0.01	0.01	±0.018	0.018	0.034	0.27
	0.035	0.02	0.014	0.014	Travel distance: ±0.05/300		0.034	0.27
	0.03	0.009	0.008	0.008	±0.01	0.008	0.034	0.27
	0.035	0.012	0.01	0.01	±0.02	0.018	0.034	0.27
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.034	0.27
	0.03	0.009	0.008	0.008	±0.01	0.008	0.034	0.27
	0.035	0.012	0.01	0.01	±0.02	0.018	0.034	0.27
	0.05	0.02	0.014	0.014	Travel distance: ±0.05/300		0.034	0.27
	0.035	0.009	0.008	0.008	±0.01	0.008	0.034	0.27
	0.05	0.012	0.01	0.01	±0.02	0.018	0.034	0.27
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.034	0.27

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK0810-3 Shaft diameter: 8; lead: 10



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 0810-3GT+205LC5Y	100	154	166	205
BNK 0810-3G2+205LC7Y				
BNK 0810-3GT+255LC5Y	150	204	216	255
BNK 0810-3G2+255LC7Y				
BNK 0810-3GT+305LC5Y	200	254	266	305
BNK 0810-3G2+305LC7Y				
BNK 0810-3GT+355LC5Y	250	304	316	355
BNK 0810-3G2+355LC7Y				
BNK 0810-3GT+405LC5Y	300	354	366	405
BNK 0810-3G2+405LC7Y				



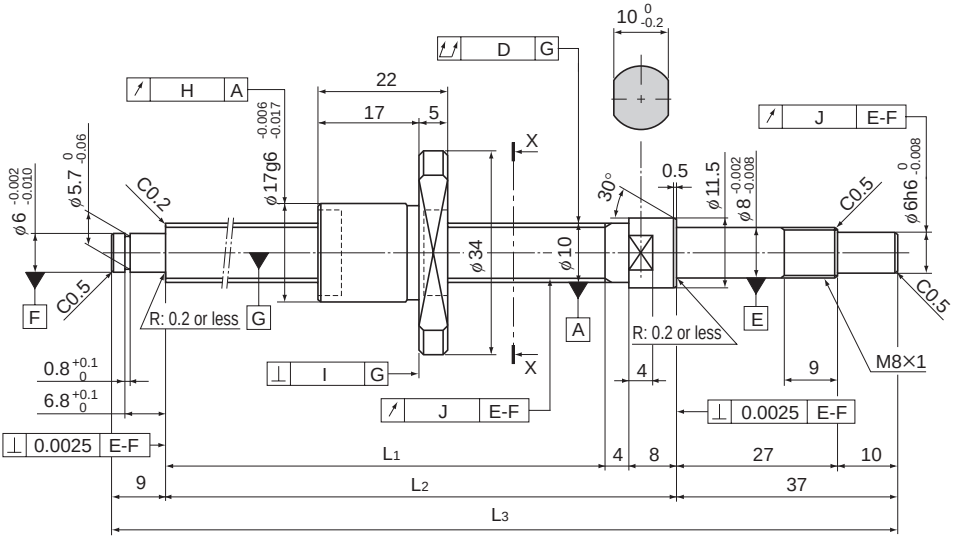
Ball Screw Specifications		
Lead (mm)	10	
BCD(mm)	8.4	
Thread minor diameter (mm)	6.7	
Threading direction, No. of threaded grooves	Rightward, 2	
No. of circuits	1.5 turns × 2 rows	
Clearance symbol	GT	G2
Axial clearance (mm)	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	2.16	2.16
Basic static load rating C0a(kN)	3.82	3.82
Preload torque (N-m)	—	—
Spacer ball	None	None
Rigidity value(N/μm)	100	
Circulation method	End cap	

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy: Representative travel distance error	Lead angle accuracy: Fluctuation	Nut mass kg	Shaft mass kg/m
	0.05	0.012	0.01	0.01	±0.02	0.018	0.049	0.30
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.049	0.30
	0.05	0.012	0.01	0.01	±0.023	0.018	0.049	0.30
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.049	0.30
	0.05	0.012	0.01	0.01	±0.023	0.018	0.049	0.30
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.049	0.30
	0.06	0.012	0.01	0.01	±0.023	0.018	0.049	0.30
	0.075	0.02	0.014	0.014	Travel distance: ±0.05/300		0.049	0.30
	0.07	0.012	0.01	0.01	±0.025	0.018	0.049	0.30
	0.09	0.02	0.014	0.014	Travel distance: ±0.05/300		0.049	0.30

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1002-3 Shaft diameter: 10; lead: 2



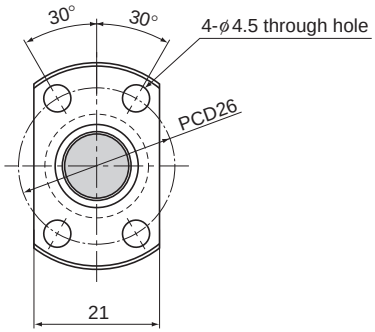
Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1002-3RRG0+143LC3Y	50	85	97	143
BNK 1002-3RRG0+143LC5Y				
BNK 1002-3RRG2+143LC7Y				
BNK 1002-3RRG0+193LC3Y	100	135	147	193
BNK 1002-3RRG0+193LC5Y				
BNK 1002-3RRG2+193LC7Y				
BNK 1002-3RRG0+243LC3Y	150	185	197	243
BNK 1002-3RRG0+243LC5Y				
BNK 1002-3RRG2+243LC7Y				
BNK 1002-3RRG0+293LC3Y	200	235	247	293
BNK 1002-3RRG0+293LC5Y				
BNK 1002-3RRG2+293LC7Y				

Note) A stainless steel type is also available for model BNK1002. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK1002-3RRG0+143LC3Y M

Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

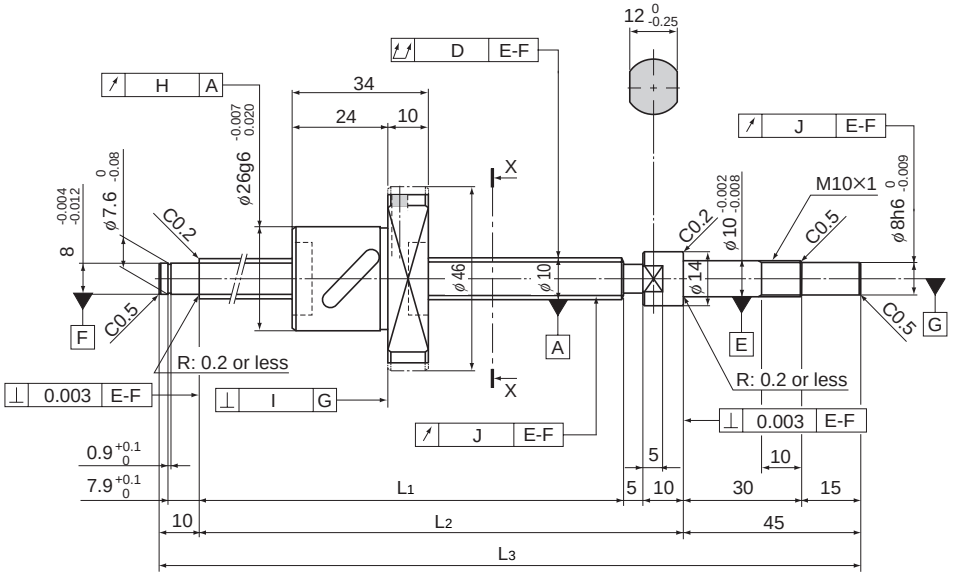
Ball Screw Specifications			
Lead (mm)	2		
BCD(mm)	10.3		
Thread minor diameter (mm)	9		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	1.5	1.5	1.5
Basic static load rating C0a(kN)	2.9	2.9	2.9
Preload torque (N-m)	to 2.5×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	100		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy		Nut mass kg	Shaft mass kg/m
					Representative travel distance error	Fluctuation		
	0.02	0.009	0.008	0.007	±0.008	0.008	0.045	0.47
	0.035	0.012	0.01	0.011	±0.018	0.018	0.045	0.47
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.045	0.47
	0.03	0.009	0.008	0.007	±0.01	0.008	0.045	0.47
	0.035	0.012	0.01	0.011	±0.02	0.018	0.045	0.47
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.045	0.47
	0.03	0.009	0.008	0.007	±0.01	0.008	0.045	0.47
	0.04	0.012	0.01	0.011	±0.02	0.018	0.045	0.47
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.045	0.47
	0.03	0.009	0.008	0.007	±0.012	0.008	0.045	0.47
	0.04	0.012	0.01	0.011	±0.023	0.018	0.045	0.47
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.045	0.47

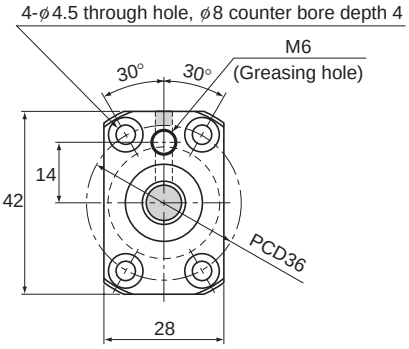
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1004-2.5 Shaft diameter: 10; lead: 4



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1004-2.5RRG0+180LC3Y	50	110	125	180
BNK 1004-2.5RRG0+180LC5Y				
BNK 1004-2.5RRG2+180LC7Y				
BNK 1004-2.5RRG0+230LC3Y	100	160	175	230
BNK 1004-2.5RRG0+230LC5Y				
BNK 1004-2.5RRG2+230LC7Y				
BNK 1004-2.5RRG0+280LC3Y	150	210	225	280
BNK 1004-2.5RRG0+280LC5Y				
BNK 1004-2.5RRG2+280LC7Y				
BNK 1004-2.5RRG0+330LC3Y	200	260	275	330
BNK 1004-2.5RRG0+330LC5Y				
BNK 1004-2.5RRG2+330LC7Y				
BNK 1004-2.5RRG0+380LC3Y	250	310	325	380
BNK 1004-2.5RRG0+380LC5Y				
BNK 1004-2.5RRG2+380LC7Y				

Note) For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

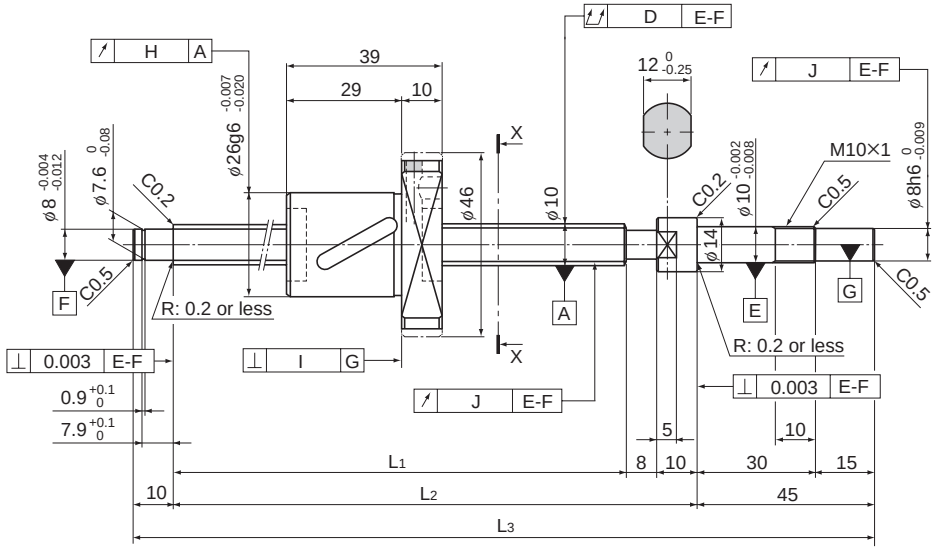
Ball Screw Specifications			
Lead (mm)	4		
BCD(mm)	10.5		
Thread minor diameter (mm)	7.8		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	2.5 turns × 1 row		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	2.1	3.4	3.4
Basic static load rating C0a(kN)	2.7	5.4	5.4
Preload torque (N-m)	9.8×10^{-3} to 4.9×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	50	100	
Circulation method	Return pipe		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.02	0.009	0.008	0.008	±0.01	0.008	0.15	0.32
	0.035	0.012	0.01	0.011	±0.02	0.018	0.15	0.32
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	0.32
	0.03	0.009	0.008	0.008	±0.01	0.008	0.15	0.32
	0.04	0.012	0.01	0.011	±0.02	0.018	0.15	0.32
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	0.32
	0.03	0.009	0.008	0.008	±0.012	0.008	0.15	0.32
	0.04	0.012	0.01	0.011	±0.023	0.018	0.15	0.32
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	0.32
	0.04	0.009	0.008	0.008	±0.012	0.008	0.15	0.32
	0.05	0.012	0.01	0.011	±0.023	0.018	0.15	0.32
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	0.32
	0.04	0.009	0.008	0.008	±0.012	0.008	0.15	0.32
	0.05	0.012	0.01	0.011	±0.023	0.018	0.15	0.32
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	0.32

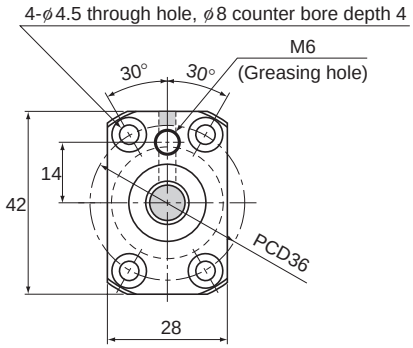
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1010-1.5 Shaft diameter: 10; lead: 10



Model No.	Stroke	Screw shaft length		
		L1	L2	L3
BNK 1010-1.5RRG0+240LC5Y	100	167	185	240
BNK 1010-1.5RRG2+240LC7Y				
BNK 1010-1.5RRG0+290LC5Y	150	217	235	290
BNK 1010-1.5RRG2+290LC7Y				
BNK 1010-1.5RRG0+340LC5Y	200	267	285	340
BNK 1010-1.5RRG2+340LC7Y				
BNK 1010-1.5RRG0+390LC5Y	250	317	335	390
BNK 1010-1.5RRG2+390LC7Y				
BNK 1010-1.5RRG0+440LC5Y	300	367	385	440
BNK 1010-1.5RRG2+440LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



X-X arrow view

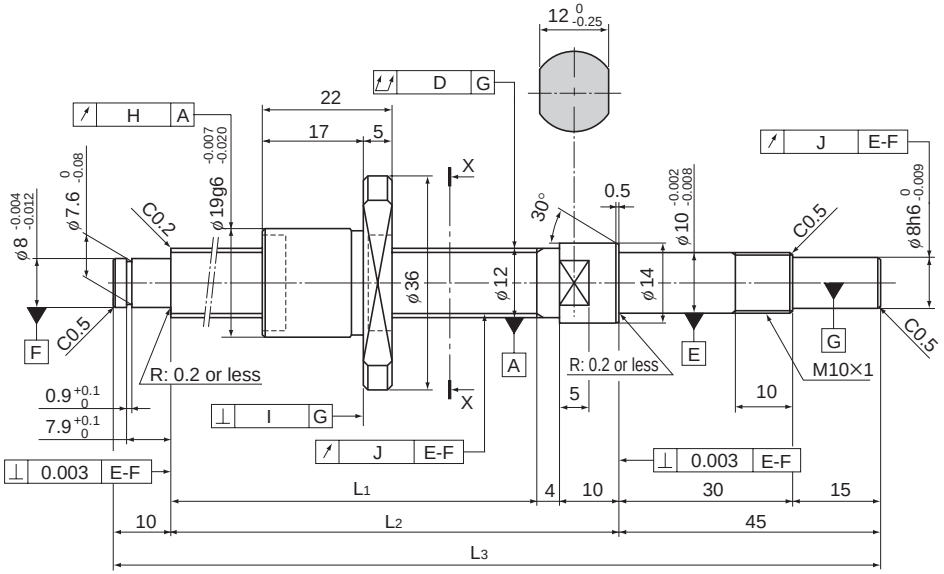
Ball Screw Specifications			
Lead (mm)	10		
BCD(mm)	10.5		
Thread minor diameter (mm)	7.8		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1.5 turns × 1 row		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	1.3	2.1	2.1
Basic static load rating C0a(kN)	1.6	3.1	3.1
Preload torque (N-m)	9.8×10^{-3} to 4.9×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	70	140	
Circulation method	Return pipe		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.04	0.012	0.01	0.011	±0.02	0.018	0.17	0.5
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.17	0.5
	0.04	0.012	0.01	0.011	±0.023	0.018	0.17	0.5
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.17	0.5
	0.05	0.012	0.01	0.011	±0.023	0.018	0.17	0.5
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.17	0.5
	0.05	0.012	0.01	0.011	±0.025	0.02	0.17	0.5
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.17	0.5
	0.065	0.012	0.01	0.011	±0.025	0.02	0.17	0.5
	0.08	0.02	0.014	0.014	Travel distance: ±0.05/300		0.17	0.5

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1202-3 Shaft diameter: 12; lead: 2



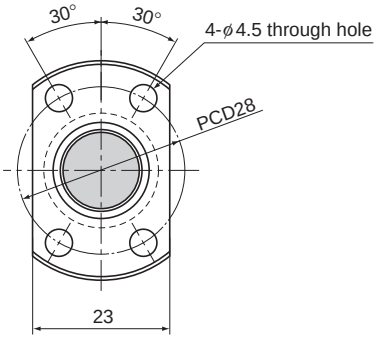
Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1202-3RRG0+154LC3Y	50	85	99	154
BNK 1202-3RRG0+154LC5Y				
BNK 1202-3RRG2+154LC7Y				
BNK 1202-3RRG0+204LC3Y	100	135	149	204
BNK 1202-3RRG0+204LC5Y				
BNK 1202-3RRG2+204LC7Y				
BNK 1202-3RRG0+254LC3Y	150	185	199	254
BNK 1202-3RRG0+254LC5Y				
BNK 1202-3RRG2+254LC7Y				
BNK 1202-3RRG0+304LC3Y	200	235	249	304
BNK 1202-3RRG0+304LC5Y				
BNK 1202-3RRG2+304LC7Y				
BNK 1202-3RRG0+354LC3Y	250	285	299	354
BNK 1202-3RRG0+354LC5Y				
BNK 1202-3RRG2+354LC7Y				

Note) A stainless steel type is also available for model BNK1202. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK1202-3RRG0+154LC3Y M

Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

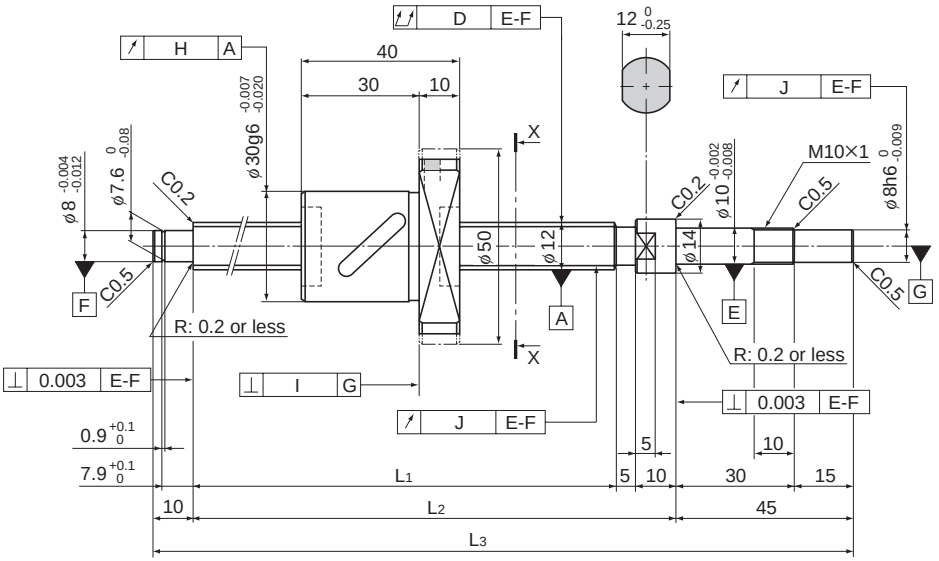
Ball Screw Specifications			
Lead (mm)	2		
BCD(mm)	12.3		
Thread minor diameter (mm)	11		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	1.7	1.7	1.7
Basic static load rating C0a(kN)	3.6	3.6	3.6
Preload torque (N-m)	9.8×10^{-3} to 3.4×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	120		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.02	0.01	0.008	0.007	±0.008	0.008	0.05	0.71
	0.035	0.012	0.01	0.011	±0.018	0.018	0.05	0.71
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.05	0.71
	0.03	0.01	0.008	0.007	±0.01	0.008	0.05	0.71
	0.04	0.012	0.01	0.011	±0.02	0.018	0.05	0.71
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.05	0.71
	0.03	0.01	0.008	0.007	±0.01	0.008	0.05	0.71
	0.04	0.012	0.01	0.011	±0.02	0.018	0.05	0.71
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.05	0.71
	0.04	0.01	0.008	0.007	±0.012	0.008	0.05	0.71
	0.05	0.012	0.01	0.011	±0.023	0.018	0.05	0.71
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.05	0.71
	0.04	0.01	0.008	0.007	±0.012	0.008	0.05	0.71
	0.05	0.012	0.01	0.011	±0.023	0.018	0.05	0.71
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.05	0.71

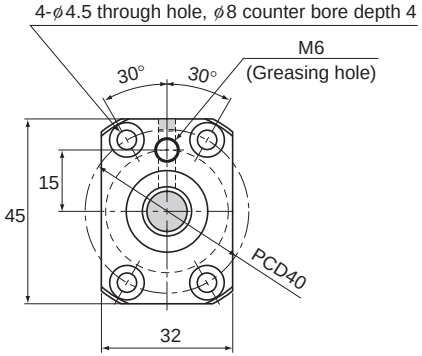
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1205-2.5 Shaft diameter: 12; lead: 5



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1205-2.5RRG0+180LC3Y	50	110	125	180
BNK 1205-2.5RRG0+180LC5Y				
BNK 1205-2.5RRG2+180LC7Y				
BNK 1205-2.5RRG0+230LC3Y	100	160	175	230
BNK 1205-2.5RRG0+230LC5Y				
BNK 1205-2.5RRG2+230LC7Y				
BNK 1205-2.5RRG0+280LC3Y	150	210	225	280
BNK 1205-2.5RRG0+280LC5Y				
BNK 1205-2.5RRG2+280LC7Y				
BNK 1205-2.5RRG0+330LC3Y	200	260	275	330
BNK 1205-2.5RRG0+330LC5Y				
BNK 1205-2.5RRG2+330LC7Y				
BNK 1205-2.5RRG0+380LC3Y	250	310	325	380
BNK 1205-2.5RRG0+380LC5Y				
BNK 1205-2.5RRG2+380LC7Y				

Note) For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

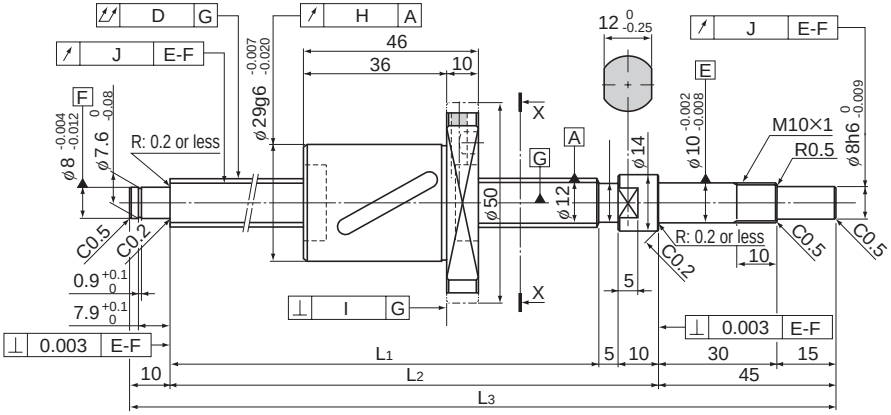
Ball Screw Specifications			
Lead (mm)	5		
BCD(mm)	12.3		
Thread minor diameter (mm)	9.6		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	2.5 turns × 1 row		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	2.3	3.7	3.7
Basic static load rating C0a(kN)	3.2	6.4	6.4
Preload torque (N-m)	9.8×10^{-3} to 4.9×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	60	120	
Circulation method	Return pipe		

Unit: mm

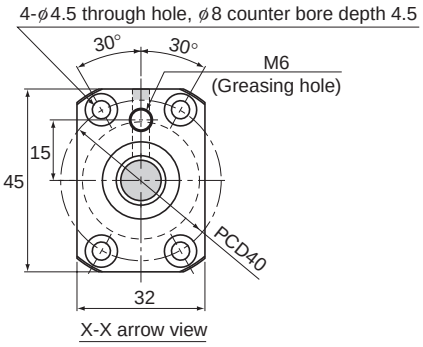
	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.02	0.009	0.008	0.008	±0.01	0.008	0.22	0.61
	0.035	0.012	0.01	0.011	±0.02	0.018	0.22	0.61
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.22	0.61
	0.03	0.009	0.008	0.008	±0.01	0.008	0.22	0.61
	0.04	0.012	0.01	0.011	±0.02	0.018	0.22	0.61
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.22	0.61
	0.03	0.009	0.008	0.008	±0.012	0.008	0.22	0.61
	0.04	0.012	0.01	0.011	±0.023	0.018	0.22	0.61
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.22	0.61
	0.04	0.009	0.008	0.008	±0.012	0.008	0.22	0.61
	0.05	0.012	0.01	0.011	±0.023	0.018	0.22	0.61
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.22	0.61
	0.04	0.009	0.008	0.008	±0.012	0.008	0.22	0.61
	0.05	0.012	0.01	0.011	±0.023	0.018	0.22	0.61
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300		0.22	0.61

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1208-2.6 Shaft diameter: 12; lead: 8



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1208-2.6RRG2+180LC7Y	50	110	125	180
BNK 1208-2.6RRG2+230LC7Y	100	160	175	230
BNK 1208-2.6RRG2+280LC7Y	150	210	225	280
BNK 1208-2.6RRG2+330LC7Y	200	260	275	330
BNK 1208-2.6RRG2+380LC7Y	250	310	325	380



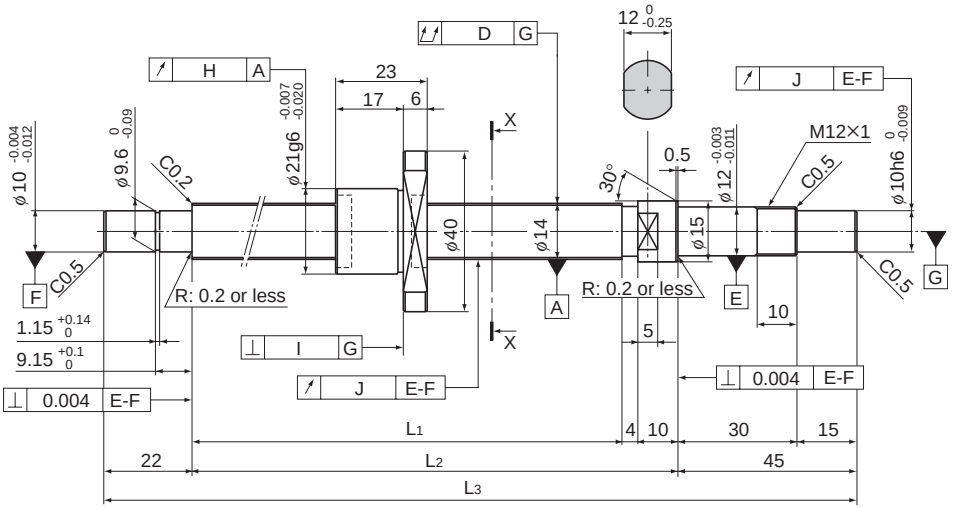
Ball Screw Specifications	
Lead (mm)	8
BCD(mm)	12.65
Thread minor diameter (mm)	9.7
Threading direction, No. of threaded grooves	Rightward, 1
No. of circuits	2.6 turns × 1 row
Clearance symbol	G2
Axial clearance (mm)	0.02 or less
Basic dynamic load rating Ca (kN)	4.7
Basic static load rating C0a(kN)	7.5
Preload torque (N-m)	—
Spacer ball	None
Rigidity value(N/μm)	127
Circulation method	Return pipe

Unit: mm

	Runout of the screw shaft axis D	Runout of the nut circumference H	Flange perpendicularity I	Runout of the thread groove surface J	Lead angle accuracy	Nut mass kg	Shaft mass kg/m
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300	0.269	0.64
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300	0.269	0.64
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300	0.269	0.64
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300	0.269	0.64
	0.065	0.02	0.014	0.014	Travel distance: ±0.05/300	0.269	0.64

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1402-3 Shaft diameter: 14; lead: 2



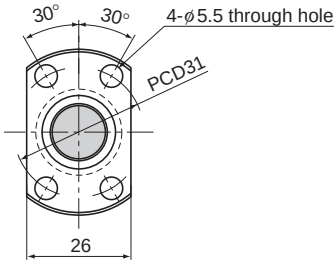
Model No.	Stroke	Screw shaft length		
		L1	L2	L3
BNK 1402-3RRG0+166LC3Y	50	85	99	166
BNK 1402-3RRG0+166LC5Y				
BNK 1402-3RRG2+166LC7Y				
BNK 1402-3RRG0+216LC3Y	100	135	149	216
BNK 1402-3RRG0+216LC5Y				
BNK 1402-3RRG2+216LC7Y				
BNK 1402-3RRG0+266LC3Y	150	185	199	266
BNK 1402-3RRG0+266LC5Y				
BNK 1402-3RRG2+266LC7Y				
BNK 1402-3RRG0+316LC3Y	200	235	249	316
BNK 1402-3RRG0+316LC5Y				
BNK 1402-3RRG2+316LC7Y				
BNK 1402-3RRG0+416LC3Y	300	335	349	416
BNK 1402-3RRG0+416LC5Y				
BNK 1402-3RRG2+416LC7Y				

Note) A stainless steel type is also available for model BNK1402. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK1402-3RRG0+166LC3Y M

Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

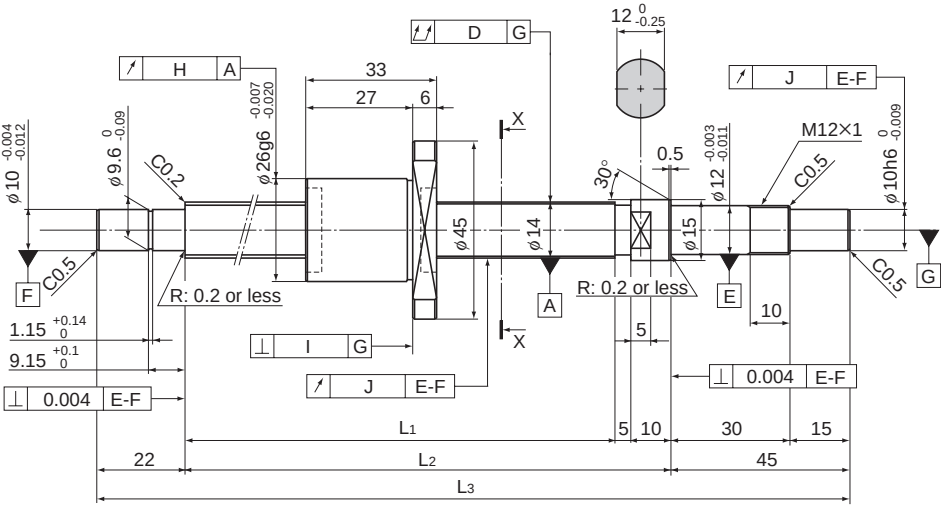
Ball Screw Specifications			
Lead (mm)	2		
BCD(mm)	14.3		
Thread minor diameter (mm)	13		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	1.8	1.8	1.8
Basic static load rating C0a(kN)	4.3	4.3	4.3
Preload torque (N-m)	4.9×10^{-3} to 4.9×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	140		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.02	0.01	0.008	0.009	±0.008	0.008	0.15	1.0
	0.025	0.012	0.01	0.012	±0.018	0.018	0.15	1.0
	0.04	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	1.0
	0.025	0.01	0.008	0.009	±0.01	0.008	0.15	1.0
	0.03	0.012	0.01	0.012	±0.02	0.018	0.15	1.0
	0.045	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	1.0
	0.025	0.01	0.008	0.009	±0.01	0.008	0.15	1.0
	0.03	0.012	0.01	0.012	±0.02	0.018	0.15	1.0
	0.045	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	1.0
	0.03	0.01	0.008	0.009	±0.012	0.008	0.15	1.0
	0.04	0.012	0.01	0.012	±0.023	0.018	0.15	1.0
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	1.0
	0.04	0.01	0.008	0.009	±0.013	0.01	0.15	1.0
	0.05	0.012	0.01	0.012	±0.025	0.02	0.15	1.0
	0.06	0.02	0.014	0.014	Travel distance: ±0.05/300		0.15	1.0

Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1404-3 Shaft diameter: 14; lead: 4



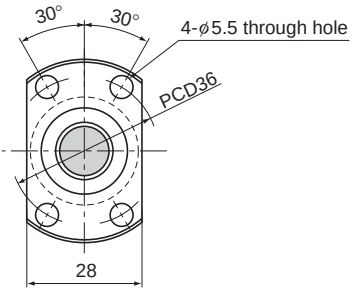
Model No.	Stroke	Screw shaft length		
		L1	L2	L3
BNK 1404-3RRG0+230LC3Y	100	148	163	230
BNK 1404-3RRG0+230LC5Y				
BNK 1404-3RRG2+230LC7Y				
BNK 1404-3RRG0+280LC3Y	150	198	213	280
BNK 1404-3RRG0+280LC5Y				
BNK 1404-3RRG2+280LC7Y				
BNK 1404-3RRG0+330LC3Y	200	248	263	330
BNK 1404-3RRG0+330LC5Y				
BNK 1404-3RRG2+330LC7Y				
BNK 1404-3RRG0+430LC3Y	300	348	363	430
BNK 1404-3RRG0+430LC5Y				
BNK 1404-3RRG2+430LC7Y				
BNK 1404-3RRG0+530LC3Y	400	448	463	530
BNK 1404-3RRG0+530LC5Y				
BNK 1404-3RRG2+530LC7Y				

Note) A stainless steel type is also available for model BNK1404. When placing an order, add symbol "M" to the end of the model number.

(Example) BNK1404-3RRG0+230LC3Y M

Symbol for stainless steel type

For accuracy grades C3 and C5, clearance GT is also available as standard.



X-X arrow view

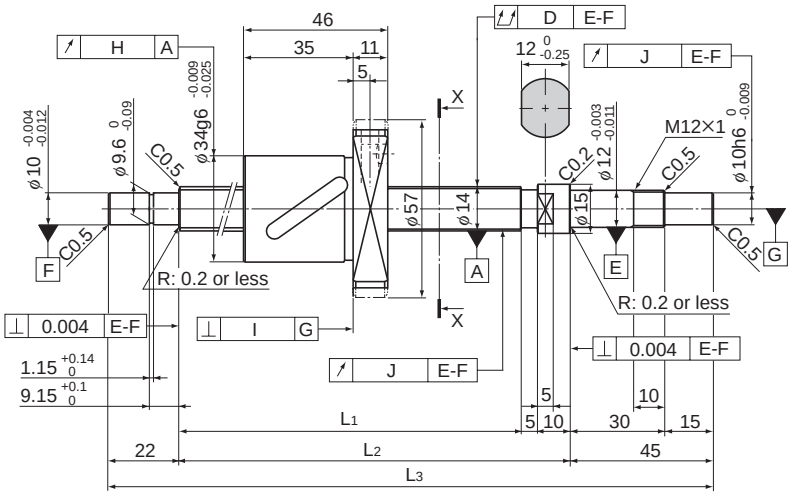
Ball Screw Specifications			
Lead (mm)	4		
BCD(mm)	14.65		
Thread minor diameter (mm)	12.2		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	1 turn × 3 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	4.2	4.2	4.2
Basic static load rating C0a(kN)	7.6	7.6	7.6
Preload torque (N-m)	9.8×10^{-3} to 6.9×10^{-2}	—	—
Spacer ball	None	None	None
Rigidity value(N/μm)	190		
Circulation method	Deflector		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.025	0.01	0.008	0.009	±0.01	0.008	0.13	0.8
	0.03	0.012	0.01	0.012	±0.02	0.018	0.13	0.8
	0.045	0.02	0.014	0.014	Travel distance: ±0.05/300		0.13	0.8
	0.025	0.01	0.008	0.009	±0.01	0.008	0.13	0.8
	0.03	0.012	0.01	0.012	±0.02	0.018	0.13	0.8
	0.045	0.02	0.014	0.014	Travel distance: ±0.05/300		0.13	0.8
	0.03	0.01	0.008	0.009	±0.012	0.008	0.13	0.8
	0.04	0.012	0.01	0.012	±0.023	0.018	0.13	0.8
	0.055	0.02	0.014	0.014	Travel distance: ±0.05/300		0.13	0.8
	0.04	0.01	0.008	0.009	±0.013	0.01	0.13	0.8
	0.05	0.012	0.01	0.012	±0.025	0.02	0.13	0.8
	0.06	0.02	0.014	0.014	Travel distance: ±0.05/300		0.13	0.8
	0.045	0.01	0.008	0.009	±0.015	0.01	0.13	0.8
	0.055	0.012	0.01	0.012	±0.027	0.02	0.13	0.8
	0.075	0.02	0.014	0.014	Travel distance: ±0.05/300		0.13	0.8

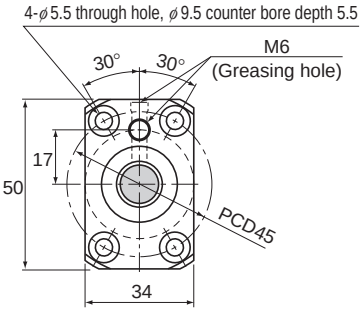
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1408-2.5 Shaft diameter: 14; lead: 8



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1408-2.5RRG0+321LC5Y	150	239	254	321
BNK 1408-2.5RRG2+321LC7Y				
BNK 1408-2.5RRG0+371LC5Y	200	289	304	371
BNK 1408-2.5RRG2+371LC7Y				
BNK 1408-2.5RRG0+421LC5Y	250	339	354	421
BNK 1408-2.5RRG2+421LC7Y				
BNK 1408-2.5RRG0+471LC5Y	300	389	404	471
BNK 1408-2.5RRG2+471LC7Y				
BNK 1408-2.5RRG0+521LC5Y	350	439	454	521
BNK 1408-2.5RRG2+521LC7Y				
BNK 1408-2.5RRG0+571LC5Y	400	489	504	571
BNK 1408-2.5RRG2+571LC7Y				
BNK 1408-2.5RRG0+621LC5Y	450	539	554	621
BNK 1408-2.5RRG2+621LC7Y				
BNK 1408-2.5RRG0+671LC5Y	500	589	604	671
BNK 1408-2.5RRG2+671LC7Y				
BNK 1408-2.5RRG0+721LC5Y	550	639	654	721
BNK 1408-2.5RRG2+721LC7Y				
BNK 1408-2.5RRG0+771LC5Y	600	689	704	771
BNK 1408-2.5RRG2+771LC7Y				
BNK 1408-2.5RRG0+871LC5Y	700	789	804	871
BNK 1408-2.5RRG2+871LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.
Plug the unused oil hole before using the product.



X-X arrow view

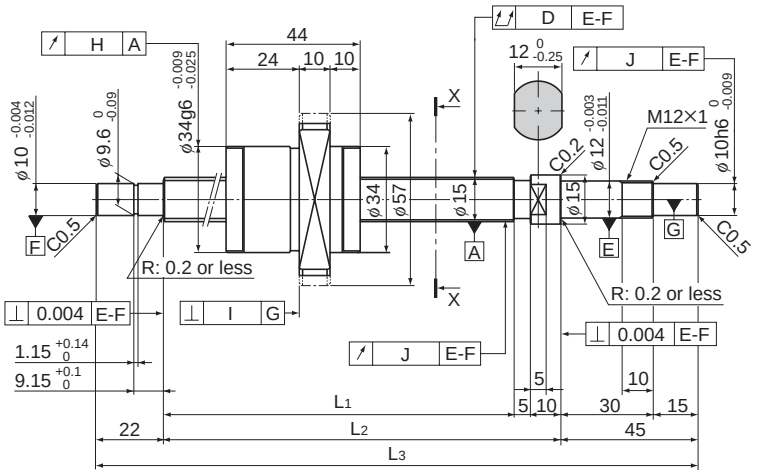
Ball Screw Specifications			
Lead (mm)	8		
BCD(mm)	14.75		
Thread minor diameter (mm)	11.2		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	2.5 turns × 1 row		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	4.3	6.9	6.9
Basic static load rating C0a(kN)	5.8	11.5	11.5
Preload torque (N-m)	2×10^{-2} to 7.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	80	150	
Circulation method	Return pipe		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.035	0.015	0.011	0.012	±0.023	0.018	0.29	0.84
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.035	0.015	0.011	0.012	±0.023	0.018	0.29	0.84
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.04	0.015	0.011	0.012	±0.025	0.02	0.29	0.84
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.04	0.015	0.011	0.012	±0.025	0.02	0.29	0.84
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.05	0.015	0.011	0.012	±0.027	0.02	0.29	0.84
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.05	0.015	0.011	0.012	±0.027	0.02	0.29	0.84
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.05	0.015	0.011	0.012	±0.03	0.023	0.29	0.84
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.065	0.015	0.011	0.012	±0.03	0.023	0.29	0.84
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.065	0.015	0.011	0.012	±0.035	0.025	0.29	0.84
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.065	0.015	0.011	0.012	±0.035	0.025	0.29	0.84
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84
	0.085	0.015	0.011	0.012	±0.035	0.025	0.29	0.84
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.29	0.84

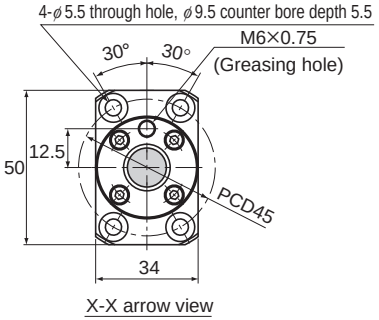
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1510-5.6 Shaft diameter: 15; lead: 10



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1510-5.6G0+321LC5Y	150	239	254	321
BNK 1510-5.6G2+321LC7Y				
BNK 1510-5.6G0+371LC5Y	200	289	304	371
BNK 1510-5.6G2+371LC7Y				
BNK 1510-5.6G0+421LC5Y	250	339	354	421
BNK 1510-5.6G2+421LC7Y				
BNK 1510-5.6G0+471LC5Y	300	389	404	471
BNK 1510-5.6G2+471LC7Y				
BNK 1510-5.6G0+521LC5Y	350	439	454	521
BNK 1510-5.6G2+521LC7Y				
BNK 1510-5.6G0+571LC5Y	400	489	504	571
BNK 1510-5.6G2+571LC7Y				
BNK 1510-5.6G0+621LC5Y	450	539	554	621
BNK 1510-5.6G2+621LC7Y				
BNK 1510-5.6G0+671LC5Y	500	589	604	671
BNK 1510-5.6G2+671LC7Y				
BNK 1510-5.6G0+721LC5Y	550	639	654	721
BNK 1510-5.6G2+721LC7Y				
BNK 1510-5.6G0+771LC5Y	600	689	704	771
BNK 1510-5.6G2+771LC7Y				
BNK 1510-5.6G0+871LC5Y	700	789	804	871
BNK 1510-5.6G2+871LC7Y				
BNK 1510-5.6G0+971LC5Y	800	889	904	971
BNK 1510-5.6G2+971LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



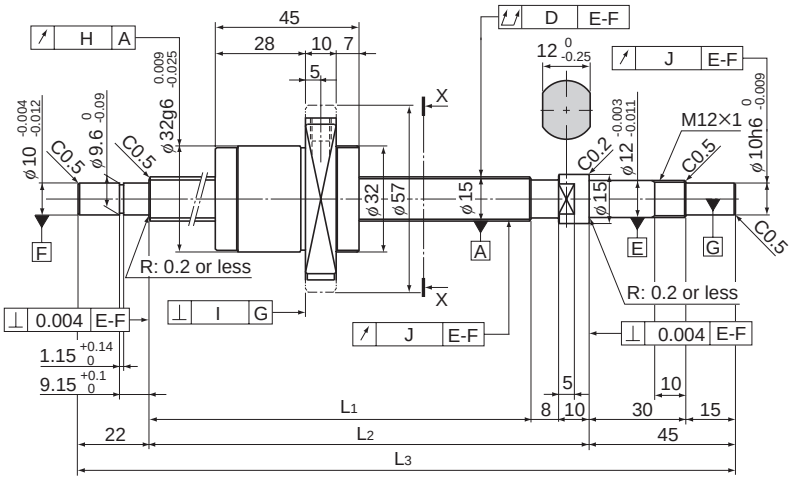
Ball Screw Specifications			
Lead (mm)	10		
BCD(mm)	15.75		
Thread minor diameter (mm)	12.5		
Threading direction, No. of threaded grooves	Rightward, 2		
No. of circuits	2.8 turns × 2 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	9	14.3	14.3
Basic static load rating C0a(kN)	13.9	27.9	27.9
Preload torque (N-m)	2×10^{-2} to 9.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	190	350	
Circulation method	End cap		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.035	0.015	0.011	0.012	±0.023	0.018	0.22	0.76
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.035	0.015	0.011	0.012	±0.023	0.018	0.22	0.76
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.04	0.015	0.011	0.012	±0.025	0.02	0.22	0.76
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.04	0.015	0.011	0.012	±0.025	0.02	0.22	0.76
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.05	0.015	0.011	0.012	±0.027	0.02	0.22	0.76
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.05	0.015	0.011	0.012	±0.027	0.02	0.22	0.76
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.05	0.015	0.011	0.012	±0.03	0.023	0.22	0.76
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.065	0.015	0.011	0.012	±0.03	0.023	0.22	0.76
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.065	0.015	0.011	0.012	±0.035	0.025	0.22	0.76
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.065	0.015	0.011	0.012	±0.035	0.025	0.22	0.76
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.085	0.015	0.011	0.012	±0.035	0.025	0.22	0.76
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76
	0.085	0.015	0.011	0.012	±0.04	0.027	0.22	0.76
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.22	0.76

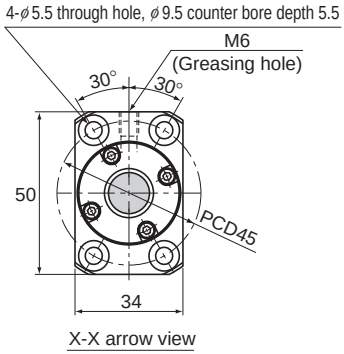
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1520-3 Shaft diameter: 15; lead: 20



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1520-3G0+321LC5Y	150	236	254	321
BNK 1520-3G2+321LC7Y				
BNK 1520-3G0+371LC5Y	200	286	304	371
BNK 1520-3G2+371LC7Y				
BNK 1520-3G0+421LC5Y	250	336	354	421
BNK 1520-3G2+421LC7Y				
BNK 1520-3G0+471LC5Y	300	386	404	471
BNK 1520-3G2+471LC7Y				
BNK 1520-3G0+521LC5Y	350	436	454	521
BNK 1520-3G2+521LC7Y				
BNK 1520-3G0+571LC5Y	400	486	504	571
BNK 1520-3G2+571LC7Y				
BNK 1520-3G0+621LC5Y	450	536	554	621
BNK 1520-3G2+621LC7Y				
BNK 1520-3G0+671LC5Y	500	586	604	671
BNK 1520-3G2+671LC7Y				
BNK 1520-3G0+721LC5Y	550	636	654	721
BNK 1520-3G2+721LC7Y				
BNK 1520-3G0+771LC5Y	600	686	704	771
BNK 1520-3G2+771LC7Y				
BNK 1520-3G0+871LC5Y	700	786	804	871
BNK 1520-3G2+871LC7Y				
BNK 1520-3G0+971LC5Y	800	886	904	971
BNK 1520-3G2+971LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



X-X arrow view

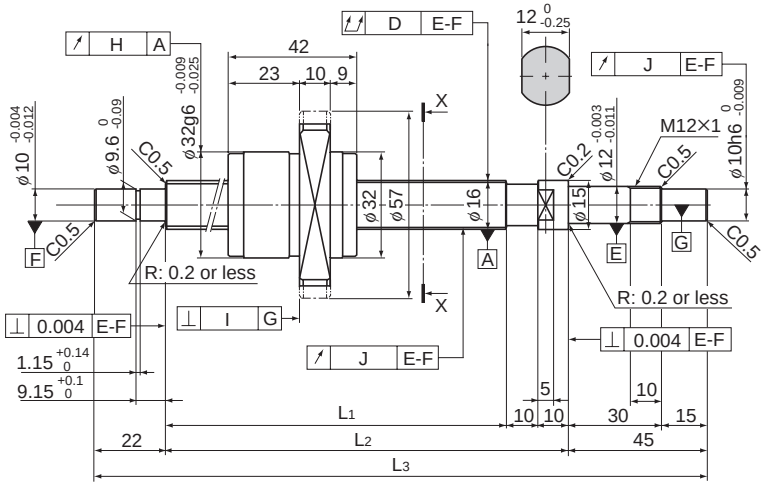
Ball Screw Specifications			
Lead (mm)	20		
BCD(mm)	15.75		
Thread minor diameter (mm)	12.5		
Threading direction, No. of threaded grooves	Rightward, 2		
No. of circuits	1.5 turns × 2 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	5.1	8	8
Basic static load rating C0a(kN)	7.9	15.8	15.8
Preload torque (N-m)	2×10^{-2} to 8.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	110	200	
Circulation method	End cap		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.035	0.015	0.011	0.012	±0.023	0.018	0.32	1.05
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.035	0.015	0.011	0.012	±0.023	0.018	0.32	1.05
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.04	0.015	0.011	0.012	±0.025	0.02	0.32	1.05
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.04	0.015	0.011	0.012	±0.025	0.02	0.32	1.05
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.05	0.015	0.011	0.012	±0.027	0.02	0.32	1.05
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.05	0.015	0.011	0.012	±0.027	0.02	0.32	1.05
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.05	0.015	0.011	0.012	±0.03	0.023	0.32	1.05
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.065	0.015	0.011	0.012	±0.03	0.023	0.32	1.05
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.065	0.015	0.011	0.012	±0.035	0.025	0.32	1.05
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.065	0.015	0.011	0.012	±0.035	0.025	0.32	1.05
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.085	0.015	0.011	0.012	±0.035	0.025	0.32	1.05
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05
	0.085	0.015	0.011	0.012	±0.04	0.027	0.32	1.05
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.32	1.05

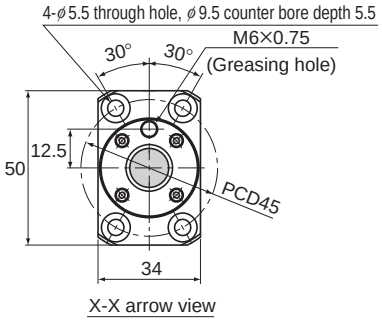
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK1616-3.6 Shaft diameter: 16; lead: 16



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 1616-3.6G0+321LC5Y	150	234	254	321
BNK 1616-3.6G2+321LC7Y				
BNK 1616-3.6G0+371LC5Y	200	284	304	371
BNK 1616-3.6G2+371LC7Y				
BNK 1616-3.6G0+421LC5Y	250	334	354	421
BNK 1616-3.6G2+421LC7Y				
BNK 1616-3.6G0+471LC5Y	300	384	404	471
BNK 1616-3.6G2+471LC7Y				
BNK 1616-3.6G0+521LC5Y	350	434	454	521
BNK 1616-3.6G2+521LC7Y				
BNK 1616-3.6G0+571LC5Y	400	484	504	571
BNK 1616-3.6G2+571LC7Y				
BNK 1616-3.6G0+621LC5Y	450	534	554	621
BNK 1616-3.6G2+621LC7Y				
BNK 1616-3.6G0+671LC5Y	500	584	604	671
BNK 1616-3.6G2+671LC7Y				
BNK 1616-3.6G0+721LC5Y	550	634	654	721
BNK 1616-3.6G2+721LC7Y				
BNK 1616-3.6G0+771LC5Y	600	684	704	771
BNK 1616-3.6G2+771LC7Y				
BNK 1616-3.6G0+871LC5Y	700	784	804	871
BNK 1616-3.6G2+871LC7Y				
BNK 1616-3.6G0+971LC5Y	800	884	904	971
BNK 1616-3.6G2+971LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



X-X arrow view

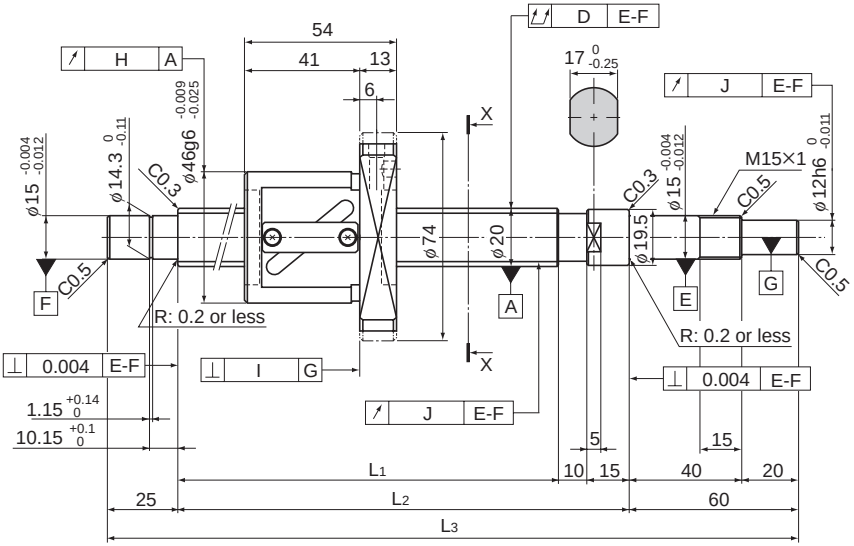
Ball Screw Specifications			
Lead (mm)	16		
BCD(mm)	16.65		
Thread minor diameter (mm)	13.7		
Threading direction, No. of threaded grooves	Rightward, 2		
No. of circuits	1.8 turns × 2 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	4.4	7.1	7.1
Basic static load rating C0a(kN)	7.2	14.3	14.3
Preload torque (N-m)	2×10^{-2} to 9.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	120	230	
Circulation method	End cap		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.035	0.015	0.011	0.012	±0.023	0.018	0.2	1.25
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.035	0.015	0.011	0.012	±0.023	0.018	0.2	1.25
	0.055	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.04	0.015	0.011	0.012	±0.025	0.02	0.2	1.25
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.04	0.015	0.011	0.012	±0.025	0.02	0.2	1.25
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.05	0.015	0.011	0.012	±0.027	0.02	0.2	1.25
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.05	0.015	0.011	0.012	±0.027	0.02	0.2	1.25
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.05	0.015	0.011	0.012	±0.03	0.023	0.2	1.25
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.065	0.015	0.011	0.012	±0.03	0.023	0.2	1.25
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.065	0.015	0.011	0.012	±0.035	0.025	0.2	1.25
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.065	0.015	0.011	0.012	±0.035	0.025	0.2	1.25
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.085	0.015	0.011	0.012	±0.035	0.025	0.2	1.25
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25
	0.085	0.015	0.011	0.012	±0.04	0.027	0.2	1.25
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.2	1.25

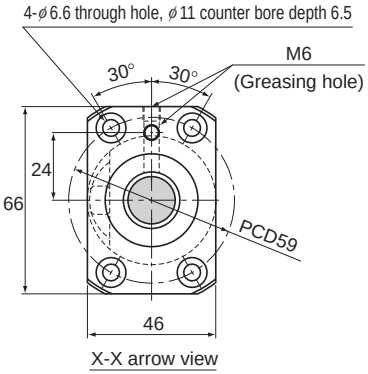
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK2010-2.5 Shaft diameter: 20; lead: 10



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 2010-2.5RRG0+499LC5Y	300	389	414	499
BNK 2010-2.5RRG2+499LC7Y				
BNK 2010-2.5RRG0+599LC5Y	400	489	514	599
BNK 2010-2.5RRG2+599LC7Y				
BNK 2010-2.5RRG0+699LC5Y	500	589	614	699
BNK 2010-2.5RRG2+699LC7Y				
BNK 2010-2.5RRG0+799LC5Y	600	689	714	799
BNK 2010-2.5RRG2+799LC7Y				
BNK 2010-2.5RRG0+899LC5Y	700	789	814	899
BNK 2010-2.5RRG2+899LC7Y				
BNK 2010-2.5RRG0+999LC5Y	800	889	914	999
BNK 2010-2.5RRG2+999LC7Y				
BNK 2010-2.5RRG0+1099LC5Y	900	989	1014	1099
BNK 2010-2.5RRG2+1099LC7Y				
BNK 2010-2.5RRG0+1199LC5Y	1000	1089	1114	1199
BNK 2010-2.5RRG2+1199LC7Y				
BNK 2010-2.5RRG0+1299LC5Y	1100	1189	1214	1299
BNK 2010-2.5RRG2+1299LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.
Plug the unused oil hole before using the product.



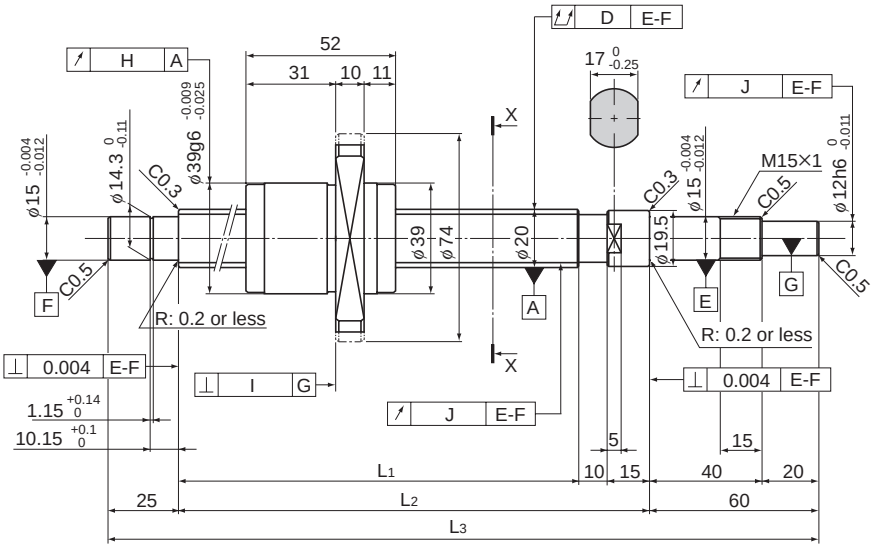
Ball Screw Specifications			
Lead (mm)	10		
BCD(mm)	21		
Thread minor diameter (mm)	16.4		
Threading direction, No. of threaded grooves	Rightward, 1		
No. of circuits	2.5 turns × 1 row		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	7	11.1	11.1
Basic static load rating C0a(kN)	11	22	22
Preload torque (N-m)	2×10^{-2} to 9.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	110	210	
Circulation method	Return pipe		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.04	0.015	0.011	0.012	±0.025	0.02	0.58	1.81
	0.06	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.05	0.015	0.011	0.012	±0.027	0.02	0.58	1.81
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.065	0.015	0.011	0.012	±0.03	0.023	0.58	1.81
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.065	0.015	0.011	0.012	±0.035	0.025	0.58	1.81
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.085	0.015	0.011	0.012	±0.035	0.025	0.58	1.81
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.085	0.015	0.011	0.012	±0.04	0.027	0.58	1.81
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.11	0.015	0.011	0.012	±0.04	0.027	0.58	1.81
	0.15	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.11	0.015	0.011	0.012	±0.046	0.03	0.58	1.81
	0.15	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81
	0.15	0.015	0.011	0.012	±0.046	0.03	0.58	1.81
	0.19	0.03	0.018	0.014	Travel distance: ±0.05/300		0.58	1.81

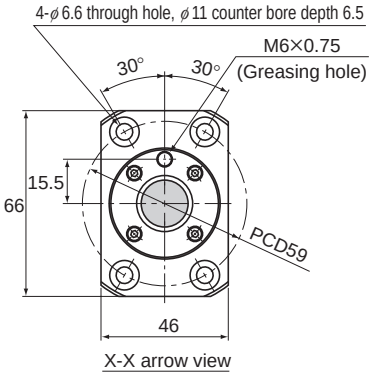
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK2020-3.6 Shaft diameter: 20; lead: 20



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 2020-3.6G0+520LC5Y	300	410	435	520
BNK 2020-3.6G2+520LC7Y				
BNK 2020-3.6G0+620LC5Y	400	510	535	620
BNK 2020-3.6G2+620LC7Y				
BNK 2020-3.6G0+720LC5Y	500	610	635	720
BNK 2020-3.6G2+720LC7Y				
BNK 2020-3.6G0+820LC5Y	600	710	735	820
BNK 2020-3.6G2+820LC7Y				
BNK 2020-3.6G0+920LC5Y	700	810	835	920
BNK 2020-3.6G2+920LC7Y				
BNK 2020-3.6G0+1020LC5Y	800	910	935	1020
BNK 2020-3.6G2+1020LC7Y				
BNK 2020-3.6G0+1120LC5Y	900	1010	1035	1120
BNK 2020-3.6G2+1120LC7Y				
BNK 2020-3.6G0+1220LC5Y	1000	1110	1135	1220
BNK 2020-3.6G2+1220LC7Y				
BNK 2020-3.6G0+1320LC5Y	1100	1210	1235	1320
BNK 2020-3.6G2+1320LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



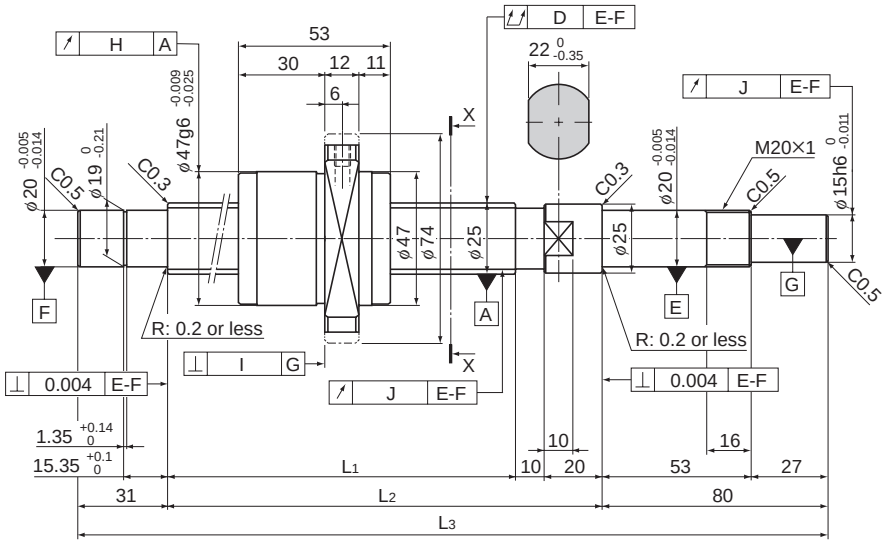
Ball Screw Specifications			
Lead (mm)	20		
BCD(mm)	20.75		
Thread minor diameter (mm)	17.5		
Threading direction, No. of threaded grooves	Rightward, 2		
No. of circuits	1.8 turns × 2 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	7	11.1	11.1
Basic static load rating C0a(kN)	12.3	24.7	24.7
Preload torque (N-m)	2×10^{-2} to 9.8×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	160	290	
Circulation method	End cap		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.05	0.015	0.011	0.012	±0.027	0.02	0.39	2.04
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.05	0.015	0.011	0.012	±0.03	0.023	0.39	2.04
	0.075	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.065	0.015	0.011	0.012	±0.03	0.023	0.39	2.04
	0.09	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.085	0.015	0.011	0.012	±0.035	0.025	0.39	2.04
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.085	0.015	0.011	0.012	±0.04	0.027	0.39	2.04
	0.12	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.11	0.015	0.011	0.012	±0.04	0.027	0.39	2.04
	0.15	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.11	0.015	0.011	0.012	±0.046	0.03	0.39	2.04
	0.15	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.11	0.015	0.011	0.012	±0.046	0.03	0.39	2.04
	0.15	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04
	0.15	0.015	0.011	0.012	±0.046	0.03	0.39	2.04
	0.19	0.03	0.018	0.014	Travel distance: ±0.05/300		0.39	2.04

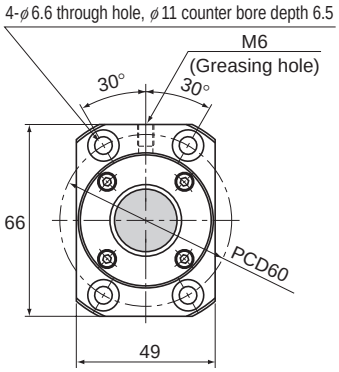
Description of Each Option⇒A-815 Dimensions⇒B-777

BNK2520-3.6 Shaft diameter: 25; lead: 20



Model No.	Stroke	Screw shaft length		
		L_1	L_2	L_3
BNK 2520-3.6G0+751LC5Y	500	610	640	751
BNK 2520-3.6G2+751LC7Y				
BNK 2520-3.6G0+851LC5Y	600	710	740	851
BNK 2520-3.6G2+851LC7Y				
BNK 2520-3.6G0+1051LC5Y	800	910	940	1051
BNK 2520-3.6G2+1051LC7Y				
BNK 2520-3.6G0+1251LC5Y	1000	1110	1140	1251
BNK 2520-3.6G2+1251LC7Y				
BNK 2520-3.6G0+1451LC5Y	1200	1310	1340	1451
BNK 2520-3.6G2+1451LC7Y				
BNK 2520-3.6G0+1651LC5Y	1400	1510	1540	1651
BNK 2520-3.6G2+1651LC7Y				
BNK 2520-3.6G0+1851LC5Y	1600	1710	1740	1851
BNK 2520-3.6G2+1851LC7Y				

Note) For accuracy grade C5, clearance GT is also standardized.



