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FASTENER COMPONENTS INDEX

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METRIC FASTENER COATING STANDARD

GLOBAL STANDARD COMPONENTS



Stamping

10/13/08

All fasteners except dowel pins and shoulder screws shall be completely and uniformly covered with a blue identification coating that is readily distinguishable as blue to identify them as metric. Shoulder screws shall be colored on the head only and the coating shall not interfere with full engagement of the drive key. Pull dowels shall be coated on the untapped end only.

Two methods of applying blue identification coating are acceptable for socket and hex head products. Each method allows different types of acceptable coatings and coverage. These methods shall be adhered to.

Method 1: Coating of the entire fastener. This method of application is intended for coating large quantities at a time and proves to be the most cost-effective.

Acceptable: Complete and uniform coverage of entire fastener covered with a blue identification coating that is readily distinguishable as blue. The k factor shall be in the range 0.13 to 0.17.

Not Acceptable:

1. Coating applied using an electro-deposition process due to the danger of hydrogen embrittlement, which contributes to premature fastener failure.
2. Paint of ANY nature (urethane, epoxy, acrylic, enamel, latex, etc.) as this will severely degrade the functionality of the fastener and will lead to improper installation torque readings resulting in premature failure of the joint.
3. Material of ANY nature that would compromise the functionality of the fastener.
4. Material of ANY nature that interferes with the "free running" of a fastener into its mating element (tapping hole or internally threaded element). This does not apply to threads with locking elements.

Method 2: Coating of the fastener head only. This method of application is intended for coating small quantities at a time (usually at the Distributor level) and may prove to be a time and cost saver.

Acceptable

1. Any blue identification coating material that will adhere to the fastener head is acceptable. The k factor The k factor shall be in the range 0.13 to 0.17.

Not Acceptable

1. Material of any nature in the socket that would interfere with full engagement of the drive key.
2. Coating material of ANY nature on ANY portion of the threads, unless the coating material meets the standards described in Method 1.

SOCKET HEAD CAP SCREW

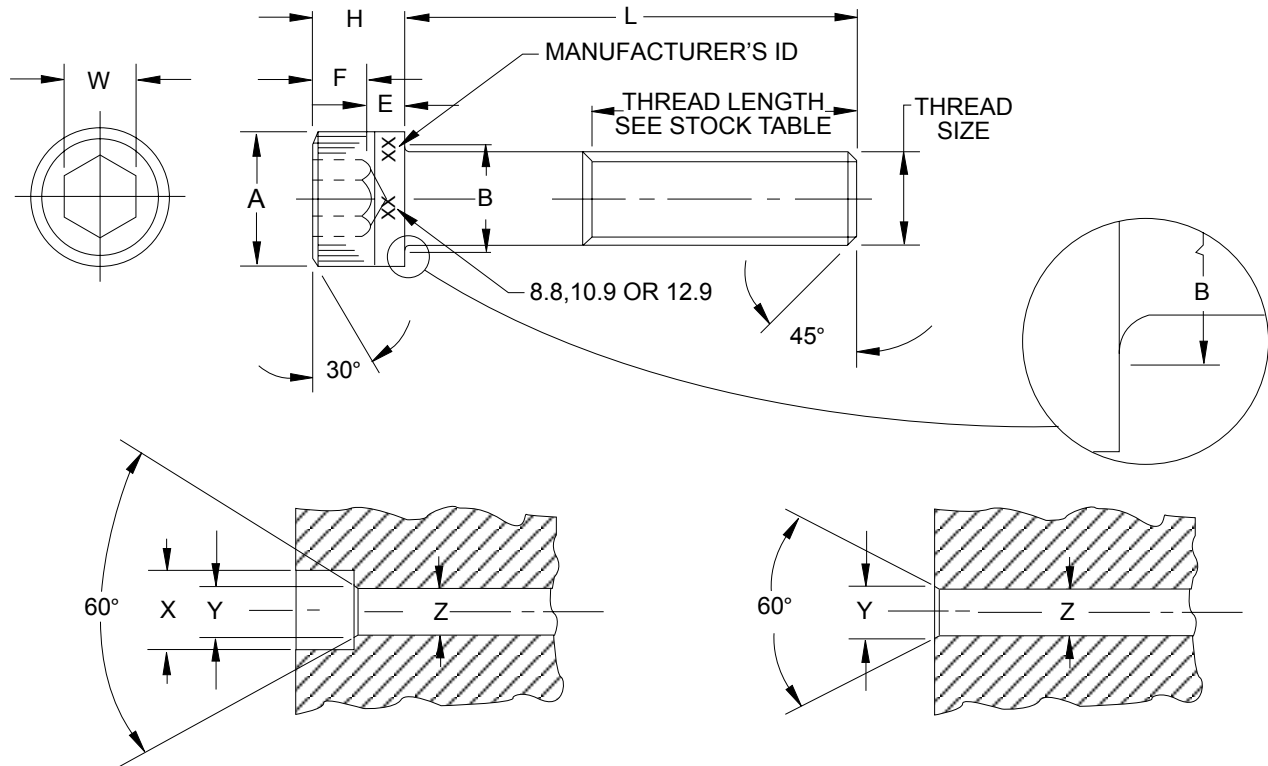
(F01, F06 AND F07 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

02/04/09



DIMENSIONS								HOLE DIMENSIONS			
THREAD SIZE NOM.	PITCH	A MAX.	B MAX.	H MAX.	W NOM.	E MIN.	F MIN.	TAP DRILL SIZE	X C'BORE SIZE	Y C'SINK DIA.	Z BODY DRILL
M3	0.5	5.5	3.6	3.0	2.5	1.15	1.5	2.5	6.5	3.6	3.4
M4	0.7	7.0	4.7	4.0	3.0	1.4	2.0	3.3	8.25	4.7	4.5
M5	0.8	8.5	5.7	5.0	4.0	1.90	2.5	4.2	9.75	5.7	5.6
M6	1.0	10.0	6.8	6.0	5.0	2.3	3.0	5.0	11.0	6.8	6.8
M8	1.25	13.0	9.2	8.0	6.0	3.3	4.0	6.7	15.0	9.2	9.0
M10	1.5	16.0	11.2	10.0	8.0	4.0	5.0	8.5	18.0	11.2	11.0
M12	1.75	18.0	13.7	12.0	10.0	4.8	6.0	10.2	20.0	14.2	13.5
M16	2.0	24.0	17.7	16.0	14.0	6.8	8.0	14.0	26.0	18.2	17.5
M20	2.5	30.0	22.4	20.0	17.0	8.6	10.0	17.5	33.0	22.4	22.0
M24	3.0	36.0	26.4	24.0	19.0	10.4	12.0	21.0	40.0	26.4	26.00

NOTES & SPECIFICATIONS:

Reference Standards:

Dimensions: ISO 4762-2004

Mechanical properties: ISO 898-1

Surface Discontinuities:

Property Class 8.8 and 10.9: ISO 6157-1

Property Class 12.9: ISO 6157-3

CODING ON FOLLOWING PAGE

F

H

I

B

C

J

G

E

A

D

SOCKET HEAD CAP SCREW CODING

MATERIAL CLASS 12.9
(COATED) (F01 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

C

D

A

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F011011B	M10x1.5x25
F011012B	M10x1.5x30
F011013B	M10x1.5x35
F011014B	M10x1.5x40
F011015B	M10x1.5x45
F011016B	M10x1.5x50
F011017B	M10x1.5x55
F011018B	M10x1.5x60
F011019B	M10x1.5x65
F011020B	M10x1.5x70
F011021B	M10x1.5x75
F011022B	M10x1.5x80
F011023B	M10x1.5x90
F011024B	M10x1.5x100
F011025B	M10x1.5x110
F011026B	M10x1.5x120
F011027B	M10x1.5x130
F011028B	M10x1.5x140
F011029B	M10x1.5x150
F011030B	M10x1.5x160
F011031B	M10x1.5x170
F011032B	M10x1.5x180
F011033B	M10x1.5x190
F011034B	M10x1.5x200
F011208B	M12x1.75x12
F011209B	M12x1.75x16
F011210B	M12x1.75x20
F011211B	M12x1.75x25
F011212B	M12x1.75x30
F011213B	M12x1.75x35
F011214B	M12x1.75x40
F011215B	M12x1.75x45
F011216B	M12x1.75x50
F011217B	M12x1.75x55
F011218B	M12x1.75x60
F011219B	M12x1.75x65
F011220B	M12x1.75x70
F011221B	M12x1.75x75
F011222B	M12x1.75x80
F011223B	M12x1.75x90

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F011224B	M12x1.75x100
F011225B	M12x1.75x110
F011226B	M12x1.75x120
F011227B	M12x1.75x130
F011228B	M12x1.75x140
F011229B	M12x1.75x150
F011230B	M12x1.75x160
F011231B	M12x1.75x170
F011232B	M12x1.75x180
F011233B	M12x1.75x190
F011234B	M12x1.75x200
F011613B	M16x2.0x35
F011614B	M16x2.0x40
F011615B	M16x2.0x45
F011616B	M16x2.0x50
F011617B	M16x2.0x55
F011618B	M16x2.0x60
F011619B	M16x2.0x65
F011620B	M16x2.0x70
F011621B	M16x2.0x75
F011622B	M16x2.0x80
F011623B	M16x2.0x90
F011624B	M16x2.0x100
F011625B	M16x2.0x110
F011626B	M16x2.0x120
F011627B	M16x2.0x130
F011628B	M16x2.0x140
F011629B	M16x2.0x150
F011630B	M16x2.0x160
F011631B	M16x2.0x170
F011632B	M16x2.0x180
F011633B	M16x2.0x190
F011634B	M16x2.0x200
F012013B	M20x2.5x35
F012014B	M20x2.5x40
F012015B	M20x2.5x45
F012016B	M20x2.5x50
F012017B	M20x2.5x55
F012018B	M20x2.5x60
F012 019B	M20x2.5x65

