# SLIDE BUSH

# SLIDE BUSH

The NB slide bush is a linear motion mechanism utilizing the rotational motion of ball elements. Since linear motion is obtained using a simple mechanism, the slide bush can be used in a wide variety of applications, including transportation equipment, food processing equipment, and semiconductor manufacturing equipment.

## STRUCTURE AND ADVANTAGES

The outer cylinder of slide bush contains a ball retainer that is perfectly designed to control the circulation of ball elements, resulting in smooth linear motion.

### Compact Machanism

The NB slide bush uses a round shaft for the guiding axis, resulting in space-saving, which allows for compact designs.

### A Wide Variety of Shapes and Installation Methods

The NB slide bush is available in various types, standard, clearance-adjustable, open, flange, etc., for a various applications.

### Selection According to Environment

NB slide bushes are available in standard and anti-corrosion types. Available options include steel-retainer suitable for use in harsh environments and resin retainer for low acoustic, low-cost requirement. Other options can be specified according to the application requirements.

### Compatibility

The NB slide bush is fully compatible with a variety of shaft types.

### Doublelip-Seal

Doublelip-seals reduce the grease leakage, keeping the same function as UU seals which prevent the foreign particles from entering the bush. (see page C-7)

### Low Friction

The raceway surface is precision ground. Since the contact surface between the ball elements and the raceway surface is minimized, the NB slide bush provides low friction compared to other linear motion mechanisms.

### GM Series

The GM slide bush makes efficient use of resin sub-parts making it possible to achieve an overall weight reduction of 30～50% compared with the SM slide bush. The ball return section is made of resin material, which serves for low noise operation. Also, cost-effectiveness expands the use of slide bush in many applications.

### Block Type Series

Block type series is a unit of NB slide bush and a block type housing. A variety of block types are available such as precision-machined blocks, resin-made blocks, and cost-effective units, each contributes to higher accuracy, light-weight, and low-cost and design-time saving, respectively.

### FIT Series

FIT series is a combination of NB slide bush and precision-machined shaft. The best-fit between slide bush and shaft achieves a smooth, high-accuracy performance meeting the customer requirements. (see page F-24)

Figure C-1 Basic Structure of NB Slide Bush (SM, KB, SW)

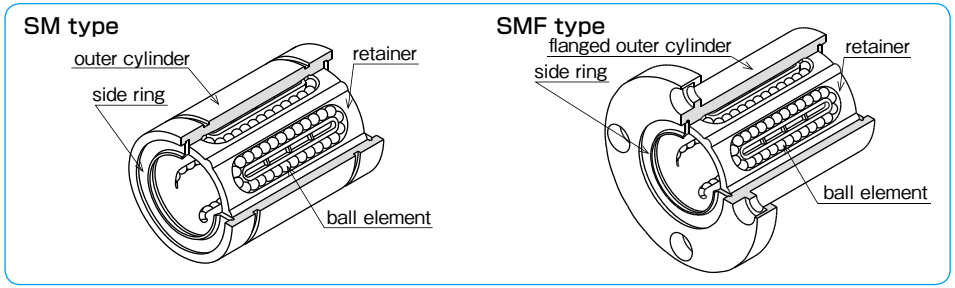
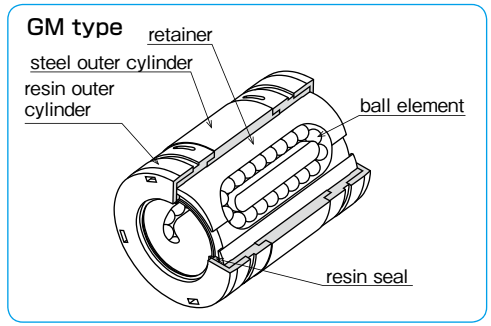







Figure C-2 Basic Structure of NB Slide Bush (GM)




## TYPES

Table C-1 Type (1)

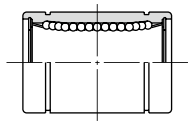
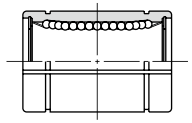
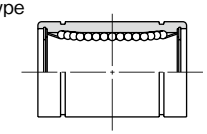
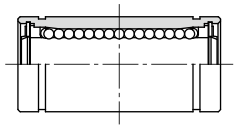
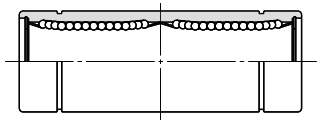
| type | | standard | anti-corrosion | page |
|---|---|---|---|---|
| standard type |  | **SM** | **SMS** | C- 14 |
| | | **KB** | **KBS** | C- 68 |
| | | **SW** | **SWS** | C- 88 |
| clearance-adjustable (AJ) type |  | **SM-AJ** | **SMS-AJ** | C- 16 |
| | | **KB-AJ** | **KBS-AJ** | C- 70 |
| | | **SW-AJ** | **SWS-AJ** | C- 90 |
| open (OP) type |  | **SM-OP** | **SMS-OP** | C- 18 |
| | | **KB-OP** | **KBS-OP** | C- 72 |
| | | **SW-OP** | **SWS-OP** | C- 92 |
| long type |  | **SM-G-L** | – | C- 20 |
| double-wide type |  | **SM-W** | **SMS-W** | C- 22 |
| | | **KB-W** | **KBS-W** | C- 74 |
| | | **SW-W** | **SWS-W** | C- 94 |

Table C-2 Type (2)

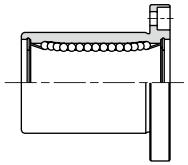
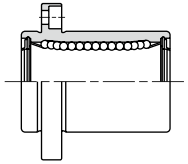
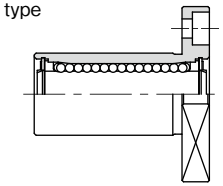
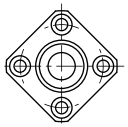
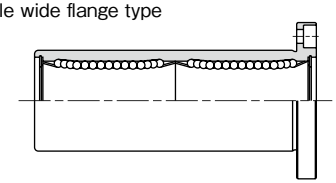
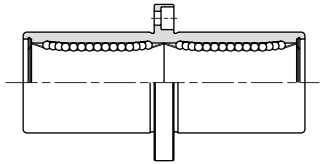
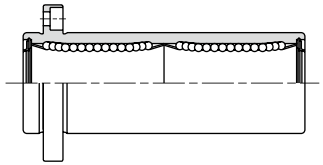
| type | | standard | anti-corrosion | page |
|---|---|---|---|---|
| flange type  |  | **SMF** | **SMSF** | C- 24 |
| | | **KBF** | **KBSF** | C- 76 |
| | | **SWF** | **SWSF** | C- 96 |
| |  | **SMK** | **SMSK** | C- 26 |
| | | **KBK** | **KBSK** | C- 78 |
| | | **SWK** | **SWSK** | C- 98 |
| |  | **SMT** | **SMST** | C- 28 |
| flange type with pilot end  |  | **SMF-E** | **SMSF-E** | C- 30 |
| |  | **SMK-E** | **SMSK-E** | C- 32 |
| |  | **SMT-E** | **SMST-E** | C- 34 |
| long flange type  |  | **SMK-G-L** | – | C- 36 |
| double wide flange type  |  | **SMF-W** | **SMSF-W** | C- 38 |
| | | **KBF-W** | **KBSF-W** | C- 80 |
| | | **SWF-W** | **SWSF-W** | C-100 |
| |  | **SMK-W** | **SMSK-W** | C- 40 |
| | | **KBK-W** | **KBSK-W** | C- 82 |
| | | **SWK-W** | **SWSK-W** | C-102 |
| |  | **SMT-W** | **SMST-W** | C- 42 |
| center mount flange type  |  | **SMFC** | **SMSFC** | C- 44 |
| | | **KBFC** | **KBSFC** | C- 84 |
| |  | **SMKC** | **SMSKC** | C- 46 |
| | | **KBKC** | **KBSKC** | C- 86 |
| |  | **SMTC** | **SMSTC** | C- 48 |
| double-wide pilot end flange type  |  | **SMF-W-E** | **SMSF-W-E** | C- 50 |
| |  | **SMK-W-E** | **SMSK-W-E** | C- 52 |
| |  | **SMT-W-E** | **SMST-W-E** | C- 54 |

Table C-3 Type (3)

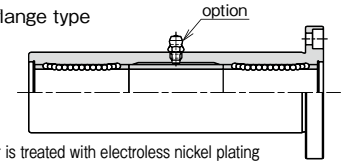
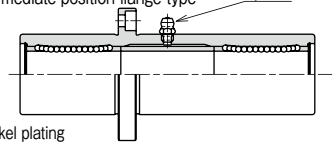
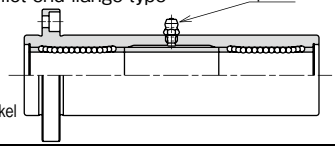
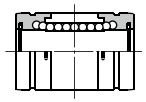
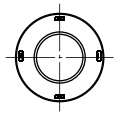
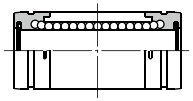
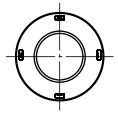
| type | | standard | anti-corrosion | page |
|---|---|---|---|---|
| triple wide flange type  ※ Outer cylinder is treated with electroless nickel plating |  | **TRF** | – | C- 56 |
| |  | **TRK** | – | C- 58 |
| triple-wide intermediate position flange type  ※ Outer cylinder is treated with electroless nickel plating |  | **TRFC** | – | C- 60 |
| |  | **TRKC** | – | C- 62 |
| triple-wide pilot end flange type  ※ Outer cylinder is treated with electroless nickel plating |  | **TRF-E** | – | C- 64 |
| |  | **TRK-E** | – | C- 66 |

Table C-4 Type (4) GM Series

| type | | standard | page |
|---|---|---|---|
| GM/GW single type  |  | **GM** | C- 104 |
| | | **GW** | C-106 |
| GM double-wide type  |  | **GM-W** | C-105 |

## BLOCK SERIES

### SMA・AK・SMB・SWA Type
This type is the most commonly used standard type. The housing is made of aluminum alloy. The wide (W) type is also available for SMA and AK types.

### SMJ ・ SWJ Type
Clearance-adjustment is achieved by creating a slit on the SMA/SWA type housing. Less clearance between block and shaft results in higher positioning accuracy by tightening the adjustment screw.

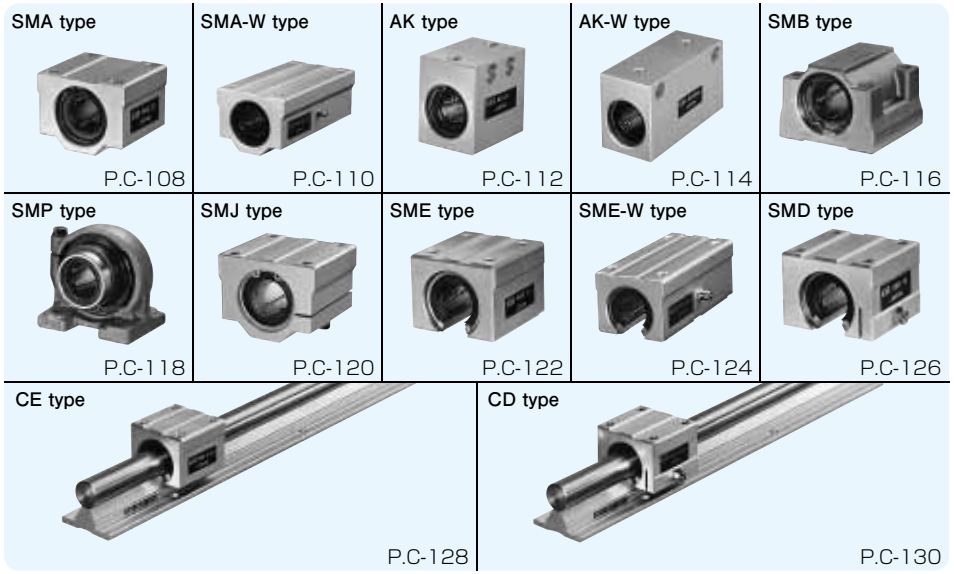
### RBW Type
The housing is made of ABS resin for light-weight and low-cost. Inside is an inch sized bush of a resin retainer type with seals.

### SMP Type
The housing has a self-aligning feature. This feature will absorb inaccuracy of the installation base so that a smooth movement is expected.

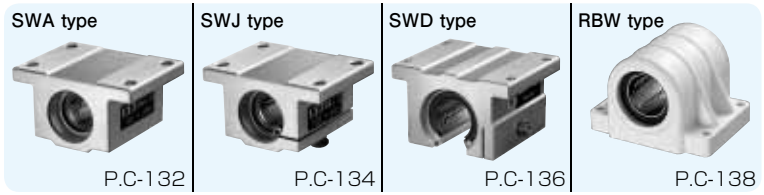
### SME・SMD・SWD Type
Open type housing allows a support from below so that a deflection of the shaft is minimized for high loading or long-stroke applications. The wide(W) type is also available for SME type.

### CE・CD Type
This type is a unit of block(s), shaft, and support rail that contributes to a total cost reduction. The maximum length is 2,000mm for the support rail and for the shaft the maximum length is 4,500mm.

Metric Series




Inch Series




## SPECIFICATIONS

### Series
The NB slide bush is available in three primary dimensional series, each with different dimensions and tolerances depending on the location of use. Please select the series that is most appropriate for your location.

Table C-5 Series and Use Location

| series | | location | | | |
|---|---|---|---|---|---|
| | | Japan | Asia | Europe | North America |
| metric | SM | ◎ | ◎ | ○ | ○ |
| | GM | | | | |
| | KB | ○ | ○ | ◎ | ○ |
| inch | SW | ○ | ○ | ○ | ◎ |

◎ generally used ○ rarely used

### Allowable Load
NB slide bushes are categorized into three functional types depending on the number and location of retainers: single, double, and triple. Table C-6 shows load ratings and static moment in comparison. The single type uses only one retainer, so when a moment load is to be applied, the double or triple type is recommended.

Table C-6 Load Comparison

| type | basic dynamic load rating | basic static load rating | allowable static moment |
|---|---|---|---|
| single | 1 | 1 | 1 |
| long | 1.3 | 1.8 | approx. 4 |
| GM-W | 1.6 | 2 | approx. 4 |
| SM double | 1.6 | 2 | approx. 6 |
| triple | 1.6 | 2 | approx.21 |

※ The single type is designated as "1" for comparison purposes.

### Material
The outer cylinder of standard type is made of bearing steel and the outer cylinder of anti-corrosion type is made of Martensitic stainless steel. The retainer is available in steel (stainless steel for anti-corrosion), and resin for low acoustic operation. The steel retainer is made of one plate (seamless type).

Table C-7 Operating Environment Temperature

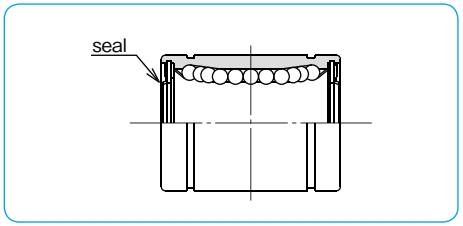
| material | | temperature range |
|---|---|---|
| outer cylinder | retainer | |
| steel | steel | −20℃～110℃ |
| | resin | −20℃～ 80℃ |
| stainless | steel | −20℃～140℃* |
| | resin | −20℃～ 80℃ |

* If a seal is used in the stainless steel slide bush, the temperature is up to 120℃. Please contact NB if a temperature range exceeds 140℃.

### Seal
The seals prevent dust from entering the slide bush in order to retain the motion accuracy, resulting in a long life time. The UU type is a standard option that has seals on both sides. The U type has a seal on one side only and is available for the standard, clearance adjustable, and open types. Nitril rubber, which has low wear and good sealing characteristics, is used as the seal material.
* Resin seals are used for GM and GW series.

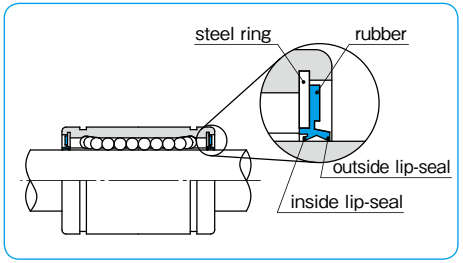
For a high temperature application, fluororubber seals are available on the SM series size 6 to 30. Please contact NB for details.

Figure C-3 Seal Profile




### Doublelip-Seal
A doublelip-seal is a combination of outside lip-seal and inside lip-seal. Outside lip-seal prevents foreign particles from entering the bush and inside lip-seal prevents grease from leaking out of the bush.
By the doublelip-seal, the seal resistance shall be increased by some margin. Applicable Part Number: SM(S) 6 to 30, TRF 6 to 30.
Please refer to the dimension table for seal option.

Figure C-4 Doublelip-Seal



## LIFE CALCULATION

Since ball elements are used as the rolling element in the NB slide bush, the following equation is used to calculate the travel life.

$$L=\left(\frac{f_H \cdot f_T \cdot f_C}{f_W} \cdot \frac{C}{P}\right)^3 \cdot 50$$

L: rated life (km) $f_H$: hardness coefficient
$f_T$: temperature coefficient $f_C$: contact coefficient
$f_W$: applied load coefficient C: basic dynamic load rating (N)
P: applied load (N)
*Refer to page Eng-5 for the coefficients.

If the stroke distance and number of strokes per unit time are constant, the life time is calculated using the following equation.

$$L_h=\frac{L \cdot 10^3}{2 \cdot \ell_S \cdot n_1 \cdot 60}$$

$L_h$: life time (hr) $\ell_S$: stroke length (m)
L: rated life (km) $n_1$: number of cycles per minute (cpm)

### LOAD RATING FOR OPEN TYPE SLIDE BUSH

For the open type slide bush an opening is provided to allow the shaft to be supported from underneath. In case a load is constantly applied in the direction of the opening (for example, being used with a vertical shaft or an overhang loading is applied), the load rating decreases due to less number of loaded rows of ball elements (Table C-8). Therefore, the load rating must be calibrated at the time of design based on the direction of the loading.

Table C-8 Direction of Load and Basic Static Load Rating

| | | | | |
|---|---|---|---|---|
| part number | SM10G～16G-OP<br>KB10G～16G-OP<br>SW 8G～10G-OP<br>SME (D) 10G～16G<br>CE (D) 16 | SM20 (G) -OP<br>KB20 (G) -OP<br>SW12 (G) -OP<br>SME (D) 20<br>CE (D) 20 | SM25 (G) ～100-OP<br>KB25 (G) ～80-OP<br>SW16 (G) ～64-OP<br>SME25～50<br>SMD25～30<br>CE (D) 25～30 | SM120,150-OP |
| loading from above | Load P | Load P | Load P | Load P |
| | C | C | C | C |
| loading from below | Load P | Load P | Load P | Load P |
| | 0.64C | 0.54C | 0.57C | 0.35C |

※ Excluding all the 3-row steel retainer types. Please contact NB in case of 3-row steel retainer.

## MOUNTING

Examples of Mounting methods are shown in Figures C-5 ～8.

Figure C-5 Standard Type

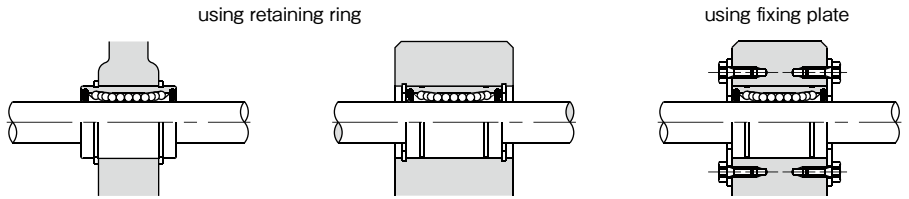



Figure C-6 Clearance Adjustable Type

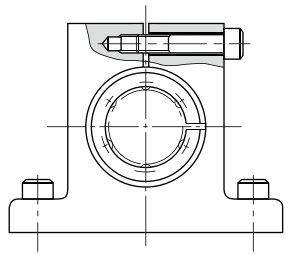


Figure C-7 Open Type

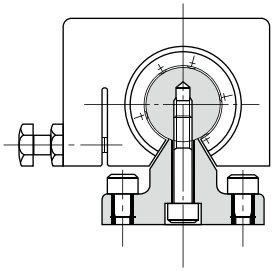
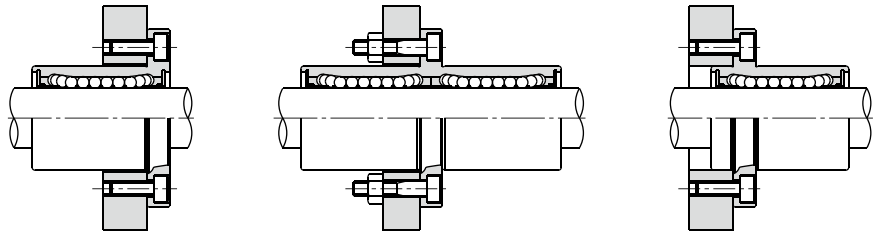


Figure C-8 Flange Type



## Fit

The normal clearance fit listed in Table C-9 is generally selected as a shaft outer diameter tolerance for the NB slide bush. The transition fit is selected for a higher accuracy by reducing clearance between slide bush and shaft. Matching bush and shaft (FIT series) is also available for customer's specified clearance. Please be cautious not to apply excess preloading with clearance adjustable and open types. Please keep preloading within the maximum radial clearance listed in the dimension table. The flange-type bush is generally inserted into an installation bore, which is slightly larger than the outer cylinder. However, if the outer cylinder is used as the pilot, H7 tolerance is recommended for housing.
The recommended clearances for the flange type are listed in Table C-10.

Table C-9 Recommended Fit

| series | accuracy grade | shaft | | housing | |
|---|---|---|---|---|---|
| | | clearance fit | transition fit | clearance fit | transition fit |
| SM | high | g6 | h6 | H7 | J7 |
| | precision(P) | g5 | h5 | H6 | J6 |
| SM-G-L | high | g6 | — | H7 | — |
| SM-W | high | g6 | — | H7 | — |
| KB | high | h6 | j6 | H7 | J7 |
| KB-W | high | h6 | — | H7 | — |
| SW | high | g6 | h6 | H7 | J7 |
| | precision(P) | g5 | h5 | H6 | J6 |
| SW-W | high | g6 | — | H7 | — |
| GM | high | g6 | h6 | H7 | — |
| GM-W | high | g6 | — | H7 | — |

Table C-10 Recommended Fit (Flange Type)

| series | shaft | |
|---|---|---|
| | clearance fit | transition fit |
| SMF | g6 | h6 |
| SMK-G-L | g6 | — |
| SMF-W | g6 | — |
| TRF | g6 | — |
| KBF | h6 | j6 |
| KBF-W | h6 | — |
| SWF | g6 | h6 |
| SWF-W | g6 | — |

## Notes on Shaft Selection:

In order to ensure a high accuracy motion of the bush, it is essential to select a high quality shaft.
In selecting a shaft, please take note of:
Hardness: 58HRC or more (refer to hardness coefficient on page Eng-5) recommended
Surface Roughness: less than Ra0.4 recommended

## Notes on Installation

When inserting a slide bush into a housing, carefully insert it by using a jig to apply a uniform pushing force at the end of the outer cylinder, as illustrated in Figure C-9. Motion performance may be diminished if an excessive force is applied to the resin portion of the outer cylinder, the side-ring, or the seal.
Ensure that all burrs are removed from the shaft and carefully install the bush by aligning it with the center of the bore. Excessive force may drop out the ball elements during insertion.
When two or more shafts are used, the parallelism of the shafts will greatly affect the motion characteristics and life of the slide bush. Please check the parallelism by moving the slide bush back and forth the length of stroke to check for freedom of movement before final fixing of the shaft.
Please refer to page F-3 for shaft specifications.

## GM Standard Type

Please avoid a tension load when retaining rings are used for installation.

Figure C-9 Insertion of Slide Bush

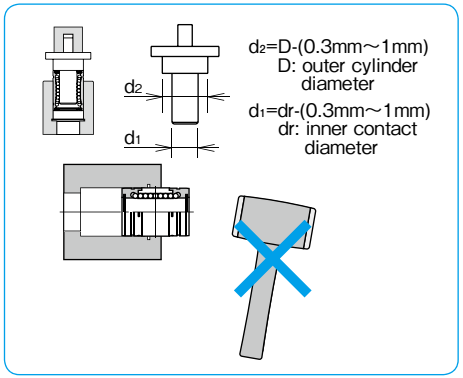
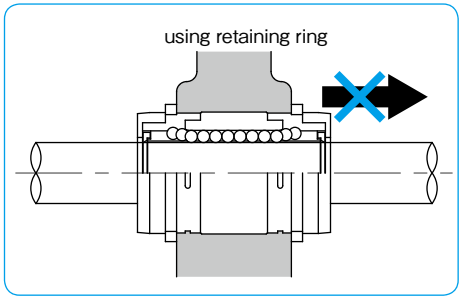



Figure C-10 Installation of GM Standard Type





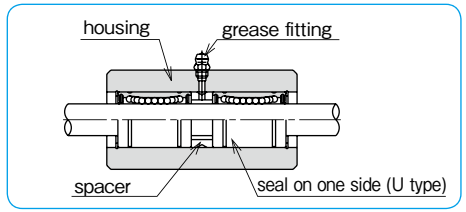

# LUBRICATION

It is important to lubricate the slide bush for an accurate operation and for a long life. Anti-rust oil is applied to NB slide bush prior to shipment. The NB selected anti-rust oil has a little effect on the lubricant, however, please apply lubricant after cleaning the slide bush by, for example, kerosene, etc.

## Grease Lubricant

Prior to usage, please apply grease, then re-lubricate periodically according to the operating conditions. (Lithium soap-based grease is recommended.) Re-lubrication can be done by directly applying grease inside the ball bush or by using a grease fitting as Figure C-11 shows.
A special low dust generating grease is optional for clean room application, please refer to page Eng-39.

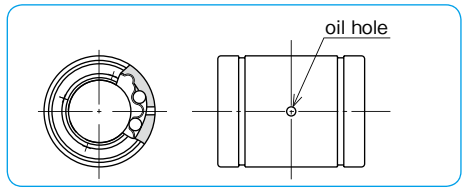
Figure C-11 Grease Fitting




## Oil Lubricant

Prior to usage, please apply oil directly to the shaft surface or by using an oil hole as Figure C-12 shows. Turbine oil (ISO standard VG32-68) is recommended.
Oil holes can be machined (see Figure C-12) in the center portion of the outer cylinder. Please contact NB for oil hole specification.

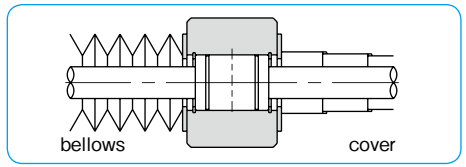
Figure C-12 Oil Hole -Specification-




# DUST PREVENTION

A smooth ball circulation is hindered by dust or foreign particles inside the slide bush. Seals on both sides is a standard option for the NB slide bush, however, in a harsh environment it is necessary to attach bellows or protective covers.

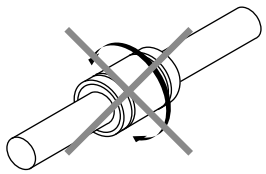
Figure C-13 Example of Dust Prevention



## NOTES ON HANDLING

The NB slide bush is a precision component, please handle with care to maintain its high motion accuracy.
The slide bush is designed for linear motion, so that for applications in which a combination of linear and rotational motion is a requirement, let us recommend Stroke Bush, Slide Rotary Bush, or Rotary Ball Spline.

Figure C-14 Direction of Motion



## OTHER SPECIFICATIONS

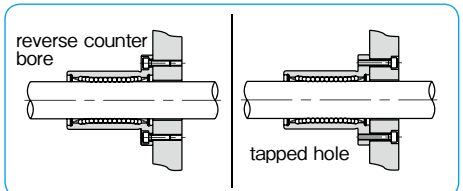
●Flange Type Slide Bush with Surface-Treatment
The following surface treatments are available as standard option:

| | |
|---|---|
| SK | electroless nickel plating |
| LF | low temperature black chrome treatment with fluoride coating |
| SB | black oxide (excluding anti-corrosion type) |
| SC | industrial chrome plating |

* Please contact NB for the thickness of coating and the resulting outer diameter tolerance.

●Special Specifications
Please contact NB for more information on surface treatment, oil hole (Figure C-12), flange mounting hole (Figure C-15), etc.

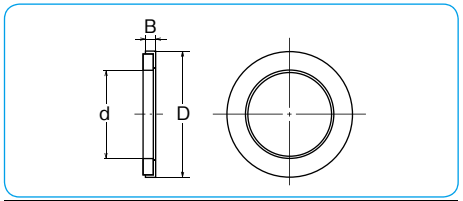
Figure C-15 Examples of Special Installation Hole




## FELT SEAL

A felt seal FLM strengthens lubrication characteristics and extends re-lubrication period of the NB slide bush.

Figure C-16 Felt Seal

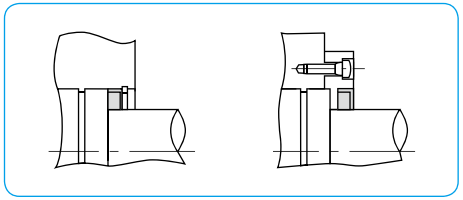



| part number | major dimensions(mm) d | D | B | applicable slide bush |
|---|---|---|---|---|
| FLM 6 | 6 | 12 | 2 | SM 6／GM 6 |
| FLM 8 | 8 | 15 | 2 | SM 8／GM 8 |
| FLM 10 | 10 | 19 | 3 | SM 10／GM10 |
| FLM 12 | 12 | 21 | 3 | SM 12／GM12 |
| FLM 13 | 13 | 23 | 3 | SM 13／GM13 |
| FLM 16 | 16 | 28 | 4 | SM 16／GM16 |
| FLM 20 | 20 | 32 | 4 | SM 20／GM20 |
| FLM 25 | 25 | 40 | 5 | SM 25／GM25 |
| FLM 30 | 30 | 45 | 5 | SM 30／GM30 |
| FLM 35 | 35 | 52 | 5 | SM 35 |
| FLM 40 | 40 | 60 | 5 | SM 40 |
| FLM 50 | 50 | 80 | 10 | SM 50 |
| FLM 60 | 60 | 90 | 10 | SM 60 |
| FLM 80 | 80 | 120 | 10 | SM 80 |
| FLM100 | 100 | 150 | 10 | SM100 |

### Felt Seal Installation

The felt seal does not work as a retaining ring. Figure C-17 shows how to install the felt seal.

Figure C-17 Example of Felt Seal Installation



## ACCURACY

The accuracy of CE/CD-type support rails are measured as shown in Figure C-18.

Figure C-18 Accuracy Measurement

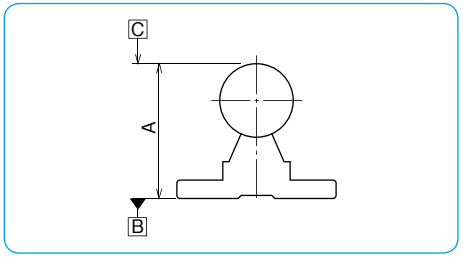
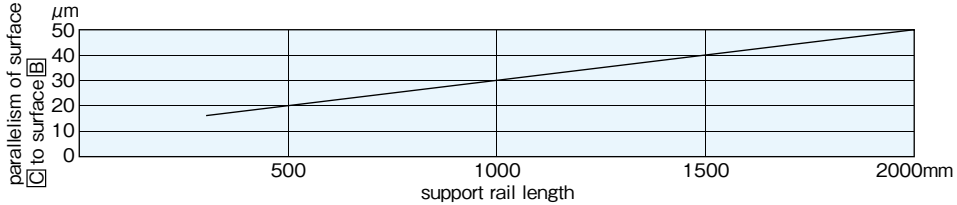



Figure C-19 Accuracy of CE/CD-type Support Rails




## NOTES ON USAGE OF BLOCK SERIES

### Reference Surface

The NB slide units have a reference surface as shown in Figure C-20. Accuracy is achieved by simply pushing the reference surface against the shoulder of the installation surface. (Excluding RBW and SMP types)

### Clearance Adjustment

On the clearance adjustment type please avoid excessive preloading. In the same manner please do not apply excessive torque when tightening the screws.

### Mounting of RBW Type

RBW type has a resin housing. Table C-11 shows proper torque values.

### Recommended Fit

For clearance fit please use a shaft with g6 tolerance and for transition fit a shaft with h6 tolerance. (Excluding adjustable-clearance and open types)

### Special Installation Case of SMJ Type

Special mouting holes will be required for installations such as Figure C-21 shows. Please contact NB for special requirements.

Figure C-20 Reference Surface

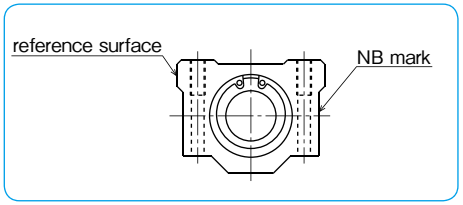
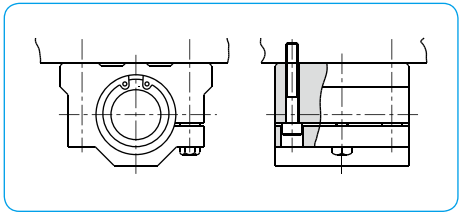



Table C-11 Recommended Torque for RBW Type

| part number | mounting screw | torque N・m |
|---|---|---|
| RBW8 | #6 | 1.3 |
| RBW10,12 | #8 | 1.9 |
| RBW16 | #10 | 5.2 |

Figure C-21 Special Installation of SMJ Type



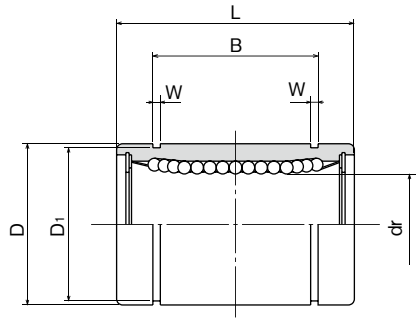
# SM TYPE
## – Standard Type –

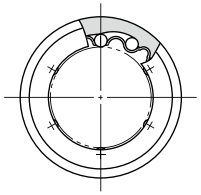
### part number structure

example **SMS 25 G UU-P**

- specification
  **SM**: standard
  **SMS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
  **Z**: doublelip-seal on one side
  **ZZ**: doublelip-seals on both sides
- accuracy grade
  **blank**: high
  **P**: precision

Doublelip-seal is available for size 6 to 30.



| part number | | | | number of ball circuits | dr | | | major dimensions D | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | tolerance μm | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | precision | high | mm | tolerance μm |
| SM 3 | SM 3G | SMS 3 | SMS 3G | 4 | 3 | 0 / −5 | 0 / −8 | 7 | 0 / −9 |
| SM 4 | SM 4G | SMS 4 | SMS 4G | 4 | 4 | | | 8 | |
| SM 5 | SM 5G | SMS 5 | SMS 5G | 4 | 5 | | | 10 | |
| SM 6 | SM 6G | SMS 6 | SMS 6G | 4 | 6 | 0 / −6 | 0 / −9 | 12 | 0 / −11 |
| SM 8s | SM 8sG | SMS 8s | SMS 8sG | 4 | 8 | | | 15 | |
| SM 8 | SM 8G | SMS 8 | SMS 8G | 4 | 8 | | | 15 | |
| SM 10 | SM10G | SMS10 | SMS10G | 4 | 10 | | | 19 | 0 / −13 |
| SM 12 | SM12G | SMS12 | SMS12G | 4 | 12 | | | 21 | |
| SM 13 | SM13G | SMS13 | SMS13G | 4 | 13 | | | 23 | |
| SM 16 | SM16G | SMS16 | SMS16G | 4 | 16 | | | 28 | |
| SM 20 | SM20G | SMS20 | SMS20G | 5 | 20 | 0 / −7 | 0 / −10 | 32 | 0 / −16 |
| SM 25 | SM25G | SMS25 | SMS25G | 6 | 25 | | | 40 | |
| SM 30 | SM30G | SMS30 | SMS30G | 6 | 30 | | | 45 | |
| SM 35 | SM35G | SMS35 | SMS35G | 6 | 35 | 0 / −8 | 0 / −12 | 52 | 0 / −19 |
| SM 40 | SM40G | SMS40 | SMS40G | 6 | 40 | | | 60 | |
| SM 50 | SM50G | SMS50 | SMS50G | 6 | 50 | | | 80 | |
| SM 60 | SM60G | SMS60 | SMS60G | 6 | 60 | 0 / −9 | 0 / −15 | 90 | 0 / −22 |
| SM 80 | SM80G | SMS80 | SMS80G | 6 | 80 | | | 120 | |
| SM100 | – | – | – | 6 | 100 | 0 / −10 | 0 / −20 | 150 | 0 / −25 |
| SM120 | – | – | – | 8 | 120 | | | 180 | |
| SM150 | – | – | – | 8 | 150 | 0/−13 | 0/−25 | 210 | 0/−29 |

| L | | B | | W | D1 | eccentricity | | radial clearance | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | tolerance | | tolerance | | | precision | high | (maximum) | dynamic C | static Co | | |
| mm | mm | mm | mm | mm | mm | μm | μm | μm | N | N | g | mm |
| 10 | 0 / −0.12 | – | – | – | – | 4 | 8 | −3 | 69 | 105 | 1.4 | 3 |
| 12 | | – | – | – | – | | | | 88 | 127 | 2.0 | 4 |
| 15 | | 10.2 | 0 / −0.2 | 1.1 | 9.6 | | | | 167 | 206 | 4.0 | 5 |
| 19 | 0 / −0.2 | 13.5 | | 1.1 | 11.5 | 8 | 12 | | 206 | 265 | 8.5 | 6 |
| 17 | | 11.5 | | 1.1 | 14.3 | | | | 176 | 216 | 11 | 8 |
| 24 | | 17.5 | | 1.1 | 14.3 | | | | 274 | 392 | 17 | 8 |
| 29 | | 22 | | 1.3 | 18 | | | −4 | 372 | 549 | 36 | 10 |
| 30 | | 23 | | 1.3 | 20 | | | | 510 | 784 | 42 | 12 |
| 32 | | 23 | | 1.3 | 22 | | | | 510 | 784 | 49 | 13 |
| 37 | | 26.5 | | 1.6 | 27 | | | −6 | 774 | 1,180 | 76 | 16 |
| 42 | | 30.5 | | 1.6 | 30.5 | 10 | 15 | | 882 | 1,370 | 100 | 20 |
| 59 | 0 / −0.3 | 41 | 0 / −0.3 | 1.85 | 38 | | | | 980 | 1,570 | 240 | 25 |
| 64 | | 44.5 | | 1.85 | 43 | | | −8 | 1,570 | 2,740 | 270 | 30 |
| 70 | | 49.5 | | 2.1 | 49 | 12 | 20 | | 1,670 | 3,140 | 425 | 35 |
| 80 | | 60.5 | | 2.1 | 57 | | | −10 | 2,160 | 4,020 | 654 | 40 |
| 100 | | 74 | | 2.6 | 76.5 | | | −13 | 3,820 | 7,940 | 1,700 | 50 |
| 110 | | 85 | | 3.15 | 86.5 | 17 | 25 | | 4,700 | 10,000 | 2,000 | 60 |
| 140 | 0 / −0.4 | 105.5 | 0 / −0.4 | 4.15 | 116 | | | −20 | 7,350 | 16,000 | 4,520 | 80 |
| 175 | | 125.5 | | 4.15 | 145 | 20 | 30 | | 14,100 | 34,800 | 8,600 | 100 |
| 200 | | 158.6 | | 4.15 | 175 | | | −25 | 16,400 | 40,000 | 15,000 | 120 |
| 240 | | 170.6 | | 5.15 | 204 | 25 | 40 | | 21,100 | 54,300 | 20,250 | 150 |