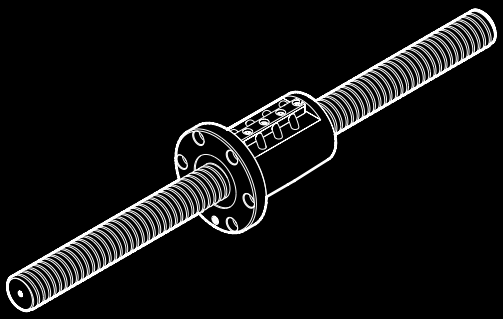
X-X arrow view

Ball Screw Specifications			
Lead (mm)	20		
BCD(mm)	26		
Thread minor diameter (mm)	21.9		
Threading direction, No. of threaded grooves	Rightward, 2		
No. of circuits	1.8 turns × 2 rows		
Clearance symbol	G0	GT	G2
Axial clearance (mm)	0	0.005 or less	0.02 or less
Basic dynamic load rating Ca (kN)	10.5	16.7	16.7
Basic static load rating C0a(kN)	19	38	38
Preload torque (N-m)	4.9×10^{-2} to 2.2×10^{-2}	—	—
Spacer ball	1 : 1	None	None
Rigidity value(N/μm)	190	360	
Circulation method	End cap		

Unit: mm

	Runout of the screw shaft axis	Runout of the nut circumference	Flange perpendicularity	Runout of the thread groove surface	Lead angle accuracy		Nut mass	Shaft mass
					Representative travel distance error	Fluctuation		
	D	H	I	J			kg	kg/m
	0.055	0.015	0.011	0.013	±0.03	0.023	0.53	3.03
	0.07	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.065	0.015	0.011	0.013	±0.035	0.025	0.53	3.03
	0.085	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.085	0.015	0.011	0.013	±0.04	0.027	0.53	3.03
	0.1	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.11	0.015	0.011	0.013	±0.046	0.03	0.53	3.03
	0.13	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.11	0.015	0.011	0.013	±0.054	0.035	0.53	3.03
	0.13	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.14	0.015	0.011	0.013	±0.054	0.035	0.53	3.03
	0.17	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03
	0.14	0.015	0.011	0.013	±0.065	0.04	0.53	3.03
	0.17	0.03	0.018	0.02	Travel distance: ±0.05/300		0.53	3.03

Description of Each Option⇒A-815 Dimensions⇒B-777



Precision Ball Screw Models BIF, DIK, BNFN, DKN, BLW, BNF, DK, MDK, BLK/WGF and BNT

Ball Screw

B Product Specifications

Options

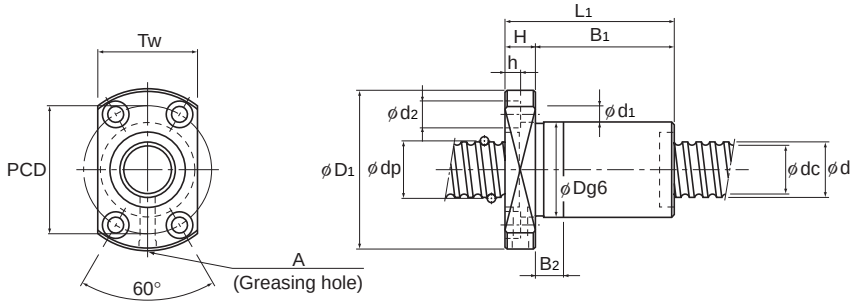
A Technical Descriptions of the Products (Separate)

Technical Descriptions

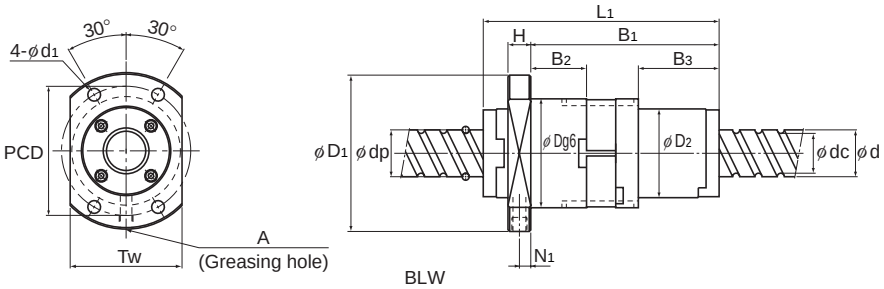
* Please see the separate "A Technical Descriptions of the Products".

Preload Type of Precision Ball Screw

Screw shaft outer diameter	14 to 18
Lead	4 to 16



DIK (1404 to 2510)



BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
14	4	DIK 1404-4	14.5	11.8	2×1	3	5.1	190	26	45	—
		DIK 1404-6	14.5	11.8	3×1	4.2	7.7	280	26	45	—
15	10	BLW 1510-5.6	15.75	12.5	2×2.8	14.3	27.8	680	43	64	34
16	4	BNFN 1604-3	16.5	13.8	2×1.5	5.1	10.5	350	36	59	—
	5	BIF 1605-5	16.75	13.2	1×2.5	7.4	13.9	330	40	60	—
		DIK 1605-6	16.75	13.2	3×1	7.4	13	310	30	49	—
		BNFN 1605-2.5	16.75	13.2	1×2.5	7.4	13.9	330	40	60	—
		BNFN 1605-3	16.75	13.2	2×1.5	8.7	16.8	390	40	60	—
		BNFN 1605-5	16.75	13.2	2×2.5	13.5	27.8	640	40	60	—
	6	BIF 1606-5	16.8	13.2	1×2.5	7.5	14	330	40	60	—
	10	BNFN 1610-1.5	16.8	13.2	1×1.5	4.8	8.5	210	40	63	—
	16	BLW 1616-3.6	16.65	13.7	2×1.8	7.1	14.3	440	41	60	32
18	10	BIF 1810-3	18.8	15.5	1×1.5	5.1	9.6	230	42	65	—
		BNFN 1810-2.5	18.8	15.5	1×2.5	7.8	15.9	360	42	65	—
		BNFN 1810-3	18.8	15.5	2×1.5	9.2	19.1	430	42	65	—

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model BLW cannot be attached with seal.

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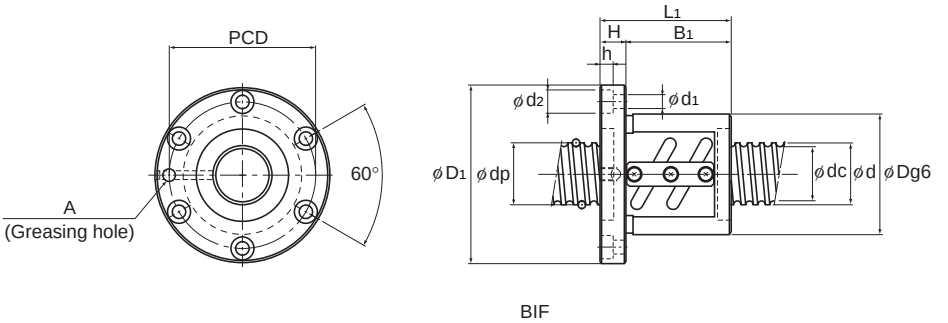
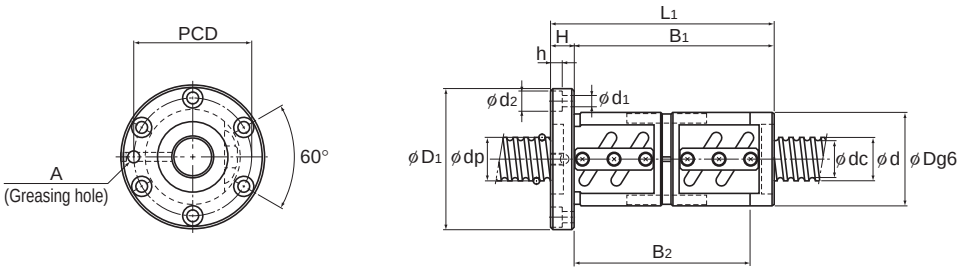


BIF



BNFN

Unit: mm

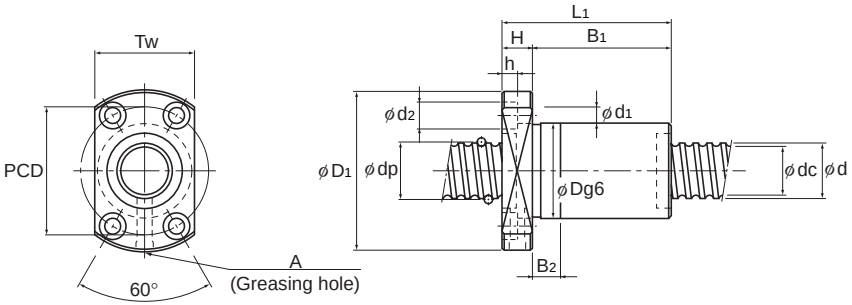
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length											Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	48	10	38	10	—	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.2	1.0
	60	10	50	10	—	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.23	1.0
	89	10	69	18.7	28.6	52	5.5	—	—	46	5	M6	3.9×10^{-4}	0.81	1.07
	85	11	74	—	—	47	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.67	1.35
	56	10	46	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.56	1.25
	60	10	50	10	—	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.3	1.25
	76	10	66	55	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.66	1.25
	96	10	86	75	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.81	1.25
	106	10	96	85	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.88	1.25
	62	10	52	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.56	1.3
	72	11	61	—	—	51	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.67	1.41
	84.5	10	65.5	18.1	27.1	49	4.5	—	—	44	6	M6	5.05×10^{-4}	0.67	1.42
	75	12	63	—	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.75	1.81
	119	12	107	94	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	1.09	1.81
	135	12	123	110	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	1.21	1.81

For model number coding, see B-718.

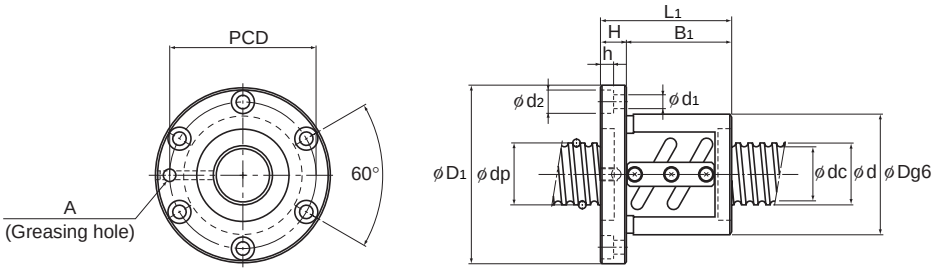
Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

Screw shaft outer diameter	20
Lead	4 to 5



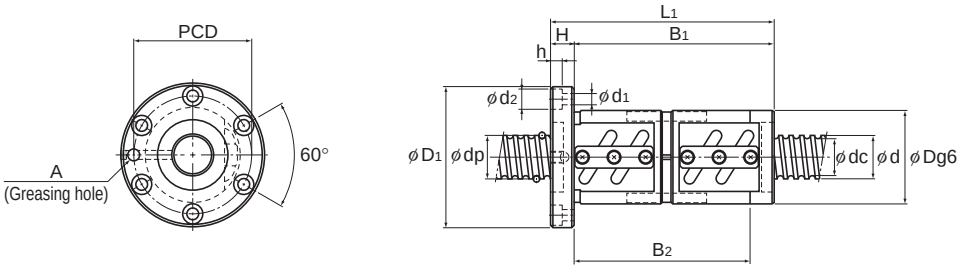
DIK (1404 to 2510)



BIF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
20	4	BIF 2004-5	20.5	17.8	1×2.5	4.8	10.9	360
		DIK 2004-6	20.5	17.8	3×1	5.2	11.6	380
		DIK 2004-8	20.5	17.8	4×1	6.6	15.5	510
		BNFN 2004-2.5	20.5	17.8	1×2.5	4.8	10.9	360
		BNFN 2004-5	20.5	17.8	2×2.5	8.6	21.8	700
	5	BIF 2005-5	20.75	17.2	1×2.5	8.3	17.4	390
		DIK 2005-6	20.75	17.2	3×1	8.5	17.3	310
		BNFN 2005-2.5	20.75	17.2	1×2.5	8.3	17.4	390
		BNFN 2005-3	20.75	17.2	2×1.5	9.7	21	470
		BNFN 2005-3.5	20.75	17.2	1×3.5	11.1	24.5	550
		BNFN 2005-5	20.75	17.2	2×2.5	15.1	35	760

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

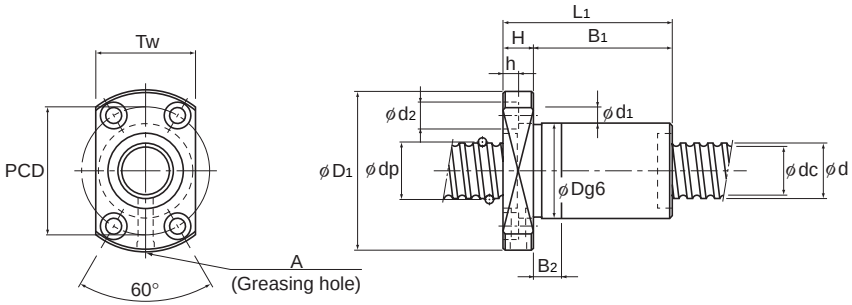
Unit: mm

	Nut dimensions										Screw shaft inertia moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	$kg \cdot cm^2/mm$	kg	kg/m
	40	63	53	11	42	—	51	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.49	2.18
	32	56	62	11	51	15	44	5.5×9.5×5.5	35	M6	1.23×10^{-3}	0.34	2.18
	32	56	70	11	59	15	44	5.5×9.5×5.5	35	M6	1.23×10^{-3}	0.37	2.18
	40	63	69	11	58	—	51	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.58	2.18
	40	63	93	11	82	—	51	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.74	2.18
	44	67	56	11	45	—	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.57	2.06
	34	58	61	11	50	10	46	5.5×9.5×5.5	36	M6	1.23×10^{-3}	0.38	2.06
	44	67	76	11	65	53	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.77	2.06
	44	67	97	11	86	74	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.93	2.06
	44	67	85	11	74	62	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.86	2.06
	44	67	106	11	95	83	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.98	2.06

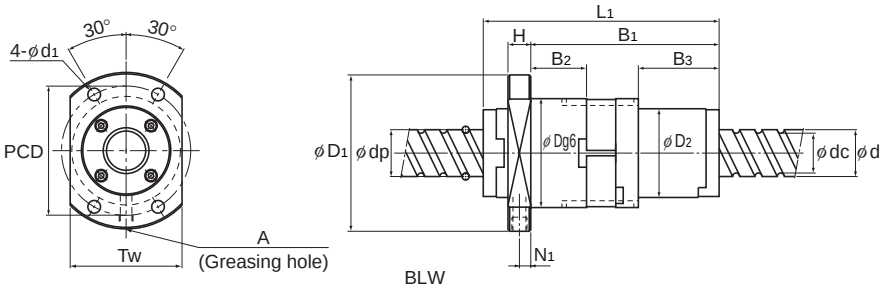
For model number coding, see B-718.

Preload Type of Precision Ball Screw

Screw shaft outer diameter	20
Lead	6 to 20



DIK (1404 to 2510)



BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1	D2
20	6	BIF 2006-3	20.75	17.2	1×1.5	5.4	10.5	250	48	71	—
		BIF 2006-5	20.75	17.2	1×2.5	8.3	17.5	390	48	71	—
		DIK 2006-6	21	16.4	3×1	11.4	21.5	410	35	58	—
		BNFN 2006-2.5	20.75	17.2	1×2.5	8.3	17.5	390	48	71	—
		BNFN 2006-3	20.75	17.2	2×1.5	9.7	21	470	48	71	—
		BNFN 2006-3.5	20.75	17.2	1×3.5	11.1	24.5	550	48	71	—
		BNFN 2006-5	20.75	17.2	2×2.5	15.1	35	760	48	71	—
	8	DIK 2008-4	21	16.4	2×1	8.1	14.4	280	35	58	—
		BNFN 2008-2.5	21	16.4	1×2.5	15.1	35	760	46	74	—
	10	BNFN 2010A-1.5	21	16.4	1×1.5	7.2	13.2	250	46	74	—
	12	BNFN 2012-1.5	21	16.4	1×1.5	7.1	12.5	250	48	71	—
	20	BLW 2020-3.6	20.75	17.5	2×1.8	11.1	24.7	570	48	69	39

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model BLW cannot be attached with seal.

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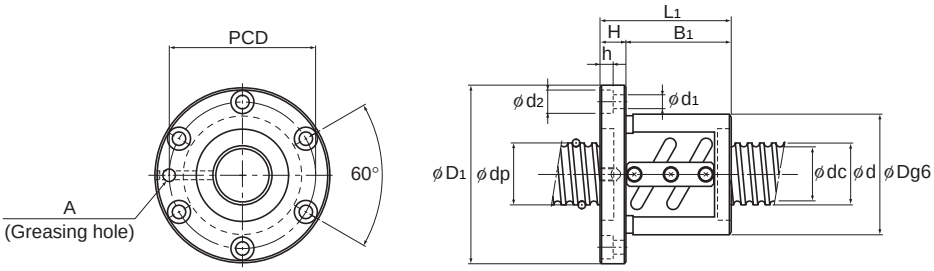
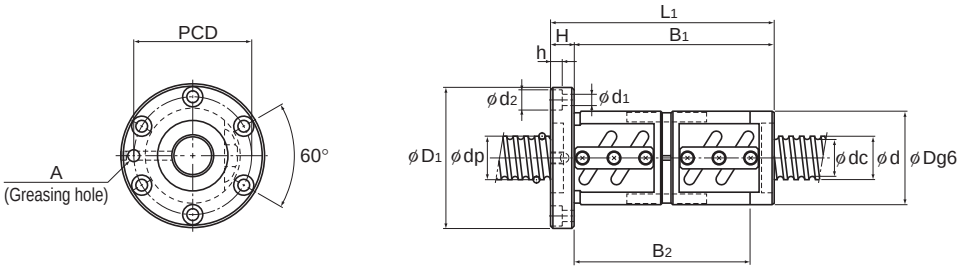


BIF



BNFN

Unit: mm

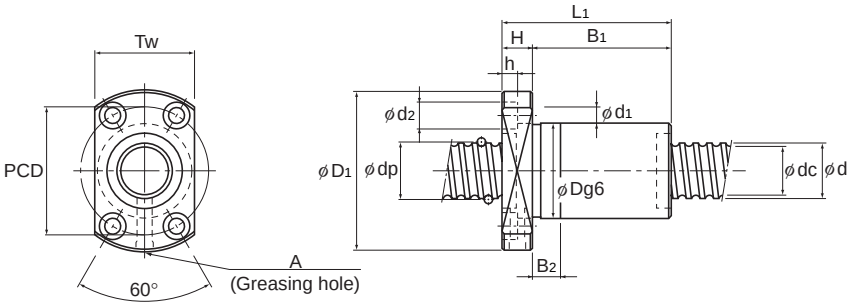
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	$kg \cdot cm^2/mm$	kg	kg/m
	56	11	45	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.74	2.13
	62	11	51	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.8	2.13
	76	11	65	15	—	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.48	1.93
	86	11	75	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.05	2.13
	110	11	99	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.3	2.13
	98	11	87	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.17	2.13
	122	11	111	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.42	2.13
	69	11	58	15	—	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.45	2.06
	100	15	85	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.08	2.06
	98	15	83	67	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.06	2.14
	100	18	82	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.3	2.19
	105	10	84	25	36	57	5.5	—	—	50	5	M6	1.23×10^{-3}	0.54	2.25

For model number coding, see B-718.

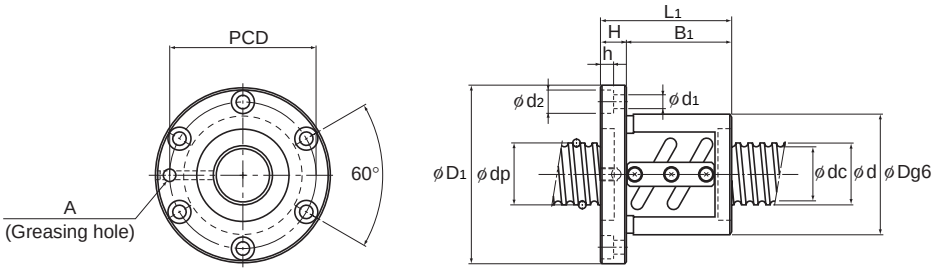
Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

Screw shaft outer diameter	25
Lead	4 to 6



DIK (1404 to 2510)



BIF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
25	4	DIK 2504-6	25.5	22.8	3×1	5.7	15	470
		DIK 2504-8	25.5	22.8	4×1	7.4	19.9	620
		○ BNFN 2504-2.5	25.5	22.8	1×2.5	5.2	13.7	420
		○ BNFN 2504-5	25.5	22.8	2×2.5	9.5	27.3	820
	5	DIK 2505-6	25.75	22.2	3×1	9.7	22.6	490
		○ BIF 2505-3	25.75	22.2	1×1.5	6	13.1	280
		○ BIF 2505-5	25.75	22.2	1×2.5	9.2	22	470
		○ BNFN 2505-2.5	25.75	22.2	1×2.5	9.2	22	470
		○ BNFN 2505-3	25.75	22.2	2×1.5	10.8	26.4	560
		○ BNFN 2505-3.5	25.75	22.2	1×3.5	12.3	30.7	650
		○ BNFN 2505-5	25.75	22.2	2×2.5	16.7	44	910
	6	DIK 2506-4	26	21.4	2×1	9.1	18	330
		DIK 2506-6	26	21.4	3×1	12.8	27	490

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.

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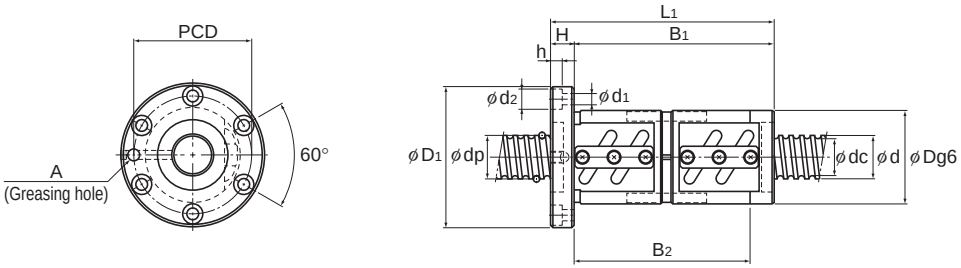


BNFN

Unit: mm

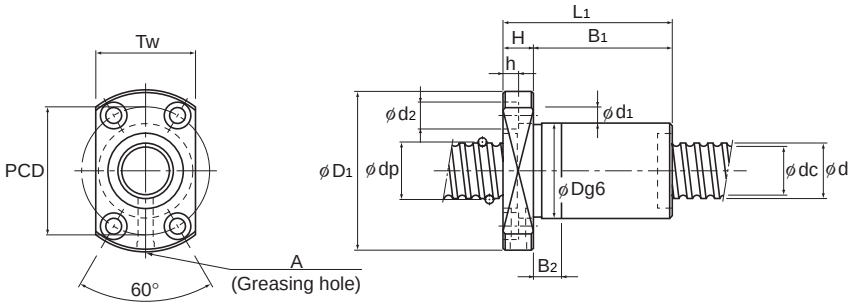
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	$kg \cdot cm^2/mm$	kg	kg/m
	38	63	63	11	52	15	51	5.5×9.5×5.5	39	M6	3.01×10^{-3}	0.43	3.5
	38	63	71	11	60	15	51	5.5×9.5×5.5	39	M6	3.01×10^{-3}	0.47	3.5
	46	69	68	11	57	—	57	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.69	3.5
	46	69	92	11	81	—	57	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.88	3.5
	40	63	61	11	50	10	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.47	3.35
	50	73	52	11	41	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.7	3.35
	50	73	55	11	44	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.75	3.35
	50	73	75	11	64	52	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.92	3.35
	50	73	102	11	91	79	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	1.19	3.35
	50	73	85	11	74	62	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	1.02	3.35
	50	73	105	11	94	82	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	1.22	3.35
	40	63	60	11	49	10	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.46	3.19
	40	63	72	11	61	15	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.54	3.19

For model number coding, see B-718.

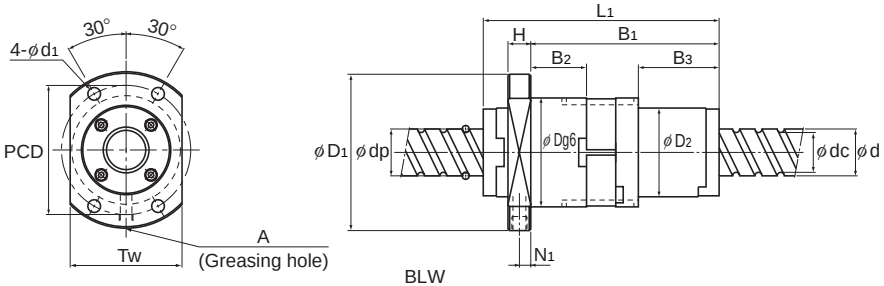
Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

Screw shaft outer diameter	25
Lead	6 to 25



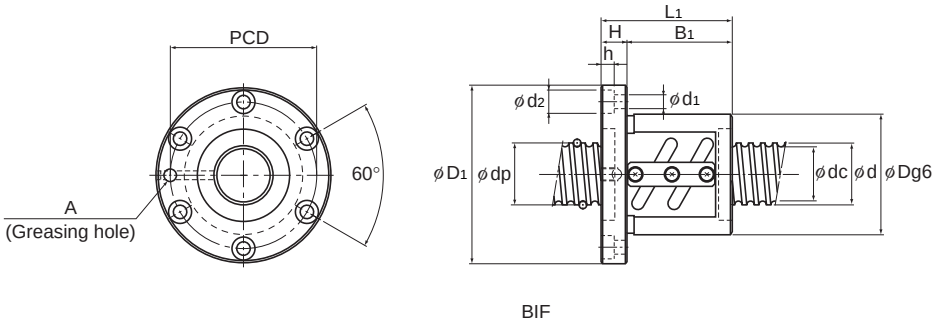
DIK (1404 to 2510)



BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1	D2
25	6	○ BNFN 2506-2.5	26	21.4	1×2.5	12.5	27.3	490	53	76	—
		○ BNFN 2506-3	26	21.4	2×1.5	14.6	32.8	580	53	76	—
		○ BNFN 2506-3.5	26	21.4	1×3.5	15.1	35.9	670	53	76	—
		○ BNFN 2506-5	26	21.4	2×2.5	22.5	54.8	940	53	76	—
	8	DIK 2508-4	26	21.4	2×1	9.2	18.8	340	40	63	—
		DIK 2508-6	26	21.4	3×1	13.1	28.1	500	40	63	—
		○ BIF 2508-5	26.25	20.5	1×2.5	15.8	32.8	500	58	85	—
		○ BNFN 2508-2.5	26.25	20.5	1×2.5	15.8	32.8	500	58	85	—
		○ BNFN 2508-3	26.25	20.5	2×1.5	18.5	39.4	600	58	85	—
		○ BNFN 2508-3.5	26.25	20.5	1×3.5	21.2	46	690	58	85	—
		○ BNFN 2508-5	26.25	20.5	2×2.5	28.7	65.8	970	58	85	—
	10	DIK 2510-4	26	21.6	2×1	9	18	330	40	63	—
		○ BIF 2510A-5	26.3	21.4	1×2.5	15.8	33	500	58	85	—
		○ BNFN 2510A-2.5	26.3	21.4	1×2.5	15.8	33	500	58	85	—
	12	○ BNFN 2512-2.5	26	21.9	1×2.5	12.3	27.6	490	53	76	—
	16	○ BNFN 2516-1.5	26	21.4	1×1.5	7.9	16.7	300	53	76	—
	25	BLW 2525-3.6	26	22	2×1.8	16.6	38.7	700	57	82	47

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778. Model BLW cannot be attached with seal.



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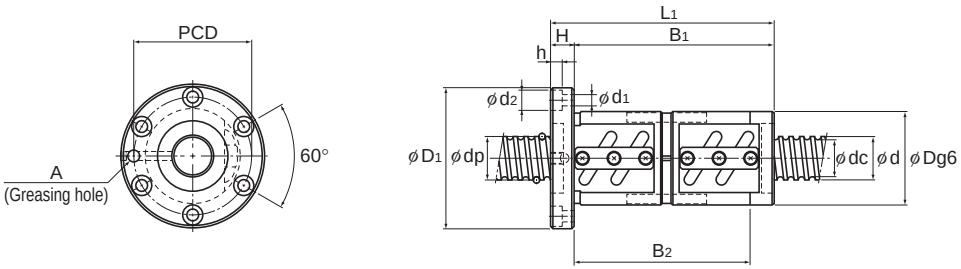


BNFN

Unit: mm

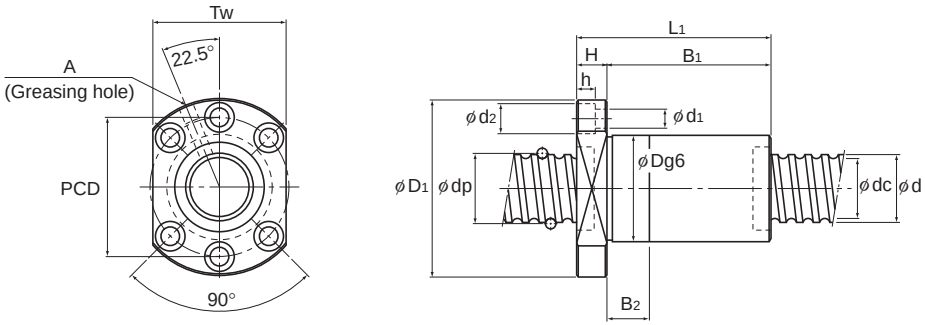
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length											Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	86	11	75	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.19	3.19
	110	11	99	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.47	3.19
	98	11	87	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.33	3.19
	122	11	111	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.61	3.19
	71	12	59	15	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.54	3.35
	94	12	82	25	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.68	3.35
	82	15	67	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.52	3.13
	106	15	91	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.89	3.13
	135	15	120	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	2.32	3.13
	122	15	107	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	2.12	3.13
	154	15	139	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	2.6	3.13
	85	15	70	20	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.65	3.45
	100	18	82	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.86	3.27
	120	18	102	83	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	2.16	3.27
	108	11	97	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.44	3.52
	108	11	97	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.44	3.6
	124.5	12	101.5	33	44	68	6.6	—	—	60	5	M6	3.01×10^{-3}	0.94	3.52

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

Screw shaft outer diameter	28
Lead	5 to 10



DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
28	5	BIF 2805-5	28.75	25.2	1×2.5	9.7	24.6	520
		BIF 2805-10	28.75	25.2	2×2.5	17.4	49.4	1000
		DIK 2805-6	28.75	25.2	3×1	10.5	26.4	560
		DIK 2805-8	28.75	25.2	4×1	13.4	35.2	730
		BNFN 2805-2.5	28.75	25.2	1×2.5	9.7	24.6	520
		BNFN 2805-3	28.75	25.2	2×1.5	11.3	29.5	620
		BNFN 2805-3.5	28.75	25.2	1×3.5	12.9	34.4	720
		BNFN 2805-5	28.75	25.2	2×2.5	17.5	49.4	1000
		BNFN 2805-7.5	28.75	25.2	3×2.5	24.8	73.8	1470
	6	BIF 2806-5	28.75	25.2	1×2.5	9.6	24.6	520
		BIF 2806-10	28.75	25.2	2×2.5	17.5	49.4	1000
		DIK 2806-6	29	24.4	3×1	14	32	530
		BNFN 2806-2.5	28.75	25.2	1×2.5	9.6	24.6	520
		BNFN 2806-3.5	28.75	25.2	1×3.5	12.9	34.5	710
		BNFN 2806-5	28.75	25.2	2×2.5	17.5	49.4	1000
		BNFN 2806-7.5	28.75	25.2	3×2.5	24.8	73.8	1470
	8	BNFN 2808-2.5	29.25	23.6	1×2.5	16.8	36.8	550
		BNFN 2808-3	29.25	23.6	2×1.5	19.6	44.2	660
		BNFN 2808-5	29.25	23.6	2×2.5	30.4	73.7	1060
	10	BIF 2810-3	29.75	22.4	1×1.5	15.7	29.4	350
		DIK 2810-4	29.25	23.6	2×1	12.3	25	380
		BNFN 2810-2.5	29.75	22.4	1×2.5	24	48.2	560

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.

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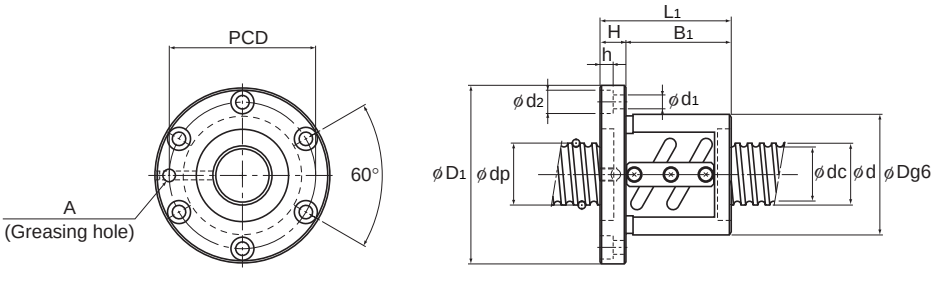

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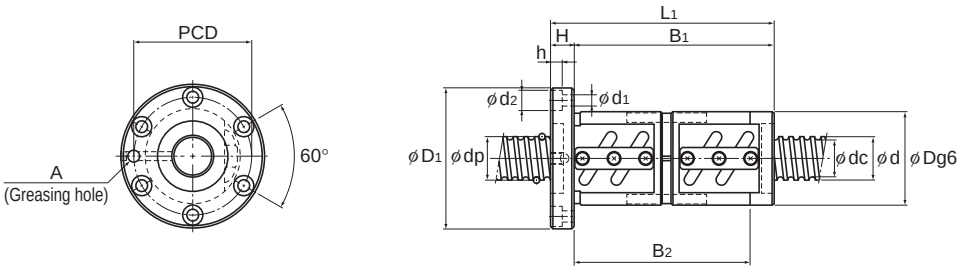


BNFN

Unit: mm

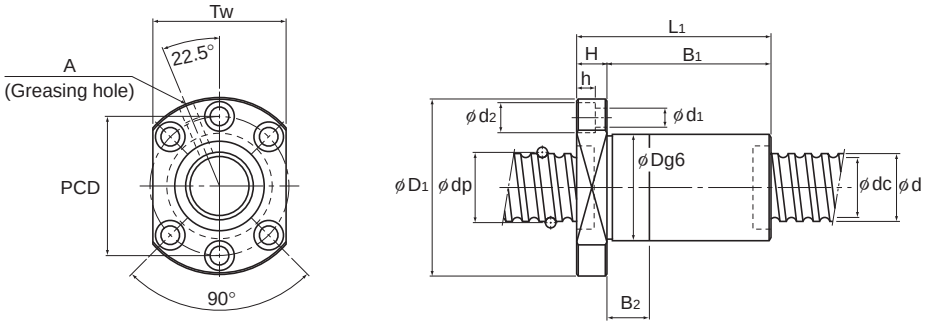
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
	55	85	59	12	47	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	0.98	4.27
	55	85	89	12	77	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.34	4.27
	43	71	69	12	57	15	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.61	4.27
	43	71	79	12	67	20	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.68	4.27
	55	85	74	12	62	49	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.16	4.27
	55	85	94	12	82	69	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.4	4.27
	55	85	84	12	72	59	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.28	4.27
	55	85	104	12	92	79	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.52	4.27
	55	85	134	12	122	109	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.88	4.27
	55	85	68	12	56	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.09	4.36
	55	85	104	12	92	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.52	4.36
	43	71	73	12	61	15	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.64	4.36
	55	85	86	12	74	61	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.3	4.36
	55	85	98	12	86	73	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.45	4.36
	55	85	122	12	110	97	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.73	4.36
	55	85	158	12	146	133	69	6.6×11×6.5	—	M6	4.74×10^{-3}	2.16	4.36
	60	104	116	18	98	—	82	11×17.5×11	—	M6	4.74×10^{-3}	2.47	4.02
	60	104	144	18	126	—	82	11×17.5×11	—	M6	4.74×10^{-3}	2.9	4.02
	60	104	164	18	146	—	82	11×17.5×11	—	M6	4.74×10^{-3}	3.2	4.02
	65	106	88	18	70	—	85	11×17.5×11	—	M6	4.74×10^{-3}	2.33	3.66
	45	71	84	15	69	20	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.82	4.18
	65	106	146	18	128	—	85	11×17.5×11	—	M6	4.74×10^{-3}	3.41	3.66

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

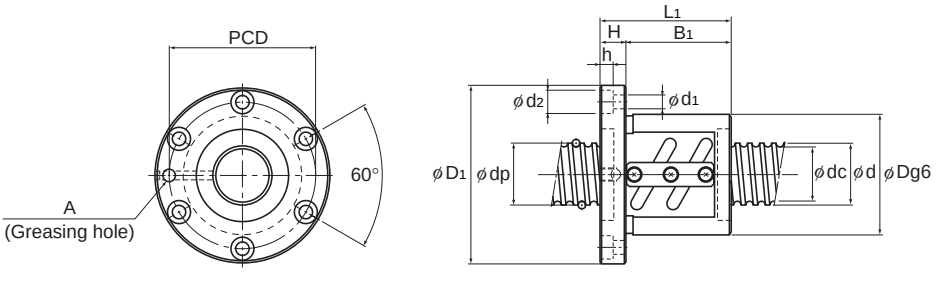
Screw shaft outer diameter	32
Lead	4 to 6



DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
32	4	BIF 3204-10	32.5	30.1	2×2.5	10.5	35.4	1010
		DIK 3204-6	32.5	30.1	3×1	6.4	19.6	580
		DIK 3204-8	32.5	30.1	4×1	8.2	26.1	760
		DIK 3204-10	32.5	30.1	5×1	10	32.7	940
	5	DIK 3205-6	32.75	29.2	3×1	11.1	30.2	620
		DIK 3205-8	32.75	29.2	4×1	14.2	40.3	810
		○ BIF 3205-5	32.75	29.2	1×2.5	10.2	28.1	570
		○ BIF 3205-10	32.75	29.2	2×2.5	18.5	56.4	1110
		○ BNFN 3205-2.5	32.75	29.2	1×2.5	10.2	28.1	570
		○ BNFN 3205-3	32.75	29.2	2×1.5	12	33.8	690
		○ BNFN 3205-4.5	32.75	29.2	3×1.5	17	50.7	1000
		○ BNFN 3205-5	32.75	29.2	2×2.5	18.5	56.4	1110
		○ BNFN 3205-7.5	32.75	29.2	3×2.5	26.3	84.5	1640
	6	DIK 3206-6	33	28.4	3×1	14.9	37.1	630
		DIK 3206-8	33	28.4	4×1	19.1	49.5	820
		○ BIF 3206-5	33	28.4	1×2.5	13.9	35.2	600
		○ BIF 3206-7	33	28.4	1×3.5	18.5	49.2	810
		○ BIF 3206-10	33	28.4	2×2.5	25.2	70.4	1150
		○ BNFN 3206-2.5	33	28.4	1×2.5	13.9	35.2	600
		○ BNFN 3206-3	33	28.4	2×1.5	16.3	42.2	710
		○ BNFN 3206-5	33	28.4	2×2.5	25.2	70.4	1150

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



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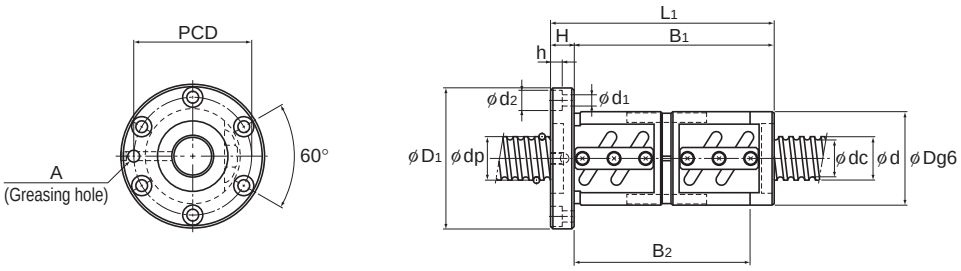


BNFN

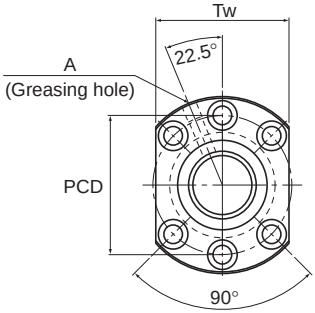
Unit: mm

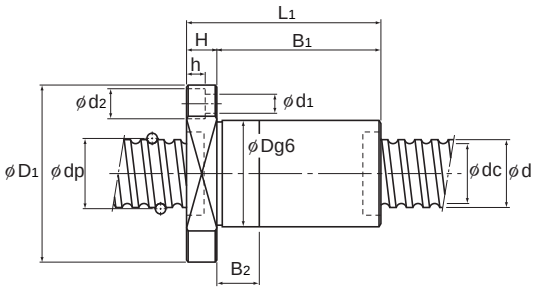
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
	54	81	76	11	65	—	67	6.6×11×6.5	—	M6	8.08×10^{-3}	0.97	5.86
	45	76	64	11	53	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.57	5.86
	45	76	72	11	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.62	5.86
	45	76	80	11	69	20	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.66	5.86
	46	76	62	12	50	10	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.60	5.67
	46	76	73	12	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.67	5.67
	58	85	56	12	44	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	0.94	5.67
	58	85	86	12	74	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.31	5.67
	58	85	76	12	64	51	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.19	5.67
	58	85	103	12	91	78	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.52	5.67
	58	85	123	12	111	98	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.77	5.67
	58	85	106	12	94	81	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.56	5.67
	58	85	136	12	124	111	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.93	5.67
	48	76	73	12	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.74	6.31
	48	76	87	12	75	20	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.85	6.31
	62	89	63	12	51	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.21	6.31
	62	89	75	12	63	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.39	6.31
	62	89	99	12	87	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.75	6.31
	62	89	87	12	75	62	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.57	6.31
	62	89	111	12	99	86	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.93	6.31
	62	89	123	12	111	98	75	6.6×11×6.5	—	M6	8.08×10^{-3}	2.11	6.31

For model number coding, see B-718.

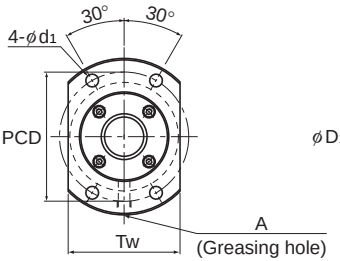
Preload Type of Precision Ball Screw

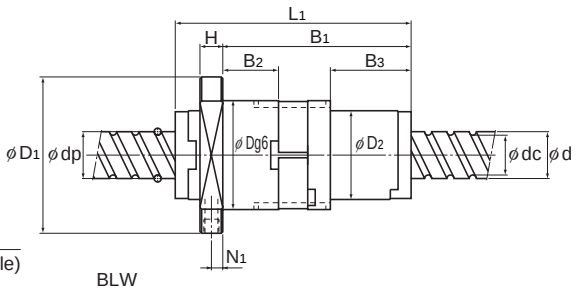
Screw shaft outer diameter	32
Lead	8 to 32





DIK (2805 to 6312)





BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1	D2
32	8	○ BIF 3208A-5	33.25	27.5	1×2.5	17.8	42.2	610	66	100	—
		○ BIF 3208A-7	33.25	27.5	1×3.5	23.8	59.1	840	66	100	—
		○ BNFN 3208A-2.5	33.25	27.5	1×2.5	17.8	42.2	610	66	100	—
		○ BNFN 3208A-3	33.25	27.5	2×1.5	20.9	50.7	730	66	100	—
		○ BNFN 3208A-4.5	33.25	27.5	3×1.5	29.5	76	1070	66	100	—
		○ BNFN 3208A-5	33.25	27.5	2×2.5	32.3	84.4	1180	66	100	—
	10	DIK 3210-6	33.75	26.4	3×1	25.7	52.2	600	54	87	—
		○ BIF 3210A-5	33.75	26.4	1×2.5	26.1	56.2	640	74	108	—
		○ BNFN 3210A-2.5	33.75	26.4	1×2.5	26.1	56.2	640	74	108	—
		○ BNFN 3210A-3	33.75	26.4	2×1.5	30.5	67.4	750	74	108	—
		○ BNFN 3210A-3.5	33.75	26.4	1×3.5	34.8	78.6	870	74	108	—
		○ BNFN 3210A-5	33.75	26.4	2×2.5	47.2	112.7	1230	74	108	—
	12	DIK 3212-4	33.75	26.4	2×1	18.8	37	430	54	87	—
		○ BNFN 3212-3.5	34	26.1	1×3.5	40.4	88.5	890	76	121	—
	32	BLW 3232-3.6	33.25	28.3	2×1.8	23.7	59.5	880	68	99	58

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.
Model BLW cannot be attached with seal.

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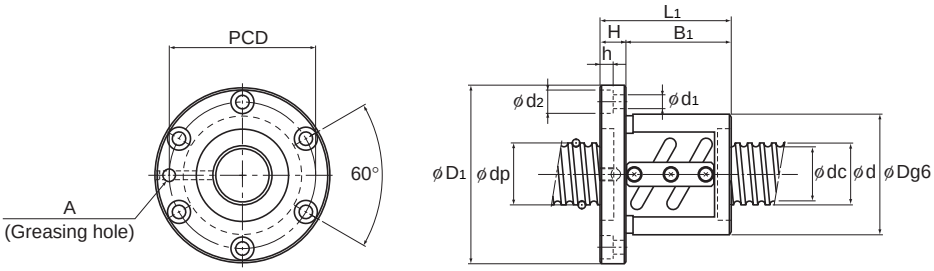
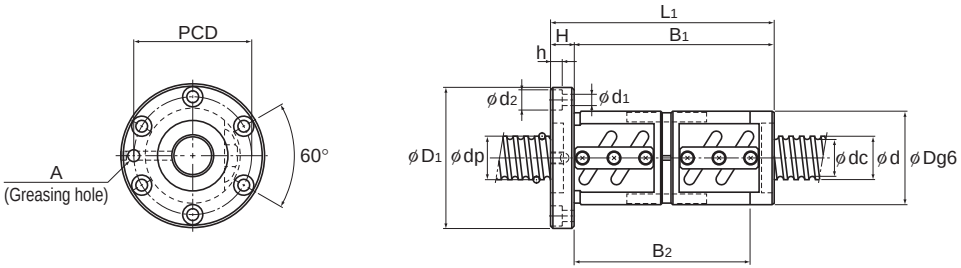


BIF



BNFN

Unit: mm

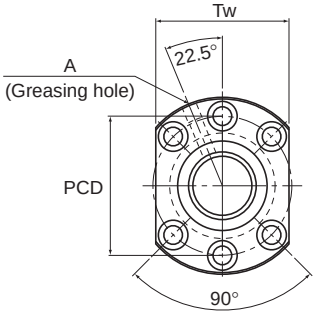
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	$kg \cdot cm^2/mm$	kg	kg/m
	82	15	67	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	1.93	5.39
	98	15	83	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.21	5.39
	106	15	91	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.36	5.39
	135	15	120	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.88	5.39
	167	15	152	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	3.45	5.39
	154	15	139	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	3.21	5.39
	110	15	95	25	—	69	9	14	8.5	66	—	M6	8.08×10^{-3}	1.57	4.98
	100	15	85	—	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	2.92	4.98
	130	15	115	99	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	3.64	4.98
	167	15	152	136	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	4.53	4.98
	150	15	135	119	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	4.12	4.98
	190	15	175	159	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	5.08	4.98
	98	15	83	25	—	69	9	14	8.5	66	—	M6	8.08×10^{-3}	1.43	5.2
	170	18	152	—	—	98	11	17.5	11	—	—	M6	8.08×10^{-3}	5.26	4.9
	155	15	127	42.4	55.4	81	9	—	—	70	6	M6	8.08×10^{-3}	3.19	5.83

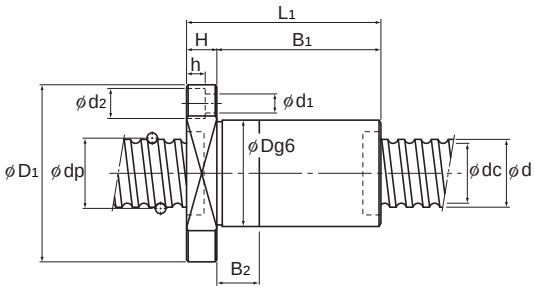
For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

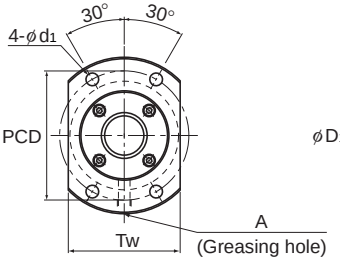
Preload Type of Precision Ball Screw

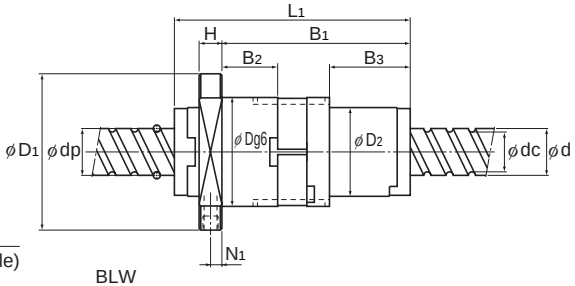
Screw shaft outer diameter	36
Lead	6 to 36





DIK (2805 to 6312)





BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
36	6	○ BNFN 3606-2.5	36.75	33.2	1×2.5	10.7	31.8	630	65	100	—
		○ BNFN 3606-3	36.75	33.2	2×1.5	12.5	38	740	65	100	—
		○ BNFN 3606-5	36.75	33.2	2×2.5	19.4	63.4	1220	65	100	—
		○ BNFN 3606-7.5	36.75	33.2	3×2.5	27.5	95.2	1790	65	100	—
	8	○ BNFN 3608-2.5	37.25	31.6	1×2.5	18.8	47.5	670	70	114	—
		○ BNFN 3608-5	37.25	31.6	2×2.5	34.1	95.1	1290	70	114	—
		○ BNFN 3608-7.5	37.25	31.6	3×2.5	48.3	142.1	1910	70	114	—
	10	DIK 3610-6	37.75	30.5	3×1	28.8	63.8	710	58	98	—
		DIK 3610-8	37.75	30.5	4×1	36.8	85	940	58	98	—
		DIK 3610-10	37.75	30.5	5×1	44.6	106.3	1160	58	98	—
		○ BIF 3610-5	37.75	30.5	1×2.5	27.6	63.3	700	75	120	—
		○ BIF 3610-10	37.75	30.5	2×2.5	50.1	126.4	1350	75	120	—
		○ BNFN 3610-2.5	37.75	30.5	1×2.5	27.6	63.3	700	75	120	—
		○ BNFN 3610-5	37.75	30.5	2×2.5	50.1	126.4	1350	75	120	—
		○ BNFN 3610-7.5	37.75	30.5	3×2.5	71.1	190.1	1990	75	120	—
	12	○ BNFN 3612-2.5	38	30.1	1×2.5	32.1	71.4	720	78	123	—
		○ BNFN 3612-5	38	30.1	2×2.5	58.4	142.1	1370	78	123	—
	16	○ BNFN 3616-2.5	38	30.1	1×2.5	32.1	71.4	720	78	123	—
		○ BNFN 3616-5	38	30.1	2×2.5	58.3	143.1	1380	78	123	—
	20	○ BNFN 3620-1.5	37.75	30.5	1×1.5	17.6	38.3	430	70	103	—
	36	BLW 3636-3.6	37.4	31.7	2×1.8	30.8	78	980	79	116	66

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778. Model BLW cannot be attached with seal.

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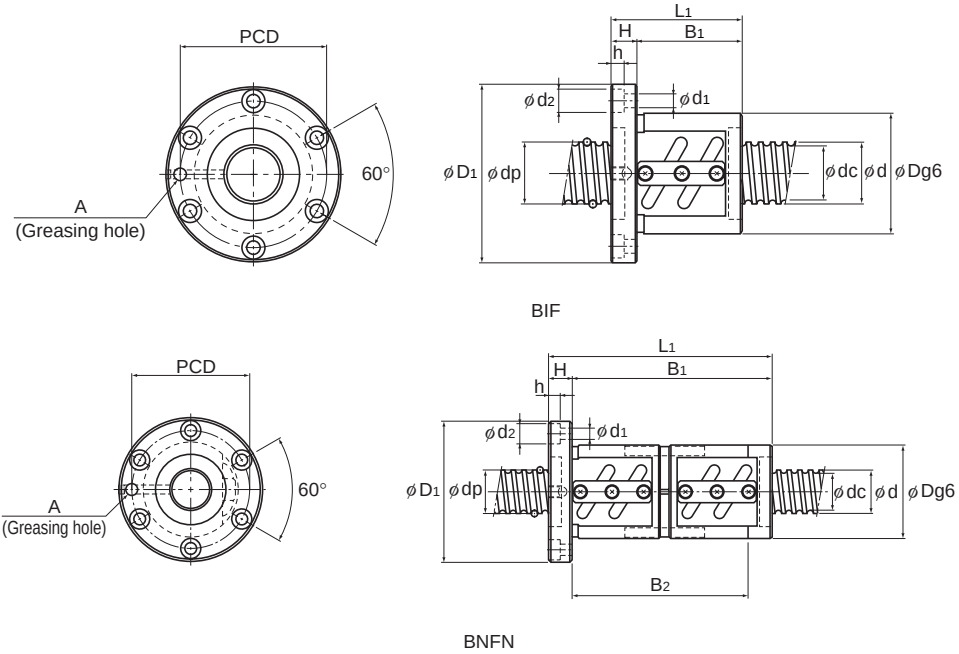


Unit: mm

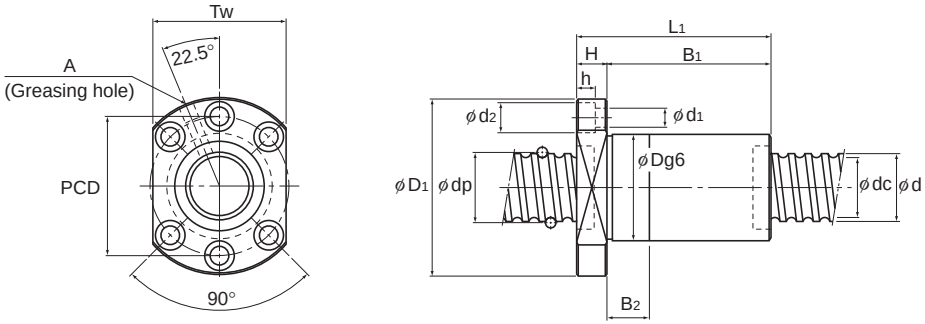
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg·cm²/mm	kg	kg/m
89	15	74	58	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.85	7.39
110	15	95	79	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	2.18	7.39
125	15	110	94	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	2.41	7.39
161	15	146	130	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	2.96	7.39
116	18	98	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	3.03	6.96
164	18	146	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	3.95	6.96
212	18	194	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	4.87	6.96
122	18	104	30	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.03	6.51
143	18	125	35	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.3	6.51
164	18	146	45	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.57	6.51
111	18	93	—	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	3.45	6.51
171	18	153	—	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	4.84	6.51
141	18	123	104	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	4.15	6.51
201	18	183	164	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	5.54	6.51
261	18	243	224	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	6.93	6.51
147	18	129	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	4.69	6.41
219	18	201	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	6.54	6.41
172	18	154	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	5.33	6.8
268	18	250	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	7.8	6.8
135	15	120	—	—	85	9	14	8.5	—	—	M6	1.29×10^{-2}	3.06	7.24
181	17	147.9	49.4	65.4	95	11	—	—	82	7	M6	1.29×10^{-2}	5.99	7.34

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

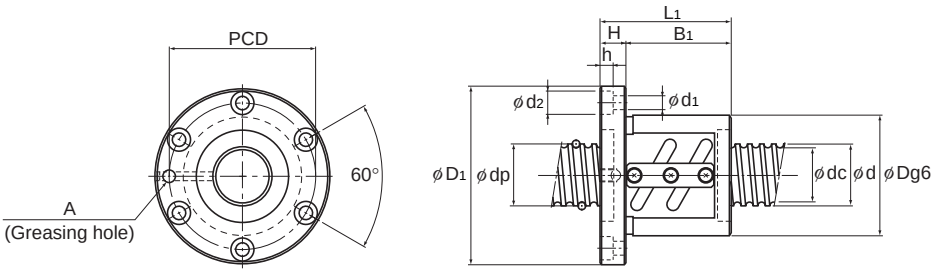
Screw shaft outer diameter	40
Lead	5 to 10



DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
40	5	BNFN 4005-3	40.75	37.2	2×1.5	13	42.3	810
		BNFN 4005-4.5	40.75	37.2	3×1.5	18.5	63.5	1200
		BNFN 4005-5	40.75	37.2	2×2.5	20.3	70.6	1320
		BNFN 4005-6	40.75	37.2	4×1.5	23.7	84.7	1580
	6	BNFN 4006-2.5	41	36.4	1×2.5	15.3	44.1	710
		BNFN 4006-5	41	36.4	2×2.5	27.7	88.1	1360
		BNFN 4006-7.5	41	36.4	3×2.5	39.2	132.3	2010
	8	BNFN 4008-2.5	41.25	35.5	1×2.5	19.6	52.8	730
		BNFN 4008-3	41.25	35.5	2×1.5	22.9	63.4	860
		BNFN 4008-5	41.25	35.5	2×2.5	35.7	105.8	1410
	10	BIF 4010-5	41.75	34.4	1×2.5	29	70.4	750
		BIF 4010-10	41.75	34.4	2×2.5	52.7	141.1	1470
		DIK 4010-6	41.75	34.7	3×1	29.8	69.3	750
		DIK 4010-8	41.75	34.7	4×1	38.1	92.4	1000
		BNFN 4010-2.5	41.75	34.4	1×2.5	29	70.4	750
		BNFN 4010-3	41.75	34.4	2×1.5	33.8	84.5	900
		BNFN 4010-3.5	41.75	34.4	1×3.5	38.8	99	1050
		BNFN 4010-5	41.75	34.4	2×2.5	52.7	141.1	1470

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



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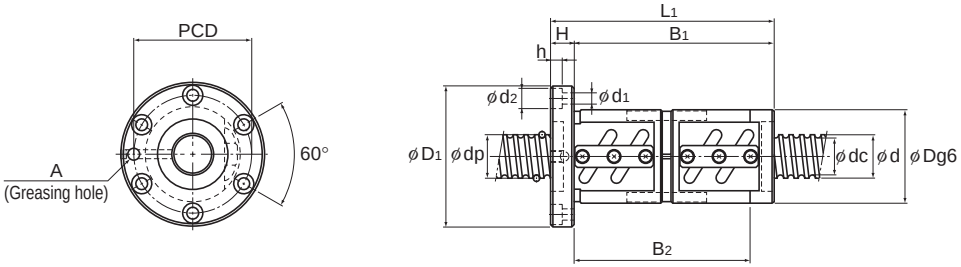


BNFN

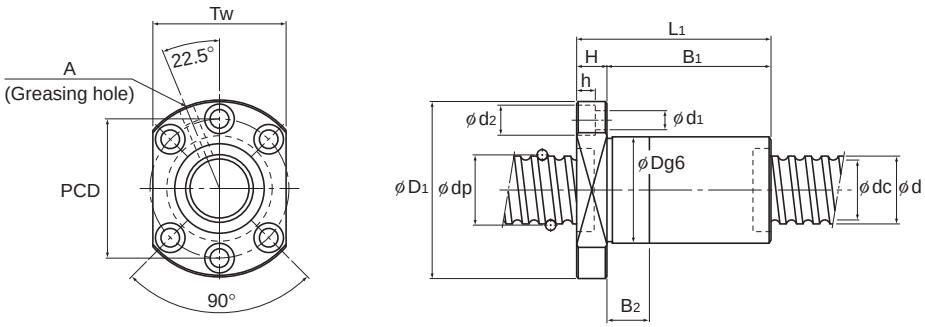
Unit: mm

Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
67	101	106	15	91	—	83	9×14×8.5	—	M6	1.97×10⁻²	2.07	9.06
67	101	126	15	111	—	83	9×14×8.5	—	M6	1.97×10⁻²	2.37	9.06
67	101	109	15	94	—	83	9×14×8.5	—	M6	1.97×10⁻²	2.11	9.06
67	101	156	15	141	—	83	9×14×8.5	—	M6	1.97×10⁻²	2.82	9.06
70	104	90	15	75	—	86	9×14×8.5	—	M6	1.97×10⁻²	2.05	8.82
70	104	126	15	111	—	86	9×14×8.5	—	M6	1.97×10⁻²	2.67	8.82
70	104	162	15	147	—	86	9×14×8.5	—	M6	1.97×10⁻²	3.29	8.82
74	108	106	15	91	—	90	9×14×8.5	—	M6	1.97×10⁻²	2.69	8.72
74	108	135	15	120	—	90	9×14×8.5	—	M6	1.97×10⁻²	3.28	8.72
74	108	154	15	139	—	90	9×14×8.5	—	M6	1.97×10⁻²	3.67	8.72
82	124	103	18	85	—	102	11×17.5×11	—	M6	1.97×10⁻²	3.69	8.22
82	124	163	18	145	—	102	11×17.5×11	—	M6	1.97×10⁻²	5.33	8.22
62	104	113	18	95	25	82	11×17.5×11	79	PT 1/8	1.97×10⁻²	2.09	8.22
62	104	137	18	119	35	82	11×17.5×11	79	PT 1/8	1.97×10⁻²	2.42	8.22
82	124	133	18	115	96	102	11×17.5×11	—	M6	1.97×10⁻²	4.51	8.22
82	124	170	18	152	133	102	11×17.5×11	—	M6	1.97×10⁻²	5.52	8.22
82	124	153	18	135	116	102	11×17.5×11	—	M6	1.97×10⁻²	5.06	8.22
82	124	193	18	175	156	102	11×17.5×11	—	M6	1.97×10⁻²	6.16	8.22

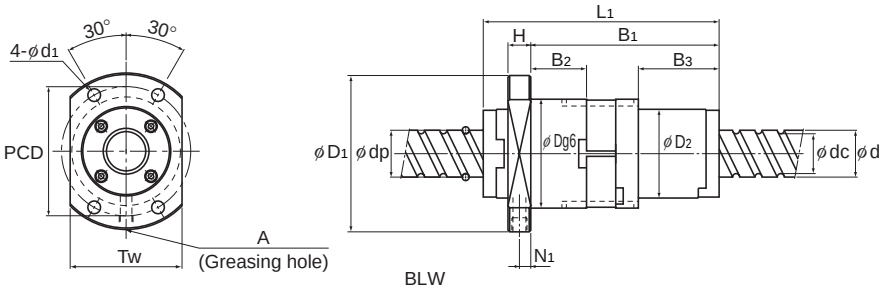
For model number coding, see B-718.

Preload Type of Precision Ball Screw

Screw shaft outer diameter	40
Lead	12 to 40



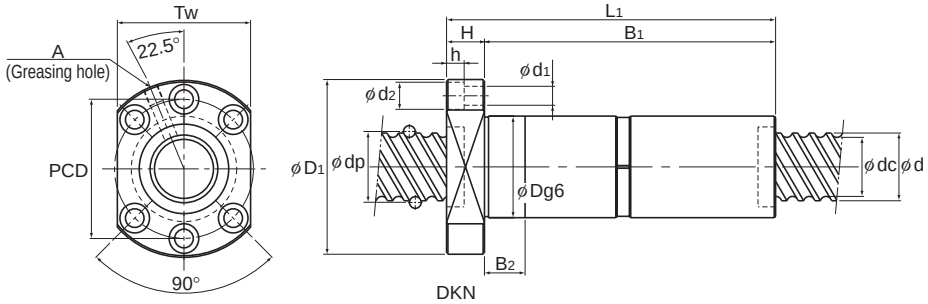
DIK (2805 to 6312)

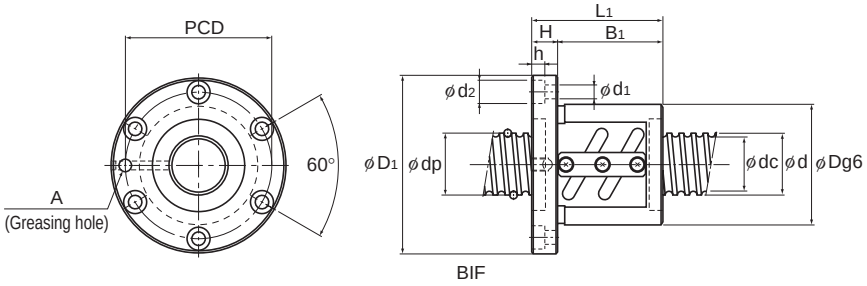


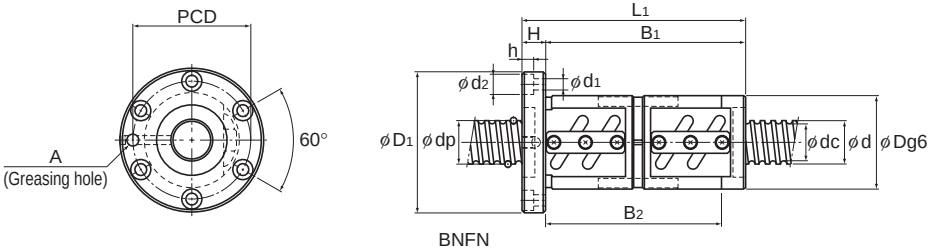
BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
40	12	BIF 4012-5	42	34.1	1×2.5	33.9	79.2	770	84	126	—
		BIF 4012-10	42	34.1	2×2.5	61.6	158.8	1490	84	126	—
		DIK 4012-6	41.75	34.4	3×1	30.6	72.3	790	62	104	—
		DIK 4012-8	41.75	34.4	4×1	39.2	96.4	1030	62	104	—
		BNFN 4012-2.5	42	34.1	1×2.5	33.9	79.2	770	84	126	—
		BNFN 4012-3.5	42	34.1	1×3.5	45.4	110.7	1070	84	126	—
		BNFN 4012-5	42	34.1	2×2.5	61.6	158.8	1490	84	126	—
	16	DIK 4016-4	41.75	34.4	2×1	21.5	68.4	540	62	104	—
		BNFN 4016-5	42	34.1	2×2.5	61.4	158.8	1500	84	126	—
	20	DKN 4020-3	41.75	34.7	3×1	29.4	69.3	750	62	104	—
	40	BLW 4040-3.6	41.75	35.2	2×1.8	38.7	99.2	1090	84	121	73

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.
Model BLW cannot be attached with seal.







