



SLIDE BUSH

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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 Mechanism

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.

Low Friction

The raceway surface is precision ground. Since the

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

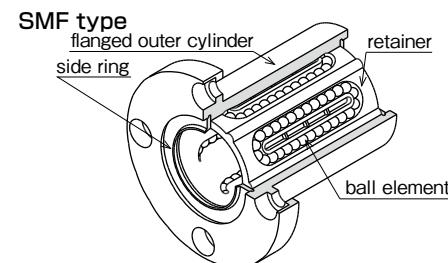
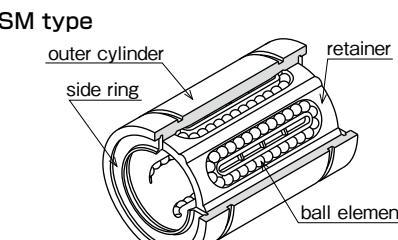
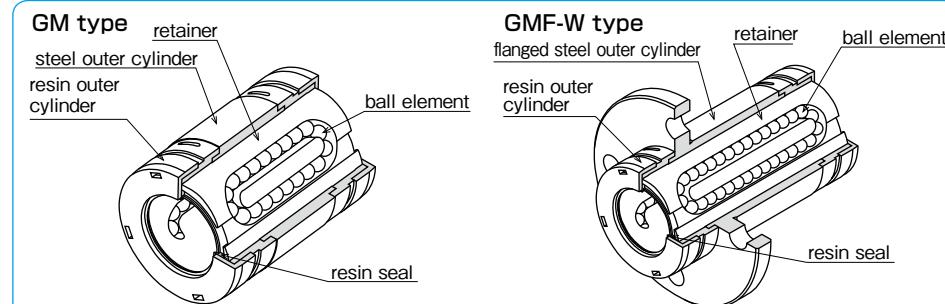


Figure C-2 Basic Structure of NB Slide Bush (GM)



TYPES

Table C-1 Type (1)

| type | standard | anti-corrosion | page |
|--------------------------------|----------|----------------|-------|
| standard type | SM | SMS | C- 14 |
| | KB | KBS | C- 68 |
| | SW | SWS | C- 90 |
| clearance-adjustable (AJ) type | SM-AJ | SMS-AJ | C- 16 |
| | KB-AJ | KBS-AJ | C- 70 |
| | SW-AJ | SWS-AJ | C- 92 |
| open (OP) type | SM-OP | SMS-OP | C- 18 |
| | KB-OP | KBS-OP | C- 72 |
| | SW-OP | SWS-OP | C- 94 |
| long type | SM-G-L | - | C- 20 |
| | SM-W | SMS-W | C- 22 |
| double-wide type | KB-W | KBS-W | C- 74 |
| | SW-W | SWS-W | C- 96 |

Table C-2 Type (2)

| | type | | standard | anti-corrosion | page |
|-----------------------------------|------|--|----------------|----------------|-------|
| flange type | | | SMF | SMSF | C- 24 |
| | | | KBF | KBSF | C- 76 |
| | | | SWF | SWSF | C- 98 |
| | | | SMK | SMSK | C- 26 |
| | | | KBK | KBSK | C- 78 |
| | | | SWK | SWSK | C-100 |
| | | | SMT | SMST | C- 28 |
| | | | KBT | KBST | C- 80 |
| | | | SWT | SWST | C-102 |
| | | | | | |
| 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- 82 |
| | | | SWF-W | SWSF-W | C-104 |
| | | | SMK-W | SMSK-W | C- 40 |
| | | | KBK-W | KBSK-W | C- 84 |
| | | | SWK-W | SWSK-W | C-106 |
| | | | SMT-W | SMST-W | C- 42 |
| | | | | | |
| | | | | | |
| | | | | | |
| center mount flange type | | | SMFC | SMSFC | C- 44 |
| | | | KBFC | KBSFC | C- 86 |
| | | | SWFC | SWSFC | C-108 |
| | | | SMKC | SMSKC | C- 46 |
| | | | KBKC | KBSKC | C- 88 |
| double-wide pilot end flange type | | | SMTC | SMSTC | C- 48 |
| | | | | | |

Table C-3 Type (3)

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

Table C-4 Type (4) GM Series

| type | standard | page |
|--|----------------|--------|
| GM/GW single type | GM | C- 112 |
| | GW | C-126 |
| GM double-wide type | GM-W | C-113 |
| GM double-wide flange type | GMF-W | C-114 |
| | GMK-W | C-116 |
| GM double-wide pilot end flange type | GMT-W | C-118 |
| | GMF-W-E | C-120 |
| | GMK-W-E | C-122 |
| | GMT-W-E | C-124 |

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.

RB・RBW Type

The housing is made of ABS resin for light-weight and low-cost. Inside is a standard slide bush of a resin retainer type with seals.

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

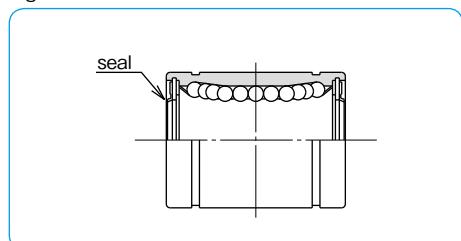
The outer cylinder of standard type is made of bearing steel and the outer cylinder of anti-corrosion type is made of Martensitic stainless steel. The retainer is available in steel (stainless steel for anti-corrosion), and resin for low acoustic operation. The steel retainer is made of one plate (seamless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

Table C-7 Operating Environment Temperature

| outer cylinder | retainer | temperature range |
|----------------|----------|-------------------|
| | | -20°C~110°C |
| steel | steel | -20°C~ 80°C |
| | resin | -20°C~ 80°C |
| stainless | steel | -20°C~140°C* |
| | resin | -20°C~ 80°C |

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

Figure C-3 Seal Profile



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.

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

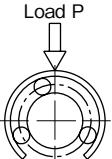
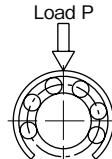
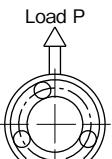
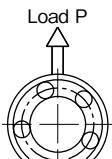
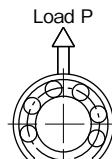
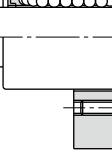
L: rated life (km) f_H: hardness coefficient
f_T: temperature coefficient f_C: contact coefficient
f_W: applied load coefficient C: basic dynamic load rating (N)
P: applied load (N)

*Refer to page Eng-5 for the coefficients.

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 KB10G~16G-OP SW 8G~10G-OP SME (D) 10G~16G CE (D) 16 | SM20 (G) -OP KB20 (G) -OP SW12 (G) -OP SME (D) 20 CE (D) 20 | SM25 (G) ~100-OP KB25 (G) ~80-OP SW16 (G) ~64-OP SME (D) 25~30 CE (D) 25~30 | SM120,150-OP |
|--------------------|---|---|---|---|
| loading from above |  |  |  |  |
| C | C | C | C | C |
| loading from below |  |  |  |  |
| | 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-4 ~7.

Figure C-4 Standard Type

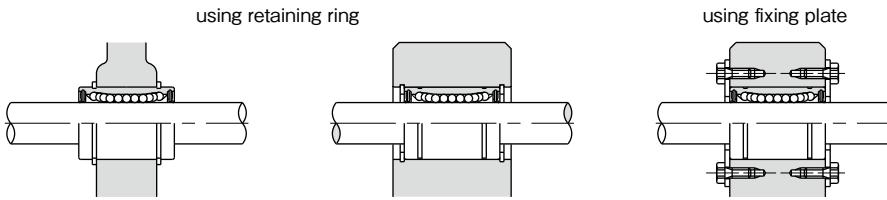


Figure C-5 Clearance Adjustable Type

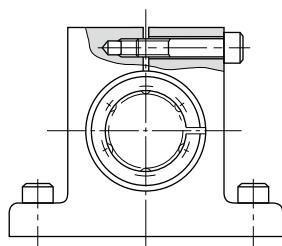


Figure C-6 Open Type

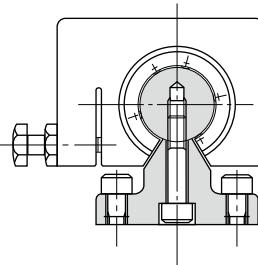
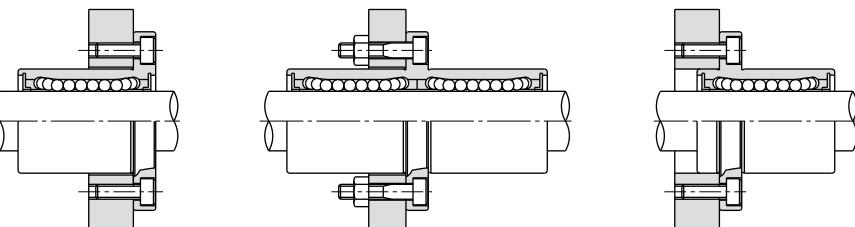


Figure C-7 Flange Type



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 pre-loading 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 | — |

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-8. 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.

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 | — |
| GMF-W | g6 | — |

Figure C-8 Insertion of Slide Bush

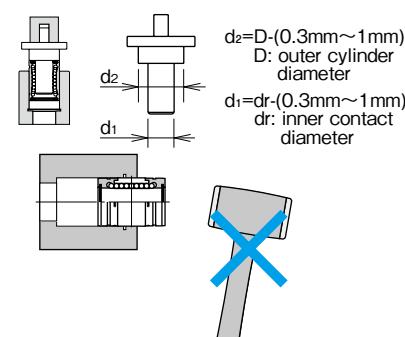
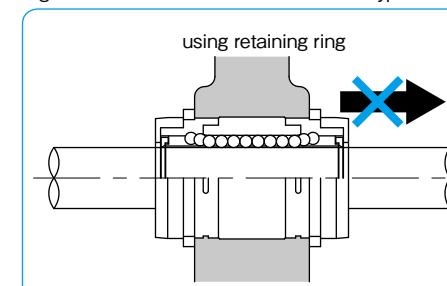


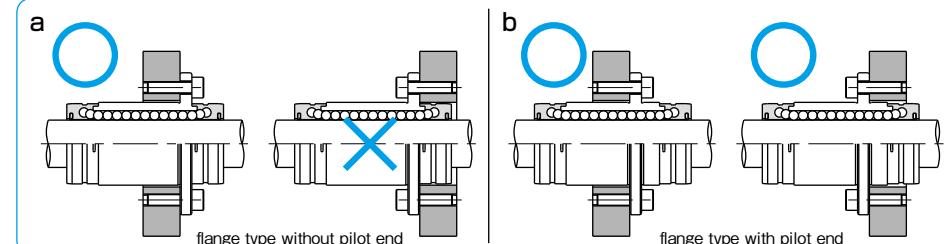
Figure C-9 Installation of GM Standard Type



GM Flange Type

The flange of GM type has a reference plane on one side only as Figure C-10a, please do not use the other side as a reference plane. In case of using the pilot-end flange type, as Figure C-10b shows, both sides can be used as a reference plane. H7 is recommended for the housing bore tolerance.

Figure C-10 Installation of GM Flange 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.

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-11 Grease Fitting

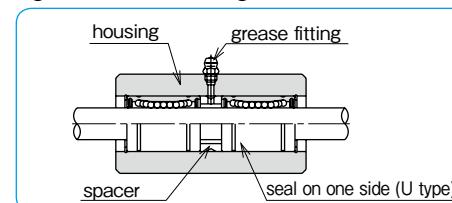
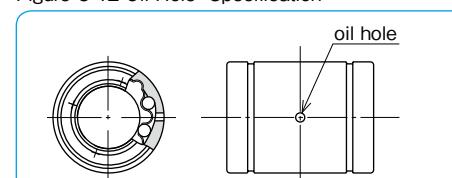


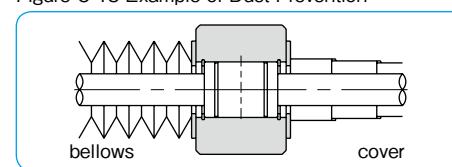
Figure C-12 Oil Hole -Specification-



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

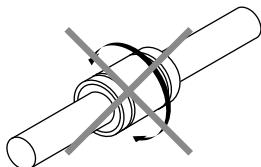


NOTES ON HANDLING

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:

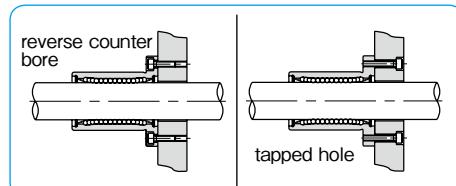
| | |
|----|--|
| SK | electroless nickel plating |
| LF | low temperature black chrome treatment with fluoride coating |
| SB | black oxide (excluding anti-corrosion type) |
| SC | industrial chrome plating |

* 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.

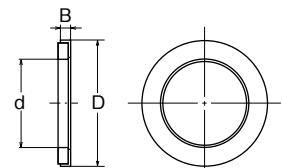
Figure C-15 Examples of Special Installation Hole



FELT SEAL

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

Figure C-16 Felt Seal

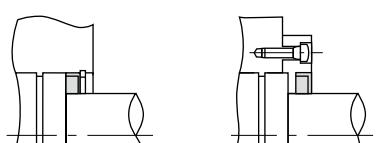


| part number | major dimensions(mm) | applicable slide bush |
|-------------|----------------------|-----------------------|
| FLM 6 | 6 12 2 | SM 6 / GM 6 |
| FLM 8 | 8 15 2 | SM 8 / GM 8 |
| FLM 10 | 10 19 3 | SM 10 / GM10 |
| FLM 12 | 12 21 3 | SM 12 / GM12 |
| FLM 13 | 13 23 3 | SM 13 / GM13 |
| 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

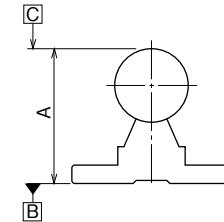
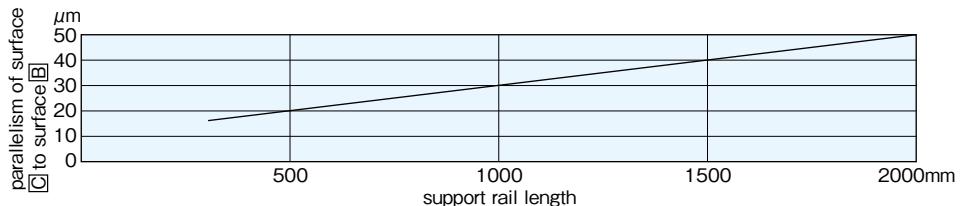


Figure C-19 Accuracy of CE/CD-type Support Rails



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 RB 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 RB Type

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

Figure C-20 Reference Surface

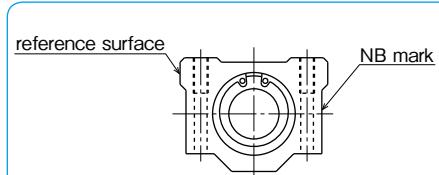
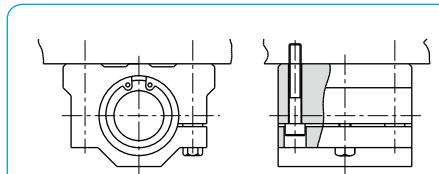


Table C-11 Recommended Torque for RB Type

| part number | mounting screw | torque N·m |
|-------------|----------------|------------|
| RB10~16 | M4 | 1.8 |
| RB20 | M5 | 5.3 |

Figure C-21 Special Installation of SMJ Type



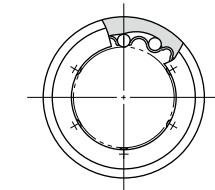
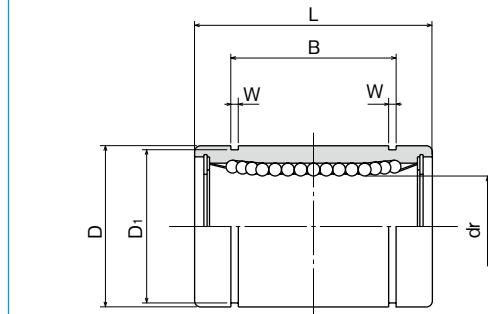
SM TYPE

— 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 | | | | | |



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

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

1N=0.102kgf

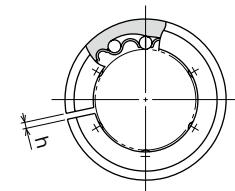
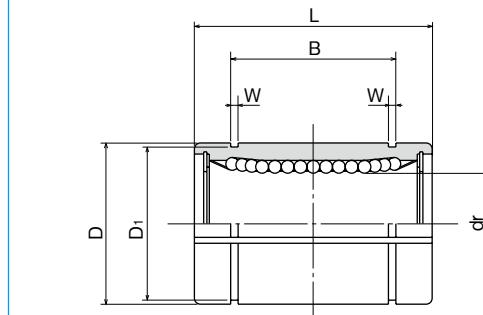
SM-AJ TYPE

— Clearance Adjustable Type —



part number structure

| | | | | | |
|--------------------------------|-----|----|---|----|-----|
| example | SMS | 25 | G | UU | -AJ |
| 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 | | | | | |



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

* Accuracy is measured prior to machining clearance slit.

| L tolerance 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 |
|----------------|----------------|------|-------|------|------------------|-------------------------------|-------------------------------|--------|-------------------|
| 0 -0.2 | 13.5 | 1.1 | 11.5 | 1 | 12 | 206 | 265 | 7.5 | 6 |
| | 11.5 | 1.1 | 14.3 | 1 | | 176 | 216 | 10 | 8 |
| | 17.5 | 1.1 | 14.3 | 1 | | 274 | 392 | 14.7 | 8 |
| | 22 | 1.3 | 18 | 1 | | 372 | 549 | 29 | 10 |
| | 23 | 1.3 | 20 | 1.5 | | 510 | 784 | 41 | 12 |
| | 23 | 1.3 | 22 | 1.5 | | 510 | 784 | 48 | 13 |
| | 26.5 | 1.6 | 27 | 1.5 | | 774 | 1,180 | 75 | 16 |
| 0 -0.3 | 30.5 | 1.6 | 30.5 | 1.5 | 15 | 882 | 1,370 | 98 | 20 |
| | 41 | 1.85 | 38 | 2 | | 980 | 1,570 | 237 | 25 |
| | 44.5 | 1.85 | 43 | 2.5 | | 1,570 | 2,740 | 262 | 30 |
| | 49.5 | 2.1 | 49 | 2.5 | | 1,670 | 3,140 | 420 | 35 |
| | 60.5 | 2.1 | 57 | 3 | | 2,160 | 4,020 | 640 | 40 |
| | 74 | 2.6 | 76.5 | 3 | | 3,820 | 7,940 | 1,680 | 50 |
| | 85 | 3.15 | 86.5 | 3 | | 4,700 | 10,000 | 1,980 | 60 |
| 0 -0.4 | 105.5 | 4.15 | 116 | 3 | 25 | 7,350 | 16,000 | 4,400 | 80 |
| | 125.5 | 4.15 | 145 | 3 | | 14,100 | 34,800 | 8,540 | 100 |
| | 158.6 | 4.15 | 175 | 3 | | 16,400 | 40,000 | 14,900 | 120 |
| | 170.6 | 5.15 | 204 | 3 | | 21,100 | 54,300 | 20,150 | 150 |

1N=0.102kgf

SM-OP TYPE

— Open Type —

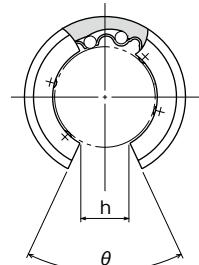
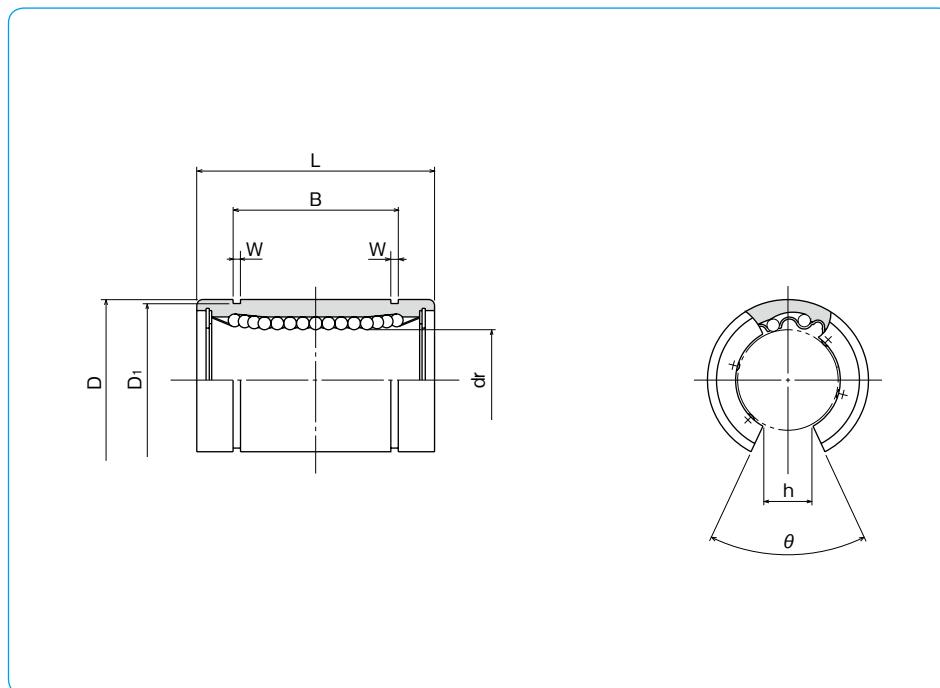


part number structure

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

* Accuracy is measured prior to machining open slit.



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

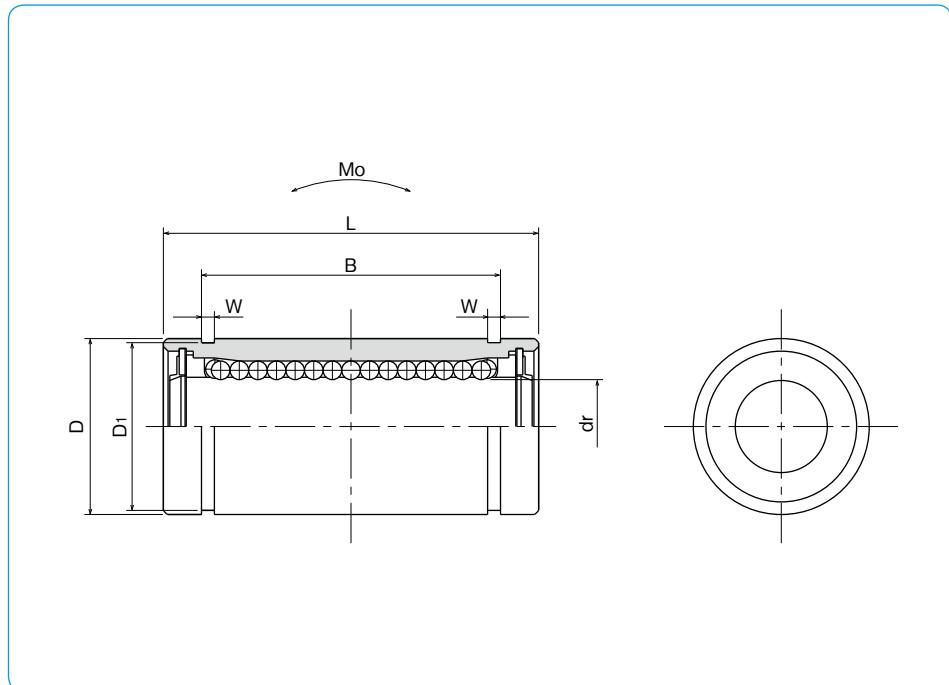
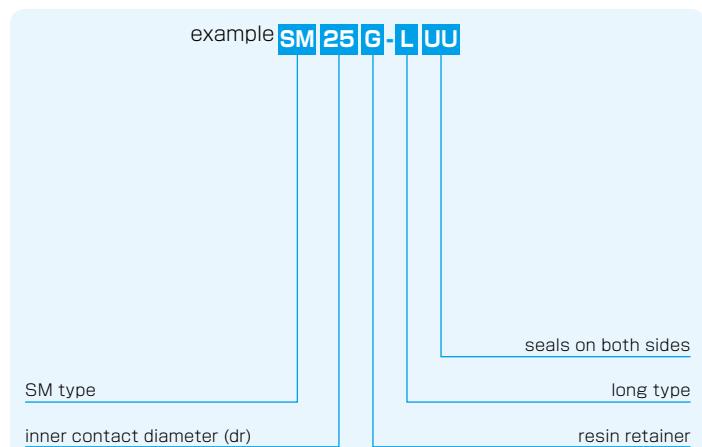
1N=0.102kgf

SM-G-L TYPE

— Long Type —



part number structure



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

*UU type is standard.

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

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

SM-W TYPE

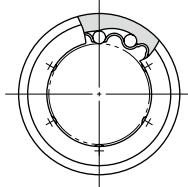
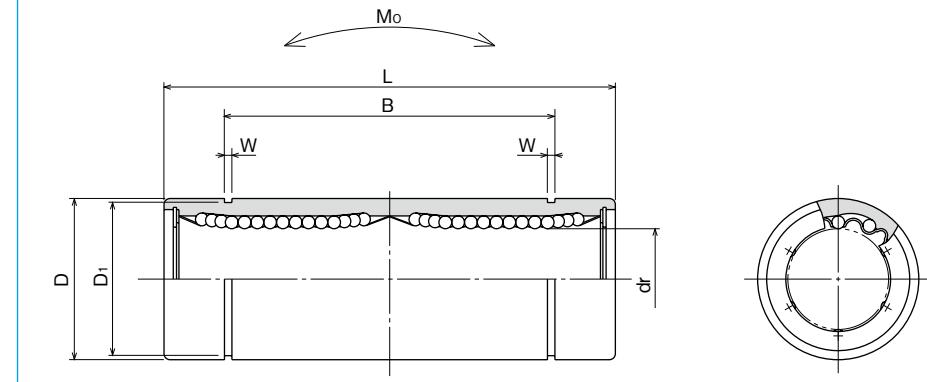
— Double-Wide Type —



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 | |
| double-wide type | |

seal
blank: without seal
UU: seals on both sides



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

| L mm | tolerance mm | B mm | tolerance mm | W mm | D 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 |
|---------|-----------------|---------|-----------------|---------|---------|-------------------------------|----------------------------------|----------------------------------|--|--------|-------------------|
| 19 | 0 | — | — | — | — | 10 | 138 | 210 | 0.51 | 3.2 | 3 |
| 23 | | — | — | — | — | | 176 | 254 | 0.63 | 4.8 | 4 |
| 28 | | 20.4 | — | 1.1 | 9.6 | | 265 | 412 | 1.38 | 11 | 5 |
| 35 | | 27 | — | 1.1 | 11.5 | | 323 | 530 | 2.18 | 16 | 6 |
| 45 | | 35 | — | 1.1 | 14.3 | | 431 | 784 | 4.31 | 31 | 8 |
| 55 | | 44 | 0 | 1.3 | 18 | | 588 | 1,100 | 7.24 | 62 | 10 |
| 57 | -0.3 | 46 | -0.3 | 1.3 | 20 | 15 | 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 | | 1,400 | 2,740 | 26.8 | 180 | 20 |
| 112 | | 82 | 0 | 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 | | 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 —



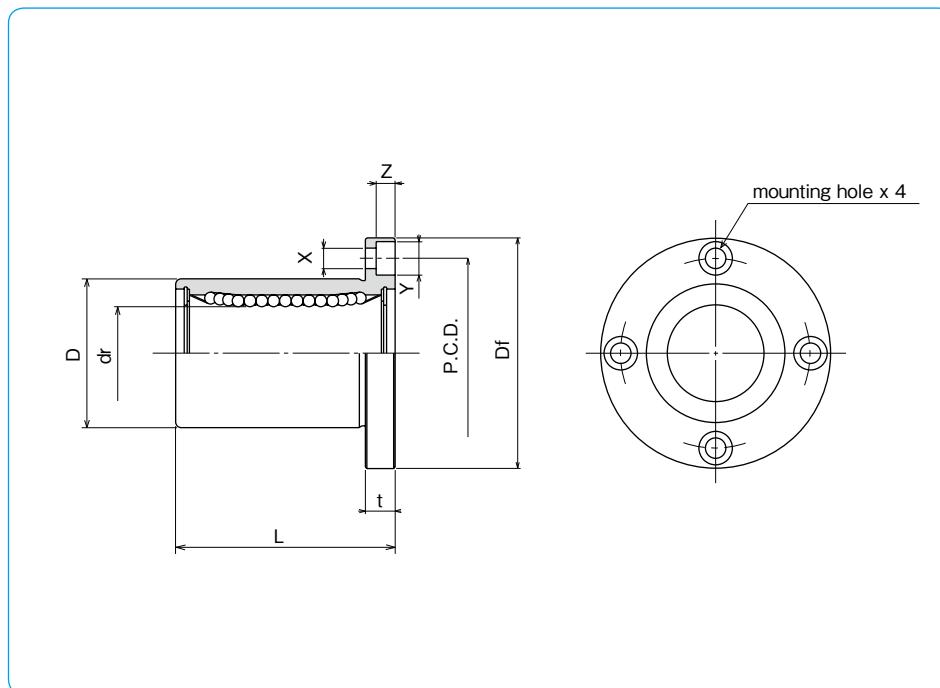
part number structure

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: resinouter 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 platingseal
blank: without seal
UU: seals on both sides

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



| Df mm | t mm | flange P.C.D. mm | X×Y×Z mm | eccentricity | perpendicularity | basic load rating | mass | shaft diameter | |
|-------|------|------------------|-------------|---------------|------------------|-------------------|-------------|----------------|-----|
| | | | | 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 | 15 | 15 | 774 | 1,180 | 120 | 16 |
| 54 | 8 | 43 | 5.5×9×5.1 | | | 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 | | | 1,670 | 3,140 | 650 | 35 |
| 96 | 13 | 78 | 9×14×8.1 | 20 | 20 | 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 | | | 4,700 | 10,000 | 3,000 | 60 |
| 164 | 18 | 142 | 11×17×11.1 | 25 | 25 | 7,350 | 16,000 | 5,800 | 80 |
| 200 | 20 | 175 | 14×20×13.1 | | | 14,100 | 34,800 | 10,600 | 100 |

1N=0.102kgf

SMK TYPE

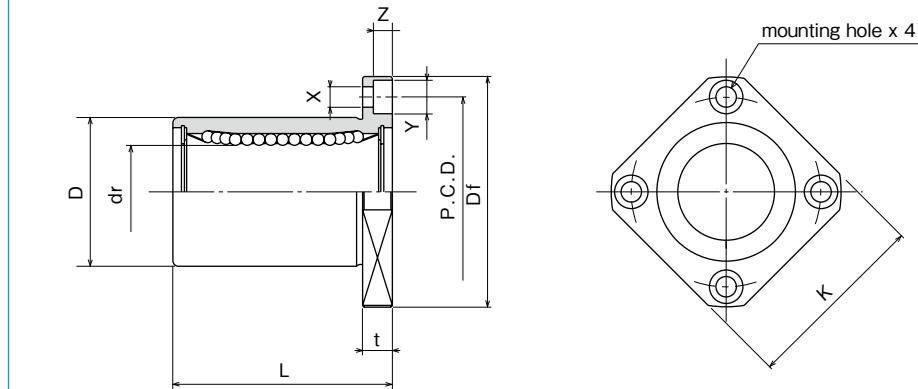
— Square Flange Type —



part number structure

example **SMSK 25 G UU-SK**specification
SMSK: standard
SMSK: anti-corrosion

inner contact diameter (dr)

retainer material
blank: standard/steel
anti-corrosion/stainless steel
G: resinouter 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 platingseal
blank: without seal
UU: seals on both sides

| part number | | number of ball circuits | major dimensions | |
|----------------------------|----------------------------------|-------------------------------|-----------------------|----------------------|
| standard steel retainer | anti-corrosion resin retainer | | dr tolerance mm | D tolerance μm |
| SMK 6 | SMK 6G | SMSK 6 | 4 | 6 |
| SMK 8s | SMK 8sG | SMSK 8s | 4 | 8 |
| SMK 8 | SMK 8G | SMSK 8 | 4 | 8 |
| SMK 10 | SMK10G | SMSK10 | 4 | 10 |
| SMK 12 | SMK12G | SMSK12 | 4 | 12 |
| SMK 13 | SMK13G | SMSK13 | 4 | 13 |
| SMK 16 | SMK16G | SMSK16 | 4 | 16 |
| SMK 20 | SMK20G | SMSK20 | 5 | 20 |
| SMK 25 | SMK25G | SMSK25 | 6 | 25 |
| SMK 30 | SMK30G | SMSK30 | 6 | 30 |
| SMK 35 | SMK35G | SMSK35 | 6 | 35 |
| SMK 40 | SMK40G | SMSK40 | 6 | 40 |
| SMK 50 | SMK50G | SMSK50 | 6 | 50 |
| SMK 60 | SMK60G | SMSK60 | 6 | 60 |
| SMK 80 | — | — | 6 | 80 |
| SMK100 | — | — | 6 | 100 |

| 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 | mass g | shaft diameter 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**

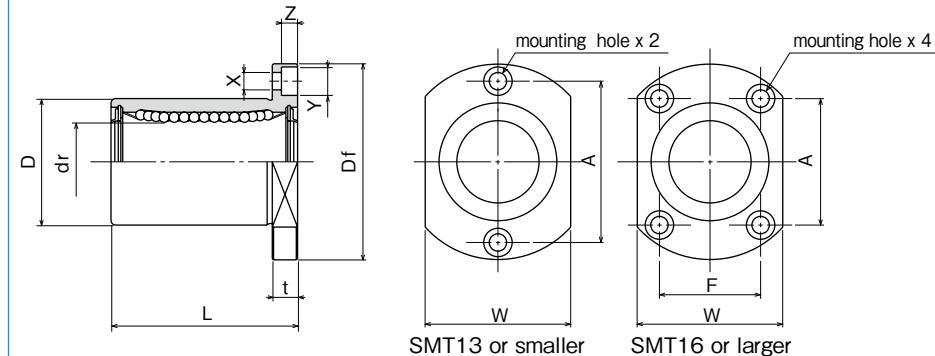
specification
SMT: standard
SMST: anti-corrosion

inner contact diameter (dr)

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

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

seals on both sides



SMT13 or smaller SMT16 or larger

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

* UU type is standard.

