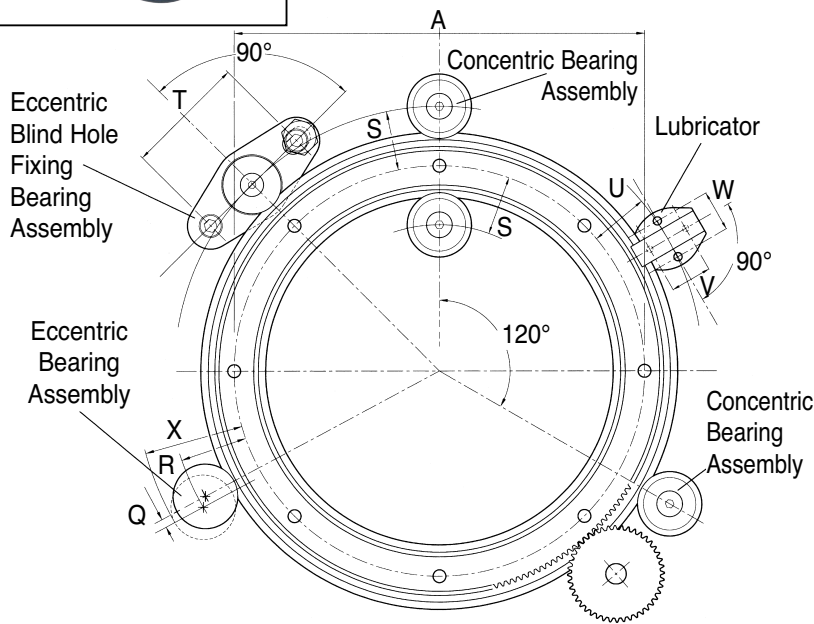
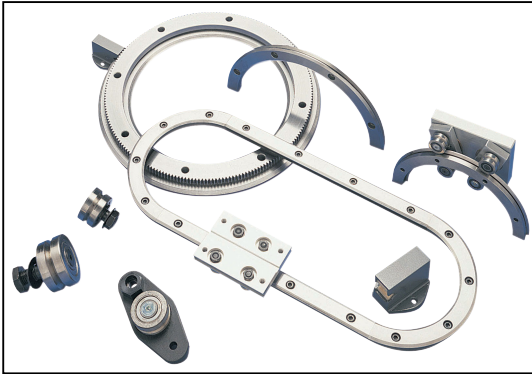


Ring Slides Assembled Ring System



Part Number Slide Ring Section	Part Number Standard Gear Drive†	A	Drilling Positions ⁽⁴⁾								Price Each	
			Q	R	S	T ^{±0.2}	U ^{±0.2}	V ^{±0.2}	W ^{±0.2}	X	Slide Ring Section	Standard Gear Drive†
R1293360	R1293360P	93	0.9	11.9	11.0	30.0	11.5	6.5	12	19.6	£226.77	£276.11
R12127360	R12127360P	127	0.9	11.9	11.0	30.0	11.5	6.5	12	19.6	£264.94	£329.67
R25159360	R25159360P	159	1.4	24.5	23.1	50.0	22.5	16.0	18	39.0	£224.67	£355.36
R25255360	R25255360P	255	1.4	24.5	23.1	50.0	22.5	16.0	18	39.0	£390.70	£543.14
R25351360	R25351360P	351	1.4	24.5	23.1	50.0	22.5	16.0	18	39.0	£477.48	£673.50
R44468360	R44468360P	468	1.8	37.8	36.0	60.0	34.5	22.0	25	57.3	£667.99	£885.80
R44612360	R44612360P	612	1.8	37.8	36.0	60.0	34.5	22.0	25	57.3	£859.50	£1238.44
R76799360	R76799360P	799	3.2	62.6	59.4	89.5	57.0	33.0	38	94.0	£1465.13	£2109.83
R761033360	R761033360P	1033	3.2	62.6	59.4	89.5	57.0	33.0	38	94.0	£2709.70	£3667.79

Notes:

† See following pages for Gear Drive Options ('P' is standard)

⁽¹⁾ Two lengths of stud are available for each size bearing assembly.

Choose according to your required carriage thickness (RSJ - short stud, is standard. Long studs are available on request).

⁽⁴⁾ Exact theoretical values have been given for 'Q', 'R' and 'S'. Positional accuracy of dimension 'S' will determine the axis of the ring. Positional accuracy for dimensions 'Q' and 'R' are not normally critical.

