HIGH TECHNOLOGY FOR PROFESSIONALS

CROSS ROLLER BEARINGS

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Cross Roller Bearing

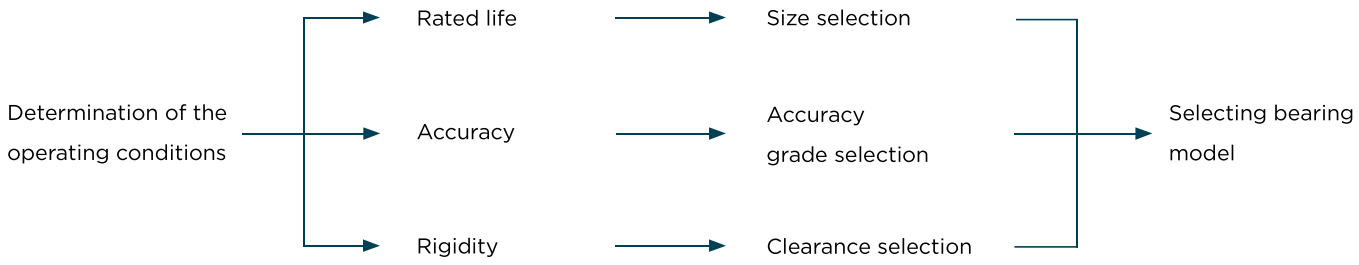
Crossed roller bearings consist of inner rings, outer rings, spacers and cylindrical rollers arranged cross-wise in the V-shaped 90° groove between the inner and outer rings. This design can support radial, axial and moment loads in all directions because the rollers have a large load-bearing area despite minimal dimensions. Therefore, these bearings are widely used for the rotating parts of industrial robots, machine tools, precision rotary tables, measuring equipment and IC manufacturing machines.

Product characteristics

- High rigidity
- High load capacity
- High turning accuracy
- Compactness
- Easy installation and handling

Cross Roller Bearings selection

The procedures for the selection and use of crossed roller bearings are based on the following figure



Models & Features

SRU

ONE-PIECE INNER & OUTER RING

The simple structure with mounting holes on inner and outer rings does not require flange washers or housings; this reduces mounting errors and achieves stable rotation accuracy and torque.

SRB

SPLIT OUTER RING-MODELL FOR INNER RING ROTATION

Standard design with two split, screwed outer rings and a one-piece inner ring, which is suitable for the precision rotation of the inner ring.

SRBE

ONE-PIECE INNER AND OUTER RING

One-piece inner and outer ring structure provides high rigidity, high accuracy and uniform rotation; suitable for inner and outer ring rotation.

SRAU

ONE-PIECE INNER AND OUTER RING

Very slim cross roller bearing with three options for bearing width: 5 mm, 8 mm and 13 mm. The rigid and compact design is suitable for limited space and light mechanisms.

SRAUF

ONE-PIECE INNER AND OUTER RING

Very slim cross roller bearing with mounting holes. Designed for easy installation, reducing weight and size.

SSHF

ONE-PIECE INNER AND OUTER RING

Specially designed for SHF expansion shaft gear. This cross roller bearing has mounting holes for easy installation.

SCSG

SPLIT OUTER RING

Specially designed for CSG expansion shaft gear. This cross roller bearing has mounting holes for easy installation.

Basic Rated Life

Most crossed roller bearings can operate individually under the same conditions without causing material damage such as spalling due to rolling fatigue. The basic rating life is represented by the total operating hours for revolutions at a constant speed.

The service life of the crossed roller bearing is calculated using the following formula:

L
basic rated life

C
basic dynamic load rating

P
dynamic-equicalent load

$$L = \left(\frac{C}{P} \right)^{\frac{10}{3}}$$

The number of revolutions is expressed in the unit of 10^6 (rev)

Dynamic equivalent radial load: P

The dynamic-equivalent radial load on cross roller bearings is calculated using the following formula:

P
dynamic-equivalent radial load (kN)

Fr
radial load (kN)

Fa
axial load (kN)

M
moment (kN*mm)

$$P = X \cdot \left(Fr + \frac{2M}{dw} \right) + Y \cdot Fa$$

X
dynamic radial coefficient (see table 1)

Y
dynamic axial coefficient (see table 1)

dw
pirch corcle diameter of rollers (mm)

Dynamic equivalent radial load: P

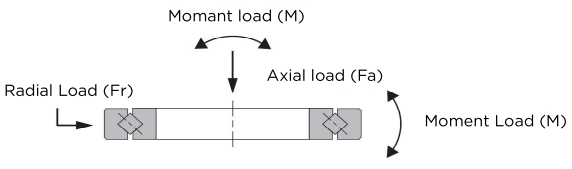


Table 1: Dynamic radial and axial coefficients

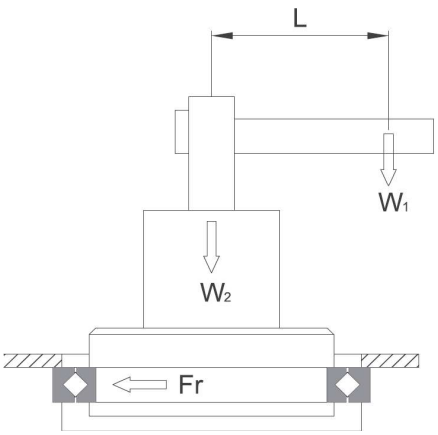
Kategorien	X	Y
$\frac{Fa}{Fr+2M/dw} \leq 1.5$	1	0.45
$\frac{Fa}{Fr+2M/dw} > 1.5$	0.67	0.67

Example for rated life calculation

ID: d = 110 (mm)	W1 = 700 (N)	Fr = 2500 (N)
OD: D = 160 (mm)	W2 = 2000 (N)	L = 700 (mm)

Example: SRB11020 model

pitch circle diameter	dw = 135 (mm)
basic dynamic load rating C	34000N
basic static load rating C_0	54000N
Radial load	Fr = 2500 (N)
axial load	Fa = W1 + W2 = 700 + 2000 = 2700 (N)
moment load	M = W1 x L = 700 x 700 = 49000 (N * mm)
PCD	dw = (d+D)/2 = (110 + 160)/2 = 135 (mm)



$$\frac{Fa}{Fr+2M/dw} = \frac{2700}{2500+2x490000/135} \cong 0.2766 < 1.5$$

Hence, if radial load coefficient: x=1, axial load, coefficient: y=0.45,

then dynamic-equivalent radial load:

$$P=X\cdot\left(Fr+\frac{2M}{dw}\right)+Y\cdot Fa=1x\left(2500+\frac{2x490000}{135}\right)+0.45\cdot 2700=10974(N)$$

Basic rated life: $L=\left(\frac{C}{P}\right)^{\frac{10}{3}}=\left(\frac{34000}{10974}\right)^{\frac{10}{3}}=43.35^{6}(x10\ \ rev)$

static safety coefficient

This coefficient is determined by the nominal static load (Co) and the static equivalent radial load (Po). When a load is applied statically or dynamically, the static coefficients of safety should be considered in the following figure.

fs
static safety coefficient

C_o
basic static rated load (kN)

P_o
static equivalent radial load (kN)

$$\frac{C_0}{P_0} = fs$$

(fs) static safety coefficient

Load conditions	Lower limit of fs
normal load	1 ~ 2
impact load	2 ~ 3

static equivalent radial load: P_o

The cross roller bearing's static equivalent radial load is calculated using the following formula:

P_o
Static-equivalent radial load (kN)

Fr
radial load (kN)

Fa
axial load (kN)

M
Moment (kN.mm)

$$P_0 = X_0 \cdot \left(Fr + \frac{2M}{dw} \right) + Y_0 \cdot Fa$$

X_o
static radial coefficient (X_0=1)

Y_o
static axial coefficient (Y_0=0,44)

dw
pitch circle diameter of rollers (mm)

Fit

Fitting of models SRU

Fitting of Models SRU Fitting required positioning accuracy, h7 and H7 are recommended.

Fitting of models SRAU

Fitting of Models SRAU Fitting required positioning accuracy, g5 and g6 for the shaft and H7 for the housing are recommended.

*Note: When using a Model SRAU (width 5 mm type), there is no interference on design devices.

Fitting of SRB & SRBE models

Radial clearance	Service contitions		Shaft	Housing
S1	Inner ring rotational load	normal load	g5	H7
		large impact and moment		
	Outer ring rotational load	normal load		
		large impact and moment		
C1	Inner ring rotational load	normal load	h5	H7
		large impact and moment		
	Outer ring rotational load	normal load	g5	Js7
		large impact and moment		

*Note: For the fitting for clearance S1, please avoid interference because it will cause an excessive pre-load. In addition, if higher rigidity is required, we recommend measuring the inner and outer diameters of the bearing and applying a slight interference fit to match the diameters.

Methods and design of the housing and flange disc

Due to the thin-walled structure of the crossed roller bearings, attention must be paid to the rigidity of the housings and flanged washers. In split bearings, if the housing or flanged washer is not rigid enough, the inner ring or outer ring cannot be held uniformly, which will lead to the deformation of the bearing when moment load occurs. Therefore, the contact area of the rollers will become uneven, resulting in a significant reduction in bearing performance.

To prevent this, it is recommended that the housing and flanged washers be designed according to the following methods and designed as follows:

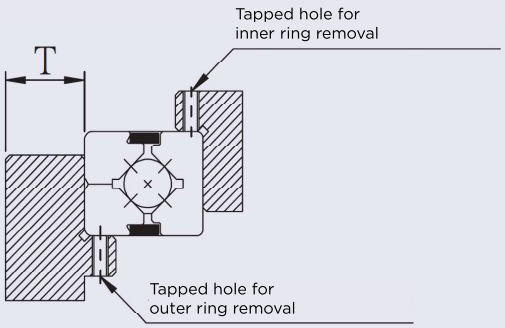
Housing: at least 60 % of the cross-sectional height of the crossed roller bearing

Wall thickness of the housing $T = \frac{(D-d)}{2} \times 0.6$ or bigger

(D: outer diameter of the outer ring; d: inner diameter of the inner ring)

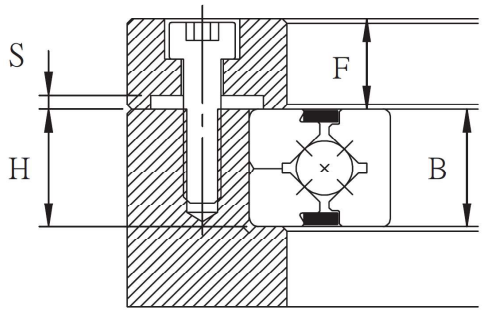
Tapped hole for bearing removal

Alternatively, tapped holes can be provided on the housing for bearing removal; if it is necessary to remove the bearings from the housing, the screws can be threaded into the tapped holes to push the bearing out without damaging it.



