

PLAIN RING GAUGES

Plain ring gauges are manufactured from the finest steel and are ground and precision lapped after a heat treatment process which includes a sub-zero stabilisation cycle to ensure dimensional stability.

For corrosion resistance and to extend wear life, ring gauges can be supplied with a hard chrome deposit, typically 6 microns thickness.

For even greater gauge life, ring gauges can be supplied with a tungsten carbide insert, precision lapped to a highly polished finish.

	SIZE		CLASS A or X	CLASS AA or XX
	mm	inch		
STEEL	1.5-2.00	0.060-0.078	HO51X	HO51XX
	2.0-4.0	0.078-0.157	HO52X	HO52XX
	4.0-12.0	0.157-0.472	HO53X	HO53XX
	12.0-20.0	0.472-0.787	HO54X	HO54XX
	20.0-30.0	0.787-1.000	HO55X	HO55XX
	25.0-30.0	1.000-1.181	HO56X	HO56XX
	30.0-40.0	1.181-1.575	HO57X	HO57XX
	40.0-50.0	1.575-2.000	HO58X	HO58XX
	50.0-60.0	2.000-2.362	HO59X	HO59XX
	60.0-70.0	2.362-2.756	HO510X	HO510XX
	70.0-80.0	2.756-3.150	HO511X	HO511XX
	80.0-90.0	3.150-3.543	HO512X	HO512XX
	90.0-100.0	3.543-4.000	HO513X	HO513XX
	100.0-115.0	4.000-4.528	HO514X	HO514XX
	115.0-130.0	4.528-5.119	HO515X	HO515XX
	130.0-145.0	5.119-5.710	HO516X	HO516XX
	145.0-160.0	5.710-6.300	HO517X	HO517XX
	160.0-170.0	6.300-6.700	HO518X	HO518XX
	170.0-180.0	6.700-7.100	HO519X	HO519XX
180.0-190.0	7.100-7.500	HO520X	HO520XX	
190.0-200.0	7.500-8.000	HO521X	HO521XX	

	SIZE		CLASS X	CLASS XX
	mm	inch		
CARBIDE	1.5-3.0	0.060-0.120	HO61X	HO61XX
	3.0-9.0	0.120-0.354	HO62X	HO62XX
	9.0-16.0	0.354-0.630	HO63X	HO63XX
	16.0-21.0	0.630-0.826	HO64X	HO64XX
	21.0-26.0	0.826-1.025	HO65X	HO65XX
	26.0-29.0	1.025-1.141	HO66X	HO66XX
	29.0-35.0	1.141-1.378	HO67X	HO67XX
	35.0-38.0	1.378-1.496	HO68X	HO68XX
	38.0-40.0	1.496-1.575	HO69X	HO69XX
	40.0-45.0	1.575-1.775	HO610X	HO610XX
	45.0-51.0	1.775-2.000	HO611X	HO611XX

Plain setting ring gauges are manufactured to **BS 4065:1966** for inch sizes and **BS 4064:1966** for metric. There are three grades, **B; A and AA**.

These gauges are intended for use as masters to set the numerous types of instrument used in the manufacture of internal diameters. These instruments generally use two or three points of contact, or in the case of air gauging, there is no point of contact.

BS 4065 – Total tolerance per grade of ring

ABOVE	TO AND INCLUDING	AA	A
2.0mm	25.4mm	0.8µm	2.0µm
25.4mm	50.8mm	1.6µm	3.8µm
50.8mm	101.6mm	2.3µm	5.8µm
101.6mm	152.4mm	3.0µm	7.6µm

American standard **ANSI/ASME B89.1.6M.1984** includes four classes:– **z; y; x and xx**, xx being the highest degree of accuracy normally available.

ANSI/ASME B89.1 – Total tolerance per grade of ring

Customers should specify disposition of tolerance eg. + tolerance, - tolerance or bilateral.

ABOVE	TO AND INCLUDING	XX	X	Y	Z
3.8mm	20.96mm	0.5µm	1.0µm	1.7µm	2.5µm
20.96mm	38.35mm	0.8µm	1.5µm	2.2µm	3.0µm
38.35mm	63.75mm	1.0µm	2.0µm	3.0µm	4.2µm
63.75mm	114.55mm	1.3µm	2.5µm	3.9µm	5.1µm
114.55mm	165.35mm	1.7µm	3.3µm	4.8µm	6.3µm
165.35mm	228.85mm	2.1µm	3.9µm	6.0µm	8.1µm
228.85mm	305.05mm	2.5µm	5.1µm	7.5µm	10.2µm

Variations due to out-of-roundness, taper and out-of-straightness must not exceed one half of the total tolerance in combination. Any single geometric error must not exceed one third of the tabulated values.



Calibration Services are available on all our products. For plain rings, features checked are size, roundness and parallelism.

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