The bearing assemblies may be placed internally and/or externally.

In all cases either the ring or the bearings may be the moving component.

When using rings as shown above it is recommended that two concentric bearing assemblies should be used.

The other bearing assemblies used should be the eccentric type (see load/life chart on following pages).

All eccentrics may be used where positional adjustment of the ring is required.

One or more lubricators should be fitted at convenient positions to take advantage of the increased load/life afforded by lubrication.

Material

Slides: High quality steel, zone hardened on the V edges.

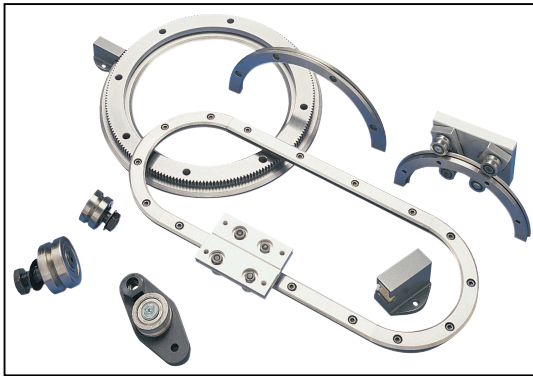
Features

- Circular motion control at the periphery where it is needed
- Large hollow centre to accommodate other components
- Will track the curvature of cylindrical shapes
- Easy means of driving available

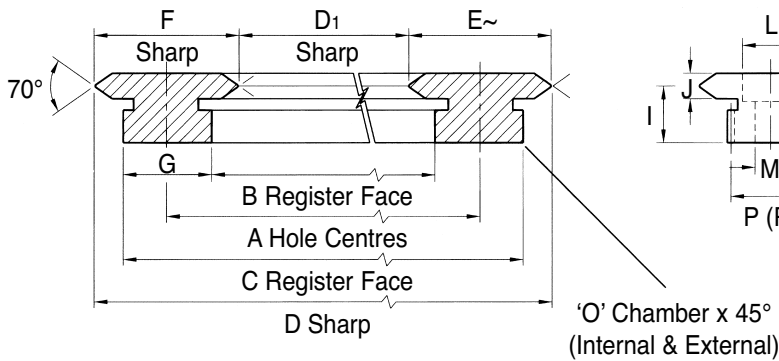
LINEAR MOTION

R

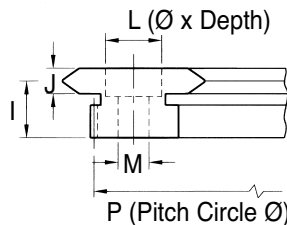
Ring Slides Slide Rings and Segments



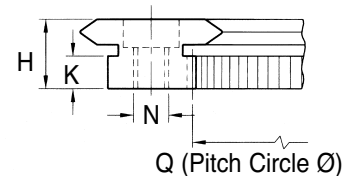
Slide Ring Section X-X



Standard Gear Drive
Option 'P' (External)