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F012020B	M20x2.5x70
F012021B	M20x2.5x75
F012022B	M20x2.5x80
F012023B	M20x2.5x90
F012024B	M20x2.5x100
F012025B	M20x2.5x110
F012026B	M20x2.5x120
F012027B	M20x2.5x130
F012028B	M20x2.5x140
F012029B	M20x2.5x150
F012030B	M20x2.5x160
F012031B	M20x2.5x170
F012032B	M20x2.5x180
F012033B	M20x2.5x190
F012034B	M20x2.5x200
F012415B	M24x3.0x45
F012416B	M24x3.0x50
F012417B	M24x3.0x55
F012418B	M24x3.0x60
F012419B	M24x3.0x65
F012420B	M24x3.0x70
F012421B	M24x3.0x75
F012422B	M24x3.0x80
F012423B	M24x3.0x90
F012424B	M24x3.0x100
F012425B	M24x3.0x110
F012426B	M24x3.0x120
F012427B	M24x3.0x130
F012428B	M24x3.0x140
F012429B	M24x3.0x150
F012430B	M24x3.0x160
F012431B	M24x3.0x170
F012432B	M24x3.0x180
F012433B	M24x3.0x190
F012434B	M24x3.0x200

B

SOCKET HEAD CAP SCREW CODING

MATERIAL CLASS 12.9
(UNCOATED) (F01 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/13/08

B

A

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F011011	M10x1.5x25
F011012	M10x1.5x30
F011013	M10x1.5x35
F011014	M10x1.5x40
F011015	M10x1.5x45
F011016	M10x1.5x50
F011017	M10x1.5x55
F011018	M10x1.5x60
F011019	M10x1.5x65
F011020	M10x1.5x70
F011021	M10x1.5x75
F011022	M10x1.5x80
F011023	M10x1.5x90
F011024	M10x1.5x100
F011025	M10x1.5x110
F011026	M10x1.5x120
F011027	M10x1.5x130
F011028	M10x1.5x140
F011029	M10x1.5x150
F011030	M10x1.5x160
F011031	M10x1.5x170
F011032	M10x1.5x180
F011033	M10x1.5x190
F011034	M10x1.5x200
F011208	M12x1.75x12
F011209	M12x1.75x16
F011210	M12x1.75x20
F011211	M12x1.75x25
F011212	M12x1.75x30
F011213	M12x1.75x35
F011214	M12x1.75x40
F011215	M12x1.75x45
F011216	M12x1.75x50
F011217	M12x1.75x55
F011218	M12x1.75x60
F011219	M12x1.75x65
F011220	M12x1.75x70
F011221	M12x1.75x75
F011222	M12x1.75x80
F011223	M12x1.75x90

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F011224	M12x1.75x100
F011225	M12x1.75x110
F011226	M12x1.75x120
F011227	M12x1.75x130
F011228	M12x1.75x140
F011229	M12x1.75x150
F011230	M12x1.75x160
F011231	M12x1.75x170
F011232	M12x1.75x180
F011233	M12x1.75x190
F011234	M12x1.75x200
F011613	M16x2.0x35
F011614	M16x2.0x40
F011615	M16x2.0x45
F011616	M16x2.0x50
F011617	M16x2.0x55
F011618	M16x2.0x60
F011619	M16x2.0x65
F011620	M16x2.0x70
F011621	M16x2.0x75
F011622	M16x2.0x80
F011623	M16x2.0x90
F011624	M16x2.0x100
F011625	M16x2.0x110
F011626	M16x2.0x120
F011627	M16x2.0x130
F011628	M16x2.0x140
F011629	M16x2.0x150
F011630	M16x2.0x160
F011631	M16x2.0x170
F011632	M16x2.0x180
F011633	M16x2.0x190
F011634	M16x2.0x200
F012013	M20x2.5x35
F012014	M20x2.5x40
F012015	M20x2.5x45
F012016	M20x2.5x50
F012017	M20x2.5x55
F012018	M20x2.5x60
F012 019	M20x2.5x65

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F012020	M20x2.5x70
F012021	M20x2.5x75
F012022	M20x2.5x80
F012023	M20x2.5x90
F012024	M20x2.5x100
F012025	M20x2.5x110
F012026	M20x2.5x120
F012027	M20x2.5x130
F012028	M20x2.5x140
F012029	M20x2.5x150
F012030	M20x2.5x160
F012031	M20x2.5x170
F012032	M20x2.5x180
F012033	M20x2.5x190
F012034	M20x2.5x200
F012415	M24x3.0x45
F012416	M24x3.0x50
F012417	M24x3.0x55
F012418	M24x3.0x60
F012419	M24x3.0x65
F012420	M24x3.0x70
F012421	M24x3.0x75
F012422	M24x3.0x80
F012423	M24x3.0x90
F012424	M24x3.0x100
F012425	M24x3.0x110
F012426	M24x3.0x120
F012427	M24x3.0x130
F012428	M24x3.0x140
F012429	M24x3.0x150
F012430	M24x3.0x160
F012431	M24x3.0x170
F012432	M24x3.0x180
F012433	M24x3.0x190
F012434	M24x3.0x200

LOW PROFILE SOCKET HEAD CAP SCREW

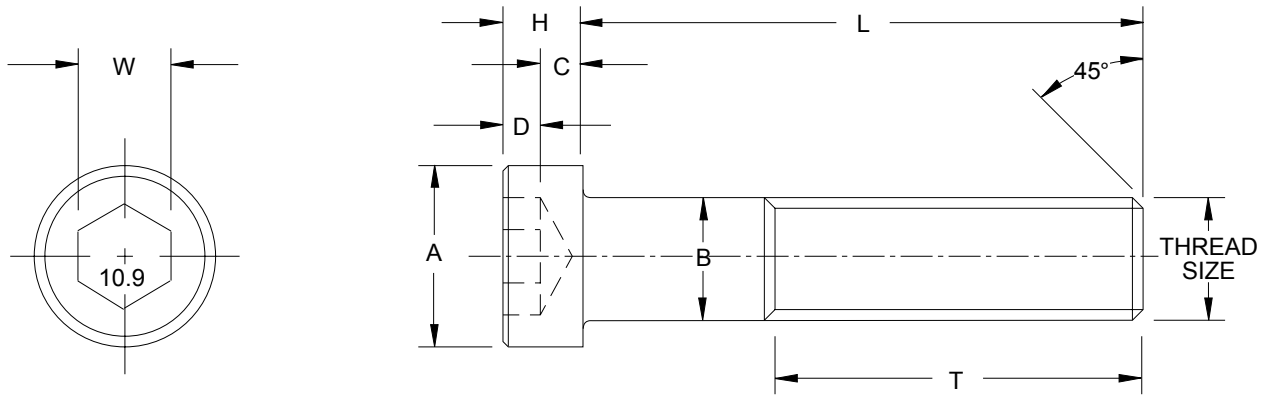
(F02 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08



DIMENSIONS									HOLE DIMENSIONS		
NOM. THREAD SIZE	PITCH	A	B	C	D	H	T	W	TAP DRILL SIZE	BODY DRILL SIZE	COUNTER BORE SIZE
		MAX	MAX	MIN	MIN	MAX	MIN	NOM			
M4	0.7	7.0	4	1.06	1.48	2.8	20	3	3.3	4.5	8.25
M5	0.8	8.5	5	1.39	1.85	3.5	22	4	4.2	5.6	9.75
M6	1.0	10.0	6	1.65	2.09	4.0	24	5	5	6.6	11.0
M8	1.25	13.0	8	2.24	2.48	5.0	28	6	6.7	9.0	14.25
M10	1.5	16.0	10	2.86	3.36	6.5	32	8	8.5	11.0	17.25
M12	1.75	18.0	12	3.46	4.26	8.0	36	10	10.2	13.5	19.25
M16	2.0	24.0	16	4.91	4.76	10.0	44	12	14.	17.5	25.5
M20	2.5	30.0	20	6.10	6.07	12.5	52	14	17.5	22.0	31.5

THREAD SIZE NOM.	STOCK SIZES (L)																		
	8	10	12	16	20	25	30	35	40	45	50	55	60	70	80	90	100	110	120
M4	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M5	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M6	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M8	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M10	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M12	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M16	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
M20	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

- Lengths to the left of heavy line (█) threaded to head.
- Lengths to the right of heavy line (█) have standard minimum thread lengths of two times the nominal thread diameter plus 12 mm.

NOTES & SPECIFICATIONS:

Material, class 10.9

CODING ON FOLLOWING PAGE

B

A
C
D

LOW PROFILE SOCKET HEAD CAP SCREW CODING

(COATED)
(F02 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F020406B	M4x0.7x8
F020407B	M4x0.7x10
F020408B	M4x0.7x12
F020409B	M4x0.7x16
F020410B	M4x0.7x20
F020411B	M4x0.7x25
F020412B	M4x0.7x30
F020506B	M5x0.8x8
F020507B	M5x0.8x10
F020508B	M5x0.8x12
F020509B	M5x0.8x16
F020510B	M5x0.8x20
F020511B	M5x0.8x25
F020512B	M5x0.8x30
F020513B	M5x0.8x35
F020514B	M5x0.8x40
F020606B	M6x1.0x8
F020607B	M6x1.0x10
F020608B	M6x1.0x12
F020609B	M6x1.0x16
F020610B	M6x1.0x20
F020611B	M6x1.0x25
F020612B	M6x1.0x30
F020613B	M6x1.0x35
F020614B	M6x1.0x40
F020615B	M6x1.0x45
F020616B	M6x1.0x50
F020617B	M6x1.0x55
F020618B	M6x1.0x60
F020808B	M8x1.25x12
F020809B	M8x1.25x16