Flange discs and locking screws

The values of the wall thickness (F) or the clearance (S) of the flange discs may be designed per the following formula. As for the quantity of locking screws, it may be configured at equal intervals by using the quantity shown in table (1).



F = B x 0.5 ~ B x 1.2

H = $B^{0}_{-0.1}$

S = 0.5 mm

It is recommended to secure the flange discs using materials made of iron. It is advised to firmly lock the screws using torque wrenches. See table (2) for the locking torques of supporting seats or supported flange discs which are made of medium hardness steel.

Table 1: number of locking screws and size

unit: mm

outer diameter of the outer ring (D)		number of screws	screw size (base value)
above	below		
-	100	8 or more	M3 ~ M5
100	200	12 or more	M4 ~ M8
200	500	16 or more	M5 ~ M12
500	-	24 or more	M12 or thickerr

Table 2: screw locking torque

unit: Nm

Screw model	Locking torque	Screw model	Locking torque
M3	2.1	M10	72
M4	3.9	M12	122
M5	9	M16	201
M6	13	M20	392
M8	31	M22	531

Installation steps

1. Checking each part and component before installing

Clean the housing and other installation components, remove dirt and make sure there are no burrs.

2. Installing the cross roller bearings into housing or onto shaft

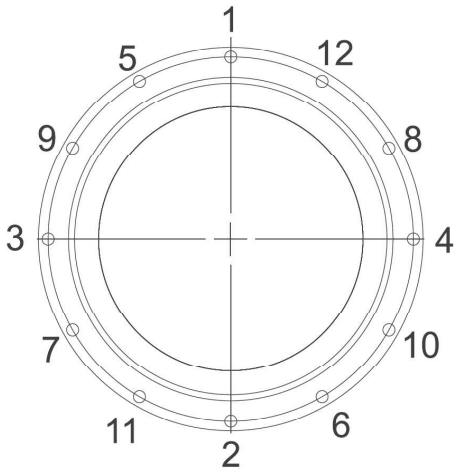
The cross roller bearing is easily tilted due to its thin wall structure. To install, level one side, and gradually insert the bearing by evenly and cautiously hammering along the perimeter using a rubber hammer or similar tool until the sound of the ring come in full contact with the mounting surface.

3. Installing the flange disc

1. Place the disc into position, shake it along its circumference back and forth several times to match the bolt holes.

2. Install screws. When manually turning the screws, make sure that the screw is fully aligned with the screw hole.

3. Tighten the screws in the order on the diagonal repeatedly as shown in the following figure, and fasten the disc from loose to tighten in three to four steps. When tightening the split type inner or outer rings, slightly turn the one-piece inner or outer rings to correct the misalignment between the ring and body.



Other precautions

Instructions on lubrication

1. Each cross roller bearings are pre-lubricated with high quality lithium soap grease No. 2. However, the bearings need lubricating on a regular basis and users are required to reapply same type of grease at a minimum interval ranging from 6 to 12 months to enable the distribution of grease within the entire internal structure of the bearing; the actual interval depends on the machine or usage.

2. Avoid mixing various kinds of lubrication grease.

3. When the bearings are used under such special conditions as high vibration, clean rooms, vacuum, low and high temperature, it may be impossible to use general-purpose lubrication grease and please contact us before using special type grease.

Precautions on use

1. Foreign objects entering the interior of the bearings may damage the revolution path of the rollers or disable their functions; take caution to prevent foreign objects entering the bearing.

2. If bearings are used at an ambient temperature above 80°C, contact us first.

3. When foreign objects enter the interior of bearings, apply lube oil again after cleaning the product.

4. Do not attempt to remove the screws and nuts on the split type bearings.

Accuracy standards

SRU | SRB | SRBE inner diameter dimensional accuracy

unit: µm

Inner ring diameter (d) Nominal dimension (mm)		Tolerance dm					
		0 | P5 | P4 | P2		PS5		PS4 | PS2	
Above	Below	Above	Below	Above	Below	Above	Below
18	30	0	-10	0	-6	0	-5
30	50	0	-12	0	-8	0	-6
50	80	0	-15	0	-9	0	-7
80	120	0	-20	0	-10	0	-8
120	150	0	-24	0	-12	0	-9
150	180	0	-24	0	-12	0	-10
180	250	0	-30	0	-14	0	-12
250	315	0	-34	0	-17	-	-

SRU | SRB | SRBE outer diameter dimensional accuracy

unit: µm

Outer ring diameter (D) Nominal dimension (mm)		Tolerance dm					
		0 | P5 | P4 | P2		PS5		PS4 | PS2	
Above	Below	Above	Below	Above	Below	Above	Below
30	50	0	-11	0	-7	0	-6
50	80	0	-13	0	-9	0	-7
80	120	0	-15	0	-10	0	-8
120	150	0	-18	0	-10	0	-9
150	180	0	-24	0	-12	0	-9
180	250	0	-30	0	-15	0	-10
250	315	0	-34	0	-18	0	-12

SRAU Inner diameter and outer diameter dimensional accuracy

unit: µm

Inner ring diameter (d) Nominal dimension (mm)		SRAU inner ring		SRAU outer ring	
Above	Below	Above	Below	Above	Below
-	18	0	-8	-	-
18	30	0	-10	0	-9
30	50	0	-12	0	-11
50	80	0	-15	0	-13
80	120	0	-20	0	-15
120	150	0	-25	0	-18
150	180	0	-25	0	-25
180	315	0	-30	0	-30

Rotational accuracy

SRU inner ring rotational accuracy

unit: µm

Model	Inner ring radial/axial run-out tolerance		
	P5	P4	P2
SRU42	4	3	2.5
SRU66	5	4	2.5
SRU85	5	4	2.5
SRU124	5	4	2.5
SRU148	6	5	2.5
SRU178	6	5	2.5
SRU228	8	6	5

SRU outer ring rotational accuracy

unit: µm

Modell	Outer ring radial/axial run-out tolerance		
	P5	P4	P2
SRU42	8	5	4
SRU66	10	6	5
SRU85	10	6	5
SRU124	12	8	5
SRU148	15	10	7
SRU178	15	10	7
SRU228	18	11	7

SRB | SRBE inner ring rotational accuracy

unit: µm

Inner ring diameter (d) Nominal dimension (mm)		Inner ring radial run-out tolerance				Inner ring axial run-out tolerance			
Above	Below	0	PS5 P5	PS4 P4	PS2 P2	0	PS5 P5	PS4 P4	PS2 P2
18	30	12	4	3	2.5	12	4	3	2.5
30	50	13	5	4	2.5	13	5	4	2.5
50	80	15	5	4	2.5	15	5	4	2.5
80	120	20	6	5	2.5	20	6	5	2.5
120	150	20	8	6	2.5	20	8	6	2.5
150	180	25	8	6	5	25	8	6	5
180	250	25	10	8	5	25	10	8	5
250	315	35	13	10	-	35	13	10	-

SRBE outer ring rotational accuracy

unit:: µm

Outer ring diameter (D) Nominal dimension (mm)		Outer ring radial run-out tolerance				Outer ring axial run-out tolerance			
		0	PS5 P5	PS4 P4	PS2 P2	0	PS5 P5	PS4 P4	PS2 P2
Above	Below	Maximum				Maximum			
30	50	20	7	5	2.5	20	7	5	2.5
50	80	25	8	5	4	25	8	5	4
80	120	35	10	6	5	35	10	6	5
120	150	40	11	7	5	40	11	7	5
150	180	45	13	8	5	45	13	8	5
180	250	50	15	10	7	50	15	10	7
250	315	60	18	11	7	60	18	11	7

SRAU Rotationsgenauigkeit des Innenrings

unit:: μm

Inner ring diameter (d) Nominal dimension (mm)		Inner ring radial run-out tolerance				Inner ring axial run-out tolerance			
Above	Below	0	P6	P5	P4	0	P6	P5	P4
-	18	10	8	5	4	10	8	5	4
18	40	13	10	5	4	13	10	5	4
40	65	13	10	5	4	13	10	5	4
65	80	15	10	5	4	15	10	5	4
80	100	15	13	6	5	15	13	6	5
100	120	20	13	6	5	20	13	6	5
120	140	25	18	8	6	25	18	8	6
140	180	25	18	8	6	25	18	8	6
180	200	30	20	10	8	30	20	10	8

*Above rotational accuracy are for width 8mm-13mm type
If a certain level of accuracy is required, please contact with SFT
*Note :SRAU width 5mm Type
1.Seals are not available
2.Only available with C1 radial clearance ,S1 is not available .

SRAU outer ring rotational accuracy

unit: μm

Outer ring diameter (d) Nominal dimension (mm)		Outer ring radial run-out tolerance				Outer ring axial run-out tolerance			
Above	Below	0	P6	P5	P4	0	P6	P5	P4
-	65	13	11	-	-	13	11	-	-
65	80	13	11	8	5	13	11	8	5
80	100	15	13	10	6	15	13	10	6
100	120	15	13	10	6	15	13	10	6
120	140	20	15	11	7	20	15	11	7
140	180	25	20	11	7	25	20	11	7
180	200	25	20	15	10	25	20	15	10
200	250	30	25	15	10	30	25	15	10

*Above rotational accuracy are for width 8mm-13mm type
If a certain level of accuracy is required, please contact with SFT
*Note :SRAU width 5mm Type
1.Seals are not available
2.Only available with C1 radial clearance ,S1 is not available .

