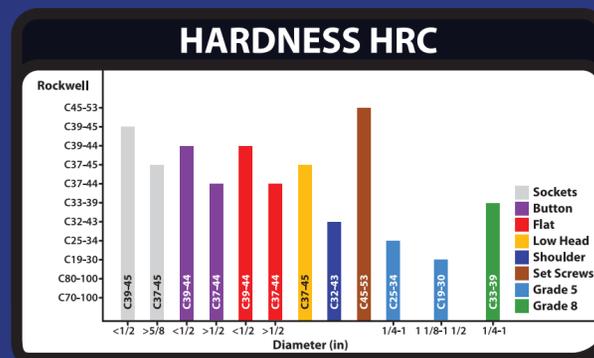
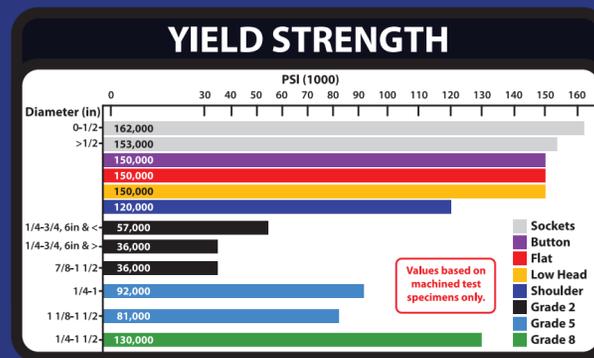
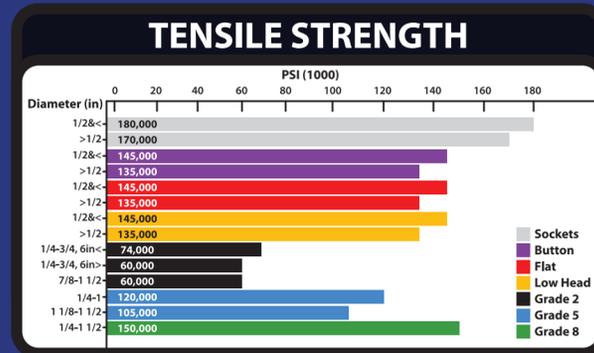
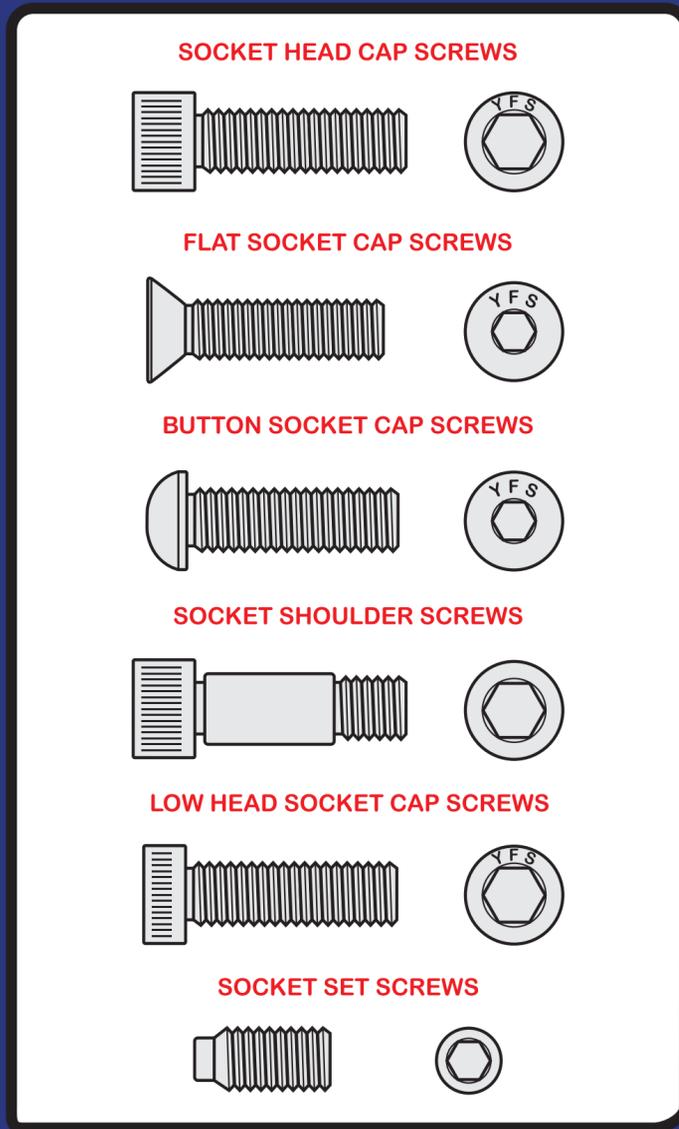