Special Gear Drive
Option 'Q' (Internal)
POA

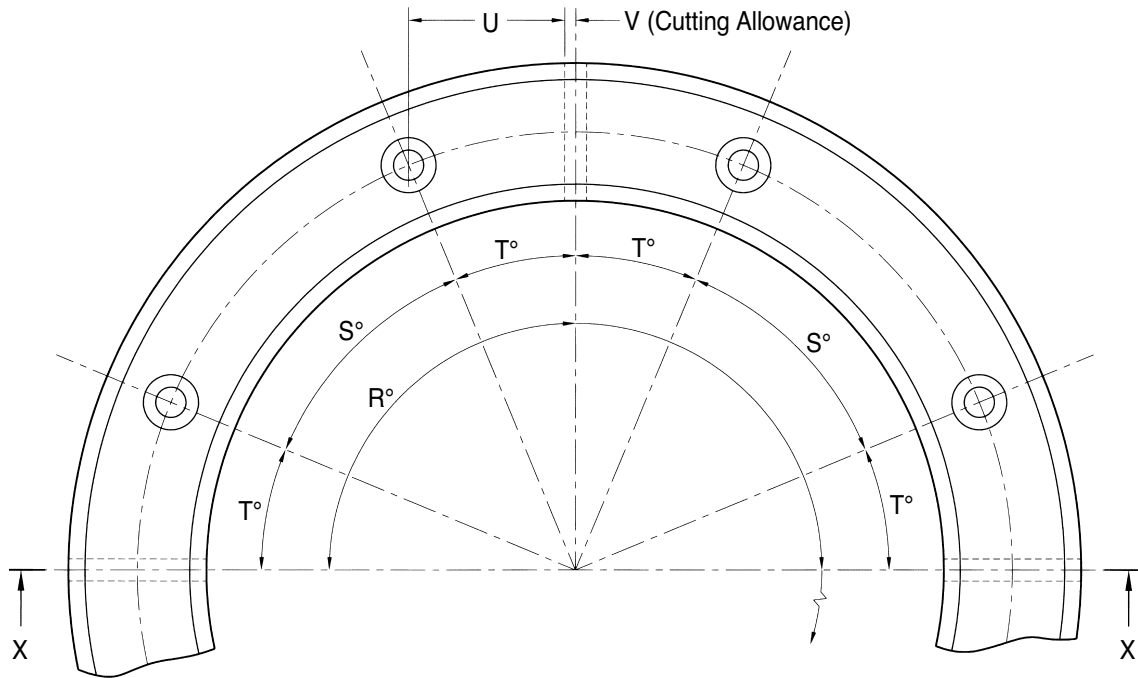


Part Number 360° Slide Ring / Std. Gear Drive	A ^{±0.2}	B JS6	C REF	D	D1	E [~]	F	G	H	I ^{±0.025}	J	K	L	M	(2)
R1293360/P	93	84.4 ^{+0.011}	101.6 ^{+0.037}	105.37	80.63	12	12.37	8.6	7.70	6.2	3.0	3.50	6x3	3.7	M3*
R12127360/P	127	118.4 ^{+0.011}	135.6 ^{+0.037}	139.37	114.63	12	12.37	8.6	7.70	6.2	3.0	3.50	6x3	3.7	M3*
R25159360/P	159	143.6 ^{+0.013}	174.4 ^{+0.039}	184.74	133.26	25	25.74	15.4	12.25	10.0	4.5	5.75	9x6	5.5	M5
R25255360/P	255	239.6 ^{+0.015}	270.4 ^{+0.041}	280.74	229.26	25	25.74	15.4	12.25	10.0	4.5	5.75	9x6	5.5	M5
R25351360/P	351	335.6 ^{+0.018}	366.4 ^{+0.044}	376.74	325.26	25	25.74	15.4	12.25	10.0	4.5	5.75	9x6	5.5	M5
R44468360/P	468	442.0 ^{+0.020}	494.0 ^{+0.046}	512.74	423.26	44	44.74	26.0	15.50	12.5	6.0	7.00	11x7	6.8	M6
R44612360/P	612	586.0 ^{+0.022}	638.0 ^{+0.048}	656.74	567.26	44	44.74	26.0	15.50	12.5	6.0	7.00	11x7	6.8	M6
R76799360/P	799	748.5 ^{+0.025}	849.5 ^{+0.051}	875.74	722.26	76	76.74	50.5	24.00	19.5	9.0	12.00	20x13	14.0	M12
R761033360/P	1033	982.5 ^{+0.028}	1083.5 ^{+0.054}	1109.74	956.26	76	76.74	50.5	24.00	19.5	9.0	12.00	20x13	14.0	M12

N	O	External Gear			Internal Gear			Std. Available Segments R°	No. of Holes S° (R=360°)	Holes Within ±0.2 Of True Position		U	V	Mass kg (R=360°)		
		P	Module	No. of Teeth (R=360°)	Q	Module	No. of Teeth (R=360°)			S°	T°					
M4x0.7	0.2	100.8	0.4	252	85.2	0.4	213	90°	180°	360°	8	45.0	22.50	16.8	1	0.16
M4x0.7	0.2	134.4	0.4	336	119.2	0.4	298	90°	180°	360°	8	45.0	22.50	23.3	1	0.22
M8x1.25	0.5	172.8	0.8	216	145.6	0.8	182	90°	180°	360°	8	45.0	22.50	29.4	1	0.77
M8x1.25	0.5	268.8	0.8	336	241.6	0.8	302	90°	180°	360°	8	45.0	22.50	47.8	1	1.20
M8x1.25	0.5	364.8	0.8	456	337.6	0.8	422	90°	180°	360°	12	30.0	15.00	44.4	1	1.65
M8x1.25	0.5	492.0	1.0	492	444.0	1.0	444	90°	180°	360°	12	30.0	15.00	58.6	2	5.10
M8x1.25	0.5	636.0	1.0	636	588.0	1.0	588	90°	180°	360°	16	22.5	11.25	57.7	2	6.70
M16x2	1.0	846.0	1.5	564	751.5	1.5	501	90°	180°	360°	16	22.5	11.25	75.9	2	25.00
M16x2	1.0	1080.0	1.5	720	985.5	1.5	657	90°	180°	360°	20	18.0	9.00	78.8	2	32.00

PRECISION GEARS

Ring Slides Slide Rings and Segments



Notes:

⁽¹⁾ Full 360° ring slides are standard.