Inner & Outer ring width tolerances

SRU Inner & Outer ring width tolerances

unit:: μm

Model	Tolerances	
	Above	Below
SRU42	0	-70
SRU66	0	-70
SRU85	0	-70
SRU124	0	-70
SRU148	0	-70
SRU178	0	-80
SRU228	0	-80

SRB Inner & Outer ring width tolerances (for all grades)

unit: μm

Inner ring diameter (d) Nominal dimension (mm)		Tolerances			
		inner ring		outer ring	
Above	Below	Above	Below	Above	Below
18	30	0	-70	0	-90
30	50	0	-70	0	-90
50	80	0	-70	0	-90
80	120	0	-70	0	-90
120	150	0	-80	0	-100
150	180	0	-80	0	-100
180	250	0	-80	0	-100
250	315	0	-80	0	-130

SRBE Inner & Outer ring width tolerances

Tolerances	
Maximum	Minimum
0	-75

SRAU Inner & Outer ring width tolerances

Tolerances	
Maximum	Minimum
0	-120

SRAUF tolerance and accuracy

SRAUF Inner diameter & outer diameter dimensional accuracy

unit: μm

Inner ring diameter (d) Nominal dimension (mm)		inner ring		outer ring	
Above	Below	Above	Below	Above	Below
10	20	0	-8	0	-9
20	30	0	-8	0	-9
30	40	0	-10	0	-13
40	50	0	-10	0	-13

SRAUF inner ring rotational accuracy

unit:: μm

Inner ring diameter (d) Nominal dimension (mm)		Inner ring radial run-out tolerance				Inner ring axial run-out tolerance			
Above	Below	0	P6	P5	P4	0	P6	P5	P4
10	20	13	8	4	3	13	8	4	3
20	30	13	8	5	4	13	8	5	4
30	40	13	10	5	4	13	10	5	4
40	50	15	10	5	4	15	10	5	4

SRAUF Outerr ring rotational accuracy

unit:: μm

Outer ring diameter (d) Nominal dimension (mm)		Outer ring radial run-out tolerance				Outer ring axial run-out tolerance			
Above	Below	0	P6	P5	P4	0	P6	P5	P4
40	50	20	10	7	5	20	10	7	5
50	60	20	13	8	5	20	13	8	5
60	70	25	13	8	5	25	13	8	5
70	80	25	13	8	5	25	13	8	5

SRAUF Inner & outer ring width tolerances

Tolerances	
Minimum	Maximum
-75	0

SRAUF radial clearance

unit: μm

S1 Radial clearance		C1 Radial clearance	
Minimum	Maximum	Minimum	Maximum
-8	0	0	15
-8	0	0	15
-8	0	0	15
-8	0	0	15

Radial clearance

SRU model radial clearance

unit: μm

Model	S1 radial clearance		C1 radial clearance	
	Minimum	Maximum	Minimum	Maximum
SRU42	-8	0	0	24
SRU66	-8	0	0	28
SRU85	-8	0	0	38
SRU124	-12	0	0	38
SRU148	-12	0	0	38
SRU178	-12	0	0	48
SRU228	-12	0	0	58

SBR | SRBE model radial clearance

unit:: μm

Roller Pitch Circle Diameter		S1 radial clearance		C1 radial clearance	
Above	Below	Minimum	Maximum	Minimum	Maximum
18	30	-8	0	0	14
30	50	-8	0	0	24
50	80	-8	0	0	28
80	120	-8	0	0	38
120	140	-8	0	0	38
140	160	-10	0	0	38
160	180	-10	0	0	48
180	200	-10	0	0	48
200	225	-10	0	0	58
225	250	-10	0	0	58
250	280	-14	0	0	78
280	315	-14	0	25	98
315	355	-14	0	25	108

SRAU model radial clearance

unit: μm

Roller Pitch Circle Diameter		S1 radial clearance		C1 radial clearance	
Above	Below	Minimum	Maximum	Minimum	Maximum
-	18	-	-	0	15
18	30	-	-	0	15
30	50	-	-	0	15
50	80	-8	0	0	15
80	120	-8	0	0	15
120	140	-8	0	0	15
140	160	-8	0	0	15
160	180	-10	0	0	20
180	200	-10	0	0	20
200	225	-10	0	0	20

*Above radial clearance are for width 8mm-13mm type
If a certain level of accuracy is required, please contact with SFT
*Note: SRAU width 5mm Type
1.Seals are not available
2.Only available with C1 radial clearance, S1 is not available .

Model SRU (one-piece inner and outer ring)

Radial clearance (p. 18)
Accuracy (p. 14)

SRU124 UU S1 P2 B G X -N

Model

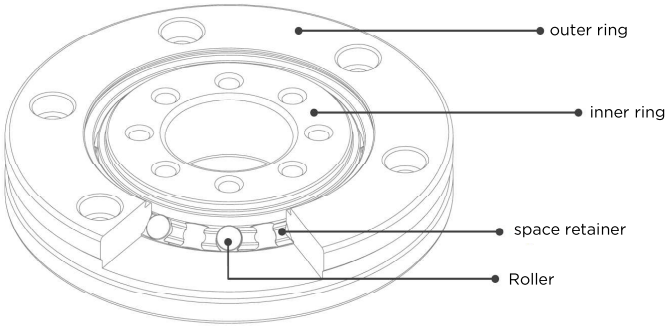
Seal mark
no marking present: no seal
UU: seal on both sides
U: seal on the outer ring side of counterbore
UT: seal on outer ring opposite side counterbore

Accuracy symbol
no marking available: Rotational accuracy inner ring
R: Rotational accuracy outer ring
B: Rotational accuracy inner & outer ring

Mounting hole orientation
Models: SRU124-SRU228 (except X models)
No marking: counterbores on inner and outer rings in the same direction
G: counterbores on inner and outer ring in reverse direction

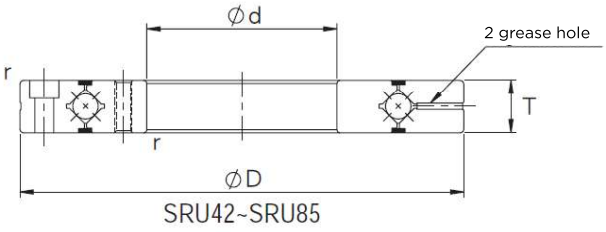
Inner ring mounting hole symbol
Models: SRU124-SRU228
No mark: counterbore on inner ring
Tapped holes (through holes)

Option symbol
no mark: no nozzle N : nozzle attached
SRU42-SRU178: NP3.2×3.5
SRU228: NP6×5

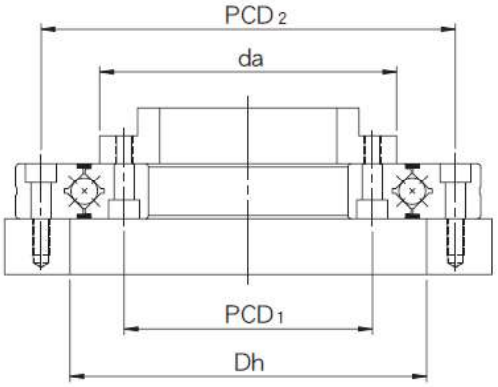


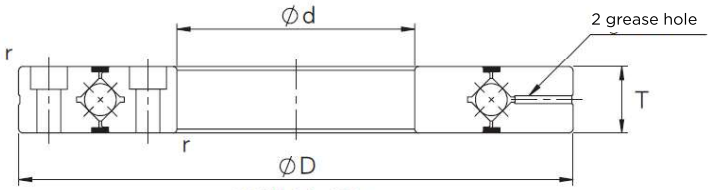
unit: mm

Shaft Diameter	Model	Main Dimensions					Shoulder Height		Basic Load rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Width T	Greasing Hole d1	Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
20	SRU42	20	70	12	3	0.5	36	46	7.3	8.33	0.28
35	SRU66	35	95	15	3	0.5	58	75	17.53	22.31	0.6
55	SRU85	55	120	15	3	0.5	78	94	20.31	29.55	1.1
80	SRU124 (G) SRU124X	80	165	22	3	1	115	133	33	50.85	2.61
90	SRU148(G) SRU148X	90	210	25	3	1.5	134	161	49	76.83	4.95
115	SRU178(G) SRU178X	115	240	28	3	1.5	162	194	80.32	134.9	6.78
160	SRU228(G) SRU228X	160	295	35	6.1	2	207	247	103.5	172.8	10.5

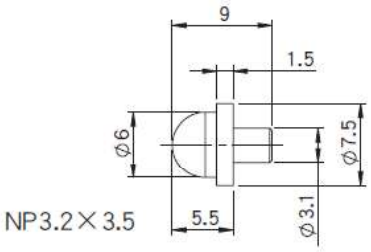


SRU42~SRU85

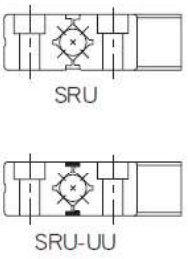


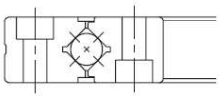


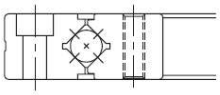
SRU124~228

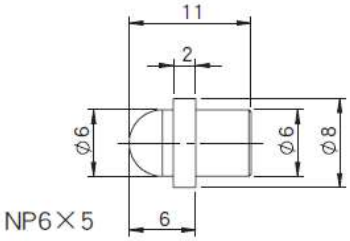


NP3.2×3.5

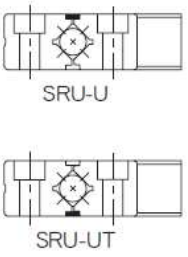



SRU124G~SRU228G


SRU124X~SRU228X



NP6×5



Mounting Hole Specification			
Inner Ring		Outer Ring	
PCD1	Mounting Hole	PCD2	Mounting Hole
28	6-M3 Through	57	6-Ø3.5 Through, Ø6,5 hole depth 3.5
45	8-M4 Through	83	8-Ø4.5 Through, Ø8 hole depth 4.5
65	8-M5 Through	105	8-Ø5.5 Through, Ø10 hole depth 5.5
97	10-Ø5.5 Through, Ø10 hole depth 5.5 10-M5 Through	148	10-Ø5.5 Through, Ø10 hole depth 5.5
112	12-Ø9.0 Through, Ø14 hole depth 8.5 12-M8 Through	187	12-Ø9.0 Through, Ø14 hole depth 8.5
139	12-Ø9.0 Through, Ø14 hole depth 8.5 12-M8 Through	217	12-Ø9.0 Through, Ø14 hole depth 8.5
184	12-Ø11.0 Through, Ø18 hole depth 10.8 12-M10 Through	270	12-Ø11.0 Through, Ø18 hole depth 10.8

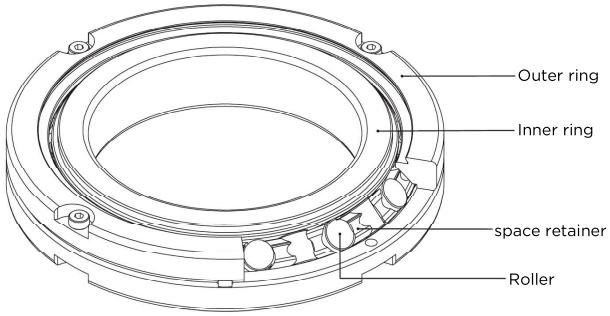
Modell SRB (mit geteiltem Aussenring für Innenringrotation)

SRB20030 — **Model**

UU — **Seal mark**
no marking present: no seal
UU: seal on both sides
U: seal on outer ring

S1 — **Radial clearance mark** (p. 19)
S1: vorgespannt (negatives Spiel)
C1: keine Vorspannung (positives Spiel)