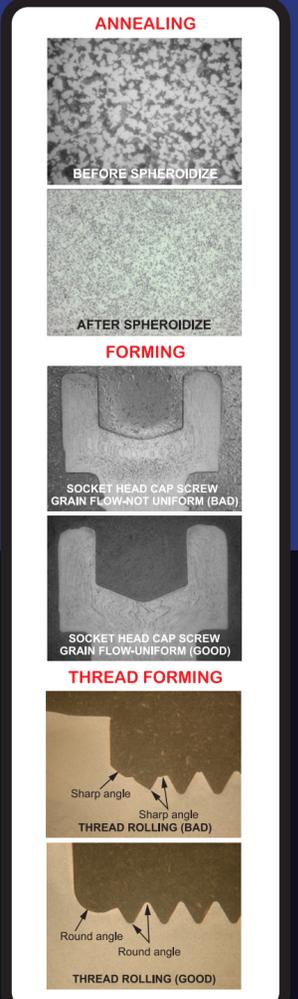
Fastener Depot

Socket Screws



APPLICATIONS

Description	Use / Application
Socket Screws	
Socket Head Cap Screws	Used in fastening or clamping components together, die castings, and machine assemblies among other use.
Flat Socket Cap Screws	Used in applications where counter sinking is desired. Used when a flush finish is required for either safety or appearance requirements.
Button Socket Cap Screws	Used when appearance is a factor and clamping material is too thin for counter sink. Examples are end panels, display shelving, and carts.
Socket Shoulder Screws	Used in many tool and die applications as well as stationary guides, pulley shafts, moving shafts, or pivots.
Low Head Socket Cap Screws	Used in applications where not enough clearance is available for a standard socket head cap screw.
Dowel Pins	Formed ends, controlled heat treat; close tolerances; standard for die work; also used as bearings, gages, precision parts, etc.
Pipe Plugs	3/4" taper (dry seal to help prevent leaks). 7/8" taper (flush seal to seat plug level with standard tapped hole).
Set Screws (Multiple Point Types)	
Cup Point Set Screws	Used against hardened shafts or where frequent adjustments are needed and no locking point is required.
Knurl Cup Set Screws	Similar to cup point but where vibration might be a problem. Knurls lock onto seating material and prevent screw from loosening.
Cone Point Set Screws	Used for permanent location of machine parts to shafts. Also used for pivots and fine adjustments.
Oval Point Set Screws	The oval point is used where frequent adjustments may be required. It may be used in applications where the point contacts the mating part at an angle.
Half Dog Set Screws	Used for permanent location of one part to another. Point is often set into a drilled hole. May sometimes take the place of a dowel pin.
Full Dog Set Screws	Used for permanent location of one part to another. Point is often set into a drilled hole. May sometimes take the place of a dowel pin.
Flat Point Set Screws	Used when parts must frequently be reset. Causes very minor damage to part it seats against.

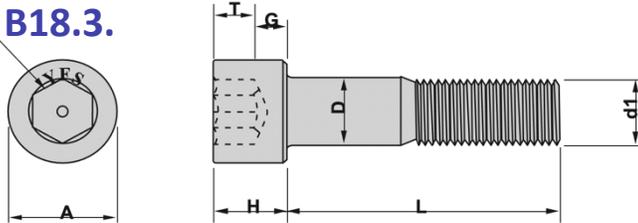


DISCLAIMER: INFORMATION PROVIDED IS FOR GENERAL REFERENCE ONLY

BUTTONS & FLAT SPEC: ANSI B18.3-1986 AND ASTM F835 | SOCKETS & SHOULDERS SPEC: ANSI B18.3-1986 AND ASTM A574-92A | DOWEL PINS: ASME B18.8.2 | PIPE PLUGS: ANSI B1.20.3-1976