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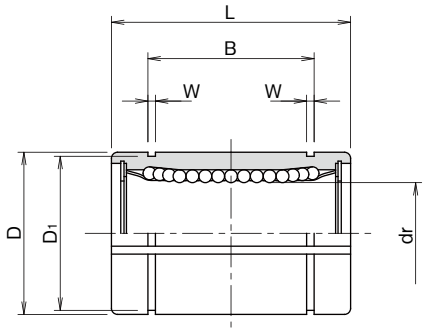
# SM-AJ TYPE

## – Clearance Adjustable Type –

### part number structure

example **SMS 25 G UU - AJ**

- **SMS 25 G UU - AJ**: clearance-adjustable
- **SMS**: specification — **SM**: standard; **SMS**: anti-corrosion
- **25**: inner contact diameter (dr)
- **G**: retainer material — **blank**: standard/steel, anti-corrosion/stainless steel; **G**: resin
- **UU**: seal — **blank**: without seal; **U**: seal on one side; **UU**: seals on both sides




| part number | | | | number of ball circuits | major dimensions | | | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance* μm | mm | tolerance* μm |
| – | SM 6G-AJ | – | SMS 6G-AJ | 4 | 6 | 0 −9 | 12 | 0 −11 |
| – | SM 8sG-AJ | – | SMS 8sG-AJ | 4 | 8 | | 15 | |
| – | SM 8G-AJ | – | SMS 8G-AJ | 4 | 8 | | 15 | |
| – | SM10G-AJ | – | SMS10G-AJ | 4 | 10 | | 19 | 0 −13 |
| SM 12-AJ | SM12G-AJ | SMS12-AJ | SMS12G-AJ | 4 | 12 | | 21 | |
| SM 13-AJ | SM13G-AJ | SMS13-AJ | SMS13G-AJ | 4 | 13 | | 23 | |
| SM 16-AJ | SM16G-AJ | SMS16-AJ | SMS16G-AJ | 4 | 16 | | 28 | |
| SM 20-AJ | SM20G-AJ | SMS20-AJ | SMS20G-AJ | 5 | 20 | 0 −10 | 32 | 0 −16 |
| SM 25-AJ | SM25G-AJ | SMS25-AJ | SMS25G-AJ | 6 | 25 | | 40 | |
| SM 30-AJ | SM30G-AJ | SMS30-AJ | SMS30G-AJ | 6 | 30 | | 45 | |
| SM 35-AJ | SM35G-AJ | SMS35-AJ | SMS35G-AJ | 6 | 35 | 0 −12 | 52 | 0 −19 |
| SM 40-AJ | SM40G-AJ | SMS40-AJ | SMS40G-AJ | 6 | 40 | | 60 | |
| SM 50-AJ | SM50G-AJ | SMS50-AJ | SMS50G-AJ | 6 | 50 | | 80 | |
| SM 60-AJ | SM60G-AJ | SMS60-AJ | SMS60G-AJ | 6 | 60 | 0 −15 | 90 | 0 −22 |
| SM 80-AJ | SM80G-AJ | – | – | 6 | 80 | | 120 | |
| SM100-AJ | – | – | – | 6 | 100 | 0 −20 | 150 | 0 −25 |
| SM120-AJ | – | – | – | 8 | 120 | | 180 | |
| SM150-AJ | – | – | – | 8 | 150 | 0/−25 | 210 | 0/−29 |

* Accuracy is measured prior to machining clearance slit.

| L | | B | | W | D1 | h | eccentricity* | basic load rating dynamic C | basic load rating static Co | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | tolerance mm | mm | tolerance mm | mm | mm | mm | μm | N | N | g | mm |
| 19 | 0 −0.2 | 13.5 | 0 −0.2 | 1.1 | 11.5 | 1 | 12 | 206 | 265 | 7.5 | 6 |
| 17 | | 11.5 | | 1.1 | 14.3 | 1 | | 176 | 216 | 10 | 8 |
| 24 | | 17.5 | | 1.1 | 14.3 | 1 | | 274 | 392 | 14.7 | 8 |
| 29 | | 22 | | 1.3 | 18 | 1 | | 372 | 549 | 29 | 10 |
| 30 | | 23 | | 1.3 | 20 | 1.5 | | 510 | 784 | 41 | 12 |
| 32 | | 23 | | 1.3 | 22 | 1.5 | | 510 | 784 | 48 | 13 |
| 37 | | 26.5 | | 1.6 | 27 | 1.5 | | 774 | 1,180 | 75 | 16 |
| 42 | | 30.5 | | 1.6 | 30.5 | 1.5 | | 882 | 1,370 | 98 | 20 |
| 59 | 0 −0.3 | 41 | 0 −0.3 | 1.85 | 38 | 2 | 15 | 980 | 1,570 | 237 | 25 |
| 64 | | 44.5 | | 1.85 | 43 | 2.5 | | 1,570 | 2,740 | 262 | 30 |
| 70 | | 49.5 | | 2.1 | 49 | 2.5 | 20 | 1,670 | 3,140 | 420 | 35 |
| 80 | | 60.5 | | 2.1 | 57 | 3 | | 2,160 | 4,020 | 640 | 40 |
| 100 | | 74 | | 2.6 | 76.5 | 3 | | 3,820 | 7,940 | 1,680 | 50 |
| 110 | | 85 | | 3.15 | 86.5 | 3 | 25 | 4,700 | 10,000 | 1,980 | 60 |
| 140 | 0 −0.4 | 105.5 | 0 −0.4 | 4.15 | 116 | 3 | | 7,350 | 16,000 | 4,400 | 80 |
| 175 | | 125.5 | | 4.15 | 145 | 3 | 30 | 14,100 | 34,800 | 8,540 | 100 |
| 200 | | 158.6 | | 4.15 | 175 | 3 | | 16,400 | 40,000 | 14,900 | 120 |
| 240 | | 170.6 | | 5.15 | 204 | 3 | 40 | 21,100 | 54,300 | 20,150 | 150 |

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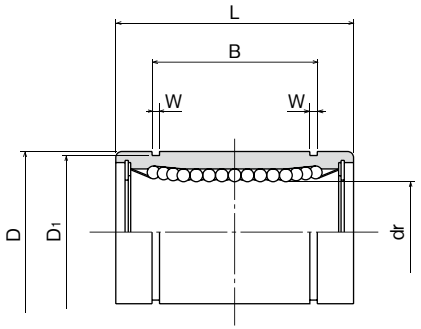
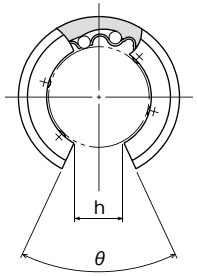
# SM-OP TYPE
## – Open Type –

### part number structure

example **SMS 25 G UU - OP**

- specification
  **SM**: standard
  **SMS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
- open type




| part number | | | | number of ball circuits | major dimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance* μm | mm | tolerance* μm |
| – | SM10G-OP | – | SMS10G-OP | 3 | 10 | 0 −9 | 19 | 0 −13 |
| SM 12-OP | SM12G-OP | SMS12-OP | SMS12G-OP | 3 | 12 | | 21 | |
| SM 13-OP | SM13G-OP | SMS13-OP | SMS13G-OP | 3 | 13 | | 23 | |
| SM 16-OP | SM16G-OP | SMS16-OP | SMS16G-OP | 3 | 16 | | 28 | |
| SM 20-OP | SM20G-OP | SMS20-OP | SMS20G-OP | 4 | 20 | 0 −10 | 32 | 0 −16 |
| SM 25-OP | SM25G-OP | SMS25-OP | SMS25G-OP | 5 | 25 | | 40 | |
| SM 30-OP | SM30G-OP | SMS30-OP | SMS30G-OP | 5 | 30 | | 45 | |
| SM 35-OP | SM35G-OP | SMS35-OP | SMS35G-OP | 5 | 35 | 0 −12 | 52 | 0 −19 |
| SM 40-OP | SM40G-OP | SMS40-OP | SMS40G-OP | 5 | 40 | | 60 | |
| SM 50-OP | SM50G-OP | SMS50-OP | SMS50G-OP | 5 | 50 | | 80 | |
| SM 60-OP | SM60G-OP | SMS60-OP | SMS60G-OP | 5 | 60 | 0 −15 | 90 | 0 −22 |
| SM 80-OP | SM80G-OP | – | – | 5 | 80 | | 120 | |
| SM100-OP | – | – | – | 5 | 100 | 0 −20 | 150 | 0 −25 |
| SM120-OP | – | – | – | 6 | 120 | | 180 | |
| SM150-OP | – | – | – | 6 | 150 | 0/−25 | 210 | 0/−29 |

* Accuracy is measured prior to machining open slit.

| L mm | L tolerance mm | B mm | B tolerance mm | W mm | D1 mm | h mm | θ | eccentricity* μm | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | 0 −0.2 | 22 | 0 −0.2 | 1.3 | 18 | 6.8 | 80° | 12 | 372 | 549 | 23 | 10 |
| 30 | | 23 | | 1.3 | 20 | 8 | 80° | | 510 | 784 | 32 | 12 |
| 32 | | 23 | | 1.3 | 22 | 9 | 80° | | 510 | 784 | 37 | 13 |
| 37 | | 26.5 | | 1.6 | 27 | 11 | 80° | | 774 | 1,180 | 58 | 16 |
| 42 | | 30.5 | | 1.6 | 30.5 | 11 | 60° | 15 | 882 | 1,370 | 79 | 20 |
| 59 | 0 −0.3 | 41 | 0 −0.3 | 1.85 | 38 | 12 | 50° | | 980 | 1,570 | 203 | 25 |
| 64 | | 44.5 | | 1.85 | 43 | 15 | 50° | | 1,570 | 2,740 | 228 | 30 |
| 70 | | 49.5 | | 2.1 | 49 | 17 | 50° | 20 | 1,670 | 3,140 | 355 | 35 |
| 80 | | 60.5 | | 2.1 | 57 | 20 | 50° | | 2,160 | 4,020 | 546 | 40 |
| 100 | | 74 | | 2.6 | 76.5 | 25 | 50° | | 3,820 | 7,940 | 1,420 | 50 |
| 110 | | 85 | | 3.15 | 86.5 | 30 | 50° | 25 | 4,700 | 10,000 | 1,650 | 60 |
| 140 | 0 −0.4 | 105.5 | 0 −0.4 | 4.15 | 116 | 40 | 50° | | 7,350 | 16,000 | 3,750 | 80 |
| 175 | | 125.5 | | 4.15 | 145 | 50 | 50° | 30 | 14,100 | 34,800 | 7,200 | 100 |
| 200 | | 158.6 | | 4.15 | 175 | 85 | 80° | | 16,400 | 40,000 | 11,600 | 120 |
| 240 | | 170.6 | | 5.15 | 204 | 105 | 80° | 40 | 21,100 | 54,300 | 15,700 | 150 |

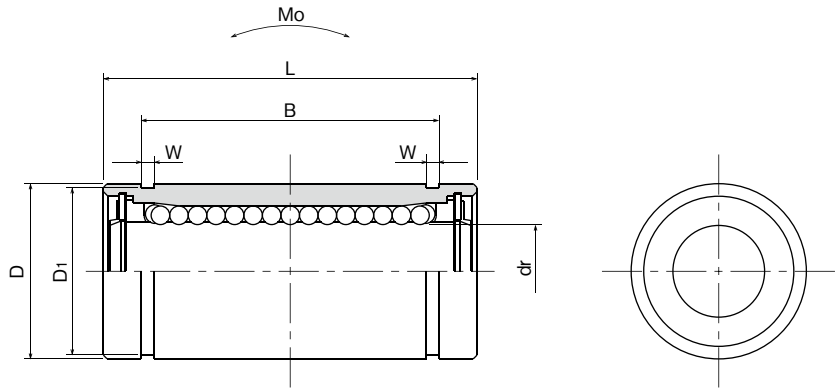
1N≒0.102kgf

# SM-G-L TYPE
— Long Type —

## part number structure

example SM 25 G - L UU

- SM type
- inner contact diameter (dr)
- resin retainer
- long type
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides




| part number* | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L mm | L tolerance mm | B mm | B tolerance mm |
|---|---|---|---|---|---|---|---|---|---|
| SM 6G-LUU | 4 | 6 | 0 −10 | 12 | 0 −13 | 26 | 0 −0.3 | 20.5 | 0 −0.2 |
| SM 8G-LUU | 4 | 8 | | 15 | | 32 | | 25.5 | |
| SM10G-LUU | 4 | 10 | | 19 | 0 −16 | 39 | | 32 | |
| SM12G-LUU | 4 | 12 | | 21 | | 41 | | 34 | |
| SM13G-LUU | 4 | 13 | | 23 | | 45 | | 36 | |
| SM16G-LUU | 4 | 16 | | 28 | | 53 | | 42 | |
| SM20G-LUU | 5 | 20 | 0 −12 | 32 | 0 −19 | 59 | | 47.5 | |
| SM25G-LUU | 6 | 25 | | 40 | | 83 | | 69 | 0 −0.3 |
| SM30G-LUU | 6 | 30 | | 45 | | 90 | | 75 | |

* Seals-on-both-sides is standard.

| W mm | D1 mm | eccentricity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|
| 1.1 | 11.5 | 15 | 262 | 476 | 1.15 | 10 | 6 |
| 1.1 | 14.3 | | 352 | 615 | 1.94 | 19 | 8 |
| 1.3 | 18 | | 493 | 1,005 | 3.98 | 38 | 10 |
| 1.3 | 20 | | 637 | 1,430 | 6.26 | 43 | 12 |
| 1.3 | 22 | | 682 | 1,560 | 7.68 | 62 | 13 |
| 1.6 | 27 | | 1,039 | 2,350 | 13.2 | 99 | 16 |
| 1.6 | 30.5 | 20 | 1,160 | 2,740 | 17.9 | 125 | 20 |
| 1.85 | 38 | | 1,300 | 2,960 | 27.2 | 315 | 25 |
| 1.85 | 43 | | 2,160 | 5,880 | 61.3 | 347 | 30 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SM-W TYPE
## – Double-Wide Type –

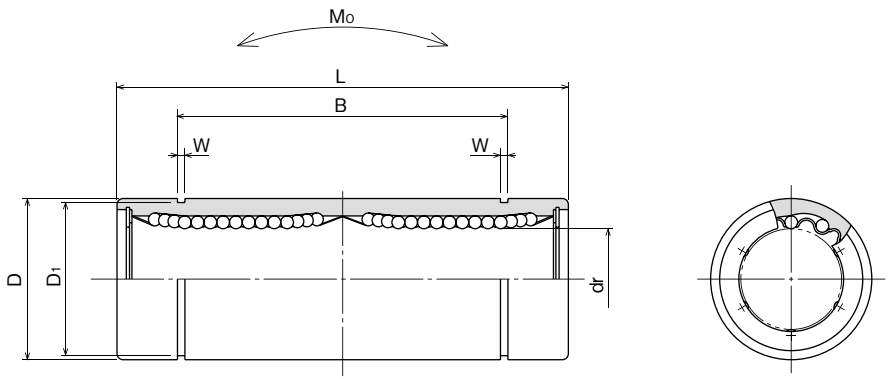
### part number structure

example SMS 25 G W UU

- specification
  **SM**: standard
  **SMS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- double-wide type

Doublelip-seal is available for size 6 to 30.

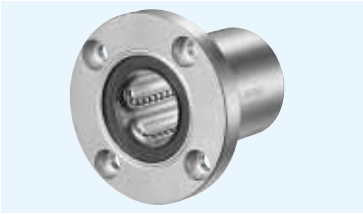
| part number | | | | number of ball circuits | major dimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm |
| SM 3W | SM 3GW | SMS 3W | SMS 3GW | 4 | 3 | 0 −10 | 7 | 0 −11 |
| SM 4W | SM 4GW | SMS 4W | SMS 4GW | 4 | 4 | | 8 | |
| SM 5W | SM 5GW | SMS 5W | SMS 5GW | 4 | 5 | | 10 | |
| SM 6W | SM 6GW | SMS 6W | SMS 6GW | 4 | 6 | | 12 | 0 −13 |
| SM 8W | SM 8GW | SMS 8W | SMS 8GW | 4 | 8 | | 15 | |
| SM10W | SM10GW | SMS10W | SMS10GW | 4 | 10 | | 19 | 0 −16 |
| SM12W | SM12GW | SMS12W | SMS12GW | 4 | 12 | | 21 | |
| SM13W | SM13GW | SMS13W | SMS13GW | 4 | 13 | | 23 | |
| SM16W | SM16GW | SMS16W | SMS16GW | 4 | 16 | | 28 | |
| SM20W | SM20GW | SMS20W | SMS20GW | 5 | 20 | 0 −12 | 32 | 0 −19 |
| SM25W | SM25GW | SMS25W | SMS25GW | 6 | 25 | | 40 | |
| SM30W | SM30GW | SMS30W | SMS30GW | 6 | 30 | | 45 | |
| SM35W | SM35GW | SMS35W | SMS35GW | 6 | 35 | 0 −15 | 52 | 0 −22 |
| SM40W | SM40GW | SMS40W | SMS40GW | 6 | 40 | | 60 | |
| SM50W | SM50GW | SMS50W | SMS50GW | 6 | 50 | | 80 | |
| SM60W | SM60GW | SMS60W | SMS60GW | 6 | 60 | 0/−20 | 90 | 0/−25 |




| L | | B | | W | D1 | eccentricity | basic load rating dynamic C | basic load rating static Co | allowable static moment Mo | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | tolerance mm | mm | tolerance mm | mm | mm | μm | N | N | N・m | g | mm |
| 19 | 0 −0.3 | – | – | – | – | 10 | 138 | 210 | 0.51 | 3.2 | 3 |
| 23 | | – | – | – | – | | 176 | 254 | 0.63 | 4.8 | 4 |
| 28 | | 20.4 | 0 −0.3 | 1.1 | 9.6 | | 265 | 412 | 1.38 | 11 | 5 |
| 35 | | 27 | | 1.1 | 11.5 | 15 | 323 | 530 | 2.18 | 16 | 6 |
| 45 | | 35 | | 1.1 | 14.3 | | 431 | 784 | 4.31 | 31 | 8 |
| 55 | | 44 | | 1.3 | 18 | | 588 | 1,100 | 7.24 | 62 | 10 |
| 57 | | 46 | | 1.3 | 20 | | 813 | 1,570 | 10.9 | 80 | 12 |
| 61 | | 46 | | 1.3 | 22 | | 813 | 1,570 | 11.6 | 90 | 13 |
| 70 | | 53 | | 1.6 | 27 | | 1,230 | 2,350 | 19.7 | 145 | 16 |
| 80 | | 61 | | 1.6 | 30.5 | 20 | 1,400 | 2,740 | 26.8 | 180 | 20 |
| 112 | 0 −0.4 | 82 | 0 −0.4 | 1.85 | 38 | | 1,560 | 3,140 | 43.4 | 440 | 25 |
| 123 | | 89 | | 1.85 | 43 | | 2,490 | 5,490 | 82.8 | 480 | 30 |
| 135 | | 99 | | 2.1 | 49 | 25 | 2,650 | 6,270 | 110 | 795 | 35 |
| 151 | | 121 | | 2.1 | 57 | | 3,430 | 8,040 | 147 | 1,170 | 40 |
| 192 | | 148 | | 2.6 | 76.5 | | 6,080 | 15,900 | 397 | 3,100 | 50 |
| 209 | | 170 | | 3.15 | 86.5 | 30 | 7,550 | 20,000 | 530 | 3,500 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMF TYPE
## – Round Flange Type –

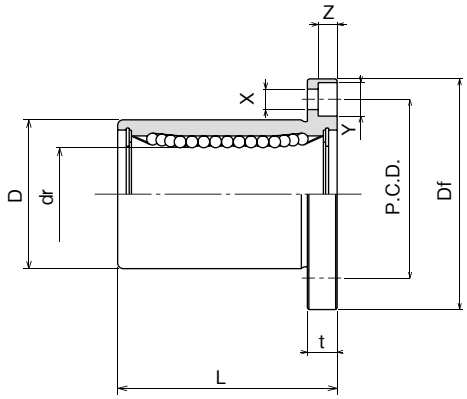


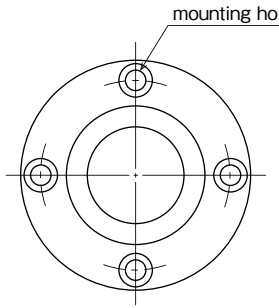
### part number structure

example **SMSF 25 G UU - SK**

- specification
  **SMF**: standard
  **SMSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.



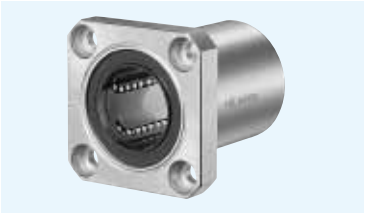




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMF 6 | SMF 6G | SMSF 6 | SMSF 6G | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMF 8s | SMF 8sG | SMSF 8s | SMSF 8sG | 4 | 8 | | 15 | | 17 |
| SMF 8 | SMF 8G | SMSF 8 | SMSF 8G | 4 | 8 | | 15 | | 24 |
| SMF 10 | SMF10G | SMSF10 | SMSF10G | 4 | 10 | | 19 | 0 −16 | 29 |
| SMF 12 | SMF12G | SMSF12 | SMSF12G | 4 | 12 | | 21 | | 30 |
| SMF 13 | SMF13G | SMSF13 | SMSF13G | 4 | 13 | | 23 | | 32 |
| SMF 16 | SMF16G | SMSF16 | SMSF16G | 4 | 16 | | 28 | | 37 |
| SMF 20 | SMF20G | SMSF20 | SMSF20G | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMF 25 | SMF25G | SMSF25 | SMSF25G | 6 | 25 | | 40 | | 59 |
| SMF 30 | SMF30G | SMSF30 | SMSF30G | 6 | 30 | | 45 | | 64 |
| SMF 35 | SMF35G | SMSF35 | SMSF35G | 6 | 35 | 0 −12 | 52 | 0 −22 | 70 |
| SMF 40 | SMF40G | SMSF40 | SMSF40G | 6 | 40 | | 60 | | 80 |
| SMF 50 | SMF50G | SMSF50 | SMSF50G | 6 | 50 | | 80 | | 100 |
| SMF 60 | SMF60G | SMSF60 | SMSF60G | 6 | 60 | 0 −15 | 90 | 0 −25 | 110 |
| SMF 80 | – | – | – | 6 | 80 | | 120 | | 140 |
| SMF100 | – | – | – | 6 | 100 | 0/−20 | 150 | 0/−29 | 175 |

| flange | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|
| Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | g | mm |
| 28 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 24 | 6 |
| 32 | 5 | 24 | 3.5×6×3.1 | | | 176 | 216 | 32 | 8 |
| 32 | 5 | 24 | 3.5×6×3.1 | | | 274 | 392 | 37 | 8 |
| 40 | 6 | 29 | 4.5×7.5×4.1 | | | 372 | 549 | 72 | 10 |
| 42 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 76 | 12 |
| 43 | 6 | 33 | 4.5×7.5×4.1 | | | 510 | 784 | 88 | 13 |
| 48 | 6 | 38 | 4.5×7.5×4.1 | | | 774 | 1,180 | 120 | 16 |
| 54 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 180 | 20 |
| 62 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 340 | 25 |
| 74 | 10 | 60 | 6.6×11×6.1 | | | 1,570 | 2,740 | 470 | 30 |
| 82 | 10 | 67 | 6.6×11×6.1 | 20 | 20 | 1,670 | 3,140 | 650 | 35 |
| 96 | 13 | 78 | 9×14×8.1 | | | 2,160 | 4,020 | 1,060 | 40 |
| 116 | 13 | 98 | 9×14×8.1 | | | 3,820 | 7,940 | 2,200 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | 25 | 25 | 4,700 | 10,000 | 3,000 | 60 |
| 164 | 18 | 142 | 11×17×11.1 | | | 7,350 | 16,000 | 5,800 | 80 |
| 200 | 20 | 175 | 14×20×13.1 | 30 | 30 | 14,100 | 34,800 | 10,600 | 100 |

1N≒0.102kgf

# SMK TYPE
## – Square Flange Type –

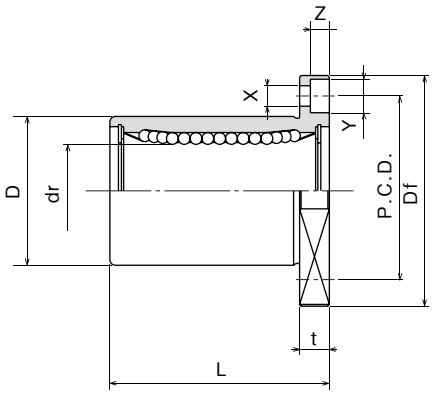


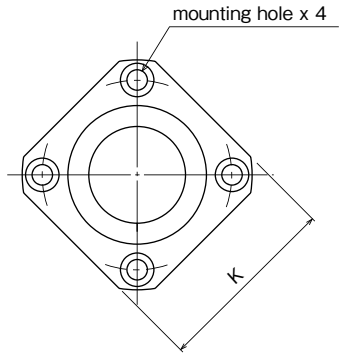
### part number structure

example **SMSK 25 G UU - SK**

- specification
  **SMK**: standard
  **SMSK**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.



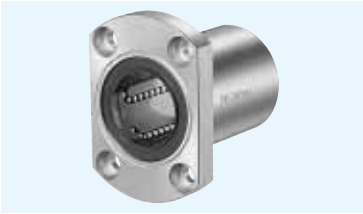

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMK 6 | SMK 6G | SMSK 6 | SMSK 6G | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMK 8s | SMK 8sG | SMSK 8s | SMSK 8sG | 4 | 8 | | 15 | | 17 |
| SMK 8 | SMK 8G | SMSK 8 | SMSK 8G | 4 | 8 | | 15 | | 24 |
| SMK 10 | SMK10G | SMSK10 | SMSK10G | 4 | 10 | | 19 | 0 −16 | 29 |
| SMK 12 | SMK12G | SMSK12 | SMSK12G | 4 | 12 | | 21 | | 30 |
| SMK 13 | SMK13G | SMSK13 | SMSK13G | 4 | 13 | | 23 | | 32 |
| SMK 16 | SMK16G | SMSK16 | SMSK16G | 4 | 16 | | 28 | | 37 |
| SMK 20 | SMK20G | SMSK20 | SMSK20G | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMK 25 | SMK25G | SMSK25 | SMSK25G | 6 | 25 | | 40 | | 59 |
| SMK 30 | SMK30G | SMSK30 | SMSK30G | 6 | 30 | | 45 | | 64 |
| SMK 35 | SMK35G | SMSK35 | SMSK35G | 6 | 35 | 0 −12 | 52 | 0 −22 | 70 |
| SMK 40 | SMK40G | SMSK40 | SMSK40G | 6 | 40 | | 60 | | 80 |
| SMK 50 | SMK50G | SMSK50 | SMSK50G | 6 | 50 | | 80 | | 100 |
| SMK 60 | SMK60G | SMSK60 | SMSK60G | 6 | 60 | 0 −15 | 90 | 0 −25 | 110 |
| SMK 80 | – | – | – | 6 | 80 | | 120 | | 140 |
| SMK100 | – | – | – | 6 | 100 | 0/−20 | 150 | 0/−29 | 175 |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | g | mm |
| 28 | 22 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 18 | 6 |
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 176 | 216 | 24 | 8 |
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 274 | 392 | 29 | 8 |
| 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | | | 372 | 549 | 52 | 10 |
| 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 57 | 12 |
| 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | | | 510 | 784 | 72 | 13 |
| 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | | | 774 | 1,180 | 104 | 16 |
| 54 | 42 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 145 | 20 |
| 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 300 | 25 |
| 74 | 58 | 10 | 60 | 6.6×11×6.1 | | | 1,570 | 2,740 | 375 | 30 |
| 82 | 64 | 10 | 67 | 6.6×11×6.1 | 20 | 20 | 1,670 | 3,140 | 560 | 35 |
| 96 | 75 | 13 | 78 | 9×14×8.1 | | | 2,160 | 4,020 | 880 | 40 |
| 116 | 92 | 13 | 98 | 9×14×8.1 | | | 3,820 | 7,940 | 2,000 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | 25 | 25 | 4,700 | 10,000 | 2,560 | 60 |
| 164 | 136 | 18 | 142 | 11×17×11.1 | | | 7,350 | 16,000 | 5,300 | 80 |
| 200 | 170 | 20 | 175 | 14×20×13.1 | 30 | 30 | 14,100 | 34,800 | 9,900 | 100 |

1N≒0.102kgf

# SMT TYPE

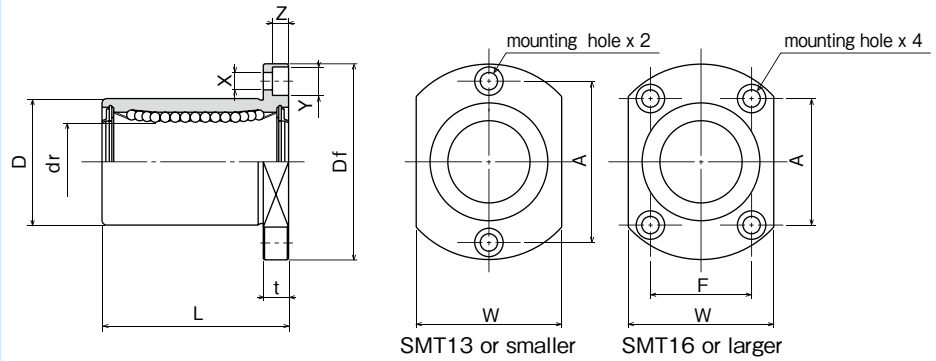
## – Two Side Cut Flange Type –



### part number structure

example **SMST 25 G UU - SK**

- specification
  **SMT**: standard
  **SMST**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number* standard steel retainer | part number* standard resin retainer | part number* anti-corrosion stainless retainer | part number* anti-corrosion resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|---|---|
| SMT 6UU | SMT 6GUU | SMST 6UU | SMST 6GUU | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMT 8UU | SMT 8GUU | SMST 8UU | SMST 8GUU | 4 | 8 | | 15 | | 24 |
| SMT10UU | SMT10GUU | SMST10UU | SMST10GUU | 4 | 10 | | 19 | 0 −16 | 29 |
| SMT12UU | SMT12GUU | SMST12UU | SMST12GUU | 4 | 12 | | 21 | | 30 |
| SMT13UU | SMT13GUU | SMST13UU | SMST13GUU | 4 | 13 | | 23 | | 32 |
| SMT16UU | SMT16GUU | SMST16UU | SMST16GUU | 4 | 16 | | 28 | | 37 |
| SMT20UU | SMT20GUU | SMST20UU | SMST20GUU | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMT25UU | SMT25GUU | SMST25UU | SMST25GUU | 6 | 25 | | 40 | | 59 |
| SMT30UU | SMT30GUU | SMST30UU | SMST30GUU | 6 | 30 | | 45 | | 64 |

* Seals-on-both-sides is standard.

| Df mm | W mm | t mm | flange A mm | flange F mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 21 | 6 |
| 32 | 21 | 5 | 24 | — | 3.5×6×3.1 | | | 274 | 392 | 33 | 8 |
| 40 | 25 | 6 | 29 | — | 4.5×7.5×4.1 | | | 372 | 549 | 64 | 10 |
| 42 | 27 | 6 | 32 | — | 4.5×7.5×4.1 | | | 510 | 784 | 68 | 12 |
| 43 | 29 | 6 | 33 | — | 4.5×7.5×4.1 | | | 510 | 784 | 81 | 13 |
| 48 | 34 | 6 | 31 | 22 | 4.5×7.5×4.1 | | | 774 | 1,180 | 112 | 16 |
| 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 167 | 20 |
| 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 980 | 1,570 | 325 | 25 |
| 74 | 51 | 10 | 49 | 35 | 6.6×11×6.1 | | | 1,570 | 2,740 | 388 | 30 |

1N≒0.102kgf

# SMF-E TYPE

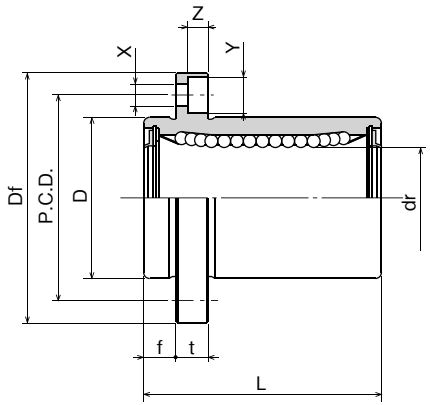
## — Round Flange Type with Pilot End —

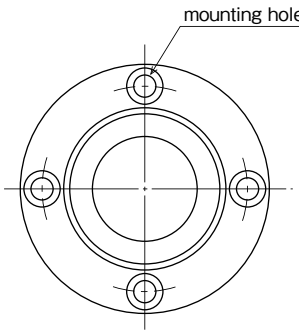
### part number structure

example **SMSF 25 G UU - E - SK**

- specification
  **SMF**: standard
  **SMSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number* | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMF 6UU-E | SMF 6GUU-E | SMSF 6UU-E | SMSF 6GUU-E | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMF 8UU-E | SMF 8GUU-E | SMSF 8UU-E | SMSF 8GUU-E | 4 | 8 | | 15 | | 24 |
| SMF10UU-E | SMF10GUU-E | SMSF10UU-E | SMSF10GUU-E | 4 | 10 | | 19 | 0 −16 | 29 |
| SMF12UU-E | SMF12GUU-E | SMSF12UU-E | SMSF12GUU-E | 4 | 12 | | 21 | | 30 |
| SMF13UU-E | SMF13GUU-E | SMSF13UU-E | SMSF13GUU-E | 4 | 13 | | 23 | | 32 |
| SMF16UU-E | SMF16GUU-E | SMSF16UU-E | SMSF16GUU-E | 4 | 16 | | 28 | | 37 |
| SMF20UU-E | SMF20GUU-E | SMSF20UU-E | SMSF20GUU-E | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMF25UU-E | SMF25GUU-E | SMSF25UU-E | SMSF25GUU-E | 6 | 25 | | 40 | | 59 |
| SMF30UU-E | SMF30GUU-E | SMSF30UU-E | SMSF30GUU-E | 6 | 30 | | 45 | | 64 |
| SMF35UU-E | SMF35GUU-E | — | — | 6 | 35 | 0 −12 | 52 | 0 −22 | 70 |
| SMF40UU-E | SMF40GUU-E | — | — | 6 | 40 | | 60 | | 80 |
| SMF50UU-E | SMF50GUU-E | — | — | 6 | 50 | | 80 | | 100 |
| SMF60UU-E | SMF60GUU-E | — | — | 6 | 60 | 0/−15 | 90 | 0/−25 | 110 |

* Seals-on-both-sides is standard.

| flange | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | g | mm |
| 5 | 28 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 24 | 6 |
| 5 | 32 | 5 | 24 | 3.5×6×3.1 | | | 274 | 392 | 37 | 8 |
| 6 | 40 | 6 | 29 | 4.5×7.5×4.1 | | | 372 | 549 | 72 | 10 |
| 6 | 42 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 76 | 12 |
| 6 | 43 | 6 | 33 | 4.5×7.5×4.1 | | | 510 | 784 | 88 | 13 |
| 6 | 48 | 6 | 38 | 4.5×7.5×4.1 | | | 774 | 1,180 | 120 | 16 |
| 8 | 54 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 180 | 20 |
| 8 | 62 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 340 | 25 |
| 10 | 74 | 10 | 60 | 6.6×11×6.1 | | | 1,570 | 2,740 | 470 | 30 |
| 10 | 82 | 10 | 67 | 6.6×11×6.1 | 20 | 20 | 1,670 | 3,140 | 650 | 35 |
| 13 | 96 | 13 | 78 | 9×14×8.1 | | | 2,160 | 4,020 | 1,060 | 40 |
| 13 | 116 | 13 | 98 | 9×14×8.1 | | | 3,820 | 7,940 | 2,200 | 50 |
| 18 | 134 | 18 | 112 | 11×17×11.1 | 25 | 25 | 4,700 | 10,000 | 3,000 | 60 |

1N≒0.102kgf

# SMK-E TYPE

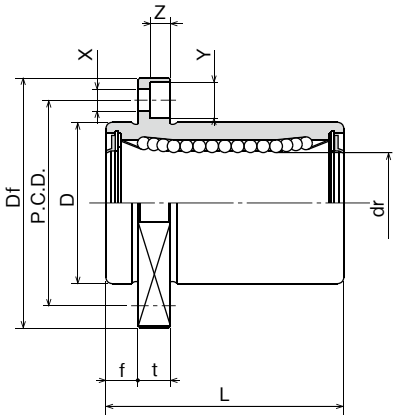
## – Square Flange Type with Pilot End –

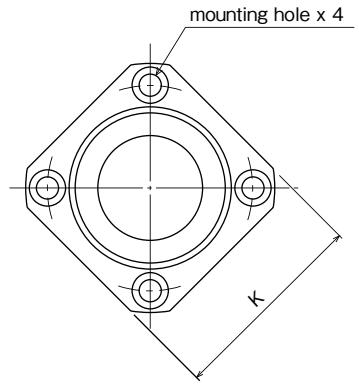
### part number structure

example **SMSK 25 G UU - E - SK**

- specification
  **SMK**: standard
  **SMSK**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number* | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMK 6UU-E | SMK 6GUU-E | SMSK 6UU-E | SMSK 6GUU-E | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMK 8UU-E | SMK 8GUU-E | SMSK 8UU-E | SMSK 8GUU-E | 4 | 8 | | 15 | | 24 |
| SMK10UU-E | SMK10GUU-E | SMSK10UU-E | SMSK10GUU-E | 4 | 10 | | 19 | 0 −16 | 29 |
| SMK12UU-E | SMK12GUU-E | SMSK12UU-E | SMSK12GUU-E | 4 | 12 | | 21 | | 30 |
| SMK13UU-E | SMK13GUU-E | SMSK13UU-E | SMSK13GUU-E | 4 | 13 | | 23 | | 32 |
| SMK16UU-E | SMK16GUU-E | SMSK16UU-E | SMSK16GUU-E | 4 | 16 | | 28 | | 37 |
| SMK20UU-E | SMK20GUU-E | SMSK20UU-E | SMSK20GUU-E | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMK25UU-E | SMK25GUU-E | SMSK25UU-E | SMSK25GUU-E | 6 | 25 | | 40 | | 59 |
| SMK30UU-E | SMK30GUU-E | SMSK30UU-E | SMSK30GUU-E | 6 | 30 | | 45 | | 64 |
| SMK35UU-E | SMK35GUU-E | – | – | 6 | 35 | 0 −12 | 52 | 0 −22 | 70 |
| SMK40UU-E | SMK40GUU-E | – | – | 6 | 40 | | 60 | | 80 |
| SMK50UU-E | SMK50GUU-E | – | – | 6 | 50 | | 80 | | 100 |
| SMK60UU-E | SMK60GUU-E | – | – | 6 | 60 | 0/−15 | 90 | 0/−25 | 110 |

