

Fasteners

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REFERENCE CHART — INCH & METRIC CONVERSION

Fractional to Decimal to Millimeter

Millimeter to Inch

FRACTIONS	DECIMAL	MILLIMETERS	FRACTIONS	DECIMAL	MILLIMETERS	mm	INCHES	mm	INCHES	mm	INCHES
$\frac{1}{64}$	0.015625	— 0.397	$\frac{33}{64}$	1.515625	— 13.097	.1	.0039	35—	1.3780	78—	3.0709
$\frac{1}{32}$	.03125	— 0.794	$\frac{17}{32}$	.53125	— 13.494	.2	.0079	36—	1.4173	79—	3.1102
$\frac{3}{64}$	.046875	— 1.191	$\frac{35}{64}$	.546875	— 13.891	.3	.0118	37—	1.4567	80—	3.1496
$\frac{1}{16}$	.0625	— 1.588	$\frac{9}{16}$	.5625	— 14.288	.4	.0157	38—	1.4961	81—	3.1890
$\frac{5}{64}$	.078125	— 1.984	$\frac{37}{64}$	.578125	— 14.684	.5	.0197	39—	1.5354	82—	3.2283
$\frac{3}{32}$	.09375	— 2.381	$\frac{19}{32}$	.59375	— 15.081	.6	.0236	40—	1.5748	83—	3.2677
$\frac{7}{64}$	.109375	— 2.778	$\frac{39}{64}$	.609375	— 15.478	.7	.0276	41—	1.6142	84—	3.3071
$\frac{1}{8}$	.1250	— 3.175	$\frac{5}{8}$	.6250	— 15.875	.8	.0315	42—	1.6535	85—	3.3465
$\frac{9}{64}$	.140625	— 3.572	$\frac{41}{64}$	.640625	— 16.272	.9	.0354	43—	1.6929	86—	3.3858
$\frac{5}{32}$	.15625	— 3.969	$\frac{21}{32}$	.65625	— 16.669	1	.0394	44—	1.7323	87—	3.4252
$\frac{11}{64}$	.171875	— 4.366	$\frac{43}{64}$	.671875	— 17.066	2	.0787	45—	1.7717	88—	3.4646
$\frac{3}{16}$	.1875	— 4.763	$\frac{11}{16}$	.6875	— 17.463	3	.1181	46—	1.8110	89—	3.5039
$\frac{13}{64}$	.203125	— 5.159	$\frac{45}{64}$	.703125	— 17.859	4	.1575	47—	1.8504	90—	3.5433
$\frac{7}{32}$	.21875	— 5.556	$\frac{23}{32}$	.71875	— 18.256	5	.1969	48—	1.8898	91—	3.5827
$\frac{15}{64}$	.234375	— 5.953	$\frac{47}{64}$	.734375	— 18.653	6	.2362	49—	1.9291	92—	3.6220
$\frac{1}{4}$	.2500	— 6.350	$\frac{3}{4}$	.7500	— 19.050	7	.2756	50—	1.9685	93—	3.6614
$\frac{17}{64}$	.265625	— 6.747	$\frac{49}{64}$	.765625	— 19.447	8	.3150	51—	2.0079	94—	3.7008
$\frac{9}{32}$	.28125	— 7.144	$\frac{25}{32}$	.78125	— 19.844	9	.3543	52—	2.0472	95—	3.7402
$\frac{19}{64}$	.296875	— 7.541	$\frac{51}{64}$	.796875	— 20.241	10	.3937	53—	2.0866	96—	3.7795
$\frac{5}{16}$	.3125	— 7.938	$\frac{13}{16}$	.8125	— 20.638	11	.4331	54—	2.1260	97—	3.8189
$\frac{21}{64}$	.328125	— 8.334	$\frac{53}{64}$	.828125	— 21.034	12	.4724	55—	2.1654	98—	3.8583
$\frac{11}{32}$	.34375	— 8.731	$\frac{27}{32}$	.84375	— 21.431	13	.5118	56—	2.2047	99—	3.8976
$\frac{23}{64}$	.359375	— 9.128	$\frac{55}{64}$	.859375	— 21.828	14	.5512	57—	2.2441	100—	3.9370
$\frac{3}{8}$	.3750	— 9.525	$\frac{7}{8}$	.8750	— 22.225	15	.5906	58—	2.2835		
$\frac{25}{64}$	.390625	— 9.922	$\frac{57}{64}$	.890625	— 22.622	16	.6299	59—	2.3228		
$\frac{13}{32}$	.40625	— 10.319	$\frac{29}{32}$	.90625	— 23.019	17	.6693	60—	2.3622		
$\frac{27}{64}$	.421875	— 10.716	$\frac{59}{64}$	.921875	— 23.416	18	.7087	61—	2.4016		
$\frac{7}{16}$	.4375	— 11.113	$\frac{15}{16}$	.9375	— 23.813	19	.7480	62—	2.4409		
$\frac{29}{64}$	.453125	— 11.509	$\frac{61}{64}$	.953125	— 24.209	20	.7874	63—	2.4803		
$\frac{15}{32}$	.46875	— 11.906	$\frac{31}{32}$	.96875	— 24.606	21	.8268	64—	2.5197		
$\frac{31}{64}$	.484375	— 12.303	$\frac{63}{64}$	.984375	— 25.003	22	.8661	65—	2.5591		
$\frac{1}{2}$	.5000	— 12.700	1	1.000	— 25.400	23	.9055	66—	2.5984		
						24	.9449	67—	2.6378		
						25	.9843	68—	2.6772		
						26	1.0236	69—	2.7165		
						27	1.0630	70—	2.7559		
						28	1.1024	71—	2.7953		
						29	1.1417	72—	2.8346		
						30	1.1811	73—	2.8740		
						31	1.2205	74—	2.9134		
						32	1.2598	75—	2.9528		
						33	1.2992	76—	2.9921		
						34	1.3386	77—	3.0315		

1 mm = .03937"

.001" = .0254mm

REFERENCE CHART — DETERMINING THREAD LENGTHS INCH

LENGTH STANDARDS FOR FULL OR PARTIAL THREADS

Capscrew Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"
Fully Threaded Max. Length*	1-1/4	1-3/8	1-1/2	1-3/4	1-7/8	2-1/8

Capscrew Diameter	5/8"	3/4"	7/8"	1"	7/8"	1"
Fully Threaded Max. Length*	2-1/4	2-5/8	2-7/8	3-1/4	3-3/4	4

*These lengths and longer = partially threaded

There is a formula for calculating minimum length of threads on any given hex head cap screw. It is as follows: Minimum thread length equals twice the basic thread diameter plus .250 inches for screw lengths up to and including six inches and twice the basic thread diameter plus .500 inches for lengths over six inches.

The chart to the left is also a useful tool for determining at which lengths a given diameter bolt changes from fully threaded to partially threaded, according to industry specifications.

REFERENCE CHART — INCH SIZE TO DECIMAL, THREAD PITCH

STANDARD THREAD PITCH

Bolt Size No. or Inches	Threads Per Inch (TPI)	
	Coarse Thread UNC	Fine Thread UNF
0		80
1	64	72
2	56	64
3	48	56
4	40	48
5	40	44
6	32	40
8	32	36
10	24	32
12	24	28
1/4	20	28
5/16	18	24
3/8	16	24
7/16	14	20
1/2	13	20
9/16	12	18
5/8	11	18
3/4	10	16

Bolt Size No. or Inches	Threads Per Inch (TPI)	
	Coarse Thread UNC	Fine Thread UNF
7/8	9	14
1	8	12
1-1/8	7	12
1-1/4	7	12
1-3/8	6	12
1-1/2	6	12
1-3/4	5	
2	4-1/2	
2-1/4	4-1/2	
2-1/2	4	
2-3/4	4	
3	4	
3-1/4	4	
3-1/2	4	
3-3/4	4	
4	4	

SIZE TO DECIMAL CONVERSION

Nominal Size in No.	Basic Major Dia. in. D	Nominal Size in No.	Basic Major Dia. in. D
0	0.0600	9/16	0.5625
1	0.0730	5/8	0.6250
2	0.0860	3/4	0.7500
3	0.0990	7/8	0.8750
4	0.1120	1	1.0000
5	0.1250	1-1/8	1.1250
6	0.1380	1-1/4	1.2500
8	0.1640	1-3/8	1.3750
10	0.1900	1-1/2	1.5000
12	0.2160		
1/4	0.2500		
5/16	0.3125		
3/8	0.3750		
7/16	0.4375		
1/2	0.5000		

BIT SELECTION CHARTS

PHILLIPS BITS

BIT SIZE	WOOD SCREW SIZE			MACHINE SCREW SIZE		SHEET METAL SCREW SIZE
	FLAT, OVAL	ROUND	FLAT, OVAL	ROUND	TRUSS	FLAT, OVAL, ROUND
0	0, 1	0, 1	0, 1	0, 1	0, 1	0, 1
1	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4, 5	2, 3, 4
2	5, 6, 7, 8, 9	5, 6, 7, 8, 9, 10	5, 6, 7, 8, 10	5, 6, 7, 8, 10	6, 8, 10	5, 6, 7, 8, 10
3	10, 12, 14, 16	12, 14, 16	12, 14	12, 1/4, 5/16	12, 1/4	12, 14
4	18, 20, 24	18, 20, 24	5/16, 3/8, 7/16, 1/2	3/8, 7/16, 1/2	5/16, 3/8, 7/16, 1/2	



SQUARE RECESS BITS

BIT SIZE	TAPPING/ SHEET METAL SCREW SIZE	WOOD SCREW SIZE	MACHINE SCREW SIZE
#0	#3, #4	#3, #4	#3, #4
#1	#5, #6, #7	#5, #6, #7	#5, #6, #7
#2	#8, #10	#8, #9, #10	#8, #10
#3	#12, #14	#12, #14	#12, #14



HEX KEYS/BITS

POINT SIZE	SOCKET HEAD SCREW SIZE	SET SCREW SIZE	BUTTON HEAD SIZE	FLAT HEAD SIZE	SHOULDER SCREWS	PRESSURE PLUGS
.050	#0	#1, #2	#1, #2	#1, #2	-	-
1/16	#1	#3, #4	#3, #4	#3, #4	-	-
5/64	#2, #3	#8	#5, #6	#5, #6	-	-
3/32	#4, #5	#10	#8	#8	-	-
7/64	#6	-	-	-	-	-
1/8	-	1/4	#10	#10	1/4	-
9/64	#8	-	-	-	-	-
5/32	#10	5/16	1/4	1/4	5/16	1/16
3/16	1/4	3/8	5/16	5/16	3/8	1/8
7/32	-	7/16	3/8	3/8	-	-
1/4	5/16	1/2	-	7/16	1/2	1/4
5/16	3/8	5/8	1/2	1/2, 9/16	5/8	3/8
3/8	7/16, 1/2	3/4	5/8	5/8	3/4	1/2



TORX KEYS/BITS

BIT SIZE	Socket Set Screw	Socket Cap Screw	Flat Head Screw
T3	#2	-	-
T4	-	-	-
T5	#3	-	-
T6	#4	-	#2
T7	#5, #6	-	#3
T8	#8	-	#4
T9	-	-	#5
T10	#10, #12	#4, #5	#6
T15	-	#6	#8
T20	1/4	-	#10
T25	-	#8	#12
T27	5/16	#10, #12	1/4
T30	3/8	1/4	-
T40	7/16	-	5/16, 3/8
T45	1/2	5/16	-
T50	-	3/8	7/16
T55	-	7/16, 1/2	1/2



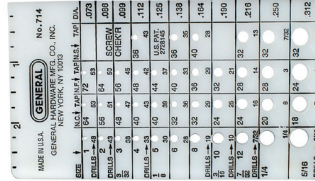
METRIC

POINT SIZE	SOCKET HEAD SCREW SIZE	SET SCREW SIZE	BUTTON HEAD SIZE	FLAT HEAD SIZE	SHOULDER SCREWS
M2	M2.3, M2.5	M4	M3	M3	-
M2.5	M3	M5	M4	M4	-
M3	M4	M6	M5	M5	M6
M4	M5	M8	M6	M6	M8
M5	M6	M10	M8	M8	M10
M6	M8	M12, M14	M10	M10	M12
M8	M10	M16	M12	M12	M16

TOOLS — CALIPERS & GAUGES

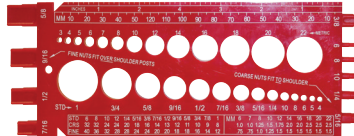
QUICK CHECK SCREW GAUGE F112546

- Quick way to identify machine screws, bolts, wood screws, standard size rivets, and common cotter pin sizes up to 5/16" (8mm)
- 3" scale to check screw lengths
- Checker gives required drill size for recommended tap size and proper drill size for like hole
- Threaded holes indicate threads per inch while unthreaded holes indicate size by number and fractions of an inch
- Durable engineering plastic



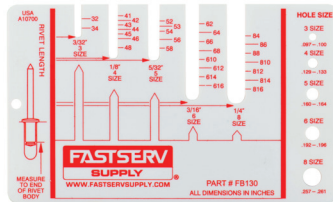
BOLT AND NUT GAUGE FB8

- Inch and Metric
- Made of Heavy Plastic
- Thread Pitch Gauge
- 8-1/4" x 3-1/4"

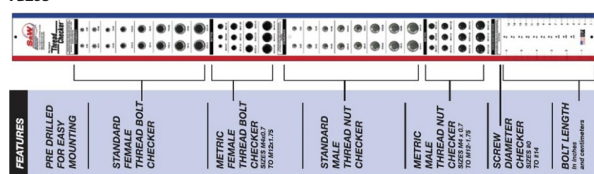


RIVET GAUGE FB130

- Quick way to identify size of rivets
- 4-3/4" x 2-7/8"



WALL MOUNTED CHECK-A-THREAD FB268



- Check most common size nuts and bolts in one easy-to-display center.
- Inch Sizes:** 6-32, 8-32, 10-24, 10-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18
- Metric Sizes:** M4x0.7, M5x0.8, M6x1.0, M7x1.0, M8x1.0, M8x1.25, M10x1.0, M10x1.25, M10x1.5, M12x1.25, M12x1.5, M12x1.75
- Pre-drilled for easy mounting
- Mounted On Heavy-duty 1/2 Inch Sintra® board.
- Overall dimension 3" x 39"

THREAD IDENTIFIERS

- All thread identifiers are equipped with a 3-3/8" (85mm) ruler. They have permanent, easy-to-read laser etched size markings that will not peel off and are chemical resistant.
- Includes an extra-long wire rope for hard-to-reach places, and loops convenient for hanging. All thread identifiers are color coded with shatter-proof gauge dividers to allow for a
- quick and easy recognition between inch, metric and pipe thread strands at a glance.

FRACTIONAL / METRIC THREAD IDENTIFIER F121897

- Inch Sizes:** 6-32, 8-32, 10-24, 10-32, 1/4"-20, 1/4"-28, 5/16"-18, 5/16"-24, 3/8"-16, 3/8"-24, 7/16"-14, 7/16"-20, 1/2"-13, 1/2"-20
- Metric Sizes:** M4 x 0.7, M5 x 0.8, M6 x 1.0, M8 x 1.0, M8 x 1.25, M10 x 1.0, M10 x 1.25, M10 x 1.50, M12 x 1.25, M12 x 1.75



LARGE DIAMETER BOLT GAUGE FB277

- The Large Diameter Bolt Gauge is used for:** Sizing large diameter nuts, bolts, studs & washers
- Metric and inch dimensions
- Size washers from 3/4" to 3-1/4" & 20mm to 80mm
- Size studs & bolts from 3/4" to 2" & 20mm to 50mm
- On the reverse side you can size UNF & UNC nuts from 3/4" to 3"
- Also on the reverse side you have a head id chart for inch & metric head markings
- Very useful and durable tool.



THREAD GAUGES F119871 — Standard Inch

- Graduation: 10, 11, 12, 13, 14, 16, 18, 20, 24, 27, 28, 32, 36, 40
- Pitch Range: 10 TPI - 40 TPI



F117340 — Metric

- Graduation: 1.0, 1.25, 1.5, 1.75, 27, 28, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9
- Pitch Range: 0.5mm - 1.75mm, 2.7, 28
- Pipe thread pitch in each

DIGITAL CALIPER 6" F18236

- Measuring range:** 0-6" (0-150mm)
- Resolution:** 0.0005" (0.01mm)
- Accuracy:** 0.001"
- LCD display
- Power:** 1.55v silver oxide battery (SR44)
- Working temperature: 41°F - 104°F (5°C - 40°C)
- Humidity:** keep under 80% humidity



SLIDE CALIPER F09462

- Pocket Caliper 4-3/8" x 1-1/2"
- Inch and Metric scales
- Decimal equivalent chart on back
- Made of stainless steel
- Comes with storage case



TRI-GAUGE COMBO TOOL

- F114921 — Metric**
- F113953 — American Std.**

- Identify thread pitch with a full set of common pitch gauges
- Measure bolt size in metric or american standard
- Includes clearly marked bolt grade guide
- Rust free high-grade stainless steel



JUMBO FRACTIONAL / METRIC THREAD IDENTIFIER FB299

- Inch Sizes:** 5/8"-11, 5/8"-18, 3/4"-10, 3/4"-16, 1"-8, 1"-12
- Metric Sizes:** M14 x 1.5, M14 x 2.0, M16 x 1.5, M16 x 2.0, M20 x 1.5, M20 x 2.5, M24 x 2.0, M24 x 3.0

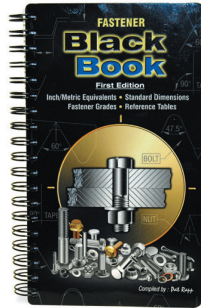


TOOLS — CALIPERS & GAUGES (continued)

FASTENER BLACK BOOK

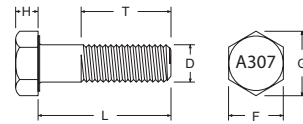
F121881

- Quick reference for dimensions and other relevant information on commonly used fasteners
- Book Has sections for ANSI (metric), ISO (metric), DIN (metric) and a separate section for ANSI (inch) products
- Each book comes with a thread pitch identification gage to assist identification of unknown threads
- Book follows the style of the popular Engineers Black Book



SCREWS — HEX HEAD BOLT GRADE A307 GALVANIZED GRADE A

ASME B18.2.1 2010	Tensile Strength PSI:		60,000
	Plating:		Hot Dipped Galvanized
	Import		



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height	H	5/32	13/64	15/64	9/32	5/16	23/64	25/64	15/32	35/64	39/64
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	13/16	15/16	1-1/8	1-5/16	1-1/2
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732

D	L	T	UNC
1/4	1	1"	F119566
1/4	1-1/4	3/4	F15640
1/4	1-1/2	3/4	F112964
1/4	2	3/4	F16896
1/4	3	3/4	F113056
1/4	3-1/2	3/4	F13530
1/4	4-1/2	3/4	F119146
1/4	5	3/4	F14234
1/4	5-1/2	3/4	F1424
1/4	6	3/4	F110730
5/16	1/2	1/2	F112157
5/16	1	7/8	F116053
5/16	1-1/4	7/8	F11360
5/16	1-1/2	7/8	F12471
5/16	2	7/8	F117611
5/16	2-1/4	7/8	F117657
5/16	2-1/2	7/8	F19487
5/16	3	7/8	F11296
5/16	3-1/2	7/8	F112583
5/16	4	7/8	F111259
5/16	5	7/8	F17577
5/16	5-1/2	7/8	F1772
3/8	3/4	1	F111972
3/8	1	1	F113796
3/8	1-1/4	1	F13130
3/8	1-1/2	1	F118057
3/8	1-3/4	1	F114897
3/8	2	1	F12346
3/8	2-1/4	1	F116400
3/8	2-1/2	1	F117197
3/8	3	1	F19841
3/8	3-1/2	1	F16391
3/8	4	1	F118580
3/8	4-1/2	1	F117989
3/8	5	1	F118290
3/8	5-1/2	1	F116589
3/8	6	1	F114105
3/8	6-1/2	1-1/4	F18476
3/8	7	1-1/4	F14600
3/8	8	1-1/4	F113365
3/8	9	1-1/4	F1527
3/8	10	1-1/4	F112934

D	L	T	UNC
1/2	1	1	F111332
1/2	1-1/4	1-1/4	F12257
1/2	1-1/2	1-1/4	F13861
1/2	1-3/4	1-1/4	F111349
1/2	2	1-1/4	F118895
1/2	2-1/4	1-1/4	F115328
1/2	2-1/2	1-1/4	F17976
1/2	3	1-1/4	F19529
1/2	3-1/2	1-1/4	F16092
1/2	4	1-1/4	F17773
1/2	4-1/2	1-1/4	F16959
1/2	5	1-1/4	F15818
1/2	5-1/2	1-1/4	F17437
1/2	6	1-1/4	F13212
1/2	6-1/2	1-1/2	F11502
1/2	7	1-1/2	F117627
1/2	7-1/2	1-1/2	F17971
1/2	8	1-1/2	F16484
1/2	8-1/2	1-1/2	F116974
1/2	9	1-1/2	F16177
1/2	10	1-1/2	F112569
1/2	11	1-1/2	F117817
1/2	12	1-1/2	F12602
1/2	13	1-1/2	F15659
1/2	14	1-1/2	F113243
1/2	15	1-1/2	F15827
1/2	16	1-1/2	F112019
1/2	18	1-1/2	F113259
1/2	20	1-1/2	F118523
5/8	1-1/4	1-1/2	F17565
5/8	1-1/2	1-1/2	F118783
5/8	1-3/4	1-1/2	F115343
5/8	2	1-1/2	F119611
5/8	2-1/4	1-1/2	F115546
5/8	2-1/2	1-1/2	F111010
5/8	3	1-1/2	F110211
5/8	3-1/2	1-1/2	F15454
5/8	4	1-1/2	F115013
5/8	4-1/2	1-1/2	F13719
5/8	5	1-1/2	F111853
5/8	5-1/2	1-1/2	F11768
5/8	6	1-1/2	F11924

D	L	T	UNC
5/8	7	1-3/4	F16329
5/8	7-1/2	1-3/4	F114367
5/8	8	1-3/4	F11145
5/8	8-1/2	1-3/4	F18471
5/8	9	1-3/4	F115233
5/8	10	1-3/4	F112569
5/8	11	1-3/4	F117817
5/8	12	1-3/4	F12123
5/8	13	1-3/4	F19075
5/8	14	1-3/4	F119994
5/8	15	1-3/4	F11610
5/8	16	1-3/4	F4703
5/8	18	1-3/4	F12627
5/8	24	1-3/4	F11554
3/4	1-1/2	1-3/4	F111726
3/4	1-3/4	1-3/4	F111725
3/4	2	1-3/4	F11434
3/4	2-1/4	1-3/4	F119086
3/4	2-1/2	1-3/4	F15956
3/4	2-3/4	1-3/4	F110924
3/4	3	1-3/4	F17358
3/4	3-1/2	1-3/4	F116579
3/4	4	1-3/4	F115734
3/4	4-1/2	1-3/4	F19068
3/4	5	1-3/4	F118863
3/4	6	1-3/4	F1265
3/4	6-1/2	2	F15476
3/4	7	2	F119748
3/4	7-1/2	2	F110943
3/4	8	2	F16901
3/4	9	2	F12697
3/4	10	2	F17240
3/4	10-1/2	2	F19142
3/4	11	2	F11869
3/4	12	2	F14172
3/4	13	6	F113082
3/4	14	6	F114166
3/4	15	6	F15246
3/4	16	6	F11311
3/4	18	6	F110526
3/4	20	6	F111890
3/4	22	6	F16518

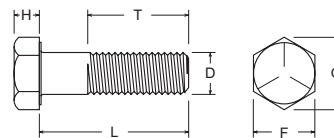
D	L	T	UNC
3/4	24	6	F18469
3/4	26	6	F16057
3/4	30	6	F13271
3/4	34	6	F116437
7/8	2-1/2	2	F16237
7/8	3-1/2	2	F11732
7/8	4-1/2	2	F11184
7/8	5	2	F19288
7/8	6	2	F16520
7/8	6-1/2	2-1/4	F17954
7/8	7	2-1/4	F110167
7/8	7-1/2	2-1/4	F118361
7/8	8	2-1/4	F111925
7/8	9	2-1/4	F14588
7/8	10	2-1/4	F17240
7/8	12	2-1/4	F17959
7/8	14	2-1/4	F9555
7/8	16	2-1/4	F114122
7/8	18	2-1/4	F14742
7/8	20	2-1/4	F19633
7/8	24	2-1/4	F14749
1	2-1/2	2-1/4	F117077
1	3	2-1/4	F1908
1	4-1/2	2-1/4	F16388
1	5	2-1/4	F17776
1	5-1/2	2-1/4	F16223
1	6	2-1/4	F114237
1	7	2-1/2	F111400
1	8	2-1/2	F12246
1	12	2-1/2	F111755
1	14	2-1/2	F118579
1	16	2-1/2	F116216
1	18	2-1/2	F112085
1	20	2-1/2	F14759
1	24	2-1/2	F17375

*Plano warehouse

Note: The above items are stocked in Plano, TX warehouse only.

SCREWS — HEX HEAD CAP GRADE 5

SAE J429	Proof Load PSI:	85,000
	Tensile Strength:	120,000
	Plating:	Zinc or plain
	Import	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
Height	H	5/32	13/64	15/64	9/32	5/16	23/64	25/64	15/32	35/64	39/64	23/32	25/32
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	13/16	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732	1.949	2.165

D	L	T	UNC ZINC	UNC PLAIN
1/4	1/2	1/2	F13930	F112752
1/4	5/8	5/8	F110088	
1/4	3/4	3/4	F19047	F16121
1/4	7/8	3/4	F16584	
1/4	1	3/4	F115965	F19234
1/4	1-1/4	3/4	F114620	F112131
1/4	1-1/2	3/4	F12181	F11699
1/4	1-3/4	3/4	F113397	
1/4	2	3/4	F13988	F14646
1/4	2-1/4	3/4	F110894	F112429
1/4	2-1/2	3/4	F118561	F16681
1/4	2-3/4	3/4	F119325	F16051
1/4	3	3/4	F114541	F110433
1/4	3-1/4	3/4	F115185	
1/4	3-1/2	3/4	F13674	F18995
1/4	3-3/4	3/4	F118596	
1/4	4	3/4	F18527	F118135
1/4	4-1/2	3/4	F19285	
1/4	5	3/4	F16341	F110301
1/4	5-1/2	3/4	F116103	
1/4	6	3/4	F19843	F111297
5/16	1/2	1/2	F18197	F111249
5/16	5/8	5/8	F111061	
5/16	3/4	3/4	F16053	F11575
5/16	1	7/8	F12343	F17686
5/16	1-1/4	7/8	F15684	F115122
5/16	1-1/2	7/8	F115252	F12100
5/16	1-3/4	7/8	F119869	F120087
5/16	2	7/8	F118221	F19865
5/16	2-1/4	7/8	F116527	F11513
5/16	2-1/2	7/8	F19740	F115663
5/16	2-3/4	7/8	F112726	
5/16	3	7/8	F16602	F115317
5/16	3-1/4	7/8	F111630	
5/16	3-1/2	7/8	F111426	F116484
5/16	3-3/4	7/8	F12314	
5/16	4	7/8	F13939	F110907
5/16	4-1/2	7/8	F113859	F16456
5/16	5	7/8	F118703	F111472
5/16	5-1/2	7/8	F15712	
5/16	6	7/8	F116470	F12086
3/8	1/2	1/2	F12105	
3/8	3/4	3/4	F18498	F13683
3/8	1	1	F119494	F16692
3/8	1-1/4	1	F117078	F11990
3/8	1-1/2	1	F119631	F118851
3/8	1-3/4	1	F11997	F118742
3/8	2	1	F12569	F13177
3/8	2-1/4	1	F118934	F114029
3/8	2-1/2	1	F11037	F119763
3/8	2-3/4	1	F115000	F15746
3/8	3	1	F114845	F110577
3/8	3-1/4	1	F116918	
3/8	3-1/2	1	F19806	F119344
3/8	3-3/4	1	F13385	
3/8	4	1	F118128	F112317
3/8	4-1/2	1	F15061	
3/8	5	1	F112690	F110589

D	L	T	UNC ZINC	UNC PLAIN
3/8	5-1/2	1	F19559	
3/8	6	1	F17601	F117097
3/8	7	1	F120738	
3/8	8	1	F112766	
7/16	3/4	3/4	F12564	F14470
7/16	1	1	F112509	F116298
7/16	1-1/4	1-1/8	F17591	F14873
7/16	1-1/2	1-1/8	F112697	F12415
7/16	1-3/4	1-1/8	F15543	F115556
7/16	2	1-1/8	F115507	F18094
7/16	2-1/4	1-1/8	F15888	F119589
7/16	2-1/2	1-1/8	F18985	F113194
7/16	2-3/4	1-1/8	F113113	
7/16	3	1-1/8	F16789	F15580
7/16	3-1/4	1-1/8	F13846	
7/16	3-1/2	1-1/8	F116382	F111292
7/16	3-3/4	1-1/8	F17948	
7/16	4	1-1/8	F114026	F15699
7/16	4-1/2	1-1/8	F112240	
7/16	5	1-1/8	F110783	F12611
7/16	5-1/2	1-1/8	F13536	
7/16	6	1-1/8	F19527	F115033
1/2	3/4	3/4	F114240	
1/2	1	1	F12555	F13480
1/2	1-1/4	1-1/4	F11649	F117990
1/2	1-1/2	1-1/4	F116425	F119607
1/2	1-3/4	1-1/4	F110753	F12140
1/2	2	1-1/4	F114644	F115422
1/2	2-1/4	1-1/4	F19332	
1/2	2-1/2	1-1/4	F15778	F117573
1/2	2-3/4	1-1/4	F115277	F115993
1/2	3	1-1/4	F115192	F1132
1/2	3-1/4	1-1/4	F116198	
1/2	3-1/2	1-1/4	F115953	F12137
1/2	3-3/4	1-1/4	F118222	
1/2	4	1-1/4	F14579	F15737
1/2	4-1/2	1-1/4	F115183	
1/2	4-3/4	1-1/4	F1836	
1/2	5	1-1/4	F12599	
1/2	5-1/2	1-1/4	F12754	
1/2	6	1-1/4	F1636	F17723
1/2	6-1/2	1-1/4	F1966	
1/2	7	1-1/4	F13486	
1/2	8	1-1/4	F115421	
9/16	1	1	F113920	
9/16	1-1/4	1-1/4	F19966	
9/16	1-1/2	1-3/8	F112242	
9/16	1-3/4	1-3/8	F116630	
9/16	2	1-3/8	F13742	
9/16	2-1/4	1-3/8	F118451	
9/16	2-1/2	1-3/8	F13145	
9/16	2-3/4	1-3/8	F117045	
9/16	3	1-3/8	F19620	
9/16	3-1/2	1-3/8	F114653	
9/16	4	1-3/8	F118577	
9/16	4-1/2	1-3/8	F119924	
9/16	5	1-3/8	F1198	
9/16	5-1/2	1-3/8	F112390	

SCREWS — HEX HEAD CAP GRADE 5 (continued)

D	L	T	UNC ZINC	UNC PLAIN
9/16	6	1-3/8	F118600	
5/8	1	1	F110049	F1726
5/8	1-1/4	1-1/4	F116655	F15747
5/8	1-1/2	1-1/2	F19217	F14802
5/8	1-3/4	1-1/2	F1961	F111814
5/8	2	1-1/2	F111896	F15006
5/8	2-1/4	1-1/2	F14159	F117334
5/8	2-1/2	1-1/2	F11795	F119544
5/8	2-3/4	1-1/2	F16309	F118998
5/8	3	1-1/2	F113158	F11889
5/8	3-1/4	1-1/2	F11249	
5/8	3-1/2	1-1/2	F1303	F18826
5/8	3-3/4	1-1/2	F115591	
5/8	4	1-1/2	F114232	F15433
5/8	4-1/2	1-1/2	F114121	
5/8	5	1-1/2	F111655	F13555
5/8	5-1/2	1-1/2	F110263	
5/8	6	1-1/2	F11815	F15062
5/8	6-1/2	1-1/2	F110598	
5/8	7	1-1/4	F14104	
5/8	7-1/2	1-1/2	F17645	
5/8	8	1-3/4	F118816	
5/8	10	1-3/4	F111666	
3/4	1-1/4	1-3/4	F116742	F12437
3/4	1-1/2	1-3/4	F110811	F112555
3/4	1-3/4	1-3/4	F117034	F113262
3/4	2	1-3/4	F14339	F14336
3/4	2-1/4	1-3/4	F115372	F110255
3/4	2-1/2	1-3/4	F114814	F18789
3/4	2-3/4	1-3/4	F12469	
3/4	3	1-3/4	F11089	F1723
3/4	3-1/4	1-3/4	F118682	
3/4	3-1/2	1-3/4	F113399	F11415
3/4	4	1-3/4	F12058	F16319
3/4	4-1/2	1-3/4	F110836	
3/4	5	1-3/4	F1840	F112739
3/4	5-1/2	1-3/4	F12138	
3/4	6	1-3/4	F113589	F113478
3/4	6-1/2	1-3/4	F116546	
3/4	7	1-3/4	F18444	
3/4	7-1/2	1-3/4	F112796	
3/4	8	1-3/4	F112195	F19823
3/4	9	1-3/4	F117919	
3/4	10	1-3/4	F110654	
7/8	1-1/2	2	F118085	F12092
7/8	2	2	F15683	F15867

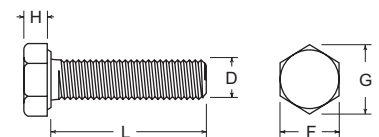
D	L	T	UNC ZINC	UNC PLAIN
7/8	2-1/2	2	F113344	F114195
7/8	3	2	F17767	F18124
7/8	3-1/2	2	F17568	F110279
7/8	4	2	F111333	F113622
7/8	4-1/2	2	F116293	F14764
7/8	5	2	F19628	F19179
7/8	5-1/2	2-1/4	F113799	
7/8	6	2-1/4	F19818	F17626
7/8	6-1/2	2-1/4	F14652	
7/8	7	2-1/4	F18009	
7/8	8	2-1/4	F113112	F116619
7/8	9	2-1/4	F14020	
7/8	10	2-1/4	F12009	
1	2	2-1/4	F112943	F110139
1	2-1/2	2-1/4	F111997	F116523
1	3	2-1/4	F17508	F117440
1	3-1/4	2-1/4	F110377	
1	3-1/2	2-1/4	F115350	F12708
1	4	2-1/4	F11972	F14147
1	4-1/2	2-1/4	F14991	F1880
1	5	2-1/4	F18533	F14483
1	5-1/2	2-1/4	F16864	
1	6	2-1/2	F117326	F13296
1	6-1/2	2-1/2	F18078	
1	7	2-1/2	F1242	
1	7-1/2	2-1/2	F11343	
1	8	2-1/2	F14692	F19106
1	9	2-1/2	F1224	
1	10	2-1/2	F116316	
1-1/8	4-1/2	2-1/4	F16465	
1-1/8	5	2-1/4	F113668	
1-1/8	6	2-1/2	F113328	
1-1/8	6-1/2	2-1/2	F11345	
1-1/8	8	2-1/2	F1919	
1-1/8	9	2-1/2	F19359	
1-1/8	10	2-1/2	F116951	
1-1/4	4	2-1/4	F111573	
1-1/4	5	2-1/4	F19143	
1-1/4	5-1/2	2-1/4	F119602	
1-1/4	6	2-1/2	F117704	
1-1/4	6-1/2	2-1/2	F12277	
1-1/4	7	2-1/2	F120737	
1-1/4	7-1/2	2-1/2	F117302	
1-1/4	8	2-1/2	F115747	

BOLTS — HEX HEAD TAP FULLY THREAD GRADE 5

SAE J429	Proof Load PSI:	85,000
	Tensile Strength:	120,000
	Plating:	Zinc
	Import	

D	L	UNC
1/4	1	F115861
1/4	1-1/4	F16333
1/4	1-1/2	F111321
1/4	2	F119612
1/4	3	F119813
5/16	1-1/2	F14518
5/16	2	F13880

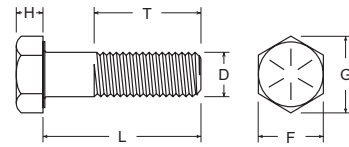
D	L	UNC
3/8	1-1/2	F115431
3/8	2	F12440
3/8	3	F114053
1/2	1-1/2	F11116
1/2	1-3/4	F19517
1/2	2	F18635
1/2	2-1/2	F114556
1/2	3	F115738



Diameter	D	1/4"	5/16"	3/8"	1/2"
Height	H	5/32	13/64	15/64	5/16
W.A.F.	F	7/16	1/2	9/16	3/4
W.A.C.	G	.505	.577	.650	.866

SCREWS — HEX HEAD CAP GRADE 8 USA

SAE 429 ASTM- A354BD	Proof Load PSI:	120,000
	Tensile Strength:	150,000
	Plating:	Yellow Zinc/Plain
	Made in U.S.A.	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
Height	H	5/32	13/64	15/64	9/32	5/16	23/64	25/64	15/32	35/64	39/64	23/32	25/32
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	13/16	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732	1.949	2.165

D	L	T	UNC Yellow Zinc	UNF Yellow Zinc	UNC Plain
1/4	3/8	3/8	F119145		
1/4	1/2	1/2	F12210	F112686	F110670
1/4	5/8	5/8	F11114		
1/4	3/4	3/4	F111941	F16994	F115486
1/4	7/8	3/4	F116159	F11744	
1/4	1	1	F116251	F114278	F11553
1/4	1-1/4	3/4	F1544	F1319	F112557
1/4	1-1/2	3/4	F118694	F115913	F1470
1/4	1-3/4	3/4	F115460	F14724	F16607
1/4	2	3/4	F191	F111961	F112567
1/4	2-1/4	3/4	F114058	F113473	F19441
1/4	2-1/2	3/4	F117015	F19205	F17834
1/4	2-3/4	3/4	F114494		F12481
1/4	3	3/4	F116904	F117496	
1/4	3-1/4	3/4	F12717	F12091	
1/4	3-1/2	3/4	F111162	F16425	F112202
1/4	3-3/4	3/4	F114485	F14126	
1/4	4	3/4	F19080	F15369	F18656
1/4	4-1/2	3/4	F1562	F117142	F12312
1/4	5	3/4	F119661	F18863	F117343
1/4	5-1/2	3/4	F118819	F117662	
1/4	6	3/4	F14321	F110210	
1/4	7	3/4	F14649		
5/16	1/2	1/2	F11431	F17434	
5/16	5/8	5/8	F111396	F113919	
5/16	3/4	3/4	F17657	F15172	F11704
5/16	7/8	7/8	F14555	F11397	
5/16	1	7/8	F15306	F18699	F118028
5/16	1-1/4	1-1/4	F12964	F114357	F16529
5/16	1-1/2	7/8	F114323	F117559	F112863
5/16	1-3/4	7/8	F112656	F115785	F132219
5/16	2	7/8	F18465	F12348	F111791
5/16	2-1/4	7/8	F114774	F1538	F18765
5/16	2-1/2	7/8	F116963	F118898	F114070
5/16	2-3/4	7/8	F115146	F114407	
5/16	3	7/8	F13343	F19954	F111338
5/16	3-1/4	7/8	F14901	F17307	
5/16	3-1/2	7/8	F18424	F112935	F114076
5/16	3-3/4	7/8	F110919		
5/16	4	7/8	F113245	F110382	
5/16	4-1/2	7/8	F115680	F14777	
5/16	5	7/8	F113043	F12220	
5/16	5-1/2	7/8	F19827	F111357	
5/16	6	7/8	F116632	F118809	
5/16	7-1/2	7/8	F15275		
3/8	1/2	1/2	F13357		
3/8	5/8	5/8	F11365	F120070	
3/8	3/4	3/4	F114012	F118860	F1417
3/8	7/8	7/8	F117601	F117835	
3/8	1	1	F112421	F119918	F17791
3/8	1-1/4	1-1/4	F13036	F114205	F12618
3/8	1-1/2	1	F111261	F17894	F115087

D	L	T	UNC Yellow Zinc	UNF Yellow Zinc	UNC Plain
3/8	1-3/4	1	F16453	F116927	F111150
3/8	2	1	F19888	F118235	F113775
3/8	2-1/4	1	F14471	F18223	
3/8	2-1/2	1	F115650	F16264	F114518
3/8	2-3/4	1	F17717	F15179	F110403
3/8	3	1	F119268	F19244	F11126
3/8	3-1/4	1	F15655	F1897	
3/8	3-1/2	1	F113746	F110817	F13651
3/8	3-3/4	1	F118971	F12098	
3/8	4	1	F118113	F15201	F15278
3/8	4-1/2	1	F17924	F119391	F11127
3/8	5	1	F19631	F13641	F117206
3/8	5-1/2	1	F11980	F17509	F14499
3/8	6	1	F19144	F116871	
3/8	6-1/2	1	F16446	F17350	
7/16	3/4	3/4	F115563	F114297	
7/16	7/8	7/8	F115761		
7/16	1	1	F11139	F17775	F13494
7/16	1-1/4	1-1/8	F112538	F113869	F111122
7/16	1-1/2	1-1/2	F13180	F14708	F16932
7/16	1-3/4	1-1/8	F12781	F19009	F17113
7/16	2	1-1/8	F18820	F11476	F110825
7/16	2-1/4	1-1/8	F17989	F117631	F114455
7/16	2-1/2	1-1/8	F17268	F112926	F117838
7/16	2-3/4	1-1/8	F110875	F14381	
7/16	3	1-1/8	F117000	F18768	F110343
7/16	3-1/4	1-1/8	F113507	F111244	
7/16	3-1/2	1-1/8	F111738	F112025	F13211
7/16	3-3/4	1-1/8	F14701	F15196	
7/16	4	1-1/8	F115875	F112140	F114249
7/16	4-1/2	1-1/8	F115790	F18096	
7/16	5	1-1/8	F18667	F112133	
7/16	5-1/2	1-1/8	F113539	F119662	
7/16	6	1-1/8	F110732	F113626	
7/16	7	1-1/8	F119432		
1/2	3/4	3/4	F18800	F114482	
1/2	7/8	7/8	F112986	F112090	
1/2	1	1	F15643	F16203	F19963
1/2	1-1/4	1-1/4	F11082	F118228	F13662
1/2	1-1/2	1-1/4	F114039	F17140	F12445
1/2	1-3/4	1-3/4	F113677	F118559	F116263
1/2	2	1-1/4	F17353	F19741	F111118
1/2	2-1/4	1-1/4	F111049	F18249	F15878
1/2	2-1/2	1-1/4	F16765	F112275	F115221
1/2	2-3/4	1-1/4	F114080	F19685	F17965
1/2	3	1-1/4	F115497	F18512	F15572
1/2	3-1/4	1-1/4	F117468	F18586	
1/2	3-1/2	1-1/4	F19982	F12202	F110882
1/2	3-3/4	1-1/4	F17584	F12068	
1/2	4	1-1/4	F18624	F13003	F15880
1/2	4-1/2	1-1/4	F15944	F1646	F18649
1/2	5	1-1/4	F117323	F111464	F13599

Fully Threaded per Mfg
slow moving sizes may be Canadian

SCREWS — HEX HEAD CAP GRADE 8 USA (continued)

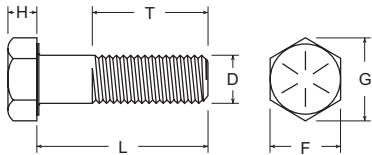
D	L	T	UNC Yellow Zinc	UNF Yellow Zinc	UNC Plain
1/2	5-1/2	1-1/4	F112080	F17533	
1/2	6	1-1/4	F14639	F115718	F17721
1/2	6-1/2	1-1/4	F13047	F112306	
1/2	7	1-1/4	F113060	F116694	
1/2	7-1/2	1-1/4	F118068		
1/2	8	1-1/4	F113276		
9/16	1	1	F1422	F15777	
9/16	1-1/4	1-1/4	F17232	F119080	
9/16	1-1/2	1-3/8	F115504	F116021	
9/16	1-3/4	1-3/8	F116138	F13609	
9/16	2	2	F19356	F117364	
9/16	2-1/4	1-3/8	F16850	F114495	
9/16	2-1/2	1-3/8	F113554	F116211	
9/16	2-3/4	1-3/8	F115737	F15602	
9/16	3	1-3/8	F12526	F112164	
9/16	3-1/4	1-3/8	F114451	F119635	
9/16	3-1/2	1-3/8	F18399	F14188	
9/16	3-3/4	1-3/8	F17573	F15145	
9/16	4	1-3/8	F19196	F115081	
9/16	4-1/2	1-3/8	F115874	F17092	
9/16	5	1-3/8	F17259	F119102	
9/16	5-1/2	1-3/8	F18911	F13072	
9/16	6	1-3/8	F110191	F116533	
9/16	7	1-3/8	F15175		
5/8	1	1	F116244	F18325	
5/8	1-1/4	1-1/4	F14206	F1976	F13396
5/8	1-1/2	1-1/2	F113749	F1890	F18827
5/8	1-3/4	1-1/2	F17213	F1770	F116417
5/8	2	2	F111541	F119070	F116658
5/8	2-1/4	1-1/2	F114065	F18174	F112951
5/8	2-1/2	1-1/2	F119777	F111723	F119685
5/8	2-3/4	1-1/2	F118701	F12786	
5/8	3	1-1/2	F116936	F19148	F16436
5/8	3-1/4	1-1/2	F11320	F13511	
5/8	3-1/2	1-1/2	F113575	F12937	F119184
5/8	3-3/4	1-1/2	F110826		
5/8	4	1-1/2	F113931	F18176	F13676
5/8	4-1/2	1-1/2	F115380	F13669	F118645
5/8	5	1-1/2	F110870	F13114	F112193
5/8	5-1/2	1-1/2	F11169	F117524	F114361
5/8	6	1-3/4	F120019	F19169	F115867
5/8	6-1/2	1-3/4	F111131	F110839	
5/8	7	1-3/4	F116621	F11746	F18200
5/8	8	1-3/4	F118124	F113287	F19760
5/8	8-1/2	1-3/4	F118250	F14400	
5/8	10	1-3/4	F14255		
3/4	1-1/4	1-1/4	F13285	F111303	
3/4	1-1/2	1-1/2	F11192	F117596	F110837
3/4	1-3/4	1-3/4	F119091	F1802	
3/4	2	1-3/4	F14677	F117897	F1997
3/4	2-1/4	2-1/4	F16956	F18127	F16267
3/4	2-1/2	2-1/2	F17587	F118719	F111444
3/4	2-3/4	1-3/4	F117341	F117154	F18908
3/4	3	1-3/4	F111962	F1533	F17950
3/4	3-1/4	1-3/4	F113887	F19896	
3/4	3-1/2	1-3/4	F17139	F13844	F16472
3/4	3-3/4	1-3/4	F13106	F18283	
3/4	4	1-3/4	F115907	F117806	F16925
3/4	4-1/2	1-3/4	F1108	F111664	F117551
3/4	5	1-3/4	F1396	F19507	F116704
3/4	5-1/2	1-3/4	F13613	F111325	
3/4	6	1-3/4	F12421	F16934	F112524
3/4	6-1/2	2	F16783		
3/4	7	2	F112761	F117564	F12695
3/4	7-1/2	2	F111758	F119680	
3/4	8	2	F114935		F117668
3/4	8-1/2	2	F112168	F14207	

Fully Threaded per Mfg
slow moving sizes may be Canadian

D	L	T	UNC Yellow Zinc	UNF Yellow Zinc	UNC Plain
3/4	9	2	F18497	F115850	F17110
3/4	9-1/2	2	F115601		
3/4	10	2	F18944	F12128	F110259
7/8	1-1/2	1-1/2	F14140	F18848	F113022
7/8	1-3/4	1-1/4	F113272	F112146	
7/8	2	2	F11646	F115643	
7/8	2-1/4	2	F19407	F12980	
7/8	2-1/2	2-1/2	F13467	F115641	F17877
7/8	2-3/4	2-3/4	F17754	F116438	
7/8	3	22	F120042	F119985	F11212
7/8	3-1/4	2	F110432		
7/8	3-1/2	2	F16790	F15534	F113358
7/8	3-3/4	2	F16233	F110760	
7/8	4	2	F117139	F13845	F110018
7/8	4-1/2	2	F115358	F1625	F115142
7/8	5	2	F12873	F115220	F112369
7/8	5-1/2	2	F113405	F11780	
7/8	6	2-1/4	F112142	F11169	F11080
7/8	6-1/2	2-1/4	F110234		F115324
7/8	7	2-1/4	F118805		F111858
7/8	7-1/2	2-1/4	F112279	F115011	
7/8	8	2-1/4	F19504	F17398	F112366
7/8	8-1/2	2-1/4	F1444		
7/8	9	2-1/4	F113634		
7/8	10	2-1/4	F114677	F16579	F15988
1	1-1/2	1-1/2	F11891	F112347	
1	1-3/4	1-3/4	F17049		
1	2	2	F15876	F111673	F18342
1	2-1/4	2-1/4	F112646	F11449	
1	2-1/2	2-1/4	F17998	F1789	F12947
1	2-3/4	2-1/4	F119137	F13445	
1	3	3	F115029		F17503
1	3-1/4	2-1/4	F112020	F14359	
1	3-1/2	2-1/4	F118065	F111753	F18591
1	3-3/4	2-1/4	F19658		
1	4	2-1/4	F16420	F118084	F16988
1	4-1/2	2-1/4	F112758	F115887	F119887
1	5	2-1/4	F110796	F1915	F15541
1	5-1/2	2-1/4	F15751	F16852	F1238
1	6	2-1/2	F114350	F110293	F18287
1	6-1/2	2-1/2	F111218		
1	7	2-1/2	F120069		F16282
1	7-1/2	2-1/2	F17289		F11208
1	8	2-1/2	F113841	F12400	F119684
1	8-1/2	2-1/2	F12864	F118889	
1	9	2-1/2	F185	F13795	
1	10	2-1/2	F11999	F18613	F117113
1-1/8	3	2-1/2			F114151
1-1/8	4	2-1/2			F17636
1-1/8	4-1/2	2-1/2			F117204
1-1/8	5	2-1/2			F119641
1-1/8	5-1/2	2-1/2			F15197
1-1/8	6-1/2	2-1/2	F118117		
1-1/8	7	2-1/2			F115600
1-1/8	8	2-1/2			F112397
1-1/8	9	2-1/2			F113025
1-1/4	3-1/2	3-1/2	F17899		F16569
1-1/4	4	2-3/4			F112121
1-1/4	4-1/2	2-3/4	F118871		F113032
1-1/4	5	2-3/4			F112693
1-1/4	5-1/2	2-3/4			F11362
1-1/4	6	2-3/4			F117268
1-1/4	7-1/2	2-3/4			F12038
1-1/4	8	2-3/4			F19787
1-1/4	9	2-3/4			F19220
1-1/4	10	2-3/4			F14277

SCREWS — HEX HEAD CAP GRADE 8 IMPORT

SAE 429 ASTM- A354BD	Proof Load PSI:	120,000
	Tensile Strength:	150,000
	Plating:	Yellow Zinc
	Import	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H	5/32	13/64	15/64	9/32	5/16	23/64	25/64	15/32	35/64	39/64	23/32	25/32	1
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	13/16	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2.25
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732	1.949	2.165	2.598

D	L	T	UNC Yellow Zinc	UNC Plain	UNFYZ **stocked in Plano only
1/4	1/2	1/2	F115089		F124134
1/4	5/8	5/8	F119615		
1/4	3/4	3/4	F18722		F124141
1/4	7/8	3/4	F16881		
1/4	1	3/4	F1948		F124131
1/4	1-1/4	3/4	F15785		
1/4	1-1/2	3/4	F16703	F110741	F124132
1/4	1-3/4	3/4	F116681		
1/4	2	3/4	F13752		F124136
1/4	2-1/4	3/4	F15510		
1/4	2-1/2	3/4	F114260		F124137
1/4	2-3/4	3/4	F15352		
1/4	3	3/4	F119445		F124139
1/4	3-1/4	3/4	F16252		
1/4	3-1/2	3/4	F116752		F124140
1/4	3-3/4	3/4	F113175		
1/4	4	3/4	F110585		F127520
1/4	4-1/2	3/4	F112680		F127521
1/4	5	3/4	F115315		
1/4	5-1/2	3/4	F114721		
1/4	6	3/4	F112699		
5/16	1/2	1/2	F115452		F124170
5/16	3/4	3/4	F119698		F124175
5/16	1	7/8	F115092		F124167
5/16	1-1/4	7/8	F116488		
5/16	1-1/2	7/8	F113825		F124168
5/16	1-3/4	7/8	F1677		
5/16	2	7/8	F15704		F124171
5/16	2-1/4	7/8	F14047		
5/16	2-1/2	7/8	F112120		F124172
5/16	2-3/4	7/8	F12524		
5/16	3	7/8	F11040		F124173
5/16	3-1/4	7/8	F115935		
5/16	3-1/2	7/8	F110101		F124174
5/16	4	7/8	F14022		F127532
5/16	4-1/2	7/8	F114815		F127533
5/16	5	7/8	F13694		
5/16	5-1/2	7/8	F19676		
5/16	6	7/8	F17740		F127534
5/16	7	1-1/8	F114692		
3/8	1/2	1/2	F111024		F124154
3/8	5/8	5/8	F112477		
3/8	3/4	3/4	F115014	F15894	F124162
3/8	1	1	F18967	F114783	F124151
3/8	1-1/4	1	F17972	F118025	
3/8	1-1/2	1	F15022	F119451	F124152
3/8	1-3/4	1	F12537		
3/8	2	1	F18524	F15996	F124156
3/8	2-1/4	1	F19850	F18243	
3/8	2-1/2	1	F117716	F111533	F124157
3/8	2-3/4	1	F14820		
3/8	3	1		F118441	F124160

D	L	T	UNC Yellow Zinc	UNC Plain	UNFYZ **stocked in Plano only
3/8	3-1/4	1	F113081		
3/8	3-1/2	1	F113609		F124161
3/8	3-3/4	1	F113098		
3/8	4	1	F110160		F124163
3/8	4-1/2	1	F112338		F124164
3/8	5	1	F19060		F127528
3/8	5-1/2	1	F19124		F124165
3/8	6	1-1/4	F15757		F124166
3/8	6-1/2	1-1/4	F115076		
7/16	3/4	3/4	F114714		F124197
7/16	7/8	7/8	F16422		
7/16	1	1	F116785		F124186
7/16	1-1/4	1-1/8	F116355		
7/16	1-1/2	1-1/8	F171		F124187
7/16	1-3/4	1-1/8	F15652		
7/16	2	1-1/8	F116644		F124190
7/16	2-1/4	1-1/8	F14615		
7/16	2-1/2	1-1/8	F17642		F124191
7/16	2-3/4	1-1/8	F11898		
7/16	3	1-1/8	F110974		F124194
7/16	3-1/4	1-1/8	F19536		
7/16	3-1/2	1-1/8	F14058		F124195
7/16	3-3/4	1-1/8	F111669		
7/16	4	1-1/8	F113520		
7/16	4-1/2	1-1/8	F1718		F124199
7/16	5	1-1/8	F19993		F124200
7/16	5-1/2	1-1/8	F11448		
7/16	6	1-1/8	F112736		F127541
7/16	6-1/2	1-3/8	F118295		
1/2	3/4	3/4	F14109		F124128
1/2	1	1	F111953	F114673	F11057
1/2	1-1/4	1-1/4	F117229		
1/2	1-1/2	1-1/4	F15161	F113315	F124118
1/2	1-3/4	1-1/4	F110355		
1/2	2	1-1/4	F114520	F119517	F124121
1/2	2-1/4	1-1/4	F17637		
1/2	2-1/2	1-1/4	F116408	F1256	F124122
1/2	2-3/4	1-1/4	F118583		
1/2	3	1-1/4	F1381	F18648	F124125
1/2	3-1/4	1-1/4	F18684		
1/2	3-1/2	1-1/4	F115449		F124126
1/2	3-3/4	1-1/4	F11784		
1/2	4	1-1/4	F19033		F124129
1/2	4-1/2	1-1/4	F11317		F124130
1/2	5	1-1/4	F119863		F127516
1/2	5-1/2	1-1/4	F16067		F127517
1/2	6	1-1/4	F16977		F127518
1/2	6-1/2	1-1/2	F112773		
1/2	7	1-1/2	F11611		F127519
1/2	7-1/2	1-1/2	F114268		
1/2	8	1-1/2	F117480		
1/2	9	1-1/2	F124210	F116879	

SCREWS — HEX HEAD CAP GRADE 8 IMPORT (continued)

D	L	T	UNC Yellow Zinc	UNC Plain	UNFYZ **stocked in Plano only
1/2	10	1-1/2	F12143	F11525	
9/16	1	1	F114981		
9/16	1-1/4	1-1/4	F117080		F124202
9/16	1-1/2	1-3/8	F16871		
9/16	1-3/4	1-3/8	F198		F127549
9/16	2	1-3/8	F116583		
9/16	2-1/4	1-3/8	F113822		F124203
9/16	2-1/2	1-3/8	F18913		
9/16	2-3/4	1-3/8	F117397		F127551
9/16	3	1-3/8	F117311		
9/16	3-1/4	1-3/8	F1765		F124205
9/16	3-1/2	1-3/8	F112922		
9/16	3-3/4	1-3/8	F11007		F124206
9/16	4	1-3/8	F1405		
9/16	4-1/2	1-3/8	F116187		
9/16	5	1-3/8	F18734		
9/16	5-1/2	1-3/8	F114245		F127553
9/16	6	1-3/8	F18361		F127554
5/8	1	1	F15340	F110252	F124207
5/8	1-1/4	1-1/4	F119755		F124176
5/8	1-1/2	1-1/2	F113500	F16443	
5/8	1-3/4	1-1/2	F111140		F124177
5/8	2	1-1/2	F115599	F111345	
5/8	2-1/4	1-1/2	F19935		F124179
5/8	2-1/2	1-1/2	F15658	F19999	
5/8	2-3/4	1-1/2	F1244		F124180
5/8	3	1-1/2	F114990	F114844	
5/8	3-1/4	1-1/2	F111238		F124181
5/8	3-1/2	1-1/2	F118695	F17145	
5/8	3-3/4	1-1/2	F19203		F127538
5/8	4	1-1/2	F13203	F119565	
5/8	4-1/2	1-1/2	F16208		F124182
5/8	5	1-1/2	F16440		F127539
5/8	5-1/2	1-1/2	F114125		F124183
5/8	6	1-3/4	F17370		
5/8	6-1/2	1-3/4	F113336	F1615	F124184
5/8	7	1-3/4	F114759		F124185
5/8	7-1/2	1-3/4	F118093	F14192	
5/8	8	1-3/4	F19137		
5/8	8-1/2	1-3/4	F112440		
3/4	1	1	F1619		
3/4	1-1/4	1-1/4	F114523		
3/4	1-1/2	1-1/2	F11353	F120075	
3/4	1-3/4	1-3/4	F12198		
3/4	2	2	F16189	F1293	F124142
3/4	2-1/4	2-1/4	F14527		
3/4	2-1/2	2-1/2	F111163	F18048	F124143
3/4	2-3/4	2-3/4	F113794		
3/4	3	1-3/4	F112049	F116359	F124144
3/4	3-1/4	1-3/4	F111273		
3/4	3-1/2	1-3/4	F11608		F124147
3/4	3-3/4	1-3/4	F112151		
3/4	4	1-3/4	F18087	F12774	F124148
3/4	4-1/2	1-3/4	F110609	F17115	
3/4	5	1-3/4	F17806		F124149
3/4	5-1/2	1-3/4	F15904		F124150
3/4	6	1-3/4	F117467		F127525
3/4	6-1/2	2	F113408		F127526
3/4	7	2	F110852		F127527
3/4	7-1/2	2	F120063		
3/4	8	2	F110362		
3/4	8-1/2	2	F1831		
3/4	9	2	F119283		
3/4	10	2	F112263		

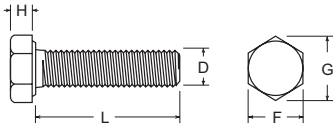
D	L	T	UNC Yellow Zinc	UNC Plain	UNFYZ **stocked in Plano only
7/8	1-1/2	1-1/2	F111994		
7/8	1-3/4	1-3/4	F119482		
7/8	2	2	F120076	F111692	
7/8	2-1/4	2	F119646		
7/8	2-1/2	2	F113090		F127543
7/8	2-3/4	2	F12344		
7/8	3	2	F14915		F127544
7/8	3-1/4	2	F115226		
7/8	3-1/2	2	F115722		F124201
7/8	3-3/4	2	F15285		
7/8	4	2	F14063		F127545
7/8	4-1/2	2	F12142		
7/8	5	2	F16291		F127546
7/8	5-1/2	2	F12797		F127547
7/8	6	2	F17583		
7/8	7	2-1/4	F120020		F127548
7/8	7-1/2	2-1/4	F112252		
7/8	8	2-1/4	F18886		
7/8	8-1/2	2-1/4	F13741		
7/8	9	2-1/4	F117430		
7/8	10	2-1/4	F16179		
1	2	2	F113607	F110390	
1	2-1/4	2-1/4	F110913	F111417	
1	2-1/2	2-1/4	F17728	F118051	
1	2-3/4	2-1/4	F112167		
1	3	2-1/4	F15214		
1	3-1/4	2-1/4	F19882		
1	3-1/2	2-1/4	F113402		F127511
1	3-3/4	2-1/4	F112040		
1	4	2-1/4	F18542		
1	4-1/2	2-1/4	F12550		
1	5	2-1/4	F111169		F127512
1	5-1/2	2-1/4	F14567		F127513
1	6	2-1/4	F114557	F17678	
1	7	2-1/2	F16100		F127514
1	7-1/2	2-1/2	F16079		F127515
1	8	2-1/2	F13961		
1	9	2-1/2	F115105		
1	10	2-1/2	F111279		
1-1/8	3	2-1/2	F16825		
1-1/8	3-1/2	2-1/2	F16923		
1-1/8	4	2-1/2	F111255		
1-1/8	4-1/2	2-1/2	F110637		
1-1/8	5	2-1/2	F16428		
1-1/8	5-1/2	2-1/2	F17025		
1-1/8	6	2-1/2	F119326		
1-1/8	6-1/2	2-3/4	F115466		
1-1/8	7	2-3/4	F19718		
1-1/8	8	2-3/4	F12333		
1-1/8	9	2-3/4	F11903		
1-1/8	10	2-3/4	F11714		
1-1/4	3	2-3/4	F13005		
1-1/4	3-1/2	2-3/4	F11170		
1-1/4	4	2-3/4	F12632		
1-1/4	5	2-3/4	F118509		
1-1/4	5-1/2	2-3/4	F110460		
1-1/4	6	2-3/4	F112070	F115102	
1-1/4	6-1/2	3	F112871		
1-1/4	7-1/2	3	F113341		
1-1/4	8	3	F12987		
1-1/4	9	3	F119900		
1-1/4	10	3	F113596		
1-1/2	4-1/2	3-1/4	F110397		
1-1/2	8	3-1/2	F17610		

* May have plain finish

BOLTS — HEX HEAD FULL THREAD GRADE 8 IMPORT (TAP BOLTS)

SAE J429	Proof Load PSI:	120,000
	Tensile Strength:	150,000
	Plating:	Yellow Zinc
	Import	

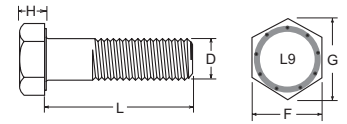
Diameter	D	1/4"	5/16"	3/8"	3/4"
Height	H	5/32	13/64	15/64	15/32
W.A.F.	F	7/16	1/2	9/16	1-1/8
W.A.C.	G	.505	.577	.650	1.299



D	L	UNC
1/4	1-1/2	F13774
1/4	2	F119117
5/16	1-1/2	F114884
5/16	2	F18801
3/8	1-1/2	F12541
3/8	2	F15359
1/2	2	F114516
1/2	4	F118233
3/4	3-1/2	F12959

SCREWS — HEX HEAD CAP L9 TYPE USA

ASTM F606	Material:	Steel
	Tensile Strength:	180,000 PSI Min.
	Plating:	Yellow Zinc
	Made In U.S.A.	



1

Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height Max	H	.194	.242	.290	.338	.386	.433	.481	.577	.672	.706
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	13/16	15/16	1-1/8	1-5/16	1-1/2
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732

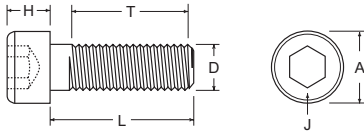
D	L	T	UNC
1/4	1/2	1/2	F14344
1/4	3/4	3/4	F15696
1/4	1	3/4	F112402
1/4	1-1/4	3/4	F115004
1/4	1-1/2	3/4	F113326
1/4	1-3/4	3/4	F1338
1/4	2	3/4	F112801
1/4	2-1/4	3/4	F116442
1/4	2-1/2	3/4	F110115
1/4	3	3/4	F118992
1/4	3-1/2	3/4	F14235
1/4	4	3/4	F19300
1/4	5	3/4	F11836
1/4	5-1/2	3/4	F119373
1/4	6	3/4	F115687
5/16	1/2	1/2	F117164
5/16	3/4	3/4	F118027
5/16	1	7/8	F117830
5/16	1-1/4	7/8	F12254
5/16	1-1/2	7/8	F112946
5/16	1-3/4	7/8	F1940
5/16	2	7/8	F117104
5/16	2-1/2	7/8	F12798
5/16	3	7/8	F11306
5/16	3-1/2	7/8	F19535
5/16	4	7/8	F16181
5/16	4-1/2	7/8	F111153
5/16	5-1/2	7/8	F12649
5/16	6	7/8	F112767
3/8	1/2	1/2	F115927
3/8	3/4	3/4	F116094
3/8	1	7/8	F114212
3/8	1-1/4	1	F12398
3/8	1-1/2	1	F11291
3/8	1-3/4	1	F17290
3/8	2	1	F17608
3/8	2-1/4	1	F11180
3/8	2-1/2	1	F17103
3/8	3	1	F118063
3/8	3-1/2	1	F115164
3/8	4	1	F110645
3/8	4-1/2	1	F116247
3/8	5	1	F18774
3/8	6	1	F11719
7/16	3/4	3/4	F117810
7/16	1	1	F16954

D	L	T	UNC
7/16	1-1/4	1-1/8	F114712
7/16	1-1/2	1-1/8	F16981
7/16	1-3/4	1-1/8	F14852
7/16	2	1-1/8	F117696
7/16	2-1/2	1-1/8	F119487
7/16	3	1-1/8	F117374
7/16	3-1/2	1-1/8	F19592
7/16	4	1-1/8	F112093
7/16	4-1/2	1-1/8	F115173
7/16	5	1-1/8	F11785
7/16	6	1-1/8	F113674
1/2	3/4	3/4	F114254
1/2	1	1	F19150
1/2	1-1/4	1-1/4	F119442
1/2	1-1/2	1-1/4	F16884
1/2	1-3/4	1-1/4	F118487
1/2	2	1-1/4	F114910
1/2	2-1/4	1-1/4	F11134
1/2	2-1/2	1-1/4	F115884
1/2	3	1-1/4	F11592
1/2	3-1/2	1-1/4	F18228
1/2	4	1-1/4	F114314
1/2	4-1/2	1-1/4	F18983
1/2	5	1-1/4	F114796
1/2	6	1-1/4	F19663
1/2	7	1-1/4	F117943
1/2	8	1-1/4	F18737
9/16	1	1	F117602
9/16	1-1/2	1-3/8	F114499
9/16	2	1-3/8	F114754
9/16	2-1/2	1-3/8	F111859
9/16	3	1-3/8	F17922
9/16	3-1/2	1-3/8	F1261
9/16	4	1-3/8	F11419
9/16	5	1-3/8	F112746
5/8	1	1	F114474
5/8	1-1/4	1-1/4	F119525
5/8	1-1/2	1-1/2	F18644
5/8	1-3/4	1-1/2	F1464
5/8	2	1-1/2	F111988
5/8	2-1/2	1-1/2	F115446
5/8	3	1-1/2	F115525
5/8	3-1/2	1-1/2	F17402
5/8	4	1-1/2	F111468
5/8	4-1/2	1-1/2	F118643
5/8	5	1-1/2	F18918

D	L	T	UNC
5/8	5-1/2	1-1/2	F13403
5/8	6	1-1/2	F112724
5/8	7	1-1/2	F118322
5/8	8	1-1/2	F12175
3/4	1-1/2	1-1/2	F1764
3/4	1-3/4	1-3/4	F117436
3/4	2	1-3/4	F116949
3/4	2-1/4	1-3/4	F13804
3/4	2-1/2	1-3/4	F115590
3/4	2-3/4	1-3/4	F117752
3/4	3	1-3/4	F14438
3/4	3-1/2	1-3/4	F118764
3/4	4	1-3/4	F114982
3/4	4-1/2	1-3/4	F111769
3/4	5	1-3/4	F115655
3/4	5-1/2	1-3/4	F119495
3/4	6	2	F118585
3/4	7	2	F14853
3/4	8	2	F118849
3/4	10	2	F16648
7/8	1-3/4	1-3/4	F18508
7/8	2	2	F119891
7/8	2-1/2	2	F111093
7/8	3	2	F13829
7/8	3-1/2	2	F17679
7/8	4	2	F111271
7/8	4-1/2	2-1/4	F14868
7/8	5	2-1/4	F111065
7/8	5-1/2	2-1/4	F114652
7/8	6	2-1/4	F117542
7/8	8	2-1/4	F13431
7/8	10	2-1/4	F16482
1	2	2	F113332
1	2-1/2	2-1/4	F117995
1	2-3/4	2-1/4	F117442
1	3	2-1/4	F11472
1	3-1/4	2-1/4	F114165
1	3-1/2	2-1/4	F16131
1	4	2-1/4	F112728
1	4-1/2	2-1/4	F16430
1	5	2-1/4	F115060
1	5-1/2	2-1/4	F14396
1	6	2-1/2	F19699
1	7	2-1/2	F112803
1	8	2-1/2	F111384
1	10	2-1/2	F16641

SOCKET CAP SCREWS — INCH USA

ANSI B18.3 1986	Tensile Strength #6-1/2":		180,000
	Tensile Strength 5/8" - 1"		170,000
	Plating:		Black Oxide
	Made in U.S.A.		



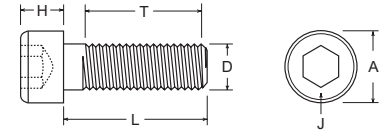
Diameter	D	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
Height	H	.138	.164	.190	.250	.312	.375	.500	.625	.750	.875	1.000
Head Dia.	A	.226	.270	.312	.375	.469	.562	.750	.938	1.125	1.312	1.500
Socket Size	J	7/64	9/64	5/32	3/16	1/4	5/16	3/8	1/2	5/8	3/4	3/4

D	L	T	UNC	UNF
#6	1/4	1/4	F14182	F110336
#6	3/8	3/8	F120016	F116498
#6	1/2	1/2	F17734	
#6	5/8	5/8	F115910	F12155
#6	3/4	3/4	F15728	F13501
#6	7/8	3/4	F114771	
#6	1	3/4	F18448	
#6	1-1/4	3/4	F19042	
#6	1-1/2	3/4	F17326	
#8	1/4	3/4	F14305	
#8	3/8	3/8	F120088	F117183
#8	1/2	1/2	F113438	F1899
#8	5/8	5/8	F14642	
#8	3/4	3/4	F119212	F18780
#8	7/8	7/8	F113274	
#8	1	7/8	F117676	
#8	1-1/4	7/8	F15570	
#8	1-1/2	7/8	F115855	
#8	2	7/8	F1215	
#10	1/4	1/4	F113890	F11690
#10	3/8	3/8	F18700	F113143
#10	1/2	1/2	F111252	F115677
#10	5/8	5/8	F19497	F17551
#10	3/4	3/4	F119324	F18480
#10	7/8	7/8	F114540	F113108
#10	1	7/8	F111449	F116602
#10	1-1/4	7/8	F113667	F117970
#10	1-1/2	7/8	F18084	F18132
#10	1-3/4	7/8	F11512	F18229
#10	2	7/8	F15076	F11843
#10	2-1/2	7/8	F13233	F17611
1/4	1/4	1/4	F119751	
1/4	3/8	3/8	F16809	F19598
1/4	1/2	1/2	F113111	F115322
1/4	5/8	5/8	F11066	F118444
1/4	3/4	3/4	F13191	F110108
1/4	7/8	7/8	F11416	F11623
1/4	1	1	F12773	F18544
1/4	1-1/4	1	F17066	F118976
1/4	1-1/2	1	F112463	F114729
1/4	1-3/4	1	F114890	F117545
1/4	2	1	F112458	F119701
1/4	2-1/4	1	F15014	
1/4	2-1/2	1	F1741	
1/4	2-3/4	1	F117667	
1/4	3	1	F114409	
1/4	3-1/4	1	F12672	
1/4	3-1/2	1	F114269	
1/4	4	1	F112740	
5/16	3/8	3/8	F114006	
5/16	1/2	1/2	F13586	F1135
5/16	5/8	5/8	F18540	F119328
5/16	3/4	3/4	F15042	F114776
5/16	7/8	7/8	F18802	F18377
5/16	1	1	F14685	F11242
5/16	1-1/4	1-1/8	F114247	F116044
5/16	1-1/2	1-1/8	F119741	F16132
5/16	1-3/4	1-1/8	F117428	
5/16	2	1-1/8	F119396	F112941
5/16	2-1/4	1-1/8	F119258	
5/16	2-1/2	1-1/8	F115272	F110003
5/16	3	1-1/8	F119265	
5/16	3-1/2	1-1/8	F12075	
5/16	4	1-1/8	F16636	
3/8	1/2	1/2	F111785	F11718
3/8	3/4	3/4	F118317	F113509
3/8	7/8	7/8	F16585	
3/8	1	1	F11640	F110611
3/8	1-1/4	1-1/4	F116139	F15677
3/8	1-1/2	1-1/4	F14254	F11600
3/8	1-3/4	1-1/4	F117105	F115046
3/8	2	1-1/4	F115320	F114595
3/8	2-1/4	1-1/4	F117437	F14806
3/8	2-1/2	1-1/4	F18998	F119358
3/8	2-3/4	1-1/4	F118012	
3/8	3	1-1/4	F119175	F13765
3/8	3-1/4	1-1/4	F110297	
3/8	3-1/2	1-1/4	F13622	
3/8	4	1-1/4	F13541	
3/8	4-1/2	1-1/4	F15745	
3/8	5	1-1/4	F113557	
3/8	6	1-1/4	F13287	
7/16	3/4	3/4	F118248	
7/16	7/8	7/8	F11058	

D	L	T	UNC	UNF
7/16	1	1	F16171	F12442
7/16	1-1/4	1-1/4	F111716	F17741
7/16	1-1/2	1-1/4	F117351	F120077
7/16	1-3/4	1-1/4	F11220	
7/16	2	1-1/4	F110304	F115382
7/16	2-1/2	1-1/4	F112262	
7/16	3	1-1/4	F16232	
7/16	4	1-1/4	F110199	
1/2	1/2	1/2	F110370	
1/2	5/8	5/8	F118061	
1/2	3/4	3/4	F118786	
1/2	7/8	7/8	F114931	
1/2	1	1	F110698	F12791
1/2	1-1/4	1-1/4	F115787	F19570
1/2	1-1/2	1-1/2	F13621	F111473
1/2	1-3/4	1-1/2	F119540	F16985
1/2	2	1-1/2	F118862	F110002
1/2	2-1/4	1-1/2	F18952	F11876
1/2	2-1/2	1-1/2	F110708	F113195
1/2	2-3/4	1-1/2	F13940	
1/2	3	1-1/2	F14520	F12859
1/2	3-1/4	1-1/2	F112258	
1/2	3-1/2	1-1/2	F11504	
1/2	4	1-1/2	F11341	
1/2	4-1/2	1-1/2	F115150	
1/2	5	1-1/2	F12563	
1/2	5-1/2	1-1/2	F18600	
1/2	6	1-1/2	F117742	
1/2	6-1/2	1-1/2	F12266	
1/2	7	1-1/2	F110890	
1/2	8	1-1/2	F116906	
5/8	1	1-1/4	F14361	F116508
5/8	1-1/4	1-1/4	F11205	F11216
5/8	1-1/2	1-1/2	F11413	
5/8	1-3/4	1-3/4	F18665	F114527
5/8	2	2	F13608	F19461
5/8	2-1/4	2-1/4	F111474	
5/8	2-1/2	2-1/4	F110267	F14796
5/8	2-3/4	2-1/4	F17033	
5/8	3	2-1/4	F110039	
5/8	3-1/4	2-1/4	F116693	
5/8	3-1/2	2-1/4	F110912	
5/8	4	2-1/4	F1670	
5/8	4-1/2	2-1/4	F117938	
5/8	8	2-1/4	F118372	
3/4	1-1/4	1-1/4	F17564	
3/4	1-1/2	1-1/2	F17842	
3/4	1-3/4	1-3/4	F14874	
3/4	2	2	F116357	
3/4	2-1/4	2	F112709	
3/4	2-1/2	2	F118140	
3/4	2-3/4	2	F11342	
3/4	3	2	F17648	
3/4	3-1/4	2	F116006	
3/4	3-1/2	2	F14099	
3/4	4	2	F19195	
3/4	4-1/2	2	F115569	
3/4	5	2	F119866	
3/4	6	2	F116297	
3/4	7	2	F118920	
3/4	8	2	F19423	
7/8	2	2	F15143	
7/8	2-1/4	2-1/4	F114283	
7/8	2-1/2	2-1/4	F118034	
7/8	2-3/4	2-1/4	F119148	
7/8	3	2-1/4	F12017	
7/8	3-1/2	2-1/4	F13890	
7/8	5	2-1/4	F115975	
7/8	5-1/2	2-1/4	F15512	
7/8	6	2-1/4	F12917	
7/8	6-1/2	2-1/4	F114918	
7/8	7	2-1/4	F17178	
1	2	2	F113078	
1	2-1/4	2-1/4	F15950	
1	2-1/2	2-1/2	F116265	
1	2-3/4	2-1/2	F115521	
1	3	2-1/2	F15050	
1	3-1/2	2-1/2	F19437	
1	4	2-1/2	F118131	
1	5	2-1/2	F115412	
1	5-1/2	2-1/2	F113283	
1	6-1/2	2-1/2	F112615	
1	8	2-1/2	F113644	

SOCKET CAP SCREWS — INCH IMPORT

ANSI B18.3 1986	Tensile Strength #6-1/2":	180,000
	Tensile Strength 5/8"-1"	170,000
	Plating:	Black Oxide
	Imported	



1

Diameter	D	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
Height	H	.112	.125	.138	.164	.190	.216	.250	.312	.375	.438	.500	.625	.750	.875	1.000	1.250
Head Dia.	A	.183	.205	.226	.270	.312	.324	.375	.469	.562	.656	.750	.938	1.125	1.312	1.500	1.852
Socket Size	J	3/32	3/32	7/64	9/64	5/32	5/32	3/16	1/4	5/16	3/8	3/8	1/2	5/8	3/4	3/4	7/8

D	L	T	UNC	UNF
#4	1/8	1/8	F115005	
#4	1/4	1/4	F1878	
#4	3/8	3/8	F13966	
#4	1/2	1/2	F15502	
#4	5/8	5/8	F15650	
#4	3/4	3/4	F116596	
#4	7/8	3/4	F110695	
#4	1	3/4	F14783	
#5	1/4	1/4	F113352	
#5	3/8	3/8	F14093	
#5	1/2	1/2	F16098	
#5	5/8	5/8	F18724	
#5	3/4	3/4	F119511	
#5	1	3/4	F113915	
#6	1/4	1/4	F17171	F13138
#6	3/8	3/8	F18536	F112596
#6	1/2	1/2	F1913	F16272
#6	5/8	5/8	F14087	F18571
#6	3/4	3/4	F13964	F15057
#6	7/8	3/4	F116730	
#6	1	3/4	F1783	F17521
#6	1-1/4	3/4	F14393	
#8	1/4	1/4	F13370	
#8	3/8	3/8	F17202	F116715
#8	1/2	7/8	F17991	F16740
#8	5/8	7/8	F118429	F113914
#8	3/4	7/8	F12808	F110733
#8	7/8	7/8	F12518	
#8	1	7/8	F18738	F1251
#8	1-1/4	7/8	F114179	F18529
#8	1-1/2	7/8	F116852	F118953
#10	1/4	1/4	F116273	F111450
#10	5/16	5/16	F116822	
#10	3/8	3/8	F114823	F112949
#10	1/2	1/2	F119397	F19066
#10	5/8	5/8	F111257	F11324
#10	3/4	3/4	F114327	F115515
#10	7/8	7/8	F12466	F117722
#10	1	7/8	F18364	F110780
#10	1-1/4	7/8	F115536	F110075
#10	1-1/2	7/8	F16823	F15954
#10	1-3/4	7/8	F115298	F118492
#10	2	7/8	F15207	F111368
#10	2-1/4	7/8	F117508	F11986
#10	2-1/2	7/8	F111990	F113694
#10	3	7/8	F115585	F18322
#10	4	7/8	F111691	

D	L	T	UNC	UNF
#12	1/2	1/2	F12451	
#12	3/4	3/4	F12831	
#12	1	1	F113905	
#12	1-1/4	1	F18875	
#12	1-1/2	1	F15213	
1/4	1/4	1/4	F14956	F110312
1/4	5/16	5/16	F118758	
1/4	3/8	3/8	F113252	F111611
1/4	1/2	1/2	F119888	F17391
1/4	5/8	5/8	F13571	F18231
1/4	3/4	3/4	F19790	F112658
1/4	7/8	7/8	F113778	F19038
1/4	1	1	F114036	F17909
1/4	1-1/8	1	F15783	
1/4	1-1/4	1	F110332	F119399
1/4	1-3/8	1	F114397	
1/4	1-1/2	1	F14379	F14612
1/4	1-3/4	1	F111628	F15916
1/4	2	1	F117166	F15424
1/4	2-1/4	1	F12127	F12369
1/4	2-1/2	1	F12655	F111433
1/4	2-3/4	1	F116908	
1/4	3	1	F16028	F116333
1/4	3-1/4	1	F115679	
1/4	3-1/2	1	F18716	
1/4	3-3/4	1	F12349	
1/4	4	1	F1904	
1/4	4-1/2	1	F114806	
1/4	5	1	F119908	
1/4	5-1/2	1	F113420	
5/16	3/8	3/8	F113850	
5/16	1/2	1/2	F16651	F1732
5/16	5/8	5/8	F114869	F15548
5/16	3/4	3/4	F112423	F16698
5/16	7/8	7/8	F116815	F112523
5/16	1	1	F13149	F118291
5/16	1-1/4	1-1/8	F16169	F13076
5/16	1-1/2	1-1/8	F19782	F119974
5/16	1-3/4	1-1/8	F16553	F112333
5/16	2	1-1/8	F17374	F16801
5/16	2-1/4	1-1/8	F17258	F119723
5/16	2-1/2	1-1/8	F16535	
5/16	2-3/4	1-1/8	F13135	
5/16	3	1-1/8	F115273	F13202
5/16	3-1/2	1-1/8	F16353	F115088
5/16	3-3/4	1-1/8	F118186	
5/16	4	1-1/8	F114919	

SOCKET CAP SCREWS — INCH IMPORT (continued)

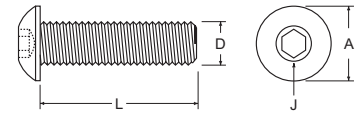
1

D	L	T	UNC	UNF
5/16	4-1/2	1-1/8	F18622	
5/16	5	1-1/8	F18797	
5/16	5-1/2	1-1/8	F16725	
5/16	6	1-1/8	F112302	
5/16	6-1/2	1-1/8	F115562	
3/8	1/2	1/2	F12543	F15761
3/8	5/8	5/8	F16929	
3/8	3/4	3/4	F112086	F116786
3/8	7/8	7/8	F14590	
3/8	1	1	F119624	F119980
3/8	1-1/4	1-1/4	F115748	F114221
3/8	1-1/2	1-1/4	F17507	F111877
3/8	1-3/4	1-1/4	F16689	F12223
3/8	2	1-1/4	F18987	F15299
3/8	2-1/4	1-1/4	F116132	
3/8	2-1/2	1-1/4	F118690	F1528
3/8	2-3/4	1-1/4	F14702	
3/8	3	1-1/4	F110805	F111475
3/8	3-1/4	1-1/4	F118417	
3/8	3-1/2	1-1/4	F16213	
3/8	4	1-1/4	F112622	
3/8	4-1/2	1-1/4	F1901	
3/8	5	1-1/4	F11652	
3/8	5-1/2	1-1/4	F110925	
3/8	6	1-1/4	F113928	
3/8	6-1/2	1-1/4	F111855	
3/8	7	1-1/4	F112868	
3/8	7-1/2	1-1/4	F114142	
3/8	8	1-1/4	F116033	
7/16	3/4	3/4	F16751	F119773
7/16	7/8	7/8	F115571	
7/16	1	1	F117266	F11119
7/16	1-1/4	1-1/4	F11541	F18747
7/16	1-1/2	1-1/4	F116983	F15620
7/16	1-3/4	1-1/4	F14705	F118674
7/16	2	1-1/4	F11326	F119793
7/16	2-1/4	1-1/4	F116471	F14720
7/16	2-1/2	1-1/4	F1999	F11687
7/16	2-3/4	1-1/4		F119132
7/16	3	1-1/4	F114517	F12612
7/16	3-1/4	1-1/4	F111645	
7/16	3-1/2	1-1/4	F18012	F115155
7/16	4	1-1/4	F117464	
7/16	4-1/2	1-1/4	F18749	
7/16	5	1-1/4	F119154	
7/16	6	1-1/4	F118354	
1/2	1/2	1/2	F15045	
1/2	5/8	5/8	F14743	
1/2	3/4	3/4	F117967	F19418
1/2	1	1	F18961	F118090
1/2	1-1/4	1-1/4	F11130	F15095
1/2	1-1/2	1-1/2	F12395	F13060
1/2	1-3/4	1-1/2	F12897	F111760
1/2	2	1-1/2	F17830	F1192
1/2	2-1/4	1-1/2	F14426	F119786
1/2	2-1/2	1-1/2	F11391	F18211
1/2	2-3/4	1-1/2	F114077	
1/2	3	1-1/2	F15727	F111063
1/2	3-1/4	1-1/2	F119214	
1/2	3-1/2	1-1/2	F115783	F14798
1/2	3-3/4	1-1/2	F16424	
1/2	4	1-1/2	F119281	F117223
1/2	4-1/2	1-1/2	F116739	F11854
1/2	5	1-1/2	F118963	
1/2	5-1/2	1-1/2	F119474	
1/2	6	1-1/2	F16822	
1/2	6-1/2	1-1/2	F113196	
1/2	7	1-1/2	F113793	

D	L	T	UNC	UNF
1/2	7-1/2	1-1/2	F115503	
1/2	8	1-1/2	F12318	
5/8	3/4	3/4	F118717	
5/8	1	1-1/4	F19062	F113187
5/8	1-1/4	1-1/2	F111002	
5/8	1-1/2	1-3/4	F19327	F119412
5/8	1-3/4	1-3/4	F1877	
5/8	2	1-3/4	F17659	F110013
5/8	2-1/4	1-3/4	F110752	
5/8	2-1/2	1-3/4	F1181	
5/8	2-3/4	1-3/4	F111149	
5/8	3	1-3/4	F110352	F15016
5/8	3-1/4	1-3/4	F112307	
5/8	3-1/2	1-3/4	F110685	
5/8	4	1-3/4	F115749	
5/8	4-1/2	1-3/4	F19653	
5/8	5	1-3/4	F112613	
5/8	5-1/2	1-3/4	F115809	
5/8	6	1-1/4	F18338	
5/8	6-1/2	1-1/4	F19167	
5/8	7	1-1/4	F114149	
5/8	7-1/2	1-1/4	F110056	
5/8	8-1/2	1-1/4	F116334	
3/4	1	1-1/4	F113345	
3/4	1-1/4	1-1/4	F116447	
3/4	1-1/2	1-1/2	F117519	F111987
3/4	1-3/4	1-2/4	F112905	F1391
3/4	2	2	F18372	F17046
3/4	2-1/4	2	F116674	
3/4	2-1/2	2	F112409	F119972
3/4	2-3/4	2	F112492	
3/4	3	2	F1751	F115671
3/4	3-1/2	2	F113942	
3/4	4	2	F14062	
3/4	4-1/2	2	F12464	
3/4	5	2	F111741	
3/4	5-1/2	2	F116031	
3/4	6	2	F19724	
3/4	6-1/2	2	F14970	
3/4	7	2	F118886	
3/4	8	2	F12813	
7/8	2	2-1/4	F119443	
7/8	2-1/2	2-1/4	F15456	
7/8	3	2-1/4	F16982	
7/8	3-1/2	2-1/4	F1176	
7/8	4	2-1/4	F14773	
7/8	4-1/2	2-1/4	F117849	
7/8	5	2-1/4	F116646	
7/8	6	2-1/4	F115941	
1	2	2	F15766	
1	2-1/2	2	F13032	
1	3	2-1/2	F16023	
1	3-1/2	2-1/2	F110319	
1	4	2-1/2	F116000	
1	4-1/2	2-1/2	F118226	
1	5	2-1/2	F19870	
1	5-1/2	2-1/2	F12990	
1	6	2-1/2	F18777	
1	6-1/2	2-1/2	F118394	
1	7	2-1/2	F118562	
1	8	2-1/2	F13389	
1-1/4	2-1/2	2-1/2	F1865	
1-1/4	3	3	F19475	
1-1/4	3-1/2	3	F119521	
1-1/4	5	3	F1910	
1-1/4	6	3	F110519	
1-1/4	7	3	F11520	

SOCKET CAP SCREWS — BUTTON HEAD USA

ASME B18.3	Tensile Strength:	up to 1/2" 145000 PSI, over 1/2" = 1 350000 PSI
	Material:	Alloy Steel
	Plating:	Furnace Black
	Made in U.S.A.	



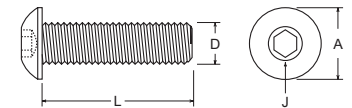
Diameter	D	#4	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"
Head Height Max	H	.059	.073	.087	.101	.132	.166	.199	.265	.331
Head Dia. Max	A	.213	.262	.312	.361	.437	.547	.656	.875	1.00
Socket Size	J	1/16	5/64	3/32	1/8	5/32	3/16	7/32	5/16	3/8

D	L	T	UNC	UNF
#4	1/4	1/4	F15389	
#4	3/8	3/8	F18065	
#4	1/2	1/2	F16682	
#6	1/4	1/4	F12261	
#6	3/8	3/8	F111560	
#6	1/2	1/2	F1272	
#6	5/8	5/8	F118638	
#8	1/4	1/4	F11734	
#8	3/8	3/8	F111916	
#8	1/2	1/2	F116100	
#8	5/8	5/8	F110303	
#8	3/4	1	F19426	
#10	1/4	1/4	F16686	F117378
#10	3/8	3/8	F19636	F116476
#10	1/2	1/2	F17245	F110466
#10	5/8	5/8	F19902	F17333
#10	3/4	3/4	F1937	F11531
#10	7/8	7/8	F118010	F18464
#10	1	1	F12577	F14697
1/4	3/8	3/8	F118442	F114379
1/4	1/2	1/2	F117151	F17450
1/4	5/8	3/4	F116956	F118991

D	L	T	UNC	UNF
1/4	3/4	3/4	F112465	F17297
1/4	7/8	7/8	F12342	
1/4	1	1	F114647	F15247
5/16	3/8	3/8	F110815	
5/16	1/2	1/2	F16049	F114827
5/16	5/8	5/8	F115396	F112792
5/16	3/4	3/4	F17257	F111376
5/16	7/8	7/8	F13267	
5/16	1	1	F114403	F17174
3/8	1/2	1/2	F17825	F117061
3/8	5/8	5/8	F14205	
3/8	3/4	3/4	F116872	
3/8	7/8	7/8	F110749	
3/8	1	1	F116227	F114446
3/8	1-1/4	1-1/4	F12945	
1/2	1	1	F15136	
1/2	1-1/4	1-1/4	F1329	
1/2	1-1/2	1-1/2	F117945	
1/2	2	2	F11781	
5/8	1-1/2	1-1/2	F116907	
5/8	2	2	F15809	

SOCKET CAP SCREWS — BUTTON HEAD IMPORT

ASME B18.3	Tensile Strength:	up to 1/2" 145000 PSI, over 1/2" = 135000 PSI
	Material:	Alloy Steel
	Plating:	Furnace Black
	Imported	



Diameter	D	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"
Head Height Max	H	.059	.066	.073	.087	.101	.132	.166	.199	.265	.331
Head Dia. Max	A	.213	.238	.262	.312	.361	.437	.547	.656	.875	1.000
Socket Size	J	1/16	5/64	5/64	3/32	1/8	5/32	3/16	7/32	5/16	3/8

D	L	T	UNC	UNF
#4	1/4	1/4	F12691	
#4	3/8	3/8	F115302	
#4	1/2	1/2	F110305	
#4	5/8	5/8	F14371	
#4	3/4	3/4	F112329	
#4	1	1	F111461	
#5	1/4	1/4	F110203	
#5	1/2	1/2	F111283	
#5	5/8	5/8	F118179	
#5	1	1	F16742	
#5	1-1/4	1-1/2	F14352	
#5	1-1/2	1-1/2	F114257	
#6	1/4	1/4	F110458	
#6	3/8	3/8	F116266	
#6	7/16	7/16	F115567	
#6	1/2	1/2	F113624	
#6	5/8	5/8	F12565	
#6	3/4	3/4	F12735	
#6	7/8	7/8	F118790	
#6	1	1	F110807	
#8	1/4	1/4	F14954	
#8	3/8	3/8	F112737	
#8	1/2	1/2	F110250	
#8	9/16	9/16	F116126	

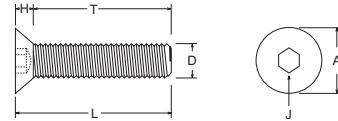
D	L	T	UNC	UNF
#8	5/8	5/8	F110285	
#8	3/4	3/4	F13727	
#8	7/8	7/8	F120067	
#8	1	1	F119963	
#10	1/4	1/4	F19591	F18513
#10	5/16	5/16		F19793
#10	3/8	3/8	F118541	F117396
#10	1/2	1/2	F111071	F111598
#10	5/8	5/8	F118195	F11377
#10	3/4	3/4	F18707	F18161
#10	7/8	7/8		F112553
#10	1	1	F110118	F16724
1/4	3/8	3/8	F11830	F118370
1/4	1/2	1/2	F119456	F17764
1/4	5/8	5/8	F17108	F16280
1/4	3/4	3/4	F119050	F115035
1/4	7/8	7/8	F116164	
1/4	1	1	F1164	F1721
1/4	1-1/4	1-1/4	F15176	
1/4	1-1/2	1-1/2	F117320	
1/4	1-3/4	1-3/4	F19116	
1/4	2	2	F119042	
5/16	3/8	3/8	F112575	
5/16	1/2	1/2	F112473	F111682

D	L	T	UNC	UNF
5/16	5/8	5/8	F110309	F119681
5/16	3/4	3/4	F18470	F117470
5/16	7/8	7/8	F112296	
5/16	1	1	F118389	
5/16	1-1/4	1-1/4	F113253	
5/16	2	2-1/2	F16135	
5/16	2-1/2	2-1/2	F118951	
5/16	3	3	F12828	
3/8	1/2	12	F110329	F110151
3/8	5/8	5/8	F19914	
3/8	3/4	3/4	F112354	
3/8	1	1	F11485	
3/8	1-1/4	1-1/4	F119294	
3/8	1-1/2	1-1/2	F111977	
3/8	1-3/4	1-3/4	F111508	
1/2	1	1	F13134	
1/2	1-1/4	1-1/4	F16702	
1/2	1-1/2	1-1/2	F18079	
1/2	2	2	F116750	
5/8	1-1/4	1-1/4	F118340	
5/8	1-1/2	1-1/2	F15790	

SOCKET CAP SCREWS — FLAT HEAD USA

1

ASME B18.3	Tensile Strength:	up to 1/2" 145000 PSI, over 1/2" =135000 PSI
	Material:	Alloy Steel
	Plating:	Furnace Black
	Made in U.S.A.	



Diameter	D	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Head Height Max	H	.083	.090	.097	.112	.127	.161	.198	.234	.234	.251	.324	.396
Head Dia. Max	A	.255	.281	.307	.359	.411	.531	.656	.781	.844	.938	1.188	1.438
Socket Size	J	1/16	5/64	5/64	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	1/2

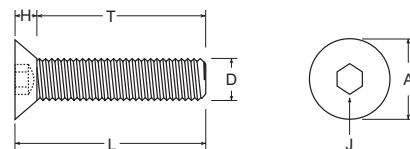
D	L	UNC	UNF
#4	1/4	F17685	
#4	3/8	F113729	
#4	1/2	F117796	
#4	5/8	F114895	
#4	3/4	F117570	
#5	1/4	F15964	
#5	3/8	F18612	
#5	1/2	F111544	
#5	5/8	F118422	
#5	3/4	F111870	
#6	1/4	F118588	
#6	3/8	F113395	
#6	1/2	F117267	
#6	5/8	F118042	
#6	3/4	F18153	
#8	3/8	F13142	
#8	1/2	F115963	
#8	5/8	F118378	
#8	3/4	F119780	
#8	1	F117127	
#10	3/8	F15584	F110636
#10	1/2	F1838	F113010
#10	5/8	F13109	F14840
#10	3/4	F116531	F115511
#10	1	F117282	F118289
#10	1-1/4	F14529	F117418
#10	1-1/2	F17180	F13055
1/4	3/8	F110296	F11389

D	L	UNC	UNF
1/4	1/2	F115795	F118564
1/4	5/8	F117434	F14046
1/4	3/4	F1431	F17193
1/4	1	F153	F16968
1/4	1-1/4	F18991	F110878
1/4	1-1/2	F11338	F115922
1/4	1-3/4	F17072	
1/4	2	F15211	
5/16	1/2	F11517	F15948
5/16	5/8	F19831	F112264
5/16	3/4	F17519	F17095
5/16	1	F114103	F18005
5/16	1-1/4	F14722	F110074
5/16	1-1/2	F14611	F113152
5/16	1-3/4	F19795	
5/16	2	F115751	
5/16	2-1/2	F117936	
3/8	1/2	F111927	
3/8	5/8	F13715	F16380
3/8	3/4	F115325	F13383
3/8	1	F110190	F112092
3/8	1-1/4	F117618	F18602
3/8	1-1/2	F14221	F115725
3/8	1-3/4	F113248	
3/8	2	F16354	
3/8	2-1/4	F15754	
3/8	2-1/2	F119235	
3/8	3	F18840	

D	L	UNC	UNF
7/16	3/4	F116953	
7/16	1	F120896	
7/16	1-1/4	F17344	
7/16	1-1/2	F14758	
7/16	2	F111905	
1/2	3/4	F19019	F113346
1/2	1	F19731	F117247
1/2	1-1/4	F12325	F17206
1/2	1-1/2	F19372	F110934
1/2	1-3/4	F112016	F116183
1/2	2	F119787	F12007
1/2	2-1/4	F110961	
1/2	2-1/2	F11890	
1/2	3	F117969	
5/8	1-1/4	F115845	
5/8	1-1/2	F13644	
5/8	2	F1508	
5/8	2-1/4	F15473	
5/8	2-1/2	F114864	
5/8	3	F112166	
3/4	1-1/2	F113174	
3/4	2	F113192	
3/4	2-1/2	F19825	
3/4	3	F112464	

SOCKET CAP SCREWS — FLAT HEAD IMPORT

ASME B18.3	Tensile Strength:	up to 1/2" 145000 PSI, over 1/2" =135000 PSI
	Material:	Alloy Steel
	Plating:	Furnace Black
	Imported	



Diameter	D	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"
Head Height Max	H	.083	.090	.097	.112	.127	.161	.198	.234	.234	.251	.324	.396	.468
Head Dia. Max	A	.255	.281	.307	.359	.411	.531	.656	.781	.844	.938	1.188	1.438	1.688
Socket Size	J	1/16	5/64	5/64	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	1/2	9/16

D	L	UNC	UNF
#4	1/4	F12814	
#4	3/8	F118174	
#4	1/2	F119625	
#4	5/8	F111448	
#4	3/4	F116495	
#4	1	F112892	
#4	1-1/4	F16989	
#5	3/8	F117994	
#5	1	F13540	
#6	1/4	F111513	
#6	5/16	F114171	
#6	3/8	F11256	
#6	1/2	F119828	
#6	5/8	F18260	
#6	3/4	F17161	
#6	7/8	F114410	
#6	1	F118636	
#8	3/8	F112382	
#8	1/2	F11716	
#8	5/8	F19629	
#8	3/4	F18121	
#8	7/8	F18937	
#8	1	F110972	
#10	3/8	F114555	F110979
#10	1/2	F117251	F14835
#10	5/8	F114027	F119453
#10	3/4	F110971	F19045
#10	1	F14010	F19563
#10	1-1/4	F16286	F17766
#10	1-1/2	F12035	F110057
1/4	3/8	F13446	
1/4	1/2	F118347	F12215
1/4	5/8	F118945	F115533
1/4	3/4	F111861	F18739
1/4	1	F14837	F12939
1/4	1-1/4	F18340	F112731
1/4	1-1/2	F13809	F1792
1/4	1-3/4	F117200	
1/4	2	F15834	
5/16	1/2	F12960	F13912

D	L	UNC	UNF
5/16	5/8	F1597	F116723
5/16	3/4	F16889	F14843
5/16	1	F110563	F120053
5/16	1-1/4	F19172	F118046
5/16	1-1/2	F118865	F119206
5/16	1-3/4	F18712	
5/16	2	F115487	F13169
5/16	2-1/4	F15976	
5/16	2-1/2	F18846	
3/8	1/2	F118948	
3/8	3/4	F1269	F119779
3/8	1	F113771	F15895
3/8	1-1/4	F118641	F114872
3/8	1-1/2	F14636	F118427
3/8	1-3/4	F13108	
3/8	2	F17396	
3/8	2-1/4	F118470	
3/8	2-1/2	F112754	
3/8	3	F12441	
3/8	4	F114683	
7/16	3/4	F15748	
7/16	1	F13185	
7/16	1-1/4	F13937	
7/16	1-1/2	F111587	
7/16	2	F19177	
1/2	3/4	F119228	F15596
1/2	1	F18217	F118405
1/2	1-1/4	F119020	F19247
1/2	1-1/2	F12057	F118952
1/2	1-3/4	F115744	F114489
1/2	2	F116572	F119058
1/2	2-1/4	F11163	
1/2	2-1/2	F1673	
1/2	3	F16621	
1/2	3-1/2	F118752	
1/2	4	F110937	
1/2	8	F15700	
5/8	1	F116687	
5/8	1-1/4	F15646	
5/8	1-1/2	F116143	

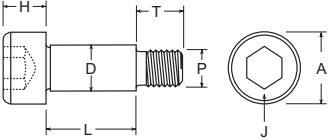
D	L	UNC	UNF
5/8	1-3/4	F13013	
5/8	2	F17634	
5/8	2-1/4	F110950	
5/8	2-1/2	F15009	
5/8	3	F116850	
5/8	3-1/2	F117595	
5/8	4	F12696	
3/4	1-1/4	F110155	
3/4	1-1/2	F16883	
3/4	1-3/4	F116113	
3/4	2	F118508	
3/4	2-1/2	F19934	
3/4	3	F114996	
3/4	3-1/2	F119660	
3/4	4	F117115	
7/8	4	F115712	
7/8	5	F15453	

SOCKET CAP SCREWS — SHOULDER SCREWS USA

1

ANSI B1.1	Tensile Strength PSI: 140000	
	Plating: Black Oxide	
	Made in U.S.A.	

