



Metric Fasteners

A

Assortments

Class 8.8 Metric

440P•Fasteners - 40B H-7

480P•Fasteners - 72B H-9

Class 10.9 Metric

441P•Fasteners - 40B H-11

481P•Fasteners - 72B H-12

J.I.S. Fasteners Assortment H-19

Screws, Machine

Metric Phillips Pan Hd Machine Screws,

Flat Washers & Nuts H-15

Phillips Flat Head Machine Screws H-15

Socket Set Screw

Metric H-21

C

Capscrews

Metric H-16

Cl 8.8 Crse Thread H-6, H-10, H-16

Fine Pitch Class 8.8 H-6

Reg Pitch Class 8.8 ZP H-6

Metric 10.9 H-10

Metric Socket H-16

Set Screws H-16

F

Fasteners

Metric

Conversion of Fasteners H-3

Converting PSI to MPa H-4

General Information H-2

Mechanical Properties Defined H-5

Metric Capscrews

Coarse Thread Class 8.8 ZP H-6, H-10, H-16

Metric Hex Nuts H-13

Metric Stainless Steel

Capscrews H-20

Finished Hex Nuts H-20

Flat Washers H-20

Lock Washers H-20

Socket Head Capscrews H-20

Socket Set Screws H-21

Metric Washers H-14

Flat H-14

Hard H-14

Lock H-14

Spring H-14

Fasteners, Steel

JIS B1180, Heat Treated

Class 8.8 Zinc Plated H-18

H

Hex Nuts

Metric H-13

Metric, Finished

Fine Pitch, Class 8, ZP H-13

Reg. Pitch, Class 8, ZP H-13

Reg. Pitch, Class 10, Pln H-13

Metric, Gr C Lock Nut

Reg Pitch, Class 8, ZP H-13

Reg Pitch, Class 10, ZP H-13

Metric, Nyloc

Reg Pitch, Class 6/8, ZP H-13

J

J.I.S Fasteners

Steel H-18

M

Metric

Conversion Chart H-3

General Information H-2

Metric Washers

Flat H-14

Hard H-14

Lock H-14

Spring H-14

S

Stainless Steel

Metric H-20, H-21

W

Washers

Metric

Flat H-14

Hard, Class 10 H-14

Lock Washers H-14

Spring H-14



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Metric Information & Tables

General Information

The international system of units (commonly known as the metric system) is accepted and used world wide as the modern system of units for measurement. It is used as the international standard for all areas of science, technology, and trade.

GLOSSARY OF TERMS

SI	The International System of Units
ISO	The Internatinal Organization of Standards
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
ASME	American Society of Mechanical Engineers
DIN	West German National Standards
IFI	Industrial Fasteners Institute
meter (m)	SI unit for length
mega (M)	SI prefix for 1 000 000 units (i.e. 1000000 = 1 MPa)
kilo (k)	SI prefix for 1000 units (i.e. 1000 m = 1 km)
milli (m)	SI prefix for 0.001 units (i.e. 0.001 m = 1 mm)
Pitch (P)	Distance between two threads in mm.
newton (N)	SI unit for force
N/mm²	newtons per square millimeter
pascal (Pa)	SI unit for mechanical pressure/stress
MPa	Megapascal (1 MPa = 1 N/mm²)
R_m	Ultimate tensile strength

Conversion Table US Units to Metric

Type of Dimension	Metric		Converted			For quick ref
	Unit	Symbol	from:	to:	factor	Approx. factor
linear	millimeter	mm	inch	mm	25.4	25 mm = 1 in.
	meter	m	foot	m	0.3048	300 mm = 1 ft.
area	sq. millimeter	mm ²	in. ²	mm ²	645.16	645 mm ² = 1 in. ²
	sq. meter	m ²	ft. ²	m ²	0.0929	1 m ² = 11 ft. ²
Stress or pressure	megapascal	MPa N/mm ²	psi	MPa	0.00689	1 MPa = 145 psi 7 MPa = 1000 psi
temperature	Degree Celcius	°C	°F	°C	0.556 (°F-32)	0°C = 32°F 20°C = 68°F 100°C = 212°F
torque	Newton meter	Nm	in-oz	Nm	0.00706	1 Nm = 140 in oz
			in-lb		0.11298	1 Nm = 9 in lb
			ft-lb		1.3558	1.4 Nm = 1 Ft Lb 1 Nm = 0.75 ft lb
force	Newton	N	oz.	N	0.278	1 N = 3.6 oz
			lb.		4.448	4.4N = 1 lb 1 kN = 225 lb

METRICS





Conversion of Fasteners

Specifications for metric fasteners incorporate both linear measurements and mechanical requirements so it is imperative that one looks at factors other than just the nearest major diameter of the thread. The table below compares the physical data for U.S. Grades 5 and 8 and Metric Property Classes 8.8 and 10.9. As can be seen, converting a 3/4"-10 bolt to M20 results in a 13.7% stronger bolt, but converting a 1/2"-13 to M12 will be 11% lower. It is important to consider this when joints are calculated with regard to high utilization of the yield stress.

When selecting fastener property classes, diameter/pitch combinations and sizes it is best to choose those which have a high usage frequency as these will generally have greater availability. Conversion to metric should be used as an opportunity to simplify your fastener program for improved economy and service.

Comparison Chart U.S. Standard Grades and Metric Strength Classes Tensile Load Comparison

Tensile Load in kN = $A_s \times R_m$ (1 kN = 224.8 lbs.)†

Thread Size	Major Diam mm	Stress Area mm ²	Thread Size	Stress Area mm ²	SAE Grade 5	8.8	SAE Grade 8	10.9
5-40	3.175	5.14	M3	5.03	4.25	4.02	5.32	5.23
6-32	3.505	5.86	M3.5	6.78	4.85	5.42	6.06	7.05
8-32	4.166	9.04	M4	8.78	7.48	7.02	9.35	9.13
10-24	4.826	11.31	M5	14.20	9.36	11.36	11.70	14.77
1/4-20	6.350	20.50	M6	20.10	16.97	16.08	21.21	20.90
5/16-18	7.938	33.80	M8	36.60	27.97	29.28	34.97	38.06
3/8-16	9.525	50.00	M10	58.00	41.38	46.40	51.72	60.32
7/16-14	11.112	68.60			56.77		70.97	
1/2-13	12.700	91.50	M12	84.30	75.72	67.44	94.65	87.67
9/16-12	14.288	117.00	M14	115.00	96.83	92.00	121.03	119.60
5/8-11	15.875	146.00	M16	157.00	120.83	125.60	151.03	163.28
			M18	192.00		159.36		199.68
3/4-10	19.050	216.00	M20	245.00	178.76	203.35	223.45	254.80
7/8-9	22.225	298.00	M22	303.00	246.62	251.49	308.28	315.12
1-8	25.400	391.00	M24	353.00	323.28	292.99	404.48	367.12
			M27	459.00		380.97		477.36
1 1/8-7	28.575	492.00	M30	561.00	356.27	465.63	508.96	583.44
1 1/4-7	31.750	625.00			452.28		646.55	
1 3/8-6	34.925	745.00			539.48		770.69	
			M36	817.00		678.11		849.68
1 1/2-6	38.100	907.00			656.79		938.27	

† A_s = stress area R_m = min. tensile strength

CONVERT BOTH UNC & UNF TO M (COARSE).
AVOID USING METRIC FINE THREADS WHENEVER POSSIBLE.