Hexagon Socket Head Cap Screws (1960 Series) - Inch Series

1.0 Dimensions: ASME B18.3.



Nominal Size or Basic Product Diameter d1	D		A		H		J	T	G
	Body Diameter		Head Diameter		Head Height		Key Size	Key Engagement	Wall Thickness
	Max	Min	Max	Min	Max	Min	Nom	Min	Min
# 0	0.0600	0.0568	0.096	0.091	0.060	0.057	0.050	0.025	0.020
# 1	0.0730	0.0695	0.118	0.112	0.073	0.070	1/16	0.031	0.025
# 2	0.0860	0.0822	0.140	0.134	0.086	0.083	5/64	0.038	0.029
# 3	0.0990	0.0949	0.161	0.154	0.099	0.095	5/64	0.044	0.034
# 4	0.1120	0.1075	0.183	0.176	0.112	0.108	3/32	0.051	0.038
# 5	0.1250	0.1202	0.205	0.198	0.125	0.121	3/32	0.057	0.043
# 6	0.1380	0.1329	0.226	0.216	0.138	0.134	7/64	0.064	0.047
# 8	0.1640	0.1585	0.270	0.257	0.164	0.159	9/64	0.077	0.056
# 10	0.1900	0.1840	0.312	0.298	0.190	0.185	5/32	0.090	0.065
1/4	0.2500	0.2435	0.375	0.354	0.250	0.244	3/16	0.120	0.095
5/16	0.3125	0.3053	0.469	0.446	0.312	0.306	1/4	0.151	0.119
3/8	0.3750	0.3678	0.562	0.540	0.375	0.368	5/16	0.182	0.143
7/16	0.4375	0.4294	0.656	0.631	0.438	0.430	3/8	0.213	0.166
1/2	0.5000	0.4919	0.750	0.725	0.500	0.492	3/8	0.245	0.190
5/8	0.6250	0.6163	0.938	0.914	0.625	0.616	1/2	0.307	0.238
3/4	0.7500	0.7406	1.125	1.094	0.750	0.740	5/8	0.370	0.285
7/8	0.8750	0.8647	1.312	1.291	0.875	0.864	3/4	0.432	0.333
1	1.0000	0.9886	1.500	1.476	1.000	0.988	3/4	0.495	0.380
1-1/8	1.1250	1.1086	1.688	1.665	1.125	1.111	7/8	0.557	0.428
1-1/4	1.2500	1.2336	1.875	1.852	1.250	1.236	7/8	0.620	0.475
1-3/8	1.3750	1.3568	2.062	2.038	1.375	1.360	1	0.682	0.523
1-1/2	1.5000	1.4818	2.250	2.224	1.500	1.485	1	0.745	0.570
1-3/4	1.7500	1.7295	2.625	2.597	1.750	1.734	1-1/4	0.870	0.665
2	2.0000	1.9780	3.000	2.970	2.000	1.983	1-1/2	0.995	0.760
2-1/4	2.2500	2.2280	3.375	3.344	2.250	2.232	1-3/4	1.120	0.855
2-1/2	2.5000	2.4762	3.750	3.717	2.500	2.481	1-3/4	1.245	0.950

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 & 2A NO GO thread ring gage condition.

Hexagon Socket Head Cap Screws (1960 Series) - Inch Series

2.0 Mechanical Properties (For Full Size Screw Testing):

2.1 Steel – ASTM A574

Nominal Size	Tensile Strength Minimum	Proof Load	Rockwell Hardness
Less than 1/2 inch	180,000 PSI	140,000 PSI	HRC 39-44
Greater than 1/2 inch	170,000 PSI	135,000 PSI	HRC 37-44

Notes: The screws will only have manufacturer's marking on the head.

