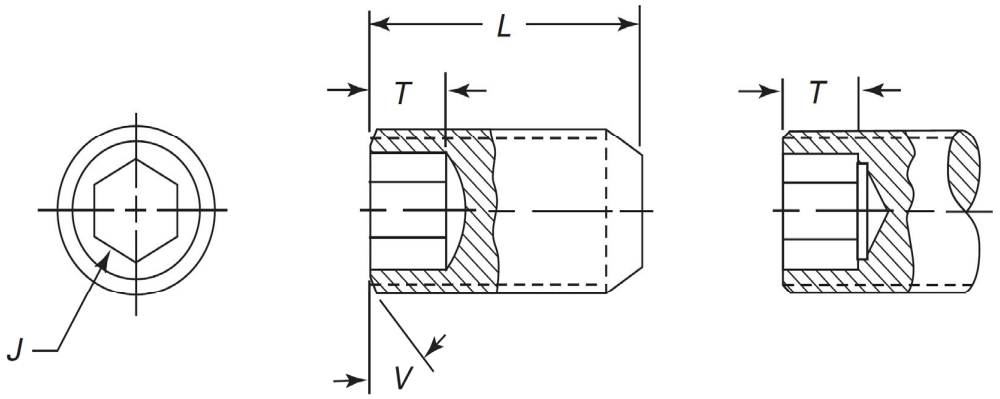
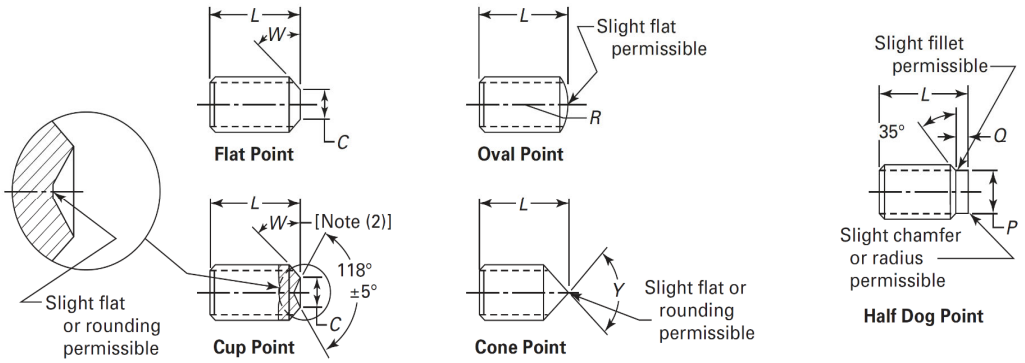
Socket Set Screws