METRICS





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Metric Information & Tables

Converting PSI to MPa

PSI	MPa	PSI	MPa	PSI	MPa
86000	592.9	96000	661.9	130000	896.3
87000	599.8	97000	668.8	135000	930.8
88000	606.7	98000	675.7	140000	965.3
89000	613.6	99000	682.6	145000	999.7
90000	620.5	100000	689.5	150000	1034.2
91000	627.4	105000	723.9	160000	1103.2
92000	634.3	110000	758.4	170000	1172.1
93000	641.2	115000	792.9	180000	1241.1
94000	648.1	120000	827.4	190000	1310.0
95000	655.0	125000	861.8	200000	1379.0

Conversion factor

1 psi = 0.00689 MPa (N/mm²)
 1 MPa (N/mm²) = 145 psi

YIELD LOAD COMPARISON

Yield Load in kN = As x Rp 0.2 (1 kN = 224.8 lbs)⊃>†								
Thread Size	Major Diam. mm	Stress Area mm ²	Thread Size	Stress Area mm ²	SAE Grade 5	8.8	SAE Grade 8	10.9
5-40	3.175	5.14	M3	5.03	3.26	3.22	4.61	4.73
6-32	3.505	5.86	M3.5	6.78	3.72	4.34	5.25	6.37
8-32	4.166	9.04	M4	8.78	5.74	5.62	8.10	8.25
10-24	4.826	11.31	M5	14.20	7.18	9.09	10.14	13.35
1/4-20	6.350	20.50	M6	20.10	13.01	12.86	18.38	18.89
5/16-18	7.938	33.80	M8	36.60	21.45	23.42	30.30	34.40
3/8-16	9.525	50.00	M10	58.00	31.72	37.12	44.83	54.52
7/16-14	11.112	68.60			43.53		61.50	
1/2-13	12.700	91.50	M12	84.30	58.05	53.95	82.03	79.24
9/16-12	14.288	117.00	M14	115.00	74.23	73.60	104.90	108.10
5/8-11	15.875	146.00	M16	157.00	92.63	100.48	130.90	147.58
			M18	192.00		126.72		180.48
3/4-10	19.050	216.00	M20	245.00	137.05	161.70	193.65	230.30
7/8-9	22.225	298.00	M22	303.00	189.08	199.98	267.17	284.82
1-8	25.400	391.00	M24	353.00	248.08	232.98	350.55	331.82
			M27	459.00		302.94		431.46
1 1/8-7	28.575	492.00			274.84		441.10	
			M30	561.00		370.26		527.34
1 1/4-7	31.750	625.00			349.14		560.34	
1 3/8-6	34.925	745.00			416.17		667.93	
			M36	817.00		539.22		767.98
1 1/2-6	38.100	907.00			506.67		813.17	

[†] As = stress area Rp 0.2 = min. yield strength

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Mechanical Properties Defined

Tensile strength R_m

Tensile strength on full size screws determines how much stress a screw must withstand without breaking. It is calculated as follows:

$$R_{M \text{ screw}} = \frac{F \text{ max}}{A_s} = \frac{N}{\text{mm}^2} \left[\quad \right]$$

A_s = nominal stress area, which is the actual cross section that carries the load. The screw must break in this general area or in the shank when tested for tensile strength.

Yield strength R_p

Yield strength is the amount of resistance of a material to plastic deformation. In general terms, yield strength determines how much stress a screw must withstand without being permanently elongated. This applies to relatively soft materials.

0.2 limit $R_{p0.2}$ ($\sigma_{0.2}$)

The yield point of somewhat harder materials is not sharply pronounced. It is then replaced by the stress at which the permanent elongation is 0.2%. This, too, is expressed in N/mm².

Metric Tap & Clearance Hole Drill Size Chart

Metric Size	Pitch		Drill Sizes				Clearance Hole	
	Coarse	Fine	M-Coarse	U.S.	M-Fine	U.S.	Metric	U.S.
3	0.5		2.5	#40			3.4	#29
3.5	0.6		2.9	#33			3.9	#24
4	0.7		3.3	#30			4.5	#16
5	0.8		4.2	#19			5.5	7/32
6	1		5.0	#9			6.6	G
8	1.25	1	6.8	17/64	7	J	9.0	T
10	1.5	1.25	8.5	Q	8.8	11/32 (T)	11.0	27/64
12	1.75	1.25 (1.5)	10.2	J	10.8	27/64 (Z)	13.5	17/32
14	2	1.5	12.0	15/32	12.5	1/2	15.5	39/64
16	2	1.5	14.0	35/64	14.5	37/64	17.5	11/16
18	2.5	1.5	15.5	39/64	16.5	21/32	20.0	51/64
20	2.5	1.5	17.5	11/16	18.5	47/64	22.0	55/64
22	2.5	1.5	19.5	49/64	20.5	13/16	24.0	15/16
24	3	2	21.0	53/64	22.0	7/8	26.0	1 1/64
27	3	2	24.0	15/16	25.0	63/64	30.0	1 11/64
30	3.5	2	26.5	1 3/64	28.0	1 7/64	33.0	1 9/32
36	4	3	32.0	1 1/4	33.0	1 19/64	39.0	1 9/16

«Note» Use metric drill sizes whenever possible. The listed US drill sizes are as close they possibly can be. However, they may not be adequate in all circumstances.

METRICS





IBS, INCORPORATED

Metric Capscrews Class 8.8 H01

Metric Capscrews

Regular Pitch • Class 8.8 • Zinc Plated



METRICS

Length	M4 (.7)	M5 (.8)	M6 (1.0)	M7 (1.0)	M8 (1.25)	M10 (1.5)	M12 (1.75)	M14 (2.0)	M16 (2.0)	M18 (2.5)	M20 (2.5)	Length
8	10000											8
10	10001	10018	10036		10078							10
12	10002	10019	10037		10079							12
14			10038									14
16	10004	10021	10039	10063	10081	10106	10132					16
20	10006	10023	10041	10065	10083	10108	10133					20
25	10008	10026	10044	10068	10086	10111	10136	10156				25
30	10012	10029	10047	10071	10089	10114	10138	10159	10172			30
35	10013*	10030*	10048	10072	10090	10115	10139	10160				35
40	10014*	10031*	10049		10091	10116	10140	10161	10174			40
45			10050◇		10092◇	10117◇	10141	10162	10175			45
50		10033◇	10051◇		10093◇	10118◇	10142	10163	10176	10196	10209	50
55						10119◇						55
60			10053◇		10095◇	10120◇	10144	10165	10178	10198	10211	60
65					10096◇	10121◇	10145					65
70					10097◇	10122◇	10146	10167	10180			70
75					10098◇	10123◇						75
80							10148					80
90							10150					90
QTY	100/50*	100/50* 25◇	50/25◇	50	50/25◇	50/25◇	25	25	25	25	10	QTY

Metric Capscrews

Fine Pitch • Class 8.8 • Plain



Length	M8 (1.0)	M10 (1.0)	M10 (1.25)	M12 (1.5)	M12 (1.25)	M14 (1.5)	Length
10	10441						10
16	10444						16
20	10446	10465	10480	10502			20
25	10449	10468	10483	10505	10524		25
30	10452	10471	10486	10508	10527	10543	30
35	10453	10472	10487	10509	10528	10544	35
40	10454	10473	10488	10510	10529	10545	40
45	10455◇						45
50	10456◇	10475◇	10490◇	10512	10531	10547	50
60	10458◇		10492◇	10514	10533	10549	60
70			10494◇				70
80	10462◇		10496◇				80
QTY	50/25◇	50/25◇	50/25◇	25	25	25	QTY



