

SOCKET CAP, SHOULDER, SET SCREWS,  
HEX, AND SPLINE KEYS

Table 1E Shank Straightness for Socket Head Cap Screws

Nom Size		0	1	2	3	4	5	6	8	10
Nom Length		D <sub>e</sub> Diameters (Note 1) and Appendix III								
Over	To Incl.	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>
0	0.25	0.063	0.076	...	...	...	...	...	...	...
0.25	0.50	0.065	0.078	...	...	...	...	...	...	...
0.50	0.75	0.068	0.080	...	...	...	...	...	...	...
0.75	1	0.070	0.082	...	...	...	...	...	...	...
1	1.50	...	0.087	...	...	...	...	...	...	...
0	0.50	...	...	0.090	0.103	0.116	...	...	...	...
0.50	1	...	...	0.095	0.107	0.120	...	...	...	...
1	1.50	...	...	0.099	0.111	0.123	...	...	...	...
1.50	2	...	...	0.103	0.115	0.127	...	...	...	...
2	2.50	...	...	...	...	0.131	...	...	...	...
0	0.75	...	...	...	...	...	0.130	0.143	0.168	...
0.75	1.50	...	...	...	...	...	0.136	0.148	0.173	...
1.50	2.25	...	...	...	...	...	0.140	0.153	0.178	...
2.25	3	...	...	...	...	...	0.146	0.158	0.183	...
3	4	...	...	...	...	...	0.150	0.163	0.189	...
0	1	...	...	...	...	...	...	...	...	0.196
1	2	...	...	...	...	...	...	...	...	0.201
2	3	...	...	...	...	...	...	...	...	0.207
3	4	...	...	...	...	...	...	...	...	0.213
4	6	...	...	...	...	...	...	...	...	0.215

Nom Size		1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Nom Length		D <sub>e</sub> Diameters (Note 1) and Appendix III								
Over	To Incl.	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>
0	1	0.255	0.317	0.379	0.441	...	...	...	...	...
1	2	0.260	0.322	0.383	0.445	...	...	...	...	...
2	3	0.265	0.326	0.387	0.449	...	...	...	...	...
3	4	0.270	0.331	0.391	0.453	...	...	...	...	...
4	6	0.275	0.337	0.400	0.462	...	...	...	...	...
0	2	...	...	...	...	0.507	0.631	0.756	0.880	1.005
2	4	...	...	...	...	0.514	0.638	0.762	0.886	1.010
4	6	...	...	...	...	0.521	0.644	0.767	0.891	1.015
6	8	...	...	...	...	0.525	0.650	0.773	0.897	1.020
8	10	...	...	...	...	...	0.775	0.900	1.025	

Nom Size		1-1/8	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4
Nom Length		D <sub>e</sub> Diameters (Note 1) and Appendix III						
Over	To Incl.	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>
0	6	1.140	1.265	1.390	1.515	1.765	2.015	2.265
6	12	1.155	1.280	1.405	1.530	1.780	2.030	2.280
12	18	1.170	1.295	1.420	1.545	1.795	2.045	2.295
18	24	1.185	1.310	1.435	1.560	1.810	2.060	2.310

Nom Size		2-1/2	2-3/4	3	3-1/4	3-1/2	3-3/4	4
Nom Length		D <sub>e</sub> Diameters (Note 1) and Appendix III						
Over	To Incl.	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>	D <sub>e</sub>
0	6	2.515	2.765	3.015	3.265	3.515	3.765	4.015
6	12	2.530	2.780	3.030	3.280	3.530	3.780	4.030
12	18	2.545	2.795	3.045	3.295	3.545	3.795	4.045
18	24	2.560	2.810	3.060	3.310	3.560	3.810	4.060

## NOTE:

1. The largest diameter D<sub>e</sub> specified for the various screw sizes shall apply for any nominal screw length longer than that tabulated for the respective nominal screw size.