Diameter	D	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.188	.219	.250	.313	.375	.500
Head Dia.	A	.375	.438	.562	.750	.875	1.00
Thread	P	10-24	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11
Socket Size	J	1/8	5/32	3/16	1/4	5/16	3/8



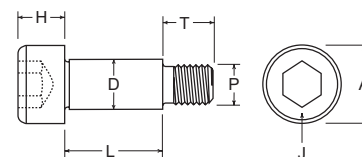
D	L	T	UNC
1/4	3/8	.375	F117803
1/4	1/2	.375	F1197
1/4	5/8	.375	F113425
1/4	3/4	.375	F1387
1/4	1	.375	F120032
1/4	1-1/4	.375	F19552
1/4	1-1/2	.375	F119876
5/16	3/8	.437	F112399
5/16	1/2	.437	F113277
5/16	5/8	.437	F13629
5/16	3/4	.437	F15282
5/16	1	.437	F115675
5/16	1-1/4	.437	F14969
5/16	1-1/2	.437	F114021
5/16	1-3/4	.437	F14857
5/16	2	.437	F12004
3/8	3/8	.500	F114050
3/8	1/2	.500	F1680
3/8	5/8	.500	F114450
3/8	3/4	.500	F11635
3/8	1	.500	F111613
3/8	1-1/4	.500	F116824

D	L	T	UNC
3/8	1-1/2	.500	F117991
3/8	1-3/4	.500	F12200
3/8	2	.500	F115313
3/8	2-1/4	.500	F12940
3/8	2-1/2	.500	F115573
3/8	2-3/4	.500	F13777
3/8	3	.500	F115286
3/8	4	.500	F13986
1/2	1/2	.625	F17141
1/2	5/8	.625	F19129
1/2	3/4	.625	F18002
1/2	1	.625	F17052
1/2	1-1/4	.625	F118525
1/2	1-1/2	.625	F114587
1/2	1-3/4	.625	F118675
1/2	2	.625	F19347
1/2	2-1/2	.625	F19319
1/2	2-3/4	.625	F1307
1/2	3	.625	F111262
5/8	1-1/4	.750	F119015
5/8	1-1/2	.750	F13625
5/8	2	.750	F11148

D	L	T	UNC
5/8	2-1/2	.750	F111318
5/8	3	.750	F119402
5/8	3-1/4	.750	F15990
5/8	4	.750	F13068
5/8	4-1/4	.750	F110652
5/8	5	.750	F1757
3/4	1-1/2	.875	F113510
3/4	2-1/4	.875	F115264
3/4	2-3/4	.875	F118529
3/4	3-1/4	.875	F110134
3/4	3-1/2	.875	F118418
3/4	3-3/4	.875	F110315
3/4	4-1/4	.875	F13643
3/4	4-1/2	.875	F113769
3/4	4-3/4	.875	F113289
3/4	5	.875	F18092
3/4	6	.875	F112352

SOCKET CAP SCREWS — SHOULDER SCREWS IMPORT

ANSI B1.1	Tensile Strength PSI:	140000
	Plating:	Black Oxide
	Imported	



Diameter	D	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
Height	H	.188	.219	.250	.313	.375	.500	.5625	.625
Head Dia.	A	.375	.438	.562	.750	.875	1.00	1.125	1.312
Thread	P	10-24	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	3/4-10
Socket Size	J	1/8	5/32	3/16	1/4	5/16	3/8	7/16	1/2

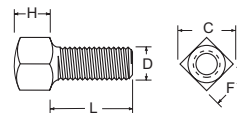
D	L	T	UNC
1/4	3/8	.375	F12260
1/4	1/2	.375	F17846
1/4	5/8	.375	F117245
1/4	3/4	.375	F114808
1/4	1	.375	F119500
1/4	1-1/4	.375	F1581
1/4	1-1/2	.375	F112237
1/4	1-3/4	.375	F18204
1/4	2	.375	F18642
1/4	2-1/4	.375	F13374
1/4	2-1/2	.375	F13493
1/4	2-3/4	.375	F111595
1/4	3	.375	F110213
1/4	3-1/2	.375	F12076
1/4	4	.375	F111151
5/16	3/8	.437	F17713
5/16	1/2	.437	F115447
5/16	5/8	.437	F15277
5/16	3/4	.437	F118150
5/16	1	.437	F17979
5/16	1-1/4	.437	F118156
5/16	1-1/2	.437	F14851
5/16	1-3/4	.437	F120028
5/16	2	.437	F112077
5/16	2-1/4	.437	F17399
5/16	2-1/2	.437	F13557
5/16	3	.437	F110699
5/16	3-1/2	.437	F12459
5/16	4	.437	F17931
3/8	3/8	.500	F111424
3/8	1/2	.500	F112864
3/8	5/8	.500	F14137
3/8	3/4	.500	F11248
3/8	1	.500	F111696
3/8	1-1/4	.500	F113385
3/8	1-1/2	.500	F113430

D	L	T	UNC
3/8	1-3/4	.500	F11027
3/8	2	.500	F112989
3/8	2-1/4	.500	F118254
3/8	2-1/2	.500	F111492
3/8	2-3/4	.500	F18201
3/8	3	.500	F112925
3/8	3-1/4	.500	F115933
3/8	3-1/2	.500	F114973
3/8	4	.500	F119558
3/8	4-1/2	.500	F119955
3/8	5	.500	F110091
3/8	5-1/2	.500	F14148
3/8	6	.500	F13201
1/2	1/2	.625	F116598
1/2	5/8	.625	F19344
1/2	3/4	.625	F17175
1/2	1	.625	F19641
1/2	1-1/4	.625	F118075
1/2	1-1/2	.625	F119347
1/2	1-3/4	.625	F19413
1/2	2	.625	F16155
1/2	2-1/4	.625	F116592
1/2	2-1/2	.625	F113978
1/2	2-3/4	.625	F112446
1/2	3	.625	F115454
1/2	3-1/4	.625	F116525
1/2	3-1/2	.625	F19923
1/2	4	.625	F1309
1/2	4-1/4	.625	F111825
1/2	4-1/2	.625	F18491
1/2	4-3/4	.625	F12736
1/2	5	.625	F13769
1/2	5-1/2	.625	F110230
1/2	6	.625	F17518
5/8	1-1/4	.750	F12172
5/8	1-1/2	.750	F114228

D	L	T	UNC
5/8	1-3/4	.750	F113540
5/8	2	.750	F114959
5/8	2-1/4	.750	F114085
5/8	2-1/2	.750	F115439
5/8	2-3/4	.750	F17885
5/8	3	.750	F116540
5/8	3-1/4	.750	F116464
5/8	3-1/2	.750	F116280
5/8	4	.750	F13205
5/8	4-1/4	.750	F117465
3/4	1-1/2	.875	F119167
3/4	1-3/4	.875	F116910
3/4	2	.875	F15971
3/4	2-1/4	.875	F110314
3/4	2-1/2	.875	F111648
3/4	3	.875	F110187
3/4	3-1/2	.875	F113447
3/4	3-3/4	.875	F116326
3/4	4	.875	F117801
3/4	4-1/2	.875	F12848
3/4	4-3/4	.875	F110869
3/4	5	.875	F16149
3/4	5-1/2	.875	F12849
3/4	6	.875	F18304
1	1	1.0	F11919
1	1-1/4	1.0	F1832
1	1-1/2	1.0	F111549
1	1-3/4	1.0	F1740
1	2-1/4	1.0	F13401
1	2-3/4	1.0	F14576
1	3	1.0	F1694
1	3-1/4	1.0	F110710
1	4	1.0	F19828
1	4-1/2	1.0	F117856
1	5	1.0	F13681

SCREWS — SQUARE HEAD SET

ANSI ASME 18.6.2	Material:	Case Hardened Steel
	Plating:	Unplated
	Imported	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Head Height	H	.196	.245	.293	.341	.389	.485	.582	.678	.774
W.A.C.	C	.354	.442	.530	.619	.707	.884	1.060	1.237	1.414
W.A.F.	F	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1

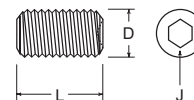
D	L	UNC
1/4	1/2	F119845
1/4	3/4	F17757
1/4	7/8	F111372
1/4	1	F116206
1/4	1-1/4	F114999
1/4	1-1/2	F17981
1/4	2	F14266
1/4	2-1/2	F16577
1/4	3	F14553
5/16	5/8	F1517
5/16	3/4	F112787
5/16	7/8	F11530
5/16	1	F19886
5/16	1-1/4	F1925
5/16	1-1/2	F111181
5/16	2	F117905
5/16	3	F17473
3/8	1/2	F114737
3/8	5/8	F11154
3/8	3/4	F119354
3/8	7/8	F113460
3/8	1	F16762
3/8	1-1/4	F15138
3/8	1-1/2	F18572
3/8	1-3/4	F110891
3/8	2	F113528
3/8	2-1/2	F110546
3/8	3	F119112
3/8	3-1/2	F114313
3/8	4	F16071

D	L	UNC
3/8	5	F110137
7/16	3/4	F1715
7/16	1	F13910
7/16	1-1/4	F112228
7/16	1-1/2	F12847
7/16	1-3/4	F117118
7/16	2	F110610
7/16	2-1/2	F19626
7/16	3	F116803
1/2	3/4	F16767
1/2	7/8	F17474
1/2	1	F118423
1/2	1-1/4	F115629
1/2	1-1/2	F12913
1/2	1-3/4	F1640
1/2	2	F118450
1/2	2-1/2	F13685
1/2	3	F118978
1/2	3-1/2	F115885
1/2	4	F110806
1/2	4-1/2	F18525
1/2	5	F11922
1/2	6	F19306
5/8	3/4	F16931
5/8	7/8	F19078
5/8	1	F17887
5/8	1-1/4	F119904
5/8	1-3/4	F12583
5/8	2	F110510
5/8	2-1/2	F110277

D	L	UNC
5/8	3	F15043
5/8	3-1/2	F12341
5/8	4	F1150
5/8	4-1/2	F12544
5/8	5	F112734
5/8	6	F18866
3/4	1-1/4	F19646
3/4	1-3/4	F119664
3/4	2	F18036
3/4	2-1/4	F110885
3/4	2-1/2	F111885
3/4	3	F117298
3/4	3-1/2	F12192
3/4	4	F110328
3/4	4-1/2	F17805
3/4	5	F11063
3/4	6	F116212
7/8	2-1/2	F110302
7/8	4	F1510
7/8	6	F110038
1	2-1/2	F13117
1	3	F114761
1	3-1/2	F16887
1	4	F116835
1	4-1/2	F112683
1	5	F116845
1	6	F112106

SOCKET SET SCREWS — CUP POINT USA

ANSI B18.3 1986	Tensile Strength PSI:	180,000
	Material:	Alloy Steel
	Plating:	Black Oxide
	Made in U.S.A.	



Diameter	D	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Socket Size	J	.050	1/16	1/16	5/64	3/32	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8

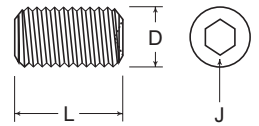
D	L	UNC	UNF
#4	1/8	F14009	
#4	3/16	F113160	
#4	1/4	F15711	
#4	3/8	F112832	
#4	5/8	F18718	
#5	1/2	F19575	
#5	3/4	F18099	
#6	1/8	F16062	
#6	3/16	F18876	
#6	1/4	F14829	
#6	5/16	F1693	
#6	3/8	F19547	
#6	1/2	F112851	
#6	3/4	F14326	
#8	1/8	F11742	
#8	3/16	F19597	
#8	1/4	F18404	
#8	5/16	F16393	
#8	3/8	F13164	
#8	1/2	F118581	
#8	5/8	F115595	
#8	3/4	F12454	
#8	1	F11783	
#10	3/16	F117337	F17770
#10	1/4	F116057	F112516
#10	5/16	F11398	F11588

D	L	UNC	UNF
#10	3/8	F119322	F19797
#10	1/2	F16690	F111027
#10	5/8		F12216
#10	3/4	F114923	F15812
#10	1	F116697	F15321
1/4	3/16	F14171	F116415
1/4	1/4	F114715	F112217
1/4	5/16	F110219	F113485
1/4	3/8	F19583	F118785
1/4	1/2	F115754	F15066
1/4	5/8	F118267	F115812
1/4	1	F114322	F1922
1/4	1-1/4	F11741	F113298
1/4	1-1/2	F14737	
1/4	2	F12741	
5/16	1/4	F110905	F116652
5/16	5/16	F116042	F15579
5/16	3/8	F117402	F13808
5/16	1/2	F116529	F118464
5/16	5/8	F110248	
5/16	3/4	F14464	F15495
5/16	1	F16551	F13993
5/16	1-1/4	F1489	
5/16	1-1/2	F111452	
5/16	2	F13842	
3/8	1/4	F14222	F14170

D	L	UNC	UNF
3/8	3/8	F112979	F118212
3/8	1/2	F111915	F114487
3/8	5/8	F15123	F117842
3/8	3/4	F113171	F116381
3/8	1	F14906	F1199
3/8	1-1/4	F19046	
3/8	1-1/2	F115091	
7/16	1/2	F12560	F18496
7/16	3/4	F112461	
7/16	1	F19766	
7/16	1-1/2	F16238	
1/2	1/2	F119774	F17414
1/2	5/8	F112718	
1/2	3/4	F120091	F117011
1/2	1	F11865	
1/2	1-1/4	F15395	
1/2	1-1/2	F113612	
1/2	2	F117546	
3/4	1-1/2	F117088	

SOCKET SET SCREWS — CUP POINT IMPORT

ANSI B18.3 1986	Tensile Strength PSI:	180,000
	Material:	Alloy Steel
	Plating:	Black Oxide
	Imported	



1

Diameter	D	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Socket Size	J	.050	1/16	1/16	5/64	3/32	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8

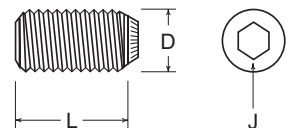
D	L	UNC	UNF
#4	1/8	F17463	
#4	1/4	F15110	
#4	5/16	F1750	
#4	3/8	F119909	
#4	1/2	F111217	
#5	1/8	F19395	
#5	1/4	F1717	
#6	1/8	F112834	
#6	3/16	F1236	
#6	1/4	F111646	
#6	5/16	F113857	
#6	3/8	F119034	
#6	1/2	F114399	
#6	1	F118941	
#8	1/8	F11896	
#8	3/16	F119557	
#8	1/4	F13025	
#8	5/16	F113835	
#8	3/8	F116427	
#8	1/2	F110679	
#8	5/8	F110231	
#8	3/4	F15290	
#8	1	F111084	
#10	3/16	F16292	F113323
#10	1/4	F118321	F15651
#10	5/16	F116068	F14766
#10	3/8	F110601	F13163
#10	1/2	F13113	F118365
#10	5/8	F116166	F112630
#10	3/4	F13482	F118846

D	L	UNC	UNF
#10	1	F115723	F12426
#10	1-1/4	F117209	
#12	1/4	F113393	
1/4	3/16	F116075	
1/4	1/4	F112059	F19908
1/4	5/16	F11996	F19539
1/4	3/8	F13709	F113131
1/4	1/2	F16891	F119834
1/4	5/8	F18637	F15973
1/4	3/4	F17468	F116519
1/4	1	F11392	F17112
1/4	1-1/4	F119797	F119809
1/4	1-1/2	F120051	
1/4	2	F116707	
5/16	1/4	F119694	F110731
5/16	5/16	F119425	F18040
5/16	3/8	F16153	F113717
5/16	1/2	F18286	F119942
5/16	5/8	F16307	
5/16	3/4	F112649	F13213
5/16	1	F110350	F115752
5/16	1-1/4	F17880	
5/16	1-1/2	F18812	
5/16	2	F113176	
3/8	1/4	F112213	F16010
3/8	3/8	F112055	F113592
3/8	1/2	F112211	F117331
3/8	5/8	F12231	F1623
3/8	3/4	F116813	F113237
3/8	1	F17313	F12099

D	L	UNC	UNF
3/8	1-1/4	F119300	
3/8	1-1/2	F113787	F13462
3/8	2	F113451	
3/8	2-1/4		F114786
7/16	3/8		F1767
7/16	1/2	F119085	F113649
7/16	3/4	F14061	
7/16	1	F11560	
7/16	1-1/2	F12601	
7/16	2	F113605	
1/2	1/2	F116651	F114056
1/2	5/8	F119830	
1/2	3/4	F12422	F17863
1/2	1	F17905	F17310
1/2	1-1/4	F111556	
1/2	1-1/2	F19037	
1/2	2	F17908	
5/8	5/8	F113653	F16937
5/8	3/4	F114007	
5/8	1	F116465	F118652
5/8	1-1/4	F15093	
5/8	1-1/2	F16228	
5/8	2	F16563	
3/4	3/4	F119031	
3/4	1	F119304	
3/4	1-1/4	F12234	
3/4	1-1/2	F110353	
3/4	1-3/4	F118740	
3/4	2	F112471	
1	1	F119438	

SOCKET SET SCREWS — KNURLED POINT USA

ANSI B18.3 1986	Tensile Strength PSI:	180,000
	Material:	Alloy Steel
	Plating:	Black Oxide
	Made in U.S.A.	



Diameter	D	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Socket Size	J	1/16	5/64	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8

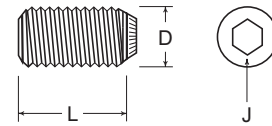
D	L	UNC	UNF
#6	1/8	F118760	
#6	1/4	F13887	
#8	1/8	F12733	
#8	3/16	F17469	
#8	1/4	F18528	
#8	3/8	F11385	
#10	3/16	F14251	F111346

D	L	UNC	UNF
#10	1/4	F15271	F11154
#10	3/8		F12904
1/4	1/4	F110495	
1/4	5/16	F16845	
1/4	3/8	F14208	
1/4	1/2	F119997	
1/4	3/4	F11237	

D	L	UNC	UNF
5/16	1/4	F114368	F12912
5/16	5/16	F119293	
5/16	3/8	F119496	
5/16	1/2	F17641	
3/8	3/8	F12932	F1905
3/8	1/2	F14968	
3/8	3/4	F111674	

SOCKET SET SCREWS — KNURLED POINT IMPORT

ANSI B18.3 1986	Tensile Strength PSI:	180,000
	Material:	Alloy Steel
	Plating:	Black Oxide
	Imported	



Diameter	D	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	3/4"
Socket Size	J	1/16	5/64	3/32	1/8	5/32	3/16	7/32	1/4	3/8

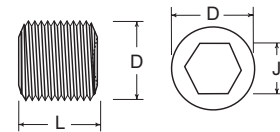
D	L	UNC	UNF
#4	1/4	F114638	
#6	3/16	F113721	
#6	1/4	F119914	
#6	3/8	F114863	
#6	1/2	F14630	
#8	3/16	F19406	
#8	1/4	F13768	
#8	3/8	F16191	
#10	3/16	F13582	F19236
#10	1/4	F116260	F18703
#10	5/16	F116411	
#10	3/8	F17927	F118530

D	L	UNC	UNF
#10	1/2	F1733	F119759
1/4	1/4	F118726	F118308
1/4	5/16	F113959	F112186
1/4	3/8	F15425	F1545
1/4	1/2	F14363	
1/4	3/4	F116814	
5/16	1/4	F115822	
5/16	5/16	F111171	F116151
5/16	3/8	F114160	F19697
5/16	1/2	F119945	F16328
5/16	5/8		F118616
5/16	3/4	F119462	

D	L	UNC	UNF
5/16	1	F110914	
3/8	3/8	F12204	F12334
3/8	1/2	F16565	F117957
3/8	3/4	F111428	
3/8	1	F12225	
3/8	1-1/4	F110860	
1/2	1/2	F14165	
1/2	5/8	F111946	
1/2	3/4	F19314	
1/2	1	F11948	

SOCKET — PIPE PLUGS 3/4" DRY SEAL NPTF

ANSI/ASME B1.20.3	Material:	Alloy Steel
	Plating:	Furnace Black



Nominal Size	Nominal Outside Diameter (D)	Thread Pitch	Overall Length Max (L)	Socket Size J	Tap Drill Size	Part No.
1/16	.3120	27	.3240	5/32	15/64	F11701
1/8	.4050	27	.3240	3/16	21/64	F116897
1/4	.5400	18	.4570	1/4	27/64	F115919

Nominal Size	Nominal Outside Diameter (D)	Thread Pitch	Overall Length Max (L)	Socket Size J	Tap Drill Size	Part No.
3/8	.6750	18	.5200	5/16	9/16	F17607
1/2	.8400	14	.5820	3/8	11/16	F118258
3/4	1.0500	14	.6450	9/16	57/64	F116768

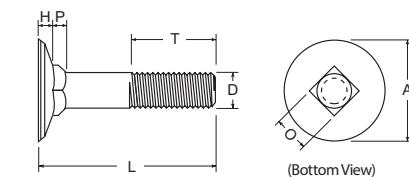
BOLTS — ELEVATOR

ANSI B18.5 1978	Material:	Steel
	Plating:	Zinc

Diameter	D	1/4"	5/16"	3/8"
Height	H	.035	.035	.040
Head Dia.	A	1.008	1.227	1.352
Square Width	O	.280	.342	.405
Square Depth	P	.219	.250	.250

D	L	T	UNC
1/4	3/4	3/4	F110046
1/4	1	3/4	F19189
1/4	1-1/4	3/4	F12280
1/4	1-1/2	3/4	F119109
1/4	2	3/4	F114175
1/4	2-1/2	3/4	F11974
1/4	3	3/4	F14628

D	L	T	UNC
5/16	1	7/8	F19442
5/16	1-1/4	7/8	F112865
5/16	1-1/2	7/8	F111998
5/16	2	7/8	F15527
5/16	2-1/2	7/8	F11068
5/16	3	7/8	F14425



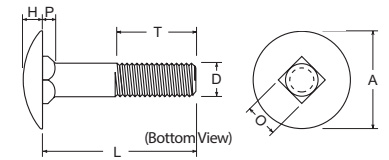
D	L	T	UNC
3/8	1	1	F117373
3/8	1-1/4	1	F113280
3/8	1-1/2	1	F114974
3/8	2	1	F118088
3/8	3	1	F116585

BOLTS — STEP

ANSI B18.5 1978	Material:	Steel
	Plating:	Zinc

D	L	T	UNC
1/4	3/4	3/4	F17871
1/4	1	3/4	F15315
1/4	1-1/4	3/4	F115137
1/4	1-1/2	3/4	F15837
1/4	2	3/4	F110407

D	L	T	UNC
5/16	2	7/8	F118659
5/16	2-1/2	7/8	F14351
3/8	1-1/2	1	F118276
3/8	2-1/2	1	F14331



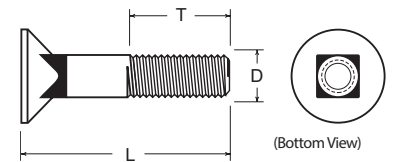
Diameter	D	1/4"	5/16"	3/8"
Height	H	.145	.176	.208
Head Dia.	A	.844	1.031	1.219
Square Width	O	.260	.324	.388
Square Depth	P	.156	.187	.219

1

BOLTS — PLOW GRADE 5

ANSI B18.3 1986	Proof Load PSI:	85,000
	Tensile Strength:	120,000
	Plating:	Zinc

Diameter	D	3/8"	7/16"	1/2"
Head Dia.	A	.708	.826	.945
Square Width	B	.387	.450	.515
Square Depth	S	.312	.364	.417



Grade 5 Plow Bolts are furnished in the Flat Head design.

D	L	T	UNC
3/8	1	1	F117379
3/8	1-1/4	1	F118374
3/8	1-1/2	1	F1120
3/8	1-3/4	1	F115900
3/8	2	1	F112158
3/8	2-1/2	1	F13815
7/16	1-1/4	1-1/8	F110726

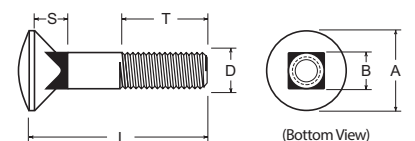
D	L	T	UNC
7/16	1-1/2	1-1/8	F19044
7/16	1-3/4	1-1/8	F11868
7/16	2	1-1/8	F19682
7/16	2-1/4	1-1/8	F110033
7/16	2-1/2	1-1/8	F119724
7/16	2-3/4	1-1/8	F113715
7/16	3	1-1/8	F14044

D	L	T	UNC
7/16	3-1/2	1-1/8	F1826
1/2	2	1-1/4	F115645
1/2	2-1/4	1-1/4	F112684
1/2	2-1/2	1-1/4	F15765
1/2	3	1-1/4	F119134
1/2	3-1/2	1-1/4	F118755
1/2	4	1-1/4	F113843

BOLTS — PLOW 170

Tensile Strength:	70,000
Plating:	Plain

Diameter	D	5/8"	3/4"	7/8"	1"	1-1/4"
Head Dia.	A	1.024	1.181	1.402	1.575	2.008
Square Width	B	.630	.760	.878	1.00	1.338
Square Depth	S	.45	.47	.78	.57	.83



170 STAMPED ON HEAD
USE WITH GR 8 PLAIN HEX NUTS

D	L	T	UNC
5/8	2	1.38	F131296
5/8	2-1/4	1.61	F131297
5/8	2-3/4	1.73	F131298
5/8	3-1/2	1.81	F131299
3/4	2	1.13	F131293
3/4	2-1/2	1.13	F132266

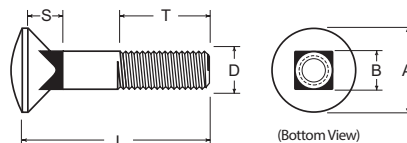
D	L	T	UNC
3/4	3	1.80	F131294
3/4	3-1/2	1.93	F131295
7/8	3	1.81	F131300
1	3-1/4	1.55	F131285
1	3-1/2	2.13	F131284
1	3-3/4	1.97	F131286

D	L	T	UNC
1	4		F131287
1-1/4	3-3/4	1.70	F131288
1-1/4	4	2.00	F131289
1-1/4	4-1/2	2.44	F131290
1-1/4	5	2.95	F131291
1-1/4	6	3.75	F131292

BOLTS — PLOW GRADE 8

ANSI B18.3 1986	Proof Load PSI:	120,000
	Tensile Strength:	150,000
	Plating:	Plain

Diameter	D	1/2"	5/8"	3/4"	7/8"	1"
Head Dia.	A	.945	1.147	1.303	1.512	1.700
Square Width	B	.515	.640	.765	.906	1.301
Square Depth	S	.417	.506	.541	.626	.690



D	L	T	UNC
1/2	1-1/2	1-1/4	F1279
1/2	1-3/4	1-1/4	F114839
1/2	2	1-1/4	F12554
1/2	2-1/2	1-1/4	F113409
5/8	1-1/2	1-1/2	F15545
5/8	1-3/4	1-1/2	F112012
5/8	2	1-1/2	F14917
5/8	2-1/4	1-1/2	F116440
5/8	2-1/2	1-1/2	F18538
5/8	3	1-1/2	F16739
5/8	3-1/2	1-1/2	F11399

D	L	T	UNC
5/8	4	1-1/2	F118824
5/8	4-1/2	1-1/2	F15498
3/4	2	1-3/4	F113304
3/4	2-1/4	1-3/4	F19985
3/4	2-1/2	1-3/4	F110992
3/4	2-3/4	1-3/4	F116880
3/4	3	1-3/4	F115703
3/4	3-1/2	1-3/4	F13300
3/4	4	1-3/4	F18060
3/4	4-1/2	1-3/4	F1368

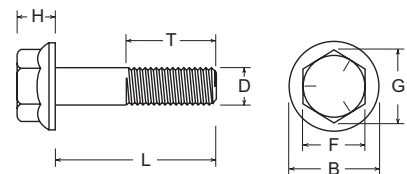
D	L	T	UNC
7/8	2-1/2	2	F113302
7/8	2-3/4	2	F114537
7/8	3	2	F12758
7/8	3-1/2	2	F113772
7/8	4	2	F17102
1	2-3/4	2-1/4	F110689
1	3	2-1/4	F1686
1	3-1/2	2-1/4	F15912
1	4	2-1/4	F1568
1	6	2-1/4	F19688

Note: 1/2" diameter Grade 8 #3 Head Plow Bolts are furnished in the Flat Head design.
All larger diameters are furnished in the dome head style.

BOLTS — SERRATED FLANGE HEX GRADE 5

IFI-111 1970	Proof Load PSI:	85,000
	Tensile Strength:	120,000
	Plating:	Zinc

Diameter & Thread Pitch	#10-32	1/4"-20	5/16"-18	3/8"-16	7/16"-14	1/2"-13
Head Height	H	.209	.240	.298	.331	.460
W.A.F.	F	5/16	3/8	1/2	9/16	5/8
Flange Diameter	B	.454	.531	.706	.793	.930



D	L	T	Part No.
1/4	1/2	1/2	F113706
1/4	3/4	3/4	F17200
1/4	1	1	F19082
1/4	1-1/2	1-1/2	F13585
1/4	2	2	F116633
5/16	1/2	1/2	F113710
5/16	3/4	3/4	F17100
5/16	1	1	F14169
5/16	1-1/4	1-1/4	F114950

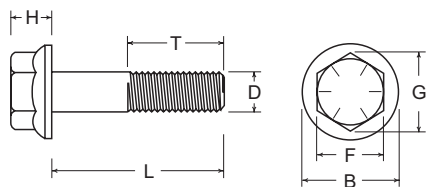
D	L	T	Part No.
5/16	1-1/2	1-1/2	F111488
5/16	2	2	F1146
5/16	2-1/2	2-1/2	F118825
3/8	3/4	3/4	F118091
3/8	1	1	F114079
3/8	1-1/4	1-1/4	F112885
3/8	1-1/2	1-1/2	F115306
3/8	2	2	F19391
3/8	2-1/2	2-1/2	F18307

D	L	T	Part No.
7/16	1	1	F13936
7/16	1-1/2	1-1/2	F17004
7/16	2	2	F12745
1/2	1	1	F14388
1/2	1-1/4	1-1/4	F119035
1/2	1-1/2	1-1/2	F11122
1/2	2	2	F119339
1/2	2-1/2	2-1/2	F17001

BOLTS — HEX HEAD FLANGE GRADE 8

IFI-111 1970	Proof Load PSI:	120,000
	Tensile Strength:	150,000
	Plating:	Unplated

Diameter	D	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.280	.320	.390	.510	.620	.730
W.A.F.	F	3/8	1/2	9/16	3/4	15/16	1-1/8
W.A.C.	G	.433	.577	.650	.866	1.083	1.299
Flange Dia.	B	.560	.680	.810	1.070	1.330	1.590



D	L	T	UNC	UNF
1/4	1	1	F1952	
1/4	1-1/4	1-1/4	F111730	
1/4	1-1/2	3/4	F19548	
1/4	2	3/4	F11271	
1/4	2-1/4	3/4	F118260	
1/4	2-1/2	3/4	F16537	
5/16	1	1	F11683	
5/16	1-1/4	1-1/4	F115202	
5/16	1-1/2	7/8	F116039	
5/16	1-3/4	7/8	F1614	
5/16	2	7/8	F117112	
5/16	2-1/4	7/8	F14327	
5/16	2-1/2	7/8	F17995	
3/8	1	1	F115397	
3/8	1-1/4	1-1/4	F17167	

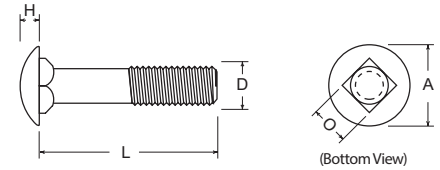
D	L	T	UNC	UNF
3/8	1-1/2	1-1/2	F18811	
3/8	1-3/4	1	F118880	
3/8	2	1	F119574	
3/8	2-1/4	1	F15792	
3/8	2-1/2	1	F17839	
3/8	3	1	F15959	
1/2	1-1/4	1-1/4	F110289	
1/2	1-1/2	1-1/2	F11605	F113757
1/2	1-3/4	1-1/4	F17785	F13344
1/2	2	1-1/4	F13664	F118243
1/2	2-1/4	1-1/4	F16938	
1/2	2-1/2	1-1/4	F115204	F117099
1/2	2-3/4	1-1/4	F114492	
1/2	3	1-1/4	F111145	F116420

D	L	T	UNC	UNF
5/8	1-1/2	1-1/2	F112223	F18574
5/8	1-3/4	1-3/4	F111708	F1126
5/8	2	2	F11669	F18783
5/8	2-1/4	2-1/4	F14000	F16412
5/8	2-1/2	2-1/2	F12610	F19508
5/8	2-3/4	1-1/2	F1497	F118711
5/8	3	1-1/2	F19496	F119461
5/8	3-1/2	1-1/2	F117507	
5/8	4	1-1/2	F113133	
3/4	2	2	F115274	F1748
3/4	2-1/2	2-1/2	F115925	F110457
3/4	3	1-3/4	F117567	F1571
3/4	3-1/2	1-3/4	F1187	
3/4	4	1-3/4	F111021	

*T = Min Thread Length

BOLTS — CARRIAGE GRADE 2

ANSI B18.5 1978	Gr. 2 Tensile Strength PSI:	60,000
	Material:	Steel
	Plating:	Zinc, Galvanized

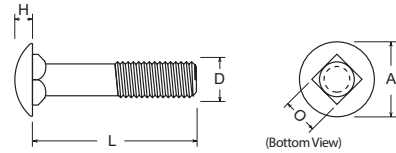


Diameter	D	3/16" (#10)	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Height	H	.114	.145	.176	.208	.239	.270	.344	.406
Head Dia.	A	.469	.594	.719	.844	.969	1.094	1.344	1.594
Square Width	O	.199	.260	.324	.388	.452	.515	.642	.768

D	L	Zinc	Galvanized	D	L	Zinc	Galvanized	D	L	Zinc	Galvanized	D	L	Zinc	Galvanized
3/16	1/2	F115448		5/16	1-1/4	F12338	F114603	3/8	7	F116515	F110418	1/2	8	F19735	F117422
3/16	3/4	F115161		5/16	1-1/2	F115904	F15301	3/8	8	F118158	F11778	1/2	8-1/2	F12489	
3/16	1	F118767		5/16	1-3/4	F12511		3/8	9	F114824		1/2	9	F14872	
3/16	1-1/4	F18125		5/16	2	F12293	F17541	3/8	10	F113241		1/2	10	F113792	F18588
3/16	1-1/2	F12093		5/16	2-1/4	F12165		3/8	12	F112448	F1860	1/2	10-1/2	F12101	
3/16	1-3/4	F12383		5/16	2-1/2	F113156	F115209	7/16	1	F19971		1/2	12	F112561	F1662
3/16	2	F115107		5/16	3	F15253	F118804	7/16	1-1/4	F111966		5/8	1-1/2	F119355	
3/16	2-1/2	F115071		5/16	3-1/2	F11453	F18398	7/16	1-1/2	F19208		5/8	2	F110109	F128180
3/16	3	F1459		5/16	4	F111733	F1383	7/16	2	F114615		5/8	2-1/2	F113704	F19743
3/16	3-1/2	F14563		5/16	4-1/2	F14163	F11050	7/16	2-1/2	F16381		5/8	3	F13667	F16335
1/4	1/2	F114793		5/16	5	F19043		7/16	3	F110256		5/8	3-1/2	F1535	
1/4	5/8	F112481		5/16	5-1/2	F17982	F110608	7/16	3-1/2	F1745		5/8	4	F17653	
1/4	3/4	F113621		5/16	6	F117525		7/16	4	F17142		5/8	4-1/2	F117454	F118274
1/4	1	F113034		5/16	6-1/2	F19567		7/16	5	F114609		5/8	5	F19906	F18382
1/4	1-1/4	F11384	F113203	5/16	7	F110559	F16367	7/16	5-1/2	F14990		5/8	5-1/2	F18131	F113238
1/4	1-1/2	F16374	F15237	5/16	7-1/2	F18526		7/16	6	F14489		5/8	6	F13086	F15987
1/4	1-3/4	F117980		5/16	8	F110349	F118145	1/2	1	F1456	F115857	5/8	7-1/2	F11892	F19786
1/4	2	F114161	F117860	3/8	3/4	F111907		1/2	1-1/4	F11638		5/8	8	F14424	F11776
1/4	2-1/4	F112617		3/8	1	F16879		1/2	1-1/2	F11336	F18037	5/8	10	F119842	F17758
1/4	2-1/2	F115381	F112861	3/8	1-1/4	F16928		1/2	1-3/4	F1145		3/4	2-1/2	F14570	
1/4	2-3/4	F14876		3/8	1-1/2	F19350	F14869	1/2	2	F115841	F119733	3/4	3	F17448	
1/4	3	F11607	F19572	3/8	1-3/4	F113246		1/2	2-1/4	F12688		3/4	3-1/2	F13546	
1/4	3-1/2	F19021	F1889	3/8	2	F19338	F12403	1/2	2-1/2	F11545	F17857	3/4	4	F117260	F111099
1/4	4	F14549	F117305	3/8	2-1/4	F118004		1/2	2-3/4	F19270		3/4	4-1/2	F13406	
1/4	4-1/2	F116110	F15215	3/8	2-1/2	F117792	F12623	1/2	3	F15636	F12187	3/4	5	F1722	
1/4	5	F11696		3/8	2-3/4	F13360		1/2	3-1/2	F17703	F114777	3/4	5-1/2	F116660	
1/4	5-1/2	F19213		3/8	3	F115019	F115892	1/2	4	F117565	F14932	3/4	6	F117096	F18883
1/4	6	F13957	F110034	3/8	3-1/2	F118658	F114664	1/2	4-1/2	F17329	F119659	3/4	6-1/2	F14948	
1/4	6-1/2	F110888		3/8	4	F114654	F11912	1/2	5	F11786	F115755	3/4	8	F16178	F113379
1/4	7	F115165		3/8	4-1/2	F17428	F114347	1/2	5-1/2	F114351		3/4	9	F16485	
1/4	7-1/2	F11059		3/8	5	F111795	F117210	1/2	6	F117802	F11024	3/4	10	F14374	
1/4	8	F19520		3/8	5-1/2	F12040	F119320	1/2	6-1/2	F116444	F18277	3/4	11	F117634	
5/16	3/4	F110916		3/8	6	F18610	F16473	1/2	7	F113741	F15932	3/4	12	F12699	
5/16	1	F12663		3/8	6-1/2	F110299		1/2	7-1/2	F16899					

BOLTS — CARRIAGE GRADE 5

ANSI B18.5 1978	Gr. 5 Tensile Strength PSI:	120,000
	Material:	Steel
	Plating:	Zinc



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Height	H	.145	.176	.208	.239	.270	.344	.406
Head Dia.	A	.594	.719	.844	.969	1.094	1.344	1.594
Square Width	O	.260	.324	.388	.452	.515	.642	.768

D	L	Zinc
1/4	1/2	F115287
1/4	3/4	F117006
1/4	1	F11383
1/4	1 1/4	F15632
1/4	1 1/2	F17663
1/4	2	F1442
1/4	2 1/2	F110235
1/4	3	F1503
1/4	3 1/2	F19091
5/16	3/4	F117438
5/16	1	F115990
5/16	1 1/4	F18273
5/16	1 1/2	F19396
5/16	1 3/4	F115377

D	L	Zinc
5/16	2	F117064
5/16	2 1/2	F16545
5/16	3	F116514
5/16	3 1/2	F119346
5/16	4	F19951
5/16	4 1/2	F119747
3/8	3/4	F15332
3/8	1	F118788
3/8	1 1/4	F18871
3/8	1 1/2	F17356
3/8	1 3/4	F11030
3/8	2	F14803
3/8	2 1/4	F11161
3/8	2 1/2	F16215

D	L	Zinc
3/8	2 3/4	F115099
3/8	3	F12606
3/8	3 1/2	F117914
3/8	4	F111305
3/8	6	F110763
7/16	1	F12896
7/16	1 1/4	F18805
7/16	1 1/2	F13743
7/16	1 3/4	F111616
7/16	2	F14461
7/16	3	F112826
7/16	3 1/2	F14890
7/16	4	F119744
1/2	1	F15928

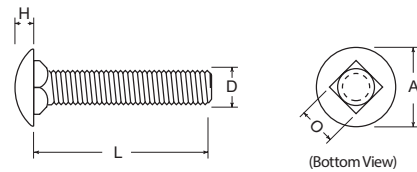
D	L	Zinc
1/2	1 1/4	F17163
1/2	1 1/2	F17501
1/2	1 3/4	F117952
1/2	2	F115248
1/2	2 1/2	F14558
1/2	3	F15986
1/2	3 1/2	F117977
1/2	4	F118497
1/2	4 1/2	F16996
1/2	5	F112260
1/2	6	F15814
5/8	1 1/2	F119881
5/8	2	F12433
5/8	2 1/2	F118771

D	L	Zinc
5/8	3	F16969
5/8	3 1/2	F116966
5/8	4	F18735
5/8	4 1/2	F116690
5/8	5	F112956
5/8	6	F13637
3/4	2 1/2	F130842
3/4	3	F112287
3/4	3 1/2	F114941
3/4	4	F16498
3/4	4 1/2	F112285
3/4	5	F118495
3/4	6	F17224

BOLTS — CARRIAGE GRADE 8 (SHAKER SCREEN)

ANSI B1.1 1986	Gr. 8 Tensile Strength PSI:	150,000
	Material:	Alloy Steel
	Plating:	Plain

Diameter	D	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.145	.176	.208	.270	.344	.406
Head Dia.	A	.594	.719	.844	1.094	1.344	1.594
Square Width	O	.260	.324	.388	.515	.642	.768



D	L	UNC
1/2	1-1/2	F132459
1/2	2	F132460
1/2	2-1/2	F132461
1/2	3	F132462
1/2	3-1/2	F132463
1/2	4	F132464
1/2	4-1/2	F132465
1/2	5	F132466
1/2	5-1/2	F132467
1/2	6	F132468

D	L	UNC
5/8	2	F132469
5/8	2-1/2	F132470
5/8	3	F132471
5/8	3-1/2	F132472
5/8	4	F132473
5/8	4-1/2	F132474
5/8	5	F132475
5/8	6	F132476
3/4	2	F132477
3/4	2-1/2	F132478

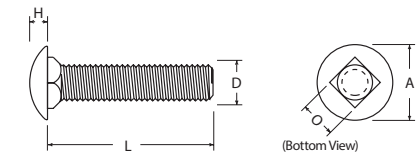
D	L	UNC
3/4	3	F132479
3/4	3-1/2	F132480
3/4	4	F132481
3/4	4-1/2	F132482
3/4	5	F132483
3/4	5-1/2	F132484
3/4	6	F132485

BOLTS — CARRIAGE SHAKER SCREEN (F911)

ANSI B1.1 1986	Tensile Strength PSI Min.:	180,000
	Material:	Alloy Steel
	Plating:	Plain

D	L	UNC
1/2	1-1/2	F111055
1/2	2	F125022
1/2	2-1/2	F19566
1/2	3	F129531
1/2	3-1/2	F129532
1/2	4	F127865
1/2	6	F127867
5/8	2	F125023
5/8	3	F1540
5/8	3-1/2	F129537

D	L	UNC
5/8	5-1/2	F119468
5/8	6	F119996
3/4	3-1/2	F129536
3/4	4	F127868
3/4	4-1/2	F13951
3/4	5	F19105
3/4	5-1/2	F112804
3/4	6	F117234



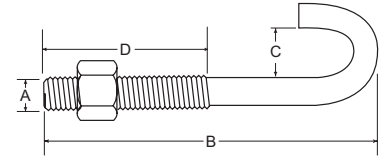
Diameter	D	1/2"	5/8"	3/4"
Head Height Max	H	.270	.344	.406
Head Dia.	A	1.094	1.344	1.594
Square Width Max	O	.515	.642	.768

BOLTS — J-BOLT

Material:	Steel
Plating:	Zinc

Thread Size (A)	Thread Length (D)	Overall Length (B)	I.D. (C)	Part No.
1/4-20	1-1/2	2-5/16	7/16	F15202
5/16-18	2	3	1/2	F116535
3/8-16	2-1/4	5	5/8	F110447

Thread Size (A)	Thread Length (D)	Overall Length (B)	I.D. (C)	Part No.
1/2-13	3	6	1	F114732
5/8-11	3-1/2	6	2	F115709
5/8-11	3-3/4	8	1-1/4	F14535



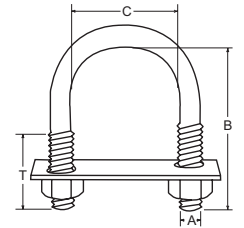
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BOLTS — U-BOLT WITH NUTS & PLATES

Material:	Low Carbon Steel
Plating:	Zinc

2 Hex Nuts and Plate Included

Thread Size (A)	Overall Length (B)	I.D. (C)	Thread Length (T)	Pipe Size	Part No.
1/4-20	1-3/4	1	1	1/2	F119250
1/4-20	2	1-1/8	1	3/4	F117899
1/4-20	2-3/4	1-1/2	1-3/8	1	F118307
1/4-20	3-1/4	2	1-3/8	1-1/2	F13388
5/16-18	2-3/16	1-1/8	1	3/4	F110188
5/16-18	2-3/16	1-3/8	1	1	F115552
5/16-18	2-11/16	2	1	1-1/2	F12065
5/16-18	3-3/16	2-1/2	1	2	F117157

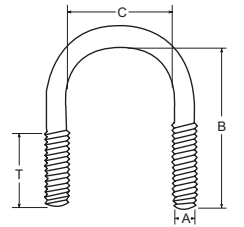


Thread Size (A)	Overall Length (B)	I.D. (C)	Thread Length (T)	Pipe Size	Part No.
3/8-16	2-1/4	1	1-1/4	1/2	F13440
3/8-16	2-5/8	2	1-1/4	1-1/2	F16776
3/8-16	3-1/8	2-1/2	1-1/4	2	F1504
3/8-16	4-1/8	3-1/2	1-1/4	3	F19467

BOLTS — U-BOLT

Material:	Low Carbon Steel
Plating:	Zinc

Thread Size (A)	Overall Length (B)	I.D. (C)	Thread Length (T)	Pipe Size	Part No.
1/4-20	2	1-1/8	1	3/4	F1949
1/4-20	2-3/4	1-1/2	1-3/8	1	F15853
3/8-16	2-1/2	1-1/2	1-1/4	1	F114902
3/8-16	2-3/4	1-3/4	1-1/8	1-1/4	F113840
3/8-16	2-5/8	2	1-1/4	1-1/2	F16833
3/8-16	3-1/8	2-1/2	1-1/4	2	F16463



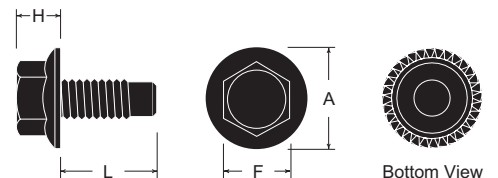
Thread Size (A)	Overall Length (B)	I.D. (C)	Thread Length (T)	Pipe Size	Part No.
1/2-13	4-1/2	3	1-5/8	2-1/2	F13392
1/2-13	5	3-1/2	1-1/2	3	F116985
1/2-13	6	4-1/2	1-1/2	4	F12683
1/2-13	7-1/4	5-5/8	2	5	F116788

BOLTS — SPINLOCK SERRATED FLANGE DOG POINT

Material:	Heat Treated Steel
Plating:	Black Oxide

D	L	UNC
1/4	5/8	F8613
5/16	3/4	F84776
5/16	1	F84672
5/16	1-1/4	F84500

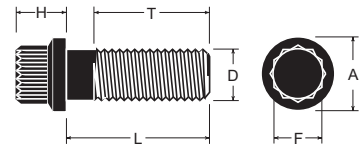
*These sizes have Dog Point



Diameter	D	1/4"	5/16"
Height	F	.236	.283
W.A.F.	H	7/16	1/2
Flange	A	.594	.680

BOLTS — 12 POINT COUNTERBORE GRADE 8 (FERRY HEAD)

IFI 115 1986	Tensile Strength:	170,000
	Material:	Steel
	Plating:	Black Oxide



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"
Height	H	.260	.312	.375	.438	.500	.625	.750	.875
W.A.F.	F	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
Flange	A	.375	.469	.562	.656	.750	.843	1.125	1.312

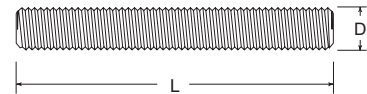
D	L	T	UNC	UNF
1/4	1/2	1/2	F14473	
1/4	3/4	3/4	F112451	
1/4	1	1	F17823	
1/4	1-1/2	1	F112497	
5/16	3/4	3/4	F18541	F117471
5/16	1	1	F113611	
5/16	2-1/4	1-1/8	F15320	
3/8	1	1	F116900	
3/8	1-1/4	1-1/4	F14415	
3/8	1-1/2	1-1/4	F117547	
3/8	2	1-1/4	F14552	
3/8	3-1/2	1-1/4	F18841	

D	L	T	UNC	UNF
7/16	1	1	F17535	
7/16	1-1/4	1	F14879	
1/2	1	1	F110061	
1/2	1-1/4	1-1/4	F17680	
1/2	1-1/2	1-1/2	F115281	
1/2	2	1-1/2	F119385	
5/8	1-1/2	1-1/2	F116429	
5/8	1-3/4	1-3/4	F16792	
5/8	2	1-3/4	F16965	
5/8	2-1/2	1-3/4	F12750	
7/8	2	1-3/4	F12694	

Note: Thread lengths indicated by the 'T' dimension are minimum thread lengths

ROD — THREADED GRADE A

ASME B18.31.3 2014	Tensile Strength:	60,000PSI
	Material:	Steel
	Plating:	Zinc

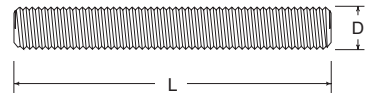


D	UNC - 3'	UNF - 3'	UNC - 6'
#6	F11676		
#8	F19245		
#10	F118013		F1315
#12	F118868		
1/4	F1793	F15825	F14609
5/16	F15216	F18270	F15806
3/8	F114956	F114957	F117466

D	UNC - 36"	UNF - 3'	UNC - 6'
7/16	F112323	F19431	F12698
1/2	F15841	F120048	F16300
9/16	F114385		
5/8	F113184	F17522	F13492
3/4	F12662	F16515	
7/8	F11524	F19255	F110562
1	F119767	F111829	

ROD — THREADED A307 GRADE A GALVANIZED

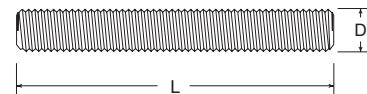
ASME B18.31.3 2014	Tensile Strength:	60,000PSI
	Material:	Steel
	Plating:	Galvanized



D	UNC - 3'	UNC - 6'	D	UNC - 36"	UNC - 6'
3/8	F112114		3/4	F110968	F19909
1/2	F19929	F11987	7/8	F11209	F11789
5/8	F114645	F112418	1	F16468	

ROD — THREADED GRADE B-7

ASME B18.31.3 2014	Tensile Strength:	125,000 PSI
	Material:	Steel
	Plating:	Yellow Zinc or Plain



D	L	Yellow Zinc UNC	Plain UNC	Yellow Zinc UNF	Plain UNF
1/4	36"	F111026	F14927	F14530	F115512
5/16	36"	F14394	F14392	F15428	F115419
3/8	36"	F16588	F118377	F112997	F11366
7/16	36"	F115882	F13405	F13757	F115403
1/2	36"	F119491	F19607	F111702	F16999
9/16	36"	F119637	F13802	F113288	F115859
5/8	36"	F11822	F112994	F118049	F15955

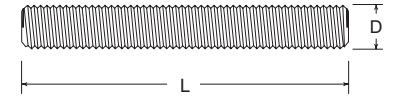
D	L	Yellow Zinc UNC	Plain UNC	Yellow Zinc UNF	Plain UNF
3/4	36"	F117192	F111401	F116329	F117686
7/8	36"	F113388	F119750	F16840	F15872
1	36"	F14957	F18631	F18899	F119518
1-1/8	36"	F110564	F115934		
1-1/4	36"	F11141	F110394		
1-1/2	36"	F1219	F112771		
1-1/2	36"	F111052	F119988		

STUDS — GRADE B-7

ASME B18.31.3 2014	Tensile Strength:	125,000 PSI
	Material:	Steel
	Plating:	Unplated

D	L	UNC	UNF
1/2	3-1/4	F16798	
1/2	5	F11295	
1/2	5-1/2	F116945	
5/8	3-1/2	F11633	
5/8	4-1/2	F17123	
5/8	5	F116003	

D	L	UNC	UNF
5/8	6-1/2	F18114	
3/4	4-1/4	F15128	
3/4	4-3/4	F15010	
3/4	4-1/2	F11191	
3/4	5	F112920	
3/4	6	F114829	



D	L	UNC	UNF
1	6	F112820	
7/8	4-3/4	F16995	
7/8	5	F18386	
7/8	6	F12516	

1

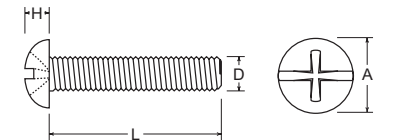
MACHINE SCREWS — SUPER COMBO PAN GRADE 5.1 USA

SAE J429	Tensile Strength:	120,000 PSI
	Material:	Steel
	Plating:	Commercial Zinc Trivalent
	Made in U.S.A.	

Diameter	D	#6	#8	#10	1/4"
Head Height Max	H	.097	.115	.133	.175
Head Dia. Max	A	.270	.322	.373	.492

D	L	Zinc UNC	Zinc UNF
#6	1/4	F129324	
#6	3/8	F129327	
#6	1/2	F129323	
#6	5/8	F129328	
#6	3/4	F129326	
#6	1	F129320	
#6	1-1/4	F129322	
#6	1-1/2	F129321	
#6	2	F129325	
#8	1/4	F129332	
#8	3/8	F129334	
#8	5/8	F129335	
#8	3/4	F129333	
#8	1	F129329	

D	L	Zinc UNC	Zinc UNF
#8	1-1/2	F129330	
#10	3/8	F129309	
#10	1/2	F129303	
#10	5/8	F129310	
#10	3/4	F129308	
#10	1	F129300	
#10	1-1/4	F129302	
#10	2	F129304	
#10	2-3/4	F129306	
#10	1/4		F129339
#10	3/8		F129342
#10	1/2		F129338
#10	5/8		F129343
#10	3/4		F129341



D	L	Zinc UNC	Zinc UNF
#10	1		F129336
#10	1-1/2		F129337
#10	2		F129340
1/4	1/2	F129314	
1/4	5/8	F129319	
1/4	3/4	F129318	
1/4	1	F129311	
1/4	1-1/4	F129313	
1/4	1-1/2	F129312	
1/4	2	F129315	
1/4	2-1/2	F129316	
1/4	3	F129317	

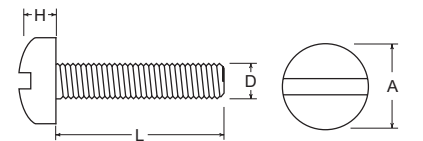
MACHINE SCREWS — SLOTTED PAN

ANSI B18.6.3	Material:	Steel
		Fully Threaded
	Plating:	Zinc

Diameter	D	#6	#8	#10	#12	1/4"
Head Height Max	H	.082	.096	.110	.125	.144
Head Dia. Max	A	.270	.322	.373	.425	.492

D	L	UNC	UNF
#6	1/4	F111272	
#6	3/8	F13303	
#6	1/2	F111790	
#6	5/8	F19416	
#6	3/4	F16550	
#6	1	F11132	
#6	1-1/4	F117944	
#6	1-1/2	F118526	
#8	1/4	F15073	
#8	3/8	F17023	
#8	1/2	F19174	
#8	5/8	F112568	

D	L	UNC	UNF
#8	3/4	F14804	
#8	1	F11445	
#8	1-1/4	F12728	
#8	1-1/2	F119597	
#8	2	F113027	
#10	1/4		F110833
#10	3/8	F110750	F113847
#10	1/2	F118327	F119647
#10	5/8		F11070
#10	3/4	F13505	F117356
#10	1	F16288	F14719
#10	1-1/4	F114418	

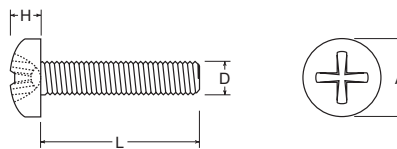


D	L	UNC	UNF
#10	1-1/2	F115898	F118538
#10	2	F111505	F116656
#10	2-1/2		F118668
1/4	1/2	F17530	
1/4	3/4	F1207	
1/4	1	F15713	
1/4	1-1/4	F11481	
1/4	1-1/2	F114438	
1/4	2	F110797	
1/4	2-1/2	F110605	

MACHINE SCREWS — PHILLIPS PAN

ANSI B18.6.3	Material:	Steel
	Fully Threaded	
	Plating:	Zinc & Black Oxide

Diameter	D	#4	#5	#6	#8	#10	#12	1/4"	5/16"
Head Height Max	H	.080	.089	.097	.115	.133	.151	.175	.218
Head Dia. Max	A	.219	.245	.270	.322	.373	.425	.492	.615



D	L	Zinc UNC
#4	1/4	F19837
#4	3/8	F119897
#4	1/2	F113834
#4	5/8	F14526
#4	3/4	F114333
#4	7/8	F118070
#4	1	F113030
#5	5/16	F1816
#5	3/8	F117484
#5	1/2	F13311
#6	1/4	F16141
#6	3/8	F18893
#6	1/2	F111989
#6	5/8	F116676
#6	3/4	F116466
#6	7/8	F15117
#6	1	F111344
#6	1-1/4	F15731
#6	1-1/2	F119595
#6	2	F110292
#8	1/4	F112391

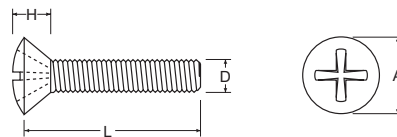
D	L	Zinc UNC	Black Oxide UNC	Zinc UNF
#8	3/8	F114756	F115300	
#8	1/2	F110980		
#8	5/8	F14807		
#8	3/4	F11368	F116452	
#8	7/8	F11118		
#8	1	F112087		
#8	1-1/4	F115622		
#8	1-1/2	F116748		
#8	2	F113526		
#8	2-1/2	F121435		
#8	3	F124975		
#10	1/4	F114736		F17277
#10	3/8	F15719		F113178
#10	1/2	F15802		F118651
#10	5/8	F114688		F15591
#10	3/4	F14440		F113077
#10	7/8			F116810
#10	1	F115640		F116914
#10	1-1/4	F113728		F116669
#10	1-1/2	F12650		F115078
#10	2	F113587		F1125

D	L	Zinc UNC	Zinc UNF
#10	2-1/2	F119861	F19910
#10	3	F117691	F15281
#12	1/2	F16439	
#12	3/4	F111894	
#12	1	F110087	
#12	1-1/2	F18167	
#12	2	F16713	
1/4	3/8	F18199	
1/4	1/2	F17997	
1/4	5/8	F13941	
1/4	3/4	F111857	
1/4	7/8	F12153	
1/4	1	F11842	
1/4	1-1/4	F13864	
1/4	1-1/2	F112911	
1/4	2	F111215	
1/4	2-1/4	F119632	
1/4	2-1/2	F18189	
1/4	3	F110414	
5/16	3/4	F12337	
5/16	1	F19056	

MACHINE SCREWS — PHILLIPS OVAL

ANSI B18.6.3	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	#4	#6	#8	#10	#12	1/4"
Head Height Max	H	.104	.128	.152	.176	.200	.232
Head Dia. Max	A	.212	.262	.312	.362	.412	.477



D	L	UNC	UNF
#4	1/2	F112431	
#4	3/4	F110427	
#4	1	F19992	
#6	1/4	F12027	
#6	3/8	F18676	
#6	1/2	F118136	
#6	3/4	F14686	
#6	1	F112692	
#6	1-1/4	F15598	
#6	1-1/2	F110138	
#8	3/8	F18493	
#8	1/2	F112715	

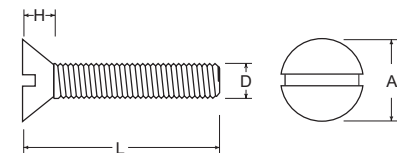
D	L	UNC	UNF
#8	3/4	F114577	
#8	1	F118520	
#8	1-1/2	F110951	
#10	1/2	F115404	F12958
#10	3/4	F19321	F116386
#10	1	F18781	F14142
#10	1-1/4	F119703	F18505
#10	1-1/2	F13071	
#10	2	F115557	
#12	1/2	F14871	
#12	3/4	F13657	
#12	1	F119039	

D	L	UNC	UNF
#12	1-1/2	F118030	
#12	2	F119583	
1/4	1/2	F117642	
1/4	3/4	F1558	
1/4	1	F19263	
1/4	1-1/4	F111258	
1/4	1-1/2	F1917	
1/4	2	F1782	

MACHINE SCREWS — SLOTTED FLAT

ANSI B18.6.3	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	#6	#8	#10	#12	1/4"	3/8"
Head Height Max	H	.083	.100	.116	.132	.153	.230
Head Dia. Max	A	.262	.312	.362	.412	.477	.717



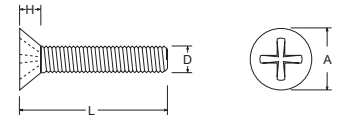
D	L	UNC	UNF
#6	1/4	F17638	
#6	3/8	F116274	
#6	1/2	F19543	
#6	3/4	F110754	
#6	1	F16150	
#6	1-1/4	F117026	
#6	1-1/2	F17218	
#6	2	F17853	
#6	3	F12665	
#8	1/4	F119872	
#8	3/8	F118993	
#8	1/2	F119100	
#8	3/4	F111348	
#8	1	F1602	
#8	1-1/4	F11286	
#8	1-1/2	F112009	

D	L	UNC	UNF
#8	2	F114529	
#8	3	F14138	
#10	1/4		F114967
#10	3/8	F15264	F113687
#10	1/2	F116231	F111264
#10	5/8		F119541
#10	3/4	F112945	F110456
#10	1	F15507	F114443
#10	1-1/4	F115506	F115007
#10	1-1/2	F114311	F13706
#10	1-3/4		F111299
#10	2	F111751	F114481
#12	1/2	F115042	
#12	3/4	F14198	
#12	1	F13924	
#12	1-1/2	F19053	

D	L	UNC	UNF
#12	2	F115759	
1/4	3/8	F112694	
1/4	1/2	F115610	
1/4	3/4	F16460	
1/4	1	F114625	
1/4	1-1/4	F18144	
1/4	1-1/2	F12953	
1/4	1-3/4	F12117	
1/4	2	F16081	
1/4	2-1/2	F18708	
1/4	3	F111290	
1/4	4	F12283	

MACHINE SCREWS — PHILLIPS FLAT

ANSI B18.6.3	Material:	Steel
	Fully Threaded	
	Plating:	Zinc



Diameter	D	#2	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"
Head Height Max	H	.051	.067	.083	.100	.116	.132	.153	.191	.230
Head Dia. Max	A	.162	.212	.262	.312	.362	.412	.477	.597	.717

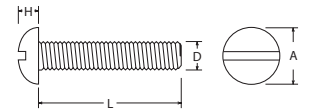
D	L	UNC	UNF
#2	1/2	F118582	
#4	1/4	F14992	
#4	3/8	F16072	
#4	1/2	F17445	
#4	5/8	F111750	
#4	3/4	F113601	
#4	1	F18035	
#6	1/4	F18877	
#6	3/8	F114507	
#6	1/2	F16991	
#6	5/8	F1592	
#6	3/4	F110461	
#6	7/8	F112673	
#6	1	F19604	
#6	1-1/4	F118897	
#6	1-1/2	F110777	
#6	2	F111091	
#6	2-1/2	F12304	
#6	3	F18818	
#8	1/4	F114639	
#8	3/8	F118604	
#8	1/2	F1516	
#8	5/8	F19839	
#8	3/4	F11149	
#8	7/8	F19451	
#8	1	F115331	

D	L	UNC	UNF
#8	1-1/4	F114854	
#8	1-1/2	F18178	
#8	2	F115664	
#8	2-1/2	F113862	
#8	3	F112183	
#10	3/8	F18284	F117370
#10	1/2	F117457	F119868
#10	5/8	F16449	F19357
#10	3/4	F17592	F19267
#10	1	F16107	F113559
#10	1-1/4	F116480	F119944
#10	1-1/2	F114833	F17546
#10	2	F115868	F110867
#10	2-1/2	F18230	F119053
#10	3	F113897	F14007
#12	1/2	F11629	
#12	5/8	F18074	
#12	3/4	F116085	
#12	1	F110361	
#12	1-1/4	F18551	
#12	1-1/2	F111747	
#12	2	F15897	
#12	2-1/2	F113725	
#12	3	F12734	
1/4	3/8	F119359	
1/4	1/2	F13840	

D	L	UNC	UNF
1/4	5/8	F13129	
1/4	3/4	F117702	
1/4	1	F13339	
1/4	1-1/4	F15228	
1/4	1-1/2	F13319	
1/4	1-3/4	F110761	
1/4	2	F16653	
1/4	2-1/2	F13878	
1/4	3	F111006	
1/4	3-1/2	F17613	
1/4	4	F113726	
5/16	1/2	F1607	
5/16	3/4	F117889	
5/16	1	F116827	
5/16	1-1/2	F17647	
5/16	2	F13095	
5/16	2-1/2	F119833	
5/16	3	F17016	
5/16	4	F15051	
3/8	3/4	F117873	
3/8	1	F17105	
3/8	1-1/4	F114340	
3/8	1-1/2	F11181	
3/8	2	F116843	
3/8	2-1/2	F119638	
3/8	3	F118720	

MACHINE SCREWS — SLOTTED ROUND

ANSI B18.6.3 1972	Material:	Steel
	Fully Threaded	
	Plating:	Zinc



Diameter	D	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	1/2"
Head Height Max	H	.086	.095	.103	.120	.137	.153	.175	.216	.256	.355
Head Dia. Max	A	.211	.236	.260	.309	.359	.408	.472	.590	.708	.813

D	L	UNC	UNF
#4	3/8	F116391	
#4	1/2	F117046	
#4	3/4	F15968	
#4	1	F19613	
#4	1-1/4	F116249	
#4	1-1/2	F12021	
#6	1/4	F19927	
#6	3/8	F196	
#6	1/2	F116268	
#6	5/8	F15762	
#6	3/4	F14378	
#6	1	F18593	
#6	1-1/4	F118393	
#6	1-1/2	F117868	
#6	2	F117616	
#6	2-1/2	F114570	
#6	3	F13179	
#6	1/4	F112220	
#8	3/8	F112723	
#8	1/2	F117529	
#8	5/8	F18980	
#8	3/4	F19645	
#8	7/8	F118502	
#8	1	F116542	
#8	1-1/4	F17627	
#8	1-1/2	F17858	
#8	2	F118843	
#8	2-1/2	F14130	

D	L	UNC	UNF
#8	3	F111783	
#8	3-1/2	F118087	
#10	4	F119929	
#10	1/4	F119947	F114464
#10	3/8	F115942	F13722
#10	1/2	F119714	F115592
#10	5/8	F16402	F119979
#10	3/4	F14360	F15049
#10	1	F16935	F16769
#10	1-1/4	F114727	F16474
#10	1-1/2	F15776	F115543
#10	1-3/4	F113415	
#10	2	F119165	F13340
#10	2-1/2	F118196	
#10	3	F13359	F119896
#10	4	F17630	
#12	3/8	F1590	
#12	1/2	F112504	
#12	5/8	F118178	
#12	3/4	F112582	
#12	1	F13510	
#12	1-1/4	F111323	
#12	1-1/2	F12160	
#12	2	F115196	
#12	2-1/2	F11036	
1/4	1/2	F115443	
1/4	5/8	F11004	
1/4	3/4	F18420	

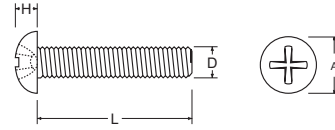
D	L	UNC	UNF
1/4	1	F116933	
1/4	1-1/4	F114382	
1/4	1-1/2	F113505	
1/4	1-3/4	F16414	
1/4	2	F116745	
1/4	2-1/2	F15031	
1/4	3	F118292	
1/4	3-1/2	F12572	
1/4	4	F117958	
1/4	5	F16301	
1/4	6	F14778	
5/16	3/4	F15752	
5/16	1	F115493	
5/16	1-1/2	F16926	
5/16	2	F13116	
5/16	2-1/2	F111209	
5/16	3	F113736	
3/8	3/4	F110788	
3/8	1	F12082	
3/8	2	F1631	
3/8	3	F19382	
3/8	4	F126989	
3/8	5	F126990	

FASTENERS

1 Inch Bolts & Screws

MACHINE SCREWS — PHILLIPS ROUND

ANSI B18.6.3	Material:		Steel					
	Fully Threaded							
	Plating:		Zinc					
Diameter	D	#4	#6	#8	#10	1/4"	5/16"	3/8"
Head Height Max	H	.086	.103	.120	.137	.175	.216	.256
Head Dia. Max	A	.211	.260	.309	.359	.472	.590	.708



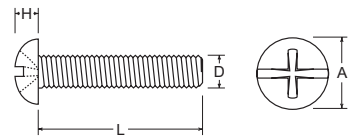
D	L	UNC	UNF
#4	1/4	F15470	
#4	3/8	F118842	
#4	1/2	F114626	
#4	3/4	F17844	
#4	1	F118216	
#4	1-1/4	F114049	
#4	1-1/2	F115698	
#6	1/4	F114497	
#6	3/8	F115938	
#6	1/2	F117287	
#6	3/4	F118459	
#6	1	F112933	
#6	1-1/4	F119356	
#6	1-1/2	F118544	
#6	2	F116943	
#6	3	F112331	
#8	1/4	F114589	
#8	3/8	F15355	
#8	1/2	F113436	
#8	5/8	F18881	
#8	3/4	F12704	
#8	1	F116299	

D	L	UNC	UNF
#8	1-1/4	F19557	
#8	1-1/2	F19012	
#8	2	F119821	
#8	2-1/2	F112852	
#8	3	F111188	
#10	1/4	F117572	
#10	3/8	F115836	F118504
#10	1/2	F111958	F12909
#10	5/8	F13918	F110877
#10	3/4	F115876	F15490
#10	1	F116497	F14800
#10	1-1/4	F113632	F116284
#10	1-1/2	F1103	F110958
#10	1-3/4	F113967	
#10	2	F111766	F13783
#10	2-1/2	F112344	F17280
#10	3	F1649	F17579
#10	3-1/2	F18120	
1/4	1/2	F18337	
1/4	3/4	F112392	
1/4	1	F112798	

D	L	UNC	UNF
1/4	1-1/4	F119342	
1/4	1-1/2	F13843	
1/4	1-3/4	F117120	
1/4	2	F1493	
1/4	2-1/2	F12763	
1/4	3	F111827	
1/4	3-1/2	F16046	
1/4	4	F11077	
1/4	6	F119092	
5/16	3/4	F110017	
5/16	1	F113039	
5/16	1-1/2	F18799	
5/16	2	F14620	
5/16	2-1/2	F11153	
5/16	3	F16637	
3/8	1	F11354	

MACHINE SCREWS — COMBINATION ROUND

ANSI B18.6.3	Material:		Steel		
	Fully Threaded				
	Plating:		Zinc		
Nominal Size	D	#6	#8	#10	1/4"
Head Height Max	H	.103	.120	.137	.175
Head Dia. Max	A	.260	.309	.359	.472



D	L	NC	NF
#6	1/2	F116036	
#6	3/4	F11905	
#6	1	F119879	
#6	1-1/4	F118181	
#6	1-1/2	F116955	
#6	2	F11695	
#6	3	F13041	
#6	4	F11905	
#8	3/4	F16214	
#8	1	F111042	
#8	1-1/4	F15203	
#8	1-1/2	F118621	
#8	2	F110212	
#10	3/8		F15199

D	L	NC	NF
#10	1/2	F110976	F110854
#10	3/4	F111434	F13943
#10	1	F11135	F15885
#10	1-1/4		F115739
#10	1-1/2	F120022	F11217
#10	2	F13553	F112266
#10	3	F123263	
#10	4	F123264	
#10	5	F123265	
#10	6	F123266	
1/4	1/2	F12083	
1/4	3/4	F16207	
1/4	1	F11228	
1/4	1-1/4	F13378	

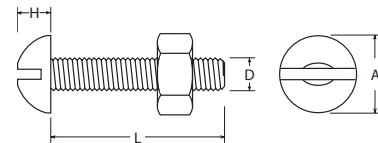
D	L	NC	NF
1/4	1-1/2	F110987	
1/4	2	F110923	
1/4	3	F11651	
1/4	4	F123267	
1/4	6	F123269	
5/16	4	F123273	
5/16	5	F123274	
3/8	3	F123270	
3/8	5	F123271	
3/8	6	F123272	

MACHINE SCREWS — SLOTTED ROUND STOVE BOLT

ANSI B18.6.3	Material:		Steel	
	Fully Threaded			
	Plating:		Zinc	
Nominal Size	D	3/16 (#10)	1/4"	
Head Height Max	H	.137	.175	
Head Dia. Max	A	.359	.472	

D	L	UNC
3/16	2-1/2	F116722

D	L	UNC
1/4	3/4	F18492
1/4	1-1/2	F117804

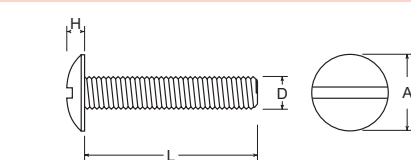


MACHINE SCREWS — SLOTTED TRUSS

ANSI B18.6.3	Material:		Steel		
	Fully Threaded				
	Plating:		Zinc		
Nominal Size	D	#6	#8	#10	1/4"
Head Height Max	H	.086	.102	.118	.150
Head Dia. Max	A	.321	.384	.448	.573

D	L	UNC
#6	1/2	F18171
#6	3/4	F113119
#8	1/2	F1930
#8	3/4	F19756
#8	1	F111306
#10	1/2	F16445

D	L	UNC
#10	3/4	F117429
#10	1	F18441
1/4	3/8	F11121
1/4	1/2	F110798
1/4	3/4	F1653

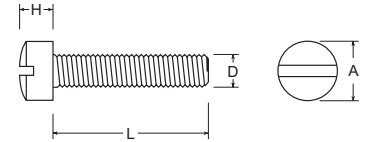


D	L	UNC
1/4	1	F16685
1/4	1-1/4	F112984
1/4	1-1/2	F115484
1/4	2	F111148
1/4	2-1/2	F19513

MACHINE SCREWS — SLOTTED FILLISTER

ANSI B18.6.3	Material:	Steel
		Fully Threaded
	Plating:	Zinc

* = Phillips Drive



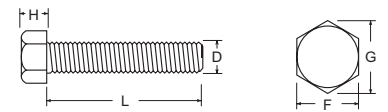
Nominal Size	D	#6	#8	#10	1/4
Head Height Max	H	.132	.156	.180	.237
Head Dia. Max	A	.226	.270	.313	.414

D	L	UNC	UNF
#6	1	F112298	
#8	3/8	F116089	
#8	1/2	F114476	

D	L	UNC	UNF
#8	1	F17012	
#10	1/2		F16397
#10	3/4		F115065

MACHINE SCREWS — UNSLOTTED HEX

ANSI B18.6.3	Material:	Steel
		Fully Threaded
	Plating:	Zinc



Nominal Size	D	#6	#8	#10	1/4"
Head Height Max	H	1/4	.250	.312	.375
W.A.F. Max	F	.272	.272	.340	.409
W.A.C. Max	G	.093	.110	.120	.190

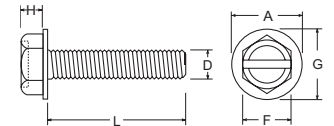
D	L	UNC	UNF
#6	1/2	F14848	
#6	3/4	F114550	
#6	1	F112743	
#6	1-1/4	F112064	
#6	1-1/2	F15927	
#8	1/2	F17732	

D	L	UNC	UNF
#8	3/4	F113291	
#8	1-1/4	F1845	
#10	1/2	F119527	F16136
#10	3/4	F12936	F1589
#10	1	F15511	F114452
#10	1-1/4	F113271	F15272

D	L	UNC	UNF
#10	1-1/2	F117094	F115977
1/4	1/2	F112152	
1/4	3/4	F14664	
1/4	1	F117124	

MACHINE SCREWS — SLOTTED INDENTED HEX WASHER

ANSI B18.6.3	Material:	Steel
		Fully Threaded
	Plating:	Zinc



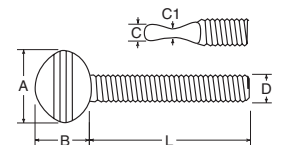
Nominal Size	D	#8	#10
Head Height Max	H	.110	.120
W.A.F. Max	F	.250	.312
W.A.C. Max	G	.272	.340
Flange Dia.	A	.348	.414

D	L	UNC	UNF
#8	3/8	F12456	
#8	3/4	F111590	
#10	3/8	F117568	F112377

D	L	UNC	UNF
#10	1/2	F17040	F112539
#10	3/4	F113973	F16672
#10	1	F117399	F112324

SCREWS — THUMB

ASME B18.6.8	Material:	Steel
	Plating:	Zinc



Nominal Size	D	#6	#8	#10	1/4"	5/16"	3/8"
Thread Pitch		32	32	24 or 32	20	18	16
Head Width Max	A	.45	.51	.58	.83	.96	1.09
Head Height Max	B	.28	.32	.39	.52	.64	.71
Head Thickness Max	C	.08	.09	.10	.16	.17	.22
Head Thickness Max	C1	.03	.04	.05	.06	.09	.11

D	L	UNC	UNF
#6	1/2	F16717	
#6	3/4	F116127	
#8	3/4	F17071	
#8	1	F19028	
#10	1/2	F117968	F19611
#10	3/4	F13230	F111879
#10	1	F120013	F19545
1/4	1/2	F118038	
1/4	3/4	F116307	

D	L	UNC	UNF
1/4	1	F17146	
1/4	1-1/4	F119652	
1/4	1-1/2	F113684	
1/4	2	F114924	
1/4	2-1/2	F12006	
1/4	3	F110874	
5/16	1/2	F114415	
5/16	1	F16285	

D	L	UNC	UNF
5/16	1-1/4	F18326	
5/16	1-1/2	F114092	
5/16	2	F13817	
3/8	3/4	F11587	
3/8	1	F15715	
3/8	1-1/2	F114048	
3/8	2	F113558	
3/8	2-1/2	F117563	
3/8	3	F119298	

FASTENERS

1 Inch Bolts & Screws

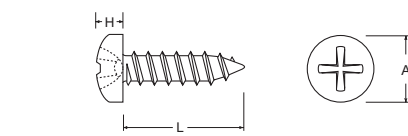
SHEET METAL SCREWS — PHILLIPS PAN

ANSI B18.6.4 1981	Type 'AB' Threads		
	Material:		Steel
	Plating:		Zinc or Black Oxide

Diameter	D	#2	#4	#6	#7	#8	#10	#12	#14
Height Max	H	.062	.080	.097	.106	.115	.133	.151	.169
Head Dia. Max	A	.167	.219	.270	.296	.322	.373	.425	.476

D	L	Zinc P/N	Black Ox No.
#4	3/8	F1633	F10446
#4	1/2	F14828	F13801
#4	3/4	F119951	
#4	7/8	F118469	
#4	1	F118109	
#6	1/4	F1310	
#6	3/8	F113009	F16605
#6	1/2	F113646	F110941
#6	5/8	F115705	
#6	3/4	F113142	F12981
#6	7/8	F118960	
#6	1	F110828	F114765
#6	1-1/4	F1361	F111016
#6	1-1/2	F115423	
#6	1-3/4	F19215	F131097
#6	2	F11837	
#7	3/8	F18673	
#7	1/2	F113875	F119398
#7	5/8	F1104	
#7	3/4	F118794	
#7	7/8	F17693	
#7	1	F117879	
#7	1-1/4	F110963	
#8	1/4	F117281	

D	L	Zinc P/N	Black Ox No.
#8	3/8	F19026	F12504
#8	1/2	F117955	F119606
#8	5/8	F19812	F16026
#8	3/4	F119582	F17384
#8	7/8	F1216	
#8	1	F12496	F14659
#8	1-1/4	F117966	F117816
#8	1-1/2	F116747	F112821
#8	1-3/4	F114746	
#8	2	F15787	F130594
#8	2-1/2	F115297	
#8	3	F112653	
#10	3/8	F14237	
#10	1/2	F110632	F113180
#10	5/8	F18220	F1935
#10	3/4	F113216	F84571
#10	7/8	F1699	
#10	1	F14531	F113764
#10	1-1/4	F110294	F116797
#10	1-1/2	F12830	F15750
#10	1-3/4	F11361	
#10	2	F116645	F15821
#10	3	F16289	F113602
#12	1/2	F17559	F110475



D	L	Zinc P/N	Black Ox No.
#12	5/8	F117381	F111801
#12	3/4	F16359	F17832
#12	7/8	F15873	
#12	1	F17725	F17050
#12	1-1/4	F112095	
#12	1-1/2	F118855	
#12	1-3/4	F16226	
#12	2	F13624	
#12	2-1/2	F117625	
#12	3	F110909	
#14	1/2	F113396	
#14	5/8	F116989	
#14	3/4	F14538	F14119
#14	7/8	F12634	
#14	1	F19826	F82789
#14	1-1/4	F113093	
#14	1-1/2	F117906	
#14	1-3/4	F1833	
#14	2	F11172	
#14	2-1/2	F110288	
#14	3	F17070	

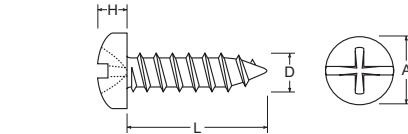
SHEET METAL SCREWS — COMBINATION PAN

ANSI B18.6.4 1981	Type 'AB' Threads		
	Material:		Steel
	Plating:		Zinc

Diameter	D	#6	#7	#8	#10	#12	#14
Height	H	.082	.089	.096	.110	.125	.144
Head Dia.	A	.270	.296	.322	.373	.425	.492

D	L	Part No.
#6	3/8	F1113
#6	1/2	F112970
#6	5/8	F112089
#6	3/4	F13496
#6	1	F111370
#6	1-1/4	F17618
#6	1-1/2	F12952
#7	3/4	F119603
#7	1	F118125
#8	3/8	F119360
#8	1/2	F110059
#8	5/8	F16505
#8	3/4	F110993
#8	1	F17058
#8	1-1/4	F18317
#8	1-1/2	F114394

D	L	Part No.
#8	1-3/4	F16532
#8	2	F13171
#8	3	F12000
#10	1/2	F118546
#10	5/8	F17137
#10	3/4	F13354
#10	1	F116070
#10	1-1/4	F13672
#10	1-1/2	F119967
#10	1-3/4	F113893
#10	2	F18091
#10	2-1/2	F1706
#10	3	F16998
#12	1/2	F11414
#12	5/8	F17691
#12	3/4	F17318



D	L	Part No.
#12	1	F15593
#12	1-1/4	F116047
#12	1-1/2	F11290
#12	2	F112501
#12	2-1/2	F114294
#12	3	F113896
#14	1/2	F113372
#14	5/8	F13069
#14	3/4	F116338
#14	1	F15039
#14	1-1/4	F1193
#14	1-1/2	F11047
#14	1-3/4	F16612
#14	2	F110920
#14	2-1/2	F111231
#14	3	F118333

SHEET METAL SCREWS — SLOTTED PAN

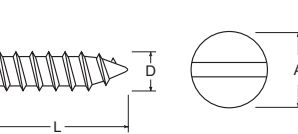
ANSI B18.6.4 1981	Type 'AB' Threads		
	Material:		Steel
	Plating:		Zinc

Diameter	D	#4	#6	#7	#8	#10	#12	#14
Height	H	.082	.082	.089	.096	.110	.125	.144
Head Dia.	A	.270	.270	.296	.322	.373	.425	.492

D	L	Part No.
#4	1/4	F116492
#4	3/8	F14959
#4	1/2	F115788
#4	5/8	F18532
#4	3/4	F113222
#4	1	F13535
#6	1/4	F15862
#6	3/8	F16507
#6	1/2	F1574
#6	5/8	F19861
#6	3/4	F115082
#6	1	F18129
#8	1/4	F115038

D	L	Part No.
#8	3/8	F14001
#8	1/2	F113391
#8	3/4	F111190
#8	1	F112960
#8	1-1/4	F116615
#8	1-1/2	F110175
#8	1-3/4	F13699
#8	2	F114448
#8	2-1/2	F117692
#8	3	F19224
#10	3/8	F116160
#10	1/2	F16554
#10	5/8	F117725

D	L	Part No.
#10	3/4	F117592
#10	7/8	F19341
#10	1	F11106
#10	1-1/4	F11900
#10	1-1/2	F18963
#10	1-3/4	F111701
#10	2	F111793
#10	2-1/2	F118902
#10	3	F11834
#12	1/2	F113961
#12	3/4	F113173
#12	1	F11021
#12	1-1/4	F19849



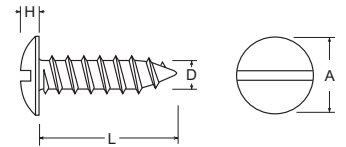
D	L	Part No.
#12	1-1/2	F14767
#14	5/8	F115700
#14	3/4	F15463
#14	7/8	F17810
#14	1	F16921
#14	1-1/4	F117781
#14	1-1/2	F115268
#14	2	F113279
#14	2-1/2	F13092

SHEET METAL SCREWS — SLOTTED TRUSS

SAE J78 1979	Type 'AB' Threads				
	Material:				Steel
	Plating:				Zinc

Diameter	D	#6	#8	#10	#12	#14
Height	H	.086	.102	.118	.134	.150
Head Dia.	A	.321	.384	.488	.511	.573

D	L	Part No.
#6	1/2	F112599
#6	3/4	F119804
#8	3/4	F12668
#8	1	F13157
#10	1/2	F115609
#10	3/4	F115040
#10	1	F117143
#12	3/4	F119419
#14	1/2	F110738



1

SHEET METAL SCREWS — PHILLIPS TRUSS

SAE J78 1979	Type 'AB' Threads				
	Material:				Steel
	Plating:				Zinc

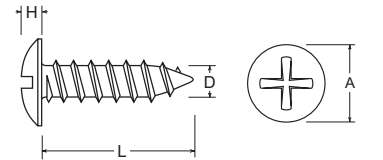
Diameter	D	#6	#8	#10	#12	#14
Height	H	.086	.102	.118	.134	.150
Head Dia.	A	.321	.384	.488	.511	.573

D	L	Part No.
#6	3/8	F16331
#6	1/2	F15898
#6	3/4	F19714
#6	1	F113129
#6	1-1/4	F13154
#8	3/8	F114417

D	L	Part No.
#8	1/2	F18583
#8	3/4	F14566
#8	1	F14301
#8	1-1/4	F18994
#8	1-1/2	F112574
#10	3/8	F114932

D	L	Part No.
#10	1/2	F116054
#10	3/4	F17706
#10	1	F18748
#10	1-1/4	F18589
#10	1-1/2	F15329
#12	1/2	F118517

D	L	Part No.
#12	3/4	F119815
#12	1	F19701
#12	1-1/2	F11979
#14	3/4	F13190
#14	1-1/2	F113380



* 'A' Type Thread

SHEET METAL SCREWS — PHILLIPS OVAL

ANSI B18.6.4 1981	Type 'AB' Threads				
	Material:				Steel
	Plating:				Zinc

Diameter	D	#2	#4	#6	#7	#8	#10	#12	#14
Height	H	.051	.067	.083	.091	.100	.116	.132	.148
Head Dia.	A	.162	.212	.262	.287	.312	.362	.412	.462

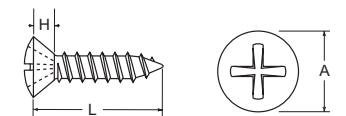
D	L	Part No.
#2	1/4	F114162
#4	1/4	F112725
#4	3/8	F112415
#4	5/8	F1308
#4	3/4	F14089
#6	3/4	F116600
#6	7/8	F116303
#6	1	F19336

D	L	Part No.
#6	1-1/4	F114060
#6	1-1/2	F114663
#7	1/2	F110880
#8	1/2	F118939
#8	5/8	F19811
#8	3/4	F114799
#8	7/8	F11668
#8	1	F12615

D	L	Part No.
#8	1-1/4	F12715
#8	1-1/2	F119044
#8	1-3/4	F17893
#8	2	F112862
#10	1/2	F15639
#10	5/8	F114466
#10	3/4	F12373
#10	7/8	F110694

D	L	Part No.
#10	1	F17582
#10	1-1/4	F119737
#10	1-1/2	F112818
#10	1-3/4	F112353
#10	2	F16206
#12	5/8	F110803
#12	3/4	F115574
#12	1	F18940

D	L	Part No.
#12	1-1/4	F1575
#12	1-1/2	F113990
#12	1-3/4	F18697
#14	3/4	F110584
#14	1	F12402
#14	1-1/4	F13818
#14	1-1/2	F1685
#14	2	F1362



SHEET METAL SCREWS — PHILLIPS FLAT

ANSI B18.6.4 1981	Type 'AB' Threads				
	Material:				Steel
	Plating:				Zinc

Diameter	D	#2	#4	#6	#7	#8	#10	#12	#14
Height	H	.051	.067	.083	.091	.100	.116	.132	.148
Head Dia.	A	.162	.212	.262	.287	.312	.362	.412	.462

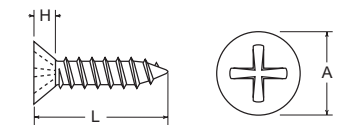
D	L	Part No.
#4	3/8	F114326
#4	3/4	F14101
#6	3/8	F116035
#6	1/2	F12368
#6	5/8	F17841
#6	3/4	F17036
#6	1	F11615
#6	1-1/4	F117350
#6	1-1/2	F18511
#8	1/2	F12251

D	L	Part No.
#8	5/8	F113867
#8	3/4	F13077
#8	1	F13419
#8	1-1/4	F113427
#8	1-1/2	F16421
#8	1-3/4	F16165
#8	2	F16224
#8	2-1/2	F14791
#10	1/2	F110520
#10	5/8	F113371

D	L	Part No.
#10	3/4	F117653
#10	1	F118304
#10	1-1/4	F1969
#10	1-1/2	F117947
#10	1-3/4	F17031
#10	2	F114733
#10	2-1/2	F13132
#10	3	F14850
#12	1/2	F113849
#12	5/8	F111330

D	L	Part No.
#12	3/4	F112130
#12	7/8	F115773
#12	1	F119514
#12	1-1/4	F110758
#12	1-1/2	F18685
#12	1-3/4	F13723
#12	2	F110229
#12	2-1/2	F120102
#12	3	F111909
#14	5/8	F18814

D	L	Part No.
#14	3/4	F112482
#14	1	F19138
#14	1-1/4	F15115
#14	1-1/2	F18890
#14	1-3/4	F18135
#14	2	F116090
#14	2-1/2	F110376
#14	3	F16370



FASTENERS

1 Inch Bolts & Screws

SHEET METAL SCREWS — SLOTTED FLAT

ANSI B18.6.4 1981	Type 'AB' Tapping Screws		
	Material:	Steel	
	Plating:	Zinc	

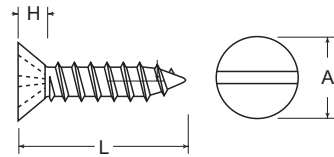
Diameter	D	#4	#6	#8	#10	#12	#14
Height	H	.039	.049	.054	.060	.067	.075
Head Dia.	A	.225	.279	.332	.385	.438	.507

D	L	Part No.
#4	3/8	F116295
#4	1/2	F19001
#4	5/8	F14094
#6	1/2	F119261
#6	1	F110413
#8	3/8	F119984

D	L	Part No.
#8	3/4	F15879
#8	1	F113979
#8	1-1/2	F110140
#10	1	F119483
#10	1-1/4	F114978
#10	1-1/2	F114858

D	L	Part No.
#10	2	F116087
#12	1/2	F12759
#12	5/8	F19435
#12	1	F16405
#12	1-1/2	F11488
#12	2	F11015

D	L	Part No.
#14	5/8	F119444
#14	1	F119856
#14	1-1/2	F13119
#14	2	F1123



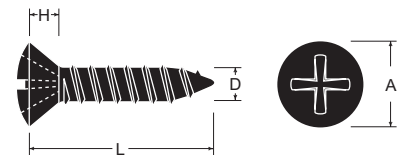
SHEET METAL SCREWS — PHILLIPS OVAL

ANSI B18.1.4 1981	Type 'AB' Threads		
	Material:	Steel	
	Plating:	Black Oxide	

Diameter	D	#4	#6	#7	#8	#8 RH	#10	#10 RH	#12
Height	H	.039	.048	.095	.054	.048	.060	.054	.132
Head Dia.	A	.225	.279	.305	.332	.279	.385	.332	.438

D	L	Standard	*RH
#4	1	F84867	
#4	3/4	F82076	
#6	1	F81754	
#6	1-1/4	F81274	
#8	1/2	F84810	
#8	3/4	F82855	F85116

D	L	Standard	*RH
#8	1	F83736	F84315
#8	1-1/4	F84882	F82633
#8	1-1/2	F82618	F84412
#10	1/2	F83607	
#10	3/4	F8130	F81925
#10	1	F83560	F8162



D	L	Standard	*RH
#10	1-1/4	F82844	F83244
#10	1-1/2	F85011	
#10	2	F83758	F82243

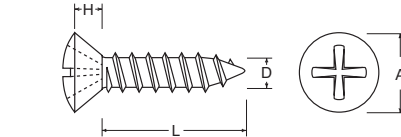
SHEET METAL SCREWS — PHILLIPS OVAL CHROME

ANSI B18.6.4 1981	Type 'AB' Threads		
	Material:	Steel	
	Plating:	Chrome	

Diameter	D	#4	#6	#8	#8 RH	#10	#10 RH
Height	H	.039	.048	.054	.048	.060	.054
Head Dia.	A	.225	.279	.332	.279	.385	.332

D	L	Standard	*RH
#4	1/2	F83034	
#4	3/4	F84061	
#6	1/2	F84681	
#6	5/8	F81412	
#6	3/4	F84128	
#6	1	F84266	
#6	1-1/4	F81387	

D	L	Standard	*RH
#8	1/2	F81780	F85025
#8	5/8	F83979	F85076
#8	3/4	F8749	F83307
#8	7/8	F8698	F18234
#8	1	F82241	F81430
#8	1-1/4	F116607	F82220



D	L	Standard	*RH
#8	1-1/2	F8268	F8560
#8	2		F8811
#10	3/4	F82848	F82159
#10	1	F82755	F82399
#10	1-1/4		F82657
#10	1-1/2		F82696

SHEET METAL SCREWS — SQUARE PAN

Type 'AB' Threads		
Material:	Steel	
Plating:	Zinc	

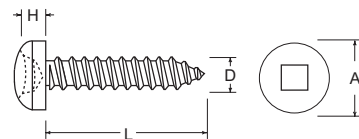
Diameter	D	#6	#8	#10
Height	H	.082	.096	.110
Head Dia.	A	.270	.322	.373

D	L	Part No.
#6	3/8	F113564
#6	1/2	F115117
#6	3/4	F116078
#6	1	F16886

D	L	Part No.
#6	1-1/4	F1823
#6	1-1/2	F1941
#8	1/2	F14011
#8	3/4	F112655

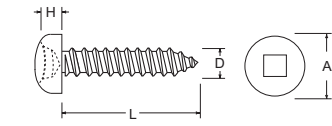
D	L	Part No.
#8	1	F19178
#8	1-1/4	F13302
#8	1-1/2	F17387
#8	2	F13831
#10	1/2	F19227

D	L	Part No.
#10	3/4	F16738
#10	1	F116930
#10	1-1/4	F17892
#10	1-1/2	F12191
#10	2	F13463



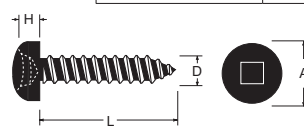
SHEET METAL SCREWS — SQUARE PAN PAINTED

Type 'AB' Threads		
Material:	Steel	
Plating:	Painted	

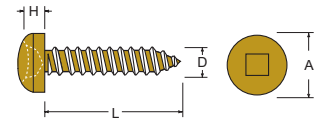


D	L	White Part No.	Part No.	Bulk Box
#8	3/4	F123380		F123381
#8	1	F123374		F123379
#8	1-1/4	F123377		F123378
#8	1-1/2	F123375		F123376

Diameter	D	#8
Height	H	.096
Head Dia.	A	.322



D	L	Black Part No.	Bulk Box
8	3/4	F123501	F130601
8	1	F123497	F130303
8	1-1/4	F123499	F130602
8	1-1/2	F123498	F130302
8	2	F123500	F130304



D	L	Bronze Part No.	Bulk Box
8	1	F130296	F130299
8	1-1/2	F130297	F130298
8	2	F130300	F130301

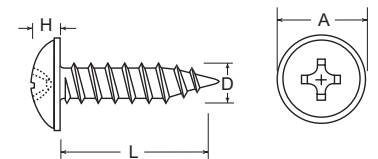
SHEET METAL SCREWS — SQUARE/PHILLIPS PAN WASHER HEAD

Type 'AB' Threads		
Material:	Steel	
Plating:	Zinc	

Diameter	D	#8
Height	H	.125
Head Dia.	A	.375

D	L	Part No.
8	3/4	F132237
8	1	F132232
8	1-1/4	F132234
8	1-1/2	F132233
8	2	F132235
8	3	F132236

*Use #2 Square or #2 Phillips Bits



SHEET METAL SCREWS — PHILLIPS ROUND WASHER

Type 'AB' Threads		
Material:	Steel	
Plating:	Black Oxide	

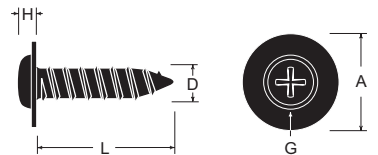
Diameter	D	#6	#8	#10
Height	H	.087	.108	.136
Head Dia.	A	.370	.400	.473

D	L	Part No.
#6	1/2	F84564
#6	3/4	F81249
#6	1	F81421

D	L	Part No.
#8	1/2	F81731
#8	5/8	F84388
#8	3/4	F83637

D	L	Part No.
#8	1	F81891
#8	1-1/4	F81051
#8	1-1/2	F83069

D	L	Part No.
#10	3/4	F8859
#10	1	F84222
#10	1-1/4	F82198



SHEET METAL SCREWS — PHILLIPS ROUND WASHER

Type 'AB' Threads		
Material:	Steel	
Plating:	Black Oxide	

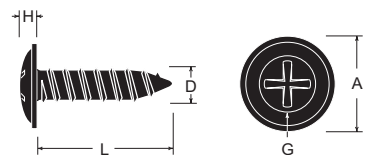
Diameter	D	#7	#8	#10
Height	H	.099	.110	.120
Head Dia.	A	.385	.425	.465

D	L	Part No.
#8*	3/4	F8717
#8	1-1/2	F82829

D	L	Part No.
#10	5/8	F83930
#10	3/4	F8303

D	L	Part No.
#10	7/8	F84861
#10	1	F83763

D	L	Part No.
#10	1-1/2	F8345



*Screw has 1/2" OD Washer

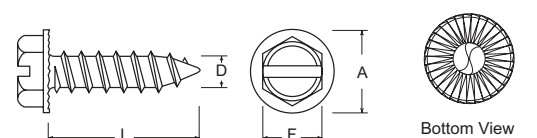
SHEET METAL SCREWS — CRIMPTITE USA

ANSI B18.6.3 1981			Type 'AB' Threads		
			Material:	Case Hardened Steel J 933	
			Plating:	Zinc	

