

ECCENTRICITY TOLERANCES OF TAP ELEMENTS WHEN TESTED ON DEAD CENTERS

(Ref. USCTI Table 317)

ELEMENT	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	0.003	0.006
	Over 1/2" thru 4"	1/4 - 4"	Over M12 thru M100	0.004	0.008
Shank	#0-5/16"	1/16"	M1.6 - M8	0.0005	0.001
	Over 0-5/16" 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	0.001
	Over 0-5/16" thru 4"	1/8 - 4"	Over M8 thru M100	0.0008	0.0016
Pitch Diameter	#0-1/2"	1/16"	M1.6 - M8	0.0005	0.001
	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	0.001	0.002
	Over 1/2" thru 4"	1/4 - 4"	Over M12 thru M100	0.0015	0.003

*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 thread grooves

SURFACE TREATMENT ABBREVIATIONS

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