⁽²⁾ Socket head cap screws ISO 4762 will protrude 1mm above the surface of the R12 section slide rings. Customers requiring screws to be flush should use low head type DIN 7984, available from Ondrives upon request.

The 'R' series slide rings are manufactured from high quality steel, zone hardened on the V edges and precision ground all over with datum register faces provided both internally and externally for ease of location.

Gear drive options are available with teeth machined into either the internal or external register face.

The number of teeth on the standard external option is divisible by 12 in order to provide maximum choice of pinion size for exact ratio requirements.

Customers may also choose the tapped hole option 'N' which enables the slide ring to be bolted from below (see previous page).

The 'R' series ring segments are cut from complete 360° slide rings and available in nominal 90° and 180° sections.

Any length segment can be cut to customer's special order and additional holes drilled as required.

Although suitable for most applications, slight out of roundness and flatness may be experienced with slide rings and segments in their free unmounted condition.

This may be overcome by installing against a register and bolting to a flat surface.

Prices shown are for full 360° ring slides as standard.

Ordering

R1293360 = Full 360° ring slide (standard).

If you require 90° or 180° segments only, please substitute the '360' at the end of the part number for '90' or '180' respectively.

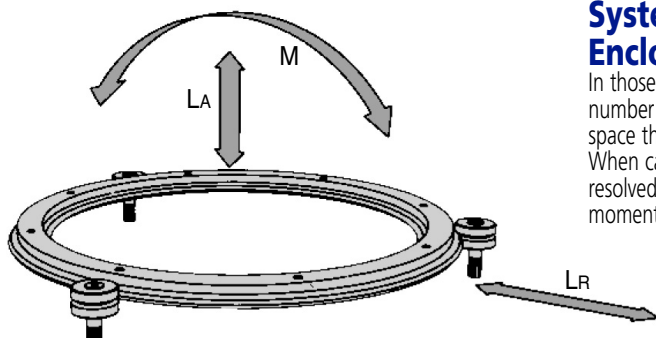
Similarly, if you require either of the options 'Q' or 'N', please add this to the end of the part number.

Please contact sales for prices and further information on the above non-standard options.

T
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PRECISION GEARS

Ring Slide Bearing Assemblies



Systems with Rings Rotating Within Enclosing Bearing Assemblies

In those duties having a complete ring which rotates in a number of encircling bearing assemblies, it is usual to equally space the bearing assemblies around the ring⁽¹⁾. When calculating the life, the loading on the system should be resolved into the direct load components LA and LR and the moment load component M (see adjacent diagram).

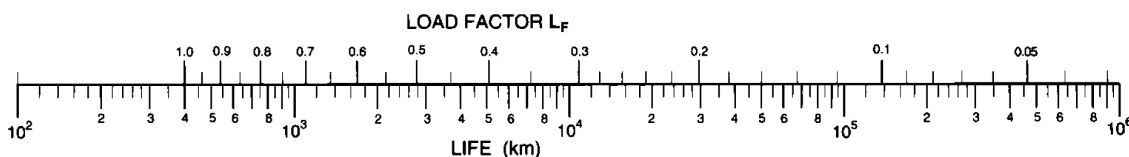
Bearing Assembly	Used with Ring Type	Number Of Bearing Assemblies Equally Spaced	Maximum Lubricated Load Capacity			Maximum Lubricated Load Capacity		
			LA (N)	LR (N)	M (Nm) ⁽⁴⁾	LA (N)	LR (N)	M (Nm) ⁽⁴⁾
RSJ-13	R12-93	3	90	52	18xØc	60	34	13xØc
	R12-127	4	113	60	22.5xØc	75	40	16xØc
	Each Additional 1	23	15	4.5xØc	5	3	1.2xØc	
RSJ-25	R25-159	3	600	350	150xØc	230	125	55xØc
	R25-255	4	750	400	187xØc	285	150	69xØc
	R25-351	Each Additional 1	150	100	37xØc	18	12	5xØc
RSJ-34	R44-468	3	1200	700	300xØc	460	255	110xØc
	R44-612	4	1500	800	375xØc	575	300	138xØc
	Each Additional 1	300	100	75xØc	38	24	27xØc	
RSJ-54	R76-799	3	2850	1650	750xØc	1050	600	260xØc
	R76-1033	4	3600	1900	875xØc	1300	700	325xØc
	Each Additional 1	700	470	175xØc	75	50	18xØc	

