

## 2 Guiding systems

### Linear guiding system Speedi-Roll

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To complement its versatile range of linear motion products, SKF has introduced the LLE linear guiding system (→ **fig 21**), a highly efficient unit marketed under the name “Speedi-Roll”. In response to current market demands, this product was developed giving high priority to lightweight construction and ease of installation.

Speedi-Roll is a linear guiding system with high load-carrying capacity, rigidity and torque resistance, consisting of a guide rail and a carriage with either four or six rollers. The rail consists of a drawn and anodised aluminium profile with hardened steel angle raceways fitted to both sides.

The aluminium base plate of the carriage, which is also anodised, houses the factory-fitted rollers. A special feature of this roller design is the presence of elastic elements around the threaded bolt adjusting the rollers and fixing them in the base plate. This unique patented system avoids the risk of mounting errors, thus contributing to a more efficient and cost effective installation.

As standard, the units are supplied with light preload. In order to cover a wide range of applications, SKF offers three sizes: LLE 15, 25 and 35. This allows flexibility when selecting a system to meet the design parameters.

Speedi-Roll guides operate effortlessly and quietly. The high linear speed rating permits shorter cycle times, and

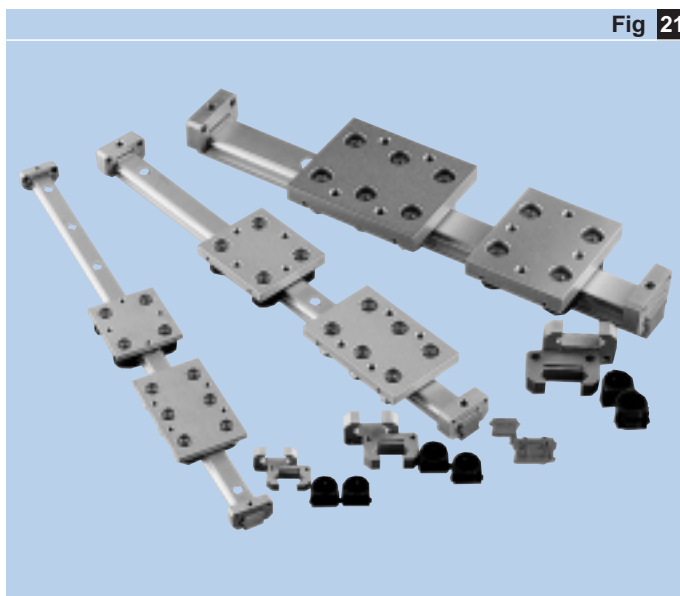


Fig 21

the low friction between rail and rollers allows less power input for driving the system. The hollow centre of size 25 and 35 rails helps to reduce the mass of the entire system. In addition, these “bores” can serve as wire or cable channels. The rollers are lubricated for life, greatly reducing the need for service.

Roller covers and end stops are available to complete the product range. It is possible to produce customer specific configurations using the standard rollers and steel angle raceways in addition to the catalogue range.

**Ordering key**



**Type**

**Guide rail type:**

..... H

**System key:**

Guide rail and carriage (system) ..... S  
 Carriage ..... C  
 Guide rail ..... R  
 Roller ..... E  
 Roller cover ..... X  
 End stop ..... M

**Size:**

(18 mm) ..... 15  
 (23 mm) ..... 25  
 (36 mm) ..... 35

**Carriage type:**

Standard (4 rollers) ..... H  
 Long (6 rollers) ..... L

**Sealing:**

Without roller covers ..... Z  
 With roller covers ..... C

**Number of carriages per guide rail**

**Length of guide rail [mm]**

**Special design:**

Joint rail ..... A  
 Guide rails as specified ..... D  
 System with one end stop ..... M1  
 System with two end stops ..... M2  
 Hard chromium plated ..... H

**Distance between end face and the first hole [mm]:**

Symmetric holes as standard ..... E = 0

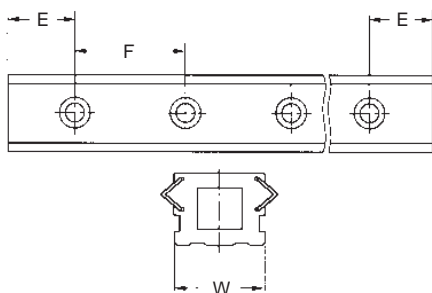
Example: **LLE H S 15 H Z 2 - 300 / M1 E=0**

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#### LLEHR ..

