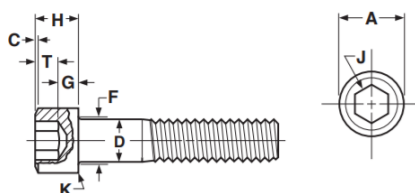


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SOCKET HEAD CAP SCREWS – 18-8 STAINLESS STEEL

The following Specification Sheet applies to all **18-8 Stainless Steel Socket Head Cap Screws** in our **SHC** series of screws.



SOCKET HEAD CAP SCREWS											ASME B18.3-2012		
Basic Screw Diam.	D		A		H		C	J	F		T	G	K
	Body Diameter		Head Diameter		Head Height		Top Chamfer or Radius	Hex Socket Size	Fillet Juncture Diameter at Bearing Surface		Key Engage- ment	Wall Thick- ness	Bottom Chamfer or Radius
	Max	Min	Max	Min	Max	Min	Max	Nom	Max	Min	Min	Min	Max
6	0.1380	0.1329	0.226	0.218	0.138	0.134	0.013	7/64	0.158	0.144	0.064	0.047	0.008
8	0.1640	0.1585	0.270	0.262	0.164	0.159	0.014	9/64	0.188	0.172	0.077	0.056	0.008
10	0.1900	0.1840	0.312	0.303	0.190	0.185	0.018	5/32	0.218	0.202	0.090	0.065	0.008
1/4	0.2500	0.2435	0.375	0.365	0.250	0.244	0.025	3/16	0.278	0.261	0.120	0.095	0.010
5/16	0.3125	0.3053	0.469	0.457	0.312	0.306	0.033	1/4	0.347	0.329	0.151	0.119	0.010
3/8	0.3750	0.3678	0.562	0.550	0.375	0.368	0.040	5/16	0.415	0.397	0.182	0.143	0.010
Tolerance on Length		Nominal Screw Size		Nominal Screw Length									
				Up to 1 in., Incl.		Over 1 in. to 2-1/2 in., Incl.		Over 2-1/2 to 6 in., Incl.		Over 6 in.			
				6 thru 3/8, Incl.		-0.03		-0.04		-0.06		-0.12	

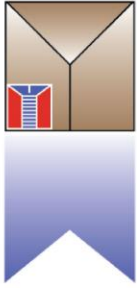
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SHEAR AND TENSILE STRENGTH – STAINLESS STEEL

nom. size	STAINLESS STEEL						
	tensile strength pounds		minimum tensile strength	minimum yield strength	single shear strength	recommended seat- ing torque in-lbs	
	UNRC	UNRF				UNRC plain	UNRF plain
6	864	964	95,000	30,000	670	15	17
8	1,330	1,400	95,000	30,000	850	28	29
10	1,660	1,900	95,000	30,000	1,280	40	45
1/4	3,020	3,460	95,000	30,000	2,200	95	110
5/16	4,980	5,510	95,000	30,000	3,450	170	190
3/8	7,360	8,350	95,000	30,000	4,470	300	345

Description	An externally threaded fastener with unified threads, a cylindrical head with a flat chamfered top surface, knurled cylindrical sides and hexagonal recess. It is made from austenitic stainless steel .
Applications/ Advantages	Although stainless socket cap screws have significantly less tensile and yield strength than alloy sockets, they have superior resistance to corrosion. They retain their mechanical and performance capabilities at higher than ambient temperatures.
Material	<i>Cap screws shall be made from one of the following stainless alloys: 302, 303, 304, 305, 384, XM1 or XM7.</i>
Heat Treatment	The austenitic alloys develop their strength through work hardening during the fastener manufacturing process, as seen from the hardness properties below. The only heat treatment normally available on austenitic stainless alloys is annealing, which is done at approximately 1900°F to a dead soft condition and is not normally thermally reversible.
Hardness	Rockwell B80 minimum
	<i>Cap screws of a length 3D or greater, where D equals the nominal diameter of the screw, are subject to tensile strength, yield strength, elongation and reduction of area testing.</i>
Tensile Strength	80,000 psi. minimum
Yield Strength	30,000 psi. minimum
Elongation	10% minimum (applies to machined specimens of lengths at least 4D where D equals the nominal diameter of the screw)
Reduction of Area	30% minimum (applies to machined specimens)

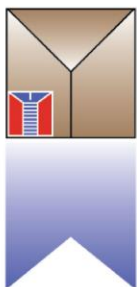
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LENGTH SPECIFICATIONS

