



Tolerances

The ABEC tolerances listed are current at this catalog's printing. These tolerances are reviewed regularly and updated as required. The ABMA Standards may be obtained by contacting: ABMA, 2025 M Street, NW, Suite 800, Washington, DC 20036.

Inner Ring*

CHARACTERISTIC	ABEC 1	ABEC 3P	ABEC 5P	ABEC 7P	ABEC 9P
Bore tolerance limits	+0.0000 -0.0003	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.0001
Bore 2 pt. out of roundness	—	—	.0001	.0001	.00005
Bore taper	—	—	.0001	.0001	.00005
Radial runout	.0004	.0002 ⁽¹⁾	.00015	.0001	.00005
Width variation	—	—	.0002	.0001	.00005
Bore runout with face	—	—	.0003	.0001	.00005
Race runout with face	—	—	.0003	.0001	.00005

*Measurement in inches. ⁽¹⁾ Add .0001 to the tolerance if bore size is over 10mm (.3937 inch).

Outer Ring*

CHARACTERISTIC	CONFIGURATION	SIZE RANGE	ABEC 1	ABEC 3P	ABEC 5P	ABEC 7P	ABEC 9P
Mean O.D. tolerance limits	All	0-18 mm (0-.7086 inch)	+0.0000 -0.0003	+0.0000 -0.0003	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.0001
		over 18-30 mm (.7086-1.1181 inch)	+0.0000 -0.0004	+0.0000 -0.0003	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.00015
Maximum O.D. tolerance limits	Open	0-18 mm (0-.7086 inch)	+0.0001 -0.0004	+0.0001 -0.0004	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.0001
		over 18-30 mm (.7086-1.1811 inch)	+0.0001 -0.0005	+0.0001 -0.0004	+0.0000 -0.0002	+0.0000 -0.0002	+0.0000 -0.00015
	Shielded	0-18 mm (0-.7086 inch)	+0.0002 -0.0005	+0.0002 -0.0005	+0.00004 -0.00024	+0.00004 -0.00024	— —
		over 18-30 mm (.7086-1.1811 inch)	+0.0002 -0.0006	+0.0002 -0.0005	+0.00004 -0.00024	+0.00004 -0.00024	— —
O.D. 2 pt. out of roundness	Open	0-18 mm	—	—	.0001	.0001	.00005
	Open	over 18-30 mm	—	—	.0001	.0001	.00008
	Shielded	0-30 mm	—	—	.0002	.0002	—
O.D. taper	All	0-18 mm	—	—	.0001	.0001	.0005
	All	over 18-30 mm	—	—	.0001	.0001	.0008
	Shielded	0-30 mm	—	—	.0002	.0002	—
Radial runout	All	0-18 mm	.0006	.0004	.0002	.00015	.00005
	All	over 18-30 mm	.0006	.0004	.0002	.00015	.0001
Width variation	All	0-30 mm	—	—	.0002	.0001	.00005
O.D. runout with face	All	0-30 mm	—	—	.0003	.00015	.00005
Race runout with face	Plain	0-18 mm	—	—	.0003	.0002	.00005
	Plain	over 18-30 mm	—	—	.0003	.0002	.0001
	Flanged	0-30 mm	—	—	.0003	.0003	—
Flange width tolerance limits		—	—	+0.0000 -0.0020	+0.0000 -0.0020	+0.0000 -0.0020	— —
		—	—	+0.0050 -0.0020	+0.0000 -0.0010	+0.0000 -0.0010	— —
Flange diameter tolerance limits		—	—	+0.0050 -0.0020	+0.0000 -0.0010	+0.0000 -0.0010	— —

*Measurement in inches, unless otherwise indicated.

Ring Width*

CHARACTERISTIC	CONFIGURATION	ABEC 1	ABEC 3P	ABEC 5P	ABEC 7P	ABEC 9P
Width	Single bearing	+0.000 -0.005	+0.000 -0.005	+0.000 -0.001	+0.000 -0.001	+0.000 -0.001
	Duplex pair	— —	— —	+0.000 -0.015	+0.000 -0.015	+0.000 -0.015

*Measurement in inches.