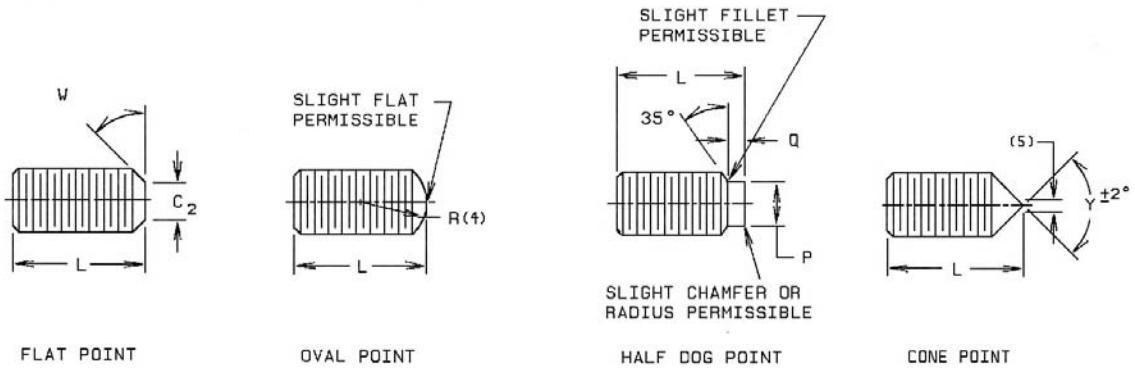
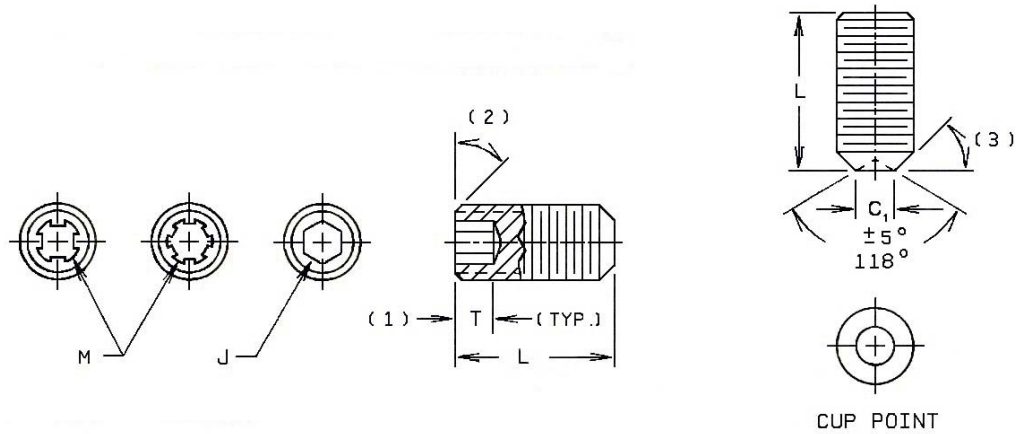
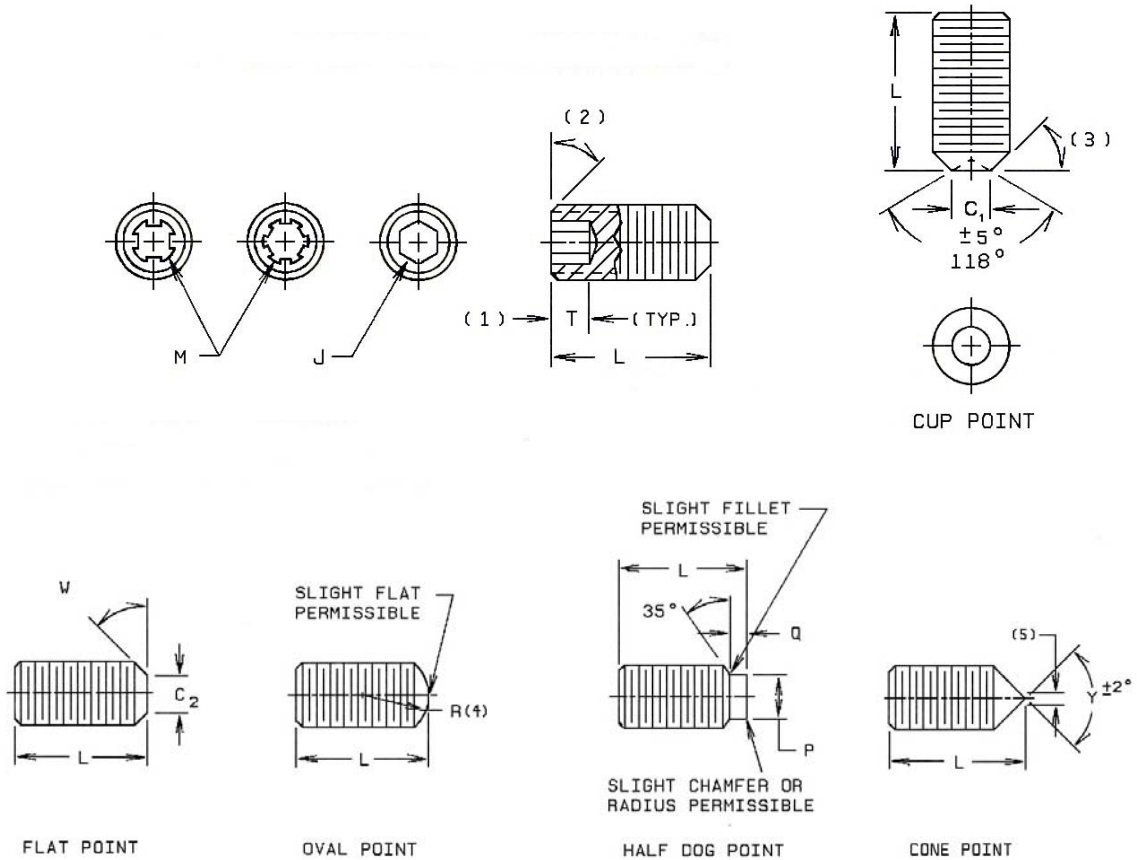


