MATERIALS OF BEARINGS

Standard Bearing Inserts

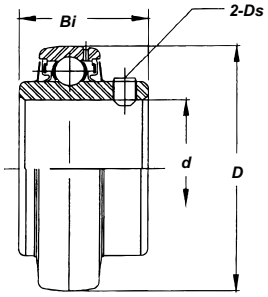
Inner and outer rings, as well as balls, are made from vacuum degassed 52100 bearing steel. Composed of high carbon, chrome alloy 52100 steel offers great longevity as it is very resistant to deformation and fatigue.

TOLERANCES OF RINGS

Outer Ring

Unit=.0001 in.

Normal Outside Diameter D				Outside Diameter Tolerance of Diameter		Radial Run-out (max.)
Over		Including				
mm	in.	mm	in.	High	Low	
30	1.1811	50	1.9685	0	- 4	8
50	1.9685	80	3.1496	0	- 5	10
80	3.1496	120	4.7244	0	- 6	14
120	4.7244	150	5.9055	0	- 7	16
150	5.9055	180	7.0866	0	-10	18
180	7.0866	250	9.8425	0	-12	20
250	9.8425	315	12.4016	0	-14	24



Inner Ring

Unit=.0001 in.

Normal Bore Diameter d				Bore Diameter				Inner Ring Width Bi		Radial Run-outs (max.)
Over		Including		dm		d				
mm	in.	mm	in.	max.	min.	max.	min.	max.	min.	
10	0.3937	18	0.7087	+ 7	0	+ 9	-2	0	-47	6
18	0.7087	30	1.1811	+ 8	0	+10	-2	0	-47	7
30	1.1811	50	1.9685	+10	0	+12	-2	0	-47	8
50	1.9685	80	3.1496	+12	0	+14	-2	0	-59	10
80	3.1496	120	4.7244	+14	0	+17	-3	0	-79	12
120	4.7244	180	7.0866	+16	0	+19	-3	0	-98	14

INTERNAL CLEARANCES

The Normal of C⌀ fit is generally accepted as an industry standard, and is, therefore, adopted as our standard clearance. However, other fits are available to accommodate extreme temperatures of low tolerance applications where slow r.p.m.s allow for a tighter fit.

Unit=.0001 in.

Bore Diameter				C_2		Normal		C_3		C_4	
Over		Including									
mm	in.	mm	in.	min.	max.	min.	max.	min.	max.	min.	max.
10	0.3937	18	0.7087	0	3	2	6	5	9	8	12
18	0.7087	24	0.9449	0	3.5	3	7	6	10	9	13
24	0.9449	30	1.1811	0	4	3	7	6	10	10	15
30	1.1811	40	1.5748	0	4	3	7	7	12	12	17
40	1.5748	50	1.9685	0	4	3	8	8	13	13	19
50	1.9685	65	2.5591	0	5	4	10	10	16	16	23
65	2.5591	80	3.1496	0	5	5	11	11	19	19	27
80	3.1496	100	3.9370	0	6	6	13	13	22	22	32
100	3.9370	120	4.7244	0	7	7	15	15	25	25	37