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

1N=0.102kgf

SMF-E TYPE

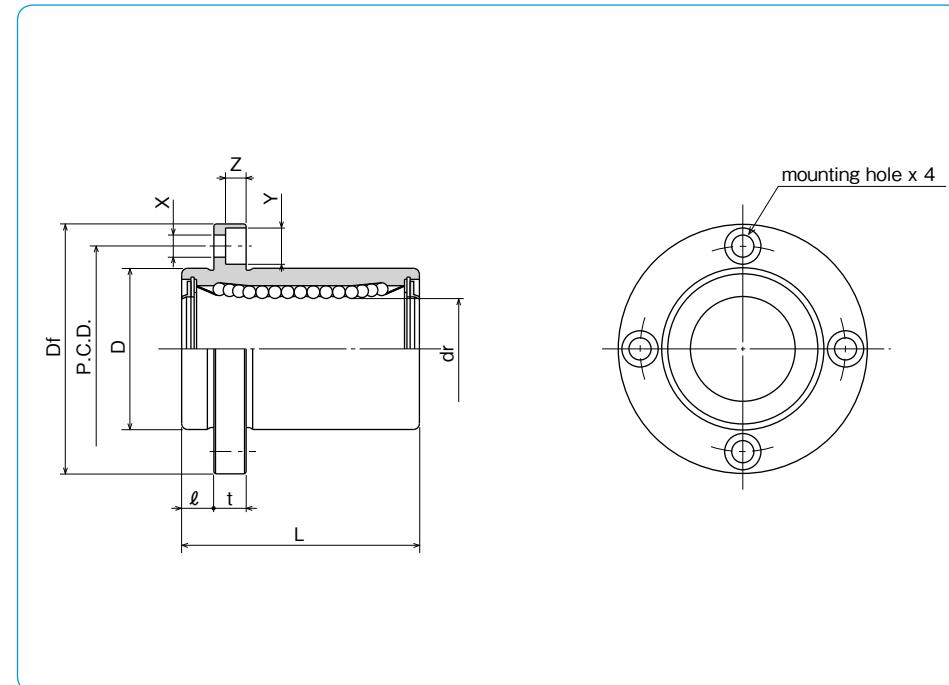
– Round Flange Type with Pilot End –



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 | |
| with pilot end | |
| 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



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

* UU type is standard.

| l mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | mass g | shaft diameter mm |
|------|-------|------|-----------|-------------|-----------------|---------------------|-------------------|-------------|--------|-------------------|
| | | | | | | | dynamic C N | static Co N | | |
| 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

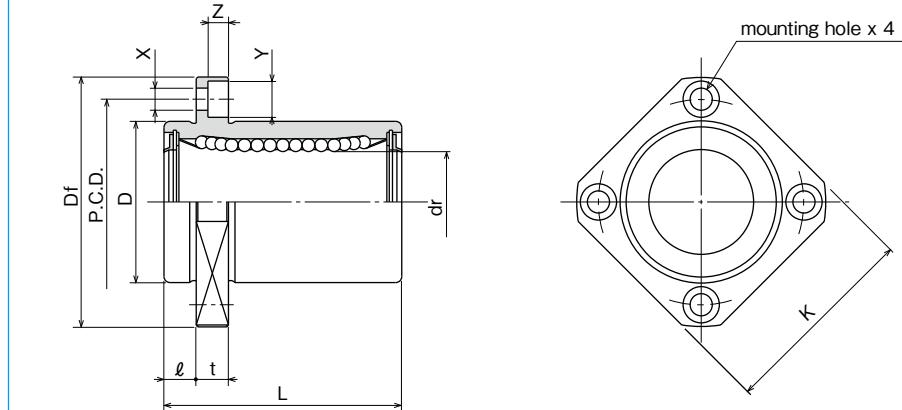
SMK-E TYPE

— 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 | |
| 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 | |



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

* UU type is standard.

| l mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | mass g | shaft diameter mm |
|---------|----------|---------|---------|--------------|-------------|--------------------|------------------------|-------------------|-------------------|-----------|----------------------|
| | | | | | | | | dynamic C N | static Co N | | |
| 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 | | | 1,670 | 3,140 | 560 | 35 |
| 13 | 96 | 75 | 13 | 78 | 9×14×8.1 | 20 | 20 | 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

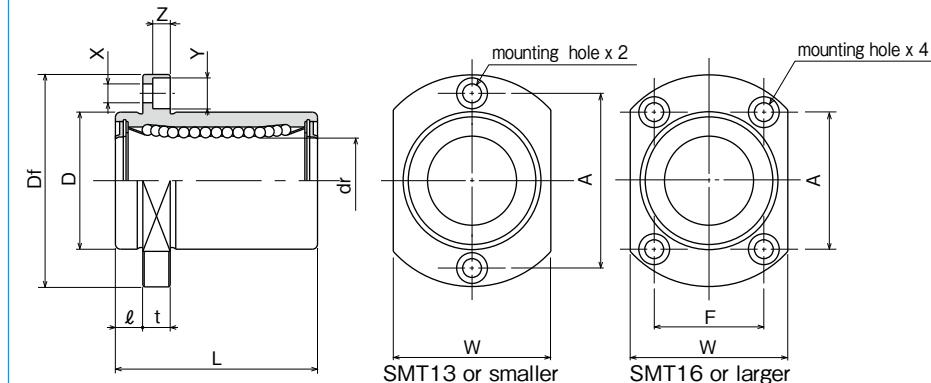
inner contact diameter (dr)

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

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

with pilot end

seals on both sides



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

* UU type is standard.

| ℓ mm | Df mm | W mm | flange | | | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | static Co N | mass g | shaft diameter mm |
|--------------|----------|---------|---------|---------|---------|-------------|-------------------------------|-----------------------------------|-------------------------------------|----------------|-----------|-------------------------|
| | | | t mm | A mm | F 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

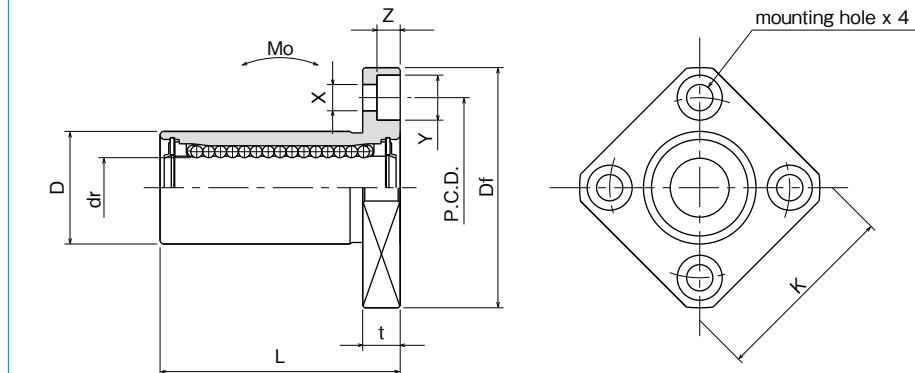
inner contact diameter (dr)

resin retainer

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

seals on both sides

long type



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

| 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 |
|-------------|-------------------------------|-----------------------------------|-------------------------------------|----------------|---|-----------|-------------------------|
| 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 —

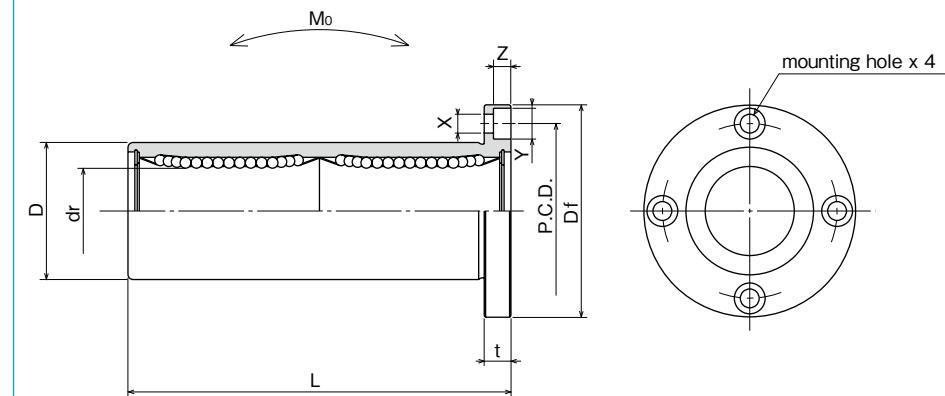


part number structure

| | | | | | | |
|--------------------------------|-------------|-----------|----------|----------|-----------|------------|
| 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 | | | | | | |

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

seal
blank: without seal
UU: seals on both sides



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

| Df mm | t mm | flange P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter 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 | | | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 96 | 13 | 78 | 9×14×8.1 | 25 | 25 | 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 | | | 7,550 | 20,000 | 530 | 4,500 | 60 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

SMK-W TYPE

— Square Flange Double-Wide Type —

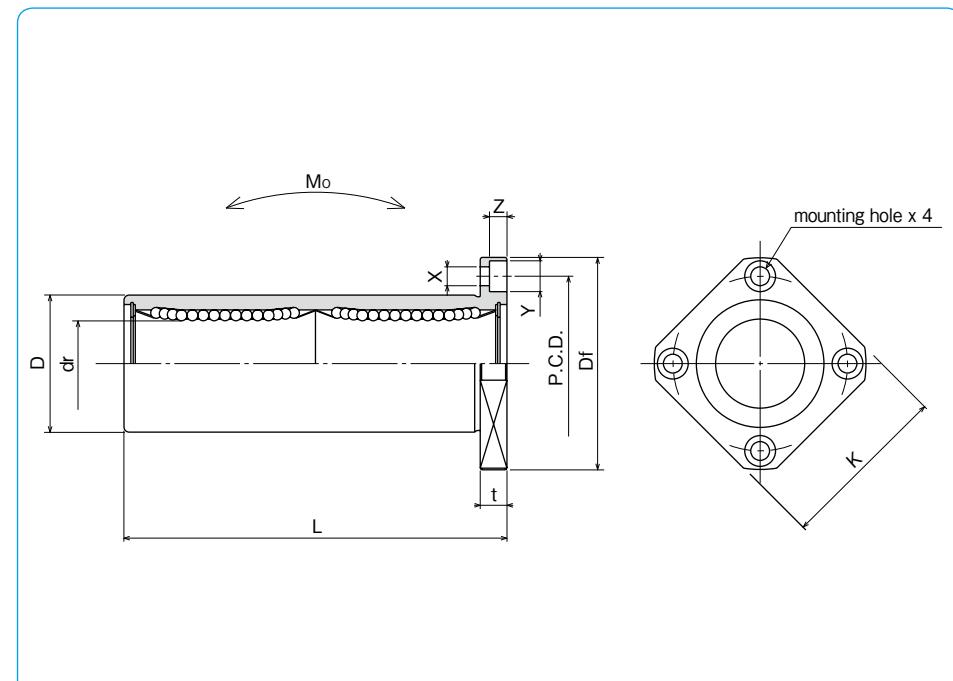


part number structure

| | | | | | | |
|-----------------------------|--------|--------------------------------|---|---|----|-----|
| example | SMSK | 25 | G | W | UU | -SK |
| specification | SMSK: | standard | | | | |
| | SMSK: | anti-corrosion | | | | |
| inner contact diameter (dr) | | | | | | |
| retainer material | blank: | standard/steel | | | | |
| | | anti-corrosion/stainless steel | | | | |
| G: resin | | | | | | |
| double-wide type | | | | | | |

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

seal
blank: without seal
UU: seals on both sides



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

| Df mm | K mm | flange | | | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | allowable static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|-------|------|--------|-----------|-------------|-----------------|---------------------|-------------------------------|-----------------------|--------------------------------|--------|-------------------|
| | | t mm | P.C.D. mm | X×Y×Z 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 | | | 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 —

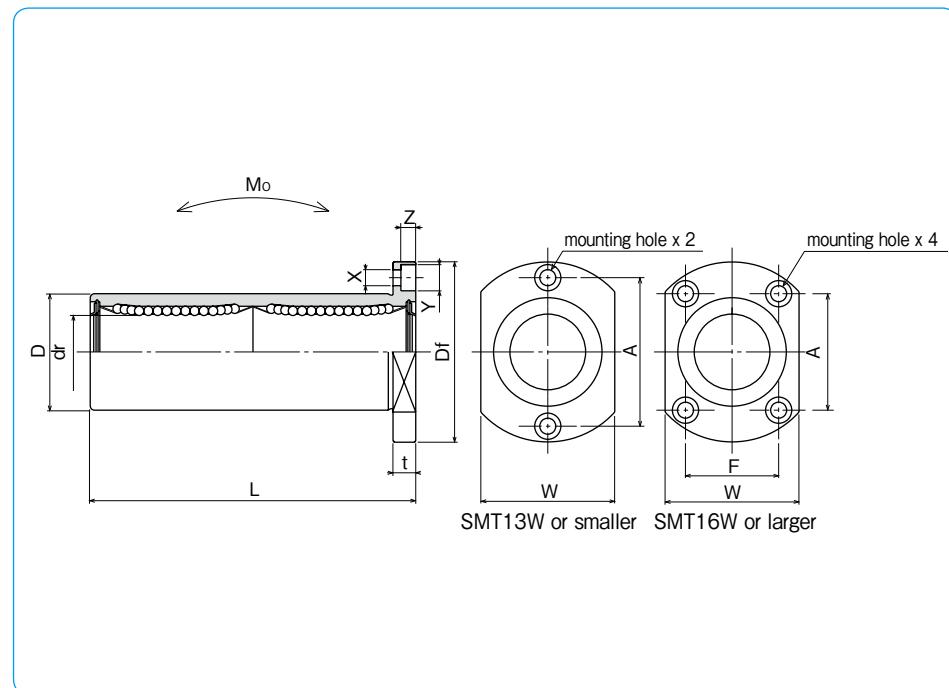


part number structure

| | | | | | | |
|-----------------------------|--------------------------------|-----------|----------|----------|-----------|------------|
| example | SMST | 25 | G | W | UU | -SK |
| specification | SMST: standard | | | | | |
| | SMST: anti-corrosion | | | | | |
| inner contact diameter (dr) | | | | | | |
| retainer material | blank: standard/steel | | | | | |
| | anti-corrosion/stainless steel | | | | | |
| G: resin | | | | | | |
| seals on both sides | | | | | | |
| double-wide type | | | | | | |

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

* UU type is standard.



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

* $1\text{N} \approx 0.102\text{kgf}$ $1\text{N}\cdot\text{m} \approx 0.102\text{kgf}\cdot\text{m}$

SMFC TYPE

– Center Mount Round Flange Type –



part number structure

example **SMSFC|25|G|UU-SK**

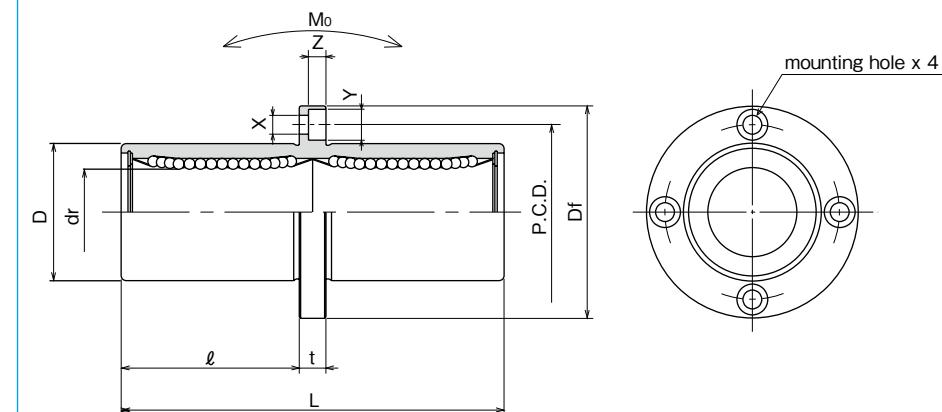
specification
SMFC: standard
SMSFC: anti-corrosion

inner contact diameter (dr)
inner contact diameter (dr)

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

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

seal
blank: without seal
UU: seals on both sides



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

| ℓ mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | allowable static moment Mo N·m | mass g | shaft diameter mm |
|--------------|----------|---------|--------------|-------------|-------------------------------|-----------------------------------|-------------------|-------------------|---|-----------|-------------------------|
| | | | | | | | dynamic C N | static Co N | | | |
| 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 | | | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 69 | 96 | 13 | 78 | 9×14×8.1 | 25 | 25 | 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 | | | 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**

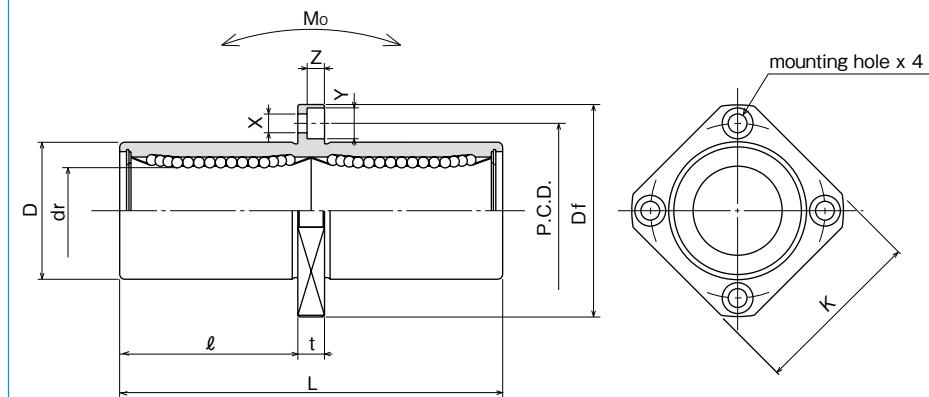
specification
SMKC: standard
SMSKC: anti-corrosion

inner contact diameter (dr)

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

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

seal
blank: without seal
UU: seals on both sides



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

| l mm | Df 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 |
|------|-------|--------|------|-----------|-------------|-----------------|---------------------|-------------------------------|-------------------------------|--------------------------------|--------|-------------------|
| | | K mm | t mm | P.C.D. mm | | | | | | | | |
| 15 | 28 | 22 | 5 | 20 | 3.5×6×3.1 | | | 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 | 15 | 15 | 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 | | | 1,400 | 2,740 | 26.8 | 225 | 20 |
| 52 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 20 | 20 | 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 | | | 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 | | | 7,550 | 20,000 | 530 | 4,060 | 60 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

SMTC TYPE

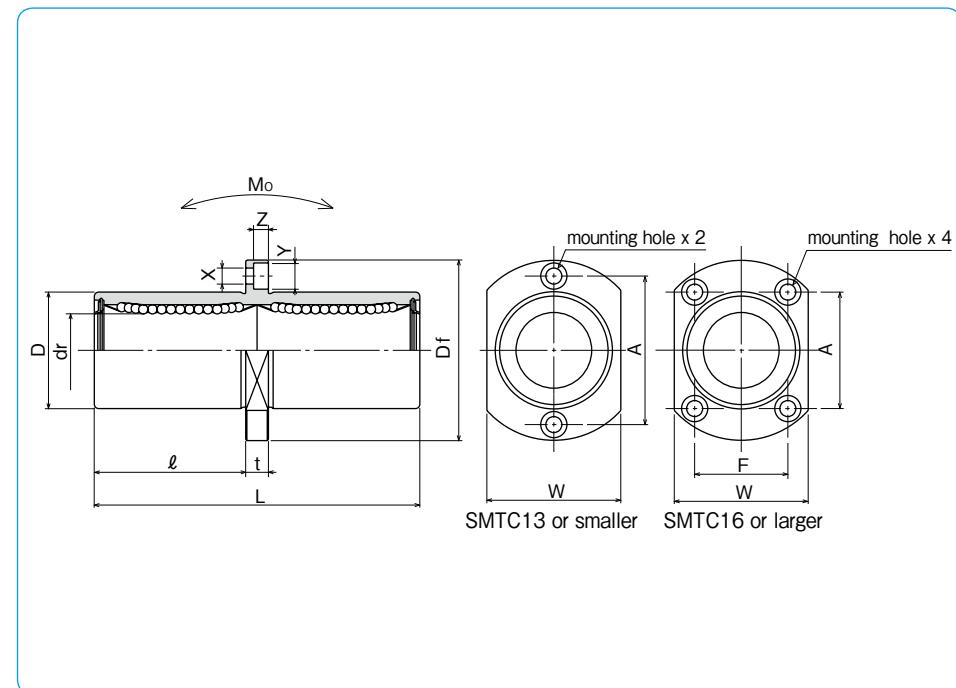
— Two Side Cut Center Flange Type —



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

* UU type is standard.

| l mm | Df mm | W mm | flange | | | | 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 |
|------|-------|------|--------|------|------|-------------|-----------------|---------------------|-------------------------------|-------------------------------|--------------------------------|--------|-------------------|
| | | | t mm | A mm | F mm | X×Y×Z 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

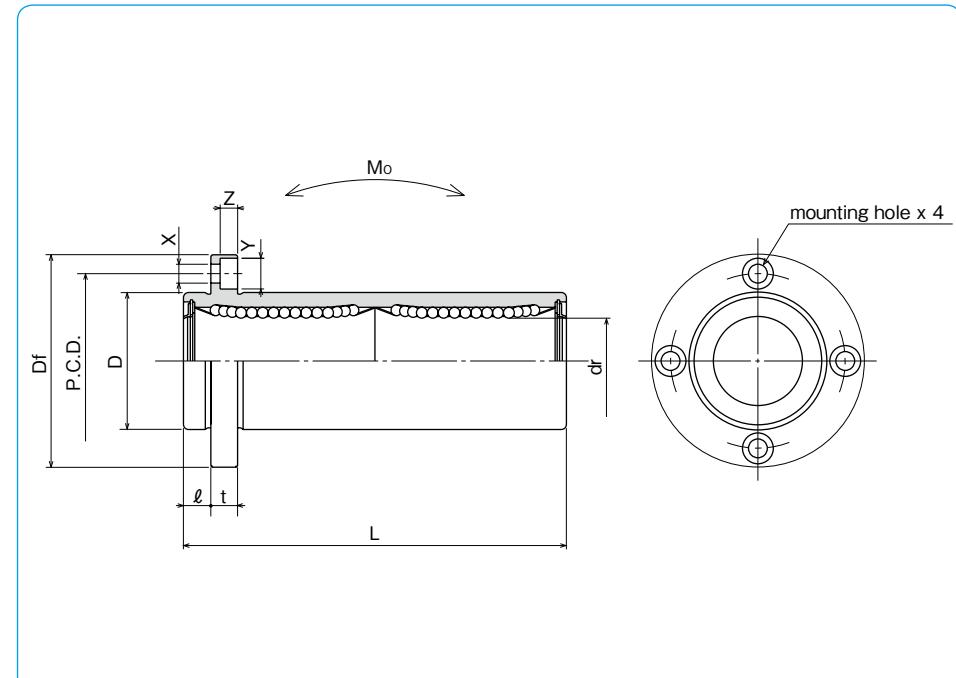
SMF-W-E TYPE

— 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 | |
| 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 | |
| with pilot end | |



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

* UU type is standard.

| l mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | allowable static moment Mo N·m | mass g | shaft diameter mm |
|------|-------|------|-----------|-------------|-----------------|---------------------|-------------------|-------------|--------------------------------|--------|-------------------|
| | | | | | | | dynamic C N | static Co N | | | |
| 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 | | | 2,650 | 6,270 | 110 | 1,020 | 35 |
| 13 | 96 | 13 | 78 | 9×14×8.1 | 25 | 25 | 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 | | | 7,550 | 20,000 | 530 | 4,500 | 60 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

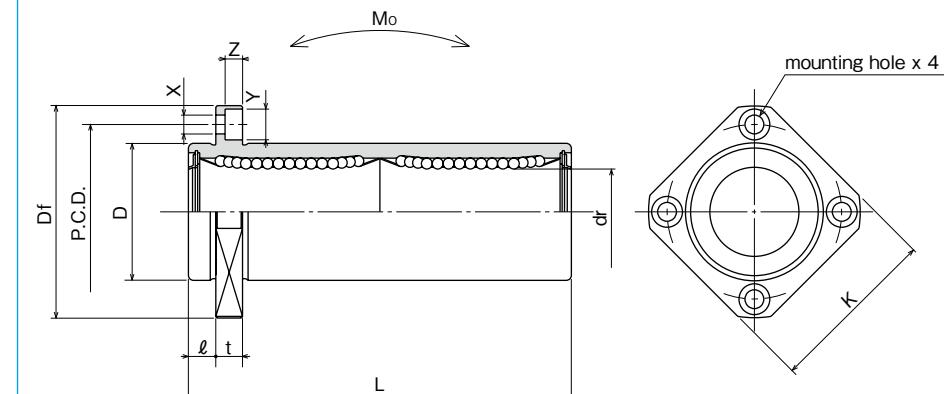
SMK-W-E TYPE

— Square Flange Double-Wide Pilot End Type —



part number structure

| | |
|--|------------------------------|
| example | SMSK 25 G WUU - E - SK |
| specification | |
| SMSK: standard | |
| SMSK: anti-corrosion | |
| inner contact diameter (dr) | |
| retainer material | |
| blank: standard/steel | |
| anti-corrosion/stainless steel | |
| G: resin | |
| double-wide type | |
| 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 | |
| with pilot end | |
| seals on both sides | |



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

* UU type is standard.

| l mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | allowable static moment Mo N·m | mass g | shaft diameter mm |
|------|-------|------|------|-----------|-------------|-----------------|---------------------|-------------------|-------------|--------------------------------|--------|-------------------|
| | | | | | | | | dynamic C N | static Co N | | | |
| 5 | 28 | 22 | 5 | 20 | 3.5×6×3.1 | | | 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 | 15 | 15 | 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 | | | 1,400 | 2,740 | 26.8 | 225 | 20 |
| 8 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 20 | 20 | 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 | | | 2,650 | 6,270 | 110 | 930 | 35 |
| 13 | 96 | 75 | 13 | 78 | 9×14×8.1 | 25 | 25 | 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

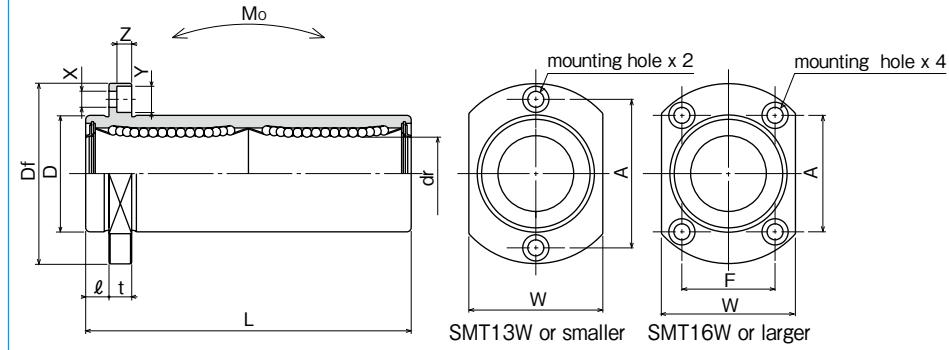
SMT-W-E TYPE

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



part number structure

| | |
|--|---------------------------|
| example | SMST 25 G WUU-E-SK |
| specification | |
| <u>SMT</u> : standard | |
| <u>SMST</u> : anti-corrosion | |
| inner contact diameter (dr) | |
| retainer material | |
| <u>blank</u> : standard/steel | |
| anti-corrosion/stainless steel | |
| <u>G</u> : resin | |
| double-wide type | |
| seals on both sides | |
| outer cylinder surface treatment | |
| <u>blank</u> : no surface treatment | |
| <u>SK</u> : electroless nickel plating | |
| <u>LF</u> : low temperature black chrome treatment with fluoride coating | |
| <u>SB</u> : black oxide (not available on anti-corrosion type) | |
| <u>SC</u> : industrial chrome plating | |
| with pilot end | |



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

* UU type is standard.

| l mm | Df mm | W mm | flange | | | | 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 |
|------|-------|------|--------|------|------|-------------|-----------------|---------------------|-------------------------------|-------------------------------|--------------------------------|--------|-------------------|
| | | | t mm | A mm | F mm | X×Y×Z mm | | | | | | | |
| 5 | 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | | | 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 | 15 | 15 | 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 |

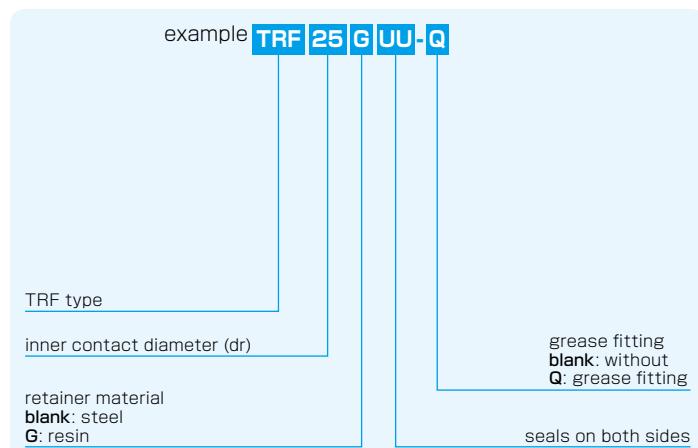
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRF TYPE

— Triple-Wide Round Flange Type —



part number structure

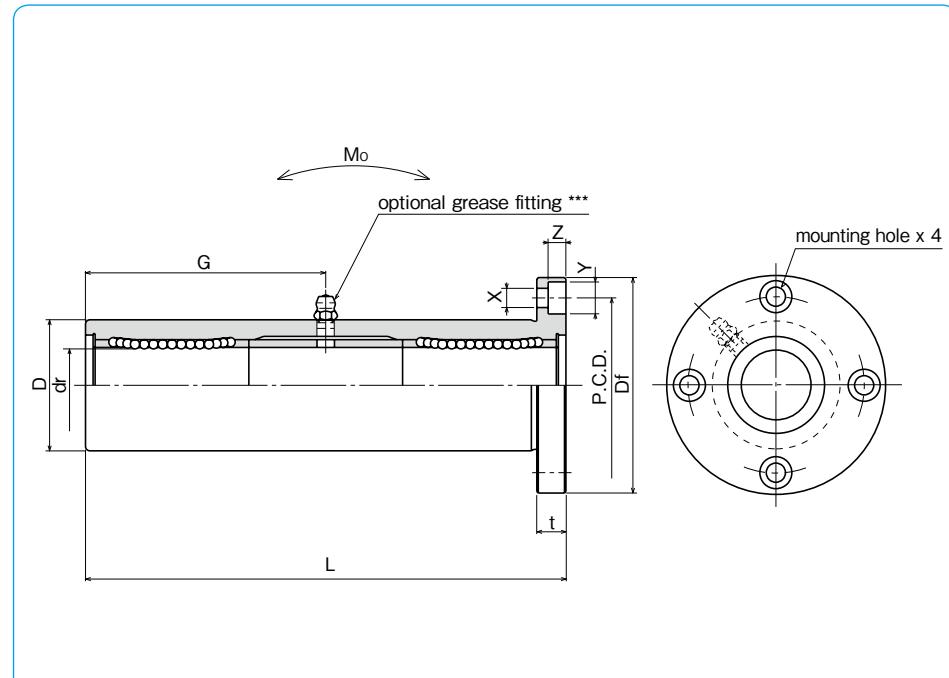


| part number* | | number of ball circuits | dr tolerance mm | major dimensions | | |
|----------------|----------------|-------------------------|-----------------|------------------|-----------|-----|
| steel retainer | resin retainer | | | D tolerance μm | L ±0.3 mm | |
| TRF 6UU | TRF 6GUU | 4 |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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

