

# Socket Set Screws #0 to #10

Inch



Fasten collars, sheaves, gears, knobs on shafts. Locate machine parts. Self-locking knurled cup point is standard. Special Points like Flat, Dog, Cone & Plain Cup are also available.

## Equivalent Standards

ASME B18.3, BS 2470

## Mechanical Properties

Material : ASTM F912

Dimensions : ASME/ANSI B18.3

Hardness : Rc 45-53

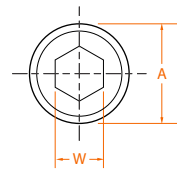
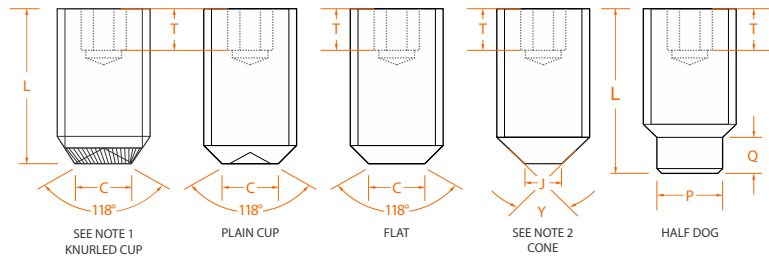
Thread : 3A

## Length Tolerance

Diameter	.63 and under	over .63 to 2"	over 2" to 6"	over 6"
	All	±.01	±.02	±.03

## NOTE

1. Knurled Cup Point: When length equals nominal dia or less, included angle is 130°.
2. Cone Cup Point: When length equals nominal diameter or less, included angle is 118°. (#4 x 1/8 and #8 x 3/16 also have 118° angle)



## Product Dimensions

nom. size	Threads per inch.		Head Diameter A			Hex Socket Size W C		
	UNRC	UNRF	max	UNRC	UNRF	nom	max	min
#0	-	80	.0600	-	.0568	.028	.033	.027
#1	64	72	.0730	.0692	.0695	.035	.040	.033
#2	56	64	.0860	.0819	.0822	.035	.047	.039
#3	48	56	.0990	.0945	.0949	.050	.054	.045
#4	40	48	.1120	.1069	.1075	.050	.061	.051
#5	40	44	.1250	.1199	.1202	.0625	.067	.057
#6	32	40	.1380	.1320	.1329	.0625	.074	.064
#8	32	36	.1640	.1580	.1585	.0781	.087	.076
#10	24	32	.1900	.1825	.1840	.0937	.102	.088

nom. size	Q		T*	P		Recommended** seating torque In-lbs	screw length nom.
	max	min	min	max	min		
#0	.017	.013	.035	.040	.037	1.0	3/32
#1	.021	.017	.035	.049	.045	1.8	1/8
#2	.024	.020	.035	.057	.053	1.8	1/8
#3	.027	.023	.060	.066	.062	5	5/32
#4	.030	.026	.075	.075	.070	5	5/32
#5	.033	.027	.075	.083	.078	10	5/32
#6	.038	.032	.075	.092	.087	10	3/16
#8	.043	.037	.075	.109	.103	20	3/16
#10	.049	.041	.105	.127	.120	36	3/16

\*CAUTION: Values shown in column T are for minimum stock length cup point screws. Screws shorter than nominal minimum length shown do not have sockets deep enough to utilize full key capability which can result in failure of socket, key or mating threads.

\*\*Torque application only to minimum, nominal lengths shown or longer.

# Socket Set Screws

## 1/4 to 1 1/2

Inch



Fasten collars, sheaves, gears, knobs on shafts. Locate machine parts. Self-locking knurled cup point is standard. Special Points like Flat, Dog, Cone & Plain Cup are also available.

### Equivalent Standards

ASME B18.3, BS 2470

### Mechanical Properties

Material : ASTM F912 – alloy steel

Dimensions : ASME/ANSI B18.3

Hardness : Rc 45-53 (alloy steel only),

Thread : 3A

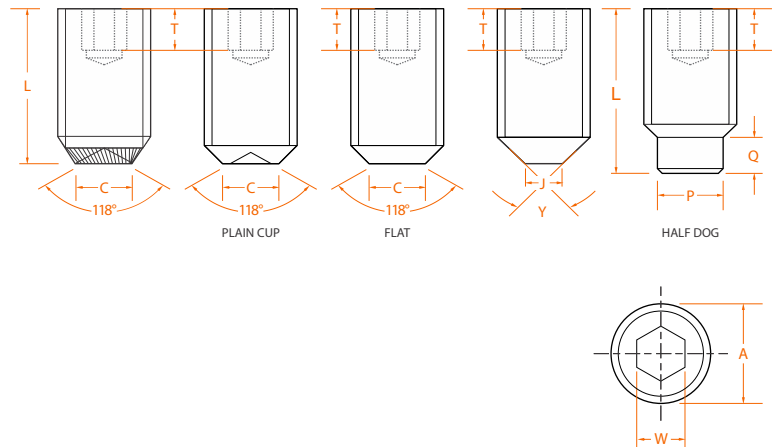
### Length Tolerance

Diameter	.63 and under	over .63 to 2"	over 2" to 6"	over 6"
All	±.01	±.02	±.03	±.06

### NOTE

1. Cone Cup Point: When length equals nominal diameter or less, included angle is 118°. (#4 x 1/8 and #8 x 3/16 also have 118° angle)