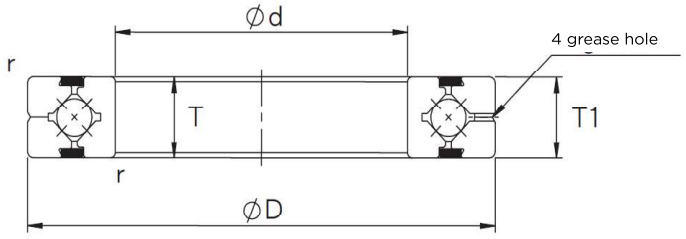
P2 — **Accuracy symbol** (S. 14)
if no mark is present: normal grade (0 degrees)
P5: Rotation accuracy grade 5
PS5: rotation accuracy grade 5 + size accuracy grade 5
P4: Rotational accuracy grade 4
PS4: Rotational accuracy grade 4 + size accuracy grade 4
P2: Rotational accuracy grade 2
PS2: Rotational accuracy grade 2 + size accuracy grade 2

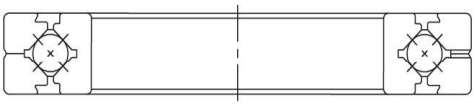


unit: mm

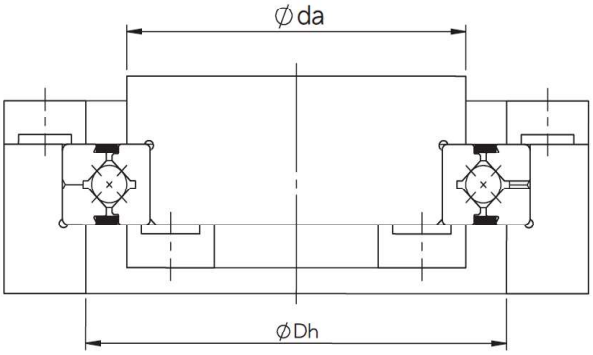
Shaft Diameter	Model	Main Dimensions						Shoulder Height		Basic Load Rating (radial)		Weight
		Inner Diameter d	Outer Diameter D	Width T, T_1	Greasing Hole		Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
					w	h						
20	SRB2008	20	36	8	2.1	0.7	0.5	24	30	3.2	3.1	0.06
25	SRB2508	25	41	8	2.1	0.7	0.5	29	35	3.6	3.8	0.07
30	SRB3010	30	55	10	2.6	0.8	0.6	37.5	46.5	7.4	8.4	0.14
35	SRB3510	35	60	10	2.6	0.8	0.6	41.5	51	7.6	9.1	0.12
40	SRB4010	40	65	10	2.6	0.8	0.6	47	58	8.3	10.8	0.18
45	SRB4510	45	70	10	2.6	0.8	0.6	51.5	61	8.6	11.1	0.15
50	SRB5013	50	80	13	2.6	1.5	0.6	57	72.5	16.6	20.7	0.28
60	SRB6013	60	90	13	2.6	1.5	0.6	67.5	82.5	18	24.1	0.32
70	SRB7013	70	100	13	2.6	1.5	0.6	78.5	91.5	19.5	27.9	0.37
80	SRB8016	80	120	16	3.1	1.5	0.8	91.5	110	30	42	0.72
90	SRB9016	90	130	16	3.1	1.5	1.0	98.8	117	31.3	45.1	0.77
100	SRB10016	100	140	16	3.6	1.5	1.0	110	128	31.8	48.8	0.82
100	SRB10020	100	150	20	3.6	1.5	1.0	117	132	33	51	1.47
110	SRB11012	110	135	12	2.6	0.8	0.6	118	126	12.6	24	0.42
110	SRB11015	110	145	15	3.6	1.5	0.6	123	135	23.8	41.8	0.76
110	SRB11020	110	160	20	3.6	1.5	1.0	121	139	34	54	1.58
120	SRB12016	120	150	16	3.6	1.5	0.8	128	140	24.3	43.4	0.74
120	SRB12025	120	180	25	3.6	2.1	1.5	134	163	66.8	100.2	2.62

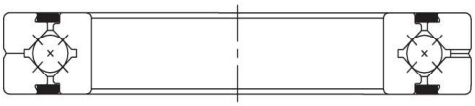
Note* (w) and (h) greasing hole dimensions in the detailed view are reference values.



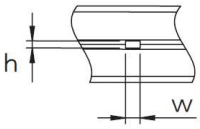


SRB

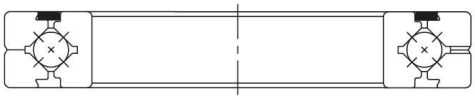




SRB-UU



grease hole detailed view



SRB-U

unit: mm

Shaft Diameter	Model	Main Dimensions						Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Width T, T_1	Greasing Hole		Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
					w	h						
130	SBR13015	130	160	15	3.6	1.5	0.8	136	151	25	46.9	0.74
130	SBR13025	130	190	25	3.6	2.1	1.2	144	173	69.7	107.3	2.8
140	SBR14016	140	175	16	2.6	1.5	0.8	148	163	26	50.3	1.1
140	SBR14025	140	200	25	3.6	2.1	1.2	155	184	74.7	121	2.98
150	SBR15013	150	180	13	2.6	1.5	0.5	158	171	27.1	53.7	0.66
150	SBR15025	150	210	25	3.6	2.1	1.2	165	193	76.5	128	3.18
150	SBR15030	150	230	30	4.6	3.1	1.5	174	210	100	156	5.2
160	SBR16025	160	220	25	3.6	2.1	1.2	172	205	81.6	135	3.12
170	SBR17020	170	220	20	3.6	1.5	1.2	185	197	29.2	62	2.2
180	SBR18025	180	240	25	3.6	1.8	1.2	196	224	84.3	143	3.41
190	SBR19025	190	240	25	3.6	1.5	0.8	203	221	41.8	82.7	2.97
200	SBR20025	200	260	25	3.6	1.8	1.8	214	246	84.1	157	4.2
200	SBR20030	200	280	30	4.6	2.8	1.8	222	257	113	202	6.8
200	SBR20035	200	295	35	5.1	2.8	1.8	224	271	151	251	9.8
220	SBR22025	220	280	25	3.6	1.8	1.8	236	264	92.1	173	4
240	SBR24025	240	300	25	3.6	1.8	2.2	255	282	68.4	146	4.7
250	SBR25025	250	310	25	3.6	1.8	2.2	264	291	69.2	152	5.2

Note* (w) and (h) greasing hole dimensions in the detailed view are reference values.

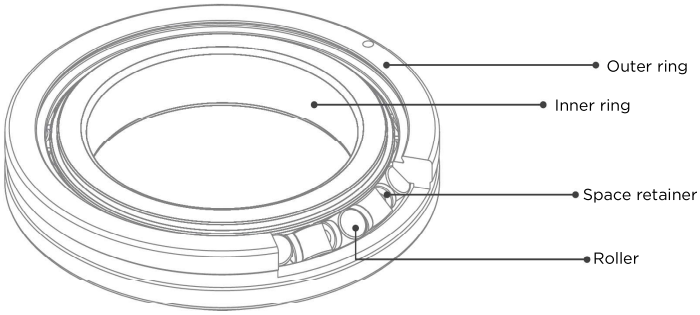
Model SRBE (one piece inner & outer ring)

SRBE20030 — **Model**

UU — **Seal mark**
no marking present: no seal
UU: seal on both sides
U: seal on the outer ring

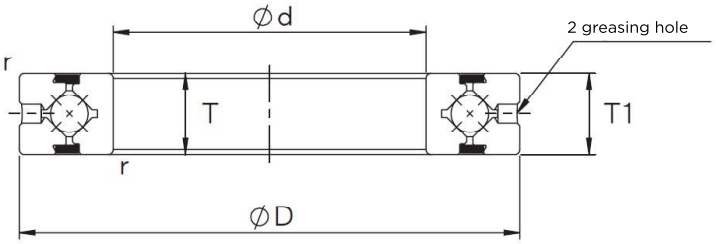
S1 — **Radial clearance mark** (p. 18)
S1 : Preloaded (negative clearance)
C1 : No preload (positive clearance)

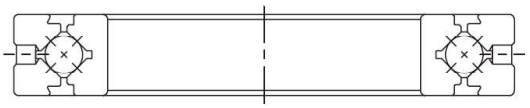
P2 — **Accuracy mark** (p. 14)
if no mark is available : ordinary grade (0 grade)
P5 : rotating accuracy grade 5
PS5 : rotating accuracy grade 5+size accuracy grade 5
P4 : rotating accuracy grade 4
PS4 : rotating accuracy grade 4 +size accuracy grade 4
P2 : rotating accuracy grade 2
PS2 : rotating accuracy grade 2 + size accuracy grad 2



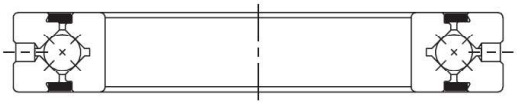
unit: mm

Shaft Diameter	Model	Main Dimensions					Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Width T, T_1	Greasing Hole	Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
20	SRBE2008	20	36	8	2-Ø2	0.5	24	30	3.2	3.1	0.06
25	SRBE2508	25	41	8	2-Ø2	0.5	29	35	3.6	3.8	0.07
30	SRBE3010	30	55	10	2-Ø2	0.6	37.5	46.5	7.4	8.4	0.14
35	SRBE3510	35	60	10	2-Ø2	0.6	41.5	51	7.6	9.1	0.12
40	SRBE4010	40	65	10	2-Ø2	0.6	47	58	8.3	10.8	0.18
45	SRBE4510	45	70	10	2-Ø2	0.6	51.5	61	8.6	11.1	0.15
50	SRBE5013	50	80	13	2-Ø3	0.6	57	72.5	16.6	20.7	0.28
60	SRBE6013	60	90	13	2-Ø3	0.6	67.5	82.5	18	24.1	0.32
70	SRBE7013	70	100	13	2-Ø3	0.6	78.5	91.5	19.5	27.9	0.37
80	SRBE8016	80	120	16	2-Ø3	0.8	91.5	110	30	42	0.72
90	SRBE9016	90	130	16	2-Ø3	1.0	98.8	117	31.3	45.1	0.77
100	SRBE10016	100	140	16	2-Ø3	1.0	110	128	31.8	48.8	0.82
100	SRBE10020	100	150	20	2-Ø3	1.0	117	132	33	51	1.47
110	SRBE11012	110	135	12	2-Ø3	0.6	118	126	12.6	24	0.42
110	SRBE11015	110	145	15	2-Ø3	0.6	123	135	23.8	41.8	0.76
110	SRBE11020	110	160	20	2-Ø3	1.0	121	139	34	54	1.58
120	SRBE12016	120	150	16	2-Ø3	0.8	128	140	24.3	43.4	0.74
120	SRBE12025	120	180	25	2-Ø3	1.5	134	163	66.8	100.2	2.62