*** TRF6~8: A-M6x1 TRF10~30: A-M6F TRF35~60: A-R1/8



| Df mm | t mm | flange P.C.D. mm | X×Y×Z mm | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | 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 | | | 1,230 | 2,350 | 73.5 | 412 | 16 |
| 62 | 8 | 51 | 5.5×9×5.1 | 59 | 25 | 25 | 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 | | | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 101 | 13 | 83 | 9×14×8.1 | 115 | 30 | 30 | 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 |

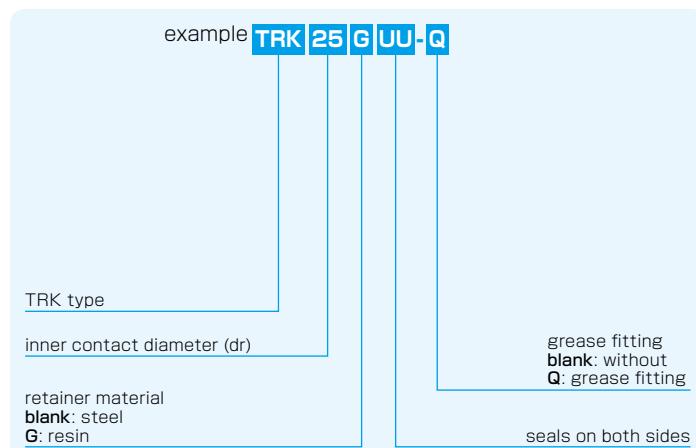
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRK TYPE

— Triple-Wide Square Flange Type —



part number structure

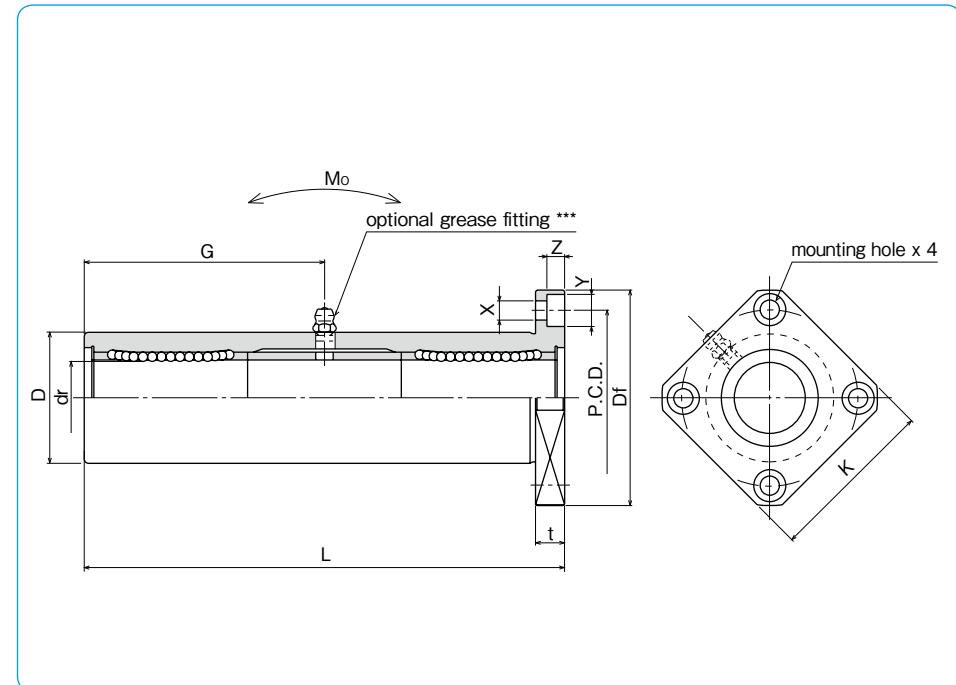


| part number* | | number of ball circuits | dr tolerance mm | major dimensions | | |
|----------------|----------------|-------------------------|-----------------|------------------|-----------|-----|
| steel retainer | resin retainer | | | D tolerance μm | L ±0.3 mm | |
| TRK 6UU | TRK 6GUU | 4 |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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

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



| Df mm | K mm | t mm | 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 |
|-------|------|------|-----------|-----------------|-----|------|---------------------|-----------------|---------------------|-------------------------------|-------------------------------|--------------------------------|--------|-------------------|
| | | | | X | Y | Z | | | | | | | | |
| 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 | | | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 62 | 50 | 8 | 51 | 5.5 | 9 | 5.1 | 59 | 25 | 25 | 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 | | | 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 | 30 | 30 | 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 |

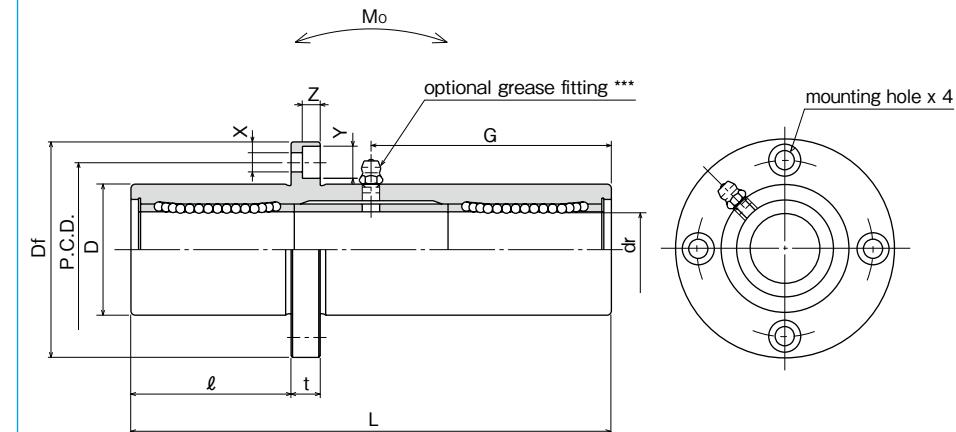
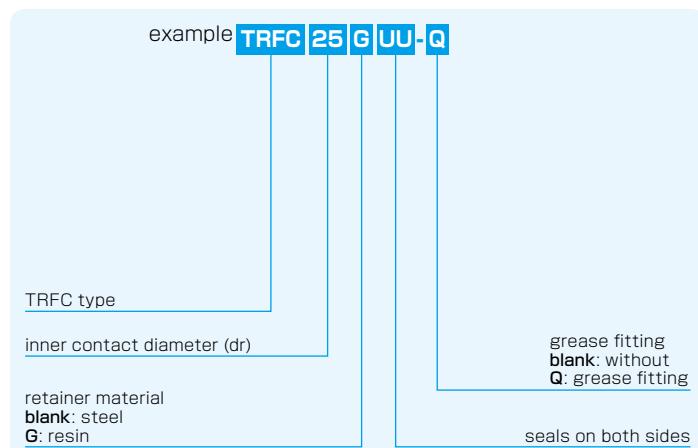
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRFC TYPE

— Triple-Wide Intermediate Position Round Flange Type —



part number structure



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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

*** TRFC6~8: A-M6x1 TRFC10~30: A-M6F TRFC35~60: A-R1/8

| l mm | Df mm | t mm | P.C.D. mm | flange X×Y×Z mm | | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|------|-------|------|-----------|-----------------|---|---------------------|-----------------|---------------------|-------------------------------|--------------------|--------------------------------|--------|-------------------|
| | | | | X | Y | | | | | | | | |
| 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 | | | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 77 | 101 | 13 | 83 | 9×14×8.1 | | 115 | 30 | 30 | 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 |

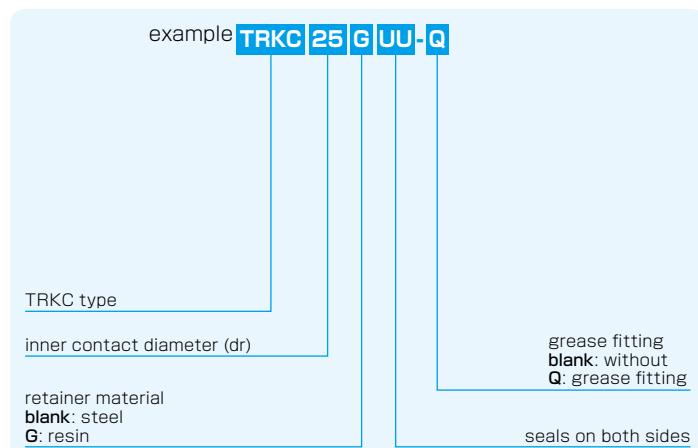
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRKC TYPE

— Triple-Wide Intermediate Position Square Flange Type —



part number structure

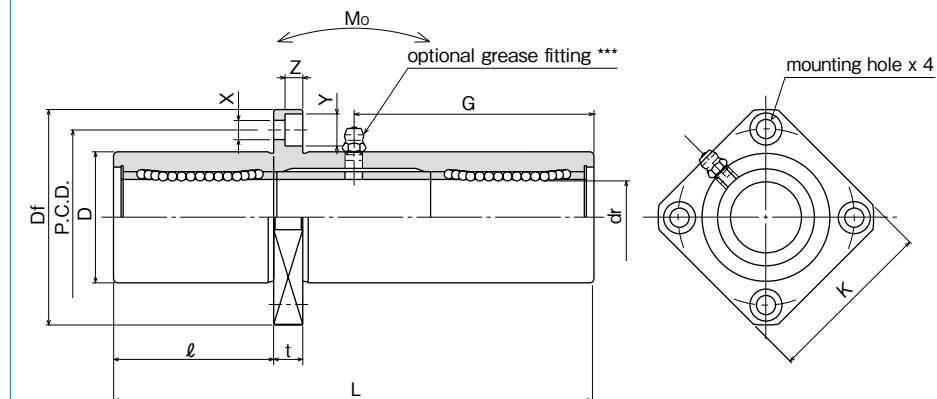


| part number* | | number of ball circuits | dr tolerance mm | major dimensions | | |
|----------------|----------------|-------------------------|-----------------|------------------|-----------|-----|
| steel retainer | resin retainer | | | D tolerance μm | L ±0.3 mm | |
| TRKC 6UU | TRKC 6GUU | 4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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

*** TRKC6~8: A-M6x1 TRKC10~30: A-M6F TRKC35~60: A-R1/8



| flange | | grease fitting | eccentricity | perpendicularity | basic load rating dynamic | rating static | allowable static moment | mass | shaft diameter | | | | |
|--------|-------|----------------|--------------|------------------|---------------------------|---------------|-------------------------|------|----------------|--------|--------|-------|----|
| ℓ mm | Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | G mm | μm | μm | C N | Co N | Mo N·m | g | 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 | | | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 40 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 59 | 25 | 25 | 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 | | | 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 | 30 | 30 | 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 |

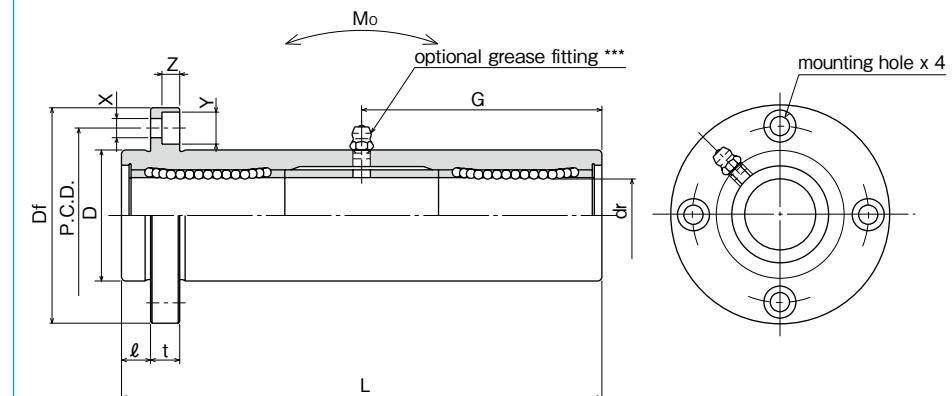
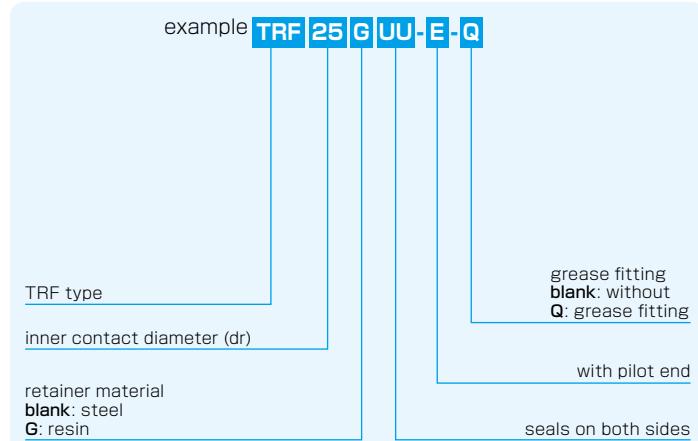
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRF-E TYPE

— Triple-Wide Round Flange Pilot End Type —



part number structure



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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

*** TRF6~8: A-M6x1 TRF10~30: A-M6F TRF35~60: A-R1/8

| l mm | Df mm | t mm | flange P.C.D. mm | | | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|------|-------|------|------------------|-------------|------|---------------------|-----------------|---------------------|-------------------------------|--------------------|--------------------------------|--------|-------------------|
| | | | X | Y | Z mm | | | | | | | | |
| 5 | 32 | 5 | 24 | 3.5×6×3.1 | 20.5 | 20 | 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 | | | | 1,230 | 2,350 | 73.5 | 412 | 16 |
| 8 | 62 | 8 | 51 | 5.5×9×5.1 | 59 | 25 | 25 | 25 | 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 | | | | 2,650 | 6,270 | 373 | 2,580 | 35 |
| 13 | 101 | 13 | 83 | 9×14×8.1 | 115 | 30 | 30 | 30 | 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 |

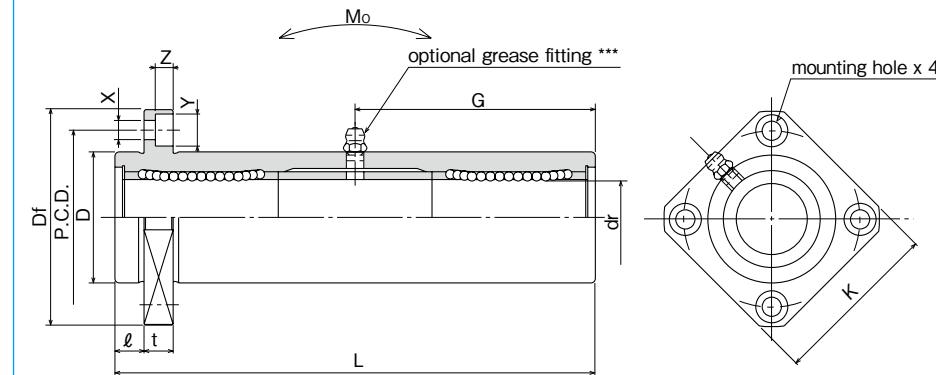
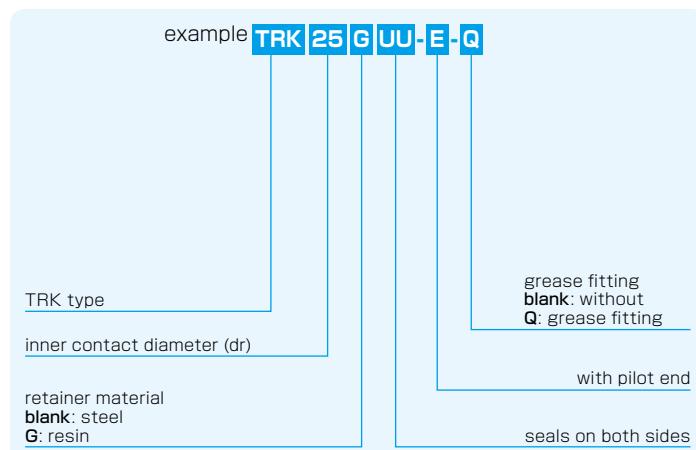
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

TRK-E TYPE

— Triple-Wide Square Flange Pilot End Type —



part number structure



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

* UU type is standard.

** Outer cylinder is treated with electroless nickel plating.

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

| ℓ mm | Df mm | K mm | flange | | | grease fitting G mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter mm |
|--------------|----------|---------|--------|-----------|-------------|------------------------|--------------------|------------------------|----------------------------------|--------------------|----------------------------------|--------|-------------------|
| | | | t mm | P.C.D. mm | X×Y×Z 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 | | | 1,230 | 2,350 | 73.5 | 376 | 16 |
| 8 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 59 | 25 | 25 | 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 | | | 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 | 30 | 30 | 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)

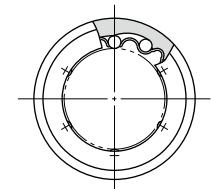
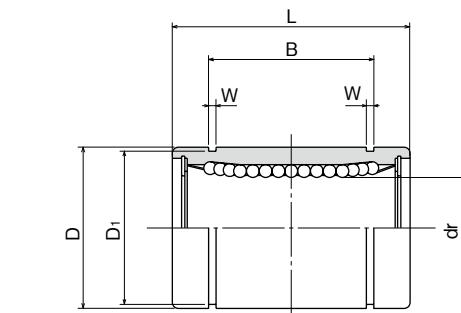
— Standard Type —



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

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

1N=0.102kgf

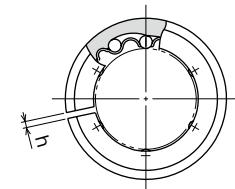
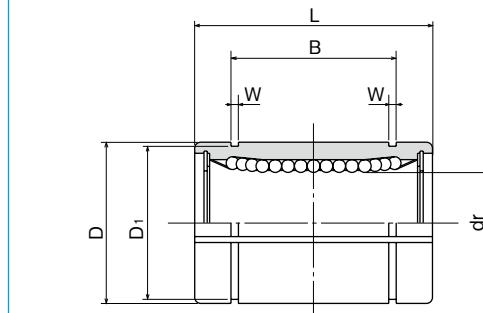
KB-AJ TYPE (Euro Standard)

– 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 | | | | | | |



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

* Accuracy is measured prior to machining clearance slit.

| L mm | tolerance mm | B mm | tolerance mm | W mm | D ₁ mm | h mm | eccentricity* μm | basic load rating dynamic C N | static Co N | mass g | shaft diameter mm |
|---------|-----------------|---------|-----------------|---------|----------------------|---------|--------------------------------|--|-------------------|-----------|-------------------------|
| 22 | 0 | 14.5 | –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 | | 862 | 1,370 | 100 | 20 |
| 58 | 0 | 44.1 | –0.3 | 1.85 | 37.5 | 2 | 15 | 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 | | 2,160 | 4,020 | 758 | 40 |
| 100 | | 77.6 | | 2.65 | 72 | 3 | | 3,820 | 7,940 | 1,230 | 50 |
| 125 | 0 | 101.7 | 0 | 3.15 | 86.5 | 3 | | 4,700 | 9,800 | 2,170 | 60 |
| 165 | –0.4 | 133.7 | –0.4 | 4.15 | 116 | 3 | | 7,350 | 16,000 | 5,000 | 80 |

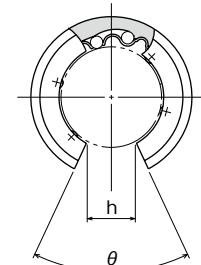
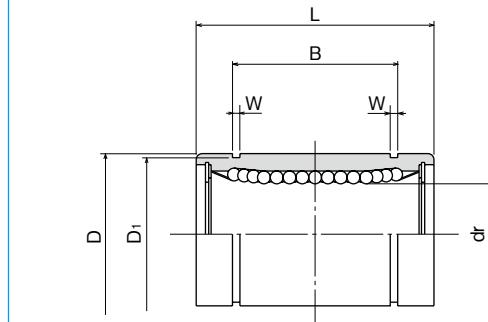
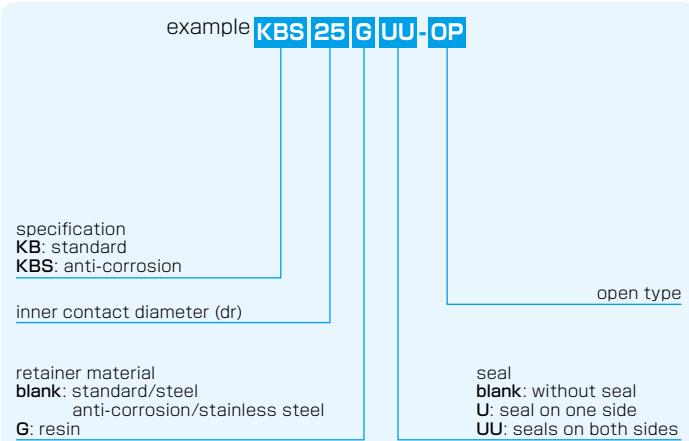
1N=0.102kgf

KB-OP TYPE (Euro Standard)

– Open Type –



part number structure



| part number | | | | number of ball circuits | dr tolerance* | | major dimensions | |
|-------------------------|-----------------|-----------------------------------|------------------|-------------------------|---------------|--------|------------------|-----|
| standard steel retainer | resin retainer | anti-corrosion stainless retainer | resin retainer | number of ball circuits | mm | μm | mm | 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 | |
| KB25-OP | KB25G-OP | KBS25-OP | KBS25G-OP | 5 | 25 | +11 | 40 | 0 |
| KB30-OP | KB30G-OP | KBS30-OP | KBS30G-OP | 5 | 30 | - 1 | 47 | -11 |
| 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.

1N=0.102kgf

| L tolerance 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 | 22 | 0 | 1.3 | 18 | 6.8 | 80° | 12 | 372 | 549 |
| 32 | | 22.9 | | 1.3 | 21 | 7.5 | 78° | | 510 | 784 |
| 36 | | 24.9 | | 1.3 | 24.9 | 10 | 78° | | 578 | 892 |
| 45 | | 31.5 | | 1.6 | 30.3 | 10 | 60° | | 862 | 1,370 |
| 58 | 0 | 44.1 | 0 | 1.85 | 37.5 | 12.5 | 60° | 15 | 980 | 1,570 |
| 68 | | 52.1 | | 1.85 | 44.5 | 12.5 | 50° | | 1,570 | 2,740 |
| 80 | | 60.6 | | 2.15 | 59 | 16.8 | 50° | | 2,160 | 4,020 |
| 100 | | 77.6 | | 2.65 | 72 | 21 | 50° | | 3,820 | 7,940 |
| 125 | 0 | 101.7 | 0 | 3.15 | 86.5 | 27.2 | 54° | 20 | 4,700 | 9,800 |
| 165 | -0.4 | 133.7 | -0.4 | 4.15 | 116 | 36.3 | 54° | | 7,350 | 16,000 |

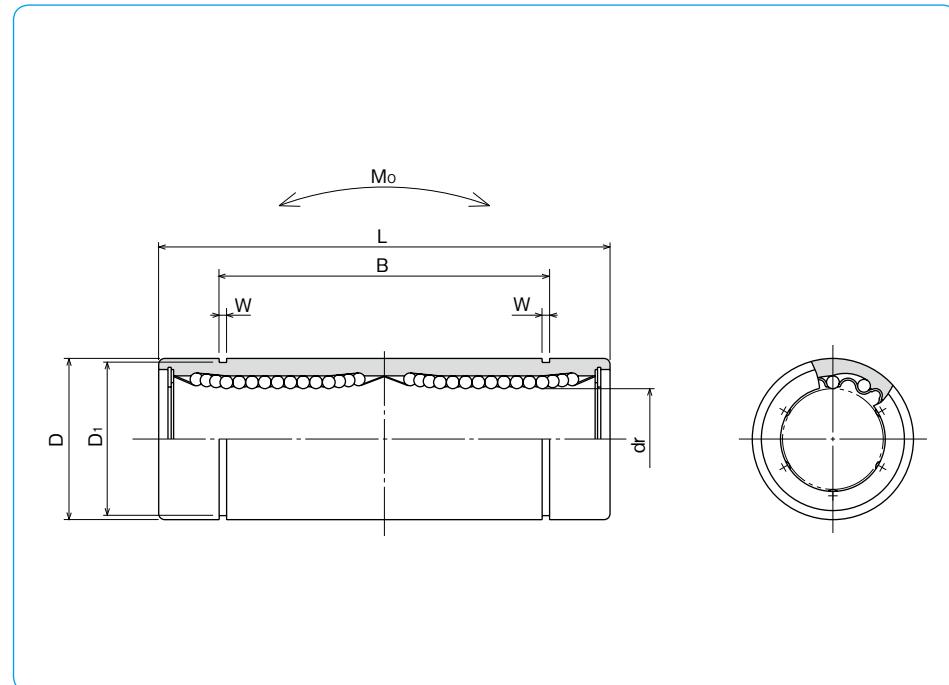
KB-W TYPE (Euro Standard)

– 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 | |
| double-wide type | |



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

| L mm | B tolerance mm | W tolerance mm | D1 mm | eccentricity μ m | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter mm |
|---------|----------------------|----------------------|----------|-------------------------|-------------------------------------|-------------------------------------|--|-----------|-------------------------|
| 46 | 0 -0.3 | 33 | 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 | | 1,370 | 2,740 | 25.0 | 180 20 |
| 112 | 0 -0.4 | 82 | 1.85 | 38 | 17 | 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 | | 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 | 20 | 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**

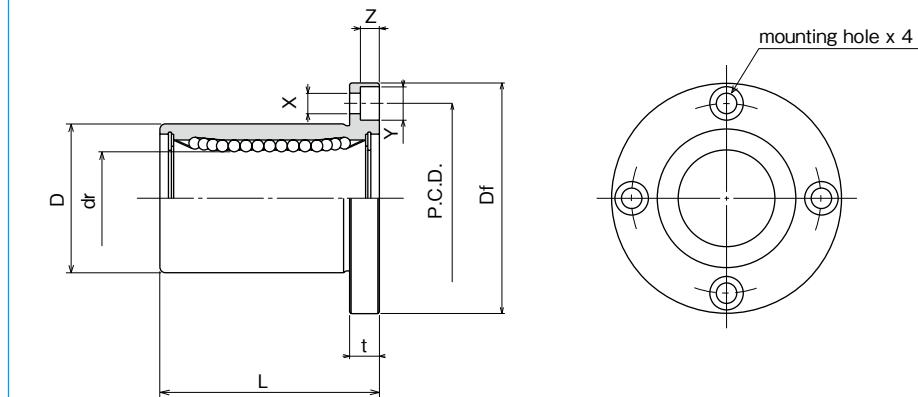
specification
KBF: standard
KBSF: anti-corrosion

inner contact diameter (dr)

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

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

seal
blank: without seal
UU: seals on both sides



| | | part number | | number of ball circuits | dr tolerance μm | major dimensions | | |
|----------------------------|----------------|---|----------------|-------------------------------|-----------------------|----------------------|-----------------|-----------|
| standard steel retainer | resin retainer | anti-corrosion stainless retainer | resin retainer | | | D tolerance μm | L ±0.3 mm | |
| – | KBF 5G | – | KBSF 5G | 4 | 5 | + 8 0 | 12 16 | 0 –13 |
| KBF 8 | KBF 8G | KBSF 8 | KBSF 8G | 4 | 8 | | | 25 |
| KBF12 | KBF12G | KBSF12 | KBSF12G | 4 | 12 | 22 | 0 | 32 |
| KBF16 | KBF16G | KBSF16 | KBSF16G | 4 | 16 | + 9 – 1 | 26 32 | 36 45 |
| KBF20 | KBF20G | KBSF20 | KBSF20G | 5 | 20 | | | |
| KBF25 | KBF25G | KBSF25 | KBSF25G | 6 | 25 | +11 – 1 | 40 47 | 58 68 |
| KBF30 | KBF30G | KBSF30 | KBSF30G | 6 | 30 | | | |
| KBF40 | KBF40G | KBSF40 | KBSF40G | 6 | 40 | +13 – 2 | 62 75 | 80 100 |
| KBF50 | KBF50G | KBSF50 | KBSF50G | 6 | 50 | | | |
| KBF60 | KBF60G | KBSF60 | KBSF60G | 6 | 60 | | | |
| 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 | | mass g | shaft diameter mm |
|----------|---------|------------------------|-------------|--------------------|------------------------|-------------------|-------------------|-----------|-------------------------|
| | | | | | | dynamic C N | static Co N | | |
| 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 | | | 2,160 | 4,020 | 1,175 | 40 |
| 112 | 13 | 94 | 9×14×8.1 | 17 | 17 | 3,820 | 7,940 | 1,745 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | | | 4,700 | 9,800 | 3,220 | 60 |
| 164 | 18 | 142 | 11×17×11.1 | | | 7,350 | 16,000 | 6,420 | 80 |

1N=0.102kgf

KBK TYPE (Euro Standard)

– Square Flange Type –



part number structure

example **KBSK 25 G UU-SK**

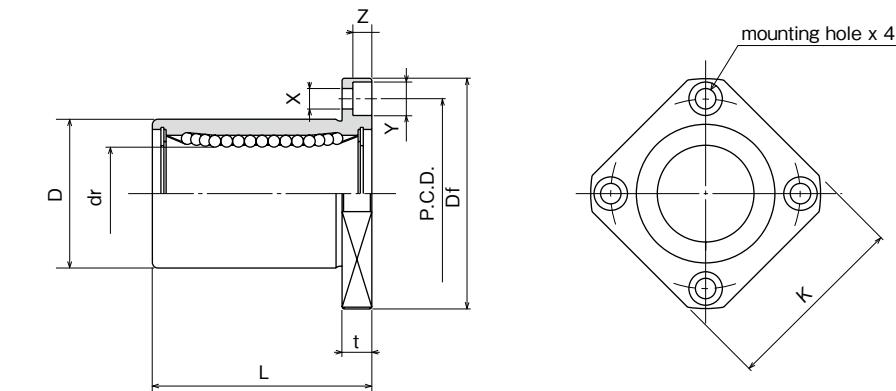
specification
KBK: standard
KBSK: anti-corrosion

inner contact diameter (dr)

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

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

seal
blank: without seal
UU: seals on both sides



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

| Df mm | K mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | | mass g | shaft diameter mm |
|----------|---------|---------|--------------|-------------|--------------------|------------------------|-------------------|-------------------|-----------|-------------------------|
| | | | | | | | dynamic C N | static Co N | | |
| 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 | | | 2,160 | 4,020 | 975 | 40 |
| 112 | 88 | 13 | 94 | 9×14×8.1 | 17 | 17 | 3,820 | 7,940 | 1,545 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | | | 4,700 | 9,800 | 2,780 | 60 |
| 164 | 136 | 18 | 142 | 11×17×11.1 | 20 | 20 | 7,350 | 16,000 | 5,920 | 80 |

1N=0.102kgf

KBT TYPE (Euro Standard)

— Two Side Cut Flange Type —



part number structure

example **KBST 25 G UU-SK**

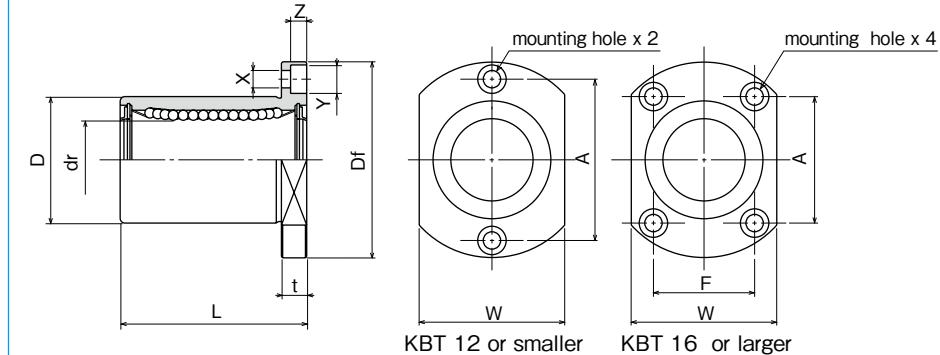
specification
KBT: standard
KBST: anti-corrosion

inner contact diameter (dr)