Diameter	D	#6	#8	#10	#14
W.A.F	F	.25	.25	.312	.375
Washer Dia.	A	.34-.32	.37-.35	.445-.425	.55-.53

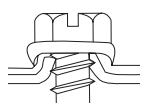
D	L	Part No.
#8	1/2	F129293
#8	5/8	F129295
#8	3/4	F129294
#8	1	F129292
#10	1/2	F129282
#10	5/8	F129283
#10	1	F129281
#12	5/8	F129287

D	L	Part No.
#12	3/4	F129286
#12	1	F129284
#12	1-1/2	F129285
#14	5/8	F129291
#14	1	F129288
#14	1-1/2	F129289



Bottom View

Recessed, Serrated Washer Face
Resists Vibration & Loosening



FASTENERS

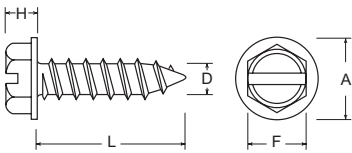
1 Inch Bolts & Screws

SHEET METAL SCREWS — SLOTTED INDENTED HEX WASHER

ANSI B18.6.4 1981	Type 'AB' Threads	
	Material:	Steel
	Plating:	Zinc

Note: * Indicates hex only; no slot or washer on these screws

Diameter	D	#6	#7	#8	#10	#12	1/4"	5/16"	3/8"
Height	H	.093	.093	.110	.120	.155	.190	.230	.295
W.A.F.	F	1/4	1/4	1/4	5/16	5/16	3/8	1/2	9/16
Flange	A	.328	.328	.348	.414	.432	.520	.676	NA



D	L	Part No.
#6	3/8	F18652
#6	1/2	F16504
#6	5/8	F11940
#6	3/4	F115482
#6	1	F119290
#6	1-1/4	F110459
#7	1/2	F11681
#8	3/8	F16589
#8	1/2	F114585
#8	5/8	F11272
#8	3/4	F12700
#8	1	F11496

D	L	Part No.
#8	1-1/4	F117502
#8	1-1/2	F119201
#8	2	F15975
#8	2-1/2	F18619
#10	3/8	F17511
#10	1/2	F117395
#10	5/8	F117882
#10	3/4	F118552
#10	1	F13955
#10	1-1/4	F116777
#10	1-1/2	F1421
#10	2	F17615
#10	2-1/2	F12090

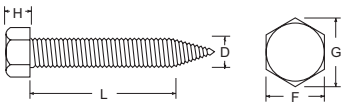
D	L	Part No.
#10	3	F112706
#12	1/2	F112332
#12	5/8	F12803
#12	3/4	F18349
#12	1	F117084
#12	2	F119315
#12	1-1/4	F117149
#12	1-1/2	F119965
1/4	1/2	F12306
1/4	5/8	F117366
1/4	3/4	F111979
1/4	1	F119960
1/4	1-1/4	F120066

D	L	Part No.
1/4	1-1/2	F113782
1/4	2	F12714
1/4	3	F113732
5/16	1/2	F12104
5/16	3/4	F113743
5/16	1	F117131
5/16	1-1/4	F11060
5/16	1-1/2	F111641
5/16*	2	F14972
3/8*	3/4	F117346
3/8*	1	F16583
3/8*	1-1/2	F13561

SHEET METAL SCREWS — UNSLOTTED INDENTED HEX

ANSI B18.6.4 1981	Type 'AB' Threads	
	Material:	Steel
	Plating:	Zinc

Diameter	D	#8	#10	#12	#14	5/16"
Height	H	0.10	0.113	0.14	0.18	0.225
W.A.F.	F	0.246	0.305	0.305	0.371	0.494



D	L	Part No.
#8	1/2	F115174
#12	1/2	F113516

D	L	Part No.
#14	3/4	F117981
5/16	2	F1111

SCREWS — THREAD CUTTING TYPE F SLOTTED INDENTED HEX WASHER

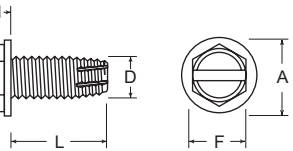
Type 'F' Threads	
Material:	Steel
Plating:	Zinc

Diameter	D	#10	#12	1/4"	5/16"	3/8"
Height	H	.120	.155	.280	.320	.390
W.A.F.	F	1/4	5/16	3/8	1/2	9/16
Flange Dia.	A	.414	.432	.560	.680	.810

D	L	Part No.
#10	3/8	F17143
#10	1/2	F1843
#10	5/8	F118097
#10	3/4	F16018
#10	1	F1275
#10	1-1/2	F19002

D	L	Part No.
#12	1/2	F119964
#12	3/4	F111917
#12	1	F18519
1/4	1/2	F17401
1/4	3/4	F15905
1/4	1	F111128

D	L	Part No.
1/4	1-1/4	F114549
5/16	1/2	F110330
5/16	3/4	F117915
5/16	1	F15156
5/16	1-1/2	F116543



D	L	Part No.
3/8	3/4	F110928
3/8	1	F12405
3/8	1-1/2	F1676
3/8	2	F118568

FLOOR BOARD SCREWS — TORX FLAT

Type 'F' Threads	
Material:	Steel
Plating:	Black Phosphate

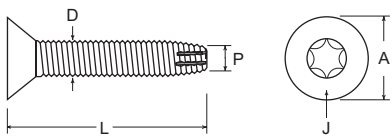
Diameter	D	1/4"	5/16"
Head Dia.	A	.4560	.5755
Drive Size	J	T30	T40
Point Size	P	.20	.25
Drill Size		7/32	9/32

Flat Head

D	L	Part No.
1/4	1	F84116
1/4	1-1/4	F81206
1/4	1-1/2	F83378
1/4	2	F14369

D	L	Part No.
1/4	2-1/4	F111831
1/4	2-1/2	F15663
1/4	3	F111936
5/16	2	F119952

D	L	Part No.
5/16	2-1/4	F114605
5/16	2-1/2	F18754
5/16	3	F15448
5/16	4	F13583



Bulk Packs

D	L	Pkg. Qty.	Bulk pkg. Part No.
1/4	1	1000	F14116B1000
1/4	1-1/2	1000	F13378B1000
1/4	2	1000	F14369B1000
1/4	2-1/2	1000	F15663B1000

SELF-DRILLING SCREWS — PHILLIPS FLAT

SAE J78 1979	Material:	Hardened Steel
	Plating:	Zinc

Diameter	D	#6	#8	#10	#14
Head Dia.	A	.279	.332	.385	.507

D	L	Part No.
#6	3/8	F11845
#6	1/2	F111707
#6	5/8	F110849
#6	3/4	F111980
#6	1	F132245
#8	3/8	F111092
#8	1/2	F1500
#8	5/8	F114144

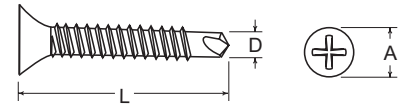
D	L	Part No.
#8	3/4	F19855
#8	1	F111606
#8	1-1/4	F115880
#10	1/2	F19302
#10	5/8	F111711
#10	3/4	F1273
#10	1	F13206

D	L	Part No.
#10	1-1/4	F111871
#10***	1-7/16	F113456
#10	1-1/2	F19675
#10	1-13/16	F115442
#12	1-1/2	F16022
#12	2-1/2	F17282
#12**	2-3/4	F19397

D	L	Part No.
#14	3/4	F14533
#14	1-1/4	F11370
#14	1-1/2	F112319
#14	2	F17980
#14	2-3/4	F112571
1/4-20**	3	F13330

** Has Wings

***Wafer Head w/ Wings



1

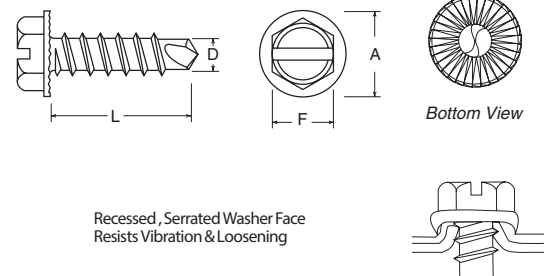
SELF-DRILLING SCREWS — CRIMPTITE USA

ASME B18.6.3	Material:	Case Hardened Steel J 78
	Plating:	Zinc

Diameter	D	#6	#8	#10	#14
W.A.F	F	.25	.25	.312	.375
Washer Dia.	A	.34-.32	.37-.35	.445-.425	.55-.53

D	L	Part No.
#8	1/2	F128714
#8	5/8	F129353
#8	3/4	F128715
#8	1	F128717
#10	1/2	F128710
#10	5/8	F129349
#10	3/4	F128711
#10	1	FW209951

D	L	Part No.
#12	5/8	F129351
#12	3/4	F128712
#12	1	F128716
#12	1-1/2	F129350
#14	5/8	F129352
#14	3/4	F128709
#14	1	F128713
#14	1-1/2	F128708

Recessed, Serrated Washer Face
Resists Vibration & Loosening

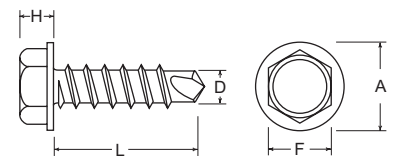
SELF-DRILLING SCREWS — UNSLOTTED INDENTED HEX WASHER

SAE J78 1979	Material:	Steel
	Plating:	Zinc, Black Oxide or Coated

Diameter	D	#6	#8	#10	#12	#14	5/16"	3/8"
Height	H	.093	.110	.120	.155	.190	.230	.295
W.A.F.	F	1/4	1/4	5/16	5/16	3/8	1/2	9/16
Flange	A	.328	.414	.414	.432	.520	.676	.780

D	L	T	Zinc	Black Oxide	Coated
#6	3/8	#2	F118747		
#6	1/2	#2	F118471		
#6	3/4	#2	F14297		
#6	1	#2	F11774		
#8	1/2	#2	F119913	F1286	
#8	5/8	#2	F18925		
#8	3/4	#2	F19679	F13479	F110054
#8	1	#2	F112741	F13441	F13766
#8	1-1/4	#2	F112071		
#8	1-1/2	#2	F11994		
#8	1-5/8	#2	F14180		
#8	1-3/4	#2	F14525		
#8	2	#2	F114554		
#10	1/2	#2	F1455	F117427	F19422
#10	5/8	#2	F15444		F115237
#10	3/4	#3	F16355	F114650	F1626
#10	1	#3	F13222	F12667	F113005
#10	1-1/4	#3	F17506	F18873	F18187
#10	1-1/2	#3	F19204		F15863
#10	1-3/4	#3	F19698		
#10	2	#3	F118242		
#10	2-1/2	#3	F119295		
#10	3	#3	F115802		
#12	1/2	#3	F114674		
#12	3/4	#3	F113797		F11590
#12	1	#3	F15364		F17135

D	L	T	Zinc	Black Oxide	Coated
#12	1-1/4	#3	F13728		F117252
#12	1-1/2	#3	F11981		F110582
#12	1-3/4	#3	F13026		
#12	2	#3	F12493		
#12	2-1/2	#3	F18466		F15334
12-24	7/8	#4	F12723		
12-24	1-1/4	#5	F14908		
12-24	1-1/2	#5	F112445		
12-24	2	#5	F118171		
#14	1/2	#3	F110112		
#14	3/4	#3	F118981		F111651
#14	1	#3	F111921		F17064
#14	1-1/4	#3	F116469		F18545
#14	1-1/2	#3	F13298		F15108
#14	1-3/4	#3	F111317		
#14	2	#3	F119019		
#14	2-1/2	#3	F118098		
#14	3	#3	F111797		
1/4-28	3	#6	F16782		
5/16	1	#3	F116092		
5/16	1-1/2	#3	F17664		
5/16	2	#3	F13499		
3/8	1	#3	F116173		
3/8	1-1/2	#3	F111659		



FASTENERS

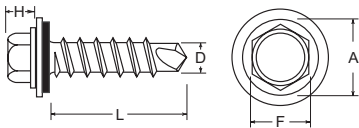
1 Inch Bolts & Screws

SELF-DRILLING SCREWS — UNSLOTTED INDENTED HEX W/BONDED WASHER

SAE J78 1979	Material:	Steel
	Plating:	Zinc

D	Thread Pith	Length	Point	Part No.
#10	16	3/4	#3	F13636
#10	16	1	#3	F12883
#10	16	1-1/4	#3	F13610
#10	16	1-1/2	#3	F14816
#12	14	3/4	#3	F117630
#12	24	7/8	#4	F115455
#12	14	1	#3	F119831
#12	24	1-1/4	#5	F15739
#12	14	1-1/2	#3	F11580

D	Thread Pith	Length	Point	Part No.
#12	14	2	#3	F14710
#12	14	3	#3	F16528
#14	14	3/4	#3	F14987
#14	14	7/8	#1	F113750
#14	14	1	#3	F117086
#14	14	1-1/4	#3	F15291
#14	14	1-1/2	#3	F115114
#14	14	2-1/2	#3	F13033



Diameter	D	#10	#12	#14
Height	H	.120	.155	.190
W.A.F.	F	5/16	5/16	3/8
Flange	A	.414	.432	.520

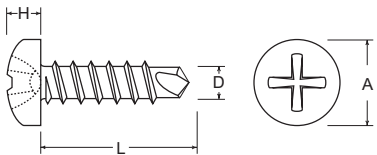
SELF-DRILLING SCREWS — PHILLIPS PAN

SAE J78 1979	Material:	Hardened Steel
	Plating:	Zinc or Black Oxide

Diameter	D	#6	#8	#10	#12	#14
Height	H	.097	.115	.137	.156	.175
Head Dia	A	.270	.296	.373	.433	.492

D	L	Point	Zinc	Black Oxide
#6	3/8	#2	F12167	
#6	1/2	#2	F110866	
#6	5/8	#2	F12558	
#6	3/4	#2	F114199	
#6	1	#2	F114391	
#6	1-1/2	#2	F115253	
#8	1/2	#2	F119045	
#8	5/8	#2	F117386	F110612
#8	3/4	#2	F111955	F11760
#8	1	#2	F14052	F114304
#8	1-1/4	#2	F19280	
#8	1-1/2	#2	F113398	F117014
#8	2	#2	F14541	
#10	1/2	#2	F15458	F12452

D	L	Point	Zinc	Black Oxide
#10	5/8	#3	F14458	
#10	3/4	#2	F110704	F116217
#10	1	#2	F15641	F1278
#10	1-1/4	#2	F111767	
#10	1-1/2	#3	F117688	
#10	2	#3	F11853	
#10	2-1/2	#3	F115309	
#12	3/4	#3	F18175	
#12	1	#3	F110273	
#12	1-1/4	#3	F19272	
#12	1-1/2	#3	F12366	
#12	2	#3	F13061	
#14	3/4	#3	F119601	
#14	1	#3	F114296	
#14	1-1/2	#3	F16188	



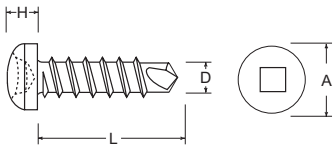
SELF-DRILLING SCREWS — SQUARE PAN

SAE J78 1979	Material:	Hardened Steel
	Plating:	Zinc

D	L	Point	Part No.	Bulk Pack
#8	3/4	#2	F111734	F111713
#8	1	#2	F18008	

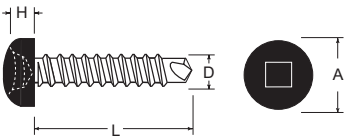
Diameter	D	#8	#10
Height	H	.096	.110
Head Dia	A	.296	.373

D	L	Point	Part No.
#10	1	#3	F110819
#10	1-1/2	#3	F1301

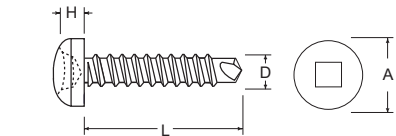


SELF-DRILLING SCREWS — SQUARE PAN PAINTED

D	L	White Part No.	Black Part No.
#8	3/4	F130501	F130498
#8	1	F130499	F130496
#8	1-1/2	F130500	F130497



Material:	Steel
Plating:	Zinc with Head Painted

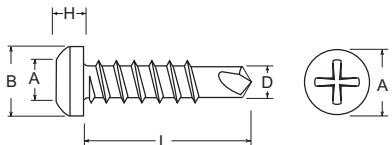


Diameter	D	#8
Height	H	.096
Head Dia	A	.296

SELF-DRILLING SCREWS — PHILLIPS PAN FRAMING

Material:	Steel	
Plating:	Zinc	
D	L	Part No.
#7	7/16	F110627

Diameter	D	#7
Height	H	.13
Head Dia	A	.26
Head Dia	B	.31



SELF-DRILLING SCREWS — PHILLIPS OVAL / WAFER

Oval Head

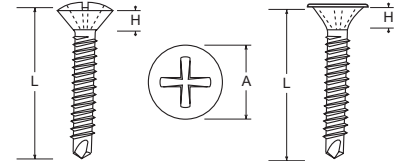
D	L	Point	Part No.
#8	3/4	#2	F11604
#8	1	#2	F117898

Wafer Head

D	L	Point	Part No.
#10	3/4	#3	F19579
#10	1	#3	F112776
#10	1-1/4	#3	F18750
#10	1-1/2	#3	F111742

SAE J78 1979	Material:	Hardened Steel
	Plating:	Zinc

Diameter	D	#8	#10
Height	H	.100	.125
Head Dia.	A	.332	.440



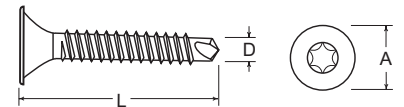
1

SELF-DRILLING SCREWS — TORX WAFER

D	L	Point	Part No.
#10	3/4	#3	F1743
#10	1	#3	F1791
#10	1-1/4	#3	F13826
#10	1-1/2	#3	F123536

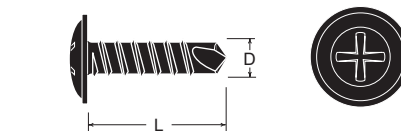
Material:	Steel
Plating:	Zinc

Diameter	D	#10
Head Dia.	A	.468
Bits Size		T27

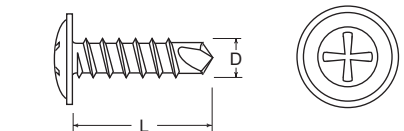


SELF-DRILLING SCREWS — PHILLIPS MODIFIED TRUSS

D	L	Point	Black Oxide	Zinc
#8	1/2	#2	F1483	F119614
#8	3/4	#2	F117533	F117654
#8	1	#2	F121210	F110528
#8	1-1/4	#2		F111236
#8	1-5/8	#2		F16257
#8	1-7/8	#2		F110552
#8	2-1/2	#2		F13813
#8	3	#2		F121209
#10	3/4	#2		F118193

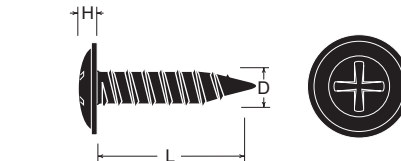


Material:	Steel
Plating:	Black Oxide/Zinc

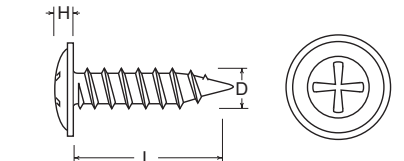


SELF-PIERCING SCREWS — PHILLIPS MODIFIED TRUSS

D	L	Black Oxide	Zinc
#8	9/16	F110386	F118232
#8	1/2		F117087
#8	3/4		F13194
#8	1	F1323	F113459
#8	1-1/4		F111077
#8	1-5/8		F117368
#8	1-7/8		F117028
#8	2-1/2		F114168
#8	3		F121193



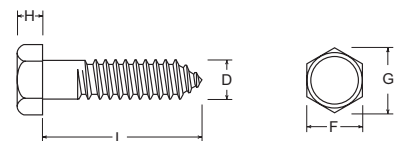
Material:	Steel
Plating:	Black Oxide/Zinc



LAG SCREWS — HEX ZINC

Material:	Steel
Plating:	Zinc

Diameter	D	1/4"	5/16"	3/8"	1/2"	3/4"
Height	H	11/64	7/32	1/4	11/32	1/2
W.A.F.	F	7/16	1/2	9/16	3/4	1-1/8
W.A.C.	G	.505	.577	.650	.866	1.299



D	L	Part No.
1/4	1	F17538
1/4	1-1/4	F117479
1/4	1-1/2	F16665
1/4	1-3/4	F118266
1/4	2	F15054
1/4	2-1/2	F12553
1/4	3	F11658
1/4	3-1/2	F17360
1/4	4	F115223
1/4	4-1/2	F16218
1/4	5	F119335
1/4	5-1/2	F119529

D	L	Part No.
1/4	6	F112043
5/16	1	F113803
5/16	1-1/2	F16263
5/16	1-3/4	F111012
5/16	2	F120037
5/16	2-1/2	F111018
5/16	3	F11378
5/16	3-1/2	F111309
5/16	4	F19833
3/8	1	F113199
3/8	1-1/2	F15193
3/8	1-3/4	F119515

D	L	Part No.
3/8	2	F112981
3/8	2-1/2	F111405
3/8	3	F116548
3/8	3-1/2	F111770
3/8	4	F13148
3/8	4-1/2	F117660
3/8	5	F113059
3/8	5-1/2	F113091
3/8	6	F17779
1/2	1-1/2	F15505
1/2	2	F11335
1/2	2-1/2	F11743

D	L	Part No.
1/2	3	F115002
1/2	3-1/2	F12961
1/2	4	F111079
1/2	4-1/2	F110560
1/2	5	F119910
1/2	5-1/2	F118312
1/2	6	F14838
1/2	7	F14883
1/2	8	F1705
3/4	4	F16145
3/4	4-1/2	F119155

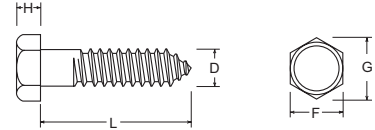
FASTENERS

1 Inch Bolts & Screws

LAG SCREWS — HEX GALVANIZED

ANSI B18.2.1	Material:	Low Carbon Steel
	Plating:	Hot Dip Zinc

Diameter	D	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Height	H	11/64	13/64	1/4	19/64	21/64	27/64	1/2
W.A.F.	F	3/8	1/2	9/16	5/8	3/4	15/16	1-1/8
W.A.C	G	.530-.498	.707-.665	.797-.747	.884-1.061	1.061-.995	1.326-1.244	1.591-1.494



D	L	Part No.
1/4	1	F111495
1/4	1-1/4	F115283
1/4	1-1/2	F114091
1/4	2	F116019
1/4	2-1/2	F1995
1/4	3	F119567
1/4	3-1/2	F116950
1/4	4	F116994
1/4	4-1/2	F114310
1/4	5	F111142
1/4	5-1/2	F15826
1/4	6	F17080
5/16	1	F117927
5/16	1-1/2	F118908
5/16	2	F116870
5/16	2-1/2	F115198
5/16	3	F118856
5/16	3-1/2	F17403
5/16	4	F11478
5/16	4-1/2	F1296

D	L	Part No.
5/16	5	F15801
5/16	5-1/2	F18085
5/16	6	F119208
3/8	1	F110774
3/8	1-1/2	F178
3/8	2	F19393
3/8	2-1/2	F111341
3/8	3	F112078
3/8	3-1/2	F117962
3/8	4	F11927
3/8	4-1/2	F13341
3/8	5	F19239
3/8	5-1/2	F116028
3/8	6	F118368
3/8	7	F12461
3/8	8	F118927
3/8	10	F110282
3/8	12	F15807
1/2	1-1/2	F119369
1/2	2	F113375

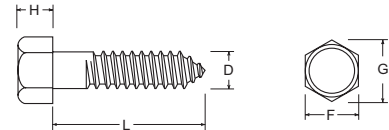
D	L	Part No.
1/2	2-1/2	F11250
1/2	3	F1109
1/2	3-1/2	F15305
1/2	4	F115085
1/2	4-1/2	F118828
1/2	5	F19627
1/2	5-1/2	F111191
1/2	6	F15256
1/2	7	F114811
1/2	8	F16486
1/2	9	F112475
1/2	10	F117152
1/2	12	F114198
5/8	2	F13990
5/8	2-1/2	F113422
5/8	3	F114908
5/8	3-1/2	F12041
5/8	4	F16730
5/8	5	F119862
5/8	6	F13999

D	L	Part No.
5/8	8	F13346
5/8	9	F15890
5/8	10	F12116
5/8	12	F13518
5/8	14	F19498
5/8	16	F18068
3/4	2-1/2	F113785
3/4	3	F11963
3/4	4	F12480
3/4	4-1/2	F115710
3/4	5	F12613
3/4	5-1/2	F18723
3/4	6	F15430
3/4	7	F17727
3/4	8	F115151
3/4	10	F18072
3/4	14	F112443
3/4	16	F112859
3/4	18	F118134

LAG SCREWS — HEX HIGH PROFILE ZINC

Material:	Low Carbon Steel	
Plating:	Zinc	
Diameter	D	5/16
Height	H	5/16
WAF	F	7/16
Flange	A	.610-.680

D	L	Part No.
5/16	1-3/4	F123370



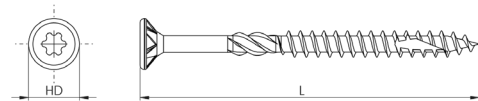
SCREWS — MAX GRIP PLUS UNIVERSAL

Material:	Case Hardened Carbon Steel
Plating:	Proprietary multi-layer coating
Gold in color	

Diameter	D	#6	#8	#9	#10
Bit Size		T15	T15	T25	T25

D	L	Part No.	Box Part No.	QTY /Box
#6	1/2	F133350	F133403	100
#6	5/8	F133351	F133404	100
#6	1-1/2	F133352	F133405	100
#8	1-1/4	F133353	F133406	100
#8	1-1/2	F133354	F133407	100
#8	2	F133355	F133408	100
#8	1-1/2	F133356	F133409	100
#9	1-3/4	F133357	F133410	100
#9	2	F133358	F133411	100
#9	2-1/2	F133359	F133412	100

D	L	Part No.	Box Part No.	QTY /Box
#9	3-1/8	F133360	F133413	100
#10	1-5/8	F133361	F133414	100
#10	2-1/4	F133362	F133415	100
#10	2-1/2	F133363	F133416	100
#10	2-3/4	F133364	F133417	100
#10	3-1/8	F133365	F133418	100
#10	3-1/2	F133366	F133419	50
#10	4	F133367	F133420	50
#12	3-1/2	F133368	F133421	50
#12	4	F133369	F133422	50



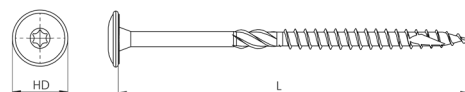
SCREWS — MAX GRIP PLUS CABINET

Material:	Case Hardened Carbon Steel
Plating:	Proprietary multi-layer coating
Gold in color	

Diameter	D	#8
Bit Size		T15

D	L	Part No.	Box Part No.	QTY /Box
#8	1-1/4	F133370	F133423	100
#8	1-1/2	F133371	F133424	100
#8	1-3/4	F133372	F133425	100
#8	2	F133373	F133426	100

D	L	Part No.	Box Part No.	QTY /Box
#8	2-1/2	F133374	F133427	100
#8	2-3/4	F133375	F133428	100
#8	3-1/8	F133376	F133429	100



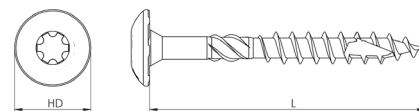
SCREWS — MAX GRIP MULTI MATERIAL

Material:	Case Hardened Carbon Steel
Plating:	Proprietary multi-layer coating
Gold in color	

Diameter	D	#10	1/4	5/16	3/8
Bit Size		T25	T25	T30	T40

D	L	Part No.	Box Part No.	QTY / Box
#10	1-1/2	F133377	F133430	50
#10	2	F133378	F133431	50
#10	2-1/2	F133379	F133432	50
#10	2-3/4	F133380	F133433	50
#10	3-1/8	F133381	F133434	50
1/4	1-1/2	F133382	F133435	50
1/4	2	F133383	F133436	50
1/4	2-1/2	F133384	F133437	50
1/4	2-3/4	F133385	F133438	50
1/4	3-1/8	F133386	F133439	50
1/4	3-3/8	F133387	F133440	50
5/16	2-1/2	F133388	F133454	50

D	L	Part No.	Box Part No.	QTY / Box
5/16	3-1/8	F133389	F133455	50
5/16	4	F133390	F133441	50
5/16	5	F133391	F133442	50
5/16	6	F133392	F133443	50
3/8	3-1/8	F133393	F133444	50
3/8	4	F133394	F133445	50
3/8	5	F133395	F133446	50
3/8	6	F133396	F133447	50
3/8	7	F133397	F133448	50
3/8	8	F133398	F133449	50



1

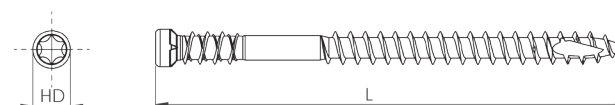
SCREWS — MAX GRIP PLUS REFINE

Material:	Case Hardened Carbon Steel
Plating:	Proprietary multi-layer coating
Gold in color	

Diameter	D	#8	#9
Bit Size		T10	T15

D	L	Part No.	Box Part No.	QTY / Box
#8	2	F133399	F133450	50
#8	2-1/2	F133400	F133451	50

D	L	Part No.	Box Part No.	QTY / Box
#8	3-1/8	F133401	F133452	50
#9	3-1/8	F133402	F133453	50



SCREWS — MAX GRIP PLUS TORX BITS

The Max Grip Plus Bits are specifically designed to fit snug and firm on the Max Grip Plus screws, are impact driver ready and are made of the same case hardened steel as the screws.

Size	Color	OAL	Part No.
T10	Yellow	1"	F45147
T10	Yellow	2"	F45148
T10	Yellow	3"	F45149
T15	Red	1"	F45150
T15	Red	2"	F45151
T15	Red	3"	F45152
T20	Purple	1"	F45153
T20	Purple	2"	F45154
T25	Green	1"	F45155
T25	Green	2"	F45156

Size	Color	OAL	Part No.
T25	Green	3"	F45157
T30	Black	1"	F45158
T30	Black	2"	F45159
T30	Black	3"	F45160
T40	Blue	1"	F45161
T40	Blue	2"	F45162
T40	Blue	3"	F45163



1/4" BIT HOLDER
F45146



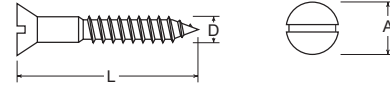
FASTENERS

1 Inch Bolts & Screws

WOOD SCREWS — SLOTTED FLAT

1

ANSI B18.6.1 1981	Material:	Steel
	Plating:	Zinc



Diameter	D	#4	#5	#6	#8	#10	#12	#14
Height	H	.067	.075	.083	.100	.116	.132	.148
Head Dia.	A	.255	.252	.279	.332	.385	.438	.491

D	L	Part No.
#4	1/2	F112541
#5	3/4	F19747
#5	1	F14410
#5	1-1/4	F11637
#6	1-1/4	F115860
#8	3/4	F12983

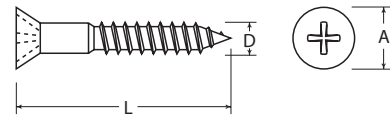
D	L	Part No.
#8	1	F12134
#8	1-1/4	F14700
#8	1-1/2	F110503
#8	2	F114447
#10	1	F118147
#10	1-1/4	F113658

D	L	Part No.
#10	1-1/2	F18169
#10	1-3/4	F111304
#10	2	F118311
#12	1	F111043
#12	1-1/4	F113650
#12	1-1/2	F12291

D	L	Part No.
#12	1-3/4	F11404
#12	2	F12984
#12	2-1/2	F117175
#14	1-1/2	F114047
#14	2	F118841

WOOD SCREWS — PHILLIPS FLAT

ANSI B18.6.1 1981	Material:	Steel
	Plating:	Zinc



Diameter	D	#4	#6	#8	#10	#12	#14
Height	H	.067	.083	.100	.116	.132	.153
Head Dia.	A	.225	.279	.332	.385	.438	.507

D	L	Part No.
#4	1/2	F117571
#4	3/4	F12673
#4	1	F17117
#4	1-1/4	F113988
#4	1-1/2	F115257
#6	1/2	F18363
#6	3/4	F16707
#6	1	F18308
#6	1-1/4	F16326
#6	1-1/2	F16509
#6	1-3/4	F117638
#6	2	F14448
#8	1/2	F114183
#8	3/4	F19974

D	L	Part No.
#8	1	F11667
#8	1-1/4	F112365
#8	1-1/2	F120082
#8	1-3/4	F19707
#8	2	F118251
#8	2-1/2	F11162
#8	3	F11855
#10	1/2	F114687
#10	3/4	F17464
#10	1	F118738
#10	1-1/4	F116204
#10	1-1/2	F13682
#10	1-3/4	F119183
#10	2	F113362

D	L	Part No.
#10	2-1/4	F18720
#10	2-1/2	F118970
#10	3	F1430
#10	3-1/2	F14346
#12	3/4	F15109
#12	1	F11666
#12	1-1/4	F18259
#12	1-1/2	F15851
#12	1-3/4	F13799
#12	2	F17735
#12	2-1/4	F17011
#12	2-1/2	F17787

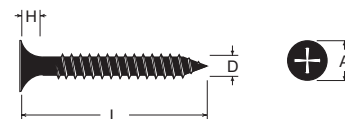
D	L	Part No.
#12	3	F194
#12	3-1/2	F18159
#12	4	F113883
#14	1	F18155
#14	1-1/4	F169
#14	1-1/2	F18348
#14	1-3/4	F19182
#14	2	F1975
#14	2-1/2	F111337
#14	3	F119205
#14	3-1/2	F18191
#14	4	F110883

DRYWALL SCREWS — PHILLIPS BUGLE FINE THREAD

D	L	Fine Thread Part No.	Fine Thread Bulk Part No.	Bulk Qty
#6	1	F18957		10,000
#6	1-1/8	F16442		10,000
#6	1-1/4	F112383	F112383B8000	8,000
#6	1-1/2	F114233		6,000
#6	1-5/8	F110287	F110287B5000	5,000
#6	2	F117150		3,500
#6	2-1/4	F118413		3,000
#8	2-1/2	F1795		2,500
#8	3	F115488		

Material:	Steel	
Plating:	Black Finish	

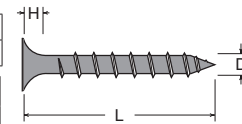
Diameter	D	#6	#8
Head Dia.	A	.314	.335



DRYWALL SCREWS — PHILLIPS BUGLE COARSE THREAD DACRO COATED

D	L	Coarse Thread Part No.	Coarse Thread Bulk Part No.	Bulk Qty
6	1-1/4	F13143	F132547	8000
6	1-5/8	F1250	F132548	5000
6	2	F18438	F132549	3500
8	2-1/2	F112335	F132550	2500
8	3	F1942	F132551	2000
10	3-1/2	F16222		
10	5	F11954		
10	6	F116692		

Material:	Steel			
Plating:	Dacro			
Diameter	D	#6	#8	#10
Head Dia.	A	.314	.335	.356

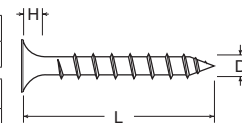


1

DRYWALL SCREWS — PHILLIPS BUGLE COARSE THREAD

D	L	Part No.
6	1	F119849
6	1 1/4	F116725
6	1 5/8	F119311
6	2	F18584
6	3	F121191
7	2	F18740
8	2 1/2	F11522
8	3	F12938
10	3 1/2	F18938
10	4	F113221
10	5	F119408

Material:	Steel				
Plating:	Yellow Zinc				
Diameter	D	#6	#7	#8	#10
Head Dia.	A	.314	.325	.335	.356



DRYWALL SCREWS — PHILLIPS BUGLE COARSE THREAD

D	L	Coarse Thread Part No.	Coarse Thread Bulk Part No.	Bulk Qty
#6	3/4	F121392		
#6	1	F12146	F12146B10000	10,000
#6	1-1/8	F11917	F11917B10000	10,000
#6	1-1/4	F113549	F113549B8000	8,000
#6	1-1/2	F16558	F16558B6000	6,000
#6	1-5/8	F13933	F13933B500	5,000
#6	2	F110939	F110939B3500	3,500
#6	2-1/4	F11788	F11788B3000	3,000
#7**	2	F18740		
#7	2	F110415		
#8	2-1/2	F13814	F13814B2500	2,500
#8	3	F117586	F117586B2000	
#10	4	F15252		

Material:		Steel			
Plating:		Black Finish			
		** Yellow Zinc			

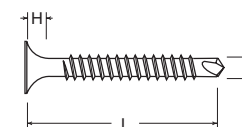
Diameter	D	#6	#7	#8	#10
Head Dia.	A	.314	.325	.335	.356



DRYWALL SCREWS — PHILLIPS SELF-DRILL (TEK®) BUGLE

D	L	Point	Part No.
#6	1	#2	F113504
#6	1-1/4	#2	F114181
#6	1-7/8	#2	F15410
#8	2-3/8	#2	F13711
#8	2-5/8	#2	F19207

Material:	Steel		
Plating:	Zinc		
Diameter	D	#6	#8
Head Dia.	A	.314	.335



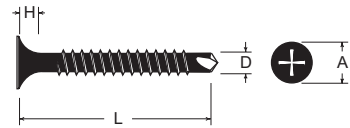
FASTENERS

1 Inch Bolts & Screws

DRYWALL SCREWS — PHILLIPS SELF-DRILL (TEK®) BUGLE

D	L	Point	Part No.	Bulk Part No.
#8	1-1/4	#3	F123426	F123427
#8	2	#3	F123428	F123431
#8	2-1/2	#3	F1236425	F123430

Material: Steel		
Plating: Black		
Diameter	D	#8
Head Dia.	A	.335



DRYWALL SCREWS — PARTICLE BOARD/PHILLIPS FLAT

ANSI B18.6.1 1981	Material: Steel	
	Plating: Black Finish	

Diameter	D	#6	#8	#9	#10
Height	H	.031	.039	.042	.045
Head Dia.	A	.347	.363	.371	.379

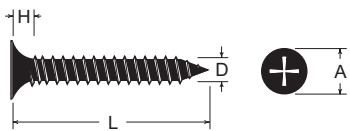
D	L	Part No.
#6	3/4	F11599
#6	1	F119492
#8	3/4	F17799
#8	1	F111981

D	L	Part No.
#8	1-1/4	F14651
#8	1-1/2	F15503
#8	1-3/4	F111326
#8	2	F19291

D	L	Part No.
#9	1-1/4	F115378
#9	1-1/2	F113141
#9	2	F116801
#9	3	F117884

D	L	Part No.
#10	2	F117788

* This size is zinc plated



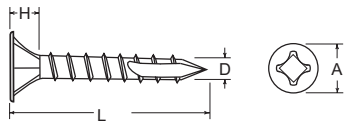
WOOD SCREWS — PHILLIPS/SQUARE FLAT NIBS TYPE 17

Material: Steel	
Plating: Zinc	

D	L	Part No.
#8	1	F111138
#8	1-1/4	F118632
#8	1-1/2	F12642
#8	1-5/8	F113293

- Double auger style for drilling hard woods
- Nibs under head for easier countersinking
- Use #2 square drill bit

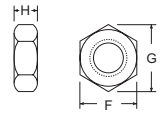
D	L	Part No.
#8	1-3/4	F111233
#8	2	F113808
#8	2-1/2	F17301
#8	3	F18415



Diameter	D	#8
Height	H	.146
Head Dia.	A	.312

NUTS — FINISHED HEX GRADE 2 GALVANIZED

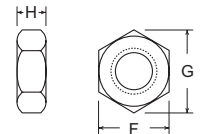
ANSI B18.2.2	For use with A307 Bolts	
	Plating:	Hot Dipped Galvanized
	Import	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"
Height	H	7/32	17/64	21/64	3/8	7/16	35/64	41/64	3/4	55/64	1-1/16	1-9/32
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	15/16	1-1/8	1-5/16	1-1/2	1-7/8	2-1/4
UNC P/N		F116611	F1376	F15132	F11864	F13131	F116667	F17212	F15605	F12918	F115039	F111822

NUTS — FINISHED HEX GRADE 2

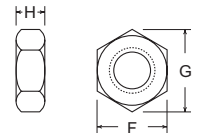
ASME B18.2.2	Plating:	Zinc
	Import	



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height	H	7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2
UNC		F115849	F12929	F117963	F116805	F117606	F155	F117594	F15260	F15918	F118789
UNF		F110169	F12129	F17761	F17362	F115644	F12783	F110367	F110365	F115080	F116926

NUTS — FINISHED HEX GRADE 5 USA*

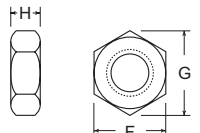
ANSI B18.2.2 SAE J-995	For use with Gr. 5 Fasteners	
	Material:	Steel
	Plating:	Zinc or Plain
	Domestic (>1" sizes may be Import) *	



Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H	7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64	31/32	1-1/16	1-9/32
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/4
W.A.C.	G	.505	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.732	1.949	2.165	2.598
ZINC UNC P/N		F16299	F1271	F117892	F118126	F112342	F113376	F1434	F14864	F18320	F117864	F11859	F111490	F119157
ZINC UNF P/N		F14731	F19578	F112672	F117203	F110855	F12944	F116506	F114150	F113138	F13150	F14267	F117205	F110152
PLAIN UNF P/N				F113908		F19864		F19198						

NUTS — FINISHED HEX GRADE 8 USA*

ANSI B18.2.2 SAE J-995	For use with Gr. 8 Fasteners	
	Material:	Heat Treated Steel
	Plating:	Yellow Zinc
	Domestic (>1" sizes may be Import) *	



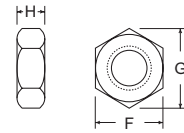
Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H	7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64	31/32	1-1/16	1-9/32
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/4
W.A.C.	G	.505	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.732	1.949	2.165	2.598
UNC P/N		F14042	F116383	F16734	F115807	F13368	F118914	F113200	F13074	F116837	F112716	F111924	F18636	F116869
UNF P/N		F112844	F113783	F112386	F119675	F113462	F118685	F15794	F114635	F111772	F17903	F114298	F13128	F112536

FASTENERS

2 Inch Nuts & Washers

NUTS — FINISHED HEX GRADE 5 IMPORT

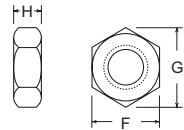
ANSI B18.2.2 SAE J-995	For use with Gr. 5 Fasteners	
	Material:	Steel
	Plating:	Zinc or Plain
	Import	



Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height H		7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64
W.A.F. F		7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2
W.A.C. G		.505	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.732
UNC Zinc	F15071	F11631	F112498	F117514	F112039	F19854	F117309	F117644	F114346	F110253	
UNF Zinc	F125047	F125050	F125049	F125052	F125046	F125053	F125051	F125048	F130047	F125044	
UNC Plain	F119839	F110430	F116319	F1736	F112118		F116840	F118162	F112576	F118847	

NUTS — FINISHED HEX GRADE 8 IMPORT

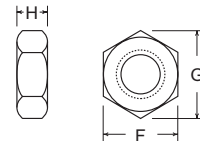
ANSI B18.2.2 SAE J-995	For use with Gr. 8 Fasteners	
	Material:	Heat Treated Steel
	Plating:	Yellow Zinc or Plain
	Import	



Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height H		7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64	39/64	23/32	27/32
W.A.F. F		7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/4
W.A.C. G		.505	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.732	1.949	2.165	2.598
ZINC UNC	F117754	F11595	F18263	F114239	F1801	F119880	F110666	F13459	F117663	F112514	F125058	F124618	F127987	
ZINC UNF	F113685	F14878	F15399	F1973	F115541	F19385	F14799	F117580	F112733	F121939				
PLAIN UNC	F15729	F115949	F112293	F118947	F110158		F111206	F17859	F111808	F15607				
PLAIN UNF	F132180	F12042	F18556	F116394	F18032	F119690	F16041	F115444	F132185	F132184				

NUTS — JAM

ANSI B18.2.2 1986	For use with Gr. 5 or 2 Cap Screws	
	Develops locking action when used under full size nut.	
	Plating:	Zinc

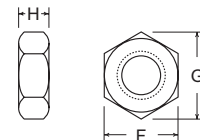


Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height H		5/32	3/16	7/32	1/4	5/16	5/16	3/8	27/64	31/64	35/64	39/64	23/32	27/32
W.A.F. F		7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/4
W.A.C. C		.505	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.732	1.949	2.165	2.598
UNC P/N	F16601	F19202	F14358	F118002	F18031	F117953	F112701	F117813	F1305	F111410	F16694			F151
UNF P/N	F17612	F19072	F11728	F17602	F116565	F115169	F110667	F117682	F116099	F18261		F118483		F115551

NUTS — LEFT HANDED JAM GRADE 5

Size		1/4"	3/8"	5/8"
Height H		5/32	7/32	3/8
W.A.F. F		7/16	9/16	15/16
W.A.C. C		.505	.650	1.083
UNC P/N	F115529	F116978		
UNF P/N		F17730	F112708	

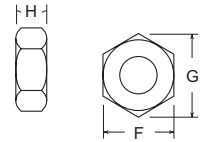
ANSI B18.2.2 1986	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc



NUTS — MACHINE SCREW

ANSI B18.2.2 1986	For use with Machine Screws	
	Material:	Steel
	Plating:	Zinc

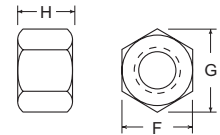
Size	#2	#3	#4	#5	#6	#8	#10	#12	1/4"
Height	H .066	.066	.098	.114	.114	.130	.130	.161	.193
W.A.F.	F 3/16	3/16	1/4	5/16	5/16	11/32	3/8	7/16	7/16
W.A.C.	G .217	.217	.289	.361	.361	.397	.433	.505	.505
UNCP/N	F17424	F111104	F17614	F1887	F112282	F116917	F19938	F13241	F119416
UNF P/N							F112903		F13867



1

NUTS — HIGH HEX

Size	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height	H 13/32	.794	9/16	39/64	23/32	13/16	29/32	1-1/4
W.A.F.	F 9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2
W.A.C.	G .650	29/64	.866	1.010	1.083	1.299	1.516	1.653
UNF P/N	F14434	F111582	F112326	F111594	F116735	F13215	F113359	F117059

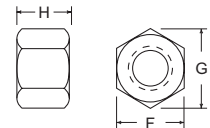


ANSI B18.2.2 1986	For use with Gr. 5 or 8 Fasteners	
	Material:	Hardened Steel
	Plating:	Unplated

NUTS — L9 TYPE HEX

For Use With Grade 8/L9 HHCS	
Material:	Steel
Plating:	Yellow Zinc

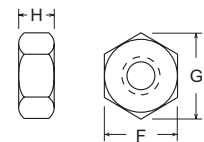
Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H .250	.293	.360	.426	.490	.552	.630	.733	.850	.982	1.176	1.272	1.526
W.A.F.	F 7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-5/8	1.7/8	2-1/4
W.A.C.	G .504	.577	.650	.794	.866	1.010	1.083	1.299	1.516	1.653	1.949	2.165	2.598
UNCP/N	F111172	F14291	F12985	F14156	F117857	F13478	F119272	F112379	F114655	F19997	F114567	F118194	F115369
UNF P/N	F116887	F110298	F15330	F119312	F12874	F18329	F1628	F13490	F116145				



NUTS — HEAVY HEX GRADE 2

ANSI B18.2.2	Material:		Steel
	Extra Large Width Across Flats		
	Plating:	Zinc or Plain	

Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
Height	H 15/64	19/64	23/64	27/64	31/64	35/64	39/64	47/64	55/64	63/64	1-7/64	1-7/32
W.A.F.	F 1/2	9/16	11/16	3/4	7/8	15/16	1-1/16	1-1/4	1-7/16	1-5/8	1-13/16	2
W.A.C.	G .577	.650	.794	.866	1.010	1.083	1.277	1.443	1.660	1.876	2.093	2.309
Zinc P/N	F14015	F163	F14736	F18761	F18782	F111539	F12966	F17502	F17130	F1133	F14064	F119064
Plain P/N	F11641	F111983	F15064	F113636	F11147	F16761	F116112	F116137	F13207	F120002		



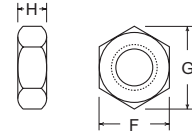
FASTENERS

2 Inch Nuts & Washers

NUTS — LEFT HANDED GRADE 2

ANSI B18.2.2 SAE J-995	For use with Gr. 2 Fasteners	
	Material:	Steel
	Plating:	Zinc
	Sources:	Import

Size		1/4"	5/16"	3/8"	7/16"	1/2"
Height	H	7/32	17/64	21/64	3/8	7/16
W.A.F.	F	7/16	1/2	9/16	11/16	3/4
W.A.C.	G	.505	.577	.650	.794	.866
UNC P/N		F111984	F117383	F112619	F15708	F19289

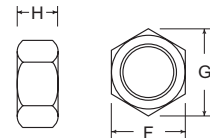


NUTS — AUTOMOTIVE STYLE HEX

Reduced Wrench Size	
Material:	Steel
Plating:	Zinc

Grade 2

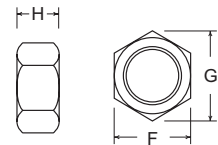
Size		7/16"
Height	H	3/8
W.A.F.	F	5/8
W.A.C.	G	.794
		Zinc
UNC P/N		F17300
UNF P/N		F114705



NUTS — 2H HEAVY HEX

Proof Load:	175,000
Plating:	Plain & Zinc

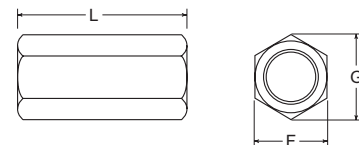
Size		1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H	15/64	19/64	23/64	27/64	31/64	39/64	47/64	55/64	63/64	1-7/64	1-7/32	1-1/2
W.A.F.	F	1/2	9/16	11/16	3/4	7/8	1-1/16	1-1/4	1-7/16	1-5/8	1-13/16	2	2-3/8
W.A.C.	G	.577	.656	.7925	.866	.9760	1.1935	1.3885	1.5890	1.8090	2.0180	2.2360	2.742
PLN UNC P/N		F14102	F19968	F18904	F14284	F18576	F17777	F114920	F118303	F115008	F116746	F116367	
PLN 8 Pitch UNC*											F18935	F11277	
ZINC UNC		F15508	F16512	F1189		F12242	F113443	F11755					F110792



NUTS — COUPLING

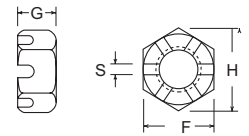
For use with Gr. 2 Threaded Rods	
Material:	Steel
Plating:	Zinc

Size		#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Length	L	.7500	1.7500	1.7500	1.7500	1.7500	1.7500	2.1250	2.2500	2.5000	2.5000
W.A.F.	F	.3085	.4275	.4950	.5520	.6145	.6780	.8065	.9900	1.2380	1.2520
W.A.C.	G	.3430	.4845	.5630	.6295	.6945	.7715	.9150	1.1345	1.4160	1.4310
UNC P/N		F115530	F17813	F12224	F14146	F119654	F17294	F16915	F111864	F13767	F111986



NUTS — SLOTTED HEX

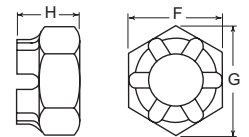
ANSI B18.2.2	For use with cotter pins	
	Material:	Steel
	Plating:	Zinc



Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height G	7/32	17/64	.650	3/8	7/16	31/64	35/64	41/64	3/4	55/64	31/32	1-7/32	1-9/32
W.A.F. F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	2	2-1/4
W.A.C. H	.505	.577	21/64	.794	.866	1.010	1.083	1.299	1.516	1.732	1.949	2.309	2.598
Pin Size S	1/16	3/32	1/8	1/8	9/64	9/64	5/32	5/32	5/32	7/32	7/32	7/32	7/32
UNF P/N	F15261	F110411	F11850	F15017	F13280	F18062	F13915	F15152	F118067	F117199	F1711	F11511	F114124
UNC P/N	F110027	F116969	F119520	F12824	F113597	F113865	F114825	F12539	F15681	F14846	F110962	F16831	F110583

NUTS — CASTLE

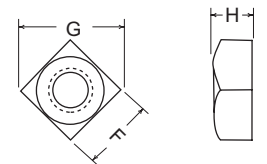
ANSI B18.2.2 1965	For use with Cotter Pins	
	Material:	Steel
	Plating:	Zinc



Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
Height H	9/32	29/64	13/32	29/64	9/16	39/64	23/32	13/16	29/32	1	1-5/32	1-1/4
W.A.F. F	7/16	11/16	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8
W.A.C. G	.505	.794	.650	.794	.866	.488	.557	.698	.698	.698	.698	1.051
UNF P/N	F19420	F131688	F15431	F118373	F110896	F119799	F112585	F116472	F19311	F110053	F19900	F13660

NUTS — SQUARE

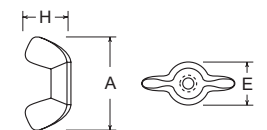
ANSI/ASME B18.2.2	Material:	Steel
	Plating:	Zinc



Size	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Height H	7/32	17/64	21/64	3/8	7/16	35/64	21/32
WAF F	7/16	9/16	5/8	3/4	13/16	1	1-1/8
WAC G	.619-.554	.795-.721	.884-.802	1.061-.970	1.149-1.052	1.414-1.300	1.591-1.464
UNC P/N	F113218	F11665	F15090	F121150	F11046	F17802	F18658

NUTS — WING TYPE A FORGED

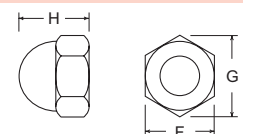
ANSI B18.17 1968	Material:	Steel
	Plating:	Zinc



Size	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"
Height H	.41	.47	.47	1.10	.66	.79	.84	1.0
Boss Diam. E	.33	.43	.43	.50	.58	.70	.78	.93
Wing Spread A	.72	.91	.91	.57	1.25	1.44	1.83	1.94
UNC P/N	F17656	F13054	F12755	F117218	F110093	F112432	F119893	F1292
UNF P/N			F11325	F119237				

NUTS — ACORN

For use with Gr. 2 Fasteners	
Material:	Steel
Plating:	Nickel



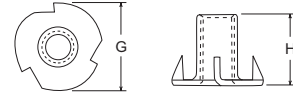
Size	#6	#8	#10	1/4"	5/16"	3/8"	1/2"
W.A.F. F	5/16	5/16	3/8	7/16	9/16	5/8	3/4
W.A.C. G	.361	.397	.433	.505	.577	.650	.866
UNC P/N	F18942	F111681	F119276	F114329	F111502	F110660	F18759
Black Zinc UNC P/N				F116431			

FASTENERS

2 Inch Nuts & Washers

NUTS — TEE STRAIGHT BARREL

Material:	Steel
Plating:	Zinc



Size		6-32	8-32	10-24	10-32	1/4-20	1/4-20	5/16-18	3/8-16	1/2-13
Flange Diam.	G	1/2	5/8	3/4	3/4	3/4	3/4	7/8	1	1-1/4
Barrel Height	H	1/4	1/4	5/16	5/16	5/16	7/16	3/8	7/16	3/8
Type		3 Prong	3 Prong	3 Prong	3 Prong	3 Prong	4 Prong	4 Prong	4 Prong	4 Prong
Part No.		F19571	F17918	F1161	F119902	F19708	F116224	F13062	F12089	F132613

NUTS — NYLON INSERT LOCK GRADE 2

For use with Gr. 2 or 5 Fasteners	
Material:	Steel
Plating:	Zinc
Insert:	Purple or White



Size		#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"
Height H		.143	.143	.178	.229	.239	.313	.313	.344	.453	.453
W.A.F.	F	1/4	1/4	5/16	11/32	3/8	7/16	7/16	1/2	9/16	11/16
W.A.C.	G	.268	.268	.339	.374	.410	.488	.488	.557	.698	.698
Purple UNCP/N	F116626	F11197	F116468	F117055	F114860	F15692	F13197	F11313	F18115	F13994	
Purple UNFP/N	F15354	F12642	F19880	F13883	F118331	F14752	F12190	F113892	F114302	F113861	
White UNCP/N			F118108	F15865	F114752	F13561	F1692	F15633	F12310	F114445	
White UNFP/N											

Size		1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height H		.594	.641	.750	.875	.984	1.047	.641	1.11	1.30
W.A.F.	F	3/4	7/8	15/16	1-1/8	1-5/16	1.50	1-5/8	1.80	2.18
W.A.C.	G	.840	.982	1.051	1.191	1.403	1.615	1.826	2.07	2.50
Purple UNCP/N	F11682	F11992	F112327	F18183	F111412	F119790	F19326	F15234		
Purple UNFP/N	F115104	F18562	F1569	F119745	F111210	F18162				
White UNCP/N	F16777	F110795	F1194	F15194	F16900	F119061				F114371
White UNFP/N	F11886	F119024	F1927	F119700	F113075		F17201	F119330		

NUTS — NYLON INSERT LOCK GRADE 5

For use with Gr. 2 or 5 Fasteners	
Material:	Steel
Plating:	Trivalent Zinc Plated
3 Dots or Marks at 120°	



Size		1/4-20	5/16-18	3/8-16	7/16-14	1/2-13	9/16-12	5/8-11	3/4-10	7/8-9	1-8
Height H		.298/.328	.329/.359	.438/.498	.458/.468	.579/.609	.626/.656	.735/.765	.860/.890	.969/.999	1.016/1.078
W.A.F.	F	.430/.439	.489/.502	.551/.564	.616/.627	.736/.752	.861/.877	.922/.940	1.052/1.064	1.239/1.252	1.247/1.440
W.A.C.	G	.488	.557	.628	.698	.840	.982	1.051	1.191	1.403	1.619
UNCP/N	F122790	F122794	F122793	F122796	F122789	F123448	F122795	F122792	F122788	F122791	

NUTS — NYLON INSERT LOCK GRADE 8

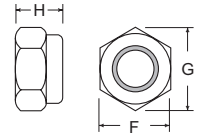
For use with Gr. 5 or 8 Fasteners	
Material:	Steel
Plating:	Zinc Yellow
Insert:	Purple



Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height H		.313	.344	.453	.453	.594	.641	.750	.875	.984	1.047	1-11/69	1-25/64	1-39/64
W.A.F.	F	7/16	1/2	9/16	5/8	3/4	7/8	15/16	1-1/16	1-1/4	1-7/16	1-5/8	1-13/16	2-3/16
W.A.C.	G	.488	.557	.628	.698	.840	.982	1.051	1.191	1.403	1.615	1.826	2.030	2.446
UNCP/N	F115271	F111078	F15519	F182	F111806	F119764	F11508	F110540	F18888	F19161	F119498	F18102		
UNFP/N	F115294	F12846	F14493	F13695	F14248	F114681	F17702	F1147	F114881	F119186	F19694	F115239	F112918	

NUTS — NYLON INSERT LOCKING JAM GRADE 2

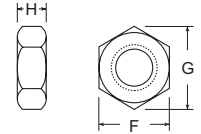
For use with Gr. 2 or 5 Fasteners
Material: Steel
Plating: Zinc



Size	#6	#8	#10	#12	1/4"	5/16"	3/8"
Height	H .140	.187	.187	.218	.203	.250	.266
W.A.F.	F 5/16	11/32	3/8	7/16	7/16	1/2	9/16
W.A.C.	G .339	.374	.410	.482	.482	.552	.622
UNC P/N	F16089	F15249	F17246	F15308	F110104	F119820	F115652
UNF P/N			F14826		F118772	F11670	F14077
Size	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height	H .313	.313	.359	.391	.406	.469	.547
W.A.F.	F 5/8	3/4	7/8	15/16	1-1/6	1-1/4	1-7/16
W.A.C.	G .694	.837	.978	1.051	1.191	1.403	1.615
UNC P/N	F1651	F118768	F110938	F110977	F120038	F116587	F18573
UNF P/N	F118935	F113084	F16087	F119605	F112668	F13847	F116134

NUTS — REVERSIBLE 2-WAY LOCKING

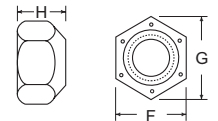
ANSI B18.2.2 SAE J-995	For use with Gr. 2-5 Fasteners
	Material: Steel
	Plating: Zinc



Size	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Height	H 7/32	17/64	21/64	3/8	7/16	35/64	41/64
W.A.F.	F 7/16	1/2	9/16	11/16	3/4	15/16	1-1/8
W.A.C.	G .505	.577	.650	.794	.866	1.083	1.299
UNC P/N	F13997	F119843	F15403	F16074	F110338	F13656	F16941

NUTS — PREVAILING TORQUE LOCK GRADE C/8

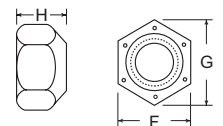
IFI 100/107 1987	For use with Gr. 8 Fasteners
	Style: Top Lock
	Plating: Cadmium and Wax
	Import



Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"
Height	H .226	.273	.337	.385	.448	.496	.559	.665	.776	.887	1.094	1.317
W.A.F.	F 7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-7/8	2-1/4
UNC P/N	F12778	F113182	F1986	F12149	F13794	F118870	F1159	F1964	F14154	F17738	F111157	F110665
UNF P/N	F118793	F16199	F112023	F12458	F119282	F120058	F12125	F14401	F19261	F112349		

NUTS — PREVAILING TORQUE LOCK GRADE C/8

IFI 100/107 1987	For use with Gr. 8 Fasteners
	Style: Top Lock
	Plating: Zinc and Wax
	Import



Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H .226	.273	.337	.385	.448	.496	.559	.665	.776	.887	.999	1.094	1.206
W.A.F.	F 7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/16
UNC P/N	F11773	F19457	F1449	F118761	F1637	F15191	F16745	F117783	F114580	F11359	F117504	F116720	F111466
UNF P/N	F112607	F118238	F118261	F19376	F11011	F1701	F117745	F111684	F17038	F115387	F113952		

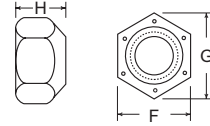
FASTENERS

2 Inch Nuts & Washers

NUTS — L9 TYPE LOCK

For use with L9 Type HHCS
Material: Alloy Steel
Plating: Yellow CAD / Wax

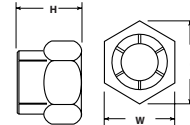
Size		1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Height	H	.301	.336	.400	.449	.516	.580	.660	.767
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8
UNC P/N		F113228	F19320	F118275	F114107	F19808	F18628	F15297	F18073



NUTS — FLEXLOC USA

Material: Steel
Plating: Unplated
Made in U.S.A.
Light Hex-Full Height

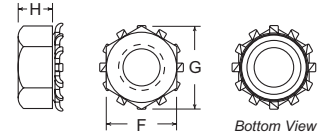
Size		#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
W.A.F.	W	5/16	11/32	3/8	7/16	1/2	9/16	5/8	3/4	15/16	1-1/16	1-7/16
W.A.C.	C	.347	.383	.419	.491	.561	.631	.703	.846	1.059	1.200	1.628
Height	H	.180	.243	.243	.290	.353	.462	.462	.602	.759	.884	1.134
UNC P/N		F111267	F16508	F112682	F111803	F19095	F111904	F119198	F17606	F115321	F18650	F12933
UNF P/N				F118686	F1218	F116403	F12079	F19294	F112156	F1829		



NUTS — K-LOCK (KEPS)

For use with Gr. 2 Fasteners
Attached Free Spinning External Tooth
Lock Washer
Plating: Zinc

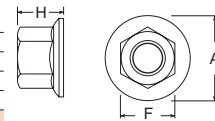
Size		#4	#6	#8	#10	#12	1/4"	5/16"	3/8"
Height	H	.098	.178	.229	.239	.313	.313	.344	.453
W.A.F.	F	1/4	5/16	11/32	3/8	7/16	7/16	1/2	9/16
W.A.C.	G	.289	.394	.378	.413	.488	.488	.557	.628
UNC P/N		F14442	F16318	F14732	F17817	F114355	F117291	F13056	F15743
UNF P/N					F1672				



NUTS — PREVAILING TORQUE NON-SERRATED FLANGE LOCK GRADE 8 & G

IFI 100/07	For use with Gr. 5 or 8 Fasteners
	Material: Hardened Steel
	Plating: Cad + Wax, Black Phos Oil, Zinc
	Type: Grade 8 (G)
	Import

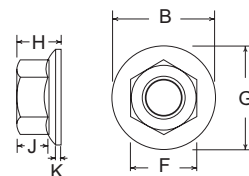
Size		1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"
Overall Height Min.	H	.265	.320	.404	.457	.528	.646	.742	.787
Flange Diameter Max	A	.560	.680	.810	.930	1.070	1.330	1.585	1.750
W.A.F. Nominal	F	7/16	1/2	9/16	11/16	3/4	15/16	1-1/8	1-5/16
Cad & Wax UNC P/N			F118966	F16330		F14286	F113115	F13720	
Cad & Wax UNF P/N							F113971	F118481	
Black Phos UNC P/N		F118385	F116220	F111286	F19108	F11451	F118680	F114475	F18775
Black Phos UNF P/N						F14753	F11461	F112115	
Clear Zinc UNC									F18629



NUTS — NON-SERRATED FLANGE NON-LOCKING GRADE 8

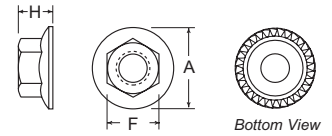
IFI 145 SAE J995	For use with Grade 5 or Grade 8 Fasteners
	Material: Hardened Steel
	Plating: Black Phos. and Oil
	Grade: 8
	Import

Size		5/16"	3/8"	1/2"	5/8"
Height (Max)	H	.283	.347	.458	.569
Flange Diameter (Max)	B	.680	.750	1.031	1.281
W.A.F. (Max)	F	.500	.562	.750	.938
UNC Part No		F13337	F19476	F1505	F12228



NUTS — SERRATED SPINLOCK FLANGE GRADE 2

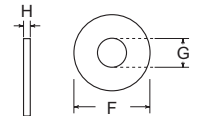
IFI 100/107 1987	For use with Gr. 2 Fasteners	
	Serrated Surface Creates Locking Action	
	Plating:	Black Oxide or Zinc



Size	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Height	H .203	.219	.236	.283	.347	.347	.456	.569	.627
W.A.F.	F 11/32	3/8	7/16	1/2	9/16	11/16	3/4	15/16	1-1/8
Fl Dia.	G .469	.500	.594	.680	.750	.937	1.031	1.281	1.50
Zinc UNC P/N	F110247	F84972	F85222	F81120	F81671	F116364	F8579	F110434	F17272
Zinc UNF P/N		F84302	F111498	F117513	F114984	F116617			
Black UNC P/N			F16857	F111322	F119170		F82365		

WASHERS — USS FLAT GALVANIZED

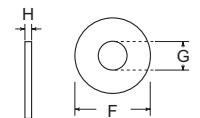
ANSI B18.2.2	Material: Steel	
	Plating:	Hot Dipped Galvanized
	Import	



Nominal Diameter	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
I.D.	G 5/16	3/8	7/16	9/16	11/16	13/16	15/16	1-1/16	1-3/8	3-1/2
O.D.	F 3/4	7/8	1	1-3/8	1-3/4	2	2-1/4	2-1/2	3	1-5/8
Thick	H .015/.080	.064/.104	.064/.104	.086/.132	.108/.160	.122/.177	.136/.192	.136/.192	.156	.171
Galvanized	F116463	F14717	F19405	F119163	F119505	F15697	F118053	F119551	F16627	F15368

WASHERS — USS FLAT USA

ANSI B18.2.2	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc
	Made in U.S.A.	



Nominal Diameter	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D.	G 5/32	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	13/16	15/16	1-1/16	1-1/4	1-3/8	1-5/8
O.D.	F 3/8	7/16	9/16	3/4	7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3	3-1/2
Thick	H .036-.065	.036-.065	.036/.065	.051/.080	.064/.104	.064/.104	.064/.104	.086/.132	.086/.132	.108/.160	.122/.177	.136/.192	.136/.192	.136-.192	.136/.192	.153/.213
Part No.	F129794	F129795	F17540	F17196	F19322	F114148	F116903	F13603	F16910	F1713	F18336	F111287	F16039	F112901	F14633	F114576

WASHERS — USS FLAT IMPORT

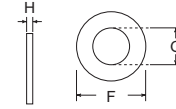
ANSI B18.2.2	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc or Plain
	Import	



Nominal Diameter	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D.	G 1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	13/16	15/16	1-1/16	1-1/4	1-3/8	1-5/8
O.D.	F 9/16	3/4	7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3	3-1/2
Thick	H .036/.065	.051/.080	.064/.104	.064/.104	.064/.104	.086/.132	.086/.132	.108/.160	.122/.177	.136/.192	.136/.192	.136-.192	.136/.192	.153/.213
Zinc	F112028	F115245	F113161	F112581	F111698	F14340	F11937	F118341	F14494	F116142	F117821	F124685	F124686	F124687
Plain		F113217	F12109	F15406	F17923	F117165		F119323	F11647	F16855	F115968		F116371	

WASHERS — SAE FLAT USA

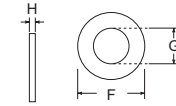
ANSI B18.2.2	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc
	Made in U.S.A.	



Nominal Diameter	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D. G	5/32	3/16	7/32	1/4	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16	1-3/16	1-5/16	1-9/16
O.D. F	3/8	7/16	1/2	9/16	5/8	11/16	13/16	59/64	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	2	2-1/4	2-1/2	3.00
Thick H	.036/.065	.036/.065	.036/.065	.051/.080	.051/.080	.051/.080	.051/.080	.051/.080	.074/.121	.074/.121	.074/.121	.108/.160	.108/.160	.108/.160	.108/.160	.136/.192	.153/.213
Part No.	F129794	F129795	F113719	F13415	F13803	F117432	F19605	F13663	F17900	F1928	F1612	F115376	F12347	F1392	F19351	F114913	F17181

WASHERS — SAE FLAT IMPORT

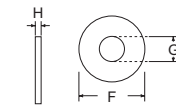
ANSI B18.2.2	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc or Plain
	Import	



Nominal Diameter	#4	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D. G	1/8	5/32	3/16	7/32	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16
O.D. F	5/16	3/8	7/16	1/2	5/8	11/16	13/16	59/64	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	2
Thick H	.025-.040	.036/.065	.036/.065	.036/.065	.051/.080	.051/.080	.051/.080	.051/.080	.074/.121	.074/.121	.074/.121	.108/.160	.108/.160	.108/.160
Zinc	F124694	F116080	F115098	F112662	F113873	F111119	F17035	F16784	F117583	F118715	F165	F16413	F118033	F116490
Plain					F110544	F117141	F116554	F114590	F119497	F1479	F11672	F14635	F112896	F19691

WASHERS — USS STANDARD HARDENED FLAT USA

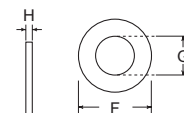
ANSI B18.2.2	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D. G	5/16	3/8	7/16	1/2	9/16	5/8	11/16	13/16	15/16	1-1/16	1-1/4	1-3/8	1-5/8
O.D. F	3/4	7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4	2-1/2	2-3/4	3	3-1/2
Thick H	.055/.072	.064/.080	.064/.080	.064/.080	.097/.121	.097/.121	.122/.146	.122/.146	.136/.160	.136/.160	.136/.160	.136/.160	.136/.160
Part No.	F110868	F112074	F12571	F17742	F114011	F13708	F1632	F11460	F111136	F117146	F118122	F117719	F113050

WASHERS — SAE STANDARD HARDENED FLAT USA

ANSI B18.2.2	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D. G	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16	1-1/4	1-3/8	1.56
O.D. F	5/8	11/16	13/16	59/64	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	2	2-1/4	2-1/2	3.00
Thick H	.055/.072	.055/.072	.055/.072	.055/.072	.097/.121	.122/.146	.122/.146	.136/.160	.136/.160	.136/.160	.136/.160	.136/.160	.136/.160
Part No.	F115189	F114436	F1328	F119254	F117357	F17317	F117081	F116773	F11887	F13270	F118207	F11779	F14728

WASHERS — USS STANDARD THRU-HARDENED FLAT IMPORT

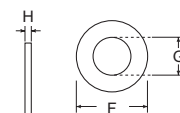
ANSI B18.2.2	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Import	



Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	5/16	3/8	7/16	1/2	9/16	5/8	21/32	13/16	15/16	1-1/16
O.D.	F	3/4	7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4	2-1/2
Thick	H	.055/.072	.064/.080	.064/.080	.064/.080	.087/.121	.087/.121	.122/.146	.122/.146	.136/.160	.136/.160
Part No.		F13893	F15817	F12465	F113958	F18042	F13876	F11405	F113191	F19500	F1196

WASHERS — SAE STANDARD THRU-HARDENED FLAT IMPORT

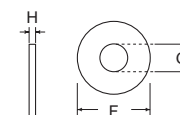
ANSI B18.2.1	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Import	



Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16
O.D.	F	5/8	11/16	13/16	59/64	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	2
Thick	H	.064/.080	.079/.093	.079/.093	.090/.106	.122/.146	.122/.146	.136/.160	.136/.160	.136/.160	.136/.160
Part No.		F114491	F113993	F12056	F111173	F110626	F13617	F11705	F15465	F113711	F19381

WASHERS — USS HEAVY DUTY THRU-HARDENED FLAT USA

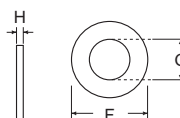
ANSI B18.2.2	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	



Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	5/16	3/8	7/16	1/2	9/16	5/8	21/32	13/16	15/16	1-1/16
O.D.	F	3/4	7/8	1	1-1/4	1-3/8	1-1/2	1-3/4	2	2-1/4	2-1/2
Thick	H	.064/.080	.079/.093	.079/.093	.090/.106	.122/.146	.122/.146	.136/.160	.136/.160	.136/.160	.136/.160
Part No.		F16794	F15844	F18587	F119778	F111004	F112513	F114781	F18408	F116580	F1668

WASHERS — SAE HEAVY DUTY THRU-HARDENED FLAT USA

ANSI B18.2.1	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	



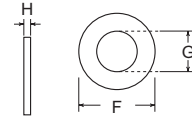
Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16
O.D.	F	5/8	11/16	13/16	59/64	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	2
Thick	H	.064/.080	.079/.093	.079/.093	.090/.106	.122/.146	.122/.146	.136/.160	.136/.160	.136/.160	.136/.160
Part No.		F11187	F17068	F19581	F15190	F15494	F12637	F11985	F117554	F114925	F118662

FASTENERS

2 Inch Nuts & Washers

WASHERS — UNIFIT FLAT USA

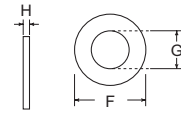
For use with Gr. 5 or 8 Fasteners	
Material:	Steel
Plating:	Mechanical Yellow Zinc
Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
I.D. G	9/32	11/32	13/32	15/32	17/32	11/16	13/16
O.D. F	3/4	7/8	1	1-1/4	1-3/8	1-3/4	2
Thick H	.086	.086	.086	.098	.132	.146	.146
Part No.	F129788	F129791	F129790	F129793	F129787	F129792	F129789

WASHERS — F436 STRUCTURAL SAE FLAT WASHERS PLAIN

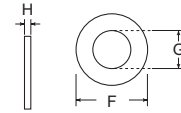
ANSI / ASME B18.18.2 M	For use with Gr. 5, 8 or 9 Fasteners	
	Material:	Steel
	Plating:	Plain
	Import	



Nominal Diameter	1/4"	5/16"	7/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
I.D. G	9/32	11/32	15/32	13/32	17/32	11/16	13/16	15/16	1 1/16
O.D. F	5/8	11/16	15/16	13/16	1 1/16	15/16	1 15/32	1 3/4	2
Thick H	.051/.080	.051/.080	.051/.080	.051/.080	.097/.177	.122/.177	.122/.177	.136/.177	.136/.177
Part No.	F123354	F123368	F123386	F123356	F123353	F123357	F123355	F123358	F123352

WASHERS — L9 TYPE USS FLAT

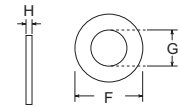
ANSI B18.2.1	For use with Gr. 8 or 9 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D. G	5/16	3/8	7/16	1/2	9/16	5/8	11/16	13/16	15/16	1-1/16
O.D. F	3/4	7/8	1	1-1/4	1-3/8	1-15/32	1-3/4	2	2-1/4	2-1/2
Thick H	.072	.072	.097	.097	.122	.122	.136	.177	.177	.177
Part No.	F15405	F112795	F117494	F116597	F113617	F14543	F118101	F16667	F115153	F110651

WASHERS — L9 TYPE SAE FLAT USA

ANSI B18.2.1	For use with Gr. 8 or 9 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A.	

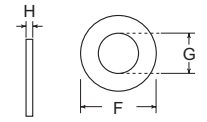


Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D. G	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16
O.D. F	5/8	11/16	13/16	59/64	1-1/16	1-5/32	1-5/16	1-1/2	1-3/4	2
Thick H	.072	.072	.097	.097	.122	.122	.136	.177	.177	.177
Part No.	F118309	F111847	F115766	F118297	F116684	F111810	F16322	F18971	F114392	F13707

WASHERS — F436 STRUCTURAL SAE FLAT PLAIN

ANSI / ASME B18.18.2 M	For use with Gr. 5, 8 or 9 Fasteners	
	Material:	Steel
	Plating:	Plain
	Made in U.S.A.	

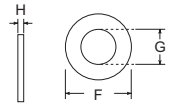
*Stocked in Plano



Nominal Diameter	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2	1-5/8	1-3/4	1-7/8	2	2-1/4	2-1/2	3
I.D. G	17/32	11/16	13/16	15/16	1 1/16	1 3/16	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2	2 1/8	2 13/32	2 21/32	3 5/32
O.D. F	1 1/16	1 5/16	1 15/32	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 3/8	3 1/2	3 3/4	4	4 1/2	5 1/2
Thick H	.097/177	.122/177	.122/177	.136/177	.136/177	.136/177	.136/177	.136/177	.136/177	.178/280	.178/280	.178/280	.178/280	.240/340	.240/340	.240/340
Part No.	F19139	F115863	F13992	F117070	F12997	F18384	F12274	F119550	F110005	F112719	F118899	F13470	F11873	F112103	F11168	F18411

WASHERS — FLAT MACHINE SCREW

ANSI B18.22.1	For use with Machine Screws	
	Material:	Steel
	Plating:	Zinc



Nominal Diameter		#4	#5	#6	#8	#10	#12	1/4"
I.D. G		.130	.145	.155	.175	.208	.232	.270
O.D. F		.285	.285	.380	.380	.443	.505	.567
Thick H		.030	.030	.036	.036	.036	.052	.052
Part No.		F19274	F119096	F118175	F115930	F111782	F120003	F117552

WASHERS — EXTRA THICK SAE THU-HARDENED FLAT USA

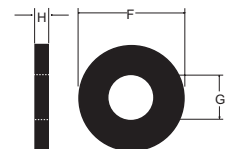
For use with Gr. 8 Fasteners	
Material:	Steel
Plating:	Yellow Zinc
Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D. G	9/32	11/32	13/32	15/32	17/32	19/32	21/32	13/16	15/16	1-1/16
O.D. F	5/8	11/16	13/16	59/64	1-1/16	1-5/32	1-5/16	1-5/32	1-3/4	2
Thick H	7/64	7/64	7/64	7/64	3/16	3/16	13/64	13/64	17/64	17/64
Part No.	F16304	F112185	F119248	F13314	F116710	F11039	F112289	F111650	F15966	F117490

WASHERS — BLACK FLAT USA

Material:	C1010 Steel Case Hardened
Plating:	Black Oxide
Made in USA	



Nominal Diameter	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
ID G	13/64	9/32	11/32	13/32	15/32	17/32	21/32	25/32	29/32	1-1/32	1-5/32	1-9/32
OD F	1/2	5/8	3/4	7/8	1	1-1/8	1-3/8	1-5/8	1-3/4	2	2-1/4	2-1/2
Thick H	3/32	1/8	1/8	1/8	1/8	1/8	1/8	5/32	5/32	3/16	7/32	9/32
Part No.	F18006	F118969	F15255	F115939	F19871	F110375	F113145	F15525	F118503	F113209	F114334	F111992

WASHERS — THICK BLACK FLAT USA

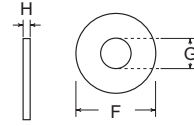
Material:	C1010 Steel Case Hardened
Plating:	Black Oxide
Made in U.S.A.	



Nominal Diameter	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
ID G	9/32	11/32	13/32	17/32	21/32	25/32	29/32	1-1/32
OD F	5/8	3/4	7/8	1-1/8	1-3/8	1-5/8	1-3/4	2
Thick H	3/16	3/16	3/16	3/16	3/16	1/4	1/4	9/32
Part No.	F13717	F112125	F116628	F119008	F119585	F119106	F115093	F119756

WASHERS — FENDER

ANSI B18.22.1	Material:	Steel
	Large O.D.	
	Plating:	Zinc
	Import	

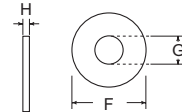


Nominal Diameter		1/8"	3/16"	3/16"	3/16"	1/4"	1/4"	1/4"	1/4"
I.D.	G	.149	7/32	7/32	7/32	9/32	9/32	9/32	9/32
O.D.	F	1"	3/4"	1	1-1/4	1	1-1/4	1-1/2	2
Thick	H	.040	051-.081	051-.081	051-.081	051-.081	051-.081	051-.081	051-.081
Part No.		F122829	F13689	F18726	F12380	F119621	F116605	F13140	F118531

Nominal Diameter		5/16"	5/16"	5/16"	3/8"	3/8"	3/8"	1/2"	1/2"
I.D.	G	11/32	11/32	11/32	13/32	13/32	13/32	17/32	17/32
O.D.	F	1-1/4	1-1/2	2	1-1/4	1-1/2	2	1-1/2	2
Thick	H	051-.081	051-.081	051-.081	051-.081	051-.081	051-.081	051-.081	051-.081
Part No.		F114598	F19315	F11693	F12046	F117178	F132243	F13969	F113124

WASHERS — FENDER, EXTRA THICK USA

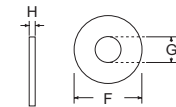
ANSI B18.22.1	Material:	Steel
	Large O.D.	
	Plating:	Zinc
	Made in U.S.A.	



Nominal Diameter		1/4"	1/4"	5/16"	5/16"	3/8"	3/8"	1/2"
I.D.	G	9/32	9/32	11/32	11/32	13/32	13/32	17/32
O.D.	F	1	1-1/2	1-1/4	1-3/4	1-1/4	1-3/4	2
Thick	H	.120	.120	.120	.120	.120	.120	.120
Part No.		F119130	F119383	F115329	F110821	F111463	F11888	F1551

WASHERS — 'AN' TYPE

Material:	Steel
Plating:	Cad-Yellow
Made in U.S.A.	



Nominal Diameter		#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	1"
I.D.	G	.149	.175	.203	.265	.328	.390	.459	.515	.578	.640	.765	1.015
O.D.	F	3/8	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1-1/16	1-3/16	1-5/16	1-3/4
Thick	H	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.090
Part No.		F110722	F14805	F111256	F113826	F19390	F114299	F117297	F111553	F11146	F116069	F19564	F11750

WASHERS — BONDED SEALING

Material:	Neoprene/Steel
Plating:	Galvanized

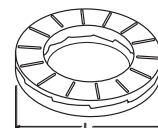
Nominal Diameter		#8/#10	#12	#14
O.D.	F	1/2	9/16	5/8
Part No.		F18321	F119052	F12018



WASHERS — DISC-LOCK GLUED PAIRS

Nominal Size	Inside Diameter	Outside Diameter	Nominal Thickness (Pair)	Number of Cams	Part No.
1/4	.262	.495	.127	6	F120638
5/16	.326	.628	.142	8	F120641
3/8	.409	.705	.160	8	F120640
7/16	.450	.880	.153	10	F120643
1/2	.510	.937	.166	10	F120637
9/16	.572	1.128	.175	10	F120644
5/8	.651	1.247	.188	12	F120642
3/4	.820	1.381	.242	14	F120639

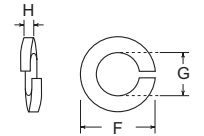
Material:	1010 Carbon Steel
Plating:	Delta Protekt
- Can be used with Grade 2, 5, 8 and even stronger bolts - Manufactured in 1010 carbon steel and case hardened to 40/55 on the Rockwell C scale to a depth of 0.005 - Coated with Delta Protekt (silver matte) with a Minimum of 600 hours of salt spray - Sold in glued pairs, however due to circumstances beyond our control during shipping and handling, some washers may become separated. This does not effect the operation of the washers.	



WASHERS — SPLIT LOCK REGULAR GALVANIZED

ANSI B18.2.2	Material:	Steel
	Plating:	Hot Dipped Galvanized
	Import	

Nominal Diameter		1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
I.D.	G	.262	.326	.390	.518	.560	.775	.905	1.042	1.302	1.561
O.D.	F	.482	.586	.683	.873	1.079	1.271	1.464	1.661	2.045	2.430
Thick	H	.109	.125	.141	.171	.203	.234	.266	.297	.359	.375
Galvanized		F119028	F18767	F111045	F16006	F17620	F116820	F13888	F116242	F12922	F18385



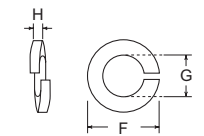
1

WASHERS — SPLIT LOCK REGULAR USA

ANSI B18.21.1	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc
	Made in U.S.A.	



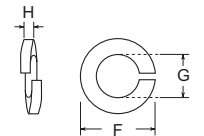
Nominal Diameter	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"	
I.D.	G	.120	.133	.148	.174	.200	.227	.262	.326	.390	.455	.518	.582	.660	.775	.905	1.042	1.172	1.302	1.561
O.D.	F	.209	.236	.250	.243	.334	.377	.482	.586	.683	.779	.873	.971	1.079	1.271	1.464	1.661	1.853	2.045	2.430
Thick	H	.040	.047	.047	.055	.062	.056	.109	.125	.141	.156	.171	.188	.203	.234	.266	.297	.328	.359	.375
Part No.	F119742	F117959	F15347	F16812	F18977	F17537	F117909	F117156	F117001	F15121	F116881	F112247	F13365	F19574	F119426	F19651	F113472	F1139	F14923	



WASHERS — SPLIT LOCK REGULAR

ANSI B18.21.1	For use with Gr. 2 or 5 Fasteners	
	Material:	Steel
	Plating:	Zinc or Plain
	Import	

Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	.262	.326	.390	.455	.518	.582	.660	.775	.905	1.042
O.D.	F	.482	.586	.683	.779	.873	.971	1.079	1.271	1.464	1.661
Thick	H	.109	.125	.141	.156	.171	.188	.203	.234	.266	.297
Zinc		F12965	F118314	F118627	F16680	F16277	F115293	F111898	F11664	F116248	F119852
Plain		F118780	F11225	F15803	F12731	F18392		F14453	F1499	F111837	F113103

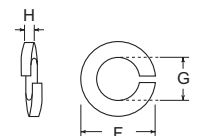


WASHERS — SPLIT LOCK HI-ALLOY USA

ANSI B18.21.1 SAE J989 B	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc
	Made in U.S.A. (>1" sizes may be Import) *	

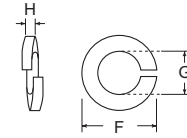


Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D.	G	.262	.326	.390	.455	.518	.582	.660	.775	.905	1.042	1.153	1.302	1.561
O.D.	F	.482	.586	.683	.779	.873	.971	1.079	1.271	1.464	1.661	1.847	2.045	2.430
Thick	H	.062	.078	.094	.109	.125	.141	.156	.188	.219	.250	.281	.312	.375
Part No.		F111413	F18731	F13460	F114362	F14641	F17661	F16837	F17431	F115948	F1157	F15096	F12844	F113625



WASHERS — SPLIT LOCK HI-ALLOY

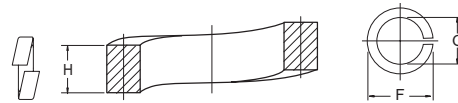
ANSI B18.21.1 SAE J989 B	For use with Gr. 5 or 8 Fasteners	
	Material:	Steel
	Plating:	Yellow Zinc or Plain
	Import	



Nominal Diameter		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	.262	.326	.390	.455	.518	.582	.650	.755	.905	1.042
O.D.	F	.482	.586	.683	.779	.873	.971	1.079	1.271	1.464	1.661
Thick	H	.062	.078	.094	.109	.125	.141	.156	.188	.219	.250
Zinc	F117735	F112387	F14998	F110085	F11101	F11473	F12118	F12039	F119573	F115499	
Plain	F12008	F119251	F19421	F119989	F15146		F13559	F114374	F112763	F118017	

WASHERS — HI-COLLAR HELICAL SPRING LOCK

ANSI/ASME B18.21.1 1972 (R1983)	For Use with Socket Head Cap Screws	
	Material:	Steel
	Plating:	Black Oxide

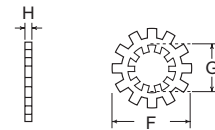


Nominal Diameter		#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
I.D.	G	.148	.174	.200	.262	.326	.390	.455	.518	.650	.775	.905	1.042	1.302
O.D.	F	.216	.267	.294	.365	.460	.553	.647	.737	.923	1.111	1.296	1.483	1.799
Thick	H	.030	.047	.047	.078	.093	.125	.140	.172	.203	.218	.234	.250	.313
Part No.		F19371	F111614	F17162	F113400	F167	F110286	F111022	F111247	F115301	F113007	F15965	F112544	F11991

WASHERS — INTERNAL / EXTERNAL TOOTH LOCK TYPE A

ANSI B18.21.1	For use with General Applications	
	Material:	Steel
	Plating:	Zinc

Nominal Diameter		3/16"	1/4"	5/16"	3/8"
I.D.	G	.204	.267	.332	.398
O.D.	F	.690	.900	.985	1.070
Thick	H	.040	.040	.045	.050
Part No.		F116689	F118326	F115379	F1263



WASHERS — INTERNAL TOOTH LOCK TYPE A

ANSI B18.21.1	For use with General Applications	
	Material:	Steel
	Plating:	Zinc

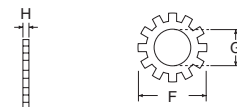
Nominal Diameter		#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
I.D.	G	.123	.150	.176	.204	.231	.267	.332	.398	.448	.512	.640	.795
O.D.	F	.270	.295	.340	.381	.410	.478	.610	.692	.789	.900	1.071	1.245
Thick	H	.019	.021	.023	.025	.025	.028	.034	.040	.040	.045	.050	.055
Part No.		F14145	F11165	F15284	F110019	F118455	F14043	F112904	F19149	F14218	F119719	F15860	F14402



WASHERS — EXTERNAL TOOTH LOCK TYPE A

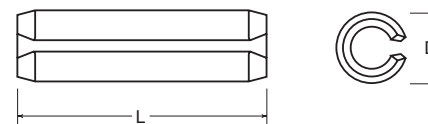
ANSI B18.21.1	For use with General Applications	
	Material:	Steel
	Plating:	Zinc

Nominal Diameter		#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
I.D.	G	.123	.150	.176	.204	.231	.267	.332	.398	.464	.530	.663	.795
O.D.	F	.260	.320	.381	.410	.475	.510	.610	.694	.760	.900	1.070	1.260
Thick	H	.019	.022	.023	.025	.028	.028	.034	.040	.040	.045	.050	.055
Part No.		F1370	F113536	F15426	F18895	F13853	F13507	F112248	F110948	F112159	F18452	F117238	F112704



PINS — SPLIT SPRING PLAIN

ANSI 18.18.1 1978	Material:	Spring Steel
	Plating:	Unplated



D	L	Part No.
1/16	1/4	F19510
1/16	3/8	F17056
1/16	1/2	F14183
1/16	5/8	F17590
1/16	3/4	F14862
1/16	1	F117526
5/64	1/4	F112620
5/64	3/8	F111023
5/64	3/4	F16868
5/64	1	F117907
5/64	1-1/2	F112063
3/32	1/4	F19050
3/32	3/8	F11724
3/32	1/2	F13591
3/32	5/8	F12891
3/32	3/4	F18458
3/32	1	F110999
3/32	1-1/8	F17964
3/32	1-1/4	F15686
3/32	1-1/2	F116005
1/8	3/8	F19039
1/8	1/2	F1374
1/8	5/8	F13793
1/8	3/4	F117477

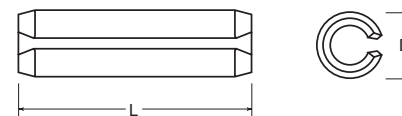
D	L	Part No.
1/8	7/8	F16005
1/8	1	F114244
1/8	1-1/4	F119022
1/8	1-1/2	F16987
1/8	1-3/4	F14897
1/8	2	F110623
5/32	1/2	F15055
5/32	5/8	F16522
5/32	3/4	F112846
5/32	7/8	F11177
5/32	1	F11475
5/32	1-1/4	F119465
5/32	1-1/2	F110676
5/32	2	F18319
3/16	1/2	F110668
3/16	5/8	F11657
3/16	3/4	F15557
3/16	1	F116232
3/16	1-1/4	F116856
3/16	1-1/2	F11938
3/16	1-3/4	F12473
3/16	2	F15030
3/16	2-1/2	F117056
7/32	3/4	F119938

D	L	Part No.
7/32	1	F18565
7/32	1-1/4	F13096
7/32	1-3/8	F114679
7/32	1-1/2	F112840
7/32	1-3/4	F12916
7/32	2	F19765
1/4	5/8	F117632
1/4	3/4	F1340
1/4	7/8	F19995
1/4	1	F114800
1/4	1-1/4	F16099
1/4	1-1/2	F114218
1/4	1-3/4	F114767
1/4	2	F118532
1/4	2-1/2	F112452
1/4	3	F14186
5/16	3/4	F118799
5/16	1	F119471
5/16	1-1/4	F13576
5/16	1-1/2	F11115
5/16	1-3/4	F15571
5/16	2	F1990
5/16	2-1/2	F1918
5/16	3	F12664

D	L	Part No.
3/8	1	F110443
3/8	1-1/4	F113864
3/8	1-1/2	F110680
3/8	2	F114463
3/8	2-1/2	F118237
3/8	2-3/4	F113945
3/8	3	F18280
3/8	4	F14185
7/16	1	F19989
7/16	1-1/2	F15523
7/16	2	F195
7/16	2-1/2	F118990
7/16	3	F12131
1/2	1-1/4	F111031
1/2	1-1/2	F11764
1/2	1-3/4	F116491
1/2	2	F111910
1/2	2-1/2	F114376
1/2	3	F15439
1/2	3-1/2	F17545

PINS — SPLIT SPRING ZINC

ANSI 18.18.1 1978	Material:	Spring Steel
	Plating:	Zinc



D	L	Part No.
1/16	1/4	F111844
1/16	3/8	F118709
1/16	1/2	F112199
1/16	5/8	F18315
1/16	3/4	F12884
1/16	1	F13787
5/64	1/4	F12893
5/64	3/8	F19512
5/64	1/2	F11067
5/64	5/8	F19952
5/64	3/4	F117852
5/64	1	F110985
5/64	1-1/4	F116148
5/64	1-1/2	F116341
3/32	1/4	F117639
3/32	3/8	F16683
3/32	1/2	F12942
3/32	5/8	F19884
3/32	3/4	F1909
3/32	7/8	F17436
3/32	1	F1960
3/32	1-1/4	F14167
3/32	1-1/2	F115508
1/8	3/8	F110164
1/8	1/2	F111183
1/8	5/8	F113608

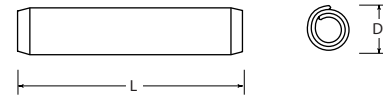
D	L	Part No.
1/8	3/4	F17581
1/8	7/8	F112117
1/8	1	F112640
1/8	1-1/4	F113132
1/8	1-1/2	F112380
1/8	1-3/4	F112047
1/8	2	F112713
5/32	1/2	F14501
5/32	5/8	F119962
5/32	3/4	F16718
5/32	7/8	F18778
5/32	1	F116729
5/32	1-1/4	F14496
5/32	1-1/2	F19011
5/32	2	F14952
5/32	2-1/2	F110917
3/16	1/2	F18803
3/16	5/8	F110746
3/16	3/4	F115166
3/16	7/8	F116784
3/16	1	F18679
3/16	1-1/4	F18047
3/16	1-1/2	F117923
3/16	1-3/4	F113839
3/16	2	F18487
3/16	2-1/2	F115683

D	L	Part No.
7/32	5/8	F12388
7/32	3/4	F19370
7/32	1	F16399
7/32	1-1/4	F110858
7/32	1-3/8	F15440
7/32	1-1/2	F14300
7/32	1-3/4	F11183
7/32	2	F17411
1/4	5/8	F115608
1/4	3/4	F112808
1/4	7/8	F11087
1/4	1	F112081
1/4	1-1/4	F11373
1/4	1-1/2	F117324
1/4	1-3/4	F111083
1/4	2	F115667
1/4	2-1/2	F15575
1/4	3	F14698
5/16	3/4	F119976
5/16	7/8	F12522
5/16	1	F16787
5/16	1-1/4	F13945
5/16	1-1/2	F1448
5/16	1-3/4	F14417
5/16	2	F19077
5/16	2-1/2	F19365

D	L	Part No.
5/16	3	F113956
5/16	4	F17873
3/8	3/4	F113523
3/8	1	F13097
3/8	1-1/4	F12012
3/8	1-1/2	F117932
3/8	1-3/4	F1541
3/8	2	F110186
3/8	2-1/2	F112494
3/8	3	F13338
7/16	1	F13273
7/16	1-1/2	F13812
7/16	2	F17032
7/16	2-1/2	F18675
7/16	3	F119364
7/16	3-1/2	F13151
1/2	1-1/4	F112839
1/2	1-1/2	F119139
1/2	2	F19309
1/2	2-1/2	F12901
1/2	2-3/4	F11540
1/2	3	F14084
1/2	3-1/2	F1768

PINS — COILED

ASME B 18.8.2 B 18.8.3M ISO 8750	Material:	Carbon Steel
	SAE 1070-1095	
	Plating:	Unplated



All spring pins have the common characteristic of a pin diameter larger than the hole diameter into which the pin is installed. Coiled pins can be easily identified by the 2-1/4 coil cross-section. When coil pins are installed, the compression starts at the outer edge and moves through the coils towards the center. Compression is uniform and stresses are distributed equally throughout the cross-section.