IBS, INCORPORATED

Metric C/S Reg. Pitch Cl. 8.8 H01



Metric Capscrews & Nuts Class 8.8

IBS No. 122R • 24 Items - 500 Pieces



Metric Cap Screws & Nuts Class 8.8

Assortment No. 122R

10601 M6-1.0 FIN HEX NUT CL8 ZP 	10603 M8-1.25 FIN HEX HUT CL8 ZP 	10091 M8-1.25 X 40 HEX C/S 8.8 ZP 	10605 M10-1.5 FIN HEX NUT CL8 ZP 	10116 M10-1.5 X 40 HEX C/S 8.8 ZP 	10606 M12-1.75 FIN HEX NUT CL8 ZP
10047 M6-1.0 X 30 HEX C/S 8.8 ZP 	10086 M8-1.25 X 25 HEX C/S 8.8 ZP 	10093 M8-1.25 X 50 HEX C/S 8.8 ZP 	10111 M10-1.5 X 25 HEX C/S 8.8 ZP 	10118 M10-1.5 X 50 HEX C/S 8.8 ZP 	10140 M12-1.75 X 40 HEX C/S 8.8 ZP
10048 M6-1.0 X 35 HEX C/S 8.8 ZP 	10089 M8-1.25 X 30 HEX C/S 8.8 ZP 	10095 M8-1.25 X 60 HEX C/S 8.8 ZP 	10114 M10-1.5 X 30 HEX C/S 8.8 ZP 	10120 M10-1.5 X 60 HEX C/S 8.8 ZP 	10142 M12-1.75 X 50 HEX C/S 8.8 ZP
10049 M6-1.0 X 40 HEX C/S 8.8 ZP 	10090 M8-1.25 X 35 HEX C/S 8.8 ZP 	10097 M8-1.25 X 70 HEX C/S 8.8 ZP 	10115 M10-1.5 X 35 HEX C/S 8.8 ZP 	10122 M10-1.5 X 70 HEX C/S 8.8 ZP 	10144 M12-1.75 X 60 HEX C/S 8.8 ZP

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8.8 Metric Capscrew Assortments

IBS No. 143P • 72 Items • 2453 Pieces

Arranged in a labeled 18 drawer metal cabinet



8.8 METRIC CAPSCREW ASSORTMENT

Cap screws	Hex Nuts	Flat & Lock Washers
M5-0.8 x 10, 12, 20, 25, 30, 40	M5-.08	M5
M6-1.0 x 10, 16, 20, 25, 30, 40, 50	M6-1.0	M6
M8-1.25 x 16, 20, 25, 30, 35, 40, 45, 50, 60	M8-1.25	M8
M10-1.5 x 20, 25, 30, 35, 40, 45, 50, 60	M10-1.5	M10
M12-1.75 x 20, 25, 30, 35, 40, 50, 60	M12-1.75	M12
M14-2.0 x 25, 30, 35, 40, 50, 60	M14-2.0	M14
M16-2.0 x 30, 35, 40, 50, 60, 70	M16-2.0	M16



IBS, INCORPORATED

Bin Assortments Z06

Metric 8.8 Hex Capscrews, Nuts & Washers

IBS No. 440P • 40 Items - 1,680 pieces
Arranged in a labeled 40 hole bin



Metric 8.8 Fasteners

Assortment No. 440P							
10600 M5-.8 FIN HEX NUT CL8 ZP 	10565 M5 FLAT WASHER ZP 	10581 M5 LOCKWASHER ZP 	10018 M5-.8 X 10 HEX C/S 8.8 ZP 	10019 M5-.8 X 12 HEX C/S 8.8 ZP 	10023 M5-.8 X 20 HEX C/S 8.8 ZP 	10026 M5-.8 X 25 HEX C/S 8.8 ZP 	10029 M5-.8 X 30 HEX C/S 8.8 ZP
10601 M6-1.0 FIN HEX NUT CL8 ZP 	10566 M6 FLAT WASHER ZP 	10582 M6 LOCKWASHER ZP 	10037 M6-1.0 X 12 HEX C/S 8.8 ZP 	10039 M6-1.0 X 16 HEX C/S 8.8 ZP 	10041 M6-1.0 X 20 HEX C/S 8.8 ZP 	10044 M6-1.0 X 25 HEX C/S 8.8 ZP 	10047 M6-1.0 X 30 HEX C/S 8.8 ZP
10603 M8-1.25 FIN HEX HUT CL8 ZP 	10568 M8 FLAT WASHER ZP 	10584 M8 LOCKWASHER ZP 	10081 M8-1.25 X 16 HEX C/S 8.8 ZP 	10083 M8-1.25 X 20 HEX C/S 8.8 ZP 	10086 M8-1.25 X 25 HEX C/S 8.8 ZP 	10089 M8-1.25 X 30 HEX C/S 8.8 ZP 	10091 M8-1.25 X 40 HEX C/S 8.8 ZP
10605 M10-1.5 FIN HEX NUT CL8 ZP 	10569 M10 FLAT WASHER ZP 	10585 M10 LOCKWASHER ZP 	10108 M10-1.5 X 20 HEX C/S 8.8 ZP 	10111 M10-1.5 X 25 HEX C/S 8.8 ZP 	10114 M10-1.5 X 30 HEX C/S 8.8 ZP 	10116 M10-1.5 X 40 HEX C/S 8.8 ZP 	10118 M10-1.5 X 50 HEX C/S 8.8 ZP
10606 M12-1.75 FIN HEX NUT CL8 ZP 	10570 M12 FLAT WASHER ZP 	10586 M12 LOCKWASHER ZP 	10133 M12-1.75 X 20 HEX C/S 8.8 ZP 	10138 M12-1.75 X 30 HEX C/S 8.8 ZP 	10140 M12-1.75 X 40 HEX C/S 8.8 ZP 	10142 M12-1.75 X 50 HEX C/S 8.8 ZP 	10144 M12-1.75 X 60 HEX C/S 8.8 ZP

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Bin Assortments Z06



Metric 8.8 Hex Capscrews, Nuts & Washers

IBS No. 808P • 72 Items - 3,275 pieces • Arranged in a labeled 80 hole bin

 Metric 8.8 Fasteners							Assortment No. 808P
10600 M5-.8 FIN HEX NUT CL8 ZP 	10601 M6-1.0 FIN HEX NUT CL8 ZP 	10603 M8-1.25 FIN HEX HUT CL8 ZP 	10605 M10-1.5 FIN HEX NUT CL8 ZP 	10606 M12-1.75 FIN HEX NUT CL8 ZP 	10607 M14-2.0 FIN HEX NUT CL8 ZP 	10608 M16-2.0 FIN HEX NUT CL8 ZP 	
10565 M5 FLAT WASHER ZP 	10566 M6 FLAT WASHER ZP 	10568 M8 FLAT WASHER ZP 	10569 M10 FLAT WASHER ZP 	10570 M12 FLAT WASHER ZP 	10571 M14 FLAT WASHER ZP 	10572 M16 FLAT WASHER ZP 	
10581 M5 LOCKWASHER ZP 	10582 M6 LOCKWASHER ZP 	10584 M8 LOCKWASHER ZP 	10585 M10 LOCKWASHER ZP 	10586 M12 LOCKWASHER ZP 	10587 M14 LOCKWASHER ZP 	10588 M16 LOCKWASHER ZP 	
10019 M5-.8 X 12 HEX C/S 8.8 ZP 	10037 M6-1.0 X 12 HEX C/S 8.8 ZP 	10081 M8-1.25 X 16 HEX C/S 8.8 ZP 	10108 M10-1.5 X 20 HEX C/S 8.8 ZP 	10133 M12-1.75 X 20 HEX C/S 8.8 ZP 	10156 M14-2.0 X 25 HEX C/S 8.8 ZP 	10172 M16-2.0 X 30 HEX C/S 8.8 ZP 	
10021 M5-.8 X 16 HEX C/S 8.8 ZP 	10039 M6-1.0 X 16 HEX C/S 8.8 ZP 	10083 M8-1.25 X 20 HEX C/S 8.8 ZP 	10111 M10-1.5 X 25 HEX C/S 8.8 ZP 	10136 M12-1.75 X 25 HEX C/S 8.8 ZP 	10159 M14-2.0 X 30 HEX C/S 8.8 ZP 	10174 M16-2.0 X 40 HEX C/S 8.8 ZP 	10093 M8-1.25 X 50 HEX C/S 8.8 ZP 
10023 M5-.8 X 20 HEX C/S 8.8 ZP 	10041 M6-1.0 X 20 HEX C/S 8.8 ZP 	10086 M8-1.25 X 25 HEX C/S 8.8 ZP 	10114 M10-1.5 X 30 HEX C/S 8.8 ZP 	10138 M12-1.75 X 30 HEX C/S 8.8 ZP 	10160 M14-2.0 X 35 HEX C/S 8.8 ZP 	10176 M16-2.0 X 50 HEX C/S 8.8 ZP 	10095 M8-1.25 X 60 HEX C/S 8.8 ZP 
10026 M5-.8 X 25 HEX C/S 8.8 ZP 	10044 M6-1.0 X 25 HEX C/S 8.8 ZP 	10089 M8-1.25 X 30 HEX C/S 8.8 ZP 	10115 M10-1.5 X 35 HEX C/S 8.8 ZP 	10139 M12-1.75 X 35 HEX C/S 8.8 ZP 	10161 M14-2.0 X 40 HEX C/S 8.8 ZP 	10178 M16-2.0 X 60 HEX C/S 8.8 ZP 	10120 M10-1.5 X 60 HEX C/S 8.8 ZP 
10029 M5-.8 X 30 HEX C/S 8.8 ZP 	10047 M6-1.0 X 30 HEX C/S 8.8 ZP 	10090 M8-1.25 X 35 HEX C/S 8.8 ZP 	10116 M10-1.5 X 40 HEX C/S 8.8 ZP 	10140 M12-1.75 X 40 HEX C/S 8.8 ZP 	10163 M14-2.0 X 50 HEX C/S 8.8 ZP 	10180 M16-2.0 X 70 HEX C/S 8.8 ZP 	10122 M10-1.5 X 70 HEX C/S 8.8 ZP 
10031 M5-.8 X 40 HEX C/S 8.8 ZP 	10049 M6-1.0 X 40 HEX C/S 8.8 ZP 	10091 M8-1.25 X 40 HEX C/S 8.8 ZP 	10117 M10-1.5 X 45 HEX C/S 8.8 ZP 	10142 M12-1.75 X 50 HEX C/S 8.8 ZP 	10165 M14-2.0 X 60 HEX C/S 8.8 ZP 		10145 M12-1.75 X 65 HEX C/S 8.8 ZP 
	10051 M6-1.0 X 50 HEX C/S 8.8 ZP 	10092 M8-1.25 X 45 HEX C/S 8.8 ZP 	10118 M10-1.5 X 50 HEX C/S 8.8 ZP 	10144 M12-1.75 X 60 HEX C/S 8.8 ZP 	10167 M14-2.0 X 70 HEX C/S 8.8 ZP 		