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

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

seals on both sides



KBT 12 or smaller

KBT 16 or larger

| part number | | | | number of ball circuits | major dimensions | | | | |
|----------------------------|----------------------------------|-----------------------|----------------|-------------------------------|------------------|----------------------------|---------|----------------------------|----------------------|
| standard steel retainer | anti-corrosion resin retainer | stainless retainer | resin retainer | | dr mm | tolerance μm | D mm | tolerance μm | L ± 0.3 mm |
| KBT 5 UU | KBT 5G UU | KBST 5 UU | KBST 5G UU | 4 | 5 | + 8 0 | 12 | 0 | 22 |
| KBT 8 UU | KBT 8G UU | KBST 8 UU | KBST 8G UU | 4 | 8 | | 16 | -13 | 25 |
| KBT12 UU | KBT12G UU | KBST12 UU | KBST12G UU | 4 | 12 | | 22 | 0 | 32 |
| KBT16 UU | KBT16G UU | KBST16 UU | KBST16G UU | 4 | 16 | + 9 - 1 | 26 | -16 | 36 |
| KBT20 UU | KBT20G UU | KBST20 UU | KBST20G UU | 5 | 20 | | 32 | 0 | 45 |
| KBT25 UU | KBT25G UU | KBST25 UU | KBST25G UU | 6 | 25 | +11 | 40 | -19 | 58 |
| KBT30 UU | KBT30G UU | KBST30 UU | KBST30G UU | 6 | 30 | - 1 | 47 | | 68 |

* UU type is standard.

| Df mm | W mm | t mm | flange | | | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | static Co N | mass g | shaft diameter mm |
|----------|---------|---------|---------|---------|-------------|-------------|-------------------------------|-----------------------------------|--|-------------------|-----------|-------------------------|
| | | | A mm | F mm | X×Y×Z mm | | | | | | | |
| 28 | 18 | 5 | 20 | — | 3.5×6×3.1 | 12 | 12 | 206 | 265 | 25 | 5 | |
| 32 | 22 | 5 | 24 | — | 3.5×6×3.1 | | | 265 | 402 | 37 | 8 | |
| 42 | 28 | 6 | 32 | — | 4.5×7.5×4.1 | | | 510 | 784 | 73 | 12 | |
| 46 | 32 | 6 | 28 | 22 | 4.5×7.5×4.1 | | | 578 | 892 | 90 | 16 | |
| 54 | 38 | 8 | 36 | 24 | 5.5×9×5.1 | 15 | 15 | 862 | 1,370 | 155 | 20 | |
| 62 | 46 | 8 | 40 | 32 | 5.5×9×5.1 | | | 980 | 1,570 | 295 | 25 | |
| 76 | 53 | 10 | 48 | 36 | 6.6×11×6.1 | | | 1,570 | 2,740 | 471 | 30 | |

1N=0.102kgf

KBF-W TYPE (Euro Standard)

– Round Flange Double-Wide Type –

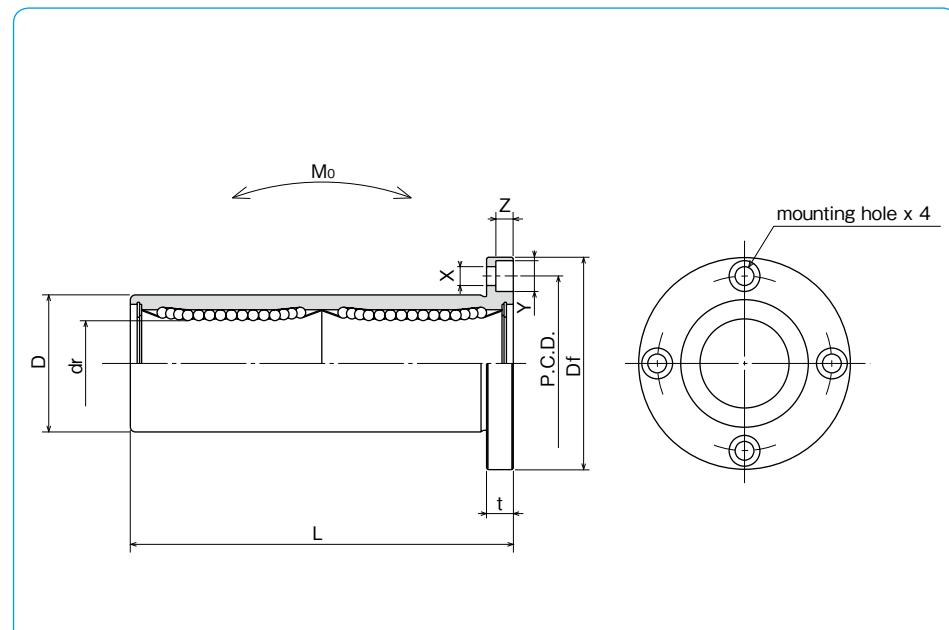


part number structure

| | | | | | | |
|-----------------------------|-------------|--------------------------------|----------|----------|-----------|------------|
| 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 | | | | | | |

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

seal
blank: without seal
UU: seals on both sides



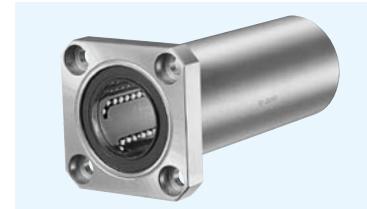
| part number | | | | number of ball circuits | major dimensions | | |
|----------------|----------------|----------------|-----------------|-------------------------|------------------|-------------|--------------|
| standard | anti-corrosion | stainless | resin | | dr tolerance | D tolerance | L ±0.3 mm |
| steel retainer | resin retainer | retainer | retainer | | mm | μm | 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 0 112 |
| KBF30W | KBF30GW | KBSF30W | KBSF30GW | 6 | 30 | - 2 | 47 -19 123 |
| 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 |

| Df mm | t mm | flange P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter 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 | | | 3,430 | 8,040 | 147 | 1,805 | 40 |
| 112 | 13 | 94 | 9×14×8.1 | 20 | 20 | 6,080 | 15,900 | 396 | 2,820 | 50 |
| 134 | 18 | 112 | 11×17×11.1 | | | 7,550 | 20,000 | 487 | 4,920 | 60 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

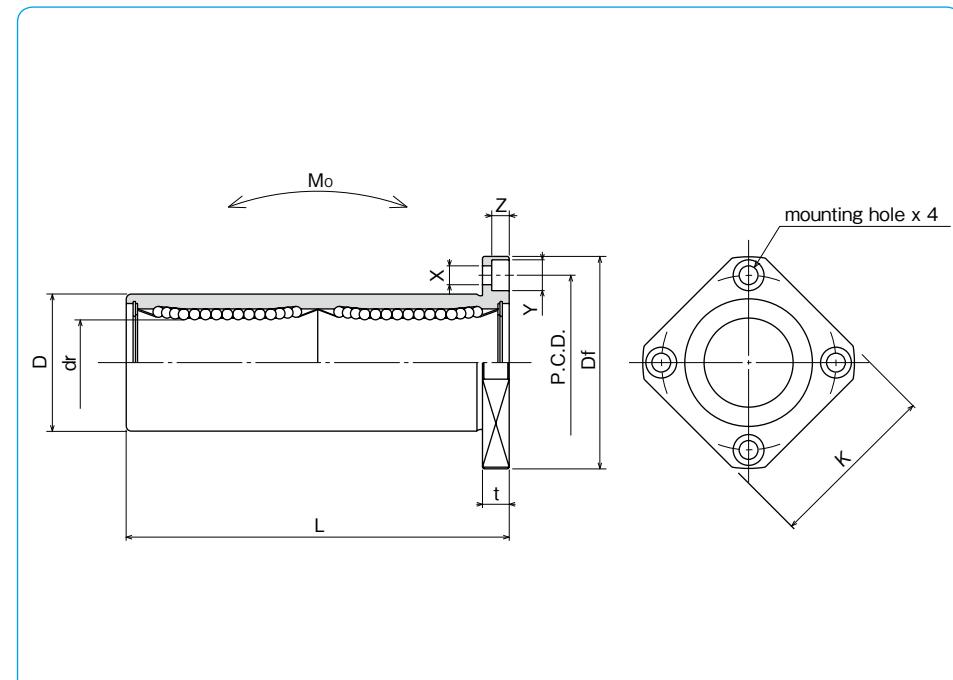
KBK-W TYPE (Euro Standard)

– Square Flange Double-Wide Type –



part number structure

| | | | | | | |
|----------------------------------|--|----|---|---|----|-----|
| example | KBSK | 25 | G | W | UU | -SK |
| specification | | | | | | |
| KBK: | standard | | | | | |
| KBSK: | anti-corrosion | | | | | |
| inner contact diameter (dr) | | | | | | |
| retainer material | | | | | | |
| blank: | standard/steel | | | | | |
| | anti-corrosion/stainless steel | | | | | |
| G: | resin | | | | | |
| double-wide type | | | | | | |
| 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 | | | | | |
| seal | | | | | | |
| blank: | without seal | | | | | |
| UU: | seals on both sides | | | | | |



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

| Df mm | K mm | flange | | | eccentricity μm | perpendicularity μm | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|-------|------|--------|-----------|-------------|-----------------|---------------------|-------------------------------|--------------------|--------------------------------|--------|-------------------|
| | | t mm | P.C.D. mm | X×Y×Z 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 | | | 3,430 | 8,040 | 147 | 1,600 | 40 |
| 112 | 88 | 13 | 94 | 9×14×8.1 | 20 | 20 | 6,080 | 15,900 | 396 | 2,620 | 50 |
| 134 | 106 | 18 | 112 | 11×17×11.1 | | | 7,550 | 20,000 | 487 | 4,480 | 60 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

KBFC TYPE (Euro Standard)

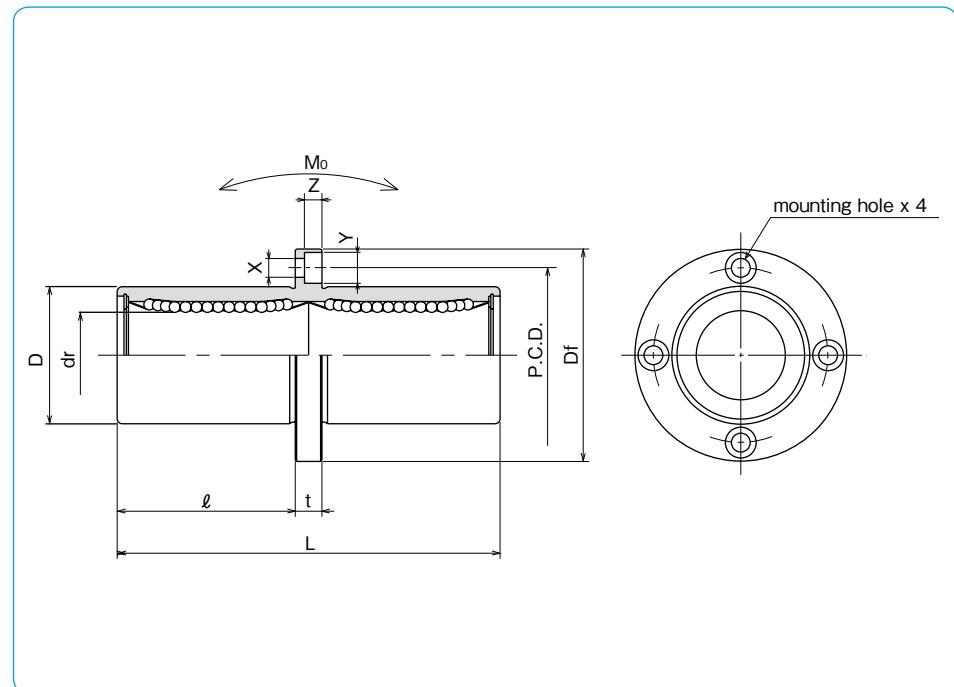
– Center Mount Round Flange Type –



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 | | | | | | |
| 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 | | | | | | |
| seal | | | | | | |
| blank: without seal | | | | | | |
| UU: seals on both sides | | | | | | |

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



| l mm | Df mm | t mm | P.C.D. mm | X×Y×Z mm | eccentricity μm | perpendicularity μm | basic load rating | allowable static moment Mo N·m | mass g | shaft diameter mm |
|---------|----------|---------|--------------|-------------|--------------------|------------------------|-------------------|-----------------------------------|-----------|----------------------|
| | | | | | | | dynamic C N | | | |
| 20.5 | 32 | 5 | 24 | 3.5×6×3.1 | 15 | 15 | 421 | 804 | 4.3 | 59 |
| 27.5 | 42 | 6 | 32 | 4.5×7.5×4.1 | | | 813 | 1,570 | 11.7 | 110 |
| 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 | 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 | 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 | 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**

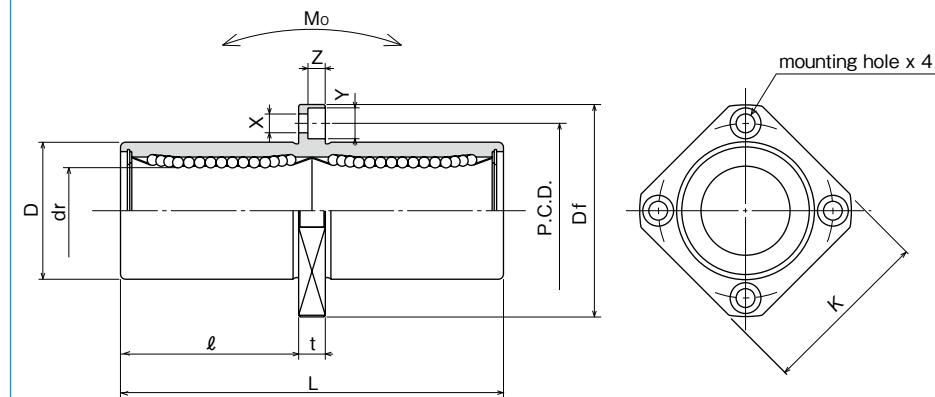
specification
KBKC: standard
KBSKC: anti-corrosion

inner contact diameter (dr)

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

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

seal
blank: without seal
UU: seals on both sides



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

| l mm | Df mm | flange | | | | 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 |
|------|-------|--------|------|-----------|-------------|-----------------|---------------------|-------------------------------|-------------------------------|----------------------------------|--------|-------------------|
| | | K mm | t mm | P.C.D. mm | X×Y×Z mm | | | | | | | |
| 20.5 | 32 | 25 | 5 | 24 | 3.5×6×3.1 | | | 421 | 804 | 4.3 | 51 | 8 |
| 27.5 | 42 | 32 | 6 | 32 | 4.5×7.5×4.1 | 15 | 15 | 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 | | | 1,370 | 2,740 | 25.0 | 225 | 20 |
| 52 | 62 | 50 | 8 | 51 | 5.5×9×5.1 | 17 | 17 | 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

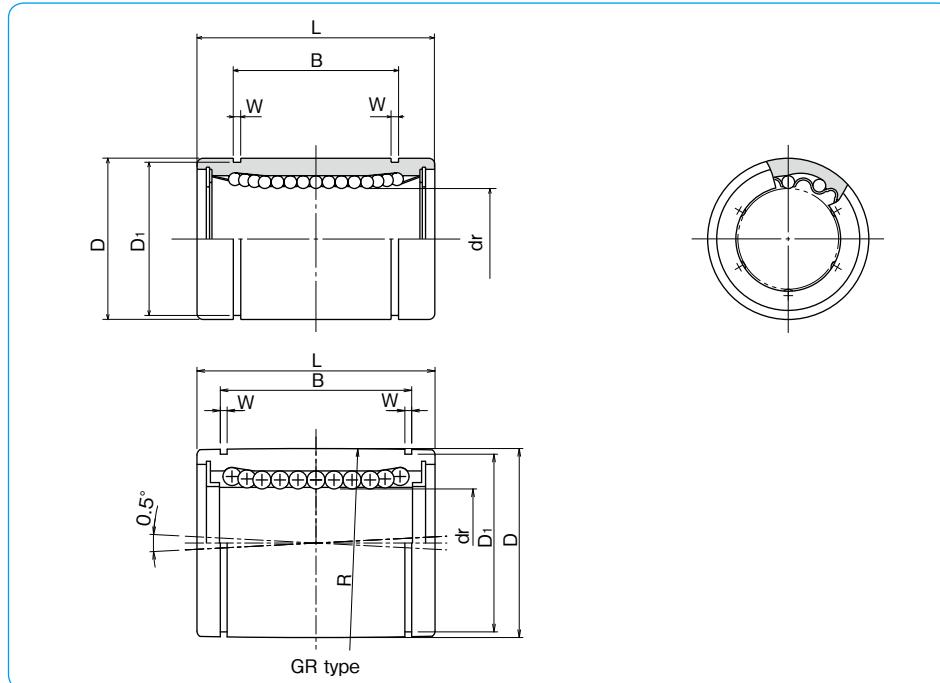
SW TYPE (Inch Standard)

— 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 | | | | | | |
| accuracy grade | | | | | | |
| blank: high | | | | | | |
| P: precision | | | | | | |
| 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 | | | | | | |



| steel retainer | partnumber | | number of ball circuits | majordimensions | | | eccentricity | radial clearance (maximum) | basicloadrating dynamic C N | basicloadrating static Co N | mass g | shaft diameter inch (mm) |
|-------------------|---------------------------|---|-------------------------------|--------------------|------------------------|---------------------|----------------------|----------------------------------|--------------------------------------|--------------------------------------|-----------|-----------------------------------|
| | standard resinretainer | anti-corrosion stainless retainer | | dr inch (mm) | tolerance precision | inch (μm) | | | | | | |
| — | — | — | SWS2 | SWS2G | 4 | .1250 (3.175) | 0 | .3125 (7.938) | 0 | 59 | 76 | 2.8 (3.175) |
| — | — | — | SWS3 | SWS3G | 4 | .1875 (4.763) | — | .3750 (9.525) | —0.0040 (-9) | 91 | 110 | 3.6 (4.763) |
| SW4 | SW4G | SW4GR | SWS4 | SWS4G | 4 | .2500 (6.350) | .5000 (12.700) | 0 | —0.0045 (-11) | 206 | 265 | 9.5 (6.350) |
| SW6 | SW6G | SW6GR | SWS6 | SWS6G | 4 | .3750 (9.525) | .6250 (15.875) | 0 | —0.0050 (-13) | 225 | 314 | 15 (9.525) |
| SW8 | SW8G | SW8GR | SWS8 | SWS8G | 4 | .5000 (12.700) | .8750 (22.225) | 0 | —0.0050 (-13) | 510 | 784 | 42 (12.700) |
| SW10 | SW10G | SW10GR | SWS10 | SWS10G | 4 | .625 (15.875) | 1.1250 (28.575) | 0 | —0.0050 (-13) | 774 | 1,180 | 85 (15.875) |
| SW12 | SW12G | SW12GR | SWS12 | SWS12G | 5 | .7500 (19.050) | 1.2500 (31.750) | 0 | —0.0065 (-16) | 862 | 1,370 | 104 (19.050) |
| SW16 | SW16G | SW16GR | SWS16 | SWS16G | 6 | 1.0000 (25.400) | 1.5625 (39.688) | 0 | —0.0065 (-16) | 980 | 1,570 | 220 (25.400) |
| SW20 | SW20G | SW20GR | SWS20 | SWS20G | 6 | 1.2500 (31.750) | 2.0000 (50.800) | 0 | —0.0075 (-19) | 1,570 | 2,740 | 465 (31.750) |
| SW24 | SW24G | SW24GR | SWS24 | SWS24G | 6 | 1.5000 (38.100) | 2.3750 (60.325) | 0 | —0.0050 (-12) | 2,180 | 4,020 | 720 (38.100) |
| SW32 | SW32G | SW32GR | SWS32 | SWS32G | 6 | 2.0000 (50.800) | 3.0000 (76.200) | 0 | —0.0050 (-13) | 3,820 | 7,940 | 1,310 (50.800) |
| SW40 | — | — | — | — | 6 | 2.5000 (63.500) | 3.7500 (95.250) | 0 | —0.0090 (-22) | 4,700 | 10,000 | 2,600 (63.500) |
| SW48 | — | — | — | — | 6 | 3.0000 (76.200) | 4.50000 (114.300) | 0 | —0.0100 (-25) | 7,350 | 16,000 | 4,380 (76.200) |
| SW64 | — | — | — | — | 6 | 4.0000 (101.600) | —0.0040 (-10) | —0.0080 (-20) | —0.0100 (-25) | 14,100 | 34,800 | 10,200 (101.600) |

| L inch (mm) | B inch (mm) | W inch (mm) | D inch (mm) | D1 inch (mm) | eccentricity | radial clearance (maximum) | basicloadrating dynamic C N | basicloadrating static Co N | mass g |
|---------------------|--------------------|-------------------|---------------------|--------------------|--------------------|----------------------------------|--------------------------------------|--------------------------------------|---------------------|
| .5000 (12.700) | .3681 (9.35) | .0280 (0.710) | .2902 (7.370) | — | —0.0003 (8) | —0.001 (-2) | 59 | 76 | 2.8 (3.175) |
| .5625 (14.275) | .4311 (10.95) | .0280 (0.710) | .3520 (8.940) | — | —0.001 (-3) | —0.001 (-3) | 91 | 110 | 3.6 (4.763) |
| .7500 (19.050) | .5110 (12.98) | .0390 (0.992) | .4687 (11.906) | —0.003 (8) | —0.0005 (12) | —0.0005 (-4) | 206 | 265 | 9.5 (6.350) |
| .8750 (22.225) | .6358 (16.15) | .0390 (0.992) | .5880 (14.935) | —0.003 (8) | —0.0005 (12) | —0.0005 (-4) | 225 | 314 | 15 (9.525) |
| 1.2500 (31.750) | .9625 (24.46) | .0459 (1.168) | .8209 (20.853) | —0.001 (-6) | —0.0001 (-6) | —0.0001 (-6) | 510 | 784 | 42 (12.700) |
| 1.5000 (38.100) | 1.1039 (28.04) | .0559 (1.422) | 1.0590 (26.899) | —0.001 (-4) | —0.0001 (-4) | —0.0001 (-4) | 774 | 1,180 | 85 (15.875) |
| 1.6250 (41.275) | 1.1657 (29.61) | .0559 (1.422) | 1.1760 (29.870) | —0.0004 (10) | —0.0006 (15) | —0.0002 (-6) | 862 | 1,370 | 104 (19.050) |
| 2.2500 (57.150) | 1.7547 (44.57) | .0679 (1.727) | 1.4687 (37.306) | —0.0004 (10) | —0.0006 (15) | —0.0002 (-6) | 980 | 1,570 | 220 (25.400) |
| 2.6250 (66.675) | 2.0047 (50.92) | .0679 (1.727) | 1.8859 (47.904) | —0.0005 (12) | —0.0008 (20) | —0.0003 (-8) | 1,570 | 2,740 | 465 (31.750) |
| 3.0000 (76.200) | 2.4118 (61.26) | .0859 (2.184) | 2.2389 (56.870) | —0.012 (-0.3) | —0.0005 (-0.3) | —0.0003 (-0.3) | 2,180 | 4,020 | 720 (38.100) |
| 4.0000 (101.600) | 3.1917 (81.07) | .1029 (2.616) | 2.8379 (72.085) | —0.012 (-0.3) | —0.0007 (-0.13) | —0.0005 (-0.13) | 3,820 | 7,940 | 1,310 (50.800) |
| 5.0000 (127.000) | 3.9760 (100.99) | .1200 (3.048) | 3.5519 (90.220) | —0.012 (-0.25) | —0.0010 (25) | —0.0005 (-0.13) | 4,700 | 10,000 | 2,600 (63.500) |
| 6.0000 (152.400) | 4.726 (120.04) | .1200 (3.048) | 4.3100 (109.474) | —0.012 (-0.25) | —0.0012 (30) | —0.0008 (-0.20) | 7,350 | 16,000 | 4,380 (76.200) |
| 8.0000 (203.200) | 6.258 (158.95) | .1200 (3.048) | 5.745 (145.923) | —0.012 (-0.25) | —0.0012 (30) | —0.0008 (-0.20) | 14,100 | 34,800 | 10,200 (101.600) |

1N ≈ 0.225lbf 1kg ≈ 2.205lbs

SW-AJ TYPE (Inch Standard)

— Clearance Adjustable Type —



part number structure

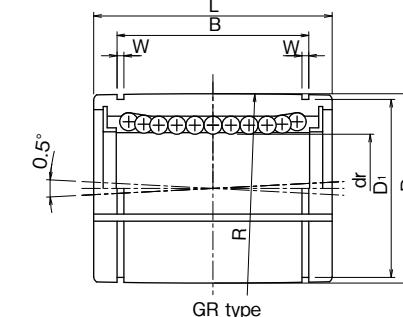
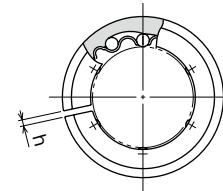
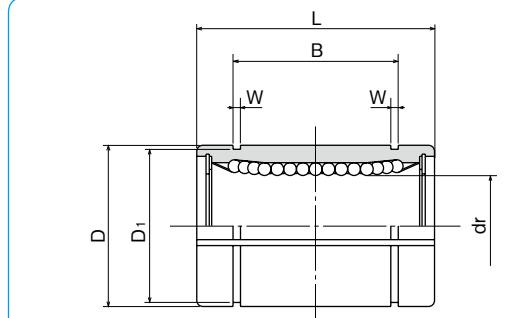
example SWS 16 G R UU - AJ

specification
SW: standard
SWS: anti-corrosion

size

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

clearance-adjustable
seal
blank: without seal
U: seal on one side
UU: seals on both sides
self aligning
blank: non self aligning
R: self aligning



| steelretainer | partnumber | | anti-corrosion | | number ofballcircuits | dr inch (mm) | tolerance* inch/ μ m) | majordimensions | |
|---------------|------------|---------------|-----------------------|---------------|-----------------------|---------------------|------------------------------|-------------------|--------------------|
| | standard | resinretainer | stainless retainer | resinretainer | | | | D inch (mm) | D1 inch (mm) |
| - | SW4-AJ | - | - | SWS4-AJ | 4 | .2500 (6.350) | .5000 (12.700) | .00045 0 | .00045 0 |
| - | SW6-AJ | - | - | SWS6-AJ | 4 | .3750 (9.525) | .6250 (15.875) | .00040 0 | .00040 0 |
| SW8-AJ | SW8G-AJ | SW8GR-AJ | SWS8-AJ | SWS8G-AJ | 4 | 5.000 (12.700) | .8750 (22.225) | .00050 0 | .00050 0 |
| SW10-AJ | SW10G-AJ | SW10GR-AJ | SWS10-AJ | SWS10G-AJ | 4 | .625 (15.875) | 1.1250 (28.575) | .00040 0 | .00040 0 |
| SW12-AJ | SW12G-AJ | SW12GR-AJ | SWS12-AJ | SWS12G-AJ | 5 | .7500 (19.050) | 1.2500 (31.750) | .00040 0 | .00040 0 |
| SW16-AJ | SW16G-AJ | SW16GR-AJ | SWS16-AJ | SWS16G-AJ | 6 | 1.0000 (25.400) | 1.5625 (39.688) | .00040 0 | .00040 0 |
| SW20-AJ | SW20G-AJ | SW20GR-AJ | SWS20-AJ | SWS20G-AJ | 6 | 1.2500 (31.750) | 2.0000 (50.800) | .00050 0 | .00050 0 |
| SW24-AJ | SW24G-AJ | SW24GR-AJ | SWS24-AJ | SWS24G-AJ | 6 | 1.5000 (38.100) | 2.3750 (60.325) | .00050 0 | .00050 0 |
| SW32-AJ | SW32G-AJ | SW32GR-AJ | SWS32-AJ | SWS32G-AJ | 6 | 2.0000 (50.800) | 3.0000 (76.200) | .00050 0 | .00050 0 |
| SW40-AJ | - | - | - | - | 6 | 2.5000 (63.500) | 3.7500 (95.250) | .00060 0 | .00060 0 |
| SW48-AJ | - | - | - | - | 6 | 3.0000 (76.200) | 4.50000 (114.300) | .00080 0 | .00080 0 |
| SW64-AJ | - | - | - | - | 6 | 4.0000 (101.600) | 6.0000 (152.400) | .00100 0 | .00100 0 |

* Accuracy is measured prior to machining clearance slit.

| L inch (mm) | B inch (mm) | W inch (mm) | D1 inch (mm) | h inch (mm) | eccentricity* inch (μ m) | basicloadrating dynamic C N | basicloadrating static Co N | mass g | shaft diameter inch (mm) |
|---------------------|--------------------|-------------------|---------------------|-------------------|-------------------------------------|--------------------------------------|--------------------------------------|-----------|-----------------------------------|
| .7500 (19.050) | .5100 (12.98) | .0390 (.992) | .4687 (11.906) | .04 (1) | .0005 (12) | 206 | 265 | 7.5 | 1/4 (6.350) |
| | .6358 (12.15) | .0390 (.992) | .5880 (14.935) | .04 (1) | | 225 | 314 | 13.5 | 3/8 (9.525) |
| | .9625 (24.46) | .0459 (1.168) | .8209 (20.853) | .06 (1.5) | | 510 | 784 | 41 | 1/2 (12.700) |
| | 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) | 1.7547 (44.57) | .0679 (1.727) | 1.4687 (37.306) | .06 (1.5) | .0008 (20) | 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 (101.600) | 2.4118 (61.26) | .0859 (2.184) | 2.2389 (56.870) | .12 (3) | .0010 (25) | 2,180 | 4,020 | 710 | 1-1/2 (38.100) |
| 4.0000 (127.000) | 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 (152.400) | 3.9760 (100.99) | .1200 (3.048) | 3.5519 (90.220) | .12 (3) | .0010 (25) | 4,700 | 10,000 | 2,560 | 2-1/2 (63.500) |
| 6.0000 (187.800) | 4.726 (120.04) | .1200 (3.048) | 4.3100 (109.474) | .12 (3) | .0012 (30) | 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) |

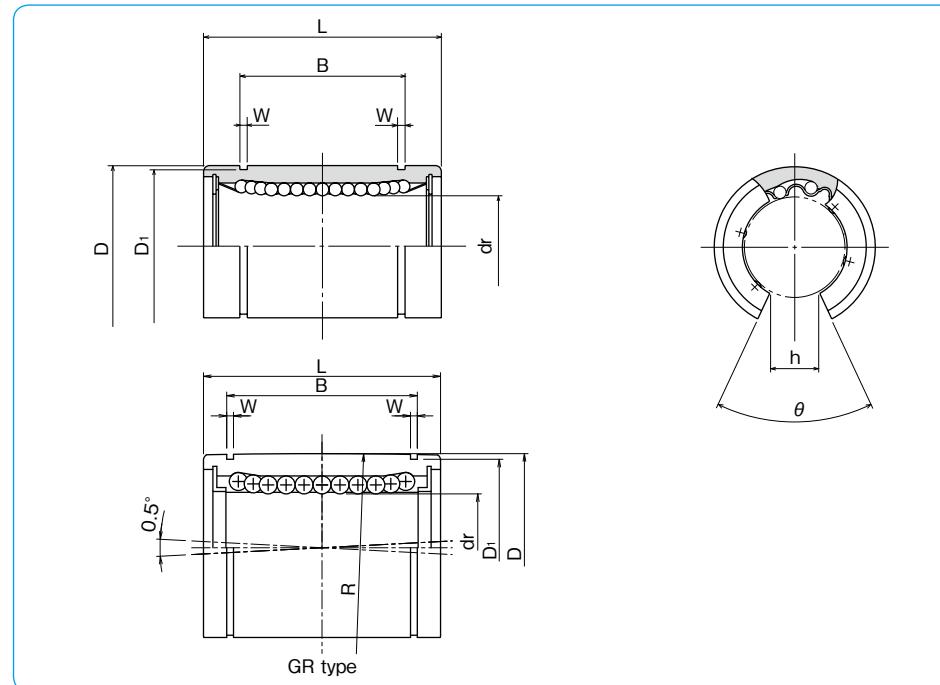
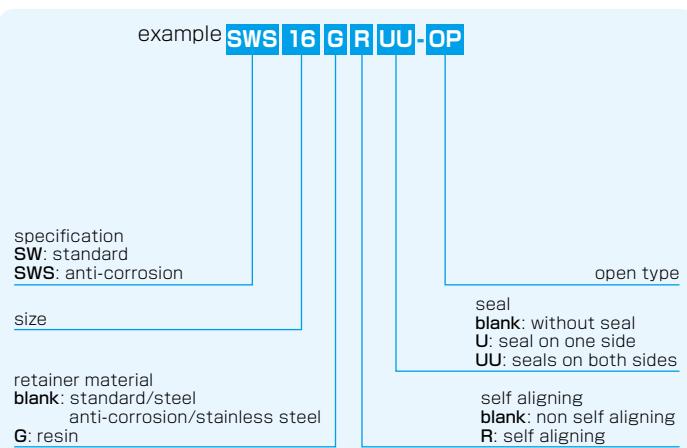
1N=0.225lbf 1kg=2.205lbs