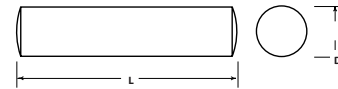
D	L	Part No.
3/32	3/4	F112849
3/32	1	F19525
1/8	1/2	F13860
1/8	1-1/2	F18973
5/32	1/2	F18501
5/32	3/4	F114831
5/32	1-1/4	F112955
5/32	1-1/2	F18388
3/16	1/2	F11897
3/16	3/4	F11038

D	L	Part No.
3/16	1	F1579
3/16	1-1/4	F17099
3/16	1-1/2	F112800
3/16	2	F118650
3/16	2-1/2	F11962
7/32	3/4	F12771
7/32	1	F115711
7/32	1-1/2	F13816
7/32	2	F115509
1/4	3/4	F113577

D	L	Part No.
1/4	1	F113301
1/4	1-1/4	F116453
1/4	1-1/2	F17283
1/4	2	F12528
1/4	2-1/2	F118294
1/4	3	F15099
5/16	1-1/2	F12404
5/16	2	F116986

PINS — DOWEL HARDENED

ANSI ASME B18.8.2	Material:	Alloy Steel
		Ground and Polished
	Plating:	Unplated
	Tolerance:	.0002



D	L	Part No.
1/16	1/4	F118603
1/16	7/16	F15689
1/16	1/2	F11303
1/16	3/4	F15087
1/16	7/8	F113708
1/16	1	F18932
3/32	1/4	F113522
3/32	1/2	F12957
3/32	3/4	F115072
3/32	7/8	F119823
3/32	1	F14976
1/8	3/8	F114977
1/8	1/2	F14128
1/8	3/4	F118052
1/8	1	F18419
1/8	1-1/4	F15937
1/8	1-1/2	F110082
1/8	2	F114939
3/16	1/2	F113457

D	L	Part No.
3/16	3/4	F115427
3/16	1	F114698
3/16	1-1/4	F111351
3/16	1-1/2	F11074
3/16	2	F16110
1/4	1/2	F118823
1/4	3/4	F18483
1/4	1	F13881
1/4	1-1/4	F18682
1/4	1-1/2	F11123
1/4	1-3/4	F115702
1/4	2	F116018
1/4	2-1/2	F111054
5/16	3/4	F117902
5/16	1	F113491
5/16	1-1/4	F113737
5/16	1-1/2	F119413
5/16	1-3/4	F117336
5/16	2	F116095

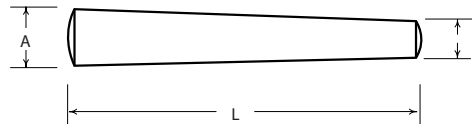
D	L	Part No.
5/16	2-1/2	F114246
5/16	3	F114711
3/8	3/4	F11012
3/8	1	F16875
3/8	1-1/4	F117650
3/8	1-1/2	F110576
3/8	2	F18898
3/8	2-1/2	F13744
3/8	3	F111572
3/8	4	F114071
7/16	1	F15092
7/16	1-1/4	F1437
7/16	1-1/2	F110829
7/16	3	F110574
1/2	1	F115906
1/2	1-1/4	F115097
1/2	1-1/2	F117935
1/2	1-3/4	F112491
1/2	2	F116097

D	L	Part No.
1/2	2-1/2	F119553
1/2	3	F119114
1/2	3-1/2	F116502
1/2	4	F14238
5/8	1	F110490
5/8	1-1/2	F11150
5/8	2	F13276
5/8	2-1/2	F119769
5/8	3	F114338
3/4	2	F111235
3/4	3	F12624
7/8	2	F110040
7/8	2-1/2	F17008
7/8	3	F111037
7/8	3-1/2	F15200
7/8	4	F114524
1	2	F112774
1	3	F117531
1	3-1/2	F114866

Warning: Always Press Dowel Pins Into Place Using An Arbor Press. Never Strike With Any Material Or Tool, Including A Hammer. Doing So May Cause The Dowel To Splinter And May Result In Serious Bodily Injury

PINS — TAPER STEEL

- Low Carbon Steel
- Tolerance: +.0013/- on major diameter
- Standard taper is 1/4" per foot or 0.0208 per inch
- Helps provide precision alignment
- Used where meeting parts must be disassembled frequently



Gauge	(A) Dia.	(B) Dia.	(L) Length	Part No.
3/0	.125	.109	1	F118706
2/0	.141	.120	1	F1655
0	.156	.140	3/4	F11907
0	.156	.125	1-1/2	F13584
1	.172	.156	3/4	F11863
1	.172	.141	1-1/2	F14150
2	.193	.167	1-1/4	F12593
2	.193	.162	1-1/2	F11761
3	.219	.198	1	F117729
3	.219	.188	1-1/2	F116098
3	.219	.177	2	F119674
3	.219	.167	2-1/2	F19453

Gauge	(A) Dia.	(B) Dia.	(L) Length	Part No.
4	.250	.219	1-1/2	F14005
4	.250	.208	2	F14842
4	.250	.198	2-1/2	F114723
4	.250	.188	3	F117185
4	.25	.125	6	F17438
5	.289	.247	2	F17285
5	.289	.237	2-1/2	F116140
5	.289	.227	3	F120654
5	.289	.216	3-1/2	F13361
5	.289	.164	6	F117027
6	.341	.299	2	F14097
6	.341	.289	2-1/2	F112026

Gauge	(A) Dia.	(B) Dia.	(L) Length	Part No.
6	.341	.268	3-1/2	F111438
7	.409	.367	2	F119645
7	.409	.347	3	F118047
7	.409	.326	4	F115833
7	.409	.284	6	F114180
8	.492	.450	2	F14232
8	.492	.430	3	F118288
8	.492	.409	4	F112231
8	.492	.367	6	F114622
9	.594	.466	6	F114061

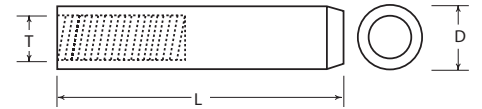
PINS — PULL DOWEL HARDENED

ANSI ASME B18.8.2	Material:	Alloy Steel
		Ground and Polished
	Plating:	Unplated

Diameter	D	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1
Thread Size	T	8-32	10-32	10-32	1/4-20	5/16-18	3/8-16	3/8-16

D	L	Part No.
1/4	1	F113257
1/4	1-3/4	F12506
5/16	1	F115225
5/16	1-1/2	F11674

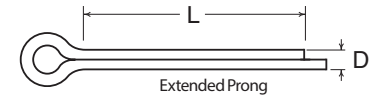
D	L	Part No.
3/8	1-1/2	F19857
3/8	1-3/4	F12288
3/8	2	F18331
1/2	2	F111112



1

PINS — COTTER EXTENDED PRONG

ANSI 18.18.1 1983	Material:	Steel
	Extended Prong	
	Plating:	Zinc



D	L	Part No.
1/16	1/2	F131693
1/16	3/4	F131696
1/16	1	F131690
1/16	1-1/4	F131692
1/16	1-1/2	F131691
1/16	1-3/4	F131694
1/16	2	F131695
5/64	1/2	F131774
5/64	3/4	F131778
5/64	1	F131772
5/64	1-1/4	F131773
5/64	1-3/4	F131775
5/64	2	F131776
5/64	2 1/4	F131777
3/32	1/2	F131739
3/32	3/4	F131743
3/32	1	F131736
3/32	1-1/4	F131738
3/32	1-1/2	F131737
3/32	1-3/4	F131740
3/32	2	F131741
3/32	2 1/2	F131742
7/64	3/4	F131798
7/64	1	F131792
7/64	1-1/4	F131794
7/64	1-1/2	F131793
7/64	1-3/4	F131795
7/64	2	F131796

D	L	Part No.
7/64	2 1/4	F131797
1/8	1/2	F131717
1/8	3/4	F131723
1/8	1	F131714
1/8	1-1/4	F131716
1/8	1-1/2	F131715
1/8	1-3/4	F131718
1/8	2	F131719
1/8	2 1/4	F131721
1/8	2 1/2	F131720
1/8	3	F131722
1/8	4	F131724
9/64	1-1/4	F131800
9/64	1-1/2	F131799
9/64	1-3/4	F131801
9/64	2	F131802
9/64	2 1/2	F131803
5/32	3/4	F131770
5/32	1	F131762
5/32	1-1/4	F131764
5/32	1-1/2	F131763
5/32	1-3/4	F131765
5/32	2	F131766
5/32	2 1/4	F131768
5/32	2 1/2	F131767
5/32	3	F131769
5/32	4	F131771
3/16	3/4	F131734

D	L	Part No.
3/16	1	F131725
3/16	1-1/4	F131727
3/16	1-1/2	F131726
3/16	1-3/4	F131728
3/16	2	F131729
3/16	2 1/4	F131731
3/16	2 1/2	F131730
3/16	3	F131732
3/16	3 1/2	F131733
3/16	4	F131735
7/32	2	F131787
7/32	2 1/2	F131788
7/32	3	F131789
7/32	5	F131790
7/32	6	F131791
1/4	1	F131702
1/4	1-1/4	F131704
1/4	1-1/2	F131703
1/4	1-3/4	F131705
1/4	2	F131706
1/4	2 1/2	F131707
1/4	3	F131708
1/4	3 1/2	F131709
1/4	4	F131710
1/4	4 1/2	F131711
1/4	5	F131712
1/4	6	F131713
5/16	1	F131752

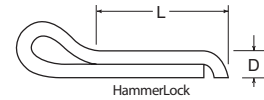
D	L	Part No.
5/16	1-1/4	F131754
5/16	1-1/2	F131753
5/16	2	F131755
5/16	2 1/2	F131756
5/16	3	F131757
5/16	3 1/2	F131758
5/16	4	F131759
5/16	5	F131760
5/16	6	F131761
3/8	1-1/2	F131744
3/8	2	F131745
3/8	2 1/2	F131746
3/8	3	F131747
3/8	3 1/2	F131748
3/8	4	F131749
3/8	5	F131750
3/8	6	F131751
7/16	2	F131780
7/16	2 1/2	F131781
7/16	3	F131782
7/16	3 1/2	F131783
7/16	4	F131784
7/16	5	F131785
7/16	6	F131786
1/2	3	F131697
1/2	4	F131698
1/2	5	F131699
1/2	6	F131700

FASTENERS

3 Inch Pins & Retainers

PINS — HAMMERLOCK

ANSI 18.18.1 1983	Material:	Steel
	Hammerlock	
	Plating:	Zinc



D	L	Part No.
1/16	1/2	F131807
1/16	3/4	F131810
1/16	1	F131804
1/16	1 1/4	F131806
1/16	1 1/2	F131805
1/16	1 3/4	F131808
1/16	2	F131809
5/64	1/2	F131888
5/64	3/4	F131892
5/64	1	F131886
5/64	1 1/4	F131887
5/64	1 3/4	F131889
5/64	2	F131890
5/64	2 1/4	F131891
3/32	1/2	F131853
3/32	3/4	F131857
3/32	1	F131850
3/32	1 1/4	F131852
3/32	1 1/2	F131851
3/32	1 3/4	F131854
3/32	2	F131855
3/32	2 1/2	F131856
7/64	3/4	F131905
7/64	1	F131899
7/64	1 1/4	F131901
7/64	1 1/2	F131900

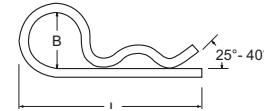
D	L	Part No.
7/64	1 3/4	F131902
7/64	2	F131903
7/64	2 1/4	F131904
1/8	1/2	F131831
1/8	3/4	F131837
1/8	1	F131828
1/8	1 1/4	F131830
1/8	1 1/2	F131829
1/8	1 3/4	F131832
1/8	2	F131833
1/8	2 1/4	F131835
1/8	2 1/2	F131834
1/8	3	F131836
1/8	4	F131838
9/64	1 1/4	F131907
9/64	1 1/2	F131906
9/64	1 3/4	F131908
9/64	2	F131909
9/64	2 1/2	F131910
5/32	3/4	F131884
5/32	1	F131876
5/32	1 1/4	F131878
5/32	1 1/2	F131877
5/32	1 3/4	F131879
5/32	2	F131880
5/32	2 1/4	F131882

D	L	Part No.
5/32	2 1/2	F131881
5/32	3	F131883
5/32	4	F131885
3/16	3/4	F131848
3/16	1	F131839
3/16	1 1/4	F131841
3/16	1 1/2	F131840
3/16	1 3/4	F131842
3/16	2	F131843
3/16	2 1/4	F131845
3/16	2 1/2	F131844
3/16	3	F131846
3/16	3 1/2	F131847
3/16	4	F131849
7/32	2	F131894
7/32	2 1/2	F131895
7/32	3	F131896
7/32	5	F131897
7/32	6	F131898
1/4	1	F131816
1/4	1 1/4	F131818
1/4	1 1/2	F131817
1/4	1 3/4	F131819
1/4	2	F131820
1/4	2 1/2	F131821
1/4	3	F131822

D	L	Part No.
1/4	3 1/2	F131823
1/4	4	F131824
1/4	4 1/2	F131825
1/4	5	F131826
1/4	6	F131827
5/16	1	F131866
5/16	1 1/4	F131868
5/16	1 1/2	F131867
5/16	2	F131869
5/16	2 1/2	F131870
5/16	3	F131871
5/16	3 1/2	F131872
5/16	4	F131873
5/16	5	F131874
5/16	6	F131875
3/8	1 1/2	F131858
3/8	2	F131859
3/8	2 1/2	F131860
3/8	3	F131861
3/8	3 1/2	F131862
3/8	4	F131863
3/8	5	F131864
3/8	6	F131865

PINS — BRIDGE

Material:	M-B Spring Wire
Plating:	Zinc



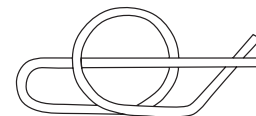
Wire Dia	Drill Hole	Min Shaft	Max Shaft	Length 'L'	Eye Dia 'B'	Generic #	Part No.
.028	1/32	1/8	5/32	5/8	3/32	231	F110426
.035	3/64	7/64	9/64	7/16	5/64	226	F15982
.042	3/64	1/16	1/8	7/16	5/64	232	F13604
.042	3/64	3/16	1/4	1	1/4	223	F12427
.072	5/64	5/16	3/8	1-3/32	9/64	225	F14885
.0725		5/16	3/8	1-7/16		2104	F110536
.062	5/64	1/4	1/2	1-5/16	5/16	222	F13616
.062	5/64	3/8	1/2	1-9/16	3/8	218	F1867
.050	1/16	3/16	7/16	3/4	1/4	auto	F114676
.054	1/16	1/4	3/8	7/8	9/64	237	F18061
.070	5/64	1/4	1/2	1-1/8	5/16	auto	F1561
.072	5/64	3/8	1/2	1-7/8	5/8	239	F17485
.080	3/32	1/4	3/8	1-3/16	1/4	213	F12147
.080	3/32	3/8	1/2	1-9/16	3/8	217	F114817
.091		3/8	1/2	2		0006	F19639
.093	7/64	1/4	1/2	1-5/8	3/8	203	F16308
.093	7/64	5/16	1/2	2	5/8	228	F19541

Wire Dia	Drill Hole	Min Shaft	Max Shaft	Length 'L'	Eye Dia 'B'	Generic #	Part No.
.093	7/64	3/8	5/8	2-5/16	5/8	207	F15040
.125	9/64	1/2	3/4	1-15/16	7/16	216	F112147
.093	7/64	1/2	3/4	2-1/2	1/4	214	F15274
.120		1/2	5/8	3-3/8		2106	F113604
.125	9/64	7/16	3/4	2-9/16	9/16	211	F11662
.148	5/32	1/2-5/8	5/8 x 1	3	1/2	201	F16791
.148	5/32	5/8	1	2-15/16	3/4	210	F17658
.148	5/32	3/4	1-1/8	3-5/16	3/4	209	F117741
.162	3/16	7/8	1-1/16	2-3/16	7/8	205	F114169
.162	3/16	5/8	1	3	5/8	204	F112268
.177	3/16	5/8	1	3-1/4	15/16	206	F111308
.177	3/16	3/4	1-1/16	3-1/2	15/16	229	F13921
.177	3/16	7/8	1-1/4	3-3/4	15/16	208	F16198
.243	17/34	3/4	1	4	15/16	219	F116990
.243	17/64	1-1/4	1-1/2	5-1/8	1-1/2	235	F117854
.310	21/64	7/8	1	4-1/16	7/8	220	F115517

PINS — LOCKING COTTER

Fits Shaft Size (A)	Wire Dia (B)	OAL C	Part No.
1/4	.041	.844	F123445
5/16	.047	1.044	F123438
3/8	.054	1.214	F123439
1/2	.062	1.42	F123440

Fits Shaft Size (A)	Wire Dia (B)	OAL C	Part No.
5/8	.072	1.69	F123441
3/4	.080	2.081	F123442
7/8	.105	2.506	F123443
1	.105	2.756	F123444

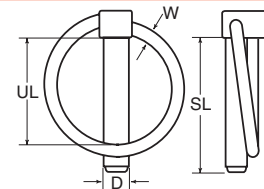


*comparable to RUE RINGS™

PINS — CLEVIS LYNCH

Pin Dia (D)	Usable Length (UL)	Shaft Length (SL)	Wire Dia (W)	Part No.
3/16	1	1-1/4	.118	F112145
3/16	1-5/16	1-9/16	.138	F11064
1/4	1-1/4	1-9/16	.138	F119087
1/4	1-5/16	1-3/4	.138	F18752
5/16	1-1/4	1-9/16	.138	F18457
5/16	1-3/8	1-3/4	.138	F116450

Pin Dia (D)	Usable Length (UL)	Shaft Length (SL)	Wire Dia (W)	Part No.
5/16	1-3/4	2	.138	F19362
7/16	1-11/32	1-9/16	.138	F116081
7/16*	1-1/4	1-3/4	.140	F16536
7/16**	1-1/2	1-3/4	.177	F110274
7/16	1-5/8	1-15/16	.138	F114398
7/16	1-3/4	2-1/4	.177	F119476



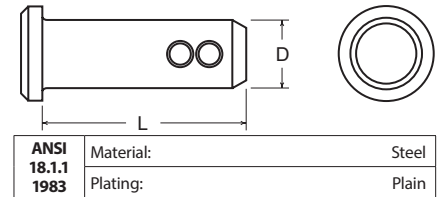
Material:	C1010 Carbon Steel
Plating:	Yellow Zinc

* With Chain
** Heavy-Duty Black Oxide

PINS — ADJUSTABLE CLEVIS

D	L	No. Holes	Hole Size	Part No.
1/4	1	2	3/32	F19414
1/4	2	5	3/32	F117537
5/16	2	5	1/8	F15307
3/8	2	5	5/32	F113307
7/16	2	5	5/32	F119063

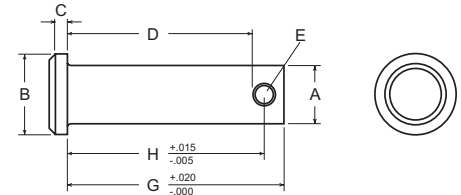
D	L	No. Holes	Hole Size	Part No.
7/16	3	7	5/32	F14900
1/2	2	5	5/32	F11328
1/2	3	7	5/32	F17820
5/8	3	7	5/32	F19777



1

PINS — CLEVIS

Dia. 'A'	Length 'G'	To center of pin hole 'H'	To edge of pin hole 'D'	Hole Size 'E'	Head Dia. 'B'	Head Thickness 'C'	Part No.
3/16	1/2	31/64	39/64	3/32	5/16	1/16	F12955
3/16	3/4	21/32	39/64	3/32	5/16	1/16	F117005
3/16	1	31/64	39/64	3/32	5/16	1/16	F119449
3/16	1-1/4	31/64	39/64	3/32	5/16	1/16	F12877
3/16	1-1/2	31/64	39/64	3/32	5/16	1/16	F13819
1/4	1/2	13/32	23/64	3/32	3/8	3/32	F119782
1/4	3/4	21/32	39/64	3/32	3/8	3/32	F11490
1/4	1	29/32	55/64	3/32	3/8	3/32	F11825
1/4	1-1/8	1-1/32	63/64	3/32	3/8	3/32	F119246
1/4	1-1/4	1-5/32	1-7/64	3/32	3/8	3/32	F111134
1/4	1-3/8	1-9/32	1-15/64	3/32	3/8	3/32	F111201
1/4	1-1/2	1-13/32	1-23/64	3/32	3/8	3/32	F115736
1/4	1-3/4	1-21/32	1-39/64	3/32	3/8	3/32	F112753
1/4	2	1-29/32	1-55/64	3/32	3/8	3/32	F114353
5/16	3/4	39/64	17/32	9/64	7/16	3/32	F11067
5/16	7/8	47/64	21/32	9/64	7/16	3/32	F117240
5/16	1	55/64	25/32	9/64	7/16	3/32	F14408
5/16	1-1/4	1-7/64	1-3/32	9/64	7/16	3/32	F18294
5/16	1-1/2	1-7/64	1-3/32	9/64	7/16	3/32	F11976
5/16	1-3/4	1-39/64	1-17/32	9/64	7/16	3/32	F18397
5/16	2	1-39/64	1-17/32	9/64	7/16	3/32	F117877
3/8	1	27/32	49/64	5/32	1/2	1/8	F117588
3/8	1-1/4	1-3/32	1-1/64	5/32	1/2	1/8	F111838
3/8	1-3/8	1-1/16	1-9/64	5/32	1/2	1/8	F112853
3/8	1-1/2	1-11/32	1-17/64	5/32	1/2	1/8	F13837
3/8	1-3/4	1-7/16	1-33/64	5/32	1/2	1/8	F125227
3/8	2	1-27/32	1-49/64	5/32	1/2	1/8	F114167
3/8	2-1/2	2-11/32	1-17/64	5/32	1/2	1/8	F17493
7/16	1-1/4	1-3/32	1-1/64	5/32	9/16	5/32	F1512
7/16	1-1/2	1-11/32	1-17/64	5/32	9/16	5/32	F116163
7/16	2	1-55/64	1-49/64	5/32	9/16	5/32	F118105
1/2	1	27/32	49/64	5/32	5/8	5/32	F123521
1/2	1-1/4	1-3/32	1-1/64	5/32	5/32	5/32	F110042
1/2	1-1/2	1-11/32	1-17/64	5/32	5/8	5/32	F114423
1/2	1-3/4	1-19/32	1-33/64	5/32	5/8	5/32	F113918
1/2	2	1-19/32	1-33/64	5/32	5/8	5/32	F117815
1/2	2-1/2	1-19/32	1-33/64	5/32	5/8	5/32	F114460
1/2	3	1-19/32	1-33/64	5/32	5/8	5/32	F111270
1/2	2-3/4	2-37/64	2-33/64	5/32	5/8	5/32	F123522
5/8	1-1/2	1-11/32	1-17/64	5/32	13/16	13/64	F116581
5/8	2	1-27/32	1-49/64	5/32	13/16	13/64	F114641
5/8	2-1/2	1-27/32	1-49/64	5/32	13/16	13/64	F117167
5/8	3	1-27/32	1-49/64	5/32	13/16	13/64	F111919
3/4	2	1-27/32	1-49/64	5/32	15/16	1/4	F116342
3/4	2-1/2	2-11/32	2-17/64	5/32	15/16	1/4	F123524
3/4	2-3/4	2-19/32	2-33/64	5/32	15/16	1/4	F123523
1*	2-1/4	2-3/64	1-61/64	13/64	1-3/16	11/32	F123492
1*	2-1/2	2-9/32	2-13/16	13/64	1-3/16	11/32	F123525
1*	2-3/4	2-35/64	2-29/64	13/64	1-3/16	11/32	F123502
1*	3	2-51/64	2-45/64	13/64	1-3/16	11/32	F123493



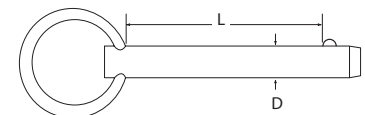
ANSI ASME B18.8.2	Material:	Steel
	Plating:	Zinc

*1" diameter pins are Plain

PINS — DETENT RING STYLE

D	L	Part No.
3/16	1/2	F132064
3/16	1	F132065
3/16	1-1/2	F132066
3/16	2	F132067
3/16	3	F132068
1/4	1/2	F132069
1/4	1	F132070
1/4	1-1/2	F132071
1/4	2	F132072
1/4	2-1/2	F132073
1/4	3	F132074
5/16	1	F132075
5/16	1-1/2	F132076
5/16	2	F132077
5/16	2-1/2	F132078
5/16	3	F132079

D	L	Part No.
3/8	1	F132080
3/8	1.30	F132081
3/8	1-1/2	F132082
3/8	2	F132083
3/8	2-1/2	F132084
3/8	3	F132085
1/2	1	F132086
1/2	1-1/2	F132087
1/2	2	F132088
1/2	2-1/2	F132089
1/2	3	F132090
1/2	2-1/2	F132089
1/2	3	F132090



Material:	Medium Carbon Steel
Plating:	Zinc Plated

Detent pins are designed for use in temporary quick disconnect operations. The pin has a ball bearing on one end with a steel spring that depresses and springs out to lock the pin into place.

FASTENERS

3 Inch Pins & Retainers

PINS — FORGED HITCH

D	Usable Length	Part No.
1/2	4-1/4	F12420
5/8	6-1/4	F119693
3/4*	4-1/4	F116781
3/4	6-1/4	F14271
7/8	6-1/4	F113357
1	6-1/4	F119450
1-1/4	6-1/4	F112281

*Without Lynch Pin

Material:	Steel
Plating:	Clear Zinc/Yellow Zinc



PINS — HITCH BLUE HEAD

Dia	Usable Length	Overall Length	Part No.
1/2"	3-5/8"	6-5/8"	F13045
5/8"	4"	7"	F115584
5/8"	6"	9"	F14946
3/4"	4"	7"	F113468
3/4"	6-1/2"	9-1/2"	F14347
7/8"	4-1/4"	7-1/4"	F14133
7/8"	6-1/2"	9-1/2"	F13811
1"	7"	10"	F19821

- Heat treated
- Blue vinyl coated head and handle
- Black powder coated pin
- Complete with zinc plated hairpin lock

Material:	Grade 8 Alloy Steel
Plating:	Black Powder Coated



PINS — BENT HITCH

Diameter (A)	Usable Length (L)	Handle Length	Drilled Hole	Hitch Pin Clip Diameter	Part No.
1/2	3	1-3/4	5/32	1/8	F15270
5/8	3	1-3/4	5/32	1/8	F11702
3/4	3-1/2	2-3/8	3/16	5/32	F12821

- 15° Bend
- Hitch Pin Clip included
- Made in USA

Material:	C1018 Carbon Steel
Plating:	Zinc



PINS — MISC.

PINS — SAFETY SPRING

Material:	Steel
Plating:	Zinc

D	L	Part No.
1/2	3-1/2	F113421
5/8	4-1/2	F18537
3/4	4-1/2	F111538
3/4	6	F114526
7/8	6	F118009



PINS — SNAPPER

Material:	Steel
Plating:	Zinc

D	L	Part No.
1/4	1-3/4	F112112
1/4	2-1/8	F17662
1/4	2-1/2	F117196
5/16	2-1/4	F11733
5/16	2-3/4	F116461
3/8	2-1/4	F113322
3/8	2-1/2	F116888
3/8	3	F17985



PINS — POWER TAKE OFF

Material:	Steel
Plating:	Zinc

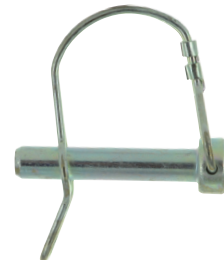
D	L	Part No.
5/16	3	F115616
3/8	2-1/4	F11729
3/8	3	F112314
1/4	2	F114030
1/4	3	F110132
5/16	2-1/4	F113172



PINS — TAB LOCK

Material:	Steel
Plating:	Zinc

D	L	Part No.
1/4	1-3/4	F18596
5/16	1-3/4	F116459
3/8	1-3/4	F1689



PINS — LOCK

Material:	Carbon Steel
Plating:	Zinc

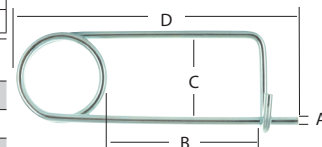
Diagram	Length	Part No.
1/4	2-3/4	F14457
5/16	2-3/4	F16151
3/8	2-3/4	F117276



PINS — COILED TENSION SAFETY

Material:	Steel
Plating:	Zinc

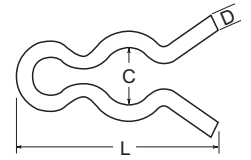
C	B	A	D	Part No.
1-1/2	3	.177	5.96	F119959
1-5/8	5	.243	8.36	F1656
2-1/4	5	.243	8.36	F16903



PINS — EXTERNAL STYLE HITCH

Length 'L'	Inside Dia. 'C'	Wire Dia.	Part No.
23/64	1/16	.025	F14210
13/32	3/32	.025	F1475
1/2	1/16	.028	F13259
15/32	3/32	.032	F14817
15/32	5/32	.032	F18578

Length 'L'	Inside Dia. 'C'	Wire Dia.	Part No.
7/8	1/8	.047	F17197
1	7/32	.062	F111757
1	5/16	.062	F110095
1	3/16	.062	F115856

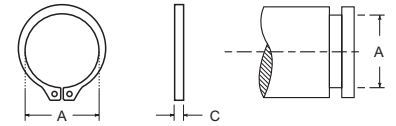


Material:	M-B Spring Wire
Plating:	Zinc

1

RETAINING RINGS — EXTERNAL

Material:	Carbon Spring Steel
'SH' Series Retaining Rings	
Plating:	Phosphate



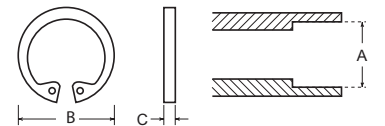
Shaft Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
1/8	.112	.010	F112128
5/32	.142	.010	F13051
3/16	.168	.015	F119803
1/4	.225	.025	F12875
9/32	.256	.025	F15222
5/16	.281	.025	F13364
3/8	.338	.025	F116736
7/16	.395	.025	F13254
1/2	.461	.035	F17883
9/16	.521	.035	F115355
5/8	.579	.035	F12756
11/16	.635	.042	F16396
3/4	.693	.042	F11804
25/32	.722	.042	F14466
13/16	.751	.042	F114545

Shaft Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
27/32	.780	.042	F114988
7/8	.810	.042	F19209
15/16	.867	.042	F15112
1	.925	.050	F13581
1-1/16	.982	.050	F1530
1-1/8	1.041	.050	F112378
1-3/16	1.098	.050	F18979
1-1/4	1.156	.050	F117269
1-5/16	1.214	.050	F119677
1-3/8	1.272	.050	F12353
1-7/16	1.333	.050	F110497
1-1/2	1.387	.050	F12978
1-9/16	1.446	.050	F119215
1-5/8	1.503	.050	F118922
1-3/4	1.618	.062	F116516

Shaft Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
1-13/16	1.675	.062	F19470
1-7/8	1.735	.062	F13885
2	1.850	.062	F115823
2-1/16	1.906	.078	F11307
2-1/8	1.964	.078	F116791
2-1/4	2.081	.078	F118574
2-5/16	2.139	.078	F11243
2-3/8	2.197	.078	F114798
2-7/16	2.255	.078	F119548
2-1/2	2.313	.078	F112577
2-5/8	2.428	.078	F11582
2-3/4	2.543	.093	F111081
2-7/8	2.659	.093	F111425
3	2.775	.093	F15949

RETAINING RINGS — INTERNAL

Material:	Carbon Spring Steel
Type 'HO' Series Retaining Rings	
Plating:	Phosphate



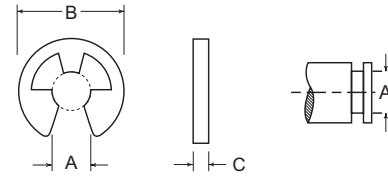
"Bore" Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
1/4	.280	.015	F116373
5/16	.346	.015	F115424
3/8	.415	.025	F14357
7/16	.482	.025	F13500
1/2	.548	.035	F110417
9/16	.620	.035	F117137
5/8	.694	.035	F19561
11/16	.763	.035	F111714
3/4	.831	.035	F11322
13/16	.901	.042	F114779
7/8	.971	.042	F15517
15/16	1.041	.042	F17860
1	1.111	.042	F111952
1-1/16	1.180	.042	F13959

"Bore" Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
1-1/8	1.249	.050	F112500
1-3/16	1.319	.050	F110396
1-1/4	1.388	.050	F111129
1-5/16	1.456	.050	F16519
1-3/8	1.526	.050	F17215
1-7/16	1.596	.050	F12586
1-1/2	1.660	.050	F19771
1-9/16	1.734	.062	F17334
1-5/8	1.804	.062	F17520
1-11/16	1.874	.062	F111540
1-3/4	1.942	.062	F1611
1-13/16	2.021	.062	F16248
1-7/8	2.072	.062	F14111

"Bore" Dia. 'A'	Free Dia. 'B'	Thick 'C'	Part No.
1-15/16	2.141	.062	F113866
2	2.210	.062	F119173
2-1/16	2.280	.078	F16564
2-1/8	2.350	.078	F17492
2-1/4	2.490	.078	F115804
2-5/16	2.535	.078	F118748
2-3/8	2.630	.078	F16810
2-7/16	2.702	.078	F110339
2-1/2	2.775	.078	F15018
2-5/8	2.910	.093	F1243
2-3/4	3.050	.093	F119819
2-7/8	3.191	.093	F116426
3	3.325	.093	F112543

RETAINING RINGS — E-TYPE

Material:	Carbon Spring Steel
External 'E' Series	
Plating:	Phosphate



Shaft Dia. 'A'	Outer Dia. 'B'	Thick 'C'	Part No.
1/16	.156	.010	F115457
3/32	.187	.015	F117417
1/8	.230	.015	F19807
9/64	.270	.018	F13397
5/32	.282	.025	F17248
3/16	.335	.025	F115451

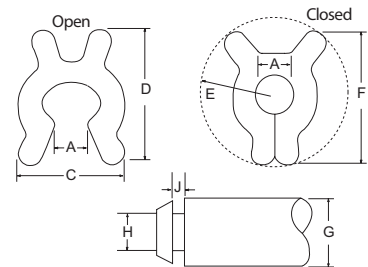
Shaft Dia. 'A'	Outer Dia. 'B'	Thick 'C'	Part No.
7/32	.437	.025	F14961
1/4	.527	.025	F19625
5/16	.500	.025	F14372
3/8	.660	.035	F112595
7/16	.687	.035	F119439
1/2	.800	.042	F13223

Shaft Dia. 'A'	Outer Dia. 'B'	Thick 'C'	Part No.
5/8	.940	.042	F19180
3/4	1.120	.050	F115214
7/8	1.312	.050	F119415
1	1.500	.050	F11406
1-3/16	1.785	.062	F112238
1-3/8	2.070	.062	F117478

CRIMP RING RETAINERS

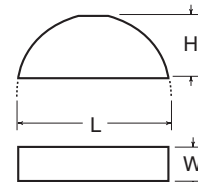
- Easier to use than a cotter pin
- Squeezed into place with pliers. Remove by squeezing the top ears to reopen the ring
- Heavy construction in mild steel offers strong retention
- Zinc-plated
- **Made in USA**

A	Thickness	C	D	E	F	Shaft Size G	Groove Seat Dia. H	Groove Width J	Part No.
.086	.025	.320	.406	.210	.406	5/32	.086	.031	F112639
.098	.055	.364	.490	.297	.475	3/16	.093	.062	F17251
.130	.055	.430	.575	.359	.556	1/4	.125	.062	F19502
.164	.065	.523	.687	.422	.665	5/16	.156	.075	F13362
.190	.065	.593	.745	.437	.730	3/8	.187	.075	F117613
.222	.075	.622	.776	.469	.775	7/16	.218	.083	F116877
.256	.075	.698	.905	.500	.890	1/2	.250	.083	F110674
.285	.075	.822	.986	.563	.984	9/16	.279	.083	F13155
.317	.089	.872	1.100	.609	1.078	5/8	.311	.097	F113547
.387	.089	.948	1.190	.688	1.188	11/16	.341	.097	F119458
.381	.089	1.060	1.297	.797	1.281	3/4	.375	.097	F116988



KEYS — WOODRUFF

Material:	Carbon Steel
Plating:	Unplated



Length 'L'	Thick 'W'	Part No.
3/8	1/16	F118479
3/8	3/32	F116270
3/8	1/8	F114308
1/2	1/16	F118257
1/2	1/8	F117807
5/8	3/32	F119384
5/8	1/8	F114285
5/8	5/32	F15922
5/8	3/16	F16696
3/4	1/8	F12308

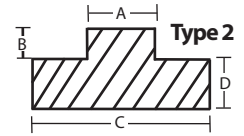
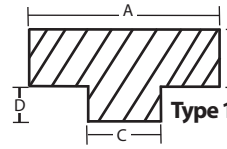
Length 'L'	Thick 'W'	Part No.
3/4	5/32	F13248
3/4	3/16	F110871
3/4	1/4	F13159
7/8	5/32	F116898
7/8	3/16	F116631
7/8	7/32	F119452
7/8	1/4	F1821
1	7/32	F111015
1	3/16	F119935
1	1/4	F15336

Length 'L'	Thick 'W'	Part No.
1	5/16	F19439
1	3/8	F18054
1-1/8	3/16	F16314
1-1/8	7/32	F112345
1-1/8	1/4	F12737
1-1/8	5/16	F19950
1-1/4	3/16	F13789
1-1/4	1/4	F114704
1-1/4	5/16	F11202
1-1/4	3/8	F17934

Length 'L'	Thick 'W'	Part No.
1-3/8	1/4	F114017
1-3/8	5/16	F118797
1-3/8	3/8	F118916
1-1/2	1/4	F15939
1-1/2	3/8	F110369
2-1/8	5/16	F119579
2-1/8	3/8	F114933

KEYSTOCK — STEP

- Used on couplings, gears, sheaves, sprockets and pulleys
- Type 1 designed for repair and salvage of damaged keys in shafts
- Type 2 is useful when mating mismatched keyways, gears and shafts
- Size marked on each piece
- Zinc plated
- 12" pieces



Type	'A'	'B'	'C'	'D'	Part No.
1	3/16"	3/32"	1/8"	1/16"	F15309
2	3/16"	3/32"	1/4"	3/32"	F15021
2	3/16"	3/32"	1/4"	1/8"	F116156
2	1/4"	1/8"	5/16"	1/8"	F112681
2	1/4"	1/8"	3/8"	1/8"	F116727
2	1/4"	1/8"	3/8"	3/16"	F15166
1	3/8"	3/16"	5/16"	1/8"	F117734
1	3/8"	3/16"	5/16"	5/32"	F110762
2	3/8"	3/16"	7/16"	5/32"	F112712

Type	'A'	'B'	'C'	'D'	Part No.
2	3/8"	3/16"	1/2"	3/16"	F13724
2	3/8"	3/16"	1/2"	1/4"	F111497
1	1/2"	1/4"	7/16"	5/32"	F13618
2	1/2"	1/4"	9/16"	3/16"	F118278
2	1/2"	1/4"	5/8"	3/16"	F15411
2	1/2"	1/4"	5/8"	5/16"	F18988
1	5/8"	5/16"	3/8"	3/16"	F111724
2	5/8"	5/16"	11/16"	1/4"	F19168
1	3/4"	3/8"	1/2"	1/4"	F18884

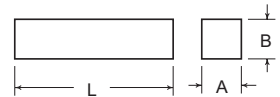
Type	'A'	'B'	'C'	'D'	Part No.
1	3/4"	3/8"	5/8"	3/16"	F13567
1	3/4"	3/8"	5/8"	5/16"	F1728
2	3/4"	3/8"	13/16"	9/32"	F116385
2	3/4"	3/8"	7/8"	7/16"	F115870
2	3/4"	3/8"	1"	1/2"	F13498
1	1"	1/2"	7/8"	7/16"	F119207

KEYSTOCK — SQUARE

Size	Square
3/4" + smaller	+0.000 / -0.002
7/8" to 1-1/2"	+0.000 / -0.003
1-5/8" to 2"	+0.000 / -0.004

STANDARD UNDERSIZE TOLERANCES

Material:	Steel
Plating:	Zinc or Plain



Width 'A'	Width 'B'	Length 'L'	Zinc	Plain
1/8	1/8	12"	F120099	F19661
5/32	5/32	12"	F113816	
3/16	3/16	12"	F113403	F1730
1/4	1/4	12"	F116149	F19972
5/16	5/16	12"	F119420	F111744
3/8	3/8	12"	F118182	F112489

Width 'A'	Width 'B'	Length 'L'	Zinc	Plain
7/16	7/16	12"	F115231	F111198
1/2	1/2	12"	F18390	F112631
9/16	9/16	12"	F11227	F118457
5/8	5/8	12"	F18123	F113086
3/4	3/4	12"	F15797	F1911

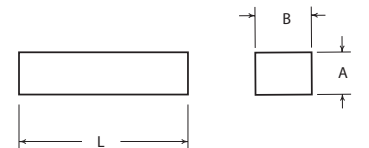
Width 'A'	Width 'B'	Length 'L'	Zinc	Plain
7/8	7/8	12"	F116685	F112592
1	1	12"	F112234	F119642
1-1/8	1-1/8	12"	F17491	
1-1/4	1-1/4	12"	F111746	F110357
1-1/2	1-1/2	12"	F116026	F18110

KEYSTOCK — FLAT

STANDARD UNDERSIZE TOLERANCES

Width 'A'	Width 'B'	Length 'L'	Part No.
3/16	1/4	12"	F115201
1/4	5/16	12"	F117009
1/4	1/2	12"	F111111
5/16	3/8	12"	F116330
3/8	1/2	12"	F113581
1/2	5/8	12"	F115801

Size	Flat
3/4" + smaller	+0.000 / -0.003
7/8" to 1-1/2"	+0.000 / -0.004
1-5/8" to 2"	+0.000 / -0.005



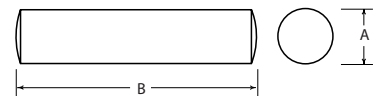
Material:	Steel
Plating:	Zinc

ROD — DRILL AIR QUENCHED

Dia 'A'	Length 'B'	Part No.
3/16	36"	F114331
1/4	36"	F1815
5/16	36"	F11740
3/8	36"	F118669
7/16	36"	F12799
1/2	36"	F14320

Dia 'A'	Length 'B'	Part No.
9/16	36"	F113123
5/8	36"	F13594
3/4	36"	F114948
7/8	36"	F119229
1	36"	F118836

Rockwell Hardness	59-62C
Machinability	Medium
Weldability	Difficult
Corrosion Resistance	Low
Depth of Hardening	Deep
Grindability	Medium



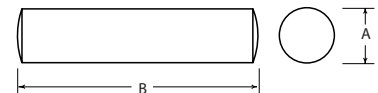
Material:	Tool Steel
Plating:	Air Quenched

ROD — DRILL WATER QUENCHED

Dia 'A'	Length 'B'	Part No.
1/4	36"	F111360
5/16	36"	F13229
3/8	36"	F119211
7/16	36"	F15931
1/2	36"	F19455

Dia 'A'	Length 'B'	Part No.
9/16	36"	F14836
5/8	36"	F112076
3/4	36"	F115896
7/8	36"	F12507
1	36"	F12578

Rockwell Hardness	56C
Machinability	Highest
Weldability	Medium
Corrosion Resistance	Low
Depth of Hardening	Shallow
Grindability	Highest



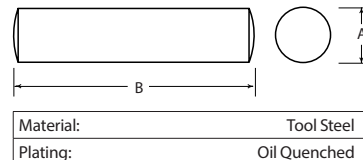
Material:	Tool Steel
Plating:	Water Quenched

ROD — DRILL OIL QUENCHED

Dia 'A'	Length 'B'	Part No.
1/8	36"	F16770
3/16	36"	F117600
1/4	36"	F118594
5/16	36"	F118133
3/8	36"	F17990

Dia 'A'	Length 'B'	Part No.
1/2	36"	F114718
5/8	36"	F12197
3/4	36"	F179
1	36"	F12719

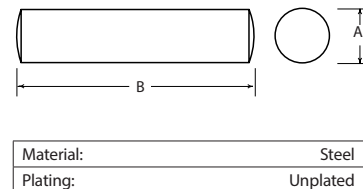
Rockwell Hardness	62-64C
Machinability	High
Weldability	Medium
Corrosion Resistance	Low
Depth of Hardening	Medium
Grindability	High



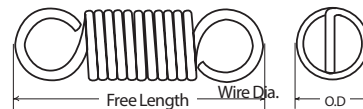
ROD — BAR STOCK ROUND

Dia 'A'	Length 'B'	Part No.
3/16	36"	F111382
1/4	36"	F1998
5/16	36"	F118633
3/8	36"	F118229
7/16	36"	F118446

Dia 'A'	Length 'B'	Part No.
1/2	36"	F12015
9/16	36"	F17707
5/8	36"	F1165
3/4	36"	F118631
7/8	36"	F16766
1	36"	F16047



SPRINGS — EXTENSION SHORT

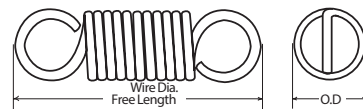


Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.187	.0230	1.25	E1C	F120084
.187	.0230	1.50	E2C	F12900
.187	.0230	1.75	E3C	F13985
.187	.0230	2.00	E4C	F17525
.187	.0230	2.25	E5C	F116475
.187	.0230	2.50	E6C	F11238
.250	.0286	1.00	E7C	F18657
.250	.0286	1.25	E8C	F12622
.250	.0286	1.50	E9C	F111437
.250	.0286	1.75	E10C	F110531
.250	.0286	2.00	E11C	F111780
.250	.0286	2.25	E12C	F19656
.250	.0286	2.50	E13C	F11396
.312	.0286	1.00	E14C	F17454
.312	.0286	1.25	E15C	F119242
.312	.0286	1.50	E16C	F113672

Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.312	.0286	1.75	E17C	F110615
.312	.0286	2.00	E18C	F110436
.312	.0286	2.25	E19C	F115897
.312	.0286	2.50	E20C	F14516
.312	.0348	1.00	E21C	F19402
.312	.0348	1.25	E22C	F113693
.312	.0348	1.50	E23C	F116029
.312	.0348	1.75	E24C	F110136
.312	.0348	2.00	E25C	F1749
.312	.0348	2.25	E26C	F110373
.312	.0348	2.50	E27C	F14594
.375	.0348	1.25	E28C	F17223
.375	.0348	1.50	E29C	F118609
.375	.0348	1.75	E30C	F18305
.375	.0348	2.00	E31C	F118912
.375	.0348	2.25	E32C	F114548

Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.375	.0348	2.50	E33C	F16754
.375	.0348	2.75	E34C	F116193
.375	.0348	3.00	E35C	F116361
.375	.0475	1.50	E36C	F110071
.375	.0475	1.75	E37C	F13075
.375	.0475	2.00	E38C	F113837
.375	.0475	2.25	E39C	F12287
.375	.0475	2.75	E41C	F14790
.375	.0475	3.00	E42C	F113096
.437	.0475	2.50	E43C	F13022
.437	.0475	2.75	E44C	F120057
.437	.0475	3.00	E45C	F116892
.437	.0475	3.25	E46C	F112244
.437	.0475	3.50	E47C	F115588
.437	.0475	3.75	E48C	F112232
.437	.0475	4.00	E49C	F12730

SPRINGS — EXTENSION LONG



Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.960	.1205	4	V1C	F115314
.840	.1055	4	V2C	F12727
.730	.0915	4	V3C	F112789
.640	.0800	4	V4C	F15091
.580	.0720	4	V5C	F13775
.500	.0625	4	V6C	F16351
.430	.0540	4	V7C	F114275
.380	.0475	4	V8C	F18706
.330	.0410	4	V9C	F114755
.280	.0348	4	V10C	F117845
.250	.0317	4	V11C	F12823
.230	.0286	4	V12C	F11255
.210	.0258	4	V13C	F113057

Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.180	.0230	4	V14C	F111680
.960	.1205	6	V18C	F12385
.840	.1055	6	V19C	F16727
.730	.0915	6	V20C	F17309
.640	.0800	6	V21C	F120029
.580	.0720	6	V22C	F112196
.500	.0625	6	V23C	F13174
.430	.0540	6	V24C	F118875
.380	.0475	6	V25C	F112687
.330	.0410	6	V26C	F14730
.280	.0348	6	V27C	F112449
.250	.0317	6	V28C	F117413
.230	.0286	6	V29C	F118498

Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.960	.1205	8	V35C	F17560
.840	.1055	8	V36C	F12818
.730	.0915	8	V37C	F117855
.640	.0800	8	V38C	F11860
.580	.0720	8	V39C	F112346
.500	.0625	8	V40C	F13533
.430	.0540	8	V41C	F114250
.380	.0475	8	V42C	F16914
.330	.0410	8	V43C	F117232
.230	.0286	8	V46C	F118231
.130	.0160	8	V51C	F18352

SPRINGS — EXTENSION SPECIAL SIZES

HOOKED ENDS

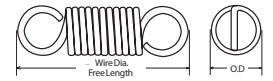
Outside Dia.	Wire Dia.	I.D.	Part No.	Outside Dia.	Wire Dia.	I.D.	Part No.
.343	.02	.303	F132048	.25	.047	.156	F132052
.218	.041	.136	F132049	.343	.054	.235	F132053
.312	.041	.23	F132050	.438	.055	.328	F14334
.375	.041	.293	F11285	.406	.062	.282	F132056
.375	.041	.293	F12732	.5	.062	.376	F132057
.218	.047	.124	F132051	.562	.072	.418	F132054



Outside Dia.	Wire Dia.	I.D.	Part No.
.594	.072	.45	F12253

LOOPED ENDS

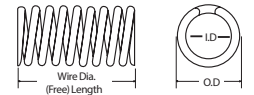
Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.	Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.
.156	.02	.116	1.875	F131992	.406	.041	.324	2.75	F132010
.25	.02	.21	2.312	F131993	.406	.041	.324	2.75	F132011
.281	.02	.241	2.5	F131994	.468	.041	.386	2.25	F132012
.187	.028	.131	1.687	F131988	.469	.041	.387	4-1/2	F11964
.187	.028	.131	2	F131989	.5	.041	.418	3.812	F132013
.234	.028	.178	1.5	F131990	.656	.041	.574	4.875	F132014
.25	.028	.194	1.875	F131991	.375	.047	.281	2.187	F132015
.250	.028	.194	6	F111578	.375	.047	.281	2.687	F132016
.218	.032	.154	2	F131995	.437	.047	.343	3.687	F132017
.25	.032	.186	2.25	F131996	.437	.047	.343	5	F132018
.312	.032	.248	2.125	F131997	.468	.047	.374	6.75	F132019
.187	.035	.117	2	F131998	.437	.054	.329	1.937	F132020
.25	.035	.18	2.5	F131999	.468	.054	.36	2.437	F132021
.25	.035	.18	3	F132000	.468	.054	.36	2.437	F132022
.281	.035	.211	2.437	F132001	.375	.062	.251	2.187	F132023
.3125	.035	.2425	5-5/8	F117082	.437	.062	.313	2.937	F132024
.343	.035	.273	4	F132002	.437	.062	.313	2.937	F132025
.375	.035	.305	2	F132003	.5	.062	.376	2.312	F132026
.25	.041	.168	2.343	F132004	.5	.062	.376	2.312	F132027
.281	.041	.199	6.5	F132005	.5	.062	.376	3.5	F132028
.312	.041	.23	1.687	F132006	.5	.062	.376	3.625	F132029
.312	.041	.23	2.187	F132007	.5	.062	.376	9.75	F132030
.312	.041	.23	2.687	F132008	.625	.062	.501	5.375	F132031
.312	.041	.23	3.437	F132009	.562	.072	.418	3.937	F132032



Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.
.625	.072	0.481	8-1/2	F119526
.813	.072	0.669	8-1/2	F112457
0.5	0.08	0.34	6	F132033
0.625	0.08	0.465	5.875	F132034
0.75	0.091	0.568	10.25	F132035
0.75	0.105	0.54	1.75	F132036
0.75	0.105	0.54	1.75	F132037
0.75	0.105	0.54	1.937	F132038
0.75	0.105	0.54	1.937	F132039
0.75	0.105	0.54	2.187	F132040
0.75	0.105	0.54	2.187	F132060
0.75	0.105	0.54	2.312	F132041
0.75	0.105	0.54	2.312	F132042
0.75	0.105	0.54	2.625	F132043
0.75	0.105	0.54	2.812	F132044
0.75	0.105	0.54	3	F132045
0.75	0.105	0.54	3.375	F132046
0.75	0.105	0.54	3.812	F132062
0.75	0.105	0.54	5.5	F132063
0.75	0.105	0.54	3.37	F132061
0.75	0.105	0.54	8	F132047

SPRINGS — COMPRESSION SPECIAL SIZES

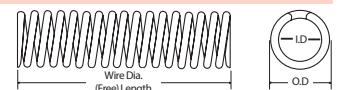
Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.	Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.
.428	.035	.368	1-7/8	F17794	.203	.032	.139	2.25	F131925
.344	.041	.262	1	F17089	.203	.032	.139	2.25	F131926
.375	.041	.293	1-3/4	F18233	.218	.032	.154	1.25	F131927
.438	.041	.356	2-1/4	F115467	.234	.032	.17	1.75	F131928
.540	.067	.406	2-1/2	F1907	.25	.032	.186	1.437	F131929
.500	.072	.356	2-3/4	F112856	.25	.032	.186	1.437	F131930
.563	.072	.421	1-3/8	F114437	.312	.032	.248	1.687	F131973
.750	.08	.590	2	F112817	.312	.035	.242	1.5	F131931
.218	.015	.188	1.625	F131962	.375	.035	.305	1.437	F131974
.218	.015	.188	1.625	F131963	.312	.041	.23	1.375	F131975
.187	.02	.147	1.125	F131919	.312	.041	.23	1.375	F131976
.187	.02	.147	1.5	F131920	.312	.041	.23	2	F131932
.25	.02	.21	2	F131921	.312	.041	.23	2.312	F131977
.25	.02	.21	2	F131922	.312	.041	.23	2.312	F131978
.312	.02	.272	1.5	F131923	.375	.041	.293	1.937	F131979
.187	.022	.143	1.312	F131964	.437	.041	.355	1.437	F131980
.25	.022	.206	1.875	F131915	.468	.041	.386	5.25	F131933
.187	.023	.141	1.312	F131965	.625	.041	.543	2.687	F131981
.25	.023	.204	2	F131916	.312	.047	.218	1.5	F131934
.25	.023	.204	2	F131917	.312	.047	.218	1.5	F131935
.25	.025	.2	2	F131918	.328	.047	.234	3.312	F131982
.312	.025	.262	1.437	F131966	.375	.047	.281	1.5	F131936
.312	.025	.262	1.437	F131967	.437	.047	.343	1.75	F131937
.375	.025	.325	1.875	F131968	.437	.047	.343	3	F131938
.312	.026	.26	1.875	F131969	.437	.047	.343	3	F131939
.312	.026	.26	1.875	F131970	.468	.047	.374	1.125	F131983
.328	.028	.272	1.125	F131971	.5	.047	.406	1.75	F131940
.328	.028	.272	1.125	F131972	.75	.047	.656	3.375	F131941



Outside Dia.	Wire Dia.	I.D.	Overall Length	Part No.
.5	.054	.392	1.75	F131942
.625	.054	.517	1.562	F131984
.281	.062	.157	3	F131943
.5	.062	.376	1.437	F131944
.5	.062	.376	2.812	F131945
.625	.062	.501	2	F131946
.812	.062	.688	3.25	F131947
.562	.072	.418	1.75	F131948
.625	.072	.481	2	F131949
.687	.072	.543	9.5	F131950
.437	.08	.277	5	F131951
.468	.08	.308	2.375	F131952
.687	.08	.527	1.5	F131953
.875	.08	.715	3.437	F131954
.625	.091	.443	1.75	F131955
.625	.091	.443	1.75	F131956
.75	.105	.54	3	F131957
.968	.105	.758	3.75	F131958
.937	.12	.697	9.5	F131959
1.031	.12	.791	5.375	F131985
1.25	.12	1.01	4	F131960
1	.135	.73	3.75	F131961

SPRINGS — COMPRESSION LONG

Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.	Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.964	.1205	12	8C11C	F19622	.500	.0625	12	8C16C	F17655
.844	.1050	12	8C12C	F1345	.432	.0540	12	8C17C	F11117
.732	.0915	12	8C13C	F118759	.380	.0475	12	8C18C	F114685
.640	.0800	12	8C14C	F17843	.328	.0410	12	8C19C	F114789
.576	.0720	12	8C15C	F111875	.278	.0348	12	8C20C	F110709



Outside Dia.	Wire Dia.	Overall Length	Gardner Part No.	Part No.
.254	.0317	12	8C21C	F113020
.229	.0286	12	8C22C	F18030
.206	.0258	12	8C23C	F111816
.184	.0230	12	8C24C	F1284

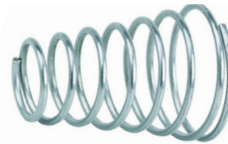
SPRINGS — TORSION

Outside Dia.	Wire Dia.	Part No.
.5	.072	F132058
.5	.072	F132059
.25	.032	F12173



SPRINGS — CONE COMPRESSION

Outside Dia.	Wire Dia.	Part No.
.406 x .687	.041	F131986
.406 x .687	.041	F131987

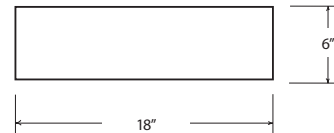


SHIM STOCK — FLAT SHEETS

Thickness	Part No.	Thickness	Part No.
.0100	F13646	.0165	F14920
.0120	F16647	.0200	F1347
.0135	F14229	.0250	F16170
.0150	F112614	.0310	F115188

STEEL

- Full hard, AISI1010
- Tensile strength: 53,000 PSI
- 6" x 18" sheets

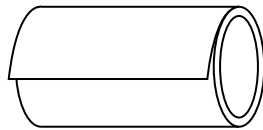


SHIM STOCK — ROLLED

STAINLESS

Thickness	Part No.
.0050	F112216
.0070	F19610
.0100	F117294
.0150	F16796

6" x 50" rolls

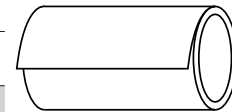


- Full hard, cold rolled
- Type 302
- **Ultimate tensile strength:** 185,000 PSI

BRASS

Thickness	Part No.
.0010	F111788
.0030	F112790
.0050	F116883

6" x 100" rolls



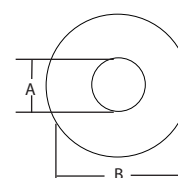
- Half hard, cold rolled
- CDA 260 Alloy
- **Tensile strength:** 57-67,000 PSI
- **Elongation:** 23% in 2"

BUSHINGS — WIDE MACHINERY

I.D. A	O.D. B	Gauge Thickness	Part No.
3/4	1-1/2	14	F112663
7/8	1-3/4	14	F118787
1	2	14	F114713
1-1/8	2-1/8	14	F19489
1-1/4	2-1/4	14	F15339
1-3/8	2-1/2	14	F17975
1-1/2	3	14	F111602

I.D. A	O.D. B	Gauge Thickness	Part No.
1-5/8	3-1/8	14	F12313
1-3/4	3-1/4	14	F11967
1-7/8	3-3/8	14	F14523
2	3-1/2	14	F112198
2-1/2	3-7/8	14	F110669

WIDE RIM



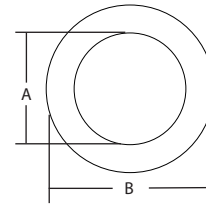
- Specially designed for use as shaft spacers.
- Reduces shaft wear and end play.
- Zinc-Plated

BUSHINGS — NARROW MACHINERY

I.D. A	O.D. B	Gauge Thickness	Part No.
1/2	7/8	18	F12914
1/2	7/8	14	F13044
9/16	1	18	F11210
9/16	1	14	F14699
5/8	1	18	F11969
5/8	1	14	F116695
3/4	1-1/4	18	F15555
3/4	1-1/4	14	F111040
7/8	1-3/8	18	F15624
7/8	1-3/8	14	F119463
1	1-1/2	14	F17624
1	1-1/2	10	F1861
1-1/8	1-3/4	14	F18409
1-1/8	1-3/4	10	F119403
1-1/4	1-7/8	14	F118576

I.D. A	O.D. B	Gauge Thickness	Part No.
1-1/4	1-7/8	10	F110025
1-3/8	2-1/8	14	F115825
1-3/8	2-1/8	10	F15026
1-1/2	2-1/4	14	F112027
1-1/2	2-1/4	10	F13067
1-5/8	2-3/8	14	F118511
1-5/8	2-3/8	10	F19281
1-3/4	2-1/2	14	F13394
1-3/4	2-1/2	10	F15313
1-7/8	2-7/8	14	F11198
2	3	14	F114782
2-1/8	3-1/8	14	F110251
2-1/4	3-1/4	14	F112493
2-3/8	3-3/8	14	F13020

NARROW RIM



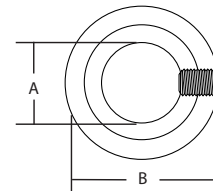
- Specially designed for use as shaft spacers.
- Reduces shaft wear and end play.
- Zinc-Plated

SHAFT COLLARS — SOLID WITH SET SCREW

I.D. A	O.D. B	Thickness	Part No.
1/8	3/8	1/4	F16378
3/16	7/16	1/4	F110448
1/4	1/2	5/16	F14280
5/16	5/8	5/16	F115401
3/8	3/4	3/8	F13745
7/16	7/8	7/8	F115612
1/2	1	7/16	F113299
9/16	1	7/16	F111409
5/8	1-1/8	1/2	F119658
11/16	1-1/4	9/16	F15967
3/4	1-1/4	9/16	F118705
13/16	1-5/16	9/16	F13423
7/8	1-1/2	9/16	F110759
15/16	1-5/8	9/16	F16983
1	1-5/8	5/8	F16793
1-1/16	1-3/4	5/8	F15474
1-1/8	1-3/4	5/8	F17288
1-3/16	2	11/16	F12886

I.D. A	O.D. B	Thickness	Part No.
1-1/4	2	11/16	F112374
1-5/16	2-1/8	11/16	F17675
1-3/8	2-1/8	3/4	F114979
1-7/16	2-1/4	3/4	F13894
1-1/2	2-1/4	3/4	F18852
1-5/8	2-1/2	13/16	F16650
1-11/16	2-1/2	13/16	F113802
1-3/4	2-3/4	7/8	F14223
1-13/16	2-3/4	7/8	F115044
1-7/8	2-3/4	7/8	F114054
1-15/16	3	7/8	F110215
2	3	7/8	F12561
2-1/8	3	7/8	F11229
2-3/16	3-1/4	15/16	F116346
2-1/4	3-1/4	15/16	F114764
2-1/2	3-1/2	1	F16675
3	4-1/4	1-1/8	F119333
3-7/16	4-1/2	1-1/8	F114185

SOLID SET SCREW STYLE



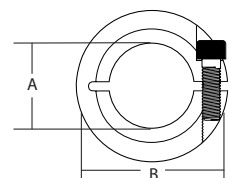
- Carbon steel zinc plated
- Flush set screw
- Stamped with bore size

SHAFT COLLARS — ONE PIECE

I.D. A	O.D. B	Thickness	Part No.
1/4	1/2	5/16	F16311
5/16	5/8	5/16	F114610
3/8	3/4	3/8	F11085
1/2	1	7/16	F111874
5/8	1-1/8	1/2	F111051
3/4	1-1/4	9/16	F115635
1	1-5/8	5/8	F114582

I.D. A	O.D. B	Thickness	Part No.
1-3/8	2-1/8	3/4	F116245
1-7/16	2-1/4	3/4	F14896
1-5/8	2-1/2	13/16	F1593
2-1/4	3-1/4	15/16	F11435
2-7/16	3-1/2	3/4	F112598
3	4-1/4	1-1/8	F14703
3-7/16	4-1/2	1-1/8	F111453

ONE-PIECE STYLE



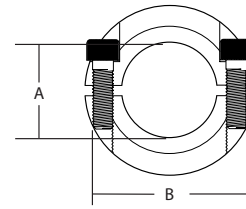
- Carbon steel black oxide plated
- Will not mar shaft
- Single split

SHAFT COLLARS — TWO PIECE

I.D. A	O.D. B	Thickness	Part No.
1/8	5/8	5/16	F116446
3/16	5/8	5/16	F117448
1/4	5/8	5/16	F116901
5/16	11/16	5/16	F113125
3/8	7/8	3/8	F1363
7/16	15/16	3/8	F114280
1/2	1-1/8	13/32	F18858
9/16	1-5/16	7/16	F13123
5/8	1-5/16	7/16	F11314
3/4	1-1/2	1/2	F1373
7/8	1-5/8	1/2	F14655
1	1-3/4	1/2	F15195
1-1/8	1-7/8	1/2	F111362
1-3/16	2-1/6	1/2	F112398
1-1/4	2-1/6	1/2	F110810
1-5/16	2-1/4	9/16	F1991
1-3/8	2-1/4	9/16	F118892

I.D. A	O.D. B	Thickness	Part No.
1-7/16	2-1/4	9/16	F14909
1-1/2	2-3/8	9/16	F118721
1-9/16	2-3/8	9/16	F11610
1-5/8	2-5/8	11/16	F12701
1-11/16	2-3/4	11/16	F117420
1-3/4	2-3/4	11/16	F119174
1-7/8	3	11/16	F118994
1-15/16	3	11/16	F15183
2	3	11/16	F114066
2-3/16	3-1/4	3/4	F1117
2-1/4	3-1/4	3/4	F14475
2-7/16	3-1/2	3/4	F117847
2-1/2	3-3/4	7/8	F119297
2-15/16	4-1/4	7/8	F13381
3	4-1/4	7/8	F119231
3-7/16	4-3/4	7/8	F12903

TWO-PIECE STYLE



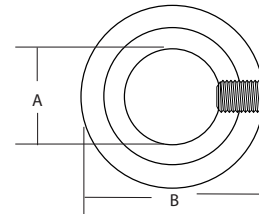
- Carbon steel black oxide plated
- Will not mar shaft
- No need to disassemble machinery

SHAFT COLLARS — STAINLESS STEEL

I.D. A	O.D. B	Thickness	Part No.
1/8	3/8	1/4	F111626
3/16	7/16	1/4	F14682
1/4	1/2	5/16	F13018
5/16	5/8	5/16	F1255
3/8	3/4	3/8	F112618
7/16	7/8	7/16	F16949
1/2	1	7/16	F17949
9/16	1	7/16	F111221

I.D. A	O.D. B	Thickness	Part No.
5/8	1-1/8	1/2	F15106
3/4	1-1/4	9/16	F115348
7/8	1-1/2	9/16	F111100
1	1-1/4	5/8	F12829
1-3/16	2	11/16	F13703
1-1/4	2	11/16	F17172
1-1/2	2-1/4	3/4	F110755

SOLID SET SCREW STYLE

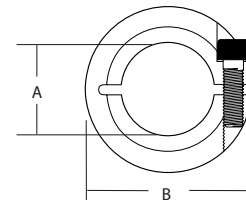


- Stainless steel
- Flush set screw
- Stamped with bore size

I.D. A	O.D. B	Thickness	Part No.
5/16	11/16	5/16	F15367
3/8	7/8	3/8	F15958
7/16	1-5/16	3/8	F113424
1/2	1-1/8	13/32	F14716
5/8	1-5/16	7/16	F1564

I.D. A	O.D. B	Thickness	Part No.
3/4	1-1/2	1/2	F112153
7/8	1-5/8	13/32	F16677
1	1-3/4	1/2	F119560
1-1/4	2-1/16	1/2	F1787

ONE-PIECE STYLE

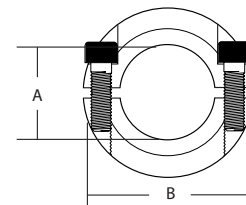


- Stainless steel
- Will not mar shaft
- Single split

I.D. A	O.D. B	Thickness	Part No.
1/4	5/8	5/16	F114449
5/16	11/16	5/16	F118929
3/8	7/8	3/8	F13093
7/16	1-5/16	3/8	F19020
1/2	1-1/8	13/32	F119017
9/16	1-5/16	7/16	F15173
5/8	1-5/16	7/16	F12796
3/4	1-1/2	1/2	F13872
7/8	1-5/8	1/2	F16157

I.D. A	O.D. B	Thickness	Part No.
1	1-3/4	1/2	F17697
1-1/8	1-7/8	1/2	F18093
1-3/16	2-1/16	1/2	F14364
1-1/4	2-1/16	1/2	F15392
1-1/2	2-3/8	9/16	F115116
1-5/16	2-1/4	9/16	F15963
1-3/8	2-1/4	9/16	F17173
1-3/4	2-3/4	11/16	F116252
2	3	11/16	F117184

TWO-PIECE STYLE



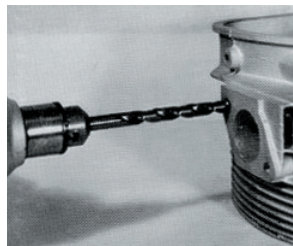
- Stainless steel
- Will not mar shaft
- No need to disassemble machinery

THREAD REPAIR — PERMA-COIL® INSERTS & KITS

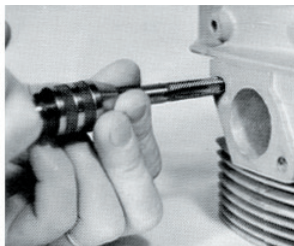
Prefix 693

Perma-Coil® helically coiled inserts are made of stainless steel wire that has been rolled to a carefully controlled thread form. When installed, Perma-Coil® inserts adjust to a tapped hole, becoming functional. Perma-Coil® inserts and repair kits are designed to repair stripped threads in a variety of metals, such as aluminum, aluminum alloys, steel and cast iron. If the original threads can be stripped, Perma-Coil® inserts can repair them. By following the detailed instructions enclosed in every Perma-Coil® kit, even an inexperienced do-it-yourselfer can repair stripped threads, permanently.

Easy-To Use:



1. Drilling out damaged threads.



2. Tap new threads.



3. Install new Perma-Coil® insert. (Prewinding tool shown is used for fine thread applications only)



4. Remove tang from insert. You now have a permanently repaired thread.

Each size comes in various lengths

- **Short** (length same as the diameter of the bolt or screw for short thread engagement applications).
- **Medium** (length 1-1/2 times the diameter of the bolt or screw) — provides sufficient strength in most applications.
- **Long** (length two times the diameter of the bolt or screw) — provides higher strength in critical applications, (especially in magnesium).
- Winzer stocks a complete line of Perma-Coil® Stainless Steel inserts for standard and spark plug repair.
- Perma-Coil® is made in the USA and is 100% interchangeable with Helicoil

THREAD REPAIR — PERMA-COIL® MASTER KITS



F61441
Inch Coarse
KIT INCLUDES:
6 each inserts 1/4-20, 5/16-18, 7/16-14, 1/2-13
1 each installation tool 1/4-20, 5/16-18, 7/16-14, 1/2-13
1 each STI Tap 1/4-20, 5/16-18, 7/16-14, 1/2-13



F14452
Inch Fine
KIT INCLUDES:
6 each inserts 1/4-28, 5/16-24, 7/16-20, 1/2-20
1 each installation tool 1/4-28, 5/16-24, 7/16-20, 1/2-20
1 each STI Tap 1/4-28, 5/16-24, 7/16-20, 1/2-20



F6342
Metric
KIT INCLUDES:
6 each inserts M5x.8, M6x1.0, M8x1.25, M10x1.25, M10x1.5
1 each installation tool M5x.8, M6x1.0, M8x1.25, M10x1.25, M10x1.5
1 each STI Tap M5x.8, M6x1.0, M8x1.25, M10x1.25, M10x1.5

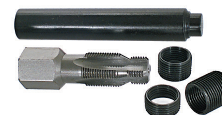
THREAD REPAIR — PERMA-PLUG® SPARK PLUG KITS

Size	Reach	Perma-Coil Part No.	Insert Part No.
M14 x 1.25	Short	214-S	F110720
M14 x 1.25	Medium	214-N	F112950
M14 x 1.25	Long	214-L	F12354

Note: Additional inserts can be ordered separately.



F84213
Kit Contents:
(1) Piloted Tap
(1) Installation Tool
(1) Short Reach Insert
(1) Medium Reach Insert
(1) Long Reach Insert



- Can be used with taper seat or Gasket Type Spark Plugs
- Works in aluminum and cast iron
- No drilling needed
- Permanent repair
- Easy Installation
- Solid inserts

THREAD REPAIR — PERMA-COIL® INSERT KITS

1

COARSE THREAD

Length of Insert	Inserts Per Kit	Size	Length of Insert	Part No.
1208-014	12	4-40	.168	F18353
1208-016	12	6-32	.207	F11849
1208-018	12	8-32	.246	F18559
1208-101	12	10-24	.285	F18253
1208-102	12	12-24	.324	F17716
1208-104	12	1/4-20	.375	F16978
1208-105	12	5/16-18	.469	F15594
1208-106	12	3/8-16	.562	F116369
1208-107	6	7/16-14	.656	F16697
1208-108	6	1/2-13	.750	F1127
1208-109	6	9/16-12	.844	F19264
1208-110	6	5/8-11	.938	F117132
1208-112	4	3/4-10	1.125	F187
3208-C14	6	7/8-9	1.312	F17782
3208-C16	6	1-8	1.500	F14944

FINE THREAD

Length of Insert	Inserts Per Kit	Size	Length of Insert	Part No.
1208-201	12	10-32	.285	F13312
1208-204	12	1/4-28	.375	F1356
1208-205	12	5/16-24	.469	F19955
1208-206	12	3/8-24	.562	F14587
1208-207	6	7/16-20	.656	F111596
1208-208	6	1/2-20	.750	F111526
1208-209	6	9/16-18	.844	F116161
1208-210	6	5/8-18	.938	F119108
1208-212	4	3/4-16	1.125	F11344
3208-F14	6	7/8-14	1.312	F1573
3208-F164	6	1-14	1.500	F117010
3208-F16	6	1-12	1.500	F14016

Kit Contains:

- Stainless steel inserts
- Tap (Special STI)
- Installation tool



METRIC COARSE THREAD

Length of Insert	Inserts Per Kit	Size	Length of Insert	Part No.
1221-304	12	M4x.7	.0060mm	F1320
1221-305	12	M5x.8	7.5mm	F1415
1221-306	12	M6x1.0	9.0mm	F115803
1221-307	12	M7x1.0	10.5mm	F112675
1221-308	12	M8x1.25	12.0mm	F117407
1221-310	12	M10x1.5	15.0mm	F15998
1221-311	6	M11x1.50	16.5mm	F111802
3221-M12C	6	M12x1.75	18.0mm	F118041
3221-M14C	6	M14x2.0	21.0mm	F17233
3221-M16C	6	M16x2.0	24.0mm	F19899
3221-M20C	6	M20x2.5	30mm	F11441

METRIC FINE THREAD

Length of Insert	Inserts Per Kit	Size	Length of Insert	Part No.
1221-M8F	12	M8x1.0	12.0mm	F17458
1221-M10I0	12	M10x1.0	15.0mm	F18474
3221-M10F	12	M10x1.25	15.0mm	F111060
3221-M12F	6	M12x1.25	18.0mm	F117896
3221-M12I5	6	M12x1.5	18.0mm	F115263
3221-M14F	6	M14x1.5	28.0mm	F112650
3221-M16F	6	M16x1.50	24.0mm	F116935

THREAD REPAIR — PERMA-COIL® INSERTS

Each size comes in various lengths

- **Short** (length same as the diameter of the bolt or screw for short thread engagement applications).
- **Medium** (length 1-1/2 times the diameter of the bolt or screw) — provides sufficient strength in most applications.
- **Long** (length two times the diameter of the bolt or screw) — provides higher strength in critical applications, (especially in magnesium).
- Winzer stocks a complete line of Perma-Coil® Inserts. Stainless steel inserts are for standard and spark plug repair.
- Perma-Coil® is made in the USA and is 100% interchangeable with Helicoil



SPARK PLUG INSERTS

Size	Length	Perma-Coil Part No.	Part No.	Size	Length	Perma-Coil Part No.	Part No.
M12x1.25	1/2"	SP1213-01-0500	F18821	M14x1.25	7/16"	SP1413-01-0438	F14640
M12x1.25	3/4"	SP1213-01-0750	F112169	M14x1.25	1/2"	SP1413-01-0500	F19803
M14x1.25	3/8"	SP1413-01-0375	F13379	M14x1.25	3/4"	SP1413-01-0750	F116970

The easiest way to permanently repair stripped spark plug port threads, can be used to repair both taperseat and gasket type spark plug assemblies.

THREAD REPAIR — PERMA-COIL® INSERTS (continued)

INCH (COARSE)

Size	Drill Size	Length	Perma-Coil Part No.	Part No.
4-40	1/8	0.112	208-C04-0112	F17226
4-40	1/8	0.224	208-C04-0224	F113227
6-32	5/32	0.138	208-C06-0138	F114045
6-32	5/32	0.207	208-C06-0207	F14191
6-32	5/32	0.276	208-C06-0276	F18021
8-32	11/64	0.246	208-C08-0246	F114791
8-32	11/64	0.328	208-C08-0328	F117918
10-24	13/64	0.19	208-C1-0190	F110320
10-24	13/64	0.285	208-C1-0285	F13178
10-24	13/64	0.38	208-C1-0380	F11071
12-24	15/64	0.216	208-C2-0216	F114454
12-24	15/64	0.324	208-C2-0324	F11918
12-24	15/64	0.432	208-C2-0432	F14469
1/4-20	17/64	0.25	208-C4-0250	F15033
1/4-20	17/64	0.375	208-C4-0375	F111029
1/4-20	17/64	0.5	208-C4-0500	F16559
5/16-18	21/64	0.312	208-C5-0312	F111643
5/16-18	21/64	0.469	208-C5-0469	F114252
3/8-16	25/64	0.562	208-C6-0562	F16034
3/8-16	25/64	0.75	208-C6-0750	F18727
7/16-14	29/64	0.438	208-C7-0438	F12298
7/16-14	29/64	0.656	208-C7-0656	F11802
7/16-14	29/64	0.875	208-C7-0875	F19542
1/2-13	17/32	0.5	208-C8-0500	F13597
1/2-13	17/32	0.75	208-C8-0750	F12363
1/2-13	17/32	1	208-C8-1.000	F16290
9/16-12	19/32	0.562	208-C9-0562	F17668
9/16-12	19/32	1.125	208-C9-1.125	F14014
5/8-11	21/32	0.625	208-C10-0625	F11091
5/8-11	21/32	0.938	208-C10-0938	F12494
3/4-10	25/32	0.75	208-C12-0750	F16964
3/4-10	25/32	1.125	208-C12-1.125	F19135
7/8-9	29/32	1.75	208-C14-1.750	F114222
1-8	1-1/32	1	208-C16-1.000	F114281
1-8	1-1/32	1.5	208-C16-1.500	F17195
1-8	1-1/32	2	208-C16-2.000	F14204

INCH (FINE)

Size	Drill Size	Length	Perma-Coil Part No.	Part No.
10-32	13/64	.190	208-F1-0190	F110744
10-32	13/64	.285	208-F1-0285	F18479
1/4-28	17/64	.250	208-F4-0250	F114381
1/4-28	17/64	.375	208-F4-0375	F115261
5/16-24	21/64	.312	208-F5-0312	F116454
5/16-24	21/64	.469	208-F5-0469	F116761
5/16-24	21/64	.625	208-F5-0625	F11152
3/8-24	25/64	.375	208-F6-0375	F113042
3/8-24	25/64	.562	208-F6-0562	F15208
3/8-24	25/64	.750	208-F6-0750	F14224
7/16-20	29/64	.438	208-F7-0438	F1773
7/16-20	29/64	.656	208-F7-0656	F116853
1/2-20	33/64	.500	208-F8-0500	F119013
1/2-20	33/64	.750	208-F8-0750	F1481
1/2-20	33/64	1.000	208-F8-1000	F119319
9/16-18	37/64	.844	208-F9-0844	F118962
9/16-18	37/64	1.125	208-F9-01125	F13739
5/8-18	41/64	.938	208-F10-0938	F19847
5/8-18	41/64	1.250	208-F10-1250	F111683
3/4-16	49/64	1.500	208-F12-1500	F114852
7/8-14	57/64	1.312	208-F14-1312	F114263
7/8-14	57/64	1.750	208-F14-1750	F118123
1-14	1-1/64	1.500	208-F164-1500	F19709
1-14	1-1/64	2.000	208-F164-2000	F112913
1-12	1-1/64	1.000	208-F16-1000	F12547
1-12	1-1/64	1.500	208-F16-1500	F14504
1-12	1-1/64	2.000	208-F16-2000	F19404



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METRIC (COARSE)

Size	Drill Size	Length	Perma-Coil Part No.	Part No.
M4 x .70	11/64	4mm	206-M4C-0040	F117265
M4 x .70	11/64	6mm	206-M4C-0060	F116703
M5 x .80	13/64	5mm	206-M5C-0050	F119966
M5 x .80	13/64	7.5mm	206-M5C-0075	F11953
M5 x .80	13/64	10mm	206-M5C-0100	F15082
M6 x 1.0	1/4	6mm	206-M6C-0060	F11380
M6 x 1.0	1/4	9mm	206-M6C-0090	F19352
M6 x 1.0	1/4	12mm	206-M6C-0120	F1414
M7 x 1.0	9/32	10.5mm	206-M7C-0105	F14983
M7 x 1.0	9/32	14mm	206-M7C-0140	F12811
M8 x 1.25	21/64	12mm	206-M8C-0120	F1742
M8 x 1.25	21/64	16mm	206-M8C-0160	F16828
M10 x 1.50	13/32	10mm	206-M10C-0100	F116172
M10 x 1.50	13/32	15mm	206-M10C-0150	F14653
M10 x 1.50	13/32	20mm	206-M10C-0200	F14718
M11 x 1.5	29/64	11mm	206-M11C-0110	F117283
M11 x 1.5	29/64	16.5mm	206-M11C-0165	F119581
M11 x 1.5	29/64	22mm	206-M11C-0220	F118204
M12 x 1.75	31/64	12mm	206-M12C-0120	F117501
M12 x 1.75	31/64	18mm	206-M12C-0180	F119341
M14 x 2.0	37/64	14mm	206-M14C-0140	F19996
M14 x 2.0	37/64	28mm	206-M14C-0280	F118518
M16 x 2.0	21/32	24mm	206-M16C-0240	F11363
M20 x 2.5	13/16	20mm	206-M20C-0200	F11245
M20 x 2.5	13/16	30mm	206-M20C-0300	F1409

METRIC (FINE)

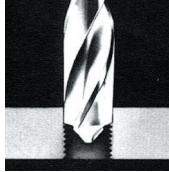
Size	Drill Size	Length	Perma-Coil Part No.	Part No.
M8 x 1.0	21/64	8mm	206-M8F-0080	F12095
M8 x 1.0	21/64	12mm	206-M8F-0120	F116105
M8 x 1.0	21/64	16mm	206-M8F-0160	F118734
M10 x 1.0	13/32	15mm	206-M1010-0150	F14913
M10 x 1.0	13/32	20mm	206-M1010-0200	F16546
M10 x 1.25	13/32	10mm	206-M10F-0100	F14548
M10 x 1.25	13/32	15mm	206-M10F-0150	F1445
M11 x 1.0	7/16	16.5mm	206-M11F-0165	F19400
M11 x 1.25	29/64	16.5mm	206-M1125-0165	F118020
M12 x 1.25	31/64	18mm	206-M12-0180	F16860
M12 x 1.25	31/64	24mm	206-M12-0240	F115976
M12 x 1.5	31/64	18mm	206-M1215-0180	F1739
M12 x 1.5	31/64	24mm	206-M1215-0240	F115829
M14 x 1.5	9/16	14mm	206-M14-0140	F13395
M14 x 1.5	9/16	21mm	206-M14F0210	F114940
M16 x 1.5	21/32	32mm	206-M16-0320	F16172

THREAD REPAIR — KEENSERT® INSERTS

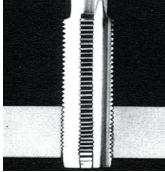
Keenserts® are solid, one piece, key-locking inserts used to repair stripped or damaged threads in a variety of metals. The Keensert® locking “Kees” provide a positive mechanical lock, which prevents rotation due to vibration or torsion. Keenserts® are available in carbon steel, both in inch and metric series. Installation tools are also available separately.

Typical Applications: Automobiles, Buses, Trucks, Heavy Equipment, Marine Equipment, Machinery, Tooling, Power Tools, Recreational Vehicles and Small Engines

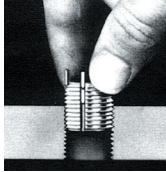
EASY TO INSTALL:



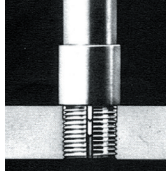
Drill out old threads, using standard drill



Tap new threads, using standard tap



Screw in insert until slightly below surface. “Kees” act as depth stop.



Drive “Kees” down with several light taps on the installation tool.



Installed Insert



Features:

- Installed with standard drills and taps
- No pre-winder tool required
- No tang break-off
- Positive mechanical lock against rotation
- **Used in virtually any material:** aluminum, magnesium, cast iron and steel
- One length per size provides maximum pullout strength
- Full range of inch and metric sizes
- Available in thinwall and heavy duty thickwall styles
- Easy to remove

KEENSERT® — THINWALL (INCH)

Size	External Size	Drill Size	Part No.
10-24	5/16-18	I	F16487
10-32	5/16-18	I	F113368
1/4-20	3/8-16	Q	F13434
1/4-28	3/8-16	Q	F110561
5/16-18	7/16-14	X	F117805
5/16-24	7/16-14	X	F14386
3/8-16	1/2-13	29/64	F1727
3/8-24	1/2-13	29/64	F12066
7/16-14	9/16-12	33/64	F111565
7/16-20	9/16-12	33/64	F115633
1/2-13	5/8-11	37/64	F119562
1/2-20	5/8-11	37/64	F117318



KEENSERT® — THINWALL (INCH) INSTALLATION TOOLS

Size	Part No.
#10	F13334
1/4	F11527
5/16	F118202
3/8	F12411
7/16	F13929
1/2	F114096



KEENSERT® — THICKWALL (INCH)

Size	External Size	Drill Size	Part No.
8-32	5/16-18	I	F117044
10-24	3/8-16	Q	F114547
10-32	3/8-16	Q	F11958
1/4-20	7/16-14	X	F19715
1/4-28	7/16-14	X	F17460
5/16-18	1/2-13	29/64	F12591
5/16-24	1/2-13	29/64	F116865
3/8-16	9/16-12	33/64	F18993
3/8-24	9/16-12	33/64	F18070
7/16-14	5/8-11	37/64	F14760
7/16-20	5/8-11	37/64	F115613
1/2-13	3/4-16	45/64	F115828
1/2-20	3/4-16	45/64	F14765
9/16-12	3/4-16	45/64	F17876
9/16-18	3/4-16	45/64	F119057
5/8-11	7/8-14	53/64	F119587
5/8-18	7/8-14	53/64	F13650
3/4-10	1-1/8-12	1-1/16	F118452
3/4-16	1-1/8-12	1-1/16	F19118
7/8-9	1-1/4-12	1-3/16	F115548
1-8	1-3/8-12	1-5/16	F17337



KEENSERT® — THICKWALL (INCH) INSTALLATION TOOLS

Size	Part No.
#8	F11589
#10	F114706
1/4	F110631
5/16	F16317
3/8	F118741
7/16	F115689
1/2	F112469
9/16	F16561
5/8	F110089
3/4	F17187
1	F13925



KEENSERT® — THINWALL (METRIC)

Size	External Size	Drill Size	Part No.
M5 x 0.8	M8 x 1.25	H	F118313
M6 x 1.0	M10 x 1.25	S	F19448
M8 x 1.0	M12 x 1.25	27/64	F114241
M8 x 1.25	M12 x 1.25	27/64	F118355
M10 x 1.25	M14 x 1.5	1/2	F1384
M10 x 1.5	M14 x 1.5	1/2	F112899
M12 x 1.25	M16 x 1.5	37/64	F11219
M12 x 1.75	M16 x 1.5	37/64	F118857



KEENSERT® — THINWALL (METRIC) INSTALLATION TOOLS

Size	Part No.
M5	F18160
M6	F116753
M8	F15165
M10	F119263
M12	F11288



THREAD REPAIR — NES® TOOLS

Nes External and Nes Internal thread restorers are the ideal tools for saving money and time during maintenance, plumbing, construction, agriculture, car repair and many other applications where there are components with a damaged thread.

NES EXTERNAL THREAD REPAIR TOOLS

Bolt Diameter Range mm	Bolt Diameter Range inches	Pipe Diameter Range	NES	Part No.
4-19mm	5/32-3/4"	up to 7/16"	1A	F112999
17-38mm	11/16-1-1/2"	3/8-1-1/8"	2	F119059
35-152mm	1-3/8-6"	1-5-1/2"	3	F120421
4-13mm	5/32-1/2"	uo to 1/4"	06040	F120420



NES INTERNAL THREAD REPAIR TOOLS

Bolt Diameter Range mm	Bolt Diameter Range inches	Pipe Diameter Range	NES	Part No.
8-11mm	5/16-7/16"	1/16-3/16"	21	F12033
12-16mm	1/2-5/8"	1/4-3/8"	22	F62980
16-20mm	11/16-13/16"	3/8-1/2"	23	F62981
22-32mm	7/8-1-1/4"	1/2-7/8"	24	F62982



THREAD REPAIR — NES® KITS



F63464



F130309



F63466



F130310

NES 1025

Kit Components

F112999
F119059
F12033
F62980
F62981
F62982

NES 1015

Kit Components

F112999
F12033
F62980

NES 1000

Kit Components

F112999
F119059

NES 1007

Kit Components

F12033
F62980
F62981

**WE KNOW
MRO**

REFERENCE CHART — DETERMINING THREAD LENGTHS METRIC

There is a formula for calculating minimum length on threads on any given metric cap screw. It is as follows: Minimum thread length equals twice the basic thread diameter plus 6mm for screw lengths up to 125 mm long, twice the basic thread diameter plus 12 mm for screw lengths between 125 mm and 200 mm long, and twice the basic thread diameter plus 25 mm for screw lengths over 200 mm long.

LENGTH STANDARDS FOR FULL OR PARTIAL THREADS

Capscrew Diameter	M4	M5	M6	M7	M8	M10
Fully Threaded Max. Length*	25	30	30	30	35	40

Capscrew Diameter	M12	M14	M16	M18	M20	M24
Fully Threaded Max. Length*	45	50	55	60	65	75

*These lengths and longer = partially threaded

REFERENCE CHART — METRIC

THREAD			LENGTH			
Metric mm	Inch Approx.	Pitch mm	Metric mm	Inch Approx.	Metric mm	Inch Approx.
1	3/64"	0.25	1	3/64"	70	2-3/4"
1.2	3/64"	0.25	1.5	1/16"	75	3"
1.4		0.3	2	5/64"	80	3-3/16"
1.6	1/16"	0.35	2.5	3/32"	85	3-3/8"
2	5/64"	0.4	3	1/8"	90	3-1/2"
2.2	5/64"	0.45	4	5/32"	100	4"
2.3	3/32"	0.45	5	3/16"	110	4-3/8"
2.5	3/32"	0.45	6	1/4"	120	4-3/4"
2.6		0.45	6.5	1/4"	130	5"
3	1/8"	0.5	8	5/16"	140	5-1/2"
3.5	9/64"	0.6	9.5	3/8"	150	6"
4	5/32"	0.7	10	3/8"	160	6-1/4"
5	3/16"	0.8	12	1/2"	170	6-3/4"
6	1/4"	1	13	1/2"	180	7"
7	9/32"	1	14	9/16"	190	7-1/2"
8	5/16"	1.25	16	5/8"	200	8"
10	3/8"	1.5	18	11/16"	220	8-3/4"
12	1/2"	1.75	19	3/4"	240	9-9/16"
14	9/16"	2	20	3/4"	260	10-1/4"
16	5/8"	2	22	7/8"	270	10-3/4"
18	11/16"	2.5	25	1"	280	11"
20	3/4"	2.5	30	1-3/16"	300	12"
22	7/8"	2.5	32	1-1/4"	320	12-1/2"
24	1"	3	35	1-3/8"	340	13-1/2"
27	1-1/16"	3	36	1-7/16"	360	14-1/4"
30	1-3/16"	3.5	38	1-1/2"	380	15"
33	1-5/16"	3.5	40	1-9/16"	400	15-3/4"
36	1-7/16"	4	45	1-3/4"	420	16-1/2"
39	1-1/2"	4	50	2"	440	17-3/8"
42	1-5/8"	4.5	55	2-3/16"	460	18"
45	1-3/4"	4.5	60	2-3/8"	480	19"
48	1-7/8"	5	65	2-9/16"	500	20"

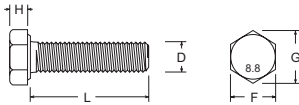


SCREWS — METRIC HEX HEAD CAP FULLY THREADED 8.8

1

DIN 933	Proof Load PSI:		84100
	Tensile Strength:		116000
	Plating:		Zinc or Yellow Zinc
	Import		

Diameter	D	M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24
Height	H	2	2.8	3.5	4	4.8	5.3	6.4	7.5	8.8	10	11.5	12.5	14	15
W.A.F	F	5.5	7	8	10	11	13	17	19	22	24	27	30	32	36
W.A.C.	G	6.01	7.66	8.79	11.05	12.12	14.38	18.9	21.1	24.49	26.75	30.14	33.53		39.98
Thread Pitch		.50	.70	.80	1.0	1.0	1.25	1.50	1.75	2.00	2.00	2.50	2.5	2.5	3



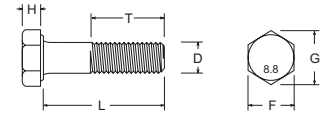
D	L	Zinc	Yellow Zinc
M3	8	F113795	
M3	10	F112393	
M3	16	F112255	
M3	20	F110936	
M4	6	F116102	F115062
M4	8	F14631	F116336
M4	10	F19055	F11765
M4	12	F11062	F13112
M4	16	F16159	F13503
M4	20	F15484	F111854
M4	25	F111519	F13125
M4	30	F18145	F119969
M5	8	F113353	F15294
M5	10	F15980	F116573
M5	12	F14768	F1945
M5	16	F13854	F19981
M5	20	F114116	F112270
M5	25	F12924	F14757
M5	30	F114097	F16756
M5	35	F11136	F16048
M5	40	F115668	F113258
M6	8	F12267	
M6	10	F111893	F113734
M6	12	F17488	F118484
M6	14	F114441	
M6	16	F116158	F112294
M6	18	F17993	F113085
M6	20	F15219	F19986
M6	22	F114850	F12646
M6	25	F112430	F118597
M6	30	F16076	F114592
M6	35	F14173	F12050
M6	40	F16743	F13038
M6	45	F117065	F1379
M6	50	F114303	F18049
M6	60	F114602	F12171
M6	65	F13611	
M6	70	F119653	F111117
M6	80	F116363	
M6	90	F110990	
M6	100	F117769	
M7	12	F114693	F113950

D	L	Zinc	Yellow Zinc
M7	16	F14547	F110452
M7	20	F112876	F17082
M7	25	F15824	F116980
M7	30	F118106	F113240
M7	35	F15995	F12003
M7	40	F110656	F17729
M7	45	F118743	F14668
M7	50	F117540	F116013
M8	10	F114501	F14819
M8	12	F11583	F111779
M8	16	F12203	F1891
M8	18	F113767	F118817
M8	20	F15735	F110681
M8	22	F14727	F115115
M8	25	F119784	F13614
M8	30	F114629	F112316
M8	35	F11982	F116530
M8	40	F16950	F13923
M8	45	F115873	F13421
M8	50	F116937	F119917
M8	55	F117569	F14332
M8	60	F112916	F11965
M8	65	F115429	F110549
M8	100	F111237	F17352
M10	12	F119101	
M10	16	F115746	
M10	20	F19515	F117155
M10	25	F113065	F1570
M10	30	F17406	F116954
M10	35	F11885	F118083
M10	40	F117972	F113122
M10	45	F118320	F117862
M10	50	F15492	F15644
M10	60	F114617	
M10	70	F17752	F19098
M10	80	F119007	
M12	16	F13158	
M12	20	F111835	F116666
M12	25	F114153	F113718
M12	30	F116392	F110995
M12	35	F119285	F110097
M12	40	F112129	F1201

D	L	Zinc	Yellow Zinc
M12	45	F13101	F116072
M12	50	F17287	F15020
M12	55	F13820	F17557
M12	60	F18075	F111116
M12	65	F114075	
M12	70	F1869	
M12	80	F112548	
M14	20	F18059	F13085
M14	25	F16715	F113664
M14	30	F115789	F116766
M14	35	F116256	
M14	40	F112805	F113669
M14	50	F113537	
M16	20	F17792	
M16	25	F116511	
M16	30	F118555	F112847
M16	35	F111427	
M16	40	F11818	F113490
M16	45	F115345	
M16	50	F15469	
M16	55	F12423	
M16	60	F16437	
M16	65	F113284	
M16	70	F12080	
M16	75	F11759	
M16	80	F11045	
M16	90	F16869	
M18	30	F116616	
M18	35	F113932	
M18	40	F119000	
M18	50	F17561	
M18	60		F11096
M20	50	F121350	
M20	60	F121349	
M20	70	F121348	
M20	80	F121347	
M22	50	F123406	
M22	60	F123407	
M24	50	F123409	
M24	60	F123410	

SCREWS — METRIC HEX HEAD CAP PARTIALLY THREADED 8.8

DIN 931	Proof Load PSi:	84100
	Tensile Strength:	116000
	Plating:	Zinc or Yellow Zinc
	Import	



Diameter	D	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18	M20	M22	M24
Height	H	2.8	3.5	4	4.8	5.3	6.4	7.5	8.8	10	11.5	12.85	14	15
W.A.F	F	7	8	10	11	13	17	19	22	24	27	30	32	36
W.A.C	G	7.66	8.79	11.05	12.12	14.38	18.9	21.1	24.49	26.75	30.14	33.53		39.98
Thread Pitch		.70	.80	1.0	1.0	1.25	1.50	1.75	2.00	2.00	2.50	2.50	2.50	3.0

D	L	T	Zinc	Yellow Zinc
M4	30	16	F112854	
M4	35	16	F115398	
M4	40	16	F12221	
M5	35	16	F119689	F17059
M5	40	16	F13274	F17646
M5	45	16	F112171	
M5	50	16	F116731	F114420
M5	55	16	F16525	
M5	60	16	F17531	F18137
M5	70	16	F117591	
M5	80	16	F115215	
M6	30	18	F18010	F114662
M6	35	18	F115890	F19222
M6	40	18	F17633	F11829
M6	45	18	F13738	F11394
M6	50	18	F14270	F113722
M6	55	18	F111224	F111158
M6	60	18	F12044	F1813
M6	65	18	F114356	F111202
M6	70	18	F15758	
M6	80	18	F118777	
M6	90	18	F115437	F119563
M6	100	18	F16604	F12852
M6	120	18	F19577	
M7	30	20	F14134	
M7	35	20	F18033	F193
M7	40	20	F12645	F12839
M7	45	20	F16951	
M7	50	20	F119072	
M7	60	20	F16628	F113937
M7	70	20		F13761
M8	35	22	F117365	F17907
M8	40	22	F14597	F112515
M8	45	22	F113633	F119873
M8	50	22	F113028	F14605
M8	55	22	F19013	F115621
M8	60	22	F111192	F16204
M8	65	22	F112410	F111275
M8	70	22	F119264	F1681
M8	75	22	F11617	F17605
M8	80	22	F118116	F15177
M8	85	22	F18313	F12241
M8	90	22	F118400	F114318
M8	100	22	F12084	F113727
M8	110	22	F116170	F13186
M8	120	22	F110735	F117085
M8	130	22	F12355	F1333
M8	140	22	F13375	
M8	150	22	F13733	
M8	160	22	F111656	

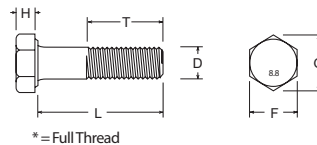
D	L	T	Zinc	Yellow Zinc
M10	40	26	F19757	F119260
M10	45	26	F118770	F12448
M10	50	26	F19973	F114886
M10	55	26	F118872	F14497
M10	60	26	F1419	F12508
M10	65	26	F115207	F16398
M10	70	26	F113770	F112455
M10	75	26	F1876	F114847
M10	80	26	F111212	F114739
M10	85	26	F110333	
M10	90	26	F113518	F14122
M10	100	26	F11230	F1583
M10	110	26	F119940	F11090
M10	120	26	F117002	F15670
M10	130	26	F113902	F111771
M10	140	26	F119406	F115399
M10	150	26	F16261	
M10	160	26	F17759	F14502
M12	45	30	F14977	F19813
M12	50	30	F14709	F14656
M12	55	30	F11539	
M12	60	30	F115697	F116934
M12	65	30	F115124	F17238
M12	70	30	F118342	F112722
M12	75	30	F13315	F110566
M12	80	30	F17250	F110786
M12	90	30	F16492	F16726
M12	100	30	F112462	F111295
M12	110	30	F16802	F118820
M12	120	30	F119213	
M12	130	30	F12574	
M12	140	30	F17896	
M12	150	30	F1916	F111114
M12	160	30	F115453	F1546
M14	50	34	F110348	
M14	55	34	F119968	
M14	60	34	F110174	F15266
M14	70	34	F13509	F112308
M14	80	34	F16571	
M14	90	34	F118153	
M14	100	34	F1616	
M14	120	34	F115969	
M14	140	40	F116828	
M14	160	40	F116714	
M14	180	40	F16366	
M16	55	38	F115834	
M16	60	38	F14754	
M16	65	38	F12631	
M16	70	38	F111056	
M16	75	38	F115576	

D	L	T	Zinc	Yellow Zinc
M16	80	38	F115813	
M16	85	38	F118932	
M16	90	38	F16862	
M16	100	38	F18824	
M16	110	38	F12416	
M16	120	38	F14940	
M16	130	44	F119405	
M16	140	44	F17966	
M16	150	44	F15798	
M16	180	44	F115495	
M16	220	57	F117453	
M18	60	42	F19231	
M18	70	42	F114762	F16878
M18	75	42	F114821	
M18	80	42	F19166	F17886
M18	90	42	F15509	
M18	100	42	F13225	
M18	110	42	F11648	
M18	120	42		F18916
M18	130	48	F111991	F12595
M18	140	48	F111302	
M18	150	48	F1175	
M18	160	48	F115199	
M18	200	48	F119580	F1852
M20	60	60	F111251	
M20	70	46	F19809	
M20	80	46	F117122	
M20	90	46	F114832	
M20	100	46	F123382	
M20	110	46	F123389	
M20	120	46	F123383	
M20	130	52	F123384	
M20	140	52	F123390	
M20	150	52	F123385	
M22	80	52	F123397	
M22	90	52	F123398	
M22	100	52	F123391	
M22	130	56	F123394	
M22	150	56	F123396	
M24	80	56	F123404	
M24	90	56	F123405	
M24	100	56	F123399	
M24	110	56	F123400	
M24	120	56	F110122	
M24	130	60	F123401	
M24	140	60	F123402	

SCREWS — METRIC HEX HEAD CAP FINE THREAD 8.8

DIN 961/960	Proof Load PSI:	84100
	Tensile Strength:	116000
	Plating:	Zinc
	Import	

Diameter	D	M8	M10	M12	M14	M16
Height	H	5.3	6.4	7.5	8.8	10.29
W.A.F	F	13	17	19	22	24
W.A.C.	G	14.38	18.9	21.1	24.49	26.75
Thread Pitch		1.0	1.25	1.5	1.5	1.5



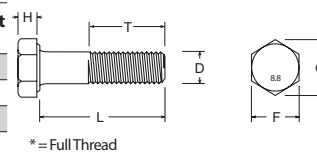
D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M8*	10	F19931	M8	60	F115474	M10	70	F113493	M12	60	F14704	M14	40	F113445	M16	40	F110275
M8*	16	F113087	M10*	20	F113333	M10	80	F13788	M12	65	F118982	M14	45	F14184	M16	45	F115996
M8*	20	F115728	M10*	25	F14607	M12*	20	F115395	M12	70	F11933	M14	50	F16779	M16	50	F18672
M8	25	F17722	M10	30	F117710	M12*	25	F17698	M12	75	F119727	M14	60	F119722	M16	60	F110499
M8	30	F110553	M10	35	F114901	M12*	30	F112952	M12	80	F14887	M14	65	F15734	M16	70	F116354
M8	35	F1950	M10	40	F18615	M12	35	F112201	M12	90	F13043	M14	70	F119916	M16	80	F19844
M8	40	F117333	M10	45	F112748	M12	40	F11189	M12	100	F119004	M14	75	F110822	M16	90	F17413
M8	45	F118058	M10	50	F120050	M12	50	F1178	M14*	30	F111480	M16*	30	F19273	M16	100	F112466
M8	50	F14735	M10	60	F115024	M12	55	F117257	M14	35	F12681	M16*	35	F118315			

SCREWS — METRIC HEX HEAD CAP EXTRA FINE THREAD 8.8

DIN 961	Proof Load PSI:	84,100
	Tensile Strength:	116,000
	Plating:	Zinc
	Import	

Diameter	D	M10	M12
Height	H	6.4	7.5
W.A.F	F	17	19
W.A.C.	G	18.9	21.1
Thread Pitch		1.0	1.25

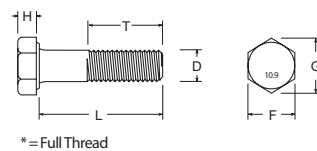
D	L (mm)	Extra Fine Part No.	D	L (mm)	Extra Fine Part No.
M10*	20	F113805	M10	50	F1766
M10*	25	F115869	M12*	25	F11261
M10*	30	F18488	M12*	35	F115987
M10*	40	F117408	M12*	50	F11706



SCREWS — METRIC HEX HEAD CAP 10.9 USA

ANSI B18.2.3.1M	Proof Load PSI:	120350
	Tensile Strength:	145000
	Plating:	Yellow Zinc
	Made in U.S.A.	