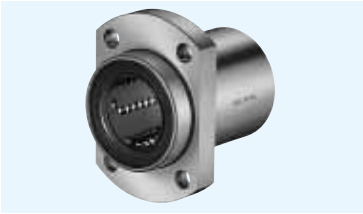
* Seals-on-both-sides is standard.

| flange | | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| f | Df | K | t | P.C.D. | X×Y×Z | | | dynamic C | static Co | | |
| mm | mm | mm | mm | mm | mm | μm | μm | N | N | g | mm |
| 5 | 28 | 22 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 18 | 6 |
| 5 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 274 | 392 | 29 | 8 |
| 6 | 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | | | 372 | 549 | 52 | 10 |
| 6 | 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 57 | 12 |
| 6 | 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | | | 510 | 784 | 72 | 13 |
| 6 | 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | | | 774 | 1,180 | 104 | 16 |
| 8 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 145 | 20 |
| 8 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 300 | 25 |
| 10 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | | | 1,570 | 2,740 | 375 | 30 |
| 10 | 82 | 64 | 10 | 67 | 6.6×11×6.1 | 20 | 20 | 1,670 | 3,140 | 560 | 35 |
| 13 | 96 | 75 | 13 | 78 | 9×14×8.1 | | | 2,160 | 4,020 | 880 | 40 |
| 13 | 116 | 92 | 13 | 98 | 9×14×8.1 | | | 3,820 | 7,940 | 2,000 | 50 |
| 18 | 134 | 106 | 18 | 112 | 11×17×11.1 | 25 | 25 | 4,700 | 10,000 | 2,560 | 60 |

1N≒0.102kgf

# SMT-E TYPE

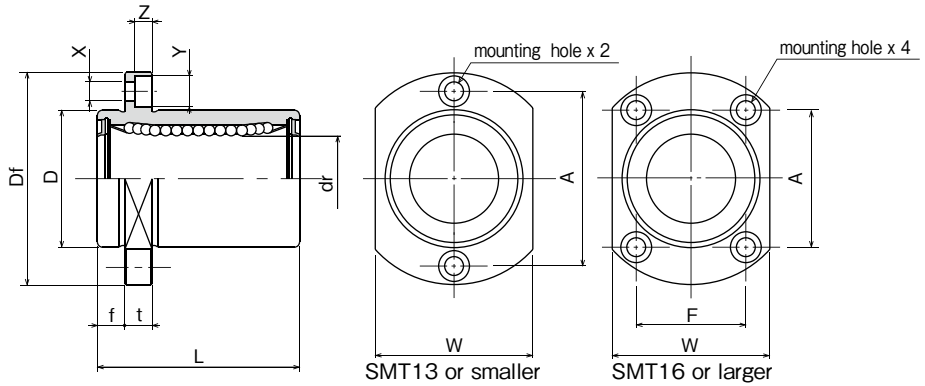
## – Two Side Cut Pilot End Flange Type –



### part number structure

example **SMST 25 G UU - E - SK**

- specification
  **SMT**: standard
  **SMST**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number* | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMT 6UU-E | SMT 6GUU-E | SMST 6UU-E | SMST 6GUU-E | 4 | 6 | 0 −9 | 12 | 0 −13 | 19 |
| SMT 8UU-E | SMT 8GUU-E | SMST 8UU-E | SMST 8GUU-E | 4 | 8 | | 15 | | 24 |
| SMT10UU-E | SMT10GUU-E | SMST10UU-E | SMST10GUU-E | 4 | 10 | | 19 | 0 −16 | 29 |
| SMT12UU-E | SMT12GUU-E | SMST12UU-E | SMST12GUU-E | 4 | 12 | | 21 | | 30 |
| SMT13UU-E | SMT13GUU-E | SMST13UU-E | SMST13GUU-E | 4 | 13 | | 23 | | 32 |
| SMT16UU-E | SMT16GUU-E | SMST16UU-E | SMST16GUU-E | 4 | 16 | | 28 | | 37 |
| SMT20UU-E | SMT20GUU-E | SMST20UU-E | SMST20GUU-E | 5 | 20 | 0 −10 | 32 | 0 −19 | 42 |
| SMT25UU-E | SMT25GUU-E | SMST25UU-E | SMST25GUU-E | 6 | 25 | | 40 | | 59 |
| SMT30UU-E | SMT30GUU-E | SMST30UU-E | SMST30GUU-E | 6 | 30 | | 45 | | 64 |

* Seals-on-both-sides is standard.

| flange | | | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | W mm | t mm | A mm | F mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | g | mm |
| 5 | 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 21 | 6 |
| 5 | 32 | 21 | 5 | 24 | — | 3.5×6×3.1 | | | 274 | 392 | 33 | 8 |
| 6 | 40 | 25 | 6 | 29 | — | 4.5×7.5×4.1 | | | 372 | 549 | 64 | 10 |
| 6 | 42 | 27 | 6 | 32 | — | 4.5×7.5×4.1 | | | 510 | 784 | 68 | 12 |
| 6 | 43 | 29 | 6 | 33 | — | 4.5×7.5×4.1 | | | 510 | 784 | 81 | 13 |
| 6 | 48 | 34 | 6 | 31 | 22 | 4.5×7.5×4.1 | | | 774 | 1,180 | 112 | 16 |
| 8 | 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 15 | 15 | 882 | 1,370 | 167 | 20 |
| 8 | 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 980 | 1,570 | 325 | 25 |
| 10 | 74 | 51 | 10 | 49 | 35 | 6.6×11×6.1 | | | 1,570 | 2,740 | 388 | 30 |

1N≒0.102kgf

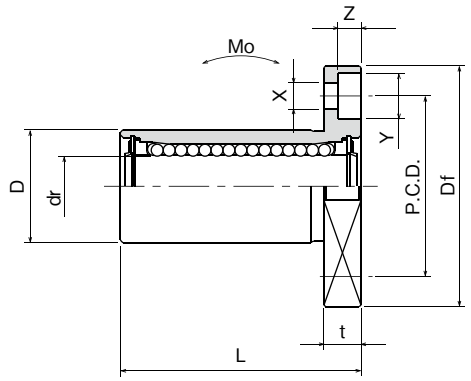
# SMK-G-L TYPE

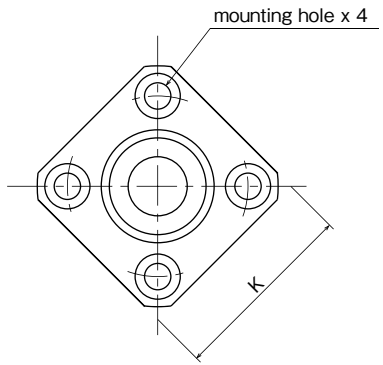
## – Square Flange Long type –

### part number structure

example SMK 25 G - L UU - SK

- SMK type
- inner contact diameter (dr)
- resin retainer
- long type
- seal
  - **UU**: seals on both sides
  - **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  - **blank**: no surface treatment
  - **SK**: electroless nickel plating
  - **LF**: low temperature black chrome treatment with fluoride coating
  - **SB**: black oxide (not available on anti-corrosion type)
  - **SC**: industrial chrome plating




| part number* | number of ball circuits | major dimensions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | dr | | D | | L | Df | K | flange | |
| | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm | mm | mm | t mm | P.C.D. mm |
| SMK 6G-LUU | 4 | 6 | 0 −10 | 12 | 0 −13 | 26 | 28 | 22 | 5 | 20 |
| SMK 8G-LUU | 4 | 8 | | 15 | | 32 | 32 | 25 | 5 | 24 |
| SMK10G-LUU | 4 | 10 | | 19 | 0 −16 | 39 | 40 | 30 | 6 | 29 |
| SMK12G-LUU | 4 | 12 | | 21 | | 41 | 42 | 32 | 6 | 32 |
| SMK13G-LUU | 4 | 13 | | 23 | | 45 | 43 | 34 | 6 | 33 |
| SMK16G-LUU | 4 | 16 | | 28 | | 53 | 48 | 37 | 6 | 38 |
| SMK20G-LUU | 5 | 20 | 0 −12 | 32 | 0 −19 | 59 | 54 | 42 | 8 | 43 |
| SMK25G-LUU | 6 | 25 | | 40 | | 83 | 62 | 50 | 8 | 51 |
| SMK30G-LUU | 6 | 30 | | 45 | | 90 | 74 | 58 | 10 | 60 |

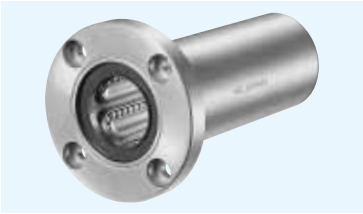
* Seals-on-both-sides is standard.

| X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|
| 3.5×6×3.1 | 15 | 15 | 262 | 476 | 1.15 | 20 | 6 |
| 3.5×6×3.1 | | | 352 | 615 | 1.94 | 32 | 8 |
| 4.5×7.5×4.1 | | | 493 | 1,005 | 3.98 | 59 | 10 |
| 4.5×7.5×4.1 | | | 637 | 1,430 | 6.26 | 67 | 12 |
| 4.5×7.5×4.1 | | | 682 | 1,560 | 7.68 | 88 | 13 |
| 4.5×7.5×4.1 | | | 1,039 | 2,350 | 13.2 | 125 | 16 |
| 5.5×9×5.1 | 20 | 20 | 1,160 | 2,740 | 17.9 | 170 | 20 |
| 5.5×9×5.1 | | | 1,300 | 2,960 | 27.2 | 380 | 25 |
| 6.6×11×6.1 | | | 2,160 | 5,880 | 61.3 | 460 | 30 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMF-W TYPE

## — Round Flange Double-Wide Type —

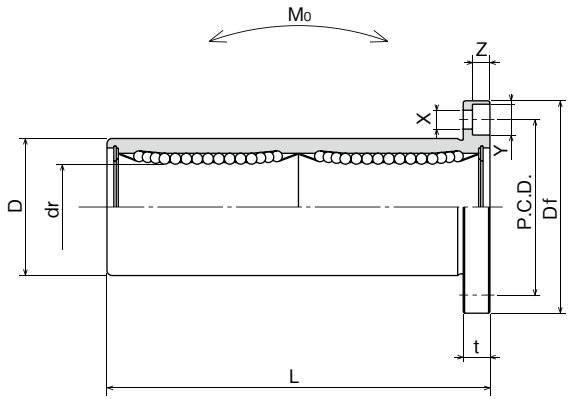


### part number structure

example **SMSF 25 G W UU - SK**

- specification
  **SMF**: standard
  **SMSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.



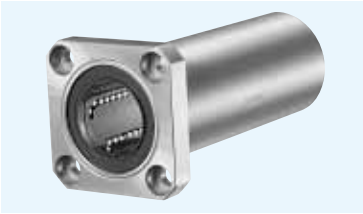

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMF 6W | SMF 6GW | SMSF 6W | SMSF 6GW | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMF 8W | SMF 8GW | SMSF 8W | SMSF 8GW | 4 | 8 | | 15 | | 45 |
| SMF10W | SMF10GW | SMSF10W | SMSF10GW | 4 | 10 | | 19 | 0 −16 | 55 |
| SMF12W | SMF12GW | SMSF12W | SMSF12GW | 4 | 12 | | 21 | | 57 |
| SMF13W | SMF13GW | SMSF13W | SMSF13GW | 4 | 13 | | 23 | | 61 |
| SMF16W | SMF16GW | SMSF16W | SMSF16GW | 4 | 16 | | 28 | | 70 |
| SMF20W | SMF20GW | SMSF20W | SMSF20GW | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMF25W | SMF25GW | SMSF25W | SMSF25GW | 6 | 25 | | 40 | | 112 |
| SMF30W | SMF30GW | SMSF30W | SMSF30GW | 6 | 30 | | 45 | | 123 |
| SMF35W | SMF35GW | SMSF35W | SMSF35GW | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMF40W | SMF40GW | SMSF40W | SMSF40GW | 6 | 40 | | 60 | | 151 |
| SMF50W | SMF50GW | SMSF50W | SMSF50GW | 6 | 50 | | 80 | | 192 |
| SMF60W | SMF60GW | SMSF60W | SMSF60GW | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

| flange | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | M0 N・m | g | mm |
| 28 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 31 | 6 |
| 32 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 51 | 8 |
| 40 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 98 | 10 |
| 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 110 | 12 |
| 43 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 130 | 13 |
| 48 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 190 | 16 |
| 54 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 260 | 20 |
| 62 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 540 | 25 |
| 74 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 680 | 30 |
| 82 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 96 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,570 | 40 |
| 116 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,600 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,500 | 60 |

1N≒0.102kgf　1N・m≒0.102kgf・m

# SMK-W TYPE

## – Square Flange Double-Wide Type –

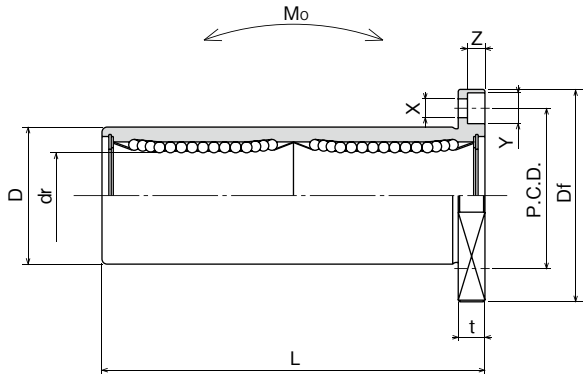


### part number structure

example **SMSK 25 G W UU - SK**

- specification
  **SMK**: standard
  **SMSK**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.



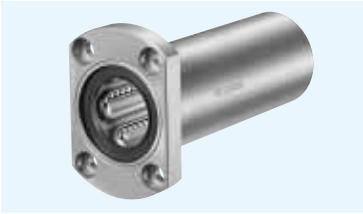

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMK 6W | SMK 6GW | SMSK 6W | SMSK 6GW | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMK 8W | SMK 8GW | SMSK 8W | SMSK 8GW | 4 | 8 | | 15 | | 45 |
| SMK10W | SMK10GW | SMSK10W | SMSK10GW | 4 | 10 | | 19 | 0 −16 | 55 |
| SMK12W | SMK12GW | SMSK12W | SMSK12GW | 4 | 12 | | 21 | | 57 |
| SMK13W | SMK13GW | SMSK13W | SMSK13GW | 4 | 13 | | 23 | | 61 |
| SMK16W | SMK16GW | SMSK16W | SMSK16GW | 4 | 16 | | 28 | | 70 |
| SMK20W | SMK20GW | SMSK20W | SMSK20GW | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMK25W | SMK25GW | SMSK25W | SMSK25GW | 6 | 25 | | 40 | | 112 |
| SMK30W | SMK30GW | SMSK30W | SMSK30GW | 6 | 30 | | 45 | | 123 |
| SMK35W | SMK35GW | SMSK35W | SMSK35GW | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMK40W | SMK40GW | SMSK40W | SMSK40GW | 6 | 40 | | 60 | | 151 |
| SMK50W | SMK50GW | SMSK50W | SMSK50GW | 6 | 50 | | 80 | | 192 |
| SMK60W | SMK60GW | SMSK60W | SMSK60GW | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 28 | 22 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 25 | 6 |
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 43 | 8 |
| 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 78 | 10 |
| 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 90 | 12 |
| 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 108 | 13 |
| 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 165 | 16 |
| 54 | 42 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 225 | 20 |
| 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 500 | 25 |
| 74 | 58 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 590 | 30 |
| 82 | 64 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 930 | 35 |
| 96 | 75 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,380 | 40 |
| 116 | 92 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,400 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,060 | 60 |

1N≒0.102kgf　1N・m≒0.102kgf・m

# SMT-W TYPE

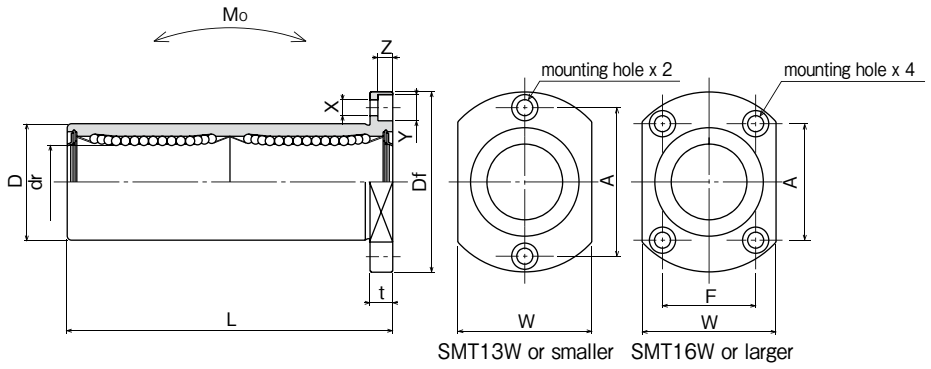
## – Two Side Cut Double-Wide Flange Type –



### part number structure

example **SMST 25 G W UU - SK**

- specification
  **SMT**: standard
  **SMST**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **UU**: sals on both sides
  **ZZ**: doublelip-seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number* | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMT 6WUU | SMT 6GWUU | SMST 6WUU | SMST 6GWUU | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMT 8WUU | SMT 8GWUU | SMST 8WUU | SMST 8GWUU | 4 | 8 | | 15 | | 45 |
| SMT10WUU | SMT10GWUU | SMST10WUU | SMST10GWUU | 4 | 10 | | 19 | 0 −16 | 55 |
| SMT12WUU | SMT12GWUU | SMST12WUU | SMST12GWUU | 4 | 12 | | 21 | | 57 |
| SMT13WUU | SMT13GWUU | SMST13WUU | SMST13GWUU | 4 | 13 | | 23 | | 61 |
| SMT16WUU | SMT16GWUU | SMST16WUU | SMST16GWUU | 4 | 16 | | 28 | | 70 |
| SMT20WUU | SMT20GWUU | SMST20WUU | SMST20GWUU | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMT25WUU | SMT25GWUU | SMST25WUU | SMST25GWUU | 6 | 25 | | 40 | | 112 |
| SMT30WUU | SMT30GWUU | SMST30WUU | SMST30GWUU | 6 | 30 | | 45 | | 123 |

* Seals-on-both-sides is standard.

| flange | | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | W mm | t mm | A mm | F mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 28 | 6 |
| 32 | 21 | 5 | 24 | — | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 47 | 8 |
| 40 | 25 | 6 | 29 | — | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 90 | 10 |
| 42 | 27 | 6 | 32 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 102 | 12 |
| 43 | 29 | 6 | 33 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 123 | 13 |
| 48 | 34 | 6 | 31 | 22 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 182 | 16 |
| 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 247 | 20 |
| 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 525 | 25 |
| 74 | 51 | 10 | 49 | 35 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 645 | 30 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMFC TYPE

## — Center Mount Round Flange Type —

### part number structure

example **SMSFC 25 G UU - SK**

specification
**SMFC**: standard
**SMSFC**: anti-corrosion

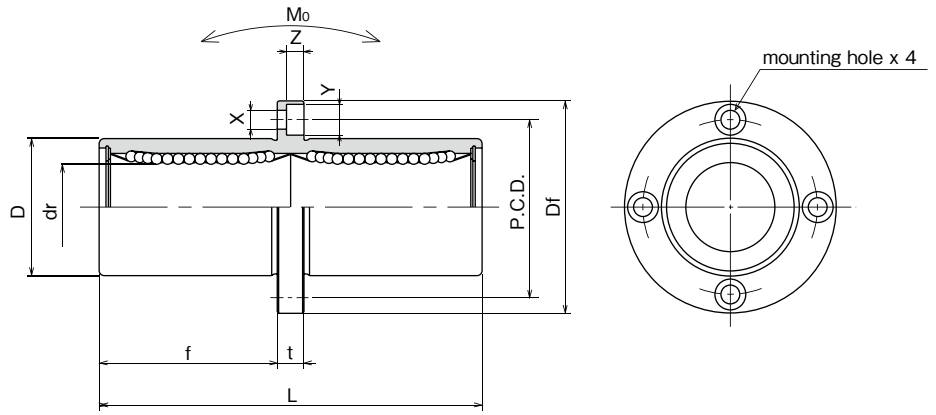
inner contact diameter (dr)

retainer material
**blank**: standard/steel
anti-corrosion/stainless steel
**G**: resin

seal
**blank**: without seal
**UU**: seals on both sides
**ZZ**: doublelip-seals on both sides

outer cylinder
surface treatment
**blank**: no surface treatment
**SK**: electroless nickel plating
**LF**: low temperature black chrome treatment with fluoride coating
**SB**: black oxide (not available on anti-corrosion type)
**SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMFC 6 | SMFC 6G | SMSFC 6 | SMSFC 6G | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMFC 8 | SMFC 8G | SMSFC 8 | SMSFC 8G | 4 | 8 | | 15 | | 45 |
| SMFC10 | SMFC10G | SMSFC10 | SMSFC10G | 4 | 10 | | 19 | 0 −16 | 55 |
| SMFC12 | SMFC12G | SMSFC12 | SMSFC12G | 4 | 12 | | 21 | | 57 |
| SMFC13 | SMFC13G | SMSFC13 | SMSFC13G | 4 | 13 | | 23 | | 61 |
| SMFC16 | SMFC16G | SMSFC16 | SMSFC16G | 4 | 16 | | 28 | | 70 |
| SMFC20 | SMFC20G | SMSFC20 | SMSFC20G | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMFC25 | SMFC25G | SMSFC25 | SMSFC25G | 6 | 25 | | 40 | | 112 |
| SMFC30 | SMFC30G | SMSFC30 | SMSFC30G | 6 | 30 | | 45 | | 123 |
| SMFC35 | SMFC35G | SMSFC35 | SMSFC35G | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMFC40 | SMFC40G | SMSFC40 | SMSFC40G | 6 | 40 | | 60 | | 151 |
| SMFC50 | SMFC50G | SMSFC50 | SMSFC50G | 6 | 50 | | 80 | | 192 |
| SMFC60 | SMFC60G | SMSFC60 | SMSFC60G | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 15 | 28 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 31 | 6 |
| 20 | 32 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 51 | 8 |
| 24.5 | 40 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 98 | 10 |
| 25.5 | 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 110 | 12 |
| 27.5 | 43 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 130 | 13 |
| 32 | 48 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 190 | 16 |
| 36 | 54 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 260 | 20 |
| 52 | 62 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 540 | 25 |
| 56.5 | 74 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 680 | 30 |
| 62.5 | 82 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 69 | 96 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,570 | 40 |
| 89.5 | 116 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,600 | 50 |
| 95.5 | 134 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,500 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMKC TYPE

## — Center Mount Square Flange Type —

### part number structure

example **SMSKC 25 G UU - SK**

specification
**SMKC**: standard
**SMSKC**: anti-corrosion

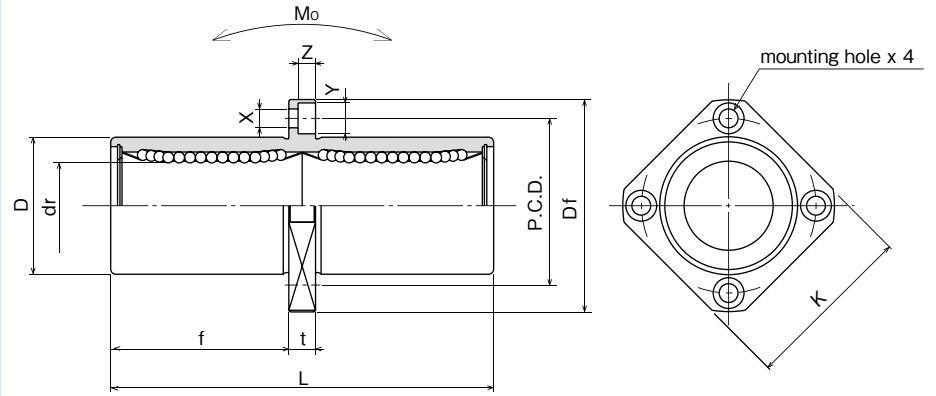
inner contact diameter (dr)

retainer material
**blank**: standard/steel
anti-corrosion/stainless steel
**G**: resin

seal
**blank**: without seal
**UU**: seals on both sides
**ZZ**: doublelip-seals on both sides

outer cylinder
surface treatment
**blank**: no surface treatment
**SK**: electroless nickel plating
**LF**: low temperature black chrome treatment with fluoride coating
**SB**: black oxide (not available on anti-corrosion type)
**SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMKC 6 | SMKC 6G | SMSKC 6 | SMSKC 6G | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMKC 8 | SMKC 8G | SMSKC 8 | SMSKC 8G | 4 | 8 | | 15 | | 45 |
| SMKC10 | SMKC10G | SMSKC10 | SMSKC10G | 4 | 10 | | 19 | 0 −16 | 55 |
| SMKC12 | SMKC12G | SMSKC12 | SMSKC12G | 4 | 12 | | 21 | | 57 |
| SMKC13 | SMKC13G | SMSKC13 | SMSKC13G | 4 | 13 | | 23 | | 61 |
| SMKC16 | SMKC16G | SMSKC16 | SMSKC16G | 4 | 16 | | 28 | | 70 |
| SMKC20 | SMKC20G | SMSKC20 | SMSKC20G | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMKC25 | SMKC25G | SMSKC25 | SMSKC25G | 6 | 25 | | 40 | | 112 |
| SMKC30 | SMKC30G | SMSKC30 | SMSKC30G | 6 | 30 | | 45 | | 123 |
| SMKC35 | SMKC35G | SMSKC35 | SMSKC35G | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMKC40 | SMKC40G | SMSKC40 | SMSKC40G | 6 | 40 | | 60 | | 151 |
| SMKC50 | SMKC50G | SMSKC50 | SMSKC50G | 6 | 50 | | 80 | | 192 |
| SMKC60 | SMKC60G | SMSKC60 | SMSKC60G | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

| flange | | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 15 | 28 | 22 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 25 | 6 |
| 20 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 43 | 8 |
| 24.5 | 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 78 | 10 |
| 25.5 | 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 90 | 12 |
| 27.5 | 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 108 | 13 |
| 32 | 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 165 | 16 |
| 36 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 225 | 20 |
| 52 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 500 | 25 |
| 56.5 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 590 | 30 |
| 62.5 | 82 | 64 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 930 | 35 |
| 69 | 96 | 75 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,380 | 40 |
| 89.5 | 116 | 92 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,400 | 50 |
| 95.5 | 134 | 106 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,060 | 60 |

1N≒0.102kgf　1N・m≒0.102kgf・m

# SMTC TYPE

## – Two Side Cut Center Flange Type –

### part number structure

example **SMSTC 25 G UU - SK**

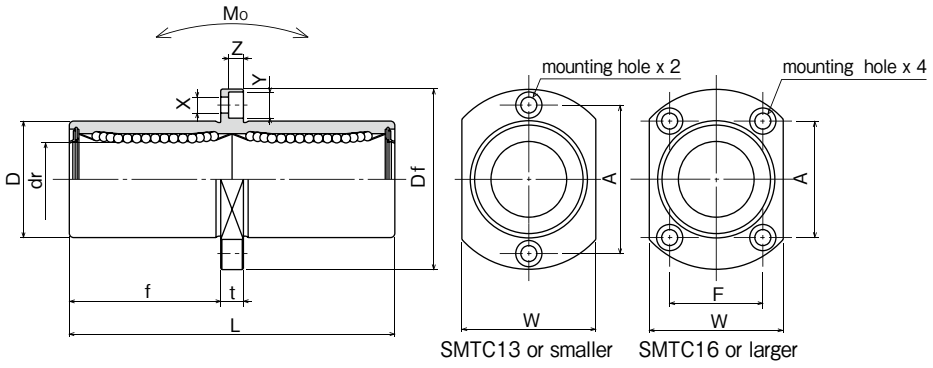
specification
**SMTC**: standard
**SMSTC**: anti-corrosion

inner contact diameter (dr)

retainer material
**blank**: standard/steel
anti-corrosion/stainless steel
**G**: resin

seal
**UU**: seals on both sides
**ZZ**: doublelip-seals on both sides

outer cylinder
surface treatment
**blank**: no surface treatment
**SK**: electroless nickel plating
**LF**: low temperature black chrome treatment with fluoride coating
**SB**: black oxide (not available on anti-corrosion type)
**SC**: industrial chrome plating




| part number* | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| SMTC 6UU | SMTC 6GUU | SMSTC 6UU | SMSTC 6GUU | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMTC 8UU | SMTC 8GUU | SMSTC 8UU | SMSTC 8GUU | 4 | 8 | | 15 | | 45 |
| SMTC10UU | SMTC10GUU | SMSTC10UU | SMSTC10GUU | 4 | 10 | | 19 | 0 −16 | 55 |
| SMTC12UU | SMTC12GUU | SMSTC12UU | SMSTC12GUU | 4 | 12 | | 21 | | 57 |
| SMTC13UU | SMTC13GUU | SMSTC13UU | SMSTC13GUU | 4 | 13 | | 23 | | 61 |
| SMTC16UU | SMTC16GUU | SMSTC16UU | SMSTC16GUU | 4 | 16 | | 28 | | 70 |
| SMTC20UU | SMTC20GUU | SMSTC20UU | SMSTC20GUU | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMTC25UU | SMTC25GUU | SMSTC25UU | SMSTC25GUU | 6 | 25 | | 40 | | 112 |
| SMTC30UU | SMTC30GUU | SMSTC30UU | SMSTC30GUU | 6 | 30 | | 45 | | 123 |

* Seals-on-both-sides is standard.

| flange | | | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | W mm | t mm | A mm | F mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 15 | 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 28 | 6 |
| 20 | 32 | 21 | 5 | 24 | — | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 47 | 8 |
| 24.5 | 40 | 25 | 6 | 29 | — | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 90 | 10 |
| 25.5 | 42 | 27 | 6 | 32 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 102 | 12 |
| 27.5 | 43 | 29 | 6 | 33 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 123 | 13 |
| 32 | 48 | 34 | 6 | 31 | 22 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 182 | 16 |
| 36 | 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 247 | 20 |
| 52 | 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 525 | 25 |
| 56.5 | 74 | 51 | 10 | 49 | 35 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 645 | 30 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMF-W-E TYPE

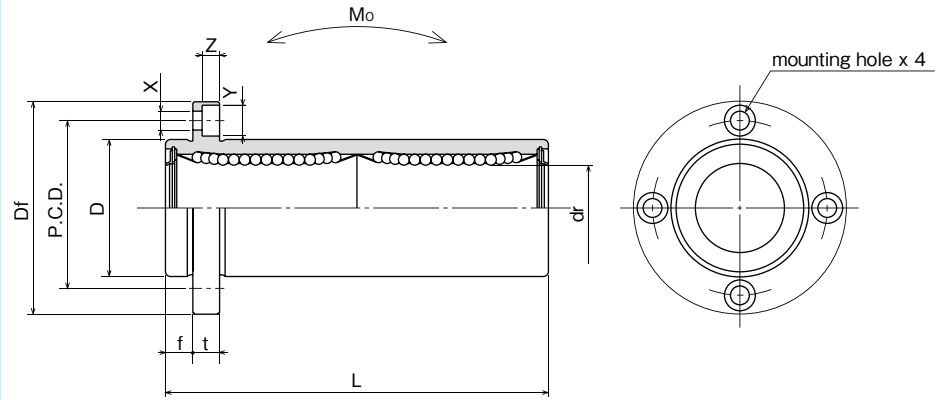
— Round Flange Double-Wide Pilot End Type —

## part number structure

example **SMSF 25 G W UU - E - SK**

- specification
  **SMF**: standard
  **SMSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number* standard steel retainer | standard resin retainer | anti-corrosion stainless retainer | anti-corrosion resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|---|---|
| SMF 6WUU-E | SMF 6GWUU-E | SMSF 6WUU-E | SMSF 6GWUU-E | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMF 8WUU-E | SMF 8GWUU-E | SMSF 8WUU-E | SMSF 8GWUU-E | 4 | 8 | | 15 | | 45 |
| SMF10WUU-E | SMF10GWUU-E | SMSF10WUU-E | SMSF10GWUU-E | 4 | 10 | | 19 | 0 −16 | 55 |
| SMF12WUU-E | SMF12GWUU-E | SMSF12WUU-E | SMSF12GWUU-E | 4 | 12 | | 21 | | 57 |
| SMF13WUU-E | SMF13GWUU-E | SMSF13WUU-E | SMSF13GWUU-E | 4 | 13 | | 23 | | 61 |
| SMF16WUU-E | SMF16GWUU-E | SMSF16WUU-E | SMSF16GWUU-E | 4 | 16 | | 28 | | 70 |
| SMF20WUU-E | SMF20GWUU-E | SMSF20WUU-E | SMSF20GWUU-E | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMF25WUU-E | SMF25GWUU-E | SMSF25WUU-E | SMSF25GWUU-E | 6 | 25 | | 40 | | 112 |
| SMF30WUU-E | SMF30GWUU-E | SMSF30WUU-E | SMSF30GWUU-E | 6 | 30 | | 45 | | 123 |
| SMF35WUU-E | SMF35GWUU-E | — | — | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMF40WUU-E | SMF40GWUU-E | — | — | 6 | 40 | | 60 | | 151 |
| SMF50WUU-E | SMF50GWUU-E | — | — | 6 | 50 | | 80 | | 192 |
| SMF60WUU-E | SMF60GWUU-E | — | — | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

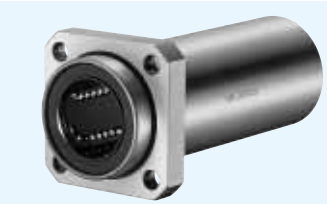
* Seals-on-both-sides is standard.

| flange f mm | flange Df mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 28 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 31 | 6 |
| 5 | 32 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 51 | 8 |
| 6 | 40 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 98 | 10 |
| 6 | 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 110 | 12 |
| 6 | 43 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 130 | 13 |
| 6 | 48 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 190 | 16 |
| 8 | 54 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 260 | 20 |
| 8 | 62 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 540 | 25 |
| 10 | 74 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 680 | 30 |
| 10 | 82 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 13 | 96 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,570 | 40 |
| 13 | 116 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,600 | 50 |
| 18 | 134 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,500 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# SMK-W-E TYPE

## — Square Flange Double-Wide Pilot End Type —

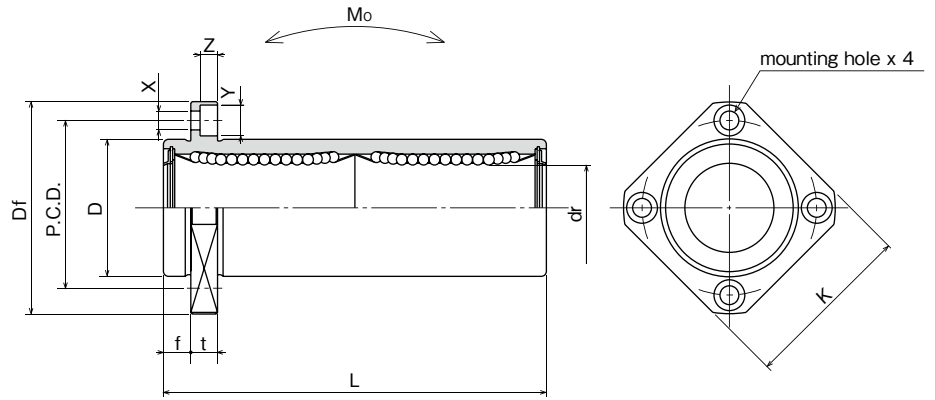


### part number structure

example **SMSK 25 G W UU - E - SK**

- specification
  **SMK**: standard
  **SMSK**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating

Doublelip-seal is available for size 6 to 30.




| part number* standard steel retainer | standard resin retainer | anti-corrosion stainless retainer | anti-corrosion resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|---|---|
| SMK 6WUU-E | SMK 6GWUU-E | SMSK 6WUU-E | SMSK 6GWUU-E | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMK 8WUU-E | SMK 8GWUU-E | SMSK 8WUU-E | SMSK 8GWUU-E | 4 | 8 | | 15 | | 45 |
| SMK10WUU-E | SMK10GWUU-E | SMSK10WUU-E | SMSK10GWUU-E | 4 | 10 | | 19 | 0 −16 | 55 |
| SMK12WUU-E | SMK12GWUU-E | SMSK12WUU-E | SMSK12GWUU-E | 4 | 12 | | 21 | | 57 |
| SMK13WUU-E | SMK13GWUU-E | SMSK13WUU-E | SMSK13GWUU-E | 4 | 13 | | 23 | | 61 |
| SMK16WUU-E | SMK16GWUU-E | SMSK16WUU-E | SMSK16GWUU-E | 4 | 16 | | 28 | | 70 |
| SMK20WUU-E | SMK20GWUU-E | SMSK20WUU-E | SMSK20GWUU-E | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMK25WUU-E | SMK25GWUU-E | SMSK25WUU-E | SMSK25GWUU-E | 6 | 25 | | 40 | | 112 |
| SMK30WUU-E | SMK30GWUU-E | SMSK30WUU-E | SMSK30GWUU-E | 6 | 30 | | 45 | | 123 |
| SMK35WUU-E | SMK35GWUU-E | — | — | 6 | 35 | 0 −15 | 52 | 0 −22 | 135 |
| SMK40WUU-E | SMK40GWUU-E | — | — | 6 | 40 | | 60 | | 151 |
| SMK50WUU-E | SMK50GWUU-E | — | — | 6 | 50 | | 80 | | 192 |
| SMK60WUU-E | SMK60GWUU-E | — | — | 6 | 60 | 0/−20 | 90 | 0/−25 | 209 |

* Seals-on-both-sides is standard.

| flange f mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 28 | 22 | 5 | 20 | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 25 | 6 |
| 5 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 43 | 8 |
| 6 | 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 78 | 10 |
| 6 | 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 90 | 12 |
| 6 | 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 108 | 13 |
| 6 | 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 165 | 16 |
| 8 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 225 | 20 |
| 8 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 500 | 25 |
| 10 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 590 | 30 |
| 10 | 82 | 64 | 10 | 67 | 6.6×11×6.1 | 25 | 25 | 2,650 | 6,270 | 110 | 930 | 35 |
| 13 | 96 | 75 | 13 | 78 | 9×14×8.1 | | | 3,430 | 8,040 | 147 | 1,380 | 40 |
| 13 | 116 | 92 | 13 | 98 | 9×14×8.1 | | | 6,080 | 15,900 | 397 | 3,400 | 50 |
| 18 | 134 | 106 | 18 | 112 | 11×17×11.1 | 30 | 30 | 7,550 | 20,000 | 530 | 4,060 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