SW-OP TYPE (Inch Standard)

— Open Type —



part number structure



| steel retainer | part number | | | | number of ball circuits | dr inch (mm) | tolerance * inch/ μm | major dimensions | |
|-------------------|----------------------------|-------------------------------------|-------------------|-----------|-------------------------------|---------------------|------------------------------------|----------------------|------------------------------------|
| | standard resin retainer | anti-corrosion steel retainer | resin retainer | | | | | D inch (mm) | tolerance * inch/ μm |
| SW 8-OP | SW 8G-OP | SW 8GR-OP | SWS 8-OP | SWS 8G-OP | 3 | .5000 (12.700) | .00040 (-9) | .8750 (22.225) | 0 -.00050 (-13) |
| SW10-OP | SW10G-OP | SW10GR-OP | SWS10-OP | SWS10G-OP | 3 | .625 (15.875) | .00080 (-0.2) | 1.1250 (28.575) | |
| SW12-OP | SW12G-OP | SW12GR-OP | SWS12-OP | SWS12G-OP | 4 | .7500 (19.050) | .00040 (-10) | 1.2500 (31.750) | 0 -.00065 (-16) |
| SW16-OP | SW16G-OP | SW16GR-OP | SWS16-OP | SWS16G-OP | 5 | 1.0000 (25.400) | .00060 (-12) | 1.5625 (39.688) | |
| SW20-OP | SW20G-OP | SW20GR-OP | SWS20-OP | SWS20G-OP | 5 | 1.2500 (31.750) | .00050 (-12) | 2.0000 (50.800) | 0 -.00075 (-19) |
| SW24-OP | SW24G-OP | SW24GR-OP | SWS24-OP | SWS24G-OP | 5 | 1.5000 (38.100) | .00050 (-12) | 2.3750 (60.325) | |
| SW32-OP | SW32G-OP | SW32GR-OP | SWS32-OP | SWS32G-OP | 5 | 2.0000 (50.800) | .00060 (-15) | 3.0000 (76.200) | 0 -.00090 (-22) |
| SW40-OP | - | - | - | - | 5 | 2.5000 (63.500) | .00060 (-15) | 3.7500 (95.250) | |
| SW48-OP | - | - | - | - | 5 | 3.0000 (76.200) | .00060 (-15) | 4.50000 (114.300) | |
| SW64-OP | - | - | - | - | 5 | 4.0000 (101.600) | -.00080 (-20) | 6.0000 (152.400) | 0 -.00100 (-25) |

* Accuracy is measured prior to machining clearance slit.

| L inch (mm) | B inch (mm) | W inch (mm) | D ₁ inch (mm) | h inch (mm) | θ | eccentricity * inch (μm) | basic load rating dynamic C N | static Co N | mass g | shaft diameter inch (mm) |
|---------------------|--------------------|-------------------|--------------------------------|--------------------|-----|---|--|-------------------|-----------|-----------------------------------|
| 1.2500 (31.750) | .9625 (24.46) | .0459 (1.168) | .8209 (20.853) | .34 (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) | 1.7547 (44.57) | .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) | 1.4687 (47.904) | .5625 (15.875) | 50° | .0008 (20) | 1,570 | 2,740 | 390 | 1-1/4 (31.750) |
| 3.0000 (76.200) | 2.4118 (61.26) | .0859 (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° | | 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° | .0010 (25) | 4,700 | 10,000 | 2,230 | 2-1/2 (63.500) |
| 6.0000 (152.400) | 4.726 (120.04) | .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

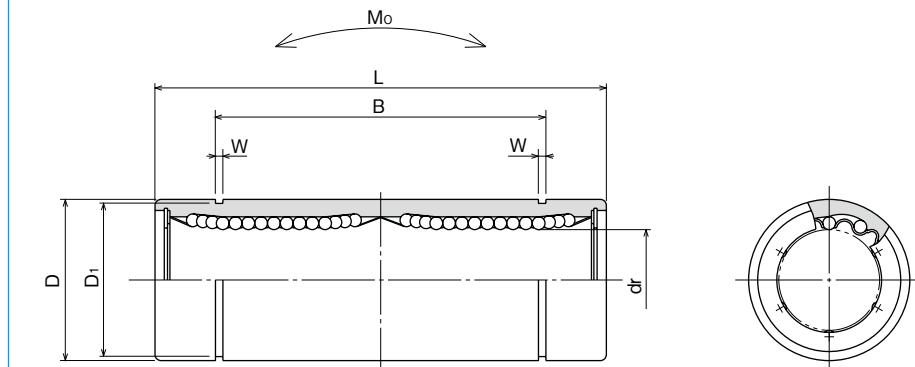
SW-W TYPE (Inch Standard)

– 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 | | standard | | anti-corrosion | | number of ball circuits | dr tolerance inch (mm) | D tolerance inch (mm) | major dimensions | | eccentricity | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter inch (mm) |
|----------------|----------------|--------------------|----------------|----------------|--------------------|-------------------------|------------------------|-----------------------|------------------|-------------------|--------------------|-------------------------------|-------------------------------|----------------------------------|--------|--------------------------|
| 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) | .5000 (12.700) | -.00050 (-13) | .6250 (15.875) | 0 | .0390 (.992) | .4687 (11.906) | .0006 (15) | 323 | 530 | 2.0 | 17.5 (6.350) |
| SW 6W | SW 6GW | SWS 6W | SWS 6GW | 4 | .3750 (9.525) | .7500 (19.050) | -.00040 (-10) | .8750 (22.225) | 0 | .0390 (.992) | .5880 (14.935) | | 353 | 630 | 2.7 | 28 (9.525) |
| SW 8W | SW 8GW | SWS 8W | SWS 8GW | 4 | .5000 (12.700) | .1.1250 (28.575) | -.00065 (-16) | 1.1250 (28.575) | 0 | .0459 (1.168) | .8209 (20.853) | | 813 | 1,570 | 11.5 | 80 (12.700) |
| SW10W | SW10GW | SWS10W | SWS10GW | 4 | .6250 (15.875) | 1.2500 (31.750) | 0 | 1.2500 (31.750) | 0 | .0559 (1.422) | 1.0590 (26.899) | | 1,230 | 2,350 | 20.0 | 160 (15.875) |
| SW12W | SW12GW | SWS12W | SWS12GW | 5 | .7500 (19.050) | 1.5625 (39.688) | 0 | 1.5625 (39.688) | 0 | .0559 (1.422) | 1.1760 (29.870) | | 1,370 | 2,740 | 26.5 | 195 (19.050) |
| SW16W | SW16GW | SWS16W | SWS16GW | 6 | 1.0000 (25.400) | 2.0000 (50.800) | 0 | 2.0000 (50.800) | 0 | .0679 (1.727) | 1.4687 (37.306) | | 1,570 | 3,140 | 41.2 | 410 (25.400) |
| SW20W | SW20GW | SWS20W | SWS20GW | 6 | 1.2500 (31.750) | 2.3750 (60.325) | 0 | 2.3750 (60.325) | 0 | .0679 (1.727) | 1.8859 (47.904) | | 2,500 | 5,490 | 84.8 | 820 (31.750) |
| SW24W | SW24GW | SWS24W | SWS24GW | 6 | 1.5000 (38.100) | 3.0000 (76.200) | 0 | 3.0000 (76.200) | 0 | .0859 (2.184) | 2.2389 (56.870) | | 3,430 | 8,040 | 143 | 1,250 (38.100) |
| SW32W | SW32GW | SWS32W | SWS32GW | 6 | 2.0000 (50.800) | 4.8236 (122.519) | 0 | 4.8236 (122.519) | 0 | .1029 (2.616) | 2.8379 (72.085) | | 6,080 | 15,900 | 399 | 2,350 (50.800) |

| L inch (mm) | tolerance inch/mm | B inch (mm) | tolerance inch/mm | W inch (mm) | D1 inch (mm) | eccentricity inch (μm) | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter inch (mm) |
|---------------------|-------------------|---------------------|-------------------|-------------------|---------------|------------------------|-------------------------------|-------------------------------|----------------------------------|-------------------|--------------------------|
| 1.3750 (34.925) | .0120 (25.959) | 1.0220 (25.959) | .0390 (.992) | .4687 (11.906) | .0006 (15) | .0008 (20) | 323 | 530 | 2.0 | 17.5 (6.350) | |
| 1.5938 (40.481) | .0120 (32.298) | 1.2716 (32.298) | .0390 (.992) | .5880 (14.935) | | | 353 | 630 | 2.7 | 28 (9.525) | |
| 2.3750 (60.325) | -.012 (-0.3) | 1.9250 (48.895) | -.012 (-0.3) | .0459 (1.168) | | | 813 | 1,570 | 11.5 | 80 (12.700) | |
| 2.8125 (71.438) | -.012 (-0.3) | 2.2079 (56.080) | -.012 (-0.3) | .0559 (1.422) | | | 1,230 | 2,350 | 20.0 | 160 (15.875) | |
| 3.0937 (78.581) | -.012 (-0.3) | 2.3314 (59.218) | -.012 (-0.3) | .0559 (1.422) | | | 1,370 | 2,740 | 26.5 | 195 (19.050) | |
| 4.2813 (108.744) | -.012 (-0.3) | 3.5094 (89.139) | -.012 (-0.3) | .0679 (1.727) | | | 1,570 | 3,140 | 41.2 | 410 (25.400) | |
| 5.0000 (127.000) | -.016 (-0.4) | 4.0094 (101.839) | -.016 (-0.4) | .0679 (1.727) | | | 2,500 | 5,490 | 84.8 | 820 (31.750) | |
| 5.6875 (144.463) | -.016 (-0.4) | 4.8236 (122.519) | -.016 (-0.4) | .0859 (2.184) | | | 3,430 | 8,040 | 143 | 1,250 (38.100) | |
| 7.7500 (196.850) | -.016 (-0.4) | 6.3834 (162.138) | -.016 (-0.4) | .1029 (2.616) | | | 6,080 | 15,900 | 399 | 2,350 (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**

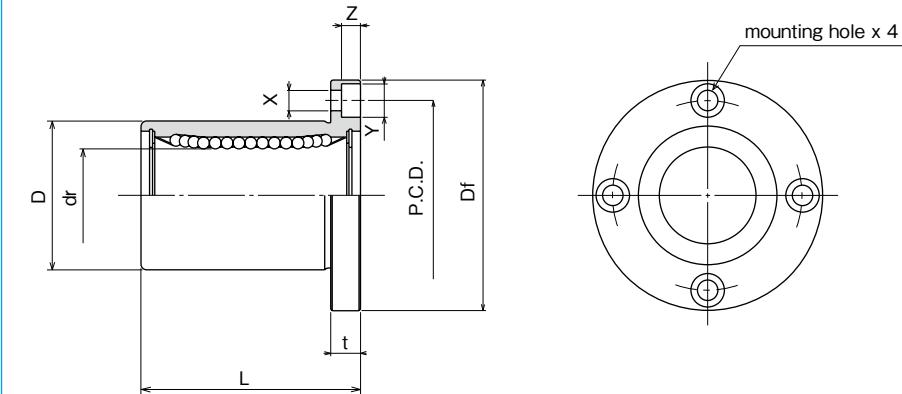
specification
SWF: standard
SWSF: anti-corrosion

size

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

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

seal
blank: without seal
UU: seals on both sides



| | | part number | | number of ball circuits | dr tolerance inch/(μm) | major dimensions | |
|-------------------------|----------------|-----------------------------------|----------------|-------------------------|------------------------|-----------------------|---------------------------|
| standard steel retainer | resin retainer | anti-corrosion stainless retainer | resin retainer | | | D tolerance inch/(μm) | L ±.012 (.03) inch/(mm) |
| SWF 4 | SWF 4G | SWSF 4 | SWSF 4G | 4 | .2500 (.6350) | .5000 (12.700) | -.00050 (-13) .0 (19.050) |
| SWF 6 | SWF 6G | SWSF 6 | SWSF 6G | 4 | .3750 (9.525) | .6250 (15.875) | 0 .0 (22.225) |
| SWF 8 | SWF 8G | SWSF 8 | SWSF 8G | 4 | .5000 (12.700) | .8750 (22.225) | -.00065 (-16) 0 (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) | 1.2500 (31.750) | 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) | 2.0000 (50.800) | 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) | 4.0000 (101.600) |
| SWF40 | — | — | — | 6 | 2.5000 (63.500) | 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) | 6.0000 (152.400) | 8.0000 (203.200) |

| Df inch/(mm) | t inch/(mm) | flange P.C.D. inch/(mm) | | eccentricity inch (μm) | perpendicularity inch (μm) | basic load rating dynamic C N | static Co N | mass g | shaft diameter inch (mm) |
|------------------|----------------|-------------------------------|--|------------------------------|----------------------------------|--|-------------------|-----------|-----------------------------------|
| | | X | Y | | | | | | |
| 1.2500 (31.750) | .0219 (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) | 1.3120 (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**

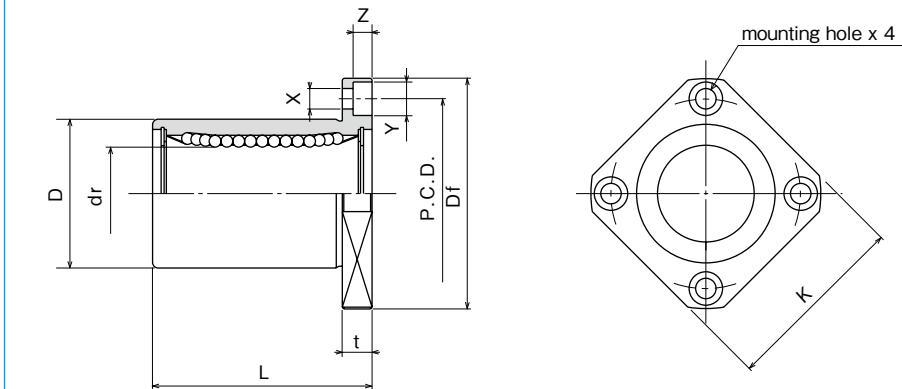
specification
SWK: standard
SWSK: anti-corrosion

size

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

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

seal
blank: without seal
UU: seals on both sides



| | | part number | | number of ball circuits | dr tolerance inch/(μm) | major dimensions | |
|-------------------------|----------------|-----------------------------------|----------------|-------------------------|------------------------|-----------------------|--------------------------|
| standard steel retainer | resin retainer | anti-corrosion stainless retainer | resin retainer | | | D tolerance inch/(mm) | L ±.012 (±.03) inch/(mm) |
| SWK 4 | SWK 4G | SWSK 4 | SWSK 4G | 4 | .2500 (.6350) | .5000 (12.700) | .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) | .8750 (22.225) | 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) | 1.5625 (39.688) | 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) | 2.3750 (60.325) | 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) | 4.5000 (114.300) | 6.0000 (152.400) |
| SWK64 | — | — | — | 6 | 4.0000 (101.600) | 6.0000 (152.400) | 8.0000 (203.200) |

| Df inch/(mm) | K inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | flange | | eccentricity inch (μm) | perpendicularity inch (μm) | basic load rating dynamic C N | static Co N | mass g | shaft diameter inch (mm) |
|------------------|------------------|----------------|---------------------|---|---|------------------------------|----------------------------------|-------------------------------------|----------------|-----------|--------------------------------|
| | | | | X | Y | | | | | | |
| 1.2500 (31.750) | 1.0000 (25.400) | 0.219 (5.556) | .8750 (22.225) | .1560 x 2500 x 1410 (3.969 x 6.350 x 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 x 2970 x 1720 (4.763 x 7.541 x 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 x 2970 x 1720 (4.763 x 7.541 x 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 x 2970 x 1720 (4.763 x 7.541 x 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 x 3440 x 2030 (5.556 x 8.731 x 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 x 3440 x 2030 (5.556 x 8.731 x 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 x 4060 x 2656 (7.144 x 10.319 x 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 x 5000 x 3280 (8.731 x 12.700 x 8.334) | | | | 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 x 5000 x 3280 (8.731 x 12.700 x 8.334) | | .0008 (20) | .0008 (20) | 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 x 6250 x 3750 (10.319 x 15.875 x 9.525) | | | | 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 x 6250 x 3750 (8.731 x 12.700 x 8.334) | | | | 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 x 7.125 x 5000 (12.700 x 18.097 x 12.700) | | | | 14,100 | 34,800 | 11,300 | 4 (101.600) |

1N=0.225lbf 1kg=2.205lbs

SWT TYPE (Inch Standard)

— Two Side Cut Flange Type —



part number structure

example **SWST 12 G UU-SK**

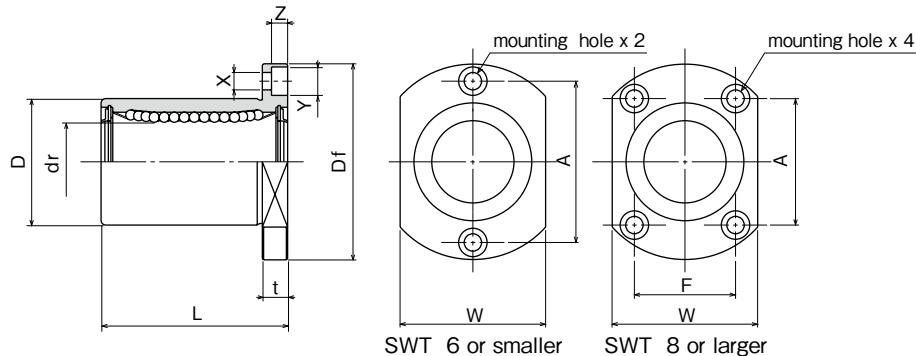
specification
SWT: standard
SWST: anti-corrosion

size

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

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

seals on both sides



| | | part number | | | | major dimensions | | | |
|----------------------------|----------------|---|----------------|-------------------------------|--------------------|------------------------|--------------------|--------------------------|-----------------------------------|
| standard steel retainer | resin retainer | anti-corrosion stainless retainer | resin retainer | number of ball circuits | dr inch (mm) | tolerance inch/(μm) | D inch (mm) | tolerance inch/(μm) | L ±.012 (±0.3) inch/(μm) |
| SWT 4 UU | SWT 4G UU | SWST 4 UU | SWST 4G UU | 4 | .2500 (6.350) | .00050 (-13) | .5000 (12.700) | 0 -.00050 (19.050) | .7500 |
| SWT 6 UU | SWT 6G UU | SWST 6 UU | SWST 6G UU | 4 | .3750 (9.525) | 0 -.00040 (-9) | .6250 (15.875) | .8750 (22.225) | .8750 |
| SWT 8 UU | SWT 8G UU | SWST 8 UU | SWST 8G UU | 4 | .5000 (12.700) | 0 -.00065 (-16) | .8750 (22.225) | 0 -.00065 (31.750) | 1.2500 |
| SWT10 UU | SWT10G UU | SWST10 UU | SWST10G UU | 4 | .6250 (15.875) | 0 -.00040 (-10) | 1.1250 (28.575) | .9375 (38.100) | 1.5000 |
| SWT12 UU | SWT12G UU | SWST12 UU | SWST12G UU | 5 | .7500 (19.050) | 0 -.00040 (-10) | 1.2500 (31.750) | 0 -.00075 (41.275) | 1.6250 |
| SWT16 UU | SWT16G UU | SWST16 UU | SWST16G UU | 6 | 1.0000 (25.400) | 0 -.00050 (-12) | 1.5625 (39.688) | 2.2500 (57.150) | 2.2500 |
| SWT20 UU | SWT20G UU | SWST20 UU | SWST20G UU | 6 | 1.2500 (31.750) | 0 -.00050 (-12) | 2.0000 (50.800) | 0 -.00090 (66.675) | 2.6250 |

* UU type is standard.

| Df inch/(mm) | W inch/(mm) | t inch/(mm) | flange | | | X×Y×Z inch/(mm) | eccentricity inch (μm) | perpendicularity inch (μm) | basic load rating dynamic C N | static Co N | mass g | shaft diameter inch (mm) |
|--------------------|--------------------|------------------|--------------------|--------------------|---|--------------------|------------------------------|----------------------------------|--|-------------------|-------------------|-----------------------------------|
| | | | A inch/(mm) | F inch/(mm) | X inch/(mm) | | | | | | | |
| 1.2500 (31.750) | .7500 (19.050) | .2190 (5.556) | .8750 (22.225) | — | .1560×2500×1410 (3.969×6.350×3.572) | .0005 (12) | .0005 (12) | 206 | 265 | 28 | 1/4 (6.350) | |
| 1.5000 (38.100) | .8750 (22.225) | .2500 (6.350) | 1.0625 (26.988) | — | .1875×2970×1720 (4.763×7.541×4.366) | | | 225 | 314 | 44 | 3/8 (9.525) | |
| 1.7500 (44.450) | 1.1250 (28.575) | .2500 (6.350) | 1.1250 (33.338) | .6875 (17.463) | .1875×2970×1720 (4.763×7.541×4.366) | | | 510 | 784 | 77 | 1/2 (12.700) | |
| 2.0000 (50.800) | 1.3750 (34.925) | .2500 (6.350) | 1.2500 (31.750) | .9375 (23.813) | .1875×2970×1720 (4.763×7.541×4.366) | | | 774 | 1,180 | 125 | 5/8 (15.875) | |
| 2.1875 (55.563) | 1.5000 (38.100) | .3125 (7.938) | 1.3750 (34.925) | 1.0000 (25.400) | .2187×3440×2030 (5.556×8.731×5.159) | .0006 (15) | .0006 (15) | 862 | 1,370 | 162 | 3/4 (19.050) | |
| 2.5000 (63.500) | 1.8750 (47.625) | .3125 (7.938) | 1.5625 (39.688) | 1.3125 (33.338) | .2187×3440×2030 (5.556×8.731×5.159) | | | 980 | 1,570 | 293 | 1 (25.400) | |
| 3.1250 (79.375) | 2.3750 (60.325) | .3750 (9.525) | 1.8750 (47.625) | 1.7500 (44.450) | .2812×4060×2656 (7.144×10.319×6.747) | .0008 (20) | .0008 (20) | 1,570 | 2,740 | 586 | 1-1/4 (31.750) | |

1N≈0.225lbf 1kg≈2.205lbs

SWF-W TYPE (Inch Standard)

— Round Flange Double-Wide Type —

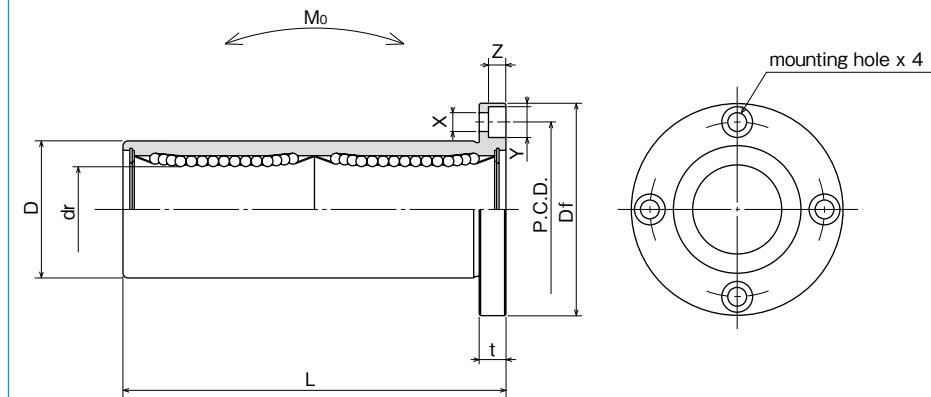


part number structure

| | | | | | | |
|--------------------------------|-------------|-----------|----------|----------|-----------|------------|
| 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 | | | | | | |

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

seal
blank: without seal
UU: seals on both sides



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

| Df inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | flange | | | eccentricity inch (μm) | perpendicularity inch (μm) | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter inch (mm) |
|---------------------|-------------------|---------------------|---|---|----------------|------------------------------|----------------------------------|--|-----------------------------|---|-----------|--------------------------------|
| | | | X | Y | Z inch/(mm) | | | | | | | |
| 1.2500 (31.750) | .2188 (5.556) | .8750 (22.225) | .1563 × .2500 × .1406 (3.969 × 6.350 × 3.572) | | | | | 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) | | | .0006 (15) | .0006 (15) | 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 × .2856 (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

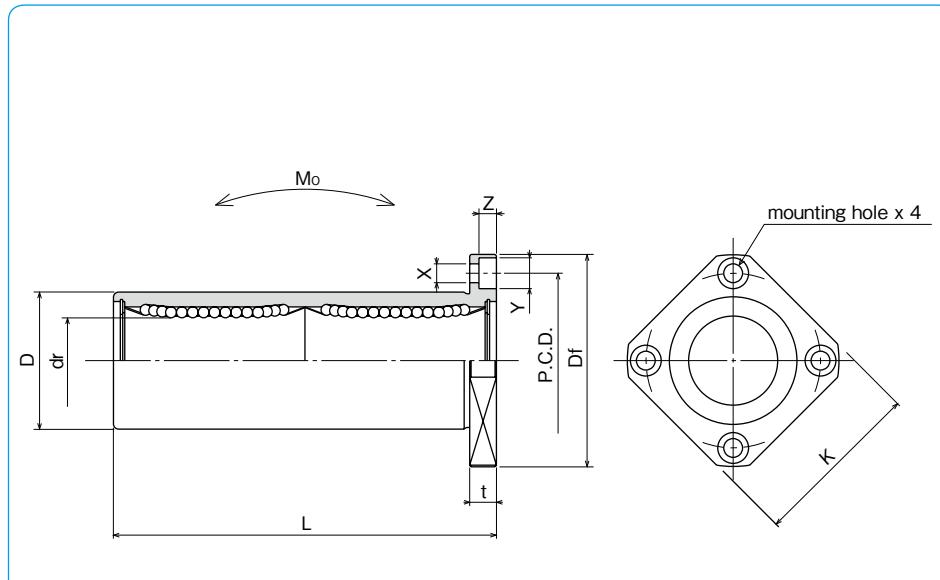
SWK-W TYPE (Inch Standard)

– 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 | | | | | |



| part number | | | | number of ball circuits | major dimensions | | D inch/(mm) | dr tolerance inch/(\mu m) | D tolerance inch/(mm) | L ±.012 (±0.3) inch/(mm) |
|---------------|----------------|----------------|--------------------|-------------------------|--------------------|-----------------|--------------------|---------------------------------|-----------------------------|-----------------------------------|
| standard | anti-corrosion | steel retainer | stainless retainer | | inch (mm) | inch (\mu m) | | | | |
| SWK 4W | SWK 4GW | SWSK 4W | SWSK 4GW | 4 | .2500 (6.350) | .00050 (-13) | .5000 (12.700) | .00050 (-13) | .13750 (34.925) | |
| SWK 6W | SWK 6GW | SWSK 6W | SWSK 6GW | 4 | .3750 (9.525) | .00040 (-10) | .6250 (15.875) | .00040 (-10) | .15938 (40.481) | |
| SWK 8W | SWK 8GW | SWSK 8W | SWSK 8GW | 4 | .5000 (12.700) | .00065 (-16) | .8750 (22.225) | .00065 (-16) | .23750 (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) | .00050 (-12) | 1.2500 (31.750) | .00050 (-12) | 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) | | 2.0000 (50.800) | | 5.0000 (127.000) | |
| SWK24W | SWK24GW | SWSK24W | SWSK24GW | 6 | 1.5000 (38.100) | .00060 (-15) | 2.3750 (60.325) | .00060 (-15) | 5.6875 (144.463) | |
| SWK32W | SWK32GW | SWSK32W | SWSK32GW | 6 | 2.0000 (50.800) | .00100 (-25) | 3.0000 (76.200) | .00100 (-25) | 7.7500 (196.850) | |

| Df inch/(mm) | K inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | X×Y×Z inch/(mm) | eccentricity inch (\mu m) | perpendicularity inch (\mu m) | basic load rating dynamic C N | rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter 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) | .1875×2969×1.719 (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) | .1875×2969×1.719 (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) | .1875×2969×1.719 (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) | 3.6875 (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

SWFC TYPE (Inch Standard)

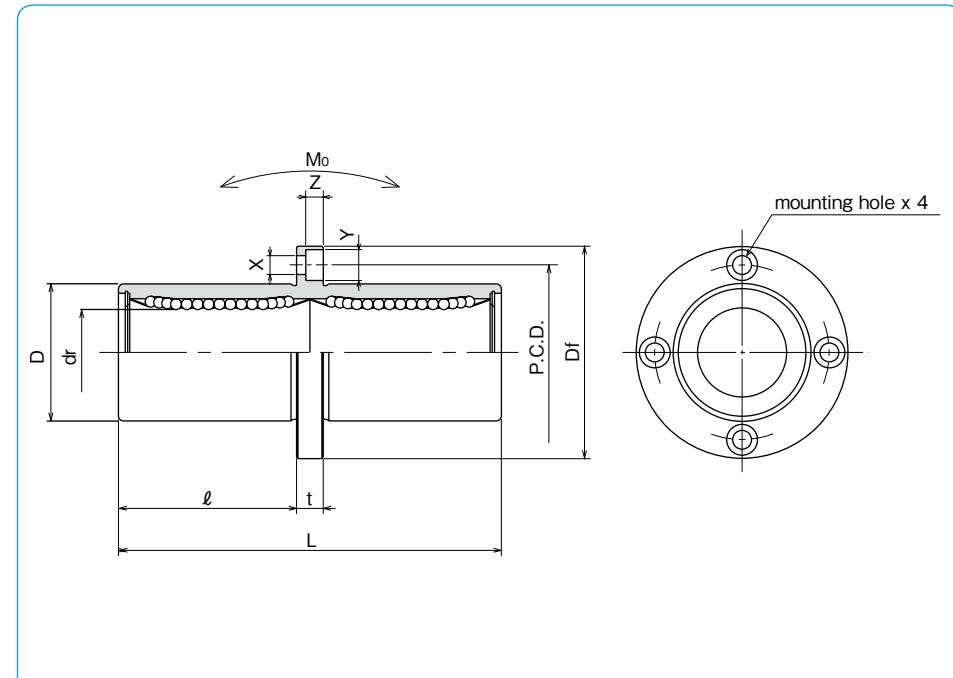
– Center Mount Round Flange Type –



part number structure

| | | | |
|-------------------|--------------------------------|--|--|
| example | SWSFC 16 G UU - SK | | |
| specification | SWFC: standard | | |
| | SWSFC: 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 | dr | | major dimensions | | inch (mm) |
|----------------|----------------|-----------|----------------|-------------------------|------------------|---------------------|------------------|---------------------|------------------|
| standard | anti-corrosion | stainless | resin retainer | | inch (mm) | tolerance inch/(μm) | inch (mm) | tolerance inch/(μm) | inch (mm) |
| steel retainer | resin retainer | stainless | resin retainer | 4 | .2500 (.6350) | | .5000 (12.700) | -.00050 (-13) | .13750 (34.925) |
| SWFC 4 | SWFC 4G | SWSFC 4 | SWSFC 4G | 4 | .3750 (9.525) | | .6250 (15.875) | 0 | 1.5938 (40.481) |
| SWFC 6 | SWFC 6G | SWSFC 6 | SWSFC 6G | 4 | .5000 (12.700) | | .8750 (22.225) | -.00065 (-16) | 2.3750 (60.325) |
| SWFC 8 | SWFC 8G | SWSFC 8 | SWSFC 8G | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 2.8125 (71.438) |
| SWFC10 | SWFC10G | SWSFC10 | SWSFC10G | 4 | .7500 (19.050) | | 1.2500 (31.750) | | 3.0937 (78.581) |
| SWFC12 | SWFC12G | SWSFC12 | SWSFC12G | 5 | .1.0000 (25.400) | | 1.5625 (39.688) | 0 | 4.2813 (108.744) |
| SWFC16 | SWFC16G | SWSFC16 | SWSFC16G | 6 | .1.2500 (31.750) | | 2.0000 (50.800) | 0 | 5.0000 (127.000) |
| SWFC20 | SWFC20G | SWSFC20 | SWSFC20G | 6 | .1.5000 (38.100) | | 2.3750 (60.325) | -.00090 (-22) | 5.6875 (144.463) |
| SWFC24 | SWFC24G | SWSFC24 | SWSFC24G | 6 | .2.0000 (50.800) | | 3.0000 (76.200) | 0 | 7.7500 (196.850) |
| SWFC32 | SWFC32G | SWSFC32 | SWSFC32G | 6 | | | | | |

| l inch/(mm) | flange | | | | eccentricity inch/(μm) | perpendicularity inch/(μm) | basic load rating dynamic C N static Co N | allowable static moment Mo N · m | mass g | shaft diameter inch/(mm) |
|-----------------|------------------|----------------|---------------------|--|---------------------------|-------------------------------|---|----------------------------------|--------|--------------------------|
| | Df inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | X × Y × Z inch/(mm) | | | | | | |
| .5781 (14.684) | 1.2500 (31.750) | .2188 (5.556) | .8750 (22.225) | .1563 × .2500 × .1406 (3.969 × 6.350 × 3.572) | | | 323 | 530 | 2.0 | 40 (1/4 (6.350)) |
| .6719 (17.066) | 1.5000 (38.100) | .2500 (6.350) | 1.0625 (26.988) | .1875 × .2969 × .1719 (4.763 × 7.541 × 4.366) | .0006 (15) | .0006 (15) | 353 | 630 | 2.7 | 60 (3/8 (9.525)) |
| 1.0625 (26.988) | 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)) |
| 1.2813 (32.544) | 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)) |
| 1.3906 (35.322) | 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)) |
| 1.9844 (50.403) | 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)) |
| 2.3125 (58.738) | 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)) |
| 2.5938 (65.882) | 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)) |
| 3.6250 (92.075) | 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