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IBS, INCORPORATED

Metric C/S Reg. Pitch Cl. 10.9 - H02

Metric Capscrews

Regular Pitch • Class 10.9 • Zinc Plated



METRICS

Length	M6 (1.0)	M8 (1.25)	M10 (1.5)	M12 (1.75)	M14 (2.0)	M16 (2.0)	M20 (2.5)	M24 (3.0)	M30 (3.0)	Length
12	10250									12
16	10252	10270	10291							16
20	10254	10271	10292	10315						20
25	10257	10272	10293	10316						25
30	10258	10273	10294	10317	10340	10358	10374			30
35	10259	10274	10295	10318	10341	10359	10375			35
40	10260	10275	10296	10319	10342	10360	10376	10389		40
45	10261	10276	10297	10320	10343	10361	10377			45
50	12062	10277	10298	10321	10344	10362	10378	10391		50
60	10265	10279	10300	10323	10346	10364	10380	10392		60
70	10266	10281	10302	10325	10347	10366	10382	10393		70
75			10303	10326	103470	10367				75
80	10267	10282	10304	10327	10348	10368	10384	10395		80
90	10268	10283	10305	10328	10349	10370	10385	10396		90
100	10269	10284	10306	10329	10350	10371	10387	10397	103984	100
110		10285	10307	10330	10351	10372	10388	103970	103985	110
120		10286	10308	10331	10352	10373	103880	103971	103986	120
130						103730	103881	103972	103987	130
140						103731	103882	103973	103988	140
150						103732	103883	103974	103989	150
160						103733	103884	103975	103990	160
170						103734		103976		170
180						103735	103886	103977	103992	180
190						103736		103978		190
200						103737	103888	103979	103994	200
QTY	50	50	50	25	25	25	10	10	5	QTY

10.9 Metric Capscrew Assortment

IBS No. 144P • 68 Items • 1323 Pieces
Arranged in a labeled 18 drawer metal cabinet.



Capscrews	Hex Nuts	Flat & Lock Washers
M6-1.0 x 12, 16, 20, 25, 30, 35, 40, 45, 50	M6-1.0	M6
M8-1.25 x 16, 20, 25, 30, 35, 40, 45, 50, 60, 70	M8-1.25	M8
M10-1.5 x 20, 25, 30, 35, 40, 45, 50, 60, 70	M10-1.5	M10
M12-1.75 x 25, 30, 35, 40, 50, 60, 70	M12-1.75	M12
M16-2.0 x 35, 40, 50, 60, 70, 80, 90	M16-2.0	M16

IBS, INCORPORATED

Bin Assortments Z06



Metric 10.9 Hex Capscrews, Nuts & Washers

IBS No. 441P • 40 Items - 900 pieces
Arranged in a labeled 40 hole bin



IBS, Inc. <small>SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR (800) 678-1906 • www.industriabolt.com</small>		Metric 10.9 Fasteners						Assortment No. 441P
10410 M6-1.0 FIN HEX NUT CL10 ZP 	10430 M6 HARD WASH TP200 ZP 	10582 M6 LOCKWASHER ZP 	10252 M6-1.0 X 16 HEX C/S 10.9 ZP 	10254 M6-1.0 X 20 HEX C/S 10.9 ZP 	10257 M6-1.0 X 25 HEX C/S 10.9 ZP 	10258 M6-1.0 X 30 HEX C/S 10.9 ZP 	10259 M6-1.0 X 35 HEX C/S 10.9 ZP 	
10260 M6-1.0 X 40 HEX C/S 10.9 ZP 	10262 M6-1.0 X 50 HEX C/S 10.9 ZP 	10411 M8-1.25 FIN HEX NUT CL10 ZP 	10431 M8 HARD WASH TP200 ZP 	10584 M8 LOCKWASHER ZP 	10270 M8-1.25 X 16 HEX C/S 10.9 ZP 	10271 M8-1.25 X 20 HEX C/S 10.9 ZP 	10272 M8-1.25 X 25 HEX C/S 10.9 ZP 	
10273 M8-1.25 X 30 HEX C/S 10.9 ZP 	10275 M8-1.25 X 40 HEX C/S 10.9 ZP 	10277 M8-1.25 X 50 HEX C/S 10.9 ZP 	10279 M8-1.25 X 60 HEX C/S 10.9 ZP 	10412 M10-1.5 FIN HEX NUT CL10 ZP 	10432 M10 HARD WASH TP200 ZP 	10585 M10 LOCKWASHER ZP 	10292 M10-1.5 X 20 HEX C/S 10.9 ZP 	
10293 M10-1.5 X 25 HEX C/S 10.9 ZP 	10294 M10-1.5 X 30 HEX C/S 10.9 ZP 	10295 M10-1.5 X 35 HEX C/S 10.9 ZP 	10296 M10-1.5 X 40 HEX C/S 10.9 ZP 	10298 M10-1.5 X 50 HEX C/S 10.9 ZP 	10300 M10-1.5 X 60 HEX C/S 10.9 ZP 	10413 M12-1.75 FIN HEX NUT CL10 ZP 	10433 M12 HARD WASH TP200 ZP 	
10586 M12 LOCKWASHER ZP 	10316 M12-1.75 X 25 HEX C/S 10.9 ZP 	10317 M12-1.75 X 30 HEX C/S 10.9 ZP 	10318 M12-1.75 X 35 HEX C/S 10.9 ZP 	10319 M12-1.75 X 40 HEX C/S 10.9 ZP 	10321 M12-1.75 X 50 HEX C/S 10.9 ZP 	10323 M12-1.75 X 60 HEX C/S 10.9 ZP 	10325 M12-1.75 X 70 HEX C/S 10.9 ZP 	