Unit: mm

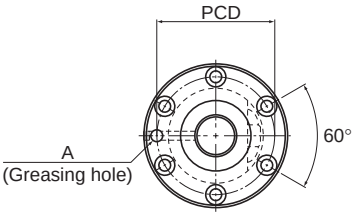
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length											Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	119	18	101	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	4.36	8.12
	191	18	173	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	6.47	8.12
	138	18	120	35	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.44	8.5
	163	18	145	45	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.78	8.5
	155	18	137	118	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	5.42	8.12
	179	18	161	142	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	6.12	8.12
	227	18	209	190	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	7.52	8.12
	120	18	102	30	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.19	8.83
	280	22	258	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	9.27	8.55
	223	18	205	25	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	3.61	9.03
	191	17	158	54.5	70.5	100	11	—	—	87	7	M6	1.97×10^{-2}	6.16	9.01

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

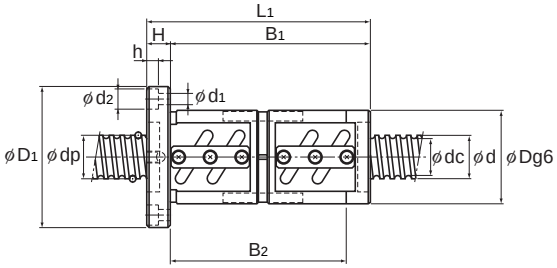
Screw shaft outer diameter	45
Lead	6 to 20



BNFN

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm
45	6	BNFN 4506A-2.5	46	41.4	1×2.5	16	49.6	770
		BNFN 4506A-5	46	41.4	2×2.5	29	99	1500
		BNFN 4506A-7.5	46	41.4	3×2.5	41.2	150	2210
	8	BNFN 4508-2.5	46.25	40.6	1×2.5	20.7	59.5	790
		BNFN 4508-5	46.25	40.6	2×2.5	37.4	118.6	1540
		BNFN 4508-7.5	46.25	40.6	3×2.5	53.1	178.4	2270
	10	BNFN 4510-2.5	46.75	39.5	1×2.5	30.7	79.3	830
		BNFN 4510-3	46.75	39.5	2×1.5	35.9	95.2	990
		BNFN 4510-5	46.75	39.5	2×2.5	55.6	158.8	1610
		BNFN 4510-7.5	46.75	39.5	3×2.5	78.8	238.1	2370
	12	BNFN 4512-5	47	39.2	2×2.5	65.2	178.4	1640
	20	BNFN 4520-1.5	47.7	37.9	1×1.5	44.2	99	690

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

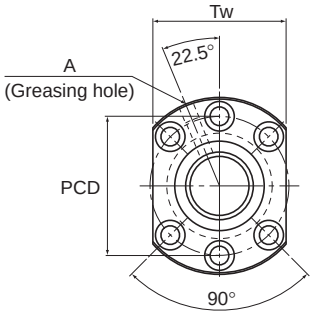
Unit: mm

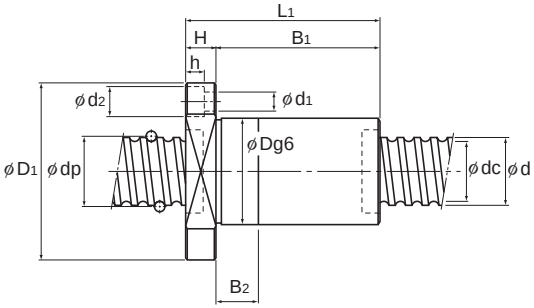
	Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg·cm²/mm	kg	kg/m
	80	114	89	15	74	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	2.59	11.31
	80	114	125	15	110	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	3.42	11.31
	80	114	161	15	146	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	4.25	11.31
	85	127	116	18	98	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	4.09	11.21
	85	127	164	18	146	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	5.41	11.21
	85	127	212	18	194	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	6.74	11.21
	88	132	141	18	123	104	110	11×17.5×11	PT 1/8	3.16×10^{-2}	5.26	10.65
	88	132	164	18	146	127	110	11×17.5×11	PT 1/8	3.16×10^{-2}	5.96	10.65
	88	132	201	18	183	164	110	11×17.5×11	PT 1/8	3.16×10^{-2}	7.09	10.65
	88	132	261	18	243	224	110	11×17.5×11	PT 1/8	3.16×10^{-2}	8.92	10.65
	90	130	227	18	209	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	8.24	10.54
	98	142	175	20	155	—	120	11×17.5×11	PT 1/8	3.16×10^{-2}	8.31	10.37

For model number coding, see B-718.

Preload Type of Precision Ball Screw

Screw shaft outer diameter	50
Lead	5 to 10





DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
50	5	○ BNFN 5005-3	50.75	47.2	2×1.5	14.2	53	970
		○ BNFN 5005-4.5	50.75	47.2	3×1.5	20.2	79.5	1420
	8	○ BNFN 5008-2.5	51.25	45.5	1×2.5	21.6	66.2	860
		○ BNFN 5008-5	51.25	45.5	2×2.5	39.1	132.3	1680
		○ BNFN 5008-7.5	51.25	45.5	3×2.5	55.4	198.9	2470
	10	DIK 5010-6	51.75	44.4	3×1	33.9	90.7	940
		DIK 5010-8	51.75	44.4	4×1	43.4	120.5	1230
		DIK 5010-10	51.75	44.4	5×1	52.5	150.9	1530
		○ BIF 5010-5	51.75	44.4	1×2.5	32	88.2	900
		○ BIF 5010-10	51.75	44.4	2×2.5	58.2	176.4	1750
		○ BNFN 5010-2.5	51.75	44.4	1×2.5	32	88.2	900
		○ BNFN 5010-3	51.75	44.4	2×1.5	37.5	105.8	1080
		○ BNFN 5010-3.5	51.75	44.4	1×3.5	42.8	123.5	1240
		○ BNFN 5010-5	51.75	44.4	2×2.5	58.2	176.4	1750
		○ BNFN 5010-7.5	51.75	44.4	3×2.5	82.5	264.6	2580

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.

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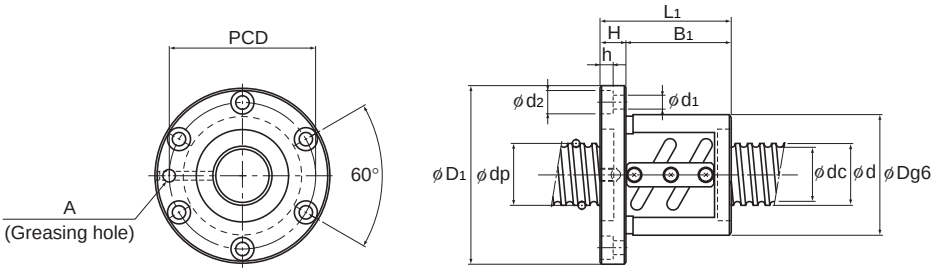

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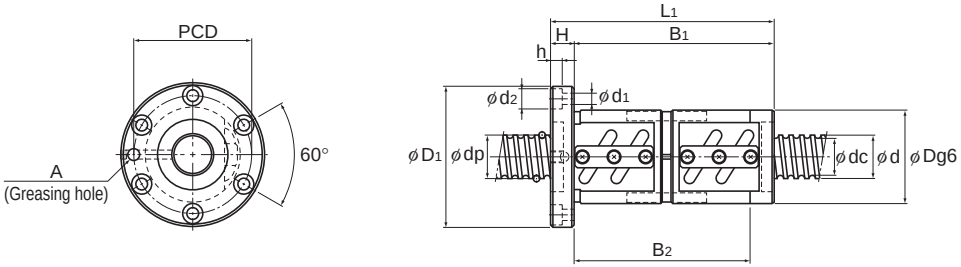


BNFN

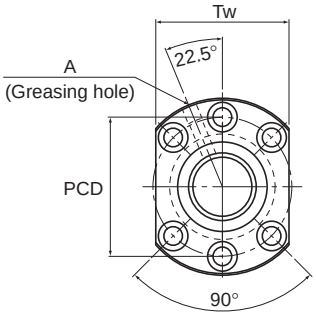
Unit: mm

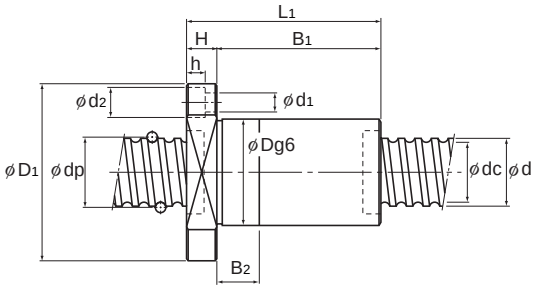
Nut dimensions									Greasing hole	Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	A	kg·cm²/mm	kg	kg/m
80	114	108	15	93	—	96	9×14×8.5	—	PT 1/8	4.82×10^{-2}	2.71	14.42
80	114	128	15	113	—	96	9×14×8.5	—	PT 1/8	4.82×10^{-2}	3.12	14.42
87	129	109	18	91	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	3.8	14.0
87	129	157	18	139	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	5.08	14.0
87	129	205	18	187	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	6.35	14.0
72	123	114	18	96	30	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	2.65	13.38
72	123	137	18	119	35	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	3.03	13.38
72	123	160	18	142	45	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	3.41	13.38
93	135	103	18	85	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	4.31	13.38
93	135	163	18	145	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	6.26	13.38
93	135	133	18	115	96	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	5.28	13.38
93	135	170	18	152	133	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	6.49	13.38
93	135	153	18	135	116	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	5.94	13.38
93	135	193	18	175	156	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	7.24	13.38
93	135	253	18	235	216	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	9.19	13.38

For model number coding, see B-718.

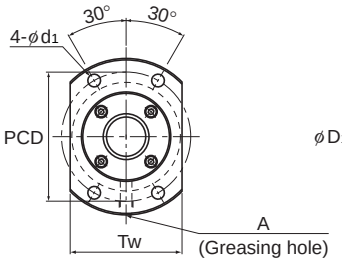
Preload Type of Precision Ball Screw

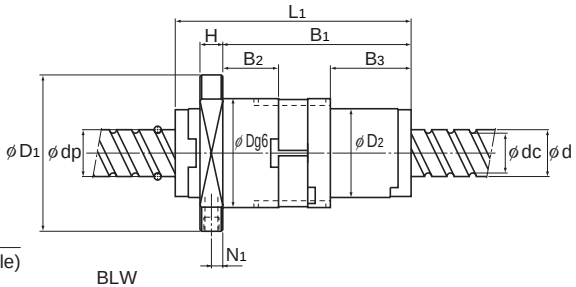
Screw shaft outer diameter	50
Lead	12 to 50





DIK (2805 to 6312)





BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1	D2
50	12	DIK 5012-6	52.25	43.3	3×1	45.8	113	970	75	129	—
		DIK 5012-8	52.25	43.3	4×1	58.6	150.6	1270	75	129	—
		○ BNFN 5012-2.5	52.25	43.3	1×2.5	43.4	109.8	930	100	146	—
		○ BNFN 5012-3.5	52.25	43.3	1×3.5	58	153.9	1280	100	146	—
		○ BNFN 5012-5	52.25	43.3	2×2.5	78.8	220.5	1810	100	146	—
	16	DIK 5016-4	52.25	43.3	2×1	32.3	75.5	660	75	129	—
		DIK 5016-6	52.25	43.3	3×1	45.7	113.3	970	75	129	—
		○ BNFN 5016-2.5	52.7	42.9	1×2.5	72.6	183.3	1230	105	152	—
		○ BNFN 5016-5	52.7	42.9	2×2.5	132.3	366.5	2360	105	152	—
	20	DKN 5020-3	52.25	43.6	3×1	44.2	108.8	930	75	129	—
		○ BNFN 5020-2.5	52.7	42.9	1×2.5	72.5	183.3	1230	105	152	—
	50	BLW 5050-3.6	52.2	44.1	2×1.8	57.8	155	1340	106	149	90

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
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For dimensions of the ball screw nut with either accessory being attached, see B-778.
Model BLW cannot be attached with seal.

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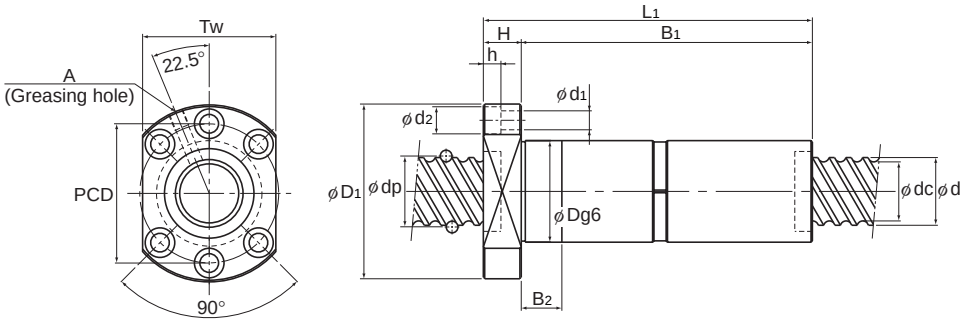
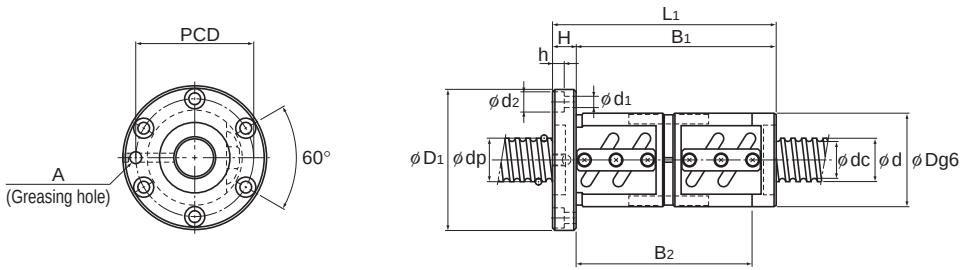


DKN



BNFN

Unit: mm

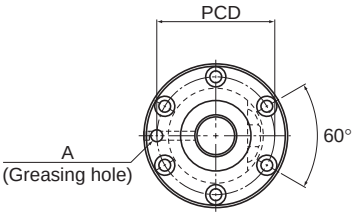
Nut dimensions													Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg·cm²/mm	kg	kg/m
	145	22	123	35	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.83	12.74
	170	22	148	45	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	4.31	12.74
	159	22	137	114	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	7.75	12.74
	183	22	161	138	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	8.71	12.74
	231	22	209	186	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	10.63	12.74
	129	22	107	30	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.52	13.41
	175	22	153	45	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	4.41	13.41
	196	25	171	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	10.64	12.5
	292	25	267	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	15.03	12.5
	243	28	215	30	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	6.0	13.8
	241	28	213	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	12.9	13.1
	245	20	203.8	70.7	91.7	126	14	—	—	108	8	M6	4.82×10^{-2}	9.06	14.08

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

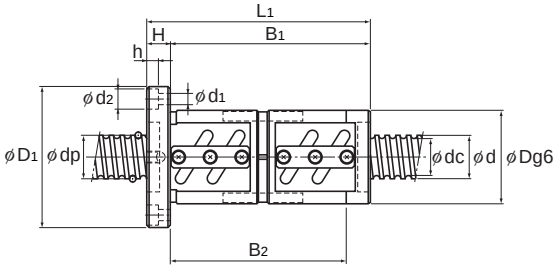
Screw shaft outer diameter	55
Lead	10 to 20



BNFN

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
55	10	BNFN 5510-2.5	56.75	49.5	1×2.5	33.4	97	970
		BNFN 5510-5	56.75	49.5	2×2.5	60.7	194	1890
		BNFN 5510-7.5	56.75	49.5	3×2.5	85.9	291.1	2770
	12	BNFN 5512-2.5	57	49.2	1×2.5	39.3	108.8	990
		BNFN 5512-3	57	49.2	2×1.5	46	131.3	1180
		BNFN 5512-3.5	57	49.2	1×3.5	52.4	152.9	1360
		BNFN 5512-5	57	49.2	2×2.5	71.3	218.5	1920
		BNFN 5512-7.5	57	49.2	3×2.5	100.9	327.3	2830
	16	BNFN 5516-2.5	57.7	47.9	1×2.5	76.1	201.9	1310
		BNFN 5516-5	57.7	47.9	2×2.5	138.2	402.8	2550
	20	BNFN 5520-2.5	57.7	47.9	1×2.5	76	201.9	1320
		BNFN 5520-5	57.7	47.9	2×2.5	138.2	403.8	2550

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

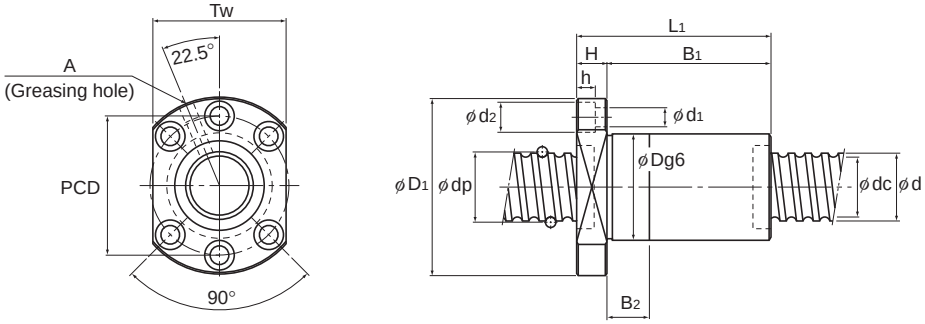
Unit: mm

	Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg·cm²/mm	kg	kg/m
	102	144	141	18	123	122	11×17.5×11	PT 1/8	7.05×10^{-2}	6.54	16.43
	102	144	201	18	183	122	11×17.5×11	PT 1/8	7.05×10^{-2}	8.88	16.43
	102	144	261	18	243	122	11×17.5×11	PT 1/8	7.05×10^{-2}	11.23	16.43
	105	147	165	18	147	125	11×17.5×11	PT 1/8	7.05×10^{-2}	8.07	16.29
	105	147	191	18	173	125	11×17.5×11	PT 1/8	7.05×10^{-2}	9.17	16.29
	105	147	189	18	171	125	11×17.5×11	PT 1/8	7.05×10^{-2}	9.09	16.29
	105	147	237	18	219	125	11×17.5×11	PT 1/8	7.05×10^{-2}	11.13	16.29
	105	147	309	18	291	125	11×17.5×11	PT 1/8	7.05×10^{-2}	14.19	16.29
	110	158	196	25	171	133	14×20×13	PT 1/8	7.05×10^{-2}	11.28	15.46
	110	158	292	25	267	133	14×20×13	PT 1/8	7.05×10^{-2}	15.94	15.46
	112	158	227	28	199	134	14×20×13	PT 1/8	7.05×10^{-2}	13.49	16.1
	112	158	347	28	319	134	14×20×13	PT 1/8	7.05×10^{-2}	19.61	16.1

For model number coding, see B-718.

Preload Type of Precision Ball Screw

Screw shaft outer diameter	63
Lead	10 to 20



DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm
63	10	DIK 6310-8	64.75	57.7	4×1	49.5	160.7	1550
		BNFN 6310-2.5	64.75	57.7	1×2.5	35.4	111.7	1090
		BNFN 6310-5	64.75	57.7	2×2.5	64.2	222.5	2100
		BNFN 6310-7.5	64.75	57.7	3×2.5	90.9	334.2	3090
	12	DIK 6312-6	65.25	56.3	3×1	51.9	147.4	1200
		DIK 6312-8	65.25	56.3	4×1	66.4	196.6	1570
		BNFN 6312A-2.5	65.25	56.3	1×2.5	48.1	139.2	1120
		BNFN 6312A-5	65.25	56.3	2×2.5	87.4	278.3	2160
	16	BNFN 6316-2.5	65.7	55.9	1×2.5	81.1	231.3	1470
		BNFN 6316-5	65.7	55.9	2×2.5	147	462.6	2840
	20	BNFN 6320-2.5	65.7	55.9	1×2.5	81	231.3	1470
		BNFN 6320-5	65.7	55.9	2×2.5	147	463.5	2640
		DKN 6320-3	65.7	55.9	3×1	83.5	229.3	1470

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.

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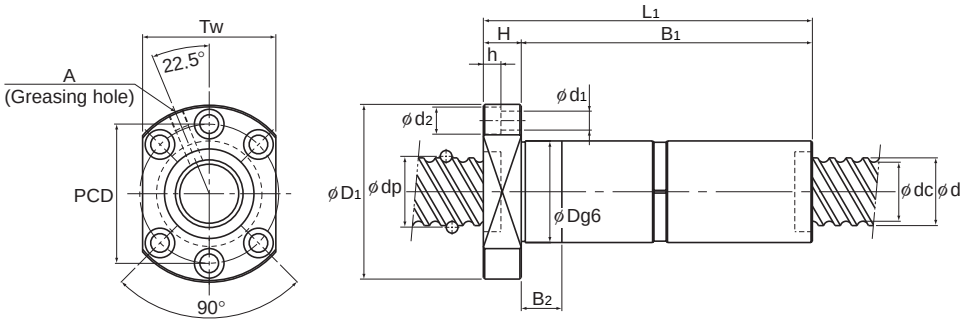
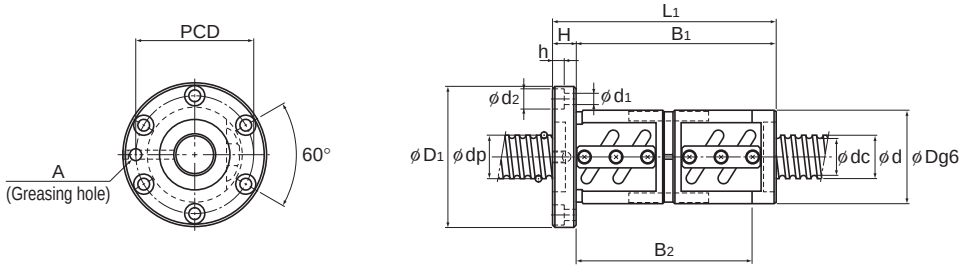


DKN



BNFN

Unit: mm

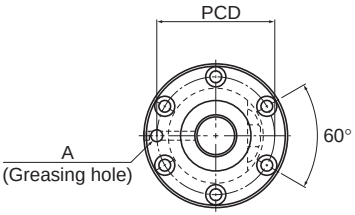
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
	85	146	141	22	119	35	122	14×20×13	110	PT 1/8	1.21×10^{-1}	4.16	21.93
	108	154	137	22	115	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	6.98	21.93
	108	154	197	22	175	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	9.4	21.93
	108	154	257	22	235	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	11.81	21.93
	90	146	146	22	124	35	122	14×20×13	110	PT 1/8	1.21×10^{-1}	4.93	21.14
	90	146	171	22	149	45	122	14×20×13	110	PT 1/8	1.21×10^{-1}	5.56	21.14
	115	161	159	22	137	—	137	14×20×13	—	PT 1/8	1.21×10^{-1}	9.32	21.14
	115	161	231	22	209	—	137	14×20×13	—	PT 1/8	1.21×10^{-1}	12.84	21.14
	122	184	208	24	184	—	152	18×26×17.5	—	PT 1/8	1.21×10^{-1}	14.61	20.85
	122	184	304	24	280	—	152	18×26×17.5	—	PT 1/8	1.21×10^{-1}	20.19	20.85
	122	180	227	28	199	—	150	18×26×17.5	—	PT 1/8	1.21×10^{-1}	15.91	20.85
	122	180	347	28	319	—	150	18×26×17.5	—	PT 1/8	1.21×10^{-1}	22.88	20.85
	95	159	243	28	215	30	129	18×26×17.5	121	PT 1/8	1.21×10^{-1}	9.5	20.85

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

Preload Type of Precision Ball Screw

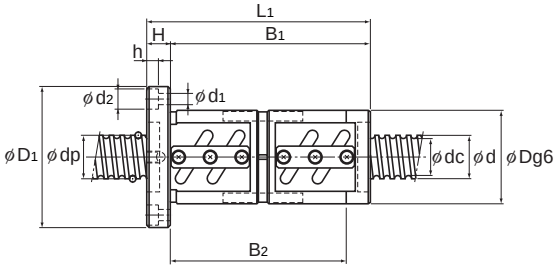
Screw shaft outer diameter	70 to 100
Lead	10 to 20



BNFN

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
70	10	BNFN 7010-2.5	71.75	64.5	1×2.5	36.8	123.5	1180
		BNFN 7010-5	71.75	64.5	2×2.5	66.9	247	2280
		BNFN 7010-7.5	71.75	64.5	3×2.5	94.9	371.4	3350
	12	BNFN 7012-2.5	72	64.2	1×2.5	43.5	139.2	1200
		BNFN 7012-5	72	64.2	2×2.5	78.9	278.3	2320
		BNFN 7012-7.5	72	64.2	3×2.5	111.7	417.5	3420
	20	BNFN 7020-5	72.7	62.9	2×2.5	153.9	514.5	3090
80	10	BNFN 8010-2.5	81.75	75.2	1×2.5	38.9	141.1	1300
		BNFN 8010-5	81.75	75.2	2×2.5	70.6	283.2	2530
		BNFN 8010-7.5	81.75	75.2	3×2.5	100	424.3	3720
	12	BNFN 8012-5	82.3	74.1	2×2.5	96.5	353.8	2620
	20	BNFN 8020A-2.5	82.7	72.9	1×2.5	90.1	294	1770
		BNFN 8020A-5	82.7	72.9	2×2.5	163.7	589	3430
100	20	BNFN 10020A-2.5	102.7	92.9	1×2.5	99	368.5	2110
		BNFN 10020A-5	102.7	92.9	2×2.5	179.3	737	4080
		BNFN 10020A-7.5	102.7	92.9	3×2.5	253.8	1105.4	6010

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

Unit: mm

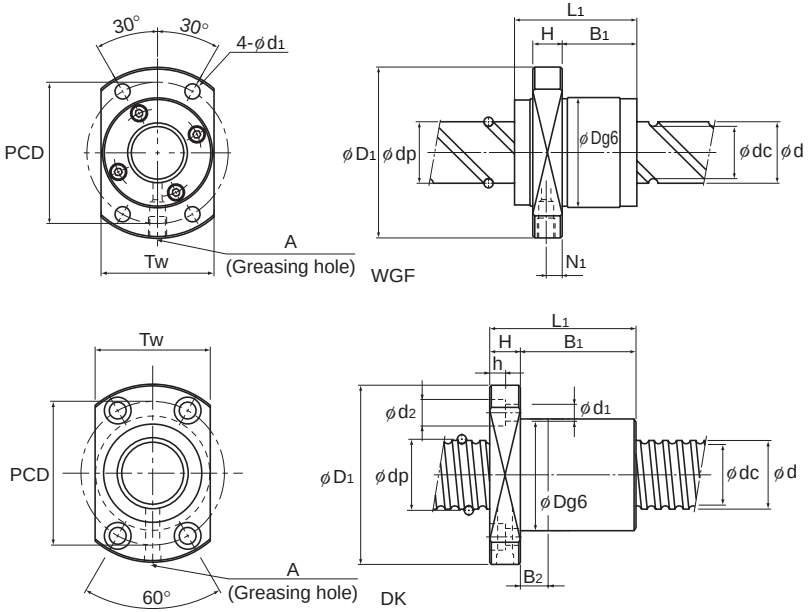
	Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg·cm²/mm	kg	kg/m
	125	167	141	18	123	145	11×17.5×11	PT 1/8	1.85×10^{-1}	9.19	27.4
	125	167	201	18	183	145	11×17.5×11	PT 1/8	1.85×10^{-1}	12.57	27.4
	125	167	261	18	243	145	11×17.5×11	PT 1/8	1.85×10^{-1}	15.96	27.4
	128	170	165	18	147	148	11×17.5×11	PT 1/8	1.85×10^{-1}	11.26	27.24
	128	170	237	18	219	148	11×17.5×11	PT 1/8	1.85×10^{-1}	15.63	27.24
	128	170	309	18	291	148	11×17.5×11	PT 1/8	1.85×10^{-1}	20.0	27.24
	130	186	325	28	297	158	18×26×17.5	PT 1/8	1.85×10^{-1}	23.4	27.0
	130	176	137	22	115	152	14×20×13	PT 1/8	3.16×10^{-1}	9.15	36.26
	130	176	197	22	175	152	14×20×13	PT 1/8	3.16×10^{-1}	12.41	36.26
	130	176	257	22	235	152	14×20×13	PT 1/8	3.16×10^{-1}	15.67	36.26
	135	181	231	22	209	157	14×20×13	PT 1/8	3.16×10^{-1}	16.02	35.26
	143	204	227	28	199	172	18×26×17.5	PT 1/8	3.16×10^{-1}	20.08	35.81
	143	204	347	28	319	172	18×26×17.5	PT 1/8	3.16×10^{-1}	28.97	35.81
	170	243	231	32	199	205	22×32×21.5	PT 1/8	7.71×10^{-1}	28.15	57.13
	170	243	351	32	319	205	22×32×21.5	PT 1/8	7.71×10^{-1}	39.99	57.13
	170	243	471	32	439	205	22×32×21.5	PT 1/8	7.71×10^{-1}	51.84	57.13

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

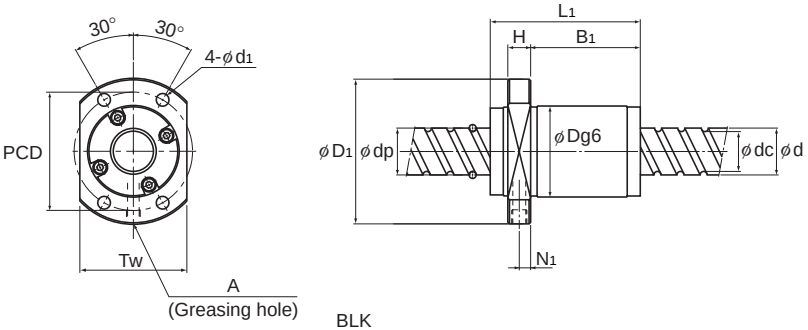
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	4 to 15
Lead	1 to 40

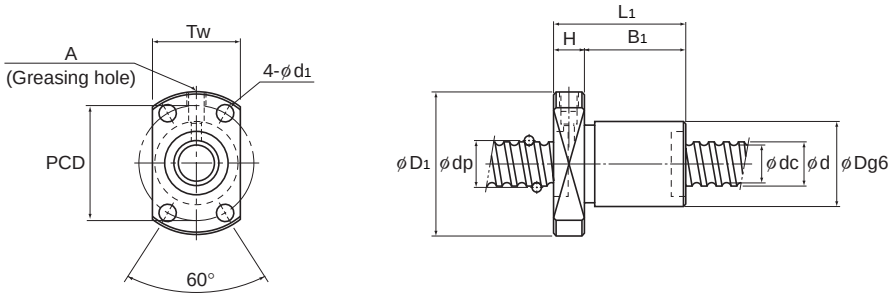


Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C₀a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D₁
4	1	MDK 0401-3	4.15	3.4	3×1	0.29	0.42	35	9	19
6	1	MDK 0601-3	6.2	5.3	3×1	0.54	0.94	60	11	23
8	1	MDK 0801-3	8.2	7.3	3×1	0.64	1.4	80	13	26
	2	MDK 0802-3	8.3	7	3×1	1.4	2.3	80	15	28
	12	WGF 0812-3	8.4	6.6	2×1.65	2.2	3.9	110	18	31
10	2	MDK 1002-3	10.3	9	3×1	1.5	2.9	100	17	34
	15	WGF 1015-3	10.5	8.3	2×1.65	3.3	6.2	140	23	40
12	2	MDK 1202-3	12.3	11	3×1	1.7	3.6	120	19	36
13	20	WGF 1320-3	13.5	10.8	2×1.65	4.7	9.6	180	28	45
14	2	MDK 1402-3	14.3	13	3×1	1.8	4.3	190	21	40
	4	MDK 1404-3	14.65	11.9	3×1	4.2	7.6	190	26	45
		DK 1404-4	14.5	11.8	4×1	5.4	10.2	180	26	45
		DK 1404-6	14.5	11.8	6×1	7.7	15.4	270	26	45
	5	MDK 1405-3	14.75	11.2	3×1	7	11.6	140	26	45
15	10	BLK 1510-5.6	15.75	12.5	2×2.8	14.3	27.8	340	34	57
	20	WGF 1520-1.5	15.75	12.5	1×1.5	4.4	7.9	100	32	53
		WGF 1520-3	15.75	12.5	2×1.5	8.1	15.8	190	32	53
	30	WGF 1530-1	15.75	12.5	2×0.6	3.5	5.4	90	32	53
		WGF 1530-3	15.75	12.5	2×1.6	8.1	14.6	220	32	53
	40	WGF 1540-1.5	15.75	12.5	2×0.75	3.9	7.4	110	32	53

Note) Models MDK0401, 0601 and 0801 is not provided with a labyrinth seal.
Models MDK0401, 0601, 0801, model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.



BLK



MDK

Unit: mm

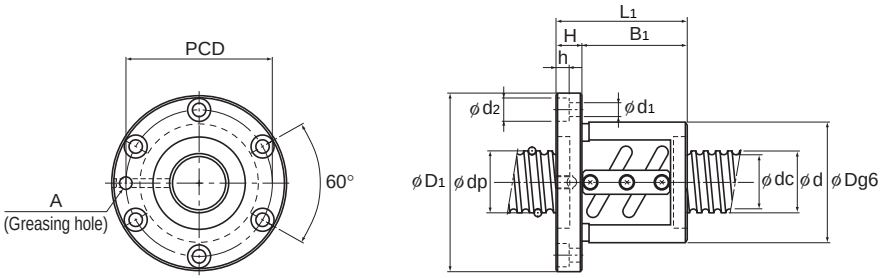
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length L1	H	B1	B2	PCD	d1	d2	h	Tw	N1	Greasing hole A	kg·cm²/mm	kg	kg/m
13	3	10	—	14	2.9	—	—	13	—	—	1.97×10^{-6}	0.01	0.07
14.5	3.5	11	—	17	3.4	—	—	15	—	—	9.99×10^{-6}	0.017	0.14
15	4	11	—	20	3.4	—	—	17	—	—	3.16×10^{-5}	0.024	0.29
22	5	17	—	22	3.4	—	—	19	—	—	3.16×10^{-5}	0.034	0.27
27	4	17	—	25	3.4	—	—	20	—	—	3.16×10^{-5}	0.054	0.35
22	5	17	—	26	4.5	—	—	21	—	—	7.71×10^{-5}	0.045	0.47
33	5	22	—	32	4.5	—	—	25	—	—	7.71×10^{-5}	0.11	0.55
22	5	17	—	28	4.5	—	—	23	—	—	1.6×10^{-4}	0.05	0.71
43	5	29	—	37	4.5	—	—	30	—	—	2.2×10^{-4}	0.18	0.96
23	6	17	—	31	5.5	—	—	26	—	—	2.96×10^{-4}	0.15	1.0
33	6	27	—	36	5.5	—	—	28	—	—	2.96×10^{-4}	0.13	0.8
48	10	38	10	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.2	1
60	10	50	10	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.23	1
42	10	32	—	36	5.5	—	—	28	—	M6	2.96×10^{-4}	0.18	0.91
44	10	24	—	45	5.5	—	—	40	5	M6	3.9×10^{-4}	0.34	0.31
45	10	28	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.29	1.22
45	10	28	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.29	1.22
33	10	17	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.23	1.26
63	10	47	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.38	1.26
42	10	26.3	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.28	1.28

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

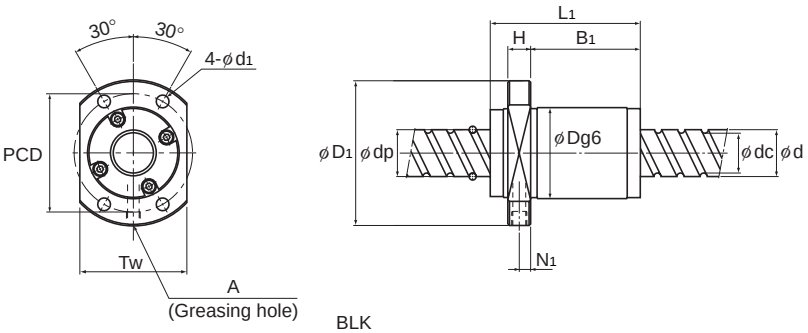
Screw shaft outer diameter	16 to 18
Lead	4 to 16

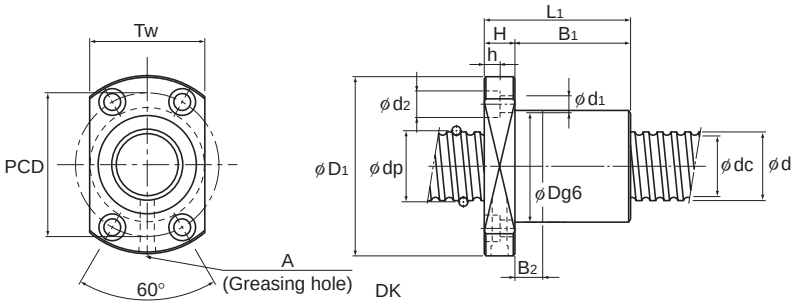


BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1
16	4	BNF 1604-3	16.5	13.8	2×1.5	5.1	10.5	180	36	59
	5	BNF 1605-2.5	16.75	13.2	1×2.5	7.4	13.9	170	40	60
		BNF 1605-3	16.75	13.2	2×1.5	8.7	16.8	200	40	60
		BNF 1605-5	16.75	13.2	2×2.5	13.5	27.8	320	40	60
		DK 1605-3	16.75	13.1	3×1	7.4	13	160	30	49
		DK 1605-4	16.75	13.1	4×1	9.5	17.4	210	30	49
	6	BNF 1606-2.5	16.8	13.2	1×2.5	7.5	14	170	40	60
		BNF 1606-5	16.8	13.2	2×2.5	13.5	28	320	40	60
	10	BNF 1610-1.5	16.8	13.5	1×1.5	4.8	8.5	100	40	63
	16	BLK 1616-2.8	16.65	13.7	1×2.8	5.2	9.9	180	32	53
		BLK 1616-3.6	16.65	13.7	2×1.8	7.1	14.3	220	32	53
18	10	BNF 1810-2.5	18.8	15.5	1×2.5	7.8	15.9	190	42	65
		BNF 1810-3	18.8	15.5	2×1.5	9.2	19.1	220	42	65

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.





Unit: mm

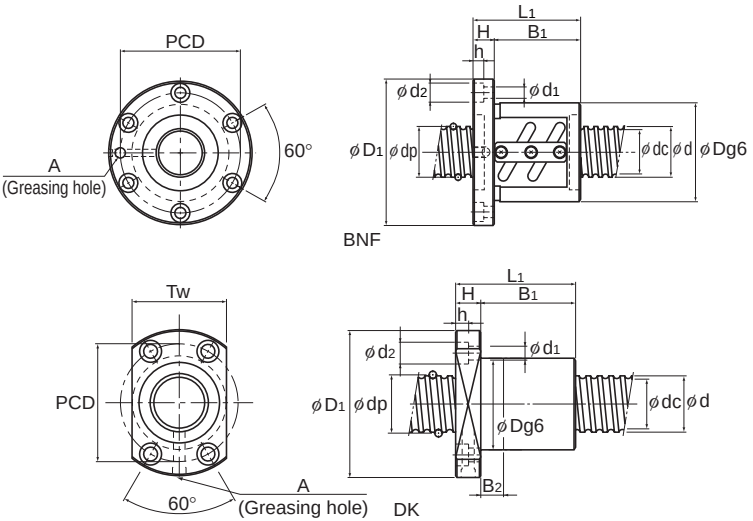
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg·cm²/mm	kg	kg/m
	45	11	34	—	47	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.32	1.35
	41	10	31	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.37	1.24
	51	10	41	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.47	1.24
	56	10	46	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.49	1.24
	45	10	35	10	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.24	1.25
	50	10	40	10	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.26	1.25
	44	10	34	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.41	1.3
	62	10	52	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.49	1.3
	42	11	31	—	51	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.32	1.41
	54	10	37.5	—	42	4.5	—	—	38	5	M6	5.05×10^{-4}	0.32	1.41
	38	10	21.5	—	42	4.5	—	—	38	5	M6	5.05×10^{-4}	0.21	1.41
	69	12	57	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.67	1.81
	75	12	63	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.63	1.81

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	20
Lead	4 to 60



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
20	4	BNF 2004-2.5	20.5	17.8	1×2.5	4.8	10.9	180	40	63
		BNF 2004-5	20.5	17.8	2×2.5	8.6	21.8	350	40	63
		DK 2004-3	20.5	17.8	3×1	5.2	11.6	190	32	56
		DK 2004-4	20.5	17.8	4×1	6.6	15.5	250	32	56
	5	BNF 2005-2.5	20.75	17.2	1×2.5	8.3	17.4	200	44	67
		BNF 2005-3	20.75	17.2	2×1.5	9.7	21	240	44	67
		BNF 2005-3.5	20.75	17.2	1×3.5	11.1	24.5	270	44	67
		BNF 2005-5	20.75	17.2	2×2.5	15.1	35	380	44	67
		DK 2005-3	20.75	17.1	3×1	8.5	17.3	200	34	58
		DK 2005-4	20.75	17.1	4×1	11	23.1	260	34	58
	6	BNF 2006-2.5	20.75	17.2	1×2.5	8.3	17.5	200	48	71
		BNF 2006-3	20.75	17.2	2×1.5	9.7	21	240	48	71
		BNF 2006-3.5	20.75	17.2	1×3.5	11.1	24.5	270	48	71
		BNF 2006-5	20.75	17.2	2×2.5	15.1	35	380	48	71
		DK 2006-3	21	16.4	3×1	11.4	21.5	410	35	58
		DK 2006-4	21	16.4	4×1	14.6	28.6	540	35	58
	8	BNF 2008-2.5	21	16.4	1×2.5	11.1	21.9	210	46	74
		DK 2008-4	21	16.4	4×1	14.6	28.8	270	35	58
	10	BNF 2010A-1.5	21	16.4	1×1.5	7.2	13.2	130	46	74
	12	BNF 2012-1.5	21	16.4	1×1.5	7.1	13.2	130	48	71
	20	BLK 2020-2.8	20.75	17.5	1×2.8	8.1	17.2	230	39	62
		BLK 2020-3.6	20.75	17.5	2×1.8	11.1	24.7	290	39	62
	40	WGF 2040-1	20.75	17.5	2×0.65	4.3	8	110	37	57
		WGF 2040-3	20.75	17.5	2×1.65	9.5	20.2	280	37	57
	60	WGF 2060-1.5	20.75	17.5	2×0.75	4.5	11	140	37	57

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.

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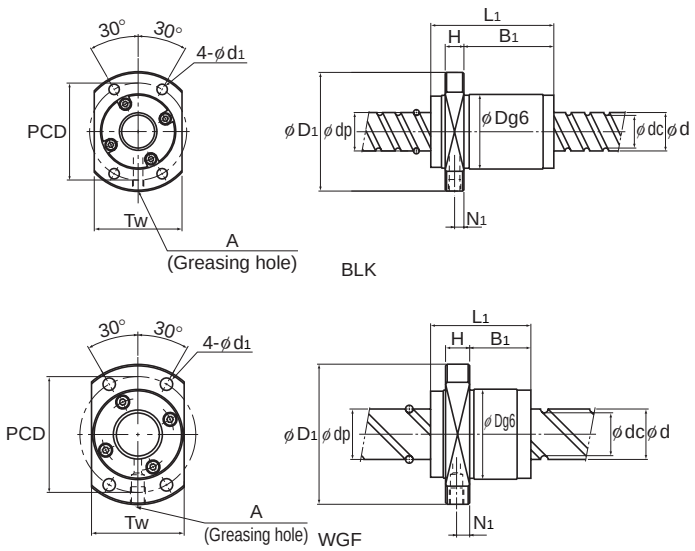


Unit: mm

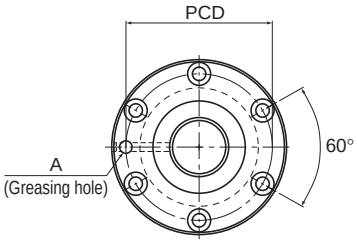
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	37	11	26	—	51	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.3	2.18
	49	11	38	—	51	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.49	2.18
	42	11	31	10	44	5.5	9.5	5.5	35	—	M6	1.23×10^{-3}	0.26	2.18
	46	11	35	10	44	5.5	9.5	5.5	35	—	M6	1.23×10^{-3}	0.27	2.18
	41	11	30	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.46	2.05
	52	11	41	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.53	2.05
	45	11	34	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.53	2.05
	56	11	45	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.6	2.05
	46	11	35	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.31	2.06
	51	11	40	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.34	2.06
	44	11	33	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.51	2.12
	56	11	45	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.68	2.12
	50	11	39	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.62	2.12
	62	11	51	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.8	2.12
	52	11	41	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.36	1.93
	59	11	48	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.39	1.93
	60	15	45	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.69	2.06
	69	11	58	15	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.45	2.06
	58	15	43	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.77	2.14
	64	18	46	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.9	2.19
	65	10	47.5	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.49	2.25
	45	10	27.5	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.35	2.25
	41	10	25	—	47	5.5	—	—	38	5.5	M6	1.23×10^{-3}	0.24	2.34
	81	10	65	—	47	5.5	—	—	38	5.5	M6	1.23×10^{-3}	0.48	2.34
	60	10	40.1	—	47	5.5	—	—	38	5	M6	1.23×10^{-3}	0.4	2.37

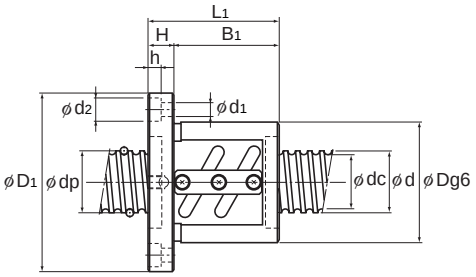
For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	25
Lead	4 to 16

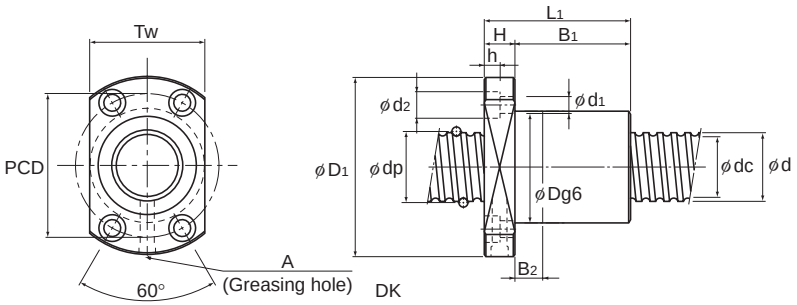




BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
25	4	BNF 2504-2.5	25.5	22.8	1×2.5	5.2	13.7	210	46	69
		BNF 2504-5	25.5	22.8	2×2.5	9.5	27.3	410	46	69
		DK 2504-3	25.5	22.8	3×1	5.7	15	230	38	63
		DK 2504-4	25.5	22.8	4×1	7.4	19.9	310	38	63
	5	BNF 2505-2.5	25.75	22.2	1×2.5	9.2	22	240	50	73
		BNF 2505-3	25.75	22.2	2×1.5	10.8	26.4	280	50	73
		BNF 2505-3.5	25.75	22.2	1×3.5	12.3	30.7	320	50	73
		BNF 2505-5	25.75	22.2	2×2.5	16.7	44	460	50	73
		DK 2505-3	25.75	22.1	3×1	9.7	22.6	250	40	63
		DK 2505-4	25.75	22.1	4×1	12.4	30.3	320	40	63
	6	BNF 2506-2.5	26	21.4	1×2.5	12.5	27.3	250	53	76
		BNF 2506-3	26	21.4	2×1.5	14.6	32.8	290	53	76
		BNF 2506-3.5	26	21.4	1×3.5	15.1	35.9	330	53	76
		BNF 2506-5	26	21.4	2×2.5	22.5	54.8	470	53	76
		DK 2506-3	26	21.4	3×1	12.8	27	250	40	63
		DK 2506-4	26	21.4	4×1	16.8	37.4	330	40	63
	8	BNF 2508-2.5	26.25	20.5	1×2.5	15.8	32.8	250	58	85
		BNF 2508-3	26.25	20.5	2×1.5	18.5	39.4	290	58	85
		BNF 2508-3.5	26.25	20.5	1×3.5	21.2	46	340	58	85
		BNF 2508-5	26.25	20.5	2×2.5	28.7	65.8	480	58	85
		DK 2508-3	26	21.4	3×1	13.1	28.1	500	40	63
		DK 2508-4	26	21.4	4×1	16.8	37.5	330	40	63
	10	BNF 2510A-2.5	26.3	21.4	1×2.5	15.8	33	250	58	85
		DK 2510-3	26	21.6	3×1	12.7	27	250	40	63
		DK 2510-4	26	21.6	4×1	16.7	37.6	330	40	63
	12	BNF 2512-2.5	26	21.9	1×2.5	12.3	27.6	250	53	76
	16	BNF 2516-1.5	26	21.4	1×1.5	7.9	16.7	150	53	76

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



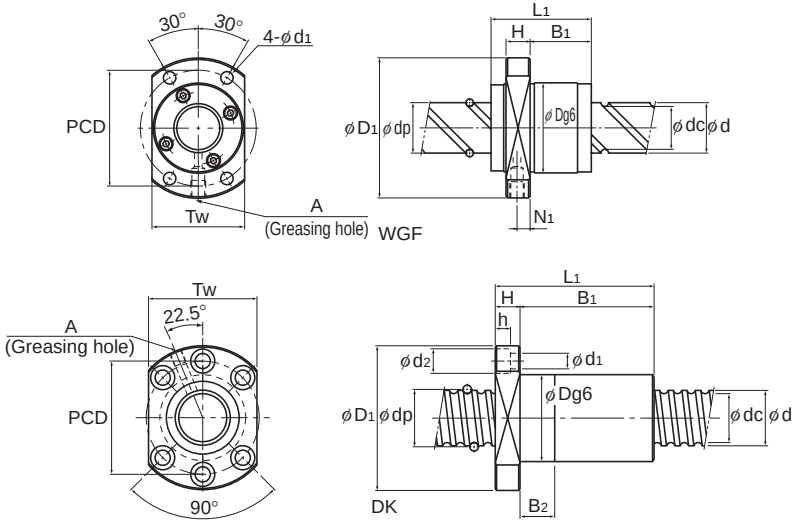
Unit: mm

Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	PCD	d_1	d_2	h	T_w	Greasing hole A	kg·cm²/mm	kg	kg/m
	36	11	25	—	57	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.21	3.5
	48	11	37	—	57	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.55	3.5
	43	11	32	10	51	5.5	9.5	5.5	39	M6	3.01×10^{-3}	0.33	3.5
	47	11	36	10	51	5.5	9.5	5.5	39	M6	3.01×10^{-3}	0.35	3.5
	40	11	29	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.52	3.34
	52	11	41	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.66	3.34
	45	11	34	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.6	3.34
	55	11	44	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.68	3.34
	46	11	35	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.38	3.35
	51	11	40	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.41	3.35
	44	11	33	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.61	3.19
	56	11	45	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.85	3.19
	50	11	39	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.79	3.19
	62	11	51	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.91	3.19
	52	11	41	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.41	3.19
	60	11	49	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.46	3.19
	58	15	43	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.07	3.12
	71	15	56	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.27	3.12
	66	15	51	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.29	3.12
	82	15	67	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.44	3.12
	62	12	50	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.48	3.35
	71	12	59	15	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.54	3.35
	70	18	52	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.43	3.27
	80	15	65	15	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.62	3.45
	85	15	70	20	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.65	3.45
	60	11	49	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.86	3.51
	60	11	49	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.96	3.6

For model number coding, see B-718.

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	25 to 30
Lead	5 to 90



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
25	25	BLK 2525-2.8	26	22	1×2.8	12.2	26.9	270	47	74
		BLK 2525-3.6	26	22	2×1.8	16.6	38.7	350	47	74
	50	WGF 2550-1	26	21.9	2×0.65	6.4	12.5	140	45	69
		WGF 2550-3	26	21.9	2×1.65	14.3	31.7	340	45	69
28	5	BNF 2805-2.5	28.75	25.2	1×2.5	9.7	24.6	250	55	85
		BNF 2805-3	28.75	25.2	2×1.5	11.3	29.5	300	55	85
		BNF 2805-3.5	28.75	25.2	1×3.5	12.9	34.4	350	55	85
		BNF 2805-5	28.75	25.2	2×2.5	17.5	49.4	500	55	85
		BNF 2805-7.5	28.75	25.2	3×2.5	24.8	73.8	740	55	85
		DK 2805-3	28.75	25.2	3×1	10.5	26.4	270	43	71
		DK 2805-4	28.75	25.2	4×1	13.4	35.2	360	43	71
	6	BNF 2806-2.5	28.75	25.2	1×2.5	9.6	24.6	250	55	85
		BNF 2806-3.5	28.75	25.2	1×3.5	12.9	34.5	350	55	85
		BNF 2806-5	28.75	25.2	2×2.5	17.5	49.4	500	55	85
		BNF 2806-7.5	28.75	25.2	3×2.5	24.8	73.8	740	55	85
		DK 2806-3	29	24.4	3×1	14	32	280	43	71
		DK 2806-4	29	24.4	4×1	18	42.5	370	43	71
	8	BNF 2808-2.5	29.25	23.6	1×2.5	16.8	36.8	270	60	104
		BNF 2808-3	29.25	23.6	2×1.5	19.6	44.2	320	60	104
		BNF 2808-5	29.25	23.6	2×2.5	30.4	73.7	530	60	104
	10	BNF 2810-2.5	29.75	22.4	1×2.5	24	48.2	280	65	106
		DK 2810-4	29.25	23.6	4×1	22.4	50	370	45	71
30	60	WGF 3060-1	31.25	26.4	2×0.65	8.9	18	170	55	89
		WGF 3060-3	31.25	26.4	2×1.65	19.9	45.7	410	55	89
	90	WGF 3090-1.5	31.25	26.4	2×0.75	9.7	25.8	200	55	89

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.

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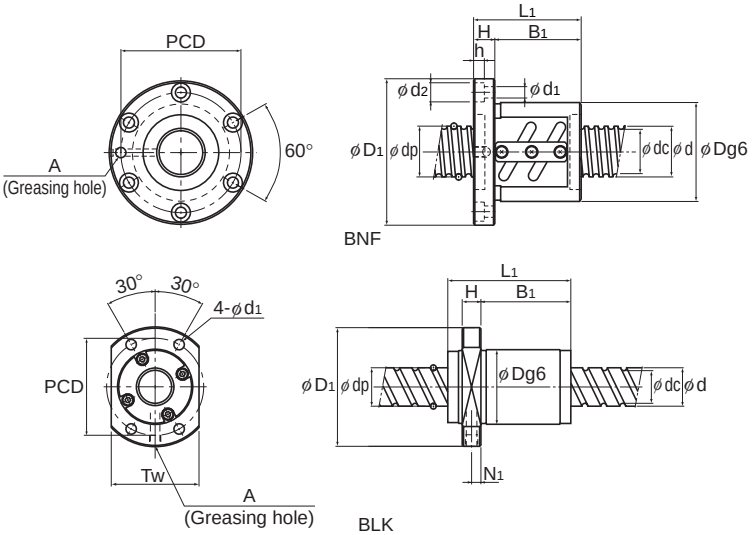


Unit: mm

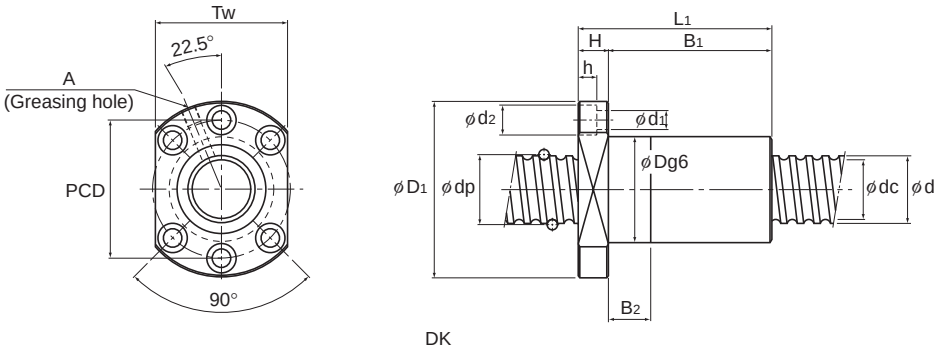
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	80	12	60	—	60	6.6	—	—	56	6	M6	3.01×10^{-3}	0.89	3.52
	55	12	35	—	60	6.6	—	—	56	6	M6	3.01×10^{-3}	0.64	3.52
	52	12	31.5	—	57	6.6	—	—	46	7	M6	3.01×10^{-3}	0.43	3.66
	102	12	81.5	—	57	6.6	—	—	46	7	M6	3.01×10^{-3}	0.85	3.66
	44	12	32	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.02	4.27
	54	12	42	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.92	4.27
	49	12	37	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.86	4.27
	59	12	47	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.06	4.27
	74	12	62	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.16	4.27
	49	12	37	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.48	4.27
	54	12	42	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.51	4.27
	50	12	38	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.87	4.36
	56	12	44	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.94	4.36
	68	12	56	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.09	4.36
	86	12	74	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.3	4.36
	53	12	41	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.5	4.36
	61	12	49	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.56	4.36
	68	18	50	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	1.75	4.02
	80	18	62	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	1.93	4.02
	92	18	74	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	2.11	4.02
	86	18	68	—	85	11	17.5	11	—	—	M6	4.74×10^{-3}	2.3	3.66
	84	15	69	20	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.82	4.18
	62	15	37	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.11	5.28
	122	15	97	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.9	5.28
	92	15	61.3	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.51	5.34

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

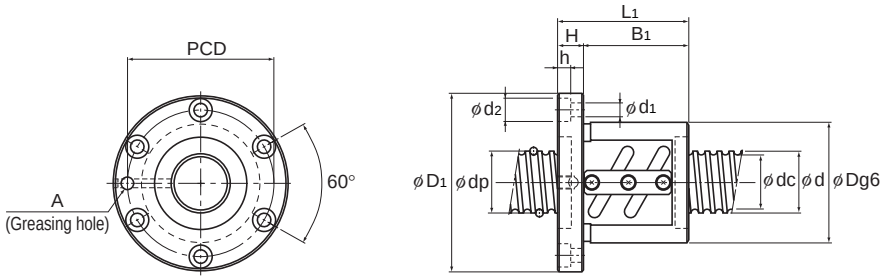
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	32
Lead	4 to 12



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
32	4	BNF 3204-7.5	32.5	30	3×2.5	14.8	52.7	740	54	81
		DK 3204-3	32.5	30.1	3×1	6.4	19.6	290	45	76
		DK 3204-4	32.5	30.1	4×1	8.2	26.1	380	45	76
	5	○ BNF 3205-2.5	32.75	29.2	1×2.5	10.2	28.1	280	58	85
		○ BNF 3205-3	32.75	29.2	2×1.5	12	33.8	340	58	85
		○ BNF 3205-4.5	32.75	29.2	3×1.5	17	50.7	500	58	85
		○ BNF 3205-5	32.75	29.2	2×2.5	18.5	56.4	560	58	85
		○ BNF 3205-7.5	32.75	29.2	3×2.5	26.3	84.5	810	58	85
		DK 3205-3	32.75	29.2	3×1	11.1	30.2	300	46	76
		DK 3205-4	32.75	29.2	4×1	14.2	40.3	400	46	76
		DK 3205-6	32.75	29.2	6×1	20.1	60.4	600	46	76
	6	○ BNF 3206-2.5	33	28.4	1×2.5	13.9	35.2	290	62	89
		○ BNF 3206-3	33	28.4	2×1.5	16.3	42.2	350	62	89
		○ BNF 3206-5	33	28.4	2×2.5	25.2	70.4	580	62	89
		DK 3206-3	33	28.4	3×1	14.9	37.1	310	48	76
		DK 3206-4	33	28.4	4×1	19.1	49.5	410	48	76
	8	○ BNF 3208A-2.5	33.25	27.5	1×2.5	17.8	42.2	300	66	100
		○ BNF 3208A-3	33.25	27.5	2×1.5	20.9	50.7	360	66	100
		○ BNF 3208A-4.5	33.25	27.5	3×1.5	29.5	76	530	66	100
		○ BNF 3208A-5	33.25	27.5	2×2.5	32.3	84.4	590	66	100
	10	○ BNF 3210A-2.5	33.75	26.4	1×2.5	26.1	56.2	310	74	108
		○ BNF 3210A-3	33.75	26.4	2×1.5	30.5	67.4	380	74	108
		○ BNF 3210A-3.5	33.75	26.4	1×3.5	34.8	78.6	440	74	108
		○ BNF 3210A-5	33.75	26.4	2×2.5	47.2	112.7	620	74	108
		DK 3210-3	33.75	26.4	3×1	25.7	52.2	300	54	87
		DK 3210-4	33.75	26.4	4×1	33	69.7	390	54	87
	12	○ BNF 3212-3.5	34	26.1	1×3.5	40.4	88.5	440	76	121
		DK 3212-4	33.75	26.4	4×1	34.2	73.9	420	54	87

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



BNF

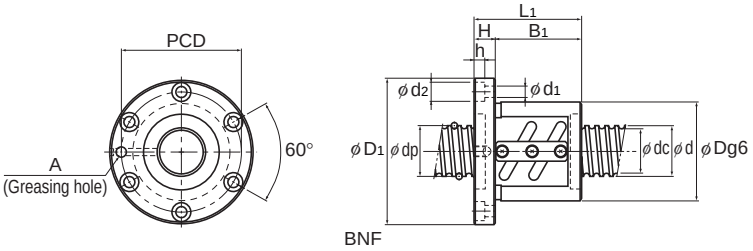
Unit: mm

Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L1	H	B1	B2	PCD	d1	d2	h	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
	60	11	49	—	67	6.6	11	6.5	—	M6	8.08×10⁻³	0.81	5.86
	44	11	33	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.44	5.86
	48	11	37	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.47	5.86
	41	12	29	—	71	6.6	11	6.5	—	M6	8.08×10⁻³	0.76	5.67
	53	12	41	—	71	6.6	11	6.5	—	M6	8.08×10⁻³	0.91	5.67
	63	12	51	—	71	6.6	11	6.5	—	M6	8.08×10⁻³	1.03	5.67
	56	12	44	—	71	6.6	11	6.5	—	M6	8.08×10⁻³	0.94	5.67
	71	12	59	—	71	6.6	11	6.5	—	M6	8.08×10⁻³	1.13	5.67
	47	12	35	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.5	5.67
	52	12	40	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.53	5.67
	62	12	50	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.6	5.67
	45	12	33	—	75	6.6	11	6.5	—	M6	8.08×10⁻³	0.94	5.47
	57	12	45	—	75	6.6	11	6.5	—	M6	8.08×10⁻³	1.12	5.47
	63	12	51	—	75	6.6	11	6.5	—	M6	8.08×10⁻³	1.21	5.47
	53	12	41	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.58	6.31
	61	12	49	10	63	6.6	11	6.5	59	M6	8.08×10⁻³	0.65	6.31
	58	15	43	—	82	9	14	8.5	—	M6	8.08×10⁻³	1.5	5.39
	71	15	56	—	82	9	14	8.5	—	M6	8.08×10⁻³	1.73	5.39
	87	15	72	—	82	9	14	8.5	—	M6	8.08×10⁻³	2.02	5.39
	82	15	67	—	82	9	14	8.5	—	M6	8.08×10⁻³	1.93	5.39
	70	15	55	—	90	9	14	8.5	—	M6	8.08×10⁻³	2.2	4.98
	87	15	72	—	90	9	14	8.5	—	M6	8.08×10⁻³	2.6	4.98
	80	15	65	—	90	9	14	8.5	—	M6	8.08×10⁻³	2.44	4.98
	100	15	85	—	90	9	14	8.5	—	M6	8.08×10⁻³	2.92	4.98
	80	15	65	15	69	9	14	8.5	66	M6	8.08×10⁻³	1.22	4.98
	90	15	75	20	69	9	14	8.5	66	M6	8.08×10⁻³	1.34	4.98
	98	18	80	—	98	11	17.5	11	—	M6	8.08×10⁻³	3.4	4.9
	98	15	83	25	69	9	14	8.5	66	M6	8.08×10⁻³	1.43	5.2

For model number coding, see B-718.

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	32 to 36
Lead	6 to 36



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
32	32	BLK 3232-2.8	33.25	28.3	1×2.8	17.3	41.4	340	58	92
		BLK 3232-3.6	33.25	28.3	2×1.8	23.7	59.5	440	58	92
36	6	○ BNF 3606-2.5	36.75	33.2	1×2.5	10.7	31.8	310	65	100
		○ BNF 3606-3	36.75	33.2	2×1.5	12.5	38	370	65	100
		○ BNF 3606-5	36.75	33.2	2×2.5	19.4	63.4	610	65	100
		○ BNF 3606-7.5	36.75	33.2	3×2.5	27.5	95.2	890	65	100
	8	○ BNF 3608-2.5	37.25	31.6	1×2.5	18.8	47.5	330	70	114
		○ BNF 3608-5	37.25	31.6	2×2.5	34.1	95.1	650	70	114
		○ BNF 3608-7.5	37.25	31.6	3×2.5	48.3	142.1	950	70	114
	10	○ BNF 3610-2.5	37.75	30.5	1×2.5	27.6	63.3	350	75	120
		○ BNF 3610-5	37.75	30.5	2×2.5	50.1	126.4	680	75	120
		○ BNF 3610-7.5	37.75	30.5	3×2.5	71.1	190.1	990	75	120
		DK 3610-3	37.75	30.5	3×1	28.8	63.8	350	58	98
		DK 3610-4	37.75	30.5	4×1	36.8	85	470	58	98
	12	○ BNF 3612-2.5	38	30.1	1×2.5	32.1	71.4	350	78	123
		○ BNF 3612-5	38	30.1	2×2.5	58.4	142.1	690	78	123
	16	○ BNF 3616-2.5	38	30.1	1×2.5	32.1	71.4	350	78	123
	20	○ BNF 3620-1.5	37.75	30.5	1×1.5	17.6	38.3	220	70	103
		BLK 3620-5.6	37.75	31.2	2×2.8	54.9	134.3	760	70	110
	24	BLK 3624-5.6	38	30.7	2×2.8	63.8	151.9	770	75	115
	36	BLK 3636-2.8	37.4	31.7	1×2.8	22.4	54.1	390	66	106
		BLK 3636-3.6	37.4	31.7	2×1.8	30.8	78	490	66	106

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.