SWKC TYPE (Inch Standard)

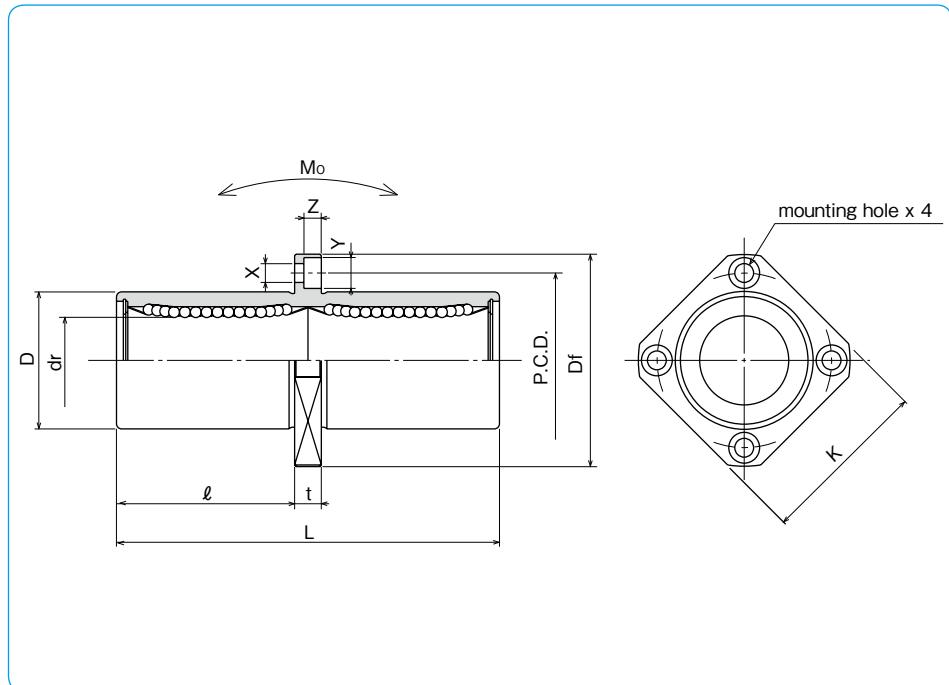
– Center Mount Square Flange Type –



part number structure

| | | | |
|-------------------|---|--|--|
| example | SWSKC 16 G UU - SK | | |
| specification | SWSKC: standard SWSKC: anti-corrosion | | |
| size | | | |
| retainer material | blank: standard/steel anti-corrosion/stainless steel | | |
| G: resin | | | |
| seal | blank: without seal UU: seals on both sides | | |

| part number | | | | number of ball circuits | major dimensions | | | | | |
|----------------|----------------|--------------------|-----------------|-------------------------|------------------|------------------------|-----------------|------------------------|------------------|------------------------|
| standard | anti-corrosion | stainless retainer | resin retainer | | dr | D | L | | | |
| steel retainer | resin retainer | | | | inch (mm) | tolerance inch/(\mu m) | inch (mm) | tolerance inch/(\mu m) | inch (mm) | tolerance inch/(\mu m) |
| SWKC 4 | SWKC 4G | SWSKC 4 | SWSKC 4G | 4 | .2500 (.6350) | | .5000 (12.700) | -.00050 (-13) | .13750 (34.925) | |
| SWKC 6 | SWKC 6G | SWSKC 6 | SWSKC 6G | 4 | .3750 (9.525) | | .6250 (15.875) | 0 | 1.5938 (40.481) | |
| SWKC 8 | SWKC 8G | SWSKC 8 | SWSKC 8G | 4 | .5000 (12.700) | | .8750 (22.225) | -.00065 (-16) | 2.3750 (60.325) | |
| SWKC10 | SWKC10G | SWSKC10 | SWSKC10G | 4 | .6250 (15.875) | | 1.1250 (28.575) | | 2.8125 (71.438) | |
| SWKC12 | SWKC12G | SWSKC12 | SWSKC12G | 5 | .7500 (19.050) | | 1.2500 (31.750) | 0 | 3.0937 (78.581) | |
| SWKC16 | SWKC16G | SWSKC16 | SWSKC16G | 6 | 1.0000 (25.400) | | 1.5625 (39.688) | -.00075 (-19) | 4.2813 (108.744) | |
| SWKC20 | SWKC20G | SWSKC20 | SWSKC20G | 6 | 1.2500 (31.750) | | 2.0000 (50.800) | 0 | 5.0000 (127.000) | |
| SWKC24 | SWKC24G | SWSKC24 | SWSKC24G | 6 | 1.5000 (38.100) | | 2.3750 (60.325) | -.00090 (-22) | 5.6875 (144.463) | |
| SWKC32 | SWKC32G | SWSKC32 | SWSKC32G | 6 | 2.0000 (50.800) | | 3.0000 (76.200) | -.00100 (-25) | 7.7500 (196.850) | |

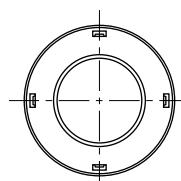
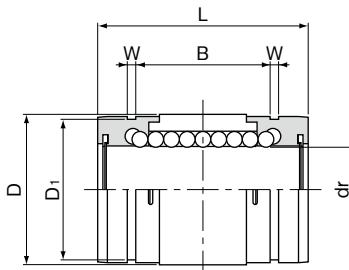
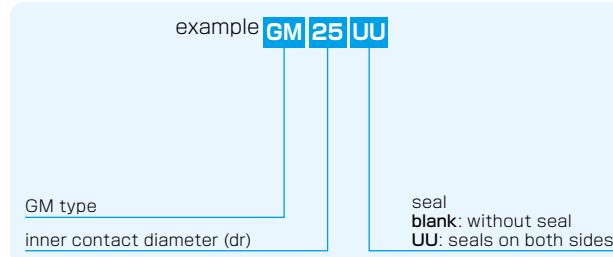


| ℓ inch/(mm) | Df inch/(mm) | flange | | | eccentricity inch (μ m) | perpendicularity inch (μ m) | basic load rating dynamic C N static Co N | allowable static moment Mo N · m | mass g | shaft diameter inch (mm) |
|---------------------|------------------|-----------------|-----------------|--|--|-------------------------------------|---|----------------------------------|--------|--------------------------|
| | | K inch/(mm) | t inch/(mm) | P.C.D. inch/(mm) | | | | | | |
| .5781 (14.684) | 1.2500 (31.750) | 1.0000 (25.400) | .2188 (5.556) | .8750 (22.225) | .1563 x .2500 x .1406 (3.969 x 6.350 x 3.572) | | 323 | 530 | 2.0 | 33 (1/4 (6.350)) |
| .6719 (17.066) | 1.5000 (38.100) | 1.2500 (31.750) | .2500 (6.350) | 1.0625 (46.988) | .1875 x .2969 x .1719 (4.763 x 7.541 x 4.366) | .0006 (15) | 353 | 630 | 2.7 | 45 (3/8 (9.525)) |
| 1.0625 (26.988) | 1.7500 (44.450) | 1.3750 (34.925) | .2500 (6.350) | 1.3125 (33.338) | .1875 x .2969 x .1719 (4.763 x 7.541 x 4.366) | | 813 | 1,570 | 11.5 | 106 (1/2 (12.700)) |
| 1.2813 (32.544) | 2.0000 (50.800) | 1.5000 (38.100) | .2500 (6.350) | 1.5625 (39.688) | .1875 x .2969 x .1719 (4.763 x 7.541 x 4.366) | | 1,230 | 2,350 | 20.0 | 200 (5/8 (15.875)) |
| 1.3906 (35.322) | 2.1875 (55.563) | 1.6875 (42.863) | .3125 (7.938) | 1.7188 (43.656) | .2188 x .3438 x .2031 (5.556 x 8.731 x 5.159) | .0008 (20) | 1,370 | 2,740 | 26.5 | 240 (3/4 (19.050)) |
| 1.9844 (50.403) | 2.5000 (63.500) | 2.0000 (50.800) | .3125 (7.938) | 2.0313 (51.594) | .2188 x .3438 x .2031 (5.556 x 8.731 x 5.159) | | 1,570 | 3,140 | 41.2 | 470 (1 (25.400)) |
| 2.3125 (58.738) | 3.1250 (79.375) | 2.5000 (63.500) | .3750 (9.525) | 2.5625 (65.088) | .2813 x .4063 x .2656 (7.144 x 10.319 x 6.747) | .0010 (25) | 2,500 | 5,490 | 84.8 | 935 (1-1/4 (31.750)) |
| 2.5938 (65.882) | 3.7500 (95.250) | 3.0000 (76.200) | .30625 (12.700) | .3437 x .5000 x .3281 (8.731 x 12.700 x 8.334) | | (25) | 3,430 | 8,040 | 143 | 1,460 (1-1/2 (38.100)) |
| 3.6250 (92.075) | 4.3750 (111.125) | 3.5000 (88.900) | .5000 (12.700) | 3.6875 (93.662) | .3437 x .5000 x .3281 (8.731 x 12.700 x 8.334) | .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 —

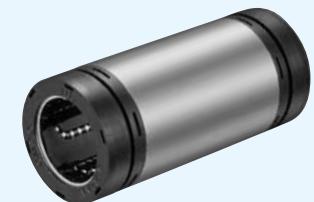
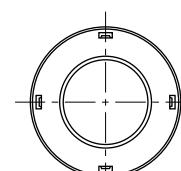
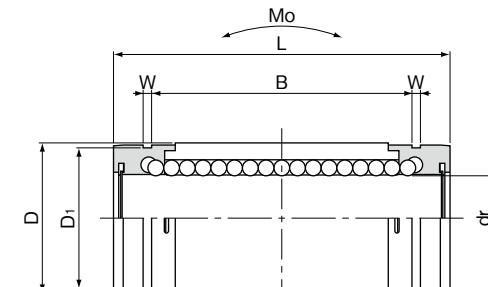
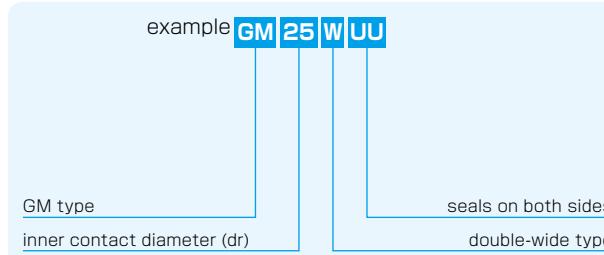
**part number structure**

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

 $1\text{N} \approx 0.102\text{kgf}$ **GM-W TYPE**

— Double-Wide Type —

**part number structure**

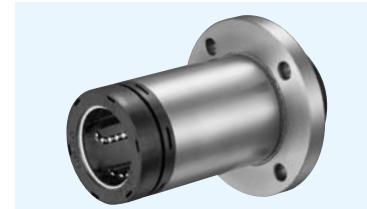
| part number | number of ball circuits | dr mm | tolerance μm | major dimensions | | | | | basic load rating dynamic C N | static Co N | allowable static moment Mo N · m | mass g | |
|-----------------|-------------------------|-------|-------------------------|------------------|---------------------------|------|------|------|-------------------------------|-------------|----------------------------------|--------|-----|
| | | | | D mm | D tolerance μm | L mm | B mm | W mm | | | | | |
| GM 6W UU | 4 | 6 | | 12 | 0 | 28 | 20.3 | 1.1 | 11.5 | 323 | 530 | 1.5 | 9 |
| GM 8W UU | 4 | 8 | | 15 | -13 | 36 | 27.3 | 1.1 | 14.3 | 431 | 784 | 3.3 | 18 |
| GM10W UU | 4 | 10 | 0 | 19 | | 41 | 31.4 | 1.3 | 18 | 588 | 1,100 | 5.0 | 31 |
| GM12W UU | 4 | 12 | -10 | 21 | 0 | 46 | 36.4 | 1.3 | 20 | 813 | 1,570 | 7.6 | 42 |
| GM13W UU | 4 | 13 | | 23 | -16 | 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 | | 32 | 0 | 65 | 50.3 | 1.6 | 30.5 | 1,400 | 2,740 | 20.0 | 130 |
| GM25W UU | 6 | 25 | -12 | 40 | -19 | 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.

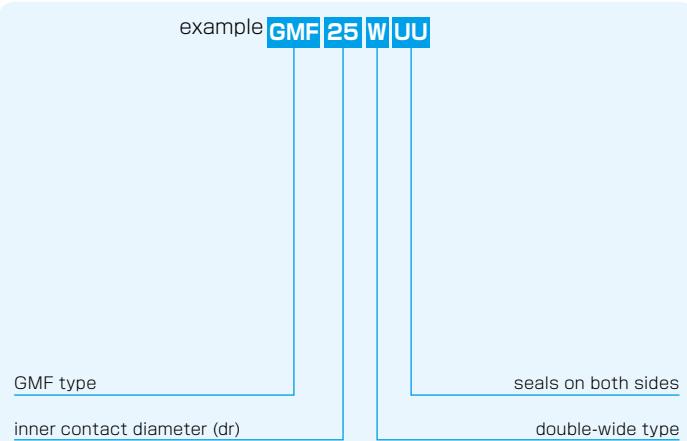
 $1\text{N} \approx 0.102\text{kgf}$ $1\text{N} \cdot \text{m} \approx 0.102\text{kgf} \cdot \text{m}$

GMF-W TYPE

– Round Flange Double-Wide Type –

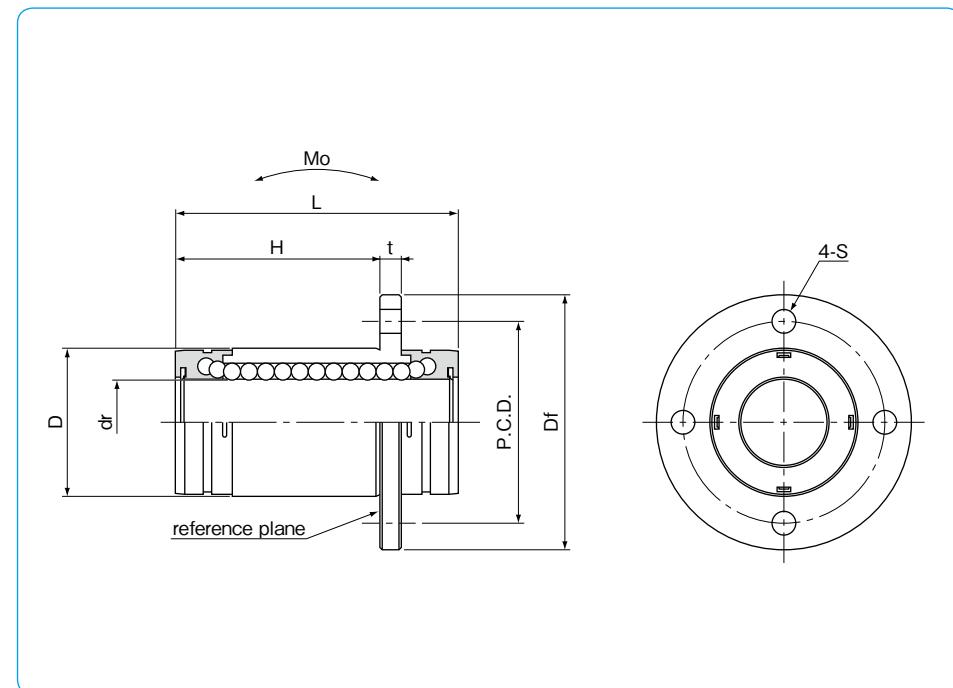


part number structure



| part number | number of ball circuits | dr tolerance | | D tolerance | | major dimensions | |
|-------------|-------------------------|--------------|----|-------------|-----|------------------|------|
| | | mm | μm | mm | μm | mm | mm |
| GMF 6W UU | 4 | 6 | | 12 | 0 | 28 | 17.8 |
| GMF 8W UU | 4 | 8 | | 15 | -13 | 36 | 25.1 |
| GMF10W UU | 4 | 10 | | 19 | | 41 | 28.2 |
| GMF12W UU | 4 | 12 | | 21 | | 46 | 34.2 |
| GMF13W UU | 4 | 13 | | 23 | | 48 | 34.7 |
| GMF16W UU | 4 | 16 | | 28 | | 53 | 38.3 |
| GMF20W UU | 6 | 20 | | 32 | | 65 | 49.2 |
| GMF25W UU | 6 | 25 | | 40 | -19 | 91 | 70.5 |
| GMF30W UU | 6 | 30 | | 45 | | 99 | 74.3 |

*UU type is standard.

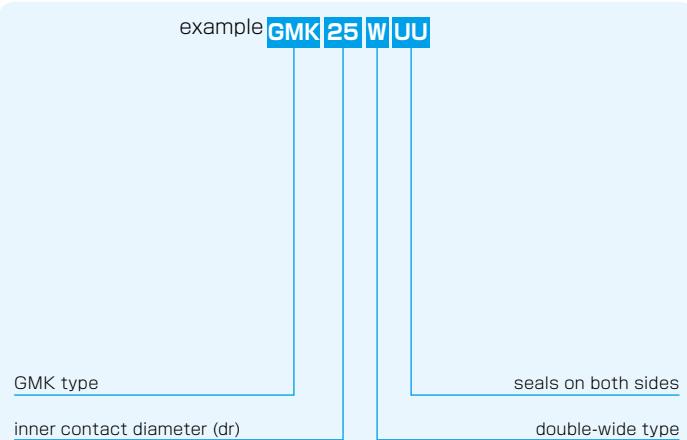


| Df mm | flange | | | | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N·m | mass g | shaft diameter mm |
|----------|---------|--------------|---------|--|------------------------|----------------------------------|----------------------------------|--------------------------------|--------|-------------------|
| | t mm | P.C.D. mm | S mm | | | | | | | |
| 28 | 4 | 20 | 3.5 | | 15 | 323 | 530 | 1.5 | 25 | 6 |
| 32 | 4 | 24 | 3.5 | | | 431 | 784 | 3.3 | 38 | 8 |
| 40 | 4 | 29 | 4.5 | | | 588 | 1,100 | 5.0 | 62 | 10 |
| 42 | 4 | 32 | 4.5 | | | 813 | 1,570 | 7.6 | 75 | 12 |
| 43 | 4 | 33 | 4.5 | | | 813 | 1,570 | 8.1 | 83 | 13 |
| 48 | 4 | 38 | 4.5 | | | 1,230 | 2,350 | 13.8 | 115 | 16 |
| 54 | 5 | 43 | 5.5 | | 20 | 1,400 | 2,740 | 20.0 | 188 | 20 |
| 62 | 5 | 51 | 5.5 | | | 1,560 | 3,140 | 34.8 | 350 | 25 |
| 74 | 8 | 60 | 6.6 | | | 2,490 | 5,490 | 57.5 | 502 | 30 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

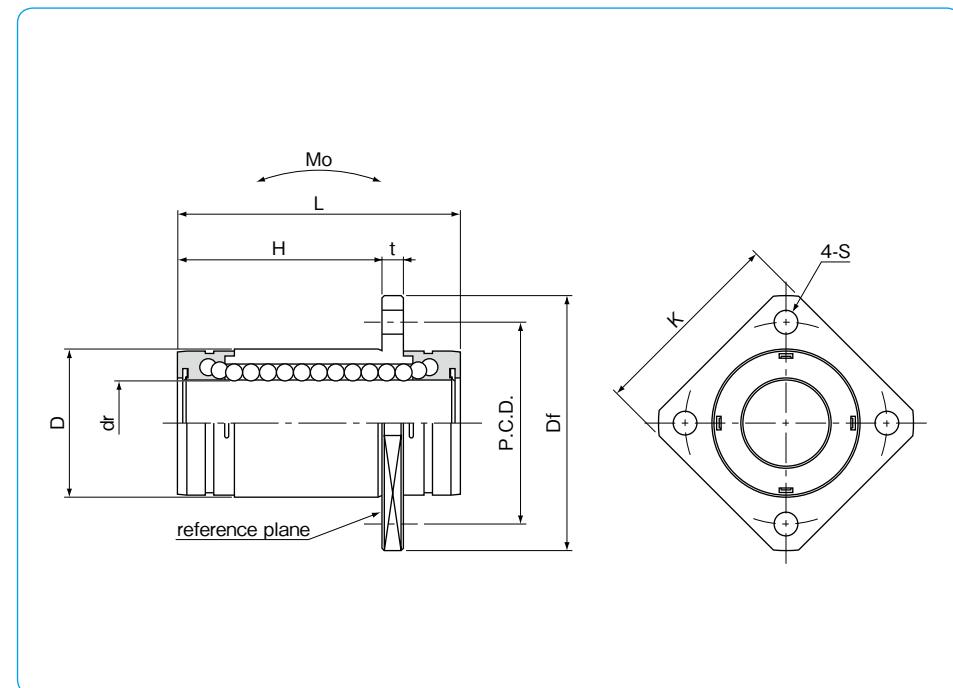
GMK-W TYPE

— Square Flange Double-Wide Type —

**part number structure**

| part number | number of ball circuits | dr | | D | | major dimensions | |
|-------------|-------------------------|----|-----------------|----|-----------------|------------------|------|
| | | mm | tolerance μm | mm | tolerance μm | mm | mm |
| GMK 6W UU | 4 | 6 | | 12 | 0 | 28 | 17.8 |
| GMK 8W UU | 4 | 8 | | 15 | -13 | 36 | 25.1 |
| GMK10W UU | 4 | 10 | | 19 | | 41 | 28.2 |
| GMK12W UU | 4 | 12 | | 21 | | 46 | 34.2 |
| GMK13W UU | 4 | 13 | | 23 | | 48 | 34.7 |
| GMK16W UU | 4 | 16 | | 28 | | 53 | 38.3 |
| GMK20W UU | 6 | 20 | | 32 | | 65 | 49.2 |
| GMK25W UU | 6 | 25 | | 40 | -19 | 91 | 70.5 |
| GMK30W UU | 6 | 30 | | 45 | | 99 | 74.3 |

*UU type is standard.

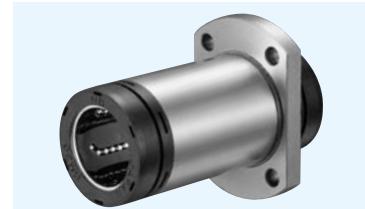


| Df mm | t mm | flange P.C.D. mm | K mm | S mm | perpendicularity μm | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter mm |
|----------|---------|------------------------|---------|---------|------------------------|--|--|---|-----------|-------------------------|
| 28 | 4 | 20 | 22 | 3.5 | 15 | 323 | 530 | 1.5 | 20 | 6 |
| 32 | 4 | 24 | 25 | 3.5 | | 431 | 784 | 3.3 | 32 | 8 |
| 40 | 4 | 29 | 30 | 4.5 | | 588 | 1,100 | 5.0 | 50 | 10 |
| 42 | 4 | 32 | 32 | 4.5 | | 813 | 1,570 | 7.6 | 63 | 12 |
| 43 | 4 | 33 | 34 | 4.5 | | 813 | 1,570 | 8.1 | 72 | 13 |
| 48 | 4 | 38 | 37 | 4.5 | | 1,230 | 2,350 | 13.8 | 99 | 16 |
| 54 | 5 | 43 | 42 | 5.5 | 20 | 1,400 | 2,740 | 20.0 | 165 | 20 |
| 62 | 5 | 51 | 50 | 5.5 | | 1,560 | 3,140 | 34.8 | 325 | 25 |
| 74 | 8 | 60 | 58 | 6.6 | | 2,490 | 5,490 | 57.5 | 437 | 30 |

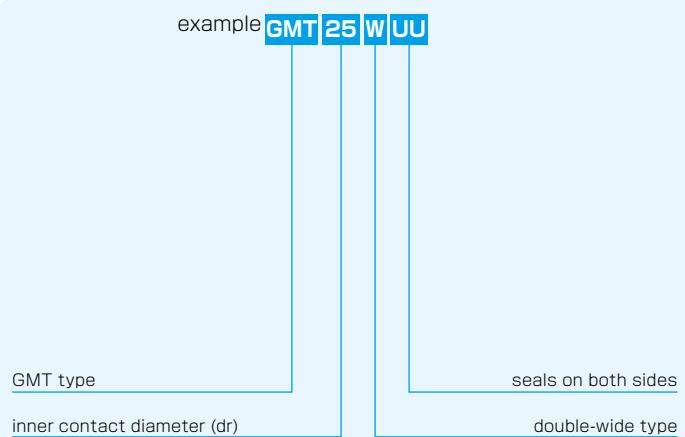
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

GMT-W TYPE

— Two Side Cut Double-Wide Flange Type —

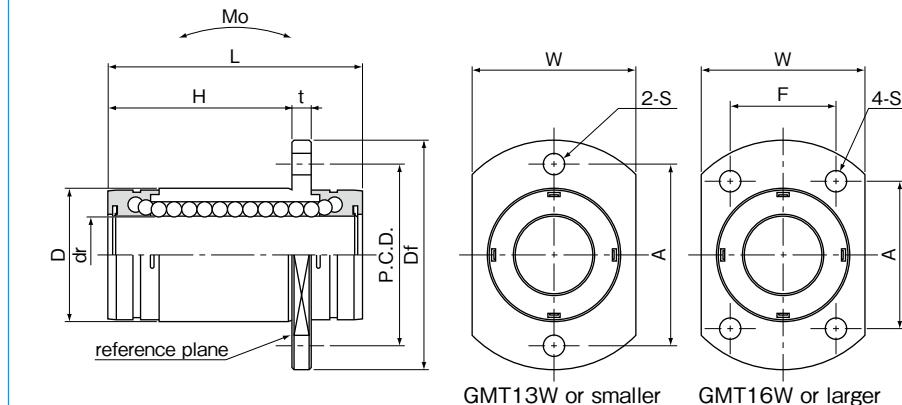


part number structure



| part number | number of ball circuits | dr | | D | | major dimensions | |
|------------------|-------------------------|-----------------|-----------------|-----------------|-----------------|------------------|---------|
| | | tolerance mm | tolerance μm | tolerance mm | tolerance μm | L mm | H mm |
| GMT 6W UU | 4 | 6 | | 12 | 0 | 28 | 17.8 |
| GMT 8W UU | 4 | 8 | | 15 | -13 | 36 | 25.1 |
| GMT10W UU | 4 | 10 | | 19 | 0 | 41 | 28.2 |
| GMT12W UU | 4 | 12 | | 21 | 0 | 46 | 34.2 |
| GMT13W UU | 4 | 13 | | 23 | -16 | 48 | 34.7 |
| GMT16W UU | 4 | 16 | | 28 | | 53 | 38.3 |
| GMT20W UU | 6 | 20 | | 32 | 0 | 65 | 49.2 |
| GMT25W UU | 6 | 25 | | 40 | -19 | 91 | 70.5 |
| GMT30W UU | 6 | 30 | | 45 | | 99 | 74.3 |

*UU type is standard.



| flange | | | | | | | perpendicularity μm | basic load rating | | allowable static moment Mo N · m | mass g | shaft diameter mm |
|----------|---------|---------|---------|---------|---------|-------------------|------------------------|-------------------|------|---|-----------|-------------------------|
| Df mm | t mm | W mm | A mm | F mm | S mm | dynamic C N | static Co N | | | | | |
| 28 | 4 | 18 | 20 | — | 3.5 | 15 | 323 | 530 | 1.5 | 21 | 6 | |
| 32 | 4 | 21 | 24 | — | 3.5 | | 431 | 784 | 3.3 | 33 | 8 | |
| 40 | 4 | 25 | 29 | — | 4.5 | | 588 | 1,100 | 5.0 | 52 | 10 | |
| 42 | 4 | 27 | 32 | — | 4.5 | | 813 | 1,570 | 7.6 | 65 | 12 | |
| 43 | 4 | 29 | 33 | — | 4.5 | | 813 | 1,570 | 8.1 | 74 | 13 | |
| 48 | 4 | 34 | 31 | 22 | 4.5 | | 1,230 | 2,350 | 13.8 | 104 | 16 | |
| 54 | 5 | 38 | 36 | 24 | 5.5 | 20 | 1,400 | 2,740 | 20.0 | 171 | 20 | |
| 62 | 5 | 46 | 40 | 32 | 5.5 | | 1,560 | 3,140 | 34.8 | 331 | 25 | |
| 74 | 8 | 51 | 49 | 35 | 6.6 | | 2,490 | 5,490 | 57.5 | 447 | 30 | |

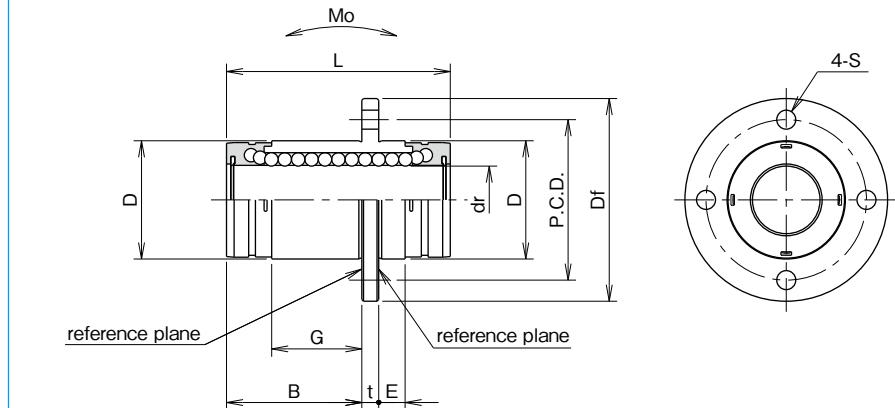
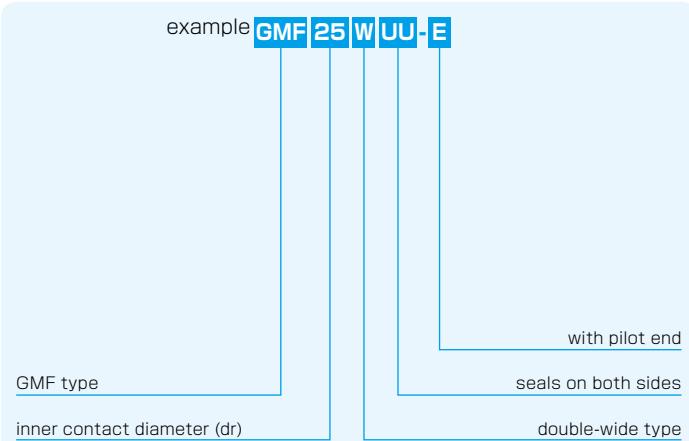
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