Inch Series Socket Set Screws



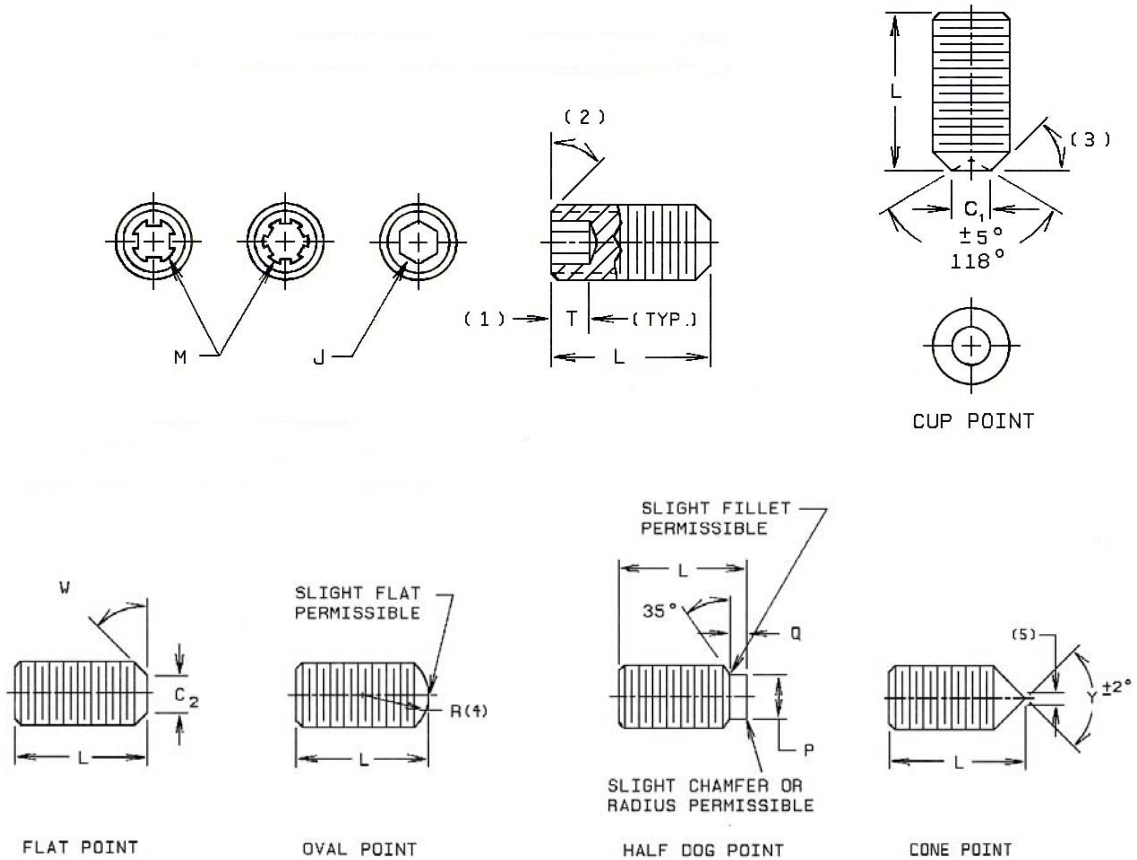
Nominal Size	Basic Screw Diameter	J Hex Socket Size	M Spline Socket Size	T Minimum Key Engagement		C Cup Point Diameter		C2 Flat Point Diameter		R Oval Point Radius
				Hex	Spline	Max.	Min.	Max.	Min.	
#2	0.0860	0.035	0.048	0.060	0.040	0.043	0.038	0.047	0.039	0.064
#3	0.0990	0.050	0.048	0.070	0.040	0.050	0.045	0.054	0.045	0.074
#4	0.1120	0.050	0.060	0.070	0.045	0.056	0.051	0.061	0.051	0.084
#5	0.1250	1/16	0.072	0.080	0.055	0.062	0.056	0.067	0.057	0.094
#6	0.1380	1/16	0.072	0.080	0.055	0.069	0.062	0.074	0.064	0.104
#8	0.1640	5/64	0.096	0.090	0.080	0.082	0.074	0.087	0.076	0.123
#10	0.1900	3/32	0.111	0.100	0.080	0.095	0.086	0.102	0.088	0.142
1/4	0.2500	1/8	0.145	0.125	0.125	0.125	0.114	0.132	0.118	0.188
5/16	0.3125	5/32	0.183	0.156	0.156	0.156	0.144	0.172	0.156	0.234
3/8	0.3750	3/16	0.216	0.188	0.188	0.187	0.174	0.212	0.194	0.281
7/16	0.4375	7/32	0.251	0.219	0.219	0.218	0.204	0.252	0.232	0.328
1/2	0.5000	1/4	0.291	0.250	0.250	0.250	0.235	0.291	0.270	0.375
5/8	0.6250	5/16	0.372	0.312	0.312	0.312	0.295	0.371	0.347	0.469
3/4	0.7500	3/8	0.454	0.375	0.375	0.375	0.357	0.450	0.425	0.562
7/8	0.8750	7/16	0.595	0.500	0.500	0.437	0.418	0.530	0.502	0.656
1	1.0000	1/2	--	0.562	--	0.500	0.480	0.609	0.579	0.750