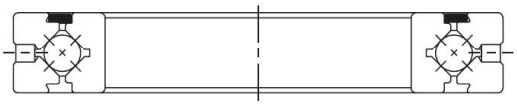




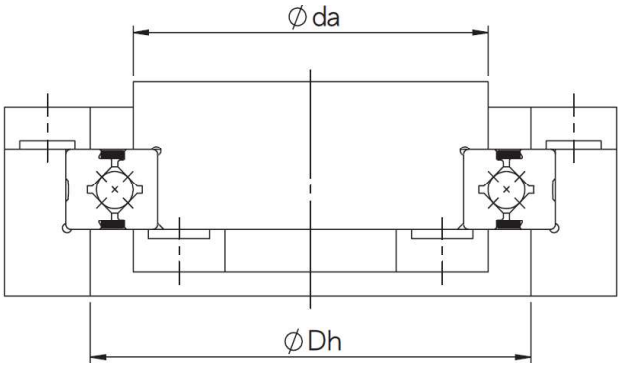
SRBE



SRBE-UU



SRBE-U



unit: mm

Shaft Diameter	Model	Main Dimensions					Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Width T, T_1	Greasing Hole	Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
130	SRBE13015	130	160	15	2-Ø3	0.8	136	151	25	46.9	0.74
130	SRBE13025	130	190	25	2-Ø3	1.2	144	173	69.7	107.3	2.8
140	SRBE14016	140	175	16	2-Ø3	0.8	148	163	26	50.3	1.1
140	SRBE14025	140	200	25	2-Ø3	1.2	155	184	74.7	121	2.98
150	SRBE15013	150	180	13	2-Ø3	0.5	158	171	27.1	53.7	0.66
150	SRBE15025	150	210	25	2-Ø3	1.2	165	193	76.5	128	3.18
150	SRBE15030	150	230	30	2-Ø3	1.5	174	210	100	156	5.2
160	SRBE16025	160	220	25	2-Ø3	1.2	172	205	81.6	135	3.12
170	SRBE17020	170	220	20	2-Ø3	1.2	185	197	29.2	62	2.2
180	SRBE18025	180	240	25	2-Ø3	1.2	196	224	84.3	143	3.41
190	SRBE19025	190	240	25	2-Ø3	0.8	203	221	41.8	82.7	2.97
200	SRBE20025	200	260	25	2-Ø3	1.8	214	246	84.1	157	4.2
200	SRBE20030	200	280	30	2-Ø3	1.8	222	257	113	202	6.8
200	SRBE20035	200	295	35	2-Ø3	1.8	224	271	151	251	9.8
220	SRBE22025	220	280	25	2-Ø3	1.8	236	264	92.1	173	4
240	SRBE24025	240	300	25	2-Ø3	2.2	255	282	68.4	146	4.7
250	SRBE25025	250	310	25	2-Ø3	2.2	264	291	69.2	152	5.2

Modell SRAU (one piece inner & outer ring)

SRAU8008 — **Model**

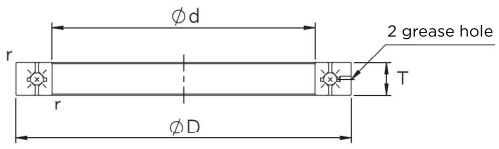
UU — **Seal mark**
no marking present: no seal
UU: seal on both sides
U: seal on outer ring

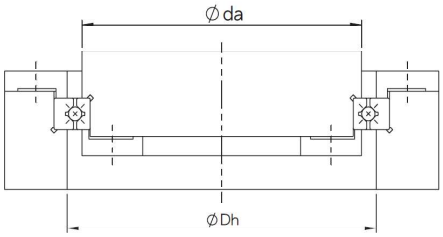
S1 — **Radial clearance** (p. 18)
S1: preloaded (negative clearance)
C1: no preload (positive clearance)

P5 — **Accuracy mark** (p. 14)
if no mark is available: ordinary grade (0 grade)
P6 : rotating accuracy grade 6
P5 : rotating accuracy grade 5
P4 : rotating accuracy grade 4

S1 — **Accuracy symbol**
If no mark is available: inner ring rotational accuracy
R : outer ring rotational accuracy
B : inner & outer ring rotational accuracy

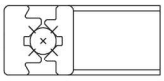
*Note: SRAU width 5 mm Type
1. Seals are not available
2. Only available with C1 radial clearance ,S1 is not available



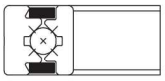


unit: mm

Shaft Diameter	Model	Main Dimensions						Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Pitch Circle Diameter dw	Width T	Greasing Hole D_0	Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
10	SRAU1005	10	21	14.7	5	1	0.15	12.5	17	1.12	0.809	0.009
15	SRAU1505	15	26	19.7	5	1	0.15	17.5	22	1.32	1.1	0.012
20	SRAU2005	20	31	24.7	5	1	0.15	22.5	27	1.49	1.4	0.015
30	SRAU3005	30	41	34.7	5	1	0.15	32.5	37	1.89	2.14	0.021
40	SRAU4005	40	51	44.7	5	1	0.15	42.5	47	2.14	2.74	0.027
50	SRAU5005	50	61	54.7	5	1	0.15	52.5	57	2.43	3.49	0.032
60	SRAU6005	60	71	64.7	5	1	0.15	62.5	67	2.63	4.09	0.038
70	SRAU7005	70	81	74.7	5	1	0.15	72.5	77	2.81	4.68	0.044
80	SRAU8005	80	91	84.7	5	1	0.15	82.5	87	3.05	5.43	0.5
90	SRAU9005	90	101	94.7	5	1	0.15	92.5	97	3.19	6.03	0.056
100	SRAU10005	100	111	104.7	5	1	0.15	102.5	107	3.37	6.63	0.061

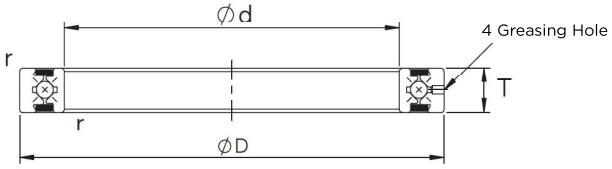


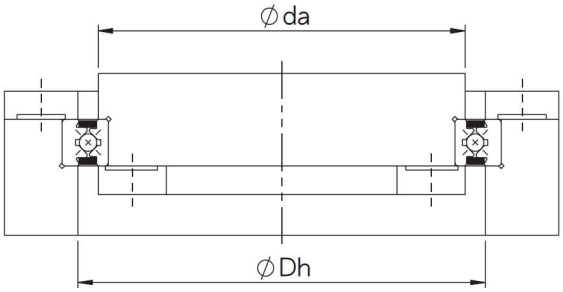
SRAU



SRAU-UU

Breite: 8 mm, 13 mm





unit: mm

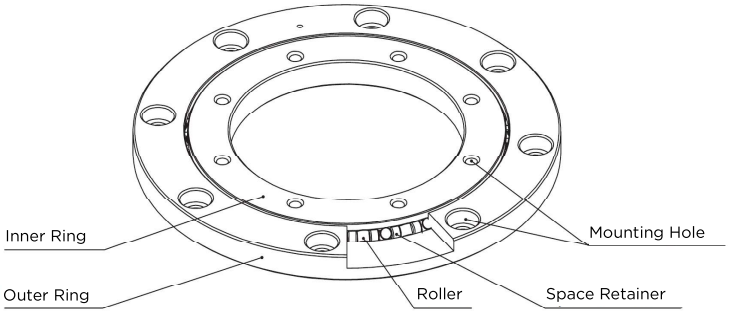
Shaft Diameter	Model	Main Dimensions						Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Pitch Circle Diameter dw	Width T	Greasing Hole d_o	Chamfer r_{min}	da	Dh	C kN	C_o kN	kg
50	SRAU5008	50	66	57	8	1.5	0.5	53.5	60.5	5.1	7.19	0.08
60	SRAU6008	60	76	67	8	1.5	0.5	63.5	70.5	5.68	8.68	0.09
70	SRAU7008	70	86	77	8	1.5	0.5	73.5	80.5	5.98	9.8	0.1
80	SRAU8008	80	96	87	8	1.5	0.5	83.5	90.5	6.37	11.3	0.11
90	SRAU9008	90	106	97	8	1.5	0.5	93.5	100.5	6.76	12.4	0.12
100	SRAU10008	100	116	107	8	1.5	0.5	103.5	110.5	7.15	13.9	0.14
110	SRAU11008	110	126	117	8	1.5	0.5	113.5	120.5	7.45	15.0	0.15
120	SRAU12008	120	136	127	8	1.5	0.5	123.5	130.5	7.84	16.5	0.17
130	SRAU13008	130	146	137	8	1.5	0.5	133.5	140.5	7.94	17.6	0.18
140	SRAU14008	140	156	147	8	1.5	0.5	143.5	150.5	8.33	19.1	0.19
150	SRAU15008	150	166	157	8	1.5	0.5	153.5	160.5	8.82	20.6	0.2
160	SRAU16013	160	186	172	13	2	0.8	165	179	23.3	44.9	0.59
170	SRAU17013	170	196	182	13	2	0.8	175	189	23.5	46.5	0.64
180	SRAU18013	180	206	192	13	2	0.8	185	199	24.5	49.8	0.68
190	SRAU19013	190	216	202	13	2	0.8	195	209	24.9	51.5	0.69
200	SRAU20013	200	226	212	13	2	0.8	205	219	25.8	54.5	0.71

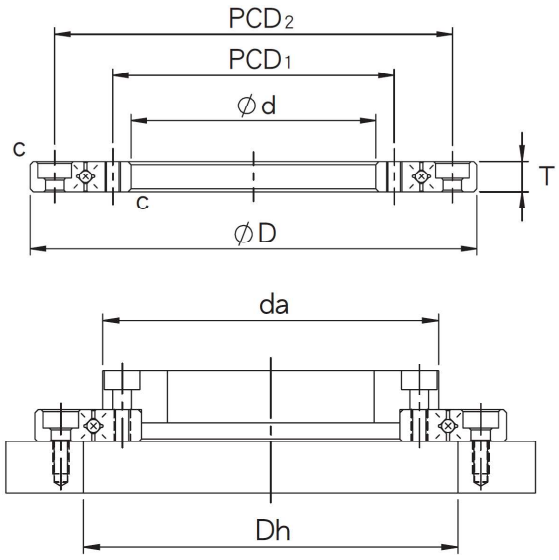
Modell SRAUF (one piece inner & outer ring)

SRAUF2005 — **Model**

S1 — **Radial clearance mark** (p. 18)
S1 : Preloaded (negative clearance)
C1 : No preload (positive clearance)