Diameter	D	M6	M8	M10	M12	M14	M16	M20
Height	H	4.15	5.50	6.63	7.76	9.09	10.32	12.88
W.A.F	F	10	13	16	18	21	24	30
W.A.C.	G	11.55	15.01	18.48	20.78	24.25	27.71	34.64
Thread Pitch		1	1.25	1.50	1.75	2.0	2.0	2.50

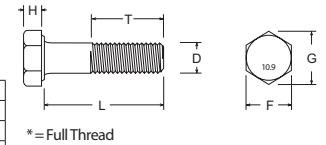


D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M6**	20	F113774	M10**	20	F1171	M12**	35	F114292	M16	70	F117301
M8**	16	F117047	M10**	25	F1644	M12**	40	F113930	M20**	50	F117578
M8**	20	F117469	M10**	30	F114498	M12	50	F116997	M20**	60	F112101
M8**	25	F18312	M10**	35	F119437	M12	60	F116027	M20**	70	F1967
M8**	30	F114130	M10	40	F16138	M14**	50	F12994	M20	80	F14228
M8**	35	F15638	M10	50	F116332	M16**	35	F12853			
M8	40	F111493	M10	60	F113471	M16**	40	F162			
M8	45	F111537	M12**	20	F116944	M16**	45	F11450			
M8	50	F110492	M12**	25	F112486	M16**	50	F117016			
M8	60	F114034	M12**	30	F13262	M16**	60	F115425			

SCREWS — METRIC HEX HEAD CAP 10.9

ANSI B18.2.3.1M	Proof Load PSI:	120350
	Tensile Strength:	145000
	Plating:	Zinc
	Import	

Diameter	D	M6	M8	M10	M12	M14	M16	M18	M20	M24
Height	H	4.15	5.50	6.63	7.76	9.09	10.32	11.5	12.88	15.44
W.A.F	F	10	13	16	18	21	24	27	30	36
W.A.C.	G	11.55	15.01	18.48	20.78	24.25	27.71	30.14	34.64	41.57
Thread Pitch		1.0	1.25	1.5	1.75	2.0	2.0	2.50	2.5	3



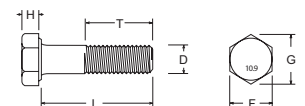
D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M6*	12	F113367	M10*	25	F111743	M12	100	F110629	M16	80	F111334	M20	100	F119257
M6*	16	F119306	M10*	30	F14197	M12	110	F17821	M16	85	F117773	M20	110	F112061
M6*	20	F115883	M10*	35	F11946	M12	120	F110747	M16	90	F17369	M20	120	F11213
M6*	25	F113519	M10	40	F113923	M12	130	F1652	M16	100	F19936	M20	130	F110300
M6	30	F119509	M10	45	F115216	M12	150	F115908	M16	110	F11767	M20	140	F14274
M6	35	F16230	M10	50	F110613	M12	160	F12108	M16	120	F119128	M20	150	F16168
M6	40	F110586	M10	55	F114707	M14	25	F113615	M16	130	F114372	M20	160	F1457
M6	45	F12031	M10	60	F12589	M14*	30	F118507	M16	140	F17660	M20	170	F119958
M6	50	F116043	M10	65	F111938	M14*	35	F15919	M16	150	F11432	M20	180	F17279
M6	60	F110947	M10	70	F11725	M14*	40	F13958	M16	160	F13239	M20	190	F17279
M8*	16	F12339	M10	75	F117235	M14	45	F17296	M16	170	F116594	M20	200	F14081
M8	18	F117913	M10	80	F14175	M14	50	F111064	M16	180	F110596	M20	220	F112750
M8*	20	F15442	M10	90	F119088	M14	55	F19369	M16	190	F16313	M24*	40	F113018
M8*	25	F117058	M10	100	F13913	M14	60	F15669	M16	200	F18785	M24*	50	F112525
M8*	30	F16534	M10	110	F113824	M14	65	F18017	M16	220	F118448	M24*	60	F111373
M8	35	F15150	M10	120	F14792	M14	70	F116567	M16	240	F116146	M24*	70	F119619
M8	40	F13521	M10	130	F110621	M14	80	F118704	M18*	40	F1892	M24	80	F116030
M8	45	F13824	M12*	20	F117348	M14	90	F110930	M18*	50	F111973	M24	90	F17849
M8	50	F19590	M12*	25	F13326	M14	100	F114203	M18*	60	F112527	M24	100	F15732
M8	55	F119608	M12*	30	F19438	M14	110	F112535	M18	70	F117284	M24	110	F117138
M8	60	F119933	M12*	35	F12546	M14	120	F112679	M18	80	F13800	M24	120	F113429
M8	65	F110266	M12*	40	F116679	M16*	30	F114031	M18	90	F114106	M24	130	F110141
M8	70	F115793	M12	45	F116285	M16	35	F11492	M18	100	F113067	M24	140	F1798
M8	75	F113851	M12	50	F115614	M16*	40	F14512	M18	110	F19969	M24	150	F119131
M8	80	F115017	M12	55	F16516	M16*	45	F112985	M18	120	F115414	M24	170	F118225
M8	90	F15238	M12	60	F12396	M16*	50	F111358	M20*	40	F118655	M24	200	F15720
M8	100	F114059	M12	65	F119152	M16*	55	F110014	M20*	50	F1399			
M8	110	F112779	M12	70	F18970	M16	60	F119074	M20*	60	F117036			
M8	120	F17523	M12	75	F14370	M16	65	F113868	M20	70	F13810			
M10*	16	F111764	M12	80	F111860	M16	70	F15333	M20	80	F116663			
M10*	20	F118318	M12	90	F12111	M16	75	F119623	M20	90	F18634			

SCREWS — METRIC HEX HEAD CAP COARSE THREAD 10.9

Diameter	D	M10	M12
Height	H	6.4	7.5
W.A.F	F	17	19
W.A.C.	G	18.9	21.1
Thread Pitch		1.50	1.75

DIN 933 / 931	Proof Load PSI:	120000
	Tensile Strength:	150000
	Plating:	Zinc
	Full Thread = DIN 933; Partial Thread = DIN 931	

* = Full Thread

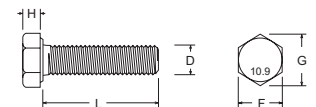


D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M10**	25	F111316	M10	70	F113126	M12*	45	F16348	M12	100	F112301
M10**	30	F118247	M10	80	F18434	M12	50	F13294	M12	110	F115547
M10**	35	F15317	M10	100	F14827	M12	60	F113114			
M10**	40	F19801	M10	120	F12238	M12	70	F18105			
M10	45	F18360	M12**	30	F113916	M12	80	F1587			
M10	50	F12406	M12**	35	F112381	M12	90	F117186			
M10	60	F13458	M12**	40	F14782						

SCREWS — METRIC HEX HEAD CAP FINE THREAD 10.9

Diameter	D	M8	M10	M12	M14	M16
Height	H	5.3	6.4	7.5	8.8	10
W.A.F	F	13	17	19	22	24
W.A.C.	G	14.38	18.9	21.1	24.49	26.75
Thread Pitch		1.0	1.25	1.5	1.5	1.5

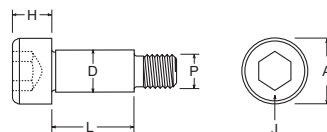
DIN 961	Proof Load PSI:	120350
	Tensile Strength:	145000
	Plating:	Yellow Zinc



D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M8	20	F119792	M8	80	F113418	M12	40	F15311	M14	45	F13977
M8	25	F1737	M10	20	F118359	M12	45	F1283	M14	50	F113324
M8	30	F113818	M10	25	F111969	M12	50	F117133	M16	30	F1639
M8	35	F16503	M10	30	F16657	M12	60	F16125	M16	40	F116124
M8	40	F111609	M10	35	F116025	M12	70	F115570	M16	50	F115086
M8	45	F1180	M10	40	F17256	M12	80	F116482	M16	60	F119110
M8	50	F13426	M12	20	F17222	M14	25	F1522	M16	70	F15702
M8	55	F114750	M12	25	F116065	M14	30	F114277	M16	80	F117687
M8	60	F14070	M12	30	F12775	M14	35	F18380			
M8	70	F18373	M12	35	F111731	M14	40	F18276			

SOCKET CAP SCREWS — METRIC SHOULDER SCREWS 12.9

DIN 912 ISO 7379 ANSI B18.3M	Proof Load PSI:	141000
	Tensile Strength:	177000
	Plating:	Furnace Black

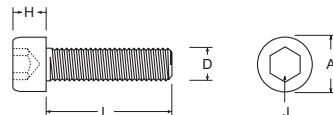


Diameter	D	M6	M8	M10	M12	M16	M20
Height	H	4.5	5.5	7	8	10	5.3
Head Dia	A	10	13	16	18	24	30
Thread Pitch	P	M5 x .80	M6 x 1.0	M8 x 1.25	M10 x 1.50	M12 x 1.75	M16 x 2.0
Socket Size	J	3	4	5	6	8	10

D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M6	10	F12182	M8	20	F118007	M10	40	F15978	M12	60	F110281	M20	30	F12785
M6	12	F19333	M8	25	F118543	M10	50	F15011	M12	70	F18213	M20	40	F115057
M6	16	F117535	M8	30	F119561	M10	70	F113321	M12	90	F113455	M20	60	F111510
M6	20	F11031	M8	40	F14023	M10	80	F15429	M12	100	F15621	M20	80	F113657
M6	25	F17674	M10	12	F117820	M12	20	F115899	M16	30	F12726	M20	90	F18599
M6	30	F12124	M10	16	F15780	M12	25	F12443	M16	40	F112472	M20	100	F113350
M8	10	F114552	M10	20	F115911	M12	30	F16096	M16	60	F115862			
M8	12	F15056	M10	25	F16126	M12	40	F17580	M16	80	F11408			
M8	16	F12356	M10	30	F13350	M12	50	F13027	M16	90	F120011			

SOCKET CAP SCREWS — METRIC 8.8

DIN 912 Class 8.8	Proof Load PSI:	84100
	Tensile Strength:	116000
	Plating:	Clear Zinc / Yellow Zinc
Import		

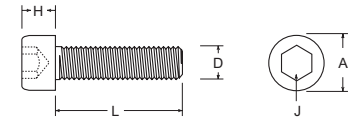


Diameter	D	M3	M4	M5	M6	M8	M10	M12
Height Max	H	3	4	5	6	8	10	12
Head Dia. Max	A	5.68	7.22	8.72	10.22	13.27	16.27	18.27
Socket Size Max		2.58	3.08	4.095	5.14	6.140	8.175	10.175
Thread Pitch		.50	.70	.80	1.0	1.25	1.50	1.75

D	L (mm)	Clear Zinc	Yellow Zinc	D	L (mm)	Clear Zinc	Yellow Zinc	D	L (mm)	Clear Zinc	Yellow Zinc	D	L (mm)	Clear Zinc	Yellow Zinc
M3	6	F116131		M5	30	F111918	F19409	M6	55	F115375		M8	50	F113014	F19232
M3	8	F11092		M5	35	F110216		M6	60	F118687		M8	55	F117499	F13740
M3	10	F118852		M5	40	F111126		M6	65	F113569		M8	60	F116404	
M4	6	F118513		M5	45	F118691		M6	70	F116713		M8	65	F113804	
M4	8	F1601		M5	50	F119377		M6	75	F115513		M8	70	F18594	
M4	10	F112959		M5	60	F116563		M6	80	F113879		M8	75	F115980	
M4	12	F111509		M5	80	F110872		M6	85	F111388		M8	80	F17378	
M4	16	F115912		M6	8	F112866		M6	90	F19960		M8	90	F13833	
M4	20	F112900		M6	10	F117605		M6	100	F117489		M8	100	F111567	
M4	25	F13427		M6	12	F14385	F117823	M8	10	F113661		M8	110	F117161	
M4	30	F114025		M6	16	F11003	F11856	M8	12	F113673		M8	120	F14637	
M4	35	F17555		M6	18	F114271		M8	16	F12107	F13281	M8	130	F117106	
M4	40	F12974		M6	20	F115106	F113198	M8	18	F110076		M10	16	F113102	
M5	8	F110408		M6	22	F113139		M8	20	F19772	F115126	M10	20	F119098	
M5	10	F13244		M6	25	F119301		M8	22	F111250		M10	25	F113249	
M5	12	F115041	F15662	M6	30	F112506	F118996	M8	25	F113423	F112105	M10	30	F119808	
M5	14	F14867		M6	35	F17065	F115307	M8	30	F115799	F119376	M10	35	F15773	
M5	16	F1819	F116859	M6	40	F110684	F18293	M8	35	F15597	F113265	M10	40	F116654	
M5	20	F18090	F118830	M6	45	F116911	F110409	M8	40	F15414	F115222	M10	50	F118395	
M5	25	F117363	F15279	M6	50	F118798		M8	45	F16122		M12	30	F17151	

SOCKET CAP SCREWS — METRIC 12.9

DIN 912 Class 12.9	Proof Load PSI:	141000
	Tensile Strength:	176900
	Plating:	Furnace Black
	Import	



Diameter	D	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M30	M36
Head Height Max	H	2	2.5	3	4	5	6	8	10	12	14	16	18	20	22	24	30	36
Head Dia. Max	A	3.98	4.68	5.68	7.22	8.72	10.22	13.27	16.27	18.27	21.33	24.33	27.33	30.33	33.39	36.39	45.39	54.46
Socket Size Max	J	1.56	2.06	2.58	3.08	4.095	5.14	6.140	8.175	10.175	12.212	14.212	14	17	17	19	22	27
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25	1.50	1.75	2	2	2.50	2.5	2.50	3	3.50	4.00

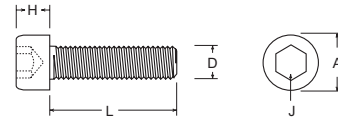
D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M2	4	F118060	M5	35	F11142	M8	110	F17574	M14	25	F15979	M20	50	F119003
M2	5	F118475	M5	40	F111406	M8	120	F114970	M14	30	F110991	M20	55	F12687
M2	6	F111113	M5	45	F115156	M8	130	F116315	M14	40	F113045	M20	60	F115864
M2	8	F115598	M5	50	F1565	M8	140	F110127	M14	45	F113788	M20	70	F15553
M2	10	F111240	M5	60	F119609	M10	16	F114259	M14	50	F11872	M20	80	F15815
M2	12	F16094	M5	65	F116277	M10	20	F11602	M14	55	F12967	M20	90	F114952
M2	16	F119798	M5	80	F14419	M10	25	F114995	M14	60	F115961	M20	100	F15250
M2	20	F17219	M6	8	F11351	M10	30	F112052	M14	65	F113762	M20	110	F1155
M2.5	4	F110455	M6	10	F15131	M10	35	F119160	M14	70	F14938	M20	120	F18413
M2.5	5	F19278	M6	12	F116614	M10	40	F17868	M14	80	F110813	M20	130	F115197
M2.5	6	F15398	M6	14	F15477	M10	45	F117347	M14	90	F18468	M20	140	F113193
M2.5	8	F110960	M6	16	F15657	M10	50	F12470	M14	100	F117425	M20	160	F112350
M2.5	10	F14919	M6	18	F1898	M10	55	F18662	M14	110	F11913	M20	170	F118252
M2.5	12	F110131	M6	20	F12842	M10	60	F17936	M14	120	F110384	M20	180	F17132
M3	4	F116458	M6	22	F118435	M10	65	F115132	M14	130	F117695	M20	190	F117358
M3	5	F112794	M6	25	F120001	M10	70	F111520	M14	140	F115631	M20	200	F119950
M3	6	F17093	M6	30	F119161	M10	75	F19961	M16	20	F14928	M20	210	F117304
M3	8	F111963	M6	35	F110062	M10	80	F119761	M16	25	F119806	M20	220	F14684
M3	10	F118177	M6	40	F114504	M10	90	F112116	M16	30	F111205	M20	230	F119435
M3	12	F112678	M6	45	F111220	M10	100	F115581	M16	35	F110790	M22	90	F18570
M3	16	F116101	M6	50	F15140	M10	120	F112363	M16	40	F118187	M24	40	F13024
M3	20	F112487	M6	55	F13875	M10	130	F16911	M16	45	F14209	M24	50	F115249
M3	25	F15786	M6	60	F111720	M10	140	F15513	M16	50	F17034	M24	60	F16744
M3	30	F117566	M6	65	F17325	M10	150	F113833	M16	55	F119883	M24	70	F17045
M3	35	F18289	M6	70	F116162	M12	20	F18173	M16	60	F18098	M24	80	F19478
M4	5	F17090	M6	75	F119575	M12	25	F15769	M16	65	F19250	M24	90	F118443
M4	6	F116998	M6	80	F19415	M12	30	F116756	M16	70	F110060	M24	100	F115410
M4	8	F114480	M6	90	F120073	M12	35	F12410	M16	75	F115290	M24	110	F119037
M4	10	F19859	M6	100	F119504	M12	40	F115282	M16	80	F116958	M24	120	F15283
M4	12	F16909	M6	140	F113983	M12	45	F114186	M16	90	F115989	M24	130	F16269
M4	16	F15296	M8	10	F116009	M12	50	F14584	M16	100	F16148	M24	140	F115394
M4	20	F11128	M8	12	F19796	M12	55	F15485	M16	110	F115815	M24	150	F12617
M4	25	F117876	M8	16	F19998	M12	60	F13679	M16	120	F18301	M24	160	F18150
M4	30	F14411	M8	18	F116418	M12	65	F118015	M16	130	F14407	M24	170	F114740
M4	35	F119475	M8	20	F111826	M12	70	F114500	M16	140	F115292	M24	180	F15799
M4	40	F18344	M8	22	F15489	M12	75	F116347	M16	180	F13320	M24	220	F110764
M4	45	F19256	M8	25	F116228	M12	80	F13785	M16	190	F110535	M24	230	F1531
M4	50	F113205	M8	30	F110707	M12	85	F17490	M16	200	F114538	M24	240	F17499
M4	55	F11395	M8	35	F110848	M12	90	F118732	M16	210	F13895	M30	90	F17850
M4	60	F113254	M8	40	F120054	M12	95	F117509	M16	220	F111009	M30	120	F113968
M4	65	F1978	M8	45	F14672	M12	100	F16209	M18	40	F11327	M30	150	F1703
M4	70	F120046	M8	50	F110227	M12	110	F116407	M18	45	F18972	M30	170	F18606
M5	6	F113435	M8	55	F113562	M12	120	F117979	M18	50	F110462	M30	180	F15981
M5	8	F19848	M8	60	F15533	M12	130	F12825	M18	55	F114909	M30	190	F18393
M5	10	F116109	M8	65	F116971	M12	140	F16575	M18	60	F115792	M30	200	F13014
M5	12	F116613	M8	70	F115003	M12	150	F1400	M18	70	F113584	M36	160	F1924
M5	14	F13380	M8	75	F111066	M12	160	F17076	M18	75	F13347	M36	180	F120005
M5	16	F112782	M8	80	F115623	M12	180	F15648	M18	80	F113441			
M5	20	F112511	M8	85	F117621	M12	200	F1355	M18	160	F1946			
M5	25	F19481	M8	90	F17373	M12	240	F119805	M20	35	F116413			
M5	30	F18832	M8	100	F1246	M12	380	F11173	M20	40	F112783			

SOCKET CAP SCREWS — METRIC 12.9 FINE THREAD

1

DIN 912 Class 12.9	Proof Load PSI:	141000
	Tensile Strength:	176900
	Plating:	Furnace Black
	Import	

Diameter	D	M10	M12
Head Height Max	H	10	12
Head Dia. Max	A	16.27	18.27
Socket Size Max	J	8.175	10.175
Thread Pitch		1.25	1.50



D	L (mm)	Part No.
M10	20	F123504
M10	25	F123505
M10	30	F123506
M10	35	F123507
M10	40	F123508
M10	50	F123509

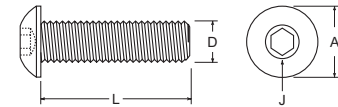
D	L (mm)	Part No.
M10	55	F123510
M10	60	F123511
M10	70	F123512
M12	20	F123513

D	L (mm)	Part No.
M12	25	F123514
M12	30	F123515
M12	35	F123516
M12	40	F123517

D	L (mm)	Part No.
M12	50	F123518
M12	60	F123520
M12	70	

SOCKET CAP SCREWS — METRIC BUTTON HEAD 10.9

ISO 7380	Proof Load PSI:	120350
	Tensile Strength:	145000
	Plating:	Furnace Black



Diameter	D	M2	M2.5	M3	M4	M5	M6	M8	M10	M12
Head Height Max	H	1.20	1.35	1.65	2.20	2.75	3.30	4.40	5.50	6.60
Head Dia. Max	A	3.90	4.80	5.70	7.60	9.50	10.50	14.00	17.50	21.00
Socket Size	J	1.3	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.00
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25	1.50	1.75

D	L (mm)	T	Part No.
M2	4	4	F113740
M2	6	6	F111812
M2	8	8	F12777
M2	10	10	F18640
M2.5	6	6	F14849
M2.5	8	8	F18429
M3	6	6	F14231
M3	8	8	F19817
M3	10	10	F115985
M3	12	12	F16944
M3	16	16	F114330
M3	20	20	F11211
M4	6	6	F115338
M4	8	8	F19117

D	L (mm)	T	Part No.
M4	10	10	F118391
M4	12	12	F1863
M4	16	16	F15977
M4	20	20	F11723
M4	25	25	F16192
M5	6	6	F114879
M5	8	8	F112200
M5	10	10	F113105
M5	12	12	F114770
M5	16	16	F113361
M5	20	20	F116325
M5	25	25	F112214
M5	30	30	F118590
M6	8	8	F111530

D	L (mm)	T	Part No.
M6	10	10	F114220
M6	12	12	F1253
M6	16	16	F115052
M6	20	20	F114618
M6	25	25	F1371
M6	30	30	F115715
M6	35	35	F18523
M8	10	10	F18296
M8	12	12	F111011
M8	16	16	F16587
M8	20	20	F15601
M8	25	25	F117089
M8	30	30	F16225
M8	35	35	F116257

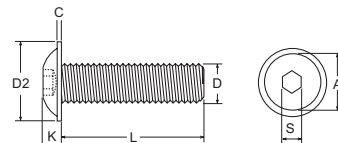
D	L (mm)	T	Part No.
M8	40	40	F11737
M8	50	50	F117214
M10	16	16	F118567
M10	20	20	F114534
M10	25	25	F15400
M10	30	30	F15562
M10	35	35	F15710
M10	40	40	F115550
M10	50	50	F15660
M12	25	25	F15023
M12	30	30	F15946
M12	35	35	F1268
M12	40	40	F111748

SOCKET CAP SCREWS — METRIC BUTTON WITH FLANGE HEAD 10.9

BN 11252	Plating:	Furnace Black
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D	L (mm)	Part No.
M4	12	F112667
M4	16	F119954
M4	20	F112784
M4	25	F110697
M5	12	F14275
M5	16	F117779
M5	20	F18763
M5	25	F114834
M5	30	F16858

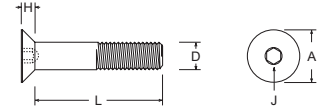
D	L (mm)	Part No.
M6	12	F119912
M6	16	F11477
M6	20	F116486
M6	25	F12954
M6	30	F11018
M6	35	F15192
M6	40	F116604



Diameter	D	M4	M5	M6
Thread Pitch		.70	.80	1.00
Head Height (max)	K	2.2	2.8	3.3
Flange Diameter (max)	D2	9.4	11.8	13.6
Flange Thickness	C	.80	1.00	1.2
Key Size (Nom)	S	2.5	3.	4.

SOCKET CAP SCREWS — METRIC FLAT HEAD 10.9

DIN 7991	Material:	Steel
	Property Class:	10.9
	Plating:	Furnace Black



Diameter	D	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16
Head Height Max	H	1.30	1.50	1.7	2.3	2.9	3.3	4.4	5.5	6.5	7	7.5
Head Dia. Max	A	4.00	5	6	8	10	12	16	20	24	27	30
Socket Size	J	1.5	1.5	2	2	3	4	5	6	8	10	10
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25	1.50	1.75	2.0	2.0

D	L (mm)	Part No.
M2	4	F19667
M2	6	F115069
M2	8	F12255
M2	10	F13015
M2	12	F110473
M2.5	12	F115528
M3	6	F113369
M3	8	F18568
M3	10	F19991
M3	12	F112137
M3	16	F14455
M3	20	F110739
M4	8	F19485
M4	10	F111821
M4	12	F116847

D	L (mm)	Part No.
M4	16	F14258
M4	20	F113844
M5	8	F114293
M5	10	F114176
M5	12	F114510
M5	16	F117532
M5	20	F115630
M5	25	F12446
M5	30	F112542
M5	35	F12549
M5	40	F18158
M6	12	F114558
M6	16	F117609
M6	20	F116460
M6	25	F12156

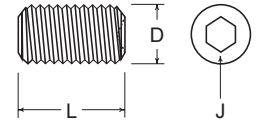
D	L (mm)	Part No.
M6	30	F116755
M6	35	F117993
M6	40	F110994
M6	45	F119906
M6	50	F11752
M8	12	F116116
M8	16	F1480
M8	20	F14521
M8	25	F19492
M8	30	F17489
M8	35	F118203
M8	40	F115056
M8	50	F14176
M8	60	F14196
M8	70	F1886

D	L (mm)	Part No.
M8	80	F111017
M8	90	F111940
M8	100	F12707
M10	20	F12881
M10	25	F118807
M10	30	F115191
M10	35	F11566
M10	40	F15848
M10	45	F111095
M10	50	F119995
M10	60	F18051
M12	30	F110084
M12	35	F114700
M12	40	F13452
M12	50	F14241

D	L (mm)	Part No.
M12	60	F117415
M12	70	F111041
M12	80	F117870
M12	90	F111775
M14	30	F112104
M14	40	F113223
M14	55	F115386
M14	70	F110226
M16	40	F114236
M16	50	F1314
M16	60	F12475
M16	70	F113939
M16	80	F116107

SOCKET SET SCREWS — METRIC CUP POINT

DIN 916 Class 10.9	Proof Load PSI:	120350
	Tensile Strength:	145000
	Plating:	Furnace Black



Diameter	D	M2	M3	M4	M5	M6	M8	M10	M12	M16
Socket Size	J	0.9	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0
Thread Pitch		.40	.50	.70	.80	1.0	1.25	1.50	1.75	2.0

D	L (mm)	Part No.
M2	6	F112249
M3	4	F16246
M3	6	F111186
M3	8	F13897
M3	10	F117279
M3	12	F16626
M3	16	F17974
M3	20	F110379
M4	4	F113260
M4	5	F119594
M4	6	F112606
M4	8	F12094
M4	10	F113040

D	L (mm)	Part No.
M4	12	F15690
M4	16	F14514
M4	20	F16244
M4	30	F18590
M5	6	F17926
M5	8	F19650
M5	10	F112322
M5	12	F117517
M5	16	F13121
M5	20	F11134
M5	25	F16163
M5	30	F114660
M5	40	F19243

D	L (mm)	Part No.
M6	6	F15383
M6	8	F12026
M6	10	F12303
M6	12	F11880
M6	16	F1148
M6	20	F12757
M6	25	F114792
M6	30	F119679
M6	35	F14962
M6	40	F112912
M6	50	F115638
M8	8	F114804
M8	10	F116981

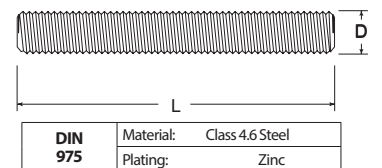
D	L (mm)	Part No.
M8	12	F114857
M8	16	F114871
M8	20	F119502
M8	25	F113047
M8	30	F11708
M8	35	F110185
M8	40	F13118
M8	50	F16768
M10	10	F114628
M10	12	F17774
M10	16	F12570
M10	20	F18746
M10	25	F15645

D	L (mm)	Part No.
M10	30	F114184
M10	35	F1281
M10	40	F114435
M10	60	F119666
M12	20	F118751
M12	25	F119178
M12	30	F117317
M12	40	F13691
M12	50	F13102
M12	60	F13526
M16	25	F114875
M16	80	F11901

ROD — METRIC THREADED 4.6

D	Pitch	L (mm)	Part No.
M5	.80	1 Meter	F118888
M6	1.0	1 Meter	F119012
M8	1.25	1 Meter	F110313
M10	1.50	1 Meter	F16080
M12	1.75	1 Meter	F14500
M14	2.00	1 Meter	F119478
M16	2.00	1 Meter	F11945

D	Pitch	L (mm)	Part No.
M18	2.05	1 Meter	F110177
M20	2.5	1 Meter	F114855
M22	2.5	1 Meter	F1881
M24	3.0	1 Meter	F114378

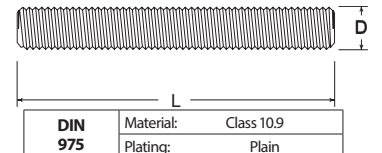


DIN 975	Material:	Class 4.6 Steel
	Plating:	Zinc

ROD — METRIC THREADED 10.9

D	Pitch	L (mm)	Part No.
M6	1.00	1 Meter	F17477
M8	1.25	1 Meter	F15413
M10	1.50	1 Meter	F13906
M12	1.75	1 Meter	F12869
M14	2.00	1 Meter	F118995

D	Pitch	L (mm)	Part No.
M16	2.00	1 Meter	F1896
M18	2.50	1 Meter	F118467
M20	2.50	1 Meter	F11323
M22	2.50	1 Meter	F115575
M24	3.00	1 Meter	F111601



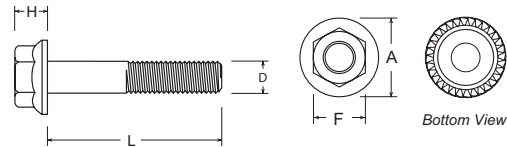
DIN 975	Material:	Class 10.9
	Plating:	Plain

SCREWS — METRIC TENSIOLOCK SERRATED HEX FLANGE

Tensile Strength:	Min 130500
Plating:	Yellow Zinc

D	L (mm)	Part No.
M5	10	F114253
M5	12	F1494
M5	16	F12928
M6	10	F112742
M6	12	F115905
M6	16	F19595
M6	20	F13962
M6	25	F132499
M6	30	F132487
M8	12	F116487
M8	16	F16836
M8	20	F15337
M8	25	F116545
M8	30	F132488

D	L (mm)	Part No.
M8	35	F132489
M8	40	F132490
M10	25	F132500
M10	30	F1174
M10	35	F132491
M10	40	F132492
M10	45	F18239
M10	50	F132493
M12	25	F132494
M12	30	F132495
M12	35	F132496
M12	40	F132497
M12	50	F132498

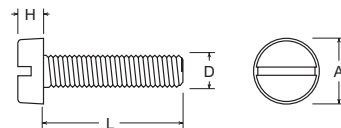


Diameter	D	M5	M6	M8	M10	M12
Height	H	5.4	6	5.1	9.2	8.7
W.A.F	F	8	10	13	15	17
Flange Dia.	A	8.71	10.95	14.26	22.3	24
Pitch		.80	1.0	1.25	1.5	1.75
Property Class		.90	.90	.90	.90	100

SCREWS — METRIC SLOTTED CHEESE HEAD MACHINE

DIN 84	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	M3	M4	M5	M6
Height	H	2	2.6	3.3	3.9
Head Dia.	A	5.5	7	8.5	10
Thread Pitch		.50	.70	.80	1.0



D	L (mm)	Part No.
M3	4	F120913
M3	8	F111789
M3	10	F15810
M3	12	F11301
M3	16	F15377
M3	20	F115059
M3	25	F115811

D	L (mm)	Part No.
M3	30	F119484
M4	5	F16611
M4	6	F17532
M4	8	F11770
M4	10	F111471
M4	12	F18192
M4	16	F117619

D	L (mm)	Part No.
M4	20	F118524
M4	30	F119564
M4	40	F114101
M4	60	F15839
M5	6	F15874
M5	10	F1357
M5	12	F18626

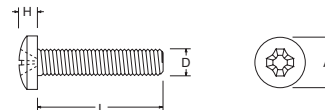
D	L (mm)	Part No.
M5	16	F111607
M5	20	F116289
M5	25	F117661
M5	30	F1119
M5	35	F117736
M5	50	F110509
M6	8	F12841

D	L (mm)	Part No.
M6	10	F15915
M6	12	F110940
M6	16	F17946
M6	20	F18450
M6	25	F117117
M6	30	F16212
M6	60	F15373

SCREWS — METRIC PHILLIPS PAN HEAD MACHINE

DIN 7985	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	M2	M2.5	M3	M4	M5	M6	M8
Height	H	1.6	2.1	2	2.6	3.3	3.9	3.9
Head Dia.	A	4	5	5.6	8.0	10	12	16
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25



D	L (mm)	Part No.
M2	4	F15384
M2	6	F15341
M2	8	F115413
M2	10	F14638
M2	12	F118660
M2.5	6	F115606
M2.5	10	F18011
M3	4	F14125
M3	5	F117177
M3	6	F115433
M3	8	F19403
M3	10	F15259
M3	12	F17911
M3	16	F18081
M3	20	F14373

D	L (mm)	Part No.
M3	25	F115848
M3	30	F115758
M4	5	F14643
M4	6	F19447
M4	8	F111028
M4	10	F118649
M4	12	F110166
M4	16	F110705
M4	18	F15993
M4	20	F17599
M4	25	F114710
M4	30	F117787
M4	40	F117893
M5	6	F14035
M5	8	F13790

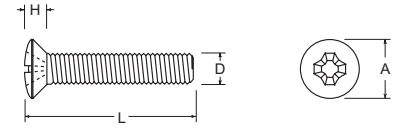
D	L (mm)	Part No.
M5	10	F13902
M5	12	F11484
M5	16	F14249
M5	18	F117352
M5	20	F117126
M5	25	F17457
M5	30	F111013
M5	35	F12630
M5	40	F118488
M6	8	F117119
M6	10	F14815
M6	12	F11479
M6	14	F11984
M6	16	F111227

D	L (mm)	Part No.
M6	18	F115168
M6	20	F119357
M6	25	F12209
M6	30	F113351
M6	35	F115353
M6	40	F119410
M6	45	F111865
M6	50	F14302
M8	12	F112274
M8	16	F118921
M8	20	F110594
M8	25	F11103
M8	30	F114532
M8	35	F111876

SCREWS — METRIC PHILLIPS OVAL HEAD MACHINE

DIN 966	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	M3	M4	M5	M6	M8
Height	H	2.4	3.2	3.75	4.5	8
Head Dia.	A	5.6	7.5	9.2	11	14.5
Thread Pitch		.50	.70	.80	1.0	1.25



D	L (mm)	Part No.
M3	6	F1559
M3	8	F16531
M3	10	F116802
M3	16	F120026
M3	20	F18936
M4	6	F114358
M4	8	F115445
M4	10	F116564

D	L (mm)	Part No.
M4	12	F118014
M4	16	F13884
M4	20	F17231
M4	25	F119718
M5	8	F111944
M5	10	F110736
M5	12	F110604
M5	16	F17650

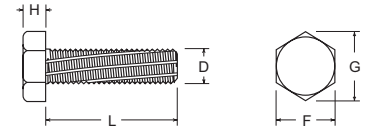
D	L (mm)	Part No.
M5	20	F13040
M5	25	F11549
M5	35	F114141
M6	10	F117198
M6	12	F12409
M6	16	F118245
M6	20	F113940
M6	25	F112550

D	L (mm)	Part No.
M6	30	F15449
M6	40	F19389
M8	16	F112075
M8	20	F114400
M8	25	F12151

SCREWS — METRIC HEX HEAD MACHINE THREAD CUTTING

DIN 7513A	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	M6	M8
Height	H	4	5.3
W.A.F.	F	10	13
W.A.C.	J	11.05	14.38
Thread Pitch		1.0	1.25

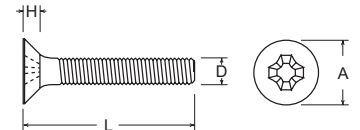


D	L (mm)	Part No.
M6	20	F14460
M6	25	F18146
M8	30	F118480

SCREWS — METRIC PHILLIPS FLAT HEAD MACHINE

DIN 965	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Diameter	D	M3	M4	M5	M6	M8
Height	H	1.65	2.2	2.5	3	4
Head Dia.	A	5.6	7.5	9.2	11	14.5
Thread Pitch		.50	.70	.80	1.0	1.25



D	L (mm)	Part No.
M3	6	F116612
M3	8	F11637
M3	10	F118458
M3	12	F16193
M3	16	F118388
M3	20	F16450
M4	6	F114342
M4	8	F15920
M4	10	F1138

D	L (mm)	Part No.
M4	12	F12948
M4	16	F13234
M4	20	F19717
M4	25	F12232
M4	30	F19176
M4	35	F18437
M5	8	F115031
M5	10	F114202
M5	20	F16134
M5	25	F15466
M5	30	F17595

D	L (mm)	Part No.
M5	35	F15118
M5	40	F118100
M6	10	F12742
M6	12	F18856
M6	14	F16821
M6	16	F15048
M6	18	F118979
M6	20	F119448
M6	25	F13770
M6	30	F113292
M6	35	F117765

D	L (mm)	Part No.
M6	40	F1824
M6	50	F11417
M8	12	F115560
M8	16	F116709
M8	20	F11444
M8	25	F18549
M8	30	F116979
M8	35	F16986

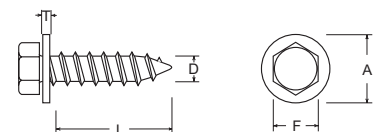
SCREWS — METRIC SELF-TAPPING HEX HD W/WASHER ASSEMBLY

DIN 6901	Material:	Steel
	Free-Spinning Washer	
	Plating	Zinc

Diameter	D	M4.8	M5.5	M5.6	M6.3	M6.5	M8
Thickness	T	1.6	1.6	1.6	1.6	1.6	2
W.A.F.	F	8	8	8	10	10	13
Washer Dia.	A	15	15	15	18	21	18

D	L (mm)	Part No.
M4.8	13	F860
M4.8	16	F84787
M4.8	19	F81471
M5.5	16	F85010

D	L (mm)	Part No.
M5.5	18	F83048
M5.6	13	F81800
M6.3	16	F84741



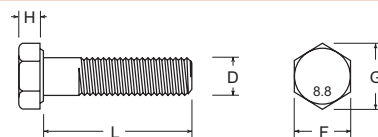
D	L (mm)	Part No.
M6.5	16	F81781
M6.5	20	F84034
M8	19	F83367

SCREWS — METRIC CAP JIS HEX HEAD REDUCED HEAD 8.8

Diameter	D	M8	M10	M12
Height Max	H	5.65	7.2	8.2
W.A.F. Max	F	12	14	17
W.A.C.	G	13.45	15.85	19.38
Thread Pitch		1.25	1.25	1.25

JIS-B 1180	Proof Load PSi:	84100
	Tensile Strength PSi:	116000
	Plating:	Zinc

Note: JIS nuts are in this section, on pages that follow.



D	L (mm)	Part No.
M8**	12	F112190
M8**	16	F13905
M8**	20	F11447
M8**	25	F19879
M8**	30	F13048
M8**	35	F117433
M8**	40	F119016
M8	45	F13358
M8	50	F114178
M8**	60	F113354

**= Fully Threaded

D	L (mm)	Part No.
M8	65	F119686
M8	70	F11305
M8	75	F16716
M8	80	F11557
M10**	20	F112403
M10**	25	F119191
M10**	30	F19875
M10**	35	F15028
M10**	40	F16000

D	L (mm)	Part No.
M10**	45	F11957
M10**	50	F13289
M10	60	F113092
M10	70	F116388
M10	75	F110816
M10	80	F113946
M10	85	F111156
M10	90	F116439
M12**	20	F118684

D	L (mm)	Part No.
M12**	25	F18453
M12**	30	F13658
M12**	35	F16469
M12**	40	F118547
M12	50	F18503
M12	60	F117258
M12	70	F17043
M12	80	F19126
M12	90	F119411

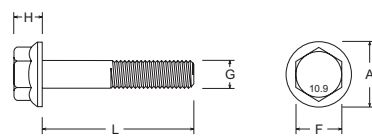
BOLTS — METRIC JIS HEX FLANGE REDUCED HEAD 10.9

Diameter	D	M6	M8	M10	M12
Height	H	6	8	10	11.5
W.A.F.	F	10	12	14	17
Flange Dia.	A	14	17.5	21	25
Thread Pitch		1.00	1.25	1.25	1.25

**10mm Wrenchsize

JIS-B 1189	Proof Load PSi:	120350
	Tensile Strength PSi:	145000
	Plating:	Zinc

Note: JIS nuts are in this section, on pages that follow.



D	L (mm)	Part No.
M6	12	F13590
M6	16	F12358
M6	20	F114898
M6	25	F118769
M6	30	F18104
M6	35	F15331
M6	40	F13900
M6	45	F111700
M6	50	F110004
M6**	55	F16600

D	L (mm)	Part No.
M8	12	F118489
M8	16	F16042
M8	20	F115615
M8	25	F117590
M8	30	F1285
M8	35	F119124
M8	40	F116086
M8	45	F14190
M8	50	F17497
M8	60	F116919

D	L (mm)	Part No.
M8	70	F11893
M10	16	F115692
M10	20	F15240
M10	25	F119552
M10	30	F19491
M10	35	F117391
M10	40	F111025
M10	45	F15268
M10	50	F12329
M10	60	F19710

D	L (mm)	Part No.
M10	70	F118514
M12	20	F118168
M12	25	F15537
M12	30	F119292
M12	35	F118026
M12	40	F15037
M12	45	F112065
M12	50	F16800
M12	55	F17938

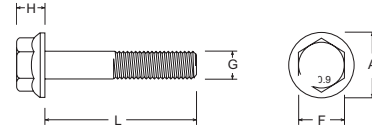
BOLTS — METRIC JIS SMOOTH DOME HEX FLANGE REDUCED HEAD 10.9

Diameter	D	*M6	**M8
Height	H	5	7
W.A.F.	F	8	10
Flange Dia.	A	11	14
Thread Pitch		1.00	1.25

**10mm wrench size

JIS-B 1189	Proof Load PSi:	120350
	Tensile Strength PSi:	145000
	Plating:	Zinc

Note: JIS nuts are in this section, on pages that follow.



D	L (mm)	Part No.
M6	10	F18254
M6	12	F16283
M6	16	F16479
M6	20	F114084

D	L (mm)	Part No.
M6	25	F12690
M6	30	F115708
M6	35	F16882
M6	40	F12870

D	L (mm)	Part No.
M6	45	F1469
M6	55	F18044
M6	60	F17711
M8	20	F114081

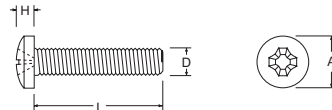
D	L (mm)	Part No.
M8	30	F113872
M8	40	F16820
M8	50	F18601

SCREWS — METRIC JIS PHILLIPS PAN HD MACHINE REDUCED HD

Diameter	D	M3	M4	M5	M6
Height	H	2.0	2.6	3.3	3.9
Head Dia.	A	5.5	7.0	8.75	10.5
Pitch		.50	.70	.80	1.0

JIS B-1111	Material:	Steel
	Fully Threaded	
	Plating:	Zinc

Note: JIS nuts are in this section, on pages that follow.



D	L (mm)	Part No.
M3	4	F19445
M3	8	F113878
M3	10	F113720
M3	12	F17808
M3	16	F15232
M3	20	F13192
M3	25	F17254
M3	30	F118749
M4	6	F117299
M4	8	F112762
M4	10	F112404
M4	12	F112637
M4	14	F19894
M4	16	F12950

D	L (mm)	Part No.
M4	18	F111232
M4	20	F16266
M4	25	F17203
M4	30	F19565
M4	35	F115523
M4	40	F11864
M4	45	F19417
M4	50	F112927
M4	55	F113838
M4	60	F117248
M5	6	F118776
M5	8	F114810
M5	10	F114022
M5	12	F18889

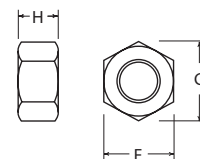
D	L (mm)	Part No.
M5	16	F12751
M5	18	F113013
M5	20	F119240
M5	25	F11033
M5	30	F15393
M5	35	F117901
M5	40	F13260
M5	45	F16130
M5	50	F111709
M5	55	F12112
M6	8	F114375
M6	10	F118534
M6	12	F14688
M6	14	F116680

D	L (mm)	Part No.
M6	16	F113570
M6	18	F12502
M6	20	F118845
M6	25	F110850
M6	30	F110144
M6	35	F118601
M6	40	F115468
M6	45	F114470
M6	50	F117622
M6	60	F116456
M6	70	F18376
M6	80	F19736
M6	85	F16660
M6	100	F112245

NUTS — METRIC CLASS 8

DIN 934	For use with Class 8.8 Fasteners	
	Material:	Steel
	Plating:	Zinc or Yellow Zinc

Note: Bold Part No.'s denote standard sizes



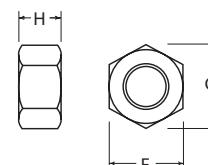
1

Size	M2	M2.5	M3	M4	M5	M6	M7	M8	M8	M10	M10	M10	M10	M12	
Height H	1.6	2.0	2.4	3.2	4	5	5.5	6.5	6.5	8	8	8	6.5	10	
W.A.F. F	4	5	5.5	7	8	10	11	13	13	15	17	17	17	19	
W.A.C.G	4.62	5.77	6.01	7.66	8.79	11.05	12.12	14.38	14.38	16.20	18.90	18.90	18.90	21.10	
Pitch	.40	.45	.50	.70	.80	1.0	1.0	1.25	1.0	1.5	1.5	1.25	1.0	1.75	
Zinc	F116838	F110567	F118885	F15604	F17801	F12588	F14490	F11276	F118491	F18874	F1326	F13690	F118728	F113442	
Yell. Zinc				F110766	F113659	F14355	F12468	F116182			F17862	F13200		F113046	
Size	M12	M12	M14	M14	M16	M16	M18	M18	M20	M20	M22	M24	M24	M27	M30
Height H	10	10	11	11	13	13	15	15	16	16	18	19	19	22	24
W.A.F. F	19	19	22	22	24	24	27	27	30.0	30.0	32	36.0	36.0	36	46
W.A.C. G	21.10	21.10	24.49	24.49	26.75	26.75	29.56	29.56	34.64	34.64	35.03	41.57	41.57	45.2	50.85
Pitch	1.5	1.25	2.0	1.5	2.0	1.5	2.5	1.5	2.5	1.5	2.5	3.0	2.0	3	3.5
Zinc	F14839	F12397	F112910	F16477	F11433	F115964	F16295	F1888	F111090	F112284	F111130	F111485	F114051	F11043	F11675
Yell. Zinc	F111547	F113349	F15265	F111282	F116344	F17996									

NUTS — METRIC CLASS 10

DIN 934	For use with Class 8.8 & 10.9 Fasteners	
	Material:	Steel
	Plating:	Zinc/Yellow Zinc or Black

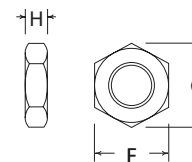
Note: Bold Part No.'s denote standard sizes



Size	M5	M6	M8	M8	M10	M10	M10	M12	M12	M12	M12
Height H	4	5	6.5	6.5	8	8	8	10	10	10	10
W.A.F. F	8	10	13	13	17	17	17	19	19	19	19
W.A.C. G	8.79	11.05	14.38	14.38	18.90	18.90	18.90	21.10	21.10	21.10	21.10
Pitch	0.8	1.0	1.25	1.0	1.5	1.25	1.0	1.75	1.5	1.25	1.0
Zinc/Yellow Zinc	F12677	F1747	F119875	F19907	F117757	F17127		F110322	F117458		
Black		F112528	F118779	F119987	F11257	F117215	F16638	F18817	F12265	F16873	F118968
Size	M14	M14	M16	M16	M18	M18	M20	M22	M22	M24	M30
Height H	11	11	13	13	15	15	16	18	18	19	24
W.A.F. F	22	22	24	24	27	27	30	32	32	36	46
W.A.C. G	24.49	24.49	26.75	26.75	29.56	29.56	32.95	35.03	35.03	39.55	50.85
Pitch	2.0	1.5	2.0	1.5	2.5	1.5	2.5	1.5	2.5	3	3.5
Zinc/Yellow Zinc	F112703	F14581	F14051		F17441		F111851		F114738	F14315	F113656
Black	F119202	F17486	F112412	F11055	F15590	F110523	F123366	F15694	F123367	F16390	

NUTS — METRIC JAM

DIN 439	For use with Class 8.8 Fasteners	
	Material:	Steel
	Plating:	Zinc



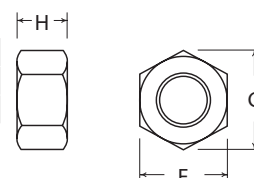
Size	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Height H	2.2	2.7	3.2	5	6	7	8	8	9	10
W.A.F. F	7	8	10	13	17	19	22	24	27	30
W.A.C. G	7.66	8.78	11.05	14.38	18.9	21.1	24.49	26.75	29.56	32.95
Pitch	.70	.80	1.00	1.25	1.50	1.75	1.50	1.50	1.50	2.50
Part No.	F118648	F119287	F112588	F113642	F114853	F119159	F119688	F13091	F14847	F115522

NUTS — METRIC JIS CLASS 8 HEX

Size	M8	M10	M10	M12
Height H	6.5	8	8	10
W.A.F. F	12	14	14	17
W.A.C. G	13.45	15.85	15.85	19.38
Pitch	1.25	1.50	1.25	1.25
Zinc	F18790		F12053	F116899
Yellow Zinc	F13928	F117846	F11438	

JIS B1181	For use with JIS Fasteners	
	Material:	Steel
	Plating:	Zinc or Yellow Zinc

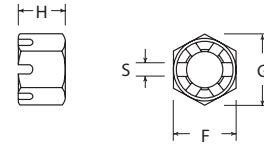
Note: See previous pages in this section for JIS bolts.



NUTS — METRIC SLOTTED

Size		M8	M10
Height	H	9.5	12
W.A.F.	F	13	17
W.A.C.	G	14.39	18.9
Pitch		1.25	1.50
Pin Size	S	2.75	3.05
Part No.		F114976	F110124

DIN 935	For use with 8.8 Fasteners	
	Material:	Steel
	Plating:	Zinc

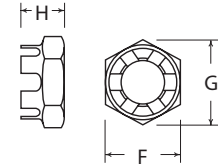


NUTS — METRIC CASTLE

Size		M12	M12	M12	M14	M14
Height	H	15	15	15	16	16
W.A.F.	F	19	19	19	22	22
W.A.C.	G	21.1	21.1	21.1	24.49	24.49
Pitch		1.25	1.5	1.75	2.0	1.5
Part No.		F115074	F110238	F110080	F119440	F117090

DIN 935	Material:	Steel
	Plating:	Zinc / Unplated

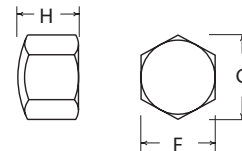
* = Zinc



NUTS — METRIC CAP CLASS 6

Size		M6	M8
Height	H	9	12
W.A.F.	F	10	13
W.A.C.	G	11.05	14.38
Pitch		1.00	1.25
Part No.		F16161	F17826

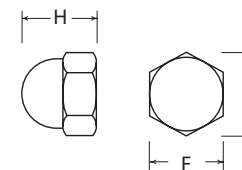
DIN 917	Material:	Steel
	Plating:	Zinc



NUTS — METRIC ACORN CLASS 6

Size		M5	M6	M8	M10
Height	H	10	12	15	18
W.A.F.	F	8	10	13	17
W.A.C.	G	8.79	11.05	14.38	18.9
Pitch		.80	1.00	1.25	1.50
Part No.		F119073	F120055	F1985	F116174

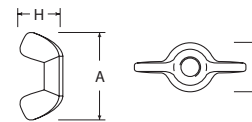
DIN 1587	Material:	Steel
	Plating:	Zinc



NUTS — METRIC WING CLASS 5

Size		M4	M5	M6	M8	M10
Height	H	10.5	13	17	20	25
Head	E	20	26	33	39	51
Spread	A	8	11	13	16	20
Pitch		.70	.80	1.00	1.25	1.50
Part No.		F110393	F111839	F113754	F118814	F15002

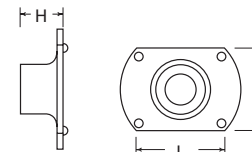
DIN 315	Material:	Steel
	Plating:	Zinc



NUTS — METRIC SPOT WELD

Size		M6	M8
Width	G	14	18
Length	L	24	26
Height	H	8	10
Pitch		1.00	1.25
Part No.		F1758	F13563

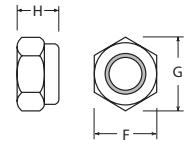
Material:	Steel
Plating:	Zinc



NUTS — METRIC NYLON INSERT LOCK CLASS 8

DIN 985	Material:	Steel
	Nylon insert develops locking actions	
	Plating:	Zinc or Yellow Zinc

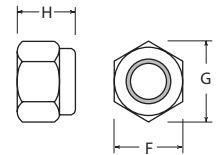
Note: Bold Part No.'s denote standard sizes



Size		M3	M4	M5	M6	M7	M8	M8	M10	M10	M10	M12
Height	H	4	5	5	6	7.5	8	8	10	10	10	12
W.A.F.	F	5.5	7	8	10	11	13	13	17	17	17	19
W.A.C.	G	6.01	7.66	8.79	11.05	12.12	14.38	14.38	18.90	18.90	18.90	21.10
Pitch		.50	.70	.80	1.00	1.00	1.00	1.25	1.0	1.25	1.50	1.00
Zinc		F12250	F15153	F110400	F116060	F18472	F16861	F116664	F110378	F14830	F119472	F16666
Zinc w/Blue Insert		F19913		F116118	F112018			F14261			F117937	
Yellow Zinc			F14621	F16077	F14536			F117250			F115997	
Yellow Zinc w/ Blue Insert				F19284	F119836			F118606				
Size		M12	M12	M12	M14	M14	M16	M16	M18	M18	M20	M20
Height	H	12	12	12	14	14	16	16	18.5	18.5	20.0	20.0
W.A.F.	F	19	19	19	22	22	24	24	27	27	30	30
W.A.C.	G	21.10	21.10	21.10	24.49	24.49	26.75	26.75	29.56	29.56	32.95	32.95
Pitch		1.25	1.50	1.75	1.50	2.00	1.50	2.00	1.50	2.50	1.50	2.50
Zinc		F14491	F18617	F11155	F116584	F16090	F19246	F13901	F13252	F112143		F115374
Yellow Zinc			F119030	F13088							F110910	

LOCKNUT — METRIC TALL NYLON INSERT CLASS 8 DIN982

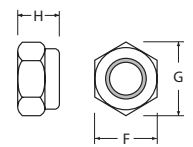
DIN 982	Material:	Steel
	Nylon insert develops locking actions	
	Plating:	Zinc



Size		M4	M5	M6	M8	M10	M12	M14	M16	M20	M24
Height	H	6	6.3	8	9.5	11.5	14	16	18	22	28
W.A.F.	F	7	8	10	13	17	19	22	24	30	36
W.A.C.	G	7.80	8.79	11.05	14.38	18.9	21.1	24.49	26.75	32.95	39.55
Pitch		0.70	0.80	1.00	1.25	1.50	1.75	2.00	2.00	2.50	3.00
Part No.		F123028	F123029	F123030	F123031	F123022	F123023	F123024	F123025	F123026	F123027

NUTS — METRIC NYLON INSERT LOCK CLASS 10

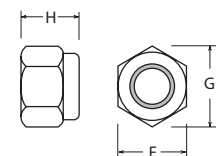
DIN 985	Material:	Steel
	Nylon insert develops locking actions	
	Plating:	Yellow Zinc



Size		M6	M8	M8	M10	M10	M12	M12	M12	M14	M14	M16	M18	M20	M22	M24
Height	H	6	8	8	10	10	12	12	12	14	14	16	18.5	20	22	24
W.A.F.	F	10	13	13	17	17	19	19	19	22	22	24	27	30	32	36
W.A.C.	G	11.05	14.38	14.38	18.9	18.9	21.1	21.1	21.1	24.49	24.49	26.75	29.56	32.95	35.03	39.55
Pitch		1.00	1.00	1.25	1.50	1.25	1.25	1.50	1.75	2.00	1.50	2.00	2.50	2.50	2.50	3.00
Part No.		F111929	F15907	F1591	F113378	F113104	F110886	F14024	F116931	F17408	F14585	F13411	F112165	F114120	F12097	F18219

LOCKNUT — METRIC TALL NYLON INSERT CLASS 10 DIN982

DIN 982	Material:	Steel
	Nylon insert develops locking actions	
	Plating:	Zinc

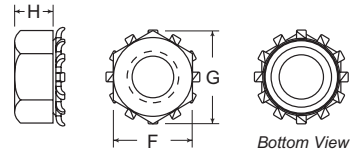


Size		M6	M8	M10	M12	M16	M18	M20
Height	H	8	9.5	11.5	14	18	20	22
W.A.F.	F	10	13	17	19	24	27	30
W.A.C.	G	11.05	14.38	18.9	21.1	26.75	29.56	32.95
Pitch		1.00	1.25	1.50	1.75	2.00	2.50	2.50
Part No.		F123037	F123038	F123032	F123033	F123034	F123035	F123036

NUTS — METRIC K-LOCK (KEPS)

Size		M5	M6	M8
Height	H	4.70	5.20	6.50
W.A.F.	F	8.00	10.00	13
W.A.C.	G	9.24	11.55	15.5
Pitch		0.80	1.00	1.25
Part No.		F110257	F15861	F123418

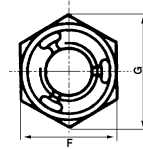
For use with 8.8 Fasteners
Attached Free Spinning External Tooth
Lock Washer
Plating: Zinc



NUTS — METRIC HEAVY STYLE SPRING STOP LOCK CLASS 6

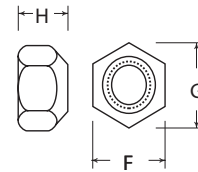
Size		M6	M8	M10
Height	H	5.4	7.3	8.5
W.A.F.	F	10	14	17
W.A.C.	G	11.05	15.9	18.9
Pitch		1.0	1.25	1.50
Part No.		F111008	F115240	F16729

DIN 980M	Material:	Low Carbon Steel
	Plating:	Zinc



NUTS — METRIC PREVAILING TORQUE ALL METAL CLASS 8

DIN 980V	Material:	Steel
	Crimped design develops locking action	
	Plating:	Zinc or Yellow Zinc

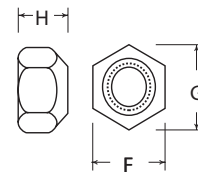


Size		M5	M6	M8	M10	M10	M10	M12	M12	M14	M14	M16	M16	M18	M20
Height	H	4.8	5.7	7.5	9	9	9	11	11	12	12	14	14	16	18
W.A.F.	F	8	10	13	17	17	17	19	19	22	22	24	24	27	30
W.A.C.	G	8.79	11.05	14.38	18.9	18.9	18.9	21.1	21.1	24.49	24.49	26.75	26.75	29.56	32.95
Pitch		.80	1.00	1.25	1.00	1.25	1.50	1.50	1.75	1.50	2.00	1.50	2.00	2.50	2.50
Zinc		F119274	F15609	F114797	F14048	F13595	F11618	F1866	F115128	F112597	F19690	F111159	F14532	F115120	F18406
Yellow Zinc						F120098									

NUTS — METRIC PREVAILING TORQUE ALL METAL CLASS 10

DIN 980V	Material:	Steel
	Crimped design develops locking action	
	Plating:	Zinc

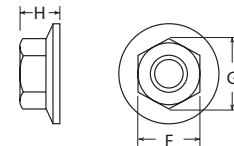
Size		M6	M8	M10	M12	M14	M16	M18	M20	M22	M24
Height	H	5.7	7.5	9	11	12	14	16	18	22	24
W.A.F.	F	10	13	17	19	22	24	27	30	32	36
W.A.C.	G	11.05	14.38	18.9	21.1	24.49	26.75	29.56	32.95	35.03	39.55
Pitch		1.00	1.25	1.50	1.75	2.0	2.0	2.50	2.50	2.50	3.0
Zinc		F19387	F16343	F117073	F112745	F114972	F18066	F118461	F119493	F120816	F121141



NUTS — METRIC LOCK WITH WASHER ASSEMBLY CLASS 8

Size		M5
Height	H	6.2
W.A.F.	F	8
W.A.C.	G	8.79
Pitch		.80
Part No.		F11418

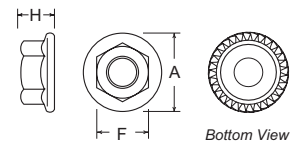
Material:	Steel
Free spinning washer attached	
Plating:	Yellow Zinc



NUTS — METRIC SERRATED FLANGE CLASS 8

Size		M4	M5	M6	M8	M10	M12
Height	H	4	5	6	8	10	12
W.A.F.	F	7	8	10	13	15	18
Flange	A	10	11.8	14.2	17.9	21.8	26.0
Pitch		.70	.80	1.00	1.25	1.50	1.75
Part No.		F12474	F13919	F16250	F116185	F15770	F111830

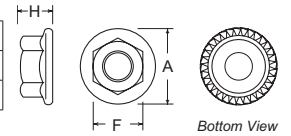
DIN 6923	Material:	Steel
	Serrated surface develops locking action	
	Plating:	Yellow Zinc



NUTS — METRIC JIS CLASS 10 HEX FLANGE LOCKING

Size	M6	M8	M10	M12
Height H	6	7.5	9	11.5
W.A.F. F	10	12	14	17
Dia. G	14	17	21	24
Pitch	1.00	1.25	1.25	1.25
Serrated	F118382	F117255	F110959	F16385

JIS B1190	For use with JIS Fasteners
	Material: Steel
	Plating: Zinc Clear

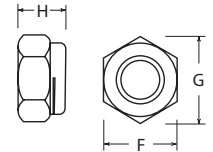


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NUTS — METRIC LOCK COPPER PLATED

Size	M6	M8	M8	M8	M10	M10
Height H	7	8	8.5	8	10.2	10.5
W.A.F. F	9	12	13	12	14	14
Pitch	1.00	1.00	1.25	1.25	1.25	1.50
Part No.	F15559	F12077	F117910	F19632	F14158	F13245

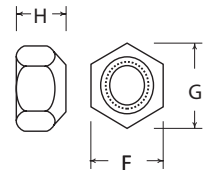
DIN 14440 14441	Material: Steel
	For exhaust applications up to 250°C
	Plating: Copper



NUTS — METRIC CRIMPLOCK COPPER PLATED

Size	M10	M10
Height H	9	9
W.A.F. F	14	17
Pitch	1.50	1.50
Part No.	F19695	F14377

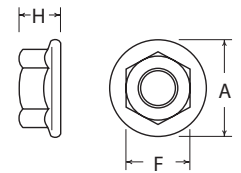
DIN 980	Material: Steel
	For exhaust stud applications
	Plating: Copper



NUTS — METRIC FLANGE COPPER PLATED

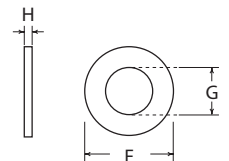
Size	M8	M8
Height H	9.4	9.4
W.A.F. F	12	13
Flange A	21.8	21.8
Pitch	1.25	1.25
Part No.	F15160	F19464

DIN 6923	Material: Steel
	For exhaust stud applications
	Plating: Copper



WASHERS — METRIC 8.8 FLAT

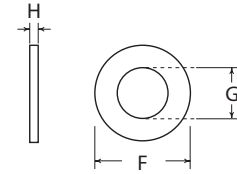
DIN 125	For use with Class 8.8 Fasteners
	Material: Steel
	Plating: Zinc or Yellow Zinc or plain



Nominal Diameter	M2	M2.5	M3	M4	M5	M6	M7	M8	M10	M12
I.D. G	2.5	3	3.2	4.3	5.3	6.4	7.4	8.4	10.5	13
O.D. F	5	6	7	9	10	12.5	14	17	21	24
Thick H	.5	.5	.5	.8	1.0	1.6	1.6	1.6	2	2.5
Zinc	F11364	F110861	F19970	F116125	F1769	F112958	F14141	F110580	F111548	F118584
Yellow Zinc				F115049	F18475	F17062	F14112	F114267	F117062	F19378
Plain			F115339	F111307	F114519	F112570	F17790	F11787	F17617	F19292
Nominal Diameter	M14	M16	M18	M20	M22	M24	M27	M30		
I.D. G	15	17	19	21	23	25	28	31		
O.D. F	28	30	34	37	39	44	50	56		
Thick H	2.5	3	3	3	3	4	4	4		
Zinc	F11105	F119180	F15388	F112476	F19738					
Yellow Zinc	F112647									
Plain	F111528	F114968	F13219	F1934	F117581	F116008	F16045	F111501		

WASHERS — METRIC THRU-HARDENED FLAT

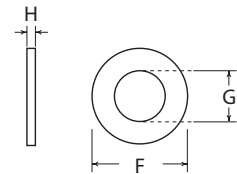
Nominal Diameter		M5	M6	M8	M10	M12	M14	M16	M18	M20	M24
I.D.	G	5.3	6.4	8.4	10.5	13	15	17	19	21	25
O.D.	F	10	12	16	20	24	28	30	33	37	44
Thick	H	1	1.6	1.6	2	2.5	2.5	3	3	3	3
Zinc		F123551	F110997	F11703	F118485	F1213	F112829	F120101	F114146	F12951	F114295
Yellow Zinc			F19702	F13784	F112036	F172	F14539	F112907		F112099	F18721



DIN 125	For use with Class 10.9 Fasteners
	Material: Steel
	Plating: Zinc or Yellow Zinc

WASHERS — METRIC FLAT POLYAMIDE (PLASTIC)

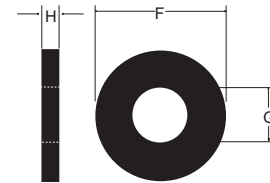
Nominal Diameter		M4	M5	M8	M10	M12
I.D.	G	4.3	5.3	8.4	10.5	13
O.D.	F	9	10	16	20	24
Thick	H	.8	1.0	1.6	2	2.5
Part No.		F13094	F12226	F18683	F1870	F112944



DIN 125A	Material: Clear Polyamide

WASHERS — METRIC CASE HARDENED BLACK

Nominal Dia.		M6	M8	M10	M12	M16	M20
ID	G	7	9	11	13	17	22
OD	F	16	19	22	29	35	44
Thick	H	3	3	3	3	3	5
Part No.		F15154	F111291	F115018	F18027	F14279	F12871

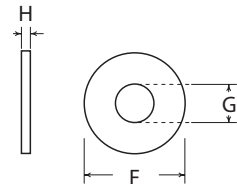


Material:	C1010 Steel Case Hardened
Plating:	Black Oxide
Made in USA	

WASHERS — METRIC FENDER

DIN 9021B	Material: Steel
	Plating: Zinc or Yellow Zinc

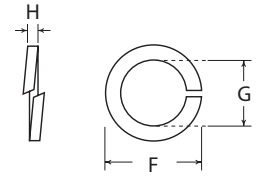
*Non-standard item, price, & availability subject to change without notice.



Nominal Diameter		M4	M5	M5	M5	M6	M6*	M6	M6	M6
I.D.	G	4.3	5.3	5.3	5.3	6.4	6.4	6.4	6.4	6.4
O.D.	F	12	15	20	25	15	16	18	20	25
Thick	H	.8	1.0	1.0	1.0	1.6	1.6	1.6	1.6	1.6
Zinc		F11412	F115893	F115068	F1971	F17623		F110470	F116830	F19687
Yellow Zinc				F110450			F11034		F110647	
Nominal Diameter		M7	M7	M8	M8	M8	M10	M10	M10	M12
I.D.	G	7.4	7.4	8.4	8.4	8.4	10.5	10.5	10.5	13
O.D.	F	20	25	20	24	30	20	30	40	37
Thick	H	1.6	1.6	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Zinc		F12809	F112384	F13920	F13238	F17684	F119993	F13035	F14436	F117004
Yellow Zinc					F113610			F15482		

WASHERS — METRIC SPLIT LOCK

DIN 127	Material:	Steel
	Plating:	Zinc or Yellow Zinc or plain

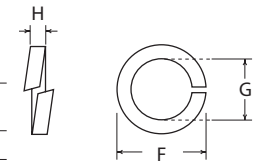


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Nominal Diameter	M2	M2.5	M3	M4	M5	M6	M7	M8	M10	M12	M14	M16	M18
I.D. G	2.1	2.6	3.1	4.1	5.1	6.1	7.1	8.4	10.2	12.2	14.2	16.2	18.2
O.D. F	4	5.1	6.2	7.6	9.2	11.8	12.8	14.8	18.1	21.1	24.1	27.4	29.4
Thick H	.06	.06	.08	.09	1.2	1.6	1.6	2	2.2	2.5	3	3.5	3.5
Zinc	F12300	F117310	F14715	F119622	F13471	F118896	F14487	F15487	F117961	F13971	F112529	F119179	F1879
Yellow Zinc				F18742	F13224	F118974		F17410	F15142	F115385	F13098	F15391	
Plain			F19994	F117888	F112605	F17882	F116882	F111665	F112182	F119048	F111787	F115408	F113068
Nominal Diameter	M20	M22	M24	M27	M30	M33	M36	M42	M45	M48	M52		
I.D. G	21.2	23.03	25.5	27.5	30.5	33.5	36.5	43.7	46.7	50.5	54.5		
O.D. F	33.6	34.46	40	43	48.2	55.2	58	68.2	71.2	75	83		
Thick H	4	4	5	10	12	12	12	7	7	7	8		
Zinc	F13704	F114213	F115769										
Yellow Zinc													
Plain	F111266				F14945	F13322	F118832	F15999	F13037	F1162	F17158	F114412	

WASHERS — METRIC HIGH COLLAR SPLIT LOCK

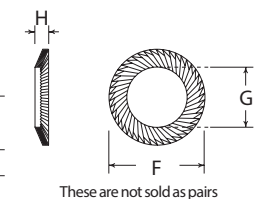
DIN 7980	Material:	Steel
	High Collar Style for Socket Head Bolts	
	Plating:	Zinc



Nominal Diameter	M4	M5	M6	M8	M10	M12	M14	M16	M20
I.D. G	4.1	5.1	6.1	8.1	10.2	12.2	14.2	16.2	20.2
O.D. F	7	8.8	9.9	12.7	16	18	21.1	24.4	30.6
Thick H	1.2	1.6	1.6	2	2.5	2.5	3.0	3.5	4.5
Part No.	F18794	F113309	F13329	F17324	F115143	F113023	F15972	F14256	F114836

WASHERS — METRIC SCHNORR SERRATED LOCK

For use with Socket Head Bolts	
Material:	Steel
Plating:	Zinc

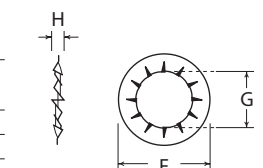


These are not sold as pairs

Nominal Diameter	M4	M5	M6	M8	M10	M12	M14	M16	M18
I.D. G	4.3	5.3	6.4	8.4	10.5	13	15	17	19
O.D. F	7	9	10	13	16	18	22	24	27
Height H	1	1.1	1.2	1.4	1.6	1.7	2.4	2.1	2.3
Part No.	F117038	F116322	F19649	F110024	F14564	F119049	F112109	F111866	F114015

WASHERS — METRIC INTERNAL SERRATED LOCK

DIN 6798J	Material:	Steel
	Plating:	Zinc



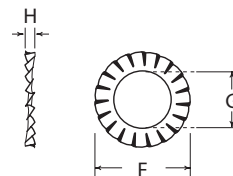
Nominal Diameter	M3	M4	M5	M6	M8	M10	M12
I.D. G	3.2	4.3	5.3	6.4	8.4	10.5	12.5
O.D. F	6	8	10	11	14	18	20.5
Thick H	1.2	1.5	1.8	2.1	2.4	2.7	3
Part No.	F19901	F18282	F115051	F12278	F11884	F15923	F13751

WASHERS — METRIC EXTERNAL SERRATED LOCK

DIN 6798A	Material:	Spring Steel
	Plating:	Zinc

Nominal Diameter		M3	M4	M5	M6	M7	M8	M10	M12
I.D.	G	3.2	4.3	5.3	6.4	7.4	8.4	10.5	12.5
O.D.	F	6	8	10	11	12.5	14	18	20.5
Thick	H	1.2	1.5	1.8	2.1	2.4	2.4	2.7	3

Part No.	F110572	F12029	F115312	F16940	F19260	F118437	F15401	F12335
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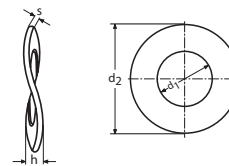
WASHERS — METRIC WAVE SPRING

DIN 137B	Material:	Carbon Spring Steel
	Plating:	Plain Heat Treated, Zinc or Yellow Zinc

Nominal Diameter		M5	M6	M7	M8	M10	M12	M14	M16	M18
I.D.	D1	5.3	6.4	7.4	8.4	10.5	13	15	17	19
O.D.	D2	11	12	14	15	18	24	28	30	34
Free Height Max	H	2.2	2.6	3.0	3.0	4.2	5.0	5.9	6.3	6.5
Thick	S	.5	.5	.8	.8	1	1.2	1.6	1.6	1.6

Zinc	F117424	F113900	F14706	F116501	F13456	F18089	F113024	F111762	F18560
Yellow Zinc	F1482	F13369		F117960	F112067	F113666			
Plain Heat Treat		F113338		F16846	F118424				

* Black in appearance from heat treat

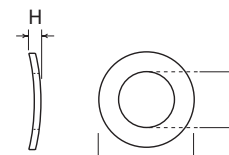


WASHERS — METRIC CURVED SPRING

DIN 137A	Material:	Spring Steel
	Plating:	Zinc

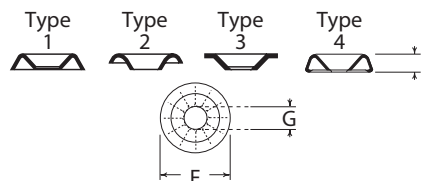
Nominal Diameter		M3	M4	M5	M6	M7	M8	M10
I.D.	G	3.2	4.3	5.3	6.4	7.4	8.4	10.5
O.D.	F	6	8	10	11	12	15	18
Thick	H	.65	.8	.9	1.1	1.2	1.7	2

Part No.	F113603	F110032	F112786	F112434	F13216	F114717	F115351
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WASHERS — METRIC FINISHING

DIN 17670	Material:	Steel or Plastic
	Plating:	Nickel or Black Oxide

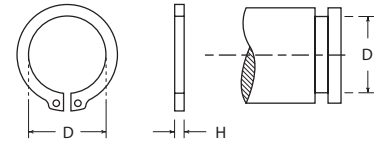


Nominal Diameter		M3	M4.2	M4.3	M4.8	M5	M5	M6	M6
Type		1	2	3	4	1	4	1	4
I.D.	G	3.2	4.3	4.3	4.8	5.3	5.3	6.4	6.4
O.D.	F	10	14	14	14	16	16	18	18
Height	H	1.97	1.73	2.03	2.70	2.34	2.38	2.27	2.73

Steel Nickel Pltd	F17920	F118001	F115232		F113100			F117999
Steel Black Pltd				F17649		F11528		F115430
Plastic Black							F117134	

RETAINING RINGS — METRIC EXTERNAL

DIN 471	Material:	Spring Steel
	Plating:	Black Phosphate



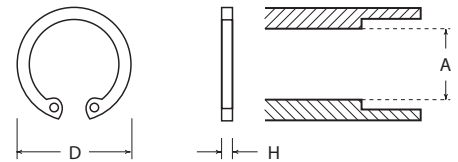
Shaft Dia.	ID "D"	Thickness "H"	Part No.
M3	2.7	.40	F19873
M4	3.7	.40	F17672
M5	4.7	.60	F13373
M6	5.6	.70	F1289
M7	6.5	.80	F1731
M8	7.4	.80	F18166
M9	8.4	1.0	F110863
M10	9.3	1.0	F18892
M11	10.2	1.0	F113683
M12	11.0	1.0	F12679
M13	11.9	1.0	F16808
M14	12.9	1.0	F15989

Shaft Dia.	ID "D"	Thickness "H"	Part No.
M15	13.8	1.0	F116496
M16	14.7	1.0	F119874
M17	15.7	1.0	F15560
M18	16.5	1.2	F112730
M19	16.5	1.2	F117623
M20	17.5	1.2	F12575
M21	18.5	1.2	F111823
M22	19.5	1.2	F1453
M23	20.5	1.2	F17228
M24	21.5	1.2	F19340
M25	23.2	1.2	F18302
M26	24.2	1.2	F19221

Shaft Dia.	ID "D"	Thickness "H"	Part No.
M27	24.9	1.2	F116255
M28	25.9	1.2	F117263
M29	26.9	1.5	F115936
M30	27.9	1.5	F16523
M32	29.6	1.5	F12072
M33	30.5	1.5	F115250
M34	31.5	1.5	F16085
M35	32.2	1.5	F1237
M36	33.2	1.75	F118910
M37	34.2	1.75	F119305
M38	35.2	1.75	F112819
M39	36.0	1.75	F114284

RETAINING RINGS — METRIC INTERNAL

DIN 472	Material:	Spring Steel
	Plating:	Phosphate



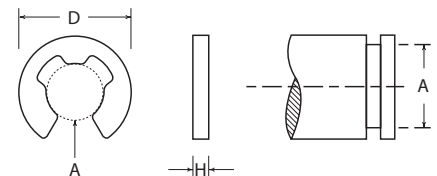
Bore Dia. "A"	OD "D"	Thickness "H"	Part No.
M8	8.7	.8	F113922
M9	9.8	.8	F14666
M10	10.8	1.0	F17866
M11	11.8	1.0	F15360
M12	13	1.0	F14136
M13	14.1	1.0	F114900
M14	15.1	1.0	F17144
M15	16.2	1.0	F17247
M16	17.3	1.0	F11848
M17	18.3	1.0	F110200
M18	19.5	1.0	F13141

Bore Dia. "A"	OD "D"	Thickness "H"	Part No.
M19	20.5	1.0	F118167
M20	21.5	1.0	F111622
M21	22.5	1.0	F110498
M22	23.5	1.0	F110804
M23	23.5	1.2	F116965
M24	25.9	1.2	F13678
M25	26.9	1.2	F110107
M26	27.9	1.2	F18660
M27	29.1	1.2	F116152
M28	30.1	1.2	F119327
M29	31.1	1.2	F11975

Bore Dia. "A"	OD "D"	Thickness "H"	Part No.
M30	32.1	1.2	F18999
M32	34.4	1.2	F12379
M35	37.8	1.5	F112579
M36	38.8	1.5	F19335
M37	39.8	1.5	F112627
M38	40.8	1.5	F110879
M39	42.0	1.5	F13773

RETAINING RINGS — METRIC E-TYPE

DIN 6799	Material:	Spring Steel
	Plating:	Unplated



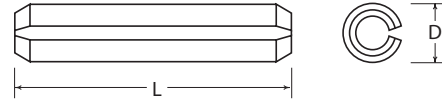
Dia. "A"	OD "D"	Shaft From	Shaft To	Thickness "H"	Part No.
1.2	3.25	1.4	2.0	.34	F116648
1.5	4.25	2.0	2.5	.44	F19587
1.9	4.50	2.5	3.0	.54	F18082
2.3	6.30	3.0	4.0	.64	F116165
3.2	7.30	4.0	5.0	.74	F16069
4.0	9.0	5.0	7.0	.74	F113071
5.0	11.0	6.0	8.0	.74	F11493
6.0	12.0	7.0	9.0	.74	F15012

Dia. "A"	OD "D"	Shaft From	Shaft To	Thickness "H"	Part No.
7.0	14.0	8.0	11.0	.94	F116783
8.0	16.0	9.0	12.0	1.05	F17513
9.0	18.5	10.0	14.0	1.15	F112998
10.0	20.4	11.0	15.0	1.25	F116842
12.0	23.4	13.0	18.0	1.35	F117920
15.0	29.0	16.0	24.0	1.55	F18461
19.0	37.0	20.0	34.0	1.80	F1688
24.0	44.0	25.0	38.0	2.05	F17462

PINS — METRIC SPRING

1

DIN 1481	Material:	Steel
	Plating:	Black Oxide



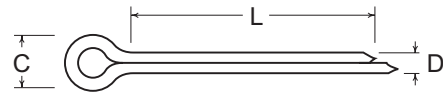
D	L (mm)	Part No.
M2	10	F12264
M2	12	F119262
M2	22	F11537
M3	10	F18807
M3	16	F16227
M3	20	F118754
M3	26	F112938
M3	30	F13437
M4	20	F13449
M4	26	F18829

D	L (mm)	Part No.
M4	36	F18486
M4	40	F114055
M4	50	F18266
M5	20	F117495
M5	30	F13221
M5	50	F12315
M5	60	F17904
M6	26	F13193
M6	30	F111675
M6	36	F13697

D	L (mm)	Part No.
M6	40	F18490
M6	50	F117597
M8	16	F190
M8	20	F15709
M8	26	F111007
M8	30	F19368
M8	40	F12855
M8	50	F14809

PINS — METRIC CHISEL POINT COTTER

DIN 94	Material:	Steel
	Plating:	Zinc Plated



D	L (mm)	C	Part No.
M1	16	2	F117033
M1	25	2	F19556
M1.6	16	2.7	F19197
M1.6	20	2.7	F110575
M1.6*	25	2.7	F113343
M1.6	32	2.7	F16221
M1.6	40	2.7	F14895
M2	16	3.2	F1586
M2	20	3.2	F19377
M2	25	3.2	F1784
M2	32	3.2	F114870
M2	40	3.2	F18481
M2.5	20	4	F119089
M2.5	25	4	F113080

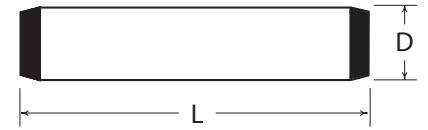
*Possibility of being yellow zinc

D	L (mm)	C	Part No.
M2.5	32	4	F111856
M2.5	40	4	F116796
M2.5	50	4	F114062
M3.2	16	5.1	F11659
M3.2	20	5.1	F112902
M3.2	25	5.1	F115713
M3.2	32	5.1	F17765
M3.2	36	5.1	F14026
M3.2	40	5.1	F112290
M3.2	50	5.1	F15125
M3.2	63	5.1	F117698
M3.5*	35	5.9	F13348
M3.5	40	5.9	F118197
M3.5*	50	5.9	F11372

D	L (mm)	C	Part No.
M3.5	60	5.9	F11826
M4	25	6.5	F13286
M4	32	6.5	F16384
M4	36	6.5	F117928
M4	40	6.5	F114138
M4	45	6.5	F118296
M4	50	6.5	F112372
M4	56	6.5	F115662
M5	45	8	F17262
M5	56	8	F12434
M5	63	8	F119090
M6.3	63	10.3	F17807

PINS — METRIC DOWEL DIN 6325

Material:	Alloy Steel Ground and Polished
Plating:	Unplated



1

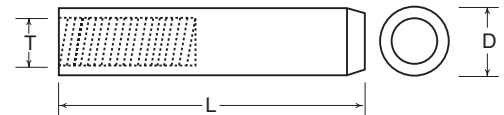
D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M2	8	F113453	M4	26	F113313	M6	30	F110620	*M10 (.0005)	40	F110262
M2	10	F116509	M4	30	F111105	M6	32	F113370	M10	45	F111361
M2	22	F112097	M4	40	F19240	M6	35	F118215	M10	50	F13335
M2	30	F16829	M4	45	F117791	M6	40	F19759	M10	60	F118220
M2.5	16	F1425	M4	50	F19298	M6	45	F119026	M12	20	F113261
M3	6	F114735	M5	10	F17026	M6	60	F1212	M12	25	F15437
M3	8	F112534	M5	12	F15549	M8	16	F19635	M12	30	F116246
M3	10	F13218	M5	14	F118244	M8	20	F17789	M12	32	F18647
M3	12	F114194	M5	16	F113904	M8	25	F1603	M12	35	F17973
M3	20	F17795	M5	20	F115458	M8	30	F110897	M12	40	F17800
M3	24	F119149	M5	24	F16943	M8	32	F112295	M12	50	F115696
M3	30	F12800	M5	26	F115267	M8	40	F11877	M12	60	F112751
M3	32	F12045	M5	30	F117825	M8	45	F15182	M12	70	F113829
M4	10	F14899	M5	40	F110306	M8	50	F113264	M12	80	F114135
M4	12	F113432	M6	10	F14608	M8	60	F19753	M12	90	F111736
M4	14	F11056	M6	12	F19052	M10	20	F11882	M16	40	F14537
M4	16	F113555	M6	14	F118542	M10	30	F113758			
M4	20	F112594	M6	16	F119188	M10	32	F1397			
M4	24	F16753	M6	20	F1708	M10	40	F14841			

*Indicates .0005 over-sized dowel pin

Warning: Always Press Dowel Pins Into Place Using An Arbor Press. Never Strike With Any Material Or Tool, Including A Hammer. Doing So May Cause The Dowel To Splinter And May Result In Serious Bodily Injury.

PINS — METRIC PULL DOWEL

DIN 7979	Material:	Alloy Steel
		Ground and Polished
	Plating:	Unplated



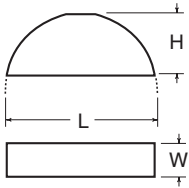
Diameter	D	M6	M8	M10	M12	M16
Thread Size	T	M4	M5	M6	M6	M8

D	L (mm)	Part No.	D	L (mm)	Part No.	D	L (mm)	Part No.
M6	20	F16704	M6	60	F16239	M8	50	F15889
M6	24	F15723	M8	20	F116940	M8	60	F112046
M6	25	F1369	M8	25	F118279	M12	40	F117516
M6	30	F16471	M8	30	F116323	M12	60	F12523
M6	32	F116240	M8	32	F11190	M12	80	F119172
M6	35	F114914	M8	35	F15520			
M6	40	F117727	M8	40	F112069			
M6	50	F13103	M8	45	F118900			

KEYS — METRIC WOODRUFF

1

DIN 6888	Material:	1035 Carbon Steel
	Plating:	Unplated



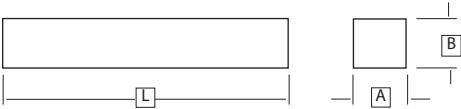
Width / Thick (W)	Height (H)	Length (L)	Part No.
2.5	3.7	9.66	F17769
3	3.7	9.66	F15693
3	5	12.65	F17194
3	6.5	15.72	F112267
4	5	12.65	F17189
4	6.5	15.72	F15816

Width / Thick (W)	Height (H)	Length (L)	Part No.
4	7.5	18.57	F112351
5	6.5	16	F15788
5	7.5	19	F14629
5	9	22	F114223
6	9	22	F19253
6	10	25	F12214

Width / Thick (W)	Height (H)	Length (L)	Part No.
8	11	28	F15707
8	13	32	F18421
10	13	32	F119592

KEYSTOCK — METRIC

Material:	Steel
Plating:	Yellow Zinc or Plain



Width 'A'	Width 'B'	Length 'L'	Yellow Zinc	Plain
M2	M2	12"		F115077
M3	M3	12"		F117711
M4	M4	12"	F110932	F115586
M5	M5	12"	F116593	F12297
M6	M6	12"	F13967	F11221
M7	M7	12"	F17714	F12401
M8	M8	12"	F15286	F12387
M10	M10	12"	F11376	F15518

* Not Available Yellow Zinc

Width 'A'	Width 'B'	Length 'L'	Yellow Zinc	Plain
M12	M12	12"	F18489	F18604
M14	M14	12"	F18555	F18269
M16	M16	12"	F14546	F19528
M18	M18	12"	F12168	F14626
M20	M20	12"	F14762	F113552
M22	M22	12"		F14556
M25	M25	12"	F14304	F11895

REFERENCE CHART — STAINLESS STEEL INFORMATION

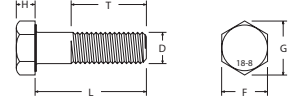
AUSTENITIC - Refers to 300 series stainless, the most popular of the stainless alloys accounting for 85% - 90% of stainless fasteners sold. Named for Sir Robert Williams Austen, an English metallurgist, austenitic stainless is a crystal structure formed by heating steel, chromium, and nickel to a high temperature where it forms the characteristics of 300 series stainless steel. An **"AUSTENITE"** is a molecular structure where 8 atoms of iron surround one atom of carbon, thus limiting the corrosive effects of the carbon. Austenitic fasteners have the highest level of corrosion resistance in the stainless family, cannot be hardened by heat treatment, and are non-magnetic for practical purposes. The most popular of austenitic grades is known generically as **"18-8"** stainless and includes grades 302, 302HQ, 303, 304, 305, and XM-7. Typical industries using 18-8 fasteners include: food, dairy, wine, chemical, pulp and paper, pharmaceutical, boating, swimming pool, pollution control, electronic, medical and hospital equipment, computer and textile.

Type 316 stainless has added nickel and molybdenum. The molybdenum (called moly) sharply increases corrosion resistance to chlorides and sulfates, including various sulfurous acids in the pulp industry. It has superior tensile strength at high temperatures compared to 18-8. Besides pulp and paper, typical industries using 316 are: photographic and other chemical, ink, textile, bleach, and rubber. **A2** is the metric designation for a stainless steel comparable to 18-8. **A4** is the metric equivalent to 316.