+1 (610) 904-8616
sales@nickel-systems.com
www.nickel-systems.com





Socket Set Screws

+1 (610) 904-8616
sales@nickel-systems.com
www.nickel-systems.com

ASME 18.3 - 2012

Nominal Size (Basic Screw Diameter)		J		T	C		R	Y	Half Dog Point				B			B_1		
		Nominal Hexagon Socket Size		Minium Key Engagement to Develop Functional Capability of Key	Cup & Flat Point Diameters		Basic Oval Point Radius	Con Point Angle 90 Deg +/- deg for These Nominal Lengths or Longer: 18 deg +/- 2 deg for Shorter Nominal Lengths	Diameter, P		Length, Q		Shortest Optimum Nominal Length to Which T_H Applies			Shortest Optimum Nominal Length to Which TS Applies		
					Max.	Min.			Max.	Min.	Max.	Min.	Cup & Flat Points	90 Deg Cone & Oval Points	Half Dog Point	Cup & Flat Points	90 Deg Cone & Oval Points	Half Dog Point
5	0.1250	1/16	0.062	0.080	0.067	0.057	0.094	0.190	0.083	0.078	0.033	0.027	0.190	0.190	0.190	0.130	0.190	0.190
5	0.1250	1/16	0.062	0.080	0.067	0.057	0.094	0.190	0.083	0.078	0.033	0.027	0.190	0.190	0.190	0.130	0.190	0.190
6	0.1380	1/16	0.062	0.080	0.074	0.064	0.104	0.190	0.092	0.087	0.038	0.032	0.190	0.190	0.190	0.130	0.250	0.190
6	0.1380	1/16	0.062	0.080	0.074	0.064	0.104	0.190	0.092	0.087	0.038	0.032	0.190	0.190	0.190	0.130	0.250	0.190
8	0.1640	5/64	0.078	0.090	0.087	0.076	0.123	0.250	0.109	0.103	0.043	0.037	0.190	0.250	0.250	0.190	0.250	0.250
10	0.1900	3/32	0.094	0.100	0.102	0.088	0.142	0.250	0.127	0.120	0.049	0.041	0.190	0.250	0.250	0.190	0.250	0.250
1/4	0.2500	1/8	0.125	0.125	0.132	0.118	0.188	0.310	0.156	0.149	0.067	0.059	0.250	0.310	0.310	0.250	0.310	0.310
5/16	0.3125	5/32	0.156	0.156	0.172	0.156	0.234	0.380	0.203	0.195	0.082	0.074	0.310	0.380	0.380	0.310	0.440	0.380
3/8	0.3750	3/16	0.188	0.188	0.212	0.194	0.281	0.440	0.250	0.241	0.099	0.089	0.380	0.440	0.440	0.380	0.440	0.440
7/16	0.4375	7/32	0.219	0.219	0.252	0.232	0.328	0.500	0.297	0.287	0.114	0.104	0.440	0.630	0.500	0.440	0.630	0.500
1/2	0.5000	1/4	0.250	0.250	0.291	0.270	0.375	0.570	0.344	0.334	0.130	0.120	0.500	0.630	0.630	0.500	0.630	0.630
5/8	0.6250	5/16	0.312	0.312	0.371	0.347	0.469	0.750	0.469	0.456	0.164	0.148	0.630	0.880	0.880	0.630	0.880	0.880
3/4	0.7500	3/8	0.375	0.375	0.450	0.425	0.562	0.880	0.562	0.549	0.196	0.180	0.750	1.000	1.000	0.750	1.000	1.000
7/8	0.8750	1/2	0.500	0.500	0.530	0.502	0.656	1.000	0.656	0.642	0.227	0.211	0.880	1.000	1.000	0.880	1.250	1.000
1	1.0000	9/16	0.562	0.562	0.609	0.579	0.750	1.130	0.750	0.734	0.260	0.240	1.000	1.250	1.250	.	.	.
11/8	1.1250	9/16	0.562	0.562	0.689	0.655	0.844	1.250	0.844	0.826	0.291	0.271	1.250	1.500	1.250	.	.	.
11/4	1.2500	5/8	0.625	0.625	0.767	0.733	0.938	1.500	0.938	0.920	0.323	0.303	1.250	1.500	1.500	.	.	.
13/8	1.3750	5/8	0.625	0.625	0.848	0.808	1.031	1.630	1.031	1.011	0.354	0.334	1.500	1.750	1.500	.	.	.
11/2	1.5000	3/4	0.750	0.750	0.926	0.886	1.125	1.750	1.125	1.105	0.385	0.365	1.500	2.000	1.750	.	.	.
13/4	1.7500	1	1.000	1.000	1.086	1.039	1.312	2.000	1.312	1.289	0.448	0.428	1.750	2.250	2.000	.	.	.
2	2.0000	1	1.000	1.000	1.244	1.193	1.500	2.250	1.500	1.474	0.510	0.490	2.000	2.500	2.500	.	.	.

(1) Face - The plane of the face on the socket end of the screw shall be approximately normal to the axis of the screw, and shall be chamfered on screws longer than lengths listed in this Table, columns B and B_1. The chamfer angle, V, shall be between 30 deg and 45 deg. The chamfer shall extend slightly below the root diameter of the thread and the edge between flat and chamfer may be slightly rounded. For screws equal to or shorter than the lengths listed in this Table, columns B and B1, or screws 0.250 in. diameter or greater, with a national coarse thread, including lengths longer than listed in this Table, columns B and B_1, chamfering shall be at the option of the manufacturer. If chamfered, the chamfer angle, V, shall not exceed 45 deg.

(2) Point Angles. Point angles specified shall apply only to those portions of the angles that lie below the root diameter of the thread. The angles may vary in the threaded portions due to manufacturing processes.