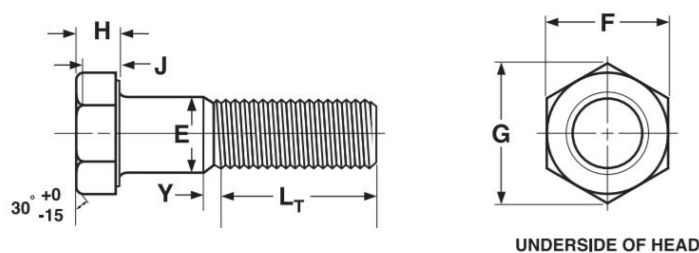


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An **AMERICAN** Source For Premier
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HEX BOLT – DOMESTIC, 18-8 STAINLESS STEEL, AND 316 STAINLESS STEEL

The following Specification Sheet applies to all **Hex Bolt – Domestic, 18-8 Stainless Steel, and 316 Stainless Steel** in our **SBHC and JSBHC** series.



HEX BOLTS															
Nominal or Basic Product Diameter		E		F			G		H			J	L _T		Y
		Body Diameter		Width Across Flats			Width Across Corners		Head Height			Wrenching Height	Thread Length		Transition Thread Length
													For Screw Lengths ≤ 6 in.	For Screw Lengths > 6 in.	
		Max	Min	Basic	Max	Min	Max	Min	Basic	Max	Min	Min	Ref	Ref	Max
1/4	0.2500	0.2500	0.2450	7/16	0.438	0.428	0.505	0.488	5/32	0.163	0.150	0.106	0.750	1.000	0.250
5/16	0.3125	0.3125	0.3065	1/2	0.500	0.489	0.577	0.557	13/64	0.211	0.195	0.140	0.875	1.125	0.278
3/8	0.3750	0.3750	0.3690	9/16	0.562	0.551	0.650	0.628	15/64	0.243	0.226	0.160	1.000	1.250	0.312
7/16	0.4375	0.4375	0.4305	5/8	0.625	0.612	0.722	0.698	9/32	0.291	0.272	0.195	1.125	1.375	0.357
1/2	0.5000	0.5000	0.4930	3/4	0.750	0.736	0.866	0.840	5/16	0.323	0.302	0.215	1.250	1.500	0.385
5/8	0.6250	0.6250	0.6170	15/16	0.938	0.922	1.083	1.051	25/64	0.403	0.378	0.269	1.500	1.750	0.455
3/4	0.7500	0.7500	0.7410	1-1/8	1.125	1.100	1.299	1.254	15/32	0.483	0.455	0.324	1.750	2.000	0.500
1	1.0000	1.0000	0.9900	1-1/2	1.500	1.469	1.732	1.675	39/64	0.627	0.591	0.416	2.250	2.500	0.625

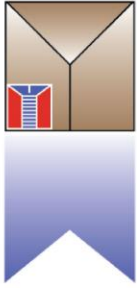
Metallics

229 Cross Street
Bristol, CT 06010

www.metallics.us

Phone: 860 589-4186 Toll Free: 800 243-8272

Fax: 860 584-1008 Toll Free Fax: 800 831-9358



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Description	18-8 and 316 stainless steel cap screws are both made from austenitic alloys as described below.
Applications/ Advantages	18-8: Used in products that require general atmospheric corrosion resistance, such as chemical and food-processing equipment. Some chemical environments may require special corrosion resistant materials and precautions. 316: The molybdenum content gives this type of stainless even greater corrosion resistance than 18-8 as well as superior strength at high temperatures.
Material	18-8: A cap screw made from one of the following austenitic alloys: 303, 303Se, 304, XM7, all of which are characterized as having a chromium content of 17-19% and nickel content of 8-10%. 316: A cap screw made from 316 stainless steel, an austenitic alloy, which differs from 18-8 by its molybdenum content (2-3%) and a higher nickel content (10-14%).
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	1/4 through 5/8 in. diameter: Rockwell B95 - C32 3/4 through 1 in. diameter: Rockwell B80 - C32
Yield Strength*	1/4 through 5/8 in. diameter, 2.25D and longer: 65,000 psi minimum 3/4" (2.25D & longer) & 7/8 through 1 in. diameter (3D & longer): 45,000 psi. minimum
Tensile Strength	1/4 through 5/8 in. diameter, 2.25D and longer: 100,000 - 150,000 psi 3/4" (2.25D & longer) & 7/8 through 1 in. diameter (3D & longer): 85,000 - 140,000 psi.
Elongation in 4D*	1/4 through 5/8 in. diameter: 20% minimum; 3/4 through 1 in. diameter: 25% minimum.

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