Inch Series Socket Set Screws (continued)



Nominal Size	Basic Screw Diameter	Y Cone Point Angle $90^\circ \pm 2^\circ$ For these Lengths Or Longer $118^\circ \pm 2^\circ$ For Shorter	P Half Dog Point Diameter		Q Half Dog Point Length		B Shortest Optimal Length To Which T_H Applies		
			Max.	Min.	Max.	Min.	Cup and Flat Point	90° Cone and Oval Point	Half Dog Point
#2	0.0860	0.13	0.057	0.053	0.024	0.020	0.13	0.19	0.19
#3	0.0990	0.13	0.066	0.062	0.027	0.023	0.19	0.19	0.19
#4	0.1120	0.19	0.075	0.070	0.030	0.026	0.19	0.19	0.19
#5	0.1250	0.19	0.083	0.078	0.033	0.027	0.19	0.19	0.19
#6	0.1380	0.19	0.092	0.087	0.038	0.032	0.19	0.25	0.19
#8	0.1640	0.25	0.109	0.103	0.043	0.037	0.19	0.25	0.25
#10	0.1900	0.25	0.127	0.120	0.049	0.041	0.19	0.25	0.25
1/4	0.2500	0.31	0.156	0.149	0.067	0.059	0.25	0.31	0.31
5/16	0.3125	0.38	0.203	0.195	0.082	0.074	0.31	0.44	0.38
3/8	0.3750	0.44	0.250	0.241	0.099	0.089	0.38	0.44	0.44
7/16	0.4375	0.50	0.297	0.287	0.114	0.104	0.44	0.63	0.50
1/2	0.5000	0.57	0.344	0.334	0.130	0.120	0.50	0.63	0.63
5/8	0.6250	0.75	0.469	0.456	0.164	0.148	0.63	0.88	0.88
3/4	0.7500	0.88	0.562	0.549	0.196	0.180	0.75	1.00	1.00
7/8	0.8750	1.00	0.656	0.642	0.227	0.211	0.88	1.00	1.00
1	1.0000	1.13	0.750	0.734	0.260	0.240	1.00	1.25	1.25

Inch Series Socket Set Screws (continued)



Nominal Size	Basic Screw Diameter	B_1 Shortest Optimal Length To Which T_s Applies		
		Cup and Flat Point	90° Cone and Oval Point	Half Dog Point
#2	0.0860	0.13	0.19	0.19
#3	0.0990	0.13	0.19	0.19
#4	0.1120	0.13	0.19	0.19
#5	0.1250	0.13	0.19	0.19
#6	0.1380	0.13	0.25	0.19
#8	0.1640	0.19	0.25	0.25
#10	0.1900	0.19	0.25	0.25
1/4	0.2500	0.25	0.31	0.31
5/16	0.3125	0.31	0.44	0.38
3/8	0.3750	0.38	0.44	0.44
7/16	0.4375	0.44	0.63	0.50
1/2	0.5000	0.50	0.63	0.63
5/8	0.6250	0.63	0.88	0.88
3/4	0.7500	0.75	1.00	1.00
7/8	0.8750	0.88	1.25	1.00
1	1.0000	--	--	--

Applicable Standards: ASME B18.3 and ASTM F912.
Hardness: R_C 45-53.