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IBS, INCORPORATED

Bin Assortments Z06

Metric 10.9 Hex Capscrews, Nuts & Washers

IBS No. 810P • 72 Items - 1,716 pieces
Arranged in a labeled 80 hole bin

						Metric 10.9 Fasteners	
Assortment No. 810P							
10410 M6-1.0 FIN HEX NUT CL10 ZP	10411 M8-1.25 FIN HEX NUT CL10 ZP	10412 M10-1.5 FIN HEX NUT CL10 ZP	10413 M12-1.75 FIN HEX NUT CL10 ZP	10415 M16-2.0 FIN HEX NUT CL10 ZP	10416 M20-2.5 FIN HEX NUT CL10 ZP		
							
10430 M6 HARD WASH TP200 ZP	10431 M8 HARD WASH TP200 ZP	10432 M10 HARD WASH TP200 ZP	10433 M12 HARD WASH TP200 ZP	10435 M16 HARD WASH TP200 ZP	10437 M20 HARD WASH TP200 ZP		
							
10582 M6 LOCKWASHER ZP	10584 M8 LOCKWASHER ZP	10585 M10 LOCKWASHER ZP	10586 M12 LOCKWASHER ZP	10588 M16 LOCKWASHER ZP	10590 M20 LOCKWASHER ZP		
							
10250 M6-1.0 X 12 HEX C/S 10.9 ZP	10271 M8-1.25 X 20 HEX C/S 10.9 ZP	10291 M10-1.5 X 16 HEX C/S 10.9 ZP	10316 M12-1.75 X 25 HEX C/S 10.9 ZP	10359 M16-2.0 X 35 HEX C/S 10.9 ZP	10376 M20-2.5 X 40 HEX C/S 10.9 ZP		
							
10252 M6-1.0 X 16 HEX C/S 10.9 ZP	10272 M8-1.25 X 25 HEX C/S 10.9 ZP	10292 M10-1.5 X 20 HEX C/S 10.9 ZP	10317 M12-1.75 X 30 HEX C/S 10.9 ZP	10360 M16-2.0 X 40 HEX C/S 10.9 ZP	10378 M20-2.5 X 50 HEX C/S 10.9 ZP	10261 M6-1.0 X 45 HEX C/S 10.9 ZP	10298 M10-1.5 X 50 HEX C/S 10.9 ZP
							
10254 M6-1.0 X 20 HEX C/S 10.9 ZP	10273 M8-1.25 X 30 HEX C/S 10.9 ZP	10293 M10-1.5 X 25 HEX C/S 10.9 ZP	10318 M12-1.75 X 35 HEX C/S 10.9 ZP	10361 M16-2.0 X 45 HEX C/S 10.9 ZP	10380 M20-2.5 X 60 HEX C/S 10.9 ZP	10260 M6-1.0 X 40 HEX C/S 10.9 ZP	10300 M10-1.5 X 60 HEX C/S 10.9 ZP
							
10257 M6-1.0 X 25 HEX C/S 10.9 ZP	10274 M8-1.25 X 35 HEX C/S 10.9 ZP	10294 M10-1.5 X 30 HEX C/S 10.9 ZP	10319 M12-1.75 X 40 HEX C/S 10.9 ZP	10362 M16-2.0 X 50 HEX C/S 10.9 ZP	10384 M20-2.5 X 80 HEX C/S 10.9 ZP	10265 M6-1.0 X 60 HEX C/S 10.9 ZP	10302 M10-1.5 X 70 HEX C/S 10.9 ZP
							
10258 M6-1.0 X 30 HEX C/S 10.9 ZP	10275 M8-1.25 X 40 HEX C/S 10.9 ZP	10295 M10-1.5 X 35 HEX C/S 10.9 ZP	10320 M12-1.75 X 45 HEX C/S 10.9 ZP	10364 M16-2.0 X 60 HEX C/S 10.9 ZP	10387 M20-2.5 X 100 HEX C/S 10.9 ZP	10271 M8-1.25 X 20 HEX C/S 10.9 ZP	10303 M10-1.5 X 75 HEX C/S 10.9 ZP
							
10259 M6-1.0 X 35 HEX C/S 10.9 ZP	10276 M8-1.25 X 45 HEX C/S 10.9 ZP	10296 M10-1.5 X 40 HEX C/S 10.9 ZP	10321 M12-1.75 X 50 HEX C/S 10.9 ZP	10366 M16-2.0 X 70 HEX C/S 10.9 ZP	10370 M16-2.0 X 90 HEX C/S 10.9 ZP	10281 M8-1.25 X 70 HEX C/S 10.9 ZP	10325 M12-1.75 X 70 HEX C/S 10.9 ZP
							
10260 M6-1.0 X 40 HEX C/S 10.9 ZP	10279 M8-1.25 X 60 HEX C/S 10.9 ZP	10297 M10-1.5 X 45 HEX C/S 10.9 ZP	10323 M12-1.75 X 60 HEX C/S 10.9 ZP	10367 M16-2.0 X 75 HEX C/S 10.9 ZP	10371 M16-2.0 X 100 HEX C/S 10.9 ZP	10373 M16-2.0 X 120 HEX C/S 10.9 ZP	10327 M12-1.75 X 80 HEX C/S 10.9 ZP
							

METRICS





Metric Hex Nuts



FINISHED HEX NUTS (H09 / H10 / H03)

IBS No.	Reg Pitch · Class 8 · ZP	Qty
	Size	
10597	M3 (.5)	100
10599	M4 (.7)	100
10600	M5 (.8)	100
10601	M6 (1.0)	100
10602	M7 (1.0)	100
10603	M8 (1.25)	100
10605	M10 (1.5)	50
10606	M12 (1.75)	50
10607	M14 (2.0)	25
10608	M16 (2.0)	10
10609	M18 (2.5)	10
10610	M20 (2.5)	10
10611	M24 (3.0)	10
IBS No.	Fine Pitch · Class 8 · ZP	Qty
	Size	
10615	M8 (1.0)	100
10616	M10 (1.0)	50
10617	M10 (1.25)	50
10618	M12 (1.5)	50
10619	M12 (1.25)	50
10620	M14 (1.5)	50
IBS No.	Reg Pitch · Class 10 · ZP	Qty
	Size	
10410	M6 (1.0)	100
10411	M8 (1.25)	100
10412	M10 (1.5)	50
10413	M12 (1.75)	50
10414	M14 (2.0)	25
10415	M16 (2.0)	25
10416	M20 (2.5)	25
10417	M24 (3.0)	25



NYLOC HEX NUTS (H15)

IBS No.	Reg Pitch · Class 6/8 · ZP	Qty
	Size	
749	M4 (.7)	50
750	M5 (.8)	50
751	M6 (1.0)	50
752	M8 (1.25)	50
753	M10 (1.5)	50
754	M12 (1.75)	50
755	M14 (2.0)	50
756	M16 (2.0)	50
757	M20 (2.5)	25
758	M24 (3.0)	25
IBS No.	Reg Pitch · Class 10 · ZP	Qty
	Size	
4751	M6 (1.0)	50
4752	M8 (1.25)	50
4753	M10 (1.5)	50
4754	M12 (1.75)	50
4755	M14 (2.0)	50
4756	M16 (2.0)	50
4757	M20 (2.5)	25
4758	M24 (3.0)	25



GRADE C LOCK NUTS (H15)

IBS No.	Reg Pitch · Class 10 · ZP	Qty
	Size	
10420	M6 (1.0)	10
10421	M8 (1.25)	10
10422	M10 (1.5)	10
10423	M12 (1.75)	10
10425	M16 (2.0)	10
10426	M20 (2.5)	10
10427	M24 (3.0)	10

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IBS, INCORPORATED

Metric Machine Screws

Metric Washers



METRIC FLAT WASHERS (H21)