2.1 Stainless Steel – ASTM F837

Classification		Condition	Tensile Strength Minimum PSI	Hardness Minimum HRA	Grade Marking
Type	Nominal Size				
304 (18-8)	0 to 3/4	CW	80,000	50	F837B
		CW1	102,000	59	F837C
316	0 to 3/4	CW	80,000	50	F837E
		CW1	102,000	59	F837F

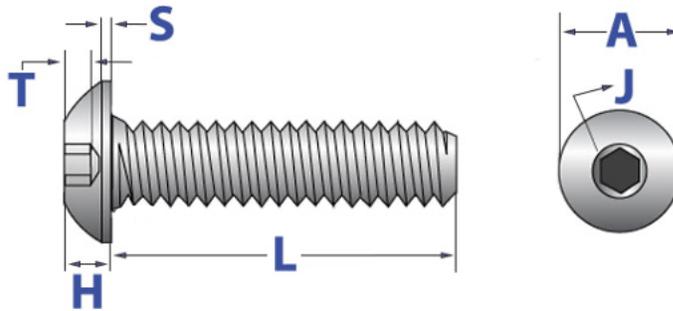
Notes: The screws will also have manufacturer's marking on the head, in addition to the grade marking as mentioned in the table. Screws will be passivated.

3.0 Surface Finish: Thermal Black Oxide / Zinc. Zinc & Mechanical zinc details given in table below.

Properties	Zinc Clear	Mechanical Zinc
Type	Trivalent (Cr+3)	Trivalent (Cr+3)
Color	Clear	Clear
Minimum Coating Thickness	0.0001" / 3 Microns	0.0003 " / 8 Microns
Specification	ASTM F1941 / F1941M. Fe/Zn 3AN	ASTM B695. Class 8. Type II.

Hexagon Socket Button Head Cap Screws - Inch Series

1.0 Dimensions: ASME B18.3.



Nominal Size or Basic Product Diameter	A		H		S	J	T
	Head Diameter		Head Height		Head Side Height	Key Size	Key Engagement
	Max	Min	Max	Min	Ref	Nom	Min
	# 0	0.114	0.104	0.032	0.026	0.010	0.035
# 1	0.139	0.129	0.039	0.033	0.010	0.050	0.028
# 2	0.164	0.154	0.046	0.038	0.010	0.050	0.028
# 3	0.188	0.176	0.052	0.044	0.010	1/16	0.035
# 4	0.213	0.201	0.059	0.051	0.015	1/16	0.035
# 5	0.238	0.226	0.066	0.058	0.015	5/64	0.044
# 6	0.262	0.250	0.073	0.063	0.015	5/64	0.044
# 8	0.312	0.298	0.087	0.077	0.015	3/32	0.052
# 10	0.361	0.347	0.101	0.091	0.020	1/8	0.070
1/4	0.437	0.419	0.132	0.122	0.031	5/32	0.087
5/16	0.547	0.527	0.166	0.152	0.031	3/16	0.105
3/8	0.656	0.636	0.199	0.185	0.031	7/32	0.122
1/2	0.875	0.851	0.265	0.245	0.046	5/16	0.175
5/8	1.000	0.970	0.331	0.311	0.062	3/8	0.210

Notes: Screws will be fully threaded.

Thread Class of Fit: 3A.

Hexagon Socket Button Head Cap Screws - Inch Series

2.0 Mechanical Properties (For Full Size Screw Testing):

2.1 Steel - ASTM F835

Nominal Size	Tensile Strength Minimum	Rockwell Hardness HRC
1/2 inch and smaller	145,000 PSI	39-44
Over 1/2 inch	135,000 PSI	37-44

2.2 Stainless Steel - ASTM F879

Classification			
Types	Condition	Tensile Strength Minimum	Hardness HRA Minimum
304 (18-8) & 316	CW	80,000 PSI	50
	CW1	102,000 PSI	59

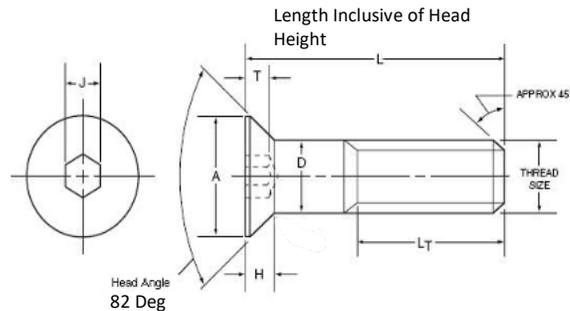
Screws will be passivated.