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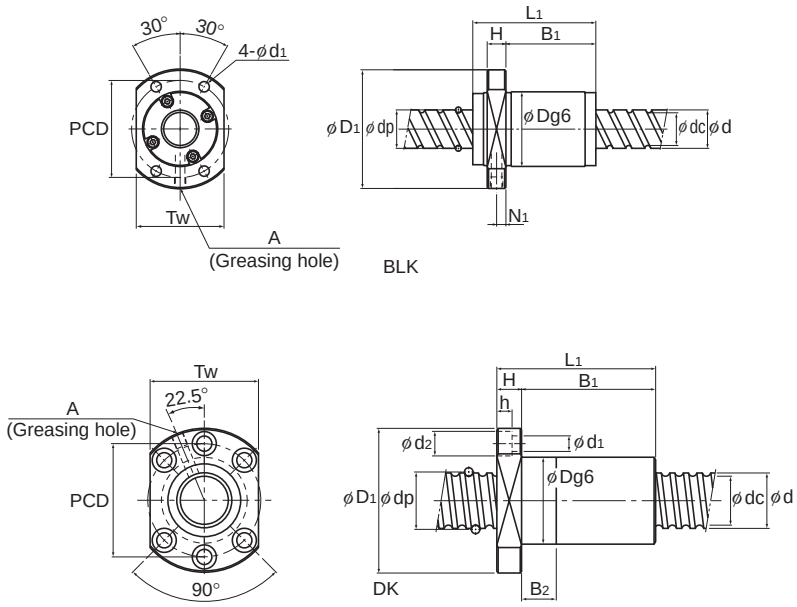


Unit: mm

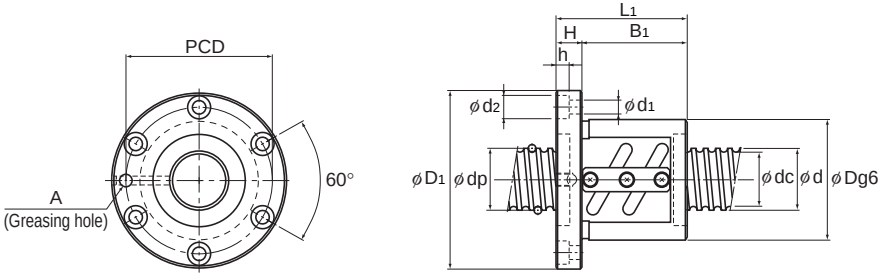
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	102	15	77	—	74	9	—	—	68	7.5	M6	8.08×10^{-3}	1.78	5.83
	70	15	45	—	74	9	—	—	68	7.5	M6	8.08×10^{-3}	1.32	5.83
	53	15	38	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.29	7.39
	62	15	47	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.43	7.39
	71	15	56	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.57	7.39
	89	15	74	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.85	7.39
	68	18	50	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.11	6.96
	92	18	74	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.57	6.96
	116	18	98	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	3.03	6.96
	81	18	63	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	2.75	6.51
	111	18	93	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	3.45	6.51
	141	18	123	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	4.15	6.51
	82	18	64	15	77	11	17.5	11	75	—	M6	1.29×10^{-2}	1.52	6.51
	93	18	75	20	77	11	17.5	11	75	—	M6	1.29×10^{-2}	1.66	6.51
	87	18	69	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	3.14	6.41
	123	18	105	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	4.07	6.41
	92	18	74	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	3.27	6.8
	75	15	60	—	85	9	14	8.5	—	—	M6	1.29×10^{-2}	1.91	7.24
	78	17	45	—	90	11	—	—	80	8.5	M6	1.29×10^{-2}	2.23	6.49
	94	18	59	—	94	11	—	—	86	9	M6	1.29×10^{-2}	3.05	6.39
	113	17	86	—	85	11	—	—	76	8.5	M6	1.29×10^{-2}	2.61	7.34
	77	17	50	—	85	11	—	—	76	8.5	M6	1.29×10^{-2}	1.93	7.34

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

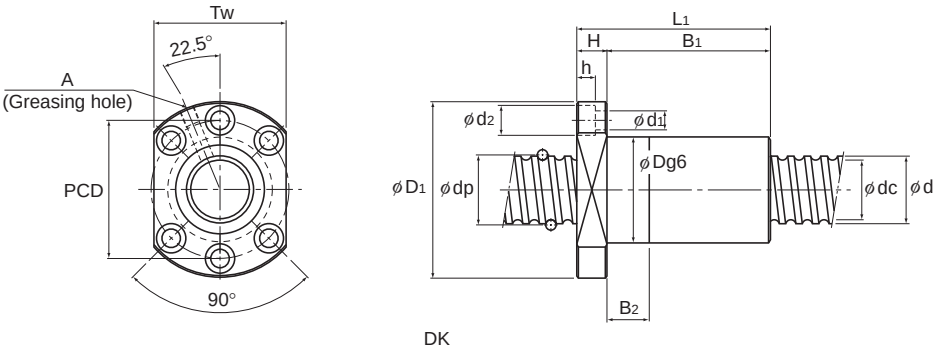
Screw shaft outer diameter	40
Lead	5 to 10



BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
40	5	BNF 4005-3	40.75	37.2	2×1.5	13	42.3	400	67	101
		BNF 4005-4.5	40.75	37.2	3×1.5	18.5	63.5	600	67	101
		BNF 4005-6	40.75	37.2	4×1.5	23.7	84.7	780	67	101
	6	BNF 4006-2.5	41	36.4	1×2.5	15.3	44.1	350	70	104
		BNF 4006-5	41	36.4	2×2.5	27.7	88.1	690	70	104
		BNF 4006-7.5	41	36.4	3×2.5	39.2	132.3	1010	70	104
	8	BNF 4008-2.5	41.25	35.5	1×2.5	19.6	52.8	360	74	108
		BNF 4008-3	41.25	35.5	2×1.5	22.9	63.4	430	74	108
		BNF 4008-5	41.25	35.5	2×2.5	35.7	105.8	710	74	108
	10	BNF 4010-2.5	41.75	34.4	1×2.5	29	70.4	380	82	124
		BNF 4010-3	41.75	34.4	2×1.5	33.8	84.5	450	82	124
		BNF 4010-3.5	41.75	34.4	1×3.5	38.8	99	520	82	124
		BNF 4010-5	41.75	34.4	2×2.5	52.7	141.1	740	82	124
		DK 4010-3	41.75	34.4	3×1	29.8	69.3	380	62	104
		DK 4010-4	41.75	34.4	4×1	38.1	92.4	500	62	104

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



Unit: mm

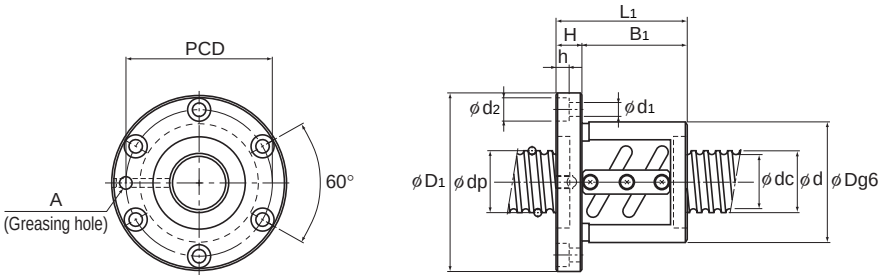
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	A	kg·cm²/mm	kg	kg/m
	56	15	41	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.31	9.06
	66	15	51	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.46	9.06
	81	15	66	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.69	9.06
	48	15	33	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.32	8.82
	66	15	51	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.63	8.82
	84	15	69	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.94	8.82
	58	15	43	—	90	9	14	8.5	—	M6	1.97×10^{-2}	1.7	8.72
	71	15	56	—	90	9	14	8.5	—	M6	1.97×10^{-2}	1.97	8.72
	82	15	67	—	90	9	14	8.5	—	M6	1.97×10^{-2}	2.19	8.72
	73	18	55	—	102	11	17.5	11	—	M6	1.97×10^{-2}	2.86	8.22
	90	18	72	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.33	8.22
	83	18	65	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.14	8.22
	103	18	85	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.69	8.22
	83	18	65	15	82	11	17.5	11	79	PT 1/8	1.97×10^{-2}	3.14	8.22
	93	18	75	20	82	11	17.5	11	79	PT 1/8	1.97×10^{-2}	3.41	8.22

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

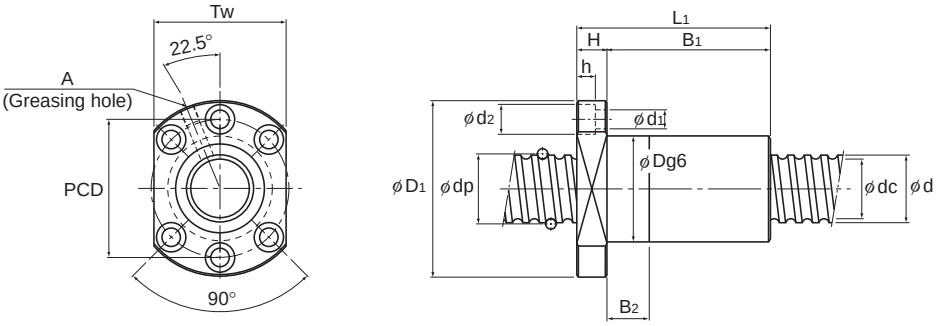
Screw shaft outer diameter	40
Lead	12 to 40



BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
40	12	○ BNF 4012-2.5	42	34.1	1×2.5	33.9	79.2	390	84	126
		○ BNF 4012-3.5	42	34.1	1×3.5	45.4	110.7	530	84	126
		○ BNF 4012-5	42	34.1	2×2.5	61.6	158.3	750	84	126
		○ DK 4012-3	41.75	34.4	3×1	30.6	72.3	390	62	104
		○ DK 4012-4	41.75	34.4	4×1	39.2	96.4	520	62	104
	16	○ BNF 4016-5	42	34.1	2×2.5	61.4	158.8	740	84	126
		○ DK 4016-4	41.75	34.4	4×1	39.1	96.8	520	62	104
	20	○ DK 4020-3	41.75	34.7	3×1	29.4	69.3	750	62	104
	40	BLK 4040-2.8	41.75	35.2	1×2.8	28.2	68.9	430	73	114
		BLK 4040-3.6	41.75	35.2	2×1.8	38.7	99.2	550	73	114

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.



Unit: mm

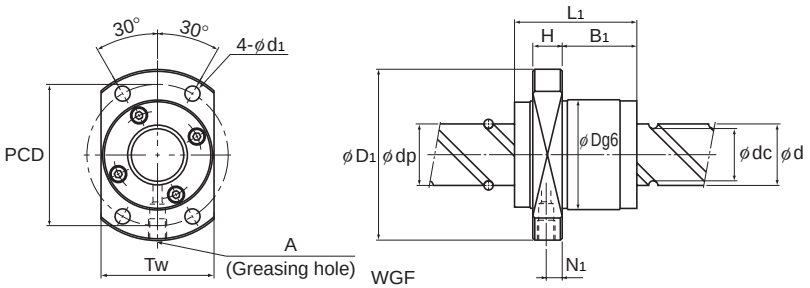
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	83	18	65	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	3.31	8.12
	95	18	77	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	3.66	8.12
	119	18	101	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	4.36	8.12
	90	18	72	20	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	1.77	8.5
	103	18	85	25	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	1.95	8.5
	152	22	130	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	5.52	8.55
	120	18	102	30	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.19	8.83
	123	18	105	30	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.23	9.03
	125	17	96.5	—	93	11	—	—	84	8.5	M6	1.97×10^{-2}	3.4	9.01
	85	17	56.5	—	93	11	—	—	84	8.5	M6	1.97×10^{-2}	2.48	9.01

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

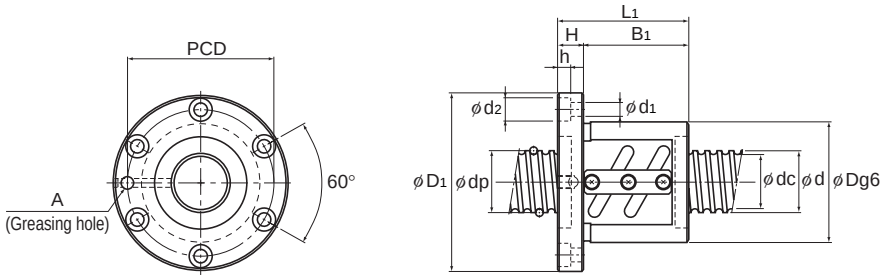
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	40 to 45
Lead	6 to 80



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1
40	80	WGF 4080-1	41.75	35.2	2×0.65	15	32.1	220	73	114
		WGF 4080-3	41.75	35.2	2×1.65	33.4	81.4	530	73	114
45	6	BNF 4506A-2.5	46	41.4	1×2.5	16	49.6	390	80	114
		BNF 4506A-5	46	41.4	2×2.5	29	99	750	80	114
		BNF 4506A-7.5	46	41.4	3×2.5	41.2	150	1100	80	114
	8	BNF 4508-2.5	46.25	40.6	1×2.5	20.7	59.5	400	85	127
		BNF 4508-5	46.25	40.6	2×2.5	37.4	118.6	770	85	127
		BNF 4508-7.5	46.25	40.6	3×2.5	53.1	178.4	1140	85	127
	10	BNF 4510-2.5	46.75	39.5	1×2.5	30.7	79.3	420	88	132
		BNF 4510-3	46.75	39.5	2×1.5	35.9	95.2	500	88	132
		BNF 4510-5	46.75	39.5	2×2.5	55.6	158.8	800	88	132
		BNF 4510-7.5	46.75	39.5	3×2.5	78.8	238.1	1190	88	132
	12	BNF 4512-5	47	39.2	2×2.5	65.2	178.4	820	90	130
	20	BNF 4520-1.5	47.7	37.9	1×1.5	44.2	99	350	98	142

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model WGF cannot be attached with seal.



BNF

Unit: mm

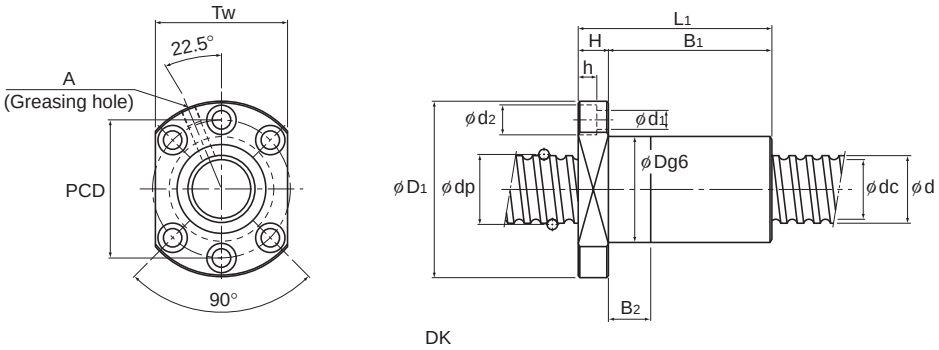
Nut dimensions											Screw shaft inertia moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg·cm²/mm	kg	kg/m
	79	17	50.5	93	11	—	—	74	8.5	M6	1.97×10^{-2}	2.34	9.38
	159	17	130.5	93	11	—	—	74	8.5	M6	1.97×10^{-2}	4.18	9.38
	53	15	38	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	1.76	11.31
	71	15	56	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	2.18	11.31
	89	15	74	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	2.59	11.31
	68	18	50	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	2.76	11.21
	92	18	74	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.42	11.21
	116	18	98	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.09	11.21
	81	18	63	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.43	10.65
	94	18	76	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.83	10.65
	111	18	93	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.35	10.65
	141	18	123	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	5.26	10.65
	119	18	101	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.74	10.54
	95	20	75	120	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	5.04	10.37

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

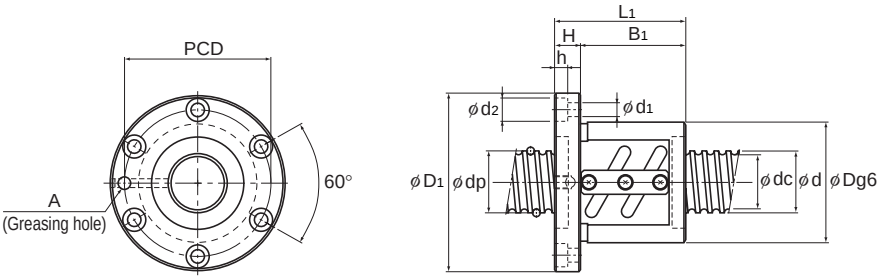
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	50
Lead	5 to 10



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
50	5	○ BNF 5005-4.5	50.75	47.2	3×1.5	20.2	79.5	710	80	114
	8	○ BNF 5008-2.5	51.25	45.5	1×2.5	21.6	66.2	430	87	129
		○ BNF 5008-5	51.25	45.5	2×2.5	39.1	132.3	840	87	129
		○ BNF 5008-7.5	51.25	45.5	3×2.5	55.4	198.9	1230	87	129
	10	○ BNF 5010-2.5	51.75	44.4	1×2.5	32	88.2	450	93	135
		○ BNF 5010-3	51.75	44.4	2×1.5	37.5	105.8	540	93	135
		○ BNF 5010-3.5	51.75	44.4	1×3.5	42.8	123.5	620	93	135
		○ BNF 5010-5	51.75	44.4	2×2.5	58.2	176.4	880	93	135
		○ BNF 5010-7.5	51.75	44.4	3×2.5	82.5	264.6	1290	93	135
		DK 5010-3	51.75	44.4	3×1	33.9	90.7	470	72	123
		DK 5010-4	51.75	44.4	4×1	43.4	120.5	610	72	123
		DK 5010-6	51.75	44.4	6×1	62.7	186.8	930	72	123

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.



BNF

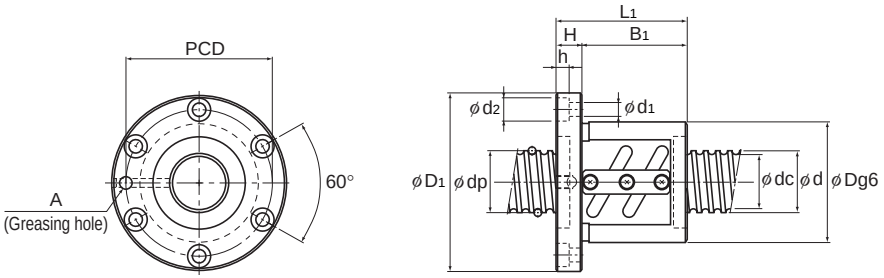
Unit: mm

Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	Greasing hole A	kg·cm²/mm	kg	kg/m
	68	15	53	—	96	9	14	8.5	—	PT 1/8	4.82×10^{-2}	1.91	14.4
	61	18	43	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	2.52	14.0
	85	18	67	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.16	14.0
	109	18	91	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.8	14.0
	73	18	55	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.33	13.38
	90	18	72	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.88	13.38
	83	18	65	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.66	13.38
	103	18	85	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	4.31	13.38
	133	18	115	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	5.28	13.38
	83	18	65	15	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.14	13.38
	93	18	75	20	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.3	13.38
	114	18	96	30	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.65	13.38

For model number coding, see B-718.

No Preload Type of Precision Ball Screw

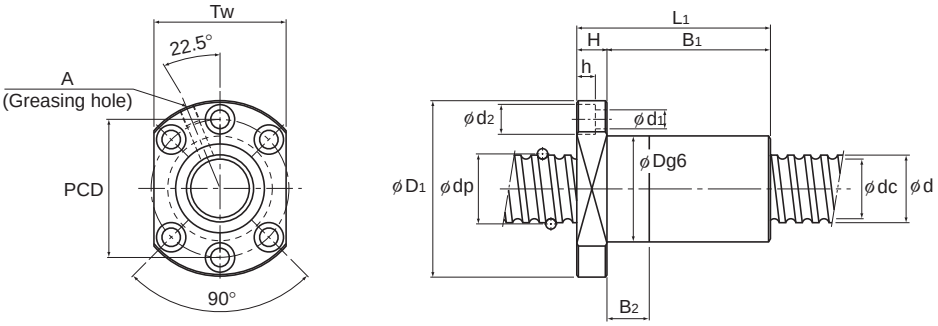
Screw shaft outer diameter	50
Lead	12 to 50



BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
50	12	DK 5012-3	52.25	43.3	3×1	45.8	113	490	75	129
		DK 5012-4	52.25	43.3	4×1	58.6	150.6	640	75	129
		○ BNF 5012-2.5	52.25	43.3	1×2.5	43.4	109.8	470	100	146
		○ BNF 5012-3.5	52.25	43.3	1×3.5	58	153.9	640	100	146
		○ BNF 5012-5	52.25	43.3	2×2.5	78.8	220.5	910	100	146
	16	DK 5016-3	52.25	43.3	3×1	45.7	113.3	490	75	129
		DK 5016-4	52.25	43.3	4×1	58.5	151	640	75	129
		○ BNF 5016-2.5	52.7	42.9	1×2.5	72.6	183.3	620	105	152
		○ BNF 5016-5	52.7	42.9	2×2.5	132.3	366.5	1180	105	152
	20	DK 5020-3	52.25	43.6	3×1	44.2	108.8	470	75	129
		○ BNF 5020-2.5	52.7	42.9	1×2.5	72.5	183.3	620	105	152
	50	BLK 5050-2.8	52.2	44.1	1×2.8	42.2	107.8	530	90	135
		BLK 5050-3.6	52.2	44.1	2×1.8	57.8	155	670	90	135

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see B-778.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.



Unit: mm

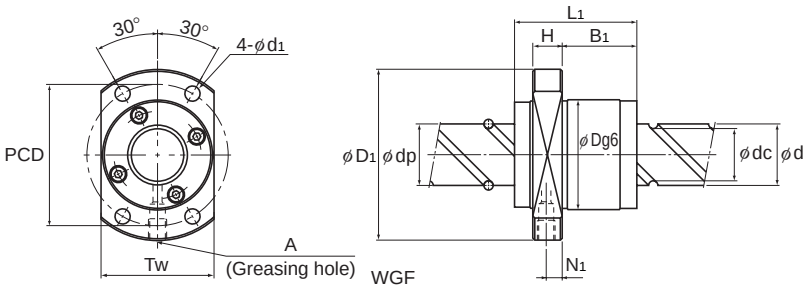
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg·cm²/mm	kg	kg/m
	97	22	75	20	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	2.91	12.74
	110	22	88	25	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.16	12.74
	87	22	65	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	4.57	12.74
	99	22	77	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	5.05	12.74
	123	22	101	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	6.02	12.74
	111	22	89	25	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.18	13.41
	129	22	107	30	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.52	13.41
	116	25	91	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	6.98	12.5
	164	25	139	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	9.18	12.5
	136	28	108	30	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.94	13.8
	141	28	113	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	8.32	13.08
	156	20	122	—	112	14	—	—	104	10	M6	4.82×10^{-2}	6.18	14.08
	106	20	72	—	112	14	—	—	104	10	M6	4.82×10^{-2}	4.45	14.08

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

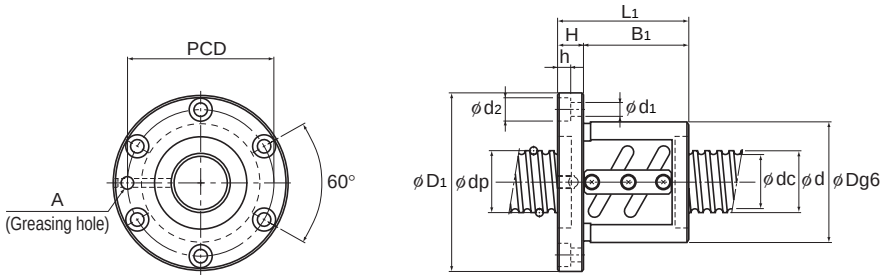
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	50 to 55
Lead	10 to 100



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1
50	100	WGF 50100-1	52.2	44.1	2×0.65	22.4	50.1	270	90	135
		WGF 50100-3	52.2	44.1	2×1.65	49.9	127.2	650	90	135
55	10	BNF 5510-2.5	56.75	49.5	1×2.5	33.4	97	490	102	144
		BNF 5510-5	56.75	49.5	2×2.5	60.7	194	950	102	144
		BNF 5510-7.5	56.75	49.5	3×2.5	85.9	291.1	1390	102	144
	12	BNF 5512-2.5	57	49.2	1×2.5	39.3	108.8	500	105	147
		BNF 5512-3	57	49.2	2×1.5	46	131.3	590	105	147
		BNF 5512-3.5	57	49.2	1×3.5	52.4	152.9	680	105	147
		BNF 5512-5	57	49.2	2×2.5	71.3	218.5	960	105	147
		BNF 5512-7.5	57	49.2	3×2.5	100.9	327.3	1420	105	147
	16	BNF 5516-2.5	57.7	47.9	1×2.5	76.1	201.9	650	110	158
		BNF 5516-5	57.7	47.9	2×2.5	138.2	402.8	1280	110	158
	20	BNF 5520-2.5	57.7	47.9	1×2.5	76	201.9	660	112	158
		BNF 5520-5	57.7	47.9	2×2.5	138.2	403.8	1280	112	158

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WGF cannot be attached with seal.



BNF

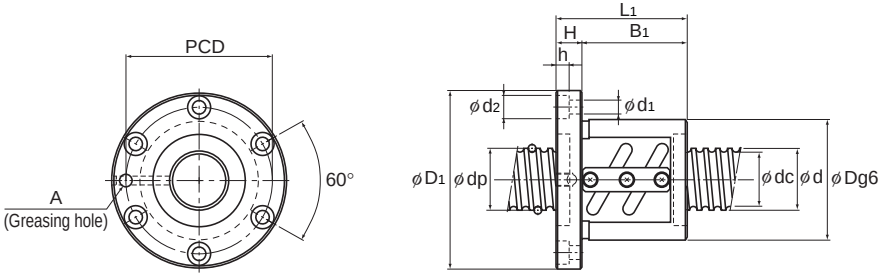
Unit: mm

Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg·cm²/mm	kg	kg/m
	98	20	64	112	14	—	—	92	10	M6	4.82×10^{-2}	4.18	14.66
	198	20	164	112	14	—	—	92	10	M6	4.82×10^{-2}	7.63	14.66
	81	18	63	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	4.19	16.43
	111	18	93	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.36	16.43
	141	18	123	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	6.54	16.43
	93	18	75	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.01	16.29
	107	18	89	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.6	16.29
	105	18	87	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.52	16.29
	129	18	111	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	6.54	16.29
	165	18	147	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	8.07	16.29
	116	25	91	133	14	20	13	—	—	PT 1/8	7.05×10^{-2}	7.4	15.46
	164	25	139	133	14	20	13	—	—	PT 1/8	7.05×10^{-2}	9.73	15.46
	127	28	99	134	14	20	13	—	—	PT 1/8	7.05×10^{-2}	8.4	16.1
	187	28	159	134	14	20	13	—	—	PT 1/8	7.05×10^{-2}	11.45	16.1

For model number coding, see B-718.

No Preload Type of Precision Ball Screw

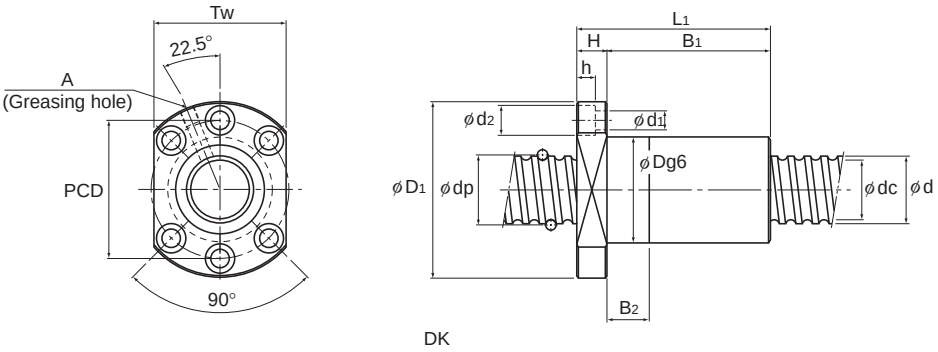
Screw shaft outer diameter	63
Lead	10 to 20



BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
63	10	BNF 6310-2.5	64.75	57.7	1×2.5	35.4	111.7	550	108	154
		BNF 6310-5	64.75	57.7	2×2.5	64.2	222.5	1050	108	154
		BNF 6310-7.5	64.75	57.7	3×2.5	90.9	334.2	1550	108	154
		DK 6310-4	64.75	57.7	4×1	49.5	160.7	780	85	146
		DK 6310-6	64.75	57.7	6×1	70.3	242.1	1140	85	146
	12	BNF 6312A-2.5	65.25	56.3	1×2.5	48.1	139.2	560	115	161
		BNF 6312A-5	65.25	56.3	2×2.5	87.4	278.3	1090	115	161
		DK 6312-3	65.25	56.3	3×1	51.9	147.4	600	90	146
		DK 6312-4	65.25	56.3	4×1	66.4	196.6	785	90	146
	16	BNF 6316-5	65.7	55.9	2×2.5	147	462.6	1420	122	184
	20	BNF 6320-2.5	65.7	55.9	1×2.5	81	231.3	740	122	180
		BNF 6320-5	65.7	55.9	2×2.5	147	463.5	1420	122	180
		DK 6320-3	65.7	55.9	3×1	83.5	229.3	1470	95	159

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



Unit: mm

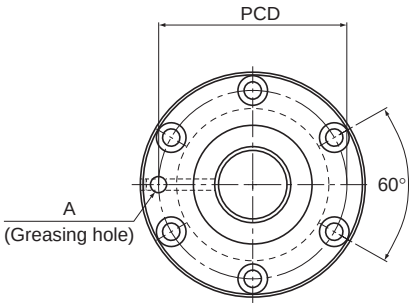
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	A	kg·cm²/mm	kg	kg/m
	77	22	55	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	4.57	21.93
	107	22	85	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	5.77	21.93
	137	22	115	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	6.98	21.93
	97	22	75	20	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.28	21.93
	118	22	96	30	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.7	21.93
	87	22	65	—	137	14	20	13	—	PT 1/8	1.21×10^{-1}	5.8	21.14
	123	22	101	—	137	14	20	13	—	PT 1/8	1.21×10^{-1}	7.56	21.14
	98	22	76	20	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.71	21.14
	111	22	89	25	122	14	20	13	110	PT 1/8	1.21×10^{-1}	4.04	21.14
	160	24	136	—	152	18	26	17.5	—	PT 1/8	1.21×10^{-1}	11.82	20.85
	127	28	99	—	150	18	26	17.5	—	PT 1/8	1.21×10^{-1}	10.1	21.57
	187	28	159	—	150	18	26	17.5	—	PT 1/8	1.21×10^{-1}	13.58	21.57
	136	28	108	30	129	18	26	17.5	121	PT 1/8	1.21×10^{-1}	6.17	21.57

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Precision Ball Screw

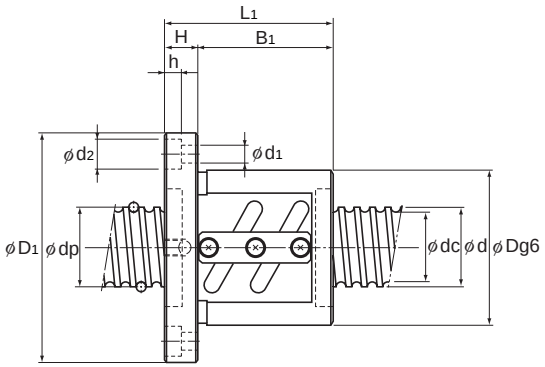
Screw shaft outer diameter	70 to 100
Lead	10 to 20



BNF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
70	10	BNF 7010-2.5	71.75	64.5	1×2.5	36.8	123.5	590	125	167
		BNF 7010-5	71.75	64.5	2×2.5	66.9	247	1140	125	167
		BNF 7010-7.5	71.75	64.5	3×2.5	94.9	371.4	1680	125	167
	12	BNF 7012-2.5	72	64.2	1×2.5	43.5	139.2	600	128	170
		BNF 7012-5	72	64.2	2×2.5	78.9	278.3	1160	128	170
		BNF 7012-7.5	72	64.2	3×2.5	111.7	417.5	1710	128	170
	20	BNF 7020-5	72.7	62.9	2×2.5	153.9	514.5	1550	130	186
80	10	BNF 8010-2.5	81.75	75.2	1×2.5	38.9	141.1	650	130	176
		BNF 8010-5	81.75	75.2	2×2.5	70.6	283.2	1270	130	176
		BNF 8010-7.5	81.75	75.2	3×2.5	100	424.3	1860	130	176
	20	BNF 8020A-2.5	82.7	72.9	1×2.5	90.1	294	890	143	204
		BNF 8020A-5	82.7	72.9	2×2.5	163.7	589	1720	143	204
		BNF 8020A-7.5	82.7	72.9	3×2.5	231.6	883.2	2520	143	204
100	20	BNF 10020A-2.5	102.7	92.9	1×2.5	99	368.5	2110	170	243
		BNF 10020A-5	102.7	92.9	2×2.5	179.3	737	4080	170	243
		BNF 10020A-7.5	102.7	92.9	3×2.5	253.8	1105.4	6010	170	243

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNF

Unit: mm

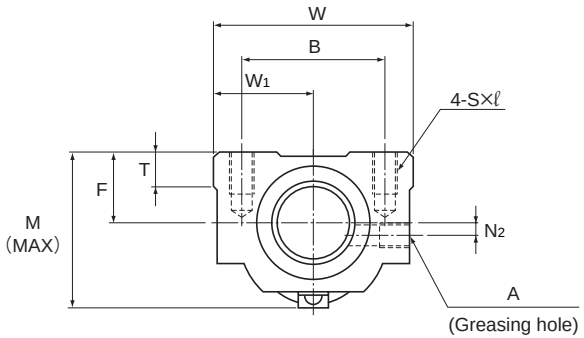
Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	PCD	d_1	d_2	h	Greasing hole A	kg·cm²/mm	kg	kg/m
	81	18	63	145	11	17.5	11	PT 1/8	1.85×10^{-1}	5.8	27.4
	111	18	93	145	11	17.5	11	PT 1/8	1.85×10^{-1}	7.49	27.4
	141	18	123	145	11	17.5	11	PT 1/8	1.85×10^{-1}	9.19	27.4
	93	18	75	148	11	17.5	11	PT 1/8	1.85×10^{-1}	6.89	27.24
	129	18	111	148	11	17.5	11	PT 1/8	1.85×10^{-1}	9.08	27.24
	165	18	147	148	11	17.5	11	PT 1/8	1.85×10^{-1}	11.26	27.24
	185	28	157	158	18	26	17.5	PT 1/8	1.85×10^{-1}	14.5	27.0
	77	22	55	152	14	20	13	PT 1/8	3.16×10^{-1}	5.9	36.26
	107	22	85	152	14	20	13	PT 1/8	3.16×10^{-1}	7.53	36.26
	137	22	115	152	14	20	13	PT 1/8	3.16×10^{-1}	9.15	36.26
	127	28	99	172	18	26	17.5	PT 1/8	3.16×10^{-1}	12.68	35.81
	187	28	159	172	18	26	17.5	PT 1/8	3.16×10^{-1}	17.12	35.81
	247	28	219	172	18	26	17.5	PT 1/8	3.16×10^{-1}	21.56	35.81
	131	32	99	205	22	32	21.5	PT 1/8	7.71×10^{-1}	18.28	57.13
	191	32	159	205	22	32	21.5	PT 1/8	7.71×10^{-1}	24.2	57.13
	251	32	219	205	22	32	21.5	PT 1/8	7.71×10^{-1}	30.12	57.13

For model number coding, see B-718.

Description of Each Option⇒A-815 Dimensions⇒B-777

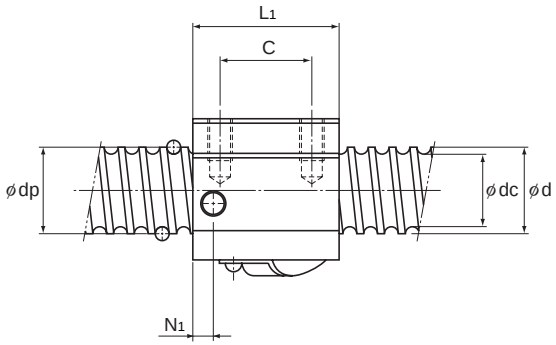
No Preload Type of Precision Ball Screw (Square Nut)

Screw shaft outer diameter	14 to 45
Lead	4 to 12



BNT

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
14	4	BNT 1404-3.6	14.4	11.5	1×3.65	6.8	12.6	190
	5	BNT 1405-2.6	14.5	11.2	1×2.65	7.2	12.6	150
16	5	BNT 1605-2.6	16.75	13.5	1×2.65	7.8	14.7	170
18	8	BNT 1808-3.6	19.3	14.4	1×3.65	18.2	34.4	270
20	5	BNT 2005-2.6	20.5	17.2	1×2.65	8.7	18.3	200
	10	BNT 2010-2.6	21.25	16.4	1×2.65	14.7	27.8	220
25	5	BNT 2505-2.6	25.5	22.2	1×2.65	9.6	23	240
	10	BNT 2510-5.3	26.8	20.2	2×2.65	43.4	92.8	520
28	6	BNT 2806-2.6	28.5	25.2	1×2.65	10.1	25.8	270
		BNT 2806-5.3	28.5	25.2	2×2.65	18.3	51.6	510
32	10	BNT 3210-2.6	33.75	27.2	1×2.65	27.3	59.5	330
		BNT 3210-5.3	33.75	27.2	2×2.65	49.6	118.9	640
36	10	BNT 3610-2.6	37	30.5	1×2.65	28.7	65.6	360
		BNT 3610-5.3	37	30.5	2×2.65	52.1	131.2	700
45	12	BNT 4512-5.3	46.5	39.2	2×2.65	68.1	186.7	860



BNT

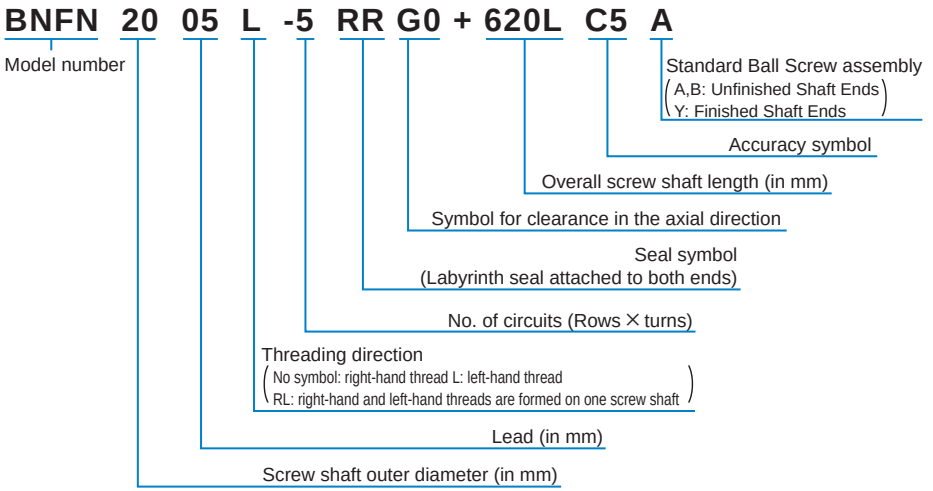
Unit: mm

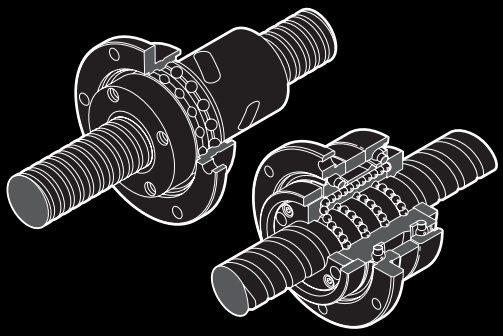
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Width	Center height	Overall length	Mounting hole			W_1	T	M	N_1	N_2	Greasing hole			
W	F	L_1	B	C	S×ℓ						A	kg·cm²/mm	kg	kg/m
34	13	35	26	22	M4×7	17	6	30	6	2	M6	2.96×10^{-4}	0.15	0.93
34	13	35	26	22	M4×7	17	6	31	6	2	M6	2.96×10^{-4}	0.15	0.92
42	16	36	32	22	M5×8	21	21.5	32.5	6	2	M6	5.05×10^{-4}	0.3	1.24
48	17	56	35	35	M6×10	24	10	44	8	3	M6	8.09×10^{-4}	0.47	1.46
48	17	35	35	22	M6×10	24	9	39	5	3	M6	1.23×10^{-3}	0.28	2.06
48	18	58	35	35	M6×10	24	9	46	10	2	M6	1.23×10^{-3}	0.5	1.99
60	20	35	40	22	M8×12	30	9.5	45	7	5	M6	3.01×10^{-3}	0.41	3.35
60	23	94	40	60	M8×12	30	10	55	10	—	M6	3.01×10^{-3}	1.18	2.79
60	22	42	40	18	M8×12	30	10	50	8	—	M6	4.74×10^{-3}	0.81	4.42
60	22	67	40	40	M8×12	30	10	50	8	—	M6	4.74×10^{-3}	0.78	4.42
70	26	64	50	45	M8×12	35	12	62	10	—	M6	8.08×10^{-3}	1.3	4.98
70	26	94	50	60	M8×12	35	12	62	10	—	M6	8.08×10^{-3}	2.0	4.98
86	29	64	60	45	M10×16	43	17	67	11	—	M6	1.29×10^{-2}	1.8	6.54
86	29	96	60	60	M10×16	43	17	67	11	—	M6	1.29×10^{-2}	2.4	6.54
100	36	115	75	75	M12×20	50	20.5	80	13	—	M6	3.16×10^{-2}	4.1	10.56

For model number coding, see B-718.

Model number coding

Model number coding





Precision Rotary Ball Screw
Model DIR and BLR

Ball Screw

B Product Specifications

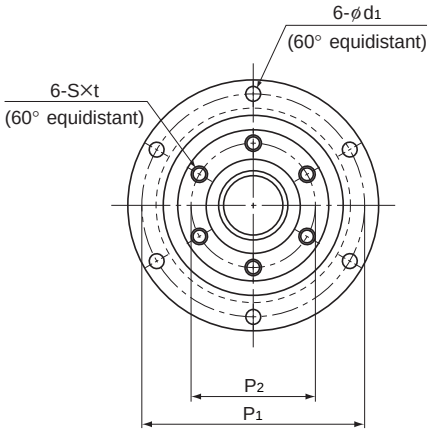
Dimensional Drawing, Dimensional Table

A Technical Descriptions of the Products (Separate)

Technical Descriptions

* Please see the separate "A Technical Descriptions of the Products".

Model DIR Standard-Lead Rotary-Nut Ball Screw



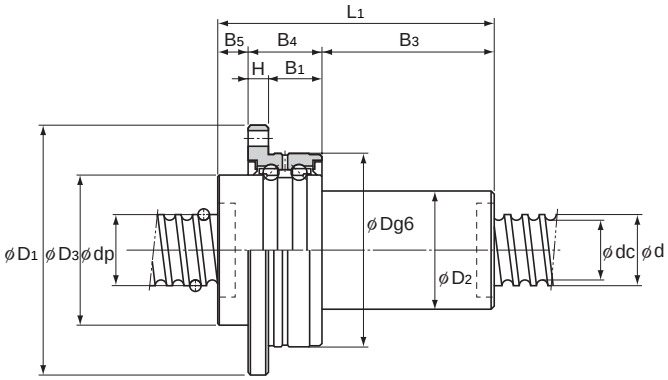
Model No.	Screw shaft outer diameter d	Thread minor diameter dc	Lead Ph	Ball center-to-center diameter dp	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/µm	Outer diameter D	Flange diameter D1	Overall length L1	D3 h7
DIR 1605-6	16	13.2	5	16.75	7.4	13	310	48	64	79	36
DIR 2005-6	20	17.2	5	20.75	8.5	17.3	310	56	72	80	43.5
DIR 2505-6	25	22.2	5	25.75	9.7	22.6	490	66	86	88	52
DIR 2510-4		21.6	10	26	9	18	330	66	86	106	52
DIR 3205-6	32	29.2	5	32.75	11.1	30.2	620	78	103	86	63
DIR 3206-6		28.4	6	33	14.9	37.1	630	78	103	97	63
DIR 3210-6		26.4	10	33.75	25.7	52.2	600	78	103	131	63
DIR 3610-6	36	30.5	10	37.75	28.8	63.8	710	92	122	151	72
DIR 4010-6	40	34.7	10	41.75	29.8	69.3	750	100	130	142	79.5
DIR 4012-6		34.4	12	41.75	30.6	72.3	790	100	130	167	79.5

Model number coding

DIR2005-6 RR G0 +520L C1

- DIR2005-6: Model number
- RR: Seal symbol (*1)
- G0: Symbol for clearance in the axial direction (*2)
- +520L: Overall screw shaft length (in mm)
- C1: Accuracy symbol (*3)

(*1) See A-816. (*2) See A-685. (*3) See A-678.



Unit: mm

Ball screw dimensions											Support bearing basic load rating		Nut inertial moment	Nut mass	Shaft mass
	D_2	B_5	B_4	B_3	P_1	P_2	H	B_1	S	t	d_1	Ca kN	C_0a kN	kg·cm²	kg	kg/m
	30	8	21	50	56	30	6	15	M4	6	4.5	8.7	10.5	0.61	0.49	1.24
	34	9	21	50	64	36	6	15	M5	8	4.5	9.7	13.4	1.18	0.68	2.05
	40	13	25	50	75	43	7	18	M6	10	5.5	12.7	18.2	2.65	1.07	3.34
	40	11	25	70	75	43	7	18	M6	10	5.5	12.7	18.2	2.84	1.16	3.52
	46	11	25	50	89	53	8	17	M6	10	6.6	13.6	22.3	5.1	1.39	5.67
	48	11	25	61	89	53	8	17	M6	10	6.6	13.6	22.3	5.68	1.54	5.47
	54	11	25	95	89	53	8	17	M6	10	6.6	13.6	22.3	8.13	2.16	4.98
	58	14	33	104	105	61	10	23	M8	12	9	20.4	32.3	14.7	3.25	6.51
	62	14	33	95	113	67	10	23	M8	12	9	21.5	36.8	20.6	3.55	8.22
	62	14	33	120	113	67	10	23	M8	12	9	21.5	36.8	22.5	3.9	8.5

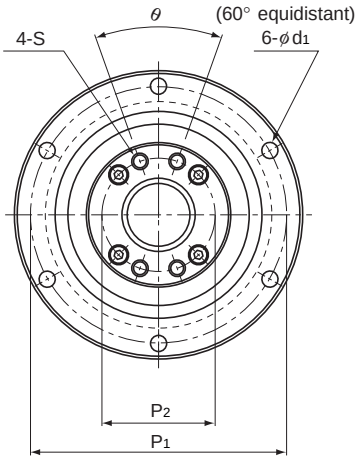
Note) The rigidity values in the table represent spring constants each obtained from the load and the elastic deformation when providing a preload 10% of the basic dynamic load rating (Ca) and applying an axial load three times greater than the preload.
These values do not include the rigidity of the components related to mounting the ball screw nut. Therefore, it is normally appropriate to regard roughly 80% of the value in the table as the actual value.
If the applied preload (Fa_0) is not 0.1 Ca, the rigidity value (K_N) is obtained from the following equation.

$$K_N = K \left(\frac{Fa_0}{0.1Ca} \right)^{\frac{1}{3}}$$

K: Rigidity value in the dimensional table.

Description of Each Option⇒A-815 Dimensions⇒B-777

Model BLR Large Lead Rotary-Nut Precision Ball Screw



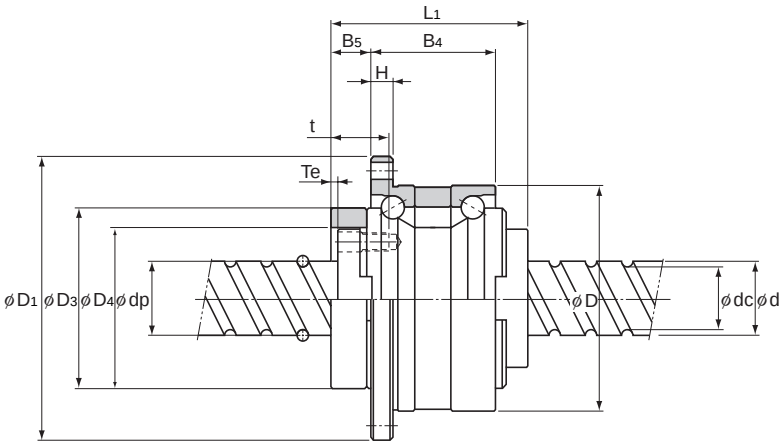
Model No.	Screw shaft outer diameter d	Thread minor diameter dc	Lead Ph	Ball center-to-center diameter dp	Basic load rating Ca kN	Basic load rating C0a kN	Outer diameter D	Flange diameter D1	Overall length L1	D3
BLR 1616-3.6	16	13.7	16	16.65	7.1	14.3	$52^{0}_{-0.007}$	68	43.5	$40^{0}_{-0.025}$
BLR 2020-3.6	20	17.5	20	20.75	11.1	24.7	$62^{0}_{-0.007}$	78	54	$50^{0}_{-0.025}$
BLR 2525-3.6	25	22	25	26	16.6	38.7	$72^{0}_{-0.007}$	92	65	$58^{0}_{-0.03}$
BLR 3232-3.6	32	28.3	32	33.25	23.7	59.5	$80^{0}_{-0.007}$	105	80	$66^{0}_{-0.03}$
BLR 3636-3.6	36	31.7	36	37.4	30.8	78	$100^{0}_{-0.008}$	130	93	$80^{0}_{-0.03}$
BLR 4040-3.6	40	35.2	40	41.75	38.7	99.2	$110^{0}_{-0.008}$	140	98	$90^{0}_{-0.035}$
BLR 5050-3.6	50	44.1	50	52.2	57.8	155	$120^{0}_{-0.008}$	156	126	$100^{0}_{-0.035}$

Model number coding

BLR2020-3.6 K UU G1 +1000L C5

- BLR2020-3.6: Model number
- K: Flange orientation symbol (*1)
- UU: Symbol for support bearing seal (*2)
- G1: Symbol for clearance in the axial direction (*3)
- +1000L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*4)

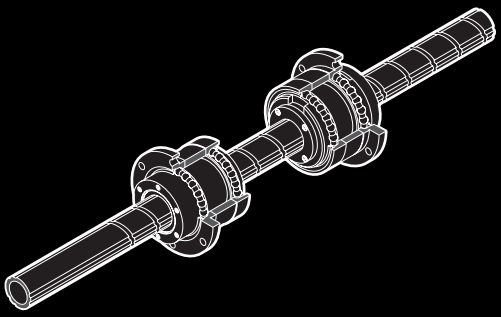
(*1) See A-778 (*2) UU: Seal attached on both ends No symbol: Without seal (*3) See A-685 (*4) See A-678



Unit: mm

Ball screw dimensions												Support bearing basic load rating		Nut inertial moment	Nut mass	Shaft mass
	D_4	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	θ°	Ca kN	C_0a kN	kg·cm²	kg	kg/m
	$32^{+0.025}_{0}$	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	0.48	0.38	1.41
	$39^{+0.025}_{0}$	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44	0.68	2.25
	$47^{+0.025}_{0}$	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23	1.1	3.52
	$58^{+0.03}_{0}$	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74	1.74	5.83
	$66^{+0.03}_{0}$	11	62	17	3	113	54	M8	22	9	40	56.4	65.2	16.8	3.2	7.34
	$73^{+0.03}$	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	27.9	3.95	9.01
	$90^{+0.035}_{0}$	12	80	25	4	136	75	M10	28	11	50	62.2	83	58.2	6.22	14.08

Description of Each Option⇒A-815 Dimensions⇒B-777



Precision Ball Screw/Spline
Models BNS-A, BNS, NS-A and NS

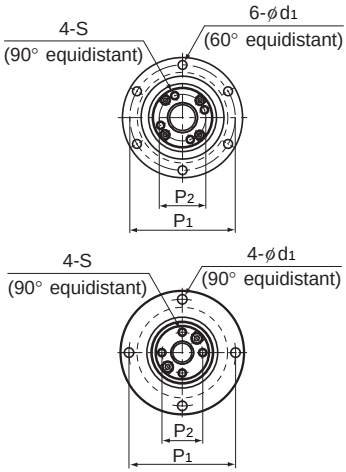
Ball Screw

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model BNS-A Compact Type: Straight-curved Motion



Models BNS 0812A and 1015A

Ball screw unit

Model No.	Screw shaft outer diameter	Screw shaft inner diameter	Lead	Ball screw dimensions								
				Basic load rating		Ball center-to-center diameter	Thread minor diameter	Outer diameter	Flange diameter	Overall length	D_3	D_4
				Ca	C_0a			D				
	d	db	Ph	kN	kN	dp	dc	g6	D_1	L_1	h7	H7
BNS 0812A	8	—	12	1.1	1.8	8.4	6.6	32	44	28.5	22	19
BNS 1015A	10	—	15	1.7	2.7	10.5	8.3	36	48	34.5	26	23
BNS 1616A	16	11	16	3.9	7.2	16.65	13.7	48	64	40	36	32
BNS 2020A	20	14	20	6.1	12.3	20.75	17.5	56	72	48	43.5	39
BNS 2525A	25	18	25	9.1	19.3	26	22	66	86	58	52	47
BNS 3232A	32	23	32	13	29.8	33.25	28.3	78	103	72	63	58
BNS 4040A	40	29	40	21.4	49.7	41.75	35.2	100	130	88	79.5	73

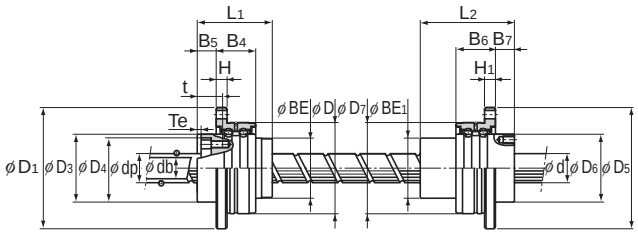
Ball spline

Model No.	Ball spline dimensions									
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter	Flange diameter	Overall length	D_6	
	C	C_0	M_A	C_T	C_{0T}	D_7				
	kN	kN	N-m	N-m	N-m	g6	D_5	L_2	h7	BE_1
BNS 0812A	1.5	2.6	5.9	2	2.9	32	44	25	24	16
BNS 1015A	2.7	4.9	15.7	3.9	7.8	36	48	33	28	21
BNS 1616A	7.1	12.6	67.6	31.4	34.3	48	64	50	36	31
BNS 2020A	10.2	17.8	118	56.8	55.8	56	72	63	43.5	35
BNS 2525A	15.2	25.8	210	105	103	66	86	71	52	42
BNS 3232A	20.5	34	290	180	157	78	103	80	63	52
BNS 4040A	37.8	60.5	687	418	377	100	130	100	79.5	64

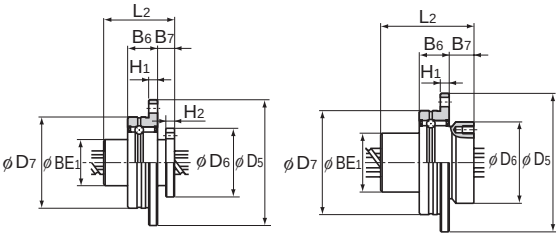
Model number coding

BNS2020A +500L

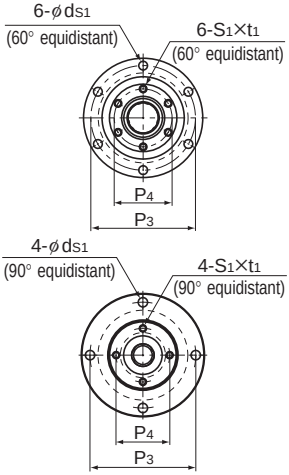
Model number — Overall shaft length (in mm)



Model BNS 0812A



Model BNS 1015A



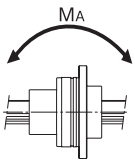
Models BNS 0812A and 1015A

Unit: mm

BE	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	Support bearing basic load rating Ca kN	Support bearing basic load rating C_0a kN	Nut inertial moment kg·cm²	Screw shaft inertial moment/mm J kg·cm²/mm	Nut mass kg	Shaft mass kg/m
19	3	10.5	7	1.5	38	14.5	M2.6	10	3.4	0.8	0.5	0.03	3.16×10^{-5}	0.08	0.35
23	3	10.5	8	1.5	42	18	M3	11.5	3.4	0.9	0.7	0.08	7.71×10^{-5}	0.15	0.52
32	6	21	10	2	56	25	M4	13.5	4.5	8.7	10.5	0.35	3.92×10^{-4}	0.31	0.8
39	6	21	11	2.5	64	31	M5	16.5	4.5	9.7	13.4	0.85	9.37×10^{-4}	0.54	1.21
47	7	25	13	3	75	38	M6	20	5.5	12.7	18.2	2.12	2.2×10^{-3}	0.88	1.79
58	8	25	14	3	89	48	M6	21	6.6	13.6	22.3	5.42	5.92×10^{-3}	1.39	2.96
73	10	33	16.5	3	113	61	M8	24.5	9	21.5	36.8	17.2	1.43×10^{-2}	3.16	4.51

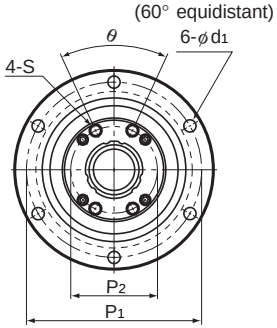
Unit: mm

H_1	B_6	B_7	H_2	P_3	P_4	$S_1\times t_1$	d_{s1}	Support bearing basic load rating C kN	Support bearing basic load rating C_0 kN	Nut inertial moment kg·cm²	Nut mass kg
3	10.5	6	3	38	19	M2.6×3	3.4	0.6	0.2	0.03	0.08
3	10.5	9	—	42	23	M3×4	3.4	0.8	0.3	0.08	0.13
6	21	10	—	56	30	M4×6	4.5	6.7	6.4	0.44	0.35
6	21	12	—	64	36	M5×8	4.5	7.4	7.8	0.99	0.51
7	25	13	—	75	44	M5×8	5.5	9.7	10.6	2.2	0.79
8	25	17	—	89	54	M6×10	6.6	10.5	12.5	5.17	1.25
10	33	20	—	113	68	M6×10	9	16.5	20.7	16.1	2.51



Description of Each Option⇒A-815 Dimensions⇒B-777

Model BNS Heavy-load Type: Straight-curved Motion



Ball screw unit

Model No.	Screw shaft outer diameter	Screw shaft inner diameter	Lead	Ball screw dimensions							
				Basic load rating		Ball center-to-center diameter	Thread minor diameter	Outer diameter	Flange diameter	Overall length	D_3
				Ca	C0a						
	d	db	Ph	kN	kN	dp	dc	D	D_1	L_1	h7
BNS 1616	16	11	16	3.9	7.2	16.65	13.7	52 $^{0}_{-0.007}$	68	43.5	40
BNS 2020	20	14	20	6.1	12.3	20.75	17.5	62 $^{0}_{-0.007}$	78	54	50
BNS 2525	25	18	25	9.1	19.3	26	22	72 $^{0}_{-0.007}$	92	65	58
BNS 3232	32	23	32	13	29.8	33.25	28.3	80 $^{0}_{-0.007}$	105	80	66
BNS 4040	40	29	40	21.4	49.7	41.75	35.2	110 $^{0}_{-0.008}$	140	98	90
BNS 5050	50	36	50	31.8	77.6	52.2	44.1	120 $^{0}_{-0.008}$	156	126	100

Ball spline

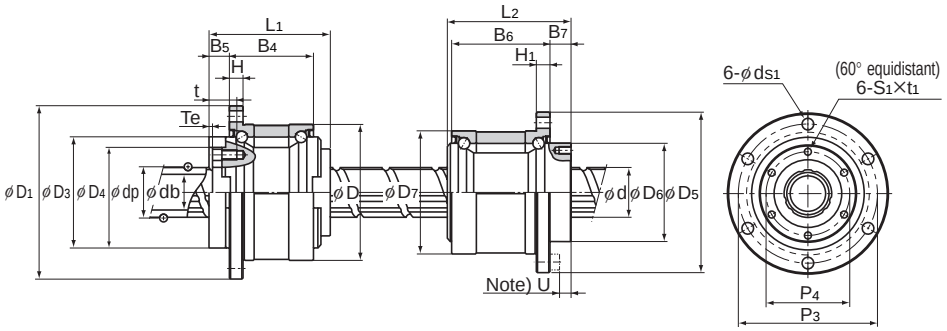
Model No.	Ball spline dimensions							
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter	Flange diameter	Overall length
	C	C0	MA	CT	C0T			
	kN	kN	N-m	N-m	N-m	D_7	D_5	L_2
BNS 1616	7.1	12.6	67.6	31.4	34.3	52 $^{0}_{-0.007}$	68	50
BNS 2020	10.2	17.8	118	56.8	55.8	56 $^{0}_{-0.007}$	72	63
BNS 2525	15.2	25.8	210	105	103	62 $^{0}_{-0.007}$	78	71
BNS 3232	20.5	34	290	180	157	80 $^{0}_{-0.007}$	105	80
BNS 4040	37.8	60.5	687	418	377	100 $^{0}_{-0.008}$	130	100
BNS 5050	60.9	94.5	1340	842	768	120 $^{0}_{-0.008}$	156	125

Note) Dimension U indicates the length from the head of the hexagonal-socket-head type bolt to the ball screw nut end.