IBS No.	Size	Nominal ID (mm)	Nominal OD (mm)	Pkg Qty
10562	M3	3.2	7	100
10564	M4	4.3	9	100
10565	M5	5.3	10	100
10566	M6	6.4	12	100
10567	M7	7.4	14	100
10568	M8	8.4	16	100
10569	M10	10.5	20	100
10570	M12	13	24	100
10571	M14	15	28	50
10572	M16	17	30	50
10573	M20	21	37	25
10574	M24	25	44	25



METRIC HI-COLLAR LOCK WASHERS (H08)

IBS No.	Size	Nominal ID (mm)	Nominal OD (mm)	Pkg Qty
10880	M4	4.1	7	100
10881	M5	5.1	8.8	100
10882	M6	6.1	9.9	100
10883	M8	8.1	12.7	100
10884	M10	10.2	16	100
10885	M12	12.2	18	100
10886	M14	14.2	21.1	50
10887	M16	16.2	24.4	50
10888	M18	18.2	26.4	25
10889	M20	20.2	30.6	25
10890	M24	24.5	35.9	25



METRIC LOCK WASHERS (H08)

IBS No.	Size	Nominal ID (mm)	Nominal OD (mm)	Pkg Qty
10580	M4	4.1	7.6	100
10581	M5	5.1	9.2	100
10582	M6	6.1	11.8	100
10583	M7	7.1	12.8	100
10584	M8	8.1	14.8	100
10585	M10	10.2	18.1	100
10586	M12	12.2	21.1	100
10587	M14	14.2	24.1	50
10588	M16	16.2	27.4	50
10589	M18	18.2	29.4	25
10590	M20	20.2	33.6	25
10591	M24	24.5	40	25



METRIC HARD WASHERS (H05)

IBS No.	Size	Nominal ID (mm)	Nominal OD (mm)	Pkg Qty
10429	M5	5.3	10	100
10430	M6	6.4	12	100
10431	M8	8.4	16	100
10432	M10	10.5	20	100
10433	M12	13	24	100
10434	M14	15	28	50
10435	M16	17	30	50
10436	M18	19	34	25
10437	M20	21	37	25
10438	M24	25	44	25



METRIC SPRING WASHERS (H15)

IBS No.	Size	Nominal ID (mm)	Nominal OD (mm)	Pkg Qty
870	M4	4.3	8	100
871	M5	5.3	10	100
872	M6	6.4	11	100
873	M8	8.4	15	100
874	M10	10.5	18	100
875	M12	13	24	100

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Metric Machine Screws



**SLOTTED PAN HEAD
MACHINE SCREWS 4.8 (H11)**

Length	M3 (.5)	M4 (.7)	M5 (.8)	M6 (1.0)	Length
6	10628	10645	10664		6
8	10629	10646	10665		8
10	10630	10647	10666	10687	10
12	10631	10648	10667	10692	12
14					14
16	10633	10650	10669	10690	16
20	10635	10652	10671	10692	20
22					22
25	10637	10654	10673	10694	25
30	10638	10655	10674	10695	30
35					35
40					40
QTY	100	100	100	100	QTY



**PHILLIPS PAN HEAD
MACHINE SCREWS 4.8 (H12)**

Length	M4 (.7)	M5 (.8)	M6 (1.0)	M8 (1.25)	Length
6	10711				6
8	10712	601			8
10	10713	602	10730		10
12	10714	603	10731		12
14					14
16	10716	604	10733	10750	16
20	10718	606	10735	10752	20
22					22
25	10720	607	10737	10754	25
30	10721	608	10738	10755	30
35					35
40					40
QTY	100	100	100	100	QTY

Metric Phillips Pan Hd Machine Screws, Flat Washers & Nuts

IBS No. 715R • 24 Items • 1,445 Pieces





IBS, Inc.
SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR
(800) 878-1906 • www.industrialbolt.com

**Metric Phillips Pan Head Machine Screws,
Flat Washers & Nuts**

Assortment No. 715R

10713 M4-.7 X 10 PHIL PAN M/S ZP 	10716 M4-.7 X 16 PHIL PAN M/S ZP 	10718 M4-.7 X 20 PHIL PAN M/S ZP 	10721 M4-.7 X 30 PHIL PAN M/S ZP 	10564 M4 FLAT WASHER ZP 	10599 M4-.7 FIN HEX NUT CL8 ZP 
602 M5-.8 X 10 PHIL PAN M/S ZP 	604 M5-.8 X 16 PHIL PAN M/S ZP 	606 M5-.8 X 20 PHIL PAN M/S ZP 	608 M5-.8 X 30 PHIL PAN M/S ZP 	10565 M5 FLAT WASHER ZP 	10600 M5-.8 FIN HEX NUT CL8 ZP 
10730 M6-1.0 X 10 PHIL PAN M/S ZP 	10733 M6-1.0 X 16 PHIL PAN M/S ZP 	10735 M6-1.0 X 20 PHIL PAN M/S ZP 	10738 M6-1.0 X 30 PHIL PAN M/S ZP 	10566 M6 FLAT WASHER ZP 	10601 M6-1.0 FIN HEX NUT CL8 ZP 
10750 M8-1.25 X 16 PHIL PAN M/S ZP 	10752 M8-1.25 X 20 PHIL PAN M/S ZP 	10754 M8-1.25 X 25 PHIL PAN M/S ZP 	10755 M8-1.25 X 30 PHIL PAN M/S ZP 	10568 M8 FLAT WASHER ZP 	10603 M8-1.25 FIN HEX HUT CL8 ZP 





IBS, INCORPORATED

Metric Socket Products H17

Metric Socket Capscrews

Class 12.9



Length (mm)	M3	M4	M5	M6	M8	M10	M12	M14	M16	M20	M24	Length (mm)
10		815	82200	8242								10
12	810	816	822	824A	828	833						12
16	812	818	823	824B	82800	834	83600					16
20	814	820	823A	824C	829	835	83601					20
25		821	824	824D	829A	835A	836	839				25
30		82105	82400	825	830	835B	836A	83901				30
35		82106	82401	826	830A	835C	83602	840	84110			35
40		82107	82402	827	831	835D	836B	841	84111	845		40
45		82108	82403	82700	83100	83500	83603	84100	84112	846		45
50		82109	82404	827B	832	83501	837A	84101	842	847	860	50
60				82702	83201	83503	838	84103	84201	849	862	60
70				82703	83202	83504	83800	84104	84202	850	863	70
75									843			75
80						83505	83801	84105	84300	851	864	80
90						83506	83802	84106	84301	852	865	90
100						83507	83803	84107	84302	853	866	100
110									84303	854	867	110
120									84304	855	868	120
130									84305	856	869	130
140									84306	857	86900	140
150									84307	858	86901	150
Pkg Qty	25	25	25	25	25	25	10	10	10	5	5	Pkg Qty

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Metric Flat Socket Capscrews

Class 12.9



Length	M4	M5	M6	M8	M10	Length
12	84345	84360	84370			12
16	84346	84361	84371			16
20	84347	84362	84372	84381	84391	20
25	84348	84363	84373	84382	84393	25
30			84374	84383	84394	30
35				84384	84395	35
40			84375	84385	84396	40
QTY	25	25	25	25	25	QTY

Metric Socket Set Screws

Cup Point • Class 12.9



Length	M6	M8	M10	M12	Length
6	785				6
8	786	792			8
10	787	793	797		10
12	788	794	798	804	12
16	789	795	799	805	16
20	790	796	800	806	20
25			802	807	25
30				807A	30
35			803	808	35
40				809	40
QTY	25	25	25	25	QTY