GMF-W-E TYPE

— Round Flange Double-Wide Type with pilot end —



part number structure



*Both sides of the flange can be used as a reference plane.

| part number | number of ball circuits | dr tolerance mm | D tolerance μm | major dimensions | | | |
|-------------|-------------------------|-----------------------|----------------------|------------------|---------|---------|---------|
| | | | | L mm | B mm | G mm | E mm |
| GMF 6W UU-E | 4 | 6 | | 12 | 0 | 28 | 13.8 |
| GMF 8W UU-E | 4 | 8 | | 15 | -13 | 36 | 21.1 |
| GMF10W UU-E | 4 | 10 | 0 | 19 | | 41 | 24.2 |
| GMF12W UU-E | 4 | 12 | 0 | 21 | | 46 | 30.2 |
| GMF13W UU-E | 4 | 13 | | 23 | -16 | 48 | 30.65 |
| GMF16W UU-E | 4 | 16 | | 28 | | 53 | 33.3 |
| GMF20W UU-E | 6 | 20 | 0 | 32 | | 65 | 44.2 |
| GMF25W UU-E | 6 | 25 | | 40 | -12 | 91 | 65.5 |
| GMF30W UU-E | 6 | 30 | | 45 | | 99 | 69.3 |
| | | | | | | 52.6 | 5 |

*UU type is standard.

| Df mm | flange | | | | 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 |
|----------|---------|--------------|---------|--|------------------------|-------------------------------------|-------------------------------------|---|-----------|-------------------------|
| | t mm | P.C.D. mm | S mm | | | | | | | |
| 28 | 4 | 20 | 3.5 | | 15 | 323 | 530 | 1.5 | 25 | 6 |
| 32 | 4 | 24 | 3.5 | | | 431 | 784 | 3.3 | 38 | 8 |
| 40 | 4 | 29 | 4.5 | | | 588 | 1,100 | 5.0 | 62 | 10 |
| 42 | 4 | 32 | 4.5 | | | 813 | 1,570 | 7.6 | 75 | 12 |
| 43 | 4 | 33 | 4.5 | | | 813 | 1,570 | 8.1 | 83 | 13 |
| 48 | 4 | 38 | 4.5 | | | 1,230 | 2,350 | 13.8 | 115 | 16 |
| 54 | 5 | 43 | 5.5 | | 20 | 1,400 | 2,740 | 20.0 | 188 | 20 |
| 62 | 5 | 51 | 5.5 | | | 1,560 | 3,140 | 34.8 | 350 | 25 |
| 74 | 8 | 60 | 6.6 | | | 2,490 | 5,490 | 57.5 | 502 | 30 |

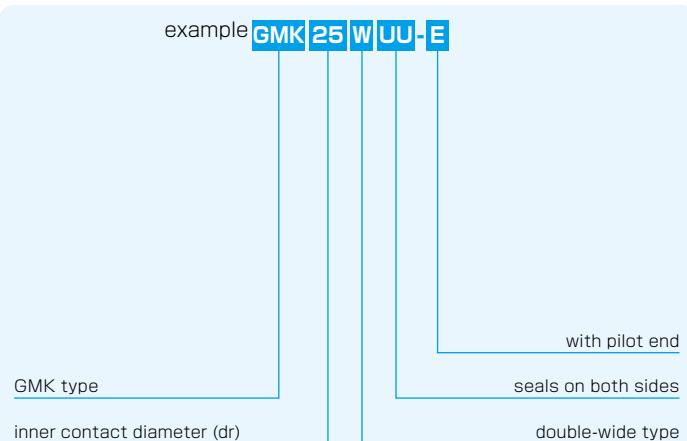
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

GMK-W-E TYPE

— Square Flange Double-Wide Type with pilot end —

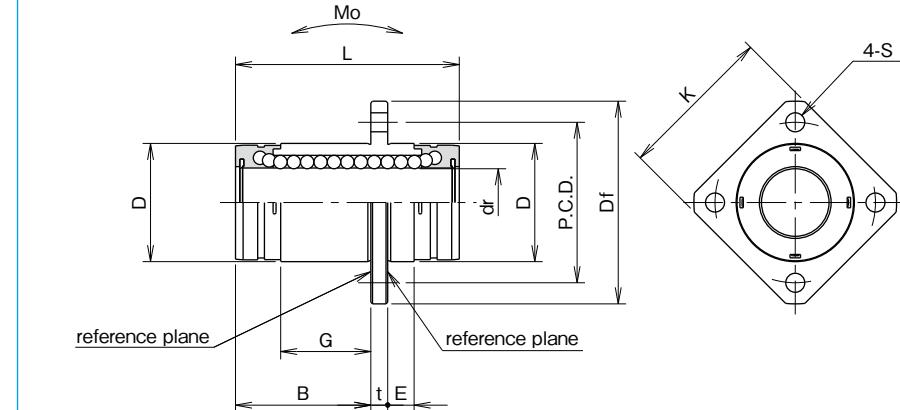


part number structure



| part number | number of ball circuits | dr tolerance mm | D tolerance μm | major dimensions | | | |
|-------------|-------------------------|-----------------------|----------------------|------------------|---------|---------|---------|
| | | | | L mm | B mm | G mm | E mm |
| GMK 6W UU-E | 4 | 6 | | 12 | 0 | 28 | 13.8 |
| GMK 8W UU-E | 4 | 8 | | 15 | -13 | 36 | 21.1 |
| GMK10W UU-E | 4 | 10 | 0 | 19 | | 41 | 24.2 |
| GMK12W UU-E | 4 | 12 | 0 | 21 | | 46 | 30.2 |
| GMK13W UU-E | 4 | 13 | | 23 | -16 | 48 | 30.65 |
| GMK16W UU-E | 4 | 16 | | 28 | | 53 | 33.3 |
| GMK20W UU-E | 6 | 20 | 0 | 32 | | 65 | 44.2 |
| GMK25W UU-E | 6 | 25 | | 40 | -12 | 91 | 65.5 |
| GMK30W UU-E | 6 | 30 | | 45 | | 99 | 69.3 |
| | | | | | | 52.6 | 52.6 |

*UU type is standard.



*Both sides of the flange can be used as a reference plane.

| Df mm | t mm | flange P.C.D. mm | K mm | S mm | perpendicularity μm | basic load rating | allowable static moment Mo N · m | mass g | shaft diameter mm |
|----------|---------|------------------------|---------|---------|------------------------|-------------------|--|-----------|-------------------------|
| | | | | | | dynamic C N | | | |
| 28 | 4 | 20 | 22 | 3.5 | 15 | 323 | 530 | 1.5 | 20 |
| 32 | 4 | 24 | 25 | 3.5 | | 431 | 784 | 3.3 | 32 |
| 40 | 4 | 29 | 30 | 4.5 | | 588 | 1,100 | 5.0 | 50 |
| 42 | 4 | 32 | 32 | 4.5 | | 813 | 1,570 | 7.6 | 63 |
| 43 | 4 | 33 | 34 | 4.5 | | 813 | 1,570 | 8.1 | 72 |
| 48 | 4 | 38 | 37 | 4.5 | | 1,230 | 2,350 | 13.8 | 99 |
| 54 | 5 | 43 | 42 | 5.5 | 20 | 1,400 | 2,740 | 20.0 | 165 |
| 62 | 5 | 51 | 50 | 5.5 | | 1,560 | 3,140 | 34.8 | 325 |
| 74 | 8 | 60 | 58 | 6.6 | | 2,490 | 5,490 | 57.5 | 437 |

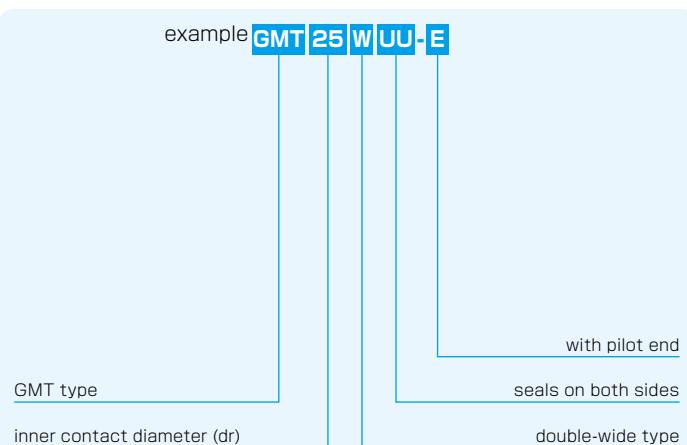
1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

GMT-W-E TYPE

— Two Side Cut Double-Wide Flange Type with pilot end —

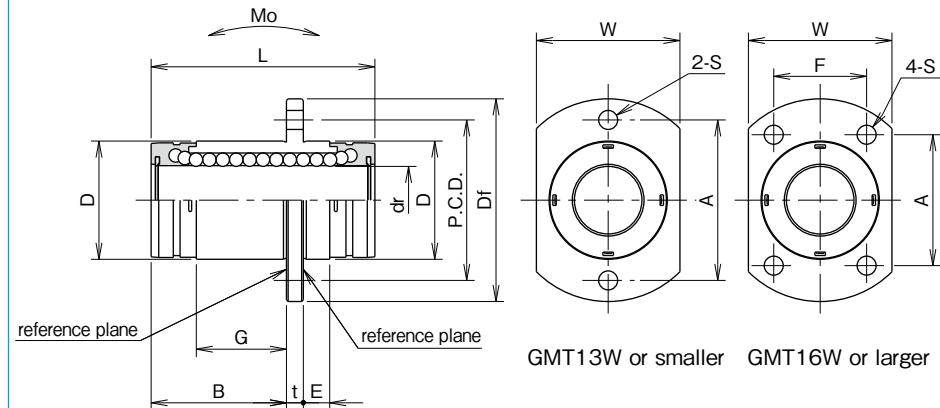


part number structure



| part number | number of ball circuits | dr tolerance mm | D tolerance μm | major dimensions | | | |
|-------------|-------------------------|-----------------------|---------------------------------|------------------|---------|---------|-------|
| | | | | B mm | G mm | E mm | |
| GMT 6W UU-E | 4 | 6 | | 12 | 0 | 28 | 13.8 |
| GMT 8W UU-E | 4 | 8 | | 15 | -13 | 36 | 21.1 |
| GMT10W UU-E | 4 | 10 | 0 | 19 | | 41 | 24.2 |
| GMT12W UU-E | 4 | 12 | -10 | 21 | 0 | 46 | 30.2 |
| GMT13W UU-E | 4 | 13 | | 23 | -16 | 48 | 30.65 |
| GMT16W UU-E | 4 | 16 | | 28 | | 53 | 33.3 |
| GMT20W UU-E | 6 | 20 | 0 | 32 | 0 | 65 | 44.2 |
| GMT25W UU-E | 6 | 25 | -12 | 40 | -19 | 91 | 65.5 |
| GMT30W UU-E | 6 | 30 | | 45 | | 99 | 69.3 |

*UU type is standard.



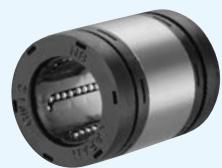
*Both sides of the flange can be used as a reference plane.

| Df mm | t mm | flange | | | | perpendicularity μm | basic load rating | | allowable static moment Mo N · m | mass g | shaft diameter mm |
|----------|---------|---------|---------|---------|---------|-----------------------------------|-------------------|-------------------|---|-----------|-------------------------|
| | | W mm | A mm | F mm | S mm | | dynamic C N | static Co N | | | |
| 28 | 4 | 18 | 20 | — | 3.5 | 15 | 323 | 530 | 1.5 | 21 | 6 |
| 32 | 4 | 21 | 24 | — | 3.5 | | 431 | 784 | 3.3 | 33 | 8 |
| 40 | 4 | 25 | 29 | — | 4.5 | | 588 | 1,100 | 5.0 | 52 | 10 |
| 42 | 4 | 27 | 32 | — | 4.5 | | 813 | 1,570 | 7.6 | 65 | 12 |
| 43 | 4 | 29 | 33 | — | 4.5 | | 813 | 1,570 | 8.1 | 74 | 13 |
| 48 | 4 | 34 | 31 | 22 | 4.5 | | 1,230 | 2,350 | 13.8 | 104 | 16 |
| 54 | 5 | 38 | 36 | 24 | 5.5 | 20 | 1,400 | 2,740 | 20.0 | 171 | 20 |
| 62 | 5 | 46 | 40 | 32 | 5.5 | | 1,560 | 3,140 | 34.8 | 331 | 25 |
| 74 | 8 | 51 | 49 | 35 | 6.6 | | 2,490 | 5,490 | 57.5 | 447 | 30 |

1N ≈ 0.102kgf 1N · m ≈ 0.102kgf · m

GW TYPE (Inch Standard)

– Single Type –



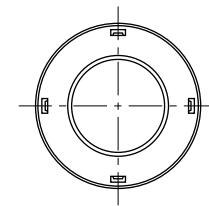
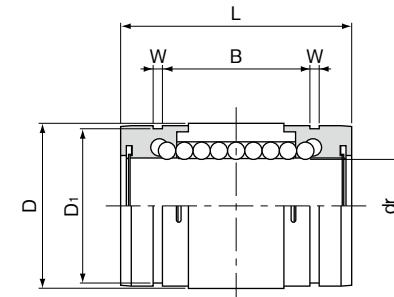
part number structure

example **GW 16 UU**

GW type

size

seal
blank: without seal
UU: seals on both sides



| part number | number of ball circuits | dr | | major dimensions | | |
|-------------|-------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|
| | | inch/(mm) | tolerance inch/(\mu m) | inch/(mm) | tolerance inch/(\mu m) | inch/(mm) |
| GW 4 | 4 | .2500 (6.350) | | .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) | 0 -.00050 (-13) | 1.2500 (31.750) |
| GW10 | 4 | .6250 (15.875) | | 1.1250 (28.575) | 0 -.00050 (-13) | 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) | 0 -.00075 (-19) | 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) | D ₁ inch/(mm) | basic load rating | | mass g |
|--------------------|------------------|-----------------------------|-------------------|-------------------|-----------|
| | | | dynamic C N | static Co N | |
| .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**

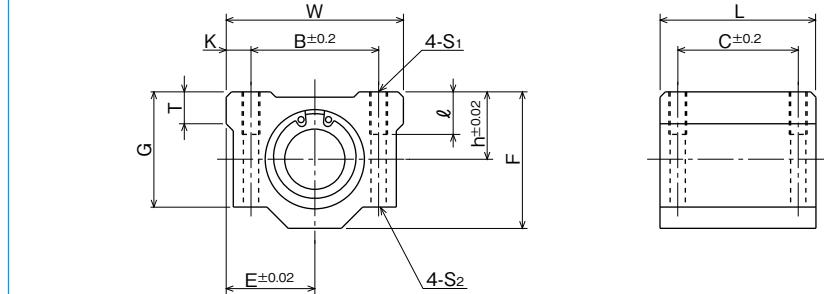
specification
SMA: standard
SMSA: anti-corrosion

seal
blank: without seal
UU: seals on both sides

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

inner contact diameter

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



| B mm | C mm | K mm | mounting dimensions | | | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---------|---------|---------|----------------------|---------|----------------------|--|--|-----------|-------------------------|
| | | | S ₁ mm | l mm | S ₂ 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

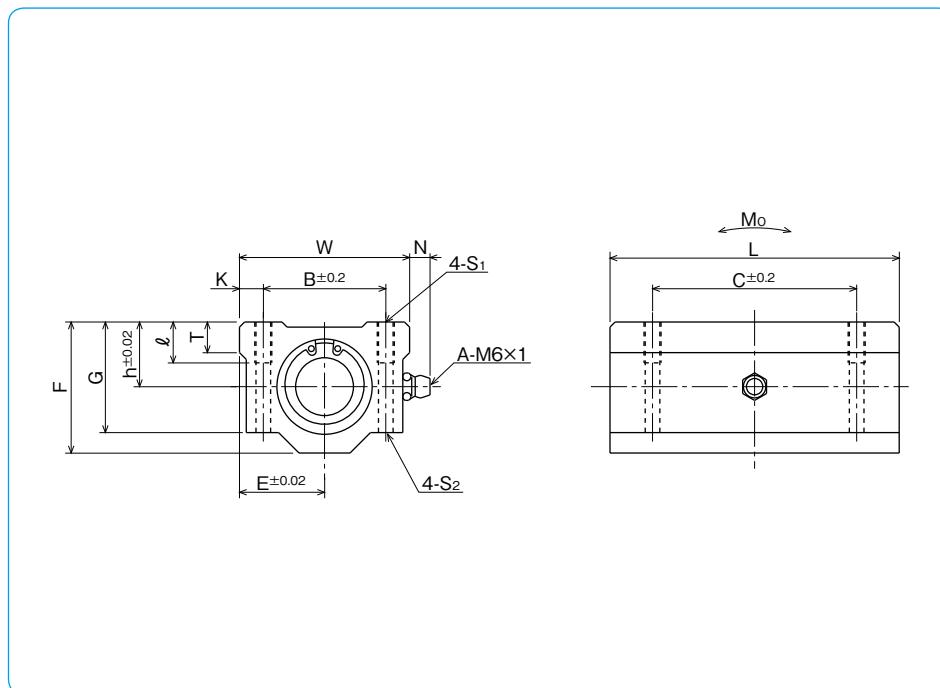
seal
blank: without seal
UU: seals on both sides

double-wide type

inner contact diameter

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

| part number | inner contact diameter mm | tolerance μm | outer dimensions | | | | | | | | | major dimensions | | |
|------------------|------------------------------|----------------------------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|------------------|------------------|------------------|
| | | | h mm | E mm | W mm | L mm | F mm | G mm | T mm | N mm | K mm | B ± 0.2 | 4-S ₁ | 4-S ₂ |
| SMA 3GWUU | 3 | 0 | 5 | 8 | 16 | 23 | 10 | 8 | — | — | — | — | — | — |
| SMA 4GWUU | 4 | — 8 | 5.5 | 8.5 | 17 | 27 | 11 | 9 | — | — | — | — | — | — |
| SMA 5GWUU | 5 | 0 | 7 | 11 | 22 | 33 | 14 | 11 | — | — | — | — | — | — |
| SMA 6GWUU | 6 | — 9 | 9 | 15 | 30 | 48 | 18 | 15 | 6 | 7 | — | — | — | — |
| SMA 8GWUU | 8 | 0 | 11 | 17 | 34 | 58 | 22 | 18 | 6 | 7 | — | — | — | — |
| SMA10GWUU | 10 | — 9 | 13 | 20 | 40 | 68 | 26 | 21 | 8 | 7 | — | — | — | — |
| SMA12GWUU | 12 | 0 | 15 | 21 | 42 | 70 | 28 | 24 | 8 | 6.5 | — | — | — | — |
| SMA13GWUU | 13 | — 9 | 15 | 22 | 44 | 75 | 30 | 24.5 | 8 | 6.5 | — | — | — | — |
| SMA16GWUU | 16 | 0 | 19 | 25 | 50 | 85 | 38.5 | 32.5 | 9 | 6 | — | — | — | — |
| SMA20GWUU | 20 | — 10 | 21 | 27 | 54 | 96 | 41 | 35 | 11 | 7 | — | — | — | — |
| SMA25GWUU | 25 | 0 | 26 | 38 | 76 | 130 | 51.5 | 42 | 12 | 4 | — | — | — | — |
| SMA30GWUU | 30 | — 12 | 30 | 39 | 78 | 140 | 59.5 | 49 | 15 | 5 | — | — | — | — |
| SMA35GWUU | 35 | 0 | 34 | 45 | 90 | 155 | 68 | 54 | 18 | 5.5 | — | — | — | — |
| SMA40GWUU | 40 | — 12 | 40 | 51 | 102 | 175 | 78 | 62 | 20 | 5 | — | — | — | — |
| SMA50GWUU | 50 | 0 | 52 | 61 | 122 | 215 | 102 | 80 | 25 | 5 | — | — | — | — |
| SMA60GWUU | 60 | 0/-15 | 58 | 66 | 132 | 240 | 114 | 94 | 30 | 5 | — | — | — | — |



| B mm | C mm | K mm | S ₁ | ℓ mm | S ₂ mm | mounting dimensions | | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter mm |
|---------|---------|---------|----------------|--------------|----------------------|---------------------|--------|--|--|---|-----------|-------------------------|
| | | | | | | 108 | 206 | | | | | |
| 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

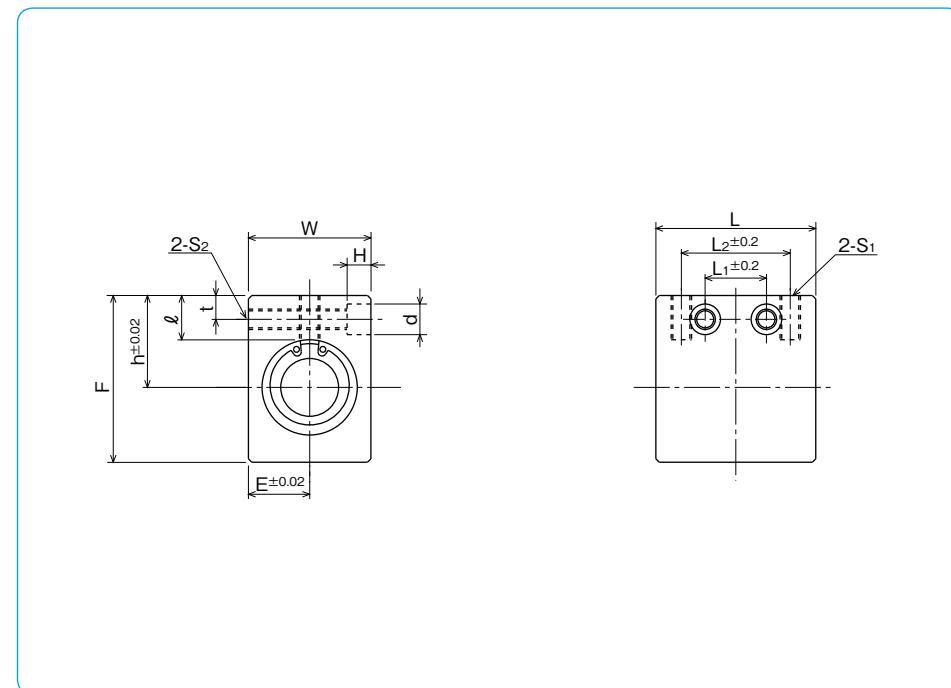
example AKS|25|G|UU

specification
AK: standard
AKS: anti-corrosionseal
blank: without seal
UU: seals on both sides

inner contact diameter

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

| part number | inner contact diameter mm | tolerance μm | outer dimensions | | | | | | major dimensions | | |
|-------------|------------------------------|----------------------------|------------------|---------|---------|---------|---------|----------------------|------------------|--|--|
| | | | h mm | E mm | W mm | L mm | F mm | L ₂ mm | S ₁ | | |
| 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 | | 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 | | | | | | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---------------------|----------------------|---------|----------------|---------|---------|--|--|-----------|-------------------------|
| ℓ mm | L ₁ mm | t mm | S ₂ | d mm | H 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

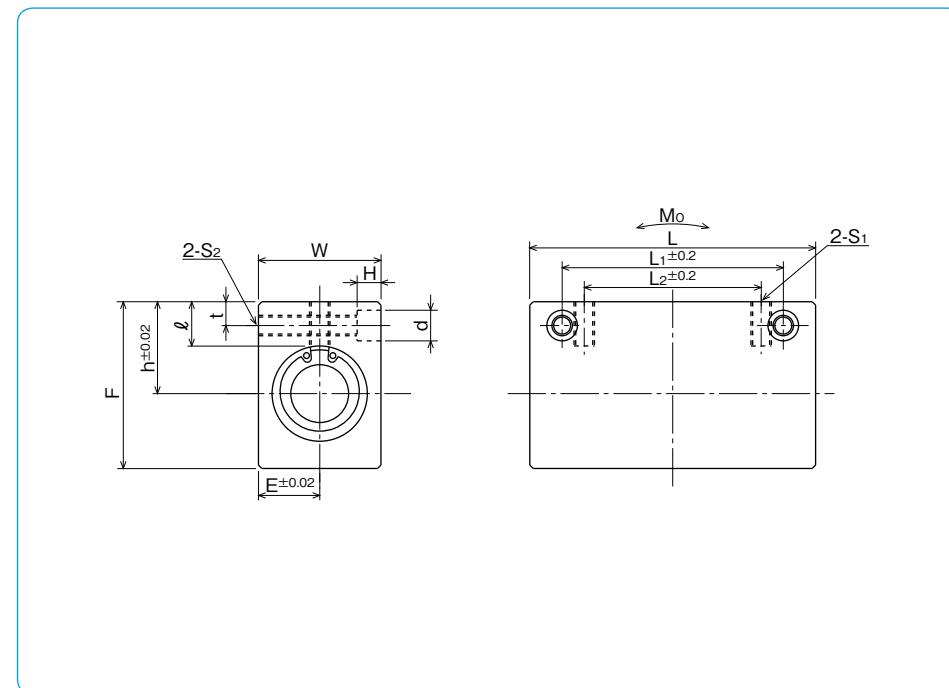
– Double-Wide Compact Block Type –



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 | | | | | |

| part number | inner contact diameter mm | tolerance μm | outer dimensions | | | | | | major dimensions | | |
|-------------|------------------------------|----------------------------|------------------|---------|---------|---------|---------|----------------------|------------------|--|--|
| | | | h mm | E mm | W mm | L mm | F mm | L ₂ mm | S ₁ | | |
| AK 6GWUU | 6 | | 14 | 8 | 16 | 46 | 22 | 20 | M4 | | |
| AK 8GWUU | 8 | | 16 | 10 | 20 | 56 | 26 | 30 | M5 | | |
| AK10GWUU | 10 | -0 | 19 | 13 | 26 | 68 | 32 | 36 | M6 | | |
| AK12GWUU | 12 | -9 | 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 | | 31 | 21 | 42 | 94 | 54 | 58 | M8 | | |
| AK25GWUU | 25 | 0 | 37 | 26 | 52 | 128 | 65 | 80 | M10 | | |
| AK30GWUU | 30 | -10 | 40 | 29 | 58 | 138 | 71 | 90 | M10 | | |



| mounting dimensions | | | | | | basic load rating dynamic C N | basic load rating static Co N | allowable static moment Mo N · m | mass g | shaft diameter mm |
|---------------------|----------------------|---------|----------------|---------|---------|--|--|---|-----------|-------------------------|
| ℓ mm | L ₁ mm | t mm | S ₂ | d mm | H 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

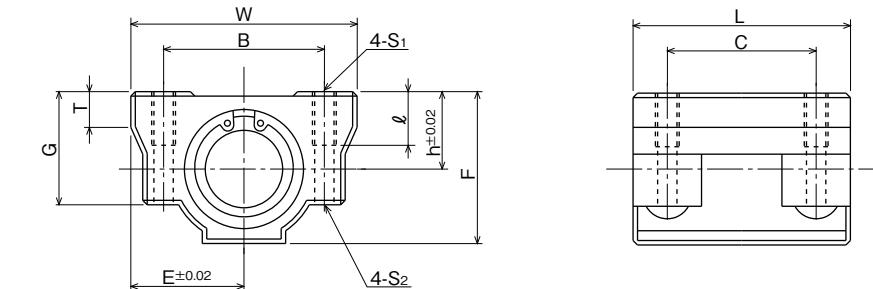
example **SMSB|25|G|UU**

specification
SMB: standard
SMSB: anti-corrosion

seal
blank: without seal
UU: seals on both sides

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

inner contact diameter



| part number | inner contact diameter | | outer dimensions | | | | | | | major dimensions | | |
|-----------------|------------------------|-------------------------|------------------|------|------|------|------|------|------|------------------|--|--|
| | mm | tolerance μm | h mm | E mm | W mm | L mm | F mm | G mm | T mm | | | |
| SMB13GUU | 13 | 0 | 16 | 22 | 44 | 39 | 31 | 22 | 8 | | | |
| SMB16GUU | 16 | -9 | 19 | 25 | 50 | 49 | 37 | 28 | 9 | | | |
| SMB20GUU | 20 | 0 | 21 | 27 | 54 | 55 | 41 | 31 | 11 | | | |
| SMB25GUU | 25 | -10 | 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 | | | |

| B mm | C mm | mounting dimensions | | | basic load rating | | mass g | shaft diameter mm |
|---------|---------|---------------------|---------|----------------------|-------------------|-------------------------------|-----------|-------------------------|
| | | S ₁ | l mm | S ₂ mm | dynamic C N | static C ₀ N | | |
| 33 | 26 | M5 | 10 | 4.3 | 510 | 784 | 120 | 13 |
| 36 | 34 | M5 | 12 | 4.3 | 774 | 1,180 | 170 | 16 |
| 40 | 40 | M6 | 12 | 5.1 | 882 | 1,370 | 210 | 20 |
| 54 | 50 | M8 | 18 | 6.8 | 980 | 1,570 | 500 | 25 |
| 58 | 58 | M8 | 18 | 6.8 | 1,570 | 2,740 | 600 | 30 |
| 80 | 60 | 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**

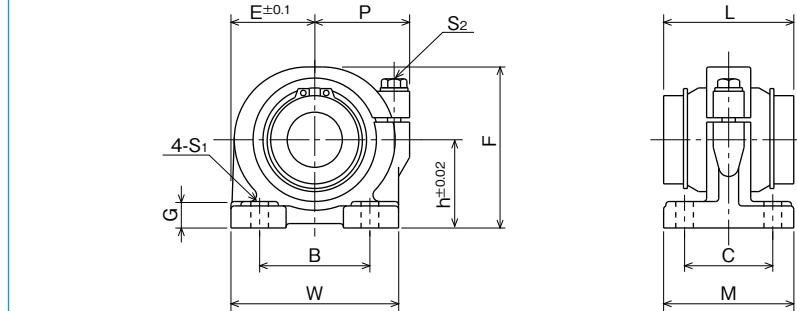
SMP type

seal
blank: without seal
UU: seals on both sides

inner contact diameter

retainer material
blank: steel
G: resin

| part number | inner contact diameter | | outer dimensions | | | | | | | major dimensions | | |
|-----------------|------------------------|-------------------------|------------------|------|------|------|------|------|------|------------------|--|--|
| | mm | tolerance μm | h mm | E mm | W mm | L mm | F mm | G mm | M mm | | | |
| SMP13GUU | 13 | 0 | 25 | 25 | 50 | 32 | 46 | 8 | 36 | | | |
| SMP16GUU | 16 | -9 | 29 | 27.5 | 55 | 37 | 53 | 10 | 40 | | | |
| SMP20GUU | 20 | 0 | 34 | 32.5 | 65 | 42 | 62 | 12 | 48 | | | |
| SMP25GUU | 25 | -10 | 40 | 38 | 76 | 59 | 73 | 12 | 59 | | | |
| SMP30GUU | 30 | | 45 | 42.5 | 85 | 64 | 84 | 15 | 69 | | | |
| SMP35GUU | 35 | 0 | 50 | 49 | 98 | 70 | 94 | 15 | 76 | | | |
| SMP40GUU | 40 | -12 | 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 | | | |



| P mm | mounting dimensions | | | adjustment screw size S2 | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|------|---------------------|------|----------|--------------------------|-------------------------------|-------------------------------|--------|-------------------|
| | B mm | C mm | S1 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

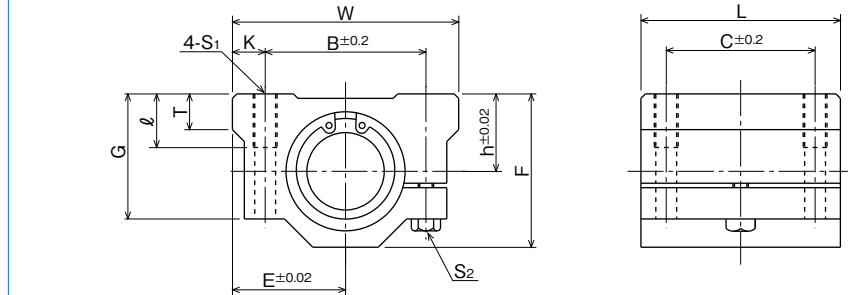
— Clearance Adjustable Type —

**part number structure**example **SMSJ|25|G|UU**specification
SMSJ: standard
SMSJ: anti-corrosionseal
blank: without seal
UU: seals on both sidesretainer material
blank: standard/steel*
anti-corrosion/stainless steel*
G: resin

inner contact diameter

*Size 10 is provided with resin retainer type only.