Inch Series Socket Set Screws (continued)

Standard Length Increments

Nominal Screw Length	Standard Length Increment
1/16 through 3/16	0.03
1/8 through 1/2	0.06
1/2 through 1 inch	0.12
1 through 2 inches	0.25
2 through 6 inches	0.50
Over 6 inches long	1.00

Length Tolerances

Nominal Screw Length	Tolerance on Length
Through 5/8 long	+/- 0.01
Over 5/8 through 2 inches	+/- 0.02
Over 2 through 6 inches	+/- 0.03
Over 6 inches long	+/- 0.06

Notes on Inch Series Socket Set Screws

1. Key engagement dimensions shown in Columns T_H and T_S shall apply to screw lengths longer than listed in Columns B and B_1 respectively.
2. On screws longer than minimum lengths listed in Column B or B_1 , the face will be chamfered between 30° and 45° . Shorter screws may or may not be chamfered.
3. The angle on the flat and cup point set screws is 45° plus 5° minus 0° for screws longer or equal to in length those listed in Columns B and B_1 and 30° minimum for shorter screws.
4. The oval point radius tolerance is +0.015 inches for sizes through #5 and 0.031 inches for sizes #6 diameter and greater.
5. The apex of the cone may be flattened or rounded to as much as 10 percent of the basic screw diameter.

Inch Series Socket Set Screws (continued)

Hex Key Engagement for Short Length Screws

Nominal Size	Basic Screw Diameter	J Hex Socket Size	L Nominal Screw Lengths	Minimum Key Engagement		
				Cup ₃ and Flat Points	T _H 118° Cone and Oval Points	Half Dog Point
#2	0.0860	0.035	0.06	0.030	0.029	--- ₂
			0.09	0.040	0.040	0.035
#3	0.0990	0.050	0.09	0.040	0.039	--- ₂
			0.13	0.055	0.040	0.045
#4	0.1120	0.050	0.19	0.045	0.039	--- ₂
			0.13	0.060	0.045	0.045
#5	0.1250	1/16	0.09	0.040	0.039	--- ₂
			0.13	0.060	0.045	0.045
#6	0.1360	1/16	0.09	0.040	0.039	--- ₂
			0.13	0.060	0.045	0.045
			0.16	0.070	0.065	0.065
#8	0.1640	5/64	0.13	0.060	0.050	0.045
			0.16	0.070	0.060	0.060
			0.19	--- ₁	0.065	0.065
#10	0.1900	3/32	0.13	0.060	0.042	0.042
			0.19	--- ₁	0.060	0.060
1/4	0.2500	1/8	0.19	0.090	0.065	0.055
			0.25	--- ₁	0.110	0.090
5/16	0.3125	5/32	0.25	0.125	0.099	0.090
			0.31	--- ₁	0.140	0.105
			0.25	0.110	0.090	0.075
3/8	0.3750	3/16	0.31	0.140	0.115	0.105
			0.50	--- ₁	0.165	0.155
			0.38	0.160	0.125	0.125
7/16	0.4375	7/32	0.44	--- ₁	0.160	0.160
			0.38	0.175	0.130	0.130
			0.44	0.215	0.155	0.155
1/2	0.5000	1/4	0.50	--- ₁	0.195	0.195
			0.50	0.205	0.145	0.145
			0.50	0.205	0.145	0.145
5/8	0.6250	5/16	0.50	0.205	0.145	0.145
			0.63	0.255	0.190	0.190
3/4	0.7500	3/8	0.75	--- ₁	0.325	0.295
			0.75	0.330	0.255	0.225
7/8	0.8750	1/2	0.87	--- ₁	0.419	0.330
			0.75	0.280	0.175	0.175
			0.85	0.380	0.280	0.280
1	1.0000	9/16	1.00	--- ₁	0.380	0.380
			0.85	0.380	0.280	0.280

The use of short length set screws shown in the above table may result in failure of the hex key or mating threads because the key engagement is less than optimal.

Notes:

1. These products are included in the previous tables in this section.
2. These sizes cannot be manufactured due to point configuration and short length.
3. Cup Angle may be 118° or 130° +/- 5°, depending on manufacturing process and screw length.