IBS, INCORPORATED


Assortments Z02



Metric 12.9 Socket Head Cap Screws

IBS No. 266R • 24 Items • 475 Pieces




 IBS, Inc. <small>SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR (800) 678-1906 • www.industrialbolt.com</small>		Metric 12.9 Socket Head Capscrews				Assortment No. 266R
816 M4 X 12 SOCKET HD C/S ALLOY	818 M4 X 16 SOCKET HD C/S ALLOY	820 M4 X 20 SOCKET HD C/S ALLOY	821 M4 X 25 SOCKET HD C/S ALLOY	822 M5 X 12 SOCKET HD C/S ALLOY	823 M5 X 16 SOCKET HD C/S ALLOY	
823A M5 X 20 SOCKET HD C/S ALLOY	824 M5 X 25 SOCKET HD C/S ALLOY	824A M6 X 12 SOCKET HD C/S ALLOY	824B M6 X 16 SOCKET HD C/S ALLOY	824C M6 X 20 SOCKET HD C/S ALLOY	824D M6 X 25 SOCKET HD C/S ALLOY	
825 M6 X 30 SOCKET HD C/S ALLOY	827 M8 X 40 SOCKET HD C/S ALLOY	829 M6 X 20 SOCKET HD C/S ALLOY	829A M8 X 25 SOCKET HD C/S ALLOY	830 M8 X 30 SOCKET HD C/S ALLOY	830A M8 X 35 SOCKET HD C/S ALLOY	
831 M8 X 40 SOCKET HD C/S ALLOY	835 M10 X 20 SOCKET HD C/S ALLOY	835A M10 X 25 SOCKET HD C/S ALLOY	835B M10 X 30 SOCKET HD C/S ALLOY	835C M10 X 35 SOCKET HD C/S ALLOY	835D M10 X 40 SOCKET HD C/S ALLOY	

Metric 12.9 Flat Socket Cap Screws

IBS No. 267R • 24 Items • 435 Pieces



 IBS, Inc. <small>SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR (800) 678-1906 • www.industrialbolt.com</small>		Metric 12.9 Flat Socket Head Cap Screws				Assortment No. 267R
84345 M4 X 12 FLAT SOCKET C/S ALLOY	84346 M4 X 16 FLAT SOCKET C/S ALLOY	84347 M4 X 20 FLAT SOCKET C/S ALLOY	84348 M4 X 25 FLAT SOCKET C/S ALLOY	84360 M5 X 12 FLAT SOCKET C/S ALLOY	84361 M5 X 16 FLAT SOCKET C/S ALLOY	
84362 M5 X 20 FLAT SOCKET C/S ALLOY	84363 M5 X 25 FLAT SOCKET C/S ALLOY	84370 M6 X 12 FLAT SOCKET C/S ALLOY	84371 M6 X 16 FLAT SOCKET C/S ALLOY	84372 M6 X 20 FLAT SOCKET C/S ALLOY	84373 M6 X 25 FLAT SOCKET C/S ALLOY	
84374 M6 X 30 FLAT SOCKET C/S ALLOY	84375 M6 X 40 FLAT SOCKET C/S ALLOY	84381 M8 X 20 FLAT SOCKET C/S ALLOY	84382 M8 X 25 FLAT SOCKET C/S ALLOY	84383 M8 X 30 FLAT SOCKET C/S 12.9	84384 M8 X 35 FLAT SOCKET C/S 12.9	
84385 M8 X 40 FLAT SOCKET C/S ALLOY	84391 M10 X 20 FLAT SOCKET C/S ALLOY	84393 M10 X 25 FLAT SOCKET C/S ALLOY	84394 M10 X 30 FLAT SOCKET C/S ALLOY	84395 M10 X 35 FLAT SOCKET C/S ALLOY	84396 M10 X 40 FLAT SOCKET C/S 12.9	

METRICS





IBS, INCORPORATED

Automotive Rivets & Fasteners H04

J.I.S Fasteners

J.I.S. B1180 • STEEL • HEAT TREATED • I.S.O. CLASS 8.8 & 10.9 • ZINC PLATED

J.I.S. fasteners have a smaller hex dimension (across the flats) than DIN or ISO metric fasteners. They fit in those tight spots where the hex of an ISO or DIN fastener is too large. J.I.S. fasteners are OEM equipment on many GM and Japanese import car applications, as well as Japanese imported equipment and machinery.



J.I.S. Hex Head Bolts 8.8

IBS No.	Diameter & Pitch	Length	Pkg. Qty.
M8-1.25 (Width Across the Flats; 12mm)			
10801	8mm-1.25	12mm	100
10802	8mm-1.25	16mm	100
10803	8mm-1.25	20mm	100
10804	8mm-1.25	25mm	50
10805	8mm-1.25	30mm	50
10806	8mm-1.25	35mm	50
10807	8mm-1.25	40mm	50
10809	8mm-1.25	50mm	50
M10-1.25 (Width Across the Flats; 14mm)			
10811	10mm-1.25	20mm	50
10812	10mm-1.25	25mm	50
10813	10mm-1.25	30mm	25
10814	10mm-1.25	35mm	25
10815	10mm-1.25	40mm	25
10816	10mm-1.25	45mm	25
10817	10mm-1.25	50mm	25
10818	10mm-1.25	60mm	25
M12-1.25 (Width Across the Flats; 17mm)			
10821	12mm-1.25	20mm	50
10822	12mm-1.25	25mm	25
10823	12mm-1.25	30mm	25
10824	12mm-1.25	35mm	25
10825	12mm-1.25	40mm	25
10827	12mm-1.25	50mm	25



J.I.S. Hex Flange Bolts 10.9

IBS No.	Diameter & Pitch	Length	Pkg. Qty.
M6-1.00 (Width Across the Flats; 10mm)			
10850	6mm-1.00	12mm	100
10851	6mm-1.00	16mm	100
10852	6mm-1.00	20mm	100
10856	6mm-1.00	25mm	100
10853	6mm-1.00	30mm	100
10854	6mm-1.00	35mm	100
10855	6mm-1.00	40mm	100
M8-1.25 (Width Across the Flats; 12mm)			
10860	8mm-1.25	12mm	50
10861	8mm-1.25	16mm	50
10862	8mm-1.25	20mm	50
10863	8mm-1.25	25mm	50
10864	8mm-1.25	30mm	50
10865	8mm-1.25	35mm	50
10866	8mm-1.25	40mm	50
M10-1.25 (Width Across the Flats; 14mm)			
10870	10mm-1.25	16mm	25
10871	10mm-1.25	20mm	25
10872	10mm-1.25	25mm	25
10873	10mm-1.25	30mm	25
10874	10mm-1.25	35mm	25
10875	10mm-1.25	40mm	25
10876	10mm-1.25	45mm	25
10877	10mm-1.25	50mm	25



J.I.S. Small Hex Nuts

IBS No.	Diameter & Pitch	WAF	Pkg. Qty.
10840	8mm-1.25	12mm	100
10841	10mm-1.25	14mm	100
10842	12mm-1.25	17mm	100



J.I.S. Hex Flange Nuts - Serrated

IBS No.	Diameter & Pitch	WAF	Pkg. Qty.
10845	6mm-1.00	10mm	100
10843	8mm-1.25	12mm	100
10844	10mm-1.25	14mm	100

METRICS



IBS, INCORPORATED

Assortments Z02



J.I.S. Hex Head Capscrews Assortment

IBS No. 697R • 20 Pieces • 595 Items

Packaged in a locking steel drawer for easy storage & organization



IBS, Inc. SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR (800) 678-1906 • www.industrialbolt.com		JIS Hex Head Capscrews				Assortment No. 697R
10802 M8-1.25 X 16 JIS HEX C/S ZP 	10803 M8-1.25 X 20 JIS HEX C/S ZP 	10804 M8-1.25 X 25 JIS HEX C/S ZP 	10805 M8-1.25 X 30 JIS HEX C/S ZP 	10807 M8-1.25 X 40 JIS HEX C/S ZP 	10811 M10-1.25 X 20 JIS HEX C/S ZP 	
10812 M10-1.25 X 25 JIS HEX C/S ZP 	10813 M10-1.25 X 30 JIS HEX C/S ZP 	10814 M10-1.25 X 35 JIS HEX C/S ZP 	10815 M10-1.25 X 40 JIS HEX C/S ZP 	10816 M10-1.25 X 45 JIS HEX C/S ZP 	10817 M10-1.25 X 50 JIS HEX C/S ZP 	
10822 M12-1.25 X 25 JIS HEX C/S ZP 	10823 M12-1.25 X 30 JIS HEX C/S ZP 	10824 M12-1.25 X 35 HEX C/S JIS ZP 	10825 M12-1.25 X 40 JIS HEX C/S ZP 	10827 M12-1.25 X 50 JIS HEX C/S ZP 		
10840 M8-1.25 JIS HEX NUT ZP 	10841 M10-1.25 JIS HEX NUT ZP 	10842 M12-1.25 JIS HEX NUT ZP 				