BODY AND GRIP LENGTHS OF SOCKET HEAD CAP SCREWS																		ASME B18.3-2012
Nom. Size D	0		1		2		3		4		5		6		8		10	
Basic Thread Length L _t	0.500		0.625		0.625		0.625		0.750		0.750		0.750		0.875		0.875	
Nominal Length L	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B
1.00	0.50	0.44	0.25	0.17	0.25	0.16	0.25	0.15	0.25	0.12	0.25	0.12						
1.25	0.75	0.69	0.62	0.55	0.62	0.54	0.62	0.52	0.25	0.12	0.25	0.12	0.50	0.34	0.38	0.22	0.38	0.17
1.50			0.88	0.80	0.88	0.79	0.88	0.77	0.75	0.62	0.75	0.62	0.50	0.34	0.38	0.22	0.38	0.17
1.75					1.12	1.04	1.12	1.02	0.75	0.62	0.75	0.62	1.00	0.84	0.88	0.72	0.88	0.67
2.00							1.38	1.27	1.25	1.12	1.25	1.12	1.00	0.84	0.88	0.72	0.88	0.67
2.25									1.25	1.12	1.25	1.12	1.50	1.34	1.38	1.22	1.38	1.17
2.50											1.75	1.62	1.50	1.34	1.38	1.22	1.38	1.17
2.75													2.00	1.84	1.88	1.72	1.88	1.67
3.00															1.88	1.72	1.88	1.67
3.50																	2.38	2.17

Nom. Size D	1/4		5/16		3/8		7/16		1/2		5/8		3/4		7/8		1	
Basic Thread Length L _t	1.000		1.125		1.250		1.375		1.500		1.750		2.000		2.250		2.500	
Nominal Length L	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B
1.50	0.50	0.25																
1.75	0.50	0.25	0.62	0.35	0.50	0.19												
2.00	1.00	0.75	0.62	0.35	0.50	0.19	0.62	0.27										
2.25	1.00	0.75	1.12	0.85	1.00	0.69	0.62	0.27	0.75	0.36								
2.50	1.50	1.25	1.12	0.85	1.00	0.69	1.12	0.77	0.75	0.36	0.75	0.30						
2.75	1.50	1.25	1.62	1.35	1.50	1.19	1.12	0.77	0.75	0.36	0.75	0.30						
3.00	2.00	1.75	1.62	1.35	1.50	1.19	1.62	1.27	1.50	1.12	0.75	0.30	1.00	0.50				
3.25	2.00	1.75	2.12	1.85	2.00	1.69	1.62	1.27	1.50	1.12	1.50	1.04	1.00	0.50	1.00	0.44		
3.50	2.50	2.25	2.12	1.85	2.00	1.69	2.12	1.77	1.50	1.12	1.50	1.04	1.00	0.50	1.00	0.44	1.00	0.38
4.00	3.00	2.75	2.62	2.35	2.50	2.19	2.62	2.27	2.25	1.86	2.25	1.80	2.00	1.50	1.00	0.44	1.00	0.38
4.50	3.50	3.25	3.12	2.85	3.00	2.69	3.12	2.77	3.00	2.62	2.25	1.80	2.00	1.50	2.00	1.44	2.00	1.38
5.00	4.00	3.75	3.62	3.35	3.50	3.19	3.62	3.27	3.00	2.62	3.00	2.54	3.00	2.50	2.00	1.44	2.00	1.38
5.50			4.12	3.85	4.00	3.69	4.12	3.77	3.75	3.36	3.75	3.30	3.00	2.50	3.00	2.44	3.00	2.38
6.00			4.62	4.35	4.50	4.19	4.62	4.27	4.50	4.12	3.75	3.30	4.00	3.50	3.00	2.44	3.00	2.38
6.50					5.00	4.69	5.12	4.77	4.50	4.12	4.50	4.04	4.00	3.50	4.00	3.44	4.00	3.38
7.00					5.50	5.19	5.62	5.27	5.25	4.86	5.25	4.80	5.00	4.50	4.00	3.44	4.00	3.38
8.00							6.62	6.27	6.00	5.62	6.00	5.54	6.00	5.50	5.00	4.44	5.00	4.38
9.00							7.62	7.27	7.00	6.62	6.75	6.30	7.00	6.50	6.00	5.44	6.00	5.38
10.00									8.00	7.62	7.75	7.30	8.00	7.50	7.00	6.44	7.00	6.38
11.00											9.25	8.80	9.00	8.50	8.00	7.44	8.00	7.38
12.00											10.25	9.80	10.00	9.50	9.00	8.44	9.00	8.38

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