2. Knurled Cup Point: When length equals nominal dia or less, included angle is 130°.



### Product Dimensions

nom. size	Thread per inch.		Head Diameter A			Hex Socket Size		
	UNRC	UNRF	max	UNRC	UNRF	W nom	C	
1/4	20	28	.2500	.2419	.2435	.125	.132	.118
5/16	18	24	.3125	.3038	.3053	.1562	.172	.156
3/8	16	24	.3750	.3656	.3678	.1875	.212	.194
7/16	14	20	.4375	.4272	.4294	.2187	.252	.232
1/2	13	20	.5000	.4891	.4919	.250	.291	.270
9/16	12	18	.5625	.5511	.5538	.250	.332	.309
5/8	11	18	.6250	.6129	.6163	.3125	.371	.347
3/4	10	16	.7500	.7371	.7406	.375	.450	.425
7/8	9	14	.8750	.8611	.8647	.500	.530	.502
1	8	12	1.0000	.9850	.9886	.5625	.609	.579
1 1/8	7	12	1.1250	1.1086	1.1136	.5625	.689	.655
1 1/4	7	12	1.2500	1.2336	1.2386	.625	.767	.733
1 3/8	6	12	1.3750	1.3568	1.3636	.625	.848	.808
1 1/2	6	12	1.5000	1.4818	1.4886	.750	.926	.886

nom. size	Q		T*	P		Recommended ** seating torque In-lbs	screw length nom.
	max	min	min	max	min		
1/4	.067	.059	.105	.156	.149	87	5/16
5/16	.082	.074	.140	.203	.195	165	3/8
3/8	.099	.089	.140	.250	.241	290	7/16
7/16	.114	.104	.190	.297	.287	430	1/2
1/2	.130	.120	.210	.344	.334	620	9/16
9/16	.146	.136	.265	.390	.379	620	5/8
5/8	.164	.148	.265	.469	.456	1,325	11/16
3/4	.196	.180	.330	.562	.549	2,400	3/4
7/8	.227	.211	.450	.656	.642	3,600	3/4
1	.260	.240	.550	.750	.734	5,000	7/8
1 1/8	.291	.271	.650	.844	.826	7,200	1
1 1/4	.323	.303	.700	.938	.920	9,600	1 1/8
1 3/8	.354	.334	.700	1.031	1.011	9,600	1 1/4
1 1/2	.385	.365	.750	1.125	1.105	11,320	1 1/4

\*CAUTION: Values shown in column T are for minimum stock length cup point screws. Screws shorter than nominal minimum length shown do not have sockets deep enough to utilize full key capability which can result in failure of socket, key or mating threads.

\*\*Torque application only to minimum, nominal lengths shown or longer.



## Torsional and axial holding power

(Based on Recommended Seating Torques – Inch-Lbs.)

Tabulated axial and torsional holding powers are typical strengths and should be used accordingly, with specific safety factors appropriate to the given application and load conditions.

Thread Size	Seating Torque lbf.in.	Axial Holding Power (lbf)	Shaft diameter (shaft hardness Rc 15 to Rc 35) Torsional Holding Power lbf.in.												
			1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	
#0	1.0	50	1.5	2.3	3.1	3.9	4.7	5.4	6.2						
#1	1.8	65	2.0	3.0	4.0	5.0	6.1	7.1	8.1	10.0					
#2	1.8	85	2.6	4.0	5.3	6.6	8.0	9.3	10.6	13.2	16.0				
#3	5.0	120	3.2	5.6	7.5	9.3	11.3	13.0	15.0	18.7	22.5	26.3			
#4	5.0	160		7.5	10.0	12.5	15.0	17.5	20.0	25.0	30.0	35.0	40.0		
#5	10.0	200			12.5	15.6	18.7	21.8	25.0	31.2	37.5	43.7	50.0	56.2	
#6	10.0	250				19.0	23.0	27.0	31.0	39.0	47.0	55.0	62.0	70.0	
#8	20.0	385				30.0	36.0	42.0	48.0	60.0	72.0	84.0	96.0	108.0	
#10	36.0	540					51.0	59.0	68.0	84.0	101.0	118.0	135.0	152.0	
1/4	87.0	1,000							125.0	156.0	187.0	218.0	250.0	281.0	
5/16	165.0	1,500								234.0	280.0	327.0	375.0	421.0	
3/8	290.0	2,000									375.0	437.0	500.0	562.0	
7/16	430.0	2,500										545.0	625.0	702.0	
1/2	620.0	3,000											750.0	843.0	
9/16	620.0	3,500												985.0	

Thread Size	Seating Torque lbf.in.	Axial Holding Power (lbf)	Shaft diameter (shaft hardness Rc 15 to Rc 35) Torsional Holding Power lbf.in.												
			5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3	3 1/2	4	
#5	10.0	200	62												
#6	10.0	250	78	94	109										
#8	20.0	385	120	144	168	192									
#10	36.0	540	169	202	236	270	338								
1/4	87.0	1,000	312	375	437	500	625	750							
5/16	165.0	1,500	468	562	656	750	937	1125	1310	1500					
3/8	290.0	2,000	625	750	875	1000	1250	1500	1750	2000					
7/16	430.0	2,500	780	937	1095	1250	1560	1875	2210	2500	3125				
1/2	620.0	3,000	937	1125	1310	1500	1875	2250	2620	3000	3750	4500			
9/16	620.0	3,500	1090	1310	1530	1750	2190	2620	3030	3500	4370	5250	6120		
5/8	1,325.0	4,000	1250	1500	1750	2000	2500	3000	3750	4000	5000	6000	7000	8000	
3/4	2,400.0	5,000		1875	2190	2500	3125	3750	4500	5000	6250	7500	8750	10000	
7/8	5,200.0	6,000			2620	3000	3750	4500	5250	6000	7500	9000	10500	12000	
1	7,200.0	7,000				3500	4375	5250	6120	7000	8750	10500	12250	14000	