P5 — **Accuracy mark** (p. 14)
if no mark is available: ordinary grade (0 grade)
P6 : rotating accuracy grade 6
P5 : rotating accuracy grade 5
P4 : rotating accuracy grade 4





unit: mm

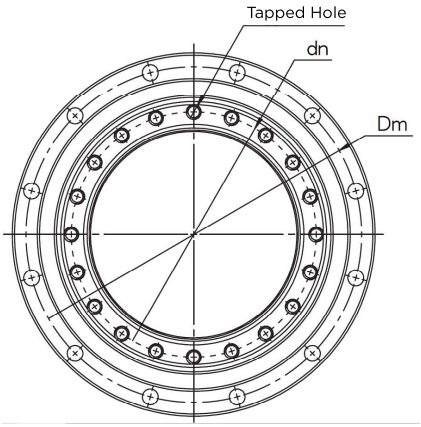
Shaft Diameter	Model	Main Dimensions				Shoulder Height		Basic Load Rating (radial)		Mass
		Inner Diameter d	Outer Diameter D	Width T	Chamfer r_{min}	da	Dh	C kN	C_0 kN	kg
10	SRAUF1005	10	43	5	0.15	21.5	28	1.50	1.41	0.046
20	SRAUF2005	20	53	5	0.15	31.5	38	1.89	2.15	0.066
30	SRAUF3005	30	63	5	0.15	41.5	47.5	2.14	2.75	0.083
40	SRAUF4005	40	73	5	0.15	51.5	58	2.44	3.49	0.103

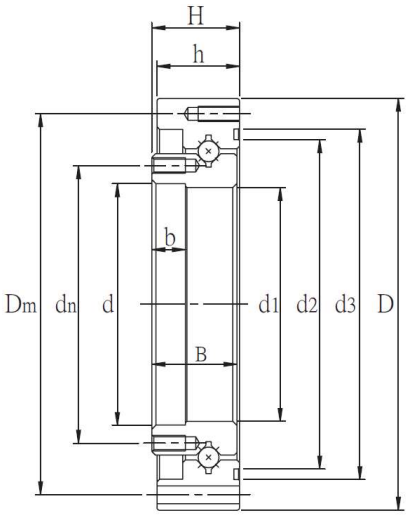
Mounting Hole Specification			
Inner Ring		Outer Ring	
PCD1	Mounting Hole	PCD2	Mounting Hole
10	6-M2.5 Through	35	6-Ø2.9 Through, Ø5.5 Counterbore depth 2.8
20	6-M2.5 Through	45	6-Ø2.9 Through, Ø5.5 Counterbore depth 2.8
30	8-M2.5 Through	55	8-Ø2.9 Through, Ø5.5 Counterbore depth 2.8
40	8-M2.5 Through	65	8-Ø2.9 Through, Ø5.5 Counterbore depth 2.8

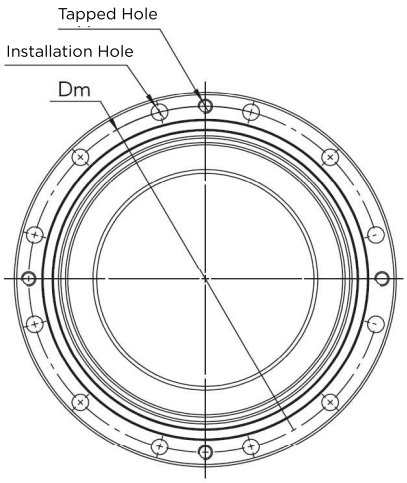
Modell SSHF (one piece inner & outer ring)

SSHF14

Model







unit: mm

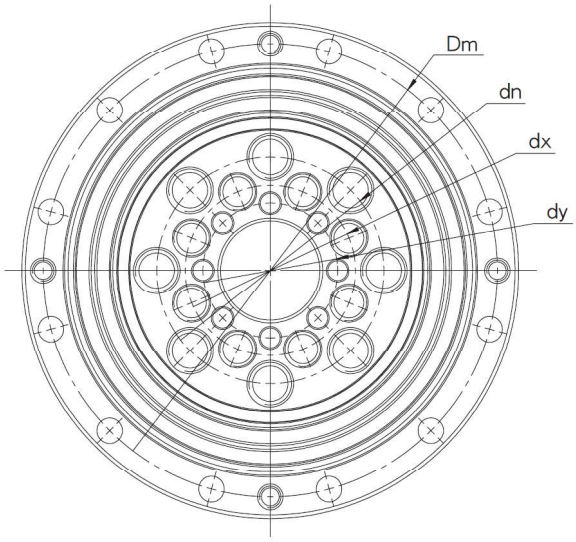
Model	Main Dimensions								
	D	d	d1	d2	d3	H	h	B	b
SSHF14	70	38	36	53	57	15.1	14.1	14.7	5
SSHF17	80	47	45.5	64	68.1	17	16	16.5	6.5
SSHF20	90	54	51.3	72.6	78	18.5	17.5	17.5	7
SSHF25	110	67	64.2	90	94.8	20.7	19.7	19.7	7.5
SSHF32	142	88	84	117.5	123	24.4	23.4	22.9	8

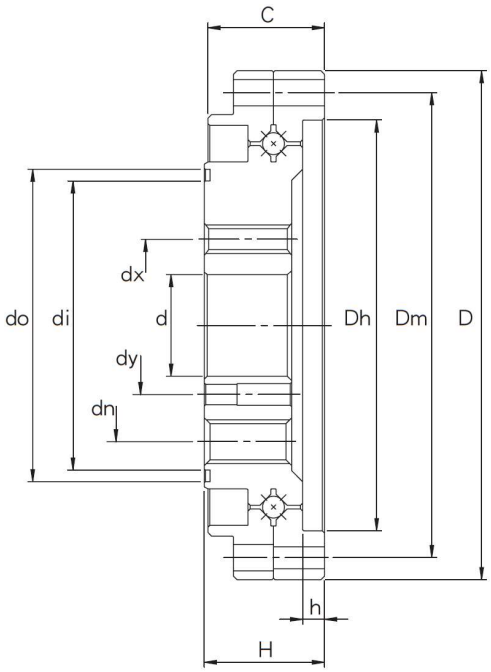
Model	Installation Hole Dimensions (PCD&PEC)					Basic Load Rating (radial)		Mass
	Outer Ring			Inner Ring		C kN	Co kN	kg
	Dm	Installation Hole	Tapped Hole	dn	Tapped Hole			
SSHF14	64	8-Ø3.5	2-M3	44	12-M3	10.34	13.82	0.1
SSHF17	74	12-Ø3.5	4-M3	54	20-M3	10.07	14.12	0.34
SSHF20	84	12-Ø3.5	4-M3	62	4-M3 16-M3	20.73	28.01	0.45
SSHF25	102	12-Ø4.5	4-M3	77	4-M3 16-M4	23.22	34.64	0.7
SSHF32	132	12-Ø5.5	4-M4	100	8-M4 16-M5	40.81	64.07	1.55

Modell SCSG (split outer ring)

SCSG14

Model





unit: mm

Model	Main Dimensions								Basic Load Rating (radial)		Mass
	D	Dh	d	do	di	H	h	C	C kN	Co kN	kg
SCSG14	55	41.8	11	29.7	28.3	16.5	2.5	16	4.88	5.68	0.13
SCSG17	62	49	10	36	33.8	16.5	2.7	16	5.46	7.05	0.22
SCSG20	70	56.5	14	43	39.8	16.5	3	16	6.67	9.66	0.2
SCSG25	85	68	20	55.4	52.5	18.5	2	18	10.3	14.76	0.45
SCSG32	112	90	26	74.1	68.4	22.5	3	21.5	22.6	32.97	0.88

unit: mm

Model	Installation Hole Size (PCD&PEC)							
	Outer Ring		Inner Ring					
	Dm	Installation Hole	dn	Tapped Hole	dx	Tapped Hole	dy	Hole Size
SCSG14	49	8-Ø3.5	23	6-M4	17	6-M4	15	6-Ø2.5
SCSG17	56	10-Ø3.5	27	6-M5	19	6-M5	15	6-Ø3
SCSG20	64	12-Ø3.5	32	8-M6	24	8-M5	19	8-Ø3
SCSG25	79	16-Ø3.5	42	8-M8	30	8-M6	26	8-Ø3
SCSG32	104	16-Ø4.5	55	8-M10	40	8-M8	34	4-Ø5

Curve guidance

The SFT curved track is a non-recirculating, curved cross roller track. The precision rollers, which have extremely low frictional resistance, provide stable curved motion. They are mainly used in high-precision positioning where the centers of rotation remain unchanged and accurate tilting angles are required. They are widely used for optical instruments and measuring devices.

Product characteristics

- high rigidity and load capacity
- same pivot points
- low friction and precise movement
- easy installation
- low noise

Accuracy standards

The accuracy of the SFT curve guidance is measured according to the method shown in the following figure. The mutual dimensional deviations of the four rails are measured over their entire length.

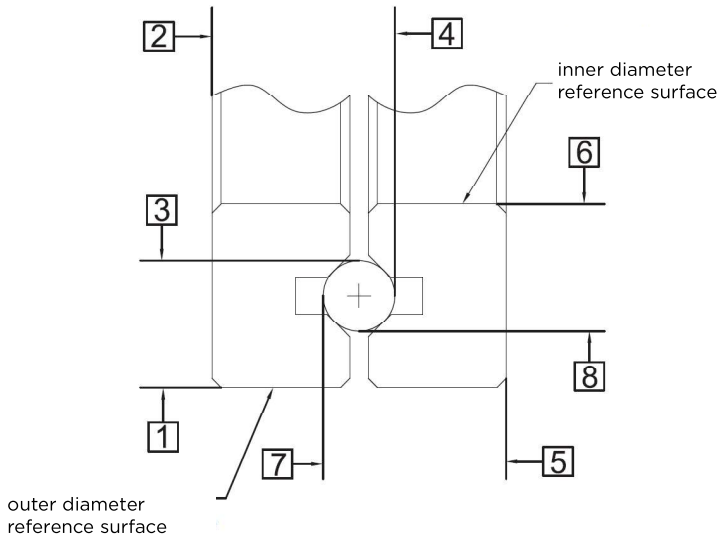
Accuracy measurement method

unit: µm

Model	Accuracy
SRV0240-50	10
SRV0260-60	
SRV0370-90	
SRV0370-110	
SRV03100-160	

unit: µm

Model	Accuracy
SCRV0240-51	10
SCRV0240-70	
SCRV0240-89.5	
SCRV0260-65	
SCRV0260-89	
SCRV0260-113.5	
SCRV0260-138.5	



Rated life

The nominal service life of cam guides is calculated according to the following formula:

