



PO Box 2161
 MANSFIELD, QLD, 4122
 Ph: 1300 330414
 Fax: 07 3014 8764

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www.minibearings.com.au

sales@minibearings.com.au

BEARING CLEARANCE

The radial play of a bearing is equal to the total radial displacement, in the median plane perpendicular to the bearing axis of the inner ring in relation to the outer ring, under the effect of a small measuring force.

Miniature Bearings (Less than 10mm bore size)

This table shows the basic radial clearances available for miniature bearings and applications for these clearances. Dimensions shown in microns μm 0.001mm and (1/10th's thou 0.0001").

MBA/ISO Code	Description	Minimum	Maximum	Applications
MC1	Tight	0 (0)	5 (2)	Radially loaded low backlash gear systems. Very low speed.
MC2		3 (1)	8 (3)	
MC3	Standard	5 (2)	10 (4)	Tape Guides, Synchros, Servo Motors, Low Speed Electric Motors and Gear Trains. Gyro Gimbals (Horizontal Axis).
MC3A		5 (2)	13 (5)	
MC4		8 (3)	13 (5)	
MC5	Loose	13 (5)	20 (8)	High speed Electric Motors and Tape Guides. Provides some compensation for axial loading. Gyro Gimbals (Vertical Axis).
MC6		20 (8)	28 (11)	

Bearings Over and equal to 10mm bore size

This table shows the basic radial clearances available for bearings over and including 10mm bore size. Dimensions shown in microns μm 0.001mm.

		Min / Max Clearance					
		Bore Size Range					
MBA/ISO Code	Description	10mm	Over 10mm to 18mm	Over 18mm to 24mm	Over 24mm to 30mm	Over 30mm to 40mm	Over 40mm to 50mm
C2	Tight	0 / 7	0 / 9	0 / 10	1 / 11	1 / 11	1 / 11
CN (standard)	Standard	2 / 13	3 / 18	5 / 20	5 / 20	6 / 20	6 / 23
C3	Loose	8 / 23	11 / 25	13 / 28	13 / 28	15 / 33	18 / 36
C4		14 / 29	18 / 33	20 / 36	23 / 41	28 / 46	30 / 51
C5		20 / 37	25 / 45	28 / 48	30 / 53	40 / 64	45 / 73