| part number | inner contact diameter mm | h mm | E mm | outer dimensions | | | | major dimensions | | |
|-----------------|---------------------------|------|------|------------------|------|------|------|------------------|------|--|
| | | | | W mm | L mm | F mm | G mm | 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 | |



| C mm | K mm | S1 | l mm | adjustment screw size S2 | basic load rating | mass g | shaft diameter mm |
|------|------|-----|------|--------------------------|-------------------|--------|-------------------|
| | | | | | dynamic C N | | |
| 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 SME 25 G UU

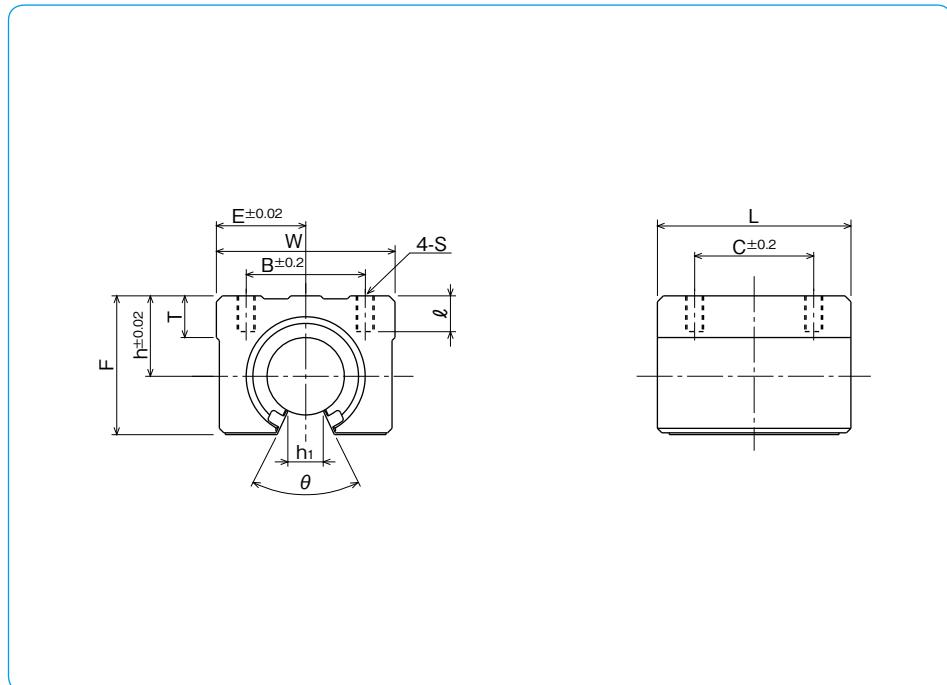
specification
SME: standard
SMSE: anti-corrosionseal
blank: without seal
UU: seals on both sides

inner contact diameter

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

*Size 10 is provided with resin retainer type only.

| part number | inner contact diameter mm | h mm | E mm | W mm | outer dimensions | | major dimensions | | |
|-------------|---------------------------|------|------|------|------------------|------|------------------|-------|-----|
| | | | | | 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° |



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

specification
SME: standard
SMSE: anti-corrosion

seal
blank: without seal
UU: seals on both sides

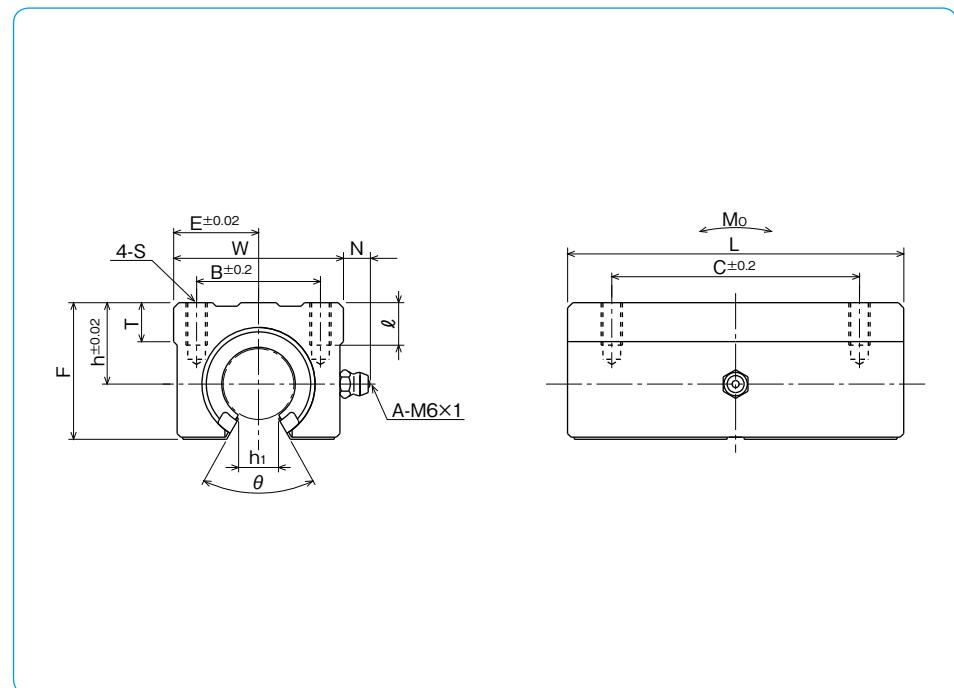
double-wide type

inner contact diameter

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

*Size 10 is provided with resin retainer type only.

| part number | inner contact diameter mm | outer dimensions | | | | | | | | major dimensions | | |
|-------------|---------------------------------|------------------|---------|---------|---------|---------|---------|---------|----------------------|------------------|--|--|
| | | h mm | E mm | W mm | L mm | F mm | T mm | N mm | h ₁ mm | θ | | |
| 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° | | |



| B mm | mounting dimensions | | | l mm | basic load rating | | allowable static moment Mo N·m | * mass g | shaft diameter mm |
|---------|---------------------|----|----|---------|-------------------|-------------------|--|----------------|-------------------------|
| | C mm | S | M | | dynamic C N | static Co N | | | |
| 25 | 40 | M5 | 10 | 588 | 1,100 | 4.63 | 140 | 10 | |
| 28 | 50 | M5 | 10 | 813 | 1,570 | 7.42 | 200 | 13 | |
| 32 | 60 | M5 | 12 | 1,230 | 2,350 | 12.6 | 300 | 16 | |
| 35 | 70 | M6 | 12 | 1,400 | 2,740 | 14.5 | 400 | 20 | |
| 40 | 90 | M6 | 12 | 1,560 | 3,140 | 24.7 | 900 | 25 | |
| 50 | 100 | 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**

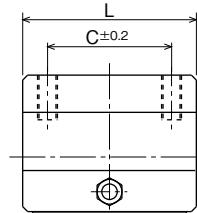
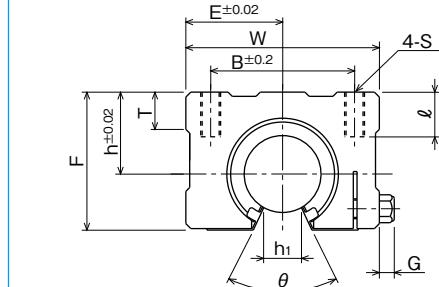
specification
SMD: standard
SMSD: anti-corrosion

seal
blank: without seal
UU: seals on both sides

inner contact diameter

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

| part number | inner contact diameter mm | outer dimensions | | | | | | | | | | major dimensions | |
|-----------------|---------------------------------|------------------|---------|---------|---------|---------|---------|---------|----------------------|-----|--|------------------|--|
| | | h mm | E mm | W mm | L mm | F mm | T mm | G mm | h ₁ mm | θ | | | |
| 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° | | | |



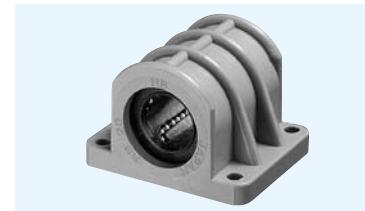
| B mm | mounting dimensions | | | ℓ mm | basic load rating | | mass g | shaft diameter mm |
|---------|---------------------|----|-------------------|---------|-------------------|-----|-----------|-------------------------|
| | C mm | S | dynamic C N | | static Co N | | | |
| 36 | 30 | M5 | 12 | 774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

* Mass of resin retainer type

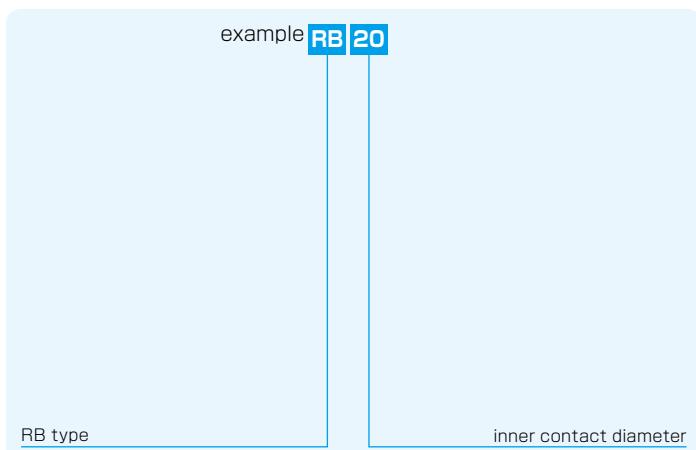
1N=0.102kgf

RB TYPE

– Resin Block Type –



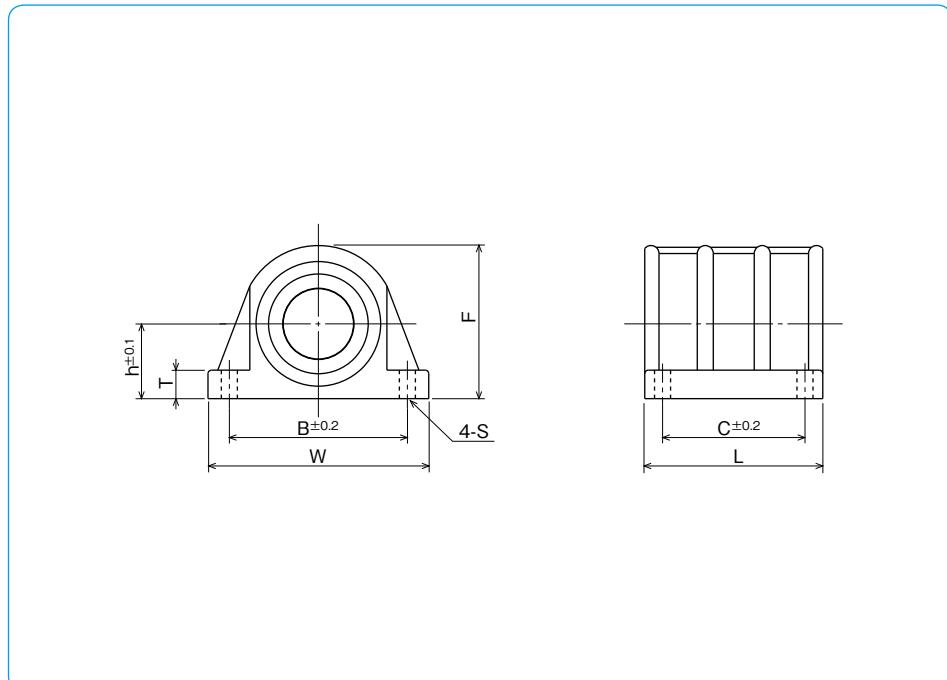
part number structure



| part number | inner contact diameter | | major dimensions outer dimensions | | | |
|-------------|------------------------|----------------------------|--------------------------------------|---------|---------|---------|
| | mm | tolerance μm | h mm | W mm | L mm | F mm |
| RB10 | 10 | | 13 | 45 | 35 | 26.5 |
| RB12 | 12 | 0 | 15 | 50 | 36 | 30 |
| RB13 | 13 | -9 | 15 | 50 | 39 | 31 |
| RB16 | 16 | | 19 | 56 | 44 | 38.5 |
| RB20 | 20 | 0/-10 | 21 | 62 | 50 | 43 |

RB has seals as standard.

SLIDE BUSH



| T mm | mounting dimensions | | | basic load rating dynamic C N | basic load rating static Co N | mass g | shaft diameter mm |
|---------|---------------------|---------|---------|--|--|-----------|-------------------------|
| | B mm | C mm | S mm | | | | |
| 6 | 35 | 21 | 4.5 | 372 | 549 | 43 | 10 |
| 6.5 | 40 | 26 | 4.5 | 510 | 784 | 50 | 12 |
| 6.5 | 40 | 26 | 4.5 | 510 | 784 | 63 | 13 |
| 7 | 46 | 34 | 4.5 | 774 | 1,180 | 99 | 16 |
| 8 | 50 | 40 | 5.5 | 882 | 1,370 | 127 | 20 |

1N=0.102kgf

CE TYPE

— Non-Clearance Adjustable Type —



part number structure

CES|25-2-500

specification
CE: standard
CES: anti-corrosion

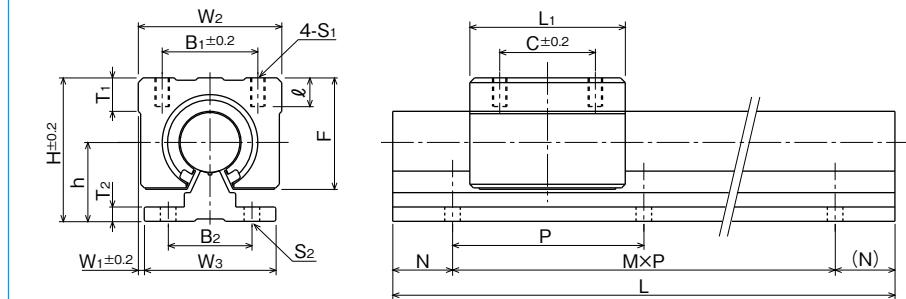
shaft diameter

number of blocks
attached to one shaft

total length

※Bush inside is a resin retainer type with seals.

| part number | | shaft diameter | assembly dimension | | | block dimension | | | | | | major dimensions | | | | | | |
|-------------|----------------|----------------|--------------------|------|-------|-----------------|-------|-------|------|-------|------|------------------|------|-------|-------|-------|------|-------|
| standard | anti-corrosion | | H mm | h mm | W1 mm | W2 mm | L1 mm | B1 mm | C mm | T1 mm | ℓ 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 | 9 | 12 | M5 | 33 | 40 | 30 | 5 | 150 | 5.5 |
| CE20 | CES20 | 20 | 50 | 27 | 1.5 | 48 | 50 | 35 | 35 | 11 | 12 | M6 | 39 | 45 | 30 | 5 | 150 | 5.5 |
| CE25 | CES25 | 25 | 60 | 33 | 2.5 | 60 | 65 | 40 | 40 | 14 | 12 | M6 | 47 | 55 | 35 | 6 | 200 | 6.5 |
| CE30 | CES30 | 30 | 70 | 37 | 5 | 70 | 70 | 50 | 50 | 15 | 18 | M8 | 56 | 60 | 40 | 7 | 200 | 6.5 |



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

1N=0.102kgf

CD TYPE

— Clearance Adjustable Type —

**part number structure****CDS|25-2-500**

specification
CD: standard
CDS: anti-corrosion

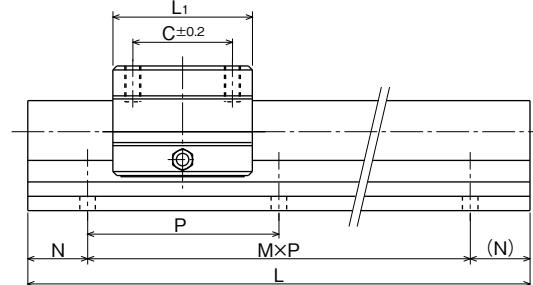
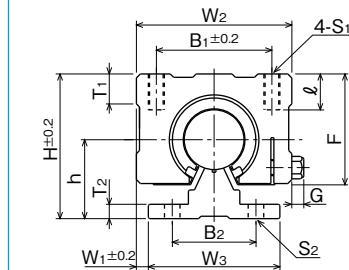
shaft diameter

number of blocks
attached to one shaft

total length

※Bush inside is a resin retainer type with seals.

| part number | | shaft diameter | assembly dimensions | | | | block dimensions | | | | | | | | major dimensions | | | | | |
|-------------|----------------|----------------|---------------------|------|-------------------|-------------------|-------------------|-------------------|------|-------------------|------|----------------|------|------|-------------------|-------------------|-------------------|------|-------------------|--|
| standard | anti-corrosion | mm | H mm | h mm | W ₁ mm | W ₂ mm | L ₁ mm | B ₁ mm | C mm | T ₁ mm | ℓ mm | S ₁ | G mm | F mm | W ₃ mm | B ₂ mm | T ₂ mm | P mm | S ₂ mm | |
| CD16 | CDS16 | 16 | 45 | 25 | 5 | 50 | 45 | 36 | 30 | 9 | 12 | M5 | 6 | 33 | 40 | 30 | 5 | 150 | 5.5 | |
| CD20 | CDS20 | 20 | 50 | 27 | 4.5 | 54 | 50 | 40 | 35 | 11 | 12 | M6 | 7 | 39 | 45 | 30 | 5 | 150 | 5.5 | |
| CD25 | CDS25 | 25 | 60 | 33 | 10.5 | 76 | 65 | 54 | 40 | 14 | 12 | M6 | 7 | 47 | 55 | 35 | 6 | 200 | 6.5 | |
| CD30 | CDS30 | 30 | 70 | 37 | 9 | 78 | 70 | 58 | 50 | 15 | 18 | M8 | 7 | 56 | 60 | 40 | 7 | 200 | 6.5 | |



| rail dimensions | | | | basic load rating | mass | size | | |
|-----------------|---------------|---------------|---------------|-------------------|-------------|---------|------|-----------|
| L (M,N) mm | | | | dynamic C N | static Co N | block g | | |
| 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

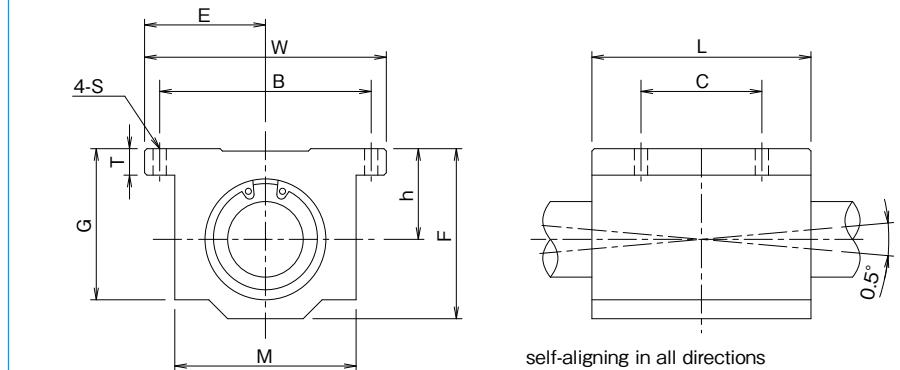
SWA TYPE (Inch Standard)

— 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 | | | | |
| seal | | | | | |
| blank: | without seal | | | | |
| UU: | seals on both sides | | | | |
| self-aligning | | | | | |
| (SWA-resin retainer only) | | | | | |



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

| part number | inner contact diameter | | major dimensions | | | | |
|------------------|------------------------|---------------------------|------------------------------------|------------------------------------|-------------------|-------------------|-------------------|
| | inch/(mm) | tolerance inch/(\mu m) | h ±.001/(\pm 0.02) inch/(mm) | E ±.001/(\pm 0.02) inch/(mm) | W inch/(mm) | L inch/(mm) | F inch/(mm) |
| SWA 4GUU | .2500 (6.350) | | .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) | | .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) | | 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 inch/(mm) | G inch/(mm) | M inch/(mm) | mounting dimensions | | S inch/(mm) | basic load rating dynamic C N | static Co N | mass g |
|-----------------|------------------|-------------------|----------------------------------|----------------------------------|----------------|-------------------------------------|----------------|-----------|
| | | | B ±.01/(\pm 0.2) inch/(mm) | C ±.01/(\pm 0.2) inch/(mm) | | | | |
| .188 (4.76) | .750 (19.05) | 1.000 (25.40) | 1.312 (33.33) | .750 (19.05) | .156 (4.0) | 206 | 265 | 45 |
| .188 (4.76) | .875 (22.23) | 1.125 (28.58) | 1.437 (36.50) | .875 (22.23) | .156 (4.0) | 225 | 314 | 62 |
| .250 (6.35) | 1.125 (28.58) | 1.375 (34.93) | 1.688 (42.88) | 1.000 (25.40) | .156 (4.0) | 510 | 784 | 130 |
| .281 (7.14) | 1.437 (36.50) | 1.750 (44.45) | 2.125 (53.98) | 1.125 (28.58) | .188 (4.8) | 774 | 1,180 | 240 |
| .313 (7.94) | 1.563 (39.69) | 1.875 (47.63) | 2.375 (60.33) | 1.250 (31.75) | .188 (4.8) | 862 | 1,370 | 290 |
| .375 (9.53) | 1.938 (49.21) | 2.375 (60.33) | 2.875 (73.03) | 1.750 (44.45) | .219 (5.6) | 980 | 1,570 | 615 |
| .438 (11.11) | 2.500 (63.50) | 3.000 (76.20) | 3.500 (88.90) | 2.000 (50.80) | .219 (5.6) | 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) | .281 (7.2) | 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) | .406 (10.5) | 3,820 | 7,940 | 3,600 |

SI UNIT 1N ≈ 0.225lbf

1kg ≈ 2.205lbs

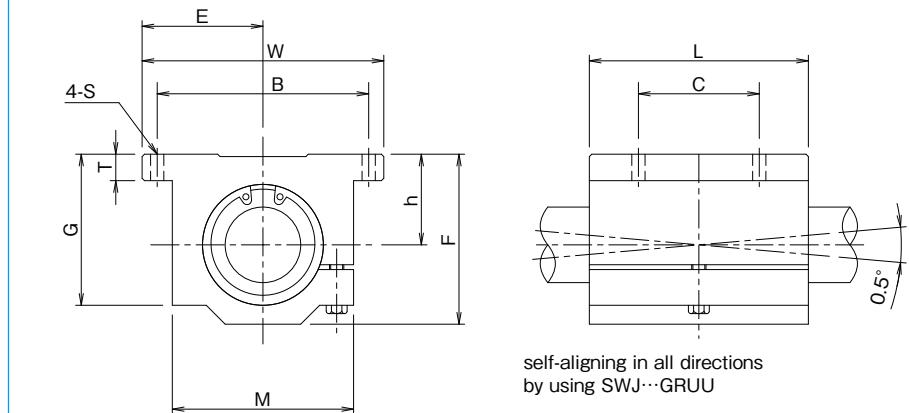
SWJ TYPE (Inch Standard)

– 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 | | | | | |
| seal | | | | | |
| blank: without seal | | | | | |
| UU: seals on both sides | | | | | |
| self-aligning (SWA-resin retainer only) | | | | | |



self-aligning in all directions
by using SWJ...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) |
| 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 inch/(mm) | G inch/(mm) | M inch/(mm) | mounting dimensions | | | basic load rating dynamic C N | basic load rating static Co N | mass g |
|-----------------|------------------|-------------------|-----------------------------|-----------------------------|----------------|--|--|-----------|
| | | | B ±.01/±0.2 inch/(mm) | C ±.01/±0.2 inch/(mm) | S inch/(mm) | | | |
| .188 (4.76) | .750 (19.05) | 1.000 (25.40) | 1.312 (33.33) | .750 (19.05) | .156 (4.0) | 206 | 265 | 45 |
| .188 (4.76) | .875 (22.23) | 1.125 (28.58) | 1.437 (36.50) | .875 (22.23) | .156 (4.0) | 225 | 315 | 62 |
| .250 (6.35) | 1.125 (28.58) | 1.375 (34.93) | 1.688 (42.88) | 1.000 (25.40) | .156 (4.0) | 510 | 784 | 130 |
| .281 (7.14) | 1.437 (36.50) | 1.750 (44.45) | 2.125 (53.98) | 1.125 (28.58) | .188 (4.8) | 774 | 1,180 | 240 |
| .313 (7.94) | 1.563 (39.69) | 1.875 (47.63) | 2.375 (60.33) | 1.250 (31.75) | .188 (4.8) | 862 | 1,370 | 290 |
| .375 (9.53) | 1.938 (49.21) | 2.375 (60.33) | 2.875 (73.03) | 1.750 (44.45) | .219 (5.6) | 980 | 1,570 | 615 |
| .438 (11.11) | 2.500 (73.03) | 3.000 (76.20) | 3.500 (88.90) | 2.000 (50.80) | .219 (5.6) | 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) | .281 (7.2) | 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) | .406 (10.5) | 3,820 | 7,940 | 3,600 |

SI UNIT 1N≈0.225lbf

1kg≈2.205lbs

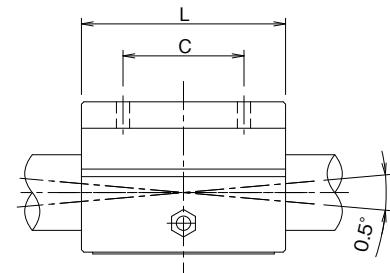
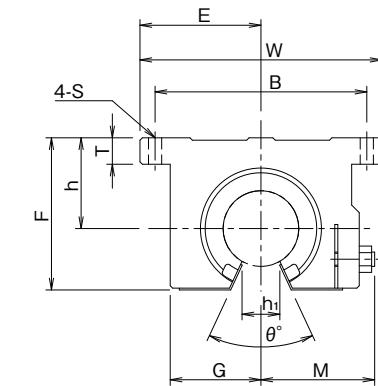
SWD TYPE (Inch Standard)

— 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: resinseal
blank: without seal
UU: seals on both sides

self-aligning
(SWD-resin retainer only)self-aligning in all directions
by using SWD-GRUU

| part number | inner contact diameter inch/(mm) | major dimensions outer dimensions | | | | | | |
|------------------------------|-------------------------------------|-----------------------------------|--------------------|-------------------|------------------|------------------|-----------------|------------------|
| | | h inch/(mm) | E inch/(mm) | W inch/(mm) | L inch/(mm) | F inch/(mm) | T inch/(mm) | G inch/(mm) |
| SWD 8GUU (12.700) | .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 (15.875) | .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 (19.050) | .7500 (23.800) | .9370 (34.950) | 1.3750 (69.85) | 2.750 (47.63) | 1.875 (39.00) | 1.535 (8.00) | .315 (23.80) | .937 (30.18) |
| SWD 16GUU (25.400) | 1.0000 (30.150) | 1.1870 (41.300) | 1.6250 (82.55) | 3.250 (66.68) | 2.625 (50.17) | 1.975 (9.53) | .375 (30.18) | 1.188 (38.10) |
| SWD 20GUU (31.750) | 1.2500 (38.100) | 1.5000 (50.800) | 2.0000 (101.60) | 4.000 (85.73) | 3.375 (63.12) | 2.485 (11.10) | .437 (38.10) | 1.500 (44.45) |
| SWD 24GUU (38.100) | 1.5000 (44.450) | 1.7500 (60.325) | 2.3750 (120.65) | 4.750 (95.25) | 3.750 (73.90) | 2.910 (12.70) | .500 (44.45) | 1.750 (57.15) |
| SWD 32GUU (50.800) | 2.0000 (53.975) | 2.1250 (76.200) | 3.0000 (152.4) | 6.000 (120.65) | 4.750 (92.90) | 3.660 (15.88) | .625 (57.15) | 2.250 (57.15) |

| M inch/(mm) | h1 inch/(mm) | θ | mounting dimensions | | | S inch/(mm) | basic load rating dynamic C N | basic load rating static Co N | mass g |
|-----------------|------------------|-----|---------------------------------|---------------------------------|----------------|----------------|-------------------------------------|-------------------------------------|-----------|
| | | | B ±.01/(\pm0.2) inch/(mm) | C ±.01/(\pm0.2) inch/(mm) | N | | | | |
| .98 (24.89) | .3425 (8.70) | 80° | 1.688 (42.88) | 1.000 (25.40) | .156 (4.0) | .510 | 784 | 98 | |
| 1.15 (29.21) | .375 (9.53) | 80° | 2.125 (53.98) | 1.125 (28.58) | .188 (4.8) | 774 | 1,180 | 185 | |
| 1.23 (31.24) | .4375 (11.11) | 60° | 2.375 (60.33) | 1.250 (31.75) | .188 (4.8) | 862 | 1,370 | 235 | |
| 1.48 (37.59) | .5625 (14.29) | 50° | 2.875 (73.03) | 1.750 (44.45) | .218 (5.6) | 980 | 1,570 | 530 | |
| 1.88 (47.75) | .625 (15.88) | 50° | 3.500 (88.90) | 2.000 (50.80) | .218 (5.6) | 1,570 | 2,740 | 1,080 | |
| 2.12 (53.85) | .750 (19.05) | 50° | 4.125 (104.78) | 2.500 (63.50) | .281 (7.4) | 2,160 | 4,020 | 1,620 | |
| 2.70 (68.58) | 1.00 (25.40) | 50° | 5.250 (133.35) | 3.250 (82.55) | .406 (10.5) | 3,820 | 7,940 | 3,100 | |

SI UNIT 1N≈0.225lbf
1kg≈2.205lbs

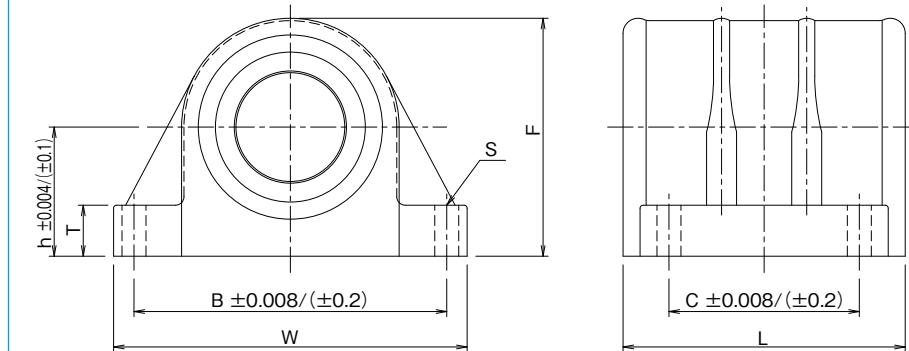
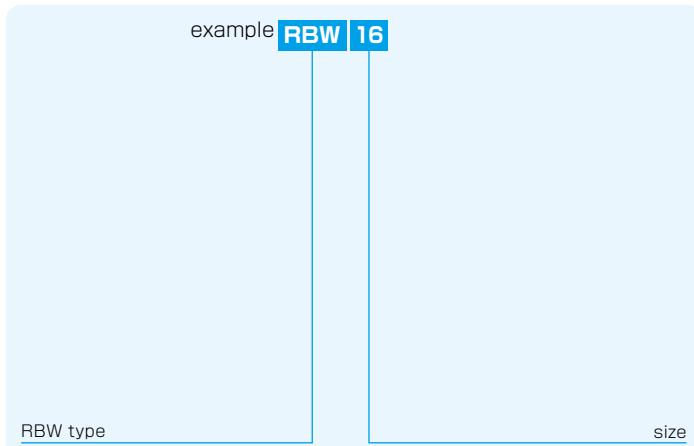
RBW TYPE

(Inch Standard / Anti-Corrosion Type)

— Resin Block Type —



part number structure



| part number | inner contact diameter | | outer dimensions | | | | major dimensions | |
|---------------|------------------------|---------------------------|--------------------|------------------|--------------------|--------------------|------------------|--|
| | inch/(mm) | tolerance inch/(\mu m) | h inch/(mm) | W inch/(mm) | L inch/(mm) | F 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) | | |
| | 6250 (15.875) | | .8750 (22.225) | 2.500 (63.50) | 1.8437 (46.831) | 1.6250 (41.275) | | |
| RBW 10 | .7500 (19.050) | 0 -0.00040 (-10) | .9370 (23.800) | 2.750 (69.85) | 1.9687 (50.006) | 1.7500 (44.450) | | |
| | 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.

| T inch/(mm) | mounting dimensions | | | basic load rating dynamic C N | static Co N | mass g |
|-------------------|---------------------|-------------------|----------------|--|-------------------|-----------|
| | B inch/(mm) | C inch/(mm) | S inch/(mm) | | | |
| .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