*All hex cap may have an additional 1/4" to 3/8" thread, particularly on short length up to 1-1/2" and long lengths over 4"

SCREWS — HEX HEAD CAP 18-8 STAINLESS STEEL

ANSI B18.2.1 1981	Material:	18-8 Stainless Steel			
	Plating:	None			



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height	H	.156	.203	.234	.281	.313	.359	.391	.469	.547	.609	.688	.781	.938
W.A.F.	F	.438	.500	.563	.625	.750	.813	.938	1.125	1.313	1.500	1.688	1.875	2.250
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732	1.949	2.165	2.598

D	L	T	UNC	UNF
1/4	3/8	3/8	F115626	
1/4	1/2	1/2	F119350	F119299
1/4	5/8	5/8	F11140	F116136
1/4	3/4	3/4	F17051	F118611
1/4	7/8	3/4	F19121	
1/4	1	3/4	F12505	F13688
1/4	1-1/4	3/4	F11616	F18494
1/4	1-1/2	3/4	F15610	F110500
1/4	1-3/4	3/4	F113202	F16395
1/4	2	3/4	F1532	F118071
1/4	2-1/4	s3/4	F19895	F16174
1/4	2-1/2	3/4	F12424	F14613
1/4	2-3/4	3/4	F113306	
1/4	3	3/4	F119847	F114129
1/4	3-1/4	3/4	F15524	
1/4	3-1/2	3/4	F117020	F12769
1/4	3-3/4	3/4	F19049	
1/4	4	3/4	F14038	
1/4	4-1/2	3/4	F17430	
1/4	5	3/4	F115577	
1/4	5-1/2	3/4	F1704	
1/4	6	3/4	F110145	
5/16	1/2	1/2	F1334	F13849
5/16	5/8	5/8	F12336	F12495
5/16	3/4	3/4	F15717	F113572
5/16	7/8	7/8	F112616	
5/16	1	7/8	F15244	F11689
5/16	1-1/4	7/8	F11906	F15404
5/16	1-1/2	7/8	F115260	F11745
5/16	1-3/4	7/8	F18930	F17316
5/16	2	7/8	F19029	F18064
5/16	2-1/4	7/8	F113578	
5/16	2-1/2	7/8	F119536	F110180
5/16	2-3/4	7/8	F111225	
5/16	3	7/8	F112132	F110125
5/16	3-1/4	7/8	F18101	
5/16	3-1/2	7/8	F15722	
5/16	3-3/4	7/8	F11281	
5/16	4	7/8	F111668	
5/16	4-1/2	7/8	F15528	
5/16	5	7/8	F15496	
5/16	5-1/2	7/8	F16688	
5/16	6	7/8	F110723	
3/8	1/2	1/2	F18796	F111939
3/8	5/8	5/8	F110072	F114272
3/8	3/4	3/4	F111552	F17837
3/8	7/8	7/8	F15085	
3/8	1	1	F14203	F111311
3/8	1-1/4	1	F117983	F12252
3/8	1-1/2	1	F117300	F19569
3/8	1-3/4	1	F15241	F17372
3/8	2	1	F18432	F192
3/8	2-1/4	1	F13620	
3/8	2-1/2	1	F1921	F110374
3/8	2-3/4	1	F13488	
3/8	3	1	F116032	F111845
3/8	3-1/4	1	F12374	
3/8	3-1/2	1	F114505	F116522
3/8	3-3/4	1	F14654	
3/8	4	1	F117315	F113899
3/8	4-1/2	1	F16866	
3/8	5	1	F15767	
3/8	5-1/2	1	F15451	
3/8	6	1	F19822	
3/8	6-1/2	1-1/4	F12856	
3/8	7	1-1/4	F110781	

D	L	T	UNC	UNF
3/8	8	1-1/4	F19640	
3/8	9	1-1/4	F19798	
3/8	10	1-1/4	F112454	
7/16	3/4	3/4	F13106	
7/16	1	1	F14450	
7/16	1-1/4	1-1/8	F12982	F11049
7/16	1-1/2	1-1/8	F15292	F115701
7/16	1-3/4	1-1/8	F12345	F15515
7/16	2	1-1/8	F17037	F1495
7/16	2-1/4	1-1/8	F111154	
7/16	2-1/2	1-1/8	F116262	F13996
7/16	2-3/4	1-1/8	F17393	
7/16	3	1-1/8	F18880	F11758
7/16	3-1/2	1-1/8	F112648	
7/16	4	1-1/8	F18989	
7/16	4-1/2	1-1/8	F12361	
7/16	5	1-1/8	F19706	
7/16	5-1/2	1-1/8	F16478	
1/2	3/4	3/4	F111575	
1/2	7/8	7/8	F16448	
1/2	1	1	F117974	F119829
1/2	1-1/4	1-1/4	F13468	F17947
1/2	1-1/2	1-1/4	F119837	F16362
1/2	1-3/4	1-1/4	F12607	F119672
1/2	2	1-1/4	F18907	F111732
1/2	2-1/4	1-1/4	F18359	
1/2	2-1/2	1-1/4	F113339	F13247
1/2	3	1-1/4	F111689	F110043
1/2	3-1/4	1-1/4	F1472	
1/2	3-1/2	1-1/4	F111971	F117189
1/2	4	1-1/4	F110898	F114433
1/2	4-1/2	1-1/4	F118623	
1/2	5	1-1/4	F1853	
1/2	5-1/2	1-1/4	F115782	
1/2	6	1-1/4	F117950	
1/2	6-1/2	1-1/2	F116829	
1/2	7	1-1/2	F16566	
1/2	7-1/2	1-1/2	F117129	
1/2	8	1-1/2	F18605	
1/2	9	1-1/2	F18482	
1/2	11	1-1/2	F112368	
9/16	1-1/2	1-3/8	F117997	
9/16	2	1-3/8	F11947	F112503
9/16	2-1/2	1-3/8	F15063	
9/16	3	1-3/8	F13753	F119056
5/8	1	1	F14751	
5/8	1-1/4	1-1/4	F15760	
5/8	1-1/2	1-1/2	F16200	F111223
5/8	1-3/4	1-1/2	F119656	F11483
5/8	2	1-1/2	F1114	F110465
5/8	2-1/4	1-1/2	F119882	
5/8	2-1/2	1-1/2	F116190	F117863
5/8	2-3/4	1-1/2	F17737	
5/8	3	1-1/2	F18459	F114969
5/8	3-1/4	1-1/2	F16706	
5/8	3-1/2	1-1/2	F13272	
5/8	3-3/4	1-1/2	F17109	
5/8	4	1-1/2	F14437	F17803
5/8	4-1/2	1-1/2	F112688	
5/8	5	1-1/2	F15024	
5/8	5-1/2	1-1/2	F113752	
5/8	6	1-1/2	F112549	
5/8	6-1/2	1-3/4	F118463	
5/8	7	1-3/4	F119321	
5/8	7-1/2	1-3/4	F112768	
5/8	8	1-3/4	F12273	

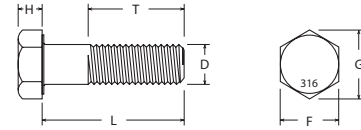
D	L	T	UNC	UNF
5/8	10	1-3/4	F113662	
3/4	1	1	F11722	
3/4	1-1/4	1-1/4	F110240	
3/4	1-1/2	1-1/2	F12850	
3/4	1-3/4	1-3/4	F13122	F14330
3/4	2	1-3/4	F16924	F114744
3/4	2-1/4	1-3/4	F116129	
3/4	2-1/2	1-3/4	F19070	F110474
3/4	2-3/4	1-3/4	F18623	
3/4	3	1-3/4	F117880	
3/4	3-1/4	1-3/4	F19589	
3/4	3-1/2	1-3/4	F14333	
3/4	3-3/4	1-3/4	F11910	
3/4	4	1-3/4	F112007	
3/4	4-1/2	1-3/4	F117715	
3/4	5	1-3/4	F11888	
3/4	5-1/2	1-3/4	F118607	
3/4	6	1-3/4	F16679	
3/4	6-1/2	2	F118173	
3/4	7	2	F19210	
3/4	7-1/2	2	F116178	
3/4	8	2	F17550	
3/4	9	2	F111799	
7/8	1-1/2	1-1/2	F19408	
7/8	1-3/4	1-3/4	F18575	
7/8	2	2	F11978	
7/8	2-1/4	2	F120104	
7/8	2-1/2	2	F114915	
7/8	2-3/4	2	F1335	
7/8	3	2	F115514	
7/8	3-1/4	2	F12678	
7/8	3-1/2	2	F119284	
7/8	3-3/4	2	F13438	
7/8	4	2	F11178	
7/8	4-1/2	2	F112321	
7/8	5	2	F112197	
7/8	5-1/2	2	F14517	
7/8	6	2	F112484	
1	2	2	F11692	
1	2-1/2	2-1/4	F114425	
1	2-3/4	2-1/4	F110161	
1	3	2-1/4	F12389	
1	3-1/2	2-1/4	F114922	
1	3-3/4	2-1/4	F117060	
1	4	2-1/4	F14934	
1	4-1/2	2-1/4	F13916	
1	5	2-1/4	F116167	
1	5-1/2	2-1/4	F1519	
1	6	2-1/4	F19130	
1	7	2-1/2	F16111	
1	8	2-1/2	F117758	
1-1/8	3	2-1/2	F119171	
1-1/8	3-1/2	2-1/2	F115902	
1-1/8	5-1/2	2-1/2	F117851	
1-1/8	6	2-1/2	F12185	
1-1/4	3	2-3/4	F112563	
1-1/4	4	2-3/4	F111431	
1-1/4	4-1/2	2-3/4	F119424	
1-1/4	5	2-3/4	F14645	
1-1/4	5-1/2	2-3/4	F11691	
1-1/4	6	2-3/4	F120024	
1-1/2	6	3-1/4	F110511	

FASTENERS

8 Stainless, Brass & Nylon Inch

SCREWS — HEX HEAD CAP 316 STAINLESS STEEL

ANSI B18.2.1 1981	Material:	316 Stainless Steel
	Plating:	None



Diameter	D	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height	H	.156	.203	.234	.281	.313	.359	.391	.469	.547	.609
W.A.F.	F	.438	.500	.562	.625	.750	.812	.937	1.125	1.313	1.500
W.A.C.	G	.505	.577	.650	.722	.866	.938	1.083	1.299	1.516	1.732

D	L	T	UNC
1/4	1/2	1/2	F114937
1/4	5/8	5/8	F112124
1/4	3/4	3/4	F117194
1/4	1	3/4	F1989
1/4	1-1/4	3/4	F16670
1/4	1-1/2	3/4	F111110
1/4	1-3/4	3/4	F113943
1/4	2	3/4	F15147
1/4	2-1/4	3/4	F11790
1/4	2-1/2	3/4	F12861
1/4	3	3/4	F15084
1/4	3-1/2	3/4	F117975
1/4	4	3/4	F116807
1/4	4-1/2	3/4	F116312
1/4	5	3/4	F114632
1/4	5-1/2	3/4	F118230
1/4	6	3/4	F11292
5/16	1/2	1/2	F14801
5/16	5/8	5/8	F18001
5/16	3/4	3/4	F110346
5/16	1	7/8	F114319
5/16	1-1/4	7/8	F16369
5/16	1-1/2	7/8	F116547
5/16	1-3/4	7/8	F115791
5/16	2	7/8	F14690
5/16	2-1/4	7/8	F19472
5/16	2-1/2	7/8	F16036
5/16	2-3/4	7/8	F111096
5/16	3	7/8	F11316
5/16	3-1/2	7/8	F115333
5/16	4	7/8	F117643
5/16	5	7/8	F17000
5/16	6	7/8	F13792
3/8	1/2	1/2	F18357
3/8	3/4	3/4	F117674
3/8	1	1	F116586
3/8	1-1/4	1	F15736
3/8	1-1/2	1	F112793
3/8	1-3/4	1	F116743
3/8	2	1	F11019
3/8	2-1/2	1	F17009
3/8	3	1	F16294

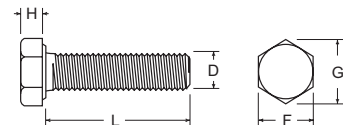
D	L	T	UNC
3/8	3-1/2	1	F14545
3/8	4	1	F16984
3/8	4-1/2	1	F18224
3/8	5	1	F19778
3/8	5-1/2	1	F1608
3/8	6	1	F14283
7/16	3/4	3/4	F112206
7/16	1	1	F18691
7/16	1-1/4	1-1/8	F12299
7/16	1-1/2	1-1/8	F110718
7/16	1-3/4	1-1/8	F15616
7/16	2	1-1/8	F14004
7/16	2-1/2	1-1/8	F13156
7/16	3	1-1/8	F19953
7/16	3-1/2	1-1/8	F19140
7/16	4	1-1/8	F118654
1/2	3/4	3/4	F14075
1/2	1	1	F15849
1/2	1-1/4	1-1/4	F11224
1/2	1-1/2	1-1/4	F16043
1/2	1-3/4	1-1/4	F115194
1/2	2	1-1/4	F114370
1/2	2-1/2	1-1/4	F1584
1/2	3	1-1/4	F114127
1/2	3-1/2	1-1/4	F116478
1/2	4	1-1/4	F1230
1/2	4-1/2	1-1/4	F14610
1/2	5	1-1/4	F110477
1/2	5-1/2	1-1/4	F118024
1/2	6	1-1/4	F117772
1/2	7	1-1/2	F12163
1/2	7-1/2	1-1/2	F1735
1/2	8	1-1/2	F14488
9/16	1-1/4	1-1/4	F12792
9/16	1-1/2	1-3/8	F116226
9/16	2-1/2	1-3/8	F15262
9/16	3	1-3/8	F17952
5/8	1	1	F15992
5/8	1-1/4	1-1/4	F112303
5/8	1-1/2	1-1/2	F17131
5/8	1-3/4	1-1/2	F117376
5/8	2	1-1/2	F112624

D	L	T	UNC
5/8	2-1/2	1-1/2	F17816
5/8	2-3/4	1-1/2	F117230
5/8	3	1-1/2	F118306
5/8	3-1/2	1-1/2	F111353
5/8	4	1-1/2	F112657
5/8	4-1/2	1-1/2	F110603
5/8	5	1-1/2	F11264
5/8	5-1/2	1-1/2	F13529
5/8	6	1-1/2	F111298
5/8	6-1/2	1-3/4	F19930
5/8	7-1/2	1-3/4	F14973
5/8	8	1-3/4	F1582
3/4	1-1/2	1-1/2	F13666
3/4	2	1-3/4	F119486
3/4	2-1/2	1-3/4	F114102
3/4	3	1-3/4	F118806
3/4	3-1/4	1-3/4	F112042
3/4	3-1/2	1-3/4	F113532
3/4	4	1-3/4	F14746
3/4	4-1/2	1-3/4	F19846
3/4	5	1-3/4	F110283
3/4	5-1/2	1-3/4	F116416
3/4	6	1-3/4	F116317
3/4	7-1/2	2	F118055
3/4	8	2	F118384
3/4	9	2	F114840
7/8	1-1/2	1-1/2	F15514
7/8	2	2	F115516
7/8	2-1/2	2	F114768
7/8	3	2	F119953
7/8	4	2	F112251
7/8	4-1/2	2	F14451
7/8	5	2	F14441
7/8	5-1/2	2	F115670
7/8	6	2	F16338
7/8	7	2-1/4	F111381
1	2-1/2	2-1/4	F113790
1	3-1/2	2-1/4	F115572
1	4	2-1/4	F13645
1	5	2-1/4	F1674
1	6	2-1/4	F112727

BOLTS — HEX HEAD FULL THREAD 18-8 STAINLESS STEEL (TAP BOLTS)

Diameter	D	1/2"
Height	H	5/16
W.A.F.	F	3/4
W.A.C.	G	.866

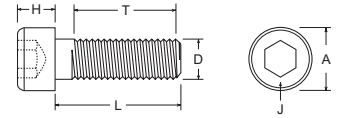
ANSI B18.2.1 1981	Material:	18-8 Stainless Steel
	Plating:	None



D	L	UNC	D	L	UNC	D	L	UNC	D	L	UNC
1/4	1-1/4	F121244	5/16	3	F118236	3/8	4	F112172	1/2	3-1/2	F113652
1/4	1-1/2	F12789	5/16	4	F119568	3/8	5	F18440	1/2	4	F11866
1/4	2	F116489	3/8	1-1/4	F121243	3/8	6	F118571	1/2	4-1/2	F116811
1/4	3	F18553	3/8	1-1/2	F111446	3/8	8	F117174	1/2	5	F16255
1/4	4	F13805	3/8	2	F1972	1/2	2	F115305	1/2	5-1/2	F117450
5/16	1-1/2	F118130	3/8	2-1/2	F114709	1/2	2-1/2	F111479	1/2	6	F12562
5/16	2	F115479	3/8	3	F115295	1/2	3	F13269	5/8	3	F13857

SOCKET CAP SCREWS — 18-8 STAINLESS STEEL

ANSI B18.3 1983	Material:	18-8 Stainless Steel
	Plating:	None



Diameter	D	#0	#2	#3	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.060	.086	.099	.112	.125	.138	.164	.190	.250	.312	.375	.500	.625	.750
Head Dia.	A	.096	.140	.161	.183	.205	.226	.270	.312	.375	.469	.562	.750	.938	1.125
Socket Size	J	.050	5/64	5/64	3/32	3/32	7/64	9/64	5/32	3/16	1/4	5/16	3/8	1/2	5/8

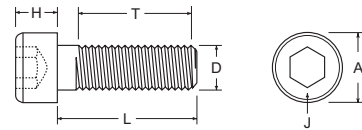
D	L	T	UNC	UNF
#0	1/8	1/8		F19584
#0	3/16	3/16		F116443
#0	1/4	1/4		F11194
#0	3/8	3/8		F112971
#2	1/8	1/8	F17383	
#2	3/16	3/16	F114568	
#2	1/4	1/4	F1929	
#2	5/16	5/16	F1594	
#2	3/8	3/8	F13655	
#2	7/16	7/16	F17563	
#2	1/2	1/2	F117091	
#2	3/4	5/8	F11156	
#2	1	5/8	F119859	
#2	1-1/4	5/8	F111902	
#3	3/16	3/16	F111974	
#3	3/8	3/8	F17088	
#3	1/2	1/2	F13464	
#4	3/16	3/16	F114699	
#4	1/4	1/4	F119378	
#4	5/16	5/16	F11236	
#4	3/8	3/8	F110037	
#4	7/16	7/16	F17897	
#4	1/2	1/2	F114114	
#4	9/16	9/16	F113439	
#4	5/8	5/8	F113327	
#4	3/4	3/4	F11923	
#4	7/8	3/4	F18134	
#4	1	3/4	F114010	
#4	1-1/8	3/4	F13474	
#4	1-1/4	3/4	F113832	
#4	1-1/2	3/4	F110249	
#5	3/8	3/8	F114794	
#5	3/4	3/4	F14100	
#5	1	3/4	F15781	
#5	1-1/4	1/4	F116384	
#6	1/4	5/16	F15212	
#6	5/16	3/8	F110239	
#6	3/8	7/16	F115617	
#6	1/2	9/16	F12724	
#6	5/8	3/4	F119743	
#6	3/4	3/4	F113386	
#6	7/8	3/4	F16434	
#6	1	3/4	F114934	
#6	1-1/8	3/4	F17822	
#6	1-1/2	3/4	F17619	
#6	1-3/4	3/4	F115582	
#6	2	3/4	F15871	
#8	1/4	1/4	F19965	
#8	5/16	5/16	F116512	
#8	3/8	3/8	F17063	
#8	1/2	1/2	F110881	
#8	5/8	5/8	F110232	
#8	3/4	3/4	F18788	
#8	7/8	7/8	F1931	
#8	1	7/8	F1734	
#8	1-1/4	7/8	F113167	
#8	1-1/2	7/8	F11736	
#8	1-3/4	7/8	F115765	
#8	2	7/8	F11832	
#8	2-1/2	7/8	F111203	

D	L	T	UNC	UNF
#8	3	7/8	F13659	
#10	1/4	1/4	F113543	F15846
#10	3/8	3/8	F18431	F19482
#10	1/2	1/2	F18986	F110385
#10	5/8	5/8	F113512	F15126
#10	3/4	3/4	F18793	F16976
#10	7/8	7/8	F112608	F115983
#10	1	7/8	F118671	F12711
#10	1-1/4	7/8	F111087	F114690
#10	1-1/2	7/8	F112468	F17019
#10	1-3/4	7/8	F112625	F111320
#10	2	7/8	F18891	F113073
#10	2-1/4	7/8	F17094	F118183
#10	2-1/2	7/8	F19354	F113061
#10	2-3/4	7/8		F16444
#10	3	7/8	F111781	F118678
1/4	1/4	1/4	F17470	
1/4	3/8	3/8	F17696	F17057
1/4	1/2	1/2	F16115	F118462
1/4	5/8	5/8	F16947	F12460
1/4	3/4	3/4	F111956	F119932
1/4	7/8	7/8	F15447	F19926
1/4	1	1	F19891	F12772
1/4	1-1/8	1	F110887	
1/4	1-1/4	1	F19373	F114001
1/4	1-1/2	1	F110354	F110776
1/4	1-5/8	1	F15300	
1/4	1-3/4	1	F115603	F16990
1/4	2	1	F12671	F16116
1/4	2-1/4	1	F119078	
1/4	2-1/2	1	F12186	F118496
1/4	2-3/4	1	F115352	
1/4	3	1	F115392	F118598
1/4	3-1/2	1	F113907	
1/4	4	1	F14253	
5/16	3/8	3/8	F113909	
5/16	1/2	1/2	F1429	F19433
5/16	5/8	5/8	F111901	F111740
5/16	3/4	3/4	F15421	F117683
5/16	7/8	7/8	F113242	
5/16	1	1	F111176	F112562
5/16	1-1/4	1-1/8	F17667	F113417
5/16	1-1/2	1-1/8	F115838	F14380
5/16	1-3/4	1-1/8	F11426	
5/16	2	1-1/8	F19791	F113763
5/16	2-1/4	1-1/8	F13309	
5/16	2-1/2	1-1/8	F115111	
5/16	2-3/4	1-1/8	F112066	
5/16	3	1-1/8	F13087	
5/16	3-1/2	1-1/8	F14675	
5/16	4	1-1/8	F1556	
5/16	4-1/2	1-1/8	F19034	
3/8	3/8	3/8	F115101	
3/8	1/2	1/2	F12805	F111185
3/8	5/8	5/8	F15726	
3/8	3/4	3/4	F116841	F117697
3/8	7/8	7/8	F119715	
3/8	1	1	F110514	F11878
3/8	1-1/4	1-1/4	F17188	F15830
3/8	1-1/2	1-1/4	F16917	F19128

D	L	T	UNC	UNF
3/8	1-3/4	1-1/4	F113006	F116520
3/8	2	1-1/4	F19606	F114093
3/8	2-1/4	1-1/4	F16063	
3/8	2-1/2	1-1/4	F117843	F113599
3/8	2-3/4	1-1/4	F110522	
3/8	3	1-1/4	F110000	
3/8	3-1/2	1-1/4	F112269	
3/8	3-3/4	1-1/4	F111199	
3/8	4	1-1/4	F114469	
3/8	4-1/2	1-1/4	F116050	
3/8	5	1-1/4	F15408	
3/8	6	1-1/4	F110841	
7/16	1	1	F118285	
7/16	1-1/4	1-1/4	F114486	
7/16	1-1/2	1-3/8	F110521	F11097
7/16	1-3/4	1-3/8	F116962	
7/16	2	1-3/8	F13283	F118383
7/16	2-1/4	1-3/8	F15682	
7/16	2-1/2	1-3/8	F115688	
7/16	3	1-3/8	F11388	
1/2	3/4	3/4	F115625	
1/2	1	1	F18842	F12600
1/2	1-1/4	1-1/4	F114189	F1566
1/2	1-1/2	1-1/2	F11430	F1451
1/2	1-3/4	1-1/2	F17265	
1/2	2	1-1/2	F14250	F15170
1/2	2-1/4	1-1/2	F13495	
1/2	2-1/2	1-1/2	F117917	
1/2	2-3/4	1-1/2	F110398	
1/2	3	1-1/2	F115130	
1/2	3-1/2	1-1/2	F16960	
1/2	4	1-1/2	F12576	
5/8	1	1	F18810	
5/8	1-1/4	1-1/4	F111200	
5/8	1-1/2	1-1/2	F119375	
5/8	1-3/4	1-3/4	F112205	
5/8	2	1-3/4	F19544	
5/8	2-1/2	1-3/4	F111687	
5/8	3	1-3/4	F113155	
5/8	3-1/2	1-3/4	F110438	
5/8	4	1-3/4	F11422	
5/8	4-1/2	1-3/4	F12788	
5/8	5-1/2	1-3/4	F110840	
3/4	1	1	F17827	
3/4	1-1/2	1-1/2	F12497	
3/4	2	2	F16781	
3/4	3	2	F114217	
3/4	4	2	F15344	
3/4	6	2	F116467	
7/8	2	2	F11407	
7/8	3	2-1/4	F117492	
1	2	2	F17984	
1	2-1/2	2-1/2	F16774	
1	3	2-1/2	F115032	
1	4	2-1/2	F13390	

SOCKET CAP SCREWS — 316 STAINLESS STEEL

ANSI B 18.3 1986	Material:	316 Stainless Steel
	Plating:	None



Diameter	D	#2	#4	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.086	.112	.138	.164	.190	.250	.312	.375	.500	.625	.750
Head Dia.	A	.140	.183	.226	.270	.312	.375	.469	.562	.750	.938	1.125
Socket Size	J	5/64	3/32	7/64	9/64	5/32	3/16	1/4	5/16	3/8	1/2	5/8

D	L	T	UNC
#2	1/4	1/4	F12194
#2	3/8	3/8	F115266
#4	3/8	3/8	F13363
#4	1/2	1/2	F1761
#4	3/4	3/4	F114619
#6	1/4	1/4	F1667
#6	3/8	3/8	F15936
#6	5/8	5/8	F12328
#6	3/4	3/4	F16194
#6	1	3/4	F119093
#6	1-1/2	3/4	F118813
#8	1/4	1/4	F11401
#8	3/8	3/8	F14599
#8	1/2	1/2	F113347
#8	5/8	5/8	F111121
#8	3/4	3/4	F111570
#8	1-1/4	7/8	F1227
#8	1-1/2	7/8	F118986
#10	1/2	1/2	F110237
#10	3/4	3/4	F11654

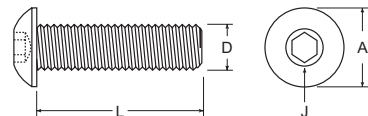
D	L	T	UNC
#10	1	7/8	F18205
#10	1-1/2	7/8	F113206
1/4	1/2	3/8	F115340
1/4	3/4	5/8	F116451
1/4	1	3/4	F116233
1/4	1-1/4	7/8	F119075
1/4	1-1/2	1	F112505
1/4	1-3/4	1	F113041
1/4	2	1	F115806
1/4	2-1/4	1	F118936
1/4	2-1/2	1	F113992
5/16	3/4	1/2	F110570
5/16	1	3/4	F19746
5/16	1-1/4	7/8	F112283
5/16	1-1/2	1-1/8	F112526
5/16	1-3/4	1-1/8	F114360
5/16	2-1/2	1-1/8	F19780
5/16	4	1-1/8	F116422
3/8	1/2	1/2	F12534
3/8	5/8	5/8	F118054

D	L	T	UNC
3/8	3/4	3/4	F110425
3/8	7/8	7/8	F13532
3/8	1	1	F112179
3/8	1-1/4	1-1/4	F14298
3/8	1-1/2	1-1/4	F15538
3/8	2	1-1/4	F16011
1/2	1	1	F14072
1/2	1-1/4	1-1/4	F15418
1/2	1-1/2	1-1/2	F111170
1/2	1-3/4	1-1/2	F16874
1/2	2	1-1/2	F15362
5/8	1	1-1/4	F19444
5/8	1-1/4	1-1/2	F16895
5/8	2-3/4	1-3/4	F119629
5/8	3	1-3/4	F13560
3/4	1-1/4	1-1/4	F13007
3/4	1-1/2	1-1/2	F11108
3/4	1-3/4	1-3/4	F16259
3/4	3	2	F14995

Thumb Screw Knob Available on page 1-1-17

SOCKET CAP SCREWS — BUTTON HEAD 18-8 STAINLESS STEEL

ASME B18.3	Material:	18-8 Stainless Steel
	Plating:	None



Diameter	D	#2	#4	#6	#8	#10	1/4"	5/16"	3/8"	1/2"
Head Heig Max	H	.046	.059	.073	.087	.101	.132	.166	.199	.265
Head Dia. Max	A	.164	.213	.262	.312	.361	.437	.547	.656	.875
Socket Size	J	.050	1/16	5/64	3/32	1/8	5/32	3/16	7/32	5/16

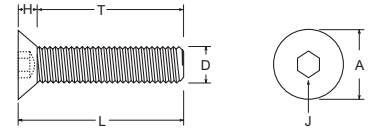
D	L	UNC	UNF
#2	1/8	F13439	
#2	3/16	F12559	
#2	1/4	F18865	
#2	5/16	F17874	
#2	3/8	F115532	
#2	1/2	F16123	
#4	1/8	F113716	
#4	3/16	F13126	
#4	1/4	F11022	
#4	5/16	F14217	
#4	3/8	F114916	
#4	1/2	F110086	
#4	5/8	F12921	
#4	3/4	F112695	
#4	1	F16345	
#6	3/16	F15168	
#6	1/4	F17517	
#6	5/16	F118757	
#6	3/8	F116052	
#6	1/2	F13502	
#6	5/8	F12919	
#6	3/4	F117940	
#6	1	F19538	
#8	3/16	F13504	
#8	1/4	F112559	
#8	5/16	F110069	
#8	3/8	F117755	
#8	1/2	F19664	

D	L	UNC	UNF
#8	5/8	F15627	
#8	3/4	F16805	
#8	1	F13714	
#8	1-1/4	F1707	
#8	1-1/2	F14435	
#10	1/4	F115179	F15504
#10	5/16		F19479
#10	3/8	F17427	F17704
#10	1/2	F115208	F14069
#10	5/8	F1380	F119977
#10	3/4	F13972	F15603
#10	7/8		F111073
#10	1	F16897	F120059
#10	1-1/4	F115767	F113052
#10	1-1/2	F118563	F116390
#10	1-3/4		F15134
#10	2	F11793	
1/4	3/8	F16750	F117042
1/4	1/2	F119334	F16629
1/4	5/8	F113981	F111930
1/4	3/4	F19452	F17942
1/4	7/8	F119009	
1/4	1	F17053	F16278
1/4	1-1/4	F115772	F14472
1/4	1-1/2	F114238	
1/4	1-3/4	F116942	
1/4	2	F111880	
1/4	2-1/2	F114646	

D	L	UNC	UNF
1/4	3	F16811	
5/16	3/8	F12294	
5/16	1/2	F17340	F115921
5/16	5/8	F111892	
5/16	3/4	F17412	F14462
5/16	7/8	F19947	
5/16	1	F113963	F14262
5/16	1-1/4	F17479	
5/16	1-1/2	F16737	
5/16	1-3/4	F118815	
5/16	2	F19683	
3/8	1/2	F12535	
3/8	3/4	F117721	F11234
3/8	1	F111773	F116017
3/8	1-1/4	F12384	
3/8	1-1/2	F13579	
3/8	2	F113730	
3/8	2-1/2	F117689	
3/8	3	F112478	
1/2	1	F11536	
1/2	1-1/4	F11487	
1/2	1-1/2	F18235	
1/2	2	F119936	

SOCKET CAP SCREWS — FLAT HEAD 18-8 STAINLESS STEEL

ASME B18.3	Material:	18-8 Stainless Steel
	Plating:	None



1

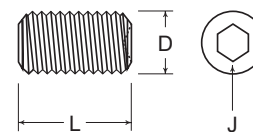
Diameter	D	#2	#4	#6	#5	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Height	H	.064	.083	.097	.281	.112	.127	.161	.198	.234	.251	.324	.396
Head Dia.	A	.197	.255	.307	.090	.359	.411	.531	.656	.781	.938	1.188	1.438
Socket Size	J	.050	1/16	5/64	5/64	3/32	1/8	5/32	3/16	7/32	5/16	3/8	1/2

D	L	UNC	UNF
#2	3/16	F116449	
#2	1/4	F113148	
#2	5/16	F17945	
#2	3/8	F15397	
#4	1/4	F15137	
#4	5/16	F15111	
#4	3/8	F16466	
#4	1/2	F15407	
#4	5/8	F13649	
#4	3/4	F113814	
#5	1/4	F110956	
#5	3/8	F18693	
#5	1/2	F119310	
#5	5/8	F110176	
#5	3/4	F14949	
#6	1/4	F13623	
#6	5/16	F112670	
#6	3/8	F18614	
#6	1/2	F16258	
#6	5/8	F11486	
#6	3/4	F117575	
#6	1	F113000	
#8	1/4	F15029	
#8	5/16	F113044	
#8	3/8	F16268	
#8	1/2	F111677	
#8	5/8	F117231	
#8	3/4	F19745	
#8	1	F17514	
#8	1-1/4	F119241	
#8	1-1/2	F117380	

D	L	UNC	UNF
#10	1/4	F16771	F115559
#10	3/8	F15838	F13748
#10	1/2	F117538	F18822
#10	5/8	F112942	F115332
#10	3/4	F18275	F115928
#10	7/8	F18878	F110217
#10	1	F113550	F112447
#10	1-1/4	F117361	F16912
#10	1-1/2	F19345	F14225
1/4	1/2	F115768	F11801
1/4	5/8	F17622	F113654
1/4	3/4	F117828	F11339
1/4	7/8	F19010	
1/4	1	F16906	F13208
1/4	1-1/4	F16933	F11297
1/4	1-1/2	F110410	F119717
1/4	1-3/4	F118234	
1/4	2	F116077	
1/4	2-1/2	F15622	
1/4	3	F116402	
5/16	1/2	F114044	F11008
5/16	5/8	F15186	
5/16	3/4	F111034	F19505
5/16	1	F112867	F112874
5/16	1-1/4	F11930	F112435
5/16	1-1/2	F12521	F13275
5/16	1-3/4	F117071	
5/16	2	F118293	
5/16	2-1/4	F112939	
5/16	2-1/2	F117933	

D	L	UNC	UNF
5/16	3	F14309	
3/8	1/2	F14741	
3/8	5/8	F15935	
3/8	3/4	F113433	F111324
3/8	1	F19113	F118155
3/8	1-1/4	F115365	F115649
3/8	1-1/2	F17554	F115061
3/8	1-3/4	F15573	
3/8	2	F118404	
3/8	2-1/4	F118545	
3/8	2-1/2	F17628	
3/8	3	F18804	
1/2	3/4	F17208	
1/2	1	F111132	
1/2	1-1/4	F1563	
1/2	1-1/2	F1446	
1/2	1-3/4	F12230	
1/2	2	F111204	
1/2	2-1/2	F15366	
1/2	3	F112453	
1/2	3-1/2	F17676	
5/8	1-1/4	F113641	
5/8	1-1/2	F18370	
5/8	1-3/4	F119103	
5/8	2	F115259	
5/8	2-1/2	F110110	
5/8	3	F14405	
3/4	1-1/2	F17865	
3/4	2	F110383	
3/4	2-1/2	F110119	
3/4	3	F17604	

SOCKET SET SCREWS — CUP POINT 18-8 STAINLESS STEEL



ANSI B18.3 1986	Material:	18-8 Stainless Steel
	Plating:	None

Diameter	D	#0	#1	#2	#3	#4	#5	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Socket Size	J	.028	.028	.035	.050	.050	1/16	1/16	5/64	3/32	1/8	5/32	3/16	1/4	5/16	3/8

D	L	UNC	UNF
#0	3/16		F118344
#0	1/4		F1231
#1	1/8		F114785
#1	3/16		F115010
#1	1/4		F118602
#2	1/8	F112843	
#2	3/16	F112433	
#2	1/4	F19286	
#2	5/16	F113566	
#2	3/8	F111663	
#3	1/8	F16114	
#3	3/16	F115371	
#3	1/4	F17543	
#3	3/8	F117656	
#4	1/8	F1466	
#4	3/16	F18522	
#4	1/4	F114211	
#4	3/8	F19155	
#4	1/2	F18728	
#4	3/4	F13652	
#5	3/16	F119216	
#5	1/4	F17498	
#5	1/2	F112545	
#6	1/8	F18241	
#6	3/16	F17400	F13570
#6	1/4	F119673	
#6	5/16	F14943	
#6	3/8	F116698	
#6	1/2	F116905	
#6	5/8	F19277	
#6	3/4	F15581	
#6	1	F115979	
#8	1/8	F19534	

D	L	UNC	UNF
#8	3/16	F119104	
#8	1/4	F175	
#8	5/16	F110444	
#8	5/8	F15656	
#8	3/4	F1488	
#8	7/8	F16078	
#8	1	F19751	
#10	1/8	F18163	F119094
#10	3/16	F19048	F19518
#10	1/4	F118127	F113286
#10	5/16	F113177	F16431
#10	3/8	F119588	F15714
#10	1/2	F119269	F110832
#10	5/8	F115079	F13538
#10	3/4	F16719	F13034
#10	1	F12269	F12351
#10	1-1/4		F115368
1/4	3/16	F12367	F1358
1/4	1/4	F19380	F15358
1/4	5/16	F17041	F117483
1/4	3/8	F116340	F110028
1/4	1/2	F115994	F113912
1/4	5/8	F115658	F114726
1/4	3/4	F111155	F112485
1/4	7/8	F117636	F19723
1/4	1	F13387	F113542
1/4	1-1/4	F116643	F17847
1/4	1-1/2	F1725	
1/4	1-3/4	F113821	
1/4	2	F11839	
5/16	1/4	F110207	F118640
5/16	5/16	F112299	F13292
5/16	3/8	F113095	F15997

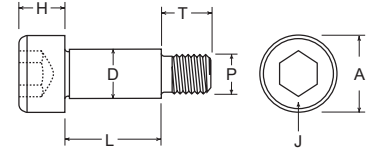
D	L	UNC	UNF
5/16	5/8	F116348	
5/16	3/4	F110479	
5/16	1	F112824	
5/16	1-1/2	F110478	
5/16	1-3/4	F117641	
3/8	1/4	F17783	
3/8	5/16	F116197	
3/8	3/8	F16097	
3/8	1/2	F120043	
3/8	5/8	F15069	
3/8	3/4	F16927	
3/8	1	F18324	
3/8	1-1/4	F19268	
3/8	1-1/2	F118727	
3/8	1-3/4	F13506	
3/8	2	F11410	
1/2	3/8	F12988	
1/2	1/2	F1259	
1/2	5/8	F15933	
1/2	3/4	F113063	
1/2	1	F115224	
1/2	1-3/4	F117840	
5/8	1/2	F12657	
5/8	5/8	F13278	
5/8	3/4	F15088	
5/8	1	F12073	
5/8	1-1/2	F119892	
3/4	3/4	F110568	
3/4	1	F11390	
3/4	1-1/4	F117241	
3/4	1-1/2	F110454	
3/4	2	F115177	

Thumb Screw Knob Available on page 1-1-17

SOCKET CAP SCREWS — SHOULDER SCREWS 18-8 STAINLESS STEEL

ASME B18.3-2012	Plating:	None
	Imported	

Diameter	D	3/16	1/4	5/16	3/8	1/2
Height	H	.150	.188	.219	.250	.313
Head Diameter	A	.30	.375	.438	.562	.750
Thread Pitch	P	8-32	10-24	1/4-20	5/16-18	3/8-16
Socket Size	J	3/32	1/8	5/32	3/16	1/2
Thread Length	T	3/16	3/8	7/16	1/2	5/8



D	L	T	UNC
3/16	1/4	8-32	F14779
1/4	3/8	10-24	F124547
1/4	1/2	10-24	F124545
1/4	5/8	10-24	F127748
1/4	3/4	10-24	F124546
1/4	1	10-24	F124543
1/4	1-1/2	10-24	F124544
5/16	1/2	1/4-20	F124556

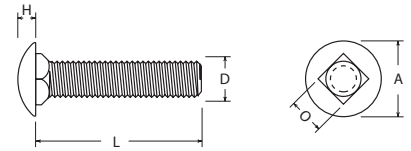
D	L	T	UNC
5/16	3/4	1/4-20	F124557
5/16	1	1/4-20	F124554
5/16	1-1/4	1/4-20	F124555
3/8	1/2	5/16-18	F124551
3/8	3/4	5/16-18	F124552
3/8	7/8	5/16-18	F124553
3/8	1	5/16-18	F124548
3/8	1-1/4	5/16-18	F124550

D	L	T	UNC
3/8	1-1/2	5/16-18	F124549
1/2	3/8	3/8-16	F124541
1/2	1/2	3/8-16	F124539
1/2	5/8	3/8-16	F124542
1/2	3/4	3/8-16	F124540
1/2	1	3/8-16	F124538

BOLTS — CARRIAGE 18-8 STAINLESS STEEL

ANSI B18.5 1978	Material:	18-8 Stainless Steel
	Plating:	None

Diameter	D	1/4"	5/16"	3/8"
Height	H	.145	.176	.208
Head Dia.	A	.594	.719	.844
Square Width	O	.260	.324	.388



D	L	UNC
10-24	3/4	F112226
1/4	1/2	F19800
1/4	3/4	F115347
1/4	1	F114192
1/4	1-1/4	F13517
1/4	1-1/2	F114929
1/4	2	F13735
1/4	2-1/2	F118334
1/4	3	F116556
1/4	3-1/2	F111076
1/4	4	F16524
5/16	3/4	F18422

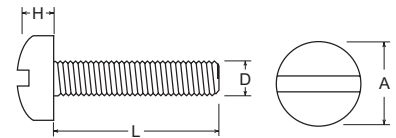
D	L	UNC
5/16	1	F118287
5/16	1-1/4	F116176
5/16	1-1/2	F110686
5/16	2	F111189
5/16	2-1/2	F12898
5/16	3	F118608
5/16	3-1/2	F12188
5/16	4	F17021
3/8	3/4	F16902
3/8	1	F12996
3/8	1-1/4	F1779

D	L	UNC
3/8	1-1/2	F114867
3/8	1-3/4	F115944
3/8	2	F1152
3/8	2-1/2	F115831
3/8	3	F12597
3/8	3-1/2	F11184
3/8	4	F14930
1/2	1-1/2	F119699
1/2	2	F1344
1/2	3	F119340
1/2	4	F13258

SCREWS — SLOTTED PAN MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	#12	1/4
Head Height Max	H	.068	.082	.096	.110	.125	.144
Head Dia. Ma	A	.219	.270	.322	.373	.425	.492



D	L	UNC	UNF
#4	3/16	F110031	
#4	1/4	F112976	
#4	5/16	F110035	
#4	3/8	F112499	
#4	7/16	F114546	
#4	1/2	F18597	
#4	3/4	F15951	
#4	1	F111085	
#4	1-1/2	F14714	
#6	1/4	F119407	
#6	3/8	F1511	
#6	1/2	F110111	

D	L	UNC	UNF
#6	5/8	F11017	
#6	3/4	F115690	
#6	1	F110094	
#6	1-1/4	F118366	
#6	1-1/2	F1536	
#6	2	F110404	
#8	1/4	F19058	
#8	3/8	F112677	
#8	1/2	F110518	
#8	3/4	F115390	
#8	1	F11010	
#8	1-1/4	F117798	

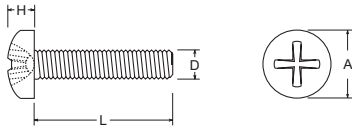
D	L	UNC	UNF
#8	1-1/2	F112395	
#8	2	F114533	
#10	1/4	F117475	
#10	3/8	F110970	
#10	1/2	F14427	F112091
#10	5/8	F11715	
#10	3/4	F14933	F16464
#10	1	F110269	F16851
#10	1-1/4	F18579	F117497
#10	1-1/2	F11076	F111937
#10	2	F117092	
#12	1/2	F11727	

D	L	UNC	UNF
#12	3/4	F17192	
#12	1	F11579	
#14	1/2	F118985	
#14	3/4	F114088	
#14	1	F115400	
#14	1-1/4	F120041	
#14	1-1/2	F110117	
#14	2-1/2	F116088	

SCREWS — PHILLIPS PAN MACHINE 18-8 STAINLESS STEEL

1

ANSI B18.6.3 1972	Material:	18-8 Stainless Steel
	Plating:	None



Nominal Size	D	#0	#1	#2	#3	#4	#5	#6	#8	#10	#12	1/4"	5/16"
Head Height Max	H	.044	.053	.062	.071	.080	.089	.097	.115	.133	.151	.175	.218
Head Dia. Ma	A	.116	.142	.167	.193	.219	.245	.270	.322	.373	.425	.492	.615

D	L	UNC	UNF
#0	1/4		F110189
#0	3/8		F19921
#0	1/2		F110360
#0	3/4		F115929
#1	1/8		F111635
#1	1/4		F15578
#1	3/8		F114324
#1	1/2		F118406
#2	1/8	F110671	
#2	3/16	F110440	
#2	1/4	F112189	
#2	5/16	F15854	
#2	3/8	F17471	
#2	1/2	F111529	
#2	5/8	F17913	
#2	3/4	F11875	
#3	1/4		F116625
#3	3/8		F19388
#3	3/4	F11955	
#4	1/8	F117841	
#4	3/16	F1963	
#4	1/4	F110700	
#4	5/16	F14033	
#4	3/8	F17349	
#4	7/16	F117286	
#4	1/2	F112405	
#4	5/8	F19672	
#4	3/4	F120045	
#4	7/8	F117226	
#4	1	F113190	
#4	1-1/4	F114432	
#4	1-1/2	F111080	
#4	1-3/4	F118905	
#5	3/16	F15530	
#5	1/4	F17429	
#5	1/2	F18607	
#5	5/8	F117544	
#5	3/4	F19742	
#5	1	F119730	

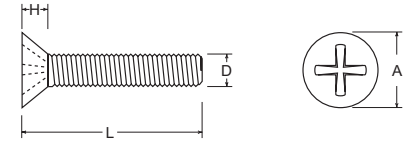
D	L	UNC	UNF
#6	3/16	F117708	
#6	1/4	F114300	
#6	5/16	F18504	
#6	3/8	F17941	
#6	7/16	F12019	
#6	1/2	F117744	
#6	5/8	F16574	
#6	3/4	F113760	
#6	1	F119414	
#6	1-1/4	F115741	
#6	1-1/2	F12991	
#6	1-3/4	F117008	
#6	2	F111914	
#6	2-1/2	F114828	
#6	3	F113340	
#8	3/16	F12157	
#8	1/4	F119226	
#8	5/16	F1525	
#8	3/8	F19088	
#8	1/2	F12145	
#8	5/8	F16614	
#8	3/4	F119901	
#8	7/8	F1627	
#8	1	F112138	
#8	1-1/4	F13705	
#8	1-1/2	F119781	
#8	1-3/4	F14428	
#8	2	F117763	
#8	2-1/2	F12776	
#8	2-3/4	F117869	
#8	3	F16117	
#10	3/16		F14032
#10	1/4	F18000	F115363
#10	5/16	F16315	F119222
#10	3/8	F116154	F13332
#10	1/2	F119501	F19904
#10	5/8	F18828	F111634
#10	3/4	F14263	F11340
#10	1	F115129	F18246

D	L	UNC	UNF
#10	1-1/4	F19069	F113742
#10	1-1/2	F19774	F1413
#10	1-3/4	F17157	F112017
#10	2	F119704	F116084
#10	2-1/4		F110944
#10	2-1/2	F119382	F17069
#10	3		F118138
#12	3/8	F11684	
#12	1/2	F117280	
#12	5/8	F1172	
#12	3/4	F15921	
#12	1	F113924	
#12	1-1/4	F11772	
#12	1-1/2	F1993	
#12	2	F16755	
1/4	1/4	F12514	
1/4	3/8	F111908	
1/4	1/2	F1755	F12716
1/4	5/8	F115186	
1/4	3/4	F13386	F13566
1/4	7/8	F112408	
1/4	1	F13046	F113233
1/4	1-1/4	F13052	F17705
1/4	1-1/2	F111234	F113101
1/4	1-3/4	F113003	
1/4	2	F118575	
1/4	2-1/4	F115535	
1/4	2-1/2	F12620	
1/4	3	F18577	
1/4	3-1/2	F110435	
1/4	4	F15910	
5/16	3/4	F11350	
5/16	1	F17915	
5/16	1-1/2	F12567	
5/16	2	F119289	
5/16	2-1/2	F12435	
5/16	3	F17156	
5/16	4	F117270	

SCREWS — PHILLIPS 82° FLAT MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	#12	1/4"
Head Height Max	H	.067	.083	.100	.110	0.132	.153
Head Dia. Ma	A	.212	.262	.312	.362	0.412	.477



D	L	UNC	UNF
#4	3/16	F112259	
#4	1/4	F112738	
#4	5/16	F111820	
#4	3/8	F15671	
#4	1/2	F112222	
#4	5/8	F112929	
#4	3/4	F119948	
#4	7/8	F1800	
#4	1	F113083	
#4	1-1/2	F114722	
#6	1/4	F117057	
#6	5/16	F16973	
#6	3/8	F1617	
#6	1/2	F116541	
#6	5/8	F119203	
#6	3/4	F12540	
#6	1	F112828	
#6	1-1/4	F114503	
#8	1/4	F110096	
#8	3/8	F110078	
#8	1/2	F18265	

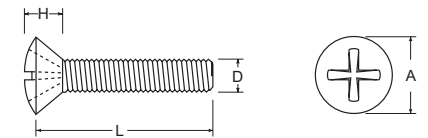
D	L	UNC	UNF
#8	5/8	F118536	
#8	3/4	F11300	
#8	1	F17835	
#8	1-1/4	F16185	
#8	1-1/2	F13188	
#8	1-3/4	F17432	
#8	2	F14202	
#8	2-1/2	F115426	
#10	1/4		F117836
#10	3/8	F111558	F110682
#10	1/2	F12272	F118086
#10	5/8	F19004	F119776
#10	3/4	F156	F17274
#10	7/8		F17242
#10	1	F117382	F111222
#10	1-1/4	F18003	F119392
#10	1-1/2	F114235	F119316
#10	1-3/4	F15599	F1817
#10	2	F113116	F19937
#10	2-1/2	F110831	F13523
#10	3	F111369	F111390

D	L	UNC	UNF
#12	3/8	F18870	
#12	1/2	F19375	
#12	5/8	F113074	
#12	3/4	F116282	
#12	1	F116328	
#12	1-1/4	F15925	
#12	1-1/2	F118214	
#12	2	F116445	
#12	3	F119535	
1/4	1/2	F18630	
1/4	5/8	F115308	
1/4	3/4	F19816	
1/4	1	F116339	
1/4	1-1/4	F13078	
1/4	1-1/2	F13949	
1/4	1-3/4	F112084	
1/4	2	F117582	
1/4	2-1/4	F113538	
1/4	2-1/2	F16027	
1/4	3	F116243	
5/16	3/4	F1814	

SCREWS — PHILLIPS OVAL MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3 1972	Material:	18-8 Stainless Steel
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	1/4"	5/16"
Head Height Max	H	.104	.128	.152	.176	.232	.290
Head Dia. Ma	A	.212	.262	.312	.362	.477	.597



D	L	UNC	UNF
#6	3/8	F116034	
#6	1/2	F11402	
#6	5/8	F1938	
#6	3/4	F113303	
#6	1	F11833	
#8	3/8	F113831	
#8	1/2	F1555	
#8	5/8	F112006	
#8	3/4	F1958	
#8	1	F14299	
#8	1-1/4	F118702	
#8	1-1/2	F15217	
#8	2	F12782	
#8	2-1/2	F118854	
#8	3	F118151	

D	L	UNC	UNF
#10	1/2	F110416	F15884
#10	5/8	F11655	F19836
#10	3/4	F112312	F116733
#10	7/8	F15326	F16180
#10	1	F15079	F16483
#10	1-1/4	F118617	F113962
#10	1-1/2	F118335	F15155
#10	2	F116706	F1330
#10	2-1/2	F113974	F118572
#10	3	F114680	F19290
#12	3/4	F113944	
#12	1	F14947	
#12	1-1/2	F14220	
1/4	1/2	F113731	

D	L	UNC	UNF
1/4	5/8	F114949	
1/4	3/4	F16426	
1/4	7/8	F12196	
1/4	1	F18354	
1/4	1-1/4	F18456	
1/4	1-1/2	F18152	
1/4	1-3/4	F116582	
1/4	2	F114741	
1/4	2-1/4	F113606	
1/4	2-1/2	F113860	
1/4	3	F116424	
5/16	1	F12625	
5/16	1-1/2	F12923	
5/16	2	F113881	

FASTENERS

8 Stainless, Brass & Nylon Inch

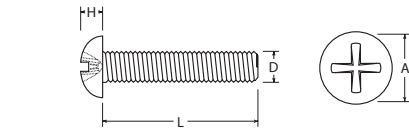
SCREWS — PHILLIPS ROUND MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
		Fully Threaded
	Plating:	None

Nominal Size	D	#4	#6	#8	#10
Head Height Max	H	.086	.103	.120	.137
Head Dia. Ma	A	.211	.260	.309	.359

D	L	UNC	UNF
#4	1/4	F110010	
#4	1/2	F13081	
#4	3/4	F118887	
#4	1	F111048	
#6	1/4	F116854	
#6	1/2	F12531	
#6	5/8	F117403	
#6	3/4	F13600	

D	L	UNC	UNF
#6	1	F116929	
#8	1/4	F117684	
#8	3/8	F1524	
#8	1/2	F112208	
#8	5/8	F13231	
#8	3/4	F1709	
#8	1	F110316	
#8	1-1/2	F117401	



D	L	UNC	UNF
#10	1/2	F115335	F14513
#10	5/8	F1577	F118412
#10	3/4	F14446	F11555
#10	1	F110242	F118460
#10	1-1/4	F114903	F116393
#10	1-1/2	F19436	F110525
#10	2	F18018	F119336

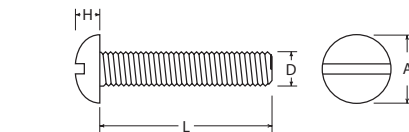
SCREWS — SLOTTED ROUND MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
		Fully Threaded
	Plating:	None

Nominal Size	D	#6	#8	#10	#12	1/4
Head Height Max	H	.103	.120	.137	.153	.175
Head Dia. Ma	A	.260	.309	.359	.408	.472

D	L	UNC	UNF
#6	1/4	F116808	
#6	3/8	F12115	
#6	1/2	F17382	
#6	3/4	F15318	
#6	1	F11569	
#6	1-1/4	F15188	
#6	1-1/2	F12103	
#8	1/4	F119931	
#8	3/8	F13279	
#8	1/2	F118129	
#8	3/4	F11698	
#8	1	F14131	

D	L	UNC	UNF
#8	1-1/4	F17480	
#8	1-1/2	F116115	
#8	2	F15015	
#10	1/4		F118329
#10	5/16		F19459
#10	3/8	F117180	F15764
#10	1/2	F14510	F17013
#10	5/8		F19932
#10	3/4	F18766	F114341
#10	1	F13263	F115578
#10	1-1/4	F118700	
#10	1-1/2	F16262	F113366



D	L	UNC	UNF
#10	2	F117319	F1956
#12	1/2	F111840	
#12	3/4	F114701	
#14	3/4	F18715	
#14	1	F13927	
#14	1-1/4	F16029	
#14	1-1/2	F19872	
#14	2	F16570	
#14	2-1/2	F16888	
#14	3	F13762	
#14	3-1/2	F1115	
#14	4	F15378	

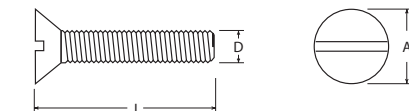
SCREWS — SLOTTED 82° FLAT MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
		Fully Threaded
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	1/2"
Head Height Max	H	.067	.083	.100	.116	.132	.153	.191	.230	.223
Head Dia. Ma	A	.212	.262	.312	.362	.412	.477	.597	.717	.815

D	L	UNC	UNF
#4	3/8	F1515	
#4	1/2	F111511	
#4	5/8	F16870	
#4	1-1/4	F118264	
#4	1-1/2	F12119	
#6	1/4	F118873	
#6	3/8	F12973	
#6	1/2	F119586	
#6	3/4	F15423	
#6	1	F110953	
#6	1-1/4	F17351	
#6	1-1/2	F117985	
#8	1/4	F15416	
#8	3/8	F112422	
#8	1/2	F12532	
#8	5/8	F11798	
#8	3/4	F118271	
#8	1	F111441	

D	L	UNC	UNF
#8	1-1/4	F16580	
#8	1-1/2	F120035	
#8	2	F15044	
#10	1/4	F16749	F14925
#10	3/8		F118436
#10	1/2	F111075	F13356
#10	5/8	F113966	F19503
#10	3/4	F118206	F119082
#10	1	F118466	F16573
#10	1-1/4	F16332	F110372
#10	1-1/2	F18028	F1220
#10	2	F19164	F110150
#12	3/4	F19219	
#12	1	F117024	
1/4	1/2	F118522	
1/4	3/4	F18247	
1/4	1	F114354	
1/4	1-1/4	F114947	

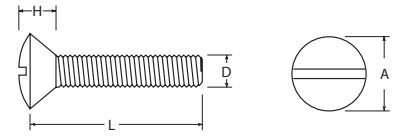


D	L	UNC	UNF
1/4	1-1/2	F120009	
1/4	2	F110178	
1/4	2-1/2	F13210	
1/4	3	F113874	
1/4	3-1/2	F118349	
1/4	4	F116749	
1/4	6	F118473	
5/16	3/4	F112177	
5/16	1	F112685	
5/16	1-1/4	F11925	
5/16	1-3/4	F111246	
5/16	2	F112162	
3/8	1	F17733	
3/8	1-1/4	F16658	
3/8	1-1/2	F12005	

SCREWS — SLOTTED OVAL MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
	Plating:	Fully Threaded
	Plating:	None

Nominal Size	D	#6	#8	#10	1/4"
Head Height Max	H	.128	.152	.176	.232
Head Dia. Ma	A	.262	.312	.362	.477



D	L	UNC	UNF
#6	1/4	F110116	
#6	3/8	F117213	
#6	1/2	F18238	
#6	5/8	F119894	
#6	3/4	F15680	
#6	1	F13448	
#6	1-1/2	F15003	
#8	1/4	F13042	
#8	3/8	F19712	
#8	1/2	F13328	

D	L	UNC	UNF
#8	3/4	F117353	
#8	1	F15535	
#8	1-1/4	F11916	
#8	2	F19486	
#10	1/4	F115642	F13175
#10	3/8	F1661	
#10	1/2	F16838	F113410
#10	5/8	F115851	F14079
#10	3/4	F112530	F1313
#10	1	F15961	F117718

D	L	UNC	UNF
#10	1-1/4	F116863	
#10	1-1/2	F18655	F14845
#10	2	F112586	
1/4	1/2	F118681	
1/4	5/8	F115524	
1/4	3/4	F110812	
1/4	1	F18416	
1/4	1-1/2	F118923	

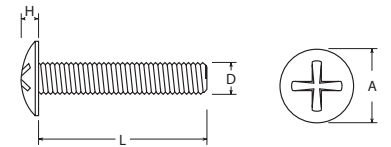
SCREWS — PHILLIPS TRUSS MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
	Plating:	None
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	1/4"	5/16"	3/8"
Head Height Max	H	.069	.086	.102	.118	.150	.183	.215
Head Dia. Ma	A	.257	.321	.384	.448	.573	.698	.823

D	L	UNC	UNF
#4	1/4	F16543	
#4	3/8	F19337	
#4	1/2	F173	
#6	1/4	F11971	
#6	3/8	F111398	
#6	1/2	F119812	
#6	3/4	F114856	
#6	1	F1232	
#6	1-1/4	F14540	
#6	1-1/2	F119244	
#8	1/4	F115732	
#8	3/8	F1754	
#8	1/2	F19554	
#8	5/8	F112340	
#8	3/4	F18945	

D	L	UNC	UNF
#8	7/8	F114994	
#8	1	F17060	
#8	1-1/2	F111647	
#10	3/8	F115820	F13562
#10	1/2	F111947	F12453
#10	5/8	F19959	F112224
#10	3/4	F114373	F119393
#10	1	F119126	F18050
#10	1-1/4	F12391	F117296
#10	1-1/2	F12393	F12548
#10	2	F113147	
1/4	3/8	F119783	
1/4	1/2	F110171	
1/4	5/8	F114612	



D	L	UNC
1/4	3/4	F15763
1/4	1	F1684
1/4	1-1/4	F11593
1/4	1-1/2	F111899
1/4	1-3/4	F110236
1/4	2	F119136
1/4	2-1/2	F110324
1/4	3	F115125
5/16	1	F116758
5/16	1-1/2	F18520
3/8	1	F118494
3/8	1-1/2	F13199

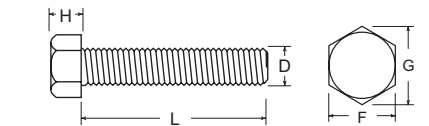
SCREWS — UNSLOTTED HEX MACHINE 18-8 STAINLESS STEEL

ANSI/ASME B18.6.3	Material:	18-8 Stainless Steel
	Plating:	None
	Plating:	None

Nominal Size	D	#4	#6	#8	#10
Head Height Max	H	.060	.093	.110	.120
W.A.F. Max	F	.188	.250	.250	.312
W.A.C. Min	G	.202	.272	.272	.340

D	L	UNC	UNF
#4	5/16	F19501	
#4	3/8	F114571	
#4	1/2	F19090	
#4	1	F14421	
#6	1/4	F111184	
#6	5/16	F111621	
#6	3/8	F110693	
#6	1/2	F112126	
#6	5/8	F112940	
#6	3/4	F115064	

D	L	UNC	UNF
#6	1	F12740	
#6	1-1/4	F19293	
#6	1-1/2	F1211	
#8	1/4	F117321	
#8	3/8	F114899	
#8	1/2	F113186	
#8	3/4	F15542	
#8	1	F15793	
#8	1-1/4	F12826	
#8	1-1/2	F119735	



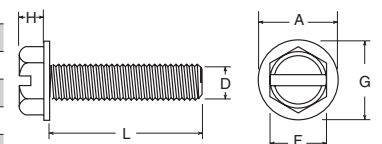
D	L	UNC	UNF
#8	2	F16032	
#10	1/4	F112858	F19744
#10	3/8	F1547	F116409
#10	1/2	F15070	F18004
#10	5/8	F115063	F16475
#10	3/4	F118456	F1241
#10	1	F119221	F19454
#10	1-1/4	F19241	F116642
#10	1-1/2	F19820	F117587
#10	2	F112203	F1182

SCREWS — SLOTTED INDENTED HEX WASHER MACHINE 18-8 STAINLESS STEEL

ANSI B18.6.3	Material:	18-8 Stainless Steel
	Plating:	None
	Plating:	None

Nominal Size	D	#8	#10	1/4
Head Height Max	H	.011	.120	.190
W.A.F. Max	F	.250	.312	.375
Washer Dia.	A	.348	.414	.52
W.A.C. Min	G	.272	.340	.409

D	L	UNC	UNF
#8	3/4	F13220	
#10	1/2	F115742	F1300
#10	1	F12768	
1/4	3/4	F12644	
1/4	1	F18473	



FASTENERS

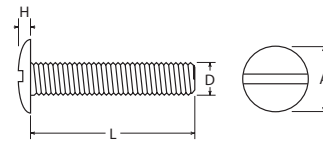
8 Stainless, Brass & Nylon Inch

SCREWS — THREAD CUTTING PHILLIPS PAN MACHINE 410 STAINLESS STEEL

ANSI B18.6.4	Material:	410 Stainless Steel
	Plating:	None

Nominal Size	D	#10
Head Height Max	H	.133
Head Dia. Ma	A	.373

D	L	UNC	UNF
#10	3/4		F112823

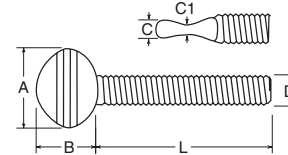


SCREWS — THUMB 18-8 STAINLESS STEEL TYPE B REGULAR

ASME B18.6.8	Material:	18-8 Stainless Steel
	Plating:	None

Nominal Size	(D)	#8	#10	1/4
Thread Pitch		32	24 or 32	20
Head Width Max	(A)	.51	.58	.83
Head Height Max	(B)	.32	.39	.52
Head Thickness Max	(C)	.09	.10	.16
Head Thickness Max	(C1)	.04	.05	.06

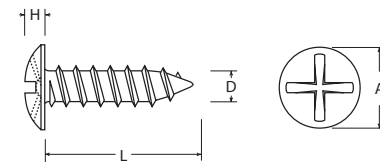
D	L	UNC	UNF
#8	3/4	F17670	
#8	1	F13333	
#10	1/2	F11614	F110395
#10	3/4		F1214
#10	1	F115821	F111465
1/4	1/2	F110197	
1/4	3/4	F13772	
1/4	1	F118629	



SCREWS — PHILLIPS TRUSS SELF-TAPPING (SMS) 18-8 STAINLESS STEEL

SAE J78 1979	Material:	18-8 Stainless Steel
	Type 'A' Tapping Screws	
	Plating:	None

Diameter	D	#6	#8	#10	#12	#14
Height	H	.086	.102	.118	.134	.150
Head Dia.	A	.321	.384	.488	.511	.573



D	L	Part No.
#6	3/8	F116428
#6	1/2	F12619
#6	5/8	F17449
#6	3/4	F113565
#6	1	F110340
#6	1-1/4	F11570
#8	3/8	F115554
#8	1/2	F119770
#8	5/8	F110506

D	L	Part No.
#8	3/4	F116432
#8	1	F14307
#8	1-1/4	F19346
#8	1-1/2	F117171
#8	2	F118587
#10	3/8	F13947
#10	1/2	F119352
#10	5/8	F117717
#10	3/4	F18343

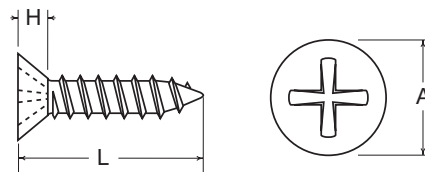
D	L	Part No.
#10	1	F112480
#10	1-1/4	F110986
#10	1-1/2	F1177
#10	2	F115100
#12	3/4	F13778
#12	1	F119598
#12	1-1/4	F117699
#12	1-1/2	F114345

D	L	Part No.
#12	2	F118379
#14	3/4	F111137
#14	1	F12438
#14	1-1/4	F111196
#14	1-1/2	F11944
#14	2	F115200
#14	2-1/2	F110619
#14	3	F17078

SCREWS — PHILLIPS FLAT 82 DEGREE TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.6.4 1981	Material:	18-8 Stainless Steel
	Type 'A' Threads	
	Plating:	None

Diameter	D	#2	#4	#6	#8	#10	#12	#14
Height Max.	H	.051	.067	.083	.100	.116	.132	.148
Head Diameter	A	.162	.212	.262	.312	.362	.412	.462
Driver Size		1	1	2	2	3	3	3



D	L	Part No.
#2	1/4	F19279
#2	3/8	F110659
#4	1/4	F18912
#4	3/8	F19093
#4	1/2	F17665
#4	5/8	F16642
#4	3/4	F111487
#4	1	F110423
#6	1/4	
#6	3/8	F110154

D	L	Part No.
#6	1/2	F15823
#6	5/8	F114691
#6	3/4	F14211
#6	1	F118419
#6	1-1/4	F18958
#6	1-1/2	F115212
#6	1-3/4	F13450
#6	2	F111402
#8	3/8	F12557

D	L	Part No.
#8	1/2	F110569
#8	5/8	F13242
#8	3/4	F11639
#8	1	F11797
#8	1-1/4	F16728
#8	1-1/2	F15532
#8	1-3/4	F110201
#8	2	F13954
#8	2-1/2	F19456

D	L	Part No.
#8	3	F13746
#10	1/2	F13484
#10	5/8	F13469
#10	3/4	F114894
#10	1	F19169
#10	1-1/4	F118367
#10	1-1/2	F113159
#10	1-3/4	F12016
#10	2	F19674

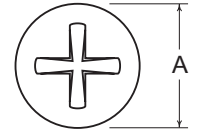
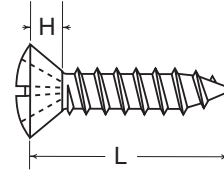
D	L	Part No.
#10	2-1/2	F110468
#10	3	F119796
#12	3/4	F111211
#12	1	F111312
#12	1-1/4	F112822
#12	1-1/2	F19810
#12	1-3/4	
#12	2	F116932
#12	2-1/2	F119255

D	L	Part No.
#12	3	F115665
#14	3/4	F119386
#14	1	F17368
#14	1-1/4	F14323
#14	1-1/2	F111296
#14	1-3/4	
#14	2	F111214
#14	2-1/2	F12180
#14	3	F115706

SCREWS — PHILLIPS OVAL TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.64 1981	Material:	18-8 Stainless Steel
	Type 'A' Threads	
	Plating:	None

Diameter	D	#4	#6	#8	#10	#12	#14
Height Total Max.	H	.104	.128	.152	.176	.200	.224
Head Diameter	A	.212	.262	.312	.362	.412	.462
Driver Size		1	2	2	2	3	3



D	L	Part No.
#2	1/4	
#2	3/8	
#4	1/4	
#4	3/8	F11644
#4	1/2	F13907
#4	5/8	F11168
#4	3/4	F115034
#4	1	F15443
#6	1/4	F115651
#6	3/8	F114841
#6	1/2	F120034

D	L	Part No.
#6	5/8	F118137
#6	3/4	F18756
#6	1	F19737
#6	1-1/4	F119639
#6	1-1/2	F17467
#6	1-3/4	F111371
#6	2	F18111
#8	3/8	F111777
#8	1/2	F116833

D	L	Part No.
#8	5/8	F117172
#8	3/4	F111482
#8	1	F115624
#8	1-1/4	F11507
#8	1-1/2	F11429
#8	1-3/4	F16542
#8	2	F110957
#8	2-1/2	F17640
#8	3	F113035

D	L	Part No.
#10	3/8	
#10	1/2	F13246
#10	5/8	F112450
#10	3/4	F1149
#10	1	F14045
#10	1-1/4	F13432
#10	1-1/2	F19366
#10	1-3/4	F12263
#10	2	F120052

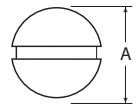
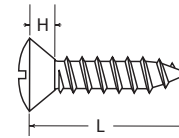
D	L	Part No.
#10	2-1/2	F18245
#10	3	F112882
#12	3/4	F14560
#12	1	F17944
#12	1-1/4	F15046
#12	1-1/2	F117039
#12	1-3/4	F112556
#12	2	F18837
#12	2-1/2	F119865

D	L	Part No.
#12	3	F111386
#14	3/4	F110123
#14	1	F117749
#14	1-1/4	F113695
#14	1-1/2	F16918
#14	1-3/4	F14177
#14	2	F116650
#14	2-1/2	F117867
#14	3	F17539

SCREWS — SLOTTED OVAL TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.64 1981	Material:	18-8 Stainless Steel
	Type 'A' Threads	
	Plating:	None

Diameter	D	#4	#6	#8	#10	#12	#14
Height Total Max.	H	.104	.128	.152	.176	.200	.224
Head Diameter	A	.212	.262	.312	.362	.412	.462
Driver Size		1	2	2	2	3	3



D	L	Part No.
4	1/4	F123470
4	3/8	F123472
4	1/2	F123469
4	5/8	F123473
4	3/4	F123471
4	1	F123468
6	1/4	F123478
6	3/8	F123481

D	L	Part No.
6	1/2	F123477
6	5/8	F123482
6	3/4	F123480
6	1	F123474
6	1-1/4	F123476
6	1-1/2	F123475
8	3/8	F123489
8	1/2	F123486

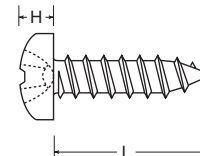
D	L	Part No.
8	5/8	F123490
8	3/4	F123488
8	1	F123483
8	1-1/4	F123485
8	1-1/2	F123484
8	2	F123487
10	1/2	F123455
10	5/8	F123458

D	L	Part No.
10	3/4	F123457
10	1	F123452
10	1-1/4	F123454
10	1-1/2	F123453
12	1-1/4	F123461
14	2	F123462

SCREWS — PHILLIPS PAN SELF-TAPPING (SMS) STAINLESS STEEL

ANSI B18.64 1981	Material:	18-8 Stainless Steel
	Type 'A' Threads	
	Plating:	None

Diameter	D	#4	#6	#8	#10	#12	#14
Height Max.	H	.080	.097	.115	.133	.151	.169
Head Diameter Max	A	.212	.270	.322	.373	.425	.476
Driver Size		1	2	2	2	3	3



D	L	Part No.
#4	1/4	F110342
#4	3/8	F13454
#4	1/2	F19353
#4	5/8	F14161
#4	3/4	F111563
#4	1	F118095
#6	3/8	F111592
#6	1/4	F19132
#6	1/2	F115238
#6	5/8	F13429
#6	3/4	F115436
#6	1	F118666
#6	1-1/4	F110675
#6	1-1/2	F116952

D	L	Part No.
#8	3/8	F18214
#8	1/2	F19361
#8	5/8	F15365
#8	3/4	F17155
#8	1	F15129
#8	1-1/4	F14329
#8	1-1/2	F120008
#8	1-3/4	F116672
#8	2	F13284
#8	2-1/2	F117865
#8	3	F15756
#10	3/8	F116199
#10	1/2	F18905
#10	5/8	F13605

D	L	Part No.
#10	3/4	F113484
#10	1	F11535
#10	1-1/4	F118822
#10	1-1/2	F112155
#10	1-3/4	F119079
#10	2	F1857
#10	2-1/2	F112010
#10	3	F12365
#12	1/2	F11817
#12	3/4	F19008
#12	1	F111574
#12	1-1/4	F119473
#12	1-1/2	F111868
#12	2	F12154

D	L	Part No.
#12	2-1/2	F117207
#12	3	F118121
#12	1/2	F13693
#14	5/8	F14311
#14	3/4	F113688
#14	1	F11201
#14	1-1/4	F112021
#14	1-1/2	F15276
#14	1-3/4	F11677
#14	2	F13028
#14	2-1/2	F111139
#14	3	F15471
#14	3-1/2	F117714

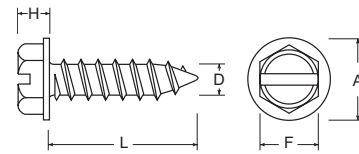
FASTENERS

8 Stainless, Brass & Nylon Inch

SCREWS — SLOT. IND. HEX WASHER SELF-TAPPING 18-8 STAINLESS STEEL

ANSI B18.6.4 1981	Material: 18-8 Stainless Steel			
	Type 'A-B' Threads			
	Plating: None			

Diameter	D	#6	#8	#10	#12	#14
Height	H	.093	.110	.120	.155	.190
W.A.F.	F	1/4	1/4	5/16	5/16	3/8
Flange	A	.328	.348	.414	.432	.520



D	L	Part No.
#6	1/2	F12837
#6	3/4	F12999
#6	1	F14975
#8	1/2	F110092
#8	3/4	F11273
#8	1	F112215
#8	1-1/4	F17119
#8	1-1/2	F116002

D	L	Part No.
#8	2	F15157
#10	1/2	F112978
#10	3/4	F15970
#10	1	F16363
#10	1-1/4	F112094
#10	1-1/2	F119850
#10	2	F119846
#10	3	F17712

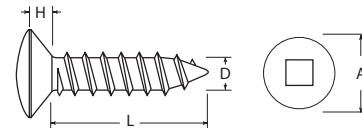
D	L	Part No.
#12	1/2	F14362
#12	3/4	F115716
#12	1	F16942
#12	1-1/4	F116419
#12	1-1/2	F113482
#12	2	F14550
#12	3	F115955
#14	1/2	F17854

D	L	Part No.
#14	3/4	F18696
#14	1	F115075
#14	1-1/4	F110258
#14	1-1/2	F113029
#14	2	F14771
#14	3	F119455

SCREWS — SQUARE OVAL SELF-TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.6.4 1981	Material: 18-8 Stainless Steel			
	Type 'AB' Threads			
	Plating: None			

Diameter	D	#6	#8	#10	#14
Height	H	.049	.054	.060	.075
Head Dia.	A	.279	.332	.385	.507



D	L	Part No.
#6	3/4	F17937
#6	1	F15612
#8	3/4	F19111
#8	1	F11812

D	L	Part No.
#8	1-1/4	F119644
#8	1-1/2	F116114
#8	2	F18055

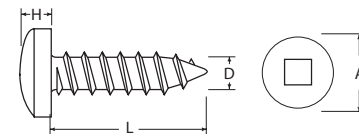
D	L	Part No.
#10	3/4	F19785
#10	1	F118263
#10	1-1/2	F16021

D	L	Part No.
#10	2	F11387
#14	1-1/2	F114878
#14	2	F14445

SCREWS — SQUARE PAN SELF-TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.6.4 1981	Material: 18-8 Stainless Steel			
	Type 'AB' Threads			
	Plating: None			

Diameter	D	#6	#8	#10	#14
Height	H	.089	.096	.110	.144
Head Dia.	A	.296	.322	.373	.492



D	L	Part No.
#6	1/2	F16494
#6	3/4	F119025
#6	1	F14858
#6	1-1/4	F111394
#6	1-1/2	F12685
#8	1/2	F117523

D	L	Part No.
#8	5/8	F18451
#8	3/4	F15343
#8	1	F113275
#8	1-1/4	F118227
#8	1-1/2	F112022
#8	2	F115288

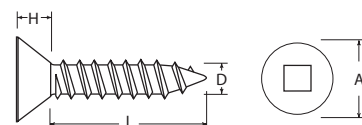
D	L	Part No.
#10	1/2	F18232
#10	5/8	F118072
#10	3/4	F17484
#10	1	F16544
#10	1-1/2	F113964
#10	2	F116370

D	L	Part No.
#14	3/4	F12479
#14	1	F110661
#14	1-1/4	F116622
#14	1-1/2	F14479
#14	2	F16176

SCREWS — SQUARE FLAT SELF-TAPPING (SMS) 18-8 STAINLESS STEEL

ANSI B18.6.4 1981	Material: 18-8 Stainless Steel			
	Type 'AB' Threads			
	Plating: None			

Diameter	D	#6	#8	#10	#14
Height	H	.049	.054	.060	.075
Head Dia.	A	.279	.332	.385	.507



D	L	Part No.
#6	3/4	F15163
#6	1	F113373
#6	1-1/2	F113454

D	L	Part No.
#8	3/4	F113038
#8	1	F11120
#8	1-1/2	F12590

D	L	Part No.
#8	2	F118521
#10	3/4	F15187
#10	1	F18069

D	L	Part No.
#10	1-1/2	F19669
#14	1-1/4	F15952
#14	1-1/2	F110643

SCREWS — PHILLIPS FLAT SELF-DRILLING (TEK) 410 STAINLESS

SAE J78 1979	Material:	410 Stainless Steel			
	Plating:	Zinc			

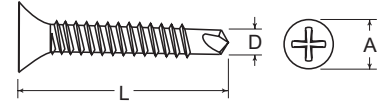
Diameter	D	#6	#8	#10	#14
Head Dia.	A	.279	.332	.385	.507

D	L	Part No.
8	3/4	F16506
8	1	F117278
8	1 1/4	F16406
8	1 1/2	F18643
8	2	F110847
10	3/4	F118336

D	L	Part No.
10	1	F114136
10	1 1/2	F17756
10	2	F18077
10	2 1/2	F177
10	3	F118622
10	4	F116067

D	L	Part No.
12	3/4	F110047
12	1	F18435
12	1 1/2	F115178
12	2	F1714
14	3/4	F110254
14	1	F120095

D	L	Part No.
14	1 1/2	F1297
14	2	F116350
14	2 1/2	F16597



SCREWS — INDENTED HEX SELF-DRILLING (TEK) 410 STAINLESS STEEL

ANSI B18.6.4	Material:	410 Stainless Steel			
	Plating:	None			

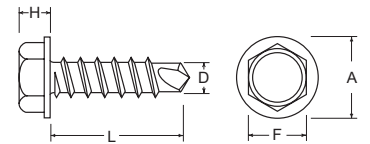
Diameter	D	#6	#8	#10	#12	#14
Height	H	.093	.110	.120	.155	.190
W.A.F.	F	1/4	1/4	5/16	5/16	3/8
Flange	A	.320	.348	.414	.432	.520

D	L	Part No.
#6	3/8	F116147
#6	1/2	F119925
#6	5/8	F1487
#6	3/4	F117069
#6	1	F111086
#6	1-1/4	F16655
#8	1/2	F16054
#8	5/8	F110530
#8	3/4	F117850

D	L	Part No.
#8	1	F119196
#8	1-1/4	F112589
#8	1-1/2	F119835
#8	2	F17969
#10	1/2	F115021
#10	5/8	F11995
#10	3/4	F113355
#10	1	F117103
#10	1-1/4	F13574

D	L	Part No.
#10	1-1/2	F12616
#10	2	F14303
#10	2-1/2	F117510
#12	3/4	F19031
#12	1	F118398
#12	1-1/4	F115805
#12	1-1/2	F114607
#12	2	F19660
#12	2-1/2	F115816

D	L	Part No.
#12	3	F1756
#14	3/4	F117694
#14	1	F19958
#14	1-1/4	F17083
#14	1-1/2	F118595
#14	2	F16832
#14	2-1/2	F18216
#14	3	F11756



SCREWS — PHILLIPS PAN SELF-DRILLING (TEK) 410 STAINLESS STEEL

SAE J78 1979	Material:	410 Stainless Steel			
	Plating:	None			

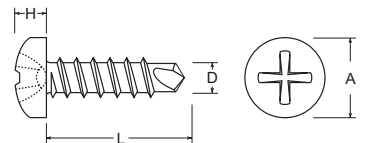
Diameter	D	#6	#8	#10	#12	#14
Height	H	.082	.096	.110	.125	.144
Head Dia.	A	.270	.296	.373	.425	.492

D	L	Part No.
#6	3/8	F11137
#6	1/2	F17176
#6	3/4	F18860
#6	1	F117054
#6	1-1/2	F119361
#8	1/2	F115704
#8	3/4	F114953

D	L	Part No.
#8	1	F117074
#8	1-1/4	F18849
#8	1-1/2	F113475
#8	2	F14037
#10	1/2	F119230
#10	5/8	F14465
#10	3/4	F118540
#10	1	F117228

D	L	Part No.
#10	1-1/4	F12371
#10	1-1/2	F111584
#10	2	F114697
#12	3/4	F111146
#12	1	F119528
#12	1-1/4	F18798
#12	1-1/2	F111913
#12	2	F12765

D	L	Part No.
#14	3/4	F11636
#14	1	F15678
#14	1-1/4	F13904
#14	1-1/2	F13871
#14	2	F116290
#14	2-1/2	F118465
#14	3	F14667



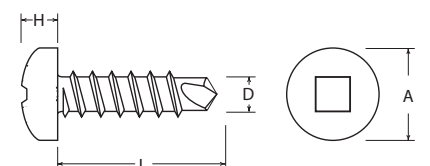
SCREWS — SQUARE PAN SELF-DRILLING (TEK) 410 STAINLESS STEEL

SAE J78 1979	Material:	410 Stainless Steel			
	Plating:	None			

Diameter	D	#6	#8	#10
Height	H	.082	.096	.110
Head Dia.	A	.270	.296	.373

D	L	Part No.
#6	3/8	F19634
#6	1/2	F1217
#6	3/4	F16619

D	L	Part No.
#8	1/2	F18442
#8	3/4	F18764
#8	1	F1553



D	L	Part No.
#10	1/2	F19830
#10	3/4	F120103
#10	1	F13416

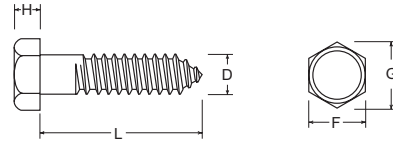
FASTENERS

8 Stainless, Brass & Nylon Inch

SCREWS — HEX HEAD LAG 18-8 STAINLESS STEEL

ANSI B18.2.1 1981	Material: 18-8 Stainless Steel	
	Plating: None	

Diameter	D	1/4"	5/16"	3/8"	1/2"
Height	H	11/64	7/32	1/4	11/32
W.A.F.	F	7/16	1/2	9/16	3/4
W.A.C.	G	.505	.577	.650	.866



D	L	Part No.
1/4	1	F15149
1/4	1-1/4	F113525
1/4	1-1/2	F112878
1/4	2	F113411
1/4	2-1/2	F15180
1/4	3	F113613
1/4	3-1/2	F17629
1/4	4	F119538
1/4	4-1/2	F112845
1/4	5	F112845
1/4	6	F12136

D	L	Part No.
5/16	1	F118265
5/16	1-1/4	F116324
5/16	1-1/2	F117576
5/16	2	F16872
5/16	2-1/2	F117971
5/16	3	F112297
5/16	3-1/2	F17475
5/16	4	F113663
5/16	4-1/2	F13172
5/16	5	F116296
5/16	6	F18611

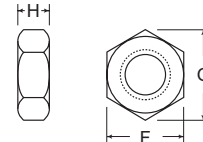
D	L	Part No.
3/8	1	F14003
3/8	1-1/2	F14797
3/8	2	F112898
3/8	2-1/2	F18639
3/8	3	F113474
3/8	3-1/2	F1110
3/8	4	F112890
3/8	5	F18428
3/8	6	F13522
1/2	1-1/2	F14310
1/2	2	F111397

D	L	Part No.
1/2	2-1/2	F119534
1/2	3	F112537
1/2	3-1/2	F1988
1/2	4	F19374
1/2	4-1/2	F16173
1/2	5	F16540
1/2	6	F113053

NUTS — FINISHED HEX 18-8 STAINLESS STEEL

ANSI B18.2.2 1986	Material: 18-8 Stainless Steel	
	Plating: None	

Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
Height H	7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64	31/32	1-1/16	1-9/16
W.A.F. F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2	1-11/16	1-7/8	2-1/4
W.A.C. G	.505	.577	.650	.722	.866	1.010	.938	1.299	1.516	1.732	1.949	2.165	2.598

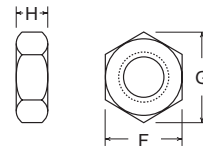


UNCP/N	F19684	F111288	F112772	F12032	F1618	F13932	F110205	F16432	F111423	F113281	F114273	F110001	F1435
UNF P/N	F18976	F118192	F113895	F110485	F114559	F17416	F110587	F115255					

NUTS — FINISHED HEX 316 STAINLESS STEEL

ANSI B18.2.2 1986	Material: 316 Stainless Steel	
	Plating: None	

Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Height H	7/32	17/64	21/64	3/8	7/16	31/64	35/64	41/64	3/4	55/64
W.A.F. F	7/16	1/2	9/16	11/16	3/4	7/8	15/16	1-1/8	1-5/16	1-1/2
W.A.C. G	.505	.577	.650	.722	.866	1.010	.938	1.299	1.732	1.732

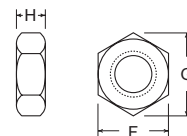


UNCP/N	F18196	F16340	F116623	F112604	F1549	F118997	F118566	F118273	F115962	F110102
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NUTS — HEAVY HEX 18-8 STAINLESS STEEL

ANSI B18.2.2 1986	Material: 18-8 Stainless	
	Plating: None	

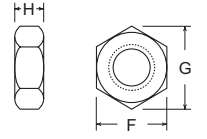
Size	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/8"
Height H	15/64	19/64	23/64	31/64	39/64	47/64	63/64	1-7/64
W.A.F. F	1/2	9/16	11/16	7/8	1-1/16	1-1/4	1-5/8	1-13/16
W.A.C. G	.577	.650	.794	1.010	1.227	1.443	1.876	2.093



UNCP/N	F118301	F114098	F110181	F116181	F11223	F112765	F113149	F113406
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NUTS — JAM 18-8 STAINLESS STEEL

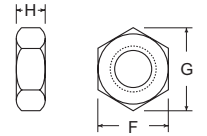
ANSI B18.2.2	Material:	18-8 Stainless Steel
	Plating:	None



Size		1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Height	H	5/32	3/16	7/32	1/4	5/16	3/8	27/64	31/64	35/64
W.A.F.	F	7/16	1/2	9/16	11/16	3/4	15/16	1-1/8	1-5/16	1-1/2
W.A.C.	G	.505	.577	.650	.794	.866	1.051	1.240	1.447	1.732
UNCP/N		F14039	F115561	F112669	F13053	F115342	F18674	F116561	F19424	F118956
UNFP/N		F114132	F15962	F14910	F118078	F110532	F111180	F111393	F15394	F15027

NUTS — JAM 316 STAINLESS STEEL

ANSI B18.2.2	Material:	316 Stainless Steel
	Plating:	None

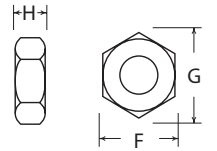


Size		1/4"	5/16"	3/8"	1/2"	3/4"	7/8"	1"
Height	H	5/32	3/16	7/32	5/16	27/64	31/64	35/64
W.A.F.	F	7/16	1/2	9/16	3/4	1-1/8	1-5/16	1-1/2
W.A.C.	G	.505	.577	.650	.866	1.240	1.447	1.732
UNCP/N		F114862	F13839	F1160	F115781	F113017	F18795	F113949

NUTS — SMALL PATTERN MACHINE SCREW 18-8 STAINLESS STEEL

ANSI B18.2.2	Material:	18-8 Stainless Steel
	Plating:	None

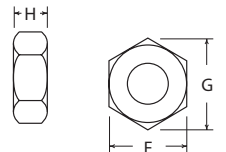
Size		#2	#4	#5	#6	#8	#10
Height	H	.0625	.098	.105	.114	.130	.130
W.A.F.	F	5/32	3/16	1/4	1/4	5/16	5/16
W.A.C.	G	.217	.289	.289	.289	.361	.361
UNCP/N		F113204	F17423	F118753	F13183	F17925	F119814
UNFP/N						F110222	



NUTS — MACHINE SCREW 18-8 STAINLESS STEEL

ANSI B18.2.2 1986	For use with Stainless Steel Machine Screws	
	Material:	18-8 Stainless Steel

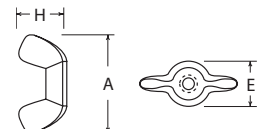
Size		#2	#4	#5	#6	#8	#10	#12
Height	H	.066	.098	.114	.114	.130	.130	.161
W.A.F.	F	.188	.250	.312	.313	.343	.375	.438
W.A.C.	G	.265	.289	.361	.361	.397	.433	.505
UNCP/N		F16253	F112212	F111053	F18531	F19104	F118626	F14713
UNFP/N							F18510	



NUTS — WING TYPE A 18-8 STAINLESS STEEL

ANSI B18.17 1986	General Application Wing Nuts	
	Material:	18-8 Stainless Steel

Size		#6	#8	#10	1/4"	5/16"	3/8"	1/2"
Height	H	.41	.47	.47	1.10	.66	.79	1.0
Boss Dia	E	.33	.43	.43	.50	.58	.70	.93
Wing Spread	A	.72	.91	.91	.57	1.25	1.44	1.94
UNCP/N		F119732	F116401	F17994	F115872	F115889	F17526	F18375
UNFP/N				F116406				

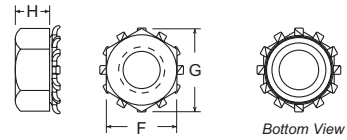


FASTENERS

8 Stainless, Brass & Nylon Inch

NUTS — K-LOCK (KEPS) 18-8 STAINLESS STEEL

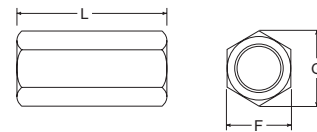
For use with Non-Graded Fasteners
Attached free spinning external tooth lock washer
Material: 18-8 Stainless Steel



Size		#4	#6	#8	#10	1/4"	5/16"	3/8"
Height	H	.098	.178	.229	.239	.313	.344	.453
W.A.F.	F	1/4	5/16	11/32	3/8	7/16	1/2	9/16
W.A.C.	G	.289	.394	.378	.413	.488	.557	.628
UNCP/N		F16274	F19522	F119224	F112192	F118277	F119571	F118008
UNFP/N					F19156			

NUTS — COUPLING 18-8 STAINLESS STEEL

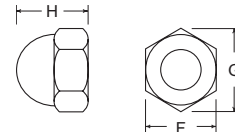
Material: 18-8 Stainless Steel
Plating: None



Size		1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Length	L	7/8"	1"	1-1/8"	1-1/4"	1-1/4"	1-3/4"	2"	2-1/2"
W.A.F.	F	3/8"	7/16"	1/2"	9/16"	5/8"	7/8"	1"	1-3/8"
W.A.C.	G	.433	.557	.557	.698	.703	.978	1.097	1.511
UNCP/N		F18625	F15842	F15323	F1822	F111418	F113655	F19987	F120100

NUTS — ACORN 18-8 STAINLESS STEEL

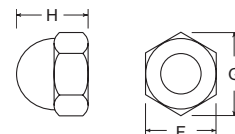
Material: 18-8 Stainless Steel
Plating: None



Size		#6	#8	#10	1/4"	5/16"	3/8"	1/2"
W.A.F.	F	5/16	5/16	3/8	7/16	9/16	5/8	3/4
W.A.C.	G	.361	.397	.433	.505	.577	.500	.866
UNCP/N		F18299	F117858	F15703	F17304	F116441	F120089	F19673
UNFP/N				F112079	F116637	F123581	F114083	F119822

NUTS — ACORN 316 STAINLESS STEEL

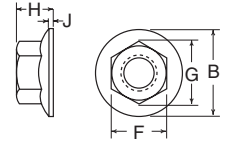
Material: 316 Stainless Steel
Plating: None



Size		#10	1/4"	5/16"	3/8"	1/2"
W.A.F.	F	3/8	7/16	9/16	5/8	3/4
W.A.C.	G	.433	.505	.577	.500	.866
UNCP/N		F18903	F111571	F17421	F112954	F19212

NUTS — SERRATED HEX FLANGE 18-8 STAINLESS STEEL

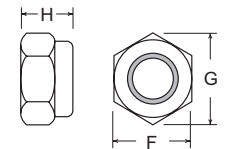
IFI-145 2002	Material:	18-8 Stainless Steel
	Plating:	None



Nominal Size	#8	#10	1/4	5/16	3/8	1/2
Thread Pitch	32	24	20	18	16	13
WAF Max	F .344	.375	.438	.500	.562	.750
WAC Max	G .397	.433	.505	.577	.650	.866
Flange Diameter Max	B .469	.500	.594	.680	.750	1.031
Nut Thickness Max	H .203	.219	.236	.283	.347	.458
Flange Thickness Max	J .02	.03	.04	.04	.04	.05
Part No.	F17249	F114265	F12307	F115988	F13760	F122346

NUTS — NYLON INSERT LOCK 18-8 STAINLESS STEEL

ANSI B18.2.2 1986	Material:	18-8 Stainless Steel
	Plating:	None

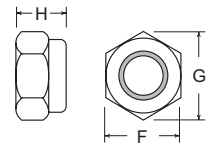


Size	#2	#3	#4	#5	#6	#8	#10	#12	1/4"	5/16"	3/8"
Height	H .066	.066	.098	.114	.114	.239	.249	.161	.328	.359	.469
WAF	F 3/16	3/16	1/4	5/16	5/16	11/32	3/8	7/16	7/16	1/2	9/16
WAC	G .217	.217	.289	.361	.361	.397	.433	.505	.505	.577	.650
UNC P/N	F118610	F19920	F13974	F112123	F119596	F14343	F17804	F114395	F15791	F118200	F115881
UNF P/N							F114152		F117236	F118901	F112520

Size	7/16"	1/2"	1/2" HVY	9/16"	5/8"	3/4"	7/8"	1"
Height	H .524	.609	.656	.656	.765	.890	.999	1.124
WAF	F 11/16	3/4	7/8	7/8	15/16	1-1/8	1-5/16	1-1/2
WAC	G .794	.866	.978	1.010	1.083	1.299	1.516	1.732
UNC P/N	F16780	F117746	F118696	F118653	F13898	F17681	F14506	F15220
UNF P/N	F17048	F17890		F117599	F113404	F111672		

NUTS — NYLON INSERT LOCKING JAM 18-8 STAINLESS STEEL

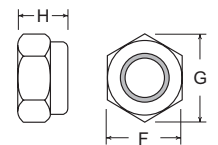
ANSI B18.2.2 1936	Material:	18-8 Stainless Steel
	Plating:	None



Size	1/4	5/16	3/8	7/16	1/2
Height	H .218	.265	.281	.328	.328
WAF	F 7/16	1/2	9/16	11/16	3/4
WAC	G .482	.552	.622	.694	.837
UNC P/N	F18367	F13779	F14924	F113531	F17718
UNF P/N	F16389	F118189	F18206	F116335	F117614

NUTS — NYLON INSERT LOCK 316 STAINLESS STEEL

ANSI B18.2.2 1986	Material:	316 Stainless Steel
	Plating:	None



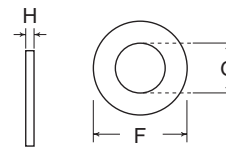
Size	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"
Height	H .239	.249	.328	.359	.469	.524	.609	.765	.890	.999
WAF	F 11/32	3/8	7/16	1/2	9/16	11/16	3/4	7/8	1-1/8	1-5/16
WAC	G .383	.420	.505	.577	.650	.794	.866	1.083	1.299	1.516
UNC P/N	F123260	F126961	F112163	F17875	F118712	F110716	F14505	F113461	F117393	F117612
UNF P/N		F126962								

FASTENERS

8 Stainless, Brass & Nylon Inch

WASHERS — COMMERCIAL / INDUSTRIAL FLAT 18-8 STAINLESS STEEL

ANSI B18.22.1 1981	Material:	18-8 Stainless Steel
	Plating:	None



Size		#0	#2	#3	#4	#5	#6	#8	#10	#12	1/4"	1/4"	5/16"	3/8"	7/16"
I.D.	G	.078	.099	.109	.125	.143	.149	.174	.203	.250	.281	.281	.343	.406	.500
O.D.	F	.188	.250	.250	.312	.438	.375	.375	.437	.562	.625	.687	.750	.875	1.125
Thick	H	1/64	1/32	1/32	1/32	3/64	1/32	1/32	1/16	1/16	3/64	3/64	3/64	3/64	1/16

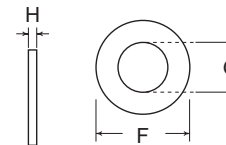
Part No.	F18506	F112810	F1343	F119243	F120027	F113815	F111329	F12986	F13111	F11581	F16856	F19819	F16661	F16572
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Size		1/2"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-1/2"
I.D.	G	.531	.562	.687	.687	.812	.937	1.062	1.187	1.312	1.562
O.D.	F	1.250	1.375	1.375	1.500	1.78	2.00	2.00	2.5	2.750	3.250
Thick	H	1/16	3/32	5/64	5/64	7/64	7/64	1/8	1/8	1/8	9/64

* Commercial Size washer

WASHERS — COMMERCIAL / INDUSTRIAL FLAT 316 STAINLESS STEEL

ANSI B18.22.1 1983	Material:	316 Stainless Steel
	Plating:	None

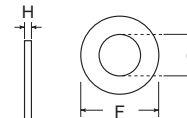


Size		#8	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	.174	.281	.406	.406	.500	.531	.625	.687	.812	.937	1.062
O.D.	F	.375	.625	.750	.875	1.125	1.250	1.375	1.500	1.78	2.00	2.00
Thick	H	1/32	3/64	3/64	3/64	1/16	1/16	5/64	5/64	7/64	7/64	1/8

Part No.	F110228	F116462	F11673	F1804	F16711	F112181	F111934	F11988	F118239	F18345	F111389
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WASHERS — 800 SERIES INDUSTRIAL & MS15795 THICK FLAT 18-8 STAINLESS STEEL

ANSI B18.22.1 1981	Material:	18-8 Stainless Steel
	Plating:	None



Size		#2	#4	#4	#6	#6	#8	#10	#10	1/4"	1/4"	5/16"	5/16"	3/8"
I.D.	G	.093	.125	.125	.156	.156	.187	.218	.250	.281	.312	.343	.375	.406
O.D.	F	.250	.250	.312	.312	.375	.375	.437	.562	.625	.750	.687	.875	.812
Thick	H	.016	.017	.025	.027	.036	.036	.036	.051	.051	.051	.051	.064	.051

Part No.	F119878	F14050	F19331	F119928	F118037	F117579	F117227	F115043	F111050	F16105	F16631	F110557	F114291
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MS No.	802	803	804	805	806	807	808	809	810	811	812	813	814
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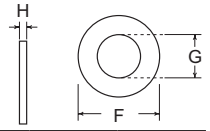
Size		3/8"	7/16"	7/16"	1/2"	1/2"	5/8"	5/8"	3/4"	3/4"	7/8"	7/8"	1"	1"
I.D.	G	.437	.468	.500	.531	.562	.656	.687	.812	.812	.937	.937	1.062	1.062
O.D.	F	1.000	.921	1.250	1.062	1.375	1.312	1.750	1.500	2.000	1.750	2.250	2.000	2.500
Thick	H	.064	.051	.064	.074	.086	.074	.108	.108	.122	.108	.136	.108	.136

Part No.	F17527	F110321	F14911	F18164	F19100	F16323	F15576	F111507	F16939	F16375	F13995	F14367	F12658
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MS No.	815	816	817	818	819	820	821	822	823	824	825	826	827
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WASHERS — FLAT AN960C 18-8 STAINLESS STEEL

ANSI B18.22.1 1981	Material:	18-8 Stainless Steel
	Plating:	None



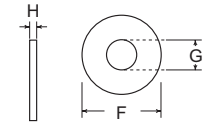
Size	#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G .149	.174	.203	.265	.328	.390	.453	.516	.578	.641	.766	.890	1.016
O.D.	F 3/8	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4
Thick	H 1/32	1/32	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/16	3/32	3/32	3/32

Part No.	F117388	F112045	F12656	F116259	F118302	F15688	F16946	F11576	F118364	F117308	F11628	F13848	F112707
Size	#6	#8	#10	1/4"	5/16"	3/8"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1 1/4"
I.D.	G .149	.174	.203	.265	.328	.390	.516	.578	.641	.766	.890	1.016	1.142
O.D.	F 3/8	3/8	7/16	1/2	9/16	5/8	7/8	1-1/16	1-3/16	1-5/16	1-1/2	1-3/4	1-5/8
Thick	H 1/64	1/64	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32

Thin Pattern Part No.	F115187	F115840	F12284	F11289	F13601	F11622	F11023	F11157	F1752	F18446
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WASHERS — FENDER 18-8 STAINLESS STEEL

ANSI 18.22.1	Material:	18-8 Stainless Steel
	Tolerance:	.040 – .055
	Plating:	None



Nominal Dia.	#8	#10	#10	3/16"	3/16"	3/16"	1/4"	1/4"	1/4"	1/4"
I.D.	G 11/64	.203	.203	13/64	13/64	13/64	9/32	9/32	9/32	9/32
O.D.	F 3/4	.750	1.00	11/16	3/4	1	1	1-1/4	1-1/2	2
Thick	H .040	.040	.040	.040	.040	.040	.055	.055	.055	.055

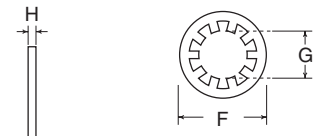
Part No.	F119801	F115405	F114196	F15293	F116236	F119546	F111804	F18933	F111685	F11470
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Nominal Dia.	5/16"	5/16"	5/16"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
I.D.	G 11/32	11/32	11/32	13/32	13/32	13/32	13/32	17/32	17/32	17/32
O.D.	F 1-1/4	1-1/2	2	1	1-1/4	1-1/2	2	1-1/2	2	2
Thick	H .055	.055	.055	.055	.055	.055	.055	.055	.055	.055

Part No.	F19506	F18423	F117316	F119971	F112873	F111532	F116222	F115901	F112880
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WASHERS — INTERNAL TOOTH LOCK TYPE A 410 STAINLESS STEEL

ANSI B18.21.1	For use with General Applications	
	Material:	410 Stainless Steel
	Plating:	None

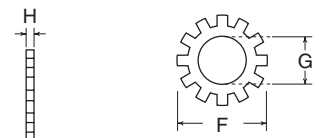


Nominal Diameter	#2	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	1/2"	5/8"
I.D.	G .095	.123	.150	.176	.204	.231	.267	.332	.398	.512	.640
O.D.	F .200	.270	.295	.340	.381	.410	.478	.610	.692	.900	1.071
Thick	H .015	.019	.021	.023	.025	.027	.028	.034	.040	.045	.050

Part No.	F115735	F18016	F114115	F1648	F110147	F16971	F12889	F18729	F110742	F115384	F119225
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WASHERS — EXTERNAL TOOTH LOCK TYPE A 410 STAINLESS STEEL

ANSI B18.21.1	For use with General Applications	
	Material:	410 Stainless Steel
	Plating:	None



Nominal Diameter	#2	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	1/2"
I.D.	G .095	.123	.150	.176	.204	.231	.267	.332	.398	.530
O.D.	F .200	.270	.320	.381	.410	.475	.510	.610	.694	.900
Thick	H .015	.019	.022	.023	.025	.028	.028	.034	.040	.045

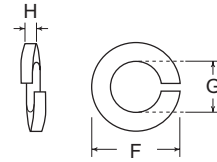
Part No.	F15800	F112341	F16364	F13914	F115131	F132226	F12010	F120039	F118890	F16305
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FASTENERS

8 Stainless, Brass & Nylon Inch

WASHERS — SPLIT LOCK 18-8 STAINLESS STEEL

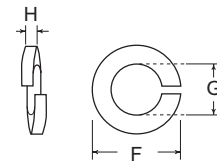
ANSI B18.21.1 1983	Material:	18-8 Stainless Steel
	Plating:	None



Size		#2	#3	#4	#5	#6	#8	#10	#12	1/4"	5/16"
I.D.	G	.088	.101	.115	.128	.156	.188	.203	.221	.262	.326
O.D.	F	.172	.195	.209	.236	.312	.375	.406	.377	.482	.586
Thick	H	.020	.025	.025	.031	.032	.040	.040	.056	.109	.125
Part No.		F17749	F15130	F118756	F118554	F115242	F118931	F13023	F114992	F116108	F15450
Size		3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"
I.D.	G	.390	.455	.518	.572	.560	.775	.890	1.042	1.172	1.302
O.D.	F	.683	.779	.873	.971	1.079	1.271	1.464	1.661	1.853	2.045
Thick	H	.141	.156	.171	.141	.203	.234	.266	.297	.328	.359
Part No.		F119368	F12908	F116120	F16050	F18968	F16668	F12432	F112033	F18026	F15882

WASHERS — SPLIT LOCK 316 STAINLESS STEEL

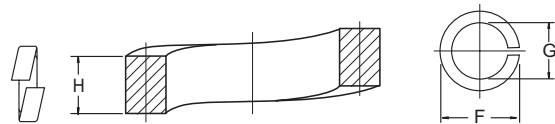
ANSI B18.21.1 1983	Material:	316 Stainless Steel
	Plating:	None



Size		1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
I.D.	G	.262	.326	.390	.454	.518	.587	.636	.775	.890	1.017
O.D.	F	.482	.586	.683	.779	.873	.971	1.079	1.271	1.464	1.661
Thick	H	.109	.125	.141	.156	.171	.181	.203	.234	.266	.297
Part No.		F11585	F111404	F19593	F110079	F14290	F18209	F111429	F118766	F17405	F117774

WASHERS — HI-COLLAR LOCK 18-8 STAINLESS STEEL

ANSI/ASME B18.21.1 1972 (R1983)	For Use with Socket Head Cap Screws	
	Material:	18-8 Stainless Steel
	Plating:	None

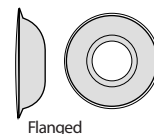
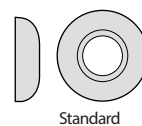


Size		#6	#10	1/4"	5/16"
I.D.	G	.148	.200	.262	.326
O.D.	F	.216	.294	.365	.460
Thick	H	.030	.047	.078	.093
Part No.		F15914	F19211	F114613	F117288

WASHERS — FINISHING CUP 18-8 STAINLESS STEEL

Material:	18-8 Stainless Steel
Plating:	None

Size	#6	#8	#10	#12	1/4"	5/16"	3/8"
Standard	F117190	F13942	F15210	F119239	F115594	F118023	F113574
Flanged	F115465	F17616	F19468				



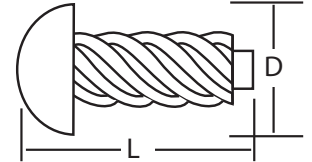
Standard

Flanged

SCREWS — ROUND U DRIVE 18-8 STAINLESS STEEL

D	L	Part No.
#2	1/8	F19006
#2	3/16	F112373
#2	1/4	F16826
#2	3/8	F13575
#4	3/16	F118268
#4	1/4	F19188
#4	3/8	F118599
#4	3/8	F117732

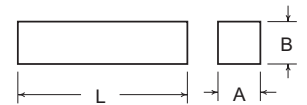
Nominal Screw Size	#2	#4	#6
Outside Diameter	.100	.116	.140
Head Diameter	.162	.211	.260
Pilot Diameter	.083	.096	.116
Head Height	.069	.086	.103
Recommended Hole Size			
Drill Size No.	#44	#37	#31
Hole Diameter	.086	.104	.120



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KEYSTOCK — 303/304 STAINLESS STEEL

Material:	303/304 Stainless Steel
Plating:	None



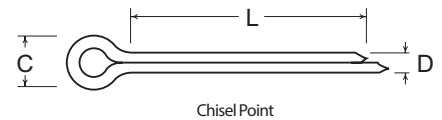
Width 'A'	Width 'B'	Length 'L'	Part No.
1/8	1/8	12"	F118949
3/16	3/16	12"	F110431
1/4	1/4	12"	F12235
5/16	5/16	12"	F117426

Width 'A'	Width 'B'	Length 'L'	Part No.
3/8	3/8	12"	F118032
7/16	7/16	12"	F11347
1/2	1/2	12"	F112113
9/16	9/16	12"	F15409

Width 'A'	Width 'B'	Length 'L'	Part No.
5/8	5/8	12"	F16236
3/4	3/4	12"	F13627
7/8	7/8	12"	F12362
1	1	12"	F18857

PINS — COTTER 18-8 STAINLESS STEEL

ANSI B18.8.1 1983	Material:	18-8 Stainless Steel
	Chisel Point	
	Plating:	None



D	L	C	Hole Size	Part No.
1/16	1/2	.12	.078	F110476
1/16	3/4	.12	.078	F117522
1/16	1	.12	.078	F18564
1/16	1-1/2	.12	.078	F17695
3/32	3/4	.19	.109	F112265
3/32	1	.19	.109	F113269
3/32	1-1/4	.19	.109	F16461
3/32	1-1/2	.19	.109	F114734
3/32	1-3/4	.19	.109	F114431
3/32	2	.19	.109	F15019
1/8	3/4	.25	.141	F115027
1/8	1	.25	.141	F117925

D	L	C	Hole Size	Part No.
1/8	1-1/4	.25	.141	F115147
1/8	1-1/2	.25	.141	F12030
1/8	1-3/4	.25	.141	F111440
1/8	2	.25	.141	F116235
1/8	2-1/2	.25	.141	F114633
1/8	3	.25	.141	F18122
5/32	1	.31	.172	F111175
5/32	1-1/4	.31	.172	F114745
5/32	1-1/2	.31	.172	F110295
5/32	1-3/4	.31	.172	F116836
5/32	2	.31	.172	F117409
5/32	2-1/2	.31	.172	F13543