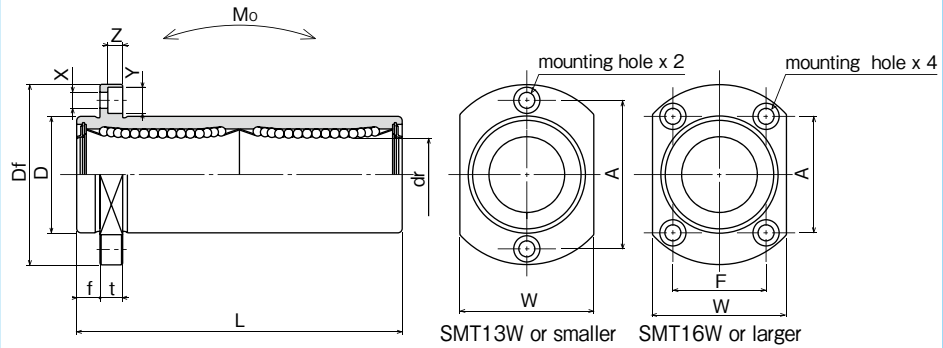
# SMT-W-E TYPE

— Two Side Cut Double-Wide Flange Pilot End Type —

## part number structure

example **SMST 25 G W UU - E - SK**

- specification
  **SMT**: standard
  **SMST**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number* standard steel retainer | standard resin retainer | anti-corrosion stainless retainer | anti-corrosion resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|---|---|
| SMT 6WUU-E | SMT 6GWUU-E | SMST 6WUU-E | SMST 6GWUU-E | 4 | 6 | 0 −10 | 12 | 0 −13 | 35 |
| SMT 8WUU-E | SMT 8GWUU-E | SMST 8WUU-E | SMST 8GWUU-E | 4 | 8 | | 15 | | 45 |
| SMT10WUU-E | SMT10GWUU-E | SMST10WUU-E | SMST10GWUU-E | 4 | 10 | | 19 | 0 −16 | 55 |
| SMT12WUU-E | SMT12GWUU-E | SMST12WUU-E | SMST12GWUU-E | 4 | 12 | | 21 | | 57 |
| SMT13WUU-E | SMT13GWUU-E | SMST13WUU-E | SMST13GWUU-E | 4 | 13 | | 23 | | 61 |
| SMT16WUU-E | SMT16GWUU-E | SMST16WUU-E | SMST16GWUU-E | 4 | 16 | | 28 | | 70 |
| SMT20WUU-E | SMT20GWUU-E | SMST20WUU-E | SMST20GWUU-E | 5 | 20 | 0 −12 | 32 | 0 −19 | 80 |
| SMT25WUU-E | SMT25GWUU-E | SMST25WUU-E | SMST25GWUU-E | 6 | 25 | | 40 | | 112 |
| SMT30WUU-E | SMT30GWUU-E | SMST30WUU-E | SMST30GWUU-E | 6 | 30 | | 45 | | 123 |

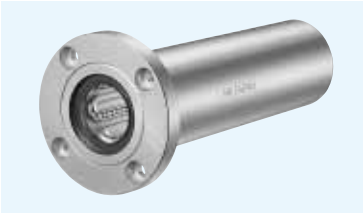
* Seals-on-both-sides is standard.

| flange f mm | Df mm | W mm | t mm | A mm | F mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 15 | 15 | 323 | 530 | 2.18 | 28 | 6 |
| 5 | 32 | 21 | 5 | 24 | — | 3.5×6×3.1 | | | 431 | 784 | 4.31 | 47 | 8 |
| 6 | 40 | 25 | 6 | 29 | — | 4.5×7.5×4.1 | | | 588 | 1,100 | 7.24 | 90 | 10 |
| 6 | 42 | 27 | 6 | 32 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 10.9 | 102 | 12 |
| 6 | 43 | 29 | 6 | 33 | — | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.6 | 123 | 13 |
| 6 | 48 | 34 | 6 | 31 | 22 | 4.5×7.5×4.1 | | | 1,230 | 2,350 | 19.7 | 182 | 16 |
| 8 | 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 20 | 20 | 1,400 | 2,740 | 26.8 | 247 | 20 |
| 8 | 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 1,560 | 3,140 | 43.4 | 525 | 25 |
| 10 | 74 | 51 | 10 | 49 | 35 | 6.6×11×6.1 | | | 2,490 | 5,490 | 82.8 | 645 | 30 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRF TYPE

## – Triple-Wide Round Flange Type –

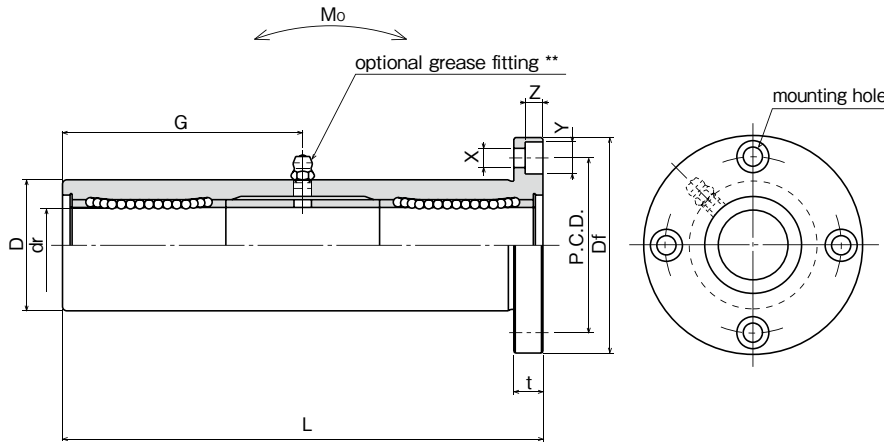


### part number structure

example **TRF 25 G UU-Q**

- TRF type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRF 6UU | TRF 6GUU | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRF 8UU | TRF 8GUU | 4 | 8 | | 19 | 0 −21 | 66 |
| TRF10UU | TRF10GUU | 4 | 10 | | 23 | | 80 |
| TRF12UU | TRF12GUU | 4 | 12 | 0 −15 | 26 | | 84 |
| TRF13UU | TRF13GUU | 4 | 13 | | 28 | | 90 |
| TRF16UU | TRF16GUU | 4 | 16 | | 32 | 0 −25 | 103 |
| TRF20UU | TRF20GUU | 5 | 20 | 0 −18 | 40 | | 118 |
| TRF25UU | TRF25GUU | 6 | 25 | | 45 | | 165 |
| TRF30UU | TRF30GUU | 6 | 30 | | 52 | 0 −30 | 182 |
| TRF35UU | TRF35GUU | 6 | 35 | 0 −21 | 60 | | 200 |
| TRF40UU | TRF40GUU | 6 | 40 | | 65 | | 230 |
| TRF50UU | TRF50GUU | 6 | 50 | | 85 | 0 −35 | 290 |
| TRF60UU | TRF60GUU | 6 | 60 | 0/−25 | 100 | | 310 |

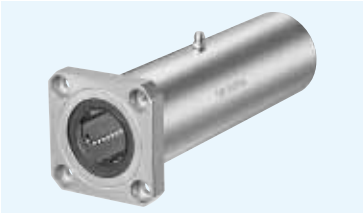
Outer cylinder is treated with electroless nickel plating.
* Seals-on-both-sides is standard.
** TRF6: A-MT6x1 TRF8: A-M6x1 TRF10~30: A-M6F TRF35~60: A-R1/8

| flange Df mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 66 | 6 |
| 40 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 135 | 8 |
| 43 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 205 | 10 |
| 46 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 248 | 12 |
| 48 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 308 | 13 |
| 54 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 412 | 16 |
| 62 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 752 | 20 |
| 74 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,244 | 25 |
| 82 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,636 | 30 |
| 96 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 101 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,950 | 40 |
| 129 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,860 | 50 |
| 144 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,660 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRK TYPE

## – Triple-Wide Square Flange Type –

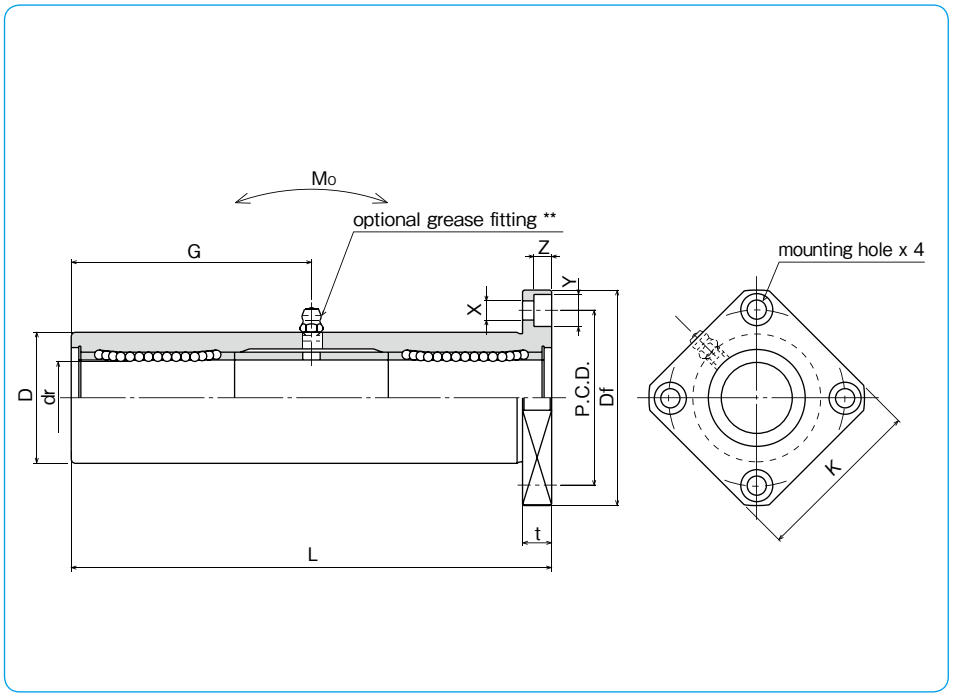


### part number structure

example **TRK 25 G UU - Q**

- TRK type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRK 6UU | TRK 6GUU | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRK 8UU | TRK 8GUU | 4 | 8 | | 19 | 0 −21 | 66 |
| TRK10UU | TRK10GUU | 4 | 10 | | 23 | | 80 |
| TRK12UU | TRK12GUU | 4 | 12 | 0 −15 | 26 | | 84 |
| TRK13UU | TRK13GUU | 4 | 13 | | 28 | | 90 |
| TRK16UU | TRK16GUU | 4 | 16 | | 32 | 0 −25 | 103 |
| TRK20UU | TRK20GUU | 5 | 20 | 0 −18 | 40 | | 118 |
| TRK25UU | TRK25GUU | 6 | 25 | | 45 | | 165 |
| TRK30UU | TRK30GUU | 6 | 30 | | 52 | 0 −30 | 182 |
| TRK35UU | TRK35GUU | 6 | 35 | 0 −21 | 60 | | 200 |
| TRK40UU | TRK40GUU | 6 | 40 | | 65 | | 230 |
| TRK50UU | TRK50GUU | 6 | 50 | | 85 | 0 | 290 |
| TRK60UU | TRK60GUU | 6 | 60 | 0/−25 | 100 | −35 | 310 |

| flange Df mm | flange K mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 58 | 6 |
| 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 117 | 8 |
| 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 189 | 10 |
| 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 228 | 12 |
| 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 286 | 13 |
| 54 | 42 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 62 | 50 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 714 | 20 |
| 74 | 58 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,163 | 25 |
| 82 | 64 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,543 | 30 |
| 96 | 75 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,400 | 35 |
| 101 | 80 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,510 | 40 |
| 129 | 100 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,400 | 50 |
| 144 | 116 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,200 | 60 |

Outer cylinder is treated with electroless nickel plating.

* Seals-on-both-sides is standard.

** TRK6: A-MT6x1 TRK8: A-M6x1 TRK10~30: A-M6F TRK35~60: A-R1/8

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRFC TYPE

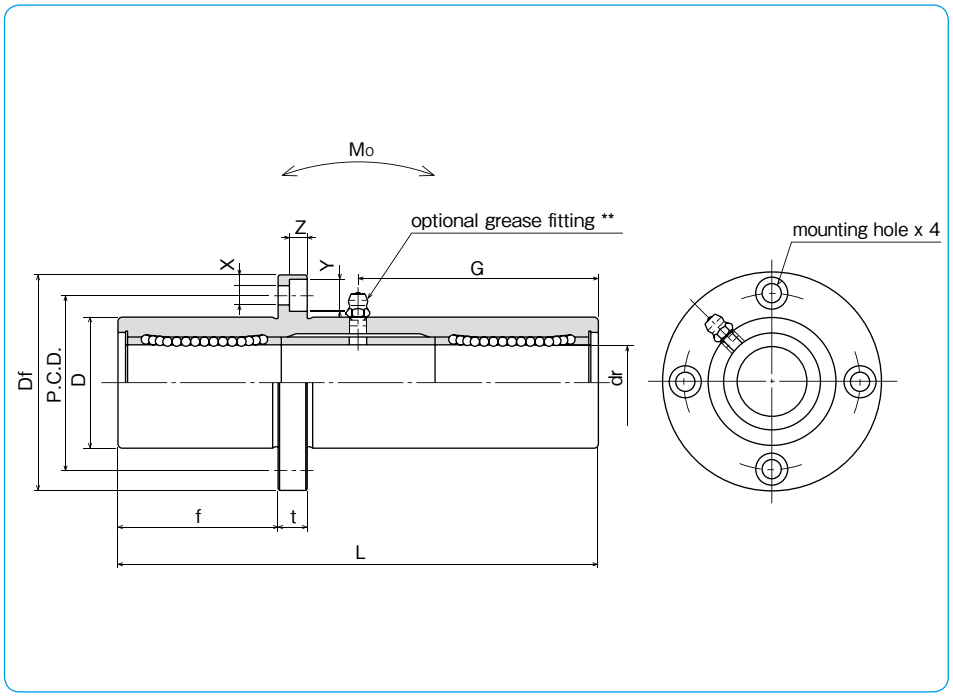
— Triple-Wide Intermediate Position Round Flange Type —

## part number structure

example **TRFC 25 G UU - Q**

- TRFC type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: seals on both sides
  **ZZ**: doublelip-seals on both sides
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRFC 6UU | TRFC 6GUU | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRFC 8UU | TRFC 8GUU | 4 | 8 | | 19 | 0 −21 | 66 |
| TRFC10UU | TRFC10GUU | 4 | 10 | | 23 | | 80 |
| TRFC12UU | TRFC12GUU | 4 | 12 | 0 −15 | 26 | | 84 |
| TRFC13UU | TRFC13GUU | 4 | 13 | | 28 | | 90 |
| TRFC16UU | TRFC16GUU | 4 | 16 | | 32 | 0 −25 | 103 |
| TRFC20UU | TRFC20GUU | 5 | 20 | 0 −18 | 40 | | 118 |
| TRFC25UU | TRFC25GUU | 6 | 25 | | 45 | | 165 |
| TRFC30UU | TRFC30GUU | 6 | 30 | | 52 | 0 −30 | 182 |
| TRFC35UU | TRFC35GUU | 6 | 35 | 0 −21 | 60 | | 200 |
| TRFC40UU | TRFC40GUU | 6 | 40 | | 65 | | 230 |
| TRFC50UU | TRFC50GUU | 6 | 50 | | 85 | 0 −35 | 290 |
| TRFC60UU | TRFC60GUU | 6 | 60 | 0/−25 | 100 | | 310 |

Outer cylinder is treated with electroless nickel plating.
* Seals-on-both-sides is standard.
** TRFC6: A-MT6x1 TRFC8: A-M6x1 TRFC10～30: A-M6F TRFC35～60: A-R1/8

| flange f mm | flange Df mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 32 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 66 | 6 |
| 22 | 40 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 135 | 8 |
| 27 | 43 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 205 | 10 |
| 28 | 46 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 248 | 12 |
| 30 | 48 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 308 | 13 |
| 35 | 54 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 412 | 16 |
| 40 | 62 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 752 | 20 |
| 55 | 74 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,244 | 25 |
| 61 | 82 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,636 | 30 |
| 67 | 96 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 77 | 101 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,950 | 40 |
| 97 | 129 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,860 | 50 |
| 104 | 144 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,660 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRKC TYPE

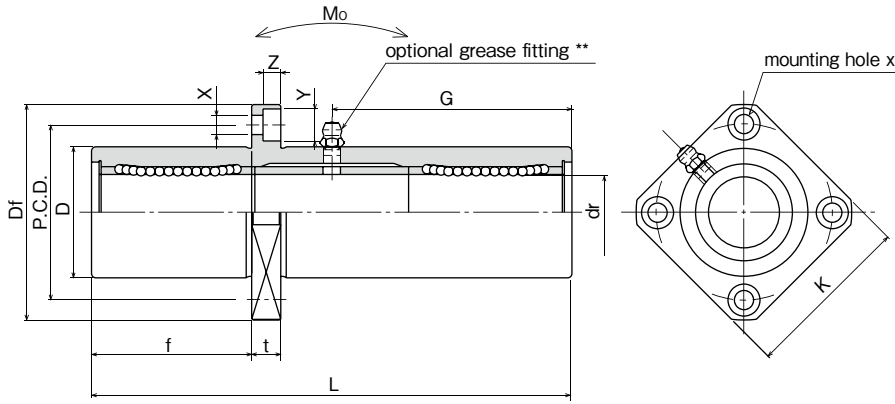
— Triple-Wide Intermediate Position Square Flange Type —

## part number structure

example **TRKC 25 G UU - Q**

- TRKC type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: sea on both sides
  **ZZ**: doublelip-seals on both sides
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRKC 6UU | TRKC 6GUU | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRKC 8UU | TRKC 8GUU | 4 | 8 | | 19 | 0 −21 | 66 |
| TRKC10UU | TRKC10GUU | 4 | 10 | | 23 | | 80 |
| TRKC12UU | TRKC12GUU | 4 | 12 | 0 −15 | 26 | | 84 |
| TRKC13UU | TRKC13GUU | 4 | 13 | | 28 | | 90 |
| TRKC16UU | TRKC16GUU | 4 | 16 | | 32 | 0 −25 | 103 |
| TRKC20UU | TRKC20GUU | 5 | 20 | 0 −18 | 40 | | 118 |
| TRKC25UU | TRKC25GUU | 6 | 25 | | 45 | | 165 |
| TRKC30UU | TRKC30GUU | 6 | 30 | | 52 | 0 −30 | 182 |
| TRKC35UU | TRKC35GUU | 6 | 35 | 0 −21 | 60 | | 200 |
| TRKC40UU | TRKC40GUU | 6 | 40 | | 65 | | 230 |
| TRKC50UU | TRKC50GUU | 6 | 50 | | 85 | 0 −35 | 290 |
| TRKC60UU | TRKC60GUU | 6 | 60 | 0/−25 | 100 | | 310 |

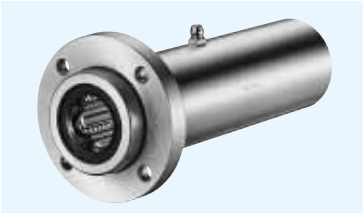
Outer cylinder is treated with electroless nickel plating.
* Seals-on-both-sides is standard.
** TRKC6: A-MT6x1 TRKC8: A-M6x1 TRKC10～30: A-M6F TRKC35～60: A-R1/8

| flange f mm | flange Df mm | flange K mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 58 | 6 |
| 22 | 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 117 | 8 |
| 27 | 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 189 | 10 |
| 28 | 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 228 | 12 |
| 30 | 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 286 | 13 |
| 35 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 40 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 714 | 20 |
| 55 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,163 | 25 |
| 61 | 82 | 64 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,543 | 30 |
| 67 | 96 | 75 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,400 | 35 |
| 77 | 101 | 80 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,510 | 40 |
| 97 | 129 | 100 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,400 | 50 |
| 104 | 144 | 116 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,200 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRF-E TYPE

## – Triple-Wide Round Flange Pilot End Type –

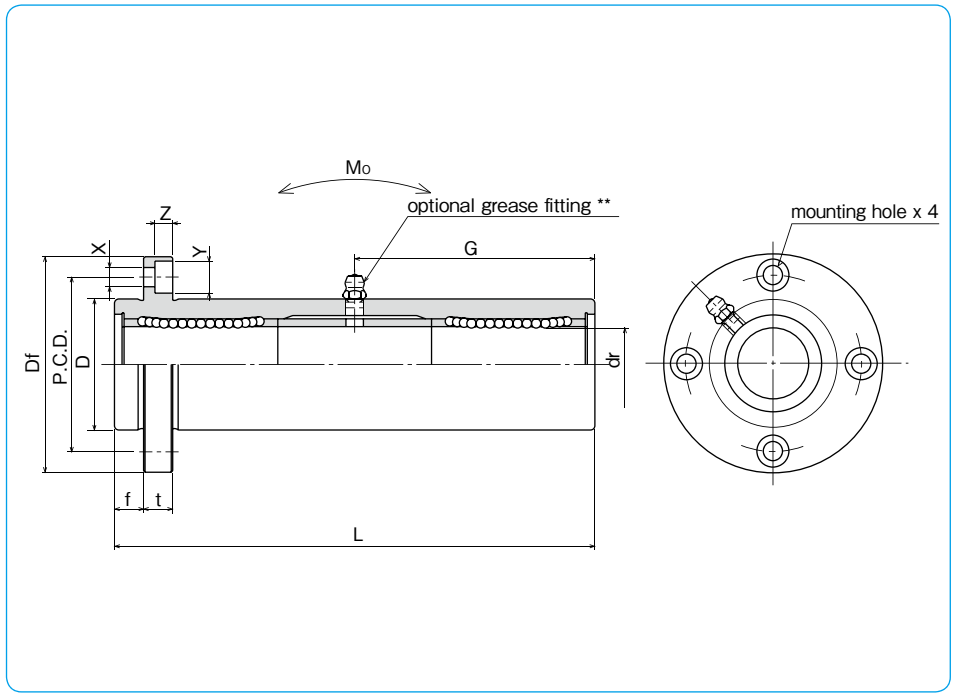


### part number structure

example **TRF 25 G UU - E - Q**

- TRF type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: sea on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRF 6UU-E | TRF 6GUU-E | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRF 8UU-E | TRF 8GUU-E | 4 | 8 | | 19 | 0 −21 | 66 |
| TRF10UU-E | TRF10GUU-E | 4 | 10 | | 23 | | 80 |
| TRF12UU-E | TRF12GUU-E | 4 | 12 | 0 −15 | 26 | | 84 |
| TRF13UU-E | TRF13GUU-E | 4 | 13 | | 28 | | 90 |
| TRF16UU-E | TRF16GUU-E | 4 | 16 | | 32 | 0 −25 | 103 |
| TRF20UU-E | TRF20GUU-E | 5 | 20 | 0 −18 | 40 | | 118 |
| TRF25UU-E | TRF25GUU-E | 6 | 25 | | 45 | | 165 |
| TRF30UU-E | TRF30GUU-E | 6 | 30 | | 52 | 0 −30 | 182 |
| TRF35UU-E | TRF35GUU-E | 6 | 35 | 0 −21 | 60 | | 200 |
| TRF40UU-E | TRF40GUU-E | 6 | 40 | | 65 | | 230 |
| TRF50UU-E | TRF50GUU-E | 6 | 50 | | 85 | 0 −35 | 290 |
| TRF60UU-E | TRF60GUU-E | 6 | 60 | 0/−25 | 100 | | 310 |

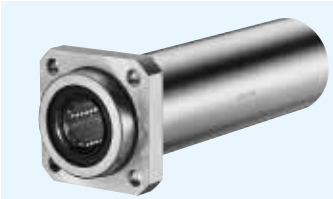
Outer cylinder is treated with electroless nickel plating.
* Seals-on-both-sides is standard.
** TRF6: A-MT6x1 TRF8: A-M6x1 TRF10~30: A-M6F TRF35~60: A-R1/8

| flange f mm | flange Df mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 32 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 66 | 6 |
| 6 | 40 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 135 | 8 |
| 6 | 43 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 205 | 10 |
| 6 | 46 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 248 | 12 |
| 6 | 48 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 308 | 13 |
| 8 | 54 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 412 | 16 |
| 8 | 62 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 752 | 20 |
| 10 | 74 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,244 | 25 |
| 10 | 82 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,636 | 30 |
| 13 | 96 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 13 | 101 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,950 | 40 |
| 18 | 129 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,860 | 50 |
| 18 | 144 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,660 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# TRK-E TYPE

## — Triple-Wide Square Flange Pilot End Type —

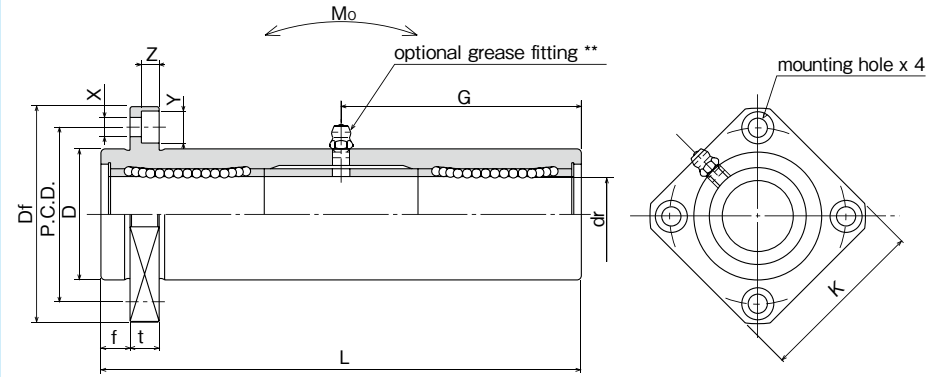


### part number structure

example **TRK 25 G UU - E - Q**

- TRK type
- inner contact diameter (dr)
- retainer material
  **blank**: steel
  **G**: resin
- seal
  **UU**: sea on both sides
  **ZZ**: doublelip-seals on both sides
- with pilot end
- grease fitting
  **blank**: without
  **Q**: grease fitting

Doublelip-seal is available for size 6 to 30.




| part number* steel retainer | part number* resin retainer | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L ±0.3 mm |
|---|---|---|---|---|---|---|---|
| TRK 6UU-E | TRK 6GUU-E | 4 | 6 | 0 −12 | 15 | 0/−18 | 51 |
| TRK 8UU-E | TRK 8GUU-E | 4 | 8 | | 19 | 0 −21 | 66 |
| TRK10UU-E | TRK10GUU-E | 4 | 10 | | 23 | | 80 |
| TRK12UU-E | TRK12GUU-E | 4 | 12 | 0 −15 | 26 | | 84 |
| TRK13UU-E | TRK13GUU-E | 4 | 13 | | 28 | | 90 |
| TRK16UU-E | TRK16GUU-E | 4 | 16 | | 32 | 0 −25 | 103 |
| TRK20UU-E | TRK20GUU-E | 5 | 20 | 0 −18 | 40 | | 118 |
| TRK25UU-E | TRK25GUU-E | 6 | 25 | | 45 | | 165 |
| TRK30UU-E | TRK30GUU-E | 6 | 30 | | 52 | 0 −30 | 182 |
| TRK35UU-E | TRK35GUU-E | 6 | 35 | 0 −21 | 60 | | 200 |
| TRK40UU-E | TRK40GUU-E | 6 | 40 | | 65 | | 230 |
| TRK50UU-E | TRK50GUU-E | 6 | 50 | | 85 | 0 −35 | 290 |
| TRK60UU-E | TRK60GUU-E | 6 | 60 | 0/−25 | 100 | | 310 |

Outer cylinder is treated with electroless nickel plating.
* Seals-on-both-sides is standard.
** TRK6: A-MT6x1 TRK8: A-M6x1 TRK10~30: A-M6F TRK35~60: A-R1/8

| flange f mm | flange Df mm | flange K mm | flange t mm | flange P.C.D. mm | flange X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 20 | 323 | 530 | 8.2 | 58 | 6 |
| 6 | 40 | 30 | 6 | 29 | 4.5×7.5×4.1 | 29 | | | 431 | 784 | 16.0 | 117 | 8 |
| 6 | 43 | 34 | 6 | 33 | 4.5×7.5×4.1 | 38 | | | 588 | 1,100 | 27.0 | 189 | 10 |
| 6 | 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | 41 | | | 813 | 1,570 | 40.1 | 228 | 12 |
| 6 | 48 | 37 | 6 | 38 | 4.5×7.5×4.1 | 45 | | | 813 | 1,570 | 42.9 | 286 | 13 |
| 8 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 51 | 25 | 25 | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 8 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 59 | | | 1,400 | 2,740 | 98.0 | 714 | 20 |
| 10 | 74 | 58 | 10 | 60 | 6.6×11×6.1 | 82.5 | | | 1,560 | 3,140 | 157 | 1,163 | 25 |
| 10 | 82 | 64 | 10 | 67 | 6.6×11×6.1 | 91 | | | 2,490 | 5,490 | 297 | 1,543 | 30 |
| 13 | 96 | 75 | 13 | 78 | 9×14×8.1 | 100 | 30 | 30 | 2,650 | 6,270 | 373 | 2,400 | 35 |
| 13 | 101 | 80 | 13 | 83 | 9×14×8.1 | 115 | | | 3,430 | 8,040 | 553 | 2,510 | 40 |
| 18 | 129 | 100 | 18 | 107 | 11×17×11.1 | 145 | | | 6,080 | 15,900 | 1,370 | 6,400 | 50 |
| 18 | 144 | 116 | 18 | 122 | 11×17×11.1 | 155 | | | 7,550 | 20,000 | 1,800 | 9,200 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# KB TYPE (Euro Standard)
## – Standard Type –

### part number structure

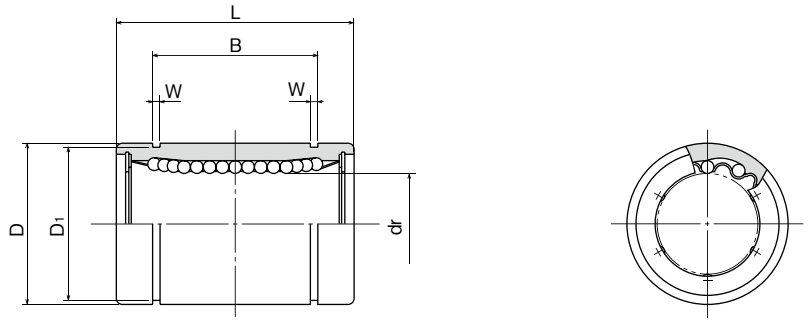
example **KBS 25 G UU**

specification
**KB**: standard
**KBS**: anti-corrosion

inner contact diameter (dr)

retainer material
**blank**: standard/steel
anti-corrosion/stainless steel
**G**: resin

seal
**blank**: without seal
**U**: seal on one side
**UU**: seals on both sides




| part number | | | | number of ball circuits | major dimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm |
| KB 3 | KB 3G | KBS 3 | KBS 3G | 4 | 3 | + 8 0 | 7 | 0 − 8 |
| KB 4 | KB 4G | KBS 4 | KBS 4G | 4 | 4 | | 8 | |
| KB 5 | KB 5G | KBS 5 | KBS 5G | 4 | 5 | | 12 | |
| KB 8 | KB 8G | KBS 8 | KBS 8G | 4 | 8 | | 16 | |
| KB10 | KB10G | KBS10 | KBS10G | 4 | 10 | | 19 | 0 − 9 |
| KB12 | KB12G | KBS12 | KBS12G | 4 | 12 | | 22 | |
| KB16 | KB16G | KBS16 | KBS16G | 4 | 16 | + 9 − 1 | 26 | |
| KB20 | KB20G | KBS20 | KBS20G | 5 | 20 | | 32 | 0 −11 |
| KB25 | KB25G | KBS25 | KBS25G | 6 | 25 | +11 − 1 | 40 | |
| KB30 | KB30G | KBS30 | KBS30G | 6 | 30 | | 47 | |
| KB40 | KB40G | KBS40 | KBS40G | 6 | 40 | +13 − 2 | 62 | 0 −13 |
| KB50 | KB50G | KBS50 | KBS50G | 6 | 50 | | 75 | |
| KB60 | KB60G | KBS60 | KBS60G | 6 | 60 | | 90 | 0 −15 |
| KB80 | – | – | – | 6 | 80 | +16/−4 | 120 | |

| L mm | L tolerance mm | B mm | B tolerance mm | W mm | D1 mm | eccentricity μm | radial clearance (maximum) μm | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0 | – | – | – | – | 10 | − 3 | 69 | 105 | 1.4 | 3 |
| 12 | −0.12 | – | – | – | – | | | 88 | 127 | 2 | 4 |
| 22 | 0 −0.2 | 14.5 | 0 −0.2 | 1.1 | 11.5 | 12 | | 206 | 265 | 11 | 5 |
| 25 | | 16.5 | | 1.1 | 15.2 | | | 265 | 402 | 22 | 8 |
| 29 | | 22 | | 1.3 | 18 | | − 4 | 372 | 549 | 36 | 10 |
| 32 | | 22.9 | | 1.3 | 21 | | | 510 | 784 | 45 | 12 |
| 36 | | 24.9 | | 1.3 | 24.9 | | | 578 | 892 | 60 | 16 |
| 45 | | 31.5 | | 1.6 | 30.3 | 15 | − 6 | 862 | 1,370 | 102 | 20 |
| 58 | 0 −0.3 | 44.1 | 0 −0.3 | 1.85 | 37.5 | | | 980 | 1,570 | 235 | 25 |
| 68 | | 52.1 | | 1.85 | 44.5 | | − 8 | 1,570 | 2,740 | 360 | 30 |
| 80 | | 60.6 | | 2.15 | 59 | 17 | | 2,160 | 4,020 | 770 | 40 |
| 100 | | 77.6 | | 2.65 | 72 | | −13 | 3,820 | 7,940 | 1,250 | 50 |
| 125 | 0 −0.4 | 101.7 | 0 −0.4 | 3.15 | 86.5 | 20 | | 4,700 | 9,800 | 2,220 | 60 |
| 165 | | 133.7 | | 4.15 | 116 | | −20 | 7,350 | 16,000 | 5,140 | 80 |

1N≒0.102kgf

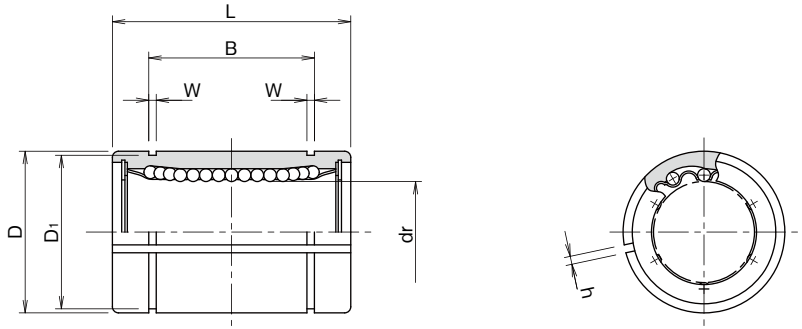
# KB-AJ TYPE (Euro Standard)

## – Clearance Adjustable Type –

### part number structure

example **KBS 25 G UU - AJ**

- specification
  **KB**: standard
  **KBS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
- clearance-adjustable




| part number | | | | number of ball circuits | major dimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance* μm | mm | tolerance* μm |
| – | KB 5G-AJ | – | KBS 5G-AJ | 4 | 5 | + 8 0 | 12 | 0 − 8 |
| – | KB 8G-AJ | – | KBS 8G-AJ | 4 | 8 | | 16 | |
| – | KB10G-AJ | – | KBS10G-AJ | 4 | 10 | | 19 | 0 − 9 |
| KB12-AJ | KB12G-AJ | KBS12-AJ | KBS12G-AJ | 4 | 12 | | 22 | |
| KB16-AJ | KB16G-AJ | KBS16-AJ | KBS16G-AJ | 4 | 16 | + 9 − 1 | 26 | |
| KB20-AJ | KB20G-AJ | KBS20-AJ | KBS20G-AJ | 5 | 20 | | 32 | 0 −11 |
| KB25-AJ | KB25G-AJ | KBS25-AJ | KBS25G-AJ | 6 | 25 | +11 − 1 | 40 | |
| KB30-AJ | KB30G-AJ | KBS30-AJ | KBS30G-AJ | 6 | 30 | | 47 | |
| KB40-AJ | KB40G-AJ | KBS40-AJ | KBS40G-AJ | 6 | 40 | +13 − 2 | 62 | 0 −13 |
| KB50-AJ | KB50G-AJ | KBS50-AJ | KBS50G-AJ | 6 | 50 | | 75 | |
| KB60-AJ | KB60G-AJ | KBS60-AJ | KBS60G-AJ | 6 | 60 | | 90 | 0 −15 |
| KB80-AJ | – | – | – | 6 | 80 | +16/−4 | 120 | |

* Accuracy is measured prior to machining clearance slit.

| L mm | L tolerance mm | B mm | B tolerance mm | W mm | D1 mm | h mm | eccentricity* μm | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 0 −0.2 | 14.5 | 0 −0.2 | 1.1 | 11.5 | 1 | 12 | 206 | 265 | 10 | 5 |
| 25 | | 16.5 | | 1.1 | 15.2 | 1 | | 265 | 402 | 19.5 | 8 |
| 29 | | 22 | | 1.3 | 18 | 1 | | 372 | 549 | 29 | 10 |
| 32 | | 22.9 | | 1.3 | 21 | 1.5 | | 510 | 784 | 44 | 12 |
| 36 | | 24.9 | | 1.3 | 24.9 | 1.5 | | 578 | 892 | 59 | 16 |
| 45 | | 31.5 | | 1.6 | 30.3 | 2 | 15 | 862 | 1,370 | 100 | 20 |
| 58 | 0 −0.3 | 44.1 | 0 −0.3 | 1.85 | 37.5 | 2 | | 980 | 1,570 | 230 | 25 |
| 68 | | 52.1 | | 1.85 | 44.5 | 2 | | 1,570 | 2,740 | 355 | 30 |
| 80 | | 60.6 | | 2.15 | 59 | 3 | 17 | 2,160 | 4,020 | 758 | 40 |
| 100 | | 77.6 | | 2.65 | 72 | 3 | | 3,820 | 7,940 | 1,230 | 50 |
| 125 | 0 −0.4 | 101.7 | 0 −0.4 | 3.15 | 86.5 | 3 | 20 | 4,700 | 9,800 | 2,170 | 60 |
| 165 | | 133.7 | | 4.15 | 116 | 3 | | 7,350 | 16,000 | 5,000 | 80 |

1N≒0.102kgf

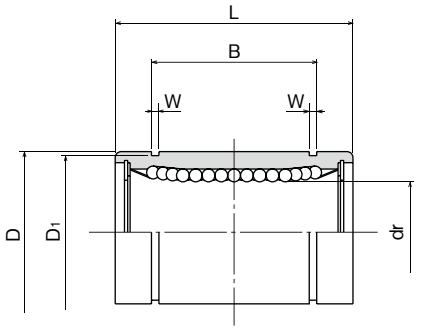
# KB-OP TYPE (Euro Standard)

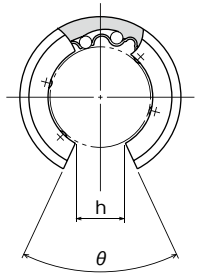
## – Open Type –

### part number structure

example **KBS 25 G UU - OP**

- specification
  **KB**: standard
  **KBS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
- open type




| part number | | | | number of ball circuits | major dimensions | | | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance* μm | mm | tolerance* μm |
| – | KB10G-OP | – | KBS10G-OP | 3 | 10 | + 8 | 19 | 0 |
| KB12-OP | KB12G-OP | KBS12-OP | KBS12G-OP | 3 | 12 | 0 | 22 | – 9 |
| KB16-OP | KB16G-OP | KBS16-OP | KBS16G-OP | 3 | 16 | + 9 | 26 | |
| KB20-OP | KB20G-OP | KBS20-OP | KBS20G-OP | 4 | 20 | – 1 | 32 | 0 |
| KB25-OP | KB25G-OP | KBS25-OP | KBS25G-OP | 5 | 25 | +11 | 40 | –11 |
| KB30-OP | KB30G-OP | KBS30-OP | KBS30G-OP | 5 | 30 | – 1 | 47 | |
| KB40-OP | KB40G-OP | KBS40-OP | KBS40G-OP | 5 | 40 | +13 | 62 | 0 |
| KB50-OP | KB50G-OP | KBS50-OP | KBS50G-OP | 5 | 50 | – 2 | 75 | –13 |
| KB60-OP | KB60G-OP | KBS60-OP | KBS60G-OP | 5 | 60 | | 90 | 0 |
| KB80-OP | – | – | – | 5 | 80 | +16/–4 | 120 | –15 |