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F020810B	M8x1.25x20
F020811B	M8x1.25x25
F020812B	M8x1.25x30
F020813B	M8x1.25x35
F020814B	M8x1.25x40
F020815B	M8x1.25x45
F020816B	M8x1.25x50
F020817B	M8x1.25x55
F020818B	M8x1.25x60
F020820B	M8x1.25x70
F021009B	M10x1.5x16
F021010B	M10x1.5x20
F021011B	M10x1.5x25
F021012B	M10x1.5x30
F021013B	M10x1.5x35
F021014B	M10x1.5x40
F021015B	M10x1.5x45
F021016B	M10x1.5x50
F021017B	M10x1.5x55
F021018B	M10x1.5x60
F021020B	M10x1.5x70
F021022B	M10x1.5x80
F021023B	M10x1.5x90
F021024B	M10x1.5x100
F021210B	M12x1.75x20
F021211B	M12x1.75x25
F021212B	M12x1.75x30
F021213B	M12x1.75x35
F021214B	M12x1.75x40
F021215B	M12x1.75x45
F021216B	M12x1.75x50

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F021217B	M12x1.75x55
F021218B	M12x1.75x60
F021220B	M12x1.75x70
F021222B	M12x1.75x80
F021223B	M12x1.75x90
F021224B	M12x1.75x100
F021612B	M16x2.0x30
F021613B	M16x2.0x35
F021614B	M16x2.0x40
F021615B	M16x2.0x45
F021616B	M16x2.0x50
F021617B	M16x2.0x55
F021618B	M16x2.0x60
F021620B	M16x2.0x70
F021622B	M16x2.0x80
F021623B	M16x2.0x90
F021624B	M16x2.0x100
F021625B	M16x2.0x110
F021626B	M16x2.0x120
F022014B	M20x2.5x40
F022015B	M20x2.5x45
F022016B	M20x2.5x50
F022017B	M20x2.5x55
F022018B	M20x2.5x60
F022020B	M20x2.5x70
F022022B	M20x2.5x80
F022023B	M20x2.5x90
F022024B	M20x2.5x100
F022025B	M20x2.5x110
F022026B	M20x2.5x120

B
A

LOW PROFILE SOCKET HEAD CAP SCREW CODING

(UNCOATED)
(F02 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08

A

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F020406	M4x0.7x8
F020407	M4x0.7x10
F020408	M4x0.7x12
F020409	M4x0.7x16
F020410	M4x0.7x20
F020411	M4x0.7x25
F020412	M4x0.7x30
F020506	M5x0.8x8
F020507	M5x0.8x10
F020508	M5x0.8x12
F020509	M5x0.8x16
F020510	M5x0.8x20
F020511	M5x0.8x25
F020512	M5x0.8x30
F020513	M5x0.8x35
F020514	M5x0.8x40
F020606	M6x1.0x8
F020607	M6x1.0x10
F020608	M6x1.0x12
F020609	M6x1.0x16
F020610	M6x1.0x20
F020611	M6x1.0x25
F020612	M6x1.0x30
F020613	M6x1.0x35
F020614	M6x1.0x40
F020615	M6x1.0x45
F020616	M6x1.0x50
F020617	M6x1.0.55
F020618	M6x1.0x60
F020808	M8x1.25x12
F020809	M8x1.25x16

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F020810	M8x1.25x20
F020811	M8x1.25x25
F020812	M8x1.25x30
F020813	M8x1.25x35
F020814	M8x1.25x40
F020815	M8x1.25x45
F020816	M8x1.25x50
F020817	M8x1.25.55
F020818	M8x1.25x60
F020820	M8x1.25x70
F021009	M10x1.5x16
F021010	M10x1.5x20
F021011	M10x1.5x25
F021012	M10x1.5x30
F021013	M10x1.5x35
F021014	M10x1.5x40
F021015	M10x1.5x45
F021016	M10x1.5x50
F021017	M10x1.5x55
F021018	M10x1.5x60
F021020	M10x1.5x70
F021022	M10x1.5x80
F021023	M10x1.5x90
F021024	M10x1.5x100
F021210	M12x1.75x20
F021211	M12x1.75x25
F021212	M12x1.75x30
F021213	M12x1.75x35
F021214	M12x1.75x40
F021215	M12x1.75x45
F021216	M12x1.75x50

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F021217	M12x1.75x55
F021218	M12x1.75x60
F021220	M12x1.75x70
F021222	M12x1.75x80
F021223	M12x1.75x90
F021224	M12x1.75x100
F021612	M16x2.0x30
F021613	M16x2.0x35
F021614	M16x2.0x40
F021615	M16x2.0x45
F021616	M16x2.0x50
F021617	M16x2.0x55
F021618	M16x2.0x60
F021620	M16x2.0x70
F021622	M16x2.0x80
F021623	M16x2.0x90
F021624	M16x2.0x100
F021625	M16x2.0x110
F021626	M16x2.0x120
F022014	M20x2.5x40
F022015	M20x2.5x45
F022016	M20x2.5x50
F022017	M20x2.5x55
F022018	M20x2.5x60
F022020	M20x2.5x70
F022022	M20x2.5x80
F022023	M20x2.5x90
F022024	M20x2.5x100
F022025	M20x2.5x110
F022026	M20x2.5x120

SOCKET FLATHEAD CAP SCREW

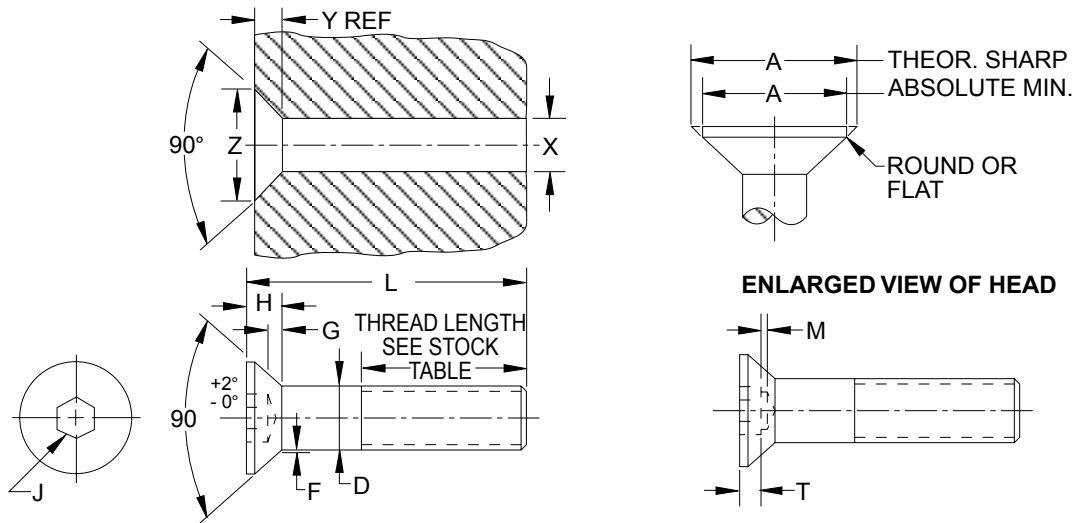
(F03 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08



A

NOM. SCR. DIA. AND THREAD PITCH	D		A		H		J	T	G	F	M
	BODY DIAMETER		HEAD DIA.		HEAD HGT.		HEX. SOC. SIZE	KEY ENGAGEMENT	WALL THK.	FILLET EXT. ABOVE D	DRILL ALLOWANCE
	MAX	MIN	THEOR. SHARP MAX	ABS. MIN	REF	FLUSHNESS TOL.					
M3 x 0.5	3.00	2.86	6.72	5.35	1.86	0.30	2.0	1.1	0.25	0.25	0.3
M4 x 0.7	4.00	3.82	8.96	7.80	2.48	0.30	2.5	1.5	0.45	0.35	0.4
M5 x 0.8	5.00	4.82	11.20	9.75	3.10	0.35	3.0	1.9	0.66	0.40	0.5
M6 x 1	6.00	5.82	13.44	11.70	3.72	0.35	4.0	2.2	0.70	0.50	0.6
M8 x 1.25	8.00	7.78	17.92	15.65	4.96	0.40	5.0	3.0	1.16	0.60	0.8
M10 x 1.5	10.00	9.78	22.40	19.50	6.20	0.50	6.0	3.6	1.62	0.80	0.9
M12 x 1.75	12.00	11.73	26.88	23.40	7.44	0.60	8.0	4.3	1.80	0.90	1.2
M16 x 2	16.00	15.73	33.60	23.76	8.80	0.80	10.0	4.8	2.20	1.00	1.5
M20 x 2.5	20.00	19.67	40.32	34.60	10.16	1.00	12.0	5.6	2.20	1.20	1.5

THREAD SIZE NOM.	STOCK SIZES (L)																	
	6	8	10	12	16	20	25	30	35	40	45	50	55	60	70	80	90	100
M3																		
M4																		
M5																		
M6																		
M8																		
M10																		
M12																		
M16																		
M20																		

SCREW SIZE NOM.	X	Y	Z
	BODY DRILL SIZE	C'SINK DEPTH (REF)	C'SINK DIA MIN
M3	3.5	1.61	6.72
M4	4.6	2.18	8.96
M5	6.0	2.60	11.20
M6	6.6	3.22	13.44
M8	9.0	4.46	17.92
M10	11.0	5.45	22.40
M12	13.5	6.69	26.88
M16	17.5	7.80	33.60
M20	22.0	8.96	40.32

- Lengths to the left of heavy line (█) threaded to head.
- Lengths to the right of heavy line (█) have standard minimum thread lengths of two times the nominal thread diameter plus 12 mm.

