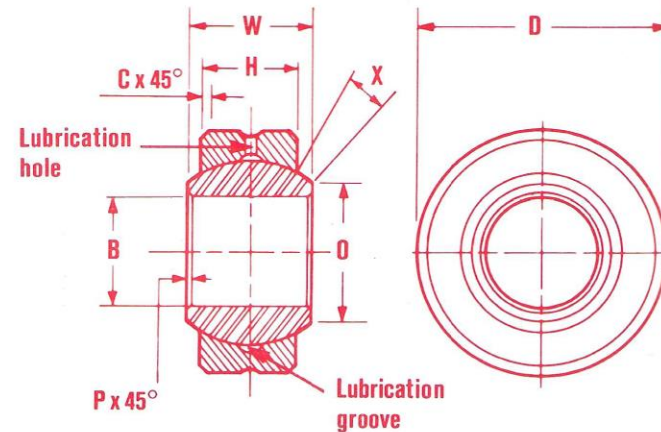


MST and RST series two piece construction



Specification

Housing Stainless steel.
Ball Stainless steel.
Through hardened.



Technical data

Applications

These bearings are suitable for applications where corrosion resistant steels are required and where higher temperatures may be encountered. The load carrying capacity is much higher than the MBB and RBB series, providing adequate lubrication is maintained. Within their capacity they will withstand shock loading and high frequency oscillation, again providing adequate lubrication is maintained.

Loads

The load figures given refer to the maximum static radial load which can be taken by the bearings. This load must be gradually applied, and under which no movement must take place. It is applied in a radial direction, and no fracture will take place under these conditions.

These bearings can also support a load in the axial direction, and amounts to approximately 15% of the maximum static radial load. The factor to be applied to the static loads to give dynamic capacities varies, depending on the application. As a rough guide for a reasonable life, the maximum dynamic load should be between 1/4 and 1/2 of the maximum static load.

Lubrication

Bearings of this type are lubricated with light oil prior to despatch, and may be re-lubricated in this way, or by using a good quality grease as required. There are lubricating holes connecting the outside diameter with the spherical surface for lubrication through the housing, but, if lubrication is required through the ball via the pin, the suffix 'G' must be added to the part number to cater for this facility.

Temperature and fits

The normal maximum operating temperature for these bearings is 500°C. Over the general temperature range of -40°C to +70°C, either of the two standard fits will be suitable, and the clearance will be determined by the application. For temperatures greater than 70°C, it is advisable to call for the normal fit only, in order to avoid seizure of the bearing, and at high temperatures a special housing tolerance will have to be considered. The clearance in the bearings will be in line with the following chart:

Bearing size	Diametral clearance (mm)	
	Normal fit	Tight fit
MST		
03	.005 — .030	0 — .015
05 — 12	.005 — .032	0 — .018
14 — 20	.008 — .040	0 — .020
22 — 30	.010 — .050	0 — .025
Bearing size	Diametral clearance (in)	
	Normal fit	Tight fit
RST		
02	.0002 — .0012	0 — .0006
03 — 07	.0002 — .0013	0 — .0007
08 — 12	.0003 — .0016	0 — .0008
14 — 16	.0004 — .0020	0 — .0010

Angles of misalignment

The angles of misalignment for these bearings are as shown in the table opposite. These are the normal maximum consistent with maintaining full bearing area. Greater angles can be achieved providing no abutment is required on the shaft which passes through the ball, and also providing that a reduction in bearing and, hence, load carrying capacity can be tolerated.

MST and RST series two piece construction

Dimensions in millimetres

Bearing number	B	D	W	H	O	C	P	X	Ball dia nom	Maximum static radial load in Newtons approx	Weight in kg each approx
	Bore	Outside dia	Ball width	Housing width	Ball flat dia	Chamfer	Chamfer	Angle deg			
	H7	h6	+ 0 -0,1	+0,1 -0,1		+0,4 - 0	+0,4 - 0				
MST 03	3	12	6	4,5	5,1	0,5	0,2	13,5	7,93	16 670	0,004
MST 05	5	16	8	6,0	7,7	0,5	0,2	12,5	11,11	30 400	0,009
MST 06	6	18	9	6,75	8,9	0,5	0,3	12,5	12,70	39 230	0,013
MST 08	8	22	12	9,0	10,4	0,8	0,3	14,0	15,87	66 680	0,024
MST 10	10	26	14	10,5	12,9	0,8	0,4	13,5	19,05	94 140	0,040
MST 12	12	30	16	12,0	15,4	0,8	0,4	13,0	22,22	126 500	0,080
MST 14	14	34	19	13,5	16,8	1,0	0,4	16,0	25,40	162 790	0,110
MST 16	16	38	21	15,0	19,3	1,0	0,5	16,0	28,57	205 940	0,130
MST 18	18	42	23	16,5	21,8	1,0	0,5	15,0	31,75	250 060	0,170
MST 20	20	46	25	18,0	24,3	1,0	0,8	14,5	34,92	299 100	0,230
MST 22	22	50	28	20,0	25,8	1,5	0,8	15,0	38,10	362 840	0,280
MST 25	25	56	31	22,0	29,6	1,5	0,8	15,0	42,85	451 100	0,390
MST 30	30	66	37	25,0	34,8	1,5	0,8	17,0	50,80	603 100	0,610

Dimensions in inches

Bearing number	B	D	W	H	O	C	P	X	Ball dia nom	Maximum static radial load in pounds approx	Weight in pounds each approx
	Bore	Outside dia	Ball width	Housing width	Ball flat dia	Chamfer	Chamfer	Angle deg			
	+0000 -0005	+0000 -0005	+000 -005	+005 -005		+015 -000	+015 -000				
RST 02	.1562	.4687	.250	.187	.235	.020	.010	13.0	.344	4 500	.007
RST 03	.1875	.5625	.281	.218	.293	.020	.010	10.5	.406	6 000	.015
RST 04	.2500	.6562	.343	.250	.364	.022	.016	13.0	.500	8 750	.023
RST 05	.3125	.7500	.375	.281	.419	.032	.016	11.0	.562	10 000	.031
RST 06	.3750	.8125	.406	.312	.475	.032	.016	10.0	.625	13 500	.039
RST 07	.4375	.9062	.437	.343	.530	.032	.016	9.5	.687	16 500	.047
RST 08	.5000	1.0000	.500	.390	.600	.032	.016	9.5	.781	21 000	.070
RST 09	.5625	1.0937	.562	.437	.670	.032	.016	9.5	.875	26 000	.094
RST 10	.6250	1.1875	.625	.500	.739	.032	.016	9.0	.969	33 500	.117
RST 12	.7500	1.4375	.750	.593	.920	.044	.032	9.0	1.187	49 000	.203
RST 14	.8750	1.5625	.875	.703	.980	.044	.032	9.0	1.312	64 500	.273
RST 16	1.0000	1.7500	1.000	.797	1.118	.044	.032	9.5	1.500	84 000	.382

Add G to part number for groove in I.D. of ball and interconnecting oil hole, e.g. MST 12G or RST 12G.
For further details please refer to general information at rear of catalogue.