



LOW HEAD SOCKET CAP SCREWS - ALLOY STEEL												Blue Devil®	
Nominal Size	D Basic Screw Diameter	A Head Diameter		H Head Height		J Hex Socket Size	T Key Engagement		F Fillet		Tensile Strength Pounds Min.		Tightening Torque Inch Pounds
		Max	Min	Max	Min		Min	Max	Min	UNRC	UNRF		
	8	0.1640	.270	.265	.082	.079	.0781	.060	.012	.007	2,310	2,440	
10	0.1900	.312	.307	.095	.092	.0938	.072	.014	.009	2,890	3,300	33.5	
1/4	0.2500	.375	.369	.125	.121	.1250	.094	.014	.009	5,250	6,000	77.9	
5/16	0.3125	.437	.431	.156	.152	.1562	.120	.017	.012	8,650	9,550	156.0	
3/8	0.3750	.562	.556	.187	.182	.1875	.145	.020	.015	12,800	14,450	273.0	
1/2	0.5000	.750	.743	.250	.244	.2500	.184	.026	.020	23,400	26,350	615.0	
Tolerance on Length		Nominal Screw Size		Nominal Screw Length									
				Up to 1 in., Incl.			Over 1 in. to 2-1/2 in., Incl.						
		0 thru 3/8		-0.03			-0.04						
		1/2		-0.03			-0.06						

Description	Similar to a standard alloy socket cap screw except the head height is 50% of the standard's and the socket size is smaller. The low-head style is supplied only in plain steel.
Applications/ Advantages	Used in applications where the limited clearance would not accommodate the head height of a standard socket cap screw. Also used in counterbored holes of material too thin for a regular socket cap screw. However, because of their design, they cannot withstand the same preloads as a standard socket head.
Material	Cap screws shall be made from an alloy steel which conforms to the following chemical composition requirements (per product analysis)-- <i>Carbon</i> : 0.31% minimum; <i>Phosphorus</i> : 0.040% maximum; <i>Sulfur</i> : 0.045% maximum. Also, one or more of the following elements shall be present in sufficient quantity to meet the performance requirements listed below: chromium, nickel, molybdenum or vanadium.
Heat Treatment	Cap screws shall be heat treated by oil quenching from above the transformation temperature and then tempered at a temperature not lower than 650°F.
Hardness	Rockwell C38 minimum
Tensile Strength	170,000 psi. minimum
Yield Strength	150,000 psi. minimum
Elongation	10% minimum (applies to machined specimens of length at least 4D where D equals the nominal diameter of the screw)
Reduction of Area	33% minimum (applies to machined specimens)