L_f
Rated Life (10^6 cycle)

O
Rotational angle (Degree)

C
Basic dynamic load rating (N)

F
Applied load (N)

f_t
Temperature coefficient

f_L
Applied load coefficient

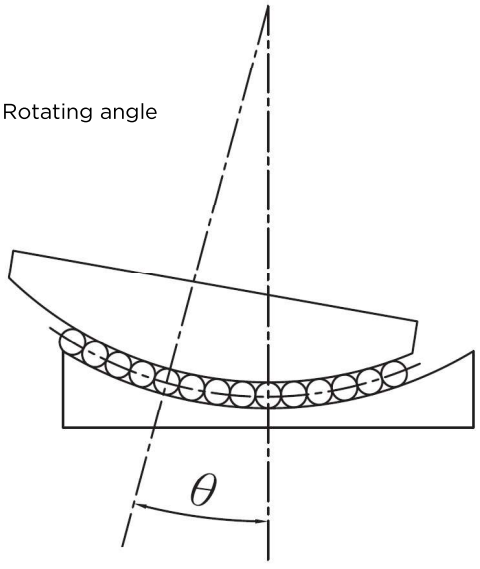
$$L_f = \frac{90}{\theta} x \left(\frac{f_t}{f_L} x \frac{C}{F} \right)^{\frac{10}{3}}$$

Life time

Lt
life time (hr)

r
number of rotation per minute (rpm)

$$L_t = \frac{L_f x 10^6}{60 x r}$$



Usage precautions

- **Lubrication**
  Use lithium soap based lubricating grease

- **Retainer Deviation**
  The Retainers will deviate from their correct position if the cam guides are subjected to special conditions such as high speeds, vibration or unbalanced loads. To minimize this deviation, maintain additional clearance, avoid excessive preload, and move the rails cyclically to return the cage to its central position.

- **Retainer Deviation**
  The cam guides may not achieve their optimum performance depending on the operating environment due to dust or foreign objects that may enter the interior. It is recommended to protect the cam guides with external dustproof covers if they are to be used in extreme environments.

- **End pieces**
  The end pieces are attached to the ends of the cam guides to prevent the roller cage from falling out of the rail.

- **Working Environment**
  It is recommended to operate cam guides in a temperature range of -20 °C to 110 °C.

- **Paired Usage**
  The accuracy of the curve guides is based on a complete set. The combination of different curve guides affects the accuracy; please adjust with care.

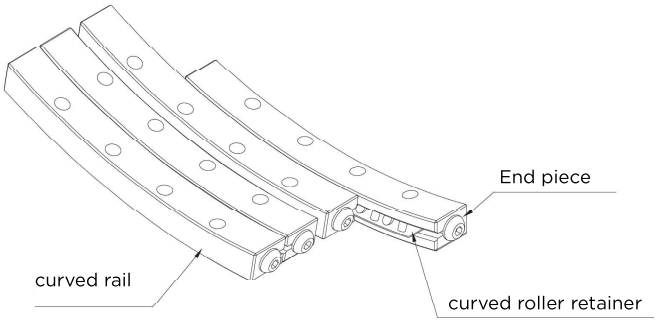
- **Adjustments**
  Inaccurate mounting on the mounting surface or improper adjustment of the preload will impair the accuracy of movement. As a result, the rail becomes skewed and performance and service life may be reduced.

- **Allowable Load**
  The permissible load is defined as a guaranteed uniform roller movement at which a sufficiently small elastic deformation of the rolling element and raceway in the contact area is subjected to maximum stress. Please use the product within the allowable load to ensure high accuracy and uniform motion.

Curve guidance structure

SRV models (figure 1) of SFT curve guidances are made up of precisely ground V-shaped track an dcurved roller cages.

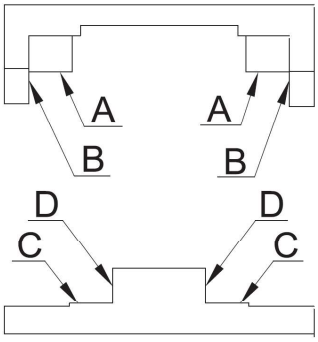
figure 1:



Curve guidance Installation

Mounting surface accuracy. As shown in figure 2, the accuracy of surfaces A-D directly affects the motion accuracy.

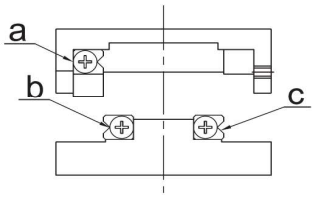
figure 2:



Installation sequence

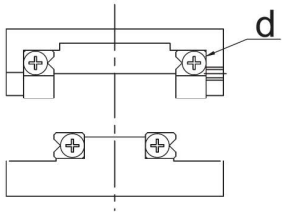
1. Clean the guide rails and the mounting surface to prevent foreign matter from entering during installation.
2. Apply low viscosity lubricating oil to each mounting surface and fix the cam guides at the recommended torques a, b, c (figure 3-1).
3. Temporarily lock the sliding rail d (figure 3-2).
4. Remove the end pieces at one end and reat-tach the bent roller cages to the center positi-on of the Cam Guide in their original position when completed (figure 3-3).
5. Move the stage horizontally to the maximum travel end and return the bent roller cage to its center position.

figure 3-1:



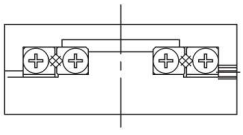
fixe curve guidance a-c

figure 3-2:



temporarily lock gonio way d

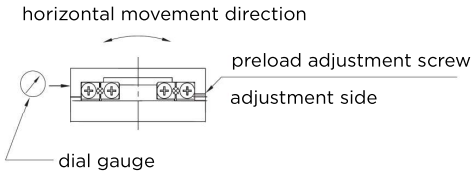
figure 3-3:



insert curved roller retainers

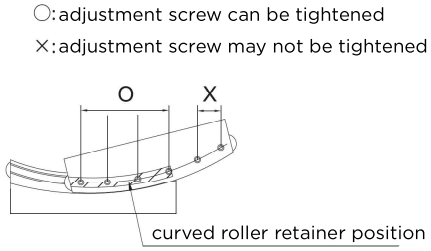
6. Install a dial gauge at the side of the slideway base level as reference (figure 3-4).

figure 3-4:



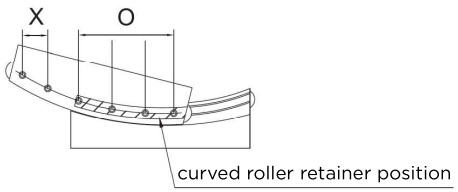
7. Move the slideway to one travel end and slightly lock adjustment screw above the curved roller cage (figure 3-5).

figure 3-5:



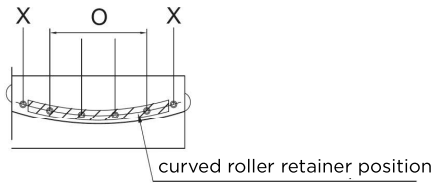
8. Guide the slideway all the way to the other end and tighten the adjustment screw slightly (figure 3-6).

figure 3-6:



9. Move the slideway to the central position and slightly lock the adjustment screw at the central position (figure 3-7).

figure 3-7:



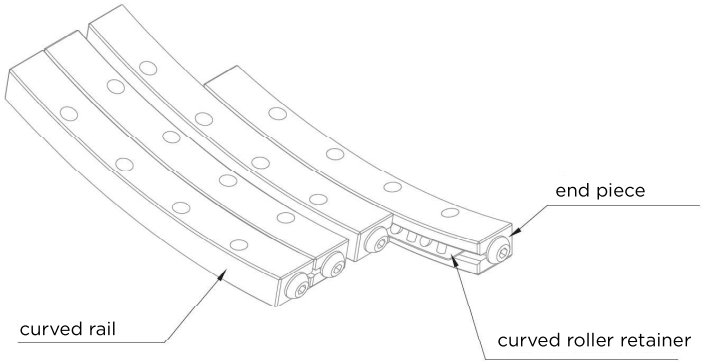
10. Repeat steps from (7) to (9) until there is no clearance with dial gauge showing minimum variation. Caution against applying excessive preloads.

11. Once there is no clearance in the horizontal direction; carry out final preload calibration by repeating operations from (7) to (9) using the recommended torque force for locking screws.

12. Tighten the curve guidance d (figure 3-2) by tightening the mounting screws sequentially in the same way as the adjustment screws.

Model SRV

SRV	03	70	-	110	-	10G
Model	Roller diameter	rail length		radius from rotation center		number of rollers



◆ one set contains 4 rails, 2 czrved roller retainers and 8 end pieces

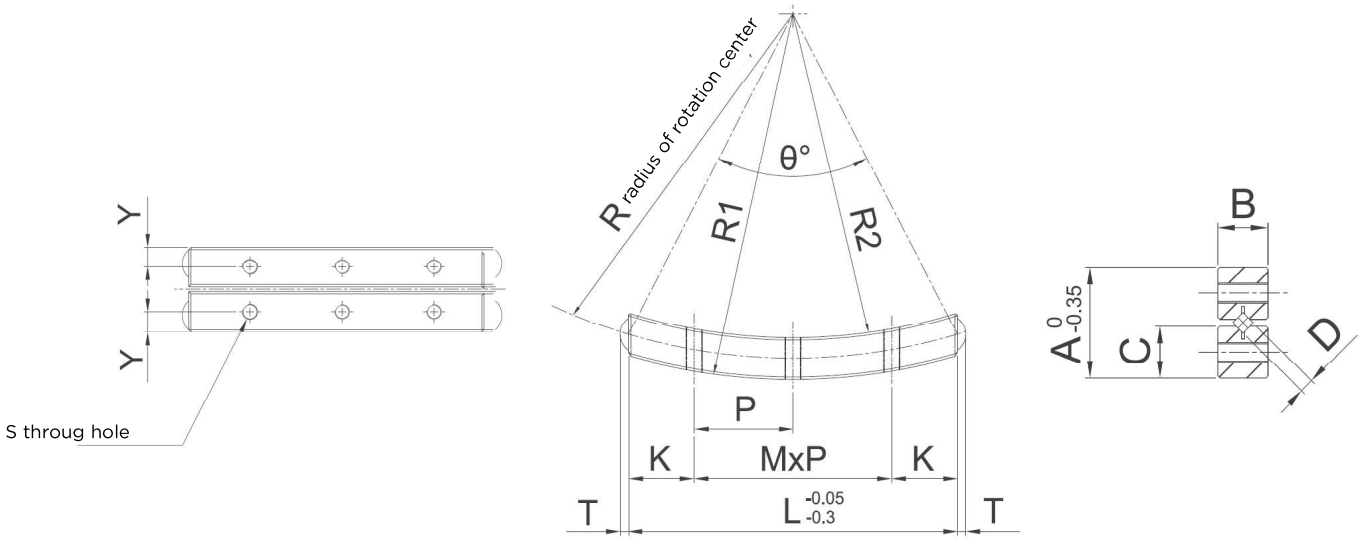
unit: mm

Model	Rotation range	Roller diameter (D)	Roller quantity (G)	Main dimensions						
				L	R	R1	R2	A	B	C
SRV0240-50-7G	±10°	2	7	40	50	53	47	15	6	7.25
SRV0260-60-12G	±10°	2	12	60	60	63	57	15	6	7.25
SRV0370-90-11G	±10°	3	11	70	90	94	86	18	8	8.5
SRV0370-110-10G	±10°	3	10	70	110	114	106	18	8	8.5
SRV03100-160-14G	±10°	3	14	100	160	164	156	18	8	8.5