To calculate the life of this type of system, first obtain a value for the load factor LF by entering the values for LA, LR and M in respect of the proposed duty, into the equation below, together with the maximum load capacities from the table above.

$$LF = \frac{M}{M(\max)} + \frac{LA}{LA(\max)} + \frac{LR}{LR(\max)}$$

The life for the system can be read from the nomogram below (for lubricated systems) or consult sales (for systems running dry) by taking the life figure on the lower scale opposite the appropriate value for LF on the upper scale.

Load/Life Nomogram for Lubricated Systems

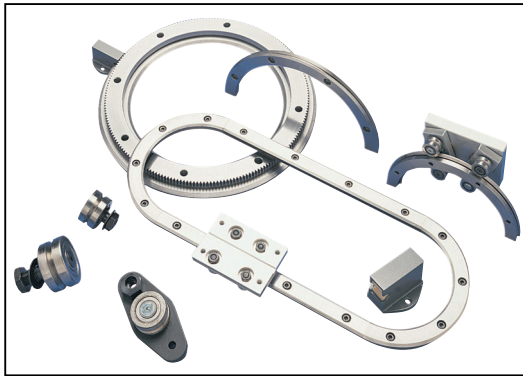


Notes:

- ¹⁾ In certain applications in which the bearing assemblies rotate with the load, and this has large LR or M components, it may be beneficial to space the bearing assemblies unequally around the ring. Consult sales for details.
- ²⁾ **Speed of Operation:** Ring, segment and track systems are rated for speeds of 1m/s without lubrication or 1.5m/s when lubricated. Greater speeds may be tolerated at reduced loads. Consult sales for details.
- ³⁾ **Short Stroke Operation:** The life of ring, segment and track systems will be reduced when the length of the path traversed in each cycle is very short. For path lengths below 0.2m, the life will reduce pro-rata with the path length, e.g., a system with a 0.08m stroke will have its life reduced by a factor of $0.08m \div 0.2 = 0.4$ compared to that calculated from the appropriate nomogram.
- ⁴⁾ Øc is the contact diameter, i.e. the diameter of the circle which passes through the points of contact between bearing assemblies and the ring. This will be equal to the P.C.D. of the ring \pm 9, 20, 37 & 64mm for the 12, 25, 44 & 76 sections respectively (depending on whether the bearing assemblies are running on the outside or inside of the ring).

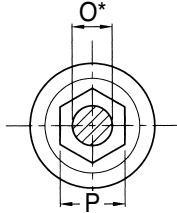
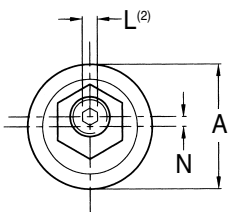
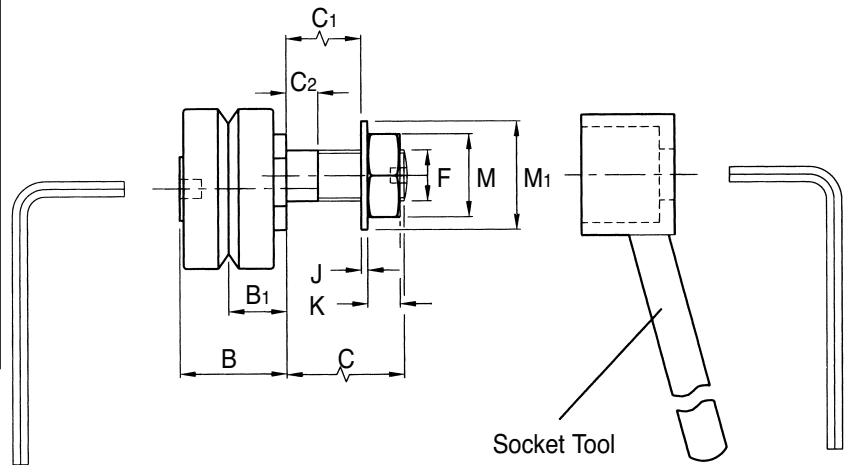
Ring Slide Bearing Assemblies

Through Fixing Type (Short Stud)



Eccentric (E)⁽²⁾

Concentric (C)⁽²⁾



* It is recommended that holes to suit bearing assembly mounting studs should be reamed to tolerance as per dimension 'O' in the table below.