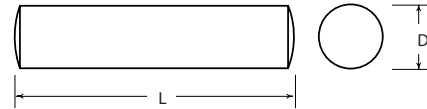
D	L	C	Hole Size	Part No.
5/32	3	.31	.172	F18290
3/16	1	.38	.203	F1630
3/16	1-1/2	.38	.203	F115462
3/16	2	.38	.203	F15985
3/16	2-1/2	.38	.203	F12144
3/16	3	.38	.203	F19616
1/4	1	.50	.266	F120656
1/4	1-1/2	.50	.266	F1518
1/4	2	.50	.266	F14618
1/4	2-1/2	.50	.266	F112495
1/4	3	.50	.266	F1348

FASTENERS

8 Stainless, Brass & Nylon Inch

PINS — DOWEL 18-8 STAINLESS STEEL

ANSI ASME B18.8.2	Material:	18-8 Stainless Steel
	Plating:	None
	Tolerance:	Oversized .0002



D	L	Part No.
1/16	1/8	F118407
1/16	3/16	F11443
1/16	1/4	F11503
1/16	5/16	F113004
1/16	3/8	F1352
1/16	1/2	F110223
1/16	5/8	F15676
1/16	3/4	F12309
1/16	1	F1438
3/32	1/4	F12935
3/32	5/16	F115780
3/32	1/2	F116832

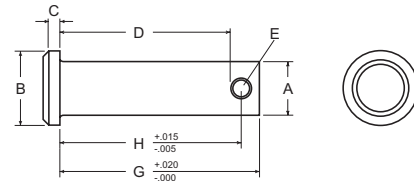
D	L	Part No.
3/32	3/4	F113318
3/32	1	F18311
1/8	3/16	F116144
1/8	1/4	F114389
1/8	3/8	F115432
1/8	1/2	F113692
1/8	5/8	F120934
1/8	3/4	F118792
1/8	1	F18400
3/16	1/4	F112001
3/16	5/16	F1365
3/16	3/8	F111667

D	L	Part No.
3/16	7/16	F116012
3/16	1/2	F115800
3/16	5/8	F117153
3/16	3/4	F13855
3/16	7/8	F114769
3/16	1	F18212
1/4	1/2	F11196
1/4	3/4	F16400
1/4	1	F1893
1/4	1-1/4	F14273
1/4	1-1/2	F110770
1/4	1-3/4	F115918

D	L	Part No.
1/4	2	F116128
5/16	1-1/4	F13515
5/16	2	F111512
3/8	1/2	F110310
3/8	3/4	F1885
3/8	1	F18965
3/8	1-1/4	F11215
3/8	1-1/2	F17266
3/8	2	F113486
1/2	1	F116366
1/2	1-1/4	F15452
1/2	2	F1844

PINS — CLEVIS 18-8 STAINLESS STEEL

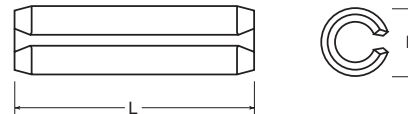
Diameter 'A'	Length 'G'	To center of pin hole 'H'	To edge of pin hole 'D'	Hole Size 'E'	Head Dia. 'B'	Head Thickness 'C'	Part No.
3/16	3/4	21/32	39/64	3/32	5/16	1/16	F119362
1/4	3/4	21/32	39/64	3/32	3/8	3/32	F115984
1/4	1	29/32	55/64	3/32	3/8	3/32	F116059
5/16	3/4	39/64	17/32	9/64	7/16	3/32	F117713
5/16	1	55/64	25/32	9/64	7/16	3/32	F113117
5/16	1-1/4	1-7/64	1-3/32	9/64	7/16	3/32	F111644
5/16	1-3/4	1-39/64	1-17/32	9/64	7/16	3/32	F12408
5/16	1	27/32	49/64	5/32	1/2	1/8	F118016
3/8	1-1/2	1-11/32	1-17/64	5/32	1/2	1/8	F115435
3/8	2	1-27/32	1-49/64	5/32	1/2	1/8	F18020



ANSI ASME B18.8.2	Material:	18-8Stainless Steel
	Plating:	None

PINS — SPLIT SPRING 420 STAINLESS STEEL

ANSI 18.18.1 1978	Material:	420 Stainless Steel
	Plating:	None



D	L	Part No.
1/16	1/2	F115190
1/16	5/8	F15835
1/16	3/4	F11983
1/16	1	F116076
5-64	1/2	F12201
5-64	5/8	F118353
5-64	3/4	F118778
3/32	1/2	F13577
3/32	5/8	F111030
3/32	3/4	F19297
3/32	1	F112154
3/32	1-1/8	F12949
1/8	3/8	F18103
1/8	1/2	F110437

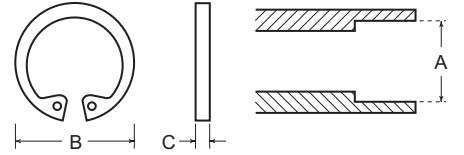
D	L	Part No.
1/8	5/8	F11265
1/8	3/4	F117244
1/8	1	F17594
1/8	1-1/4	F114028
1/8	1-1/2	F113331
5/32	1/2	F119530
5/32	5/8	F114574
5/32	3/4	F15380
5/32	7/8	F119446
5/32	1	F12120
5/32	1-1/2	F17302
5/32	2-1/4	F113637

D	L	Part No.
5/32	2-1/2	F13039
3/16	1/2	F113168
3/16	5/8	F11186
3/16	3/4	F16495
3/16	7/8	F19956
3/16	1	F11694
3/16	1-1/4	F1239
3/16	1-1/2	F19889
3/16	2	F114594
7/32	5/8	F17366
7/32	3/4	F19832
7/32	1	F114321
7/32	1-1/8	F116208

D	L	Part No.
7/32	1-3/8	F15544
7/32	1-1/2	F12643
7/32	2-3/4	F119706
7/32	3	F18485
1/4	1/2	F112479
1/4	3/4	F112173
1/4	7/8	F112917
1/4	1	F14770
1/4	1-1/4	F113691
1/4	1-1/2	F112348
1/4	2	F110900
1/4	3	F18133

RETAINING RINGS — INTERNAL PH 15-7MO STAINLESS STEEL

Material:	PH 15-7MO Stainless Steel
Plating:	None



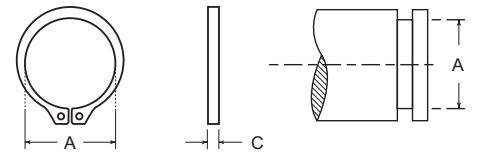
Bore Dia. A	Free Dia. B	Thick C	Part No.
1/4	.280	.015	F118119
5/16	.346	.015	F16455
3/8	.415	.025	F114430
7/16	.482	.025	F116566
1/2	.548	.035	F113466
9/16	.620	.035	F117013
5/8	.694	.035	F116305

Bore Dia. A	Free Dia. B	Thick C	Part No.
11/16	.763	.035	F11909
3/4	.831	.035	F113830
7/8	.971	.042	F117562
15/16	1.041	.042	F113515
1	1.111	.042	F19928
1-3/16	1.319	.050	F117737
1-1/4	1.388	.050	F111638

Bore Dia. A	Free Dia. B	Thick C	Part No.
1-3/8	1.526	.050	F118909
1-1/2	1.660	.050	F11104
1-9/16	1.734	.062	F116375
1-5/8	1.804	.062	F111843
1-3/4	1.942	.062	F118111
1-7/8	2.072	.062	F15325
2	2.210	.062	F180

RETAINING RINGS — EXTERNAL PH 15-7MO STAINLESS STEEL

Material:	PH 15-7MO Stainless Steel
Plating:	None



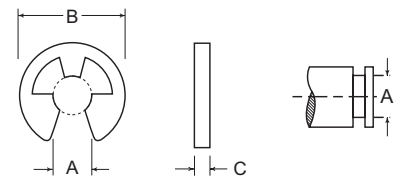
Shaft Dia. A	Thick C	Part No.
1/4	.025	F119363
5/16	.025	F11093
3/8	.025	F117220
7/16	.025	F113476
1/2	.035	F116215
9/16	.035	F113036
5/8	.035	F18621

Shaft Dia. A	Thick C	Part No.
11/16	.042	F16609
3/4	.042	F110424
7/8	.042	F115349
15/16	.042	F118614
1	.042	F17861
1-1/4	.050	F110818
1-3/8	.050	F19558

Shaft Dia. A	Thick C	Part No.
1-1/2	.050	F16438
1-9/16	.062	F114359
1-5/8	.062	F117883
1-3/4	.062	F12164
1-7/8	.062	F119886
2	.062	F117275

E-CLIPS — PH 15-7MO STAINLESS STEEL

Material:	PH 15-7MO Stainless Steel
Plating:	None



Shaft Dia. A	Outer Dia. B	Thick C	Part No.
3/32	.187	.015	F110641
1/8	.230	.015	F117140
9/64	.270	.025	F119982
5/32	.282	.025	F1476
3/16	.335	.025	F11001

Shaft Dia. A	Outer Dia. B	Thick C	Part No.
7/32	.437	.025	F12906
1/4	.527	.025	F113495
5/16	.670	.025	F118115
3/8	.660	.035	F12484

Shaft Dia. A	Outer Dia. B	Thick C	Part No.
7/16	.687	.035	F19612
1/2	.800	.042	F11653
5/8	.940	.042	F111517
3/4	1.120	.050	F117003

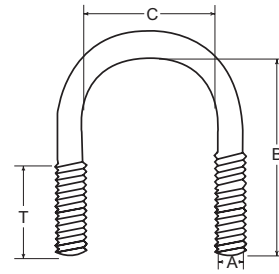
FASTENERS

8 Stainless, Brass & Nylon Inch

BOLTS — U-BOLT 304 STAINLESS STEEL

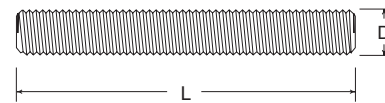
1

Thread Size (A)	Overall Length (B)	ID (C)	Thread Length (T)	Pipe Size	Part No.
1/4-20	1-1/4	3/4	5/8	3/8	F110504
1/4-20	1-3/4	1	1	1/2	F16541
1/4-20	2	1-1/8	1	3/4	F1410
1/4-20	2-1/4	1-1/4	1-1/4	3/4	F16327
1/4-20	2-3/4	1-1/2	1-3/8	1	F117121
1/4-20	3	1-3/4	1-3/8	1-1/4	F17199
5/16-18	2-3/16	1-3/8	1	1	F112778
5/16-18	2-11/16	2	1	1-1/2	F15608
3/8-16	2-1/4	1-1/4	1-1/4	3/4	F14480
3/8-16	2-1/2	1-1/2	1-1/4	1	F115006
3/8-16	2-3/4	1-3/4	1-1/8	1-1/4	F15319
3/8-16	2-5/8	2	1-1/4	1-1/2	F14113
1/2-13	4-1/2	3	1-5/8	2-1/2	F18713
1/2-13	5-1/2	4	1-1/2	3-1/2	F11439



ROD — THREADED 18-8 STAINLESS STEEL

ASME B18.31.3 2014	Material:	18-8 Stainless Steel
	Plating:	None



3' LENGTH

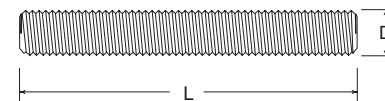
D	L	UNC	UNF
#6	3'	F114429	
#8	3'	F110571	
#10	3'	F16038	F13323
1/4	3'	F13726	F17780
5/16	3'	F115607	F14854
3/8	3'	F115771	F14413
7/16	3'	F112714	F113681
1/2	3'	F120085	F11897
9/16	3'	F116818	F119423
5/8	3'	F17771	F15771
3/4	3'	F12674	F111123
7/8	3'	F111339	
1	3'	F19720	

6' LENGTH

D	L	UNC
1/4	6'	F113011
5/16	6'	F119503
3/8	6'	F114316
7/16	6'	F115095
1/2	6'	F16279
5/8	6'	F115162
3/4	6'	F118163
1	6'	F12943

ROD — THREADED 316 STAINLESS STEEL

ASME B18.31.3 2014	Material:	316 Stainless Steel
	Plating:	None



3' LENGTH

D	L	UNC	UNF
1/4-20	3'	F13170	
5/16-18	3'	F13010	
3/8-16	3'	F1184	
7/16-14	3'	F16142	
1/2-13	3'	F116079	
5/8-11	3'	F117726	
3/4-10	3'	F123347	
7/8-9	3'	F123348	
1-8"	3'	F115835	

6' LENGTH

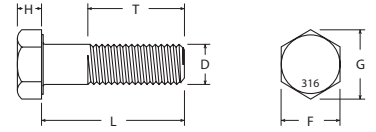
D	L	UNC
3/8-16	6'	F114315
5/8-11	6'	F19324
3/4-10	6'	F1691

SCREWS — HEX HEAD CAP BRASS

*Up to and including 6" long: Minimum thread = Twice the diameter plus 1/4"; over 6" long: Minimum thread Twice the diameter plus 1/2"

*All hex cap may have an additional 1/4" to 3/8" thread, particularly on short length up to 1-1/2" and long lengths over 4"

Diameter	D	1/4"	5/16"	3/8"	1/2"
Height	H	.156	.203	.234	.313
W.A.F.	F	.438	.500	.562	.750
W.A.C.	G	.505	.577	.650	.866



ANSI B18.2.1 1981	Material:	Brass
	Plating:	None

D	L	T	UNC
1/4	1/2	1/2	F16210
1/4	3/4	3/4	F110464
1/4	1	3/4	F119349
1/4	1-1/4	3/4	F19693
1/4	1-1/2	3/4	F16695
1/4	2	3/4	F110381
5/16	1/2	1/2	F11014

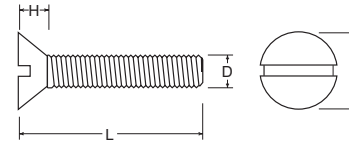
D	L	T	UNC
5/16	3/4	3/4	F17755
5/16	1	7/8	F11807
5/16	1-1/4	7/8	F13763
5/16	1-1/2	7/8	F17919
3/8	1/2	1/2	F1776
3/8	3/4	3/4	F111699
3/8	1	1	F16334

D	L	T	UNC
3/8	1-1/4	1	F113870
3/8	1-1/2	1	F13297
1/2	3/4	3/4	F15943
1/2	1	1	F116180
1/2	1-1/2	1-1/4	F115304

SCREWS — SLOTTED FLAT MACHINE BRASS

ANSI/ASME B18.6.3	Material:	Brass
	Plating:	None

Nominal Size	D	#6	#8	#10	1/4"	5/16"	3/8"
Head Height Max	H	.083	.100	.116	.153	.191	.230
Head Dia. Ma	A	.262	.312	.362	.477	.635	.717



D	L	UNC
#6	3/4	F12413
#8	1/2	F114784
#8	3/4	F115256
#8	1	F110488
#10	1/2	F12968
#10	3/4	F120007
#10	1	F15081
1/4	3/8	F13863
1/4	1/2	F113880
1/4	3/4	F17958

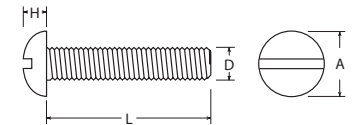
D	L	UNC
1/4	1	F18443
1/4	1-1/4	F116717
1/4	1-1/2	F111993
1/4	2	F118735
1/4	3	F13099
5/16	3/4	F116048
5/16	1-1/2	F116751
5/16	2-1/2	F118877
5/16	3	F110090
3/8	3/4	F12311

D	L	UNC
3/8	1	F12858
3/8	1-1/4	F1855
3/8	1-1/2	F112328
3/8	2-1/2	F13851
3/8	3	F17377

SCREWS — SLOTTED ROUND MACHINE BRASS

ANSI B18.6.3	Material:	Brass
	Plating:	None

Nominal Size	D	#4	#6	#8	#10	#12	1/4"
Head Height Max	H	.086	.103	.120	.137	.153	.175
Head Dia. Ma	A	.211	.260	.309	.359	.408	.472



D	L	UNC	UNF
#4	3/8	F113965	
#4	1/2	F15753	
#4	3/4	F115672	
#4	1	F11748	
#6	1/4	F17339	
#6	3/8	F115549	
#6	1/2	F18502	
#6	3/4	F116618	
#6	1	F119480	
#6	1-1/4	F113888	
#6	1-1/2	F115886	
#8	1/4	F1316	
#8	3/8	F13550	
#8	1/2	F18086	
#8	5/8	F110809	

D	L	UNC	UNF
#8	3/4	F19165	
#8	1	F11029	
#8	1-1/4	F111597	
#8	1-1/2	F13596	
#8	2	F116570	
#10	1/4	F115167	F12840
#10	3/8	F112111	
#10	1/2	F111754	F11561
#10	5/8		F119695
#10	3/4	F114072	F11072
#10	1	F17556	F11204
#10	1-1/4	F18847	F110895
#10	1-1/2	F1762	F15629
#10	2	F112696	F113885
#12	3/8	F115464	

D	L	UNC	UNF
#12	1/2	F110649	
#12	3/4	F19238	
#12	1	F14498	
#12	1-1/4	F117067	
#12	1-1/2	F111276	
#12	2	F19032	
#12	3	F114588	
1/4"	1/2	F118284	
1/4"	3/4	F1729	
1/4"	1	F16880	
1/4"	1-1/4	F11547	
1/4"	1-1/2	F117723	
1/4"	2	F118869	
1/4"	3	F14444	

FASTENERS

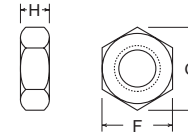
8 Stainless, Brass & Nylon Inch

NUTS — FINISHED HEX BRASS

Size		#4	#6	#8	#10	#12	1/4"
Height	H	.098	.114	.13	.13	.161	.219
WAF	F	1/4	5/16	11/32	3/8	7/16	7/16
WAC	G	.289	.361	.397	.433	.505	.505
UNC P/N		F13384	F1719	F118048	F111470	F17986	F111800
UNF P/N					F113120		F117829

ANSI B18.2.2 1986	Excellent Corrosion Resistance	
	Material:	Brass
	Plating:	None

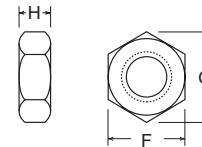
Size		5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"
Height	H	.266	.328	.375	.437	.547	.640	.750	.859
WAF	F	1/2	9/16	11/16	3/4	15/16	1-1/8	1-5/16	1-1/2
WAC	G	.557	.650	.764	.866	1.083	1.299	1.516	1.732
UNC P/N		F116203	F15577	F114003	F12867	F113483	F14606	F11464	F118858
UNF P/N		F15374	F18387	F17459					



NUTS — JAM BRASS

ANSI B18.2.2 1986	Material:	Brass
	Plating:	None

Size		5/16"	3/8"	5/8"	3/4"	1"
Height	H	3/16	7/32	3/8	27/64	35/64
WAF	F	1/2	9/16	15/16	1-1/8	1-1/2
WAC	G	.577	.650	1.051	1.240	1.732
UNC P/N		F16499	F13307	F16435	F17916	F112827
UNF P/N				F17669	F15089	F11159

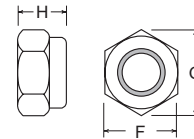


NUTS — NYLON INSERT LOCK BRASS

Size		#8	#10	1/4"	5/16"
Height	H	.239	.249	.328	.359
WAF	F	11/32	3/8	7/16	1/2
WAC	G	.397	.433	.505	.577
UNC P/N		F117941	F113150	F113679	F15887
UNF P/N			F112968		

ANSI B18.2.2 1986	Material:	Brass
	Plating:	None

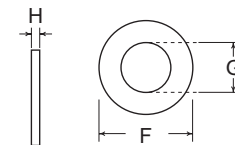
Size		3/8"	1/2"	3/4"	7/8"
Height	H	.469	.609	.890	.999
WAF	F	9/16	3/4	1-1/8	1-5/16
WAC	G	.650	.866	1.299	1.516
UNC P/N		F15098	F117019	F110591	F112609
UNF P/N			F114307		



WASHERS — FLAT BRASS

ANSI B18.22.1 1981	Material:	Brass
	Plating:	None/Nickel

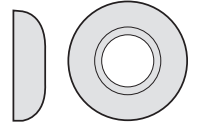
Size		#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
I.D.	G	.120	.147	.172	.200	.228	.260	.340	.392	.500	.562	.687	.812	1.062
O.D.	F	.281	.312	.375	.437	.500	.562	.750	.875	1.125	1.250	1.500	1.875	2.500
Thick	H	.025	.025	.032	.036	.040	.040	.062	.062	.081	.091	.102	.114	.144
No Finish		F111554	F112174	F111817	F19040	F13632	F112330	F1875	F15459	F116200	F112841	F12247	F16533	F14124
Nickel No.			F1302	F118325	F1390									



WASHERS — FINISHING CUP BRASS

Material:	Brass
Plating:	Nickel

Size	#6	#8	#10	#12
Standard	F12025	F114139	F113121	F116678

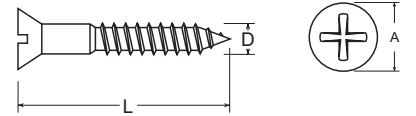


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SCREWS — PHILLIPS FLAT WOOD BRASS

ANSI B18.6.4 1981	Material:	Brass
	Plating:	None

Diameter	D	#4	#6	#8	#10	#12	#14
Height	H	.067	.083	.100	.116	.132	.153
Head Dia.	A	.225	.279	.332	.385	.438	.507



D	L	UNC
#4	3/8	F11284
#4	1/2	F15467
#4	3/4	F16603
#4	1	F117290
#6	1/2	F12993
#6	5/8	F17929
#6	3/4	F116995

D	L	UNC
#6	1	F111995
#8	1/2	F18023
#8	3/4	F117984
#8	1	F18080
#8	1-1/4	F18831
#8	1-1/2	F15167
#10	1/2	F16624

D	L	UNC
#10	3/4	F117659
#10	1	F114364
#10	1-1/4	F113689
#10	1-1/2	F119627
#12	3/4	F17456
#12	1	F14877
#12	1-1/4	F119071

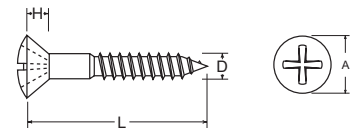
D	L	UNC
#12	1-1/2	F14041
#12	2	F111849
#14	1	F16616
#14	1-1/4	F18934
#14	1-1/2	F110453
#14	2	F17534

SCREWS — PHILLIPS OVAL WOOD BRASS

ANSI B18.6.4 1981	Material:	Brass
	Plating:	None

D	L	UNC
#6	1/2	F110368
#6	5/8	F113097
#6	3/4	F112406
#6	1	F14356
#8	1/2	F1923
#8	5/8	F16033
#8	3/4	F113325

D	L	UNC
#8	1	F15929
#8	1-1/4	F17286
#8	1-1/2	F111581
#10	3/4	F12827
#10	1	F119447
#10	1-1/4	F114208

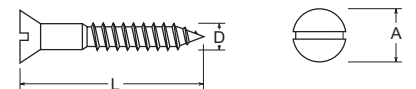


Diameter	D	#6	#8	#10
Height	H	.152	.152	.176
Head Dia.	A	.279	.332	.385

SCREWS — SLOTTED FLAT WOOD BRASS

ANSI B18.6.4 1981	Material:	Brass
	Plating:	None

Diameter	D	#6	#8	#10	#12
Height	H	.083	.100	.116	.132
Head Dia.	A	.279	.332	.385	.438



D	L	Part No.
#6	1/2	F11166
#6	3/4	F110921
#6	1	F115895
#6	1-1/4	F11105
#6	1-1/2	F15478
#6	2	F15945
#8	1/2	F115414

D	L	Part No.
#8	3/4	F119210
#8	1	F11222
#8	1-1/4	F114642
#8	1-1/2	F111555
#8	2	F119927
#8	2-1/2	F16764
#8	3	F113820

D	L	Part No.
#10	1/2	F113811
#10	3/4	F14252
#10	1	F113699
#10	1-1/4	F12975
#10	1-1/2	F119121
#10	2	F18395
#12	1/2	F115916

D	L	Part No.
#12	3/4	F110193
#12	1	F15642
#12	1-1/4	F14622
#12	1-1/2	F118356
#12	2	F14823
#12	2-1/2	F115832

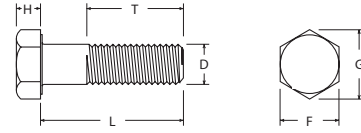
FASTENERS

8 Stainless, Brass & Nylon Inch

SCREWS — HEX HEAD CAP SILICON BRONZE

*Up to and including 4" long: Full thread

Diameter	D	1/4"	5/16"	3/8"	1/2"
Height	H	.156	.203	.234	.313
W.A.F.	F	.438	.500	.563	.750
W.A.C.	G	.505	.577	.650	.866



ANSI B18.2.1 1981	Material:	Silicon Bronze
	Plating:	None

D	L	T	UNC
1/4	1/2	1/2	F13514
1/4	3/4	3/4	F19945
1/4	1	1	F11499
1/4	1-1/4	1-1/4	F114818
1/4	1-1/2	1-1/2	F19160
1/4	2-1/2	2-1/2	F117224
5/16	3/4	3/4	F18335
5/16	1/2	1/2	F14201
5/16	1	1	F114702

D	L	T	UNC
5/16	1-1/4	1-1/4	F117100
5/16	1-1/2	1-1/2	F114024
5/16	1-3/4	1-3/4	F119877
5/16	2	2	F110064
3/8	3/4	3/4	F13204
3/8	1	1	F14468
3/8	1-1/4	1-1/4	F111366
3/8	1-1/2	1-1/2	F12394
3/8	1-3/4	1-3/4	F18330

D	L	T	UNC
3/8	2	2	F14509
3/8	2-1/2	2-1/2	F1229
3/8	3	3	F12552
1/2	1	1	F17977
1/2	1-1/4	1-1/4	F11800
1/2	1-1/2	1-1/2	F112711
1/2	1-3/4	1-3/4	F15635
1/2	2	2	F17415
1/2	2-1/2	2-1/2	F12096
1/2	3	3	F15738

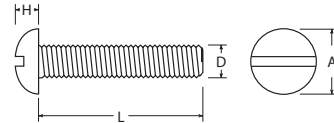
SCREWS — SLOTTED ROUND MACHINE SILICON BRONZE

ANSI B18.6.3	Material:	Silicon Bronze
	Plating:	None

Nominal Size	D	#6	#8	14"
Head Height Max	H	.103	.120	.175
Head Dia. Ma	A	.260	.309	.472

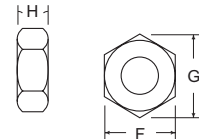
D	L	UNC	UNF
#6	1	F119116	
#6	1-1/4	F116868	
#6	1-1/2	F112671	

D	L	UNC	UNF
#8	1-1/4	F112407	
1/4	5/8	F13497	
1/4	3/4	F115764	



NUTS — FINISHED HEX SILICON BRONZE

ANSI B18.2.2	Material:	Silicon Bronze
	Plating:	None

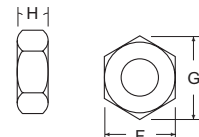


Size		#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
Height	H	.114	.130	.130	7/32	17/64	21/64	7/16	35/64	41/64	3/4	55/64
WAF.	F	5/16	11/32	3/8	7/16	1/2	9/16	3/4	15/16	1-1/8	1-5/16	1-1/2
WAC.	G	.361	.397	.433	.505	.577	.650	.866	1.083	1.299	1.516	1.732
UNCP/N		F16656	F111383		F16012	F17426	F18306	F14350	F18744	F113348	F16316	F111912
UNF P/N				F13731								

NUTS — HEAVY HEX SILICON BRONZE

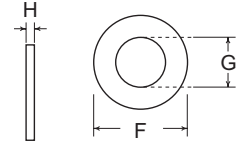
ANSI B18.2.2	Material:	Silicon Bronze
	Plating:	None

Size		1/4"	3/8
Height	H	15/64	23/64
W.A.F.	F	1/2	11/16
W.A.C.	G	.577	.794
UNCP/N		F11000	F118066



WASHERS — COMMERCIAL / INDUSTRIAL FLAT SILICON BRONZE

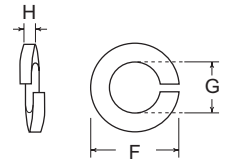
ANSI B18.22.1 1983	Material:	Silicon Bronze
	Plating:	None



Size		#6	#8	#10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"
I.D.	G	.147	.172	.218	.26	.343	.392	.500	.562	.687	.812	.937
O.D.	F	.375	.375	.427	.687	.750	.875	1.125	1.250	1.500	1.875	2.25
Thick	H	1/32	1/32	1/32	3/64	1/16	1/16	1/16	5/64	5/64	7/64	7/64
Part No.		F17204	F119273	F114402	F118357	F119135	F114961	F13781	F17987	F13549	F14780	F18813

WASHERS — SPLIT LOCK SILICON BRONZE

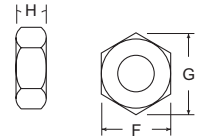
ANSI B18.21.1 1983	Material:	Silicon Bronze
	Plating:	None



Size		#6	#8	#10	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"
I.D.	G	.156	.188	.203	.262	.326	.390	.518	.560	.775	.890	1.042
O.D.	F	.312	.375	.406	.482	.586	.683	.873	1.079	1.271	1.464	1.661
Thick	H	.032	.040	.040	.109	.125	.141	.171	.203	.234	.266	.297
Part No.		F14132	F19721	F119721	F14034	F13891	F113377	F114572	F14287	F119789	F12594	F113906

NUTS — FINISHED HEX NYLON

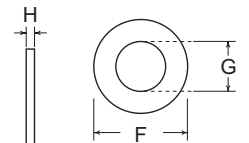
ANSI B18.2.2	Material:	Nylon
	Plating:	None



Size		#4	#6	#8	#10	1/4"	5/16"	3/8"
W.A.F.	F	.098	.114	.130	.130	.226	.273	.337
W.A.C.	G	1/4	5/16	11/32	3/8	7/16	1/2	9/16
UNCP/N		F11259	F17743	F1609		F1994	F116430	F11926
UNFP/N					F118079			

WASHERS — FLAT NYLON

ANSI B18.22.1 1981	Material:	Nylon
	Plating:	None



Size		#4	#6	#8	#10	1/4"	5/16"	3/8"	3/8"	1/2"	5/8"
I.D.	G	.115	.140	.171	.194	.257	.317	.380	.350	.505	.625
O.D.	F	1/4	5/16	3/8	3/8	1/2	1/2	5/8	3/4	3/4	5/8
Thick	H	.032	.032	.032	.062	.062	.062	.062	.062	.093	.093
Part No.		F121075	F111102	F119713	F13079	F111869	F16467	F16379	F132244	F118018	F132223

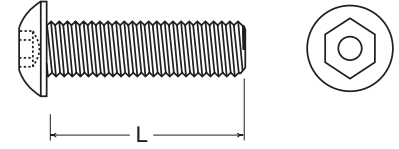
**WE KNOW
MRO**

TAMPER RESISTANT SCREWS — SS MACHINE SCREW BUTTON HEX PIN IN

ANSI B18.3	Material: 18-8 Stainless				
	Plating: Plain				
Diameter	D	#6	#8	#10	1/4"
T/R Bit Size		1/8	1/8	5/32	5/32

D & TPI	L	Part No.
6-32	3/8	F129593
6-32	1/2	F129591
6-32	3/4	F129592
6-32	1	F130492
6-32	1-1/4	F129590
8-32	1/2	F129596
8-32	3/4	F129597
8-32	1	F129594

D & TPI	L	Part No.
8-32	1-1/2	F129595
10-24	1/2	F129583
10-24	3/4	F129584
10-24	1	F129582
10-24	1-1/2	F130493
10-32	1/2	F129586
10-32	3/4	F129587
10-32	1	F129585



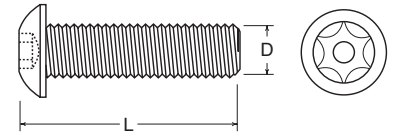
D & TPI	L	Part No.
10-32	1-1/2	F130494
1/4-20	3/4	F129589
1/4-20	1	F130495
1/4-20	1-1/2	F129588

TAMPER RESISTANT SCREWS — SS MACHINE SCREW BUTTON TORX PIN IN

ANSI B18.3	Material: 18-8 Stainless				
	Plating: Plain				
Diameter	D	#6	#8	#10	1/4"
T/R Bit Size		T10	T15	T25	T27

D & TPI	L	Part No.
6-32	1/2	F129568
6-32	3/4	F129570
6-32	1	F129566
6-32	1-1/4	F130314
6-32	1-1/2	F129567
8-32	1/2	F129575
8-32	3/4	F129579
8-32	1	F130449
8-32	1-1/4	F129574
8-32	1-1/2	F129573
10-24	1/2	F130450
10-24	3/4	F129541

D & TPI	L	Part No.
10-24	1	F129538
10-24	1-1/4	F129540
10-24	1-1/2	F129539
10-32	3/8	F129550
10-32	1/2	F129547
10-32	3/4	F129549
10-32	1	F129544
10-32	1-1/4	F129546
10-32	1-1/2	F129545
1/4-20	1/2	F129554
1/4-20	3/4	F130451
1/4-20	1	F130452



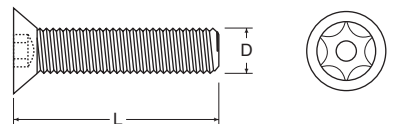
D & TPI	L	Part No.
1/4-20	1-1/4	F129553
1/4-20	1-1/2	F129552
1/4-20	2	F129557
5/16-18	3/4	F130453
5/16-18	1	F130454
5/16-18	1-1/2	F130455
5/16-18	2	F130456

TAMPER RESISTANT SCREWS — SS MACHINE SCREW FLAT TORX PIN IN

ANSI B18.3	Material: 18-8 Stainless				
	Plating: Plain				
Diameter	D	#6	#8	#10	1/4"
T/R Bit Size		T10	T15	T25	T27

D & TPI	L	Part No.
6-32	3/8	F129645
6-32	1/2	F129642
6-32	3/4	F129644
6-32	1	F129640
8-32	3/8	F129653
8-32	1/2	F129649
8-32	3/4	F129652
8-32	1	F129646
8-32	1-1/4	F129648
8-32	1-1/2	F129647

D & TPI	L	Part No.
10-24	1/2	F129617
10-24	3/4	F129618
10-24	1	F129614
10-24	1-1/4	F129616
10-24	1-1/2	F129615
10-32	1/2	F129624
10-32	3/4	F129625
10-32	1	F129621
10-32	1-1/4	F129623
10-32	1-1/2	F129622



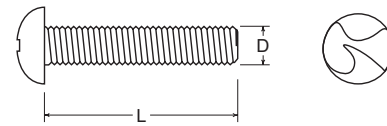
D & TPI	L	Part No.
1/4-20	1/2	F129633
1/4-20	3/4	F129637
1/4-20	1	F129630
1/4-20	1-1/4	F129632
1/4-20	1-1/2	F129631

FOR INSTALLATION AND REMOVAL TOOLS, SEE PAGE 4-2-5 THRU 4-2-7

TAMPER RESISTANT SCREWS — SS MACHINE SCREW ROUND ONE WAY

ANSI B18.3	Material:	18-8 Stainless				
	Plating:	Plain				

Diameter	D	#6	#8	#10	1/4"	5/16"
One Way Removal Tool		6-8	6-8	10-12	1/4	1/4



D & TPI	L	Part No.
6-32	1/2	F130401
6-32	3/4	F130402
6-32	1	F130403
8-32	1/2	F130404
8-32	3/4	F130405
8-32	1	F130406
8-32	1-1/4	F130407
8-32	1-1/2	F130408
10-24	1/2	F130485
10-24	3/4	F130409

D & TPI	L	Part No.
10-24	1	F130410
10-24	1-1/4	F130411
10-24	1-1/2	F130412
10-24	2	F130413
10-32	1/2	F130414
10-32	3/4	F130415
10-32	1	F130416
10-32	1-1/4	F130417
10-32	1-1/2	F130418
10-32	2	F130419

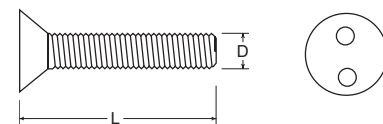
D & TPI	L	Part No.
1/4-20	1/2	F130486
1/4-20	3/4	F130487
1/4-20	1	F130488
1/4-20	1-1/4	F130489
1/4-20	1-1/2	F130490
1/4-20	2	F130420
5/16-18	3/4	F130421
5/16-18	1	F130422
5/16-18	1-1/2	F130423
5/16-18	2	F130424

ONE WAY TAMPER RESISTANT SCREWS ARE INSTALLED WITH A STANDARD SLOTTED/FLAT BLADE SCREWDRIVER
THEY CAN ONLY BE REMOVED WITH THE ONE-WAY REMOVAL TOOLS FOUND ON PAGE 4-2-7

TAMPER RESISTANT SCREWS — SS MACHINE SCREW FLAT SPANNER

ANSI B18.3	Material:	18-8 Stainless				
	Plating:	Plain				

Diameter	D	#6	#8	#10	1/4"	5/16"	3/8"
Bit Size		SP6	SP8	SP10	SP1/4	SP1/4	SP1/4



D & TPI	L	Part No.
6-32	1/2	F130332
6-32	3/4	F130333
6-32	1	F130334
6-32	1-1/4	F130335
6-32	1-1/2	F130336
6-32	2	F130337
8-32	1/2	F130338
8-32	3/4	F130339
8-32	1	F130340
8-32	1-1/4	F130341
8-32	1-1/2	F130342
8-32	2	F130343
10-24	1/2	F130344
10-24	3/4	F130345

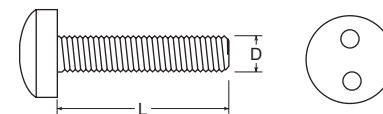
D & TPI	L	Part No.
10-24	1	F130346
10-24	1-1/4	F130347
10-24	1-1/2	F130348
10-24	2	F130349
10-32	1/2	F130471
10-32	3/4	F130472
10-32	1	F130350
10-32	1-1/4	F130351
10-32	1-1/2	F130352
10-32	2	F130353
1/4-20	1/2	F130473
1/4-20	3/4	F130474
1/4-20	1	F130475
1/4-20	1-1/4	F130476

D & TPI	L	Part No.
1/4-20	1-1/2	F130477
1/4-20	2	F130354
5/16-18	3/4	F130355
5/16-18	1	F130356
5/16-18	1-1/2	F130357
5/16-18	2	F130358
3/8-16	1	F130359
3/8-16	1-1/2	F130360
3/8-16	2	F130361

TAMPER RESISTANT SCREWS — SS MACHINE SCREW PAN SPANNER

ANSI B18.3	Material:	18-8 Stainless			
	Plating:	Plain			

Diameter	D	#6	#8	#10	1/4"
Bit Size		SP6	SP8	SP10	SP1/4



D & TPI	L	Part No.
6-32	1/2	F130459
6-32	3/4	F130316
6-32	1	F130317
6-32	1-1/4	F130318
6-32	1-1/2	F130319
6-32	2	F130320
8-32	1/2	F130321
8-32	3/4	F130322
8-32	1	F129702
8-32	1-1/4	F130323

D & TPI	L	Part No.
8-32	1-1/2	F129703
8-32	2	F130324
10-24	1/2	F130460
10-24	3/4	F130325
10-24	1	F130326
10-24	1-1/4	F130327
10-24	1-1/2	F130328
10-24	2	F130461
10-32	1/2	F130462
10-32	3/4	F130463

D & TPI	L	Part No.
10-32	1	F130329
10-32	1-1/4	F130330
10-32	1-1/2	F130331
10-32	2	F130464
1/4-20	1/2	F130465
1/4-20	3/4	F130466
1/4-20	1	F130467
1/4-20	1-1/4	F130468
1/4-20	1-1/2	F130469
1/4-20	2	F130470

FOR INSTALLATION AND REMOVAL TOOLS, SEE PAGE 4-2-5 THRU 4-2-7

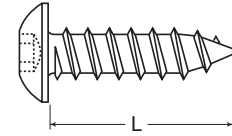
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW BUTTON HEX PIN IN

ANSI B18.3	Material:	18-8 Stainless		
	Plating:	Plain		

Diameter	D	#6	#8	#10
T/R Bit Size		1/8	1/8	5/32

D & TPI	L	Part No.
6	3/8	F129607
6	1/2	F129605
6	3/4	F129606
6	1	F129604
8	3/2	F129613
8	1/2	F129611

D & TPI	L	Part No.
8	3/4	F129612
8	1	F129608
8	1-1/4	F129610
8	1-1/2	F129609
10	1/2	F129601
10	3/4	F129603



1

D & TPI	L	Part No.
10	1	F129598
10	1-1/4	F129600
10	1-1/2	F129599
10	2	F129602

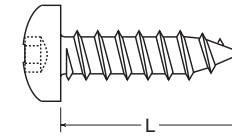
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW BUTTON TORX PIN IN

ANSI B18.3	Material:	18-8 Stainless		
	Plating:	Plain		

Diameter	D	#6	#8	#10	1/4"
T/R Bit Size		T10	T15	T25	T27

D & TPI	L	Part No.
6	1/2	F129673
6	3/4	F129674
6	1	F129671
8	1/2	F129678
8	3/4	F130457
8	1	F129675

D & TPI	L	Part No.
8	1-1/4	F129677
8	1-1/2	F129676
10	1/2	F129657
10	3/4	F129658
10	1	F129655
10	1-1/4	F130458



D & TPI	L	Part No.
10	1-1/2	F129656
14	1	F129665
14	1-1/4	F129667
14	1-1/2	F129666

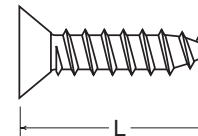
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW FLAT TORX PIN IN

ANSI B18.3	Material:	18-8 Stainless		
	Plating:	Plain		

Diameter	D	#6	#8	#10	1/4"
T/R Bit Size		T10	T15	T25	T27

D & TPI	L	Part No.
6	1/2	F129691
6	3/4	F129692
6	1	F129689
8	1/2	F129697
8	3/4	F129699
8	1	F129694

D & TPI	L	Part No.
8	1-1/4	F129696
10	3/4	F129683
10	1	F129680
10	1-1/4	F129681
10	1-1/2	F124959
14	1	F129685



D & TPI	L	Part No.
14	1-1/2	F130315

FOR INSTALLATION AND REMOVAL TOOLS, SEE PAGE 4-2-5 THRU 4-2-7

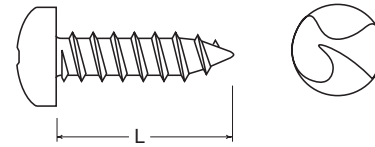
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW ROUND ONE WAY

ANSI B18.3	Material:	18-8 Stainless			
	Plating:	Plain			

Diameter	D	#6	#8	#10	1/4"
One Way Removal Tool		6-8	6-8	10-12	1/4

D & TPI	L	Part No.
6	1/2	F130425
6	3/4	F130426
6	1	F130427
6	1-1/4	F130428
8	1/2	F130429
8	3/4	F130430
8	1	F130431
8	1-1/4	F130432

D & TPI	L	Part No.
8	1-1/2	F130433
10	1/2	F130434
10	3/4	F130435
10	1	F130436
10	1-1/4	F130437
10	1-1/2	F130438
10	2	F130439
14	1/2	F130440



D & TPI	L	Part No.
14	3/4	F130441
14	1	F130442
14	1-1/4	F130443
14	1-1/2	F130444
14	2	F130445

ONE WAY TAMPER RESISTANT SCREWS ARE INSTALLED WITH A STANDARD SLOTTED/FLAT BLADE SCREWDRIVER
THEY CAN ONLY BE REMOVED WITH THE ONE-WAY REMOVAL TOOLS FOUND ON PAGE 4-2-7

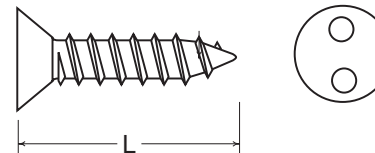
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW FLAT SPANNER

ANSI B18.3	Material:	18-8 Stainless			
	Plating:	Plain			

Diameter	D	#6	#8	#10	1/4"
Bit Size		SP6	SP8	SP10	SP1/4

D	L	Part No.
6	1/2	F130377
6	3/4	F130378
6	1	F130379
6	1-1/4	F130380
6	1-1/2	F130381
6	2	F130382
8	1/2	F130383
8	3/4	F130384
8	1	F130385
8	1-1/4	F130386

D	L	Part No.
8	1-1/2	F130387
8	2	F130388
10	1/2	F130389
10	3/4	F130390
10	1	F130391
10	1-1/4	F130392
10	1-1/2	F130393
10	2	F130394



D	L	Part No.
14	1/2	F130395
14	3/4	F130396
14	1	F130397
14	1-1/4	F130398
14	1-1/2	F130399
14	2	F130400

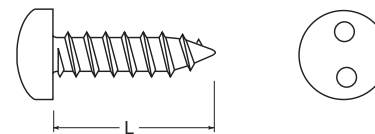
TAMPER RESISTANT SCREWS — SS SHEET METAL SCREW PAN SPANNER

ANSI B18.3	Material:	18-8 Stainless			
	Plating:	Plain			

Diameter	D	#6	#8	#10	1/4"
Bit Size		SP6	SP8	SP10	SP1/4

D & TPI	L	Part No.
6	1/2	F130478
6	3/4	F130362
6	1	F130363
6	1-1/4	F130364
6	1-1/2	F130365
6	2	F130366
8	1/2	F130479
8	3/4	F129706
8	1	F130367
8	1-1/4	F130368

D & TPI	L	Part No.
8	1-1/2	F130369
8	2	F130370
10	1/2	F130371
10	3/4	F130372
10	1	F130373
10	1-1/4	F130374
10	1-1/2	F130375
10	2	F130376

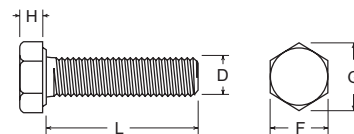


D & TPI	L	Part No.
14	1/2	F130480
14	3/4	F129705
14	1	F130481
14	1-1/4	F130482
14	1-1/2	F130483
14	2	F130484

FOR INSTALLATION AND REMOVAL TOOLS, SEE PAGE 4-2-5 THRU 4-2-7

SCREWS — METRIC HEX HEAD CAP A2 & A4 STAINLESS STEEL

DIN 933	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None



Diameter	D	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36
Height	H	1.88	2.68	3.35	3.85	5.15	6.22	7.32	8.62	9.82	11.28	12.28	14.22	15.22		45	49	53.8
W.A.F.	F	5.5	7	8	10	13	17	19	22	24	27	30	31	35	40			
W.A.C.	G	6.01	7.66	8.79	11.05	14.38	18.9	21.1	24.49	26.75	30.14	33.53	35.72	39.98				
Thread Pitch		.50	.70	.80	1.0	1.25	1.50	1.75	2.0	2.0	2.5	2.5	2.5	3.0	3.0	3.5	3.5	4.0

D	L(mm)	A2	A4
M3	6	F119280	
M3	10	F11852	
M3	12	F115666	
M3	16	F15231	
M3	18	F12205	
M3	25	F116250	
M3	30	F1774	
M4	6	F11660	
M4	10	F11883	F18825
M4	12	F115494	F117527
M4	16	F17168	
M4	20	F117558	F115903
M4	25	F114282	F118831
M4	30	F117670	F18291
M4	50	F111239	
M5	6	F114989	
M5	8	F112239	
M5	10	F114004	F19101
M5	12	F116066	F12457
M5	14	F14554	
M5	16	F14795	F118449
M5	20	F14860	F12899
M5	25	F116038	F119367
M5	30	F15994	F111515
M5	35	F1325	F12002
M5	40	F12648	F118919
M5	45	F16352	
M5	50	F18141	F19146
M5	70	F118107	
M6	8	F116610	
M6	10	F112572	F111591
M6	12	F13653	F13453
M6	14	F15698	F119800
M6	16	F112814	F11709
M6	18	F120025	
M6	20	F16710	F119427
M6	25	F118796	F112875
M6	30	F115719	F14812
M6	35	F17359	F113877
M6	40	F112972	F118548
M6	45	F111833	
M6	50	F17943	
M6	55	F111612	
M6	60	F16416	F111536
M6	65	F118310	
M6	70	F117647	F14979
M6	80	F1112	F114960
M6	90		F117029
M6	100	F14953	F13277

D	L(mm)	A2	A4
M6	110	F114846	
M8	10	F13152	
M8	12	F16260	F11731
M8	16	F111954	F114404
M8	20	F115520	F111284
M8	25	F12150	F18784
M8	30	F14168	F113335
M8	35	F115154	F118029
M8	40	F19076	F12793
M8	45	F19083	
M8	50	F19125	F113499
M8	55	F116122	
M8	60	F16024	F16630
M8	65	F12972	
M8	70	F111660	
M8	75	F12139	
M8	80	F13755	
M8	85	F19483	
M8	90	F117751	
M8	100	F112062	
M8	110	F13409	
M8	120	F18608	
M8	130	F114667	
M8	150	F14397	F114893
M10	12	F113700	
M10	16	F1354	F19788
M10	20	F118262	F113297
M10	25	F116064	F119209
M10	30	F119370	F1669
M10	35	F117784	F19979
M10	40	F116337	F18654
M10	45	F118089	F17970
M10	50	F114753	F15171
M10	55	F16797	
M10	60	F116309	F116778
M10	65	F14832	
M10	70	F13487	F17694
M10	75	F114276	
M10	80	F19835	F118864
M10	90	F13090	
M10	100	F117225	
M10	110	F113819	
M10	120	F15427	
M10	130	F17264	
M10	140	F11509	
M10	150	F170	
M12	16	F18029	F14019
M12	20	F19905	
M12	25	F114708	F113110

D	L(mm)	A2	A4
M12	30	F110419	F110148
M12	35	F13367	F17354
M12	40	F11133	F118801
M12	45	F14880	F16417
M12	50	F18954	F14214
M12	55	F112044	
M12	60	F12525	F18569
M12	70	F12675	F114816
M12	80	F113153	
M12	90	F1834	
M12	110	F113337	
M12	120		F13306
M12	150	F12285	
M14	20	F16511	
M14	30	F17510	
M14	35	F116294	
M14	40	F117188	
M14	45	F11274	
M14	50	F113903	
M14	60	F115318	
M14	65	F115144	
M14	70	F110172	
M14	80	F119626	
M14	90	F117665	
M14	110	F111486	F114773
M14	120		F111728
M16	20	F19162	
M16	25	F112420	F14316
M16	30	F116823	
M16	35	F117664	F1443
M16	40	F120040	
M16	45	F110204	
M16	50	F118036	
M16	60	F12925	F117637
M16	65		
M16	70	F115818	F120064
M16	80	F117360	
M16	90	F111414	F15151
M16	100	F14008	F112136
M16	110		F19829
M16	120	F110791	F12061
M16	130	F112277	F1542
M16	140	F15032	F111679
M16	150	F17864	
M18	40	F12193	
M18	45	F19678	
M18	70		F14376
M18	75		F110984

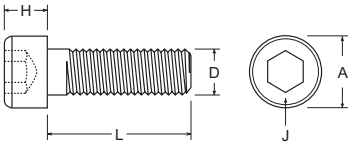
SCREWS — METRIC HEX HEAD CAP A2 & A4 STAINLESS STEEL (continued)

1

D	L(mm)	A2	A4	D	L(mm)	A2	A4	D	L(mm)	A2	A4
M18	110	F14272		M20	90	F119921	F12647	M22	110	F117894	F114288
M18	120	F118299		M20	100	F119752	F113828	M22	120	F18717	
M18	130	F117549		M20	120	F15135		M22	130	F117462	F13712
M18	140	F19022		M20	130	F17015		M22	140		F11329
M18	150	F112815		M20	140	F18116		M24	50	F114067	F14775
M20	40	F117658		M22	50	F13391	F116287	M24	60	F13110	F14726
M20	45	F115323	F111943	M22	55	F112273	F111072	M24	70	F112419	F119217
M20	50	F110347		M22	60		F113755	M24	80		F115456
M20	55	F119572	F110748	M22	65	F117677	F11831	M24	85	F112385	F117777
M20	60	F118339	F11627	M22	70		F14160	M24	100		F116765
M20	65		F16671	M22	75	F12301	F116291	M24	110		F112313
M20	70	F119978	F18182	M22	80		F115682	M24	130		F14785
M20	75		F14981	M22	90	F19343	F112988	M24	140		F119002
M20	80	F18627	F1690	M22	100	F13716	F15852	M24	150		F119522

SOCKET CAP SCREWS — METRIC SOCKET HD CAP A2 & A4 STAINLESS STEEL

DIN 912	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None



Diameter	D	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24
Head Height Max	H	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0	24.0
Head Dia. Max	A	3.98	4.68	5.68	7.22	8.72	10.22	13.27	16.27	18.27	24.33	3.33	36.39
Socket Size	J	1.5	2	2.5	3	4	5	6	8	10	14	17	19
Thread Pitch		.40	.45	.50	.70	.80	1.00	1.25	1.50	1.75	2.00	2.5	3.00

D	L(mm)	A2	A4	D	L(mm)	A2	A4	D	L(mm)	A2	A4
M2	5	F14257		M3	30	F18953		M5	20	F113054	F113239
M2	6	F112108		M3	35		F12161	M5	25	F118774	F119083
M2	8	F117506		M3	40	F116321	F117098	M5	30	F12659	F16156
M2	10	F11821		M4	5	F19752		M5	35	F13349	F118428
M2	12	F15565		M4	6	F114573		M5	40	F11334	F117093
M2	16	F12885		M4	8	F120065		M5	45	F118199	
M2	20	F119400		M4	10	F114675	F116553	M5	50	F111705	F18906
M2.5	6	F18396		M4	12	F15060		M5	55	F115234	
M2.5	8	F111435		M4	14	F17170	F113488	M5	60	F110545	
M2.5	10	F116505		M4	16	F113109	F110513	M5	80		F12110
M2.5	12	F115686		M4	18	F17111		M6	8	F13879	
M2.5	16	F15302		M4	20	F117922	F12770	M6	10	F118390	F19087
M2.5	20	F19704		M4	25	F116201	F17956	M6	12	F114000	F117948
M3	4	F110351		M4	30	F1393		M6	14	F19643	F13255
M3	5	F13165		M4	35	F113419		M6	16	F114095	F18779
M3	6	F110541	F118689	M4	40	F113055		M6	18		F111489
M3	8	F112072	F115217	M4	45	F17750		M6	20	F11109	F1835
M3	10	F13702	F111460	M4	50	F117101		M6	25	F116275	F16281
M3	12	F113170	F113766	M4	60	F116760		M6	30	F12370	F11144
M3	14	F119077		M5	10	F16773	F11048	M6	35	F1629	F115133
M3	16	F114197		M5	12	F116389	F12963	M6	40	F14383	F112309
M3	20	F114670		M5	14	F117930					
M3	25	F117445		M5	16	F111481	F116967				

SOCKET PRODUCTS — METRIC SOCKET HEAD CAP A2 & A4 STAINLESS STEEL (continued)

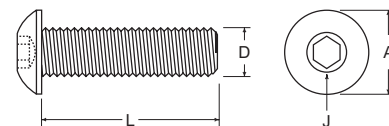
D	L(mm)	A2	A4
M6	45	F12324	F115545
M6	50	F16360	F17687
M6	55	F117307	
M6	60	F116638	F115817
M6	65	F18356	
M6	70	F115519	
M6	80	F112770	F116304
M6	90		F118593
M6	100	F117486	
M6	110	F118569	
M6	120	F116627	
M8	10	F17478	
M8	12	F117760	
M8	16	F114656	F118537
M8	20	F15586	F17466
M8	25	F16894	F1895
M8	30	F118240	F117911
M8	35	F110663	F14433
M8	40	F117022	F115182
M8	45	F114997	F18776
M8	50	F13425	F19329
M8	55	F113426	
M8	60	F117181	
M8	65	F117181	
M8	70	F112011	F116590
M8	75	F15672	
M8	80	F14784	F11494

D	L(mm)	A2	A4
M8	90	F113714	
M8	100	F111605	
M8	110	F114757	
M8	120	F18669	
M8	130	F18865	
M10	16	F13249	
M10	20	F11367	F15561
M10	25	F15198	F11558
M10	30	F114623	F117646
M10	35	F118672	
M10	40	F110655	F1854
M10	45	F116058	F14055
M10	50	F119848	
M10	55	F117964	
M10	60	F115986	
M10	65	F119687	
M10	70	F1156	
M10	80	F116560	F19962
M10	120	F111756	
M12	16	F110713	
M12	20	F110842	
M12	25	F114807	F14889
M12	30	F197	F12934
M12	35	F17631	
M12	40	F116308	F19216
M12	45	F13002	F11645
M12	50	F110244	

D	L(mm)	A2	A4
M12	55		F13070
M12	60	F110982	
M12	75	F112098	
M12	80	F16065	
M12	100		F12212
M16	20	F113929	
M16	30	F14676	
M16	35	F118159	
M16	40	F119543	
M16	45	F17967	
M16	50	F18039	F1170
M16	60	F117561	
M16	70	F17303	
M16	80	F114461	
M20	40	F13554	
M20	50	F115303	
M20	60	F13797	
M20	70	F113709	F17524
M20	110		F13687
M24	70	F115110	
M24	90	F118039	

SOCKET CAP SCREWS — METRIC BUTTON HEAD A2 STAINLESS STEEL

ISO 7380	Material:	A2 (18-8) Stainless Steel
	Plating:	None



Diameter	D	M3	M4	M5	M6	M8	M10	M12
Height	H	1.65	2.2	2.75	3.3	4.4	5.5	6.6
Head Dia.	A	5.7	7.6	9.5	10.5	14	17.5	21
Socket Size	J	2	2.5	3	4	5	6	8
Thread Pitch		.50	.70	.80	1.0	1.25	1.5	1.75

D	L(mm)	A2
M3	6	F1406
M3	8	F116313
M3	10	F13858
M3	12	F14118
M3	16	F18598
M3	20	F117584
M3	25	F114490
M4	8	F119036
M4	10	F118837
M4	12	F15497
M4	16	F112041
M4	20	F112073
M4	25	F115681
M4	30	F117574

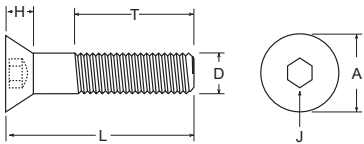
D	L(mm)	A2
M5	8	F119825
M5	10	F12208
M5	12	F13903
M5	16	F111265
M5	20	F119067
M5	25	F119122
M5	30	F112835
M5	35	F114388
M6	8	F18552
M6	10	F17347
M6	12	F13602
M6	16	F117756
M6	20	F18704
M6	25	F120105

D	L(mm)	A2
M6	30	F13187
M6	35	F12239
M6	40	F12249
M6	45	F14322
M6	50	F13607
M6	55	F117764
M6	60	F154
M8	12	F17073
M8	16	F111327
M8	20	F115450
M8	25	F111633
M8	30	F15432
M8	35	F114086
M8	40	F115015

D	L(mm)	A2
M8	45	F111277
M8	50	F14593
M8	55	F114386
M8	60	F19054
M8	70	F116537
M10	16	F119665
M10	20	F117444
M10	25	F18548
M10	30	F112623
M10	35	F17753
M10	50	F16813
M12	20	F111422
M12	35	F12579
M12	45	F166

SOCKET CAP SCREWS — METRIC FLAT HEAD A2 & A4 STAINLESS STEEL

1



DIN 7991	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None

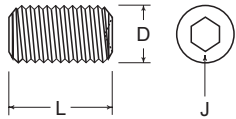
Diameter	D	M3	M4	M5	M6	M8	M10	M12	M16
Head Height	H	1.7	2.3	2.8	3.3	4.4	5.5	6.5	7.5
Head Dia.	A	6	8	10	12	16	20	24	30
Socket Size		.10	2.5	3	4	5	6	8	10
Thread Pitch		.50	.70	.80	1.0	1.25	1.5	1.75	2.0

D	L(mm)	T	A2	A4
M3	6	4.3	F112982	
M3	8	6.3	F1710	
M3	10	8.3	F110058	
M3	12	10.3	F119158	F12085
M3	16	12	F114154	F118035
M3	20	12	F111819	F114842
M3	25	12	F14152	
M3	30	12		
M4	6	3.7	F18879	
M4	8	5.7	F113786	F12887
M4	10	7.7	F1116	F16807
M4	12	9.7	F112850	F118791
M4	16	13.7	F13539	F11440
M4	20	14	F118724	F120044
M4	25	14	F114133	F13400
M4	30	14	F15859	
M4	35	14		F119142
M4	40	14	F119678	
M4	50	14		F14592
M5	8	5.2	F17879	
M5	10	7.2	F15828	F119824
M5	12	9.2	F16972	F117173
M5	16	13.2	F118737	F1260
M5	20	16	F117505	
M5	25	16	F12195	

D	L(mm)	T	A2	A4
M5	30	16	F119238	F1621
M5	35	16	F19644	F14328
M5	40	16	F111957	F17529
M5	45	16	F12048	
M6	8	4.7	F18106	
M6	10	6.7	F11188	F115230
M6	12	8.7	F19730	F113463
M6	16	12.7	F18509	F119794
M6	20	16.7	F18919	F14429
M6	25	18	F13786	F119636
M6	30	18	F110998	F16058
M6	35	18	F14259	
M6	40	18	F115023	F115045
M6	45	18	F15619	F112635
M6	50	18	F15552	F14416
M6	60	18	F1624	F17136
M8	10	5.6	F111662	
M8	12	7.6	F17079	
M8	16	11.6	F116982	F117332
M8	20	15.6	F112855	F113703
M8	25	20.6	F111967	F118723
M8	30	22	F119667	
M8	35	22	F1433	
M8	40	22	F113527	
M8	45	22		F110331

D	L(mm)	T	A2	A4
M8	50	22	F12070	
M8	60	22	F117052	
M8	70	22	F13592	
M10	16	10.5	F119381	
M10	20	14.5	F19784	
M10	25	19.5	F112438	
M10	30	24.5	F115058	
M10	35	26	F116171	F1543
M10	40	26	F13317	
M10	45	26	F116504	
M10	50	26	F110673	
M10	60	26	F13628	
M10	70	26	F12895	F116575
M12	20	13.5	F1724	
M12	25	18.5	F118144	
M12	30	23.5	F19134	
M12	35	28.5	F1825	
M12	40	30	F119345	F1318
M12	50	30	F18410	
M12	60	30		F19110
M16	30	22.5	F118950	
M16	35	27.5	F114401	
M16	45	37.5	F14083	

SOCKET SET SCREWS — METRIC CUP POINT A2 STAINLESS STEEL



DIN 916	Material:	A2 (18-8) Stainless Steel
	Plating:	None

Diameter	D	M2	M3	M4	M5	M6	M8	M10	M12
Thread Pitch		.40	.50	.70	.80	1.0	1.25	1.50	1.75
Socket Size (Nominal)	J	.09	1.5	2	2.5	3	4	5	6

D	L(mm)	Part No.
M3	4	F14412
M3	5	F15960
M3	6	F17867
M3	8	F113300
M3	10	F112705
M3	12	F117655
M4	4	F110467
M4	5	F11352
M4	6	F110291
M4	8	F116001
M4	10	F16970
M4	12	F12865

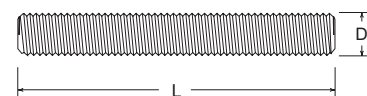
D	L(mm)	Part No.
M4	16	F18951
M5	5	F19296
M5	6	F11491
M5	8	F16158
M5	10	F14519
M5	12	F113534
M5	16	F110555
M5	20	F112361
M5	25	F15891
M6	6	F115025
M6	8	F13987
M6	10	F115839

D	L(mm)	Part No.
M6	12	F118586
M6	16	F15164
M6	20	F117219
M6	25	F1884
M6	35	F17928
M8	8	F11551
M8	10	F115501
M8	12	F15866
M8	16	F114014
M8	20	F116104
M8	25	F117423
M8	30	F115956

D	L(mm)	Part No.
M10	10	F119655
M10	12	F15376
M10	16	F111631
M10	20	F114348
M10	25	F11501
M10	30	F112325
M12	12	F11763
M12	16	F18083
M12	20	F12587
M12	25	F15288

ROD — METRIC THREADED A2 STAINLESS STEEL

DIN 975	Material:	A2 (18-8) Stainless Steel
	Plating:	None

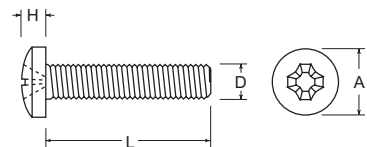


Diameter	D	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20	M24	M27	M30
Thread Pitch		.50	.70	.80	1.0	1.25	1.50	1.75	2.0	2.0	2.5	2.5	3.0	3.0	3.5

D	L (m)	Part No.	D	L (m)	Part No.	D	L (m)	Part No.
M3	1	F116754	M6	1	F14856	M12	1	F118615
M4	1	F117328	M8	1	F115972	M14	1	F118589
M5	1	F15759	M10	1	F112436	M16	1	F111059

SCREWS — METRIC PHILLIPS PAN MACHINE A2 STAINLESS STEEL

DIN 7985	Material:	A2 (18-8) Stainless Steel
	Plating:	None

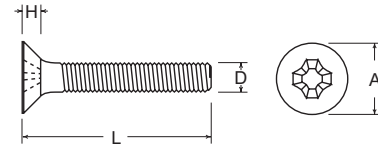


Diameter	D	M2	M2.5	M3	M4	M5	M6	M8
Height	H	1.6	2	2.4	3.1	3.8	4.6	6
Head Dia.	A	4	5	6	8	10	12	16
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25

D	L(mm)	Part No.	D	L(mm)	Part No.	D	L(mm)	Part No.	D	L(mm)	Part No.
M2	12	F114849	M3	25	F15742	M5	14	F17244	M6	30	F19976
M2	20	F18347	M3	30	F119712	M5	16	F12767	M6	35	F110120
M2.5	5	F13573	M4	6	F15875	M5	18	F111642	M6	40	F115597
M2.5	6	F114671	M4	8	F17483	M5	20	F113806	M6	45	F117431
M2.5	8	F13162	M4	10	F115067	M5	25	F117785	M6	50	F115373
M2.5	12	F119758	M4	12	F112806	M5	30	F16778	M6	60	F19364
M2.5	20	F113157	M4	14	F16007	M5	40	F111639	M8	12	F15287
M3	4	F12054	M4	16	F12787	M5	50	F118913	M8	16	F110106
M3	5	F113580	M4	20	F19349	M5	60	F12640	M8	20	F119252
M3	6	F114428	M4	25	F15379	M6	8	F13012	M8	25	F19495
M3	8	F18154	M4	30	F119033	M6	10	F16752	M8	30	F112995
M3	10	F12245	M4	35	F12414	M6	12	F117818	M8	40	F17367
M3	12	F17446	M4	40	F13133	M6	14	F12661	M8	45	F15673
M3	14	F18478	M4	50	F119151	M6	16	F19065	M8	50	F13721
M3	16	F118176	M5	8	F17010	M6	18	F18670			
M3	18	F119489	M5	10	F112909	M6	20	F1247			
M3	20	F114766	M5	12	F114657	M6	25	F19615			

SCREWS — METRIC PHILLIPS FLAT MACHINE A2 STAINLESS STEEL

DIN 965	Material:	A2 (18-8)Stainless Steel
	Plating:	None



Diameter	D	M2	M2.5	M3	M4	M5	M6	M8
Height	H	1.2	1.5	1.65	2.2	2.5	3	4
Head Dia.	A	3.8	4.7	5.6	7.5	9.2	11	14.5
Thread Pitch		.40	.45	.50	.70	.80	1.0	1.25

D	L(mm)	Part No.
M2	4	F118516
M2	6	F19206
M2	8	F14306
M2	10	F110406
M2.5	6	F12976
M3	4	F113342
M3	5	F115316
M3	6	F115136
M3	8	F111922
M3	10	F1781
M3	12	F111688
M3	16	F112030
M3	25	F12028
M3	30	F118184

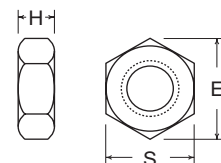
D	L(mm)	Part No.
M3	40	F11455
M4	6	F19399
M4	8	F110823
M4	10	F14813
M4	12	F115103
M4	14	F11960
M4	16	F111477
M4	20	F1467
M4	25	F15372
M4	30	F115814
M4	40	F13196
M4	50	F110989
M5	6	F110550
M5	8	F13892

D	L(mm)	Part No.
M5	10	F112519
M5	12	F116485
M5	20	F16015
M5	25	F113595
M5	35	F19254
M5	40	F11310
M5	45	F12240
M6	10	F112048
M6	12	F118533
M6	16	F16265
M6	20	F116800
M6	25	F12262
M6	30	F116037
M6	35	F18374

D	L(mm)	Part No.
M6	40	F11757
M6	50	F12879
M6	90	F112032
M8	10	F114581
M8	12	F111566
M8	16	F119926
M8	20	F110402
M8	25	F12386
M8	30	F116620
M8	40	F111456
M8	45	F116662
M8	50	F111872
M8	60	F111062

NUTS — METRIC FINISHED HEX A2 & A4 STAINLESS STEEL

DIN 934	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None

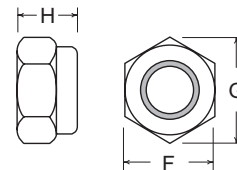


Size	Pitch	E (min.)	H (min.)	S	A2	A4
M2	.40	4.32	1.35	4	F1294	F15158
M2.5	.45	5.45	1.75	5	F113712	F12902
M3	.50	6.01	2.15	5.5	F121883	F17701
M4	.70	7.66	2.90	7	F16966	F12382
M5	.80	8.79	3.70	8	F14963	F15351
M6	1.0	11.05	4.70	10	F1671	F117472
M8	1.25	14.38	6.14	13	F13430	F1360
M8 (fine)	1.0	14.38	6.14	13	F113134	

Size	Pitch	E (min.)	H (min.)	S	A2	A4
M10	1.50	18.90	7.64	17	F112791	F115587
M10 (fine)	1.25	18.90	7.64	17	F113320	
M12	1.75	21.10	9.64	19	F111935	F16788
M12 (fine)	1.50	21.10	9.64	19	F119043	
M14	2.0	24.49	10.30	22	F115505	F16082
M14 (fine)	1.50	24.49	10.30	22	F116398	
M16	2.0	26.75	12.30	24	F114963	F112219
M20	2.50	32.95	14.90	30	F113467	F110942

NUTS — METRIC NYLON INSERT LOCK A2 STAINLESS STEEL

DIN 985	Material:	A2 (18-8) Stainless Steel
	Plating:	None

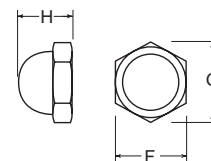


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Size		M3	M4	M5	M6	M8	M10	M12	M14	M16	M20
Height	H	4	5	5	6	8	10	12	14	16	20
W.A.F.	F	5.5	7	8	10	13	17	19	22	23.67	29.16
W.A.C.	G	6.01	7.66	8.79	11.05	14.38	18.90	21.10	24.49	26.75	32.95
Thread Pitch		0.50	0.70	.80	1.0	1.25	1.5	1.75	2	2.0	2.5
Part No.		F110153	F16137	F12854	F19769	F117102	F18603	F113229	F113236	F12189	F114462

NUTS — METRIC ACORN A2 STAINLESS STEEL

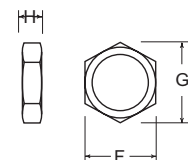
DIN 1587	Material:	A2 (18-8) Stainless Steel
	Plating:	None



Size		M4	M6	M8	M10	M12
Height	H	8	12	15	18	22
W.A.F.	F	7	10	13	17/16	19/18
W.A.C.	G	7.66	11.05	14.38	18.9	21.1
Thread Pitch		0.7	1	1.25	1.5	1.75
Part No.		F11904	F12721	F115241	F16659	F13290

NUTS — METRIC JAM A2 STAINLESS STEEL

DIN 4398	Material:	A2 (18-8) Stainless Steel
	Plating:	None

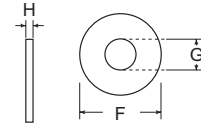


Size		M6	M8	M10	M12
Height	H	3.2	4	5	6
W.A.F.	F	10	13	17/16	19/18
W.A.C.	G	11.05	14.38	18.9	21.1
Thread Pitch		1	1.25	1.5	1.75
Part No.		F14982	F15348	F115618	F12833

WASHERS — METRIC FLAT A2 & A4 STAINLESS STEEL

1

DIN 125	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None

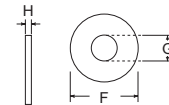


Nominal Diameter		M2	M2.5	M3	M3.5	M4	M5	M6	M8	M10	M12
I.D.	G	2.2	2.7	3.2	3.7	4.3	5.3	6.4	8.4	10.5	13
O.D.	F	5	6	7	8	9	10	12	16	20	24
Thick	H	.30	.50	.50	.50	.80	1.0	1.60	1.60	2.0	2.50
A2		F11095	F114405	F11656	F11369	F16957	F118973	F110539	F114069	F11013	F112747
A4						F117237	F119711	F1486	F110026	F118223	F118677

Nominal Diameter		M14	M16	M18	M20	M22	M24	M27	M30	M33
I.D.	G	15	17	19	21	23	25	28	31	34
O.D.	F	18	30	34	37	39	44	50	56	60
Thick	H	2.50	3.0	3.0	3.0	3.0	4.0	4.0	4.0	5.0
A2		F111336	F116759	F118224	F119697	F17932	F11458	F116397	F115693	F114306
A4		F115050	F117748	F16907						

WASHERS — METRIC FENDER A2 STAINLESS STEEL

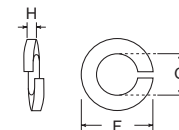
DIN 9021	Material:	A2 (18-8) Stainless Steel
	Plating:	None



Size		M3	M4	M5	M6	M6	M8	M10	M12	M14	M16
I.D.	G	3.2	4.3	5.3	6.4	6.4	8.4	10.5	13	15	17
O.D.	F	9	12	15	18	20	24	30	40	45	50
Thick	H	.80	.80	1.0	1.60	1.60	2.0	2.0	2.50	3.0	3.0
A2		F15941	F110600	F114575	F11586	F13345	F119542	F114861	F13455	F14689	F14236

WASHERS — METRIC SPLIT LOCK A2 & A4 STAINLESS STEEL

DIN 127	Material:	A2 (18-8) Stainless Steel A4 (316) Stainless Steel
	Plating:	None

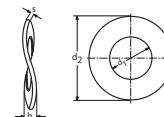


Nominal Diameter		M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M24
I.D.	G	2.1	2.6	3.1	4.1	5.1	6.1	8.1	10.2	12.2	14.2	16.2	18.2	24.5
O.D.	F	4.4	5.1	6.2	7.6	9.2	11.8	14.8	18.1	21.1	24.1	27.4	29.4	40
Thick	H	.50	.60	.80	.90	1.20	1.60	2.0	2.20	2.50	3.0	3.5	3.5	5.0
A2		F113244	F118670	F114876	F11102	F1675	F19477	F115366	F13749	F18449	F114955	F115660	F18645	F118253
A4					F14059	F120012	F116716	F12022	F13598	F13398		F13701		

WASHERS — METRIC WAVE SPRING A2 STAINLESS STEEL

DIN 137B	Material:	A2 (18-8) Stainless Steel
	Plating:	None

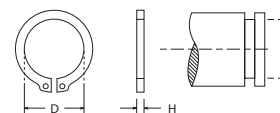
Nominal Diameter		M6	M8
I.D.	D1	6.4	8.4
O.D.	D2	12	15
Height	Max H	26	3.0
Thick	S	.5	.8
Part No.		F116405	F16030



1

RETAINING RINGS — METRIC EXTERNAL A2 STAINLESS STEEL

DIN 471	Material:	A2 (18-8) Stainless Steel
	Plating:	None

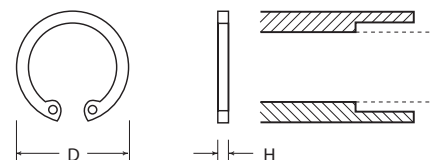


Shaft Diameter	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14
I.D. D	2.7	3.7	4.7	5.6	6.5	7.4	8.4	9.3	10.2	11.0	11.19	12.9
Thick H	.40	.40	.60	.70	.80	.80	1.0	1.0	1.0	1.0	1.0	1.0
Part No.	F13734	F16598	F15587	F119429	F16687	F11921	F1912	F114335	F14123	F110565	F110021	F111846

Shaft Diameter	M15	M17	M18	M20	M22	M24	M25	M28	M30	M35	M36
I.D. D	13.8	15.7	16.5	17.5	19.5	21.5	23.2	25.9	27.9	32.2	33.2
Thick H	1.0	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.75
Part No.	F118152	F14515	F17884	F114471	F118716	F110902	F15295	F14894	F117443	F168	F119853

RETAINING RINGS — METRIC INTERNAL A2 STAINLESS STEEL

DIN 472	Material:	A2 (18-8) Stainless Steel
	Plating:	None



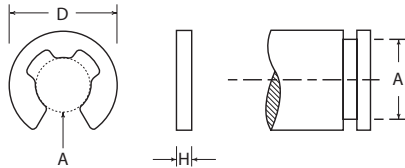
Bore Diameter	M8	M15	M19
O.D. D	8.7	16.2	20.5
Thick H	.80	1.0	1.0
Part No.	F16748	F116787	F112700

Bore Diameter	M20	M24	M25	M26	M28	M32
O.D. F	21.5	25.9	26.9	27.9	30.1	34.4
Thick H	1.0	1.2	1.2	1.2	1.2	1.2
Part No.	F120096	F12746	F19230	F18142	F17724	F111245

CLIPS — METRIC RETAINING A2 STAINLESS STEEL

1

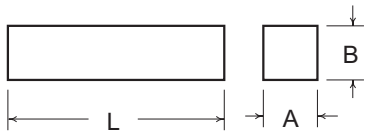
DIN 6799	Material:	A2 (18-8) Stainless Steel
	Plating:	None



Diameter	"A"	M3.2	M4	M5	M6	M7	M8	M9	M12
O.D.	D	7.3	9.0	11.0	12.0	14.0	16.0	18.5	23.4
Shaft From		4.0	5.0	6.0	7.0	8.0	9.0	10.0	13.0
Shaft To		5.0	7.0	8.0	9.0	11.0	12.0	14.0	18.0
Thick	H	.74	.74	.74	.74	.94	1.05	1.15	1.35
Part No.		F12350	F112651	F18227	F110857	F119705	F119599	F118392	F1264

KEYSTOCK — METRIC SQUARE A2 STAINLESS STEEL

Material:	A2 (18-8) Stainless Steel
Plating:	None



Width 'A'	Width 'B'	Length 'L'	Part No.
M3	M3	12"	F120086
M4	M4	12"	F120031
M5	M5	12"	F118286
M6	M6	12"	F1550
M7	M7	12"	F14951

Width 'A'	Width 'B'	Length 'L'	Part No.
M8	M8	12"	F1327
M10	M10	12"	F18595
M12	M12	12"	F119986
M14	M14	12"	F117463
M16	M16	12"	F16423

Width 'A'	Width 'B'	Length 'L'	Part No.
M18	M18	12"	F110965
M20	M20	12"	F15357
M22	M22	12"	F119919
M25	M25	12"	F19586

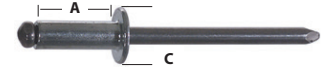
RIVETS — BUTTON HEAD BLIND



Rivet Dia.	Grip Range	Ind. No.	Drill No.	Rivet Length (A)	Flange Dia (C)	Alum Rivet Alum Mandrel	Domestic Alum Rivet Alum Mandrel	Steel Rivet Steel Mandrel	SS Rivet Steel Mandrel	Domestic Steel Rivet Steel Mandrel	Alum Rivet Steel Mandrel	SS Rivet SS Mandrel
3/32"	up to 1/8"	32	#41	.25	.178-.198	F15103		F115362				
3/32"	1/8" - 1/4"	34	#41	.375	.178-.198	F16635		F119957				
1/8"	1/16" - 1/8"	42	#30	.275	.238-.262	F19262	F118692		F11959	F15008		
1/8"	1/8" - 3/16"	43	#30	.337	.238-.262	F110036	F110007	F11252	F16325	F19141		
1/8"	3/16" - 1/4"	44	#30	.400	.238-.262	F113845	F113713	F112757	F19762	F13822	F119314	F115731
1/8"	1/4" - 5/16"	45	#30	.462	.238-.262	F13527	F114064	F17075		F12322		
1/8"	5/16" - 3/8"	46	#30	.525	.238-.262	F18507	F12832	F15107	F1490	F114328		F114906
1/8"	3/8" - 1/2"	48	#30	.650	.238-.262	F12592	F19863	F113591	F117035	F110633		F18117

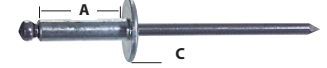


Rivet Dia.	Grip Range	Ind. No.	Drill No.	Rivet Length (A)	Flange Dia (C)	Alum Rivet Alum Mandrel	Domestic Alum Rivet Alum Mandrel	Steel Rivet Steel Mandrel	SS Rivet Steel Mandrel	Domestic Steel Rivet Steel Mandrel	Alum Rivet Steel Mandrel	SS Rivet SS Mandrel
5/32"	up to 1/8"	52	#20	.300	.296-.328	F112936	F115917	F114790	F119620			
5/32"	1/8" - 3/16"	53	#20	.362	.296-.328	F17744		F114261				
5/32"	3/16" - 1/4"	54	#20	.425	.296-.328	F19252	F111253	F111363	F119125	F118930	F11107	
5/32"	1/4" - 3/8"	56	#20	.550	.296-.328	F118977	F15674	F15716	F117474	F14348	F117811	
5/32"	3/8" - 1/2"	58	#20	.675	.296-.328	F118062	F115135	F13181		F15486	F11871	
5/32"	1/2" - 5/8"	510	#20	.800	.296-.328	F119740						
5/32"	5/8" - 3/4"	512	#20	.925	.296-.328	F11500						



Rivet Dia.	Grip Range	Ind. No.	Drill No.	Rivet Length (A)	Flange Dia (C)	Alum Rivet Alum Mandrel	Domestic Alum Rivet Alum Mandrel	Steel Rivet Steel Mandrel	SS Rivet Steel Mandrel	Domestic Steel Rivet Steel Mandrel	Alum Rivet Steel Mandrel	SS Rivet SS Mandrel
3/16"	up to 1/8"	62	#11	.325	.356-.394	F118730	F113779	F19531	F14285	F19662	F13981	F110967
3/16"	1/8" - 1/4"	64	#11	.450	.356-.394	F114508	F113384	F112993	F17118	F118114	F119970	F119066
3/16"	1/4" - 3/8"	66	#11	.575	.356-.394	F19102	F11309	F118972	F13692	F15245	F114803	F15094
3/16"	3/8" - 1/2"	68	#11	.700	.356-.394	F18426	F14187	F14447	F119772	F19862	F115354	F117390
3/16"	1/2" - 5/8"	610	#11	.825	.356-.394	F117875		F110717			F18071	F15013
3/16"	5/8" - 3/4"	612	#11	.950	.356-.394	F13261		F111070			F14958	
3/16"	3/4" - 7/8"	614	#11	1.075	.356-.394	F116653						
3/16"	7/8" - 1"	616	#11	1.200	.356-.394	F12024						
1/4"	1/16" - 1/4"	84	F	.500	.475-.525	F118773		F18823			F18262	F119771
1/4"	1/4" - 3/8"	86	F	.625	.475-.525	F113560		F17838			F19248	
1/4"	3/8" - 1/2"	88	F	.750	.475-.525	F11489		F17322			F19824	
1/4"	1/2" - 5/8"	810	F	.875	.475-.525	F115096		F12536				
1/4"	5/8" - 3/4"	812	F	1.000	.475-.525	F115926		F117951			F116532	
1/4"	7/8" - 1"	816	F	1.250	.475-.525			F116916				

RIVETS — LARGE FLANGE BUTTON HEAD



Rivet Dia.	Grip Range	Ind. No.	Drill No.	Actual Rivet Length (A)	Flange Dia (C)	Alum Rivet Alum Mandrel	Domestic Alum Rivet Alum Mandrel	Steel Rivet Steel Mandrel	Domestic Steel Rivet Steel Mandrel	Alum Rivet Steel Mandrel	Stainless Rivet Stainless Mandrel
1/8"	up to 1/8"	L42	#30	.275	.360-.390	F13850		F18996	F12213		
1/8"	1/8" - 1/4"	L44	#30	.400	.360-.390	F114926	F116588	F116526	F111627	F1785	F119754
1/8"	1/8" - 3/8"	L46	#30	.525	.360-.390	F117776		F17138			
1/8"	3/8" - 1/2"	L48	#30	.650	.360-.390	F113413					
5/32"	3/16" - 1/4"	L54	#20	.425	.448-.488	F12485					
3/16"	up to 1/4"	L64	#11	.450	.600-.650	F118472		F113440	F113640	F116020	F19853
3/16"	1/4" - 3/8"	L66	#11	.575	.600-.650	F118746	F15899	F114987	F15370	F119095	F115409
3/16"	3/8" - 1/2"	L68	#11	.700	.600-.650	F116737	F110486	F113069	F112857	F110065	F112188
3/16"	1/2" - 5/8"	L610	#11	.825	.600-.650	F11858		F19304		F110793	F113747
3/16"	5/8" - 3/4"	L612	#11	.950	.600-.650	F118191		F119331			F115636
3/16"	7/8" - 1"	L616	#11	1.200	.600-.650					F1588	

RIVETS — COUNTERSUNK FLANGE

1

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Actual Rivet Length (A)	Flange Dia (C)	Alum Rivet Alum Mandrel	Domestic Alum Rivet Alum Mandrel
1/8"	up to 1/8"	C42	#30	.275	.203-.233	F19469	F119253
1/8"	1/8" - 3/16"	C43	#30	.337	.203-.233	F115480	F113884
1/8"	3/16" - 1/4"	C44	#30	.400	.203-.233	F15349	F115568
3/16"	1/8" - 1/4"	C64	#11	.450	.335-.361		F119746



RIVETS — METRIC BUTTON HEAD BLIND

Rivet Diameter	Grip Range	Drill Dia.	Aluminum Rivet Steel Mandrel	Rivet Diameter	Grip Range	Drill Dia.	Aluminum Rivet Steel Mandrel
M3	M4.5 - 6.5	M3.1	F111719	M4	M7.5 - 10.0	M4.1	F11321
M4	M2.0 - 3.5	M4.1	F119296	M4	M18 - 22	M4.1	F116776
M4	M4.5 - 6.0	M4.1	F118211	M5	M5.0 - 7.0	M5.1	F113628
				M5	M7.0 - 9.5	M5.1	F18582



RIVETS — INTERLOCK MONOBOLT TYPE

Nom Rivet Dia.	Hole Size And Drill Number	W Man. Dia.	D Rivet Dia.	H Head Dia.	E Head Thick
3/16	.192 - .201 (#11)	.124	.187	.375	.085
1/4	.261 - .276 (17/64)	.159	.255	.500	.112

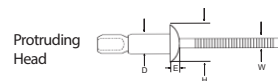
- Structural Rivets - Conforms to IFI 134 Standards
- Designed by the makers of Monobolts to use in place of Monobolts without the use of special installation nosepieces
- Weather-Tight
- Wide Grip Ranges
- Protruding Head Style in Aluminum/Aluminum and Steel/Steel

ALUMINUM / ALUMINUM

Dia.	Grip Range	Part No.	500 Pack Part No.	1000 Pack Part No.
3/16	.062-.270	F11028	F11028B500	F11028B1000
3/16	.214-.420	F16113	F16113B500	F16113B1000
1/4	.080-.375	F112580	F112580B500	
1/4	.350-.625	F18274	F18274B500	F18274B1000

STEEL / STEEL

Dia.	Grip Range	Part No.	500 Pack Part No.	1000 Pack Part No.
3/16	.062-.270	F17589	F17589B500	F17589B1000
3/16	.214-.420	F15551	F15551B500	F15551B1000
1/4	.080-.375	F110445	F110445B500	F110445B1000
1/4	.350-.625	F116977	F116977B500	F116977B1000

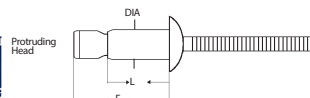


RIVETS — LARGE FLANGE INTERLOCK MONOBOLT TYPE

STEEL/STEEL

Dia.	Grip Range	L	F	Part No.
3/16	.062-.437	.500	.727	F18592

- Steel/yellow zinc carbon steel mandrel



RIVETS — MULTI-GRIP BUTTON HEAD

- Multi-Grip rivets handle up to 3 standard open-end rivet grip ranges
- Can be used in same applications as any open-end rivet
- Can be used with rivet guns F14583 and F12148

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Aluminum Rivet Steel Mandrel
1/8	1/32-3/16	4-3	#30	F120023
1/8	3/64-1/4	4-4	#30	F116928
1/8	5/32-5/16	4-5	#30	F116238
3/16	1/16-1/4	6-4	#11	F13009
3/16	1/4-1/2	6-8	#11	F112558
3/16	1/2-3/4	6-12	#11	F1282



RIVETS — LARGE FLANGE MULTI-GRIP BUTTON HEAD

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Alum Rivet Steel Mandrel
1/8	1/32-3/16	L4-3	#30	F116866
1/8	3/64-1/4	L4-4	#30	F116055
1/8	5/32-5/16	L4-5	#30	F111354
3/16	1/16-1/4	L6-4	#11	F111678
3/16	1/4-1/2	L6-8	#11	F119643
3/16	1/2-3/4	L6-12	#11	F116539



1

RIVETS — MULTI-GRIP BRAZIER HEAD

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Aluminum Rivet Steel Mandrel
3/16	1/16-1/4	6-4	#11	F15059



RIVETS — TRI-BULB

- Large footprint on blind side
- Multi-grip capability
- Oversized hole tolerant
- Great for soft or brittle materials

Rivet Dia.	Grip Range	N	Drill No.	Aluminum Rivet Aluminum Mandrel	Bulk Pack Part No.
5/32	.04-.118	.630	#20	F119133	
5/32	.04-.275	.835	#20	F19553	
3/16	.04-.157	.720	#11	F114596	
3/16	.04-.354	.925	#11	F19474	F122232
3/16*	.04-.354	.925	#11	F19942	

* = Large Flange



RIVETS — BULB-TITE

Rivet Dia.	Grip Range	Head Dia.	Head Style	Length of Body	Aluminum Rivet Aluminum Mandrel	Steel Rivet Steel Mandrel
3/16	.125-.375	.433	Dome	1.06		F117712
1/4	.125-.375	.542	Low Profile	1.130	F115858	



RIVETS — CLOSED END BUTTON HEAD

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Aluminum Rivet Steel Mandrel	Aluminum Rivet Aluminum Mandrel
3/16*	1/8 - 1/4	6-4	#11	F117048	
3/16	1/4 - 3/8	6-6	#11	F123543	F115483
3/16	3/8 - 1/2	6-8	#11		F114444
1/4*	1/4 - 3/8	8-6	F	F17578	



RIVETS — COPPER & STEEL

Rivet Dia.	Grip Range	Ind. No.	Drill No.	Copper Rivet Copper-Plated Steel Mandrel
1/8	.188 - .250	4-4	#30	F12815

*Also see automotive rivets starting on page 8-1-98



RIVETS — BACK-UP WASHERS

Material:	Aluminum or Steel
Plating:	Aluminum - Unplated
	Steel - Zinc Plating

For Rivet Diameter 'D'	Outside Diameter 'O'	Thickness	Part No. Aluminum	Part No. Steel
1/8	3/8	.062	F19776	F11471
5/32	7/16	.062	F117832	F11203
3/16	1/2	.062	F114289	F110015
1/4	5/8	.062	F1796	F14463



FASTENERS

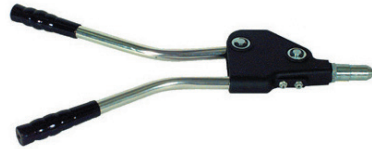
11 Rivets & Anchors

RIVETING TOOLS — 'BIG DADDY' HEAVY DUTY



F12148

- Comes with nosepieces to pull 5/32", 3/16" and 1/4" rivets
- Pulls steel or aluminum rivets in sizes of 1/8"-1/4"
- Extra-long handles give added leverage for larger rivet pulls
- Durable, shock resistant construction
- Made in the U.S.A.



RIVETING TOOLS — GUNS



F14583

- Comes with 3/32", 1/8", 5/32" and 3/16" nosepieces mounted in the tool
- Sets up to 3/16" steel rivets

HP-2 Rivet Gun
Aluminum alloy body and drop forged
Steel upper handles



F115694

- Up to 3/16" steel rivets
- SP-1 Rivet Gun — 360° swivel head
- Steel body and cast aluminum head
- Positive ratchet stops on swivel head
- Service wrench included

RIVETING TOOLS — NYLON RIVETS

F16496

- Pulls all standard nylon and plastic rivets
- Rugged all-steel construction
- Patented design ensures firm grip and smooth pulling action

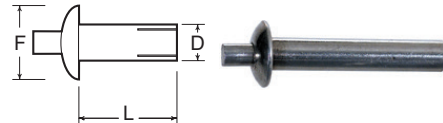
KL-2 Plastic Rivet Setter
Long reach
Long-stroke setting
Universal nosepiece



RIVETS — DRIVE

Material:	Aluminum
Plating:	Unplated

Grip Range	Diameter 'D'	L	F	Part No.
.390-.484	3/16	5/8	3/8	F19275
.265-.359	3/16	1/2	3/8	F117675
.140-.234	1/4	5/16	1/2	F117645
.203-.296	1/4	3/8	1/2	F14195
.265-.359	1/4	1/2	1/2	F117762

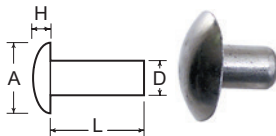


- No special tools required for installation, can be installed with a hammer
- Installed rivet leaves a finished surface, no grinding or sanding required to smooth the mandrel
- Blind installation - no access to back side required

RIVETS — SOLID ALUMINUM BUCKING



Material:	Aluminum
Plating:	Unplated

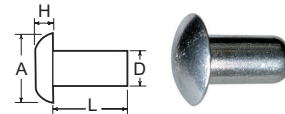


BRAZIER HEAD — STANDARD

Diameter 'D'	L'	'A'	'H'	2117T4 Hard Alloy	1100F Soft Alloy
3/16	5/16	.467	.094		F119338
3/16	3/8	.467	.094		F110827
3/16	7/16	.467	.094	F118975	F12020
3/16	1/2	.467	.094	F112359	F15779
3/16	5/8	.467	.094	F16144	F11200
3/16	3/4	.467	.094		F114822
1/4	3/8	.625	.125	F117330	
1/4	1/2	.625	.125	F15124	F117277
1/4	9/16	.625	.125		F11381
1/4	5/8	.625	.125	F13946	F111421
1/4	3/4	.625	.125	F116711	F1206

BRAZIER HEAD — MODIFIED

Diameter 'D'	L'	'A'	'H'	2117T4 Hard Alloy
1/4	1/2	.468	.094	F112176
1/4	5/8	.468	.094	F118800
1/4	3/4	.468	.094	F11548



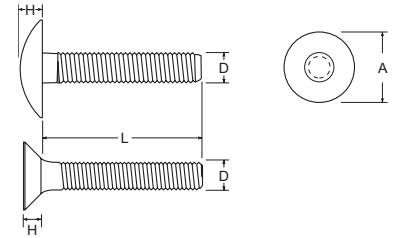
UNIVERSAL HEAD

Diameter 'D'	L'	'A'	'H'	2117T4 Hard Alloy
3/16	3/8	.375	.085	F110512
3/16	7/16	.375	.085	F116948
3/16	5/8	.375	.085	F1841
1/4	3/8	.500	.112	F112837
1/4	1/2	.500	.112	F111088
1/4	5/8	.500	.112	F1974



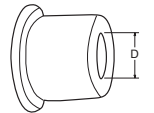
HUCK BOLTS

Material	Diameter of Body D	Grip Range	Head Diameter A	Head Height H	Head Style	Length of Body L	Shear	Tensile	Part No.
Aluminum	1/4"	.062-.625	.475-.525	.136-.152	Button	1.965	1200	1620	F128567
	1/4"	.062-.625	.531-.594	.103-.115	Truss	1.965	2200	2550	F128568
Steel	1/4"	.312-1.125	.531-.594	.103-.115	Truss	2.56	2200	2550	F128569
	3/16"	.062-.625	.450-.488	.091-.105	MGP98T	1.801	1725	1400	F128570
	3/16"	.062-.625	.323-.359	.092-.102	90CSK	1.788	1725	1400	F128571
Polished Stainless	3/16"	.125-.250	.406-.469	.078-.088	C98LT	1.466	2000	1455	F132279
	3/16"	.250-.375	.406-.469	.078-.088	C98LT	1.529	2000	1455	F132280
	3/16"	.375-.500	.406-.469	.078-.088	C98LT	1.716	2000	1455	F132281
	3/16"	.500-.625	.406-.469	.078-.088	C98LT	1.841	2000	1455	F132282
	3/16"	.625-.750	.406-.469	.078-.088	C98LT	1.966	2000	1455	F132283



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Material	Collar Diameter D	Type	Part No.
Steel, Yellow Zinc	3/16"	Standard	F128573
Steel, Yellow Zinc	1/4"	Standard	F128574
Steel, Yellow Zinc	3/16"	Medium Flange	F128575
Steel, Yellow Zinc	3/16"	Wide Flange	F128576



NUT SERTS — PLAIN

Rivet King® Rivet Nuts are perfect for installing threads into surfaces that are too thin for standard tapping. Once in place, the internal threads are ready for a screw or bolt.

- Blind installation - no access to backside required.
- Aluminum construction provides a corrosion resistant installation.
- Open end



U.S. THREADS

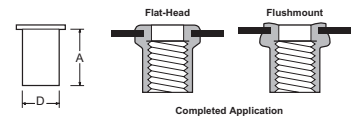
Thread Size	Grip Range	Drill Size	'D'	'A'	Installation Tool*	Flat Head Aluminum	Flush Mount Aluminum	Flat Head Steel
6-32	.010-.080	12	.183	.368	A,E	F118316	F14282	
8-32	.010-.080	2	.214	.368	A,E	F118510	F117767	
10-24	.010-.080	1/4	.245	.442	A,E	F115370	F174	
10-32	.010-.080	1/4	.245	.442	A,E	F111722	F16073	
1/4-20	.010-.080	R	.329	.628	A,E	F116987	F16892	F14338
1/4-20	.080-.140	R	.329	.687	A,E			F19977
5/16-18	.020-.125	27/64	.411	.649	E	F110927	F18864	F13568
3/8-16	.020-.125	1/2	.488	.645	E	F111926		F110590

METRIC

Thread Size	Grip Range	Drill Size	'D'	'A'	Installation Tool*	Flat Head Aluminum	Flush Mount Aluminum
M4 x .7	.25mm-2.03mm	5.6mm	5.44mm	10.86	A,E	F112150	
M5 x .8	.25mm-2.03mm	6.5mm	6.22mm	11.66	A,E	F110683	
M6 x 1.0	.25mm-2.03mm	8.6mm	8.36mm	16.14	A,E	F116769	F118280
M8 x 1.25	.50mm-3.18mm	10.8mm	10.44mm	16.94	A,E	F19265	F18248

*See threaded insert tool section

Material:	Aluminum or Steel
Plating:	Aluminum - Unplated
	Steel - Zinc



NUT SERTS — KNURLED

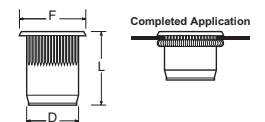
INCH SIZES

Thread Size	Grip Range	Hole Size	'D'	'F'	'L'	Part No.
6-32	.020-.080	17/64	.260	.305	.440	F110646
8-32	.020-.080	17/64	.260	.305	.440	F19005
10-24	.020-.130	19/64	.290	.335	.490	F1179
10-32	.020-.130	19/64	.290	.335	.490	F118731
1/4-20	.027-.165	25/64	.390	.460	.605	F13371
5/16-18	.027-.150	17/32	.520	.590	.705	F19877
3/8-16	.027-.150	17/32	.520	.590	.705	F19131

METRIC SIZES

Thread Size	Grip Range	Hole Size	'D'	'F'	'L'	Part No.
M5x0.8	0.5-3.3mm	7.54mm	7.60mm	8.50mm	12.50mm	F18130
M6x1.0	0.7-4.2mm	9.90mm	9.90mm	11.70mm	15.40mm	F113997
M8x1.25	0.7-3.8mm	13.50mm	13.30mm	14.90mm	17.90mm	F117500
M10x1.5	0.7-3.8mm	13.50mm	13.30mm	14.90mm	17.90mm	F15455

*See threaded insert tool section



POP® Rivet Nuts Sheet Metal Nut Serts are designed for use in any metal application. They allow the do-it-yourselfer, as well as the automotive professional, to use bolts and machine screws in place of weaker sheet metal screws.

Material:	Type C-1010/C-1008 Steel
Plating:	(Space cover 1 =) Yellow Zinc

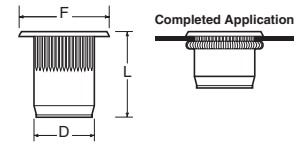
- Thin Head (small flange)
- Knurls create high torque-out valves and resist spinning due to cross-threading or over tightening.
- Blind installation - no access to backside required.
- Outer flange is nearly flush with surface when installed
- Open end

NUT SERTS — KNURLED LARGE FLANGE

POP® Rivet Nuts are ideal where irregular holes are a problem. The large flange construction combined with the axial knurls on the body ensure a torque-resistant fit.