Model number coding

BNS2525 +600L

Model number — Overall shaft length (in mm)

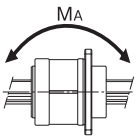


Unit: mm

D4 H7	H	B4	B5	Te	P1	P2	S	t	d1	θ°	Support bearing basic load rating Ca kN	Support bearing basic load rating C0a kN	Nut inertial moment kg·cm²	Screw shaft inertial moment/mm J kg·cm²/mm	Nut mass kg	Shaft mass kg/m
32	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	0.48	3.92×10^{-4}	0.38	0.8
39	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44	9.37×10^{-4}	0.68	1.21
47	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23	2.2×10^{-3}	1.1	1.79
58	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74	5.92×10^{-3}	1.74	2.96
73	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	27.9	1.43×10^{-2}	3.95	4.51
90	12	80	25	4	136	75	M10	28	11	50	62.2	83	58.2	3.52×10^{-2}	6.22	7.16

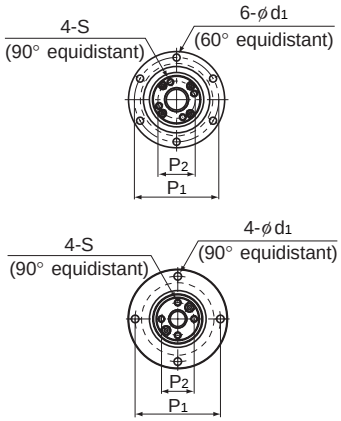
Unit: mm

D6 h7	H1	B6	B7	P3	P4	S1×t1	ds1	U	Support bearing basic load rating C kN	Support bearing basic load rating C0 kN	Nut inertial moment kg·cm²	Nut mass kg
39.5	5	37	10	60	32	M5×8	4.5	5	12.7	11.8	0.52	0.51
43.5	6	48	12	64	36	M5×8	4.5	7	16.2	15.5	0.87	0.7
53	6	55	13	70	45	M6×8	4.5	8	17.6	18	1.72	0.93
65.5	9	60	17	91	55	M6×10	6.6	10	20.1	24	5.61	1.8
79.5	11	74	23	113	68	M6×10	9	13	37.2	42.5	14.7	3.9
99.5	12	97	25	136	85	M10×15	11	13	41.6	54.1	62.5	6.7



Description of Each Option⇒A-815 Dimensions⇒B-777

Model NS-A Compact Type: Straight Motion



Models NS 0812A and 1015A

Ball screw unit

Model No.	Screw shaft outer diameter	Screw shaft inner diameter	Lead	Ball screw dimensions								
				Basic load rating		Ball center-to-center diameter	Thread minor diameter	Outer diameter	Flange diameter	Overall length	D_3	D_4
	d	db	Ph	Ca kN	C_0a kN	dp	dc	D g6	D_1	L_1	h7	H7
NS 0812A	8	—	12	1.1	1.8	8.4	6.6	32	44	28.5	22	19
NS 1015A	10	—	15	1.7	2.7	10.5	8.3	36	48	34.5	26	23
NS 1616A	16	11	16	3.9	7.2	16.65	13.7	48	64	40	36	32
NS 2020A	20	14	20	6.1	12.3	20.75	17.5	56	72	48	43.5	39
NS 2525A	25	18	25	9.1	19.3	26	22	66	86	58	52	47
NS 3232A	32	23	32	13	29.8	33.25	28.3	78	103	72	63	58
NS 4040A	40	29	40	21.4	49.7	41.75	35.2	100	130	88	79.5	73

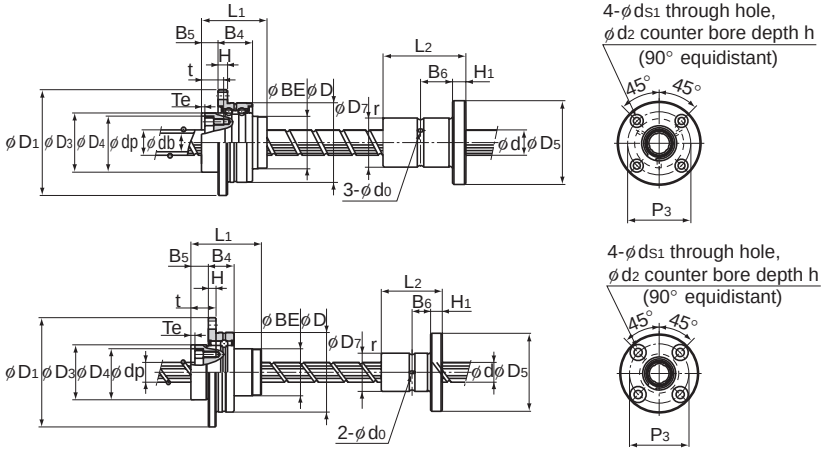
Ball spline

Model No.	Ball spline dimensions						
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter	Flange diameter
	C kN	C_0 kN	M_A N-m	C_T N-m	C_{0T} N-m	D_7	D_5 $^{0}_{-0.2}$
NS 0812A	1.5	2.6	5.9	2	2.9	16 $^{0}_{-0.011}$	32
NS 1015A	2.8	4.9	15.7	3.9	7.8	21 $^{0}_{-0.013}$	42
NS 1616A	7.1	12.6	67.6	31.4	34.3	31 $^{0}_{-0.013}$	51
NS 2020A	10.2	17.8	118	56.8	55.8	35 $^{0}_{-0.016}$	58
NS 2525A	15.2	25.8	210	105	103	42 $^{0}_{-0.016}$	65
NS 3232A	20.5	34	290	180	157	49 $^{0}_{-0.016}$	77
NS 4040A	37.8	60.5	687	418	377	64 $^{0}_{-0.019}$	100

Model number coding

NS2020A +500L

Model number — Overall shaft length (in mm)



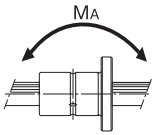
Models NS 0812A and 1015A

Unit: mm

BE	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	Support bearing basic load rating Ca kN	Support bearing basic load rating C_0a kN	Nut inertial moment kg・cm²	Screw shaft inertial moment/mm J kg・cm²/mm	Nut mass kg	Shaft mass kg/m
19	3	10.5	7	1.5	38	14.5	M2.6	10	3.4	0.8	0.5	0.03	3.16×10^{-5}	0.08	0.35
23	3	10.5	8	1.5	42	18	M3	11.5	3.4	0.9	0.7	0.08	7.71×10^{-5}	0.15	0.52
32	6	21	10	2	56	25	M4	13.5	4.5	8.7	10.5	0.35	3.92×10^{-4}	0.31	0.8
39	6	21	11	2.5	64	31	M5	16.5	4.5	9.7	13.4	0.85	9.37×10^{-4}	0.54	1.21
47	7	25	13	3	75	38	M6	20	5.5	12.7	18.2	2.12	2.2×10^{-3}	0.88	1.79
58	8	25	14	3	89	48	M6	21	6.6	13.6	22.3	5.42	5.92×10^{-3}	1.39	2.96
73	10	33	16.5	3	113	61	M8	24.5	9	21.5	36.8	17.2	1.43×10^{-2}	3.16	4.51

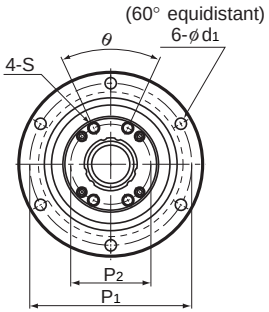
Unit: mm

Overall length L_2	H_1	B_6	r	Greasing hole d_0	P_3	Mounting hole d_{s1}	Mounting hole d_2	Mounting hole h	Nut mass kg
25	5	7.5	0.5	1.5	24	3.4	6.5	3.3	0.04
33	6	10.5	0.5	1.5	32	4.5	8	4.4	0.09
50 $^{0}_{-0.2}$	7	18	0.5	2	40	4.5	8	4.4	0.23
63 $^{0}_{-0.2}$	9	22.5	0.5	2	45	5.5	9.5	5.4	0.33
71 $^{0}_{-0.3}$	9	26.5	0.5	3	52	5.5	9.5	5.4	0.45
80 $^{0}_{-0.3}$	10	30	0.5	3	62	6.6	11	6.5	0.58
100 $^{0}_{-0.3}$	14	36	0.5	4	82	9	14	8.6	1.46



Description of Each Option⇒A-815 Dimensions⇒B-777

Model NS Heavy-load Type: Linear Motion



Ball screw unit

Model No.	Screw shaft outer diameter	Screw shaft inner diameter	Lead	Ball screw dimensions							
				Basic load rating		Ball center-to-center diameter	Thread minor diameter	Outer diameter	Flange diameter	Overall length	D_3
				Ca	C_0a						
	d	db	Ph	kN	kN	dp	dc	D	D_1	L_1	h7
NS 1616	16	11	16	3.9	7.2	16.65	13.7	52 $^{0}_{-0.007}$	68	43.5	40
NS 2020	20	14	20	6.1	12.3	20.75	17.5	62 $^{0}_{-0.007}$	78	54	50
NS 2525	25	18	25	9.1	19.3	26	22	72 $^{0}_{-0.007}$	92	65	58
NS 3232	32	23	32	13	29.8	33.25	28.3	80 $^{0}_{-0.007}$	105	80	66
NS 4040	40	29	40	21.4	49.7	41.75	35.2	110 $^{0}_{-0.008}$	140	98	90
NS 5050	50	36	50	31.8	77.6	52.2	44.1	120 $^{0}_{-0.008}$	156	126	100

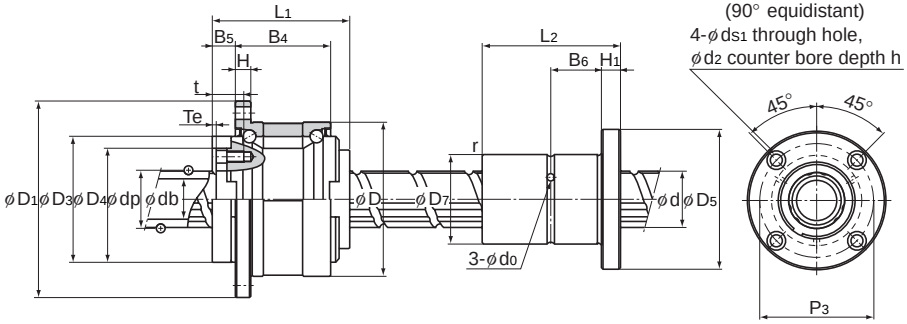
Ball spline

Model No.	Ball spline dimensions					
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter
	C	C_0	M_A	C_T	C_{0T}	D_7
	kN	kN	N-m	N-m	N-m	
NS 1616	7.1	12.6	67.6	31.4	34.3	31 $^{0}_{-0.013}$
NS 2020	10.2	17.8	118	56.9	55.9	35 $^{0}_{-0.016}$
NS 2525	15.2	25.8	210	105	103	42 $^{0}_{-0.016}$
NS 3232	20.5	34	290	180	157	49 $^{0}_{-0.016}$
NS 4040	37.8	60.5	687	419	377	64 $^{0}_{-0.019}$
NS 5050	60.9	94.5	1340	842	769	80 $^{0}_{-0.019}$

Model number coding

NS2525 +600L

Model number Overall shaft length (in mm)

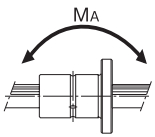


Unit: mm

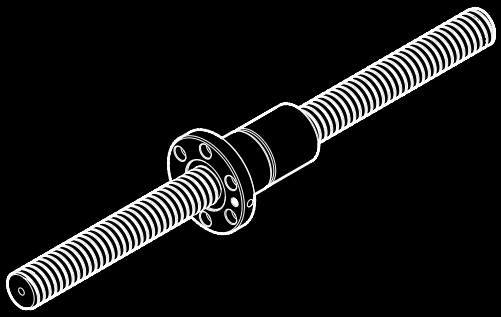
												Support bearing basic load rating		Nut inertial moment	Screw shaft inertial moment/mm	Nut mass	Shaft mass
	D_4 H7	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	θ°	Ca kN	C_0a kN	kg·cm²	J kg·cm²/mm	kg	kg/m
	32	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	0.48	3.92×10^{-4}	0.38	0.8
	39	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44	9.37×10^{-4}	0.68	1.21
	47	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23	2.2×10^{-3}	1.1	1.79
	58	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74	5.92×10^{-3}	1.74	2.96
	73	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	27.9	1.43×10^{-2}	3.95	4.51
	90	12	80	25	4	136	75	M10	28	11	50	62.2	83	58.2	3.52×10^{-2}	6.22	7.16

Unit: mm

	Flange diameter D_5	Overall length L_2	H_1	B_6	r	Greasing hole d_0	P_3	Mounting hole d_{S1}	Mounting hole d_2	Mounting hole h	Nut mass kg
	51	$50\ ^{0}_{-0.2}$	7	18	0.5	2	40	4.5	8	4.4	0.23
	58	$63\ ^{0}_{-0.2}$	9	22.5	0.5	2	45	5.5	9.5	5.4	0.33
	65	$71\ ^{0}_{-0.3}$	9	26.5	0.5	3	52	5.5	9.5	5.4	0.45
	77	$80\ ^{0}_{-0.3}$	10	30	0.5	3	62	6.6	11	6.5	0.58
	100	$100\ ^{0}_{-0.3}$	14	36	0.5	4	82	9	14	8.6	1.46
	124	$125\ ^{0}_{-0.3}$	16	46.5	1	4	102	11	17.5	11	2.76



Description of Each Option⇒A-815 Dimensions⇒B-777



Rolled Ball Screw
Models JPF, BTK, MTF, BLK/WTF, CNF and BNT

Ball Screw

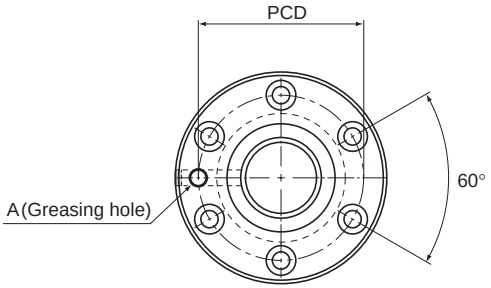
B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Preload Type of Rolled Ball Screw

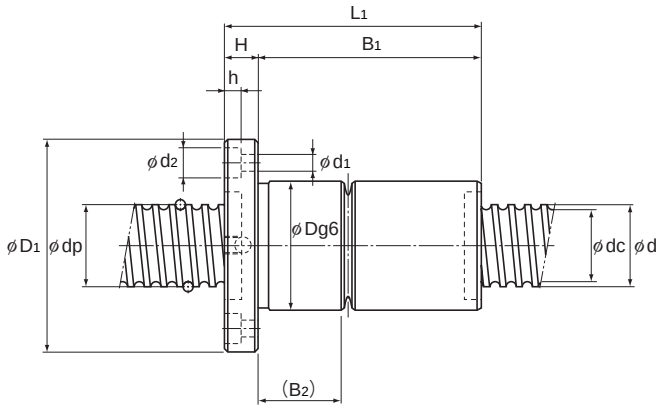
Screw shaft outer diameter	14 to 40
Lead	4 to 10



JPF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C₀a kN	Outer diameter D
14	4	JPF 1404-4	14.4	11.5	2×1	2.8	5.1	26
	5	JPF 1405-4	14.5	11.2	2×1	3.9	8.6	26
16	5	JPF 1605-4	16.75	13.5	2×1	3.7	8.2	30
20	5	JPF 2005-6	20.5	17.2	3×1	6	16	34
25	5	JPF 2505-6	25.5	22.2	3×1	6.9	20.8	40
	10	JPF 2510-4	26.8	20.2	2×1	11.4	24.5	47
28	5	JPF 2805-6	28.75	25.2	3×1	7.3	23.9	43
	6	JPF 2806-6	28.5	25.2	3×1	7.3	23.9	43
32	10	JPF 3210-6	33.75	27.2	3×1	19.3	49.9	54
36	10	JPF 3610-6	37	30.5	3×1	20.6	56.2	58
40	10	JPF 4010-6	41.75	35.2	3×1	22.2	65.3	62

Note) The ball screw nut and the screw shaft of model JPF are not sold alone.



JPF

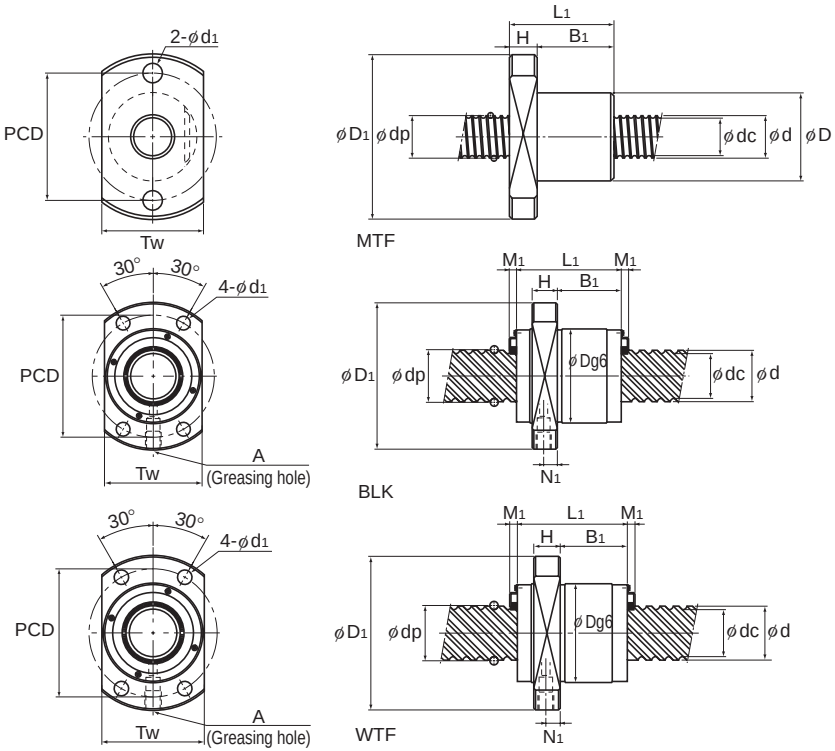
Unit: mm

Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg·cm²/mm	kg	kg/m
	46	52	10	42	16.5	36	4.5×8×4.5	M6	2.96×10^{-4}	0.22	1.0
	46	60	10	50	20	36	4.5×8×4.5	M6	2.96×10^{-4}	0.24	0.99
	49	60	10	50	19.5	39	4.5×8×4.5	M6	5.05×10^{-4}	0.3	1.34
	57	80	11	69	26.5	45	5.5×9.5×5.5	M6	1.23×10^{-3}	0.46	2.15
	66	80	11	69	26	51	5.5×9.5×5.5	M6	3.01×10^{-3}	0.6	3.45
	72	112	12	100	42	58	6.6×11×6.5	M6	3.01×10^{-3}	1.2	3.26
	69	80	12	68	25	55	6.6×11×6.5	M6	4.74×10^{-3}	0.66	4.27
	69	90	12	78	35	55	6.6×11×6.5	M6	4.74×10^{-3}	0.72	4.44
	88	135	15	120	53.5	70	9×14×8.5	M6	8.08×10^{-3}	1.84	5.49
	98	138	18	120	53.5	77	11×17.5×11	M6	1.29×10^{-2}	2.22	6.91
	104	138	18	120	53.5	82	11×17.5×11	PT 1/8	1.97×10^{-2}	2.42	8.81

Description of Each Option⇒A-815 Dimensions⇒B-777

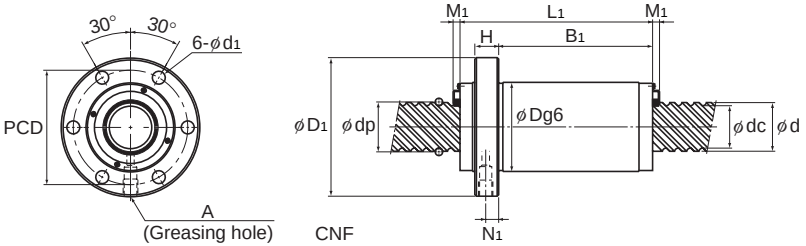
No Preload Type of Rolled Ball Screw

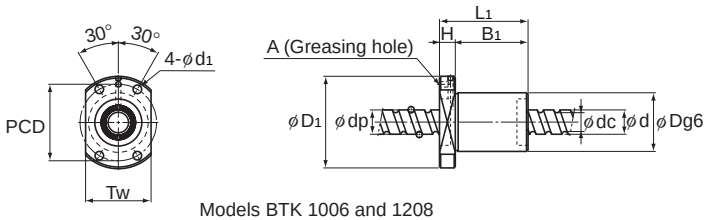
Screw shaft outer diameter	6 to 16
Lead	1 to 30



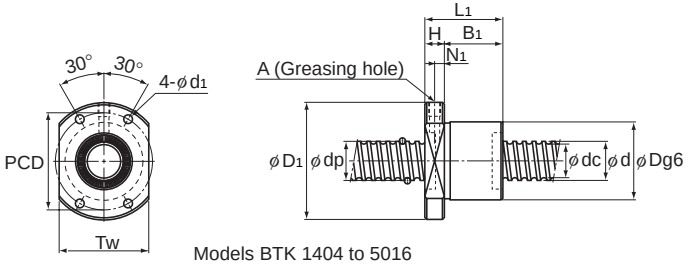
Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C₀a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D₁
6	1	MTF 0601-3.7	6.15	5.3	1×3.7	0.7	1.2	70	13	30
8	2	MTF 0802-3.7	8.3	6.6	1×3.7	2.1	3.8	90	20	40
10	2	MTF 1002-3.7	10.3	8.6	1×3.7	2.3	4.8	110	23	43
	6	BTK 1006-2.6	10.5	7.8	1×2.65	2.8	4.9	88	26	42
12	2	MTF 1202-3.7	12.3	10.6	1×3.7	2.5	5.8	130	25	47
	8	BTK 1208-2.6	12.65	9.7	1×2.65	3.8	6.8	108	29	45
14	4	BTK 1404-3.6	14.4	11.5	1×3.65	5.5	11.5	150	31	50
	5	BTK 1405-2.6	14.5	11.2	1×2.65	5	11.4	116	32	50
15	10	BLK 1510-5.6	15.75	12.5	2×2.8	9.8	25.2	260	34	57
	20	WTF 1520-3	15.75	12.5	2×1.5	5.5	14.2	140	32	53
		WTF 1520-6	15.75	12.5	4×1.5	10.1	28.5	280	32	53
	30	WTF 1530-2	15.75	12.5	4×0.6	4.3	9.3	120	32	53
		WTF 1530-3	15.75	12.5	2×1.6	5.6	12.4	160	32	53
		CNF 1530-6	15.75	12.5	4×1.6	10.1	24.7	310	32	53
16	5	BTK 1605-2.6	16.75	13.5	1×2.65	5.4	13.3	130	34	54
	16	BLK 1616-3.6	16.65	13.7	2×1.8	5.8	12.9	170	32	53
		BLK 1616-7.2	16.65	13.7	4×1.8	10.5	25.9	340	32	53

Note) Model MTF cannot be attached with seal.





Models BTK 1006 and 1208



Models BTK 1404 to 5016

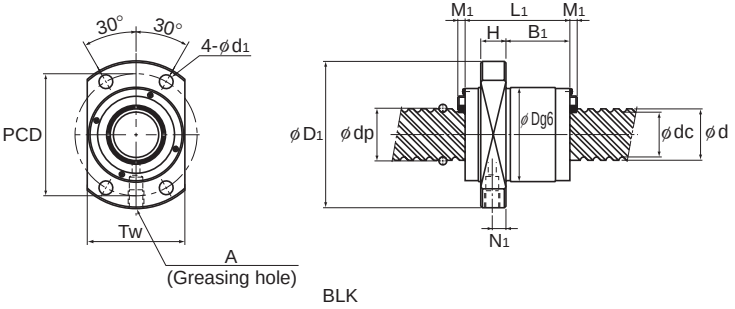
Unit: mm

Nut dimensions									Axial clearance	Standard shaft length	Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length						Greasing hole		Seal					
	L_1	H	B_1	PCD	d_1	T_w	N_1	A	M_1			kg•cm²/mm	kg	kg/m
	21	5	16	21.5	3.4	17	—	—	—	0.05	150, 250	9.99×10^{-6}	0.03	0.19
	28	6	22	30	4.5	24	—	—	—	0.05		3.16×10^{-5}	0.08	0.31
	28	6	22	33	4.5	27	—	—	—	0.05	200, 300	7.71×10^{-5}	0.1	0.52
	36	8	28	34	4.5	29	—	3	—	0.05		7.71×10^{-5}	0.19	0.48
	30	8	22	36	5.5	29	—	—	—	0.05		1.6×10^{-4}	0.13	0.77
	44	8	36	37	4.5	32	—	3	—	0.05		1.6×10^{-4}	0.20	0.72
	40	10	30	40	4.5	37	5	M6	—	0.1	500, 1000	2.96×10^{-4}	0.23	1.0
	40	10	30	40	4.5	38	5	M6	—	0.1		2.96×10^{-4}	0.24	0.99
	44	10	24	45	5.5	40	5	M6	3.5	0.1		3.9×10^{-4}	0.26	1.16
	45	10	28	43	5.5	33	5	M6	3.5	0.1		3.9×10^{-4}	0.20	1.17
	45	10	28	43	5.5	33	5	M6	3.5	0.1		3.9×10^{-4}	0.20	1.17
	33	10	17	43	5.5	33	5	M6	3.5	0.1		3.9×10^{-4}	0.22	1.19
	63	10	47	43	5.5	33	5	M6	3.5	0.1		3.9×10^{-4}	0.4	1.19
	63	10	47	43	5.5	—	5	M6	3.5	0.1		3.9×10^{-4}	0.42	1.19
	40	10	30	44	4.5	40	5	M6	—	0.1		5.05×10^{-4}	0.27	1.34
	38	10	21.5	42	4.5	38	5	M6	3.5	0.1		5.05×10^{-4}	0.21	1.35
	38	10	21.5	42	4.5	38	5	M6	3.5	0.1		5.05×10^{-4}	0.25	1.35

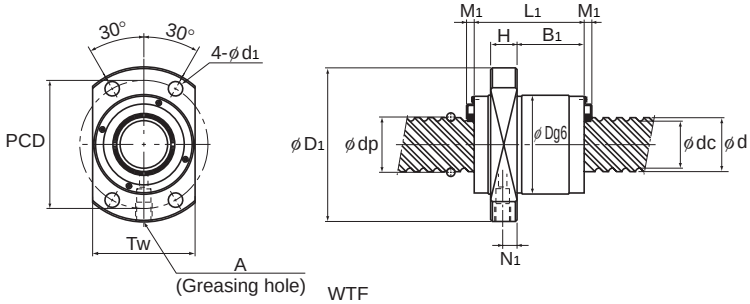
Description of Each Option⇒A-815 Dimensions⇒B-777

No Preload Type of Rolled Ball Screw

Screw shaft outer diameter	18 to 30
Lead	5 to 60

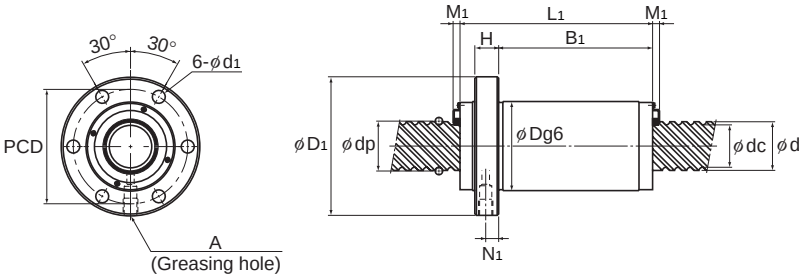


BLK

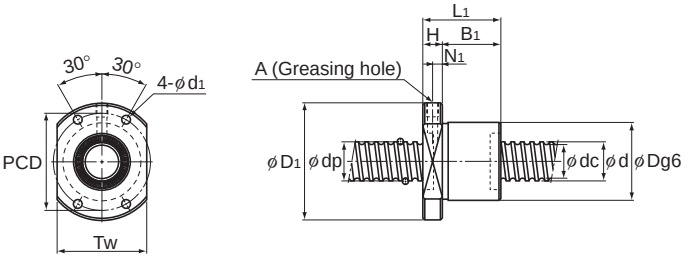


WTF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
18	8	BTK 1808-3.6	19.3	14.4	1×3.65	13.1	31	210	50	80
20	5	BTK 2005-2.6	20.5	17.2	1×2.65	6	16.5	150	40	60
	10	BTK 2010-2.6	21.25	16.4	1×2.65	10.6	25.1	160	52	82
	20	BLK 2020-3.6	20.75	17.5	2×1.8	7.7	22.3	210	39	62
		BLK 2020-7.2	20.75	17.5	4×1.8	13.9	44.6	410	39	62
	40	WTF 2040-2	20.75	17.5	4×0.65	5.4	13.6	160	37	57
		WTF 2040-3	20.75	17.5	2×1.65	6.6	17.2	200	37	57
		CNF 2040-6	20.75	17.5	4×1.65	12	34.4	400	37	57
25	5	BTK 2505-2.6	25.5	22.2	1×2.65	6.7	20.8	180	43	67
	10	BTK 2510-5.3	26.8	20.2	2×2.65	31.2	83.7	400	60	96
	25	BLK 2525-3.6	26	22	2×1.8	12.1	35	270	47	74
		BLK 2525-7.2	26	22	4×1.8	21.9	69.9	520	47	74
	50	WTF 2550-2	26	21.9	4×0.65	8.5	21.2	200	45	69
		WTF 2550-3	26	21.9	2×1.65	10.4	26.9	260	45	69
		CNF 2550-6	26	21.9	4×1.65	18.9	53.9	460	45	69
28	6	BTK 2806-2.6	28.5	25.2	1×2.65	7	23.4	200	50	80
		BTK 2806-5.3	28.5	25.2	2×2.65	12.8	46.8	390	50	80
30	60	WTF 3060-2	31.25	26.4	4×0.65	11.8	30.6	240	55	89
		WTF 3060-3	31.25	26.4	2×1.65	14.5	38.9	310	55	89
		CNF 3060-6	31.25	26.4	4×1.65	26.2	77.7	600	55	89



CNF



Models BTK 1404 to 5016

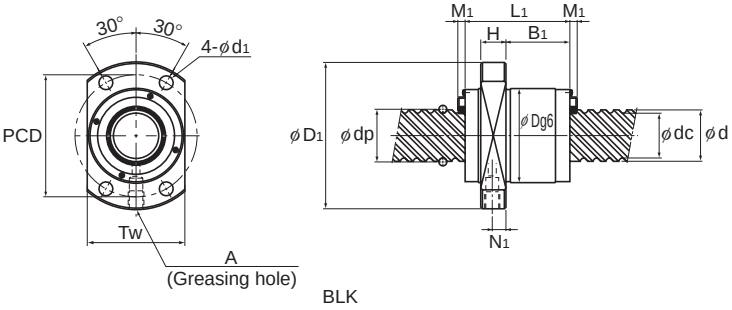
Unit: mm

Nut dimensions										Axial clearance	Standard shaft length	Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length						Greasing hole		Seal					
	L_1	H	B_1	PCD	d_1	T_w	N_1	A	M_1			$kg \cdot cm^2/mm$	kg	kg/m
	61	12	49	65	6.6	60	5	M6	—	0.1	500, 1000	8.09×10^{-4}	0.98	1.71
	40	10	30	50	4.5	46	5	M6	—	0.1	500, 1000, 1500	1.23×10^{-3}	0.35	2.15
	61	12	49	67	6.6	64	5	M6	—	0.1		1.23×10^{-3}	1.08	2.16
	45	10	27.5	50	5.5	46	5	M6	3.5	0.1		1.23×10^{-3}	0.35	2.18
	45	10	27.5	50	5.5	46	5	M6	3.5	0.1		1.23×10^{-3}	0.35	2.18
	41.5	10	25.5	47	5.5	38	5.5	M6	3.5	0.1		1.23×10^{-3}	0.25	2.12
	81.5	10	65.5	47	5.5	38	5.5	M6	3.5	0.1		1.23×10^{-3}	0.5	2.12
	81	10	65	47	5.5	—	5.5	M6	3.5	0.1		1.23×10^{-3}	0.5	2.12
	40	10	30	55	5.5	50	5	M6	—	0.1		3.01×10^{-3}	0.37	3.45
	98	15	83	78	9	72	5	M6	—	0.1		3.01×10^{-3}	2.06	3.26
	55	12	35	60	6.6	56	6	M6	3.5	0.1	1000, 1500, 2000	3.01×10^{-3}	0.64	3.41
	55	12	35	60	6.6	56	6	M6	3.5	0.1		3.01×10^{-3}	0.64	3.41
	52	12	31.5	57	6.6	46	7	M6	3.5	0.1		3.01×10^{-3}	0.45	3.34
	102	12	81.5	57	6.6	46	7	M6	3.5	0.1		3.01×10^{-3}	0.85	3.34
	102	12	81.5	57	6.6	—	7	M6	3.5	0.1		3.01×10^{-3}	0.85	3.34
	47	12	35	65	6.6	60	6	M6	—	0.1	500, 1000, 2000, 2500	4.74×10^{-3}	0.66	4.44
	65	12	53	65	6.6	60	6	M6	—	0.1		4.74×10^{-3}	0.84	4.44
	62.5	15	37.5	71	9	56	9	M6	3.8	0.14	1000, 2000, 3000, 4000	6.24×10^{-3}	0.8	4.84
	122.5	15	97.5	71	9	56	9	M6	3.8	0.14		6.24×10^{-3}	1.7	4.84
	122	15	97	71	9	—	9	M6	3.8	0.14		6.24×10^{-3}	1.7	4.84

Description of Each Option⇒A-815 Dimensions⇒B-777

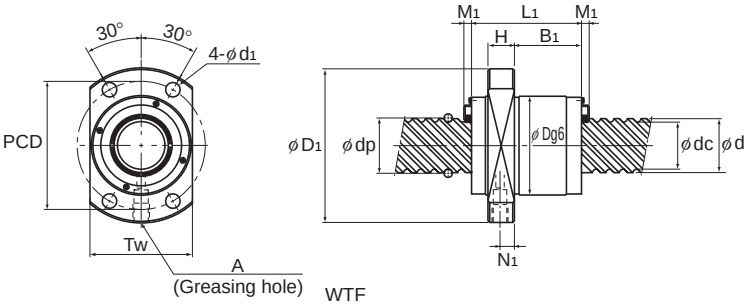
No Preload Type of Rolled Ball Screw

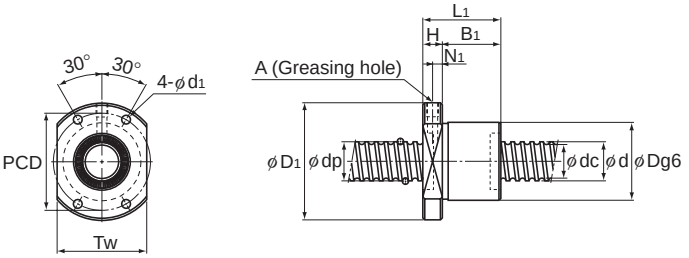
Screw shaft outer diameter	32 to 50
Lead	10 to 100



BLK

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
32	10	BTK 3210-2.6	33.75	27.2	1×2.65	19.8	53.8	250	67	103
		BTK 3210-5.3	33.75	27.2	2×2.65	36	107.5	490	67	103
	32	BLK 3232-3.6	33.25	28.3	2×1.8	17.3	53.9	330	58	92
		BLK 3232-7.2	33.25	28.3	4×1.8	31.3	107.8	650	58	92
36	10	BTK 3610-2.6	37	30.5	1×2.65	20.8	59.8	270	70	110
		BTK 3610-5.3	37	30.5	2×2.65	37.8	118.7	530	70	110
	20	BLK 3620-5.6	37.75	31.2	2×2.8	39.8	121.7	570	70	110
	24	BLK 3624-5.6	38	30.7	2×2.8	46.2	137.4	590	75	115
	36	BLK 3636-3.6	37.4	31.7	2×1.8	22.4	70.5	370	66	106
		BLK 3636-7.2	37.4	31.7	4×1.8	40.6	141.1	730	66	106
40	10	BTK 4010-5.3	41.75	35.2	2×2.65	40.3	134.9	590	76	116
	40	BLK 4040-3.6	41.75	35.2	2×1.8	28.1	89.8	420	73	114
		BLK 4040-7.2	41.75	35.2	4×1.8	51.1	179.6	810	73	114
	80	WTF 4080-2	41.75	35.2	4×0.65	19.8	54.5	320	73	114
		WTF 4080-3	41.75	35.2	2×1.65	24.3	69.2	400	73	114
45	12	BTK 4512-5.3	46.5	39.2	2×2.65	49.5	169	650	82	128
50	16	BTK 5016-5.3	52.7	42.9	2×2.65	93.8	315.2	930	102	162
	50	BLK 5050-3.6	52.2	44.1	2×1.8	42.1	140.4	510	90	135
		BLK 5050-7.2	52.2	44.1	4×1.8	76.3	280.7	1000	90	135
	100	WTF 50100-2	52.2	44.1	4×0.65	29.6	85.2	390	90	135
		WTF 50100-3	52.2	44.1	2×1.65	36.3	108.1	500	90	135





Models BTK 1404 to 5016

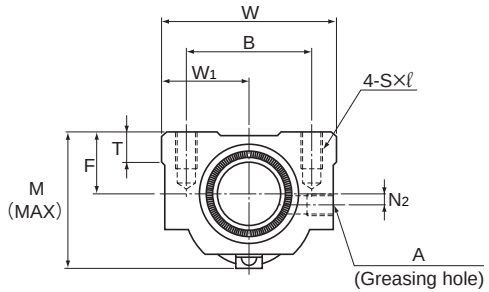
Unit: mm

Nut dimensions									Axial clearance	Standard shaft length	Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length						Greasing hole		Seal					
	L_1	H	B_1	PCD	d_1	T_w	N_1	A	M_1			kg•cm²/mm	kg	kg/m
	68	15	53	85	9	78	5	M6	—	0.14	500, 1000, 2000, 2500	8.08×10^{-3}	1.77	5.49
	98	15	83	85	9	78	5	M6	—	0.14		8.08×10^{-3}	2.35	5.49
	70	15	45	74	9	68	7.5	M6	3.8	0.14	1000, 1500, 2000, 2500	8.08×10^{-3}	1.14	5.69
	70	15	45	74	9	68	7.5	M6	3.8	0.14		8.08×10^{-3}	1.14	5.69
	70	17	53	90	11	82	7	M6	—	0.17	500, 1000, 2000, 2500, 3000	1.29×10^{-2}	1.94	6.91
	100	17	83	90	11	82	7	M6	—	0.17		1.29×10^{-2}	2.55	6.91
	78	17	45	90	11	80	8.5	M6	5	0.17	1000, 1500, 2000, 3000	1.29×10^{-2}	1.74	7.09
	94	18	59	94	11	86	9	M6	5	0.17		1.29×10^{-2}	2.42	7.02
	77	17	50	85	11	76	8.5	M6	5	0.17		1.29×10^{-2}	1.74	7.12
	77	17	50	85	11	76	8.5	M6	5	0.17		1.29×10^{-2}	1.74	7.12
	100	17	83	96	11	88	7	M6	—	0.17	1000, 1500, 2000, 3000, 3500	1.97×10^{-2}	2.91	8.81
	85	17	56.5	93	11	84	8.5	M6	5.4	0.17	1000, 1500, 2000, 3000	1.97×10^{-2}	2.16	8.76
	85	17	56.5	93	11	84	8.5	M6	5.4	0.17		1.97×10^{-2}	2.16	8.76
	79	17	50.5	93	11	74	8.5	M6	5.4	0.17		1.97×10^{-2}	2.1	8.66
	159	17	130.5	93	11	74	8.5	M6	5.4	0.17		1.97×10^{-2}	3.67	8.66
	118	20	98	104	14	94	8	M6	—	0.17	1000, 1500, 2000, 3000, 3500	3.16×10^{-2}	3.9	11.08
	145	25	120	132	18	104	12.5	PT 1/8	—	0.2		4.82×10^{-2}	7.8	13.66
	106	20	72	112	14	104	10	M6	5.4	0.2	1000, 1500, 2000, 3000	4.82×10^{-2}	3.89	13.79
	106	20	72	112	14	104	10	M6	5.4	0.2		4.82×10^{-2}	3.86	13.79
	98	20	64	112	14	92	10	M6	5.4	0.2		4.82×10^{-2}	3.5	13.86
	198	20	164	112	14	92	10	M6	5.4	0.2		4.82×10^{-2}	6.4	13.86

Description of Each Option⇒A-815 Dimensions⇒B-777

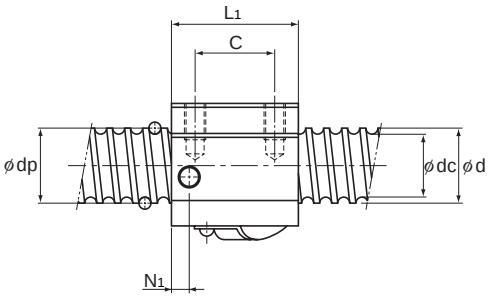
No Preload Type of Rolled Ball Screw (Square Nut)

Screw shaft outer diameter	14 to 45
Lead	4 to 12



BNT

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Width W	Center height F	Overall length L1
14	4	BNT 1404-3.6	14.4	11.5	1×3.65	5.5	11.5	150	34	13	35
	5	BNT 1405-2.6	14.5	11.2	1×2.65	5	11.4	110	34	13	35
16	5	BNT 1605-2.6	16.75	13.5	1×2.65	5.4	13.3	130	42	16	36
18	8	BNT 1808-3.6	19.3	14.4	1×3.65	13.1	31	210	48	17	56
20	5	BNT 2005-2.6	20.5	17.2	1×2.65	6	16.5	150	48	17	35
	10	BNT 2010-2.6	21.25	16.4	1×2.65	10.6	25.1	160	48	18	58
25	5	BNT 2505-2.6	25.5	22.2	1×2.65	6.7	20.8	180	60	20	35
	10	BNT 2510-5.3	26.8	20.2	2×2.65	31.2	83.7	400	60	23	94
28	6	BNT 2806-2.6	28.5	25.2	1×2.65	7	23.4	200	60	22	42
		BNT 2806-5.3	28.5	25.2	2×2.65	12.8	46.8	390	60	22	67
32	10	BNT 3210-2.6	33.75	27.2	1×2.65	19.8	53.8	250	70	26	64
		BNT 3210-5.3	33.75	27.2	2×2.65	36	107.5	490	70	26	94
36	10	BNT 3610-2.6	37	30.5	1×2.65	20.8	59.3	270	86	29	64
		BNT 3610-5.3	37	30.5	2×2.65	37.8	118.7	530	86	29	96
45	12	BNT 4512-5.3	46.5	39.2	2×2.65	49.5	169	650	100	36	115



BNT

Unit: mm

Nut dimensions										Axial clear-ance	Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Mounting hole												
	B	C	S×ℓ	W_1	T	M	N_1	N_2	A		kg·cm²/mm	kg	kg/m
	26	22	M4×7	17	6	30	6	2	M6	0.1	2.96×10^{-4}	0.15	1.0
	26	22	M4×7	17	6	31	6	2	M6	0.1	2.96×10^{-4}	0.15	0.99
	32	22	M5×8	21	21.5	32.5	6	2	M6	0.1	5.05×10^{-4}	0.3	1.34
	35	35	M6×10	24	10	44	8	3	M6	0.1	8.09×10^{-4}	0.47	1.71
	35	22	M6×10	24	9	39	5	3	M6	0.1	1.23×10^{-3}	0.28	2.15
	35	35	M6×10	24	9	46	10	2	M6	0.1	1.23×10^{-3}	0.5	2.16
	40	22	M8×12	30	9.5	45	7	5	M6	0.1	3.01×10^{-3}	0.41	3.45
	40	60	M8×12	30	10	55	10	—	M6	0.1	3.01×10^{-3}	1.18	3.26
	40	18	M8×12	30	10	50	8	—	M6	0.1	4.74×10^{-3}	0.81	4.44
	40	40	M8×12	30	10	50	8	—	M6	0.1	4.74×10^{-3}	0.78	4.44
	50	45	M8×12	35	12	62	10	—	M6	0.14	8.08×10^{-3}	1.3	5.49
	50	60	M8×12	35	12	62	10	—	M6	0.14	8.08×10^{-3}	2.0	5.49
	60	45	M10×16	43	17	67	11	—	M6	0.17	1.29×10^{-2}	1.8	6.91
	60	60	M10×16	43	17	67	11	—	M6	0.17	1.29×10^{-2}	2.4	6.91
	75	75	M12×20	50	20.5	80	13	—	M6	0.2	3.16×10^{-2}	4.1	11.08

Description of Each Option⇒A-815 Dimensions⇒B-777

Model number coding

Model number coding

Ball Screw Nut

BTK1405-2.6 ZZ

- BTK1405-2.6: Model number
- ZZ: Seal symbol
  - no symbol: without seal
  - ZZ: brush seal attached to both ends of the ball screw nut (see page 1466)

Screw Shaft

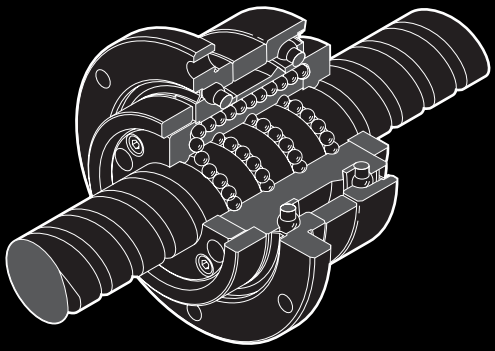
TS 14 05 +500L C7

- TS: Symbol for rolled ball screw shaft
- 14: Screw shaft outer diameter (in mm)
- 05: Lead (in mm)
- +500L: Overall screw shaft length (in mm)
- C7: Accuracy symbol (see page 1140) (no symbol for class C10)

Combination of the Ball Screw Nut and the Screw Shaft

BTK1405-2.6 ZZ +500L C7 T

- BTK1405-2.6: Model number
- ZZ: Seal symbol
  - no symbol: without seal
  - ZZ: brush seal attached to both ends of the ball screw nut (see page 1466)
- +500L: Overall screw shaft length (in mm)
- C7: Accuracy symbol (see page 1140) (no symbol for class C10)
- T: Symbol for rolled shaft



Rolled Rotary Ball Screw
Model BLR

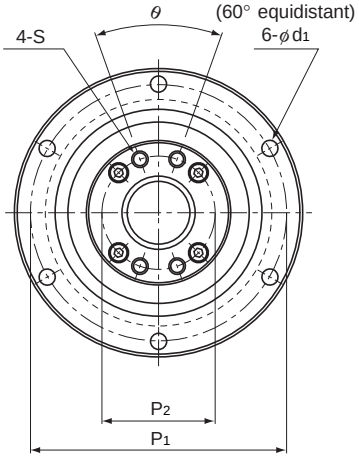
Ball Screw

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model BLR Large Lead Rotary Nut Rolled Ball Screw



Model No.	Screw shaft outer diameter d	Thread minor diameter dc	Lead Ph	Ball center-to-center diameter dp	Basic load rating Ca kN	Basic load rating C0a kN	Outer diameter D	Flange diameter D1	Overall length L1	D3
BLR 1616-3.6	16	13.7	16	16.65	5.8	12.9	52 $^{0}_{-0.007}$	68	43.5	40 $^{0}_{-0.025}$
BLR 2020-3.6	20	17.5	20	20.75	7.7	22.3	62 $^{0}_{-0.007}$	78	54	50 $^{0}_{-0.025}$
BLR 2525-3.6	25	22	25	26	12.1	35	72 $^{0}_{-0.007}$	92	65	58 $^{0}_{-0.03}$
BLR 3232-3.6	32	28.3	32	33.25	17.3	53.9	80 $^{0}_{-0.007}$	105	80	66 $^{0}_{-0.03}$
BLR 3636-3.6	36	31.7	36	37.4	22.4	70.5	100 $^{0}_{-0.008}$	130	93	80 $^{0}_{-0.03}$
BLR 4040-3.6	40	35.2	40	41.75	28.1	89.8	110 $^{0}_{-0.008}$	140	98	90 $^{0}_{-0.035}$
BLR 5050-3.6	50	44.1	50	52.2	42.1	140.4	120 $^{0}_{-0.008}$	156	126	100 $^{0}_{-0.035}$

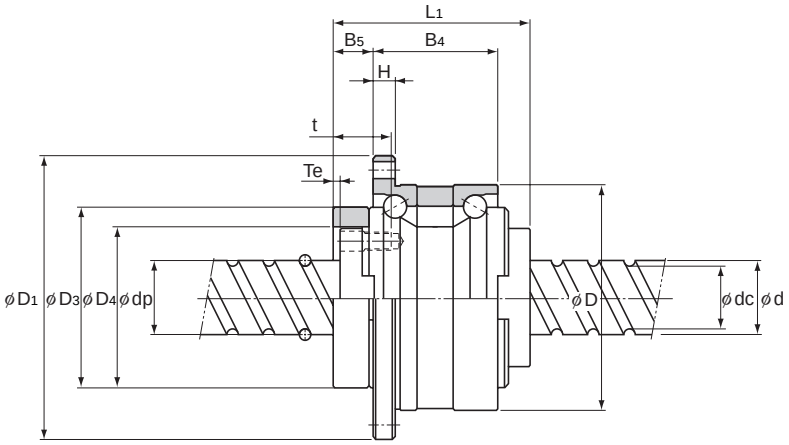
Model number coding

BLR2020-3.6 K UU +1000L C7 T

- BLR2020-3.6: Model number
- K: Flange orientation symbol (*1)
- UU: Symbol for support bearing seal (*2)
- +1000L: Overall screw shaft length (in mm)
- C7: Accuracy symbol (*3)
- T: Symbol for rolled Ball Screw

(*1) See A-799. (*2) UU: seal attached on both ends; No symbol: without seal (*3) See A-678.

Note) For clearance in the axial direction, see A-685.



Unit: mm

Ball screw dimensions												Support bearing basic load rating		Nut inertial moment	Nut mass	Shaft mass
	D_4	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	θ°	Ca	C_0a			
												kN	kN	kg·cm²	kg	kg/m
	32 +0.025 0	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	0.48	0.38	1.35
	39 +0.025 0	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44	0.68	2.17
	47 +0.025 0	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23	1.1	3.41
	58 +0.03 0	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74	1.74	5.69
	66 +0.03 0	11	62	17	3	113	54	M8	22	9	40	56.4	65.2	16.8	3.2	7.12
	73 +0.03	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	27.9	3.95	8.76
	90 +0.035 0	12	80	25	4	136	75	M10	28	11	50	62.2	83	58.2	6.22	13.79

Description of Each Option⇒A-815 Dimensions⇒B-777

Maximum Length of the Ball Screw Shaft

The maximum length of the precision Ball Screw by accuracy grade is shown in Table1, and that of the rolled Ball Screw in Table2.
If the shaft dimensions exceed the manufacturing limit in Table1 or Table2, contact THK.

Table1 Maximum Length of the Precision Ball Screw by Accuracy Grade Unit: mm

Screw shaft outer diameter	Overall screw shaft length					
	C0	C1	C2	C3	C5	C7
4	90	110	120	120	120	120
6	150	170	210	210	210	210
8	230	270	340	340	340	340
10	350	400	500	500	500	500
12	440	500	630	680	680	680
13	440	500	630	680	680	680
14	530	620	770	870	890	890
15	570	670	830	950	980	1100
16	620	730	900	1050	1100	1400
18	720	840	1050	1220	1350	1600
20	820	950	1200	1400	1600	1800
25	1100	1400	1600	1800	2000	2400
28	1300	1600	1900	2100	2350	2700
30	1450	1700	2050	2300	2570	2950
32	1600	1800	2200	2500	2800	3200
36	2000	2100	2550	2950	3250	3650
40		2400	2900	3400	3700	4300
45		2750	3350	3950	4350	5050
50		3100	3800	4500	5000	5800
55		3450	4150	5300	6050	6500
63		4000	5200	5800	6700	7700
70			6300	6450	7650	9000
80				7900	9000	10000
100				10000	10000	

Table2 Maximum Length of the Rolled Ball Screw by Accuracy Grade

Unit: mm

Screw shaft outer diameter	Overall screw shaft length		
	C7	C8	C10
6 to 8	320	320	—
10 to 12	500	1000	—
14 to 15	1500	1500	1500
16 to 18	1500	1800	1800
20	2000	2200	2200
25	2000	3000	3000
28	3000	3000	3000
30	3000	3000	4000
32 to 36	3000	4000	4000
40	3000	5000	5000
45	3000	5500	5500
50	3000	6000	6000

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Ball Screw

Ball Screw Peripherals

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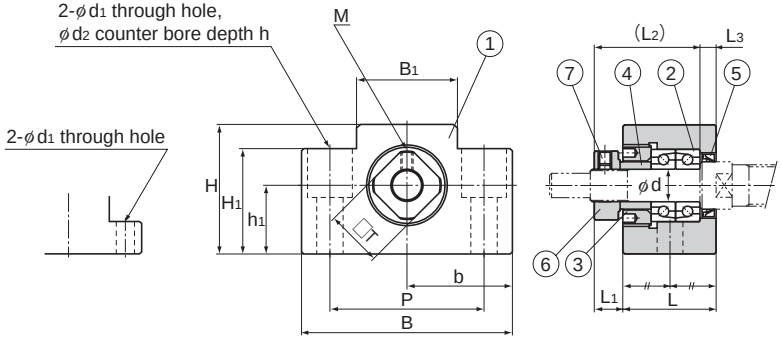
Model EK Square Type Support Unit on the Fixed Side

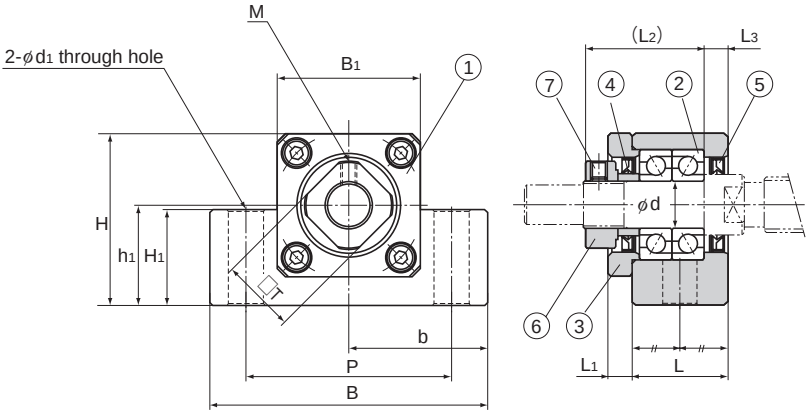


Models EK 4 and 5 Models EK 6 and 8

Model No.	Shaft diameter d	L	L1	L2	L3	B	H	b ±0.02
EK 4	4	15	5.5	17.5	3	34	19	17
EK 5	5	16.5	5.5	18.5	3.5	36	21	18
EK 6	6	20	5.5	22	3.5	42	25	21
EK 8	8	23	7	26	4	52	32	26
EK 10	10	24	6	29.5	6	70	43	35
EK 12	12	24	6	29.5	6	70	43	35
EK 15	15	25	6	36	5	80	49	40
EK 20	20	42	10	50	10	95	58	47.5

Models EK 4 to 8

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1 set
3	Set nut	1
4	Collar	2
5	Seal	1
6	Lock Nut	1
7	Hexagonal socket-head setscrew (with a set piece)	1



Models EK 10 to 20

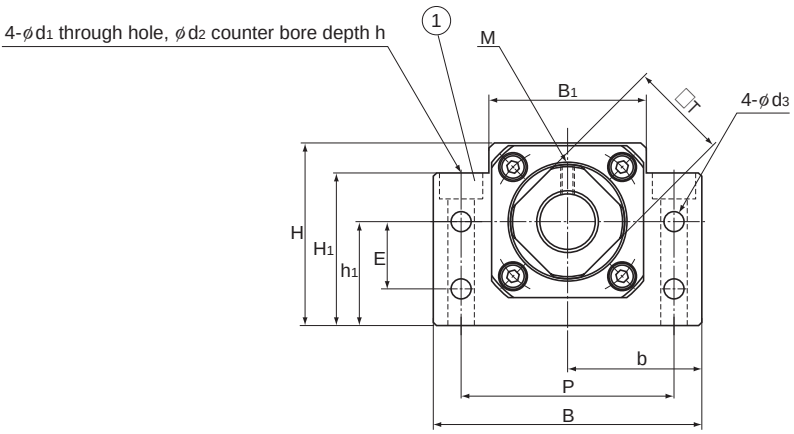
Unit: mm

	h1 ±0.02	B1	H1	P	d1	d2	h	M	T	Bearing used	Mass kg
	10	18	7	26	4.5	—	—	M2.6	10	AC4-12P5	0.06
	11	20	8	28	4.5	—	—	M2.6	11	AC5-14P5	0.08
	13	18	20	30	5.5	9.5	11	M3	12	AC6-16P5	0.14
	17	25	26	38	6.6	11	12	M3	14	79M8DFGMP5	0.24
	25	36	24	52	9	—	—	M3	16	7000HTDFGMP5	0.46
	25	36	24	52	9	—	—	M3	19	7001HTDFGMP5	0.44
	30	41	25	60	11	—	—	M3	22	7002HTDFGMP5	0.55
	30	56	25	75	11	—	—	M4	30	7204HTDFGMP5	1.35

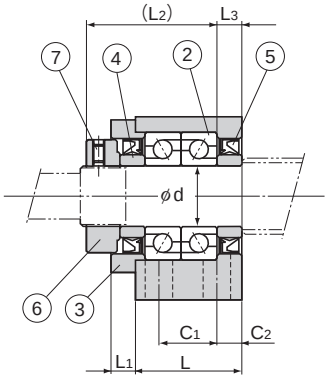
Models EK 10 to 20

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1 set
3	Holding lid	1
4	Collar	2
5	Seal	2
6	Lock Nut	1
7	Hexagonal socket-head setscrew (with a set piece)	1

Model BK Square Type Support Unit on the Fixed Side



Model No.	Shaft diameter d	L	L1	L2	L3	B	H	b ±0.02	h1 ±0.02	B1	H1
BK 10	10	25	5	29	5	60	39	30	22	34	32.5
BK 12	12	25	5	29	5	60	43	30	25	35	32.5
BK 15	15	27	6	32	6	70	48	35	28	40	38
BK 17	17	35	9	44	7	86	64	43	39	50	55
BK 20	20	35	8	43	8	88	60	44	34	52	50
BK 25	25	42	12	54	9	106	80	53	48	64	70
BK 30	30	45	14	61	9	128	89	64	51	76	78
BK 35	35	50	14	67	12	140	96	70	52	88	79
BK 40	40	61	18	76	15	160	110	80	60	100	90

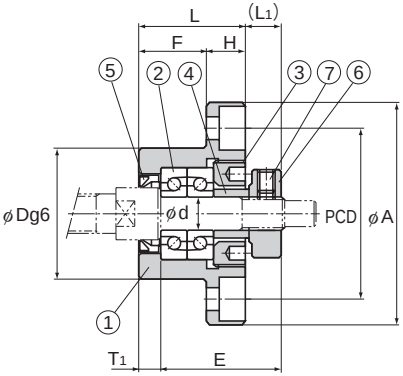


Unit: mm

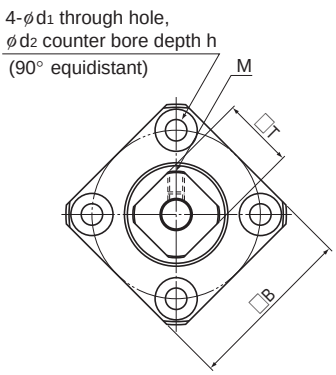
	E	P	C_1	C_2	d_3	d_1	d_2	h	M	T	Bearing used	Mass kg
	15	46	13	6	5.5	6.6	10.8	5	M3	16	7000HTDFGMP5	0.39
	18	46	13	6	5.5	6.6	10.8	1.5	M3	19	7001HTDFGMP5	0.41
	18	54	15	6	5.5	6.6	11	6.5	M3	22	7002HTDFGMP5	0.57
	28	68	19	8	6.6	9	14	8.5	M4	24	7203HTDFGMP5	1.27
	22	70	19	8	6.6	9	14	8.5	M4	30	7004HTDFGMP5	1.19
	33	85	22	10	9	11	17.5	11	M5	35	7205HTDFGMP5	2.3
	33	102	23	11	11	14	20	13	M6	40	7206HTDFGMP5	3.32
	35	114	26	12	11	14	20	13	M8	50	7207HTDFGMP5	4.33
	37	130	33	14	14	18	26	17.5	M8	50	7208HTDFGMP5	6.5

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1 set
3	Holding lid	1
4	Collar	2
5	Seal	2
6	Lock Nut	1
7	Hexagonal socket-head setscrew (with a set piece)	1

Model FK Round Type Support Unit on the Fixed Side

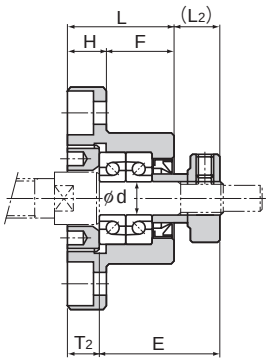


Mounting method A



Models FK 4 to 8

Model No.	Shaft diameter d	L	H	F	E	D	A	PCD	B
FK 4	4	15	6	9	17.5	18 $^{-0.006}_{-0.017}$	32	24	25
FK 5	5	16.5	6	10.5	18.5	20 $^{-0.007}_{-0.02}$	34	26	26
FK 6	6	20	7	13	22	22 $^{-0.007}_{-0.02}$	36	28	28
FK 8	8	23	9	14	26	28 $^{-0.007}_{-0.02}$	43	35	35



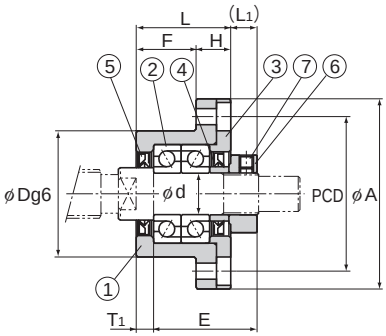
Mounting method B

Unit: mm

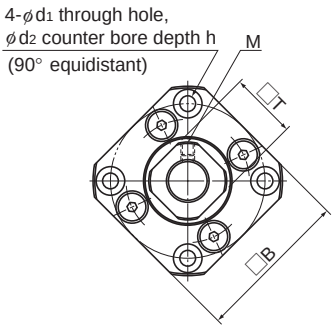
	Installation procedure A		Installation procedure B								
	L_1	T_1	L_2	T_2	d_1	d_2	h	M	T	Bearing used	Mass kg
	5.5	3	6.5	4	3.4	6.5	4	M2.6	10	AC4-12P5	0.05
	5.5	3.5	7	5	3.4	6.5	4	M2.6	11	AC5-14P5	0.06
	5.5	3.5	8.5	6.5	3.4	6.5	4	M3	12	AC6-16P5	0.08
	7	4	10	7	3.4	6.5	4	M3	14	79M8DFGMP5	0.15

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1 set
3	Set nut	1
4	Collar	2
5	Seal	1
6	Lock Nut	1
7	Hexagonal socket-head setscrew (with a set piece)	1

Model FK Round Type Support Unit on the Fixed Side

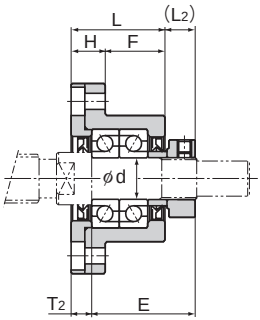


Mounting method A



Models FK 10 to 30

Model No.	Shaft diameter d	L	H	F	E	D	A	PCD	B
FK 10	10	27	10	17	29.5	34 $^{-0.009}_{-0.025}$	52	42	42
FK 12	12	27	10	17	29.5	36 $^{-0.009}_{-0.025}$	54	44	44
FK 15	15	32	15	17	36	40 $^{-0.009}_{-0.025}$	63	50	52
FK 20	20	52	22	30	50	57 $^{-0.01}_{-0.029}$	85	70	68
FK 25	25	57	27	30	60	63 $^{-0.01}_{-0.029}$	98	80	79
FK 30	30	62	30	32	61	75 $^{-0.01}_{-0.029}$	117	95	93



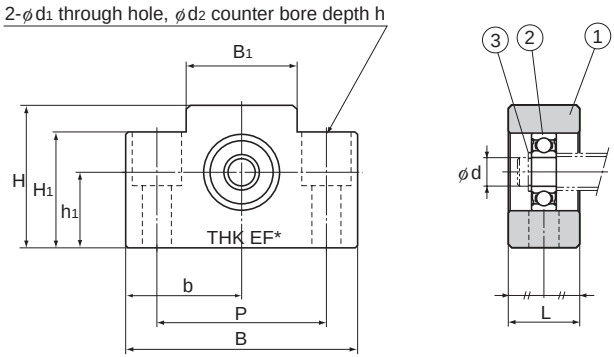
Mounting method B

Unit: mm

	Installation procedure A		Installation procedure B							Bearing used	Mass
	L_1	T_1	L_2	T_2	d_1	d_2	h	M	T		kg
	7.5	5	8.5	6	4.5	8	4	M3	16	7000HTDFGMP5	0.21
	7.5	5	8.5	6	4.5	8	4	M3	19	7001HTDFGMP5	0.22
	10	6	12	8	5.5	9.5	6	M3	22	7002HTDFGMP5	0.39
	8	10	12	14	6.6	11	10	M4	30	7204HTDFGMP5	1.09
	13	10	20	17	9	15	13	M5	35	7205HTDFGMP5	1.49
	11	12	17	18	11	17.5	15	M6	40	7206HTDFGMP5	2.32

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1 set
3	Holding lid	1
4	Collar	2
5	Seal	2
6	Lock Nut	1
7	Hexagonal socket-head setscrew (with a set piece)	1

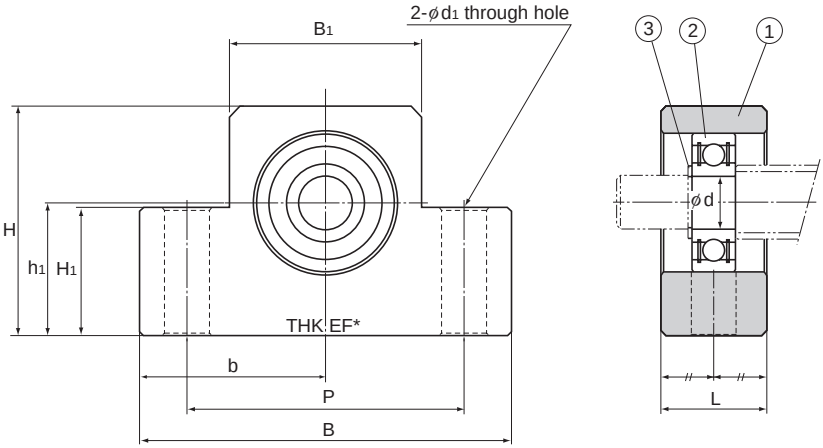
Model EF Square Type Support Unit on the Supported Side



Models EF 6 and 8

Model No.	Shaft diameter d	L	B	H	b ±0.02	h1 ±0.02	B1
EF 6	6	12	42	25	21	13	18
EF 8	6	14	52	32	26	17	25
EF 10	8	20	70	43	35	25	36
EF 12	10	20	70	43	35	25	36
EF 15	15	20	80	49	40	30	41
EF 20	20	26	95	58	47.5	30	56

Note) The area marked with "*" is imprinted with a numeric character(s) as part of the model number.



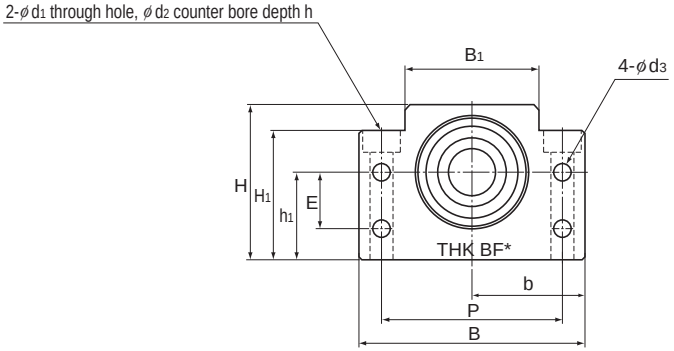
Models EF 10 to 20

Unit: mm

	H1	P	d1	d2	h	Bearing used	Snap ring used	Mass kg
	20	30	5.5	9.5	11	606ZZ	C6	0.07
	26	38	6.6	11	12	606ZZ	C6	0.13
	24	52	9	—	—	608ZZ	C8	0.33
	24	52	9	—	—	6000ZZ	C10	0.32
	25	60	9	—	—	6002ZZ	C15	0.38
	25	75	11	—	—	6204ZZ	C20	0.63

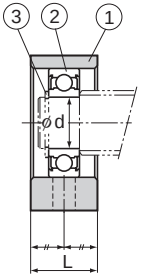
Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1
3	Snap ring	1

Model BF Square Type Support Unit on the Supported Side



Model No.	Shaft diameter d	L	B	H	b ±0.02	h1 ±0.02	B1	H1
BF 10	8	20	60	39	30	22	34	32.5
BF 12	10	20	60	43	30	25	35	32.5
BF 15	15	20	70	48	35	28	40	38
BF 17	17	23	86	64	43	39	50	55
BF 20	20	26	88	60	44	34	52	50
BF 25	25	30	106	80	53	48	64	70
BF 30	30	32	128	89	64	51	76	78
BF 35	35	32	140	96	70	52	88	79
BF 40	40	37	160	110	80	60	100	90

Note) The area marked with "*" is imprinted with a numeric character(s) as part of the model number.

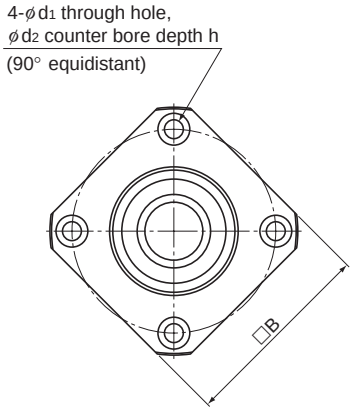


Unit: mm

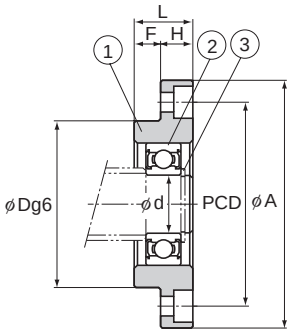
	E	P	d_3	d_1	d_2	h	Bearing used	Snap ring used	Mass kg
	15	46	5.5	6.6	10.8	5	608ZZ	C8	0.29
	18	46	5.5	6.6	10.8	1.5	6000ZZ	C10	0.3
	18	54	5.5	6.6	11	6.5	6002ZZ	C15	0.38
	28	68	6.6	9	14	8.5	6203ZZ	C17	0.74
	22	70	6.6	9	14	8.5	6004ZZ	C20	0.76
	33	85	9	11	17.5	11	6205ZZ	C25	1.42
	33	102	11	14	20	13	6206ZZ	C30	1.97
	35	114	11	14	20	13	6207ZZ	C35	2.22
	37	130	14	18	26	17.5	6208ZZ	C40	3.27

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1
3	Snap ring	1

Model FF Round Type Support Unit on the Supported Side



Model No.	Shaft diameter d	L	H	F	D	A
FF 6	6	10	6	4	22 $^{-0.007}_{-0.02}$	36
FF 10	8	12	7	5	28 $^{-0.007}_{-0.02}$	43
FF 12	10	15	7	8	34 $^{-0.009}_{-0.025}$	52
FF 15	15	17	9	8	40 $^{-0.009}_{-0.025}$	63
FF 20	20	20	11	9	57 $^{-0.01}_{-0.029}$	85
FF 25	25	24	14	10	63 $^{-0.01}_{-0.029}$	98
FF 30	30	27	18	9	75 $^{-0.01}_{-0.029}$	117

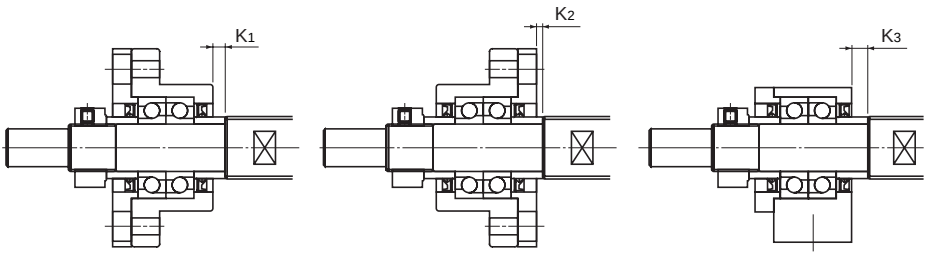


Unit: mm

	PCD	B	d_1	d_2	h	Bearing used	Snap ring used	Mass kg
	28	28	3.4	6.5	4	606ZZ	C6	0.04
	35	35	3.4	6.5	4	608ZZ	C8	0.07
	42	42	4.5	8	4	6000ZZ	C10	0.11
	50	52	5.5	9.5	5.5	6002ZZ	C15	0.2
	70	68	6.6	11	6.5	6204ZZ	C20	0.27
	80	79	9	14	8.5	6205ZZ	C25	0.67
	95	93	11	17.5	11	6206ZZ	C30	1.07

Part No.	Part name	No. of units
1	Housing	1
2	Bearing	1
3	Snap ring	1

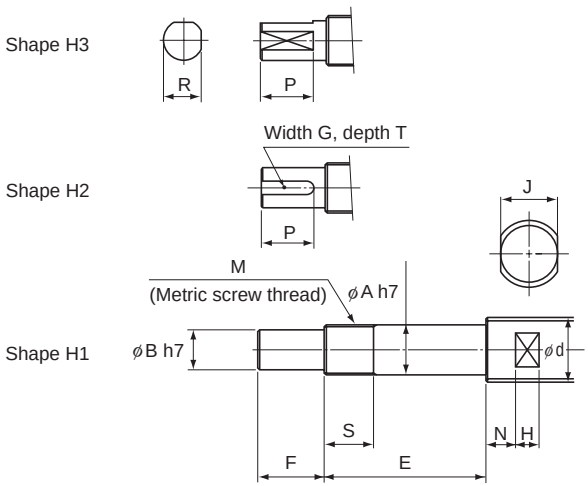
Recommended Shapes of Shaft Ends - Shape H (H1, H2 and H3) (For Support Unit Models FK and EK)



Model FK Model FK Model EK

Support Unit model No.		Ball screw shaft outer diameter	Shaft outer diameter of the bearung				Metric screw thread	
Model FK	Model EK	d	A	B	E	F	M	S
FK4	EK4	6	4	3	23	5	M4×0.5	7
FK5	EK5	8	5	4	25	6	M5×0.5	7
FK6	EK6	8	6	4	30	8	M6×0.75	8
FK8	EK8	12	8	6	35	9	M8×1	10
FK10	EK10	14	10	8	36	15	M10×1	11
FK10	EK10	15	10	8	36	15	M10×1	11
FK12	EK12	16	12	10	36	15	M12×1	11
FK12	EK12	18	12	10	36	15	M12×1	11
FK15	EK15	20	15	12	49	20	M15×1	13
FK15	EK15	25	15	12	49	20	M15×1	13
FK20	EK20	28	20	17	64	25	M20×1	17
FK20	EK20	30	20	17	64	25	M20×1	17
FK20	EK20	32	20	17	64	25	M20×1	17
FK25	—	36	25	20	76	30	M25×1.5	20
FK30	—	40	30	25	72	38	M30×1.5	25

Note) Support Units are designed to have dimensions so that combinations of models FK and FF, models EK and EF or models BK and BF are used on the same shaft.
If desiring the shaft end to be machined at THK, add the shape symbol in the end of the Ball Screw model number.
(Example) TS2505+500L-H2K
(Shape H2 on the fixed side; shape K on the supported side)
For the perpendicularity of the end face of the bearing, refer to JIS B 1192-1997.