NOTES & SPECIFICATIONS:

Material, Class 12.9
ANSI B18.3.5M
ASTM F835M

CODING CONTINUED ON FOLLOWING PAGE

B
D
C

SOCKET FLATHEAD CAP SCREW CODING

(COATED)
(F03 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH	NAAMS CODE	NOM. SIZE, PITCH AND LENGTH	NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F030305B	M3x0.5x6	F030612B	M6x1.0x30	F031211B	M12x1.75x25
F030306B	M3x0.5x8	F030613B	M6x1.0x35	F031212B	M12x1.75x30
F030307B	M3x0.5x10	F030614B	M6x1.0x40	F031213B	M12x1.75x35
F030308B	M3x0.5x12	F030615B	M6x1.0x45	F031214B	M12x1.75x40
F030309B	M3x0.5x16	F030616B	M6x1.0x50	F031215B	M12x1.75x45
F030310B	M3x0.5x20	F030807B	M8x1.25x10	F031216B	M12x1.75x50
F030311B	M3x0.5x25	F030808B	M8x1.25x12	F031217B	M12x1.75x55
F030312B	M3x0.5x30	F030809B	M8x1.25x16	F031218B	M12x1.75x60
F030406B	M4x0.7x8	F030810B	M8x1.25x20	F031220B	M12x1.75x70
F030407B	M4x0.7x10	F030811B	M8x1.25x25	F031222B	M12x1.75x80
F030408B	M4x0.7x12	F030812B	M8x1.25x30	F031223B	M12x1.75x90
F030409B	M4x0.7x16	F030813B	M8x1.25x35	F031224B	M12x1.75x100
F030410B	M4x0.7x20	F030814B	M8x1.25x40	F031612B	M16x2.0x30
F030411B	M4x0.7x25	F030815B	M8x1.25x45	F031613B	M16x2.0x35
F030412B	M4x0.7x30	F030816B	M8x1.25x50	F031614B	M16x2.0x40
F030413B	M4x0.7x35	F030817B	M8x1.25x55	F031615B	M16x2.0x45
F030414B	M4x0.7x40	F030818B	M8x1.25x60	F031616B	M16x2.0x50
F030506B	M5x0.8x8	F030820B	M8x1.25x70	F031617B	M16x2.0x55
F030507B	M5x0.8x10	F031008B	M10x1.5x12	F031618B	M16x2.0x60
F030508B	M5x0.8x12	F031009B	M10x1.5x16	F031620B	M16x2.0x70
F030509B	M5x0.8x16	F031010B	M10x1.5x20	F031622B	M16x2.0x80
F030510B	M5x0.8x20	F031011B	M10x1.5x25	F031623B	M16x2.0x90
F030511B	M5x0.8x25	F031012B	M10x1.5x30	F031624B	M16x2.0x100
F030512B	M5x0.8x30	F031013B	M10x1.5x35	F032013B	M20x2.5x35
F030513B	M5x0.8x35	F031014B	M10x1.5x40	F032014B	M20x2.5x40
F030514B	M5x0.8x40	F031015B	M10x1.5x45	F032015B	M20x2.5x45
F030515B	M5x0.8x45	F031016B	M10x1.5x50	F032016B	M20x2.5x50
F030516B	M5x0.8x50	F031017B	M10x1.5x55	F032017B	M20x2.5x55
F030606B	M6x1.0x8	F031018B	M10x1.5x60	F032018B	M20x2.5x60
F030607B	M6x1.0x10	F031020B	M10x1.5x70	F032020B	M20x2.5x70
F030608B	M6x1.0x12	F031022B	M10x1.5x80	F032022B	M20x2.5x80
F030609B	M6x1.0x16	F031023B	M10x1.5x90	F032023B	M20x2.5x90
F030610B	M6x1.0x20	F031024B	M10x1.5x100	F032024B	M20x2.5x100
F030611B	M6x1.0x25	F031210B	M12x1.75x20		

C
B

A

SOCKET FLATHEAD CAP SCREW CODING

(UNCOATED)
(F03 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08

A

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F030305	M3x0.5x6
F030306	M3x0.5x8
F030307	M3x0.5x10
F030308	M3x0.5x12
F030309	M3x0.5x16
F030310	M3x0.5x20
F030311	M3x0.5x25
F030312	M3x0.5x30
F030406	M4x0.7x8
F030407	M4x0.7x10
F030408	M4x0.7x12
F030409	M4x0.7x16
F030410	M4x0.7x20
F030411	M4x0.7x25
F030412	M4x0.7x30
F030413	M4x0.7x35
F030414	M4x0.7x40
F030506	M5x0.8x8
F030507	M5x0.8x10
F030508	M5x0.8x12
F030509	M5x0.8x16
F030510	M5x0.8x20
F030511	M5x0.8x25
F030512	M5x0.8x30
F030513	M5x0.8x35
F030514	M5x0.8x40
F030515	M5x0.8x45
F030516	M5x0.8x50
F030606	M6x1.0x8
F030607	M6x1.0x10
F030608	M6x1.0x12
F030609	M6x1.0x16
F030610	M6x1.0x20
F030611	M6x1.0x25

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F030612	M6x1.0x30
F030613	M6x1.0x35
F030614	M6x1.0x40
F030615	M6x1.0x45
F030616	M6x1.0x50
F030807	M8x1.25x10
F030808	M8x1.25x12
F030809	M8x1.25x16
F030810	M8x1.25x20
F030811	M8x1.25x25
F030812	M8x1.25x30
F030813	M8x1.25x35
F030814	M8x1.25x40
F030815	M8x1.25x45
F030816	M8x1.25x50
F030817	M8x1.25x55
F030818	M8x1.25x60
F030820	M8x1.25x70
F031008	M10x1.5x12
F031009	M10x1.5x16
F031010	M10x1.5x20
F031011	M10x1.5x25
F031012	M10x1.5x30
F031013	M10x1.5x35
F031014	M10x1.5x40
F031015	M10x1.5x45
F031016	M10x1.5x50
F031017	M10x1.5x55
F031018	M10x1.5x60
F031020	M10x1.5x70
F031022	M10x1.5x80
F031023	M10x1.5x90
F031024	M10x1.5x100
F031210	M12x1.75x20

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F031211	M12x1.75x25
F031212	M12x1.75x30
F031213	M12x1.75x35
F031214	M12x1.75x40
F031215	M12x1.75x45
F031216	M12x1.75x50
F031217	M12x1.75x55
F031218	M12x1.75x60
F031220	M12x1.75x70
F031222	M12x1.75x80
F031223	M12x1.75x90
F031224	M12x1.75x100
F031612	M16x2.0x30
F031613	M16x2.0x35
F031614	M16x2.0x40
F031615	M16x2.0x45
F031616	M16x2.0x50
F031617	M16x2.0x55
F031618	M16x2.0x60
F031620	M16x2.0x70
F031622	M16x2.0x80
F031623	M16x2.0x90
F031624	M16x2.0x100
F032013	M20x2.5x35
F032014	M20x2.5x40
F032015	M20x2.5x45
F032016	M20x2.5x50
F032017	M20x2.5x55
F032018	M20x2.5x60
F032020	M20x2.5x70
F032022	M20x2.5x80
F032023	M20x2.5x90
F032024	M20x2.5x100

SOCKET HEAD SHOULDER SCREW

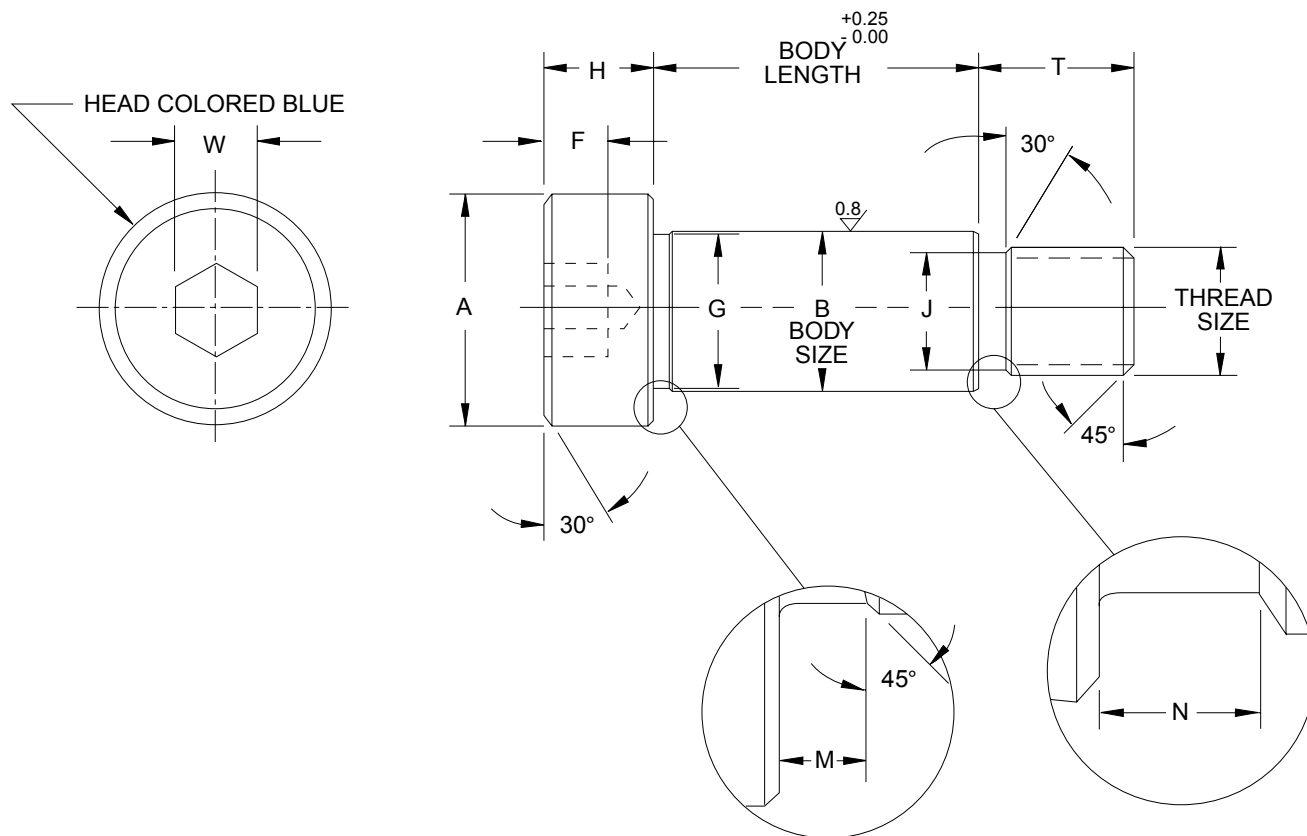
(F04 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08



