

# Cage Freewheels SF

for assembly with inner and outer ring  
with sprags, available in three types



## Features

Cage Freewheels SF are sprag freewheels to be installed between customer-supplied inner and outer rings.

The freewheels SF are used as:

- ▣ Backstops
- ▣ Overrunning Clutches
- ▣ Indexing Freewheels

In addition to the standard type, two other types are available for extended service life.

Nominal torques up to 93 000 Nm.

## Mounting

The lateral guidance of the Cage Freewheels can be effected either by a shoulder on the outer ring or by guard rings or guard discs which are fixed in the outer ring.

Torque transmission capacity can be increased if several cages are arranged side by side. In this case please consult with RINGSPANN on transmissible torques.

Please note the technical points on page 120 regarding the sprag tracks.

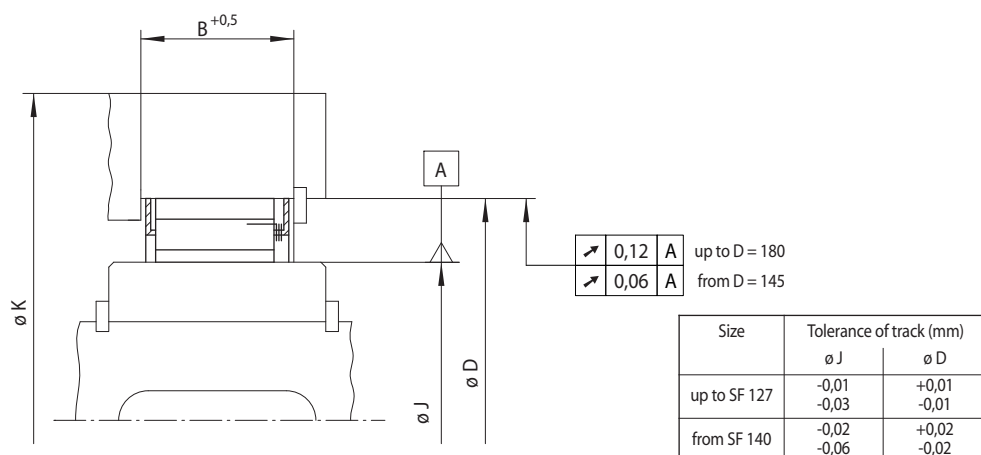
## Example for ordering

Freewheel size SF 44-11,5, standard type:

- SF 44-11,5 K

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|                    | Standard type<br>For universal use | Type with RIDUVIT®<br>For extended service life<br>using coated sprags | Type with sprag lift-off Z<br>For extended service life using sprag lift-off<br>at high speed rotating outer ring | Dimensions |
|--------------------|------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------|
| Indexing Freewheel |                                    |                                                                        |                                                                                                                   |            |
| Overrunning Clutch |                                    |                                                                        |                                                                                                                   |            |
| Backstop           |                                    |                                                                        |                                                                                                                   |            |