Metric J.I.S. Flange Bolts Assortment

IBS No. 779R • 24 Pieces • 605 Items

Packaged in a locking steel drawer for easy storage & organization

IBS, Inc. SPECIALTY PRODUCTS FOR MAINTENANCE & REPAIR (800) 678-1906 • www.industrialbolt.com		Metric JIS Flange Bolts				Assortment No. 779R
10850 M6-1.0 X 12 JIS FLANGE BOLT ZP 10.9 	10851 M6-1.0 X 16 JIS FLANGE BOLT ZP 10.9 	10852 M6-1.0 X 20 JIS FLANGE BOLT ZP 10.9 	10856 M6-1.0 X 25 JIS FLANGE BOLT ZP 10.9 	10853 M6-1.0 X 30 JIS FLANGE BOLT ZP 10.9 	10854 M6-1.0 X 35 JIS FLANGE BOLT ZP 10.9 	
10855 M6-1.0 X 40 JIS FLANGE BOLT ZP 10.9 	10860 M8-1.25 X 12 JIS FLANGE BOLT ZP 10.9 	10861 M8-1.25 X 16 JIS FLANGE BOLT ZP 10.9 	10862 M8-1.25 X 20 JIS FLANGE BOLT ZP 10.9 	10863 M8-1.25 X 25 JIS FLANGE BOLT ZP 10.9 	10864 M8-1.25 X 30 JIS FLANGE BOLT ZP 10.9 	
10865 M8-1.25 X 35 JIS FLANGE BOLT ZP 10.9 	10866 M8-1.25 X 40 JIS FLANGE BOLT ZP 10.9 	10870 M10-1.25 X 16 JIS FLANGE BOLT ZP 10.9 	10871 M10-1.25 X 20 JIS FLANGE BOLT ZP 10.9 	10872 M10-1.25 X 25 JIS FLANGE BOLT ZP 10.9 	10873 M10-1.25 X 30 JIS FLANGE BOLT ZP 10.9 	
10874 M10-1.25 X 35 JIS FLANGE BOLT ZP 10.9 	10875 M10-1.25 X 40 JIS FLANGE BOLT ZP 10.9 	10877 M10-1.25 X 50 JIS FLANGE BOLT ZP 10.9 	10845 M6-1.0 JIS SERR FLANGE NUT ZP 	10843 M8-1.25 JIS SERR FLANGE NUT ZP 	10844 M10-1.25 JIS SERR FLANGE NUT ZP 	



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IBS, INCORPORATED

Metric Stainless Steel H19

Metric Stainless Steel Fasteners



STAINLESS STEEL METRIC CAPSCREWS

Length	M4	M5	M6	M8	M10	Qty	M12	M14	M16	Qty	Length
10			91451	92010		25					10
12	908		915	92012		25					12
16	909	911	915A	921	929	25					16
20	910	912	916	922	930	25	93610	93620	93630	10	20
25		913	917	923	931	25	93611	93621	93631	10	25
30		914	918	924	932	25	93612	93622	93632	10	30
35			919	925	933	25	93613	93623	93633	10	35
40			920	926	934	25	93614	93624	93634	10	40
45					935	25	93615		93635	10	45
50					936	25	93616	93626	93636	10	50



FIN HEX NUTS SS

IBS No.	Size	Qty
960	M4	100
961	M5	100
962	M6	100
963	M8	100
964	M10	100
965	M12	25
966	M14	25
967	M16	25



FLAT WASHERS SS

IBS No.	Size	Qty
940	M4	100
941	M5	100
942	M6	100
943	M8	100
944	M10	100
945	M12	25
946	M14	25
947	M16	25



LOCK WASHERS

IBS No.	Size	Qty
950	M4	100
951	M5	100
952	M6	100
953	M8	100
954	M10	100
955	M12	25
956	M14	25
957	M16	25



STAINLESS STEEL METRIC SOCKET HEAD CAPSCREWS

Length	M4	M5	M6	M8	Qty	M10	Qty	M12	Qty	Length
10	96850	96855	96860	96870	25					10
16	96851	96856	96861	96871	25					16
20	96852	96857	96862	96872	25	96880	15	96890	10	20
25	96853	96858	96863	96873	25	96881	15	96891	10	25
30			96864	96874	25	96882	15	96892	10	30
35				96875	25	96883	15	96893	10	35
40				96876	25	96884	15	96894	10	40
45				96877	25	96885	15	96895	10	45
Key Size	3mm	4mm	5mm	6mm		8mm		10mm		Key Size

METRICS



IBS, INCORPORATED

Metric Stainless Steel H19



Metric Stainless Steel Fasteners



STAINLESS STEEL METRIC SOCKET SET SCREWS

Length	M4	M5	M6	M8	M10	M12	Length
6	96900	96905					6
8	96901	96906	96910				8
10	96902	96907	96911	96915			10
12	96903	96908	96912	96916	96920		12
16			96913	96917	96921	96925	16
20				96918	96922	96926	20
25					96923	96927	25
30						96928	30
QTY	25	25	25	25	15	10	QTY














Metric Socket Set Screw Assortment Stainless Steel (Z02)

IBS No. 405R • 24 Items • 206 Pieces



Stainless Steel Metric Socket Set Screws

Assortment No. 405R

96900 M4 X 6 SOC SET SCREW SS  Hex Key: 2mm	96905 M5 X 6 SOC SET SCREW SS  Hex Key: 2.5mm	96910 M6 X 8 SOC SET SCREW SS  Hex Key: 3mm	96915 M8 X 10 SOC SET SCREW SS  Hex Key: 4mm	96920 M10 X 12 SOC SET SCREW SS  Hex Key: 5mm	96925 M12 X 16 SOC SET SCREW SS  Hex Key: 6mm
96901 M4 X 8 SOC SET SCREW SS  Hex Key: 2mm	96906 M5 X 8 SOC SET SCREW SS  Hex Key: 2.5mm	96911 M6 X 10 SOC SET SCREW SS  Hex Key: 3mm	96916 M8 X 12 SOC SET SCREW SS  Hex Key: 4mm	96921 M10 X 16 SOC SET SCREW SS  Hex Key: 5mm	96926 M12 X 20 SOC SET SCREW SS  Hex Key: 6mm
96902 M4 X 10 SOC SET SCREW SS  Hex Key: 2mm	96907 M5 X 10 SOC SET SCREW SS  Hex Key: 2.5mm	96912 M6 X 12 SOC SET SCREW SS  Hex Key: 3mm	96917 M8 X 16 SOC SET SCREW SS  Hex Key: 4mm	96922 M10 X 20 SOC SET SCREW SS  Hex Key: 5mm	96927 M12 X 25 SOC SET SCREW SS  Hex Key: 6mm
96903 M4 X 12 SOC SET SCREW SS  Hex Key: 2mm	96908 M5 X 12 SOC SET SCREW SS  Hex Key: 2.5mm	96913 M6 X 16 SOC SET SCREW SS  Hex Key: 3mm	96918 M8 X 20 SOC SET SCREW SS  Hex Key: 4mm	96923 M10 X 25 SOC SET SCREW SS  Hex Key: 5mm	96928 M12 X 30 SOC SET SCREW SS  Hex Key: 6mm

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