

ECCENTRICITY TOLERANCES OF TAP ELEMENTS

When Tested on Dead Centers
(Ref. USCTI Table 317)

Applicable to Tables 302, 303, 303A, and 311

Element	Size Range			Ground Thread	
	Inch & Mach. Screw	Pipe	Metric	Eccentricity	t.i.v.*
Square (at central point)	#0 - 1/2	1/16 - 1/8	M1.6 - M12	0.0030	0.0060
	Over 1/2 Thru 4	1/4 - 4	Over M12 Thru M100	0.0040	0.0080
Shank	#0 - 5/16	1/16	M1.6 - M8	0.0005	0.0010
	Over 5/16 Thru 4	1/8 - 4	Over M8 Thru M100	0.0008	0.0016
Major Diameter	#0 - 5/16	1/16	M1.6 - M8	0.0005	0.0010
	Over 5/16 Thru 4	1/8 - 4	Over M8 Thru M100	0.0008	0.0016
Pitch Diameter (at first full thread)	#0 - 1/2	1/16	M1.6 - M8	0.0005	0.0010
	Over 1/2 Thru 4	1/8 - 4	Over M8 Thru M100	0.0008	0.0016
Chamfer **	#0 - 1/2	1/16 - 1/8	M1.6 - M12	0.0010	0.0020
	Over 1/2 Thru 4	1/4 - 4	Over M12 Thru M100	0.0015	0.0030

* t.i.v. = Total indicator variation. Figures are given for both eccentricity and total indicator variation to avoid misunderstanding.

** Chamfer should preferably be inspected by light projection to avoid errors due to indicator contact points dropping into the grooves.

COATING ABBREVIATIONS

See **Page 196** for Coating Recommendations

CrN:	Chromium Nitride	TiAlN:	Titanium Aluminum Nitride
N:	Nitride	TiCN:	Titanium Carbonitride
N + O:	Nitride + Oxide	TiN:	Titanium Nitride
O:	Stream Oxide	WC/C:	Tungsten Carbide / Carbon
AlCrN	Aluminum Chromium Nitride	DLC:	Diamond-like Carbon