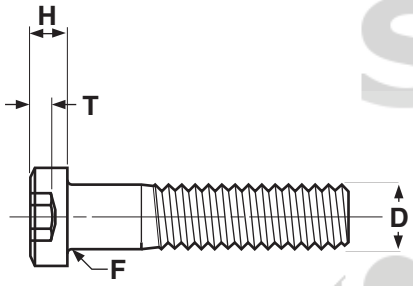
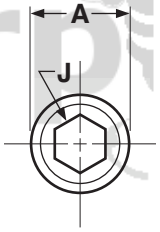
LOW HEAD CAP SCREWS

Alloy Steel





Low Head Socket Cap Screws - Alloy Steel

ASME B18.3 2012
Blue Devil®

Nominal Size	D	F		A		H		J	T	Tensile Strength Pounds Min.		Tightening Torque Inch Pounds
	Basic Screw Diameter	Body Diameter		Head Diameter		Head Height		Hex Socket Size	Key Engagement			
		Max	Min	Max	Min	Max	Min		Min	UNRC	UNRF	
8	0.1640	.1640	.1585	.270	.265	.085	.079	.078	.060	2,310	2,440	19.4
10	0.1900	.1900	.1840	.312	.307	.098	.092	.094	.072	2,890	3,300	33.5
1/4	0.2500	.2500	.2435	.375	.369	.127	.121	.125	.094	5,250	6,000	77.9
5/16	0.3125	.3125	.3053	.437	.431	.158	.152	.156	.110	8,650	9,550	156.0
3/8	0.3750	.3750	.3678	.562	.556	.192	.182	.188	.115	12,800	14,450	273.0
1/2	0.5000	.5000	.4919	.750	.743	.254	.244	.250	.151	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 accomodate 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)-- ***Carbon***: 0.31% minimum; ***Phosphorus***: 0.040% maximum; ***Sulfur***: 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 lengths at least 4D where D equals the nominal diameter of the screw)
Reduction of Area	33% minimum (applies to machined specimens)