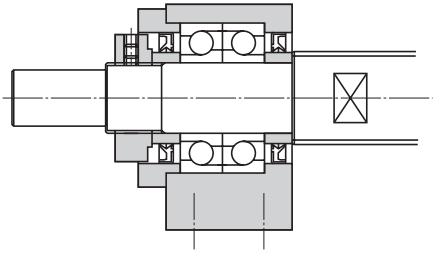


Unit: mm

	Width across flat			Shape H2 Keyway			Shape H3 Cut flat on two side		Support Unit position Model FK		Model EK
	J	N	H	G N9	T +0.1 0	P	R	P	K_1	K_2	K_3
	4	4	4	—	—	—	2.7	4	1.5	0.5	1.5
	5	4	4	—	—	—	3.7	5	2	0.5	2
	5	4	4	—	—	—	3.7	6	3.5	0.5	3.5
	8	5	5	—	—	—	5.6	7	3.5	0.5	3.5
	10	5	7	2	1.2	11	7.5	11	0.5	−0.5	−0.5
	10	5	7	2	1.2	11	7.5	11	0.5	−0.5	−0.5
	13	6	8	3	1.8	12	9.5	12	0.5	−0.5	−0.5
	13	6	8	3	1.8	12	9.5	12	0.5	−0.5	−0.5
	16	6	9	4	2.5	16	11.3	16	4	2	5
	18	7	10	4	2.5	16	11.3	16	4	2	5
	21	8	11	5	3	21	16	21	1	−3	1
	24	8	12	5	3	21	16	21	1	−3	1
	27	9	13	5	3	21	16	21	1	−3	1
	27	10	13	6	3.5	25	19	25	5	−2	—
	32	10	15	8	4	32	23.5	32	−3	−9	—

Note) The ball nut flange faces the fixed side unless otherwise specified.
If desiring the flange to face the supported side, add symbol G in the end of the Ball Screw model number when placing an order.
(Example) BNFN2505-5RRGO+420LC5-H2KG

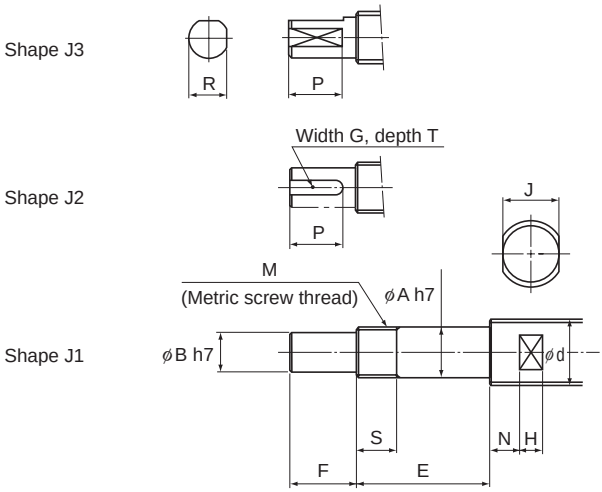
Recommended Shapes of Shaft Ends - Shape J (J1, J2 and J3) (For Support Unit Model BK)



Model BK

Support Unit model No. Model BK	Ball screw shaft outer diameter d	Shaft outer diameter of the bearung A	B	E	F	Metric screw thread M
BK10	14	10	8	39	15	M10×1
BK10	15	10	8	39	15	M10×1
BK12	16	12	10	39	15	M12×1
BK12	18	12	10	39	15	M12×1
BK15	20	15	12	40	20	M15×1
BK17	25	17	15	53	23	M17×1
BK20	28	20	17	53	25	M20×1
BK20	30	20	17	53	25	M20×1
BK20	32	20	17	53	25	M20×1
BK25	36	25	20	65	30	M25×1.5
BK30	40	30	25	72	38	M30×1.5
BK35	45	35	30	83	45	M35×1.5
BK40	50	40	35	98	50	M40×1.5
BK40	55	40	35	98	50	M40×1.5

Note) Support Units are designed to have dimensions so that combinations of models FK and FF, models EK and EF or models BK and BF are used on the same shaft.
If desiring the shaft end to be machined at THK, add the shape symbol in the end of the Ball Screw model number.
(Example) TS2505+500L-J2K
(Shape J2 on the fixed side; shape K on the supported side)
For the perpendicularity of the end face of the bearing, refer to JIS B 1192-1997.

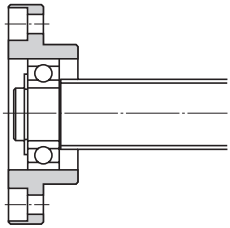


Unit: mm

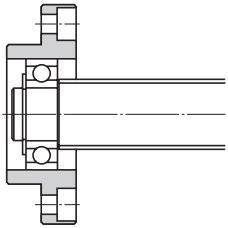
	Width across flat				Shape J2 Keyway			Shape J3 Cut flat on two side	
	S	J	N	H	G N9	T +0.1 0	P	R	P
	16	10	5	7	2	1.2	11	7.5	11
	16	10	5	7	2	1.2	11	7.5	11
	14	13	6	8	3	1.8	12	9.5	12
	14	13	6	8	3	1.8	12	9.5	12
	12	16	6	9	4	2.5	16	11.3	16
	17	18	7	10	5	3	21	14.3	21
	15	21	8	11	5	3	21	16	21
	15	24	8	12	5	3	21	16	21
	15	27	9	13	5	3	21	16	21
	18	27	10	13	6	3.5	25	19	25
	25	32	10	15	8	4	32	23.5	32
	28	36	12	15	8	4	40	28.5	40
	35	41	14	19	10	5	45	33	45
	35	46	14	20	10	5	45	33	45

Note) The ball nut flange faces the fixed side unless otherwise specified.
If desiring the flange to face the supported side, add symbol G in the end of the Ball Screw model number when placing an order.
(Example) BNFN2505-5RRGO+420LC5-J2KG

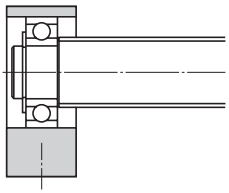
Recommended Shapes of Shaft Ends - Shape K (For Support Unit Models FF, EF and BF)



Model FF



Model FF

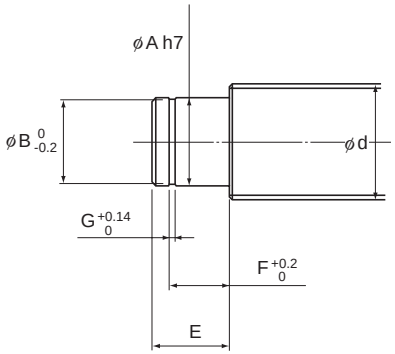


Model EF

Model BF

Support Unit model No.			Ball screw shaft outer diameter	Shaft outer diameter of the bearung
Model FF	Model EF	Model BF	d	A
FF10	EF10	BF10	14	8
FF10	EF10	BF10	15	8
FF12	EF12	BF12	16	10
FF12	EF12	BF12	18	10
FF15	EF15	BF15	20	15
FF15	EF15	BF15	25	15
—	—	BF17 *	25	17
FF20	EF20	BF20 **	28	20
FF20	EF20	BF20 **	30	20
FF20	EF20	BF20 **	32	20
FF25	—	BF25	36	25
FF30	—	BF30	40	30
—	—	BF35	45	35
—	—	BF40	50	40
—	—	BF40	55	40

Note) Support Units are designed to have dimensions so that combinations of models FK and FF, models EK and EF or models BK and BF are used on the same shaft.
If desiring the shaft end to be machined at THK, add the shape symbol in the end of the Ball Screw model number.
(Example) TS2505+500L-H2K
(Shape H2 on the fixed side; shape K on the supported side)
For the perpendicularity of the end face of the bearing, refer to JIS B 1192-1997.

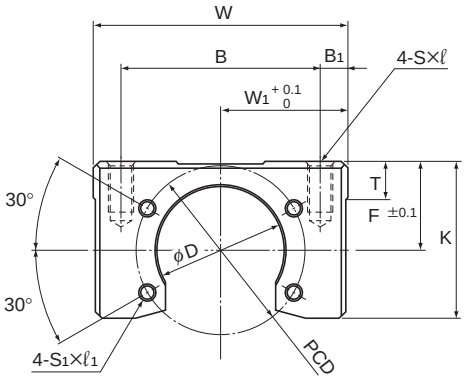


Unit: mm

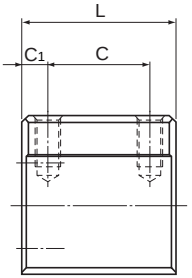
	E	Snap ring groove		
		B	F	G
	10	7.6	7.9	0.9
	10	7.6	7.9	0.9
	11	9.6	9.15	1.15
	11	9.6	9.15	1.15
	13	14.3	10.15	1.15
	13	14.3	10.15	1.15
	16	16.2	13.15	1.15
	19 (16)	19	15.35 (13.35)	1.35
	19 (16)	19	15.35 (13.35)	1.35
	19 (16)	19	15.35 (13.35)	1.35
	20	23.9	16.35	1.35
	21	28.6	17.75	1.75
	22	33	18.75	1.75
	23	38	19.95	1.95
	23	38	19.95	1.95

Note) * When model BK17 (shaft end shape: J) is used on the fixed side for a Ball Screw with a shaft outer diameter of 25 mm, the shaft end shape on the supported side is that for model BF17.
** The dimensions in the parentheses in the table above are that of model BF20. They differ from those of models FF20 and EF20. When placing an order, be sure to specify the model number of the Support Unit to be used.

Nut Bracket



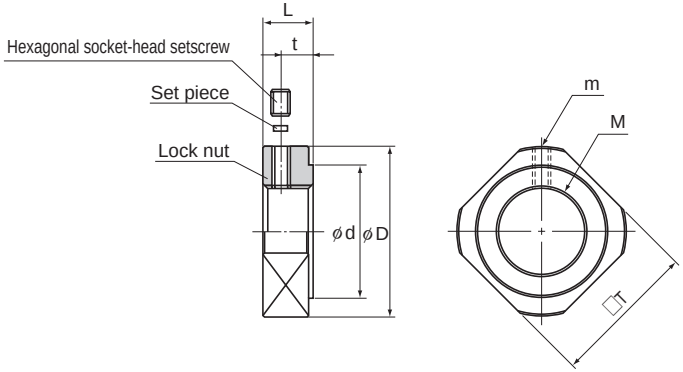
Model No.	Width W	W1	B	B1	Overall length L	C	C1	F	K
MC 1004	48	24	40	4	32	16	10	20	32.5
MC 1205	60	30	47	6.5	36	24	6	21	37
MC 1408	60	30	50	5	36	20	10	21.5	37
MC 2010	86	43	70	8	50	30	10	31	54
MC 2020	86	43	70	8	40	24	8	28	51



Unit: mm

	T	D	PCD	S×ℓ	S1×ℓ1	For factory automation equipment Supported Ball Screw models	Mass kg
	9	26.4	36	M5×10	M4×7	BNK1004,BNK1010	0.24
	9	30.4	40	M6×12	M4×7	BNK1205	0.38
	9	34.4	45	M6×12	M5×7	BNK1408,BNK1510,BNK1520,BNK1616	0.34
	16	46.4	59	M10×20	M6×10	BNK2010	1.04
	16	39.4	59	M10×20	M6×10	BNK2020	0.83

Lock Nut



Unit: mm

Model No.	M	m	D	d	L	t	T	Mass kg
RN 4	M4×0.5	M2.6	11.5	8	5	2.7	10	0.003
RN 5	M5×0.5	M2.6	13.5	9	5	2.7	11	0.004
RN 6	M6×0.75	M3	14.5	10	5	2.7	12	0.005
RN 8	M8×1	M3	17	13	6.5	4	14	0.008
RN 10	M10×1	M3	20	15	8	5.5	16	0.013
RN 12	M12×1	M3	22	17	8	5.5	19	0.014
RN 15	M15×1	M3	25	21	8	4.5	22	0.017
RN 17	M17×1	M4	30	25	13	9	24	0.042
RN 20	M20×1	M4	35	26	11	7	30	0.048
RN 25	M25×1.5	M5	43	33	15	10	35	0.096
RN 30	M30×1.5	M6	48	39	20	14	40	0.145
RN 35	M35×1.5	M8	60	46	21	14	50	0.261
RN 40	M40×1.5	M8	63	51	25	18	50	0.304

Ball Screw

Options

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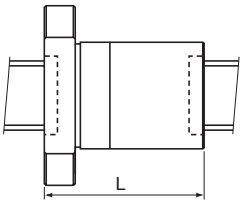
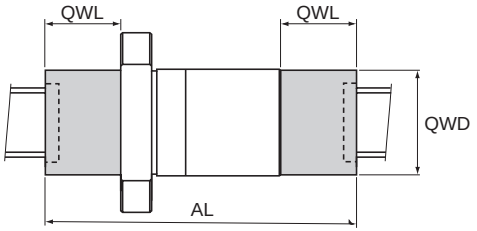
Dimensions of Each Model with an Option Attached

Dimensions of the Ball Screw Nut Attached with Wiper Ring W and QZ Lubricator



With WW (without QZ)



With QZ and WW

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
SBN Retainer	3210-7	○	○	120	31	73	182
	3212-5	○	○	117	33	73	183
	3610-7	○	○	123	33	64	189
	3612-7	○	○	140	35	64	210
	3616-5	○	○	140	32	64	204
	4012-5	○	○	119	38	66	195
	4016-5	○	○	144	42	66	228
	4512-5	○	△	119	—	—	—
	4516-5	○	△	140	—	—	—
	5012-5	○	○	119	38.5	79	196
	5016-5	○	○	143	38.5	79	220
	5020-5	○	○	169	40.5	79	250
SBK Retainer	3620-7.6	○	○	110	28	69	166
	4020-7.6	○	○	110	30.5	79	171
	4030-7.6	○	○	148	30.4	79	208.8
	5020-7.6	○	○	110	35	89	180
	5030-7.6	○	○	149	35	89	219
	5036-7.6	○	○	172	35	89	242
	5520-7.6	○	○	110	32	95	174
	5530-7.6	○	○	149	32	95	213
	5536-7.6	○	○	172	32	95	236
HBN Retainer	3210-5	×	△	—	—	—	—
	3610-5	×	△	—	—	—	—
	3612-5	×	△	—	—	—	—
	4010-7.5	×	△	—	—	—	—
	4012-7.5	×	△	—	—	—	—
	5010-7.5	×	△	—	—	—	—
	5012-7.5	×	△	—	—	—	—
	5016-7.5	×	△	—	—	—	—
	6316-7.5	×	△	—	—	—	—
	6316-10.5	×	△	—	—	—	—
	6320-7.5	×	△	—	—	—	—

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNF	1604-3	○	○	45	29	31	103
	1605-2.5	○	○	41	29	31	99
	1605-3	○	○	51	29	31	109
	1605-5	○	○	56	29	31	114
	1606-2.5	○	○	44	29	31	102
	1606-5	○	○	62	29	31	120
	1610-1.5	○	○	42	29	31	100
	1810-2.5	○	△	69	—	—	—
	1810-3	○	△	75	—	—	—
	2004-2.5	○	○	37	27.5	39	92
	2004-5	○	○	49	27.5	39	104
	2005-2.5	○	○	41	27.5	43	96
	2005-3	○	○	52	27.5	43	107
	2005-3.5	○	○	45	27.5	43	100
	2005-5	○	○	56	27.5	43	111
	2006-2.5	○	△	44	—	—	—
	2006-3	○	△	56	—	—	—
	2006-3.5	○	△	50	—	—	—
	2006-5	○	△	62	—	—	—
	2008-2.5	△	△	—	—	—	—
	2010A-1.5	○	△	58	—	—	—
	2012-1.5	△	△	—	—	—	—
	2504-2.5	○	○	36	32.5	45	101
	2504-5	○	○	48	32.5	45	113
	2505-2.5	○	○	40	32.5	45	105
	2505-3	○	○	52	32.5	45	117
	2505-3.5	○	○	45	32.5	45	110
	2505-5	○	○	55	32.5	45	120
	2506-2.5	○	○	44	33	45	110
	2506-3	○	○	56	33	45	122
	2506-3.5	○	○	50	33	45	116
	2506-5	○	○	62	33	45	128

○: available △: available per request X: not available
The dimension “L” indicates the value with WW attached. Depending on the model number, the dimension including WW may exceed the overall nut length.

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNF	2508-2.5	○	○	58	34	45	126
	2508-3	○	○	71	34	45	139
	2508-3.5	○	○	66	34	45	134
	2508-5	○	○	82	34	45	150
	2510A-2.5	○	○	70	37	45	144
	2512-2.5	○	○	60	33	45	126
	2516-1.5	○	○	60	35	45	130
	2805-2.5	○	△	44	—	—	—
	2805-3	○	△	54	—	—	—
	2805-3.5	○	△	49	—	—	—
	2805-5	○	△	59	—	—	—
	2805-7.5	○	△	74	—	—	—
	2806-2.5	○	△	50	—	—	—
	2806-3.5	○	△	56	—	—	—
	2806-5	○	△	68	—	—	—
	2806-7.5	○	△	86	—	—	—
	2808-2.5	○	△	68	—	—	—
	2808-3	○	△	80	—	—	—
	2808-5	○	△	92	—	—	—
	2810-2.5	○	△	86	—	—	—
	3204-7.5	△	△	—	—	—	—
	3205-2.5	○	○	41	32	57	105
	3205-3	○	○	53	32	57	117
	3205-4.5	○	○	63	32	57	127
	3205-5	○	○	56	32	57	120
	3205-7.5	○	○	71	32	57	135
	3206-2.5	○	○	45	32	57	109
	3206-3	○	○	57	32	57	121
	3206-5	○	○	63	32	57	127
	3208A-2.5	○	○	58	34	57	126
	3208A-3	○	○	71	34	57	139
	3208A-4.5	○	○	87	34	57	155
	3208A-5	○	○	82	34	57	150
	3210A-2.5	○	○	70	31	73	132
	3210A-3	○	○	87	31	73	149
	3210A-3.5	○	○	80	31	73	142
	3210A-5	○	○	100	31	73	162
	3212-3.5	○	○	98	33	73	164
	3606-2.5	○	○	53	30	64	113
	3606-3	○	○	62	30	64	122
	3606-5	○	○	71	30	64	131
	3606-7.5	○	○	89	30	64	149
	3608-2.5	○	○	68	31	64	130
	3608-5	○	○	92	31	64	154
	3608-7.5	○	○	116	31	64	178
	3610-2.5	○	○	81	33	64	147
	3610-5	○	○	111	33	64	177
	3610-7.5	○	○	141	33	64	207
	3612-2.5	○	○	87	35	64	157
	3612-5	○	○	123	35	64	193
	3616-2.5	○	○	92	32	64	156

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNF	3620-1.5	○	○	75	32	64	139
	4005-3	○	○	56	33	66	122
	4005-4.5	○	○	66	33	66	132
	4005-6	○	○	81	33	66	147
	4006-2.5	○	○	48	35	66	118
	4006-5	○	○	66	35	66	136
	4006-7.5	○	○	84	35	66	154
	4008-2.5	○	○	58	35	66	128
	4008-3	○	○	71	35	66	141
	4008-5	○	○	82	35	66	152
	4010-2.5	○	○	73	37	66	147
	4010-3	○	○	90	37	66	164
	4010-3.5	○	○	83	37	66	157
	4010-5	○	○	103	37	66	177
	4012-2.5	○	○	83	38	66	159
	4012-3.5	○	○	95	38	66	171
	4012-5	○	○	119	38	66	195
	4016-5	○	○	152	42	66	236
	4506A-2.5	○	△	53	—	—	—
	4506A-5	○	△	71	—	—	—
	4506A-7.5	○	△	89	—	—	—
	4508-2.5	○	△	68	—	—	—
	4508-5	○	△	92	—	—	—
	4508-7.5	○	△	116	—	—	—
	4510-2.5	○	△	81	—	—	—
	4510-3	○	△	94	—	—	—
	4510-5	○	△	111	—	—	—
	4510-7.5	○	△	141	—	—	—
	4512-5	○	△	119	—	—	—
	4520-1.5	○	△	95	—	—	—
	5005-4.5	○	○	68	35.5	79	139
	5008-2.5	○	○	61	36.5	79	134
	5008-5	○	○	85	36.5	79	158
	5008-7.5	○	○	109	36.5	79	182
	5010-2.5	○	○	73	37.5	79	148
	5010-3	○	○	90	37.5	79	165
	5010-3.5	○	○	83	37.5	79	158
	5010-5	○	○	103	37.5	79	178
	5010-7.5	○	○	133	37.5	79	208
	5012-2.5	○	○	87	38.5	79	164
	5012-3.5	○	○	99	38.5	79	176
	5012-5	○	○	123	38.5	79	200
	5016-2.5	○	○	116	38.5	79	193
	5016-5	○	○	164	38.5	79	241
	5020-2.5	○	○	141	40.5	79	222
	5510-2.5	○	△	81	—	—	—
	5510-5	○	△	111	—	—	—
	5510-7.5	○	△	141	—	—	—
	5512-2.5	○	△	93	—	—	—
	5512-3	○	△	107	—	—	—
	5512-3.5	○	△	105	—	—	—

○: available △: available per request X: not available

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNF	5512-5	○	△	129	—	—	—
	5512-7.5	○	△	165	—	—	—
	5516-2.5	○	△	116	—	—	—
	5516-5	○	△	164	—	—	—
	5520-2.5	○	△	127	—	—	—
	5520-5	○	△	187	—	—	—
	6310-2.5	○	△	77	—	—	—
	6310-5	○	△	107	—	—	—
	6310-7.5	○	△	137	—	—	—
	6312A-2.5	△	△	—	—	—	—
	6312A-5	△	△	—	—	—	—
	6316-5	△	△	—	—	—	—
	6320-2.5	○	△	127	—	—	—
	6320-5	○	△	187	—	—	—
	7010-2.5	△	△	—	—	—	—
	7010-5	△	△	—	—	—	—
	7010-7.5	△	△	—	—	—	—
	7012-2.5	△	△	—	—	—	—
	7012-5	△	△	—	—	—	—
	7012-7.5	△	△	—	—	—	—
	7020-5	△	△	—	—	—	—
	8010-2.5	△	△	—	—	—	—
	8010-5	△	△	—	—	—	—
	8010-7.5	△	△	—	—	—	—
	8020A-2.5	△	△	—	—	—	—
	8020A-5	△	△	—	—	—	—
	8020A-7.5	△	△	—	—	—	—
	10020A-2.5	○	△	131	—	—	—
	10020A-5	○	△	191	—	—	—
	10020A-7.5	○	△	251	—	—	—
BNFN	1604-3	○	○	85	29	31	143
	1605-2.5	○	○	76	29	31	134
	1605-3	○	○	96	29	31	154
	1605-5	○	○	106	29	31	164
	1610-1.5	○	○	72	29	31	130
	1810-2.5	○	△	119	—	—	—
	1810-3	○	△	135	—	—	—
	2004-2.5	○	△	69	—	—	—
	2004-5	○	△	93	—	—	—
	2005-2.5	○	△	76	—	—	—
	2005-3	○	△	97	—	—	—
	2005-3.5	○	△	85	—	—	—
	2005-5	○	△	106	—	—	—
	2006-2.5	○	△	86	—	—	—
	2006-3	○	△	110	—	—	—
	2006-3.5	○	△	98	—	—	—
	2006-5	○	△	122	—	—	—
	2008-2.5	△	△	—	—	—	—
	2010A-1.5	○	△	98	—	—	—
	2012-1.5	△	△	—	—	—	—
	2504-2.5	○	○	68	32.5	45	133

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNFN	2504-5	○	○	92	32.5	45	157
	2505-2.5	○	○	75	32.5	45	140
	2505-3	○	○	102	32.5	45	167
	2505-3.5	○	○	85	32.5	45	150
	2505-5	○	○	105	32.5	45	170
	2506-2.5	○	○	86	33	45	152
	2506-3	○	○	110	33	45	176
	2506-3.5	○	○	98	33	45	164
	2506-5	○	○	122	33	45	188
	2508-2.5	○	○	106	34	45	174
	2508-3	○	○	135	34	45	203
	2508-3.5	○	○	122	34	45	190
	2508-5	○	○	154	34	45	222
	2510A-2.5	○	○	120	37	45	194
	2512-2.5	○	○	108	33	45	174
	2516-1.5	○	○	108	35	45	178
	2805-2.5	○	△	74	—	—	—
	2805-3	○	△	94	—	—	—
	2805-3.5	○	△	84	—	—	—
	2805-5	○	△	104	—	—	—
	2805-7.5	○	△	134	—	—	—
	2806-2.5	○	△	86	—	—	—
	2806-3.5	○	△	98	—	—	—
	2806-5	○	△	122	—	—	—
	2806-7.5	○	△	158	—	—	—
	2808-2.5	○	△	116	—	—	—
	2808-3	○	△	144	—	—	—
	2808-5	○	△	164	—	—	—
	2810-2.5	○	△	146	—	—	—
	3205-2.5	○	○	76	32	57	140
	3205-3	○	○	103	32	57	167
	3205-4.5	○	○	123	32	57	187
	3205-5	○	○	106	32	57	170
	3205-7.5	○	○	136	32	57	200
	3206-2.5	○	○	87	32	57	151
	3206-3	○	○	111	32	57	175
	3206-5	○	○	123	32	57	187
	3208A-2.5	○	○	106	34	57	174
	3208A-3	○	○	135	34	57	203
	3208A-4.5	○	○	167	34	57	235
	3208A-5	○	○	154	34	57	222
	3210A-2.5	○	○	130	31	73	192
	3210A-3	○	○	167	31	73	229
	3210A-3.5	○	○	150	31	73	212
	3210A-5	○	○	190	31	73	252
	3212-3.5	○	○	170	33	73	236
	3606-2.5	○	○	89	30	64	149
	3606-3	○	○	110	30	64	170
	3606-5	○	○	125	30	64	185
	3606-7.5	○	○	161	30	64	221
	3608-2.5	○	○	116	31	64	178

○: available △: available per request X: not available

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNFN	3608-5	○	○	164	31	64	226
	3608-7.5	○	○	212	31	64	274
	3610-2.5	○	○	141	33	64	207
	3610-5	○	○	201	33	64	267
	3610-7.5	○	○	261	33	64	327
	3612-2.5	○	○	147	35	64	217
	3612-5	○	○	219	35	64	289
	3616-2.5	○	○	172	32	64	236
	3616-5	○	○	268	32	64	332
	3620-1.5	○	○	135	32	64	199
	4005-3	○	○	106	33	66	172
	4005-4.5	○	○	126	33	66	192
	4005-5	○	○	109	33	66	175
	4005-6	○	○	156	33	66	222
	4006-2.5	○	○	90	35	66	160
	4006-5	○	○	126	35	66	196
	4006-7.5	○	○	162	35	66	232
	4008-2.5	○	○	106	35	66	176
	4008-3	○	○	135	35	66	205
	4008-5	○	○	154	35	66	224
	4010-2.5	○	○	133	37	66	207
	4010-3	○	○	170	37	66	244
	4010-3.5	○	○	153	37	66	227
	4010-5	○	○	193	37	66	267
	4012-2.5	○	○	155	38	66	231
	4012-3.5	○	○	179	38	66	255
	4012-5	○	○	227	38	66	303
	4016-5	○	○	280	42	66	364
	4506A-2.5	○	△	89	—	—	—
	4506A-5	○	△	125	—	—	—
	4506A-7.5	○	△	161	—	—	—
	4508-2.5	○	△	116	—	—	—
	4508-5	○	△	164	—	—	—
	4508-7.5	○	△	212	—	—	—
	4510-2.5	○	△	141	—	—	—
	4510-3	○	△	164	—	—	—
	4510-5	○	△	201	—	—	—
	4510-7.5	○	△	261	—	—	—
	4512-5	○	△	227	—	—	—
	4520-1.5	○	△	175	—	—	—
	5005-3	○	○	108	35.5	79	179
	5005-4.5	○	○	128	35.5	79	199
	5008-2.5	○	○	109	36.5	79	182
	5008-5	○	○	157	36.5	79	230
	5008-7.5	○	○	205	36.5	79	278
	5010-2.5	○	○	133	37.5	79	208
	5010-3	○	○	170	37.5	79	245
	5010-3.5	○	○	153	37.5	79	228
	5010-5	○	○	193	37.5	79	268
	5010-7.5	○	○	253	37.5	79	328
	5012-2.5	○	○	159	38.5	79	236

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNFN	5012-3.5	○	○	183	38.5	79	260
	5012-5	○	○	231	38.5	79	308
	5016-2.5	○	○	196	38.5	79	273
	5016-5	○	○	292	38.5	79	369
	5020-2.5	○	○	241	40.5	79	322
	5510-2.5	○	△	141	—	—	—
	5510-5	○	△	201	—	—	—
	5510-7.5	○	△	261	—	—	—
	5512-2.5	○	△	165	—	—	—
	5512-3	○	△	191	—	—	—
	5512-3.5	○	△	189	—	—	—
	5512-5	○	△	237	—	—	—
	5512-7.5	○	△	309	—	—	—
	5516-2.5	○	△	196	—	—	—
	5516-5	○	△	292	—	—	—
	5520-2.5	○	△	227	—	—	—
	5520-5	○	△	347	—	—	—
	6310-2.5	○	△	137	—	—	—
	6310-5	○	△	197	—	—	—
	6310-7.5	○	△	257	—	—	—
	6312A-2.5	△	△	—	—	—	—
	6312A-5	△	△	—	—	—	—
	6316-2.5	△	△	—	—	—	—
	6316-5	△	△	—	—	—	—
	6320-2.5	○	△	227	—	—	—
	6320-5	○	△	347	—	—	—
	7010-2.5	△	△	—	—	—	—
	7010-5	△	△	—	—	—	—
	7010-7.5	△	△	—	—	—	—
	7012-2.5	△	△	—	—	—	—
	7012-5	△	△	—	—	—	—
	7012-7.5	△	△	—	—	—	—
	7020-5	△	△	—	—	—	—
	8010-2.5	△	△	—	—	—	—
	8010-5	△	△	—	—	—	—
	8010-7.5	△	△	—	—	—	—
	8012-5	△	△	—	—	—	—
	8020A-2.5	△	△	—	—	—	—
	8020A-5	△	△	—	—	—	—
	10020A-2.5	○	△	231	—	—	—
	10020A-5	○	△	351	—	—	—
	10020A-7.5	○	△	471	—	—	—
BIF	1605-5	○	○	56	29	31	114
	1606-5	○	○	62	29	31	120
	1810-3	○	△	75	—	—	—
	2004-5	○	△	53	—	—	—
	2005-5	○	△	56	—	—	—
	2006-3	○	△	56	—	—	—
	2006-5	○	△	62	—	—	—
	2505-3	○	○	52	32.5	45	117
	2505-5	○	○	55	32.5	45	120

○: available △: available per request X: not available

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BIF	2508-5	○	○	82	34	45	150
	2510A-5	○	○	100	37	45	174
	2805-5	○	△	59	—	—	—
	2805-10	○	△	89	—	—	—
	2806-5	○	△	68	—	—	—
	2806-10	○	△	104	—	—	—
	2810-3	○	△	88	—	—	—
	3204-10	△	△	—	—	—	—
	3205-5	○	○	56	32	57	120
	3205-10	○	○	86	32	57	150
	3206-5	○	○	63	32	57	127
	3206-7	○	○	75	32	57	139
	3206-10	○	○	99	32	57	163
	3208A-5	○	○	82	34	57	150
	3208A-7	○	○	98	34	57	166
	3210A-5	○	○	100	31	73	162
	3610-5	○	○	111	33	64	177
	3610-10	○	○	171	33	64	237
	4010-5	○	○	103	37	66	177
	4010-10	○	○	163	37	66	237
	4012-5	○	○	119	38	66	195
	4012-10	○	○	191	38	66	267
	5010-5	○	○	103	37.5	79	178
	5010-10	○	○	163	37.5	79	238
DIK	1404-4	△	△	—	—	—	—
	1404-6	△	△	—	—	—	—
	1605-6	○	△	60	—	—	—
	2004-6	○	△	62	—	—	—
	2004-8	○	△	70	—	—	—
	2005-6	○	△	61	—	—	—
	2006-6	△	△	—	—	—	—
	2008-4	△	△	—	—	—	—
	2504-6	○	△	63	—	—	—
	2504-8	○	△	71	—	—	—
	2505-6	○	△	61	—	—	—
	2506-4	○	△	60	—	—	—
	2506-6	○	△	72	—	—	—
	2508-4	○	△	71	—	—	—
	2508-6	○	△	94	—	—	—
	2510-4	○	△	85	—	—	—
	2805-6	○	△	69	—	—	—
	2805-8	○	△	79	—	—	—
	2806-6	○	△	73	—	—	—
	2810-4	○	△	84	—	—	—
	3204-6	○	△	64	—	—	—
	3204-8	○	△	72	—	—	—
	3204-10	○	△	80	—	—	—
	3205-6	○	△	62	—	—	—
	3205-8	○	△	73	—	—	—
	3206-6	○	△	73	—	—	—
	3206-8	○	△	87	—	—	—

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
DIK	3210-6	○	△	110	—	—	—
	3212-4	○	△	98	—	—	—
	3610-6	○	△	122	—	—	—
	3610-8	○	△	143	—	—	—
	3610-10	○	△	164	—	—	—
	4010-6	○	○	113	44	61	201
	4010-8	○	○	137	44	61	225
	4012-6	○	○	138	44	61	226
	4012-8	○	○	163	44	61	251
	4016-4	○	○	120	44	61	208
	5010-6	○	△	114	—	—	—
	5010-8	○	△	137	—	—	—
	5010-10	○	△	160	—	—	—
	5012-6	○	△	145	—	—	—
	5012-8	○	△	170	—	—	—
	5016-4	○	△	129	—	—	—
	5016-6	○	△	175	—	—	—
	6310-8	△	△	—	—	—	—
	6312-6	△	△	—	—	—	—
	6312-8	△	△	—	—	—	—
DK	1404-4	△	△	—	—	—	—
	1404-6	△	△	—	—	—	—
	1605-3	○	△	45	—	—	—
	1605-4	○	△	50	—	—	—
	2004-3	○	△	42	—	—	—
	2004-4	○	△	46	—	—	—
	2005-3	○	△	46	—	—	—
	2005-4	○	△	51	—	—	—
	2006-3	△	△	—	—	—	—
	2006-4	△	△	—	—	—	—
	2008-4	△	△	—	—	—	—
	2504-3	○	△	43	—	—	—
	2504-4	○	△	47	—	—	—
	2505-3	○	△	46	—	—	—
	2505-4	○	△	51	—	—	—
	2506-3	○	△	52	—	—	—
	2506-4	○	△	60	—	—	—
	2508-3	○	△	62	—	—	—
	2508-4	○	△	71	—	—	—
	2510-3	○	△	80	—	—	—
	2510-4	○	△	85	—	—	—
	2805-3	○	△	49	—	—	—
	2805-4	○	△	54	—	—	—
	2806-3	○	△	53	—	—	—
	2806-4	○	△	61	—	—	—
	2810-4	○	△	84	—	—	—
	3204-3	○	△	44	—	—	—
	3204-4	○	△	48	—	—	—
	3205-3	○	△	47	—	—	—
	3205-4	○	△	52	—	—	—
	3205-6	○	△	62	—	—	—

○: available △: available per request X: not available

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
DK	3206-3	○	△	53	—	—	—
	3206-4	○	△	61	—	—	—
	3210-3	○	△	80	—	—	—
	3210-4	○	△	90	—	—	—
	3212-4	○	△	98	—	—	—
	3610-3	○	△	82	—	—	—
	3610-4	○	△	93	—	—	—
	4010-3	○	○	83	44	61	171
	4010-4	○	○	93	44	61	181
	4012-3	○	○	90	44	61	178
	4012-4	○	○	103	44	61	191
	4016-4	○	○	120	44	61	208
	4020-3	○	○	123	44	61	211
	5010-3	○	△	83	—	—	—
	5010-4	○	△	93	—	—	—
	5010-6	○	△	114	—	—	—
	5012-3	○	△	97	—	—	—
	5012-4	○	△	110	—	—	—
	5016-3	○	△	111	—	—	—
	5016-4	○	△	129	—	—	—
	5020-3	○	△	136	—	—	—
	6310-4	△	△	—	—	—	—
	6310-6	△	△	—	—	—	—
	6312-3	△	△	—	—	—	—
	6312-4	△	△	—	—	—	—
	6320-3	△	△	—	—	—	—
DKN	4020-3	○	○	233	47	61	327
	5020-3	○	△	243	—	—	—
	6320-3	△	△	—	—	—	—
BLW	1510-5.6	○	○	96	25.5	31	140
	1616-3.6	△	○	—	29	31	(142.5)
	2020-3.6	○	△	112	—	—	—
	2525-3.6	○	△	131.5	—	—	—
	3232-3.6	○	○	162.6	37.5	53	230
	3636-3.6	○	△	191	—	—	—
	4040-3.6	○	△	201.8	—	—	—
	5050-3.6	○	△	255.8	—	—	—
BLK (Precision)	1510-5.6	○	○	51	25.5	31	95
	1616-2.8	△	○	—	29	31	(112)
	1616-3.6	△	○	—	29	31	(96)
	2020-2.8	○	△	72	—	—	—
	2020-3.6	○	△	52	—	—	—
	2525-2.8	○	△	87	—	—	—
	2525-3.6	○	△	62	—	—	—
	3232-2.8	○	○	109.6	37.5	53	177
	3232-3.6	○	○	77.6	37.5	53	145
	3620-5.6	○	△	88	—	—	—
	3624-5.6	△	△	—	—	—	—
	3636-2.8	○	△	123	—	—	—
	3636-3.6	○	△	87	—	—	—
	4040-2.8	○	△	135.8	—	—	—

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BLK (Precision)	4040-3.6	○	△	95.8	—	—	—
	5050-2.8	○	△	166.8	—	—	—
	5050-3.6	○	△	116.8	—	—	—
WGF	0812-3	×	×	—	—	—	—
	1015-3	×	×	—	—	—	—
	1320-3	×	×	—	—	—	—
	1520-1.5	○	○	52	25.5	31	96
	1520-3	○	○	52	25.5	31	96
	1530-1	○	○	40	25.5	31	84
	1530-3	○	○	70	25.5	31	114
	1540-1.5	×	○	49	25.5	31	(93)
	2040-1	×	△	—	—	—	—
	2040-3	×	△	—	—	—	—
	2060-1.5	×	△	—	—	—	—
	2550-1	×	△	—	—	—	—
	2550-3	×	△	—	—	—	—
	3060-1	×	○	—	37.5	53	(137)
	3060-3	×	○	—	37.5	53	(197)
	3090-1.5	×	○	—	37.5	53	(167)
	4080-1	×	△	—	—	—	—
	4080-3	×	△	—	—	—	—
	50100-1	×	△	—	—	—	—
	50100-3	×	△	—	—	—	—
BNK	0401-3	×	×	—	—	—	—
	0501-3	×	×	—	—	—	—
	0601-3	×	×	—	—	—	—
	0801-3	×	×	—	—	—	—
	0802-3	×	×	—	—	—	—
	0810-3	×	×	—	—	—	—
	1002-3	×	×	—	—	—	—
	1004-2.5	×	×	—	—	—	—
	1010-1.5	×	×	—	—	—	—
	1205-2.5	×	×	—	—	—	—
	1402-3	△	△	—	—	—	—
	1404-3	△	△	—	—	—	—
	1408-2.5	△	△	—	—	—	—
	1510-5.6	○	○	51	25.5	31	95
	1520-3	△	○	—	25.5	31	(96)
	1616-3.6	△	○	—	25.5	31	(93)
	2010-2.5	○	△	54	—	—	—
	2020-3.6	○	△	59	—	—	—
	2520-3.6	△	△	—	—	—	—
BNT (both Precision and Rolled)	1404-3.6	△	△	—	—	—	—
	1405-2.6	△	△	35	—	—	—
	1605-2.6	△	△	36	29	31	94
	1808-3.6	△	△	—	—	—	—
	2005-2.6	△	△	35	—	—	—
	2010-2.6	△	△	58	—	—	—
	2505-2.6	△	△	35	—	—	—
	2510-5.3	△	△	94	—	—	—
	2806-2.6	△	△	42	—	—	—

○: available △: available per request X: not available ( ): dimension including QZ (without WW)

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
BNT (both Precision and Rolled)	2806-5.3	△	△	67	—	—	—
	3210-2.6	△	△	64	—	—	—
	3210-5.3	△	△	94	—	—	—
	3610-2.6	△	△	64	—	—	—
	3610-5.3	△	△	96	—	—	—
	4512-5.3	△	△	115	—	—	—
BLK (Rolled)	1510-5.6	○	○	51	25.5	31	95
	1616-3.6	△	○	—	29	31	(96)
	1616-7.2	△	○	—	29	31	(96)
	2020-3.6	○	△	52	—	—	—
	2020-7.2	○	△	52	—	—	—
	2525-3.6	○	△	62	—	—	—
	2525-7.2	○	△	62	—	—	—
	3232-3.6	○	○	77.6	37.5	53	145
	3232-7.2	○	○	77.6	37.5	53	145
	3620-5.6	○	△	88	—	—	—
	3624-5.6	○	△	104	—	—	—
	3636-3.6	△	△	—	—	—	—
	3636-7.2	△	△	—	—	—	—
	4040-3.6	△	△	—	—	—	—
	4040-7.2	△	△	—	—	—	—
	5050-3.6	△	△	—	—	—	—
	5050-7.2	△	△	—	—	—	—
WTF	1520-3	○	○	52	25.5	31	96
	1520-6	○	○	52	25.5	31	96
	1530-2	×	○	—	25.5	31	(84)
	1530-3	×	○	—	25.5	31	(114)
	2040-2	×	△	—	—	—	—
	2040-3	×	△	—	—	—	—
	2550-2	×	△	—	—	—	—
	2550-3	×	△	—	—	—	—
	3060-2	×	○	—	37.5	53	(137.5)
	3060-3	×	○	—	37.5	53	(197.5)
	4080-2	×	△	—	—	—	—
	4080-3	×	△	—	—	—	—
	50100-2	×	△	—	—	—	—
	50100-3	×	△	—	—	—	—
CNF	1530-6	×	○	—	25.5	31	(114)
	2040-6	×	△	—	—	—	—

Unit: mm

Model No.		WW availability	QZ availability	Dimensions including WW	Length of protrusion with QZ attached	Outer diameter of protrusion with QZ attached	Dimensions including QZ and WW
				L	QWL	QWD	AL
CNF	2550-6	×	△	—	—	—	—
	3060-6	×	○	—	37.5	53	(197)
MBF	0401-3.7	×	×	—	—	—	—
	0601-3.7	×	×	—	—	—	—
	0802-3.7	×	×	—	—	—	—
	1002-3.7	×	×	—	—	—	—
	1202-3.7	×	×	—	—	—	—
	1402-3.7	△	△	—	—	—	—
	1404-3.7	△	△	—	—	—	—
BTK	1006-2.6	×	△	—	—	—	—
	1208-2.6	×	△	—	—	—	—
	1404-3.6	△	△	—	—	—	—
	1405-2.6	○	△	40	—	—	—
	1605-2.6	○	△	40	—	—	—
	1808-3.6	△	△	—	—	—	—
	2005-2.6	○	△	40	—	—	—
	2010-2.6	○	△	61	—	—	—
	2505-2.6	○	△	40	—	—	—
	2510-5.3	○	○	98	32.5	45	163
	2806-2.6	○	△	47	—	—	—
	2806-5.3	○	△	65	—	—	—
	3210-2.6	○	○	68	32	57	132
	3210-5.3	○	○	98	32	57	162
	3610-2.6	○	○	70	31	64	132
	3610-5.3	○	○	100	31	64	162
	4010-5.3	○	○	100	34	66	168
	4512-5.3	△	△	—	—	—	—
	5016-5.3	○	○	145	35	79	215
JPF	1404-4	△	×	—	—	—	—
	1405-4	△	×	—	—	—	—
	1605-4	○	×	60	—	—	—
	2005-6	○	×	80	—	—	—
	2505-6	○	×	80	—	—	—
	2510-4	○	×	112	—	—	—
	2805-6	○	×	80	—	—	—
	2806-6	○	×	90	—	—	—
	3210-6	○	×	135	—	—	—
	3610-6	○	×	138	—	—	—
	4010-6	○	×	138	—	—	—

○: available △: available per request X: not available ( ): dimension including QZ (without WW)

Model number coding

BNFN2505-2.5 QZ WW G0 +1000L C5

- BNFN2505-2.5: Model number
- QZ: With QZ Lubricator
- WW: With wiper ring W
- G0: Symbol for clearance in the axial direction (*1)
- +1000L: Overall screw shaft length (in mm)
- C5: Accuracy symbol (*2)

(*1) See A-685. (*2) See A-678.

Note) QZ Lubricator and wiper ring W are not sold alone.

Lead Screw Nut

THK General Catalog

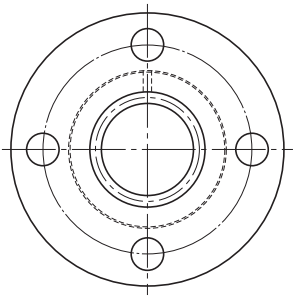
B Product Specifications

Dimensional Drawing, Dimensional Table

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model DCM



Lead Screw Nut Model No.	Outer dimensions			Lead screw nut dimensions						
	Outer diameter									
	D	Tolerance h9	Length L	Flange diameter D_1	H	B	PCD	r	F	d
DCM 12	22	0 −0.052	30	44	6	5.4	31	1.5	7	1.5
DCM 14	22		30	44	6	5.4	31	1.5	7	1.5
DCM 16	28		35	51	7	6.6	38	1.5	8	1.5
DCM 18	32	0 −0.062	40	56	7	6.6	42	1.5	10.5	2
DCM 20	32		40	56	7	6.6	42	1.5	10.5	2
DCM 22	36		50	61	8	6.6	47	2	14	2.5
DCM 25	36		50	61	8	6.6	47	2	14	2.5
DCM 28	44		56	76	10	9	58	2	15	2.5
DCM 32	44		56	76	10	9	58	2	15	2.5
DCM 36	52	0 −0.074	60	84	10	9	66	2.5	17	3
DCM 40	58		70	98	12	11	76	2.5	19	3
DCM 45	64		75	104	12	11	80	2.5	21.5	4
DCM 50	68		80	109	12	11	85	2.5	24	4

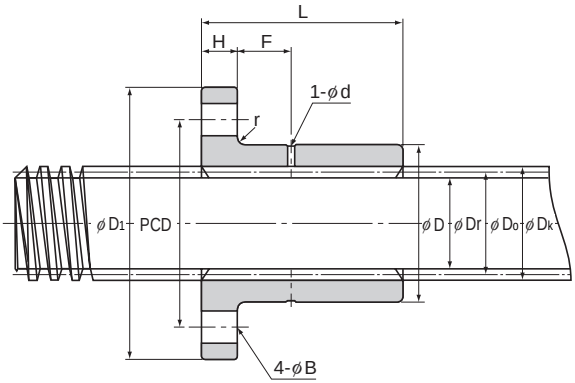
Note) Cut shafts (K) and ground shafts (G) are build-to-order.
The dynamic permissible thrust (F) indicates the torque at which the contact surface pressure on the screw tooth surface is 9.8 N/mm^2.
The static permissible load (P) of the flange indicates the strength of the flange against the load as shown in the figure on the right.

Model number coding

Combination of lead screw nut and screw shaft

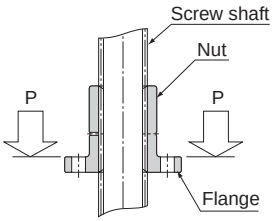
2 DC20 +1500L T

- 2: Number of lead screw nuts used on the same shaft
- DC20: Model No. of lead screw nut
- +1500L: Overall screw shaft length (in mm)
- T: How the screw shaft is processed (T: rolled shaft)



Unit: mm

Model No.(note)	Screw shaft details					Standard shaft length	Maximum shaft length	Dynamic permissible thrust	Static permissible load of the flange	Mass	
	Outer diameter D_k	Effective diameter D_0	Thread minor diameter D_r	Lead R	Lead angle α			F(note) N	P(note) N	Screw nut g	Screw shaft kg/m
CS 12	12	11	9.5	2	3°19′	1000	1500	3920	20200	100	0.8
CS 14	14	12.5	10.5	3	4°22′	1000	1500	4900	16900	85	1
CS 16	16	14.5	12.5	3	3°46′	1000	1500	6670	31500	160	1.3
CS 18	18	16	13.5	4	4°33′	1000	2000	8730	42000	230	1.6
CS 20	20	18	15.5	4	4°03′	1500	2000	9800	37200	210	2
CS 22	22	19.5	16.5	5	4°40′	1500	2500	12400	48600	320	2.3
CS 25	25	22.5	19.5	5	4°03′	1500	3000	14200	39800	290	3.1
CS 28	28	25.5	22.5	5	3°34′	2000	3000	17900	69200	550	4
CS 32	32	29	25.5	6	3°46′	2000	4000	21100	54200	490	5.2
CS 36	36	33	29.5	6	3°19′	2000	4000	25800	84500	670	6.7
CS 40	40	37	33.5	6	2°57′	2000	4000	33800	106000	980	8.4
CS 45	45	41	36.5	8	3°33′	3000	5000	42100	125000	1310	10.4
CS 50	50	46	41.5	8	3°10′	3000	5000	50100	128000	1430	13



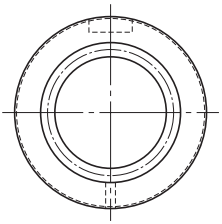
Model number coding

Screw shaft

CS20 T +1500L

- CS20: Model number of screw shaft
- T: How the screw shaft is processed (T: rolled shaft)
- +1500L: Overall screw shaft length (in mm)

Model DC



Lead Screw Nut Model No.	Outer dimensions			Lead screw nut dimensions					
	Outer diameter		L	Keyway dimensions					
	D	Tolerance h9	0 −0.3	b	Tolerance N9	t	ℓ	d	r
DC 12	22	0 −0.052	22	4	0 −0.030	2	16	1.5	1
DC 14	22		22	4		2	16	1.5	1
DC 16	28		26	5		2.5	18	1.5	1
DC 18	32	0 −0.062	31	7	0 −0.036	2.5	22	2	1
DC 20	32		31	7		2.5	22	2	1
DC 22	36		40	7		2.5	26	2.5	1
DC 25	36		40	7		2.5	26	2.5	1
DC 28	44		45	10		4	32	2.5	1.5
DC 32	44		45	10		4	32	2.5	1.5
DC 36	52	0 −0.074	49	12	0 −0.043	4.5	40	3	1.5
DC 40	58		57	15		5	42	3	1.5
DC 45	64		62	15		5	48	4	1.5
DC 50	68		67	15		5	52	4	1.5

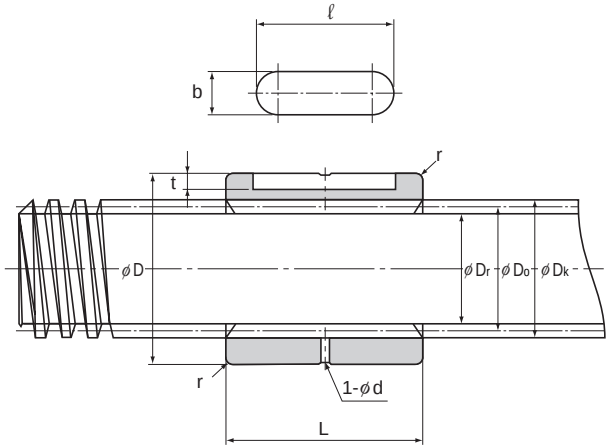
Note) Cut shafts (K) and ground shafts (G) are build-to-order.
The dynamic permissible thrust (F) indicates the torque at which the contact surface pressure on the screw tooth surface is 9.8 N/mm².

Model number coding

Combination of lead screw nut and screw shaft

2 DC20 +1500L T

- **2**: Number of lead screw nuts used on the same shaft
- **DC20**: Model No. of lead screw nut
- **+1500L**: Overall screw shaft length (in mm)
- **T**: How the screw shaft is processed (T: rolled shaft)



Unit: mm

Model No.(note)	Outer diameter D_k	Effective diameter D_0	Thread minor diameter D_r	Lead R	Lead angle α	Standard shaft length	Maximum shaft length	Dynamic permissible thrust F(note) N	Mass: Screw nut g	Mass: Screw shaft kg/m
CS 12	12	11	9.5	2	3°19′	1000	1500	2840	40	0.8
CS 14	14	12.5	10.5	3	4°22′	1000	1500	3630	45	1
CS 16	16	14.5	12.5	3	3°46′	1000	1500	4900	75	1.3
CS 18	18	16	13.5	4	4°33′	1000	2000	6860	120	1.6
CS 20	20	18	15.5	4	4°03′	1500	2000	7650	110	2
CS 22	22	19.5	16.5	5	4°40′	1500	2500	9900	180	2.3
CS 25	25	22.5	19.5	5	4°03′	1500	3000	11400	155	3.1
CS 28	28	25.5	22.5	5	3°34′	2000	3000	14400	280	4
CS 32	32	29	25.5	6	3°46′	2000	4000	17100	230	5.2
CS 36	36	33	29.5	6	3°19′	2000	4000	21200	380	6.7
CS 40	40	37	33.5	6	2°57′	2000	4000	27500	520	8.4
CS 45	45	41	36.5	8	3°33′	3000	5000	34900	730	10.4
CS 50	50	46	41.5	8	3°10′	3000	5000	42100	810	13

Model number coding

Screw shaft

CS20 T +1500L

- CS20: Model number of screw shaft
- T: How the screw shaft is processed (T: rolled shaft)
- +1500L: Overall screw shaft length (in mm)

Change Nut

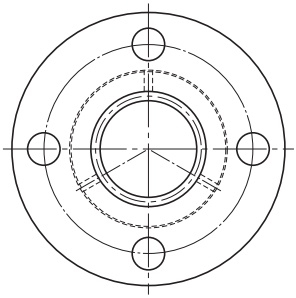
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models DCMA and DCMB



Change Nut Model No.(note)	Outer dimensions			Change nut dimensions							Screw shaft Model No.(note)
	Outer diameter D	Outer diameter Tolerance h9	Length L	Flange diameter D_1	H	B	PCD	r	F	d	
DCMB 8T(note)	15	0 −0.1	16	28	4	3.4	21	0.8	—	—	CT 8T
DCMB 12T(note)	20		25	36	5	4.5	27	1	—	—	CT 12T
DCMA 15T DCMB 15T	22	0 −0.052	15 30	44	6	5.4	31	1.5	4.5	1.5	CT 15T
DCMA 17T DCMB 17T	28		15 35	51	7	6.6	38	1.5	4.5	1.5	CT 17T
DCMA 20T DCMB 20T	32	0 −0.062	20 40	56	7	6.6	42	1.5	6.5	2	CT 20T
DCMA 25T DCMB 25T	36		25 50	61	8	6.6	47	2	8.5	2	CT 25T
DCMA 30T DCMB 30T	44		28 56	76	10	9	58	2	9	2	CT 30T
DCMA 35T DCMB 35T	52	0 −0.074	30 60	84	10	9	66	2.5	10	3	CT 35T
DCMA 40 DCMB 40	58		35 70	98	12	11	76	2.5	11.5	3	☆CT 40
DCMA 45 DCMB 45	64		37 75	104	12	11	80	2.5	12.5	3	☆CT 45
DCMA 50 DCMB 50	68		40 80	109	12	11	85	2.5	14	3	☆CT 50

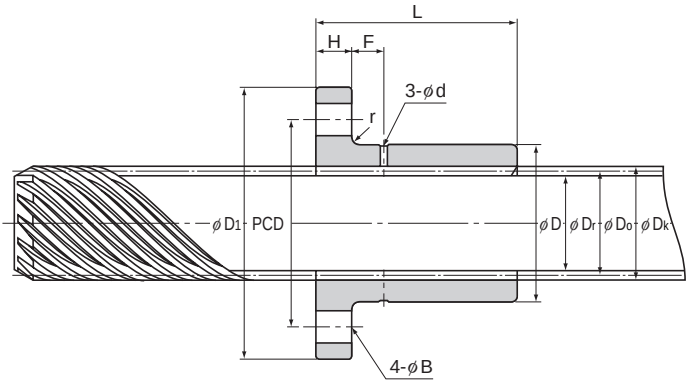
Note) Symbol T indicates that a rolled shaft is used in combination with the change nut.
The dynamic permissible torque (T) and the dynamic permissible thrust (F) indicate the values at which the contact surface pressure on the screw teeth is 9.8 N/mm^2. Miniature Change Nut models DCMB8T and DCMB12T use oil-impregnated plastics. (outer diameter tolerance: special).
The screw shafts marked with "☆" are build-to-order.
The static permissible load (P) of the flange indicates the strength of the flange against the load as shown in the figure on the right.

Model number coding

Combination of change nut and screw shaft

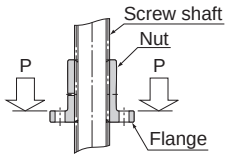
2 DCMA20 +1500L T

- 2: Number of nuts used on the same screw shaft
- DCMA20: Model No. of change nut
- +1500L: Overall screw shaft length (in mm)
- T: How the screw shaft is processed (T: rolled shaft)



Unit: mm

Multi-thread screw shaft details						Standard shaft length	Maximum shaft length	Dynamic permissible torque	Dynamic permissible thrust	Static permissible load of the flange	Mass	
											Change nut	Screw shaft
Outer diameter D_k	Effective diameter D_0	Thread minor diameter D_r	Lead R	Lead angle α°	Threaded grooves Z			T(note) N-m	F(note) N	P(note) N	g	kg/m
9	7.6	6.2	24	(45)	6	500	1000	3.24	863	1800	5	0.36
13.3	11.5	9.7	36	(45)	7	500,1000	1500	12.7	1370	2800	10	0.82
15.8	13.7	11.6	44.4	(45)	8	500,1000	1500	16.7 32.4	2300 4610	13800	60 85	1.2
17.8	15.7	13.6	50	(45)	9	500,1000	1500	20.6 48	2600 6080	28100	95 140	1.5
21.2	18.7	16.2	60	(45)	9	500,1000, 1500	3000	40.2 79.4	4170 8330	34600	135 210	2.6
25.6	23.1	20.6	73.3	(45)	11	500,1000, 1500	3000	74.5 148	6370 12700	38500	175 280	3.3
31.9	29.4	26.9	93.3	(45)	14	500,1000, 2000	4000	130 269	8090 16200	55400	290 465	5.3
34.1	31.1	28.1	97.7	(45)	11	500,1000, 2000	4000	144 287	9260 18500	84500	425 670	5.8
44	38.18	33.3	119.9	(45)	12	500,1000, 2000	—	381 763	20000 40000	85200	715 1065	9
47	41.37	36.4	129.9	(45)	13	1000,2000, 3000	—	474 960	22900 46600	115000	820 1270	10.6
52	47.73	42.9	149.9	(45)	15	1000,2000, 3000	—	681 1360	28500 57100	108000	925 1375	14



Model number coding
Multi-thread screw shaft

CT20 T +1500L

- CT20: Model number of screw shaft
- T: How the screw shaft is processed (T: rolled shaft)
- +1500L: Overall screw shaft length (in mm)

Cross-Roller Ring

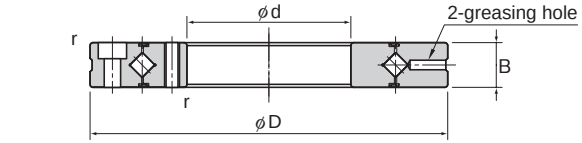
THK General Catalog

B Product Specifications

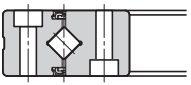
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

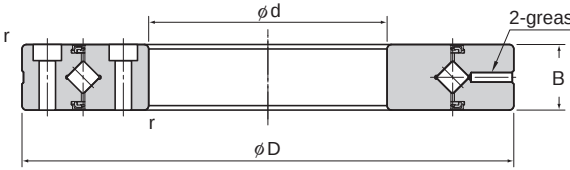
Model RU (Integrated Inner/Outer Ring Type)



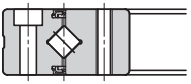
RU 42 to RU 85



RU 124G to RU 445G



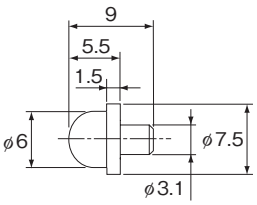
RU 124 to RU 445



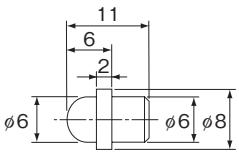
RU 124X to RU 445X

Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole				C	C_0	
		d	D	dp	B	d_1	r_{min}	ds	Dh	kN	kN	kg
20	RU 42	20	70	41.5	12	3.1	0.6	37	47	7.35	8.35	0.29
35	RU 66	35	95	66	15	3.1	0.6	59	74	17.5	22.3	0.62
55	RU 85	55	120	85	15	3.1	0.6	79	93	20.3	29.5	1
80	RU 124 (G)	80	165	124	22	3.1	1	114	134	33.1	50.9	2.6
	RU 124X											
90	RU 148 (G)	90	210	147.5	25	3.1	1.5	133	162	49.1	76.8	4.9
	RU 148X											
115	RU 178 (G)	115	240	178	28	3.1	1.5	161	195	80.3	135	6.8
	RU 178X											
160	RU 228 (G)	160	295	227.5	35	6	2	208	246	104	173	11.4
	RU 228X											
210	RU 297 (G)	210	380	297.3	40	6	2.5	272	320	156	281	21.3
	RU 297X											
350	RU 445 (G)	350	540	445.4	45	6	2.5	417	473	222	473	35.4
	RU 445X											

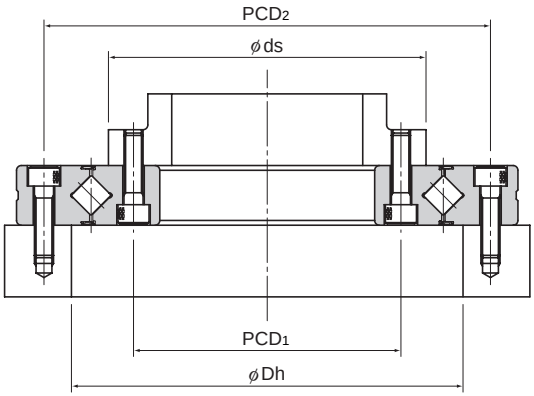
Note) Optional grease nipple available for model RU. (See figure below)
Please indicate with a "-N" at the end of the model number if required.

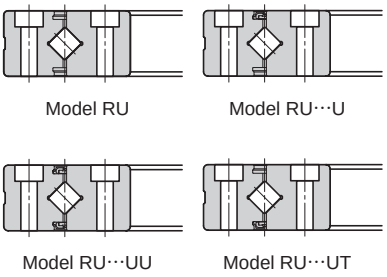


NP3.2×3.5



NP6×5





Unit: mm

	Mounting Hole Related			
	Inner ring		Outer ring	
	PCD_1	Mounting hole	PCD_2	Mounting hole
	28	6-M3 through	57	6-ϕ3.4 drilled through, ϕ6.5 counter bore depth 3.3
	45	8-M4 through	83	8-ϕ4.5 drilled through, ϕ8 counter bore depth 4.4
	65	8-M5 through	105	8-ϕ5.5 drilled through, ϕ9.5 counter bore depth 5.4
	97	10-ϕ5.5 drilled through, ϕ9.5 counter bore depth 5.4 10-M5 through	148	10-ϕ5.5 drilled through, ϕ9.5 counter bore depth 5.4
	112	12-ϕ9 drilled through, ϕ14 counter bore depth 8.6 12-M8 through	187	12-ϕ9 drilled through, ϕ14 counter bore depth 8.6
	139	12-ϕ9 drilled through, ϕ14 counter bore depth 8.6 12-M8 through	217	12-ϕ9 drilled through, ϕ14 counter bore depth 8.6
	184	12-ϕ11 drilled through, ϕ17.5 counter bore depth 10.8 12-M10 through	270	12-ϕ11 drilled through, ϕ17.5 counter bore depth 10.8
	240	16-ϕ14 drilled through, ϕ20 counter bore depth 13 16-M12 through	350	16-ϕ14 drilled through, ϕ20 counter bore depth 13
	385	24-ϕ14 drilled through, ϕ20 counter bore depth 13 24-M12 through	505	24-ϕ14 drilled through, ϕ20 counter bore depth 13

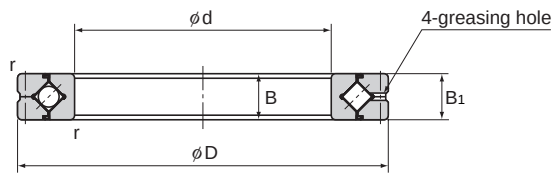
Model number coding

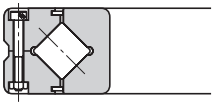
RU124 UU CC0 P2 B G X -N

- RU124 — Model No.
- UU — Seal symbol
  - No Symbol : Without seal
  - UU : Seal attached on both ends
  - U : Seal attached on either end (counterbore side of the outer ring)
  - UT : Seal attached on either end (opposite to the counterbore side of the outer ring)
- CC0 — Radial clearance symbol (*1)
- P2 — Accuracy symbol (*2)
- B — Sub-part Accuracy symbol
  - No Symbol : Rotational Accuracy of the Inner Ring
  - R : Rotational Accuracy of the Outer Ring
  - B : Rotational Accuracy of the Inner/Outer Rings
- G — Mounting Hole Orientation symbol
  - [Available models: RU124 to RU445 (excluding X type)]
  - No Symbol : The counterbore holes of the inner and outer rings face the same direction
  - G : The counterbore holes of the inner and outer rings face opposite direction
- X — Inner Ring Hole symbol
  - [Available models: RU124 to RU445]
  - No Symbol : Inner ring counterbore hole
  - X : Inner ring tapped hole (through hole)
- -N — Option symbol
  - No Symbol : No accessory
  - -N : Grease nipple attached (For the nipple's shape, see the figure on the left.)
    - RU42 to RU178: NP3.2×3.5
    - RU228 to RU445: NP6×5

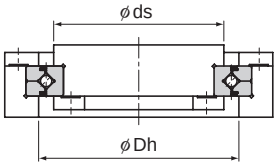
(*1) See A-870. (*2) See A-866.