* Accuracy is measured prior to machining open slit.

| L | | B | | W | D1 | h | θ | eccentricity* | basic load rating dynamic C | basic load rating static Co | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | tolerance mm | mm | tolerance mm | mm | mm | mm | | μm | N | N | g | mm |
| 29 | | 22 | | 1.3 | 18 | 6.8 | 80° | | 372 | 549 | 23 | 10 |
| 32 | 0 | 22.9 | 0 | 1.3 | 21 | 7.5 | 78° | 12 | 510 | 784 | 35 | 12 |
| 36 | –0.2 | 24.9 | –0.2 | 1.3 | 24.9 | 10 | 78° | | 578 | 892 | 48 | 16 |
| 45 | | 31.5 | | 1.6 | 30.3 | 10 | 60° | | 862 | 1,370 | 84 | 20 |
| 58 | | 44.1 | | 1.85 | 37.5 | 12.5 | 60° | 15 | 980 | 1,570 | 195 | 25 |
| 68 | 0 | 52.1 | 0 | 1.85 | 44.5 | 12.5 | 50° | | 1,570 | 2,740 | 309 | 30 |
| 80 | –0.3 | 60.6 | –0.3 | 2.15 | 59 | 16.8 | 50° | 17 | 2,160 | 4,020 | 665 | 40 |
| 100 | | 77.6 | | 2.65 | 72 | 21 | 50° | | 3,820 | 7,940 | 1,080 | 50 |
| 125 | 0 | 101.7 | 0 | 3.15 | 86.5 | 27.2 | 54° | 20 | 4,700 | 9,800 | 1,900 | 60 |
| 165 | –0.4 | 133.7 | –0.4 | 4.15 | 116 | 36.3 | 54° | | 7,350 | 16,000 | 4,380 | 80 |

1N≒0.102kgf

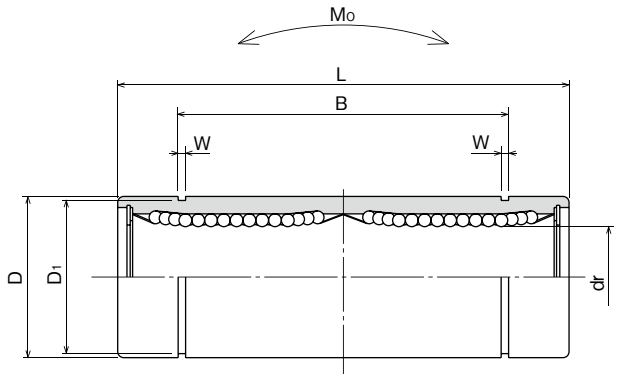
# KB-W TYPE (Euro Standard)

## – Double-Wide Type –

### part number structure

example **KBS 25 G W UU**

- specification
  **KB**: standard
  **KBS**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
- double-wide type

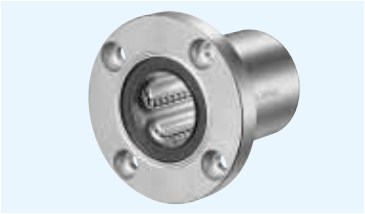



| part number | | | | number of ball circuits | major dimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | | | | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm |
| KB 8W | KB 8GW | KBS 8W | KBS 8GW | 4 | 8 | + 9 | 16 | 0/−9 |
| KB12W | KB12GW | KBS12W | KBS12GW | 4 | 12 | − 1 | 22 | 0 |
| KB16W | KB16GW | KBS16W | KBS16GW | 4 | 16 | +11 | 26 | −11 |
| KB20W | KB20GW | KBS20W | KBS20GW | 5 | 20 | − 1 | 32 | 0 |
| KB25W | KB25GW | KBS25W | KBS25GW | 6 | 25 | +13 | 40 | −13 |
| KB30W | KB30GW | KBS30W | KBS30GW | 6 | 30 | − 2 | 47 | |
| KB40W | KB40GW | KBS40W | KBS40GW | 6 | 40 | +16 | 62 | 0 |
| KB50W | KB50GW | KBS50W | KBS50GW | 6 | 50 | − 4 | 75 | −15 |
| KB60W | KB60GW | KBS60W | KBS60GW | 6 | 60 | | 90 | 0/−20 |

| L | | B | | W | D1 | eccentricity | basic load rating dynamic C | basic load rating static Co | allowable static moment Mo | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | tolerance mm | mm | tolerance mm | mm | mm | μm | N | N | N・m | g | mm |
| 46 | 0 −0.3 | 33 | 0 −0.3 | 1.1 | 15.2 | 15 | 421 | 804 | 4.3 | 40 | 8 |
| 61 | | 45.8 | | 1.3 | 21 | | 813 | 1,570 | 11.7 | 80 | 12 |
| 68 | | 49.8 | | 1.3 | 24.9 | | 921 | 1,780 | 14.2 | 115 | 16 |
| 80 | | 61 | | 1.6 | 30.5 | 17 | 1,370 | 2,740 | 25.0 | 180 | 20 |
| 112 | 0 −0.4 | 82 | 0 −0.4 | 1.85 | 38 | | 1,570 | 3,140 | 44.0 | 430 | 25 |
| 123 | | 104.2 | | 1.85 | 44.5 | | 2,500 | 5,490 | 78.9 | 615 | 30 |
| 151 | | 121.2 | | 2.15 | 59 | 20 | 3,430 | 8,040 | 147 | 1,400 | 40 |
| 192 | | 155.2 | | 2.65 | 72 | | 6,080 | 15,900 | 396 | 2,320 | 50 |
| 209 | | 170 | | 3.15 | 86.5 | 25 | 7,550 | 20,000 | 487 | 3,920 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

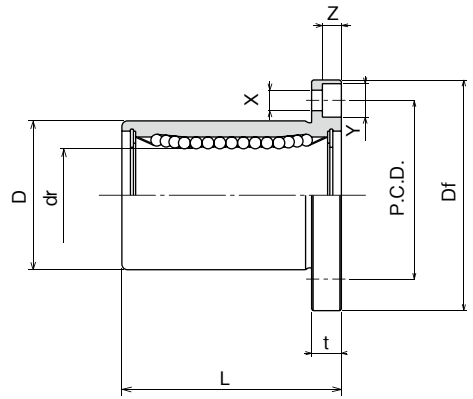
# KBF TYPE (Euro Standard)
## – Round Flange Type –

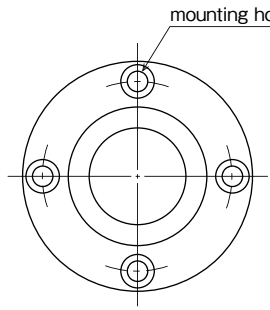


### part number structure

example **KBSF 25 G UU-SK**

- specification
  **KBF**: standard
  **KBSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| – | KBF 5G | – | KBSF 5G | 4 | 5 | + 8 0 | 12 | 0 −13 | 22 |
| KBF 8 | KBF 8G | KBSF 8 | KBSF 8G | 4 | 8 | | 16 | | 25 |
| KBF12 | KBF12G | KBSF12 | KBSF12G | 4 | 12 | | 22 | 0 −16 | 32 |
| KBF16 | KBF16G | KBSF16 | KBSF16G | 4 | 16 | + 9 − 1 | 26 | | 36 |
| KBF20 | KBF20G | KBSF20 | KBSF20G | 5 | 20 | | 32 | 0 −19 | 45 |
| KBF25 | KBF25G | KBSF25 | KBSF25G | 6 | 25 | +11 − 1 | 40 | | 58 |
| KBF30 | KBF30G | KBSF30 | KBSF30G | 6 | 30 | | 47 | | 68 |
| KBF40 | KBF40G | KBSF40 | KBSF40G | 6 | 40 | +13 − 2 | 62 | 0 −22 | 80 |
| KBF50 | KBF50G | KBSF50 | KBSF50G | 6 | 50 | | 75 | | 100 |
| KBF60 | KBF60G | KBSF60 | KBSF60G | 6 | 60 | | 90 | 0 −25 | 125 |
| KBF80 | – | – | – | 6 | 80 | +16/−4 | 120 | | 165 |

| Df mm | t mm | flange P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|
| 28 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 26 | 5 |
| 32 | 5 | 24 | 3.5×6×3.1 | | | 265 | 402 | 41 | 8 |
| 42 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 80 | 12 |
| 46 | 6 | 36 | 4.5×7.5×4.1 | | | 578 | 892 | 103 | 16 |
| 54 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 862 | 1,370 | 182 | 20 |
| 62 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 335 | 25 |
| 76 | 10 | 62 | 6.6×11×6.1 | | | 1,570 | 2,740 | 560 | 30 |
| 98 | 13 | 80 | 9×14×8.1 | 17 | 17 | 2,160 | 4,020 | 1,175 | 40 |
| 112 | 13 | 94 | 9×14×8.1 | | | 3,820 | 7,940 | 1,745 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | 20 | 20 | 4,700 | 9,800 | 3,220 | 60 |
| 164 | 18 | 142 | 11×17×11.1 | | | 7,350 | 16,000 | 6,420 | 80 |

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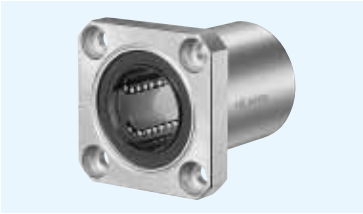
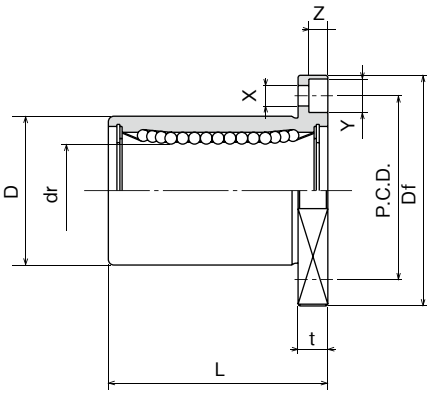
# KBK TYPE (Euro Standard)
## – Square Flange Type –

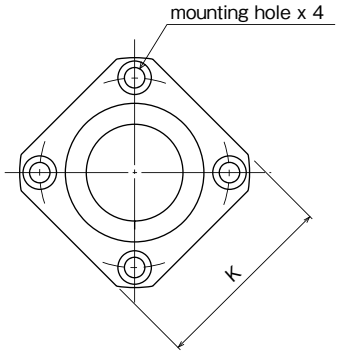


### part number structure

example **KBSK 25 G UU - SK**

- specification
  **KBK**: standard
  **KBSK**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| – | KBK 5G | – | KBSK 5G | 4 | 5 | + 8 0 | 12 | 0 −13 | 22 |
| KBK 8 | KBK 8G | KBSK 8 | KBSK 8G | 4 | 8 | | 16 | | 25 |
| KBK12 | KBK12G | KBSK12 | KBSK12G | 4 | 12 | | 22 | 0 −16 | 32 |
| KBK16 | KBK16G | KBSK16 | KBSK16G | 4 | 16 | + 9 − 1 | 26 | | 36 |
| KBK20 | KBK20G | KBSK20 | KBSK20G | 5 | 20 | | 32 | 0 −19 | 45 |
| KBK25 | KBK25G | KBSK25 | KBSK25G | 6 | 25 | +11 − 1 | 40 | | 58 |
| KBK30 | KBK30G | KBSK30 | KBSK30G | 6 | 30 | | 47 | | 68 |
| KBK40 | KBK40G | KBSK40 | KBSK40G | 6 | 40 | +13 − 2 | 62 | 0 −22 | 80 |
| KBK50 | KBK50G | KBSK50 | KBSK50G | 6 | 50 | | 75 | | 100 |
| KBK60 | KBK60G | KBSK60 | KBSK60G | 6 | 60 | | 90 | 0 −25 | 125 |
| KBK80 | – | – | – | 6 | 80 | +16/−4 | 120 | | 165 |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | g | mm |
| 28 | 22 | 5 | 20 | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 20 | 5 |
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 265 | 402 | 33 | 8 |
| 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 510 | 784 | 64 | 12 |
| 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | | | 578 | 892 | 90 | 16 |
| 54 | 42 | 8 | 43 | 5.5×9×5.1 | 15 | 15 | 862 | 1,370 | 147 | 20 |
| 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 980 | 1,570 | 295 | 25 |
| 76 | 60 | 10 | 62 | 6.6×11×6.1 | | | 1,570 | 2,740 | 465 | 30 |
| 98 | 75 | 13 | 80 | 9×14×8.1 | 17 | 17 | 2,160 | 4,020 | 975 | 40 |
| 112 | 88 | 13 | 94 | 9×14×8.1 | | | 3,820 | 7,940 | 1,545 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | 20 | 20 | 4,700 | 9,800 | 2,780 | 60 |
| 164 | 136 | 18 | 142 | 11×17×11.1 | | | 7,350 | 16,000 | 5,920 | 80 |

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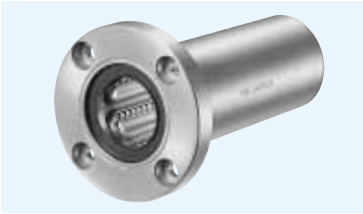
# KBF-W TYPE (Euro Standard)

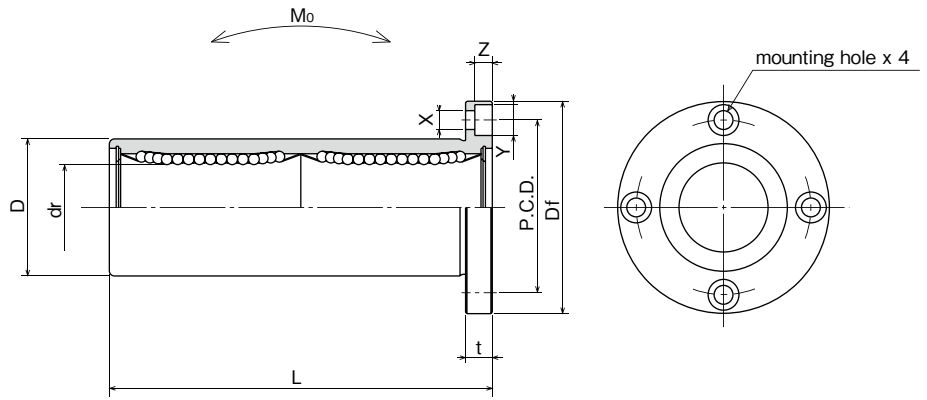
## — Round Flange Double-Wide Type —



### part number structure

example **KBSF 25 G W UU - SK**

- specification
  **KBF**: standard
  **KBSF**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating



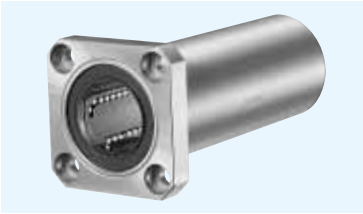

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| KBF 8W | KBF 8GW | KBSF 8W | KBSF 8GW | 4 | 8 | + 9 | 16 | 0/−13 | 46 |
| KBF12W | KBF12GW | KBSF12W | KBSF12GW | 4 | 12 | − 1 | 22 | 0 | 61 |
| KBF16W | KBF16GW | KBSF16W | KBSF16GW | 4 | 16 | +11 | 26 | −16 | 68 |
| KBF20W | KBF20GW | KBSF20W | KBSF20GW | 5 | 20 | − 1 | 32 | 0 | 80 |
| KBF25W | KBF25GW | KBSF25W | KBSF25GW | 6 | 25 | +13 | 40 | −19 | 112 |
| KBF30W | KBF30GW | KBSF30W | KBSF30GW | 6 | 30 | − 2 | 47 | | 123 |
| KBF40W | KBF40GW | KBSF40W | KBSF40GW | 6 | 40 | +16 | 62 | 0 | 151 |
| KBF50W | KBF50GW | KBSF50W | KBSF50GW | 6 | 50 | − 4 | 75 | −22 | 192 |
| KBF60W | KBF60GW | KBSF60W | KBSF60GW | 6 | 60 | | 90 | 0/−25 | 209 |

| flange | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 32 | 5 | 24 | 3.5×6×3.1 | 15 | 15 | 421 | 804 | 4.3 | 59 | 8 |
| 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.7 | 110 | 12 |
| 46 | 6 | 36 | 4.5×7.5×4.1 | | | 921 | 1,780 | 14.2 | 160 | 16 |
| 54 | 8 | 43 | 5.5×9×5.1 | 17 | 17 | 1,370 | 2,740 | 25.0 | 260 | 20 |
| 62 | 8 | 51 | 5.5×9×5.1 | | | 1,570 | 3,140 | 44.0 | 540 | 25 |
| 76 | 10 | 62 | 6.6×11×6.1 | | | 2,500 | 5,490 | 78.9 | 815 | 30 |
| 98 | 13 | 80 | 9×14×8.1 | 20 | 20 | 3,430 | 8,040 | 147 | 1,805 | 40 |
| 112 | 13 | 94 | 9×14×8.1 | | | 6,080 | 15,900 | 396 | 2,820 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | 25 | 25 | 7,550 | 20,000 | 487 | 4,920 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

# KBK-W TYPE (Euro Standard)

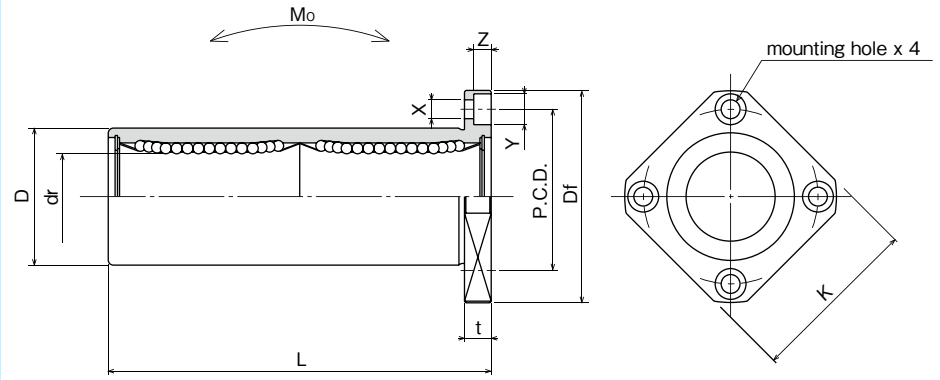
## – Square Flange Double-Wide Type –



### part number structure

example **KBSK 25 G W UU - SK**

- **KBSK 25** — specification
  **KBK**: standard
  **KBSK**: anti-corrosion
- **25** — inner contact diameter (dr)
- **G** — retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- **W** — double-wide type
- **UU** — seal
  **blank**: without seal
  **UU**: seals on both sides
- **SK** — outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| KBK 8W | KBK 8GW | KBSK 8W | KBSK 8GW | 4 | 8 | + 9 − 1 | 16 | 0/−13 | 46 |
| KBK12W | KBK12GW | KBSK12W | KBSK12GW | 4 | 12 | | 22 | 0 −16 | 61 |
| KBK16W | KBK16GW | KBSK16W | KBSK16GW | 4 | 16 | +11 − 1 | 26 | | 68 |
| KBK20W | KBK20GW | KBSK20W | KBSK20GW | 5 | 20 | | 32 | 0 −19 | 80 |
| KBK25W | KBK25GW | KBSK25W | KBSK25GW | 6 | 25 | +13 − 2 | 40 | | 112 |
| KBK30W | KBK30GW | KBSK30W | KBSK30GW | 6 | 30 | | 47 | | 123 |
| KBK40W | KBK40GW | KBSK40W | KBSK40GW | 6 | 40 | +16 − 4 | 62 | 0 −22 | 151 |
| KBK50W | KBK50GW | KBSK50W | KBSK50GW | 6 | 50 | | 75 | | 192 |
| KBK60W | KBK60GW | KBSK60W | KBSK60GW | 6 | 60 | | 90 | 0/−25 | 209 |

| flange | | | | | eccentricity | perpendicularity | basic load rating dynamic | basic load rating static | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | C N | Co N | Mo N・m | g | mm |
| 32 | 25 | 5 | 24 | 3.5×6×3.1 | 15 | 15 | 421 | 804 | 4.3 | 51 | 8 |
| 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.7 | 90 | 12 |
| 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | | | 921 | 1,780 | 14.2 | 135 | 16 |
| 54 | 42 | 8 | 43 | 5.5×9×5.1 | 17 | 17 | 1,370 | 2,740 | 25.0 | 225 | 20 |
| 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 1,570 | 3,140 | 44.0 | 500 | 25 |
| 76 | 60 | 10 | 62 | 6.6×11×6.1 | | | 2,500 | 5,490 | 78.9 | 720 | 30 |
| 98 | 75 | 13 | 80 | 9×14×8.1 | 20 | 20 | 3,430 | 8,040 | 147 | 1,600 | 40 |
| 112 | 88 | 13 | 94 | 9×14×8.1 | | | 6,080 | 15,900 | 396 | 2,620 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | 25 | 25 | 7,550 | 20,000 | 487 | 4,480 | 60 |

1N≒0.102kgf 1N・m≒0.102kgf・m

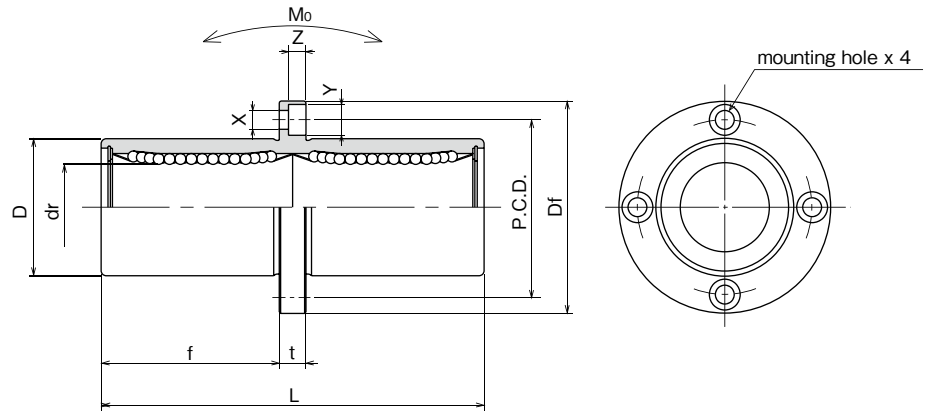
# KBFC TYPE (Euro Standard)

## – Center Mount Round Flange Type –

### part number structure

example **KBSFC 25 G UU - SK**

- specification
  **KBFC**: standard
  **KBSFC**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| KBFC 8 | KBFC 8G | KBSFC 8 | KBSFC 8G | 4 | 8 | + 9 − 1 | 16 | 0/−13 | 46 |
| KBFC12 | KBFC12G | KBSFC12 | KBSFC12G | 4 | 12 | | 22 | 0 −16 | 61 |
| KBFC16 | KBFC16G | KBSFC16 | KBSFC16G | 4 | 16 | +11 − 1 | 26 | | 68 |
| KBFC20 | KBFC20G | KBSFC20 | KBSFC20G | 5 | 20 | | 32 | 0 −19 | 80 |
| KBFC25 | KBFC25G | KBSFC25 | KBSFC25G | 6 | 25 | +13 − 2 | 40 | | 112 |
| KBFC30 | KBFC30G | KBSFC30 | KBSFC30G | 6 | 30 | | 47 | | 123 |
| KBFC40 | KBFC40G | KBSFC40 | KBSFC40G | 6 | 40 | +16 − 4 | 62 | 0 −22 | 151 |
| KBFC50 | KBFC50G | KBSFC50 | KBSFC50G | 6 | 50 | | 75 | | 192 |
| KBFC60 | KBFC60G | KBSFC60 | KBSFC60G | 6 | 60 | | 90 | 0/−25 | 209 |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | Mo N・m | g | mm |
| 20.5 | 32 | 5 | 24 | 3.5×6×3.1 | 15 | 15 | 421 | 804 | 4.3 | 59 | 8 |
| 27.5 | 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.7 | 110 | 12 |
| 31 | 46 | 6 | 36 | 4.5×7.5×4.1 | | | 921 | 1,780 | 14.2 | 160 | 16 |
| 36 | 54 | 8 | 43 | 5.5×9×5.1 | 17 | 17 | 1,370 | 2,740 | 25.0 | 260 | 20 |
| 52 | 62 | 8 | 51 | 5.5×9×5.1 | | | 1,570 | 3,140 | 44.0 | 540 | 25 |
| 56.5 | 76 | 10 | 62 | 6.6×11×6.1 | | | 2,500 | 5,490 | 78.9 | 815 | 30 |
| 69 | 98 | 13 | 80 | 9×14×8.1 | 20 | 20 | 3,430 | 8,040 | 147 | 1,805 | 40 |
| 89.5 | 112 | 13 | 94 | 9×14×8.1 | | | 6,080 | 15,900 | 396 | 2,820 | 50 |
| 95.5 | 134 | 18 | 112 | 11×17×11.1 | 25 | 25 | 7,550 | 20,000 | 487 | 4,920 | 60 |

1N≒0.102kgf　1N・m≒0.102kgf・m

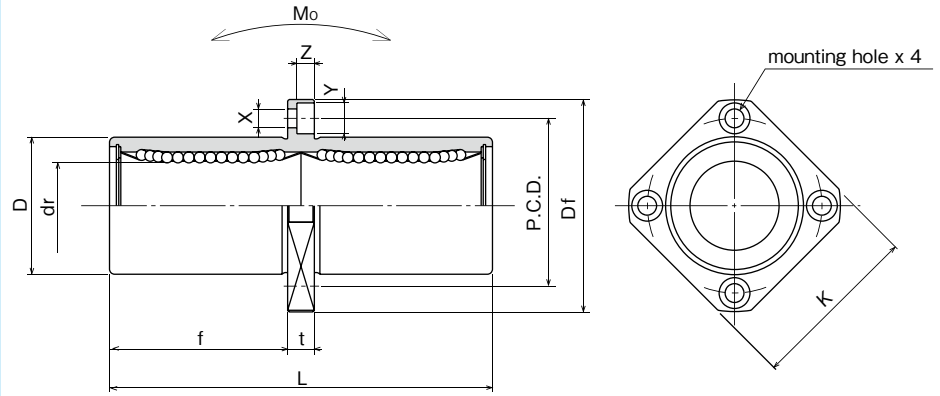
# KBKC TYPE (Euro Standard)

## — Center Mount Square Flange Type —

### part number structure

example **KBSKC 25 G UU - SK**

- specification
  **KBKC**: standard
  **KBSKC**: anti-corrosion
- inner contact diameter (dr)
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | mm | tolerance μm | mm | tolerance μm | ±0.3 mm |
| KBKC 8 | KBKC 8G | KBSKC 8 | KBSKC 8G | 4 | 8 | + 9 − 1 | 16 | 0/−13 | 46 |
| KBKC12 | KBKC12G | KBSKC12 | KBSKC12G | 4 | 12 | | 22 | 0 −16 | 61 |
| KBKC16 | KBKC16G | KBSKC16 | KBSKC16G | 4 | 16 | +11 − 1 | 26 | | 68 |
| KBKC20 | KBKC20G | KBSKC20 | KBSKC20G | 5 | 20 | | 32 | 0 −19 | 80 |
| KBKC25 | KBKC25G | KBSKC25 | KBSKC25G | 6 | 25 | +13 − 2 | 40 | | 112 |
| KBKC30 | KBKC30G | KBSKC30 | KBSKC30G | 6 | 30 | | 47 | | 123 |
| KBKC40 | KBKC40G | KBSKC40 | KBSKC40G | 6 | 40 | +16 − 4 | 62 | 0 −22 | 151 |
| KBKC50 | KBKC50G | KBSKC50 | KBSKC50G | 6 | 50 | | 75 | | 192 |
| KBKC60 | KBKC60G | KBSKC60 | KBSKC60G | 6 | 60 | | 90 | 0/−25 | 209 |

| flange | | | | | | eccentricity | perpendicularity | basic load rating | | allowable | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | μm | μm | dynamic C N | static Co N | static moment Mo N・m | g | mm |
| 20.5 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | 15 | 15 | 421 | 804 | 4.3 | 51 | 8 |
| 27.5 | 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.7 | 90 | 12 |
| 31 | 46 | 35 | 6 | 36 | 4.5×7.5×4.1 | | | 921 | 1,780 | 14.2 | 135 | 16 |
| 36 | 54 | 42 | 8 | 43 | 5.5×9×5.1 | 17 | 17 | 1,370 | 2,740 | 25.0 | 225 | 20 |
| 52 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | | | 1,570 | 3,140 | 44.0 | 500 | 25 |
| 56.5 | 76 | 60 | 10 | 62 | 6.6×11×6.1 | | | 2,500 | 5,490 | 78.9 | 720 | 30 |
| 69 | 98 | 75 | 13 | 80 | 9×14×8.1 | 20 | 20 | 3,430 | 8,040 | 147 | 1,600 | 40 |
| 89.5 | 112 | 88 | 13 | 94 | 9×14×8.1 | | | 6,080 | 15,900 | 396 | 2,620 | 50 |
| 95.5 | 134 | 106 | 18 | 112 | 11×17×11.1 | 25 | 25 | 7,550 | 20,000 | 487 | 4,480 | 60 |

1N≒0.102kgf　1N・m≒0.102kgf・m

# SW TYPE (Inch Standard)

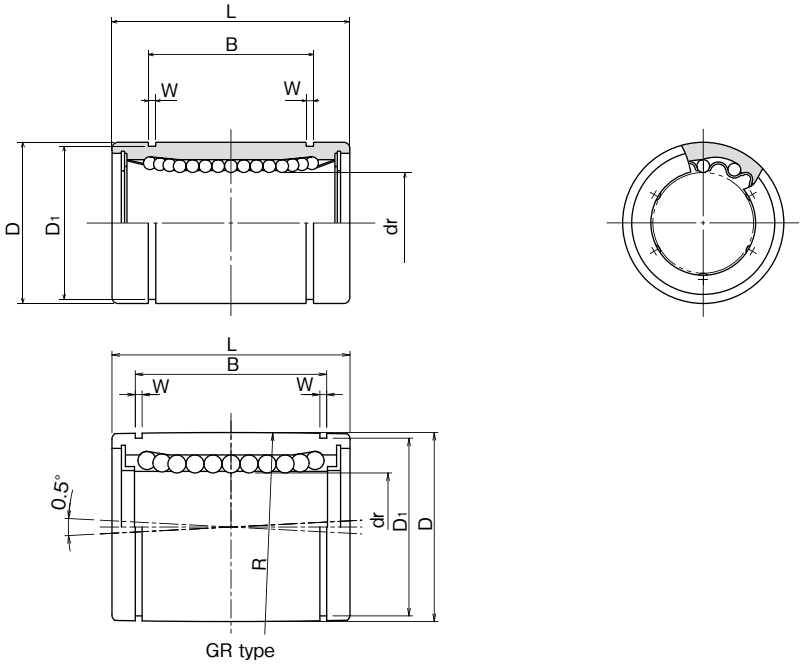
## – Standard Type –

### part number structure

example SWS 16 G R UU - P

- specification
  **SW**: standard
  **SWS**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
  *Seals are not available on SWS2 and SWS3.
- self aligning
  **blank**: non self aligning
  **R**: self aligning ※
- accuracy grade
  **blank**: high
  **P**: precision

※Self-aligning is available only with resin retainer for size 4 to 32 of carbon steel cylinder.




| partnumber | | | | | number of ball circuits | majordimensions dr | | | D | |
|---|---|---|---|---|---|---|---|---|---|---|
| steel retainer | standard resinretainer | | anti-corrosion stainless retainer | anti-corrosion resin retainer | | inch (mm) | tolerance inch/(μm) precision | tolerance inch/(μm) high | inch (mm) | tolerance inch/(μm) |
| – | – | – | SWS2 | SWS2G | 4 | .1250 (3.175) | – | 0 −.00035 (−8) | .3125 (7.938) | 0 −.00040 (−9) |
| – | – | – | SWS3 | SWS3G | 4 | .1875 (4.763) | | | .3750 (9.525) | |
| SW4 | SW4G | SW4GR | SWS4 | SWS4G | 4 | .2500 (6.350) | 0 −.00025 (−6) | 0 −.00040 (−9) | .5000 (12.700) | 0 −.00045 (−11) |
| SW6 | SW6G | SW6GR | SWS6 | SWS6G | 4 | .3750 (9.525) | | | .6250 (15.875) | 0 −.00050 (−13) |
| SW8 | SW8G | SW8GR | SWS8 | SWS8G | 4 | .5000 (12.700) | | | .8750 (22.225) | |
| SW10 | SW10G | SW10GR | SWS10 | SWS10G | 4 | .625 (15.875) | | | 1.1250 (28.575) | |
| SW12 | SW12G | SW12GR | SWS12 | SWS12G | 5 | .7500 (19.050) | 0 −.00030 (−7) | 0 −.00040 (−10) | 1.2500 (31.750) | 0 −.00065 (−16) |
| SW16 | SW16G | SW16GR | SWS16 | SWS16G | 6 | 1.0000 (25.400) | | | 1.5625 (39.688) | |
| SW20 | SW20G | SW20GR | SWS20 | SWS20G | 6 | 1.2500 (31.750) | 0 −.00035 (−8) | 0 −.00050 (−12) | 2.0000 (50.800) | 0 −.00075 (−19) |
| SW24 | SW24G | SW24GR | SWS24 | SWS24G | 6 | 1.5000 (38.100) | | | 2.3750 (60.325) | |
| SW32 | SW32G | SW32GR | SWS32 | SWS32G | 6 | 2.0000 (50.800) | | | 3.0000 (76.200) | 0 −.00090 (−22) |
| SW40 | – | – | – | – | 6 | 2.5000 (63.500) | 0 −.00040 (−9) | 0 −.00060 (−15) | 3.7500 (95.250) | |
| SW48 | – | – | – | – | 6 | 3.0000 (76.200) | | | 4.5000 (114.300) | |
| SW64 | – | – | – | – | 6 | 4.0000 (101.600) | 0 −.00040 (−10) | 0 −.00080 (−20) | 6.0000 (152.400) | 0 −.00100 (−25) |

| L | | B | | W | $D_1$ | eccentricity | | radial clearance | basicloadrating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| inch (mm) | tolerance inch/(mm) | inch (mm) | tolerance inch/(mm) | inch (mm) | inch (mm) | precision inch/(μm) | high inch/(μm) | (maximum) inch/(μm) | dynamic C N | static Co N | g | inch (mm) |
| .5000 (12.700) | 0 −.008 (−0.2) | .3681 (9.35) | 0 −.008 (−0.2) | .0280 (0.710) | .2902 (7.370) | – | .0003 (8) | −.0001 (−2) | 59 | 76 | 2.8 | 1/8 (3.175) |
| .5625 (14.275) | | .4311 (10.95) | | .0280 (0.710) | .3520 (8.940) | | | −.0001 (−3) | 91 | 110 | 3.6 | 3/16 (4.763) |
| .7500 (19.050) | | .5110 (12.98) | | .0390 (0.992) | .4687 (11.906) | .0003 (8) | .0005 (12) | | 206 | 265 | 9.5 | 1/4 (6.350) |
| .8750 (22.225) | | .6358 (16.15) | | .0390 (0.992) | .5880 (14.935) | | | | 225 | 314 | 15 | 3/8 (9.525) |
| 1.2500 (31.750) | | .9625 (24.46) | | .0459 (1.168) | .8209 (20.853) | | | −.0001 (−4) | 510 | 784 | 42 | 1/2 (12.700) |
| 1.5000 (38.100) | | 1.1039 (28.04) | | .0559 (1.422) | 1.0590 (26.899) | | | | 774 | 1,180 | 85 | 5/8 (15.875) |
| 1.6250 (41.275) | | 1.1657 (29.61) | | .0559 (1.422) | 1.1760 (29.870) | .0004 (10) | .0006 (15) | −.0002 (−6) | 862 | 1,370 | 104 | 3/4 (19.050) |
| 2.2500 (57.150) | 0 −.012 (−0.3) | 1.7547 (44.57) | 0 −.012 (−0.3) | .0679 (1.727) | 1.4687 (37.306) | | | | 980 | 1,570 | 220 | 1 (25.400) |
| 2.6250 (66.675) | | 2.0047 (50.92) | | .0679 (1.727) | 1.8859 (47.904) | .0005 (12) | .0008 (20) | −.0003 (−8) | 1,570 | 2,740 | 465 | 1-1/4 (31.750) |
| 3.0000 (76.200) | | 2.4118 (61.26) | | .0859 (2.184) | 2.2389 (56.870) | | | | 2,180 | 4,020 | 720 | 1-1/2 (38.100) |
| 4.0000 (101.600) | | 3.1917 (81.07) | | .1029 (2.616) | 2.8379 (72.085) | .0007 (17) | .0010 (25) | −.0005 (−13) | 3,820 | 7,940 | 1,310 | 2 (50.800) |
| 5.0000 (127.000) | | 3.9760 (100.99) | | .1200 (3.048) | 3.5519 (90.220) | | | | 4,700 | 10,000 | 2,600 | 2-1/2 (63.500) |
| 6.0000 (152.400) | 0 −.016 (−0.4) | 4.726 (120.04) | 0 −.016 (−0.4) | .1200 (3.048) | 4.3100 (109.474) | | | −.0008 (−20) | 7,350 | 16,000 | 4,380 | 3 (76.200) |
| 8.0000 (203.200) | | 6.258 (158.95) | | .1389 (3.530) | 5.745 (145.923) | .0008 (20) | .0012 (30) | | 14,100 | 34,800 | 10,200 | 4 (101.600) |

1N≒0.225lbf 1kg≒2.205lbs

# SW-AJ TYPE (Inch Standard)

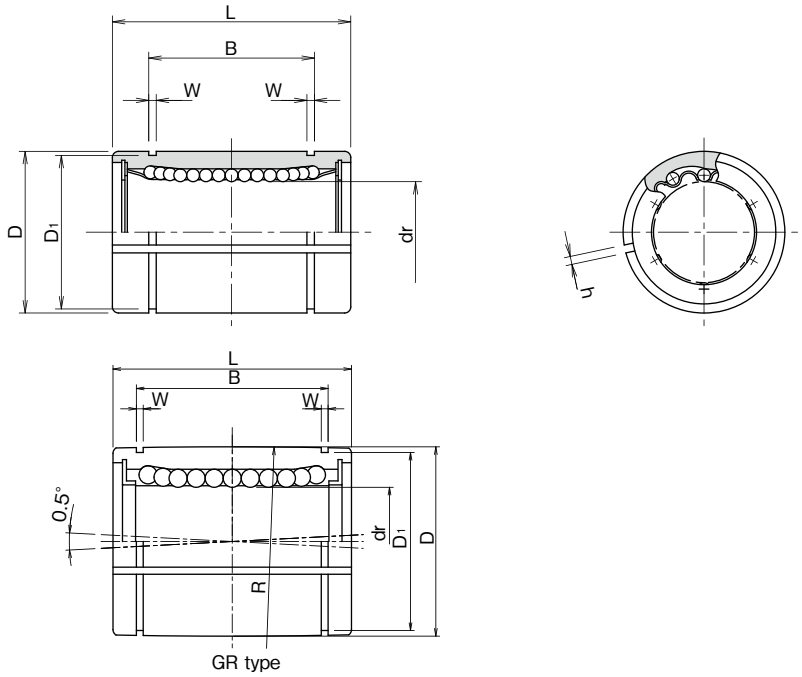
## – Clearance Adjustable Type –

### part number structure

example **SWS 16 G R UU - AJ**

- specification
  **SW**: standard
  **SWS**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- self aligning
  **blank**: non self aligning
  **R**: self aligning ※
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
- clearance-adjustable