STOCK SIZES														
NOM.	BODY LENGTHS													
BODY SIZE	10	12	16	20	25	30	40	50	60	70	80	90	100	120
6	✓	✓	✓	✓	✓	✓	✓	✓						
8		✓	✓	✓	✓	✓	✓	✓						
10			✓	✓	✓	✓	✓	✓	✓					
12				✓	✓	✓	✓	✓	✓	✓				
16					✓	✓	✓	✓	✓	✓	✓			
20						✓	✓	✓	✓	✓	✓	✓		
24							✓	✓	✓	✓	✓	✓	✓	✓

NOTES & SPECIFICATIONS:

Material, heat treated alloy steel. Ultimate min. tensile 1100MPa, single shear strength 660MPa.
ANSI B18.3.3M

CODING ON FOLLOWING PAGE

C
E
A
B
D

SOCKET HEAD SHOULDER SCREW CODING

(F04 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

BODY SIZE	NOM. THREAD SIZE	PITCH	A MAX	F MIN	B _{h8}		G MIN	H MAX
					MAX	MIN		
6	M5	0.8	10.00	2.4	6.0	5.982	5.42	4.50
8	M6	1.0	13.00	3.3	8.0	7.978	7.42	5.50
10	M8	1.25	16.00	4.2	10.0	9.978	9.42	7.00
12	M10	1.5	18.00	4.9	12.0	11.973	11.42	8.00
16	M12	1.75	24.00	6.6	16.0	15.973	15.42	10.00
20	M16	2.0	30.00	8.8	20.0	19.967	19.42	14.00
24	M20	2.5	36.00	10.0	24.0	23.967	23.42	16.00

BODY SIZE	J	M	N	T	W	RECOMMENDED SEATING TORQUE Nm	TAP DRILL SIZE
	MIN	MAX	MAX	MAX	NOM.		
6	3.68	2.5	2.40	9.75	3	7	4.2
8	4.40	2.5	2.60	11.25	4	12	5.0
10	6.03	2.5	2.80	13.25	5	29	6.75
12	7.69	2.5	3.00	16.40	6	57	8.5
16	9.35	2.5	4.00	18.40	8	100	10.25
20	12.96	2.5	4.80	22.40	10	240	14
24	16.30	3.0	5.60	27.40	12	470	17.5

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE		BODY SIZE X LENGTH	NAAMS CODE		BODY SIZE X LENGTH	NAAMS CODE		BODY SIZE X LENGTH
COATED	UNCOATED		COATED	UNCOATED		COATED	UNCOATED	
F040607B	F040607	6 X 10	F041014B	F041014	10 X 40	F041620B	F041620	16 X 70
F040608B	F040608	6 X 12	F041016B	F041016	10 X 50	F041622B	F041622	16 X 80
F040609B	F040609	6 X 16	F041018B	F041018	10 X 60	F041623B	F041623	16 X 90
F040610B	F040610	6 X 20	F041020B	F041020	10 X 70	F041624B	F041624	16 X 100
F040611B	F040611	6 X 25	F041022B	F041022	10 X 80	F041626B	F041626	16 X 120
F040612B	F040612	6 X 30	F041209B	F041209	12 X 16	F042014B	F042014	20 X 40
F040614B	F040614	6 X 40	F041210B	F041210	12 X 20	F042016B	F042016	20 X 50
F040616B	F040616	6 X 50	F041211B	F041211	12 X 25	F042018B	F042018	20 X 60
F040808B	F040808	8 X 12	F041212B	F041212	12 X 30	F042020B	F042020	20 X 70
F040809B	F040809	8 X 16	F041214B	F041214	12 X 40	F042022B	F042022	20 X 80
F040810B	F040810	8 X 20	F041216B	F041216	12 X 50	F042023B	F042023	20 X 90
F040811B	F040811	8 X 25	F041218B	F041218	12 X 60	F042024B	F042024	20 X 100
F040812B	F040812	8 X 30	F041220B	F041220	12 X 70	F042026B	F042026	20 X 120
F040814B	F040814	8 X 40	F041222B	F041222	12 X 80	F042416B	F042416	24 X 50
F040816B	F040816	8 X 50	F041223B	F041223	12 X 90	F042418B	F042418	24 X 60
F040820B	F040820	8 X 70	F041224B	F041224	12 X 100	F042420B	F042420	24 X 70
F041009B	F041009	10 X 16	F041612B	F041612	16 X 30	F042422B	F042422	24 X 80
F041010B	F041010	10 X 20	F041614B	F041614	16 X 40	F042423B	F042423	24 X 90
F041011B	F041011	10 X 25	F041616B	F041616	16 X 50	F042424B	F042424	24 X 100
F041012B	F041012	10 X 30	F041618B	F041618	16 X 60	F042426B	F042426	24 X 120

A
B
C

HEX HEAD SCREW

(F05 SERIES)

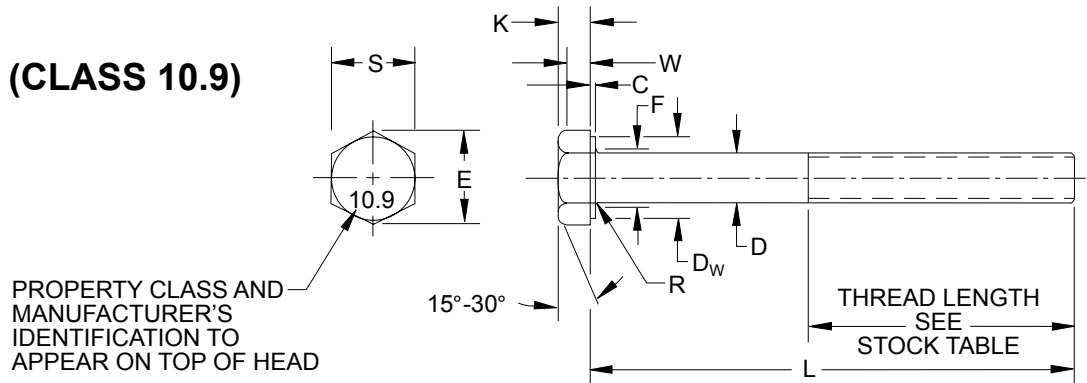
GLOBAL STANDARD COMPONENTS



Stamping

08/06/08

(CLASS 10.9)



NOMINAL SCREW DIA. & THREAD PITCH	D BODY DIAMETER		S WIDTH ACROSS FLATS		E WIDTH ACROSS CORNERS		K HEAD HEIGHT		W	F	R	C WASHER FACE THICKNESS		D _w
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MIN	MAX	MIN	MAX	MIN	MIN
M12x1.75	12.00	11.73	18.00	17.73	20.78	20.03	7.76	7.24	5.2	13.7	0.6	0.6	0.3	16.6
M14x2	14.00	13.73	21.00	20.67	24.25	23.35	9.09	8.51	6.2	15.7	0.6	0.6	0.3	19.6
M16x2	16.00	15.73	24.00	23.67	27.71	26.75	10.32	9.68	7.0	17.7	0.6	0.8	0.4	22.5
M20x2.5	20.00	19.67	30.00	29.16	34.64	32.95	12.88	12.12	8.8	22.4	0.8	0.8	0.4	27.7
M24x3	24.00	23.67	36.00	35.00	41.57	39.55	15.44	14.56	10.5	26.4	0.8	0.8	0.4	33.2
M30x3.5	30.00	29.67	46.00	45.00	53.12	50.85	19.48	17.92	13.1	33.4	1.0	0.8	0.4	42.7
M36x4	36.00	35.61	55.00	53.80	63.51	60.79	23.38	21.62	15.8	39.4	1.0	0.8	0.4	51.1

THREAD SIZE NOM	STOCK SIZES (L)																																							
	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	240	260	280	300	320	330	340						
M12	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█				
M14		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█			
M16			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█			
M20				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█		
M24					█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
M30						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
M36							█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

- Lengths to the left of heavy line (█) threaded to head.
- Lengths to the right of heavy line (█) have standard minimum thread lengths of two times the nominal thread diameter plus 12 mm.

NOTES & SPECIFICATIONS:

ANSI B18.2.3.1M
 ASTM F568M
 CLASS 10.9

CODING ON FOLLOWING PAGE

D
B
F
A
C
E

HEX HEAD SCREW CODING

(COATED)
(F05 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

A
C
B

CLASS 10.9

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F051210B	M12-1.75 x 20
F051211B	M12-1.75 x 25
F051212B	M12-1.75 x 30
F051213B	M12-1.75 x 35
F051214B	M12-1.75 x 40
F051215B	M12-1.75 x 45
F051216B	M12-1.75 x 50
F051217B	M12-1.75 x 55
F051218B	M12-1.75 x 60
F051219B	M12-1.75 x 65
F051220B	M12-1.75 x 70
F051221B	M12-1.75 x 75
F051222B	M12-1.75 x 80
F051223B	M12-1.75 x 90
F051224B	M12-1.75 x 100
F051225B	M12-1.75 x 110
F051226B	M12-1.75 x 120
F051411B	M14-2.0 x 25
F051412B	M14-2.0 x 30
F051413B	M14-2.0 x 35
F051414B	M14-2.0 x 40
F051415B	M14-2.0 x 45
F051416B	M14-2.0 x 50
F051417B	M14-2.0 x 55
F051418B	M14-2.0 x 60
F051420B	M14-2.0 x 70
F051422B	M14-2.0 x 80
F051423B	M14-2.0 x 90
F051424B	M14-2.0 x 100
F051425B	M14-2.0 x 110
F051613B	M16-2.0 x 35
F051614B	M16-2.0 x 40
F051615B	M16-2.0 x 45
F051616B	M16-2.0 x 50
F051617B	M16-2.0 x 55
F051618B	M16-2.0 x 60
F051620B	M16-2.0 x 70
F051621B	M16-2.0 x 75
F051622B	M16-2.0 x 80
F051623B	M16-2.0 x 90
F051624B	M16-2.0 x 100