| Freewheel Size | Type | Nominal torque Nm | Type | Nominal torque Nm | Type | Nominal torque Nm | Sprag lift-off at outer ring speed min <sup>-1</sup> | J mm  | D mm  | B mm | K mm | Sprags Quantity | Weight kg |
|----------------|------|-------------------|------|-------------------|------|-------------------|------------------------------------------------------|-------|-------|------|------|-----------------|-----------|
| SF 18-13,5     | J    | 66                |      |                   |      |                   |                                                      | 18,80 | 35,47 | 13,5 | 50   | 10              | 0,04      |
| SF 23-13,5     | J    | 120               |      |                   |      |                   |                                                      | 23,63 | 40,29 | 13,5 | 55   | 12              | 0,04      |
| SF 27-13,5     | J    | 160               | JT   | 160               | JZ   | 100               | 3 600                                                | 27,78 | 44,42 | 13,5 | 65   | 14              | 0,05      |
| SF 31-13,5     | J    | 170               | JT   | 170               | JZ   | 110               | 3 400                                                | 31,75 | 48,41 | 13,5 | 70   | 12              | 0,04      |
| SF 32-21,5     | J    | 400               |      |                   |      |                   |                                                      | 32,77 | 49,44 | 21,5 | 65   | 14              | 0,07      |
| SF 37-14,5     | K    | 270               | KT   | 270               | KZ   | 210               | 2 900                                                | 37    | 55    | 14,5 | 75   | 14              | 0,06      |
| SF 42-21       | J    | 720               |      |                   |      |                   |                                                      | 42,10 | 58,76 | 21   | 85   | 18              | 0,09      |
| SF 44-14,5     | K    | 500               | KT   | 500               | KZ   | 400               | 2 250                                                | 44    | 62    | 14,5 | 90   | 20              | 0,08      |
| SF 46-21       | J    | 840               |      |                   |      |                   |                                                      | 46,77 | 63,43 | 21   | 90   | 20              | 0,10      |
| SF 50-18,5     | K    | 680               | KT   | 680               | KZ   | 580               | 2 250                                                | 50    | 68    | 18,5 | 90   | 20              | 0,10      |
| SF 56-21       | J    | 1 050             |      |                   |      |                   |                                                      | 56,12 | 72,78 | 21   | 100  | 22              | 0,11      |
| SF 57-18,5     | K    | 950               | KT   | 950               | KZ   | 800               | 2 000                                                | 57    | 75    | 18,5 | 105  | 24              | 0,13      |
| SF 61-21       | J    | 1 300             | JT   | 1 300             | JZ   | 1 150             | 1 550                                                | 61,91 | 78,57 | 21   | 110  | 26              | 0,14      |
| SF 72-23,5     | K    | 2 100             | KT   | 2 100             | KZ   | 1 850             | 1 550                                                | 72    | 90    | 23,5 | 135  | 32              | 0,23      |
| SF 82-25       | K    | 2 300             | KT   | 2 300             | KZ   | 2 100             | 1 450                                                | 82    | 100   | 25   | 140  | 36              | 0,26      |
| SF 107-25      | K    | 3 300             | KT   | 3 300             | KZ   | 3 100             | 1 300                                                | 107   | 125   | 25   | 170  | 48              | 0,35      |
| SF 127-25      | K    | 4 900             | KT   | 4 900             | KZ   | 4 600             | 1 200                                                | 127   | 145   | 25   | 210  | 56              | 0,40      |
| SF 140-50      | S    | 13 600            | ST   | 13 600            | SZ   | 10 500            | 950                                                  | 140   | 180   | 50   | 260  | 24              | 1,70      |
| SF 140-63      | S    | 18 000            | ST   | 18 000            | SZ   | 14 000            | 800                                                  | 140   | 180   | 63   | 260  | 24              | 2,00      |
| SF 170-50      | S    | 17 000            | ST   | 17 000            | SZ   | 13 500            | 880                                                  | 170   | 210   | 50   | 290  | 28              | 1,95      |
| SF 170-63      | S    | 23 000            | ST   | 23 000            | SZ   | 18 500            | 720                                                  | 170   | 210   | 63   | 290  | 28              | 2,40      |
| SF 200-50      | S    | 23 000            | ST   | 23 000            | SZ   | 18 500            | 820                                                  | 200   | 240   | 50   | 325  | 36              | 2,50      |
| SF 200-63      | S    | 29 000            | ST   | 29 000            | SZ   | 23 500            | 680                                                  | 200   | 240   | 63   | 325  | 36              | 3,10      |
| SF 230-63      | S    | 37 000            | ST   | 37 000            | SZ   | 29 500            | 650                                                  | 230   | 270   | 63   | 360  | 45              | 3,90      |
| SF 270-50      | S    | 35 000            | ST   | 35 000            | SZ   | 29 500            | 720                                                  | 270   | 310   | 50   | 410  | 48              | 3,40      |
| SF 270-63      | S    | 44 000            | ST   | 44 000            | SZ   | 37 000            | 600                                                  | 270   | 310   | 63   | 410  | 48              | 4,20      |
| SF 340-50      | S    | 45 000            | ST   | 45 000            | SZ   | 43 000            | 640                                                  | 340   | 380   | 50   | 510  | 60              | 4,20      |
| SF 340-63      | S    | 67 500            | ST   | 67 500            | SZ   | 57 500            | 540                                                  | 340   | 380   | 63   | 510  | 60              | 5,20      |
| SF 380-50      | S    | 57 000            | ST   | 57 000            | SZ   | 48 500            | 610                                                  | 380   | 420   | 50   | 550  | 63              | 4,40      |
| SF 440-63      | S    | 93 000            | ST   | 93 000            | SZ   | 80 000            | 470                                                  | 440   | 480   | 63   | 640  | 72              | 6,20      |

The theoretical nominal torque applies only for ideal concentricity between the inner and outer ring.  
The maximum transmissible torque is 2 times the specified nominal torque. See page 14 for determination of selection torque.