※Self-aligning is available only with resin retainer for size 8 to 32 of carbon steel cylinder.




| partnumber | | | | | number ofball circuits | majordimensions dr | | D | |
|---|---|---|---|---|---|---|---|---|---|
| steelretainer | standard resinretainer | | anti-corrosion stainless retainer | anti-corrosion resinretainer | | inch (mm) | tolerance* inch/(μm) | inch (mm) | tolerance* inch/(μm) |
| – | SW4G-AJ | – | – | SWS4G-AJ | 4 | .2500 (6.350) | 0 −.00040 (−9) | .5000 (12.700) | 0 −.00045 (−11) |
| – | SW6G-AJ | – | – | SWS6G-AJ | 4 | .3750 (9.525) | | .6250 (15.875) | 0 −.00050 (−13) |
| SW8-AJ | SW8G-AJ | SW8GR-AJ | SWS8-AJ | SWS8G-AJ | 4 | 5.000 (12.700) | | .8750 (22.225) | |
| SW10-AJ | SW10G-AJ | SW10GR-AJ | SWS10-AJ | SWS10G-AJ | 4 | .625 (15.875) | | 1.1250 (28.575) | |
| SW12-AJ | SW12G-AJ | SW12GR-AJ | SWS12-AJ | SWS12G-AJ | 5 | .7500 (19.050) | 0 −.00040 (−10) | 1.2500 (31.750) | 0 −.00065 (−16) |
| SW16-AJ | SW16G-AJ | SW16GR-AJ | SWS16-AJ | SWS16G-AJ | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | |
| SW20-AJ | SW20G-AJ | SW20GR-AJ | SWS20-AJ | SWS20G-AJ | 6 | 1.2500 (31.750) | 0 −.00050 (−12) | 2.0000 (50.800) | 0 −.00075 (−19) |
| SW24-AJ | SW24G-AJ | SW24GR-AJ | SWS24-AJ | SWS24G-AJ | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | |
| SW32-AJ | SW32G-AJ | SW32GR-AJ | SWS32-AJ | SWS32G-AJ | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | 0 −.00090 (−22) |
| SW40-AJ | – | – | – | – | 6 | 2.5000 (63.500) | 0 −.00060 (−15) | 3.7500 (95.250) | |
| SW48-AJ | – | – | – | – | 6 | 3.0000 (76.200) | | 4.50000 (114.300) | |
| SW64-AJ | – | – | – | – | 6 | 4.0000 (101.600) | 0 −.00080 (−20) | 6.0000 (152.400) | 0 −.00100 (−25) |

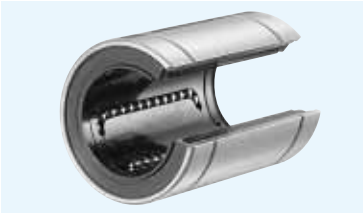
* Accuracy is measured prior to machining clearance slit.

| L inch (mm) | L tolerance inch/(mm) | B inch (mm) | B tolerance inch/(mm) | W inch (mm) | D1 inch (mm) | h inch (mm) | eccentricity* inch (μm) | basicloadrating dynamic C N | basicloadrating static Co N | mass g | shaft diameter inch (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| .7500 (19.050) | 0 −.008 (−0.2) | .5100 (12.98) | 0 −.008 (−0.2) | .0390 (0.992) | .4687 (11.906) | .04 (1) | .0005 (12) | 206 | 265 | 7.5 | 1/4 (6.350) |
| .8750 (22.225) | | .6358 (12.15) | | .0390 (0.992) | .5880 (14.935) | .04 (1) | | 225 | 314 | 13.5 | 3/8 (9.525) |
| 1.2500 (31.750) | | .9625 (24.46) | | .0459 (1.168) | .8209 (20.853) | .06 (1.5) | | 510 | 784 | 41 | 1/2 (12.700) |
| 1.5000 (38.100) | | 1.1039 (28.04) | | .0559 (1.422) | 1.0590 (26.899) | .06 (1.5) | | 774 | 1,180 | 83 | 5/8 (15.875) |
| 1.6250 (41.275) | | 1.1657 (29.61) | | .0559 (1.422) | 1.1760 (29.870) | .06 (1.5) | .0006 (15) | 862 | 1,370 | 102 | 3/4 (19.050) |
| 2.2500 (57.150) | 0 −.012 (−0.3) | 1.7547 (44.57) | 0 −.012 (−0.3) | .0679 (1.727) | 1.4687 (37.306) | .06 (1.5) | | 980 | 1,570 | 218 | 1 (25.400) |
| 2.6250 (66.675) | | 2.0047 (50.92) | | .0679 (1.727) | 1.8859 (47.904) | .10 (2.5) | .0008 (20) | 1,570 | 2,740 | 455 | 1-1/4 (31.750) |
| 3.0000 (76.200) | | 2.4118 (61.26) | | 0.859 (2.184) | 2.2389 (56.870) | .12 (3) | | 2,180 | 4,020 | 710 | 1-1/2 (38.100) |
| 4.0000 (101.600) | | 3.1917 (81.07) | | .1029 (2.616) | 2.8379 (72.085) | .12 (3) | .0010 (25) | 3,820 | 7,940 | 1,290 | 2 (50.800) |
| 5.0000 (127.000) | | 3.9760 (100.99) | | .1200 (3.048) | 3.5519 (90.220) | .12 (3) | | 4,700 | 10,000 | 2,560 | 2-1/2 (63.500) |
| 6.0000 (152.400) | 0 −.016 (−0.4) | 4.726 (120.04) | 0 −.016 (−0.4) | .1200 (3.048) | 4.3100 (109.474) | .12 (3) | | 7,350 | 16,000 | 4,350 | 3 (76.200) |
| 8.0000 (203.200) | | 6.258 (158.95) | | .1389 (3.530) | 5.745 (145.923) | .12 (3) | .0012 (30) | 14,100 | 34,800 | 10,150 | 4 (101.600) |

1N≒0.225lbf 1kg≒2.205lbs

# SW-OP TYPE (Inch Standard)

## – Open Type –

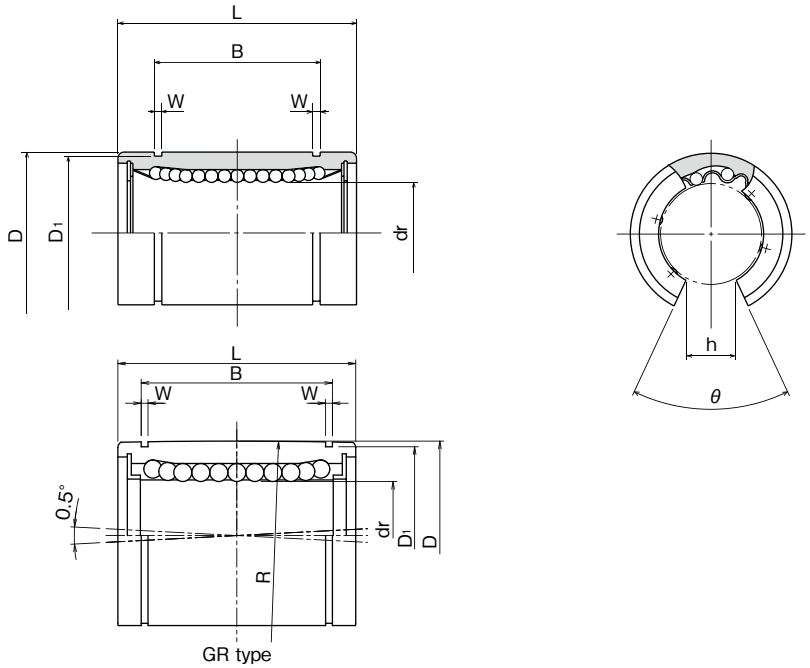


### part number structure

example SWS 16 G R UU -OP

- specification
  **SW**: standard
  **SWS**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- self aligning
  **blank**: non self aligning
  **R**: self aligning ※
- seal
  **blank**: without seal
  **U**: seal on one side
  **UU**: seals on both sides
- open type

※Self-aligning is available only with resin retainer for size 8 to 32 of carbon steel cylinder.




| part number | | | | | number of ball circuits | major dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | | anti-corrosion | | | dr | | D | |
| steel retainer | resin retainer | | steel retainer | resin retainer | | inch (mm) | tolerance* inch/(μm) | inch (mm) | tolerance* inch/(μm) |
| SW 8-OP | SW 8G-OP | SW 8GR-OP | SWS 8-OP | SWS 8G-OP | 3 | .5000 (12.700) | 0 −.00040 (−9) | .8750 (22.225) | 0 −.00050 (−13) |
| SW10-OP | SW10G-OP | SW10GR-OP | SWS10-OP | SWS10G-OP | 3 | .625 (15.875) | | 1.1250 (28.575) | |
| SW12-OP | SW12G-OP | SW12GR-OP | SWS12-OP | SWS12G-OP | 4 | .7500 (19.050) | 0 −.00040 (−10) | 1.2500 (31.750) | 0 −.00065 (−16) |
| SW16-OP | SW16G-OP | SW16GR-OP | SWS16-OP | SWS16G-OP | 5 | 1.0000 (25.400) | | 1.5625 (39.688) | |
| SW20-OP | SW20G-OP | SW20GR-OP | SWS20-OP | SWS20G-OP | 5 | 1.2500 (31.750) | 0 −.00050 (−12) | 2.0000 (50.800) | 0 −.00075 (−19) |
| SW24-OP | SW24G-OP | SW24GR-OP | SWS24-OP | SWS24G-OP | 5 | 1.5000 (38.100) | | 2.3750 (60.325) | |
| SW32-OP | SW32G-OP | SW32GR-OP | SWS32-OP | SWS32G-OP | 5 | 2.0000 (50.800) | | 3.0000 (76.200) | |
| SW40-OP | – | – | – | – | 5 | 2.5000 (63.500) | 0 −.00060 (−15) | 3.7500 (95.250) | 0 −.00090 (−22) |
| SW48-OP | – | – | – | – | 5 | 3.0000 (76.200) | | 4.50000 (114.300) | |
| SW64-OP | – | – | – | – | 5 | 4.0000 (101.600) | 0 −.00080 (−20) | 6.0000 (152.400) | 0 −.00100 (−25) |

* Accuracy is measured prior to machining clearance slit.

| L | | B | | W | $D_1$ | h | θ | eccentricity* | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| inch (mm) | tolerance inch/(mm) | inch (mm) | tolerance inch/(mm) | inch (mm) | inch (mm) | inch (mm) | | inch (μm) | dynamic C N | static Co N | g | inch (mm) |
| 1.2500 (31.750) | 0 −.008 (−0.2) | .9625 (24.46) | 0 −.008 (−0.2) | .0459 (1.168) | .8209 (20.853) | .3125 (7.9375) | 80° | .0005 (12) | 510 | 784 | 32 | 1/2 (12.700) |
| 1.5000 (38.100) | | 1.1039 (28.04) | | .0559 (1.422) | 1.0590 (26.899) | .375 (9.5250) | 80° | | 774 | 1,180 | 64 | 5/8 (15.875) |
| 1.6250 (41.275) | | 1.1657 (29.61) | | .0559 (1.422) | 1.1760 (29.870) | .4375 (11.1125) | 60° | .0006 (15) | 862 | 1,370 | 86 | 3/4 (19.050) |
| 2.2500 (57.150) | 0 −.012 (−0.3) | 1.7547 (44.57) | 0 −.012 (−0.3) | .0679 (1.727) | 1.4687 (37.306) | .5625 (14.2875) | 50° | | 980 | 1,570 | 190 | 1 (25.400) |
| 2.6250 (66.675) | | 2.0047 (50.92) | | .0679 (1.727) | 1.8859 (47.904) | .625 (15.875) | 50° | .0008 (20) | 1,570 | 2,740 | 390 | 1-1/4 (31.750) |
| 3.0000 (76.200) | | 2.4118 (61.26) | | 0.859 (2.184) | 2.2389 (56.870) | .75 (19.05) | 50° | | 2,180 | 4,020 | 610 | 1-1/2 (38.100) |
| 4.0000 (101.600) | | 3.1917 (81.07) | | .1029 (2.616) | 2.8379 (72.085) | 1.0 (25.40) | 50° | .0010 (25) | 3,820 | 7,940 | 1,120 | 2 (50.800) |
| 5.0000 (127.000) | | 3.9760 (100.99) | | .1200 (3.048) | 3.5519 (90.220) | 1.25 (31.75) | 50° | | 4,700 | 10,000 | 2,230 | 2-1/2 (63.500) |
| 6.0000 (152.400) | 0 −.016 (−0.4) | 4.726 (120.04) | 0 −.016 (−0.4) | .1200 (3.048) | 4.3100 (109.474) | 1.5 (38.10) | 50° | | 7,350 | 16,000 | 3,750 | 3 (76.200) |
| 8.0000 (203.200) | | 6.258 (158.95) | | .1389 (3.530) | 5.745 (145.923) | 2.0 (50.80) | 50° | .0012 (30) | 14,100 | 34,800 | 8,740 | 4 (101.60) |

1N≒0.225lbf 1kg≒2.205lbs

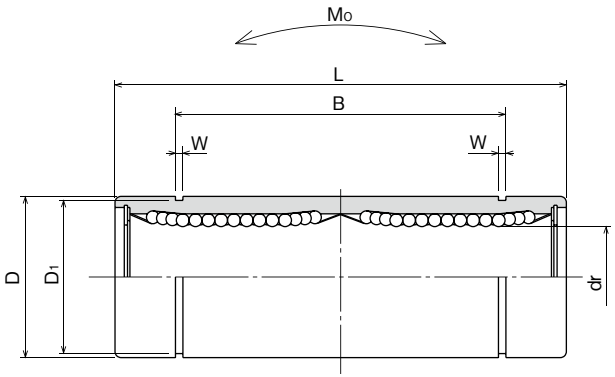
# SW-W TYPE (Inch Standard)

## – Double-Wide Type –

### part number structure

example **SWS 16 G W UU**

- specification
  **SW**: standard
  **SWS**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides



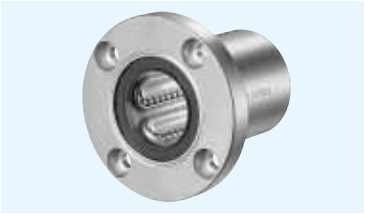

| part number | | | | number of ball circuits | major dimensions | | | |
|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | |
| steel retainer | resin retainer | stainless retainer | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) |
| **SW 4W** | **SW 4GW** | **SWS 4W** | **SWS 4GW** | 4 | .2500 (6.350) | 0 −.00040 (−10) | .5000 (12.700) | 0 −.00050 (−13) |
| **SW 6W** | **SW 6GW** | **SWS 6W** | **SWS 6GW** | 4 | .3750 (9.525) | | .6250 (15.875) | 0 −.00065 (−16) |
| **SW 8W** | **SW 8GW** | **SWS 8W** | **SWS 8GW** | 4 | .5000 (12.700) | | .8750 (22.225) | |
| **SW10W** | **SW10GW** | **SWS10W** | **SWS10GW** | 4 | .6250 (15.875) | | 1.1250 (28.575) | |
| **SW12W** | **SW12GW** | **SWS12W** | **SWS12GW** | 5 | .7500 (19.050) | 0 −.00050 (−12) | 1.2500 (31.750) | 0 −.00075 (−19) |
| **SW16W** | **SW16GW** | **SWS16W** | **SWS16GW** | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | |
| **SW20W** | **SW20GW** | **SWS20W** | **SWS20GW** | 6 | 1.2500 (31.750) | 0 −.00060 (−15) | 2.0000 (50.800) | 0 −.00090 (−22) |
| **SW24W** | **SW24GW** | **SWS24W** | **SWS24GW** | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | |
| **SW32W** | **SW32GW** | **SWS32W** | **SWS32GW** | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | 0 −.00100 (−25) |

| L | | B | | W | D1 | eccentricity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| inch (mm) | tolerance inch/(mm) | inch (mm) | tolerance inch/(mm) | inch (mm) | inch (mm) | inch (μm) | dynamic C N | static Co N | Mo N・m | g | inch (mm) |
| 1.3750 (34.925) | 0 −.012 (−0.3) | 1.0220 (25.959) | 0 −.012 (−0.3) | .0390 (0.992) | .4687 (11.906) | .0006 (15) | 323 | 530 | 2.0 | 17.5 | 1/4 (6.350) |
| 1.5938 (40.481) | | 1.2716 (32.298) | | .0390 (0.992) | .5880 (14.935) | | 353 | 630 | 2.7 | 28 | 3/8 (9.525) |
| 2.3750 (60.325) | | 1.9250 (48.895) | | .0459 (1.168) | .8209 (20.853) | | 813 | 1,570 | 11.5 | 80 | 1/2 (12.700) |
| 2.8125 (71.438) | | 2.2079 (56.080) | | .0559 (1.422) | 1.0590 (26.899) | | 1,230 | 2,350 | 20.0 | 160 | 5/8 (15.875) |
| 3.0937 (78.581) | | 2.3314 (59.218) | | .0559 (1.422) | 1.1760 (29.870) | .0008 (20) | 1,370 | 2,740 | 26.5 | 195 | 3/4 (19.050) |
| 4.2813 (108.744) | 0 −.016 (−0.4) | 3.5094 (89.139) | 0 −.016 (−0.4) | .0679 (1.727) | 1.4687 (37.306) | | 1,570 | 3,140 | 41.2 | 410 | 1 (25.400) |
| 5.0000 (127.000) | | 4.0094 (101.839) | | .0679 (1.727) | 1.8859 (47.904) | .0010 (25) | 2,500 | 5,490 | 84.8 | 820 | 1-1/4 (31.750) |
| 5.6875 (144.463) | | 4.8236 (122.519) | | .0859 (2.184) | 2.2389 (56.870) | | 3,430 | 8,040 | 143 | 1,250 | 1-1/2 (38.100) |
| 7.7500 (196.850) | | 6.3834 (162.138) | | .1029 (2.616) | 2.8379 (72.085) | .0012 (30) | 6,080 | 15,900 | 399 | 2,350 | 2 (50.800) |

1N≒0.225lbf 1N・m≒0.738lb・ft
1kg≒2.205lbs

# SWF TYPE (Inch Standard)

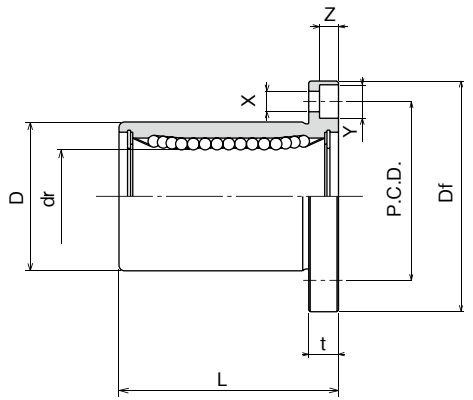
## – Round Flange Type –

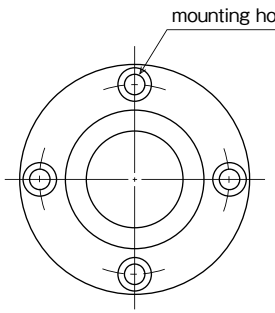


### part number structure

example **SWSF 16 G UU-SK**

- specification
  - **SWF**: standard
  - **SWSF**: anti-corrosion
- size
- retainer material
  - **blank**: standard/steel
    anti-corrosion/stainless steel
  - **G**: resin
- seal
  - **blank**: without seal
  - **UU**: seals on both sides
- outer cylinder surface treatment
  - **blank**: no surface treatment
  - **SK**: electroless nickel plating
  - **LF**: low temperature black chrome treatment with fluoride coating
  - **SB**: black oxide (not available on anti-corrosion type)
  - **SC**: industrial chrome plating



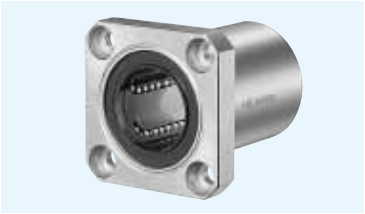




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) | ±.012 (±0.3) inch/(mm) |
| SWF 4 | SWF 4G | SWSF 4 | SWSF 4G | 4 | .2500 (6.350) | | .5000 (12.700) | 0 −.00050 (−13) | .7500 (19.050) |
| SWF 6 | SWF 6G | SWSF 6 | SWSF 6G | 4 | .3750 (9.525) | 0 −.00040 (−9) | .6250 (15.875) | 0 −.00065 (−16) | .8750 (22.225) |
| SWF 8 | SWF 8G | SWSF 8 | SWSF 8G | 4 | .5000 (12.700) | | .8750 (22.225) | | 1.2500 (31.750) |
| SWF10 | SWF10G | SWSF10 | SWSF10G | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 1.5000 (38.100) |
| SWF12 | SWF12G | SWSF12 | SWSF12G | 5 | .7500 (19.050) | 0 −.00040 (−10) | 1.2500 (31.750) | 0 −.00075 (−19) | 1.6250 (41.275) |
| SWF16 | SWF16G | SWSF16 | SWSF16G | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | | 2.2500 (57.150) |
| SWF20 | SWF20G | SWSF20 | SWSF20G | 6 | 1.2500 (31.750) | 0 −.00050 (−12) | 2.0000 (50.800) | 0 −.00090 (−22) | 2.6250 (66.675) |
| SWF24 | SWF24G | SWSF24 | SWSF24G | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | | 3.0000 (76.200) |
| SWF32 | SWF32G | SWSF32 | SWSF32G | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | 0 −.00100 (−25) | 4.0000 (101.600) |
| SWF40 | – | – | – | 6 | 2.5000 (63.500) | 0 −.00060 (−15) | 3.7500 (95.250) | | 5.0000 (127.000) |
| SWF48 | – | – | – | 6 | 3.0000 (76.200) | | 4.5000 (114.300) | | 6.0000 (152.400) |
| SWF64 | – | – | – | 6 | 4.0000 (101.600) | 0 −.00080 (−20) | 6.0000 (152.400) | 0 −.00115 (−29) | 8.0000 (203.200) |

| flange | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|
| Df inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | X×Y×Z inch/(mm) | inch (μm) | inch (μm) | dynamic C N | static Co N | g | inch (mm) |
| 1.2500 (31.750) | 0.219 (5.556) | .8750 (22.225) | .1560×.2500×.1410 (3.969×6.350×3.572) | .0005 (12) | .0005 (12) | 206 | 265 | 32 | 1/4 (6.350) |
| 1.5000 (38.100) | .2500 (6.350) | 1.0620 (26.988) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 225 | 314 | 47 | 3/8 (9.525) |
| 1.7500 (44.450) | .2500 (6.350) | 1.312 (33.338) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 510 | 784 | 88 | 1/2 (12.700) |
| 2.0000 (50.800) | .2500 (6.350) | 1.5620 (39.688) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 774 | 1,180 | 140 | 5/8 (15.875) |
| 2.1875 (55.563) | .3125 (7.938) | 1.7180 (43.660) | .2187×.3440×.2030 (5.556×8.731×5.159) | .0006 (15) | .0006 (15) | 862 | 1,370 | 190 | 3/4 (19.050) |
| 2.5000 (63.500) | .3125 (7.938) | 2.0310 (51.594) | .2187×.3440×.2030 (5.556×8.731×5.159) | | | 980 | 1,570 | 325 | 1 (25.400) |
| 3.1250 (79.375) | .3750 (9.525) | 2.5625 (65.088) | .2812×.4060×.2656 (7.144×10.319×6.747) | .0008 (20) | .0008 (20) | 1,570 | 2,740 | 665 | 1-1/4 (31.750) |
| 3.7500 (95.250) | .5000 (12.700) | 3.0625 (77.788) | .3440×.5000×.3280 (8.731×12.700×8.334) | | | 2,180 | 4,020 | 1,100 | 1-1/2 (38.100) |
| 4.3750 (111.125) | .5000 (12.700) | 3.6875 (93.662) | .3440×.5000×.3280 (8.731×12.700×8.334) | .0010 (25) | .0010 (25) | 3,820 | 7,940 | 1,760 | 2 (50.800) |
| 5.3750 (136.525) | .7500 (19.050) | 4.5625 (115.887) | .4062×.6250×.3750 (10.319×15.875×9.525) | | | 4,700 | 10,000 | 3,570 | 2-1/2 (63.500) |
| 6.1250 (155.575) | .7500 (19.050) | 5.3125 (134.937) | .4062×.6250×.3750 (10.319×15.875×9.525) | | | 7,350 | 16,000 | 5,600 | 3 (76.200) |
| 8.0000 (203.200) | .8750 (22.225) | 7.0000 (177.800) | .5000×.7125×.5000 (12.700×18.097×12.700) | .0012 (30) | .0012 (30) | 14,100 | 34,800 | 12,000 | 4 (101.600) |

1N≒0.225lbf 1kg≒2.205lbs

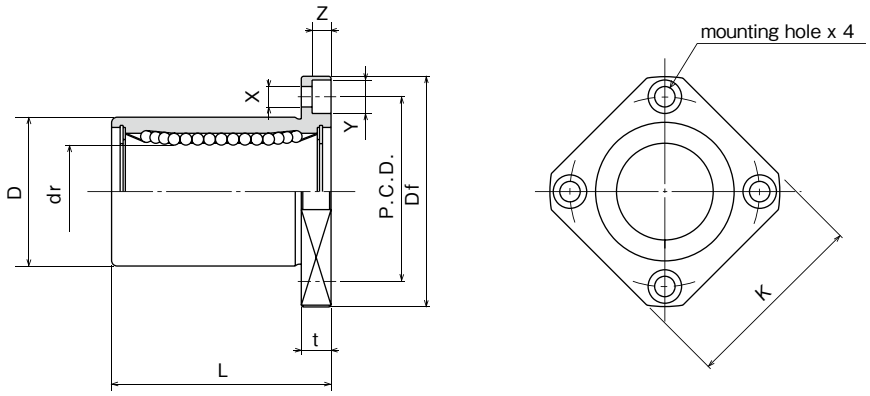
# SWK TYPE (Inch Standard)
## – Square Flange Type –



### part number structure

example **SWSK 16 G UU-SK**

- specification
  - **SWK**: standard
  - **SWSK**: anti-corrosion
- size
- retainer material
  - **blank**: standard/steel anti-corrosion/stainless steel
  - **G**: resin
- seal
  - **blank**: without seal
  - **UU**: seals on both sides
- outer cylinder surface treatment
  - **blank**: no surface treatment
  - **SK**: electroless nickel plating
  - **LF**: low temperature black chrome treatment with fluoride coating
  - **SB**: black oxide (not available on anti-corrosion type)
  - **SC**: industrial chrome plating



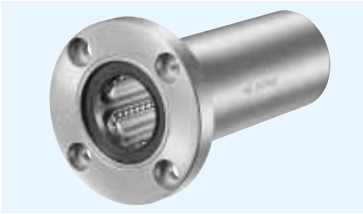

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) | ±.012 (±0.3) inch/(mm) |
| SWK 4 | SWK 4G | SWSK 4 | SWSK 4G | 4 | .2500 (6.350) | | .5000 (12.700) | $^{0}_{-.00050}$ (−13) | .7500 (19.050) |
| SWK 6 | SWK 6G | SWSK 6 | SWSK 6G | 4 | .3750 (9.525) | | .6250 (15.875) | | .8750 (22.225) |
| SWK 8 | SWK 8G | SWSK 8 | SWSK 8G | 4 | .5000 (12.700) | $^{0}_{-.00040}$ (−9) | .8750 (22.225) | $^{0}_{-.00065}$ (−16) | 1.2500 (31.750) |
| SWK10 | SWK10G | SWSK10 | SWSK10G | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 1.5000 (38.100) |
| SWK12 | SWK12G | SWSK12 | SWSK12G | 5 | .7500 (19.050) | | 1.2500 (31.750) | | 1.6250 (41.275) |
| SWK16 | SWK16G | SWSK16 | SWSK16G | 6 | 1.0000 (25.400) | $^{0}_{-.00040}$ (−10) | 1.5625 (39.688) | $^{0}_{-.00075}$ (−19) | 2.2500 (57.150) |
| SWK20 | SWK20G | SWSK20 | SWSK20G | 6 | 1.2500 (31.750) | | 2.0000 (50.800) | | 2.6250 (66.675) |
| SWK24 | SWK24G | SWSK24 | SWSK24G | 6 | 1.5000 (38.100) | $^{0}_{-.00050}$ (−12) | 2.3750 (60.325) | $^{0}_{-.00090}$ (−22) | 3.0000 (76.200) |
| SWK32 | SWK32G | SWSK32 | SWSK32G | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | | 4.0000 (101.600) |
| SWK40 | – | – | – | 6 | 2.5000 (63.500) | | 3.7500 (95.250) | | 5.0000 (127.000) |
| SWK48 | – | – | – | 6 | 3.0000 (76.200) | $^{0}_{-.00060}$ (−15) | 4.5000 (114.300) | $^{0}_{-.00100}$ (−25) | 6.0000 (152.400) |
| SWK64 | – | – | – | 6 | 4.0000 (101.600) | $^{0}_{-.00080}$ (−20) | 6.0000 (152.400) | $^{0}_{-.00115}$ (−29) | 8.0000 (203.200) |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df inch/(mm) | K inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | X×Y×Z inch/(mm) | inch (μm) | inch (μm) | dynamic C N | static Co N | g | inch (mm) |
| 1.2500 (31.750) | 1.0000 (25.400) | 0.219 (5.556) | .8750 (22.225) | .1560×.2500×.1410 (3.969×6.350×3.572) | .0005 (12) | .0005 (12) | 206 | 265 | 25 | 1/4 (6.350) |
| 1.5000 (38.100) | 1.2500 (31.750) | .2500 (6.350) | 1.0620 (26.988) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 225 | 314 | 32 | 3/8 (9.525) |
| 1.7500 (44.450) | 1.3750 (34.925) | .2500 (6.350) | 1.312 (33.338) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 510 | 784 | 68 | 1/2 (12.700) |
| 2.0000 (50.800) | 1.5000 (38.100) | .2500 (6.350) | 1.5620 (39.688) | .1875×.2970×.1720 (4.763×7.541×4.366) | | | 774 | 1,180 | 124 | 5/8 (15.875) |
| 2.1875 (55.563) | 1.6875 (42.863) | .3125 (7.938) | 1.7180 (43.660) | .2187×.3440×.2030 (5.556×8.731×5.159) | .0006 (15) | .0006 (15) | 862 | 1,370 | 150 | 3/4 (19.050) |
| 2.5000 (63.500) | 2.0000 (50.800) | .3125 (7.938) | 2.0310 (51.594) | .2187×.3440×.2030 (5.556×8.731×5.159) | | | 980 | 1,570 | 280 | 1 (25.400) |
| 3.1250 (79.375) | 2.5000 (63.500) | .3750 (9.525) | 2.5625 (65.088) | .2812×.4060×.2656 (7.144×10.319×6.747) | | | 1,570 | 2,740 | 580 | 1-1/4 (31.750) |
| 3.7500 (95.250) | 3.0000 (76.200) | .5000 (12.700) | 3.0625 (77.788) | .3440×.5000×.3280 (8.731×12.700×8.334) | .0008 (20) | .0008 (20) | 2,180 | 4,020 | 930 | 1-1/2 (38.100) |
| 4.3750 (111.125) | 3.5000 (88.900) | .5000 (12.700) | 3.6875 (93.662) | .3440×.5000×.3280 (8.731×12.700×8.334) | | | 3,820 | 7,940 | 1,580 | 2 (50.800) |
| 5.3750 (136.525) | 4.3750 (111.125) | .7500 (19.050) | 4.5625 (115.887) | .4062×.6250×.3750 (10.319×15.875×9.525) | .0010 (25) | .0010 (25) | 4,700 | 10,000 | 3,200 | 2-1/2 (63.500) |
| 6.1250 (155.575) | 5.0000 (127.000) | .7500 (19.050) | 5.3125 (134.937) | .4062×.6250×.3750 (10.319×15.875×9.525) | | | 7,350 | 16,000 | 5,000 | 3 (76.200) |
| 8.0000 (203.200) | 6.7500 (171.450) | .8750 (22.225) | 7.0000 (177.800) | .5000×.7125×.5000 (12.700×18.097×12.700) | .0012 (30) | .0012 (30) | 14,100 | 34,800 | 11,300 | 4 (101.600) |

1N≒0.225lbf 1kg≒2.205lbs

# SWF-W TYPE (Inch Standard)

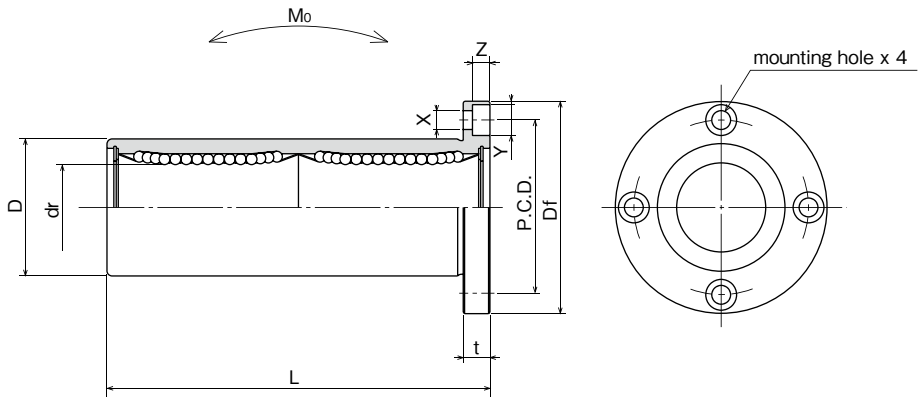
## – Round Flange Double-Wide Type –



### part number structure

example **SWSF 16 G W UU - SK**

- specification
  **SWF**: standard
  **SWSF**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating



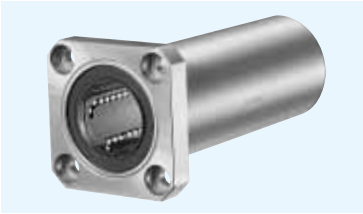

| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) | ±.012 (±0.3) inch/(mm) |
| SWF 4W | SWF 4GW | SWSF 4W | SWSF 4GW | 4 | .2500 (6.350) | 0 −.00040 (−10) | .5000 (12.700) | 0 −.00050 (−13) | 1.3750 (34.925) |
| SWF 6W | SWF 6GW | SWSF 6W | SWSF 6GW | 4 | .3750 (9.525) | | .6250 (15.875) | 0 −.00065 (−16) | 1.5938 (40.481) |
| SWF 8W | SWF 8GW | SWSF 8W | SWSF 8GW | 4 | .5000 (12.700) | | .8750 (22.225) | | 2.3750 (60.325) |
| SWF10W | SWF10GW | SWSF10W | SWSF10GW | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 2.8125 (71.438) |
| SWF12W | SWF12GW | SWSF12W | SWSF12GW | 5 | .7500 (19.050) | 0 −.00050 (−12) | 1.2500 (31.750) | 0 −.00075 (−19) | 3.0937 (78.581) |
| SWF16W | SWF16GW | SWSF16W | SWSF16GW | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | | 4.2813 (108.744) |
| SWF20W | SWF20GW | SWSF20W | SWSF20GW | 6 | 1.2500 (31.750) | 0 −.00060 (−15) | 2.0000 (50.800) | 0 −.00090 (−22) | 5.0000 (127.000) |
| SWF24W | SWF24GW | SWSF24W | SWSF24GW | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | | 5.6875 (144.463) |
| SWF32W | SWF32GW | SWSF32W | SWSF32GW | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | 0 −.00100 (−25) | 7.7500 (196.850) |

| flange | | | | eccentricity | perpendicularity | basic load rating | | allowable | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|
| Df inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | X×Y×Z inch/(mm) | inch (μm) | inch (μm) | dynamic C N | static Co N | static moment M0 N・m | g | inch (mm) |
| 1.2500 (31.750) | .2188 (5.556) | .8750 (22.225) | .1563×.2500×.1406 (3.969×6.350×3.572) | .0006 (15) | .0006 (15) | 323 | 530 | 2.0 | 40 | 1/4 (6.350) |
| 1.5000 (38.100) | .2500 (6.350) | 1.0625 (26.988) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 353 | 630 | 2.7 | 60 | 3/8 (9.525) |
| 1.7500 (44.450) | .2500 (6.350) | 1.3125 (33.338) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 813 | 1,570 | 11.5 | 126 | 1/2 (12.700) |
| 2.0000 (50.800) | .2500 (6.350) | 1.5625 (39.688) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 1,230 | 2,350 | 20.0 | 215 | 5/8 (15.875) |
| 2.1875 (55.563) | .3125 (7.938) | 1.7188 (43.656) | .2188×.3438×.2031 (5.556×8.731×5.159) | .0008 (20) | .0008 (20) | 1,370 | 2,740 | 26.5 | 280 | 3/4 (19.050) |
| 2.5000 (63.500) | .3125 (7.938) | 2.0313 (51.594) | .2188×.3438×.2031 (5.556×8.731×5.159) | | | 1,570 | 3,140 | 41.2 | 515 | 1 (25.400) |
| 3.1250 (79.375) | .3750 (9.525) | 2.5625 (65.088) | .2813×.4063×.2656 (7.144×10.319×6.747) | .0010 (25) | .0010 (25) | 2,500 | 5,490 | 84.8 | 1,020 | 1-1/4 (31.750) |
| 3.7500 (95.250) | .5000 (12.700) | 3.0625 (77.788) | .3437×.5000×.3281 (8.731×12.700×8.334) | | | 3,430 | 8,040 | 143 | 1,630 | 1-1/2 (38.100) |
| 4.3750 (111.125) | .5000 (12.700) | 3.6875 (93.662) | .3437×.5000×.3281 (8.731×12.700×8.334) | .0012 (30) | .0012 (30) | 6,080 | 15,900 | 399 | 2,800 | 2 (50.800) |