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F051625B	M16-2.0 x 110
F051626B	M16-2.0 x 120
F052014B	M20-2.5 x 40
F052015B	M20-2.5 x 45
F052016B	M20-2.5 x 50
F052018B	M20-2.5 x 60
F052020B	M20-2.5 x 70
F052022B	M20-2.5 x 80
F052023B	M20-2.5 x 90
F052024B	M20-2.5 x 100
F052025B	M20-2.5 x 110
F052026B	M20-2.5 x 120
F052027B	M20-2.5 x 130
F052028B	M20-2.5 x 140
F052029B	M20-2.5 x 150
F052030B	M20-2.5 x 160
F052031B	M20-2.5 x 170
F052032B	M20-2.5 x 180
F052033B	M20-2.5 x 190
F052034B	M20-2.5 x 200
F052036B	M20-2.5 x 220
F052037B	M20-2.5 x 240
F052038B	M20-2.5 x 260
F052039B	M20-2.5 x 280
F052040B	M20-2.5 x 300
F052043B	M20-2.5 x 340
F052416B	M24-3.0 x 50
F052418B	M24-3.0 x 60
F052420B	M24-3.0 x 70
F052422B	M24-3.0 x 80
F052424B	M24-3.0 x 100
F052425B	M24-3.0 x 110
F052426B	M24-3.0 x 120
F052427B	M24-3.0 x 130
F052428B	M24-3.0 x 140
F052429B	M24-3.0 x 150
F052430B	M24-3.0 x 160
F052431B	M24-3.0 x 170
F052432B	M24-3.0 x 180
F052433B	M24-3.0 x 190
F052434B	M24-3.0 x 200

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F052436B	M24-3.0 x 220
F052437B	M24-3.0 x 240
F052438B	M24-3.0 x 260
F052439B	M24-3.0 x 280
F052440B	M24-3.0 x 300
F052442B	M24-2.0 x 330
F052443B	M24-3.0 x 340
F053018B	M30-3.5 x 60
F053019B	M30-3.5 x 65
F053020B	M30-3.5 x 70
F053022B	M30-3.5 x 80
F053023B	M30-3.5 x 90
F053024B	M30-3.5 x 100
F053025B	M30-3.5 x 110
F053026B	M30-3.5 x 120
F053027B	M30-3.5 x 130
F053028B	M30-3.5 x 140
F053029B	M30-3.5 x 150
F053030B	M30-3.5 x 160
F053031B	M30-3.5 x 170
F053032B	M30-3.5 x 180
F053033B	M30-3.5 x 190
F053034B	M30-3.5 x 200
F053035B	M30-3.5 x 210
F053036B	M30-3.5 x 220
F053037B	M30-3.5 x 240
F053038B	M30-3.5 x 260
F053040B	M30-3.5 x 300
F053041B	M30-3.5 x 320
F053622B	M36-4.0 x 80
F053623B	M36-4.0 x 90
F053624B	M36-4.0 x 100
F053626B	M36-4.0 x 120
F053627B	M36-4.0 x 130
F053628B	M36-4.0 x 140
F053629B	M36-4.0 x 150
F053630B	M36-4.0 x 160
F053631B	M36-4.0 x 170
F053634B	M36-4.0 x 200

HEX HEAD SCREW CODING

(UNCOATED)
(F05 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

A

B

CLASS 10.9

COATED SCREWS (SEE PAGE F1.2)

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F051210	M12-1.75 x 20
F051211	M12-1.75 x 25
F051212	M12-1.75 x 30
F051213	M12-1.75 x 35
F051214	M12-1.75 x 40
F051215	M12-1.75 x 45
F051216	M12-1.75 x 50
F051217	M12-1.75 x 55
F051218	M12-1.75 x 60
F051219	M12-1.75 x 65
F051220	M12-1.75 x 70
F051221	M12-1.75 x 75
F051222	M12-1.75 x 80
F051223	M12-1.75 x 90
F051224	M12-1.75 x 100
F051225	M12-1.75 x 110
F051226	M12-1.75 x 120
F051411	M14-2.0 x 25
F051412	M14-2.0 x 30
F051413	M14-2.0 x 35
F051414	M14-2.0 x 40
F051415	M14-2.0 x 45
F051416	M14-2.0 x 50
F051417	M14-2.0 x 55
F051418	M14-2.0 x 60
F051420	M14-2.0 x 70
F051422	M14-2.0 x 80
F051423	M14-2.0 x 90
F051424	M14-2.0 x 100
F051425	M14-2.0 x 110
F051613	M16-2.0 x 35
F051614	M16-2.0 x 40
F051615	M16-2.0 x 45
F051616	M16-2.0 x 50
F051617	M16-2.0 x 55
F051618	M16-2.0 x 60
F051620	M16-2.0 x 70
F051621	M16-2.0 x 75
F051622	M16-2.0 x 80
F051623	M16-2.0 x 90
F051624	M16-2.0 x 100

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F051625	M16-2.0 x 110
F051626	M16-2.0 x 120
F052014	M20-2.5 x 40
F052015	M20-2.5 x 45
F052016	M20-2.5 x 50
F052018	M20-2.5 x 60
F052020	M20-2.5 x 70
F052022	M20-2.5 x 80
F052023	M20-2.5 x 90
F052024	M20-2.5 x 100
F052025	M20-2.5 x 110
F052026	M20-2.5x 120
F052027	M20-2.5 x 130
F052028	M20-2.5 x 140
F052029	M20-2.5 x 150
F052030	M20-2.5 x 160
F052031	M20-2.5 x 170
F052032	M20-2.5 x 180
F052033	M20-2.5 x 190
F052034	M20-2.5 x 200
F052036	M20-2.5 x 220
F052037	M20-2.5x 240
F052038	M20-2.5 x 260
F052039	M20-2.5 x 280
F052040	M20-2.5 x 300
F052043	M20-2.5x 340
F052416	M24-3.0 x 50
F052418	M24-3.0 x 60
F052420	M24-3.0 x 70
F052422	M24-3.0 x 80
F052424	M24-3.0 x 100
F052425	M24-3.0 x 110
F052426	M24-3.0x 120
F052427	M24-3.0 x 130
F052428	M24-3.0 x 140
F052429	M24-3.0x 150
F052430	M24-3.0 x 160
F052431	M24-3.0 x 170
F052432	M24-3.0 x 180
F052433	M24-3.0 x 190
F052434	M24-3.0 x 200

NAAMS CODE	NOM. SIZE, PITCH AND LENGTH
F052436	M24-3.0 x 220
F052437	M24-3.0 x 240
F052438	M24-3.0 x 260
F052439	M24-3.0 x 280
F052440	M24-3.0 x 300
F052442	M24-2.0 x 330
F052443	M24-3.0 x 340
F053018	M30-3.5 x 60
F053019	M30-3.5 x 65
F053020	M30-3.5 x 70
F053022	M30-3.5 x 80
F053023	M30-3.5 x 90
F053024	M30-3.5 x 100
F053025	M30-3.5 x 110
F053026	M30-3.5x 120
F053027	M30-3.5 x 130
F053028	M30-3.5x 140
F053029	M30-3.5x 150
F053030	M30-3.5 x 160
F053031	M30-3.5 x 170
F053032	M30-3.5 x 180
F053033	M30-3.5 x 190
F053034	M30-3.5 x 200
F053035	M30-3.5 x 210
F053036	M30-3.5 x 220
F053037	M30-3.5 x 240
F053038	M30-3.5 x 260
F053040	M30-3.5 x 300
F053041	M30-3.5 x 320
F053622	M36-4.0 x 80
F053623	M36-4.0 x 90
F053624	M36-4.0 x 100
F053626	M36-4.0 x 120
F053627	M36-4.0 x 130
F053628	M36-4.0 x 140
F053629	M36-4.0 x 150
F053630	M36-4.0 x 160
F053631	M36-4.0 x 170
F053634	M36-4.0 x 200

SOCKET SET SCREW

(F21, F22 & F23 SERIES)

GLOBAL STANDARD COMPONENTS

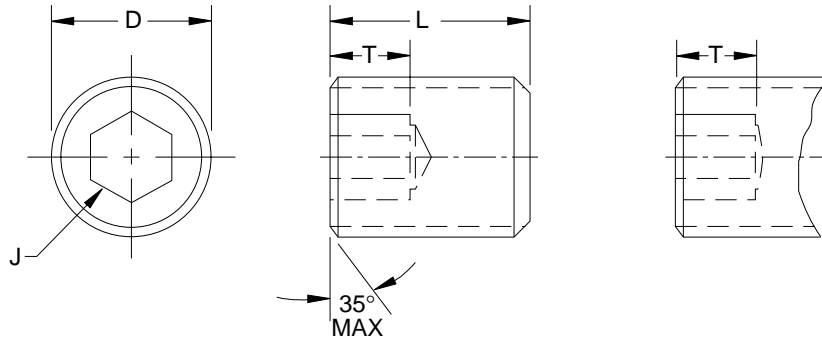


Stamping

05/14/97

NOTES & SPECIFICATIONS:

ANSI B18.3.6M
CLASS 45H
See individual point styles
for applicable DIN and ISO
specifications
(See next page)