- Large Flange Head
- Knurls create high torque-out valves and resist spinning due to cross-threading or over tightening.
- Blind installation - no access to backside required.
- Outer flange is nearly flush with surface when installed.
- Open end

Material:	Type C-1010/C-1008 Steel
Plating:	Yellow Zinc



INCH SIZES

Thread Size	Grip Range	Hole Size	'D'	'F'	'L'	Installation Tool*	Part No.
6-32	.020-.080	17/64	.265	.375	.460	A,B,E	F13465
8-32	.020-.080	17/64	.265	.375	.460	A,B,E	F115181
10-24	.020-.130	19/64	.296	.400	.515	A,B,C,E	F111504
10-32	.020-.130	19/64	.296	.400	.515	A,B,C,E	F119934
1/4-20	.027-.165	25/64	.390	.500	.620	A,B,C,E	F116448
1/4-28	.027-.165	25/64	.390	.500	.620	A,B,C,E	F16040
5/16-18	.027-.165	17/32	.530	.670	.735	C	F19071
3/8-16	.027-.165	17/32	.530	.670	.735	C	F118371

METRIC SIZES

Thread Size	Grip Range	Hole Size	'D'	'F'	'L'	Installation Tool*	Part No.
M4 x .7	.5mm - 2mm	6.75mm	6.73mm	9.91mm	10.67mm	A,F	F123436
M5 x .80	.5mm - 3.3mm	7.6mm	7.55mm	10.10mm	13.10mm	A,B,D,F	F16386
M6 x 1.0	.7mm - 4.2mm	10.0mm	9.90mm	12.7mm	15.75mm	A,B,D,F	F1274
M8 x 1.25	.7mm - 3.8mm	13.5mm	13.45mm	17.0mm	18.65mm	D	F115036
M10 x 1.50	.7mm - 1.50mm	13.50mm	13.45mm	18.8mm	21.60mm	D	F118402

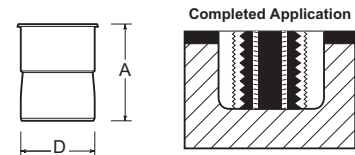
*See threaded insert tool section

THREAD REPAIR — THREADSERTS®

Threadserts® are designed to install threads into any thickness of stock, including metal, plastic, fiberglass, or any rigid material. Ideal for solid stock applications.

- Blind installation - no access to backside required.
- Finished repair is nearly flush with surface.
- Thread Sert® kit available: **Part No. F110859**
- Open end

Materials: Aluminum and Steel



U.S. THREADS

Thread Size	Hole Size	Drill Hole	'D'	'A'	Installation Tool*	Aluminum Part No.	Steel Part No.
6-32	.221	#2	.215	.375	A,B,E	F112029	F19898
8-32	.250	1/4	.246	.375	A,B,E	F112891	F118493
10-24	.2812	9/32	.277	.375	A,B,C,E	F11420	F15144
10-32	.2812	9/32	.277	.375	A,B,C,E	F115743	F1423
1/4-20	.3906	25/64	.372	.510	A,B,C,E	F17571	F18850
5/16-18	.500	1/2	.496	.615	C	F18923	F13481
3/8-16	.5625	9/16	.559	.740	C	F118421	F116961

*See threaded insert tool section

THREAD INSERT SETTING TOOLS

THREADSETTER TOOL & COMPONENTS (FOR RN-1 TOOL)

Inch Sizes

Mandrels	Part No.
Mandrel 6-32	F112879
Nose Piece 6-32	F18668
Mandrel 8-32	F16433
Nose Piece 8-32	F115794
Mandrel 10-24	F12207
Mandrel 10-32	F11977
Nose Piece 10-24/10-32	F114659
Nose Piece 1/4-20 & 1/4-28	F1595
Mandrel 1/4-20	F111419
Mandrel 1/4-28*	F117577
Mandrel 5/16-18*	F18887
Mandrel 3/8-16*	F119577

* Nose piece not needed

Metric Sizes

Mandrels	Part No.
Mandrel M4	F17447
Nose Piece M4	F114052
Mandrel M5	F17149
Nose Piece M5	F119481
Mandrel M6	F128565
Nose Piece M6	F128566



- For Threadsert, Rivet Nut & Nut Sert installations (see tool application chart)
- Pulls aluminum & steel inserts
- Complete with 8-32, 10-24 and 10-32 mandrels and nosepieces
- Other mandrels and nose pieces sold separately
- Aluminum alloy body and drop forged steel upper handles
- RN-1 Tool

THREADSERT COMPONENTS FOR DISCONTINUED MARSON TOOL (Part No. F39200)

Inch Sizes

Mandrels	Part No.
Mandrel 6-32	F117130
Nose Piece 6-32	F19249
Mandrel 8-32	F111000
Nose Piece 8-32	F118281
Mandrel 10-24	F113312
Mandrel 10-32	F115877
Nose Piece 10-24/10-32	F118399
Mandrel 1/4-20*	F113548
Mandrel 1/4-28*	F11266
Mandrel 5/16-18*	F14993
Mandrel 3/8-16*	F14929

* Nose piece not needed

Metric Sizes

Mandrels	Part No.
Mandrel M4	F115500
Nose Piece M4	F12652
Mandrel M5	F12892
Nose Piece M5	F111407
*Mandrel M6	F12866
*Mandrel M8	F114873
*Mandrel M10	F117110

THREAD INSERT SETTING TOOLS (continued)

INCH THREADSERT® KIT (ALUMINUM)

Item	Part No.
6-32 Threadserts	F112029
8-32 Threadserts	F112891
10-24 Threadserts	F11420
10-32 Threadserts	F115743
1/4-20 Threadserts	F17571
5/16-18 Threadserts	F18923
3/8-16 Threadserts	F18421
6-32 Mandrel	F117130
6-32 Nosepiece	F19249

Item	Part No.
8-32 Mandrel	F111000
8-32 Nosepiece	F118281
10-24 Mandrel	F113312
10-32 Mandrel	F115877
10-24/10-32 Nosepiece	F118399
1/4-20 Mandrel	F113548
5/16-18 Mandrel	F14993
3/8-16 Mandrel	F14929
Threadsert Tool	F16576



Kit Contents:

- Includes aluminum inserts & threadsetter tool
- Inch Sizes: 6-32 thru 3/8-16

INCH KIT — F116177 (E) (Includes these mandrels)

Mandrels	Part No.
6-32	F1903
8-32	F113031
10-24	F17547
10-32	F11844
1/4-20	F117771
*5/16-18	F111654
*3/8-16	F19007

METRIC KIT — F115923 (F) (Includes these mandrels)

Mandrels	Part No.
M3	F131328
M4	F115847
M5	F13675
M6	F118143
*M8	F118410

*For pulling aluminum inserts only

NUTSERT SETTING TOOL (E) & (F)



- Kits come complete with mandrels
- Mandrels also available separately
- For nut sert, threadserts & rivet nut installations (see tool application chart)
- Pulls steel & aluminum inserts

RIVETKING® 2-IN-1 BLIND RIVET & RIVET NUT INSTALLATION TOOL KIT

F113498

- Professional kits for installing both blind rivets and rivet nuts
- Kit includes mandrel and nosepieces for setting blind rivets and rivet nuts
- Easy changeover takes less than 1 minute
- Patented fold away design makes it easy to carry and store
- Conveniently stored in a molded carry case
- Forged steel arms insure durability
- Soft touch rubberized grips guarantee comfort

Includes:

- Blind Rivet Nosepieces: 1/8, 5/32, 3/16 & 1/4
- Rivet Nut Mandrels: #8-32, #10-24, 1/4-20, 5/16-18 & 3/8-16



REPLACEMENT PARTS

Rivet Nut Mandrels

Size	Mandrels
6-32	F114991
8-32	F12920
10-24	F116544
10-32	F117406
12-24	F114637
1/4-20	F114835
1/4-28	F111715
5/16-24	F1810
3/8-16	F13593
3/8-24	F115970

Size	Mandrels
M4	F17440
M5	F114820
M6	F19533
M8	F12236
M10	F13909

Rivet Nosepieces

Size	Mandrels
1/8"	F11099
5/32"	F110801
3/16"	F115459
Monobolt	F15052

Insert Applications for ThreadSERT, RIVET NUT & Nutsert Tools

CAUTION: Some tools may not work when using certain sizes and types of inserts. Read below for tool / insert applications. Not following these recommended applications may result in damage to the tool or an improper installation of the insert. **All three tools below will pull nut serts, rivets nuts & threadserts, but not all sizes**

Nutsert Setting Tool — Part Numbers F116177 and F115923

These guns have limited capacities for pulling steel and aluminum threaded inserts. The following specifications are recommended by the manufacturer.

This list of parts for inserts denotes the variations in material, types and sizes that are in the range of this tool for proper installation.

Steel Nutserts 6-32 thru 1/4-20 and M3 thru M6 only

Aluminum Threadserts 6-32 thru 3/8-16

Aluminum Rivet Nuts 6-32 thru 1/4-20 and M3 thru M8 only

Steel Rivet Nuts 6-32 thru 1/4-20 and M3 thru M8 only

Pop® Threaded Insert Tool — Part Number F18732 & F11124

This tool will install inserts from #10-24 thru 3/8-16 for the inch sizes and M5 thru M10 for the metric versions. This includes steel and aluminum materials.

Threadsetter Tool — Part Number F16576 and F110859

This gun also has a limited capacity for pulling threaded inserts in both steel and aluminum. The largest size for the installation of steel inserts is 1/4-20 in inch, and M6 in metric. This tool will install up to 3/8-16 and M10 in aluminum.

ANCHORS — PLASTIC PLUGS

Diameter & Length	Screw Sizes	Hole Size	Color	Part No.
3/16 x 1	#4 - #6	3/16	White	F113012
15/64 x 1	#7 - #9	15/64	Red	F15258
1/4 x 1	#10 - #12	1/4	Green	F113305
1/4 x 1-1/4	#10 - #12	1/4	Green	F115674
1/4 x 1-1/2	#10 - #12	1/4	Green	F11482
1/4 x 2	#10 - #12	1/4	Green	F120033
5/16 x 1	#14 or 1/4" Lag	5/16	Blue	F14818
5/16 x 1-1/2	#14 or 1/4" Lag	5/16	Blue	F14619
5/16 x 2	#14 or 1/4" Lag	5/16	Blue	F118918
3/8 x 1-1/2	#16 or 5/16" Lag	3/8	Orange	F112144
3/8 x 2-1/2	#16 or 5/16" Lag	3/8	Orange	F18743

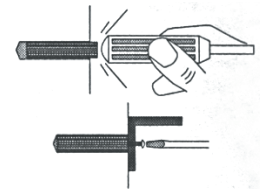


Use in: Concrete, Block, Brick, Stone

Use with: Sheet metal or wood screw

Made of: Ductile Plastic

- Layout or hole spotting required
- Acid-resistant
- Screw length equals work thickness plus anchor length



Drill hole to full length of anchor and insert flush with surface. Put fixture in place, insert screw and tighten.

The Fluted Plastic Anchor is a multi-size fastener for light duty applications in solid building materials.

ANCHORS — PLASTIC CONICAL

- Layout or hole spotting required
- Light duty
- Has collar for hollow material
- Screw length equals work thickness plus anchor length

Screw Size	Size	Drill Dia.	Min. Depth	Part No.	500 pc. Pack Part No.*
4-6-8	#6-8 x 3/4	3/16	3/4	F18038	F18038B500
6-8-10	#8-10 x 7/8	3/16	7/8	F13654	F13654B500
10-12	#10-12 x 1	1/4	1	F116855	F116855B500
10-12-14	#14-16 x 1-1/2	5/16	1-1/2	F119838	F119838B500

*Note: Box and Drill not included, see complete kits below.

A lightweight plastic anchor for wood and sheet metal screws. Recommended for light duty static applications where holding power is not a critical factor.

Drill hole. Insert until flange is flush with surface of base material. Position fixture. Insert screw and tighten.



Use in: Concrete, Block, Brick, Wallboard
Use with: Sheet metal or wood screw
Made of: Corrosion-resistant plastic

ANCHORS — PLASTIC CONICAL KITS

Anchor Size	Drill Bit Included	Screws Included	Tapping Screw Type	Quantity Anchors/Screws	Part No.
#6-8 x 3/4	3/16 x 4	#6 x 1	Combo/Pan Hd	100 / 100	F117934
#8-10 x 7/8	3/16 x 4	#8 x 1	Combo/Pan Hd	100 / 100	F16848
#10-12 x 1	1/4 x 4	#10 x 1	Combo/Pan Hd	100 / 100	F12327
#10-12 x 1	1/4 x 4	#12 x 1	Combo/Pan Hd	100 / 100	F111152
#14-16 x 1/2	5/16 x 4	#14 x 1-1/2	Combo/Pan Hd	50 / 50	F15224



- Includes plastic box, plugs, screws and drill bit

ANCHORS — PLASTIC CONICAL RIBBED

Screw Size	Color	Size	Drill Dia.	Min. Depth	Part No.
4-6-8	Yellow	4-6-8 x 7/8	3/16	7/8	F111106
8-10-12	Blue	8-10-12 x 1-1/4	1/4	1-1/4	F115330
12-14-16	Green	12-14-16 x 1-1/2	5/16	1-1/2	F115852



- Barbed anchor for superior pull-out power
- Size color-coded **Use in:** Concrete, wallboard and wood
- Use with:** Sheet metal or wood screw
- Made of:** Polyethylene

ANCHORS — PLASTIC PLUGS DELTA

Drill Size	Screw Size	Screw Length*	Pullout Strength	Length	Drill Depth	Part No.
3/16	#4 - #6	1-1/4	396 lbs	1	1-1/2	F110182
3/8	1/4 - 5/16	2	1543 lbs	1-7/8	2-1/4	F115054
1/2	5/16 - 3/8	2-1/2	2315 lbs	2-1/4	2-3/4	F115211

* Add thickness of item being hung to ensure proper pullout strength

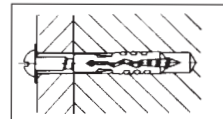
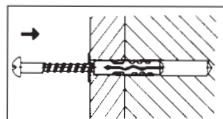
- Ribbed construction for maximum holding power
- Specially designed wings prevent spinning
- Spiral design keeps screw centered
- Expands equally on all sides for better hold
- Superior pullout strength when compared to other nylon anchors

Use in: Concrete, block, brick, stone
Use with: Sheet metal screws, wood screws, and lag screws
Made of: Nylon



ANCHORS — MUNGO PLUGS

Size	Fastener Used	Part No.
5/32 x 3/4	#6	F19866
3/16 x 1	#8	F115558
1/4 x 1-3/16	#12	F111559
1/4 x 1-3/8	#12 or 1/4 Lag	F14575
5/16 x 1-1/2	1/4 or 5/16 Lag	F15417
3/8 x 2	5/16 or 3/8 Lag	F117628
5/8 x 3-1/8	5/8 Lag	F18518



- Drill hole 1/2" deeper than anchor
- Use in:** Concrete, Block, Brick, Wallboard
- Use with:** Sheet metal screws, wood screws, machine screws and lag screws
- Made of:** Nylon

ANCHORS — MUNGO PLUGS UNIVERSAL

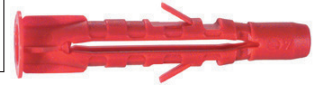
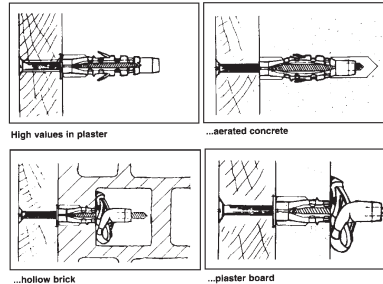
Item Description	Anchor/ Drill Dia.	Fastener Used	Part No.
1/4x 1-3/4	1/4	#8	F18882
5/16x2	5/16	1/4 Lag	F112611
3/8x2-3/8	3/8	5/16 Lag	F14028

- FINS - anchor in overhead applications prior to expansion
- KNOT formation anchor - gives positive bearing in hollow materials
- Drill hole 1/2" deeper than anchor length
- Screw length should be a minimum of 1/4" longer than anchor

Use in: Concrete, brick, wallboard, plaster

Use with: Sheet metal screws, wood screws and lag screws

Made of: Nylon

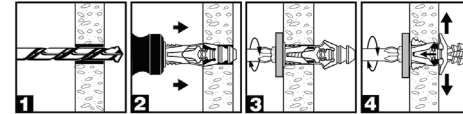


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ANCHORS — TRIPLEGRIP™

Item Description	Anchor/ Drill Dia.	Fastener Used	Part No.
#6	Beige	1/4"	F129890
#8	Grey	1/4"	F129891
#10	Blue	5/16"	F129888
#12	Green	3/8"	F129889

- **Use in:** Concrete, Block, Brick, Wallboard
- **Use with:** Sheet metal screws, wood screws, machine screws and lag screws
- **Made of:** Polyethylene

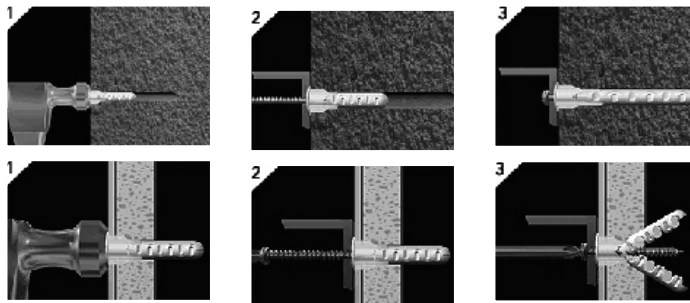


Features & Benefits

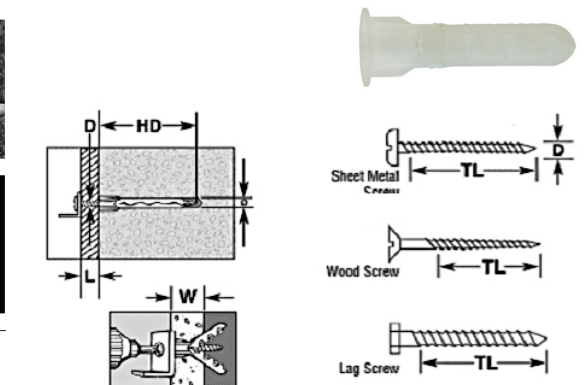
- Easy to install
- Expands inside drywall to give more stability and strength
- 2 expandable wings that grip tightly behind drywall for maximum holding power
- 2 lateral wings hold the anchor in place, preventing any rotation while the screw is inserted



ANCHORS — PLASTIC ALLIGATOR



Size	Fits Screw Sizes SMS-LAG	Use Drill Size	Min Hole Depth in Solid Material	Min wall Thickness	Min TL	Part No.
3/16"	#10 - 3/16"	3/16"	1 1/2"	1/4"	1-3/16"+L	F129899
1/4"	#6 - 1/4"	1/4"	2 3/4"	3/8"	1-3/8"+L	F117780
5/16"	#8 - 5/16"	5/16"	3 1/4"	1/2"	1-13/16"+L	F112517



- ALLIGATOR anchors will extrude up to 2x its original length in solid wall, sealing the hole and providing highest holding power.
- For best results, use a screw gun for installation in solid walls.
- If you hit a hidden cavity, the screw opens the anchor and locks securely.

ANCHORS — WALLDRIVER

Item	Screw Size	Length	Part No.
WallDriver Nylon Anchor	#8	1-1/2	F1447
WallDriver Jr. Nylon Anchor	#6	1	F119860
WallDriver Zinc Anchor	#8	1-1/2	F11160
WallDriver Jr. Zinc Anchor	#6	1	F115336

Use in: Wallboard

Use with: #6 or #8 sheet metal screw

Made of: Nylon or zinc alloy

- Fast and easy installation
- High holding power
- Screw is removable
- Open end allows for longer screw lengths



ANCHORS — LEGS HOLLOW WALL

Length	Part No.
1-3/8	F15464

Use in: Wallboard

Use with: #6 or #8 screw

Made of: Carbon steel, zinc plated

Anchor has a pierce point and requires no drilling. Removal of the anchor, if required, is easy. Once removed, the anchor leaves a small slit in the wallboard.



FASTENERS

11 Rivets & Anchors

ANCHORS — WALL HANGERS

Item	Part No.
Wall Hanger 10 lb	F12305
Wall Hanger 20 lb	F118942
Wall Hanger 30 lb	F115589
Wall Hanger 50 lb	F13668

Use in: Wallboard
Made of: Zinc alloy

- Fast and easy installation
- Use to hang tools, frames, supplies, etc
- Multiple weight tolerances for a variety of uses
- Zinc Plated
- Complete with hanger and nail

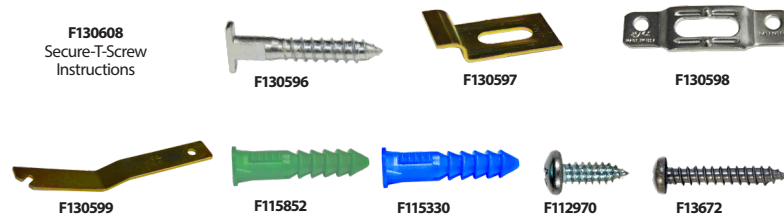


SECURE T-SCREW SYSTEM

SECURE-T-SCREW SECURITY PICTURE HANGER — KIT F130609

Qty	Description	Part No.
1	Secure-T-Screw Instructions	F130608
1	Secure-T-Screw	F130596
2	Slide-In Mounting Bracket	F130597
3	Security Slotted Bracket	F130598
1	Secure-T-Screw Wrench	F130599
1	12-14-16 x 1-1/2" Super Anchor	F115852
2	8-10-12 x 1-1/2" Super Anchor	F115330
6	1/2" Pan Head Screw	F112970
2	1-1/4" Pan Head Screw	F13672

Prevents theft or shifting of artwork, mirrors, etc. with hidden tamper-proof hardware—great for earthquake zones, windy areas, signage, boats, spacecraft, moving walls and doors.



ANCHORS — NAIL IN NYLON

Size	Part No.	Box Qty.	Part No. For Box
1/4 x 3/4	F15053	500	F15053B500
1/4 x 1	F119941	500	F119941B500
1/4 x 1-1/2	F14568	500	F14568B500
1/4 x 2	F114156	500	F114156B500
1/4 x 3	F120072		

Use in: Concrete or hollow wall
Install with: Hammer
Made of: Rigid nylon with steel nail
Color: Translucent white
Feature: Unscrew slotted nail to remove



ANCHORS — PIN PLASTIC

Size	Part No.
1/4 x 3/4	F118005
1/4 x 1	F113926
1/4 x 1-1/4	F19878
1/4 x 1-1/2	F117246

Use in: Wall panels, ceiling panels and fixture
Install with: Flat-faced hammer (preferably plastic)
Made of: Nylon with nylon pin
USDA Approved



ANCHORS — SPLIT DRIVE

Size	Drill Bit Size	Part No.
1/4x2	1/4	F19768
1/4x2-1/2	1/4	F112442
1/4x3	1/4	F16481
1/4x3-1/2	1/4	F119390
1/4x4	1/4	F110311

Split Drive Anchors are a one piece anchor with a split-type expansion mechanism on the working end. As the anchor is driven into the hole, the expansion mechanism compresses and exerts force against the walls of the hole. These anchors can be installed in concrete, grout-filled block, and stone.

Material: Heat-treated carbon steel
Finish: Zinc plated
Head Style: Countersunk



ANCHORS — HAMMER DRIVE

Zinc with Carbon Steel Pin

Size	Part No.	Part No. for Bulk Box Quantity
3/16x7/8	F15789	
1/4x3/4	F18900	F18900B1000
1/4x1	F112764	
1/4x1-1/4	F18113	F18113B1000
1/4x1-1/2	F19614	F19614B1000
1/4x2	F118882	
1/4x2-1/2	F115596	
1/4x3	F110767	

*Bulk box quantity is 1000 pieces

Hammer Drive Anchors are low cost anchors for light-duty applications under static load. These anchors are not recommended for overhead applications or eccentric tension (prying) loading.

Material: Zinc body; Pin – Carbon Steel or 304 Stainless Steel
Installation: Use same diameter drill bit as body of anchor



SCREWS — HAMMER SCREWS

Size	Part No.
1/4 x 3/4	F15679
1/4 x 1	F13080
1/4 x 1-1/4	F19064
1/4 x 1-1/2	F118092
1/4 x 2	F15298
1/4 x 2-1/4	F117620



Use in: Concrete, block, brick, stone

Made of: Zamac alloy with a carbon steel drive screw

Description: A unique, removeable, one step drive anchor featuring a phillips type head and screw thread.

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ANCHORS — HOLLOW WALL

Hollow Wall Anchors expand inside the wall cavity to provide a large bearing area for load transfer. Standard hollow wall anchors require drilling a hole for installation. Drive type hollow wall anchors do not require a pre-drilled hole for installation. Use them in standard gypsum drywall, plaster, or paneling.

Material: Expander shell-Cold-rolled steel

STANDARD HOLLOW WALL ANCHORS

Size	Hole Size	Wall Thickness	Part No.
1/8XS	5/16	1/16 — 1/4	F115418
1/8S	5/16	1/8 — 1/2	F116831
1/8L	5/16	5/8 — 7/8	F112749
1/8XL	5/16	1-1/4 — 1-1/2	F16377
3/16S	3/8	1/8 — 1/2	F11349
3/16L	3/8	5/8 — 1-3/16	F19175
1/4S	7/16	1/8 — 1/2	F17234
1/4L	7/16	5/8 — 1-3/16	F14755

Installation:

Standard Hollow Wall Anchors

- Drill hole using the specified diameter drill bit
- Tap anchor into hole until flush with surface
- Tighten screw while maintaining constant pressure on the anchor to set
- Remove screw, install screw through fixture, reinsert screw into anchor body and tighten until snug against base material



DRIVE-TYPE HOLLOW WALL ANCHORS

Size	Wall Thickness	Part No.
1/8SD	1/8 — 1/2	F15649
1/8SLD	1/8 — 1-3/16	F17760

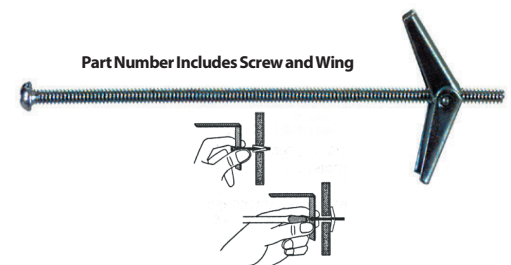
Drive-type Hollow Wall Anchors

- Drive anchor into gypsum drywall until head is flush with surface
- Tighten screw to set anchor
- Remove screw, install screw through fixture, reinsert screw into anchor body and tighten until snug against base material



ANCHORS — TOGGLE BOLTS

Size	Screw Size	Round Head Part No.	Mushroom Head Part No.
1/8 x 2	6-32 x 2	F1394	F119590
1/8 x 3	6-32 x 3	F110714	F18019
1/8 x 4	6-32 x 4	F114453	F19621
3/16 x 3	10-24 x 3	F13251	F14484
3/16 x 4	10-24 x 4	F119441	F110325
3/16 x 5	10-24 x 5	F118637	
3/16 x 6	10-24 x 6	F118679	
1/4 x 3	1/4-20 x 3	F14748	F114865
1/4 x 4	1/4-20 x 4	F113428	F17125
1/4 x 5	1/4-20 x 5	F110616	
1/4 x 6	1/4-20 x 6	F11346	F17515
5/16 x 4	5/16-18 x 4	F115824	
5/16 x 5	5/16-18 x 5	F14269	
5/16 x 6	5/16-18 x 6	F15705	
3/8 x 3	3/8-16 x 3	F116992	
3/8 x 4	3/8-16 x 4	F17153	
3/8 x 5	3/8-16 x 5	F14398	
3/8 x 6	3/8-16 x 6	F14296	



Part Number Includes Screw and Wing

Use in: Block, wallboard, plaster, hollow tile

Use with: No other fastener needed

Made of: Steel, zinc plated

To Install: Drill hole completely through wall. Insert bolt through item to be fastened, attach wings, fold wings completely back, then push through hole until wings are against inside wall. Tighten with screwdriver. Original and replacement bolts are equipped with a combo-style head.

ANCHORS — TOGGLE WINGS

Size	Screw Size	Part No
1/8	6-32	F110073
3/16	10-24	F116549
1/4	1/4-20	F12582
5/16	5/16-18	F15346
3/8	3/8-16	F116884
1/2	1/2-13	F119266



Make your own size by ordering wings and any coarse thread machine screw

FASTENERS

11 Rivets & Anchors

ANCHORS — PLASTIC TOGGLES

- A one piece anchor that takes screws from #6 through #12

Panel Thickness	Hole Size	Screw Size	Part No
0 - 1/4"	5/16	#6 - #12	F112004
3/8 - 1/2	5/16	#6 - #12	F15687
5/8	5/16	#6 - #12	F18365

*Mini style plastic toggle

Use in: Wallboard, plaster
Use with: Sheet metal screws #6 - #12
Made of: Plastic



ANCHORS — TOGGLERS

Size	Hole Size	Screw Size	Vendor Part #	Part No
3/16	1/2	#10-24	25013	F117942
1/4	1/2	1/4-20	25014	F118350
5/16	3/4	5/16-18	21017	F1436
3/8	3/4	3/8-16	21015	F115678

SNAPTOGGLE toggle bolts for Maximum strength & precise Alignment in:

- Hollow Brick
- Cement Board
- Drywall
- Fiberglass
- Cinder Block
- Hollow Brick
- Plaster
- Boat Docks
- Concrete Block
- Stucco
- Composite Panels
- Paneling

Toggle Brand Toggle Bolts



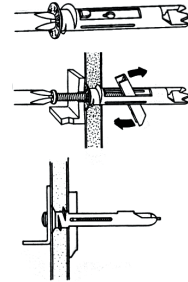
ANCHORS — EZ TOGGLES

1. Place #2 Phillips screwdriver into recess of E-Z Toggle. Press into drywall while turning the anchor clockwise until it is seated flush with wall and arrows on head are parallel to stud.
2. Place fixture in position over installed E-Z Toggle. Insert screw and push through E-Z Toggle to engage clamp.
3. Continue turning screw until tight. The clamp will move back against the drywall as the screw is turned.

Description	Part No.
EZ Toggle w/ #8 2-1/8 Pan Head SMS	F112975



- Self-drilling into 3/8", 1/2" and 5/8" wallboard
- Maximum fixture thickness: 1/2"
- Overall length: 2-1/2"



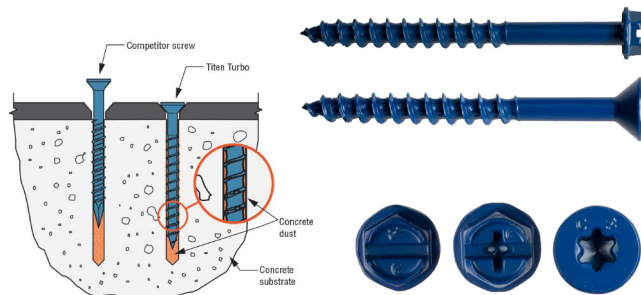
ANCHORS — TITEN TURBO

HEX HEAD

D	L	ANSI Drill Size	Part No.
3/16	1-1/4	5/32	F132553
3/16	1-3/4	5/32	F132554
3/16	2-1/4	5/32	F132555
3/16	2-3/4	5/32	F132556
3/16	3-1/4	5/32	F132557
3/16	3-3/4	5/32	F132558
1/4	1-1/4	3/16	F132559
1/4	1-3/4	3/16	F132560
1/4	2-1/4	3/16	F132561
1/4	2-3/4	3/16	F132562
1/4	3-1/4	3/16	F132563
1/4	3-3/4	3/16	F132564
1/4	4	3/16	F132565
1/4	5	3/16	F132566
1/4	6	3/16	F132567

FLAT TORX

D	L	ANSI Drill Size	Part No.
3/16	1-1/4	5/32	F132568
3/16	1-3/4	5/32	F132569
3/16	2-1/4	5/32	F132570
3/16	2-3/4	5/32	F132571
3/16	3-1/4	5/32	F132572
3/16	3-3/4	5/32	F132573
1/4	1-1/4	3/16	F132574
1/4	1-3/4	3/16	F132575
1/4	2-1/4	3/16	F132576
1/4	2-3/4	3/16	F132577
1/4	3-1/4	3/16	F132578
1/4	3-3/4	3/16	F132579
1/4	4	3/16	F132580



- Torque Reduction Channel that traps dust where it can't obstruct the thread action, reducing the likelihood of binding in the hole (patent pending)
- Serrated screw point for easier starts when fastening wood
- Availability with either a hex head or, for a smoother installed profile, a 6-lobe-drive countersunk head
- Matched-tolerance bit not required; use a standard ANSI drillbit for installation
- Designed for installation with an impact driver or cordless drill
- Code listed in accordance with ICC-ES AC193 for concrete applications without cleaning dust from predrilled holes (IAPMO UES ER-712)
- Use in dry interior environments only



ANCHORS — CONCRETE SCREWS

Diameter	Length	Drill Bit Size	Nut Driver Size	Slotted Hex Head Part No.	Phillips Flat Head Part No.
3/16	1-1/4	5/32	1/4	F120553	F120521
3/16	1-3/4	5/32	1/4	F120555	F120523
3/16	2-1/4	5/32	1/4	F120557	F120525
3/16	2-3/4	5/32	1/4	F120559	F120527
3/16	3-1/4	5/32	1/4	F120561	F120529
3/16	3-3/4	5/32	1/4	F120563	F120531
3/16	4	5/32	1/4	F120565	F120533
1/4	1-1/4	3/16	5/16	F120535	F120503
1/4	1-3/4	3/16	5/16	F120537	F120505
1/4	2-1/4	3/16	5/16	F120539	F120507
1/4	2-3/4	3/16	5/16	F120541	F120509
1/4	3-1/4	3/16	5/16	F120543	F120511
1/4	3-3/4	3/16	5/16	F120545	F120513
1/4	4	3/16	5/16	F120547	F120515
1/4	5	3/16	5/16	F120549	F120517
1/4	6	3/16	5/16	F120551	F120519



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Screws for attaching all types of components to concrete and masonry. These light duty screws are commonly used for fastening electrical boxes or light fixtures into concrete or CMU walls and ceilings.

Material: Heat-treated carbon steel

Finish: Zinc plated with a baked on blue ceramic coating

- Available in 3/16" and 1/4" diameters
- Slotted hex washer and Phillips flat head styles
- All 100pc boxes come with one masonry drill bit
- Use in dry interior and non-corrosive environments
- Make sure to used special drill bits below

Diameter	Length	Drill Bit Size	Nut Driver Size	Part No.
1/4	1-1/4	3/16	5/16	F112394
1/4	1-3/4	3/16	5/16	F119795
1/4	2-1/4	3/16	5/16	F115673
1/4	3-1/4	3/16	5/16	F18109
1/4	3-3/4	3/16	5/16	F18755



Screws are used in similar applications as the standard screws. They offer a medium level of corrosion resistance and are used in some exterior and wood applications.

Material: Heat-treated type 410 stainless steel

Finish: Zinc plated with a protective overcoat

Head Style: Slotted Hex Washer

ANCHORS — CONCRETE SCREWS DRILL BITS

Diameter	Length	Part No.
5/32	3-1/2	F6869
5/32	4-1/2	F61398
5/32	5-1/2	F61290
3/16	3-1/2	F61101
3/16	4-1/2	F61494
3/16	5-1/2	F6419
3/16	6-1/2	F61273
3/16	7-1/2	F6658



- For use with concrete screws
- The drill bits are special size and tolerance products. Use of any other bit will cause inconsistent performance of the anchor.

ANCHORS — CONCRETE DRILL BITS*

SDS-PLUS WEDGE BIT

Drill Size	Usable Length	Overall Length	Part No.
1/4"	4"	6"	F117819
3/8"	6"	8"	F119826
1/2"	8"	10"	F114566
5/8"	10"	12"	F119068



HEAVY-DUTY STRAIGHT SHANK WEDGE-BIT

Drill Size	Usable Length	Overall Length	Part No.
3/8"	11"	13"	F113285
1/2"	11"	13"	F19918
5/8"	11"	13"	F19057



ANCHORS — CONCRETE SCREWS INSTALLATION TOOL KIT

Replacable Installation Tool Kit Components

Part No.
#2 Phillips Drive Bit
#3 Phillips Drive Bit
1/8" Hex Socket Key

Kit Includes:

- 1/4" and 5/16" hex drive socket, Phillips adapter drive socket, #2 and #3 Phillips drive bits, drill adapter chuck, drill drive socket sleeve, 1/8" hex socket key.
- For use with concrete screws only



F12290

ANCHORS — TITEN HD® SCREW ANCHOR

The Titen HD® anchor is a patented, high-strength screw anchor for concrete and masonry. It is designed for optimum performance in both cracked and uncracked concrete. The high strength, easy to install Titen HD® anchor has been tested and shown to provide outstanding performance in cracked and uncracked concrete under both static and seismic loading conditions. The self-undercutting, non-expansion characteristics of the Titen HD® anchor make it ideal for structural applications, even at reduced edge distances and spacings. Recommended for permanent dry, interior non-corrosive environments or temporary outdoor applications.

Material: Carbon steel, heat treated.

Finish: Zinc plated or mechanically galvanized.

Installation Features:

- No special drill bit needed: Designed to install using standard sized ANSI tolerance drill bits
- Installs with 50% less torque: Testing shows that when compared to competitors, the Titen HD® requires 50% less torque to be installed in concrete.
- Hex-washer head: Requires no separate washer and provides a clean installed appearance. *Some jurisdictions require an additional square plate washer for sill plate applications.

Removable: Ideal for temporary anchoring (e.g. formwork, bracing) or applications where fixtures may need to be moved. Re-use of the anchor to achieve listed load values is not recommended.



Size	Drill Bit Diameter	Wrench Size	Part No.
1/4 x 2-3/4	1/4	3/8	F133344
1/4 x 3*	1/4	3/8	F118328
3/8 x 1-3/4*	3/8	9/16	F120611
3/8 x 2-1/2*	3/8	9/16	F120613
3/8 x 3	3/8	9/16	F17379
3/8 x 4	3/8	9/16	F120616
3/8 x 5	3/8	9/16	F16930
3/8 x 6	3/8	9/16	F113107
1/2 x 3	1/2	3/4	F12720
1/2 x 4	1/2	3/4	F118132

*Mini Titen HD

Size	Drill Bit Diameter	Wrench Size	Part No.
1/2 x 5	1/2	3/4	F113319
1/2 x 6	1/2	3/4	F19725
5/8 x 4	5/8	15/16	F1683
5/8 x 5	5/8	15/16	F1560
5/8 x 6	5/8	15/16	F14107
5/8 x 8	5/8	15/16	F117982
3/4 x 4	3/4	1-1/8	F18920
3/4 x 5	3/4	1-1/8	F117394
3/4 x 6	3/4	1-1/8	F11806
3/4 x 8-1/2	3/4	1-1/8	F115084

ANCHORS — CONCRETE SCREWS WALL-DOG™

Size	Head Style	Finish	Box Qty.	Part No.
3/16 x 1-1/4	Phillips Pan Head	Chrome	100	F111516
3/16 x 1-1/4	Phillips Oval Head	Chrome	100	F13989
3/16 x 1-1/4	Phillips Pan Head	White	100	F119811
3/16 x 1-1/4	Phillips Oval Head	White	100	F11510

- Installs easily in wallboard (1/2", 5/8" & double wallboard), plywood, concrete, hollow or grout filled block, brick and plaster
- One step installation, installs directly through fixture into wallboard
- Smooth entry, powerful hold
- Thread design prevents spinning and stripping
- Heat treated point penetrates metal and wood studs
- Leaves smaller hole than toggles or other systems
- Anchor made of case hardened steel
- Two head styles: Oval and Pan
- Two color finishes: Chrome and White
- Use 3/16" concrete drill for masonry installation



APPLICATIONS:

Electrical fixtures, Thermostats, HVAC fixtures, Plumbing fixtures, Bathroom accessories, Shelving and supports, Brackets, Closet Organizers, Curtain rods, signs, Bulletin Boards, Control Systems, Office Material Holders, Smoke Detectors, Doorbells, Telecommunications Equipment, Remote Control boxes

INSTALLATION:

Wallboard or Wood: no pre-drilling required, anchor is inserted through the fixture and screwed in with an ordinary Phillips screwdriver.
Masonry: requires 3/16" pre-drilled hole with a carbide drill bit.

ANCHORS — DROP-IN

Drop-In Anchors are internally threaded drop-in expansion anchors for use in flush-mount applications in solid base materials.

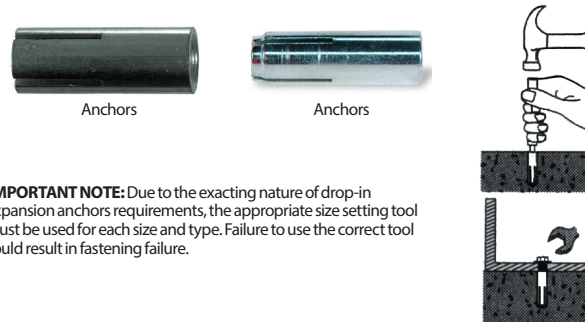
Use in: Concrete, stone

Use with: Threaded rod, bolts, machine screws

Material: Zinc plated carbon steel, 303 Stainless Steel, 316 Stainless Steel

Anchor Size	Hole Size	Thread Depth	Anchor Length	Steel Part No.	303 Stainless Part No.	316 Stainless Part No.
1/4	3/8	3/8	1	F114147	F13865	F114874
3/8	1/2	5/8	1-1/2	F115827	F19307	F12764
1/2	5/8	3/4	2	F16376	F19386	F114201
5/8	7/8	1	2-1/2	F116732	F116074	
3/4	1	1-1/4	3-1/8	F16344	F115891	

Size	Setting Tool Part No.
1/4	F18666
3/8	F117329
1/2	F15784
5/8	F1346
3/4	F116890



IMPORTANT NOTE: Due to the exacting nature of drop-in expansion anchors requirements, the appropriate size setting tool must be used for each size and type. Failure to use the correct tool could result in fastening failure.

Setting Tools *sold separately



Setting Tool

ANCHORS — MACHINE SCREW

Screw Diameter	Anchor Diameter	Hole Depth	Box Qty.	Part No.	Setting Tool Part No.
10-24	3/8	5/8	100	F112051	F132545
1/4-20	1/2	7/8	100	F19107	F13558
5/16-18	5/8	1	100	F15869	F111657
3/8-16	3/4	1	50	F14729	F112990
1/2-13	7/8	1-1/2	50	F111649	F117730



- Setting tool provided with each box/100 anchors
- Provides quick setting in concrete, stone and brick
- Anchor made of: zinc alloy cone and lead ring
- GSA specification FF-325, Group 1, Type 1, Class 1

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ANCHORS — EXPANSION SHIELDS

Single Expansion Machine Screw Anchors are a corrosion-resistant, die cast machine bolt anchor with a single, internal expanding cone for use in concrete, concrete block and brick. The Double Expansion Machine Screw Anchor utilizes the same basic anchor design but with double expansion cones to provide higher loads and better performance in base materials of questionable strength.

Material: Die Cast Zamac 3 Alloy

SINGLE EXPANSION ANCHORS

Screw Size	Drill Bit Size	Embedment Depth	Part No.
1/4-20	1/2	1-3/8	F120581
5/16-18	5/8	1-5/8	F120583
3/8-16	5/8	1-5/8	F120582
1/2-13	7/8	2-1/2	F120580



DOUBLE EXPANSION ANCHORS

Screw Size	Drill Bit Size	Embedment Depth	Part No.
1/4-20	1/2	1-1/2	F120569
5/16-18	5/8	1-3/4	F120573
3/8-16	3/4	2-1/4	F120571
1/2-13	7/8	2-3/4	F120567



ANCHORS — LAG SHIELDS

Anchor Size	Length	Hole Size	Part No.
1/4	1	1/2	F119578
1/4	1-1/2	1/2	F11754
5/16	1-1/4	1/2	F119922
5/16	1-3/4	1/2	F1463
3/8	1-3/4	5/8	F117128
3/8	2-1/2	5/8	F113812
1/2	2	3/4	F118551
1/2	3	3/4	F18539
5/8	2	7/8	F117555
5/8	3-1/2	7/8	F114561



- Used for light to medium duty fastening
- Can be used in concrete, mortar joint, masonry and brick
- Lag screw must protrude at least a 1/4" out from the bottom of the anchor to insure proper expansion
- Made of: high quality zinc alloy
- Rustproof

ANCHORS — WEDGE-ALL SIMPSON

Wedge-All® wedge anchors are a non-bottom bearing, wedge-style expansion anchor for use in solid concrete or grout-filled concrete masonry. A one-piece clip ensures uniform holding capacity that increases as tension is applied. Available in eight diameters and multiple lengths. Use hammer drill masonry bits.

WEDGE-ALL SPECIAL FEATURES:

- One piece wrap around clip.
- Threaded end is chamfered for ease of starting nut.
- Most sizes feature full thread for added versatility.



STAINLESS

Size Diameter x Length	Min. Depth	Thread Length Inches	Drill Bit Size	Box Qty	Stainless Steel Part No.	Stainless Steel Box Qty Part No.
3/8 x 2-1/4	1-3/4	1-1/8	3/8	50	F15184	F120491
3/8 x 2-3/4	1-3/4	1-5/8	3/8	50	F112565	F120492
3/8 x 3	1-3/4	1-7/8	3/8	50	F113614	F120495
3/8 x 3-1/2	1-3/4	2-1/2	3/8	50	F118022	F120493
3/8 x 3-3/4	1-3/4	2-5/8	3/8	50	F16701	F120494
3/8 x 5	1-3/4	3-7/8	3/8	50	F15877	F120496
3/8 x 7	1-3/4	5-7/8	3/8	50	F112280	F120497
1/2 x 2-3/4	2-1/4	1-5/16	1/2	25	F19755	F120479
1/2 x 3-3/4	2-1/4	2-5/16	1/2	25	F17848	F120480
1/2 x 4-1/4	2-1/4	2-13/16	1/2	25	F16675	F120481
1/2 x 5-1/2	2-1/4	4-1/16	1/2	25	F12490	F120482
1/2 x 7	2-1/4	4-9/16	1/2	25	F117895	
1/2 x 8/12*	2-1/4	6	1/2	25	F15983	
5/8 x 3-1/2	2-3/4	1-7/8	5/8	20	F11678	F120498
5/8 x 4-1/2	2-3/4	2-7/8	5/8	20	F116591	F120499
5/8 x 5	2-3/4	3-3/8	5/8	20	F119380	F120500
5/8 x 6	2-3/4	4-3/8	5/8	20	F119895	F120501
5/8 x 7	2-3/4	5-3/8	5/8	20	F12836	F120502
5/8 x 8-1/2*	2-3/4	6	5/8	20	F115950	F120478
5/8 x 10*	2-3/4	6	5/8	10	F110865	
5/8 x 12*	2-3/4	6	5/8	10	F115646	
3/4 x 4-1/4	3-3/8	2-3/8	3/4	10	F19059	F120486
3/4 x 4-3/4	3-3/8	2-7/8	3/4	10	F19471	F120487
3/4 x 5-1/2	3-3/8	3-5/8	3/4	10	F12542	F120488
3/4 x 6-1/4	3-3/8	4-3/8	3/4	10	F118416	F120489
3/4 x 7	3-3/8	5-1/8	3/4	10	F15335	F120490
3/4 x 8-1/2*	3-3/8	6	3/4	10	F119401	F120477
3/4 x 10*	3-3/8	6	3/4	10	F18188	F120476
3/4 x 12*	3-3/8	6	3/4	5	F110268	
7/8 x 6*	3-7/8	2-1/8	7/8	5	F17953	
7/8 x 8*	3-7/8	2-1/8	7/8	5	F118474	
7/8 x 10*	3-7/8	2-1/8	7/8	5	F119199	
7/8 x 12*	3-7/8	2-1/8	7/8	5	F118283	
1 x 6*	4-1/2	2-1/4	1	5	F18692	
1 x 9*	4-1/2	2-1/4	1	5	F12761	
1 x 12*	4-1/2	2-1/4	1	5	F117649	

Sizes with * are 303 Stainless Steel

GALVANIZED

Size Diameter x Length	Min. Depth	Thread Length Inches	Drill Bit Size	Box Qty	Mech. Galv. Part No.
3/8 x 2-1/4	1-3/4	1-1/8	3/8	50	F1965
3/8 x 2-3/4	1-3/4	1-5/8	3/8	50	F119542
3/8 x 3	1-3/4	1-7/8	3/8	50	F116352
3/8 x 3-1/2	1-3/4	2-1/2	3/8	50	F114002
3/8 x 3-3/4	1-3/4	2-5/8	3/8	50	F117669
3/8 x 5	1-3/4	3-7/8	3/8	50	F116503
3/8 x 7	1-3/4	5-7/8	3/8	50	F13127
1/2 x 2-3/4	2-1/4	1-5/16	1/2	25	F18394
1/2 x 3-3/4	2-1/4	2-5/16	1/2	25	F111968
1/2 x 4-1/4	2-1/4	2-13/16	1/2	25	F16270
1/2 x 5-1/2	2-1/4	4-1/16	1/2	25	F115879
1/2 x 7	2-1/4	4-9/16	1/2	25	F19722
1/2 x 8/12	2-1/4	6	1/2	25	F114226
1/2 x 10	4-1/2	6	1/2	25	F18853
1/2 x 12	4-1/2	6	1/2	25	F116763
5/8 x 3-1/2	2-3/4	1-7/8	5/8	20	F119765
5/8 x 4-1/2	2-3/4	2-7/8	5/8	20	F114608
5/8 x 5	2-3/4	3-3/8	5/8	20	F111712
5/8 x 6	2-3/4	4-3/8	5/8	20	F14135
5/8 x 7	2-3/4	5-3/8	5/8	20	F114170
5/8 x 8-1/2	2-3/4	6	5/8	20	F18046
5/8 x 10	2-3/4	6	5/8	10	F118763
5/8 x 12	2-3/4	6	5/8	10	F116022
3/4 x 4-1/4	3-3/8	2-3/8	3/4	10	F17017
3/4 x 4-3/4	3-3/8	2-7/8	3/4	10	F16409
3/4 x 5-1/2	3-3/8	3-5/8	3/4	10	F111020
3/4 x 6-1/4	3-3/8	4-3/8	3/4	10	F16865
3/4 x 7	3-3/8	5-1/8	3/4	10	F116528
3/4 x 8-1/2	3-3/8	6	3/4	10	F17788
3/4 x 10	3-3/8	6	3/4	10	F119728
3/4 x 12	3-3/8	6	3/4	5	F14721
7/8 x 6	3-7/8	2-1/8	7/8	5	F13195
7/8 x 8	3-7/8	2-1/8	7/8	5	F18327
7/8 x 10	3-7/8	2-1/8	7/8	5	F1604
7/8 x 12	3-7/8	2-1/8	7/8	5	F18391
1 x 6	4-1/2	2-1/4	1	5	F14914
1 x 9	4-1/2	2-1/4	1	5	F116976
1 x 12	4-1/2	2-1/4	1	5	F19728

316 STAINLESS

Size Diameter x Length	Min. Depth	Thread Length Inches	Drill Bit Size	Box Qty	316 Stainless Part No.
3/8 x 2-3/4	1-3/4	1-5/8	3/8	50	F113836
3/8 x 3-3/4	1-3/4	2-5/8	3/8	50	F114775
1/2 x 3-3/4	2-1/4	2-5/16	1/2	25	F14989
1/2 x 5-1/2	2-1/4	4-1/16	1/2	25	F119616
5/8 x 4-1/2	2-3/4	2-7/8	5/8	20	F111568
5/8 x 7	2-3/4	5-3/8	5/8	20	F117354
3/4 x 6-1/4	3-3/8	4-3/8	3/4	10	F113999

ANCHORS — WEDGE STRONG-BOLT® 2 SIMPSON

The Strong-Bolt® 2 Wedge Anchor is the next-generation solution for cracked and uncracked concrete. Following rigorous testing according to ICC-ES acceptance criteria, the Strong-Bolt® 2 anchor received classification as a Category 1 anchor, the highest attainable anchor category for performance in cracked concrete under static and seismic loading. It is code-listed by ICC-ES under the 2009 IBC requirements for post-installed anchors in cracked and uncracked concrete. Use hammer drill masonry bits

ZINC

Size	Thread Length	Drill Bit Size	Part No.	Box Qty	Part No. For Box*
1/4 x 1-3/4	15/16	1/4	F122744	100	F122745
1/4 x 2-1/4	1-7/16	1/4	F122746	100	F122747
1/4 x 3-1/4	2-7/16	1/4	F122748	100	F122749
3/8 x 2-3/4	1-5/16	3/8	F125249	50	F133464
3/8 x 3	1-9/16	3/8	F125250	50	F133465
3/8 x 3-1/2	2-1/16	3/8	F133466	50	F133471
3/8 x 3-3/4	2-5/16	3/8	F125251	50	F133472
3/8 x 5	3-9/16	3/8	F125252	50	F133473
3/8 x 7	5-9/16	3/8	F133467	50	F133474
1/2 x 3-3/4	2-5/16	1/2	F115134	25	F115134B25
1/2 x 5-1/2	4-1/16	1/2	F113072	25	F113072B25
1/2 x 7	5-9/16	1/2	F118157	25	F118157B25
1/2X8-1/2	6	1/2	F115583	25	F115583B25
5/8X4-1/2	2-7/8	5/8	F1478	20	F1478B20
5/8X5	3-3/8	5/8	F111982	20	F111982B20
5/8X6	4-3/8	5/8	F111107	20	F111107B20
5/8x7	4-15/16	5/8	F11411	20	F11411B20
5/8X8-1/2	6	5/8	F115203	20	F115203B20
5/8x10	6	5/8	F125254	10	F133475
3/4x5-1/2	3-3/16	3/4	F16346	10	F16346B10
3/4X6-1/4	4-3/8	3/4	F114479	10	F114479B10
3/4X7	5-1/8	3/4	F19073	10	F19073B10
3/4x8-1/2	6	3/4	F112467	10	F112467B10
3/4x10	6	3/4	F125248	10	F133476
1x7	5	1		5	F133477
1x10	5	1	F133469	5	F133478
1x13	5	1	F133470	5	F133479



Material: Carbon-steel stud with special alloy clip.
Finish: Zinc-plated

PRODUCT ATTRIBUTES

- **Tri-segmented clip:** Each segment adjusts independently, increasing follow-up expansion should the hole increase in size as a result of a crack.
- **Dual embossments on each clip segment:** Enables clip to undercut into the concrete thereby increasing follow-up expansion should a crack occur.
- **Standard (ANSI) fractional anchor:** Fits most fixtures and installs with common drill bit sizes and tools.



1

ANCHORS — SIMPSON SLEEVE-ALL®

SLEEVE ANCHORS - HEX HEAD ZINC PLATED

Head Style	Anchor Size	Thread Size	Drill Bit Size	Minimum Embedment	Part No.	Box Qty.	Part No. for Box*
Hex Nut	5/16 x 1-1/2	1/4 - 20	5/16	1-1/4	F16093	100	F120594
Hex Nut	5/16 x 2-1/2	1/4 - 20	5/16	1-1/4	F116816	100	F120595
Hex Nut	3/8 x 1-7/8	5/16 - 18	3/8	1-1/2	F117890	50	F120591
Hex Nut	3/8 x 3	5/16 - 18	3/8	1-1/2	F14443	50	F120592
Hex Nut	3/8 x 4	5/16 - 18	3/8	1-1/2	F11516	50	F120593
Hex Nut	1/2 x 2-1/4	3/8 - 16	1/2	2-1/8	F12995	25	F120584
Hex Nut	1/2 x 3	3/8 - 16	1/2	2-1/4	F118812	25	F120585
Hex Nut	1/2 x 4	3/8 - 16	1/2	2-1/4	F18609	25	F120586
Hex Nut	1/2 x 6	3/8 - 16	1/2	2-1/4	F15419	20	
Hex Nut	5/8 x 2-1/4	1/2 - 13	5/8	2-1/8	F113414	25	F120596
Hex Nut	5/8 x 3	1/2 - 13	5/8	2-3/4	F13115	25	F120597
Hex Nut	5/8 x 4-1/4	1/2 - 13	5/8	2-3/4	F12074	10	F120598
Hex Nut	5/8 x 6	1/2 - 13	5/8	2-3/4	F115326	10	F120599
Hex Nut	3/4 x 4-1/4	5/8 - 11	3/4	3-3/8	F18762	10	F120589
Hex Nut	3/4 x 6-1/4	5/8 - 11	3/4	3-3/8		10	F120590

Sleeve-All® sleeve anchors are pre-assembled expanding sleeve anchors for use in all types of solid base materials. These anchors are available in hex head, flat head and acorn head styles for a wide range of applications.

Material: Carbon and stainless steel.

Finish: Carbon Steel: Zinc plated.



Hex Head Zinc

SLEEVE ANCHORS - HEX HEAD STAINLESS

Head Style	Anchor Size	Thread Size	Drill Bit Size	Minimum Embedment	Part No.
Hex Nut	3/8 x 1-7/8	5/16 - 18	3/8	1-1/2	F112364
Hex Nut	3/8 x 3	5/16 - 18	3/8	1-1/2	F119123
Hex Nut	1/2 x 3	3/8 - 16	1/2	2-1/4	F114813
Hex Nut	1/2 x 4	3/8 - 16	1/2	2-1/4	F113268



Hex Head Stainless

SLEEVE ANCHORS - FLAT HEAD ZINC PLATED

Head Style	Anchor Size	Thread Size	Drill Bit Size	Minimum Embedment	Part No.	Box Qty.	Part No. for Box*
Flat	1/4" x 2"	10 - 24	1/4	1-1/8	F119010	100	F120600
Flat	1/4" x 3"	10 - 24	1/4	1-1/8	F17763	50	F120601
Flat	5/16" x 2-1/2"	1/4 - 20	5/16	1-7/16	F1471	50	F120606
Flat	5/16" x 3-1/2"	1/4 - 20	5/16	1-7/16	F15493	50	F120607
Flat	3/8" x 2-3/4"	5/16 x 1/8	3/8	1-1/2	F111109	50	F120602
Flat	3/8" x 4"	5/16 x 1/8	3/8	1-1/2	F11935	50	F120603
Flat	3/8" x 6"	5/16 x 1/8	3/8	1-1/2	F114562	50	F120605



Phillips Flat

SLEEVE ANCHORS - ACORN HEAD ZINC PLATED

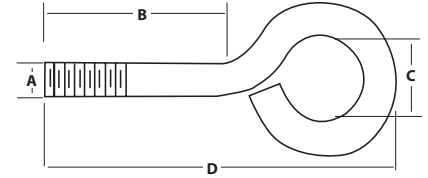
Head Style	Anchor Size	Thread Size	Drill Bit Size	Minimum Embedment	Part No.
Acorn	1/4 x 1-3/8	10 - 24	1/4	1-1/8	F11158
Acorn	1/4 x 2-1/4	10 - 24	1/4	1-1/8	F12862



Acorn Head

EYE BOLTS — TURNED

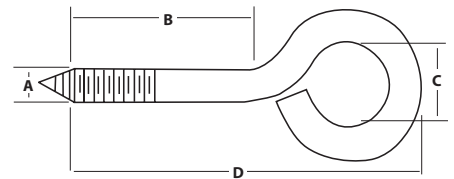
Thread Size (A)	Shank Length (B)	I.D. Eye (C)	Overall Length (D)	Working Load Limit (Lbs.)	1010 Carbon Steel Part No.	304 Stainless Steel Part No.
3/16 (10-24)	1	3/8	1-11/16	38	F1407	
3/16 (10-24)	2	3/8	2-11/16	38	F1828	
3/16 (10-24)	3	3/8	3-11/16	38	F111629	
1/4-20	1	1/2	2	74	F118893	F17567
1/4-20	1-1/2	1/2	2-1/2	74	F17047	
1/4-20	2	1/2	3	74	F111385	F14387
1/4-20	2-1/2	1/2	3-1/2	74	F111794	F116500
1/4-20	3	1/2	4	74	F11571	F113784
1/4-20	4	1/2	5	74	F113994	F1173
1/4-20	5	1/2	6	74	F119508	F14095
1/4-20	6	1/2	7	74	F112532	
5/16-18	1	5/8	2-1/8	96	F112906	
5/16-18	2	5/8	3-1/8	96	F110949	F115724
5/16-18	2-1/2	5/8	3-5/8	96	F18292	F115724
5/16-18	3	5/8	4-1/8	96	F16175	F11235
5/16-18	3-1/2	5/8	4-5/8	96	F119267	F16904
3/8-16	1	3/4	2-1/2	144	F17762	F1136
3/8-16	2	3/4	3-1/2	144	F17651	F19783
3/8-16	2-1/2	3/4	4	144	F16102	
3/8-16	3	3/4	4-1/2	144	F111364	
3/8-16	3-1/2	3/4	5	144	F117148	F18346
3/8-16	4	3/4	5-1/2	144	F110245	F16714
1/2-13	2	1	4	298	F115894	F119923
1/2-13	4	1	6	298	F13700	F115580



- 1010 Carbon Steel with Zinc Plating or 304 Stainless Steel
- Made to IFI 136
- Hex Nut Included

EYE BOLTS — LAG SCREW EYE

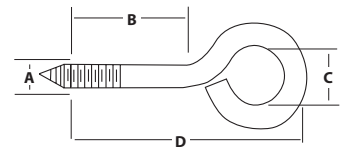
Thread Size (A)	Stem Length (B)	I.D. Eye (C)	Overall Length (D)	1010 Carbon Steel Part No.	18-8 Stainless Steel Part No.
3/16	1-7/16	17/32	2-1/2	F17504	
1/4	2	1/2	3	F16979	
1/4	2-3/4	1/2	3-3/4	F17253	F116699
1/4	4	1/2	5	F11282	F120945
5/16	2	5/8	3-1/4	F14293	
5/16	2-3/4	5/8	4	F116507	F12845
5/16	4-3/4	5/8	6	F119337	F15569
3/8	3-1/16	3/4	4-1/2	F111999	F14492
3/8	5-9/16	3/4	8	F19851	
7/16	3-3/8	1	5-1/4	F111824	
7/16	6-1/8	1	8	F1780	
1/2	3-3/4	1	5-1/4	F111828	



- 1010 Carbon Steel
- Zinc Plated or 18-8 Stainless Steel

EYE BOLTS — SCREW EYE

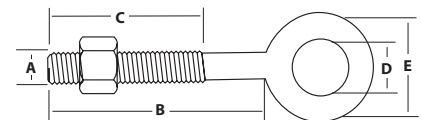
Wire Dia. (A)	Stem Length (B)	I.D. Eye (C)	Overall Length (D)	Part No.
.062	1/4	1/4	21/32	F115537
.080	1/2	11/32	1-1/16	F14239
.120	5/8	25/64	1-5/16	F118345
.162	13/16	15/32	1-5/8	F16243
.212	1-1/32	19/32	2-1/8	F116286
.262	1-5/16	23/32	2-5/8	F14994
.306	1-9/16	13/16	2-7/8	F11185
.308	1-7/8	15/16	3-7/16	F19120
.360	2-1/16	1-1/8	3-7/8	F116647



- 1010 Carbon Steel
- Zinc Plating

EYE BOLTS — FORGED WITH NUTS USA

Thread Size	Shank Length	I.D. Eye	O.D. Eye	Rated Capacity In Lbs.	USA Part No.
1/4-20	1	1/2	1	400	F15868
1/4-20	2	1/2	1	400	F117515
1/4-20	4	1/2	1	400	F12515
5/16-18	2-1/4	5/8	1-1/4	800	F118069
5/16-18	4	5/8	1-1/4	800	F14904
3/8-16	2-1/2	3/4	1-1/2	1200	F116947
3/8-16	4-1/2	3/4	1-1/2	1200	F12806
3/8-16	6	3/4	1-1/2	1200	F18202
1/2-13	3-1/4	1	1-15/16	2100	F12472
1/2-13	6	1	1-15/16	2100	F112963
5/8-11	4	1-3/8	2-1/2	3200	F115647
5/8-11	6	1-3/8	2-1/2	3200	F13832
5/8-11	8	1-3/8	2-1/2	3200	F14090
3/4-10	4	1-1/2	2-13/16	4500	F14691
3/4-10	6	1-1/2	2-13/16	4500	F17439
1-8	6	1-13/16	3-9/16	8500	F1657

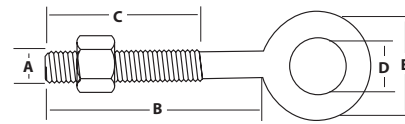


- Forged
- 1030 Carbon Steel
- Hot Dip Galvanized
- Plain Pattern
- Hex Nut Included

EYE BOLTS — FORGED WITH NUTS PLAIN PATTERN

1

DIA (A) x SHANK (B)	Working Load Limit In Pounds	Thread Length (C)	I.D. Eye (D)	O.D. Eye (E)	Import Part No.
1/4 x 2	650	1.50	.50	1.00	F16358
1/4 x 4	650	2.50	.50	1.00	F15855
1/4 x 5	650	2.62	.50	1.00	F123108
5/16 x 2-1/4	1200	1.50	.63	1.25	F19560
5/16 x 4-1/4	1200	2.50	.63	1.25	F123115
5/16 x 6	1200	-	.63	1.25	F123116
3/8 x 2-1/2	1200	1.50	.75	1.50	F11299
3/8 x 3	1500	-	.75	1.50	F123113
3/8 x 4-1/2	1500	2.50	.75	1.50	F115251
3/8 x 6	1500	2.50	.75	1.50	F112980
3/8 x 8	1500	-	.75	1.50	F123114
1/2 x 2	2600	1.50	1.00	2.00	F123105
1/2 x 3-1/4	2600	1.50	1.00	2.00	F115016
1/2 x 4-1/2	2600	-	1.00	2.00	F123106
1/2 x 6	2600	3.00	1.00	2.00	F116209
1/2 x 8	2600	3.00	1.00	2.00	F123107
1/2 x 10	2600	3.00	1.00	2.00	F113296
1/2 x 12	2600	2.25	1.22	2.00	F123104
5/8 x 4	5200	2.00	1.25	2.50	F11828
5/8 x 6	5200	3.00	1.25	2.50	F119708
3/4 x 6	7200	3.00	1.50	2.75	F11113
3/4 x 8	7200	3.00	1.50	3.00	F123112
7/8 x 8	10600	3.00	1.75	3.50	F123119
1 x 6	10000	3.00	2.00	4.00	F18563
1 x 9	10000	4.00	2.00	4.00	F123109

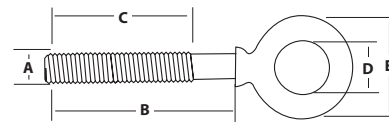


- Forged
- 1030 Carbon Steel
- Hot Dip Galvanized
- Plain Pattern
- Heavy Hex Nut Included

Working Load Limit applies to straight line pull only. These ratings apply only when the shoulder is in full contact with the mating part of the load and the load is applied in the plane of the eye. When applying load at an angle the Working Load Limit is drastically reduced. Never insert the point of a hook in an eyebolt. Always use a shackle.
CAUTION: NEVER EXCEED THE WORKING LOAD LIMIT.

EYE BOLTS — FORGED WITH SHOULDER PATTERN

DIA (A) x Shank (B)	Working Load Limit In Pounds	Thread Length (C)	I.D. Eye (D)	O.D. Eye (E)	Import Part No.
1/4 x 4	650	2.50	0.88	0.88	F123080
5/16 x 2-1/4	650	1.50	.625	1.11	F123088
3/8 x 2-1/2	1550	1.50	0.75	1.38	F123085
3/8 x 4-1/2	1550	2.50	0.75	1.38	F123086
3/8 x 6	1550	3.00	0.75	1.38	F123087
1/2 x 2	2600	1.50	1.00	1.75	F123074
1/2 x 3-1/4	2600	1.50	1.00	1.75	F123075
1/2 x 4-1/2	2600	2.50	1.00	1.75	F123076
1/2 x 8	2600	4.00	1.00	1.75	F123078
5/8 x 4	5200	2.00	1.25	2.25	F123092
5/8 x 6	5200	3.00	1.25	2.25	F115888
5/8 x 8	5200	4.00	1.25	2.25	F123093
3/4 x 4-1/2	7200	2.00	1.50	2.75	F123082
3/4 x 6	7200	3.00	1.50	2.75	F123083
3/4 x 8	7200	4.00	1.50	2.75	F123084

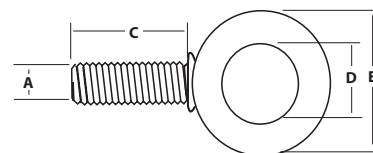


- Forged
- 1030 Carbon Steel
- Self-Colored
- Shoulder Pattern
- Mfg. in Accordance with ANSI B18.15

Working Load Limit applies to straight line pull only. These ratings apply only when the shoulder is in full contact with the mating part of the load and the load is applied in the plane of the eye. When applying load at an angle the Working Load Limit is drastically reduced. Never insert the point of a hook in an eyebolt. Always use a shackle.
CAUTION: NEVER EXCEED THE WORKING LOAD LIMIT.

EYE BOLTS — MACHINERY USA

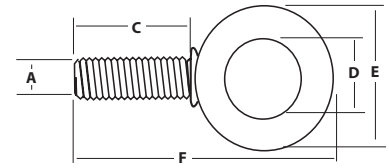
DIA (A) x Thread Length (C)	Working Load Limit In Pounds	Eye I.D. (D)	Eye O.D. (E)	USA Part No.
1/4 x 1	500	.69	1-3/16	F112578
5/16 x 1-1/8	900	.81	1-7/16	F11556
3/8 x 1-1/4	1400	.94	1-21/32	F18901
7/16 x 1-3/8	2000	1.00	1-27/32	F12835
1/2 x 1-1/2	2600	1.12	2-1/16	F12043
5/8 x 1-3/4	4000	1.31	2-1/2	F15940
3/4 x 2	6000	1.44	2-13/16	F11386
7/8 x 2-1/4	7000	1.56	3-1/4	F115496
1 x 2-1/2	9000	1.69	3-9/16	F111416



- Forged Carbon Steel
- ASTM A489 fully threaded
- Self Colored

EYE BOLTS — MACHINERY IMPORT

DIA (A) x Thread Length (C)	Working Load Limit In Pounds	Eye I.D. (D)	Eye O.D. (E)	OAL (F)	Import Part No.
1/4 x 1	500	.50	.88	1.94	F118958
5/16 x 1-1/8	900	.88	1.38	2.74	F123094
3/8 x 1-1/4	1400	.75	1.38	2.70	F110077
7/16 x 1-3/8	2000	1.07	1.81	3.55	F123095
1/2 x 1-1/2	2600	1.00	1.75	3.38	F1807
9/16 x 1-5/8	3000	1.20	2.25	4.20	F123096
5/8 x 1-3/4	4000	1.25	2.25	4.19	F18702
3/4 x 2	6000	1.50	2.75	4.94	F115417
7/8 x 2-1/4	7000	1.75	3.25	5.72	F117518
1 x 2-1/2	9000	2.00	3.75	6.47	F113008

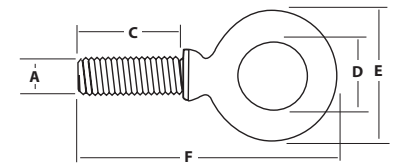


- Forged Carbon Steel
- Quenched and Tempered
- Self Colored

EYE BOLTS — FORGED SHOULDER PATTERN METRIC

METRIC

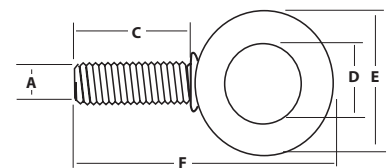
Metric Size (A)	Thread Pitch	Thread Length (C)	I.D. Eye (D)	O.D. Eye (E)	Overall Length (F)	Center of Eye to Shoulder	Rated Capacity In Kgs.	Part No.
M6	1.0	12	19	30.0	46.9	18.5	210	F119791
M8	1.25	16	25	43.0	64.8	27.8	500	F115149
M10	1.5	20	27	46.0	75.5	30.9	740	F114658
M12	1.75	24	30	54.0	86.8	34.0	1,030	F17921
M14	2.0	28	35	65.0	104.2	40.9	1,600	F116320
M16	2.0	32	35	65.0	108.2	40.9	1,600	F11862
M18	2.5	36	38	71.5	118.3	44.7	2,140	F113118
M20	2.5	40	41	81.0	135.4	52.5	2,860	F112496
M24	3.0	48	44	90.4	152.8	57.1	3,850	F13001
M36	4.0	72	63	131.8	192.8	81.8	8,970	F16216
M42	4.5	84	73	152.4	223.5	101.6	11,960	F13975
M45	4.5	84	73	152.4	263.7	101.6	12,720	F13189
M48	5.0	96	82	174.6	296.0	111.0	16,400	F16955
M52	5.0	96	82	174.6	296.0	111.0	17,300	F18257



- Forged
- 1030 Carbon Steel
- Self-Colored
- Shoulder Pattern
- Mfg. in Accordance with ANSI B18.15
- Made in USA

EYE BOLTS — FORGED METRIC

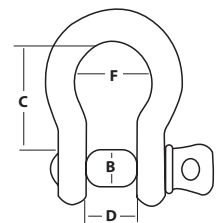
Metric Size (A)	Thread Pitch	Thread Length (C)	I.D. Eye (D)	O.D. Eye (E)	Width of Shoulder	Overall Length (F)	Rated Capacity In Kgs.	Part No.
M6	1.0	13.0	15	27	15	27	70	F112107
M8	1.25	13.0	20	36	20	36	140	F114631
M10	1.5	17.0	25	45	25	45	230	F16350
M12	1.75	20.5	30	54	30	53	340	F110344
M14	2.0	27.0	35	63	35	62	490	F16462
M16	2.0	27.0	35	63	35	62	700	F12857
M20	2.5	30.0	40	72	40	71	1200	F18978
M36	4.0	54.0	70	126	75	128	5100	F116558
M42	4.5	63.0	80	144	85	147	7000	F110926



- Forged
- DIN 580
- 1015 Carbon Steel
- Shoulder Pattern
- Mfg. to European standard

SHACKLES — SCREW PIN ANCHOR

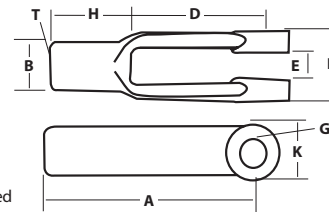
Nominal Shackle Size	Working Load Limit in Tons	Diameter Pin (B)	Inside Length (C)	Inside at Pin (D)	Width at Bow (F)	Import Part No.	USA Part No.
1/4	1/2	5/16	1.06	0.47	0.75	F111818	F116258
5/16	3/4	3/8	1.25	0.53	0.84	F13713	F11523
3/8	1	7/16	1.44	0.63	1.00	F13764	F112031
7/16	1 1/2	1/2	1.69	0.75	1.13	F15472	F1404
1/2	2	5/8	1.88	0.81	1.25	F118874	F114137
5/8	3 1/4	3/4	2.44	1.06	1.69	F14164	F11559
3/4	4 3/4	7/8	2.88	1.19	1.94	F12682	F114966
7/8	6 1/2	1	3.38	1.44	2.19	F13011	F110371
1	8 1/2	1 1/8	3.81	1.69	2.63	F12882	F1166



- Type IV A
- Class 2
- Grade A
- Hot Galv
- Forged Carbon Steel
- Heat Treated
- Oversize Pins
- Permanently Marked with Size & Working Load Limit
- Do not use screw pin shackles if the pin can roll under load and unscrew.
- Never exceed the working load limit.

YOKE ENDS — ADJUSTABLE

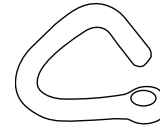
Thread (T)	Overall Length from Center of Eye (A)	O.D. of Tapped End (B)	Length of Yoke from Center of Eye (D)	Yoke Inside Width (E)	Yoke Outside Width (F)	ID of Eye (G)	Length of Tapped End (H)	O.D. of Eye (K)	Part No.
1/4-28	2	7/16	1-1/4	9/32	5/8	1/4	3/4	1/2	F115943
5/16-24	2-1/4	1/2	1-7/16	11/32	3/4	5/16	13/16	19/32	F120074
3/8-24	2-1/2	5/8	1-5/8	7/16	7/8	3/8	7/8	11/16	F111300
7/16-20	2-7/8	23/32	1-7/8	1/2	1	7/16	1	13/16	F115073
1/2-20	3	13/16	1-7/8	9/16	1-1/8	1/2	1-1/8	15/16	F116123
5/8-18	4-15/16	1-1/16	3-11/16	11/16	1-3/8	5/8	1-1/4	1-3/16	F13310



- Forged
- Steel
- Self-Colored
- Made in USA

LINKS — COLD SHUTS

Size	Working Load Limit in Pounds	Import Part No.
3/16	450	F112775
1/4	750	F16219
5/16	1250	F1209
3/8	1900	F116230
1/2	3500	F14884

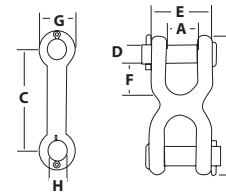


- Zinc-Plated
- Use one size larger than chain diameter
- **Do not used for overhead lifting**
- **Only to be used with proof coil chain overhead lifting**

Caution: Only to be used with proof coil chain.
Never exceed the working load limited

LINKS — TWIN CLEVIS

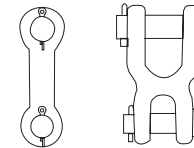
Size	A	B	C	D	E	F	G	H	Working Load Limit in Tons	Part No.
1/4-5/16	0.47	2.50	1.56	0.38	1.31	0.43	0.94	0.50	4700	F13896
3/8	0.53	2.81	1.81	0.44	1.53	0.50	1.00	0.56	6600	F111653
7/16-1/2	0.65	3.62	2.31	0.56	1.91	0.63	1.31	0.81	11300	F110272



- Grade 43
- Forged Steel
- Heat Treated
- Plated
- **Not to be used for overhead lifting**

LINKS — DOUBLE CLEVIS

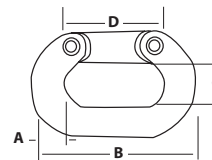
Size	Working Load Limit in Tons	Small End	Large End	Part No.
1/4	2600	0.50	0.75	F123121
5/16-3/8	5400	0.56	1.00	F123122
7/16	7000	0.69	1.13	F123124
1/2	9200	0.81	1.25	F123120
5/8	17500	0.78	1.63	F123123



- Grade 70
- Forged Steel
- Heat Treated
- Zinc Plated
- **Not to be used for overhead lifting**

LINKS — TWO PIECE CONNECTING

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Part No.
3/16	800	0.78	1.19	0.34	0.69	F14110
1/4	1325	1.00	1.50	0.44	0.88	F113234
5/16	1950	1.16	1.69	0.47	0.94	F16140
3/8	2750	1.38	2.06	0.56	1.13	F189
1/2	4750	1.72	2.66	0.66	1.47	F14345



- Forged — Heat Treated
- Zinc Plated
- Grade 30
- **Not to be used for overhead lifting or load securement**

LINKS — REPAIR / LAP

Size	Working Load Limit in Pounds	Import Part No.
3/16x1	240	F114980
1/4x1-1/4	400	F119185
5/16x1-1/2	900	F116536
3/8x1-5/8	1250	F111335
3/8x2	2125	F110202

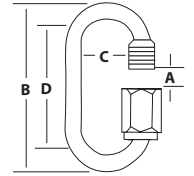


- Zinc/electro galvanized
- **Not to be used for overhead lifting or load securement**

LINKS — RAPID / QUICK

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Electro Galv Part No.	316 Stainless Part No.
3/16	660	0.25	2.06	0.50	1.69	F16392	F19460
1/4	880	0.31	2.38	0.56	1.88	F118560	F17809
5/16	1760	0.38	2.94	0.69	2.31	F110787	F1947
3/8	2200	0.44	3.19	0.69	2.44	F111686	F11042
1/2	3300	0.56	4.25	0.94	3.25	F17328	F123125

- RR-C-271d
- Type II
- Forged Steel
- Heat Treated
- Electro Galv
- Grade 80
- **Only to be used with proof coil chain do not used for overhead lifting**
- **Never exceed the working load limited**

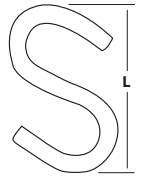


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HOOKS — S HOOK ZINC USA

Size	Wire Diameter	Inside Length	Overall Length	I.D. Top Eye	I.D. Bottom Eye	Part No.
5/32	.105	1	1-9/32	3/8	3/8	F15381
3/16	.114	1-3/8	1-11/16	3/8	3/8	F1868
7/32	.148	1-13/64	1-1/2	7/16	7/16	F19473
1/4	.186	1-3/4	2-1/8	21/32	21/32	F18651
5/16	.220	1-7/8	2-9/16	3/4	3/4	F119630
3/8	.235	2-23/64	3-5/64	25/32	25/32	F114965

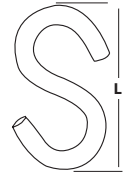
- Steel Zinc Plated
- Used to attach various accessories to chain
- Low working load limits only
- **Not to be used for overhead lifting**
- Made in USA



HOOKS — S HOOKS STAINLESS STEEL USA

Wire Diameter	Overall Length	I.D. Top Eye	I.D. Bottom Eye	Part No.
.177	1-1/2	7/16	7/16	F118209
.192	1-3/4	17/32	17/32	F11164
.262	2	9/16	9/16	F113001
.262	2-1/4	11/16	11/16	F111455
.306	2-1/2	25/32	25/32	F116668
.306	3	15/16	15/16	F16320

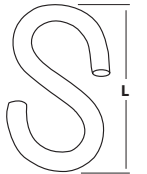
- 18-8 Stainless Steel
- Used to attach various accessories to chain
- Low working load limits only
- **Not to be used for overhead lifting**
- Made in USA



HOOKS — S HOOKS IMPORT

Wire Size	Length (L)	Zinc Part No.	316 Stainless Part No.
1/8	1-1/8	F123131	F123127
3/16	1-7/8	F123132	F123128
1/4	3-1/8	F123130	F123126
5/16	3-1/8	F123134	F123129
3/8	3-7/8	F123133	

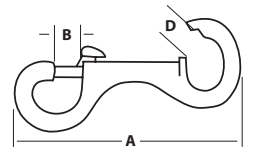
- Zinc or 316 Stainless Steel
- **Not to be used for overhead lifting**



HOOKS — SNAP OPEN ENDED

Snap Opening (B)	Overall Length (A)	Open Ended Eye Opening (D)	Part No.
3/8	3-1/2	1/2	F111975

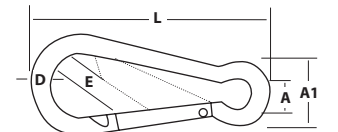
- Steel Nickel Plated
- **Not to be used for overhead lifting**



HOOKS — SNAP

Dia Size (D)	Length (L)	(A1)	(A)	(E)	(B)	Working Load Limit WLL	Breaking Load In Pounds	Import Part No.
3/16	2.05	0.41	0.25	0.33	0.31	220	0.31	F16649
1/4	2.46	0.53	0.33	0.37	0.37	260	0.37	F13226
5/16	3.28	0.53	0.33	0.37	0.47	500	0.47	F110876
3/8	3.69	0.57	0.33	0.37	0.53	550	0.53	F117671
1/2	6.56	0.90	0.57	1.07	0.82	1200	0.82	F16997

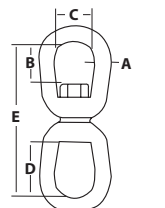
- Steel Zinc Plated/electro galvanized
- **Not to be used for overhead lifting**



SWIVEL — EYE TO EYE

Size (A)	B	C	E	F	Part No.
1/4	.69	.75	.94	2.88	F123136
5/16	.75	1.00	1.13	3.63	F123139
3/8	.94	1.25	1.38	4.25	F123138
1/2	1.38	1.50	1.94	5.63	F123135
5/8	1.63	1.75	2.31	6.63	F123140
3/4	1.81	2.00	2.56	7.25	F123137

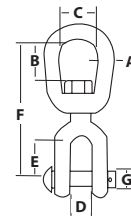
- Hot Galvanized
- Drop Forged
- Swivels are not intended to rotate under load



SWIVEL — JAW TO EYE

Size (A)	B	C	D	E	F	G	Part No.
1/4	.69	.75	.38	.88	2.69	.25	F123141
5/16	.88	1.00	.50	.88	2.88	.31	F123144
3/8	.94	1.25	.63	1.00	3.50	.38	F123143
1/2	1.38	1.50	.81	1.31	4.50	.50	F18751
5/8	1.63	1.75	1.00	1.50	5.31	.63	F123145
3/4	1.75	2.00	1.19	1.75	6.06	.75	F123142

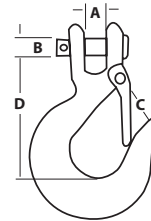
- Hot Galvanized
- Drop Forged
- Swivels are not intended to rotate under load



HOOKS — LATCHING CLEVIS SLIP IMPORT

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Import Part No.
1/4	1950	.38	.38	.88	2.56	F110081
5/16	2875	.44	.44	1.00	2.81	F116278
3/8	4000	.56	.47	1.28	3.25	F12014
1/2	6500	.63	.56	1.38	4.00	F19860

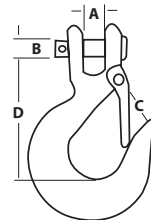
- Grade 43
- Stainless Safety Latch
- Forged Steel
- Heat Treated
- Plated
- **Not to be used for overhead lifting**



HOOKS — LATCHING CLEVIS SLIP GRADE 70 IMPORT

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Import Part No.
1/4	2600	0.38	0.38	0.34	1.94	F123101
5/16	3900	0.44	0.44	0.41	2.38	F123103
3/8	5400	0.56	0.47	0.50	2.63	F123102
1/2	9200	0.69	0.63	0.66	3.50	F123100

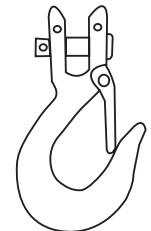
- Grade 70
- Stainless Safety Latch
- Forged Steel
- Heat Treated
- Plated Yellow Chromate
- **Not to be used for overhead lifting**



HOOKS — CLEVIS SLIP GRADE 80 IMPORT

Size of Chain	Work Load Limit (lbs)	Part No.
3/8	7100	F16060

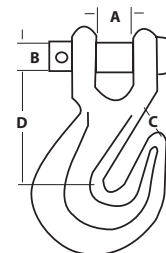
- Forged
- Alloy Steel - Heat Treated
- Grade 80
- Import



HOOKS — CLEVIS GRAB GRADE 80

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Import Part No.
5/16	4700	0.44	0.44	0.41	2.38	F119851
3/8	6600	0.56	0.47	0.50	2.63	F115684
1/2	11300	0.69	0.63	0.66	3.50	F123097
5/8	15300					F123098

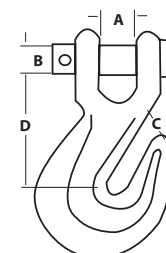
- Grade 80
- Forged Steel
- Heat Treated
- Painted Red
- **Not to be used for overhead lifting**



HOOKS — CLEVIS GRAB GRADE 70

Size	Working Load Limit in Pounds	(A) Inches	(B) Inches	(C) Inches	(D) Inches	Import Part No.
1/4	3,150	.32	.38	.31	1.94	F132362
5/16	4,700	.43	.44	.38	2.38	F132365
3/8	6,600	.48	.56	.47	2.63	F132363
1/2	11,300	.57	.69	.63	3.50	F132364

- Grade 70
- Forged Steel
- Heat Treated
- Painted Red
- **Not to be used for overhead lifting**



HOOKS — EYE SLIP IMPORT

Size of Chain	Rated Capacity	Part No.
1/4	1250	F1850
5/16	1900	F12498
3/8	2650	F17409

- Forged
- Carbon Steel
- Zinc Plated
- Grade 30
- For use with Proof Coil Chain (Grade 30)
- **Not to be used for overhead lifting**

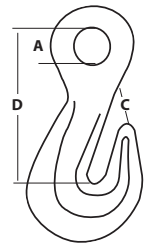


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HOOKS — EYE GRAB IMPORT

Size	Working Load Limit in Pounds	(A) Inches	(C) Inches	(D) Inches	Import Part No.
3/8	5400	0.69	0.50	2.56	F12248
1/2	9200	0.88	0.59	3.50	F12081

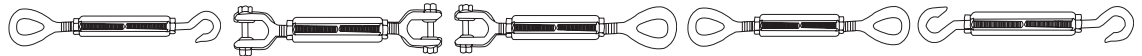
- Grade 43
- Forged Steel
- Heat Treated
- **Not to be used for overhead lifting**



LOAD BINDERS + CHAIN ASSEMBLIES, SEE PAGE 8-10-6 CARGO CONTROL

TURNBUCKLES — IMPORT

- Forged
- 1030 Carbon Steel
- Hot Dip Galvanized



Thread Dia x Take Up	HOOK & EYE		JAW & JAW		JAW & EYE		EYE & EYE		HOOK & HOOK	
	Part No.	Working Load Limit in lbs.	Part No.	Working Load Limit in lbs.	Part No.	Working Load Limit in lbs.	Part No.	Working Load Limit in lbs.	Part No.	Working Load Limit in lbs.
1/4 x 4	F123152	400	F123164	500		500	F123188	500	F123200	400
5/16 x 4 1/2	F123156	700	F123168	800	F123180	800	F123192	800	F123204	700
3/8 x 6	F123155	1000	F123167	1200		1200	F123191	1200	F123203	1000
1/2 x 6	F123150	1500	F123162	2200		2200	F123186	2200	F123198	1500
1/2 x 9	F123151	1500	F123163	2200	F123175	2200	F123187	2200	F123199	1500
1/2 x 12	F123149	1500	F123161	2200	F123173	2200	F123185	2200	F123197	1500
5/8 x 6	F123158	2250	F123170	3500	F123182	3500		3500	F123206	2250
5/8 x 9	F123159	2250	F123171	3500	F123183	3500	F123195	3500	F123207	2250
5/8 x 12	F123157	2250	F123169	3500	F123181	3500	F123193	3500	F123205	2250
3/4 x 6	F123154	3000	F123166	5200	F123178	5200	F123190	5200	F123202	3000
3/4 x 12	F123153	3000	F123165	5200	F123177	5200	F123189	5200	F123201	3000
7/8 x 12	F123160	4000	F123172	7200	F123184	7200	F123196	7200	F123208	4000

TURNBUCKLES — USA

- Forged
- 1030 Carbon Steel
- Hot Dip Galvanized
- **Made in USA**



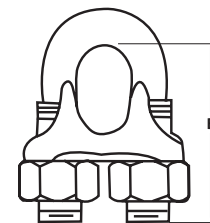
Size in Inches Thread Dia. x Take Up	Average Overall Length Closed	EYE & EYE Part No.	EYE & HOOK Part No.
1/4 x 4	8-1/4	F119422	F112414
5/16 x 4-1/2	9-9/16	F114366	F17576
3/8 x 6	11-7/8	F12500	
1/2 x 6	13	F14551	F19734

FASTENERS

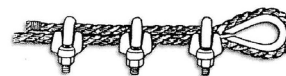
12 Chain & Cable Hardware

WIRE ROPE CLIPS — MALLEABLE

Size for Rope Dia.	Inside Length of U-Bolt (B)	Min. No. of Clips for Max. Strength	USA Galvanized Part No.	Import Zinc Plated Part No.
1/8	23/32	2-4	F15415	F119394
3/16	1-5/16	2-4	F1906	F113197
1/4	1-1/32	2-4	F18147	F114427
5/16	1-5/16	2-4	F19229	F16634
3/8	1-1/2	2-4	F118838	F15829
7/16	1-7/8	3-4	F1970	
1/2	1-7/8	3-4	F16419	F11688
5/8	2-3/8	3-4	F118358	F17159
3/4	2-3/4	4-5	F113798	F114074
7/8	3-1/8	4-5	F110573	F15206
1	3-1/2	4-5	F14614	



- 1030 Carbon Steel
- Zinc Plated or Galvanized
- All Regular Hex Nuts



Malleable rope clips are to be used for light duty, non-critical applications.

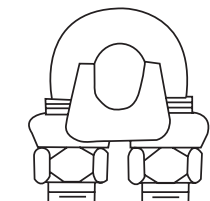
The correct way to attach U-bolts is shown above:

The "U" section is in contact with the ropes' "dead end" and is clear of the thimble. The "live end", carrying the load, is gripped by the saddle of the clamp. **DONOT USE** malleable wire rope clips for critical or lifting applications. ...Load may be suddenly released resulting in injury or death.

Caution: Never use any wire rope clamp to directly connect two straight lengths of wire rope. Not designed for overhead lifting

WIRE ROPE CLIPS — FORGED

Size for Rope Dia.	Inside Length of U-Bolt	Min. No. of Clips for Max. Strength	USA Part No.	Import Part No.
1/8	3/4	2	F12060	F1252
3/16	31/32	2	F118073	F118980
1/4	1-7/32	2	F1932	F113813
5/16	1-5/8	2	F14295	F15857
3/8	1-5/8	2	F14912	F14750
1/2	1-29/32	3	F15396	F110622
5/8	2-3/8	3	F18244	F110170
3/4	2-13/16	4	F111737	F12055
7/8	3-1/8	4	F114118	F113948
1	3-1/2	5	F110214	F114751



- 1030 Carbon Steel
- Hot Dip Galvanized



The correct way to attach U-bolts is shown above:

The "U" section is in contact with the ropes' "dead end" and is clear of the thimble. The "live end", carrying the load, is gripped by the saddle of the clamp. **DONOT USE** malleable wire rope clips for critical or lifting applications. ...Load may be suddenly released resulting in injury or death.

Caution: Never use any wire rope clamp to directly connect two straight lengths of wire rope. Not designed for overhead lifting.

WIRE ROPE THIMBLES

Size	Part No.
1/8	F13466
3/16	F119232
1/4	F112336
5/16	F115490

Size	Part No.
3/8	F111280
1/2	F116205
5/8	F112645

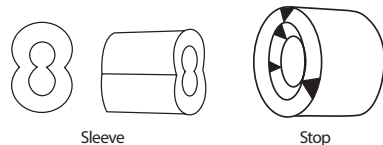
- **Material:** Steel, Galvanized
- Standard duty
- Match thimble size to cable diameter



SWAGE FITTINGS

Uncoated Cable Size Inch	Aluminum Sleeves Part No.	Aluminum Stops Part No.	ZP Copper Sleeves Part No.
1/16	F1235	F16606	F11870
3/32	F116481	F18844	F114630
1/8	F118775	F17516	F116119
5/16	F115490		

Uncoated Cable Size Inch	Aluminum Sleeves Part No.	Aluminum Stops Part No.	ZP Copper Sleeves Part No.
5/32	F118987	F118944	
3/16	F13889	F14769	
1/4	F113026	F17472	
5/16	F115490		



- **Material:** Aluminum or ZP Copper
- Sleeves, when properly applied, are capable of holding the rated breaking strength of the cable
- Stops are capable of holding one-third to one-half of the rated breaking strength of the cable

TOOLS — SWAGING / CABLE CUTTER

- Jaws are made of forged Alloy steel with heat treatment
- Hand swagers are designed for crimping copper and aluminum ovals and stops

24" SWAGING TOOL

F18861

1/16, 3/32, 1/8, 5/32, 3/16



30" SWAGING TOOL

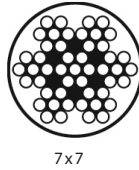
F15267

5/32, 1/4, 5/16



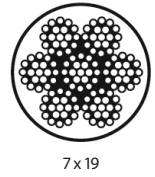
AIRCRAFT CABLE — GALVANIZED VINYL COATED

DIA	O. D.	Breaking Strength (Lbs)	Part No.
1/16	3/32	480	F123214
1/16	1/8	480	F123215
3/32	1/8	920	F123217
1/8	3/16	1700	F123216



- **Material:** Galvanized high carbon steel
- Clear vinyl coating
- 250 ft. reels
- **Not suitable for use in aircraft controls**
- Finished diameter is the total diameter with the clear vinyl coating

DIA	O. D.	Breaking Strength (Lbs)	Part No.
1/8	3/16	1700	F123219
1/4	3/8	7000	F123218
5/16	3/8	9800	F123222
3/8	7/16	14400	F123221



- **Material:** Galvanized high carbon steel
- Clear vinyl coating
- 250 ft. reels
- **Not suitable for use in aircraft controls**
- Finished diameter is the total diameter with the clear vinyl coating

*Listed for comparison only. Actual operating loads may vary, but should never exceed recommended design factor or 20% of listed Breaking Strength.

All printed information subject to corrections.

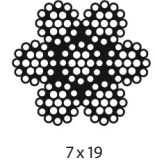
AIRCRAFT CABLE — GALVANIZED UNCOATED

Diameter	Breaking Strength (Lbs)	Part No.
1/16	480	F123146
3/32	920	F123148
1/8	1700	F123147



- **Material:** Galvanized high carbon steel
- Uncoated
- 250 ft. reels
- **Not suitable for use in aircraft controls**

Diameter	Breaking Strength (Lbs)	Part No.
1/8	2000	F123210
3/16	4200	F123211
1/4	7000	F123209
5/16	9800	F123213
3/8	14400	F123212



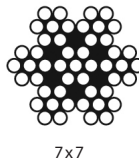
- **Material:** Galvanized high carbon steel
- Uncoated
- 250 ft. reels
- **Not suitable for use in aircraft controls**

*Listed for comparison only. Actual operating loads may vary, but should never exceed recommended design factor or 20% of listed Breaking Strength.

All printed information subject to corrections.

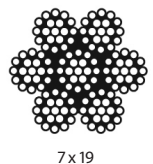
AIRCRAFT CABLE — 304 STAINLESS STEEL

Diameter	Breaking Strength (Lbs)	Part No.
1/16	480	F123223
3/32	920	F123227
1/8	1760	F123225
3/16	3700	F123226
1/4	7800	F123224



- **Material:** Type 304 Stainless Steel
- 250 ft. reels
- Not suitable for use in aircraft controls

Diameter	Breaking Strength (Lbs)	Part No.
3/32	920	F123231
1/8	1760	F123229
5/32	2400	F123234
3/16	3700	F123230
1/4	6400	F123228
5/16	9000	F123233
3/8	12000	F123232



- **Material:** Type 304 Stainless Steel
- 250 ft. reels
- Not suitable for use in aircraft controls

*Listed for comparison only. Actual operating loads may vary, but should never exceed recommended design factor or 20% of listed Breaking Strength.

All printed information subject to corrections.

CHAIN — SINGLE JACK

Size	Length	Part No.
#12	250'	F121450



FASTENERS

12 Chain & Cable Hardware

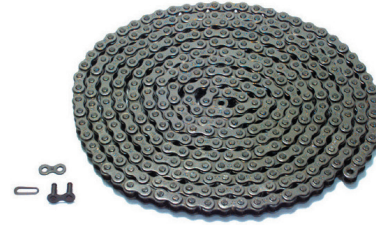
CHAIN — ROLLER

ASA Chain No.	Pitch Size	Roller Width	Length	Avg. Tensile Strength in lbs	Part No.
35	3/8	3/16	10 ft.	2,530	F112424
40	1/2	5/16	10 ft.	4,290	F116327
41	1/2	1/4	10 ft.	2,875	F111658
50	5/8	3/8	10 ft.	7,040	F113623
60	3/4	1/2	10 ft.	9,900	F15385
80	1	5/8	10 ft.	17,600	F17939

Typical Chain Applications Include:

All types of farming equipment, water well and drilling rigs, canning and food processing industry, conveyors, and off-road construction machinery.

- Solid Rollers
- Shot-peened Parts
- Factory Pre-stretched
- Packaged in a sturdy box
- 10-foot Lengths
- Import



CHAIN — ROLLER REPAIR LINKS

ASA Chain No.	Pitch Size	Offset Part No.	Connecting Part No.	Connecting w/ Open Clip Part No.
25	1/4			F117904
35	3/8	F18351	F116483	F116555
40	1/2	F13886		F112756
41	1/2	F12509		F17586
50	5/8	F16459	F113955	F15233
60	3/4	F112483	F114251	F15843
80	1	F110901	F110638	

Import



Off-set Link



Connecting Link
*Press Fit



Connecting Link
w/Open Clip

WIRE — SAFETY & MECHANICS

- Soft tempered wire used in many industries to secure nuts, bolts, and hardware subject to vibration
- Good corrosion resistance
- Dispenser is a convenient plastic container with a screw-on lid & belt clip
- Can generally be used in temperatures up to 700° F (371° C)
- Offers greater security than a cotter pin or lock washer
- Can be used for numerous jobs around the home, farm, auto and factory

STAINLESS STEEL SAFETY / LOCK WIRE

Size	Description	Packaging	Part No.
.025"	304 Stainless	1 lb. Dispenser	F44304
.032" (.81mm)	304 Stainless	1 lb. Dispenser	F41077
.041" (1.04mm)	304 Stainless	1 lb. Dispenser	F4747
.051" (1.30mm)	304 Stainless	1 lb. Dispenser	F4122
.063" (1.60mm)	304 Stainless	1 lb. Spool	F9879



MECHANICS WIRE

Size	Description	Packaging	Part No.
18 ga. (.040")	Steel	1 lb. spool	F110363
18 ga. (.040")	Steel	5 lb. spool	F19680
16 ga. (.051")	Steel	1 lb. spool	F14905
16 ga. (.051")	Steel	5 lb. spool	F1254
14 ga. (.064")	Steel	1 lb. spool	F19582
14 ga. (.064")	Steel	5 lb. spool	F19109



PLUMBERS STRAPPING

METAL HANGER STRAP (PLUMBERS TAPE)

Size	Part No.
3/4" x 50 ft.	F118185

- Quick and inexpensive way to hang pipe, duct work, etc. from joists or rafters
- 28 gauge galvanized steel with holes