Part Number	For use with Ring ⁽³⁾	A	B	B1 ^{+0.025}	C	C1	C2	F
RSJ13-CNS ⁽⁵⁾	R12	12.7	10.1	5.46	5.8	3	2.5	M4x0.5
RSJ13-ENS ⁽⁵⁾	R12	12.7	10.1	5.46	5.8	3	2.5	M4x0.5
RSJ25-C	R25	25.0	16.6	9.00	9.8	4	2.5	M8x1
RSJ25-E	R25	25.0	16.6	9.00	9.8	4	2.5	M8x1
RSJ34-C	R44	34.0	21.3	11.50	13.8	6	5.5	M10x1.25
RSJ34-E	R44	34.0	21.3	11.50	13.8	6	5.5	M10x1.25
RSJ54-C	R76	54.0	34.7	19.00	17.8	8	6.0	M14x1.5
RSJ54-E	R76	54.0	34.7	19.00	17.8	8	6.0	M14x1.5

Part Number	J	K	L	M	M1	N	O ^{+0.00 *-0.03}	P	Mass g	Price Each
RSJ13-CNS ⁽⁵⁾	0.80	2	-	7	9	1.3	4 ^{+0.008 +0.018}	7.0	8	£46.53
RSJ13-ENS ⁽⁵⁾	0.80	2	-	7	9	1.3	4 ^{+0.008 +0.018}	7.0	8	£51.34
RSJ25-C	1.00	5	3	13	17	2.0	8 ^{+0.010 +0.022}	13.0	48	£42.42
RSJ25-E	1.00	5	3	13	17	2.0	8 ^{+0.010 +0.022}	13.0	48	£48.00
RSJ34-C	1.25	6	4	17	21	2.5	10 ^{+0.010 +0.022}	15.2	115	£45.10
RSJ34-E	1.25	6	4	17	21	2.5	10 ^{+0.010 +0.022}	15.2	115	£51.72
RSJ54-C	1.60	8	6	22	28	4.5	14 ^{+0.015 +0.027}	27.0	415	£77.24
RSJ54-E	1.60	8	6	22	28	4.5	14 ^{+0.015 +0.027}	27.0	415	£87.59

Notes:
⁽¹⁾ All RSJ type eccentric bearing assembly fixing studs are supplied with allen key sockets for adjustment as shown with the exception of the RSJ13-ENS.
⁽²⁾ Nuts and washers are supplied with both concentric and eccentric RSJ type bearing assemblies.

⁽³⁾ Each size of bearing assembly has been designed for use with a specific size of ring (see table above).
 However, any bearing assembly may be used in conjunction with any ring larger than that for which it was designed if required by the application.
 Also, RSJ34 may be used with R25 and RSJ54 may be used with R44.

⁽⁴⁾ Thread form is metric fine. See 'F' dimension in table above.
⁽⁵⁾ Size 13 are supplied with neoprene seals as standard, as they are miniature. This is indicated by the 'NS' located at the end of the part number.
 All other sizes are not shipped with neoprene seals as standard, but are available on request. Add 'NS' to the end of the part number to denote this choice.

Two basic bearing assembly options are available, the standard economy through fixing type which requires access to the retaining nut on the opposite side of the mounting plate, and the blind hole fixing type (please contact sales for further details of this item) for use where access to the opposite side is denied.

The through fixing type is available in two stud lengths (short as standard, long on request) to cater for most applications.
 All bearing assemblies incorporate high precision ball races for durability, rigidity and friction free running. The bearings are greased for life and are supplied dust shielded as standard or neoprene sealed upon request⁽⁵⁾.

Bearing assemblies are available in concentric form to provide a datum reference and in eccentric form for ease of system adjustment.
 Installation and adjustment of relevant bearing assemblies may be carried out using the adjusting wrench, alternatively, the socket tool with standard hexagon key may be used (see diagrams above for details).

Material

Studs & Nuts: High Tensile Steel, 700MPa (45 ton) Chemically Blackened.