A

B

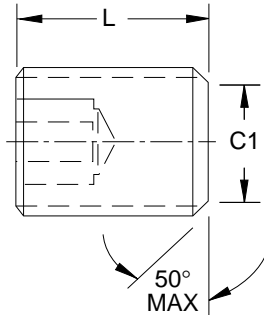
NAAMS CODE FLAT POINT STYLE	NAAMS CODE CONE POINT STYLE	NAAMS CODE CUP POINT (TYPE 1) STYLE	D NOMINAL SIZE OF BASIC SCREW ϕ x PITCH	J HEXAGON SOCKET SIZE NOM.	L NOMINAL SCREW LENGTHS	T FOR CUP AND FLAT POINTS MIN
F210503	F220503	F230503	5 x 0.8	2.5	3	1.2
F210504	F220504	F230504			4	2.0
F210505	F220505	F230505			5	2.7
F210506	F220506	F230506			6	2.7
F210508	F220508	F230508			8	2.7
F210604	F220604	F230604	6 x 1	3	4	1.8
F210605	F220605	F230605			5	2.5
F210606	F220606	F230606			6	3.0
F210608	F220608	F230608			8	3.0
F210805	F220805	F230805	8 x 1.25	4	5	1.8
F210806	F220806	F230806			6	2.5
F210808	F220808	F230808			8	4.0
F210810	F220810	F230810			10	4.0
F211006	F221006	F231006	10 x 1.5	5	6	2.0
F211008	F221008	F231008			8	3.6
F211010	F221010	F231010			10	5.0
F211012	F221012	F231012			12	5.0
F211208	F221208	F231208	12 x 1.75	6	8	3.0
F211210	F221210	F231210			10	4.5
F211212	F221212	F231212			12	6.0
F211216	F221216	F231216			16	6.0
F211610	F221610	F231610	16 x 2	8	10	3.0
F211612	F221612	F231612			12	4.8
F211616	F221616	F231616			16	8.0
F211620	F221620	F231620			20	8.0
F212012	F222012	F232012	20 x 2.5	10	12	-
F212016	F222016	F232016			16	6.0
F212020	F222020	F232020			20	9.0
F212025	F222025	F232025			25	10.0
F212416	F222416	F232416	24 x 3	12	16	5.0
F212420	F222420	F232420			20	8.0
F212425	F222425	F232425			25	12.0
F212430	F222430	F232430			30	12.0

SOCKET SET SCREW POINT STYLES

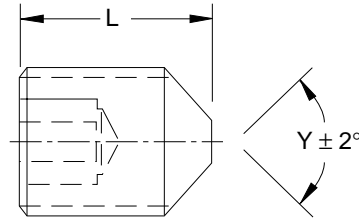
(F21, F22 & F23 SERIES)

Stamping

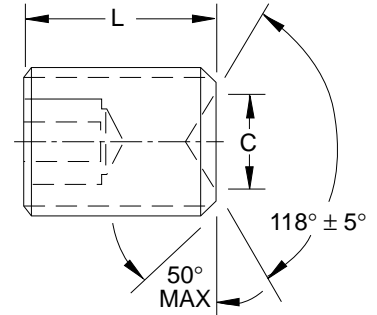
05/14/97



**FLAT POINT
(F21)**



**CONE POINT
(F22)**



**CUP POINT
TYPE 1 (F23)**

D NOMINAL SIZE OF BASIC SCREW ∅	C CUP POINT ∅ TYPE 1		C1 FLAT POINT ∅		Y CONE POINT ANGLE 90° FOR THESE LENGTHS AND OVER; 118° FOR SHORTER LENGTHS
	MAX	MIN	MAX	MIN	
5	2.50	2.25	3.50	3.20	6
6	3.00	2.75	4.00	3.70	8
8	5.00	4.70	5.50	5.20	10
10	6.00	5.70	7.00	6.64	12
12	8.00	7.64	8.50	8.14	16
16	10.00	9.64	12.00	11.57	20
20	14.00	13.57	15.00	14.57	25
24	16.00	15.57	18.00	17.57	30

NOTES & SPECIFICATIONS:

Material hardness 45H
Must conform to:
ANSI B18.3.6M
Thread class 4g 6g

Cup Point - DIN 916, ISO 4029, ANSI B18.3.6M
Flat Point - DIN 913, ISO 4026, ANSI B18.3.6M
Cone Point - DIN 914, ISO 4027, ANSI B18.3.6M

A

B

C

**HEXAGON
NUT**

(F41 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

09/18/98

B

F41 SERIES DISCONTINUED

B

HEXAGON NUT WASHER FACE

(F42 SERIES)

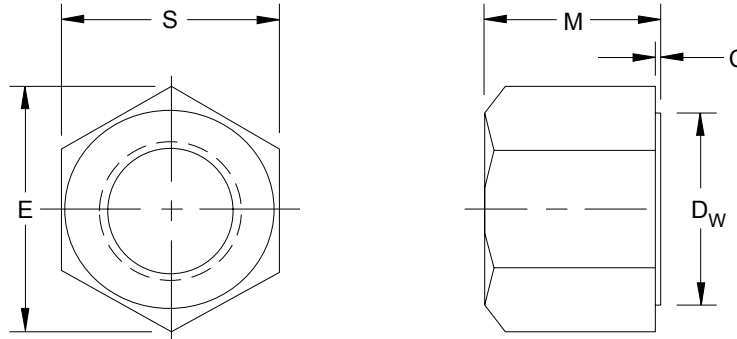
GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

COARSE THREAD



NAAMS CODE		NOMINAL NUT ϕ & THREAD PITCH	S WIDTH ACROSS FLATS		E WIDTH ACROSS CORNERS		M THICKNESS ANSI B18.2.4.2M		D _w BEARING FACE ϕ	C WASHER FACE THICKNESS	
COATED	UNCOATED		MAX	MIN	MAX	MIN	MAX	MIN	MIN	MAX	MIN
F420508B	F420508	M5 x 0.8	8.00	7.78	9.24	8.79	5.10	4.80	6.9	-	-
F420610B	F420610	M6 x 1	10.00	9.78	11.55	11.05	5.70	5.40	8.9	-	-
F420813B	F420813	M8 x 1.25	13.00	12.73	15.01	14.38	7.50	7.14	11.6	-	-
F421016B	F421016	M10 x 1.5	16.00	15.73	18.48	17.77	9.30	8.94	14.6	-	-
F421218B	F421218	M12 x 1.75	18.00	17.73	20.78	20.03	12.00	11.57	16.6	-	-
F421624B	F421624	M16 x 2	24.00	23.67	27.71	26.75	16.40	15.70	22.5	-	-
F422030B	F422030	M20 x 2.5	30.00	29.16	34.64	32.95	20.30	19.00	27.7	0.8	0.4
F422436B	F422436	M24 x 3	36.00	35.00	41.57	39.55	23.90	22.60	33.2	0.8	0.4
F423046B	F423046	M30 x 3.5	46.00	45.00	53.12	50.85	28.60	27.30	42.7	0.8	0.4
F423655B	F423655	M36 x 4	55.00	53.80	63.51	60.79	34.70	33.10	51.1	0.8	0.4

NOTES & SPECIFICATIONS:

- ANSI B18.2.4.2M
- ASTM A563M
- Class 12
- COATED NUTS (SEE PAGE F1.2)

D

B

A

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F

HEXAGON JAM NUT

(FINE: F45 SERIES, COARSE: F47 SERIES)

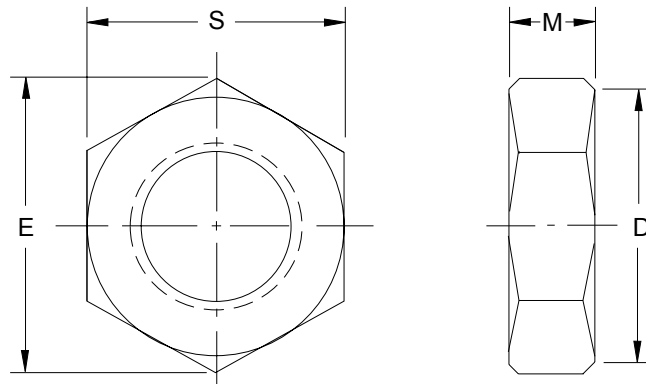
GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

COARSE & FINE THREADS



NAAMS CODE		NOMINAL NUT ϕ & THREAD PITCH	S WIDTH ACROSS FLATS		E WIDTH ACROSS CORNERS		M THICKNESS		D BEARING FACE ϕ
COATED	UNCOATED		MAX	MIN	MAX	MIN	MAX	MIN	MIN
F451017B	F451017	M10 x 1.25	17	-	-	-	5	-	-
F451219B	F451219	M12 x 1.25	19	-	-	-	6	-	-
F451624B	F451624	M16 x 1.5	24	-	-	-	8	-	-
F452030B	F452030	M20 x 1.5	30	-	-	-	10	-	-
F452741B	F452741	M27 x 2	41	-	-	-	13.5	-	-
F453650B	F453650	M36 x 2	50	-	-	-	16	-	-
F470508B	F470508	M5 x 0.8	8.00	7.78	9.24	8.79	2.70	2.45	6.9
F470610B	F470610	M6 x 1	10.00	9.78	11.55	11.05	3.20	2.90	8.9
F470813B	F470813	M8 x 1.25	13.00	12.73	15.01	14.38	4.00	3.70	11.6
F471016B	F471016	M10 x 1.5	16.00	15.73	18.48	17.77	5.00	4.70	14.6
F471218B	F471218	M12 x 1.75	18.00	17.73	20.78	20.03	6.00	5.70	16.6
F471624B	F471624	M16 x 2	24.00	23.67	27.71	26.75	8.00	7.42	22.5
F472030B	F472030	M20 x 2.5	30.00	29.16	34.64	32.95	10.00	9.10	27.7
F472243B	F472436	M24 x 3	36.00	35.00	41.57	39.55	12.00	10.90	33.2
F473046B	F473046	M30 x 3.5	46.00	45.00	53.12	50.85	15.00	13.90	42.7
F473655B	F473655	M36 x 4	55.00	53.80	63.51	60.79	18.00	16.90	51.1

NOTES & SPECIFICATIONS:

ANSI B18.2.4.5M
ASTM A563M
CLASS 04
COATED NUTS (SEE PAGE F1.2)