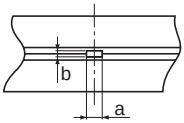
Model RB (Separable Outer Ring Type)



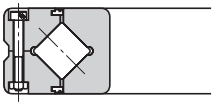


Model RB





Detail view of the greasing hole

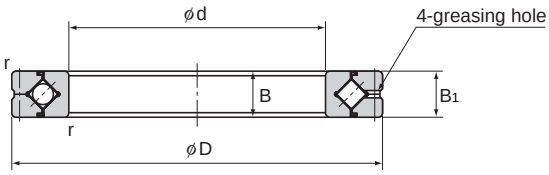


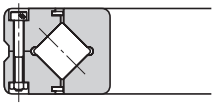
Model RB···UU

Unit: mm

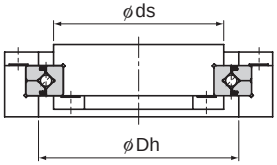
Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
20	RB 2008	20	36	27	8	2	0.8	0.5	23.5	30.5	3.23	3.1	0.04
25	RB 2508	25	41	32	8	2	0.8	0.5	28.5	35.5	3.63	3.83	0.05
30	RB 3010	30	55	41.5	10	2.5	1	0.6	37	47	7.35	8.36	0.12
35	RB 3510	35	60	46.5	10	2.5	1	0.6	41	51.5	7.64	9.12	0.13
40	RB 4010	40	65	51.5	10	2.5	1	0.6	47.5	57.5	8.33	10.6	0.16
45	RB 4510	45	70	56.5	10	2.5	1	0.6	51	61.5	8.62	11.3	0.17
50	RB 5013	50	80	64	13	2.5	1.6	0.6	57.4	72	16.7	20.9	0.27
60	RB 6013	60	90	74	13	2.5	1.6	0.6	68	82	18	24.3	0.3
70	RB 7013	70	100	84	13	2.5	1.6	0.6	78	92	19.4	27.7	0.35
80	RB 8016	80	120	98	16	3	1.6	0.6	91	111	30.1	42.1	0.7
90	RB 9016	90	130	108	16	3	1.6	1	98	118	31.4	45.3	0.75
100	RB 10016	100	140	119.3	16	3.5	1.6	1	109	129	31.7	48.6	0.83
	RB 10020		150	123	20	3.5	1.6	1	113	133	33.1	50.9	1.45
110	RB 11012	110	135	121.8	12	2.5	1	0.6	117	127	12.5	24.1	0.4
	RB 11015		145	126.5	15	3.5	1.6	0.6	122	136	23.7	41.5	0.75
	RB 11020		160	133	20	3.5	1.6	1	120	143	34	54	1.56
120	RB 12016	120	150	134.2	16	3.5	1.6	0.6	127	141	24.2	43.2	0.72
	RB 12025		180	148.7	25	3.5	2	1.5	133	164	66.9	100	2.62
130	RB 13015	130	160	144.5	15	3.5	1.6	0.6	137	152	25	46.7	0.72
	RB 13025		190	158	25	3.5	2	1.5	143	174	69.5	107	2.82

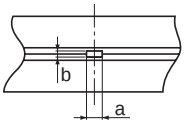
Note) The model number of a type with seals attached is RB···UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.



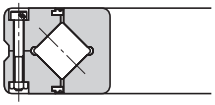


Model RB





Detail view of the greasing hole



Model RB···UU

Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
140	RB 14016	140	175	154.8	16	2.5	1.6	1	147	162	25.9	50.1	1
	RB 14025		200	168	25	3.5	2	1.5	154	185	74.8	121	2.96
150	RB 15013	150	180	164	13	2.5	1.6	0.6	157	172	27	53.5	0.68
	RB 15025		210	178	25	3.5	2	1.5	164	194	76.8	128	3.16
	RB 15030		230	188	30	4.5	3	1.5	173	211	100	156	5.3
160	RB 16025	160	220	188.6	25	3.5	2	1.5	173	204	81.7	135	3.14
170	RB 17020	170	220	191	20	3.5	1.6	1.5	184	198	29	62.1	2.21
180	RB 18025	180	240	210	25	3.5	2	1.5	195	225	84	143	3.44
190	RB 19025	190	240	211.9	25	3.5	1.6	1	202	222	41.7	82.9	2.99
200	RB 20025	200	260	230	25	3.5	2	2	215	245	84.2	157	4
	RB 20030		280	240	30	4.5	3	2	221	258	114	200	6.7
	RB 20035		295	247.7	35	5	3	2	225	270	151	252	9.6
220	RB 22025	220	280	250.1	25	3.5	2	2	235	265	92.3	171	4.1
240	RB 24025	240	300	269	25	3.5	2	2.5	256	281	68.3	145	4.5
250	RB 25025	250	310	277.5	25	3.5	2	2.5	265	290	69.3	150	5
	RB 25030		330	287.5	30	4.5	3	2.5	269	306	126	244	8.1
	RB 25040		355	300.7	40	6	3.5	2.5	275	326	195	348	14.8
300	RB 30025	300	360	328	25	3.5	2	2.5	315	340	76.3	178	5.9
	RB 30035		395	345	35	5	3	2.5	322	368	183	367	13.4
	RB 30040		405	351.6	40	6	3.5	2.5	326	377	212	409	17.2
350	RB 35020	350	400	373.4	20	3.5	1.6	2.5	363	383	54.1	143	3.9

Note) The model number of a type with seals attached is RB···UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.

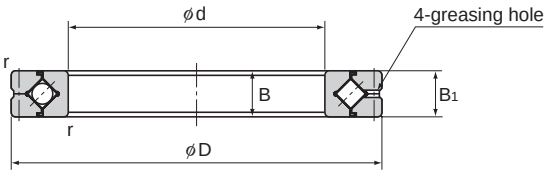
Model number coding

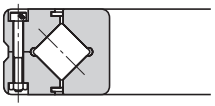
RB3010 UU CC0 P5

- RB3010: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- CC0: Radial clearance symbol (*1)
- P5: Accuracy symbol (*2)

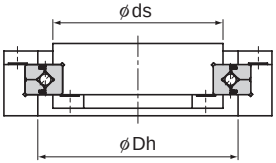
(*1) See A-870. (*2) See A-866.

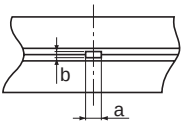
Model RB (Separable Outer Ring Type)



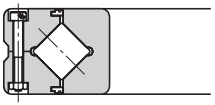


Model RB





Detail view of the greasing hole



Model RB···UU

Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
400	RB 40035	400	480	440.3	35	5	3	2.5	422	459	156	370	14.5
	RB 40040		510	453.4	40	6	3.5	2.5	428	479	241	531	23.5
450	RB 45025	450	500	474	25	3.5	1.6	1	464	484	61.7	182	6.6
500	RB 50025	500	550	524.2	25	3.5	1.6	1	514	534	65.5	201	7.3
	RB 50040		600	548.8	40	6	3	2.5	526	572	239	607	26
	RB 50050		625	561.6	50	6	3.5	2.5	536	587	267	653	41.7
600	RB 60040	600	700	650	40	6	3	3	627	673	264	721	29
700	RB 70045	700	815	753.5	45	6	3	3	731	777	281	836	46
800	RB 80070	800	950	868.1	70	6	4	4	836	900	468	1330	105
900	RB 90070	900	1050	969	70	6	4	4	937	1001	494	1490	120
1000	RB 1000110	1000	1250	1114	110	6	6	5	1057	1171	1220	3220	360
1250	RB 1250110	1250	1500	1365.8	110	6	6	5	1308	1423	1350	3970	440

Note) The model number of a type with seals attached is RB···UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.

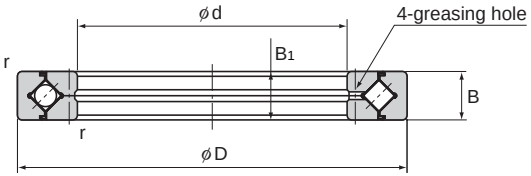
Model number coding

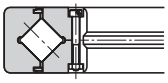
RB40040 UU C0 PE5

- RB40040: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- C0: Radial clearance symbol (*1)
- PE5: Accuracy symbol (*2)

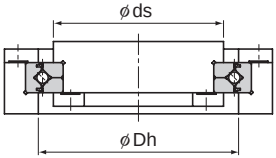
(*1) See A-870. (*2) See A-866.

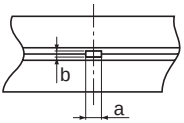
Model RE (Two-piece Inner Ring Type)



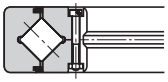


Model RE





Detail view of the greasing hole



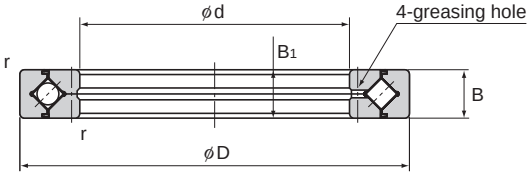
Model RE···UU

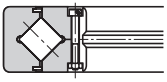
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
20	RE 2008	20	36	29	8	2	0.8	0.5	23.5	30.5	3.23	3.1	0.04
25	RE 2508	25	41	34	8	2	0.8	0.5	28.5	35.5	3.63	3.83	0.05
30	RE 3010	30	55	43.5	10	2.5	1	0.6	37	47	7.35	8.36	0.12
35	RE 3510	35	60	48.5	10	2.5	1	0.6	41	51.5	7.64	9.12	0.13
40	RE 4010	40	65	53.5	10	2.5	1	0.6	47.5	58	8.33	10.6	0.16
45	RE 4510	45	70	58.5	10	2.5	1	0.6	51	61.5	8.62	11.3	0.17
50	RE 5013	50	80	66	13	2.5	1.6	0.6	57.5	72	16.7	20.9	0.27
60	RE 6013	60	90	76	13	2.5	1.6	0.6	68	82	18	24.3	0.3
70	RE 7013	70	100	86	13	2.5	1.6	0.6	78	92	19.4	27.7	0.35
80	RE 8016	80	120	101.4	16	3	1.6	0.6	91	111	30.1	42.1	0.7
90	RE 9016	90	130	112	16	3	1.6	1	98	118	31.4	45.3	0.75
100	RE 10016	100	140	121.1	16	3	1.6	1	109	129	31.7	48.6	0.83
	RE 10020		150	127	20	3.5	1.6	1	113	133	33.1	50.9	1.45
110	RE 11012	110	135	123.3	12	2.5	1	0.6	117	127	12.5	24.1	0.4
	RE 11015		145	129	15	3	1.6	0.6	122	136	23.7	41.5	0.75
	RE 11020		160	137	20	3.5	1.6	1	120	140	34	54	1.56
120	RE 12016	120	150	136	16	3	1.6	0.6	127	141	24.2	43.2	0.72
	RE 12025		180	152	25	3.5	2	1.5	133	164	66.9	100	2.62
130	RE 13015	130	160	146	15	3	1.6	0.6	137	152	25	46.7	0.72
	RE 13025		190	162	25	3.5	2	1.5	143	174	69.5	107	2.82

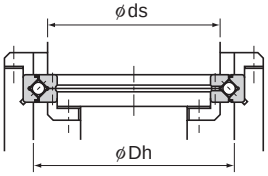
Note) The model number of a type with seals attached is RE···UU.
If a certain level of accuracy is required, this model is used for outer ring rotation.

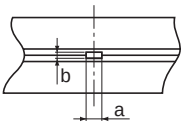
Model RE (Two-piece Inner Ring Type)



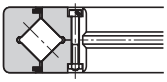


Model RE





Detail view of the greasing hole



Model RE···UU

Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
140	RE 14016	140	175	160	16	3	1.6	1	147	162	25.9	50.1	1
	RE 14025		200	172	25	3.5	2	1.5	154	185	74.8	121	2.96
150	RE 15013	150	180	166	13	2.5	1.6	0.6	158	172	27	53.5	0.68
	RE 15025		210	182	25	3.5	2	1.5	164	194	76.8	128	3.16
	RE 15030		230	192	30	4.5	3	1.5	173	210	100	156	5.3
160	RE 16025	160	220	192	25	3.5	2	1.5	173	204	81.7	135	3.14
170	RE 17020	170	220	196.1	20	3.5	1.6	1.5	184	198	29	62.1	2.21
180	RE 18025	180	240	210	25	3.5	2	1.5	195	225	84	143	3.44
190	RE 19025	190	240	219	25	3.5	1.6	1	202	222	41.7	82.9	2.99
200	RE 20025	200	260	230	25	3.5	2	2	215	245	84.2	157	4
	RE 20030		280	240	30	4.5	3	2	221	258	114	200	6.7
	RE 20035		295	247.7	35	5	3	2	225	270	151	252	9.6
220	RE 22025	220	280	250.1	25	3.5	2	2	235	265	92.3	171	4.1
240	RE 24025	240	300	272.5	25	3.5	2	2.5	256	281	68.3	145	4.5
250	RE 25025	250	310	280.9	25	3.5	2	2.5	268	293	69.3	150	5
	RE 25030		330	287.5	30	4.5	3	2.5	269	306	126	244	8.1
	RE 25040		355	300.7	40	6	3.5	2.5	275	326	195	348	14.8
300	RE 30025	300	360	332	25	3.5	2	2.5	319	344	75.5	178	5.9
	RE 30035		395	345	35	5	3	2.5	322	368	183	367	13.4
	RE 30040		405	351.6	40	6	3.5	2.5	326	377	212	409	17.2
350	RE 35020	350	400	376.6	20	3.5	1.6	2.5	363	383	54.1	143	3.9

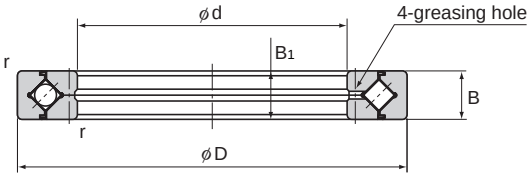
Note) The model number of a type with seals attached is RE···UU.
If a certain level of accuracy is required, this model is used for outer ring rotation.

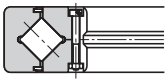
Model number coding

RE8016 UU CC0 P4

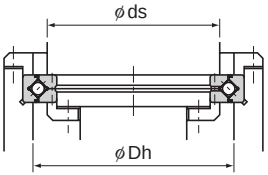
- RE8016: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- CC0: Radial clearance symbol (*1)
- P4: Accuracy symbol (*2)

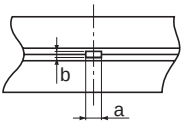
(*1) See A-870. (*2) See A-866.



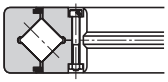


Model RE





Detail view of the greasing hole



Model RE···UU

Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
400	RE 40035	400	480	440.3	35	5	3	2.5	422	459	156	370	14.5
	RE 40040		510	453.4	40	6	3.5	2.5	428	479	241	531	23.5
450	RE 45025	450	500	476.6	25	3.5	1.6	1	464	484	61.7	182	6.6
500	RE 50025	500	550	526.6	25	3.5	1.6	1	514	534	65.5	201	7.3
	RE 50040		600	548.8	40	6	3	2.5	526	572	239	607	26
	RE 50050		625	561.6	50	6	3.5	2.5	536	587	267	653	41.7
600	RE 60040	600	700	650	40	6	3	3	627	673	264	721	29

Note) The model number of a type with seals attached is RE···UU.
If a certain level of accuracy is required, this model is used for outer ring rotation.

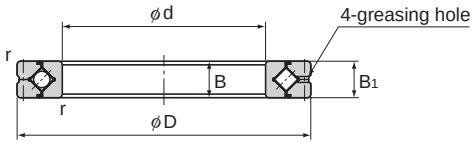
Model number coding

RE50025 UU CC0 P6

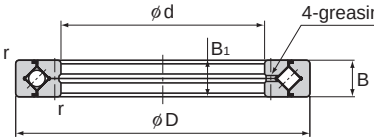
- RE50025: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- CC0: Radial clearance symbol (*1)
- P6: Accuracy symbol (*2)

(*1) See A-870. (*2) See A-866.

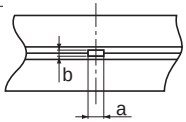
USP-Grade Models RB and RE



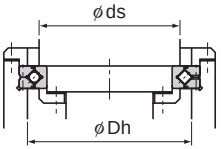
RB-USP（RB···UU-USP）



RE-USP（RE···UU-USP）



Detail view of the greasing hole



Unit: mm

Model No.	Main dimensions								Shoulder height		Basic load rating (radial)		Mass
	Inner diameter	Outer diameter	Roller pitch circle diameter dp		Width	Greasing hole					C	C_0	
	d	D	RB	RE	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
RB 10020USP RE 10020USP	100	150	123	127	20	3.5	1.6	1	113	133	33.1	50.9	1.45
RB 12025USP RE 12025USP	120	180	148.7	152	25	3.5	2	1.5	133	164	66.9	100	2.62
RB 15025USP RE 15025USP	150	210	178	182	25				164	194	76.8	128	3.16
RB 20030USP RE 20030USP	200	280	240	240	30	4.5	3	2	221	258	114	200	6.7
RB 25030USP RE 25030USP	250	330	287.5	287.5	30			2.5	269	306	126	244	8.1
RB 30035USP RE 30035USP	300	395	345	345	35	5	3		322	368	183	367	13.4
RB 40040USP RE 40040USP	400	510	453.4	453.4	40	6	3.5		428	479	241	531	23.5
RB 50040USP RE 50040USP	500	600	548.8	548.8	40	6	3		526	572	239	607	26
RB 60040USP RE 60040USP	600	700	650	650	40			3	627	673	264	721	29

Note) The model number of a type with seals attached is RB···UU-USP or RE···UU-USP.
If a certain level of rotational accuracy is required for the inner ring, select model RB; if a certain level of rotational accuracy is required for the outer ring, select model RE.

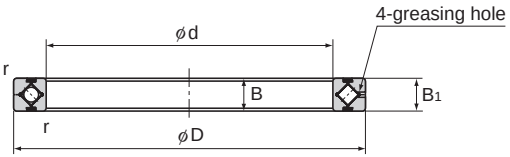
Model number coding

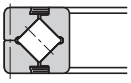
RB50040 UU CC0 USP

- RB50040: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- CC0: Radial clearance symbol (*1)
- USP: Accuracy symbol (Ultra precision grade)

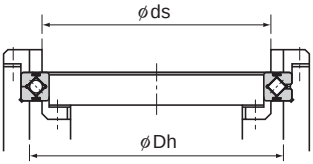
(*1) See A-870.

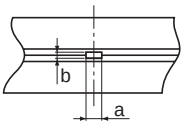
Model RA (Separable Outer Ring Type)



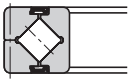


Model RA





Detail view of the greasing hole



Model RA···UU

Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Greasing hole					C	C_0	
		d	D	dp	B B_1	a	b	r_{min}	ds	Dh	kN	kN	kg
50	RA 5008	50	66	57	8	2	0.8	0.5	53.5	60.5	5.1	7.19	0.08
60	RA 6008	60	76	67	8	2	0.8	0.5	63.5	70.5	5.68	8.68	0.09
70	RA 7008	70	86	77	8	2	0.8	0.5	73.5	80.5	5.98	9.8	0.1
80	RA 8008	80	96	87	8	2	0.8	0.5	83.5	90.5	6.37	11.3	0.11
90	RA 9008	90	106	97	8	2	0.8	0.5	93.5	100.5	6.76	12.4	0.12
100	RA 10008	100	116	107	8	2	0.8	0.5	103.5	110.5	7.15	13.9	0.14
110	RA 11008	110	126	117	8	2	0.8	0.5	113.5	120.5	7.45	15	0.15
120	RA 12008	120	136	127	8	2	0.8	0.5	123.5	130.5	7.84	16.5	0.17
130	RA 13008	130	146	137	8	2	0.8	0.5	133.5	140.5	7.94	17.6	0.18
140	RA 14008	140	156	147	8	2	0.8	0.5	143.5	150.5	8.33	19.1	0.19
150	RA 15008	150	166	157	8	2	0.8	0.5	153.5	160.5	8.82	20.6	0.2
160	RA 16013	160	186	172	13	2.5	1.6	0.8	165	179	23.3	44.9	0.59
170	RA 17013	170	196	182	13	2.5	1.6	0.8	175	189	23.5	46.5	0.64
180	RA 18013	180	206	192	13	2.5	1.6	0.8	185	199	24.5	49.8	0.68
190	RA 19013	190	216	202	13	2.5	1.6	0.8	195	209	24.9	51.5	0.69
200	RA 20013	200	226	212	13	2.5	1.6	0.8	205	219	25.8	54.7	0.71

Note) The model number of a type with seals attached is RA···UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.

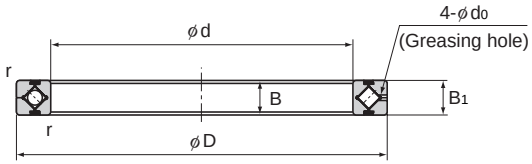
Model number coding

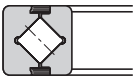
RA7008 UU CC0

- RA7008: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- CC0: Radial clearance symbol (*1)

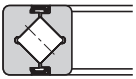
(*1) See A-870.

Model RA-C (Single-Split Type)

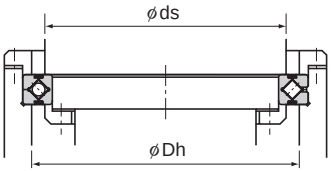




Model RA···C



Model RA···CUU



Unit: mm

Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Greasing hole d_0	r_{min}	ds	Dh	C kN	C_0 kN	kg
50	RA 5008C	50	66	57	8	1.5	0.5	53.5	60.5	5.1	7.19	0.08
60	RA 6008C	60	76	67	8	1.5	0.5	63.5	70.5	5.68	8.68	0.09
70	RA 7008C	70	86	77	8	1.5	0.5	73.5	80.5	5.98	9.8	0.1
80	RA 8008C	80	96	87	8	1.5	0.5	83.5	90.5	6.37	11.3	0.11
90	RA 9008C	90	106	97	8	1.5	0.5	93.5	100.5	6.76	12.4	0.12
100	RA 10008C	100	116	107	8	1.5	0.5	103.5	110.5	7.15	13.9	0.14
110	RA 11008C	110	126	117	8	1.5	0.5	113.5	120.5	7.45	15	0.15
120	RA 12008C	120	136	127	8	1.5	0.5	123.5	130.5	7.84	16.5	0.17
130	RA 13008C	130	146	137	8	1.5	0.5	133.5	140.5	7.94	17.6	0.18
140	RA 14008C	140	156	147	8	1.5	0.5	143.5	150.5	8.33	19.1	0.19
150	RA 15008C	150	166	157	8	1.5	0.5	153.5	160.5	8.82	20.6	0.2
160	RA 16013C	160	186	172	13	2	0.8	165	179	23.3	44.9	0.59
170	RA 17013C	170	196	182	13	2	0.8	175	189	23.5	46.5	0.64
180	RA 18013C	180	206	192	13	2	0.8	185	199	24.5	49.8	0.68
190	RA 19013C	190	216	202	13	2	0.8	195	209	24.9	51.5	0.69
200	RA 20013C	200	226	212	13	2	0.8	205	219	25.8	54.7	0.71

Note) The model number of a type with seals attached is RA···CUU.
If a certain level of accuracy is required, this model is used for inner ring rotation.

Model number coding

RA6008C UU C0

- RA6008C: Model number
- UU: Seal attached on both ends (seal attached on either end: U)
- C0: Radial clearance symbol (*1)

(*1) See A-870.

Cam Follower

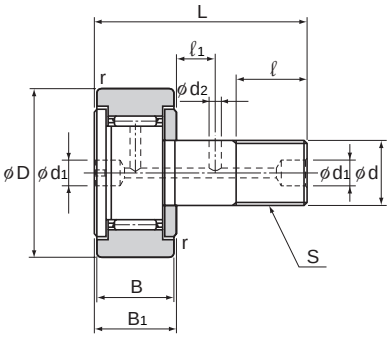
THK General Catalog

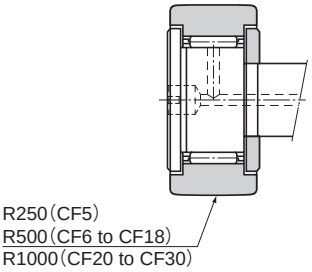
B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model CF(Popular Type (Cylindrical Outer Ring)), Model CF-M (Stainless Steel Type) Model CF-R(Popular Type (Spherical Outer Ring)), Model CF-MR (Stainless Steel Type)





Model CF-R

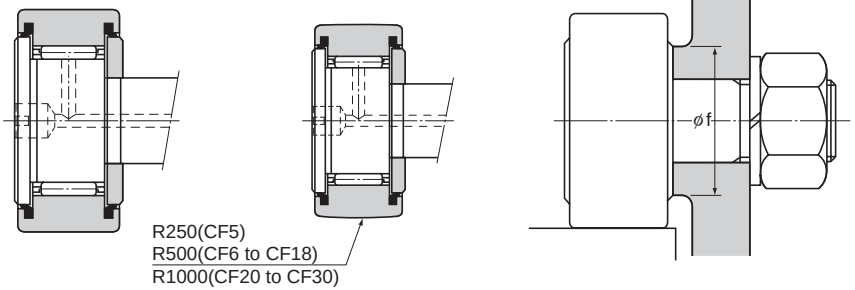
Stud diameter		Main dimensions										
		Outer diameter	Threaded	Outer ring width		Overall length						Shoulder height f
d	Model No.	D	S	B	B_1	L	d_1	d_2	ℓ	ℓ_1	r	(Min.)
5	CF 5	13	M5×0.8	9	10	23	3.1*	—	7.5	—	0.5	9.7
6	CF 6	16	M6×1	11	12	28	4*	—	9	—	0.5	11
8	CF 8	19	M8×1.25	11	12	32	4*	—	11	—	0.5	13
10	CF 10	22	M10×1.25	12	13	36	4*	—	13	—	1	15
10	CF 10-1	26	M10×1.25	12	13	36	4*	—	13	—	1	15
12	CF 12	30	M12×1.5	14	15	40	6	3	14	6	1.5	20
12	CF 12-1	32	M12×1.5	14	15	40	6	3	14	6	1.5	20
16	CF 16	35	M16×1.5	18	19.5	52	6	3	18	8	1.5	24
18	CF 18	40	M18×1.5	20	21.5	58	6	3	20	8	1.5	26
20	CF 20	52	M20×1.5	24	25.5	66	8	4	22	9	1.5	36
20	CF 20-1	47	M20×1.5	24	25.5	66	8	4	22	9	1.5	36
24	CF 24	62	M24×1.5	29	30.5	80	8	4	25	11	1.5	40
24	CF 24-1	72	M24×1.5	29	30.5	80	8	4	25	11	1.5	40
30	CF 30	80	M30×1.5	35	37	100	8	4	32	15	2	46
30	CF 30-1	85	M30×1.5	35	37	100	8	4	32	15	2	46
30	CF 30-2	90	M30×1.5	35	37	100	8	4	32	15	2	46

Note) The seal must be used at temperature of 80℃ or below.
Those models marked with "＊" have a greasing hole only on the head.

Model number coding

CF5 M UU R

- CF5: Model number
- M: Made of stainless steel
- UU: With seal
- R: Spherical outer ring



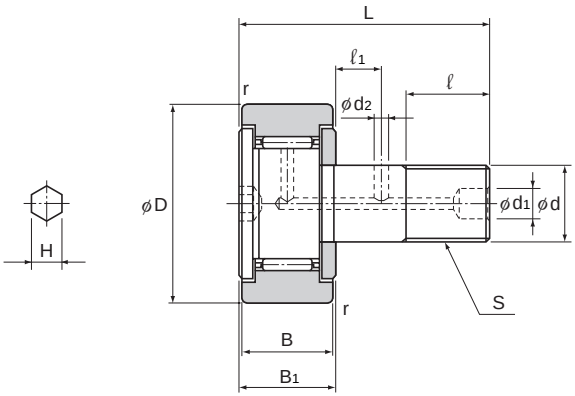
Model CF···UU Model CF···UUR

Unit: mm

	Basic load rating				Maximum permissible load	Track load capacity		Rotational speed limit *		Mass	
	With cage		Full-roller type			Cylindrical outer ring	Spherical outer ring	With cage	Full-roller type		
	C kN	C_0 kN	C kN	C_0 kN	F_0 kN	kN	kN	min^{-1}	min^{-1}	Cage g	Full rollers g
	3.14	2.77	—	—	1.42	2.25	0.53	29000	—	10.5	11
	3.59	3.58	6.94	8.5	2.11	3.43	1.08	25000	11000	18.5	19
	4.17	4.65	8.13	11.2	4.73	4.02	1.37	20000	8700	28.5	29
	5.33	6.78	9.42	14.3	5.81	4.7	1.67	17000	7200	45	46
	5.33	6.78	9.42	14.3	5.81	5.49	2.06	17000	7200	60	61
	7.87	9.79	13.4	19.8	9.37	7.06	2.45	14000	5800	95	97
	7.87	9.79	13.4	19.8	9.37	7.45	2.74	14000	5800	105	107
	12	18.3	20.6	37.6	17.3	11.2	3.14	10000	4500	170	173
	14.7	25.2	25.2	51.3	26.1	14.4	3.72	8500	3800	250	255
	20.7	34.8	33.2	64.8	32.1	23.2	8.23	7000	3400	460	465
	20.7	34.8	33.2	64.8	32.1	21	7.15	7000	3400	385	390
	30.6	53.2	46.7	92.9	49.5	34.2	10.5	6500	2900	815	820
	30.6	53.2	46.7	92.9	49.5	39.8	12.9	6500	2900	1140	1140
	45.4	87.6	67.6	145	73.7	52.6	14.9	5000	2300	1870	1870
	45.4	87.6	67.6	145	73.7	56	16.1	5000	2300	2030	2030
	45.4	87.6	67.6	145	73.7	59.3	17.3	5000	2300	2220	2220

Note) The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 70% of this value is permitted.
THK also manufactures full-roller types. (stud diameter: 6 to 30 mm).

Model CF-A(Cam Follower with Hexagon Socket (Cylindrical Outer Ring)), Model CF-M-A (Stainless Steel Type) Model CF-R-A(Cam Follower with Hexagon Socket (Spherical Outer Ring)), Model CF-MR-A (Stainless Steel Type)



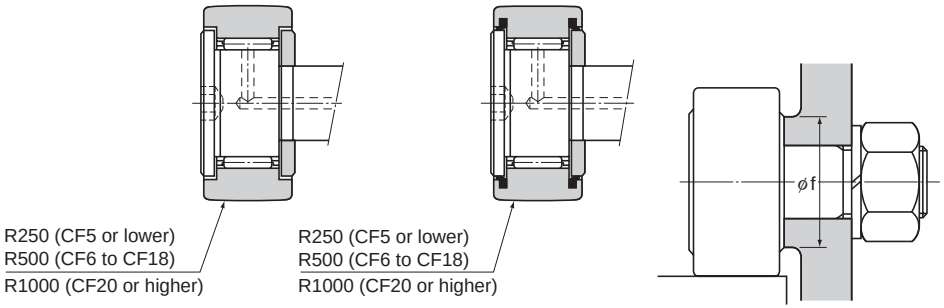
Stud diameter		Main dimensions												
		Outer diameter	Threaded	Outer ring width		Overall length								Shoulder height
d	Model No.	D	S	B	B_1	L	d_1	d_2	ℓ	ℓ_1	H*	r	f (Min.)
3	CF 3-A	10	M3×0.5	7	8	17	—*	—	5	—	2 (1.5)	0.3	6.8
4	CF 4-A	12	M4×0.7	8	9	20	—*	—	6	—	2.5 (2)	0.5	8.6
5	CF 5-A	13	M5×0.8	9	10	23	—*	—	7.5	—	3 (2.5)	0.5	9.7
6	CF 6-A	16	M6×1	11	12	28	—*	—	9	—	3	0.5	11
8	CF 8-A	19	M8×1.25	11	12	32	—*	—	11	—	4	0.5	13
10	CF 10-A	22	M10×1.25	12	13	36	—*	—	13	—	5	1	15
10	CF 10-1-A	26	M10×1.25	12	13	36	—*	—	13	—	5	1	15
12	CF 12-A	30	M12×1.5	14	15	40	6	3	14	6	6	1.5	20
12	CF 12-1-A	32	M12×1.5	14	15	40	6	3	14	6	6	1.5	20
16	CF 16-A	35	M16×1.5	18	19.5	52	6	3	18	8	6	1.5	24
18	CF 18-A	40	M18×1.5	20	21.5	58	6	3	20	8	6	1.5	26
20	CF 20-A	52	M20×1.5	24	25.5	66	8	4	22	9	8	1.5	36
20	CF 20-1-A	47	M20×1.5	24	25.5	66	8	4	22	9	8	1.5	36
24	CF 24-A	62	M24×1.5	29	30.5	80	8	4	25	11	8	1.5	40
24	CF 24-1-A	72	M24×1.5	29	30.5	80	8	4	25	11	8	1.5	40
30	CF 30-A	80	M30×1.5	35	37	100	8	4	32	15	8	2	46
30	CF 30-1-A	85	M30×1.5	35	37	100	8	4	32	15	8	2	46
30	CF 30-2-A	90	M30×1.5	35	37	100	8	4	32	15	8	2	46

Note) The seal must be used at temperature of 80℃ or below.
Those models marked with "＊" do not have a greasing hole and cannot be replenished with grease.

Model number coding

CF10 M UU R -A

- CF10: Model number
- M: Made of stainless steel
- UU: With seal
- R: Spherical outer ring
- -A: Stud with a hexagon socket



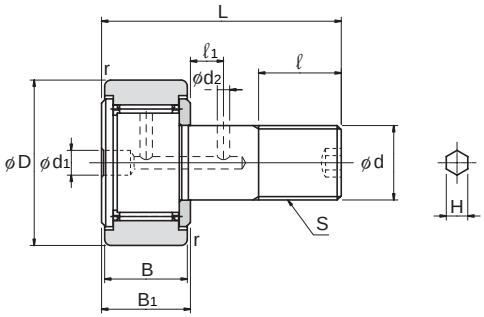
Model CF-R-A Model CF···UUR-A

Unit: mm

	Basic load rating				Maximum permissible load	Track load capacity		Rotational speed limit *		Mass	
	With cage		Full-roller type			Cylindrical outer ring	Spherical outer ring	With cage	Full-roller type		
	C	C_0	C	C_0	F_0					Cage	Full rollers
	kN	kN	kN	kN	kN	kN	kN	min^{-1}	min^{-1}	g	g
	1.47	1.18	—	—	0.36	1.37	0.37	47000	—	4.5	5
	2.06	2.05	—	—	0.78	1.76	0.47	37000	—	7.5	8
	3.14	2.77	—	—	1.42	2.25	0.53	29000	—	10.5	11
	3.59	3.58	6.94	8.5	2.11	3.43	1.08	25000	11000	18.5	19
	4.17	4.65	8.13	11.2	4.73	4.02	1.37	20000	8700	28.5	29
	5.33	6.78	9.42	14.3	5.81	4.7	1.67	17000	7200	45	46
	5.33	6.78	9.42	14.3	5.81	5.49	2.06	17000	7200	60	61
	7.87	9.79	13.4	19.8	9.37	7.06	2.45	14000	5800	95	97
	7.87	9.79	13.4	19.8	9.37	7.45	2.74	14000	5800	105	107
	12	18.3	20.6	37.6	17.3	11.2	3.14	10000	4500	170	173
	14.7	25.2	25.2	51.3	26.1	14.4	3.72	8500	3800	250	255
	20.7	34.8	33.2	64.8	32.1	23.2	8.23	7000	3400	460	465
	20.7	34.8	33.2	64.8	32.1	21	7.15	7000	3400	385	390
	30.6	53.2	46.7	92.9	49.5	34.2	10.5	6500	2900	815	820
	30.6	53.2	46.7	92.9	49.5	39.8	12.9	6500	2900	1140	1140
	45.4	87.6	67.6	145	73.7	52.6	14.9	5000	2300	1870	1870
	45.4	87.6	67.6	145	73.7	56	16.1	5000	2300	2030	2030
	45.4	87.6	67.6	145	73.7	59.3	17.3	5000	2300	2220	2220

Note) "★" indicates that the dimensions in the parentheses in this row apply to stainless steel types.
The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 70% of this value is permitted.
THK also manufactures full-roller types. (stud diameter: 6 to 30 mm).

Model CF-B(Cam Follower with Hexagon Socket (Cylindrical Outer Ring)), Model CF-M-B (Made of Stainless Steel) Model CF-R-B(Cam Follower with Hexagon Socket (Spherical Outer Ring)), Model CF-MR-B (Made of Stainless Steel)

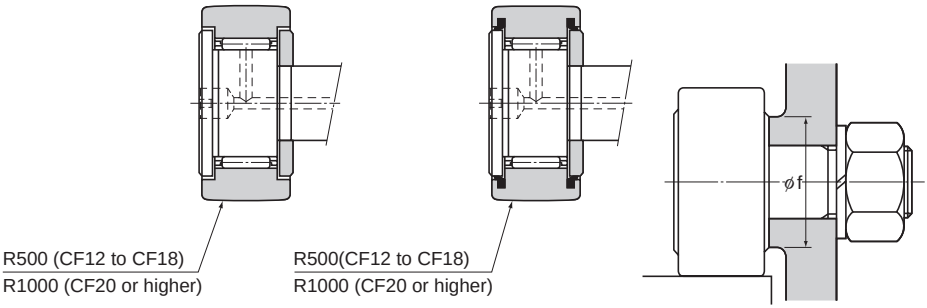


Stud diameter		Main dimensions											
d	Model No.	Outer diameter D	Threaded S	Outer ring width B	B_1	Overall length L	d_1	d_2	ℓ	ℓ_1	H*	r	Shoulder height f (Min.)
12	CF 12-B	30	M12×1.5	14	15	40	6	3	14	6	6	1.5	20
12	CF 12-1-B	32	M12×1.5	14	15	40	6	3	14	6	6	1.5	20
16	CF 16-B	35	M16×1.5	18	19.5	52	6	3	18	8	6	1.5	24
18	CF 18-B	40	M18×1.5	20	21.5	58	6	3	20	8	6	1.5	26
20	CF 20-B	52	M20×1.5	24	25.5	66	8	4	22	9	8	1.5	36
20	CF 20-1-B	47	M20×1.5	24	25.5	66	8	4	22	9	8	1.5	36
24	CF 24-B	62	M24×1.5	29	30.5	80	8	4	25	11	8	1.5	40
24	CF 24-1-B	72	M24×1.5	29	30.5	80	8	4	25	11	8	1.5	40
30	CF 30-B	80	M30×1.5	35	37	100	8	4	32	15	8	2	46
30	CF 30-1-B	85	M30×1.5	35	37	100	8	4	32	15	8	2	46
30	CF 30-2-B	90	M30×1.5	35	37	100	8	4	32	15	8	2	46

Model number coding

CF10 M UU R -B

- CF10: Model number
- M: Made of stainless steel
- UU: With seal
- R: Spherical outer ring
- -B: Stud with a hexagon socket



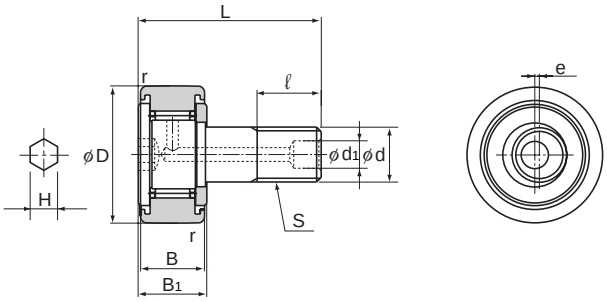
Model CF-R-B Model CF···UUR-B

Unit: mm

	Basic load rating				Maximum permissible load	Track load capacity		Rotational speed limit *		Mass	
	With cage		Full-roller type			Cylindrical outer ring	Spherical outer ring	With cage	Full-roller type		
	C kN	C_0 kN	C kN	C_0 kN	F_0 kN	kN	kN	min^{-1}	min^{-1}	Cage g	Full rollers g
	7.87	9.79	13.4	19.8	9.37	7.06	2.45	14000	5800	95	97
	7.87	9.79	13.4	19.8	9.37	7.45	2.74	14000	5800	105	107
	12	18.3	20.6	37.6	17.3	11.2	3.14	10000	4500	170	173
	14.7	25.2	25.2	51.3	26.1	14.4	3.72	8500	3800	250	255
	20.7	34.8	33.2	64.8	32.1	23.2	8.23	7000	3400	460	465
	20.7	34.8	33.2	64.8	32.1	21	7.15	7000	3400	385	390
	30.6	53.2	46.7	92.9	49.5	34.2	10.5	6500	2900	815	820
	30.6	53.2	46.7	92.9	49.5	39.8	12.9	6500	2900	1140	1140
	45.4	87.6	67.6	145	73.7	52.6	14.9	5000	2300	1870	1870
	45.4	87.6	67.6	145	73.7	56	16.1	5000	2300	2030	2030
	45.4	87.6	67.6	145	73.7	59.3	17.3	5000	2300	2220	2220

Note) "★" indicates that the dimensions in the parentheses in this row apply to stainless steel types.
The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 70% of this value is permitted.
THK also manufactures full-roller types. (stud diameter: 6 to 30 mm).

Model CFH-A(Eccentric Cam Follower with Hexagon Socket (Cylindrical Outer Ring)), Model CFH-M-A (Made of Stainless Steel) Model CFH-R-A(Eccentric Cam Follower with Hexagon Socket (Spherical Outer Ring)), Model CFH-MR-A (Made of Stainless Steel)



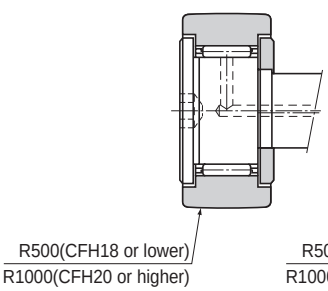
Stud diameter		Main dimensions										
		Outer diameter	Threaded	Outer ring width		Overall length			Runout			Shoulder height f
d	Model No.	D	S	B	B_1	L	d_1	ℓ	e	H	r	(Min.)
6	CFH 6-A	16	M6×1	11	12	28	—*	9	0.25	3	0.5	11
8	CFH 8-A	19	M8×1.25	11	12	32	—*	11	0.25	4	0.5	13
10	CFH 10-A	22	M10×1.25	12	13	36	—*	13	0.3	5	1	15
10	CFH 10-1-A	26	M10×1.25	12	13	36	—*	13	0.3	5	1	15
12	CFH 12-A	30	M12×1.5	14	15	40	6	14	0.4	6	1.5	20
12	CFH 12-1-A	32	M12×1.5	14	15	40	6	14	0.4	6	1.5	20
16	CFH 16-A	35	M16×1.5	18	19.5	52	6	18	0.5	6	1.5	24
18	CFH 18-A	40	M18×1.5	20	21.5	58	6	20	0.6	6	1.5	26
20	CFH 20-A	52	M20×1.5	24	25.5	66	8	22	0.7	8	1.5	36
20	CFH 20-1-A	47	M20×1.5	24	25.5	66	8	22	0.7	8	1.5	36
24	CFH 24-A	62	M24×1.5	29	30.5	80	8	25	0.8	8	1.5	40
24	CFH 24-1-A	72	M24×1.5	29	30.5	80	8	25	0.8	8	1.5	40
30	CFH 30-A	80	M30×1.5	35	37	100	8	32	1	8	2	46
30	CFH 30-1-A	85	M30×1.5	35	37	100	8	32	1	8	2	46
30	CFH 30-2-A	90	M30×1.5	35	37	100	8	32	1	8	2	46

Note) THK also manufactures types that have a driver groove and a greasing hole on the head. (Model numbers of types with a driver groove do not include symbol "-A" in the end.)
The seal must be used at temperature of 80℃ or below.
Those models marked with "＊" do not have a greasing hole and cannot be replenished with grease.

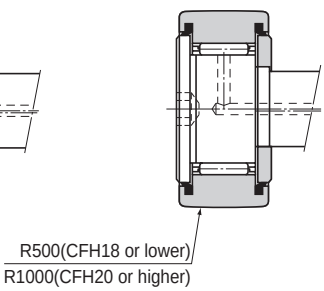
Model number coding

CFH24-1 M UU -A

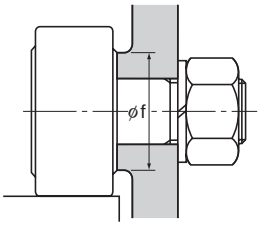
- CFH24-1: Model number
- M: Made of stainless steel
- UU: With seal
- -A: Stud with a hexagon socket



Model CFH-R



Model CFH···UUR



Unit: mm

	Basic load rating				Maximum permissible load	Track load capacity		Rotational speed limit *		Mass	
	With cage		Full-roller type			Cylindrical outer ring	Spherical outer ring	With cage	Full-roller type		
	C kN	C_0 kN	C kN	C_0 kN	F_0 kN	kN	kN	min^{-1}	min^{-1}	Cage g	Full rollers g
	3.59	3.58	6.94	8.5	2.11	3.43	1.08	25000	11000	18.5	19
	4.17	4.65	8.13	11.2	4.73	4.02	1.37	20000	8700	28.5	29
	5.33	6.78	9.42	14.3	5.81	4.7	1.67	17000	7200	45	46
	5.33	6.78	9.42	14.3	5.81	5.49	2.06	17000	7200	60	61
	7.87	9.79	13.4	19.8	9.37	7.06	2.45	14000	5800	95	97
	7.87	9.79	13.4	19.8	9.37	7.45	2.74	14000	5800	105	107
	12	18.3	20.6	37.6	17.3	11.2	3.14	10000	4500	170	173
	14.7	25.2	25.2	51.3	26.1	14.4	3.72	8500	3800	250	255
	20.7	34.8	33.2	64.8	32.1	23.2	8.23	7000	3400	460	465
	20.7	34.8	33.2	64.8	32.1	21	7.15	7000	3400	385	390
	30.6	53.2	46.7	92.9	49.5	34.2	10.5	6500	2900	815	820
	30.6	53.2	46.7	92.9	49.5	39.8	12.9	6500	2900	1140	1140
	45.4	87.6	67.6	145	73.7	52.6	14.9	5000	2300	1870	1870
	45.4	87.6	67.6	145	73.7	56	16.1	5000	2300	2030	2030
	45.4	87.6	67.6	145	73.7	59.3	17.3	5000	2300	2220	2220

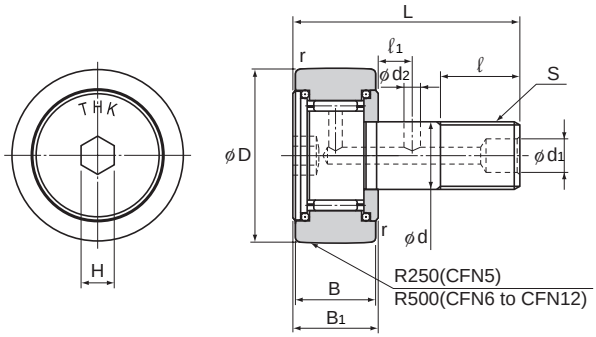
Note) The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 70% of this value is permitted.
THK also manufactures full-roller types.

Model number coding

CFH12 UU R -A

- CFH12: Model number
- UU: With seal
- R: Spherical outer ring
- -A: Stud with a hexagon socket

Model CFN-R-A(Cam Follower Containing Thrust Balls)



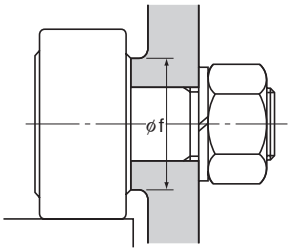
Stud diameter d	Model No. Spherical outer ring	Main							
		Outer diameter D	Threaded S	Outer ring width B	B_1	Overall length L	d_1	d_2	ℓ
5	CFN 5R-A	13	M5×0.8	9	10	23	—*	—*	7.5
6	CFN 6R-A	16	M6×1	11	12	28	—*	—*	9
8	CFN 8R-A	19	M8×1.25	11	12	32	—*	—*	11
10	CFN 10R-A	22	M10×1.25	12	13	36	—*	—*	13
12	CFN 12R-A	30	M12×1.5	14	15	40	6	3	14

Note) Those models marked with "*" do not have a greasing hole and cannot be replenished with grease.

Model number coding

CFN12 R -A

- CFN12: Model number
- R: Spherical outer ring
- -A: Stud with a hexagon socket

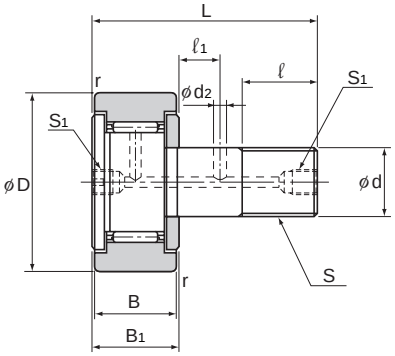


Unit: mm

dimensions					Basic load rating		Permissible thrust load	Maximum permissible load	Track load capacity	Rotational speed limit *	Mass
	ℓ_1	H	r	Shoulder height f (Min.)	C kN	C_0 kN	N	F_0 kN	kN	min^{-1}	g
	—	3	0.5	10	3.14	2.77	160	1.42	0.53	29000	10.5
	—	3	0.5	12	3.59	3.58	250	2.11	1.08	25000	18.5
	—	4	0.5	14	4.17	4.65	290	4.73	1.37	20000	28.5
	—	5	1	16.5	5.33	6.78	400	5.81	1.67	17000	45
	6	6	1.5	21.5	7.87	9.79	680	9.37	2.45	14000	95

Note) The rotation speed limit value in the table (*) applies to models using grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted.

Model CFT (Cam Follower with Tapped Greasing Hole (Cylindrical Outer Ring)), Model CFT-M (Made of Stainless Steel) Model CFT-R (Cam Follower with Tapped Greasing Hole (Spherical Outer Ring)), Model CFT-MR (Made of Stainless Steel)



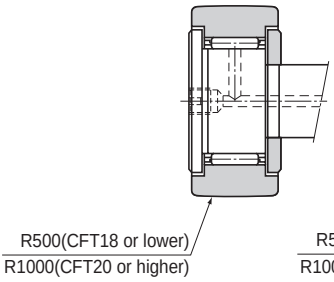
Stud diameter		Main dimensions										
		Outer diameter	Threaded	Outer ring width		Overall length						Shoulder height f
d	Model No.	D	S	B	B_1	L	S_1	d_2	ℓ	$ℓ_1$	r	(Min.)
6	CFT 6	16	M6×1	11	12	28	M6×0.75*	—	9	—	0.5	11
8	CFT 8	19	M8×1.25	11	12	32	M6×0.75*	—	11	—	0.5	13
10	CFT 10	22	M10×1.25	12	13	36	M6×0.75*	—	13	—	1	15
10	CFT 10-1	26	M10×1.25	12	13	36	M6×0.75*	—	13	—	1	15
12	CFT 12	30	M12×1.5	14	15	40	M6×0.75	3	14	6	1.5	20
12	CFT 12-1	32	M12×1.5	14	15	40	M6×0.75	3	14	6	1.5	20
16	CFT 16	35	M16×1.5	18	19.5	52	PT 1/8	3	18	8	1.5	24
18	CFT 18	40	M18×1.5	20	21.5	58	PT 1/8	3	20	8	1.5	26
20	CFT 20	52	M20×1.5	24	25.5	66	PT 1/8	4	22	9	1.5	36
20	CFT 20-1	47	M20×1.5	24	25.5	66	PT 1/8	4	22	9	1.5	36
24	CFT 24	62	M24×1.5	29	30.5	80	PT 1/8	4	25	11	1.5	40
24	CFT 24-1	72	M24×1.5	29	30.5	80	PT 1/8	4	25	11	1.5	40
30	CFT 30	80	M30×1.5	35	37	100	PT 1/8	4	32	15	2	46
30	CFT 30-1	85	M30×1.5	35	37	100	PT 1/8	4	32	15	2	46
30	CFT 30-2	90	M30×1.5	35	37	100	PT 1/8	4	32	15	2	46

Note) The seal must be used at temperature of 80℃ or below.
Those models marked with "＊" have a greasing hole only on the head.

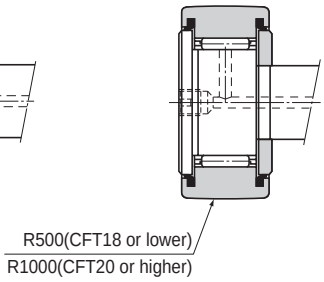
Model number coding

CFT30-1 M UU R

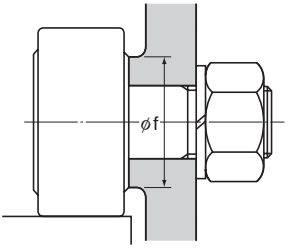
- CFT30-1: Model number
- M: Made of stainless steel
- UU: With seal
- R: Spherical outer ring



Model CFT-R



Model CFT···UUR



Unit: mm

	Basic load rating				Maximum permissible load	Track load capacity		Rotational speed limit *		Mass	
	With cage		Full-roller type			Cylindrical outer ring	Spherical outer ring	With cage	Full-roller type		
	C	C_0	C	C_0	F_0					Cage	Full rollers
	kN	kN	kN	kN	kN	kN	kN	min^{-1}	min^{-1}	g	g
	3.59	3.58	6.94	8.5	2.11	3.43	1.08	25000	11000	18.5	19
	4.17	4.65	8.13	11.2	4.73	4.02	1.37	20000	8700	28.5	29
	5.33	6.78	9.42	14.3	5.81	4.7	1.67	17000	7200	45	46
	5.33	6.78	9.42	14.3	5.81	5.49	2.06	17000	7200	60	61
	7.87	9.79	13.4	19.8	9.37	7.06	2.45	14000	5800	95	97
	7.87	9.79	13.4	19.8	9.37	7.45	2.74	14000	5800	105	107
	12	18.3	20.6	37.6	17.3	11.2	3.14	10000	4500	170	173
	14.7	25.2	25.2	51.3	26.1	14.4	3.72	8500	3800	250	255
	20.7	34.8	33.2	64.8	32.1	23.2	8.23	7000	3400	460	465
	20.7	34.8	33.2	64.8	32.1	21	7.15	7000	3400	385	390
	30.6	53.2	46.7	92.9	49.5	34.2	10.5	6500	2900	815	820
	30.6	53.2	46.7	92.9	49.5	39.8	12.9	6500	2900	1140	1140
	45.4	87.6	67.6	145	73.7	52.6	14.9	5000	2300	1870	1870
	45.4	87.6	67.6	145	73.7	56	16.1	5000	2300	2030	2030
	45.4	87.6	67.6	145	73.7	59.3	17.3	5000	2300	2220	2220

Note) The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 70% of this value is permitted.
THK also manufactures full-roller types.

Accessories for the Cam Follower

Table1 shows accessories for standard types of Cam Followers. The dedicated grease nipple is attached at your request. If desiring the dedicated grease nipple, add symbol "N" to the end of the model number.

Example: CF 12 UUR -N
└ Dedicated grease nipple

Table1 Accessories

Model No.		Plug[note 1]	Plug[note 2]	Nut JIS Class 2	Grease[note 3]
CF	Without seal	Included in package	Included in package	Included in package	Not contained
CFH	With seal	Included in package	Included in package	Included in package	Filled with grease
CFN		Included in package	Included in package	Included in package	Filled with grease
CFT	Without seal	—	—	Included in package	Not contained
	With seal	—	—	Included in package	Filled with grease

Note1) The plug is used to prevent grease from leaking. However, it is not included in the packages of model CF5, and hexagon socket types of models CFN10 (R)-A and CF (CFH) 10-1 (R)-A or lower.
Note2) The plug is used to close an unused greasing hole. However, it is not attached to model CF (CFH) 10-1 or lower.
Note3) All models without a greasing hole are filled with grease when assembled regardless of whether a seal is attached or not.

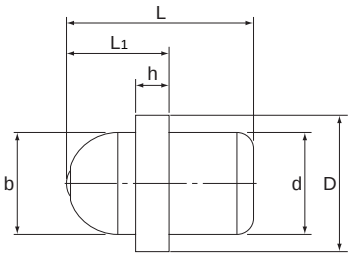


Table2 Specification Table for Grease Nipples

Supported models	Nipple dimensions						Nipple model No.
CF, CFN, CFH	d	b	D	h	L	L_1	
5	3.1	6	7.5	1.5	9	5.5	NP3.2×3.5
6 to 10	4	6	7.5	1.5	10	5.5	PB1021B
12 to 18	6	6	8	2	11	6	NP6×5
20 to 30	8	6	10	3	16	7	NP8×9

Note) The grease nipple is not attached to models CFN10 (R)-A and CF (CFH) 10-1 (R)-A or lower.

Roller Follower

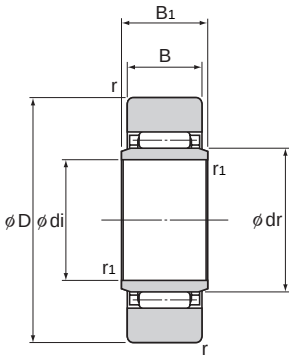
THK General Catalog

B Product Specifications

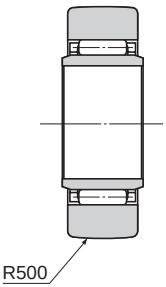
A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Models NAST (Separable Type with a Cylindrical Outer Ring), NAST-R (Separable Type with a Spherical Outer Ring)



Model NAST



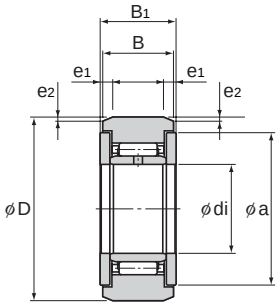
Model NAST-R

Unit: mm

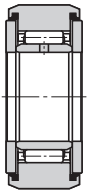
Model No.	Main dimensions							Basic load rating		Track load capacity		Rotational speed limit *	Mass
	Inner diameter di	Inscribed bore diameter dr	Outer diameter D	B_1	B	r	r_1	C kN	C_0 kN	Cylindrical outer ring kN	Spherical outer ring kN	min^{-1}	g
NAST 6	6	10	19	10	9.8	0.5	0.5	4.12	4.55	3.53	1.37	20000	17.8
NAST 8	8	12	24	10	9.8	1	0.5	5.68	5.89	4.02	1.86	17000	28
NAST 10	10	14	30	12	11.8	1.5	0.5	9.7	9.67	5.59	2.45	15000	50
NAST 12	12	16	32	12	11.8	1.5	0.5	10.4	10.9	5.98	2.74	13000	58
NAST 15	15	20	35	12	11.8	1.5	0.5	12.3	14.3	6.57	3.14	10000	62
NAST 17	17	22	40	16	15.8	1.5	0.5	17.4	20.9	10.9	3.72	9500	110
NAST 20	20	25	47	16	15.8	1.5	0.5	19.2	24.5	12.7	4.61	8500	155
NAST 25	25	30	52	16	15.8	1.5	0.5	20.7	28.4	14.1	5.29	7000	180
NAST 30	30	38	62	20	19.8	1.5	1	30.3	45.4	22.1	6.66	5500	320
NAST 35	35	42	72	20	19.8	1.5	1	32.2	50.6	25.7	8.13	5000	440
NAST 40	40	50	80	20	19.8	2	1.5	35.7	61.6	26.9	9.31	4000	530
NAST 45	45	55	85	20	19.8	2	1.5	37.1	66.4	28.5	10.1	4000	580
NAST 50	50	60	90	20	19.8	2	1.5	38.7	71.8	30.2	11	3500	635

Note) The rotation speed limit value in the table (*) applies to models using grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted.
Stainless steel types are also available. Contact THK for details.

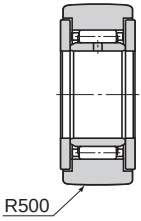
Models NAST-ZZ (Separable Type with a Cylindrical Outer Ring and Side Plates), NAST-ZZR (Separable Type with a Spherical Outer Ring and Side Plates)



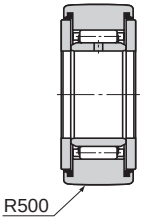
Model NAST-ZZ



Model NAST-ZZUU



Model NAST-ZZR



Model NAST-ZZUUR

Unit: mm

Model No.	Main dimensions							Basic load rating		Track load capacity		Rotational speed limit *	Mass
	Inner diameter	Outer diameter						C	C_0	Cylindrical outer ring	Spherical outer ring		
	di	D	B_1	B	a	e_1	e_2	kN	kN	kN	kN	min^{-1}	g
NAST 6ZZ	6	19	14	13.8	14	2.5	0.8	4.12	4.55	3.53	1.37	20000	24.5
NAST 8ZZ	8	24	14	13.8	17.5	2.5	0.8	5.68	5.89	4.51	1.86	17000	39
NAST 10ZZ	10	30	16	15.8	23.5	2.5	0.8	9.7	9.67	6.86	2.45	15000	65
NAST 12ZZ	12	32	16	15.8	25.5	2.5	0.8	10.4	10.9	7.35	2.74	13000	75
NAST 15ZZ	15	35	16	15.8	29	2.5	0.8	12.3	14.3	8.04	3.14	10000	83
NAST 17ZZ	17	40	20	19.8	32.5	3	1	17.4	20.9	11.8	3.72	9500	135
NAST 20ZZ	20	47	20	19.8	38	3	1	19.2	24.5	13.8	4.61	8500	195
NAST 25ZZ	25	52	20	19.8	43	3	1	20.7	28.4	15.3	5.29	7000	225
NAST 30ZZ	30	62	25	24.8	50.5	4	1.2	30.3	45.4	22.1	6.66	5500	400
NAST 35ZZ	35	72	25	24.8	53.5	4	1.2	32.2	50.6	25.7	8.13	5000	550
NAST 40ZZ	40	80	26	25.8	61.5	4	1.2	35.7	61.1	30.3	9.31	4000	710
NAST 45ZZ	45	85	26	25.8	66.5	4	1.2	37.1	66.4	31.1	10.1	4000	760
NAST 50ZZ	50	90	26	25.8	76	4	1.2	38.7	71.8	34	11	3500	830

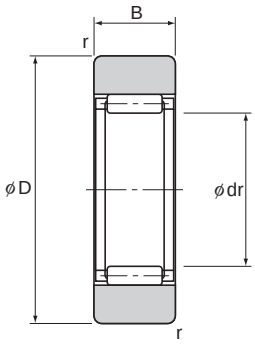
Note) The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 40% of this value is permitted.
Stainless steel types are also available. Contact THK for details.
The seal must be used at temperature of 80℃ or below.

Model number coding

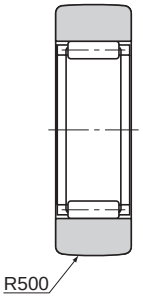
NAST 25 ZZ UU R

UU: With seal

Models RNAST (Separable Type with a Cylindrical Outer Ring and No Inner Ring), RNAST-R (Separable Type with a Spherical Outer Ring and No Inner Ring)



Model RNAST



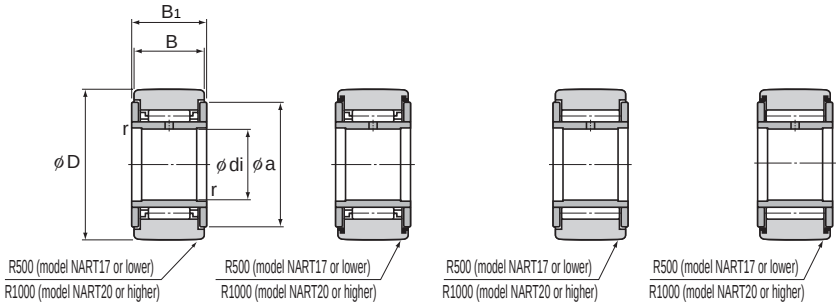
Model RNAST-R

Unit: mm

Model No.	Main dimensions				Basic load rating		Track load capacity		Rotational speed limit *	Mass
	Inscribed bore diameter dr	Outer diameter D	B	r	C kN	C_0 kN	Cylindrical outer ring kN	Spherical outer ring kN	min^{-1}	g
RNAST 5	7	16	7.8	0.5	2.74	2.39	2.35	1.08	30000	8.9
RNAST 6	10	19	9.8	0.5	4.12	4.55	3.53	1.37	20000	13.9
RNAST 8	12	24	9.8	1	5.68	5.89	4.02	1.86	17000	23.5
RNAST 10	14	30	11.8	1.5	9.7	9.67	5.59	2.45	15000	42.5
RNAST 12	16	32	11.8	1.5	10.4	10.9	5.98	2.74	13000	49.5
RNAST 15	20	35	11.8	1.5	12.3	14.3	6.57	3.14	10000	50
RNAST 17	22	40	15.8	1.5	17.4	20.9	10.9	3.72	9500	90
RNAST 20	25	47	15.8	1.5	19.2	24.5	12.7	4.61	8500	135
RNAST 25	30	52	15.8	1.5	20.7	28.4	14.1	5.29	7000	152
RNAST 30	38	62	19.8	1.5	30.3	45.4	22.1	6.66	5500	255
RNAST 35	42	72	19.8	1.5	32.2	50.6	25.7	8.13	5000	375
RNAST 40	50	80	19.8	2	35.7	61.6	26.9	9.31	4000	420
RNAST 45	55	85	19.8	2	37.1	66.4	28.5	10.1	4000	460
RNAST 50	60	90	19.8	2	38.7	71.8	30.2	11	3500	500

Note) The rotation speed limit value in the table (*) applies to models using grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted.
Stainless steel types are also available. Contact THK for details.