1N≒0.225lbf 1N・m≒0.738lb・ft
1kg≒2.205lbs

# SWK-W TYPE (Inch Standard)

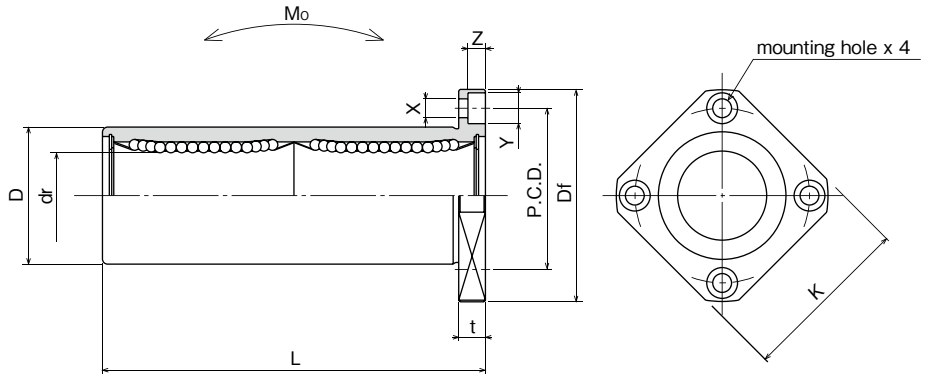
## – Square Flange Double-Wide Type –



### part number structure

example **SWSK 16 G W UU - SK**

- specification
  **SWK**: standard
  **SWSK**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides
- outer cylinder surface treatment
  **blank**: no surface treatment
  **SK**: electroless nickel plating
  **LF**: low temperature black chrome treatment with fluoride coating
  **SB**: black oxide (not available on anti-corrosion type)
  **SC**: industrial chrome plating




| part number | | | | number of ball circuits | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|
| standard | | anti-corrosion | | | dr | | D | | L |
| steel retainer | resin retainer | stainless retainer | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) | ±.012 (±0.3) inch/(mm) |
| SWK 4W | SWK 4GW | SWSK 4W | SWSK 4GW | 4 | .2500 (6.350) | 0 −.00040 (−10) | .5000 (12.700) | 0 −.00050 (−13) | 1.3750 (34.925) |
| SWK 6W | SWK 6GW | SWSK 6W | SWSK 6GW | 4 | .3750 (9.525) | | .6250 (15.875) | 0 −.00065 (−16) | 1.5938 (40.481) |
| SWK 8W | SWK 8GW | SWSK 8W | SWSK 8GW | 4 | .5000 (12.700) | | .8750 (22.225) | | 2.3750 (60.325) |
| SWK10W | SWK10GW | SWSK10W | SWSK10GW | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 2.8125 (71.438) |
| SWK12W | SWK12GW | SWSK12W | SWSK12GW | 5 | .7500 (19.050) | 0 −.00050 (−12) | 1.2500 (31.750) | 0 −.00075 (−19) | 3.0937 (78.581) |
| SWK16W | SWK16GW | SWSK16W | SWSK16GW | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | | 4.2813 (108.744) |
| SWK20W | SWK20GW | SWSK20W | SWSK20GW | 6 | 1.2500 (31.750) | 0 −.00060 (−15) | 2.0000 (50.800) | 0 −.00090 (−22) | 5.0000 (127.000) |
| SWK24W | SWK24GW | SWSK24W | SWSK24GW | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | | 5.6875 (144.463) |
| SWK32W | SWK32GW | SWSK32W | SWSK32GW | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | 0 −.00100 (−25) | 7.7500 (196.850) |

| flange | | | | | eccentricity | perpendicularity | basic load rating | | allowable static moment | mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Df | K | t | P.C.D. | X×Y×Z | inch (μm) | inch (μm) | dynamic C | static Co | Mo | | |
| inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) | | | N | N | N・m | g | inch/(mm) |
| 1.2500 (31.750) | 1.0000 (25.400) | .2188 (5.556) | .8750 (22.225) | .1563×.2500×.1406 (3.969×6.350×3.572) | .0006 (15) | .0006 (15) | 323 | 530 | 2.0 | 33 | 1/4 (6.350) |
| 1.5000 (38.100) | 1.2500 (31.750) | .2500 (6.350) | 1.0625 (26.988) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 353 | 630 | 2.7 | 45 | 3/8 (9.525) |
| 1.7500 (44.450) | 1.3750 (34.925) | .2500 (6.350) | 1.3125 (33.338) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 813 | 1,570 | 11.5 | 106 | 1/2 (12.700) |
| 2.0000 (50.800) | 1.5000 (38.100) | .2500 (6.350) | 1.5625 (39.688) | .1875×.2969×.1719 (4.763×7.541×4.366) | | | 1,230 | 2,350 | 20.0 | 200 | 5/8 (15.875) |
| 2.1875 (55.563) | 1.6875 (42.863) | .3125 (7.938) | 1.7188 (43.656) | .2188×.3438×.2031 (5.556×8.731×5.159) | .0008 (20) | .0008 (20) | 1,370 | 2,740 | 26.5 | 240 | 3/4 (19.050) |
| 2.5000 (63.500) | 2.0000 (50.800) | .3125 (7.938) | 2.0313 (51.594) | .2188×.3438×.2031 (5.556×8.731×5.159) | | | 1,570 | 3,140 | 41.2 | 470 | 1 (25.400) |
| 3.1250 (79.375) | 2.5000 (63.500) | .3750 (9.525) | 2.5625 (65.088) | .2813×.4063×.2656 (7.144×10.319×6.747) | .0010 (25) | .0010 (25) | 2,500 | 5,490 | 84.8 | 935 | 1-1/4 (31.750) |
| 3.7500 (95.250) | 3.0000 (76.200) | .5000 (12.700) | 3.0625 (77.788) | .3437×.5000×.3281 (8.731×12.700×8.334) | | | 3,430 | 8,040 | 143 | 1,460 | 1-1/2 (38.100) |
| 4.3750 (111.125) | 3.5000 (88.900) | .5000 (12.700) | 3.6875 (93.662) | .3437×.5000×.3281 (8.731×12.700×8.334) | .0012 (30) | .0012 (30) | 6,080 | 15,900 | 399 | 2,620 | 2 (50.800) |

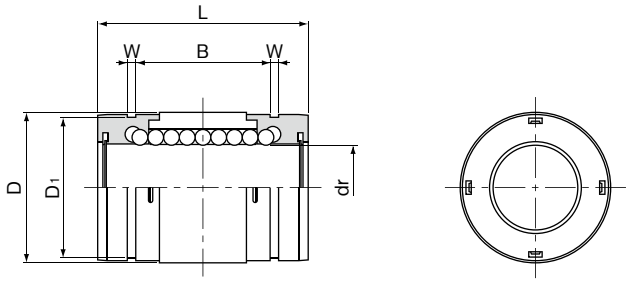
1N≒0.225lbf 1N・m≒0.738lb・ft
1kg≒2.205lbs

# GM TYPE
## – Single Type –

### part number structure

example **GM 25 UU**

- GM type
- inner contact diameter (dr)
- seal: **blank**: without seal; **UU**: seals on both sides



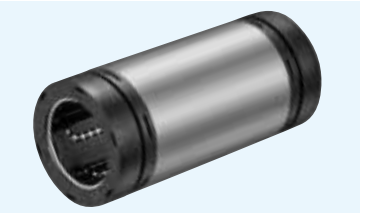

| part number | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L mm | B mm | W mm | D1 mm | basic load rating dynamic C N | basic load rating static Co N | mass g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GM 6** | 4 | 6 | 0 −9 | 12 | 0 −11 | 19 | 11.3 | 1.1 | 11.5 | 206 | 265 | 5 |
| **GM 8** | 4 | 8 | | 15 | | 24 | 15.3 | 1.1 | 14.3 | 274 | 392 | 10 |
| **GM10** | 4 | 10 | | 19 | | 29 | 19.4 | 1.3 | 18 | 372 | 549 | 18 |
| **GM12** | 4 | 12 | | 21 | 0 −13 | 30 | 20.4 | 1.3 | 20 | 510 | 784 | 23 |
| **GM13** | 4 | 13 | | 23 | | 32 | 20.4 | 1.3 | 22 | 510 | 784 | 27 |
| **GM16** | 4 | 16 | | 28 | | 37 | 23.3 | 1.6 | 27 | 774 | 1,180 | 45 |
| **GM20** | 6 | 20 | 0 −10 | 32 | 0 −16 | 42 | 27.3 | 1.6 | 30.5 | 882 | 1,370 | 70 |
| **GM25** | 6 | 25 | | 40 | | 59 | 37.3 | 1.85 | 38 | 980 | 1,570 | 150 |
| **GM30** | 6 | 30 | | 45 | | 64 | 40.8 | 1.85 | 43 | 1,570 | 2,740 | 180 |

GM-AJ type (clearance adjustable type) is also manufactured. Please contact NB for details.

1N≒0.102kgf



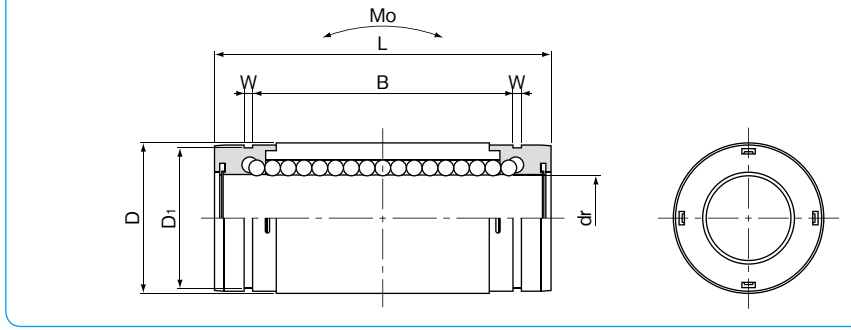
# GM-W TYPE
## – Double-Wide Type –



### part number structure

example **GM 25 W UU**

- GM type
- inner contact diameter (dr)
- seals on both sides
- double-wide type



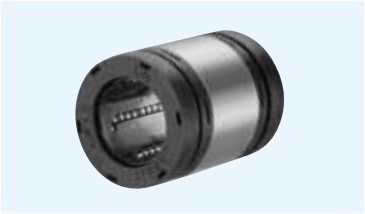

| part number | number of ball circuits | major dimensions dr mm | dr tolerance μm | D mm | D tolerance μm | L mm | B mm | W mm | D1 mm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | mass g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GM 6W UU** | 4 | 6 | 0 −10 | 12 | 0 −13 | 28 | 20.3 | 1.1 | 11.5 | 323 | 530 | 1.5 | 9 |
| **GM 8W UU** | 4 | 8 | | 15 | | 36 | 27.3 | 1.1 | 14.3 | 431 | 784 | 3.3 | 18 |
| **GM10W UU** | 4 | 10 | | 19 | | 41 | 31.4 | 1.3 | 18 | 588 | 1,100 | 5.0 | 31 |
| **GM12W UU** | 4 | 12 | | 21 | 0 −16 | 46 | 36.4 | 1.3 | 20 | 813 | 1,570 | 7.6 | 42 |
| **GM13W UU** | 4 | 13 | | 23 | | 48 | 36.4 | 1.3 | 22 | 813 | 1,570 | 8.1 | 50 |
| **GM16W UU** | 4 | 16 | | 28 | | 53 | 39.3 | 1.6 | 27 | 1,230 | 2,350 | 13.8 | 76 |
| **GM20W UU** | 6 | 20 | 0 −12 | 32 | 0 −19 | 65 | 50.3 | 1.6 | 30.5 | 1,400 | 2,740 | 20.0 | 130 |
| **GM25W UU** | 6 | 25 | | 40 | | 91 | 69.3 | 1.85 | 38 | 1,560 | 3,140 | 34.8 | 280 |
| **GM30W UU** | 6 | 30 | | 45 | | 99 | 75.8 | 1.85 | 43 | 2,490 | 5,490 | 57.5 | 334 |

*UU type is standard.

1N≒0.102kgf 1N・m≒0.102kgf・m

# GW TYPE (Inch Standard)

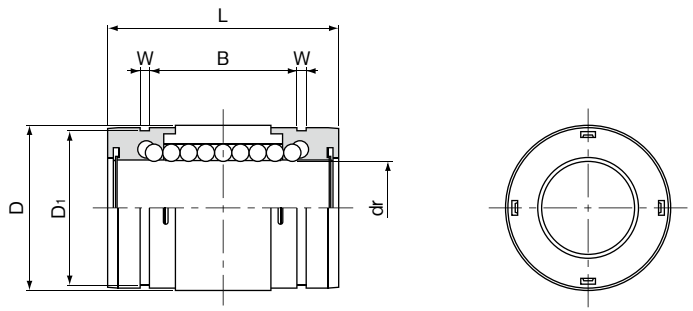
## – Single Type –



### part number structure

example GW 16 UU

- GW type
- size
- seal
  - **blank**: without seal
  - **UU**: seals on both sides




| part number | number of ball circuits | major dimensions dr inch/(mm) | dr tolerance inch/(μm) | D inch/(mm) | D tolerance inch/(μm) | L inch/(mm) |
|---|---|---|---|---|---|---|
| GW 4 | 4 | .2500 (6.350) | 0 −.00040 (−10) | .5000 (12.700) | 0 −.00045 (−11) | .7500 (19.050) |
| GW 6 | 4 | 3750 (9.525) | | .6250 (15.875) | 0 −.00050 (−13) | .8750 (22.225) |
| GW 8 | 4 | .5000 (12.700) | | .8750 (22.225) | | 1.2500 (31.750) |
| GW10 | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 1.5000 (38.100) |
| GW12 | 6 | .7500 (19.050) | | 1.2500 (31.750) | 0 −.00065 (−16) | 1.6250 (41.275) |
| GW16 | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | | 2.2500 (57.150) |
| GW20 | 6 | 1.2500 (31.750) | 0 −.00050 (−12) | 2.0000 (50.800) | 0 −.00075 (−19) | 2.6250 (66.675) |

| B inch/(mm) | W inch/(mm) | D1 inch/(mm) | basic load rating dynamic C N | basic load rating static Co N | mass g |
|---|---|---|---|---|---|
| .4329 (10.996) | .0390 (0.992) | .4687 (11.906) | 206 | 265 | 5.4 |
| .5577 (14.166) | .0390 (0.992) | .5880 (14.935) | 225 | 314 | 7.8 |
| .8710 (22.123) | .0459 (1.168) | .8209 (20.853) | 510 | 784 | 26 |
| .9920 (25.197) | .0559 (1.422) | 1.0590 (26.899) | 774 | 1,180 | 51 |
| 1.0538 (26.767) | .0559 (1.422) | 1.1760 (29.870) | 862 | 1,370 | 72 |
| 1.6187 (41.115) | .0679 (1.727) | 1.4687 (37.306) | 980 | 1,570 | 138 |
| 1.8687 (47.465) | .0679 (1.727) | 1.8859 (47.904) | 1,570 | 2,740 | 269 |

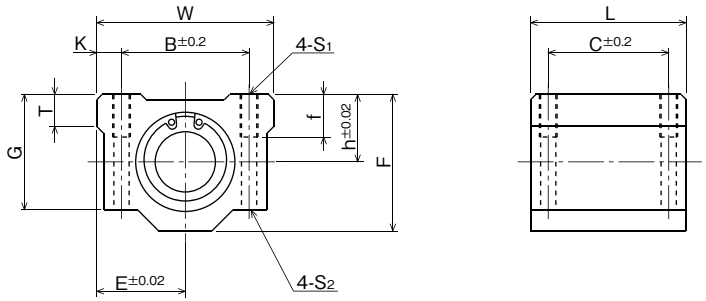
1N≒0.225lbf 1kg≒2.205lbs

# SMA TYPE
– Block Type –

## part number structure

example **SMSA 25 G UU**

- specification
  **SMA**: standard
  **SMSA**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides




| part number | inner contact diameter mm | tolerance μm | major dimensions: outer dimensions h mm | E mm | W mm | L mm | F mm | G mm | T mm |
|---|---|---|---|---|---|---|---|---|---|
| SMA 3GUU | 3 | 0 −8 | 5 | 8 | 16 | 13 | 10 | 8 | – |
| SMA 4GUU | 4 | | 5.5 | 8.5 | 17 | 15 | 11 | 9 | – |
| SMA 5GUU | 5 | | 7 | 11 | 22 | 18 | 14 | 11 | – |
| SMA 6GUU | 6 | 0 −9 | 9 | 15 | 30 | 25 | 18 | 15 | 6 |
| SMA 8GUU | 8 | | 11 | 17 | 34 | 30 | 22 | 18 | 6 |
| SMA10GUU | 10 | | 13 | 20 | 40 | 35 | 26 | 21 | 8 |
| SMA12GUU | 12 | | 15 | 21 | 42 | 36 | 28 | 24 | 8 |
| SMA13GUU | 13 | | 15 | 22 | 44 | 39 | 30 | 24.5 | 8 |
| SMA16GUU | 16 | | 19 | 25 | 50 | 44 | 38.5 | 32.5 | 9 |
| SMA20GUU | 20 | 0 −10 | 21 | 27 | 54 | 50 | 41 | 35 | 11 |
| SMA25GUU | 25 | | 26 | 38 | 76 | 67 | 51.5 | 42 | 12 |
| SMA30GUU | 30 | | 30 | 39 | 78 | 72 | 59.5 | 49 | 15 |
| SMA35GUU | 35 | 0 −12 | 34 | 45 | 90 | 80 | 68 | 54 | 18 |
| SMA40GUU | 40 | | 40 | 51 | 102 | 90 | 78 | 62 | 20 |
| SMA50GUU | 50 | | 52 | 61 | 122 | 110 | 102 | 80 | 25 |
| SMA60GUU | 60 | 0/−15 | 58 | 66 | 132 | 122 | 114 | 94 | 30 |

| mounting dimensions B mm | C mm | K mm | S1 | f mm | S2 mm | basic load rating dynamic C N | static Co N | ※ mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 8 | 2.5 | M2 | – | – | 69 | 105 | 5 | 3 |
| 12 | 10 | 2.5 | M3 | – | – | 88 | 127 | 7 | 4 |
| 16 | 12 | 3 | M3 | – | – | 167 | 206 | 14 | 5 |
| 20 | 15 | 5 | M4 | 8 | 3.4 | 206 | 265 | 34 | 6 |
| 24 | 18 | 5 | M4 | 8 | 3.4 | 274 | 392 | 52 | 8 |
| 28 | 21 | 6 | M5 | 12 | 4.3 | 372 | 549 | 92 | 10 |
| 30.5 | 26 | 5.75 | M5 | 12 | 4.3 | 510 | 784 | 102 | 12 |
| 33 | 26 | 5.5 | M5 | 12 | 4.3 | 510 | 784 | 120 | 13 |
| 36 | 34 | 7 | M5 | 12 | 4.3 | 774 | 1,180 | 200 | 16 |
| 40 | 40 | 7 | M6 | 12 | 5.2 | 882 | 1,370 | 255 | 20 |
| 54 | 50 | 11 | M8 | 18 | 7 | 980 | 1,570 | 600 | 25 |
| 58 | 58 | 10 | M8 | 18 | 7 | 1,570 | 2,740 | 735 | 30 |
| 70 | 60 | 10 | M8 | 18 | 7 | 1,670 | 3,140 | 1,100 | 35 |
| 80 | 60 | 11 | M10 | 25 | 8.7 | 2,160 | 4,020 | 1,590 | 40 |
| 100 | 80 | 11 | M10 | 25 | 8.7 | 3,820 | 7,940 | 3,340 | 50 |
| 108 | 90 | 12 | M12 | 25 | 10.7 | 4,700 | 10,000 | 4,270 | 60 |

* Mass of resin retainer type

1N≒0.102kgf

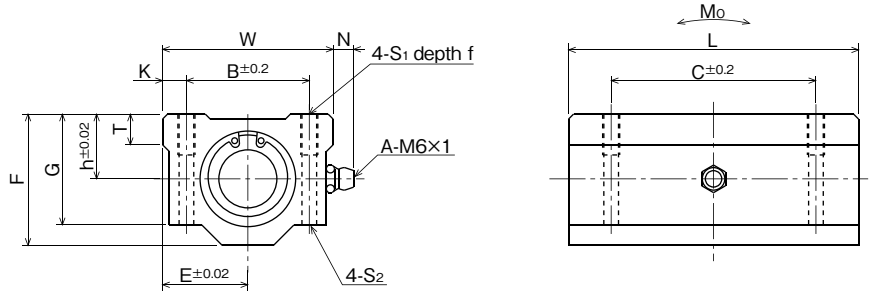
# SMA-W TYPE

## – Double-Wide Block Type –

### part number structure

example **SMSA 25 G W UU**

- specification
  **SMA**: standard
  **SMSA**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides




※Grease fitting is not provided for size 3, 4, and 5.

| part number | inner contact diameter mm | inner contact diameter tolerance μm | outer dimensions h mm | outer dimensions E mm | outer dimensions W mm | outer dimensions L mm | outer dimensions F mm | outer dimensions G mm | major dimensions T mm | major dimensions N mm |
|---|---|---|---|---|---|---|---|---|---|---|
| SMA 3GWUU | 3 | 0 −8 | 5 | 8 | 16 | 23 | 10 | 8 | – | – |
| SMA 4GWUU | 4 | | 5.5 | 8.5 | 17 | 27 | 11 | 9 | – | – |
| SMA 5GWUU | 5 | | 7 | 11 | 22 | 33 | 14 | 11 | – | – |
| SMA 6GWUU | 6 | 0 −9 | 9 | 15 | 30 | 48 | 18 | 15 | 6 | 7 |
| SMA 8GWUU | 8 | | 11 | 17 | 34 | 58 | 22 | 18 | 6 | 7 |
| SMA10GWUU | 10 | | 13 | 20 | 40 | 68 | 26 | 21 | 8 | 7 |
| SMA12GWUU | 12 | | 15 | 21 | 42 | 70 | 28 | 24 | 8 | 6.5 |
| SMA13GWUU | 13 | | 15 | 22 | 44 | 75 | 30 | 24.5 | 8 | 6.5 |
| SMA16GWUU | 16 | | 19 | 25 | 50 | 85 | 38.5 | 32.5 | 9 | 6 |
| SMA20GWUU | 20 | 0 −10 | 21 | 27 | 54 | 96 | 41 | 35 | 11 | 7 |
| SMA25GWUU | 25 | | 26 | 38 | 76 | 130 | 51.5 | 42 | 12 | 4 |
| SMA30GWUU | 30 | | 30 | 39 | 78 | 140 | 59.5 | 49 | 15 | 5 |
| SMA35GWUU | 35 | 0 −12 | 34 | 45 | 90 | 155 | 68 | 54 | 18 | 5.5 |
| SMA40GWUU | 40 | | 40 | 51 | 102 | 175 | 78 | 62 | 20 | 5 |
| SMA50GWUU | 50 | | 52 | 61 | 122 | 215 | 102 | 80 | 25 | 5 |
| SMA60GWUU | 60 | 0/−15 | 58 | 66 | 132 | 240 | 114 | 94 | 30 | 5 |

| mounting dimensions B mm | C mm | K mm | S1 | f mm | S2 mm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N・m | ※ mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 16 | 2.5 | M2 | – | – | 108 | 206 | 0.49 | 10 | 3 |
| 12 | 20 | 2.5 | M3 | – | – | 137 | 255 | 0.72 | 13 | 4 |
| 16 | 25 | 3 | M3 | – | – | 265 | 412 | 1.54 | 27 | 5 |
| 20 | 36 | 5 | M4 | 8 | 3.4 | 323 | 530 | 2.18 | 63 | 6 |
| 24 | 42 | 5 | M4 | 8 | 3.4 | 431 | 784 | 4.31 | 102 | 8 |
| 28 | 46 | 6 | M5 | 12 | 4.3 | 588 | 1,100 | 7.24 | 180 | 10 |
| 30.5 | 50 | 5.75 | M5 | 12 | 4.3 | 813 | 1,570 | 10.9 | 205 | 12 |
| 33 | 50 | 5.5 | M5 | 12 | 4.3 | 813 | 1,570 | 11.6 | 240 | 13 |
| 36 | 60 | 7 | M5 | 12 | 4.3 | 1,230 | 2,350 | 19.7 | 400 | 16 |
| 40 | 70 | 7 | M6 | 12 | 5.2 | 1,400 | 2,740 | 26.8 | 570 | 20 |
| 54 | 100 | 11 | M8 | 18 | 7 | 1,560 | 3,140 | 43.4 | 1,200 | 25 |
| 58 | 110 | 10 | M8 | 18 | 7 | 2,490 | 5,490 | 82.8 | 1,480 | 30 |
| 70 | 120 | 10 | M8 | 18 | 7 | 2,650 | 6,270 | 110 | 2,200 | 35 |
| 80 | 140 | 11 | M10 | 25 | 8.7 | 3,430 | 8,040 | 147 | 3,200 | 40 |
| 100 | 160 | 11 | M10 | 25 | 8.7 | 6,080 | 15,900 | 397 | 6,700 | 50 |
| 108 | 180 | 12 | M12 | 25 | 10.7 | 7,550 | 20,000 | 530 | 8,560 | 60 |

* Mass of resin retainer type

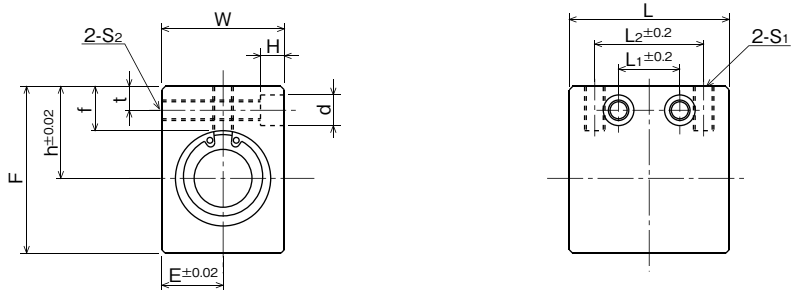
1N≒0.102kgf 1N・m≒0.102kgf・m

# AK TYPE
## — Compact Block Type —

### part number structure

example **AKS 25 G UU**

- specification
  **AK**: standard
  **AKS**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides




| part number | inner contact diameter | tolerance | major dimensions: h | E | W | L | F | L2 | S1 |
|---|---|---|---|---|---|---|---|---|---|
| | mm | μm | mm | mm | mm | mm | mm | mm | |
| AK 6GUU | 6 | 0 −9 | 14 | 8 | 16 | 27 | 22 | 18 | M4 |
| AK 8GUU | 8 | | 16 | 10 | 20 | 32 | 26 | 20 | M5 |
| AK10GUU | 10 | | 19 | 13 | 26 | 39 | 32 | 27 | M6 |
| AK12GUU | 12 | | 20 | 14 | 28 | 40 | 34 | 27 | M6 |
| AK13GUU | 13 | | 25 | 15 | 30 | 42 | 43 | 28 | M6 |
| AK16GUU | 16 | | 27 | 18 | 36 | 47 | 49 | 32 | M6 |
| AK20GUU | 20 | 0 −10 | 31 | 21 | 42 | 52 | 54 | 36 | M8 |
| AK25GUU | 25 | | 37 | 26 | 52 | 69 | 65 | 42 | M10 |
| AK30GUU | 30 | | 40 | 29 | 58 | 74 | 71 | 44 | M10 |

| mounting dimensions: f | L1 | t | S2 | d | H | basic load rating: dynamic C | static Co | ※ mass | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|
| mm | mm | mm | | mm | mm | N | N | g | mm |
| 8 | 9 | 5 | M4 | 6 | 5 | 206 | 265 | 21.5 | 6 |
| 8.5 | 10 | 5 | M4 | 6 | 5 | 274 | 392 | 40 | 8 |
| 9.5 | 15 | 6 | M5 | 8 | 6 | 372 | 549 | 80 | 10 |
| 9.5 | 15 | 6 | M5 | 8 | 6 | 510 | 784 | 90 | 12 |
| 13.5 | 16 | 7 | M6 | 9 | 7 | 510 | 784 | 132 | 13 |
| 13 | 18 | 7 | M6 | 9 | 7 | 774 | 1,180 | 204 | 16 |
| 15 | 18 | 8 | M8 | 11 | 8 | 882 | 1,370 | 272 | 20 |
| 17 | 22 | 9 | M10 | 14 | 10 | 980 | 1,570 | 574 | 25 |
| 17.5 | 22 | 9 | M10 | 14 | 10 | 1,570 | 2,740 | 710 | 30 |

* Mass of resin retainer type

1N≒0.102kgf

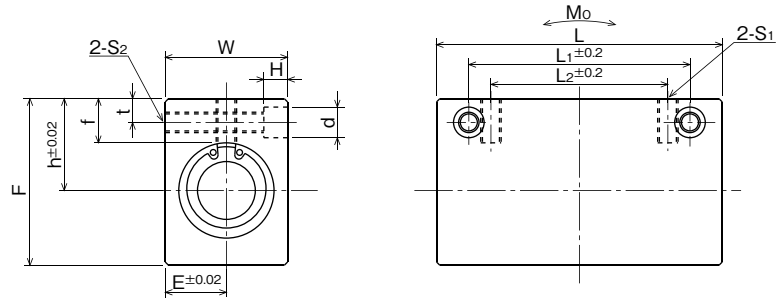
# AK-W TYPE

## — Double-Wide Compact Block Type —

### part number structure

example **AKS 25 G W UU**

- specification
  **AK**: standard
  **AKS**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides




| part number | inner contact diameter mm | tolerance μm | h mm | E mm | W mm | L mm | F mm | L2 mm | S1 |
|---|---|---|---|---|---|---|---|---|---|
| AK 6GWUU | 6 | 0 −9 | 14 | 8 | 16 | 46 | 22 | 20 | M4 |
| AK 8GWUU | 8 | | 16 | 10 | 20 | 56 | 26 | 30 | M5 |
| AK10GWUU | 10 | | 19 | 13 | 26 | 68 | 32 | 36 | M6 |
| AK12GWUU | 12 | | 20 | 14 | 28 | 70 | 34 | 36 | M6 |
| AK13GWUU | 13 | | 25 | 15 | 30 | 74 | 43 | 42 | M6 |
| AK16GWUU | 16 | | 27 | 18 | 36 | 84 | 49 | 52 | M6 |
| AK20GWUU | 20 | 0 −10 | 31 | 21 | 42 | 94 | 54 | 58 | M8 |
| AK25GWUU | 25 | | 37 | 26 | 52 | 128 | 65 | 80 | M10 |
| AK30GWUU | 30 | | 40 | 29 | 58 | 138 | 71 | 90 | M10 |

major dimensions

| mounting dimensions f mm | L1 mm | t mm | S2 | d mm | H mm | basic load rating dynamic C N | static Co N | allowable static moment Mo N・m | ※ mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 30 | 5 | M4 | 6 | 5 | 323 | 530 | 2.18 | 40 | 6 |
| 8.5 | 42 | 5 | M4 | 6 | 5 | 431 | 784 | 4.31 | 75 | 8 |
| 9.5 | 50 | 6 | M5 | 8 | 6 | 588 | 1,100 | 7.24 | 150 | 10 |
| 9.5 | 50 | 6 | M5 | 8 | 6 | 813 | 1,570 | 10.9 | 168 | 12 |
| 13.5 | 55 | 7 | M6 | 9 | 7 | 813 | 1,570 | 11.6 | 248 | 13 |
| 13 | 65 | 7 | M6 | 9 | 7 | 1,230 | 2,350 | 19.7 | 383 | 16 |
| 15 | 70 | 8 | M8 | 11 | 8 | 1,400 | 2,740 | 26.8 | 520 | 20 |
| 17 | 100 | 9 | M10 | 14 | 10 | 1,560 | 3,140 | 43.4 | 1,120 | 25 |
| 17.5 | 110 | 9 | M10 | 14 | 10 | 2,490 | 5,490 | 82.8 | 1,384 | 30 |

* Mass of resin retainer type

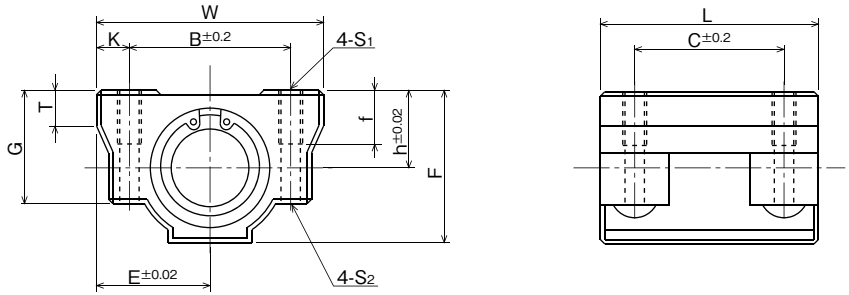
1N≒0.102kgf 1N・m≒0.102kgf・m

# SMB TYPE
— Block Type —

## part number structure

example **SMSB 25 G UU**

- specification
  **SMB**: standard
  **SMSB**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides




| part number | inner contact diameter | | major dimensions: outer dimensions | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | mm | tolerance μm | h mm | E mm | W mm | L mm | F mm | G mm | T mm |
| SMB13GUU | 13 | 0 −9 | 16 | 22 | 44 | 39 | 31 | 22 | 8 |
| SMB16GUU | 16 | | 19 | 25 | 50 | 49 | 37 | 28 | 9 |
| SMB20GUU | 20 | 0 −10 | 21 | 27 | 54 | 55 | 41 | 31 | 11 |
| SMB25GUU | 25 | | 26 | 38 | 76 | 73 | 51 | 38 | 12 |
| SMB30GUU | 30 | | 30 | 39 | 78 | 80 | 57 | 45 | 15 |
| SMB40GUU | 40 | 0/−12 | 40 | 51 | 102 | 96 | 75 | 59 | 22 |

| mounting dimensions | | | | | | basic load rating | | ※ | shaft diameter |
|---|---|---|---|---|---|---|---|---|---|
| B mm | C mm | K mm | S1 | f mm | S2 mm | dynamic C N | static Co N | mass g | mm |
| 33 | 26 | 5.5 | M5 | 10 | 4.3 | 510 | 784 | 120 | 13 |
| 36 | 34 | 7 | M5 | 12 | 4.3 | 774 | 1,180 | 170 | 16 |
| 40 | 40 | 7 | M6 | 12 | 5.1 | 882 | 1,370 | 210 | 20 |
| 54 | 50 | 11 | M8 | 18 | 6.8 | 980 | 1,570 | 500 | 25 |
| 58 | 58 | 10 | M8 | 18 | 6.8 | 1,570 | 2,740 | 600 | 30 |
| 80 | 60 | 11 | M10 | 25 | 8.6 | 2,160 | 4,020 | 1,200 | 40 |

* Mass of resin retainer type

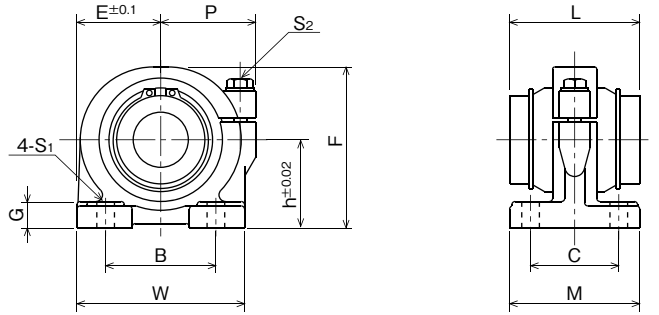
1N≒0.102kgf

# SMP TYPE
## – Pillow Block Type –

### part number structure

example **SMP 25 G UU**

- SMP type
- inner contact diameter
- seal
  **blank**: without seal
  **UU**: seals on both sides
- retainer material
  **blank**: steel
  **G**: resin




| part number | inner contact diameter | | major dimensions | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | tolerance | h | E | W | L | F | G | M |
| | mm | μm | mm | mm | mm | mm | mm | mm | mm |
| **SMP13GUU** | 13 | 0 / −9 | 25 | 25 | 50 | 32 | 46 | 8 | 36 |
| **SMP16GUU** | 16 | | 29 | 27.5 | 55 | 37 | 53 | 10 | 40 |
| **SMP20GUU** | 20 | 0 / −10 | 34 | 32.5 | 65 | 42 | 62 | 12 | 48 |
| **SMP25GUU** | 25 | | 40 | 38 | 76 | 59 | 73 | 12 | 59 |
| **SMP30GUU** | 30 | | 45 | 42.5 | 85 | 64 | 84 | 15 | 69 |
| **SMP35GUU** | 35 | 0 / −12 | 50 | 49 | 98 | 70 | 94 | 15 | 76 |
| **SMP40GUU** | 40 | | 60 | 62 | 124 | 80 | 112 | 18 | 86 |
| **SMP50GUU** | 50 | | 70 | 72 | 144 | 100 | 134 | 20 | 105 |
| **SMP60GUU** | 60 | 0/−15 | 82 | 84.5 | 169 | 110 | 154 | 23 | 115 |

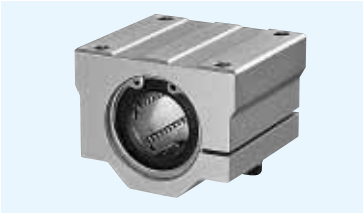
| mounting dimensions | | | | adjustment screw size | basic load rating | | ※ | shaft diameter |
|---|---|---|---|---|---|---|---|---|
| P | B | C | S1 | S2 | dynamic C | static Co | mass | |
| mm | mm | mm | mm | | N | N | g | mm |
| 30 | 30 | 26 | 7 (M5) | M5 | 510 | 784 | 270 | 13 |
| 32 | 35 | 29 | 7 (M5) | M5 | 774 | 1,180 | 380 | 16 |
| 37 | 40 | 35 | 8 (M6) | M6 | 882 | 1,370 | 680 | 20 |
| 43 | 50 | 40 | 8 (M6) | M6 | 980 | 1,570 | 1,000 | 25 |
| 49 | 58 | 46 | 10 (M8) | M8 | 1,570 | 2,740 | 1,400 | 30 |
| 58 | 62 | 53 | 12 (M10) | M10 | 1,670 | 3,140 | 2,100 | 35 |
| 68 | 76 | 64 | 12 (M10) | M10 | 2,160 | 4,020 | 3,700 | 40 |
| 80 | 100 | 70 | 14 (M12) | M12 | 3,820 | 7,940 | 6,100 | 50 |
| 88 | 115 | 80 | 14 (M12) | M12 | 4,700 | 10,000 | 8,700 | 60 |

* Mass of resin retainer type

1N≒0.102kgf

# SMJ TYPE

## – Clearance Adjustable Type –

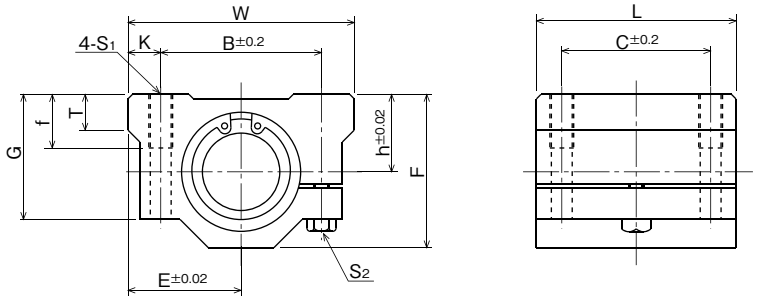


### part number structure

example **SMSJ 25 G UU**

- specification
  **SMJ**: standard
  **SMSJ**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel*
  anti-corrosion/stainless steel*
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides

*Size 10 is provided with resin retainer type only.