3.0 Surface Finish: Thermal Black Oxide / Zinc. Zinc & Mechanical zinc details given in table below.

Properties	Zinc Clear	Mechanical Zinc
Type	Trivalent (Cr+3)	Trivalent (Cr+3)
Color	Clear	Clear
Minimum Coating Thickness	0.0001" / 3 Microns	0.0003 " / 8 Microns
Specification	ASTM F1941 / F1941M Fe/Zn 3AN.	ASTM B695. Class 8. Type II.

Hexagon Socket Flat Countersunk Head Cap Screws Inch Series

1.0 Dimensions: ASME B18.3.



Nominal Size or Basic Product Diameter	D		A		H	J	T
	Body Diameter		Head Diameter		Head Height	Key Size	Key Engagement
	Max	Min	Max	Min	Ref	Nom	Min
# 0	0.0600	0.0568	0.138	0.117	0.044	0.035	0.025
# 1	0.0730	0.0695	0.168	0.143	0.054	0.050	0.031
# 2	0.0860	0.0822	0.197	0.168	0.064	0.050	0.038
# 3	0.0990	0.0949	0.226	0.193	0.073	1/16	0.044
# 4	0.1120	0.1075	0.255	0.218	0.083	1/16	0.055
# 5	0.1250	0.1202	0.281	0.240	0.090	5/64	0.061
# 6	0.1380	0.1329	0.307	0.263	0.097	5/64	0.066
# 8	0.1640	0.1585	0.359	0.311	0.112	3/32	0.076
# 10	0.1900	0.1840	0.411	0.359	0.127	1/8	0.087
1/4	0.2500	0.2435	0.531	0.480	0.161	5/32	0.111
5/16	0.3125	0.3053	0.656	0.600	0.198	3/16	0.135
3/8	0.3750	0.3678	0.781	0.720	0.234	7/32	0.159
7/16	0.4375	0.4294	0.844	0.781	0.234	1/4	0.159
1/2	0.5000	0.4919	0.938	0.872	0.251	5/16	0.172
5/8	0.6250	0.6163	1.188	1.112	0.324	3/8	0.220
3/4	0.7500	0.7406	1.438	1.355	0.396	1/2	0.220
7/8	0.8750	0.8647	1.688	1.604	0.468	9/16	0.248
1	1.0000	0.9886	1.938	1.841	0.540	5/8	0.297
1-1/8	1.1250	1.1086	2.188	2.079	0.611	3/4	0.325
1-1/4	1.2500	1.2336	2.438	2.316	0.683	7/8	0.358
1-3/8	1.3750	1.3568	2.688	2.553	0.755	7/8	0.402
1-1/2	1.5000	1.4818	2.938	2.791	0.827	1	0.435

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 & 2A NO GO thread ring gage condition.

Disclaimer: The above is a compilation of data, from various industry standards. Fastener Depot has taken every effort to present the data accurately. However Fastener Depot cannot be held liable for any claim traceable to any errors typographical or otherwise contained herein.



Hexagon Socket Flat Countersunk Head Cap Screws Inch Series

2.0 Mechanical Properties (For Full Size Screw Testing):

2.1 Steel – ASTM F835

Nominal Size	Tensile Strength Minimum	Rockwell Hardness HRC
1/2 inch and smaller	145,000 PSI	39-44
Over 1/2 inch	135,000 PSI	37-44

2.2 Stainless Steel – ASTM F879

Classification		Tensile Strength Minimum	Hardness Minimum HRA
Types	Condition		
304 (18-8) & 316	CW	80,000 PSI	50
	CW1	102,000 PSI	59

Screws will be passivated.

3.0 Surface Finish: Thermal Black Oxide / Zinc. Zinc & Mechanical zinc details given in table below.

Properties	Zinc Clear	Mechanical Zinc
Type	Trivalent (Cr+3)	Trivalent (Cr+3)
Color	Clear	Clear
Minimum Coating Thickness	0.0001" / 3 Microns	0.0003 " / 8 Microns
Specification	ASTM F1941 / F1941M. Fe/Zn 3AN.	ASTM B695. Class 8. Type II.