Models NART-R (Non-separable Type with a Spherical Outer Ring), NART-VR (Non-separable Type with a Spherical Outer Ring and Full Balls)



Model NART-R Model NART-UUR Model NART-VR Model NART-VUUR

Unit: mm

Model No.	Main dimensions							Basic load rating				Track load capacity	Rotational speed limit *		Mass	
	Inner diameter	Outer diameter					Oil hole	With cage		Full rollers		Spherical outer ring	With cage	Full rollers	With cage	Full rollers
	di	D	B_1	B	a	r	d_1	C kN	C_0 kN	C kN	C_0 kN	kN	min^{-1}	min^{-1}	g	g
NART 5R	5	16	12	11	12	0.5	1.5	2.84	2.65	6.46	7.81	1.08	25000	10500	14.5	15.1
NART 6R	6	19	12	11	14	0.5	1.5	3.33	3.35	7.58	10.2	1.37	20000	8700	20.5	21.5
NART 8R	8	24	15	14	17.5	0.5	1.5	5.68	5.89	11.7	15.6	1.86	17000	7000	41.5	42.5
NART 10R	10	30	15	14	23.5	0.5	2	7.94	7.59	15.8	18.5	2.45	15000	5700	64.5	66.5
NART 12R	12	32	15	14	25.5	0.5	2	8.53	8.44	17	21	2.74	13000	5200	71	73
NART 15R	15	35	19	18	29	0.5	2	13.7	16.4	25.3	36.9	3.14	10000	4300	102	106
NART 17R	17	40	21	20	32.5	0.5	2	17.4	19.3	32	46.6	3.72	9500	3900	149	155
NART 20R	20	47	25	24	38	0.5	2.5	22.9	30.6	41.7	67.7	7.15	8000	3400	250	255
NART 25R	25	52	25	24	43	0.5	2.5	24.6	33.3	45.4	79.5	8.23	7000	3000	285	295
NART 30R	30	62	29	28	50.5	0.5	3	33.4	51.4	60	111	10.5	5500	2400	470	485
NART 35R	35	72	29	28	53.5	1	3	35.5	57.3	63.2	123	12.9	5000	2200	640	655
NART 40R	40	80	32	30	61.5	1	3	44.6	81.4	76.4	166	14.9	4000	1900	845	865
NART 45R	45	85	32	30	66.5	1	3	46.6	88.6	80.5	183	16.1	4000	1700	915	935
NART 50R	50	90	32	30	76	1	3	48.3	95.7	84.4	200	17.3	3500	1600	980	1010

Note) The rotation speed limit value in the table (*) applies to models that have no seal and use grease lubrication. With those models using oil lubrication, up to 130% of this value is permitted. With those attached with seals, up to 40% of this value is permitted.
Stainless steel types are also available. Contact THK for details.
The seal must be used at temperature of 80℃ or below.

Model number coding

NART 15 V UU R

With seal

Spherical Plain Bearing

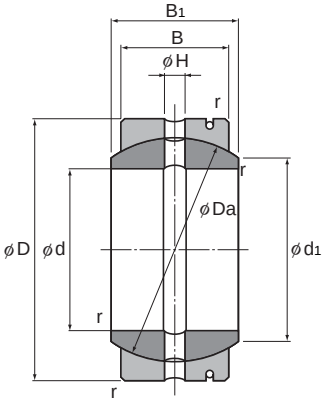
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

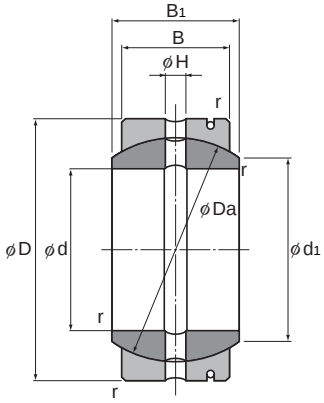
* Please see the separate "A Technical Descriptions of the Products".

Model SB



Unit: mm

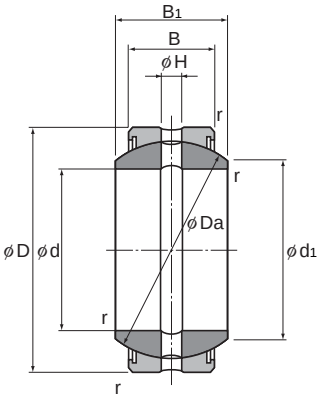
Model No.	Main dimensions								Basic load rating		Mass
	Inner diameter d	Outer diameter D	Outer ring width B	Inner ring width B_1	d_1	Da	H	r	C kN	C_0 kN	kg
SB 12	12	22	9	11	14	18	1.5	0.5	3.82	95.3	0.019
SB 15	15	26	11	13	17.5	22	2.5	0.5	5.69	142	0.028
SB 20	20	32	14	16	23	28	2.5	0.5	9.22	230	0.053
SB 22	22	37	16	19	25.5	32	2.5	0.5	12.1	301	0.085
SB 25	25	42	18	21	29	36	4	0.5	15.3	381	0.116
SB 30	30	50	23	27	36	45	4	1	24.3	609	0.225
SB 35	35	55	26	30	40	50	4	1	30.6	765	0.3
SB 40	40	62	28	33	44	55	4	1	36.3	906	0.375
SB 45	45	72	31	36	50.5	62	6	1	45.2	1130	0.6
SB 50	50	80	36	42	58.5	72	6	1	61	1530	0.87
SB 55	55	90	40	47	64.5	80	6	1	75.3	1880	1.26
SB 60	60	100	45	53	72.5	90	6	1	95.3	2380	1.7
SB 65	65	105	47	55	76	94	6	1	104	2600	2.05



Unit: mm

Model No.	Main dimensions								Basic load rating		Mass
	Inner diameter	Outer diameter	Outer ring width	Inner ring width					C	C_0	
	d	D	B	B_1	d_1	Da	H	r	kN	kN	kg
SB 70	70	110	50	58	81.5	100	8	1	118	2940	2.22
SB 75	75	120	55	64	89.5	110	8	1	142	3560	3.02
SB 80	80	130	60	70	97.5	120	8	1	170	4240	3.98
SB 85	85	135	63	74	100.5	125	8	1	185	4640	4.29
SB 90	90	140	65	76	105.5	130	8	1	199	4970	4.71
SB 95	95	150	70	82	113.5	140	8	1	230	5760	6.05
SB 100	100	160	75	88	121.5	150	10	1.5	265	6620	7.42
SB 110	110	170	80	93	130	160	10	1.5	301	7530	8.55
SB 115	115	180	85	98	132.5	165	10	1.5	330	8250	10.3
SB 120	120	190	90	105	140	175	10	1.5	371	9260	12.4
SB 130	130	200	95	110	148.5	185	10	1.5	414	10300	13.8
SB 150	150	220	105	120	166	205	10	1.5	507	12600	17

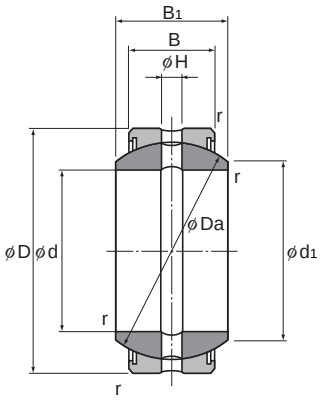
Model SA1



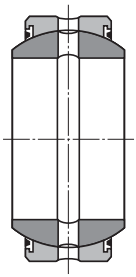
Model SA1 Model SA1-UU

Unit: mm

Model No.		Main dimensions								Basic load rating		Mass
Standard type	Seal type	Inner diameter d	Outer diameter D	Outer ring width B	Inner ring width B_1	d_1	Da	H	r	C kN	C_0 kN	kg
SA1 12	SA1 12UU	12	22	7	10	15	18	1.5	0.3	2.94	74.1	0.017
SA1 15	SA1 15UU	15	26	9	12	18.4	22	2.5	0.3	4.7	117	0.032
SA1 17	SA1 17UU	17	30	10	14	20.7	25	2.5	0.3	5.88	147	0.049
SA1 20	SA1 20UU	20	35	12	16	24.2	29	2.5	0.3	8.23	205	0.065
SA1 25	SA1 25UU	25	42	16	20	29.3	35.5	4	0.3	13.3	334	0.115
SA1 30	SA1 30UU	30	47	18	22	34.2	40.7	4	0.3	17.3	431	0.16
SA1 35	SA1 35UU	35	55	20	25	39.8	47	4	1	22.1	553	0.258
SA1 40	SA1 40UU	40	62	22	28	45	53	4	1	27.5	686	0.315
SA1 45	SA1 45UU	45	68	25	32	50.8	60	6	1	35.3	882	0.413
SA1 50	SA1 50UU	50	75	28	35	56	66	6	1	43.5	1090	0.56
SA1 60	SA1 60UU	60	90	36	44	66.8	80	6	1.5	67.7	1700	1.1
SA1 70	SA1 70UU	70	105	40	49	77.9	92	8	1.5	86.6	2170	1.54



Model SA1



Model SA1-UU

Unit: mm

Model No.		Main dimensions								Basic load rating		Mass
Standard type	Seal type	Inner diameter d	Outer diameter D	Outer ring width B	Inner ring width B_1	d_1	Da	H	r	C kN	C_0 kN	kg
SA1 80	SA1 80UU	80	120	45	55	89.4	105	8	1.5	111	2780	2.29
SA1 90	SA1 90UU	90	130	50	60	98.1	115	8	2	135	3380	2.84
SA1 100	SA1 100UU	100	150	55	70	109.5	130	8	2	169	4210	4.43
SA1 110	SA1 110UU	110	160	55	70	121.2	140	8	2	181	4530	4.94
SA1 120	SA1 120UU	120	180	70	85	135.6	160	8	2	264	6590	8.12
SA1 140	SA1 140UU	140	210	70	90	155.9	180	8	3	296	7410	11.3
SA1 160	SA1 160UU	160	230	80	105	170.2	200	10	3	376	9410	14.4
SA1 180	SA1 180UU	180	260	80	105	199	225	10	3	424	10600	18.9
SA1 200	SA1 200UU	200	290	100	130	213.5	250	10	3	588	14700	28.1
SA1 220	SA1 220UU	220	320	100	135	239.6	275	10	3.5	647	16200	36.1
SA1 240	SA1 240UU	240	340	100	140	265.3	300	10	3.5	706	17600	40.4

Note) Model numbers "...100" or higher have double-slit outer rings.

Link Ball®

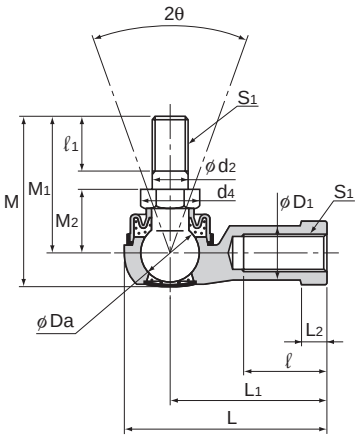
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model AL



Model No.	Outer dimensions			Threaded	Holder dimensions					
	Length L	Diameter D	Height M	S_1 JIS Class 2	L_1	ℓ	L_2	D_1	D_2	W $^{0}_{-0.3}$
AL 4D	24.5	13	20	M4×0.7	18	8	4	7.5	9.5	8
AL 5D	34.5	15	26.7	M5×0.8	27	15	4	9	12	10
AL 6D	38.5	17	32.6	M6×1	30	16	5	10	13	11
AL 8D	46	20	38.6	M8×1.25	36	19	6	13	16	14
AL 10D	56	26	46.3	M10×1.25	43	23	7	15.5	19	17
AL 10BD	56	26	52.3	M10×1.5	43	23	7	15.5	19	17

[Material]

Holder : A-1 alloy (see A-925)
Ball shank : Lightly Carburized Carbon Steel Ball: 650 Hv or higher
Shank S35C (20 to 28 HRC)
Chromate treatment
Boot : NBR special synthetic rubber

[Tolerance of the Mating Hole of the Ball Shank]

H10 is recommended.

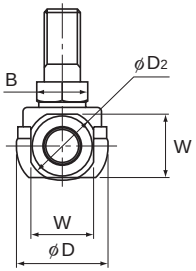
[Spherical Clearance]

Perpendicular to the axis : 0.02 to 0.06mm
Axial direction : 0.3mm or less

Model number coding

AL6 D L

- AL6: Model number
- D: With boot attached
- L: Left-hand thread

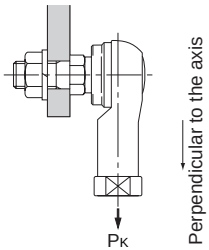


Unit: mm

	Ball shank dimensions						Ball diameter	Permissible tilt angles	Applied static load	Yield-point strength	Mass
	d_2 h9	M_1	M_2 ±0.3	ℓ_1	Hexagon B 0 −0.3	d_4	Da	2θ°	C_s N	P_k N	g
	4	15	7	6	7	8.1	7.938	40	4510	1370	7
	5	21	10	8	8	9.2	9.525	40	6470	2250	12
	6	26	11	11	10	11.6	11.112	40	9900	3920	18
	8	31	14	12	12	13.8	12.7	40	12500	6570	32
	10	37	17	15	14	16.2	15.875	40	18300	11300	65
	10	43	17	21	14	16.2	15.875	40	18300	11300	68

[Yield-Point Strength]

It indicates the strength in the direction shown in the figure below.



[Lubrication]

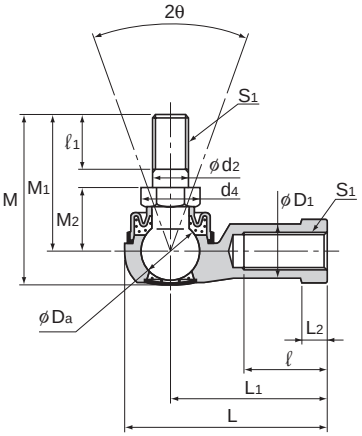
Lithium soap group grease No. 2 is contained in the boot and the cap.

[Identification of Left-hand Thread]

If the female threading is left-handed, its identification depends on the marking.

Threaded	Identification
	Cap marking
Right-hand	—
Left-hand	"L" mark

Model BL



Model No.	Outer dimensions			Threaded	Holder dimensions					
	Length L	Diameter D	Height M	S_1 JIS Class 2	L_1	ℓ	L_2	D_1	D_2	W 0 −0.3
BL 6D	38	16	32.6	M6×1	30	16	5	10	13	11
BL 8D	45.5	19	38.6	M8×1.25	36	19	6	12.5	16	14
BL 10D	55.5	25	46.3	M10×1.25	43	23	7	14.5	19	17
BL 10BD	55.5	25	52.3	M10×1.5	43	23	7	14.5	19	17
BL 12D	64.5	29	52.7	M12×1.25	50	26	8	17.5	22	19
BL 12BD	64.5	29	59.7	M12×1.75	50	26	8	17.5	22	19
BL 14D	74	34	68.4	M14×1.5	57	30	10	20	25	22
BL 14BD	74	34	74.4	M14×2	57	30	10	20	25	22
BL 16D	83	38	74	M16×1.5	64	34	11	22	27	24
BL 16BD	83	38	80	M16×2	64	34	11	22	27	24

[Material]

Holder : High strength zinc alloy (see A-926)
Ball shank : Lightly Carburized Carbon Steel Ball: 650 Hv or higher
Shank S35C (20 to 28 HRC)
Chromate treatment
Boot : NBR special synthetic rubber

[Spherical Clearance]

Perpendicular to the axis : 0.02 to 0.06mm
Axial direction : 0.3mm or less

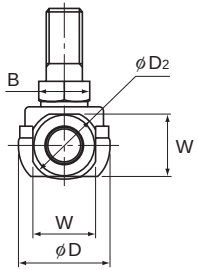
[Tolerance of the Mating Hole of the Ball Shank]

H10 is recommended.

Model number coding

BL6 D L

Model number
With boot attached
Left-hand thread

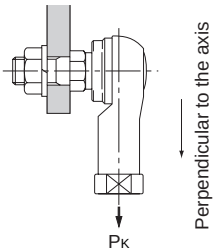


Unit: mm

	Ball shank dimensions						Ball diameter	Permissible tilt angles	Applied static load	Yield-point strength	Mass
	d_2 h9	M_1	M_2 ±0.3	ℓ_1	Hexagon B 0 −0.3	d_4	Da	2θ°	C_s N	P_k N	g
	6	26	11	11	10	11.6	11.112	40	9900	3920	26
	8	31	14	12	12	13.8	12.7	40	12500	6570	49
	10	37	17	15	14	16.2	15.875	40	18300	11300	87
	10	43	17	21	14	16.2	15.875	40	18300	11300	90
	12	42	19	17	17	19.6	19.05	40	26700	16400	143
	12	49	19	24	17	19.6	19.05	40	26700	16400	148
	14	56	21.5	22	19	21.9	22.225	40	36400	19800	235
	14	62	21.5	28	19	21.9	22.225	40	36400	19800	245
	16	60	23.5	23	22	25.4	22.225	30	36400	26900	315
	16	66	23.5	29	22	25.4	22.225	30	36400	26900	325

[Yield-Point Strength]

It indicates the strength in the direction shown in the figure below.



[Lubrication]

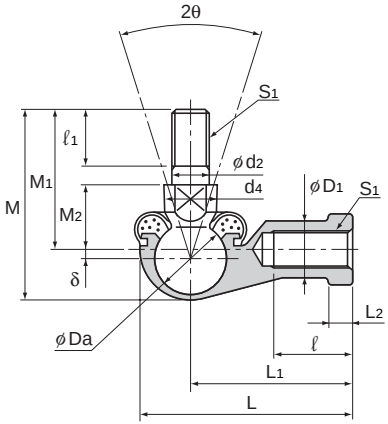
Lithium soap group grease No. 2 is contained in the boot and the cap.

[Identification of Left-hand Thread]

If the female threading is left-handed, its identification depends on the marking.

Threaded	Identification
	Cap marking
Right-hand	—
Left-hand	"L" mark

Model RBL



Model No.	Outer dimensions			Threaded	Holder dimensions					
	Length	Diameter	Height	S_1	L_1	L_2	ℓ	D_1	D_2	W
	L	D	M	JIS Class 2						0 −0.3
RBL 5D	35	16	29	M5×0.8	27	4	14	9	11	9
RBL 6D	40	19	35.5	M6×1	30	5	14	10	13	11
RBL 8D	48	23	42.5	M8×1.25	36	5	17	12.5	16	14
RBL 10D	57	27	50.5	M10×1.25	43	6.5	21	15	19	17
RBL 10BD	57	27	56.5	M10×1.5	43	6.5	21	15	19	17
RBL 12D	66	31	57.5	M12×1.25	50	6.5	25	17.5	22	19
RBL 12BD	66	31	64.5	M12×1.75	50	6.5	25	17.5	22	19
RBL 14D	75	35	73.5	M14×1.5	57	8	26	20	25	22
RBL 14BD	75	35	79.5	M14×2	57	8	26	20	25	22
RBL 16D	84	39	79.5	M16×1.5	64	8	32	22	27	22
RBL 16BD	84	39	85.5	M16×2	64	8	32	22	27	22
RBL 18D	93	44	90	M18×1.5	71	10	34	25	31	27
RBL 20D	99	44	90	M20×1.5	77	10	35	27.5	34	30
RBL 22D	109	50	95	M22×1.5	84	12	41	30	37	32

Note) The model numbers in dimmed type indicate semi-standard types. We recommend using model BL on B-836 .

[Material]

Holder : High strength zinc alloy (see A-926)
Ball shank : Lightly Carburized Carbon Steel Ball: 650 Hv or higher
Shank S35C
Chromate treatment
Boot : NBR special synthetic rubber

[Spherical Clearance]

Perpendicular to the axis : 0.02 to 0.06mm
Axial direction : 0.3mm or less

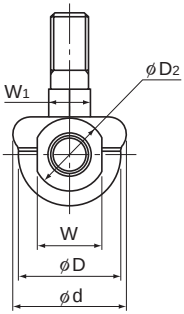
[Tolerance of the Mating Hole of the Ball Shank]

H10 is recommended.

Model number coding

RBL10 D L

- RBL10: Model number
- D: With boot attached
- L: Left-hand thread



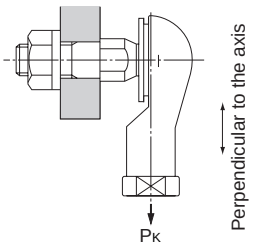
Unit: mm

	Ball shank dimensions						Boot	Eccen-tricity	Ball diameter	Permissible tilt angles	Applied static load	Yield-point strength	Mass
	d_2 h9	M_1	M_2 ±0.3	ℓ_1	W_1 0 −0.3	d_4	d	σ	Da	2θ°	C_s N	P_k N	g
	5	21	10	8	7	9	19	1	11.112	45	9220	2250	24
	6	26	11	11	8	10	20	1.2	12.7	45	12100	3530	37
	8	31	14	12	10	12	24	2	15.875	45	19100	6570	67
	10	37	17	15	11	14	30	2.5	19.05	45	27500	10700	110
	10	43	17	21	11	14	30	2.5	19.05	45	27500	10700	113
	12	42	19	17	17	19	32	2	22.225	45	37500	16400	165
	12	49	19	24	17	19	32	2	22.225	45	37500	16400	170
	14	56	21.5	22	17	19	38	2	25.4	45	48900	19800	255
	14	62	21.5	28	17	19	38	2	25.4	45	48900	19800	260
	16	60	23.5	23	19	22	44	2	25.4	35	48900	26900	335
	16	66	23.5	29	19	22	44	2	25.4	35	48900	26900	340
	18	68	26.5	25	20	23	48	4.5	28.575	35	61900	33300	465
	20	68	27	25	24	29	50	2	28.575	35	61900	45900	540
	22	70	28	26	24	27	54	5	31.75	27	75400	48000	715

Note) The permissible tilting angle of types without boot are greater by approximately 5°.

[Yield-Point Strength]

It indicates the strength in the direction shown in the figure below.



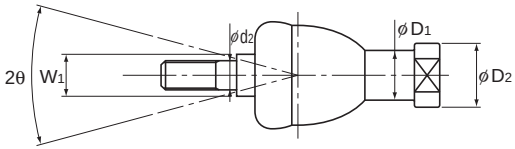
[Lubrication]

Lithium soap group grease No. 2 is contained in the boot.

[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added. The actual product is marked with symbol "L" on the wrench flat.

Model RBI



Model No.	Outer dimensions		Threaded	Holder dimensions						Shaft diameter
	Length L	Diameter D	S1 JIS Class 2	L1	L2	ℓ	D1	D2	W 0 −0.3	d2 h9
RBI 5D	46	17	M5×0.8	24	4	12	9	11	9	5
RBI 6D	55.2	20	M6×1	28	5	15	10	13	11	6
RBI 8D	65	24	M8×1.25	32	5	16	12.5	16	14	8
RBI 10D	74.5	28	M10×1.25	35	6.5	18	15	19	17	10
RBI 10BD	80.5	28	M10×1.5	35	6.5	18	15	19	17	10
RBI 12D	84	32	M12×1.25	40	6.5	20	17.5	22	19	12
RBI 12BD	91	32	M12×1.75	40	6.5	20	17.5	22	19	12
RBI 14D	103	36	M14×1.5	45	8	25	20	25	22	14
RBI 14BD	109	36	M14×2	45	8	25	20	25	22	14
RBI 16D	112	40	M16×1.5	50	8	27	22	27	22	16
RBI 16BD	118	40	M16×2	50	8	27	22	27	22	16
RBI 18D	130.5	45	M18×1.5	58	10	32	25	31	27	18
RBI 20D	133	45	M20×1.5	63	10	38	27.5	34	30	20
RBI 22D	145	50	M22×1.5	70	12	43	30	37	32	22

[Material]

Holder : High strength zinc alloy (see A-926)
Ball shank : Bearing steel ball Hardness: 650 Hv or higher
Shank S35C
Chromate treatment
Boot : NBR special synthetic rubber

[Spherical Clearance]

Perpendicular to the axis : 0.03mm or less
Axial direction : 0.1mm or less

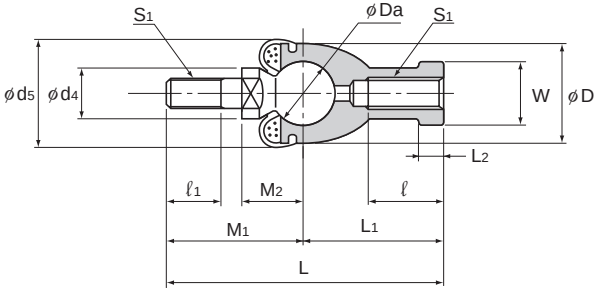
[Tolerance of the Mating Hole of the Ball Shank]

H10 is recommended.

Model number coding

RBI10 D L

Model number
With boot attached
Left-hand thread



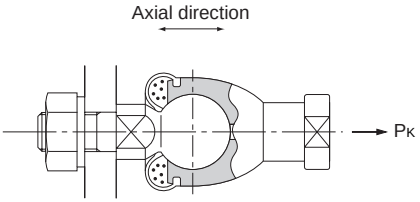
Unit: mm

	Ball shank dimensions					Boot	Ball diameter	Permissible tilt angles	Applied static load		Yield-point strength	Mass
	M_1	M_2 ±0.3	ℓ_1	W_1 0 −0.3	d_4	d_5	Da	2θ°	Tensile C_s N	Compressive C_s N	P_k N	g
	22	11	8	7	9	20	11.112	25	5690	11400	2840	25
	27.2	12.2	11	8	10	20	12.7	25	7450	14900	3730	40
	33	16	12	10	12	24	15.875	25	11700	23200	5880	75
	39.5	19.5	15	11	14	30	19.05	25	16800	33500	8430	120
	45.5	19.5	21	11	14	30	19.05	25	16800	33500	8430	123
	44	21	17	17	19	32	22.225	25	22800	45600	11400	185
	51	21	24	17	19	32	22.225	25	22800	45600	11400	190
	58	23.5	22	17	19	38	25.4	17	29800	59600	14900	275
	64	23.5	28	17	19	38	25.4	17	29800	59600	14900	280
	62	25.5	23	19	22	44	25.4	17	29800	59600	14900	360
	68	25.5	29	19	22	44	25.4	17	29800	59600	14900	370
	72.5	31	25	20	23	45	28.575	17	37700	75400	18900	535
	70	29	25	24	29	50	28.575	10	37700	75400	18900	570
	75	33	26	24	27	52	31.75	10	46600	93100	23500	755

Note) The permissible tilting angle of types without boot are greater by approximately 5°.

[Yield-Point Strength]

It indicates the strength in the direction shown in the figure below.



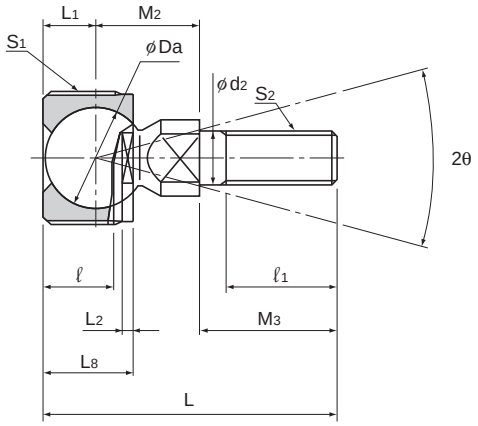
[Lubrication]

Lithium soap group grease No. 2 is contained in the boot.

[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added. The actual product is marked with symbol "L" on the holder.

Model TBS



Model No.	Outer dimensions		Holder dimensions					Shaft diameter	
	Threaded S_1 JIS Class 2	Length L	L_8	ℓ	L_1	L_2	W 0 −0.3	d_2 h9	Threaded S_2 JIS Class 2
TBS 6	M20×1.5	34.2	11.5	8	7	2	17	6	M6×1
TBS 8	M22×1.5	41.5	14.5	11	8.5	2	19	8	M8×1.25
TBS 10	M25×1.5	55.5	17	13.5	10	2	22	10	M10×1.5
TBS 12	M30×1.5	63	20	15.5	12	3	27	12	M12×1.75

[Material]

Holder : High strength zinc alloy (see A-926)
Ball shank : Bearing steel ball Hardness: 650 Hv or higher
Shank S35C
Chromate treatment

[Spherical Clearance]

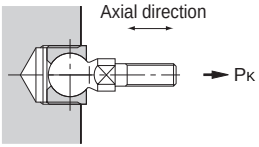
Perpendicular to the axis : 0.03mm or less
Axial direction : 0.1mm or less

[Female Threading for Attaching the Outer Ring]

JIS Class 2 thread

[Yield-Point Strength]

It indicates the strength in the direction shown in the Fig.1.



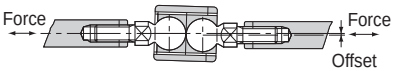
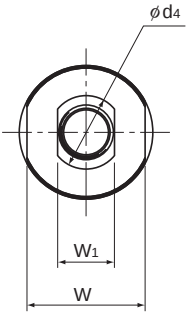


Fig.1



Unit: mm

Ball shank dimensions					Ball diameter	Permissible tilt angles	Applied static load			Yield-point strength	Mass
							Perpendicular to the axis	Axial direction			
d_4	M_2	M_3	ℓ_1	W_1 0 −0.3	Da	2θ°	C_s N	C_{sa} (Tensile) N	C_{sa} (Compressive) N	P_k N	g
10	12.2	15	11	8	12.7	30	13700	4900	12000	2450	30
12	16	17	12	10	15.875	30	24600	10400	17600	5200	50
14	19.5	26	21	11	19.05	30	32700	14400	25000	7250	80
19	21	30	24	17	22.225	30	44000	18300	35000	9220	130

[Example of Installation]

As shown in the Fig.2 below, compared with the conventional installation using a frog-shaped joint, model TBS can be installed more compactly and more easily.

[Lubrication]

Since the holder has an oil pocket, it allows grease to be replenished as necessary.

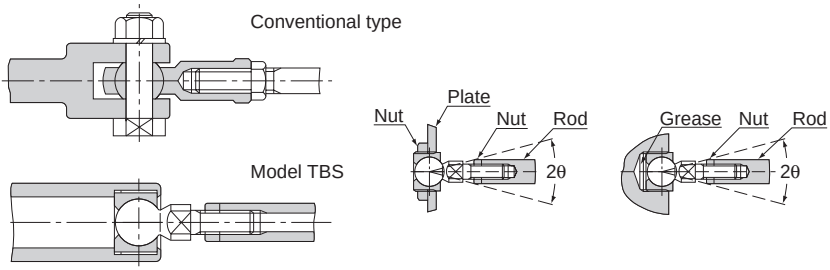


Fig.2

Rod End

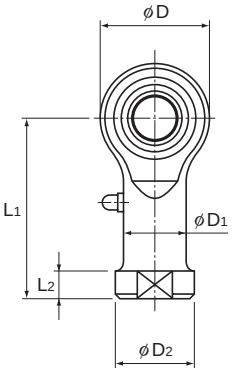
THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

Model PHS (Female Threading Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions			
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	W $^{0}_{-0.2}$	D_1	D_2	B ±0.1
PHS 5	35	16	8	M5×0.8	9	9	11	6
PHS 6	39	18	9	M6×1	11	10	13	6.75
PHS 8	47	22	12	M8×1.25	14	12.5	16	9
PHS 10	56	26	14	M10×1.5	17	15	19	10.5
PHS 12	65	30	16	M12×1.75	19	17.5	22	12
PHS 14	74	34	19	M14×2	22	20	25	13.5
PHS 16	83	38	21	M16×2	22	22	27	15
PHS 18	92	42	23	M18×1.5	27	25	31	16.5
PHS 20	100	46	25	M20×1.5	30	27.5	34	18
PHS 22	109	50	28	M22×1.5	32	30	37	20
PHS 25	124	60	31	M24×2	36	33.5	42	22
PHS 30	145	70	37	M30×2	41	40	50	25

[Material]

Holder : S35C (Chromate treatment)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Special copper alloy

[Fitting with the Shaft]

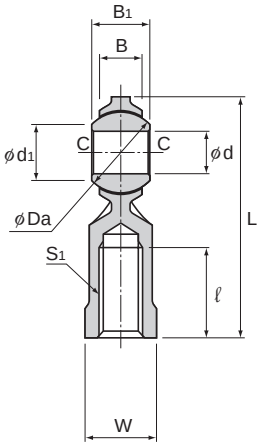
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

PHS10 L

Model number

Left-hand thread



Unit: mm

					Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	L_1	L_2	ℓ	Grease nipple	d H7	Ball diameter Da mm (inch)	d_1	C	$\alpha_1°$	$\alpha_2°$	$\alpha_3°$	C_s N	g
	27	4	14	PB107	5	11.112(7/16)	7.7	0.3	8	13	30	5590	16.5
	30	5	14		6	12.7(1/2)	9	0.3	8	13	30	6860	25
	36	5	17		8	15.875(5/8)	10.4	0.5	8	14	25	9800	43
	43	6.5	21		10	19.05(3/4)	12.9	0.5	8	14	25	13200	72
	50	6.5	24		12	22.225(7/8)	15.4	0.5	8	13	25	16700	107
	57	8	27		14	25.4(1)	16.9	0.7	10	16	24	20600	160
	64	8	33		16	28.575(1 1/8)	19.4	0.7	9	15	24	25000	210
	71	10	36		18	31.75(1 1/4)	21.9	0.7	9	15	24	29400	295
	77	10	40		20	34.925(1 3/8)	24.4	0.7	9	15	24	34300	380
	84	12	43		22	38.1(1 1/2)	25.8	0.7	10	15	23	41200	490
	94	12	48	A-M6F	25	42.862(1 11/16)	29.6	0.8	9	15	23	72500	750
	110	15	56		30	50.8(2)	34.8	0.8	10	17	23	92200	1130

[Clearance]

Unit: mm

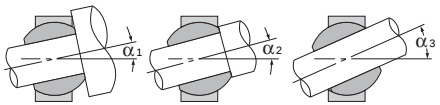
Radial clearance	0.035 or less
Axial clearance	0.1 or less

[Lubrication]

Apply lubricant before using the product. The holder has a greasing hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.

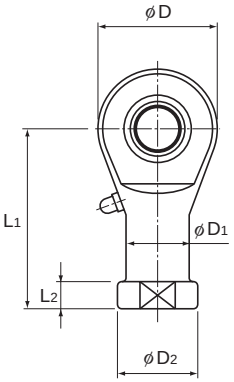
[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added.
The actual product is marked with symbol "L" on the holder.



Permissible Tilt Angles

Model RBH (Die Cast, Low Price Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions			
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	W $^{0}_{-0.3}$	D_1	D_2	B
RBH 5	35.5	17	8	M5×0.8	9	9	11	6
RBH 6	39.7	19.5	9	M6×1	11	10	13	6.75
RBH 8	48	24	12	M8×1.25	14	12.5	16	9
RBH 10	57	28	14	M10×1.5	17	15	19	10.5
RBH 12	66	32	16	M12×1.75	19	17.5	22	12
RBH 14	75	36	19	M14×2	22	20	25	13.5
RBH 16	84	40	21	M16×2	22	22	27	15
RBH 18	93.5	45	23	M18×1.5	27	25	31	16.5
RBH 20	101.5	49	25	M20×1.5	30	27.5	34	18
RBH 22	111	54	28	M22×1.5	32	30	37	20

[Material]

Holder : High strength zinc alloy (see A-942)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)

[Fitting with the Shaft]

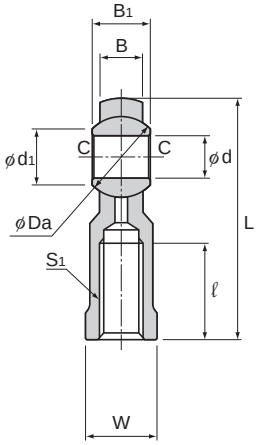
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

RBH10 L

Model number

Left-hand thread



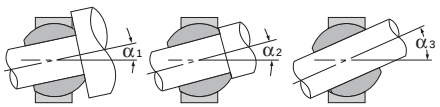
Unit: mm

					Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	L_1	L_2	ℓ	Grease nipple	d H7	Ball diameter Da mm (inch)	d_1	C	$\alpha_1°$	$\alpha_2°$	$\alpha_3°$	C_s N	g
	27	4	16	PB107	5	11.112(7/16)	7.7	0.3	8	13	30	5490	16
	30	5	16		6	12.7(1/2)	9	0.3	8	13	30	6760	21
	36	5	19		8	15.875(5/8)	10.4	0.5	8	14	25	9610	43
	43	6.5	23		10	19.05(3/4)	12.9	0.5	8	14	25	13000	68
	50	6.5	27		12	22.225(7/8)	15.4	0.5	8	13	25	16400	100
	57	8	30		14	25.4(1)	16.9	0.7	10	16	24	20200	142
	64	8	36		16	28.575(1 1/8)	19.4	0.7	9	15	24	24600	185
	71	10	40		18	31.75(1 1/4)	21.9	0.7	9	15	24	28800	265
	77	10	43		20	34.925(1 3/8)	24.4	0.7	9	15	24	33600	334
	84	12	47		22	38.1(1 1/2)	25.8	0.7	10	15	23	40400	454

[Clearance]

Unit: mm

Radial clearance	0.03 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

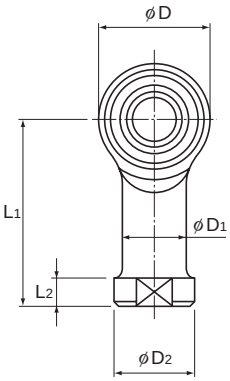
[Lubrication]

Apply lubricant before using the product. The holder has a greasing hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.

[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added. The actual product is marked with symbol "L" on the holder.

Model NHS-T (No Lubrication Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions			
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	W $^{0}_{-0.2}$	D_1	D_2	B $^{+0.1}_{-0.4}$
NHS 3T	27	12	6	M3×0.5	7	6.5	8	4.5
NHS 4T	31	14	7	M4×0.7	8	8	9.5	5.3
NHS 5T	35	16	8	M5×0.8	9	9	11	6
NHS 6T	39	18	9	M6×1	11	10	13	6.75
NHS 8T	47	22	12	M8×1.25	14	12.5	16	9
NHS 10T	56	26	14	M10×1.5	17	15	19	10.5
NHS 12T	65	30	16	M12×1.75	19	17.5	22	12
NHS 14T	74	34	19	M14×2	22	20	25	13.5
NHS 16T	83	38	21	M16×2	22	22	27	15
NHS 18T	92	42	23	M18×1.5	27	25	31	16.5
NHS 20T	100	46	25	M20×1.5	30	27.5	34	18
NHS 22T	109	50	28	M22×1.5	32	30	37	20

[Material]

Holder : S35C (Chromate treatment)
For NHS3T and NHS4T, S20C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Self-lubricating synthetic resin

[Fitting with the Shaft]

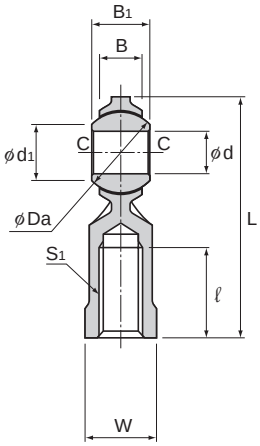
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

NHS10T L

Model number

Left-hand thread



Unit: mm

				Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	L_1	L_2	ℓ	d H7	Ball diameter Da mm (inch)	d_1	C	α_1°	α_2°	α_3°	C_s N	g
	21	3	10	3	9.525(3/8)	7.4	0.3	8	10	42	1570	6.5
	24	4	12	4	10.319(13/32)	7.6	0.3	9	11	35	2250	10
	27	4	14	5	11.112(7/16)	7.7	0.3	8	13	30	3920	16.5
	30	5	14	6	12.7(1/2)	9	0.3	8	13	30	5000	25
	36	5	17	8	15.875(5/8)	10.4	0.5	8	14	25	7450	43
	43	6.5	21	10	19.05(3/4)	12.9	0.5	8	14	25	9410	72
	50	6.5	24	12	22.225(7/8)	15.4	0.5	8	13	25	11000	107
	57	8	27	14	25.4(1)	16.9	0.7	10	16	24	15200	160
	64	8	33	16	28.575(1 1/8)	19.4	0.7	9	15	24	20200	210
	71	10	36	18	31.75(1 1/4)	21.9	0.7	9	15	24	25200	295
	77	10	40	20	34.925(1 3/8)	24.4	0.7	9	15	24	27800	380
	84	12	43	22	38.1(1 1/2)	25.8	0.7	10	15	23	35900	490

[Clearance]

Unit: mm

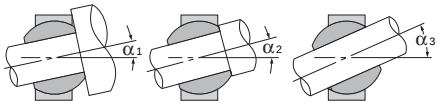
Radial clearance	0.035 or less
Axial clearance	0.1 or less

[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.

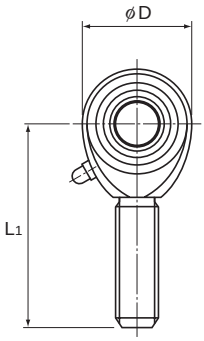
[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added. The actual product is marked with symbol "L" on the holder.



Permissible Tilt Angles

Model POS (Male Thread Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions	
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	B ±0.1	L_1
POS 5	41	16	8	M5×0.8	6	33
POS 6	45	18	9	M6×1	6.75	36
POS 8	53	22	12	M8×1.25	9	42
POS 10	61	26	14	M10×1.5	10.5	48
POS 12	69	30	16	M12×1.75	12	54
POS 14	77	34	19	M14×2	13.5	60
POS 16	85	38	21	M16×2	15	66
POS 18	93	42	23	M18×1.5	16.5	72
POS 20	101	46	25	M20×1.5	18	78
POS 22	109	50	28	M22×1.5	20	84
POS 25	124	60	31	M24×2	22	94
POS 30	145	70	37	M30×2	25	110

[Material]

Holder : S35C (Chromate treatment)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Special copper alloy

[Fitting with the Shaft]

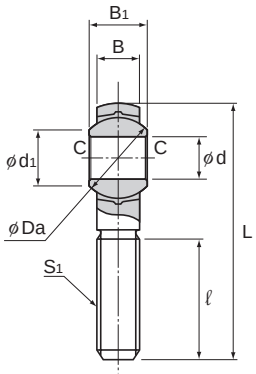
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

POS10 L

Model number

Left-hand thread



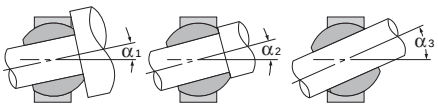
Unit: mm

			Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
	ℓ	Grease nipple	d H7	Ball diameter Da mm (inch)	d_1	C	$\alpha_1°$	$\alpha_2°$	$\alpha_3°$	C_S N	g
	20	—	5	11.112(7/16)	7.7	0.3	8	13	30	3430	12.5
	22		6	12.7(1/2)	9	0.3	8	13	30	4900	19
	25	PB107	8	15.875(5/8)	10.4	0.5	8	14	25	6860	32
	29		10	19.05(3/4)	12.9	0.5	8	14	25	10800	54
	33		12	22.225(7/8)	15.4	0.5	8	13	25	16700	85
	36		14	25.4(1)	16.9	0.7	10	16	24	20600	126
	40		16	28.575(1 1/8)	19.4	0.7	9	15	24	25000	185
	44		18	31.75(1 1/4)	21.9	0.7	9	15	24	29400	260
	47		20	34.925(1 3/8)	24.4	0.7	9	15	24	34300	340
	51		22	38.1(1 1/2)	25.8	0.7	10	15	23	41200	435
	57	A-M6F	25	42.862(1 11/16)	29.6	0.8	9	15	23	72500	650
	66		30	50.8(2)	34.8	0.8	10	17	23	92200	1070

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

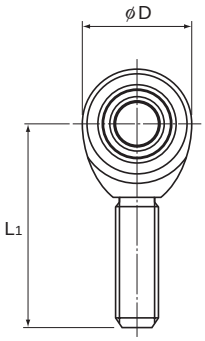
[Lubrication]

Apply lubricant before using the product. The holder has a greasing hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary. To lubricate the product, replenish grease from the holder greasing hole for models POS5 and 6, or from the grease nipple for other models.

[Identification of Left-hand Thread]

If the male thread is left-hand, symbol "L" is added.
The actual product is marked with symbol "L" on the holder.

Model NOS-T (No Lubrication, Male Thread Type)



Model No.	Outer dimensions			Threaded	Holder Dimensions	
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	B $^{+0.1}_{-0.4}$	L_1
NOS 3 T	33	12	6	M3×0.5	4.5	27
NOS 4 T	37	14	7	M4×0.7	5.3	30
NOS 5 T	41	16	8	M5×0.8	6	33
NOS 6 T	45	18	9	M6×1	6.75	36
NOS 8 T	53	22	12	M8×1.25	9	42
NOS 10 T	61	26	14	M10×1.5	10.5	48
NOS 12 T	69	30	16	M12×1.75	12	54
NOS 14 T	77	34	19	M14×2	13.5	60
NOS 16 T	85	38	21	M16×2	15	66
NOS 18 T	93	42	23	M18×1.5	16.5	72
NOS 20 T	101	46	25	M20×1.5	18	78
NOS 22 T	109	50	28	M22×1.5	20	84

[Material]

Holder : S35C (Chromate treatment)
For NOS3T and NOS4T, S20C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Self-lubricating synthetic resin

[Fitting with the Shaft]

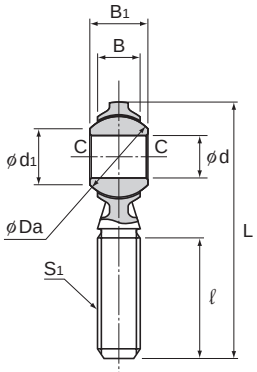
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	p6

Model number coding

NOS10T L

Model number

Left-hand thread



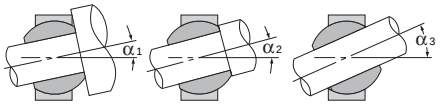
Unit: mm

	Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Mass
ℓ	d H7	Ball diameter Da mm (inch)	d_1	C	$\alpha_1°$	$\alpha_2°$	$\alpha_3°$	C_s N	g
15	3	9.525(3/8)	7.4	0.3	8	10	42	1570	4.5
17	4	10.319(13/32)	7.6	0.3	9	11	35	2250	7
20	5	11.112(7/16)	7.7	0.3	8	13	30	3430	12.5
22	6	12.7(1/2)	9	0.3	8	13	30	4900	19
25	8	15.875(5/8)	10.4	0.5	8	14	25	6860	32
29	10	19.05(3/4)	12.9	0.5	8	14	25	9410	54
33	12	22.225(7/8)	15.4	0.5	8	13	25	11000	85
36	14	25.4(1)	16.9	0.7	10	16	24	15200	126
40	16	28.575(1 1/8)	19.4	0.7	9	15	24	20200	185
44	18	31.75(1 1/4)	21.9	0.7	9	15	24	25200	260
47	20	34.925(1 3/8)	24.4	0.7	9	15	24	27800	340
51	22	38.1(1 1/2)	25.8	0.7	10	15	23	35900	435

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less



Permissible Tilt Angles

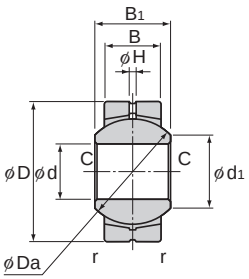
[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.

[Identification of Left-hand Thread]

If the male thread is left-hand, symbol "L" is added.

Model PB (Standard Type)



Unit: mm

Model No.	Main dimensions							Ball diameter	Permissible tilt angles			Static applied load Radial	Mass
	Inner diameter d H7	Outer diameter D h6	Outer ring width B ±0.1	Inner ring width B_1 $^{0}_{-0.1}$	d_1	H	C, r	Da mm (inch)	α_1°	α_2°	α_3°	C_s N	g
PB 5	5	16	6	8	7.7	1	0.3	11.112(7/16)	8	13	30	7840	8.5
PB 6	6	18	6.75	9	9	1	0.3	12.7(1/2)	8	13	30	9800	13
PB 8	8	22	9	12	10.4	1	0.5	15.875(5/8)	8	14	25	16700	24
PB 10	10	26	10.5	14	12.9	1.2	0.5	19.05(3/4)	8	14	25	23500	39
PB 12	12	30	12	16	15.4	1.5	0.5	22.225(7/8)	8	13	25	31400	58
PB 14	14	34	13.5	19	16.9	1.5	0.7	25.4(1)	10	16	24	40200	84
PB 16	16	38	15	21	19.4	2.5	0.7	28.575(1 1/8)	9	15	24	50000	111
PB 18	18	42	16.5	23	21.9	2.5	0.7	31.75(1 1/4)	9	15	24	61800	160
PB 20	20	46	18	25	24.4	2.5	0.7	34.925(1 3/8)	9	15	24	73500	210
PB 22	22	50	20	28	25.8	2.5	0.7	38.1(1 1/2)	10	15	23	88200	265
PB 25	25	56	22	31	29.6	3	0.8	42.862(1 11/16)	9	15	23	111000	390
PB 30	30	66	25	37	34.8	3	0.8	50.8(2)	10	17	23	148000	610

[Material]

Outer ring : S35C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Special copper alloy

[Fitting with the Shaft]

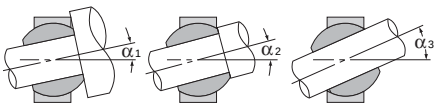
For the fitting between the shaft and the housing, the following values are recommended.

Condition		Shaft	Housing
Inner ring rotational load	Normal load	m6	H7
	Indeterminate load	n6	
Outer ring rotational load	Normal load	h7	M7
	Indeterminate load	k6	

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less

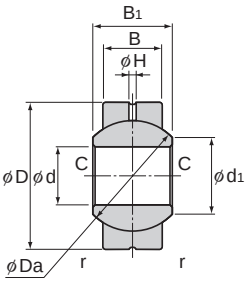


Permissible Tilt Angles

[Lubrication]

Apply lubricant before using the product.
The holder has a greasing hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.

Model PBA (Die Cast Type)



Unit: mm

Model No.	Main dimensions							Ball diameter	Permissible tilt angles			Static applied load Radial	Mass
	Inner diameter d H7	Outer diameter D h8	Outer ring width B ±0.1	Inner ring width B_1 $^{0}_{-0.1}$	d_1	H	C, r	Da mm (inch)	α_1°	α_2°	α_3°	C_s N	g
PBA 5	5	16	6	8	7.7	1	0.3	11.112(7/16)	8	13	30	7840	8.5
PBA 6	6	18	6.75	9	9	1	0.3	12.7(1/2)	8	13	30	9800	13
PBA 8	8	22	9	12	10.4	1	0.5	15.875(5/8)	8	14	25	16700	24
PBA 10	10	26	10.5	14	12.9	1.2	0.5	19.05(3/4)	8	14	25	23500	39
PBA 12	12	30	12	16	15.4	1.5	0.5	22.225(7/8)	8	13	25	31400	58
PBA 14	14	34	13.5	19	16.9	1.5	0.7	25.4(1)	10	16	24	40200	84
PBA 16	16	38	15	21	19.4	2.5	0.7	28.575(1 1/8)	9	15	24	50000	111
PBA 18	18	42	16.5	23	21.9	2.5	0.7	31.75(1 1/4)	9	15	24	61800	160
PBA 20	20	46	18	25	24.4	2.5	0.7	34.925(1 3/8)	9	15	24	73500	210
PBA 22	22	50	20	28	25.8	2.5	0.7	38.1(1 1/2)	10	15	23	88200	265

[Material]

Outer ring : High strength zinc alloy (see A-942)
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)

[Fitting with the Shaft]

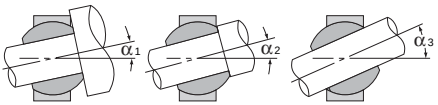
For the fitting between the shaft and the housing, the following values are recommended.

Condition		Shaft	Housing
Inner ring rotational load	Normal load	m6	H7
	Indeterminate load	n6	
Outer ring rotational load	Normal load	h7	M7
	Indeterminate load	k6	

[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less

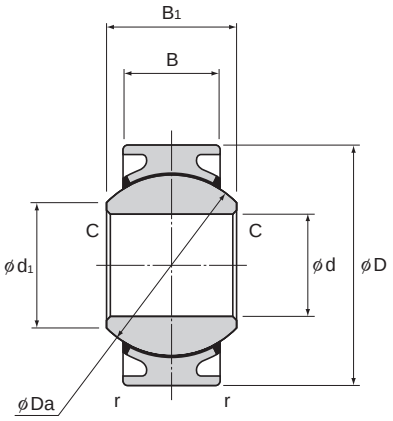


Permissible Tilt Angles

[Lubrication]

Apply lubricant before using the product.
The holder has a greasing hole and an oil groove; they allow grease to be replenished through the grease nipple as necessary.

Model NB-T (No Lubrication Type)



Unit: mm

Model No.	Outer dimensions						Ball diameter	Permissible tilt angles			Static applied load Radial	Mass
	Inner diameter d H7	Outer diameter D h7	Outer ring width B ±0.1	Inner ring width B_1 $^{0}_{-0.1}$	d_1	C, r	Da mm (inch)	α_1°	α_2°	α_3°	C_s N	g
NB 14T	14	34	13.5	19	16.9	0.7	25.4(1)	10	16	24	20200	84
NB 16T	16	38	15	21	19.4	0.7	28.575(1 1/8)	9	15	24	25200	111
NB 18T	18	42	16.5	23	21.9	0.7	31.75(1 1/4)	9	15	24	30800	160
NB 20T	20	46	18	25	24.4	0.7	34.925(1 3/8)	9	15	24	36900	210
NB 22T	22	50	20	28	25.8	0.7	38.1(1 1/2)	10	15	23	44800	265

[Material]

Outer ring : S35C
Spherical inner ring : SUJ2, 58 HRC or higher
(Hard chrome plated except for the inner surface of the inner ring)
Bush : Self-lubricating synthetic resin

[Fitting with the Shaft]

For the fitting between the shaft and the housing, the following values are recommended.

Condition		Shaft	Housing
Inner ring rotational load	Normal load	m6	H7
	Indeterminate load	n6	
Outer ring rotational load	Normal load	h7	M7
	Indeterminate load	k6	

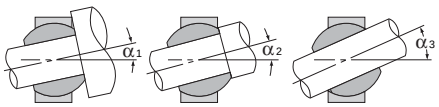
[Clearance]

Unit: mm

Radial clearance	0.035 or less
Axial clearance	0.1 or less

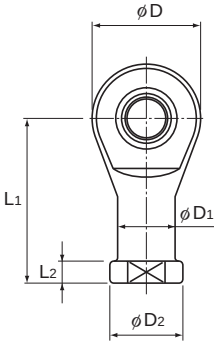
[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.



Permissible Tilt Angles

Model HS (No Lubrication, Corrosion-resistant Type)/ Build to Order



Model No.	Outer dimensions			Threaded	Holder Dimensions					
	Length L	Diameter D	Width B_1 $^{0}_{-0.1}$	S_1 JIS Class 2	W $^{0}_{-0.3}$	D_1	D_2	B	L_1	L_2
HS 5	35.5	17	8	M5×0.8	9	9	11	6	27	4
HS 6	39.7	19.5	9	M6×1	11	10	13	6.75	30	5
HS 8	48	24	12	M8×1.25	14	12.5	16	9	36	5
HS 10	57	28	14	M10×1.5	17	15	19	10.5	43	6.5
HS 12	66	32	16	M12×1.75	19	17.5	22	12	50	6.5

[Material]

Holder : Aluminum alloy
Spherical inner ring : SUJ2, 600 Hv or higher (corrosion resistant coated)
Bush : Special fluorine resin with fiber

[Fitting with the Shaft]

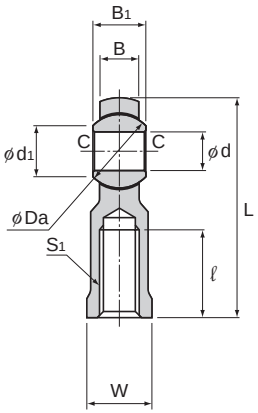
Condition	Dimensional tolerance of the shaft
Normal load	h7
Indeterminate load	n6, p6

Model number coding

HS10 L

Model number

Left-hand thread



Unit: mm

	Spherical inner ring dimensions				Permissible tilt angles			Static applied load Radial	Yield-point strength	Mass
ℓ	d G7	Ball diameter Da mm (inch)	d1	C	α1°	α2°	α3°	Cs N	Pк N	g
16	5	11.112(7/16)	7.7	0.3	7	13	30	5590	3920	9
16	6	12.7(1/2)	9	0.3	7	13	30	6860	5290	15
19	8	15.875(5/8)	10.4	0.5	8	14	25	9800	8330	26
23	10	19.05(3/4)	12.9	0.5	8	14	25	13200	10800	41
27	12	22.225(7/8)	15.4	0.5	8	13	25	16700	14700	60

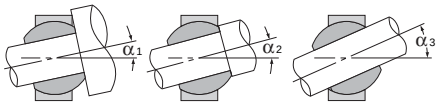
[Clearance]

Unit: mm

Radial clearance	0.03 or less
Axial clearance	0.1 or less

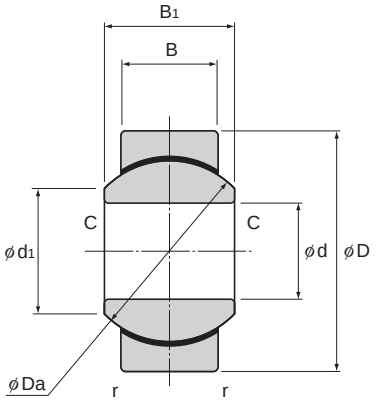
[Identification of Left-hand Thread]

If the female threading is left-hand, symbol "L" is added.
The actual product is marked with symbol "L" on the holder.



Permissible Tilt Angles

Model HB (No Lubrication Type)/ Build to Order



Unit: mm

Model No.	Outer dimensions						Ball diameter	Permissible tilt angles			Static applied load Radial	Mass
	Inner diameter d G7	Outer diameter D h7	Outer ring width B ±0.1	Inner ring width B_1 $^{0}_{-0.1}$	d_1	C, r	Da mm (inch)	α_1°	α_2°	α_3°	C_s N	g
HB 5	5	16	6	8	7.7	0.3	11.112(7/16)	7	13	30	13100	8.5
HB 6	6	18	6.75	9	9	0.3	12.7(1/2)	7	13	30	16900	13
HB 8	8	22	9	12	10.4	0.5	15.875(5/8)	8	14	25	28000	24
HB 10	10	26	10.5	14	12.9	0.5	19.05(3/4)	8	14	25	39200	39
HB 12	12	30	12	16	15.4	0.5	22.225(7/8)	8	13	25	52500	58

[Material]

Outer ring : Zinc alloy
Spherical inner ring : SUJ2, 600 Hv or higher (corrosion resistant coated)
Bush : Special fluorine resin with fiber

[Fitting with the Shaft]

For the fitting between the shaft and the housing, the following values are recommended.

Condition		Shaft	Housing
Inner ring rotational load	Normal load	m6	H7
	Indeterminate load	n6	
Outer ring rotational load	Normal load	h7	M7
	Indeterminate load	k6	

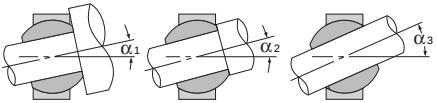
[Clearance]

Unit: mm

Radial clearance	0.03 or less
Axial clearance	0.1 or less

[Initial Lubrication]

This model can be used without lubrication. However, if desiring to provide initial lubrication, apply oil or grease to the spherical area.



Permissible Tilt Angles

Accessories for Lubrication

THK General Catalog

B Product Specifications

A Technical Descriptions of the Products (Separate)

* Please see the separate "A Technical Descriptions of the Products".

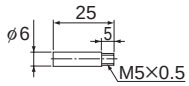
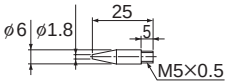
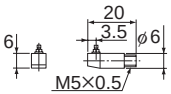
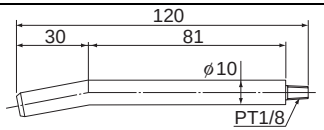
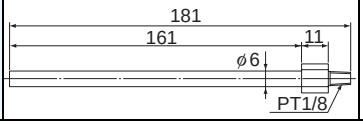
Lubrication Equipment

Grease Gun Unit MG70

●Discharge pressure: 19.6 MPa max ●Discharge rate: 0.6 cc/stroke ●Grease: 70 g bellows cartridge
●Overall length: 235 mm (excluding the nozzle) ●Weight: 480 g (including the nozzle, excluding the grease)

Grease Gun Unit MG70 is capable of lubricating small to large types of LM Guides by replacing dedicated nozzles (attached). For small LM Guides, MG70 is provided with dedicated attachments. The user can select from these attachments according to the model number and the installation space.
MG70 has a slit window, allowing the user to check the remaining amount of grease.
It is equipped with a bellows cartridge that can hold 70 g of grease and is replaceable without smirching your hand. It supports a wide range of grease products, including AFA Grease, AFB-LF Grease, AFC Grease and AFE-CA Grease, to meet varied conditions. This enables you to make a selection according to the area requiring grease. (See A-959 to A-969.)
Since the grease to be used is sold separately, you must purchase it separately.

Table for Supported Model Numbers

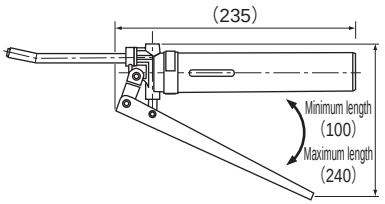
Type	Dimensions	Supported model numbers	
Type N		LM Guide	Models SSR15, SHS15, SR15, HSR12, HSR15, CSR15, HRW17, GSR15, RSR15, RSH15, HCR12 and HCR15
		Cam Follower	Models CF, CFN and CFH
		Rod End	Models PHS5 to 22, RBH and POS8 to 22
Type P		LM Guide	Models HSR8, HSR10, HRW12, HRW14, RSR12 and RSH12
Type L		LM Guide	Models HSR8, HSR10, HRW12, HRW14, RSR12 and RSH12
Type H		LM Guide	Models with grease nipple M6F or PT1/8
		Ball screw	
		Rod End	Models PHS25, PHS30, POS25 and POS30
Dedicated nozzle type U		—	—

Note) Types P and L are also capable of greasing less accessible areas other than the model numbers above (by dropping grease on the raceway).

Model number coding

MG70

(THK offers grease guns only for a 70g cartridge.)



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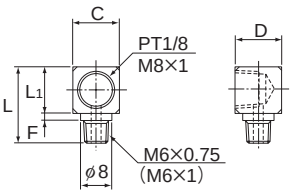
Accessories for Lubrication

Special Plumbing Fixtures

For centralized greasing and oil lubrication, special plumbing fixtures are available from THK. When ordering an LM system, specify the model number, mounting orientation and piping direction. We will ship the LM system attached with the corresponding fixture.

LF-A
LF-B
LF-E

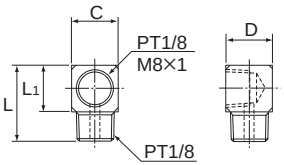


Unit: mm

Model	Screw	L	L1	F	C	D
LF-A (LF-E)	PT1/8	20	12	2	12	12
LF-B	M8×1	18.5	10	2.5	9.5	18

*LF-E: the same size with LF-A; mounting screw: M6×1

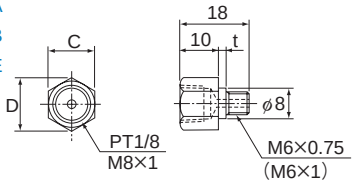
LF-C
LF-D



Unit: mm

Model	Screw	L	L1	C	D
LF-C	PT1/8	20	12	12	12
LF-D	M8×1	18	10	10	18

SF-A
SF-B
SF-E

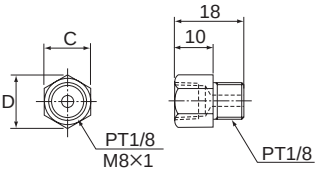


Unit: mm

Model	Screw	t	C	D
SF-A (SF-E)	PT1/8	2	12	13.8
SF-B	M8×1	2	10	11.5

*SF-E: the same size with SF-A; mounting screw: M6×1

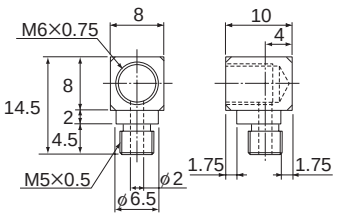
SF-C
SF-D



Unit: mm

Model	Screw	C	D
SF-C	PT1/8	12	13.8
SF-D	M8×1	10	11.5

LD



Unit: mm

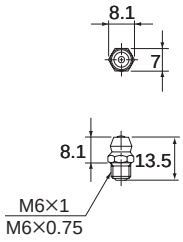
Model	Screw
LD	M6×0.75

Accessories for Lubrication

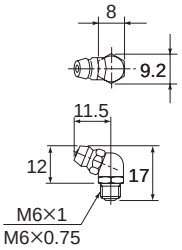
Grease Nipple

THK provides various types of grease nipples needed for the lubrication of LM systems.

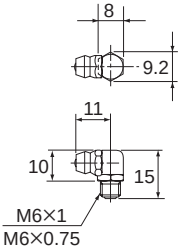
A-MT6×1 (M6×1)
A-M6F (M6×0.75)



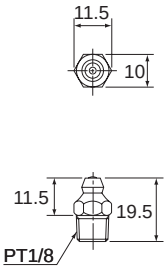
B-MT6×1 (M6×1)
B-M6F (M6×0.75)



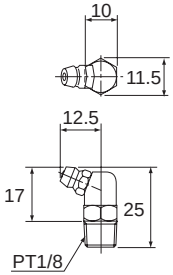
C-MT6×1 (M6×1)
C-M6F (M6×0.75)



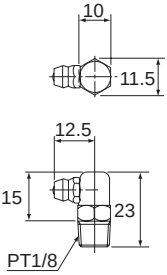
A-PT1/8



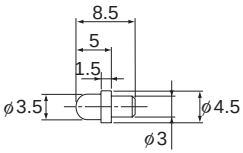
B-PT1/8



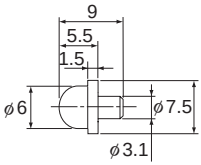
C-PT1/8



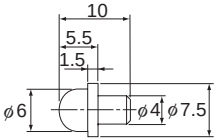
PB107



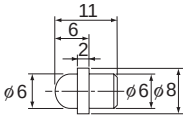
NP3.2×3.5



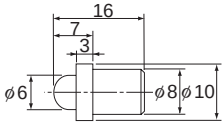
PB1021B



NP6×5



NP8×9



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