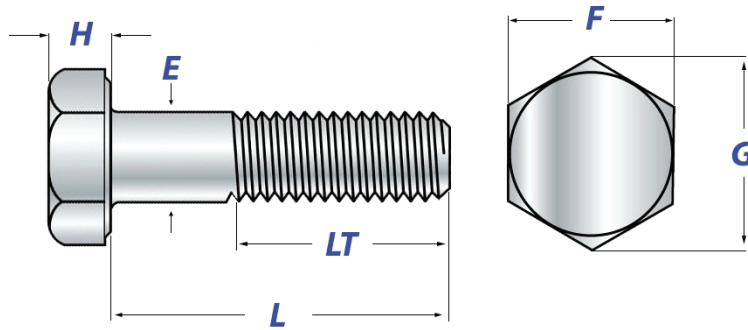


PRODUCT DATA SHEET

HEX HEAD CAP SCREWS

1.0 DIMENSIONS: ASME B18.2.1



NOMINAL SIZE OR BASIC PRODUCT DIAMETER	E		F		G		H		LT	
	BODY DIAMETER		WIDTH ACROSS FLATS		WIDTH ACROSS CORNERS		HEAD HEIGHT		THREAD LENGTH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	FOR SCREW LENGTHS 6 INCHES AND SHORTER REF	FOR SCREW LENGTHS OVER 6 INCHES REF
1/4	0.2500	0.2450	0.438	0.428	0.505	0.488	0.163	0.150	0.750	1.000
5/16	0.3125	0.3065	0.500	0.489	0.577	0.557	0.211	0.195	0.875	1.125
3/8	0.3750	0.3690	0.562	0.551	0.650	0.628	0.243	0.226	1.000	1.250
7/16	0.4375	0.4305	0.625	0.612	0.722	0.698	0.291	0.272	1.125	1.375
1/2	0.5000	0.4930	0.750	0.736	0.866	0.840	0.323	0.302	1.250	1.500
9/16	0.5625	0.5545	0.812	0.798	0.938	0.910	0.371	0.348	1.375	1.625
5/8	0.6250	0.6170	0.938	0.922	1.083	1.051	0.403	0.378	1.500	1.750
3/4	0.7500	0.7410	1.125	1.100	1.299	1.254	0.483	0.455	1.750	2.000
7/8	0.8750	0.8660	1.312	1.285	1.516	1.465	0.563	0.531	2.000	2.250
1	1.0000	0.9900	1.500	1.469	1.732	1.675	0.627	0.591	2.250	2.500
1-1/8	1.1250	1.1140	1.688	1.631	1.949	1.859	0.718	0.658	2.500	2.750
1-1/4	1.2500	1.2390	1.875	1.812	2.165	2.066	0.813	0.749	2.750	3.000
1-3/8	1.3750	1.3630	2.062	1.994	2.382	2.273	0.878	0.810	3.000	3.250
1-1/2	1.5000	1.4880	2.250	2.175	2.598	2.480	0.974	0.902	3.250	3.500
1-3/4	1.7500	1.7380	2.625	2.538	3.031	2.893	1.134	1.054	3.750	4.000
2	2.0000	1.9880	3.000	2.900	3.464	3.306	1.263	1.175	4.250	4.500
2-1/4	2.2500	2.2380	3.375	3.262	3.897	3.719	1.423	1.327	—	5.000
2-1/2	2.5000	2.4880	3.750	3.625	4.330	4.133	1.583	1.479	—	5.500

Notes: Thread Class of Fit: Sizes up to 1 inch: 3A. Above 1 inch: 2A. Zinc plated screws above 1 inch must meet 3A GO and 2A NO GO thread ring gage condition.

PRODUCT DATA SHEET

HEX HEAD CAP SCREWS

2.0 Mechanical Properties (For Full Size Screw Testing)

2.1 Steel - SAE J429

Classification		Rockwell Hardness	Proof Load Strength	Tensile Strength Minimum	Grade Marking
Grade	Nominal Size				
2	1/4 thru 3/4 (6 inch & shorter)	B80 - B100	55,000 PSI	74,000 PSI	NONE
	1/4 thru 3/4 (longer than 6 inch)	B70 - B100	33,000 PSI	60,000 PSI	
	Over 3/4 thru 1-1/2	B70 - B100	33,000 PSI	60,000 PSI	
5	1/4 thru 1	C25 - C34	85,000 PSI	120,000 PSI	3 Radial Lines 120 Degrees Apart
	Over 1 thru 1-1/2	C19 - C30	74,000 PSI	105,000 PSI	
8	1/4 thru 1-1/2	C33 - C39	120,000 PSI	150,000 PSI	6 Radial Lines 60 Degrees Apart

Notes: Mechanical Properties for sizes above 1-1/2" derived from SAE J429 or ASTM A354 for appropriate grades. The screws will also have manufacturer's marking on the head in addition to the grade marking as mentioned in the table.

2.2 Stainless Steel - ASTM F593

Classification		Condition	Tensile Strength KSI	Yield Strength KSI	Rockwell Hardness	Grade Marking
Type	Nominal Size					
304 (18-8)	1/4 - 5/8 incl	CW1	100 - 150	65	B95 - C32	F593C
	3/4 - 1-1/2 incl	CW2	85 - 140	45	B80 - C32	F593D
316	1/4 - 5/8 incl	CW1	100 - 150	65	B95 - C32	F593G
	3/4 to 1-1/2 incl	CW2	85 - 140	45	B80 - C32	F593H

(1ksi = 1000 psi)

Notes: The screws will also have manufacturer's marking on the head in addition to the grade marking as mentioned in the table. Screws will be Passivated.

3.0 Surface Finish: Plain / Zinc. Zinc plating details given in table below.

3.1 Zinc Plating

Properties	Zinc	Zinc Yellow	Zinc Yellow
Type	Trivalent (Cr + 3)	Hexavalent (Cr + 6)	Trivalent (Cr + 3)
Color	Clear	Yellow	Yellow
Minimum Coating Thickness	0.0001" / 3 Microns or 0.0002" / 5 Microns	0.0001" / 3 Microns or 0.0002" / 5 Microns	0.0001" / 3 Microns or 0.0002" / 5 Microns
Specification	ASTM F1941 / F1941M. Fe/Zn 3AN or Fe/Zn 5AN ASTM B633. SC1. (0.0002" or 5 microns) Type III.	ASTM F1941 / F1941M. Fe/Zn 3C or Fe/Zn 5C	ASTM F1941 / F1941M Fe/Zn 3CN or Fe/Zn 5CN