| part number | inner contact diameter mm | outer dimensions h mm | E mm | W mm | L mm | F mm | G mm | major dimensions T mm | B mm |
|---|---|---|---|---|---|---|---|---|---|
| **SMJ10GUU** | 10 | 13 | 20 | 40 | 35 | 26 | 21 | 8 | 28 |
| **SMJ12GUU** | 12 | 15 | 21 | 42 | 36 | 28 | 24 | 8 | 30.5 |
| **SMJ13GUU** | 13 | 15 | 22 | 44 | 39 | 30 | 24.5 | 8 | 33 |
| **SMJ16GUU** | 16 | 19 | 25 | 50 | 44 | 38.5 | 32.5 | 9 | 36 |
| **SMJ20GUU** | 20 | 21 | 27 | 54 | 50 | 41 | 35 | 11 | 40 |
| **SMJ25GUU** | 25 | 26 | 38 | 76 | 67 | 51.5 | 42 | 12 | 54 |
| **SMJ30GUU** | 30 | 30 | 39 | 78 | 72 | 59.5 | 49 | 15 | 58 |
| **SMJ35GUU** | 35 | 34 | 45 | 90 | 80 | 68 | 54 | 18 | 70 |
| **SMJ40GUU** | 40 | 40 | 51 | 102 | 90 | 78 | 62 | 20 | 80 |
| **SMJ50GUU** | 50 | 52 | 61 | 122 | 110 | 102 | 80 | 25 | 100 |
| **SMJ60GUU** | 60 | 58 | 66 | 132 | 122 | 114 | 94 | 30 | 108 |

| mounting dimensions C mm | K mm | S1 | f mm | adjustment screw size S2 | basic load rating dynamic C N | static Co N | ※ mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|
| 21 | 6 | M5 | 12 | M4 | 372 | 549 | 92 | 10 |
| 26 | 5.75 | M5 | 12 | M4 | 510 | 784 | 102 | 12 |
| 26 | 5.5 | M5 | 12 | M4 | 510 | 784 | 120 | 13 |
| 34 | 7 | M5 | 12 | M4 | 774 | 1,180 | 200 | 16 |
| 40 | 7 | M6 | 12 | M5 | 882 | 1,370 | 255 | 20 |
| 50 | 11 | M8 | 18 | M6 | 980 | 1,570 | 600 | 25 |
| 58 | 10 | M8 | 18 | M6 | 1,570 | 2,740 | 735 | 30 |
| 60 | 10 | M8 | 18 | M6 | 1,670 | 3,140 | 1,100 | 35 |
| 60 | 11 | M10 | 25 | M8 | 2,160 | 4,020 | 1,590 | 40 |
| 80 | 11 | M10 | 25 | M8 | 3,820 | 7,940 | 3,340 | 50 |
| 90 | 12 | M12 | 25 | M10 | 4,700 | 10,000 | 4,270 | 60 |

* Mass of resin retainer type

1N≒0.102kgf

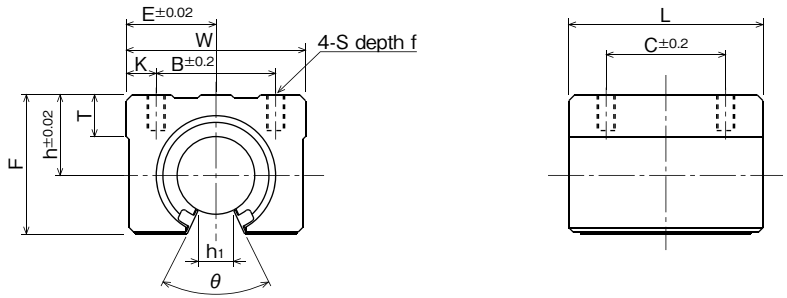
# SME TYPE
## – Open Block Type –

### part number structure

example **SMSE 25 G UU**

- specification
  **SME**: standard
  **SMSE**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel*
  anti-corrosion/stainless steel*
  **G**: resin
- seal
  **blank**: without seal
  **UU**: seals on both sides

*Size 10 is provided with resin retainer type only.




| part number | inner contact diametermm | major dimensions: outer dimensions h mm | E mm | W mm | L mm | F mm | T mm | h1 mm | θ |
|---|---|---|---|---|---|---|---|---|---|
| **SME10GUU** | 10 | 15 | 18 | 36 | 32 | 24 | 7 | 6 | 80° |
| **SME13GUU** | 13 | 17 | 20 | 40 | 39 | 28 | 8 | 8.5 | 80° |
| **SME16GUU** | 16 | 20 | 22.5 | 45 | 45 | 33 | 9 | 10 | 80° |
| **SME20GUU** | 20 | 23 | 24 | 48 | 50 | 39 | 11 | 10 | 60° |
| **SME25GUU** | 25 | 27 | 30 | 60 | 65 | 47 | 14 | 11.5 | 50° |
| **SME30GUU** | 30 | 33 | 35 | 70 | 70 | 56 | 15 | 14 | 50° |
| **SME35GUU** | 35 | 37 | 40 | 80 | 80 | 63 | 18 | 16 | 50° |
| **SME40GUU** | 40 | 42 | 45 | 90 | 90 | 72 | 20 | 19 | 50° |
| **SME50GUU** | 50 | 53 | 60 | 120 | 110 | 92 | 25 | 23 | 50° |

| mounting dimensions B mm | C mm | K mm | S | f mm | basic load rating dynamic C N | static Co N | ※ mass g | shaft diameter mm |
|---|---|---|---|---|---|---|---|---|
| 25 | 20 | 5.5 | M5 | 10 | 372 | 549 | 65 | 10 |
| 28 | 26 | 6 | M5 | 10 | 510 | 784 | 100 | 13 |
| 32 | 30 | 6.5 | M5 | 12 | 774 | 1,180 | 150 | 16 |
| 35 | 35 | 6.5 | M6 | 12 | 882 | 1,370 | 200 | 20 |
| 40 | 40 | 10 | M6 | 12 | 980 | 1,570 | 450 | 25 |
| 50 | 50 | 10 | M8 | 18 | 1,570 | 2,740 | 630 | 30 |
| 55 | 55 | 12.5 | M8 | 18 | 1,670 | 3,140 | 925 | 35 |
| 65 | 65 | 12.5 | M10 | 20 | 2,160 | 4,020 | 1,330 | 40 |
| 94 | 80 | 13 | M10 | 20 | 3,820 | 7,940 | 3,000 | 50 |

* Mass of resin retainer type

1N≒0.102kgf

# SME-W TYPE

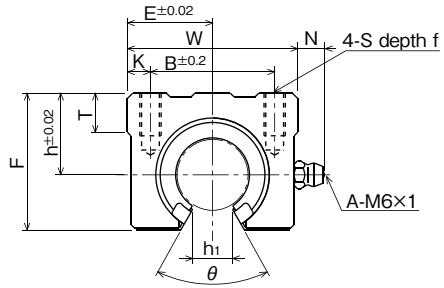
## – Double-wide Open Block Type –

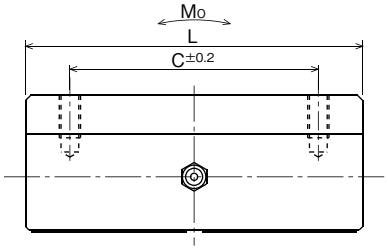
### part number structure

example **SMSE 25 G W UU**

- specification
  **SME**: standard
  **SMSE**: anti-corrosion
- inner contact diameter
- retainer material
  **blank**: standard/steel*
  anti-corrosion/stainless steel*
  **G**: resin
- double-wide type
- seal
  **blank**: without seal
  **UU**: seals on both sides

*Size 10 is provided with resin retainer type only.




| part number | inner contact diameter | outer dimensions | | | | | | | major dimensions | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | h | E | W | L | F | T | N | $h_1$ | θ |
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | |
| **SME10GWUU** | 10 | 15 | 18 | 36 | 65 | 24 | 7 | 7.5 | 6 | 80° |
| **SME13GWUU** | 13 | 17 | 20 | 40 | 75 | 28 | 8 | 7.5 | 8.5 | 80° |
| **SME16GWUU** | 16 | 20 | 22.5 | 45 | 85 | 33 | 9 | 7.5 | 10 | 80° |
| **SME20GWUU** | 20 | 23 | 24 | 48 | 95 | 39 | 11 | 7.5 | 10 | 60° |
| **SME25GWUU** | 25 | 27 | 30 | 60 | 130 | 47 | 14 | 7.5 | 11.5 | 50° |
| **SME30GWUU** | 30 | 33 | 35 | 70 | 140 | 56 | 15 | 7.5 | 14 | 50° |

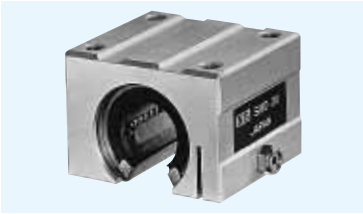
| mounting dimensions | | | | | basic load rating | | allowable | ※ | shaft |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | dynamic | static | static moment | mass | diameter |
| B | C | K | S | f | C | Co | Mo | | |
| mm | mm | mm | | mm | N | N | N・m | g | mm |
| 25 | 40 | 5.5 | M5 | 10 | 588 | 1,100 | 4.63 | 140 | 10 |
| 28 | 50 | 6 | M5 | 10 | 813 | 1,570 | 7.42 | 200 | 13 |
| 32 | 60 | 6.5 | M5 | 12 | 1,230 | 2,350 | 12.6 | 300 | 16 |
| 35 | 70 | 6.5 | M6 | 12 | 1,400 | 2,740 | 14.5 | 400 | 20 |
| 40 | 90 | 10 | M6 | 12 | 1,560 | 3,140 | 24.7 | 900 | 25 |
| 50 | 100 | 10 | M8 | 18 | 2,490 | 5,490 | 47.2 | 1,260 | 30 |

* Mass of resin retainer type

1N≒0.102kgf　1N・m≒0.102kgf・m

# SMD TYPE

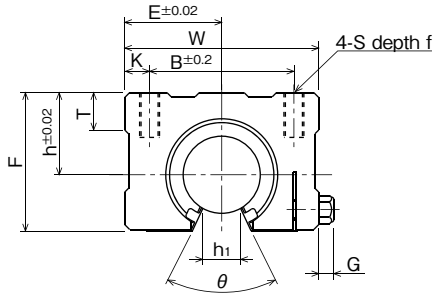
— Open Block with Clearance Adjustable Type —

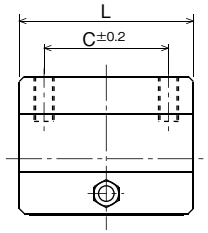


## part number structure

example **SMSD 25 G UU**

- specification
  - **SMD**: standard
  - **SMSD**: anti-corrosion
- inner contact diameter
- retainer material
  - **blank**: standard/steel
  - anti-corrosion/stainless steel
  - **G**: resin
- seal
  - **blank**: without seal
  - **UU**: seals on both sides




| part number | inner contact diameter | major dimensions: outer dimensions | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | h | E | W | L | F | T | G | $h_1$ | $\theta$ |
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | |
| **SMD16GUU** | 16 | 20 | 25 | 50 | 45 | 33 | 9 | 6 | 10 | 80° |
| **SMD20GUU** | 20 | 23 | 27 | 54 | 50 | 39 | 11 | 7 | 10 | 60° |
| **SMD25GUU** | 25 | 27 | 38 | 76 | 65 | 47 | 14 | 7 | 11.5 | 50° |
| **SMD30GUU** | 30 | 33 | 39 | 78 | 70 | 56 | 15 | 7 | 14 | 50° |

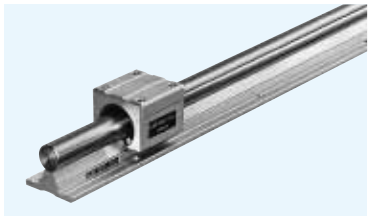
| mounting dimensions | | | | | basic load rating | | ※ | shaft diameter |
|---|---|---|---|---|---|---|---|---|
| B | C | K | S | f | dynamic C | static Co | mass | |
| mm | mm | mm | | mm | N | N | g | mm |
| 36 | 30 | 7 | M5 | 12 | 774 | 1,180 | 170 | 16 |
| 40 | 35 | 7 | M6 | 12 | 882 | 1,370 | 240 | 20 |
| 54 | 40 | 11 | M6 | 12 | 980 | 1,570 | 580 | 25 |
| 58 | 50 | 10 | M8 | 18 | 1,570 | 2,740 | 720 | 30 |

* Mass of resin retainer type

1N≒0.102kgf

# CE TYPE

## – Non-Clearance Adjustable Type –

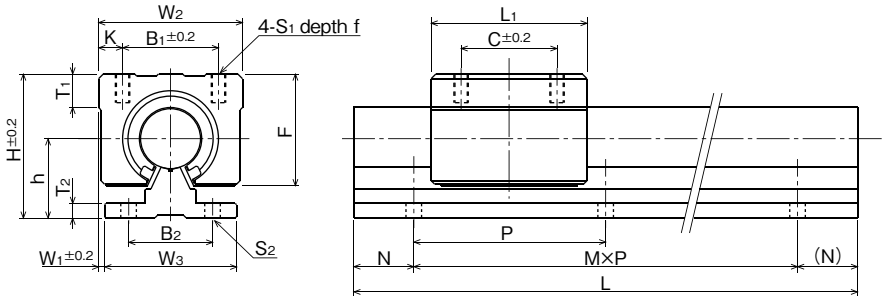


### part number structure

example **CES 25 - 2 - 500**

- specification
  **CE**: standard
  **CES**: anti-corrosion
- shaft diameter
- number of blocks attached to one shaft
- total length

※Inside bush is a resin retainer type with seals.

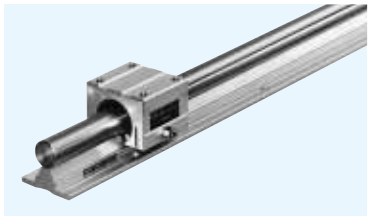



| part number | | shaft diameter | assembly dimension | | | block dimension | | | | | | | | | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| standard | anti-corrosion | g6 mm | H mm | h mm | W1 mm | W2 mm | L1 mm | B1 mm | C mm | K mm | T1 mm | f mm | S1 | F mm | W3 mm | B2 mm | T2 mm | P mm | S2 mm |
| **CE16** | **CES16** | 16 | 45 | 25 | 2.5 | 45 | 45 | 32 | 30 | 6.5 | 9 | 12 | M5 | 33 | 40 | 30 | 5 | 150 | 5.5 |
| **CE20** | **CES20** | 20 | 50 | 27 | 1.5 | 48 | 50 | 35 | 35 | 6.5 | 11 | 12 | M6 | 39 | 45 | 30 | 5 | 150 | 5.5 |
| **CE25** | **CES25** | 25 | 60 | 33 | 2.5 | 60 | 65 | 40 | 40 | 10 | 14 | 12 | M6 | 47 | 55 | 35 | 6 | 200 | 6.5 |
| **CE30** | **CES30** | 30 | 70 | 37 | 5 | 70 | 70 | 50 | 50 | 10 | 15 | 18 | M8 | 56 | 60 | 40 | 7 | 200 | 6.5 |

| support rail dimensions L (M,N) mm | | | | basic load rating dynamic C N | basic load rating static Co N | mass block g | mass rail kg/m | size |
|---|---|---|---|---|---|---|---|---|
| 300 (1,75) | 500 (3,25) | 800 (5,25) | 1,000 (6,50) | 774 | 1,180 | 150 | 2.58 | **16** |
| 1,500 (9,75) | 1,800 (11,75) | 2,000 (13,25) | | | | | | |
| 300 (1,75) | 500 (3,25) | 800 (5,25) | 1,000 (6,50) | 882 | 1,370 | 200 | 3.49 | **20** |
| 1,500 (9,75) | 1,800 (11,75) | 2,000 (13,25) | | | | | | |
| 300 (1,50) | 500 (2,50) | 800 (3,100) | 1,000 (4,100) | 980 | 1,570 | 450 | 5.31 | **25** |
| 1,500 (7,50) | 1,800 (8,100) | 2,000 (9,100) | | | | | | |
| 300 (1,50) | 500 (2,50) | 800 (3,100) | 1,000 (4,100) | 1,570 | 2,740 | 630 | 7.39 | **30** |
| 1,500 (7,50) | 1,800 (8,100) | 2,000 (9,100) | | | | | | |

1N≒0.102kgf

# CD TYPE
## – Clearance Adjustable Type –

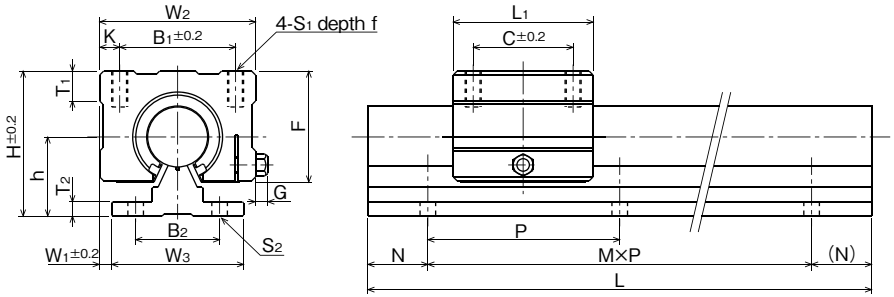


### part number structure

example **CDS 25 - 2 - 500**

- **CDS**: specification (**CD**: standard, **CDS**: anti-corrosion)
- **25**: shaft diameter
- **2**: number of blocks attached to one shaft
- **500**: total length

※Inside bush is a resin retainer type with seals.



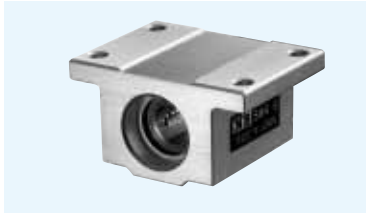

| part number | | shaft diameter | assembly dimensions | | | block dimensions | | | | | | | | | | major dimensions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| standard | anti-corrosion | g6 mm | H mm | h mm | W1 mm | W2 mm | L1 mm | B1 mm | C mm | K mm | T1 mm | f mm | S1 | G mm | F mm | W3 mm | B2 mm | T2 mm | P mm | S2 mm |
| **CD16** | **CDS16** | 16 | 45 | 25 | 5 | 50 | 45 | 36 | 30 | 7 | 9 | 12 | M5 | 6 | 33 | 40 | 30 | 5 | 150 | 5.5 |
| **CD20** | **CDS20** | 20 | 50 | 27 | 4.5 | 54 | 50 | 40 | 35 | 7 | 11 | 12 | M6 | 7 | 39 | 45 | 30 | 5 | 150 | 5.5 |
| **CD25** | **CDS25** | 25 | 60 | 33 | 10.5 | 76 | 65 | 54 | 40 | 11 | 12 | 12 | M6 | 7 | 47 | 55 | 35 | 6 | 200 | 6.5 |
| **CD30** | **CDS30** | 30 | 70 | 37 | 9 | 78 | 70 | 58 | 50 | 10 | 15 | 18 | M8 | 7 | 56 | 60 | 40 | 7 | 200 | 6.5 |

| support rail dimensions L (M,N) mm | | | | basic load rating dynamic C N | basic load rating static Co N | mass block g | mass rail kg/m | size |
|---|---|---|---|---|---|---|---|---|
| 300 (1,75) | 500 (3,25) | 800 (5,25) | 1,000 (6,50) | 774 | 1,180 | 170 | 2.58 | **16** |
| 1,500 (9,75) | 1,800 (11,75) | 2,000 (13,25) | | | | | | |
| 300 (1,75) | 500 (3,25) | 800 (5,25) | 1,000 (6,50) | 882 | 1,370 | 240 | 3.49 | **20** |
| 1,500 (9,75) | 1,800 (11,75) | 2,000 (13,25) | | | | | | |
| 300 (1,50) | 500 (2,50) | 800 (3,100) | 1,000 (4,100) | 980 | 1,570 | 580 | 5.31 | **25** |
| 1,500 (7,50) | 1,800 (8,100) | 2,000 (9,100) | | | | | | |
| 300 (1,50) | 500 (2,50) | 800 (3,100) | 1,000 (4,100) | 1,570 | 2,740 | 720 | 7.39 | **30** |
| 1,500 (7,50) | 1,800 (8,100) | 2,000 (9,100) | | | | | | |

1N≒0.102kgf

# SWA TYPE (Inch Standard)

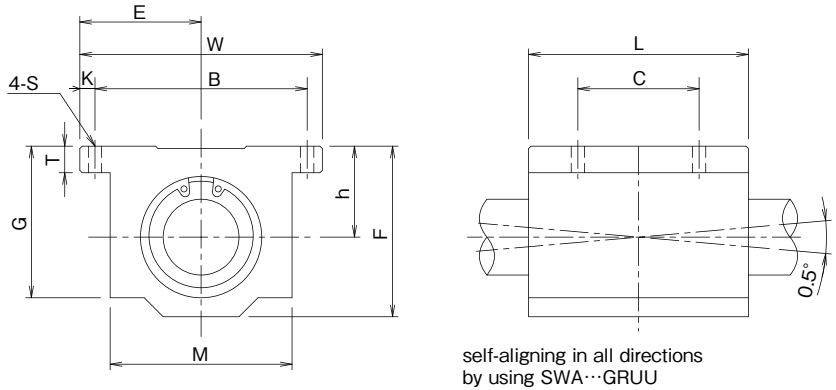
## – Block Type –



### part number structure

example **SWA 20 G R UU**

- specification
  **SWA**: standard
  **SWSA**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- self-aligning
  (SWA-resin retainer only)
- seal
  **blank**: without seal
  **UU**: seals on both sides




self-aligning in all directions
by using SWA···GRUU

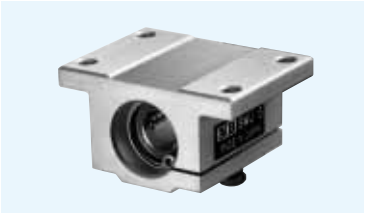
| part number | inner contact diameter | tolerance | major dimensions: outer dimensions h | E | W | L | F |
|---|---|---|---|---|---|---|---|
| | inch/(mm) | inch/(μm) | ±.001/(±0.02) inch/(mm) | ±.001/(±0.02) inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) |
| SWA 4GUU | .2500 (6.350) | 0 −.00040 (−9) | .4370 (11.100) | .8125 (20.638) | 1.625 (41.28) | 1.188 (30.16) | .813 (20.64) |
| SWA 6GUU | .3750 (9.525) | | .5000 (12.700) | .8750 (22.225) | 1.750 (44.45) | 1.313 (33.34) | .938 (23.82) |
| SWA 8GUU | .5000 (12.700) | | .6870 (17.450) | 1.0000 (25.400) | 2.000 (50.80) | 1.688 (42.86) | 1.250 (31.75) |
| SWA 10GUU | .6250 (15.875) | | .8750 (22.225) | 1.2500 (31.750) | 2.500 (63.50) | 1.938 (49.21) | 1.625 (41.28) |
| SWA 12GUU | .7500 (19.050) | 0 −.00040 (−10) | .9370 (23.800) | 1.3750 (34.925) | 2.750 (69.85) | 2.063 (52.39) | 1.750 (44.45) |
| SWA 16GUU | 1.0000 (25.400) | | 1.1870 (30.150) | 1.6250 (41.275) | 3.250 (82.55) | 2.813 (71.44) | 2.188 (55.56) |
| SWA 20GUU | 1.2500 (31.750) | 0 −.00050 (−12) | 1.5000 (38.100) | 2.0000 (50.800) | 4.000 (101.60) | 3.625 (92.08) | 2.813 (71.44) |
| SWA 24GUU | 1.5000 (38.100) | | 1.7500 (44.450) | 2.3750 (60.325) | 4.750 (120.65) | 4.000 (101.60) | 3.250 (82.55) |
| SWA 32GUU | 2.0000 (50.800) | | 2.1250 (53.975) | 3.0000 (76.200) | 6.000 (152.40) | 5.000 (127.00) | 4.063 (103.19) |

| T | G | M | mounting dimensions: B | C | K | S | basic load rating: dynamic C | static Co | mass |
|---|---|---|---|---|---|---|---|---|---|
| inch/(mm) | inch/(mm) | inch/(mm) | ±.01/(±0.2) inch/(mm) | ±.01/(±0.2) inch/(mm) | inch/(mm) | inch/(mm) | N | N | g |
| .188 (4.76) | .750 (19.05) | 1.000 (25.40) | 1.312 (33.33) | .750 (19.05) | .156 (3.96) | .156 (3.96) | 206 | 265 | 45 |
| .188 (4.76) | .875 (22.23) | 1.125 (28.58) | 1.437 (36.50) | .875 (22.23) | .156 (3.96) | .156 (3.96) | 225 | 314 | 62 |
| .250 (6.35) | 1.125 (28.58) | 1.375 (34.93) | 1.688 (42.88) | 1.000 (25.40) | .156 (3.96) | .156 (3.96) | 510 | 784 | 130 |
| .281 (7.14) | 1.437 (36.50) | 1.750 (44.45) | 2.125 (53.98) | 1.125 (28.58) | .188 (4.76) | .188 (4.76) | 774 | 1,180 | 240 |
| .313 (7.94) | 1.563 (39.69) | 1.875 (47.63) | 2.375 (60.33) | 1.250 (31.75) | .188 (4.76) | .188 (4.76) | 862 | 1,370 | 290 |
| .375 (9.53) | 1.938 (49.21) | 2.375 (60.33) | 2.875 (73.03) | 1.750 (44.45) | .188 (4.76) | .219 (5.56) | 980 | 1,570 | 615 |
| .438 (11.11) | 2.500 (63.50) | 3.000 (76.20) | 3.500 (88.90) | 2.000 (50.80) | .250 (6.35) | .219 (5.56) | 1,570 | 2,740 | 1,300 |
| .500 (12.70) | 2.875 (73.03) | 3.500 (88.90) | 4.125 (104.78) | 2.500 (63.50) | .313 (7.94) | .281 (7.14) | 2,160 | 4,020 | 1,900 |
| .625 (15.88) | 3.625 (92.08) | 4.500 (114.30) | 5.250 (133.35) | 3.250 (82.55) | .375 (9.53) | .413 (10.50) | 3,820 | 7,940 | 3,600 |

SI UNIT 1N≒0.225lbf
1kg≒2.205lbs

# SWJ TYPE (Inch Standard)

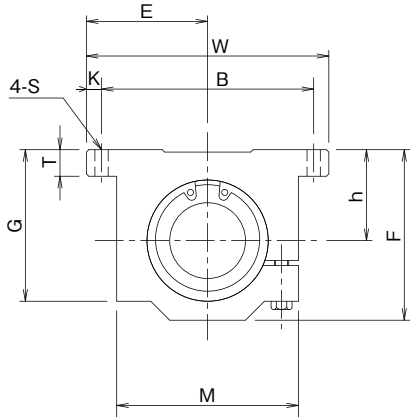
## – Clearance Adjustable Block Type –

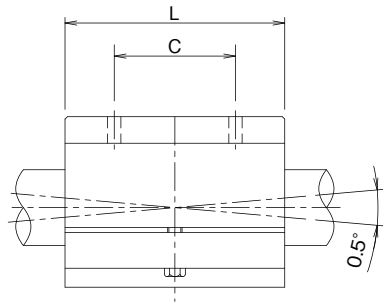


### part number structure

example **SWJ 20 G R UU**

- specification
  **SWJ**: standard
  **SWSJ**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- self-aligning
  (SWA-resin retainer only)
- seal
  **blank**: without seal
  **UU**: seals on both sides



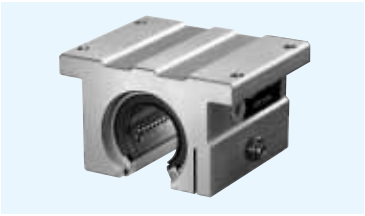

self-aligning in all directions
by using SWJ···GRUU

| part number | inner contact diameter | major dimensions outer dimensions h | E | W | L | F |
|---|---|---|---|---|---|---|
| | inch/(mm) | ±.001/(±0.02) inch/(mm) | ±.001/(±0.02) inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) |
| SWJ 4GUU | .2500 (6.350) | .4370 (11.100) | .8125 (20.638) | 1.625 (41.28) | 1.188 (30.16) | .813 (20.64) |
| SWJ 6GUU | .3750 (9.525) | .5000 (12.700) | .8750 (22.225) | 1.750 (44.45) | 1.313 (33.34) | .938 (23.82) |
| SWJ 8GUU | .5000 (12.700) | .6870 (17.450) | 1.0000 (25.400) | 2.000 (50.80) | 1.688 (42.86) | 1.250 (31.75) |
| SWJ 10GUU | .6250 (15.875) | .8750 (22.225) | 1.2500 (31.750) | 2.500 (63.50) | 1.938 (49.21) | 1.625 (41.28) |
| SWJ 12GUU | .7500 (19.050) | .9370 (23.800) | 1.3750 (34.925) | 2.750 (69.85) | 2.063 (52.39) | 1.750 (44.45) |
| SWJ 16GUU | 1.0000 (25.400) | 1.1870 (30.150) | 1.6250 (41.275) | 3.250 (82.55) | 2.813 (71.44) | 2.188 (55.56) |
| SWJ 20GUU | 1.2500 (31.750) | 1.5000 (38.100) | 2.0000 (50.800) | 4.000 (101.60) | 3.625 (92.08) | 2.813 (71.44) |
| SWJ 24GUU | 1.5000 (38.100) | 1.7500 (44.450) | 2.3750 (60.325) | 4.750 (120.65) | 4.000 (101.60) | 3.250 (82.55) |
| SWJ 32GUU | 2.0000 (50.800) | 2.1250 (53.975) | 3.0000 (76.200) | 6.000 (152.40) | 5.000 (127.00) | 4.063 (103.19) |

| T | G | M | mounting dimensions B | C | K | S | basic load rating dynamic C | static Co | mass |
|---|---|---|---|---|---|---|---|---|---|
| inch/(mm) | inch/(mm) | inch/(mm) | ±.01/(±0.2) inch/(mm) | ±.01/(±0.2) inch/(mm) | inch/(mm) | inch/(mm) | N | N | g |
| .188 (4.76) | .750 (19.05) | 1.000 (25.40) | 1.312 (33.33) | .750 (19.05) | .156 (3.96) | .156 (3.96) | 206 | 265 | 45 |
| .188 (4.76) | .875 (22.23) | 1.125 (28.58) | 1.437 (36.50) | .875 (22.23) | .156 (3.96) | .156 (3.96) | 225 | 315 | 62 |
| .250 (6.35) | 1.125 (28.58) | 1.375 (34.93) | 1.688 (42.88) | 1.000 (25.40) | .156 (3.96) | .156 (3.96) | 510 | 784 | 130 |
| .281 (7.14) | 1.437 (36.50) | 1.750 (44.45) | 2.125 (53.98) | 1.125 (28.58) | .188 (4.76) | .188 (4.76) | 774 | 1,180 | 240 |
| .313 (7.94) | 1.563 (39.69) | 1.875 (47.63) | 2.375 (60.33) | 1.250 (31.75) | .188 (4.76) | .188 (4.76) | 862 | 1,370 | 290 |
| .375 (9.53) | 1.938 (49.21) | 2.375 (60.33) | 2.875 (73.03) | 1.750 (44.45) | .188 (4.76) | .219 (5.56) | 980 | 1,570 | 615 |
| .438 (11.11) | 2.500 (63.50) | 3.000 (76.20) | 3.500 (88.90) | 2.000 (50.80) | .250 (6.35) | .219 (5.56) | 1,570 | 2,740 | 1,300 |
| .500 (12.70) | 2.875 (73.03) | 3.500 (88.90) | 4.125 (104.78) | 2.500 (50.80) | .313 (7.94) | .281 (7.14) | 2,160 | 4,020 | 1,900 |
| .625 (15.88) | 3.625 (92.08) | 4.500 (114.30) | 5.250 (133.35) | 3.250 (82.55) | .375 (9.53) | .413 (10.50) | 3,820 | 7,940 | 3,600 |

SI UNIT 1N≒0.225lbf
1kg≒2.205lbs

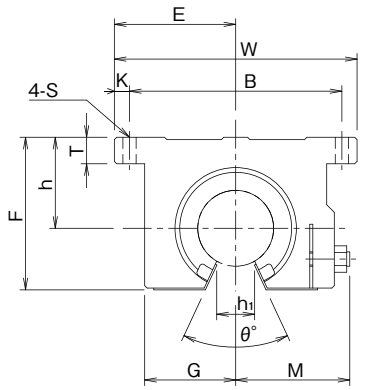
# SWD TYPE (Inch Standard)
## — Open Block Type —

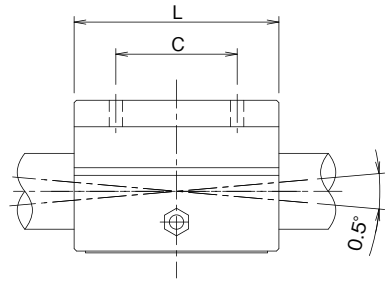


### part number structure

example **SWD 20 G R UU**

- specification
  **SWD**: standard
  **SWSD**: anti-corrosion
- size
- retainer material
  **blank**: standard/steel
  anti-corrosion/stainless steel
  **G**: resin
- self-aligning
  (SWD-resin retainer only)
- seal
  **blank**: without seal
  **UU**: seals on both sides




self-aligning in all directions
by using SWD···GRUU

| part number | inner contact diameter inch/(mm) | major dimensions outer dimensions h ±.001/(±0.02) inch/(mm) | E ±.001/(±0.02) inch/(mm) | W inch/(mm) | L inch/(mm) | F inch/(mm) | T inch/(mm) | G inch/(mm) |
|---|---|---|---|---|---|---|---|---|
| SWD 8GUU | .5000 (12.700) | .6870 (17.450) | 1.0000 (25.400) | 2.000 (50.80) | 1.500 (38.10) | 1.100 (27.94) | .250 (6.35) | .688 (17.5) |
| SWD 10GUU | .6250 (15.875) | .8750 (22.225) | 1.2500 (31.750) | 2.500 (63.50) | 1.750 (44.45) | 1.375 (34.93) | .281 (7.14) | .875 (22.23) |
| SWD 12GUU | .7500 (19.050) | .9370 (23.800) | 1.3750 (34.950) | 2.750 (69.85) | 1.875 (47.63) | 1.535 (39.00) | .315 (8.00) | .937 (23.80) |
| SWD 16GUU | 1.0000 (25.400) | 1.1870 (30.150) | 1.6250 (41.300) | 3.250 (82.55) | 2.625 (66.68) | 1.975 (50.17) | .375 (9.53) | 1.188 (30.18) |
| SWD 20GUU | 1.2500 (31.750) | 1.5000 (38.100) | 2.0000 (50.800) | 4.000 (101.60) | 3.375 (85.73) | 2.485 (63.12) | .437 (11.10) | 1.500 (38.10) |
| SWD 24GUU | 1.5000 (38.100) | 1.7500 (44.450) | 2.3750 (60.325) | 4.750 (120.65) | 3.750 (95.25) | 2.910 (73.90) | .500 (12.70) | 1.750 (44.45) |
| SWD 32GUU | 2.0000 (50.800) | 2.1250 (53.975) | 3.0000 (76.200) | 6.000 (152.4) | 4.750 (120.65) | 3.660 (92.90) | .625 (15.88) | 2.250 (57.15) |

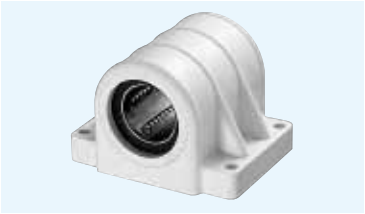
| M inch/(mm) | $h_1$ inch/(mm) | θ | mounting dimensions B ±.01/(±0.2) inch/(mm) | C ±.01/(±0.2) inch/(mm) | K inch/(mm) | S inch/(mm) | basic load rating dynamic C N | static Co N | mass g |
|---|---|---|---|---|---|---|---|---|---|
| .98 (24.89) | .3425 (8.70) | 80° | 1.688 (42.88) | 1.000 (25.40) | .156 (3.96) | .156 (3.96) | 510 | 784 | 98 |
| 1.15 (29.21) | .375 (9.53) | 80° | 2.125 (53.98) | 1.125 (28.58) | .188 (4.76) | .188 (4.76) | 774 | 1,180 | 185 |
| 1.23 (31.24) | .4375 (11.11) | 60° | 2.375 (60.33) | 1.250 (31.75) | .188 (4.76) | .188 (4.76) | 862 | 1,370 | 235 |
| 1.48 (37.59) | .5625 (14.29) | 50° | 2.875 (73.03) | 1.750 (44.45) | .188 (4.76) | .219 (5.56) | 980 | 1,570 | 530 |
| 1.88 (47.75) | .625 (15.88) | 50° | 3.500 (88.90) | 2.000 (50.80) | .250 (6.35) | .219 (5.56) | 1,570 | 2,740 | 1,080 |
| 2.12 (53.85) | .750 (19.05) | 50° | 4.125 (104.78) | 2.500 (63.50) | .313 (7.94) | .281 (7.14) | 2,160 | 4,020 | 1,620 |
| 2.70 (68.58) | 1.00 (25.40) | 50° | 5.250 (133.35) | 3.250 (82.55) | .375 (9.53) | .413 (10.50) | 3,820 | 7,940 | 3,100 |

SI UNIT 1N≒0.225lbf
1kg≒2.205lbs

# RBW TYPE

## (Inch Standard ／Anti-Corrosion Type)

## − Resin Block Type −

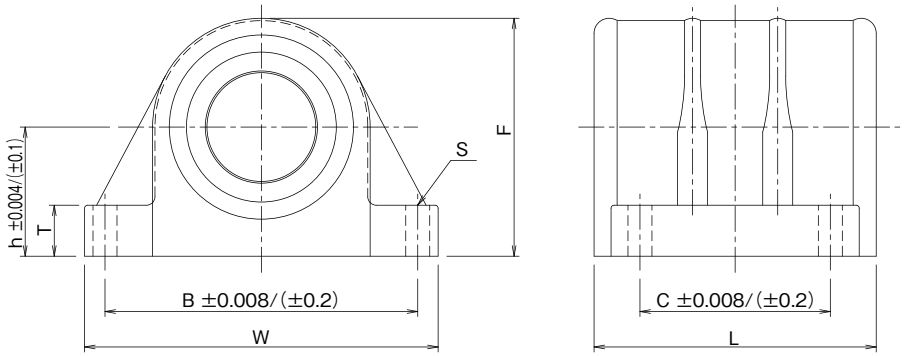


### part number structure

example **RBW** **16**

RBW type

size




| part number | inner contact diameter | | major dimensions | | | |
|---|---|---|---|---|---|---|
| | | tolerance | h | outer dimensions W | L | F |
| | inch/(mm) | inch/(μm) | inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) |
| **RBW 8** | .5000 (12.700) | 0 −0.00040 (−9) | .6870 (17.450) | 2.000 (50.80) | 1.5937 (40.481) | 1.2500 (31.750) |
| **RBW 10** | .6250 (15.875) | | .8750 (22.225) | 2.500 (63.50) | 1.8437 (46.831) | 1.6250 (41.275) |
| **RBW 12** | .7500 (19.050) | 0 −0.00040 (−10) | .9370 (23.800) | 2.750 (69.85) | 1.9687 (50.006) | 1.7500 (44.450) |
| **RBW 16** | 1.0000 (25.400) | | 1.1870 (30.150) | 3.250 (82.55) | 2.5937 (65.881) | 2.1870 (55.550) |

※RBW type has side-seals as standard.

| mounting dimensions | | | | basic load rating | | mass |
|---|---|---|---|---|---|---|
| T | B | C | S | dynamic C | static Co | |
| inch/(mm) | inch/(mm) | inch/(mm) | inch/(mm) | N | N | g |
| .3437 (8.731) | 1.688 (42.875) | 1.000 (25.400) | .157 (4.0) | 510 | 784 | 51 |
| .3750 (9.525) | 2.125 (53.975) | 1.125 (28.575) | .189 (4.8) | 774 | 1180 | 99 |
| .4063 (10.319) | 2.375 (60.325) | 1.250 (31.750) | .189 (4.8) | 862 | 1370 | 129 |
| .4687 (11.906) | 2.875 (73.025) | 1.750 (44.450) | .220 (5.6) | 980 | 1570 | 242 |

SI UNIT 1N≒0.225lbf
1kg≒2.205lbs