unit: mm

Model	Weight per set (g)	Allowable load (F)(N)	Basic load rating		0°	T	S	Y	K	MxP
			static (C_0)(N)	dynamic (C)(N)						
SRV0240-50-7G	47	480	1420	800	47.1°	1.5	M3	2.5	7.5	2x12.5
SRV0260-60-12G	78	930	2870	1430	59.9°	1.5	M3	2.5	11.25	3x12.5
SRV0370-90-11G	135	1820	5480	2620	45.7°	1.9	M3	3	12.5	3x15
SRV0370-110-10G	131	1800	5600	2420	37°	1.9	M3	3	12.5	3x15
SRV03100-160-14G	191	2600	7870	2480	36.3°	1.9	M3	3	12.5	5x15

Model SCRV



unit: mm

Model	Rotation range	Roller diameter (D)	Roller quantity (G)	Main dimensions						
				L	R	R1	R2	A	B	C
SCRV0240-51-7G	±8°	2	7	40	51	53.5	48.5	11.3	5	5.25
SCRV0240-70-7G	±6°	2	7	40	70	72.5	67.5	11.3	5	5.25
SCRV0240-89.5-7G	±5°	2	7	40	89.5	92	87	11.3	5	5.25
SCRV0260-65-11G	±8°	2	11	60	65	68	62	16	6	7.6
SCRV0260-89-11G	±8°	2	11	60	89	92	86	16	6	7.6
SCRV0260-113.5-11G	±6°	2	11	60	113.5	116.5	110.5	16	6	7.6
SCRV0260-138.5-9G	±5°	2	9	60	138.5	141.5	135.5	16	6	7.6

unit: mm

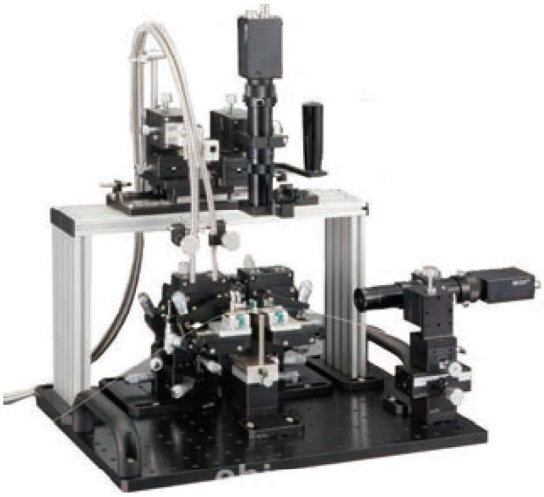
Model	Weight per set (g)	Allowable load (F)(N)	Basic load rating		0°	T	S	Y	K	MxP
			static (C_0)(N)	dynamic (C)(N)						
SCRV0240-51-7G	29	480	1420	800	46.2°	1.5	M2	2.0	8	2x12
SCRV0240-70-7G	29	480	1420	800	33.2°	1.5	M2	2.0	8	2x12
SCRV0240-89.5-7G	29	480	1420	800	25.8°	1.5	M2	2.0	8	2x12
SCRV0260-65-11G	79	853	2629	1320	55°	1.5	M3	2.5	11.25	3x12.5
SCRV0260-89-11G	77	853	2629	1320	39.4°	1.5	M3	2.5	11.25	3x12.5
SCRV0260-113.5-11G	77	853	2629	1320	30.7°	1.5	M3	2.5	11.25	3x12.5
SCRV0260-138.5-9G	77	853	2629	1320	25°	1.5	M3	2.5	11.25	3x12.5

Examples of application

Cross roller bearings

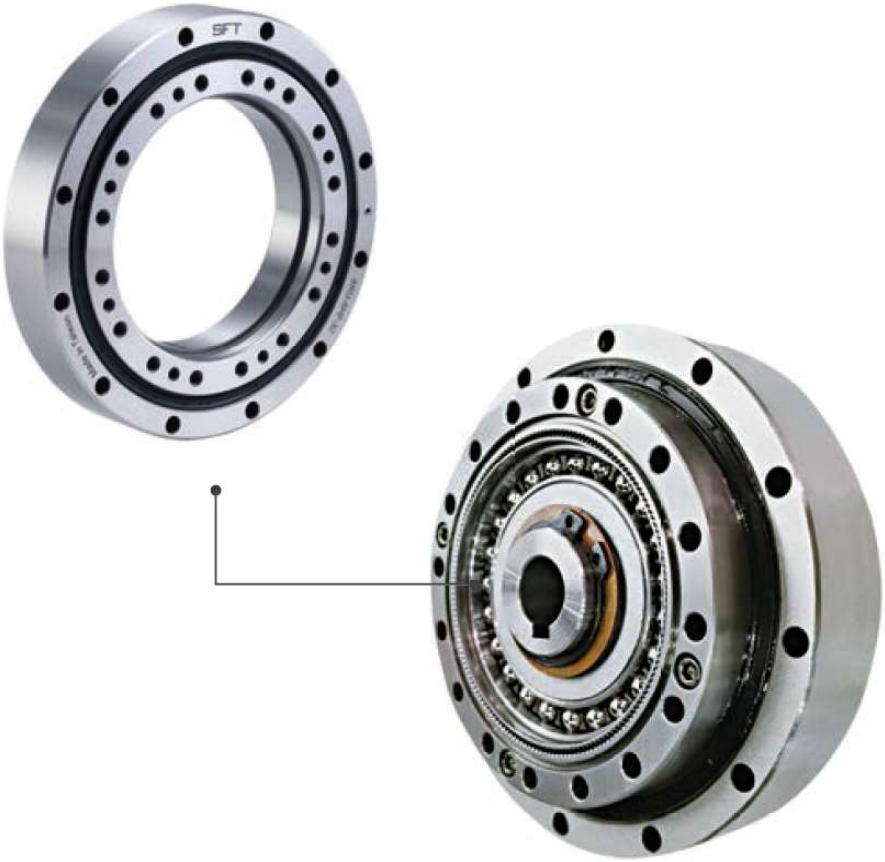
Examples of application

Curve guidance



Examples of application

Strain wave gear cross roller bearings



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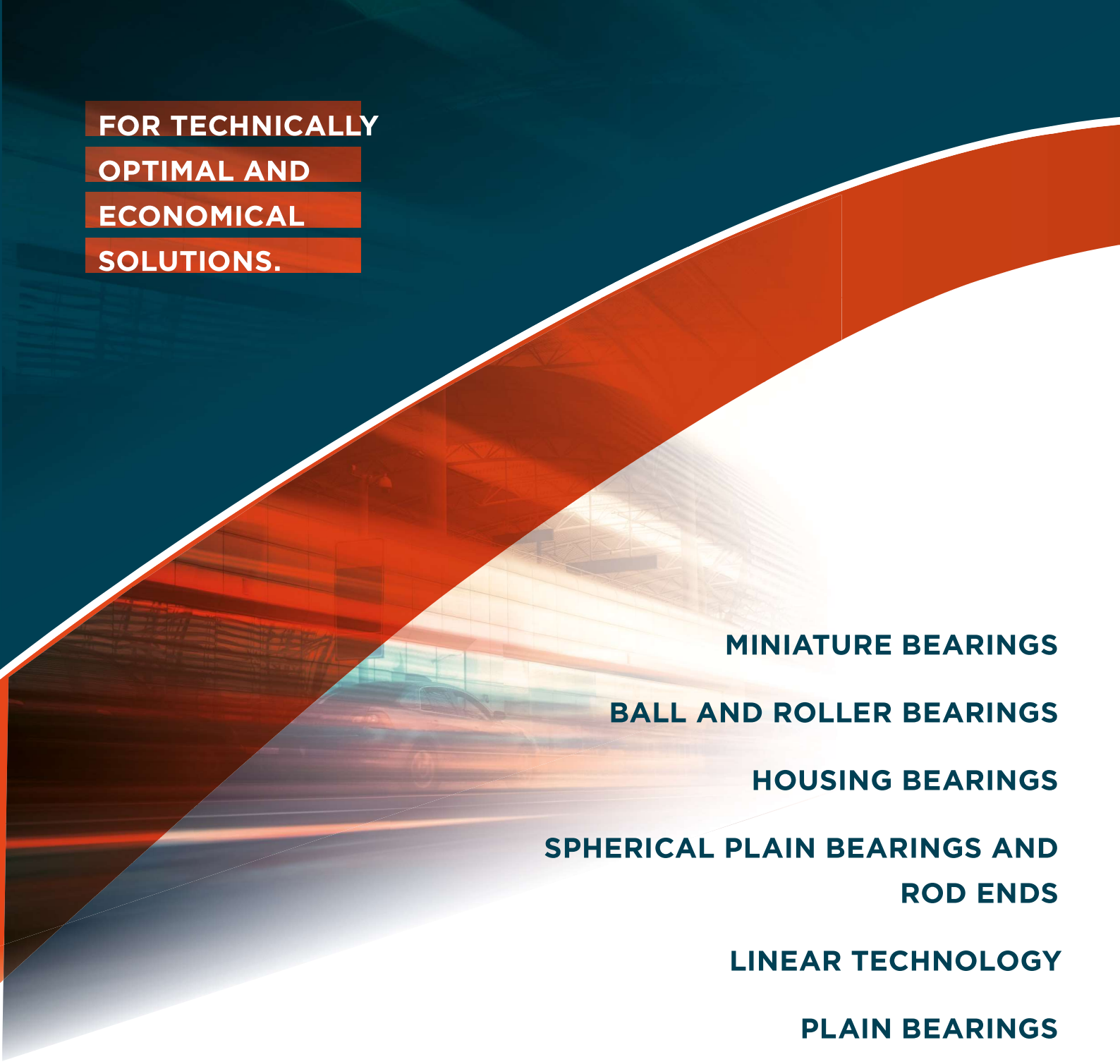

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