Rails in standard length



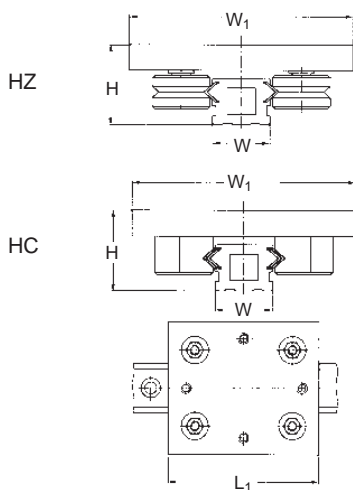
Designations	Dimensions		
	W	F	E
	mm		
<b>LLEHR 15</b>	18	62.5	31.25
<b>LLEHR 25</b>	23	125.0	62.5
<b>LLEHR 35</b>	36	250.0	125.0

#### LLEHC ..HZ/ ..HC

Standard carriages

LLEHC ..HZ without roller covers

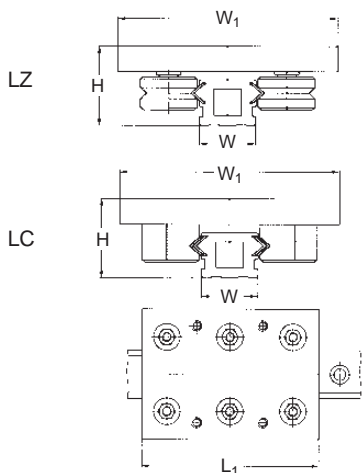
LLEHC ..HC with roller covers



Designations	Dimensions			
	W	W <sub>1</sub>	H	L <sub>1</sub>
	mm			
<b>LLEHR 15 HZ HC</b>	18	65	25.0	70
<b>LLEHR 25 HZ HC</b>	23	80	35.5	90
<b>LLEHR 35 HZ HC</b>	36	120	54.3	100

**LLEHC ..LZ/ ..LC**

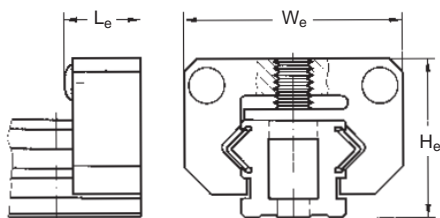
Long carriages  
 LLEHC ..LZ without roller covers  
 LLEHC ..LC with roller covers



Designations	Dimensions			
	W	W <sub>1</sub>	H	L <sub>1</sub>
mm				
<b>LLEHC 15 LZ LC</b>	18	65	25.0	105
<b>LLEHC 25 LZ LC</b>	23	80	35.5	120
<b>LLEHC 35 LZ LC</b>	36	120	54.3	140

**LLEHM**

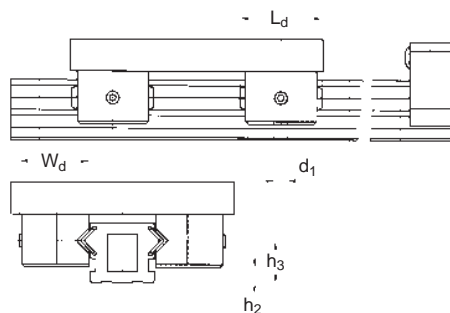
End stops



Designations	Dimensions		
	W <sub>e</sub>	H <sub>e</sub>	L <sub>e</sub>
mm			
<b>LLEHM 15</b>	38	24.5	11.1
<b>LLEHM 25</b>	48	34.1	16.6
<b>LLEHM 35</b>	65	52.0	16.6

**LLEHX**

Roller covers



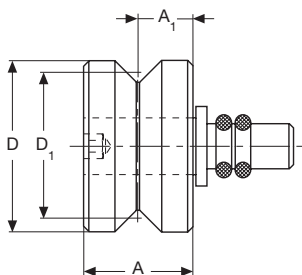
Designations	Dimensions				
	L <sub>d</sub>	W <sub>d</sub>	h <sub>2</sub>	h <sub>3</sub>	d <sub>1</sub>
mm					
<b>LLEHX 15</b>	29.2	25.1	1.65	10.75	2
<b>LLEHX 25</b>	29.2	25.1	5.60	14.70	2
<b>LLEHX 35</b>	31.8	27.8	10.95	22.75	2

## 2 Guiding systems

### Linear guiding system Speedi-Roll/Profile rail guides

#### LLEHE ..Z

Rollers



Designations	Dimensions			
	D	D <sub>1</sub>	A	A <sub>1</sub>
	mm			
<b>LLEHE 15 Z</b>	20.5	17.75	14.00	8.2
<b>LLEHE 25 Z</b>	22.0	19.25	14.00	9.0
<b>LLEHE 35 Z</b>	24.5	21.75	20.25	12.1

System with	Designations	Basic load ratings dynamic static*	
		C	C <sub>0</sub>
		N	
Standard carriage	<b>LLEHS 15 H</b>	2000	1200
Long carriage	<b>LLEHS 15 L</b>	2600	1800
Roller only	<b>LLEHE 15</b>	2850	1400
Standard carriage	<b>LLEHS 25 H</b>	4000	2700
Long carriage	<b>LLEHS 25 L</b>	5200	4000
Roller only	<b>LLEHE 25</b>	2850	1400
Standard carriage	<b>LLEHS 35 H</b>	6000	4250
Long carriage	<b>LLEHS 35 L</b>	8000	6350
Roller only	<b>LLEHE 35</b>	4400	2200

\* Data for radial direction, load angle 90° or 270°, with load centrally applied to the carriage