D

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H

HEXAGON JAM NUT WITH WASHER FACE

(FINE: F46 SERIES COARSE: F48 SERIES)

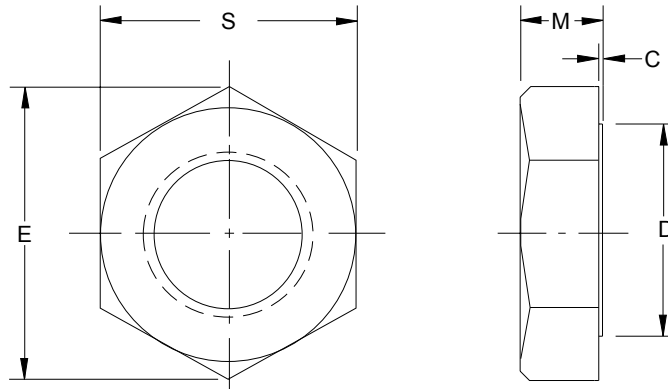
GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

COARSE & FINE THREADS



NAAMS CODE		NOMINAL NUT ϕ & THREAD PITCH	S WIDTH ACROSS FLATS		E WIDTH ACROSS CORNERS		M THICKNESS		D BEARING FACE ϕ	C WASHER FACE THICKNESS	
COATED	UNCOATED		MAX	MIN	MAX	MIN	MAX	MIN	MIN	MAX	MIN
F480508B	F480508	M5 x 0.8	8.00	7.78	9.24	8.79	2.70	2.45	6.9	-	-
F480610B	F480610	M6 x 1	10.00	9.78	11.55	11.05	3.20	2.90	8.9	-	-
F480813B	F480813	M8 x 1.25	13.00	12.73	15.01	14.38	4.00	3.70	11.6	-	-
F461017B	F461017	*M10 x 1.25	17	-	-	-	5	-	-	-	-
F480016B	F481016	M10 x 1.5	16.00	15.73	18.48	17.77	5.00	4.70	14.6	-	-
F461219B	F461219	*M12 x 1.25	19	-	-	-	6	-	-	-	-
F481218B	F481218	M12 x 1.75	18.00	17.73	20.78	20.03	6.00	5.70	16.6	-	-
F481218B	F461624	*M16 x 1.5	24	-	-	-	8	-	-	-	-
F461624B	F481624	M16 x 2	24.00	23.67	27.71	26.75	8.00	7.42	22.5	-	-
F462030B	F462030	*M20 x 1.5	30	-	-	-	10	-	-	-	-
F462030B	F482030	M20 x 2.5	30.00	29.16	34.64	32.95	10.00	9.10	27.7	0.8	0.4
F482436B	F482436	M24 x 3	36.00	35.00	41.57	39.55	12.00	10.90	33.2	0.8	0.4
F462741B	F462741	*M27 x 2	41	-	-	-	13.5	-	-	-	-
F483046B	F483046	M30 x 3.5	46.00	45.00	53.12	50.85	15.00	13.90	42.7	0.8	0.4
F483650B	F463650	*M36 x 2	50	-	-	-	16	-	-	-	-
F483650B	F483655	M36 x 4	55.00	53.80	63.51	60.79	18.00	16.90	51.1	0.8	0.4

* Fine thread series (F46 Series)

NOTES & SPECIFICATIONS:

ANSI B18.2.4.5M
ASTM A563M
Class 04
COATED NUTS (SEE PAGE F1.2)

D

B

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PLAIN WASHERS

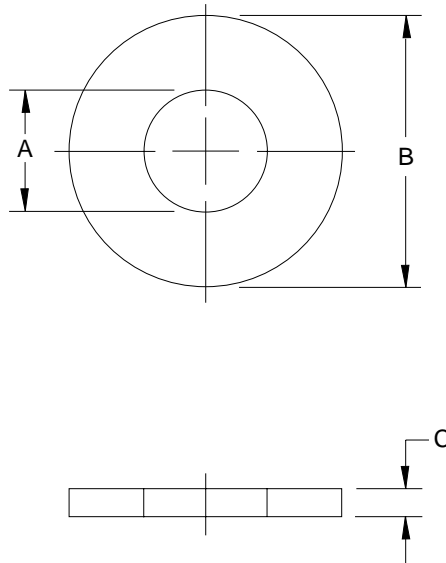
(F61 SERIES)

GLOBAL STANDARD COMPONENTS

TM **NAAMS** 

Stamping

01/03/95



NAAMS CODE	NOMINAL WASHER	WASHER SERIES	A INSIDE \varnothing		B OUTSIDE \varnothing		C THICKNESS	
			MAX	MIN	MAX	MIN	MAX	MIN
F610515	5	REGULAR	5.78	5.50	15.00	14.57	1.75	1.20
F610618	6	REGULAR	6.87	6.65	18.80	18.37	1.75	1.20
F610825	8	REGULAR	9.12	8.90	25.40	24.48	2.30	1.60
F611028	10	REGULAR	11.12	10.85	28.00	27.48	2.80	2.00
F611234	12	REGULAR	13.57	13.30	34.00	33.38	3.50	2.50
F611644	16	REGULAR	17.52	17.25	44.00	43.38	4.00	3.00
F612050	20	REGULAR	22.32	21.80	50.00	49.38	4.60	3.50
F612456	24	REGULAR	26.12	25.60	56.00	54.80	5.10	4.00
F613072	30	REGULAR	33.02	32.40	72.00	70.80	5.60	4.50
F613690	36	REGULAR	38.92	38.30	90.00	88.60	6.40	5.00

NOTES & SPECIFICATIONS:

Material, steel
ANSI B18.22M

A

HARDENED WASHER

(F62 SERIES)

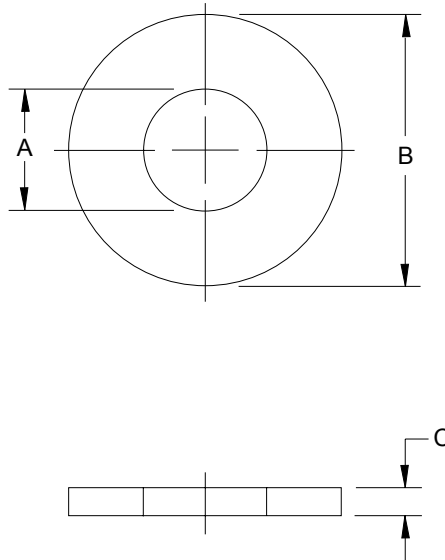
GLOBAL STANDARD COMPONENTS



Stamping

10/27/08

(ASTM F436M)



NAAMS CODE		NOMINAL WASHER	A INSIDE ϕ		B OUTSIDE ϕ		C THICKNESS	
COATED	UNCOATED		MAX	MIN	MAX	MIN	MAX	MIN
F620614B	F620614	6	7.3	7.0	13.6	12.6	4.0	2.7
F620818B	F620818	8	9.8	9.0	18.4	17.1	4.0	2.7
F621022B	F621022	10	11.8	11.0	22.0	20.7	4.0	2.7
F621227B	F621227	12	14.4	14.0	27.0	25.7	4.6	3.1
F621634B	F621634	16	18.4	18.0	34.0	32.4	4.6	3.1
F622042B	F622042	20	22.5	22.0	42.0	40.4	4.6	3.1
F622244B	F622244	22	24.5	24.0	44.0	42.4	4.6	3.4
F622244B	F622450	24	26.5	26.0	50.0	48.4	4.6	3.4
F622756B	F622756	27	30.5	30.0	56.0	54.1	4.6	3.4
F623060B	F623060	30	33.6	33.0	60.0	58.1	4.6	3.4
F623672B	F623672	36	39.6	39.0	72.0	70.1	4.6	3.4

NOTES & SPECIFICATIONS:

M6-M10 – Rc 38-45 through hardened (except as noted)
M12 & larger – ASTM F436M
COATED NUTS (SEE PAGE F1.2)

C

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PULL DOWEL PIN

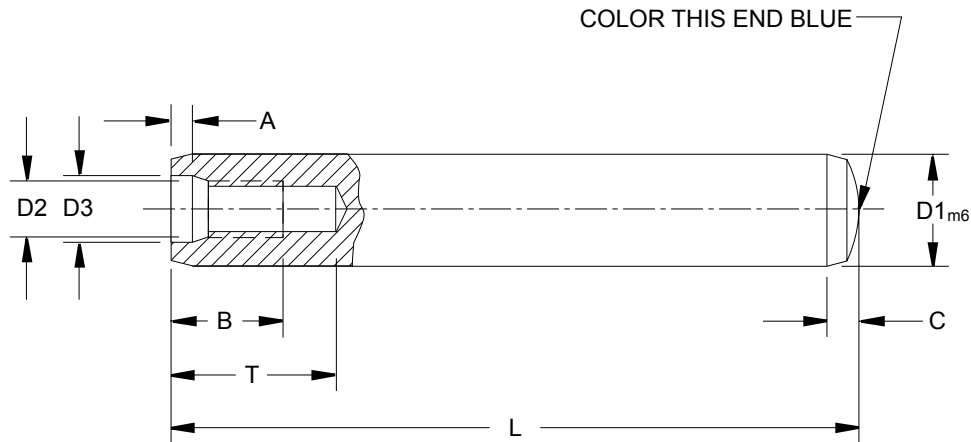
(F91 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08



D1 Dia.	6	8	10	12	16	20	25	
C	2.1	2.6	3	3.8	4.6	6	6	
D2 MAX.	M4 X 0.7	M5 x 0.8	M6 x 1	M6 x 1	M8 x 1.25	M10 x 1.5	M16 x 2	
B	6	8	10	12	16	18	24	
D3	4.3	5.3	6.4	6.4	8.4	10.5	17	
A	1	1.2	1.2	1.2	1.5	1.5	2	
T MIN.	10	12	16	20	25	28	35	
L	16	X						
	20	X	X					
	24	X	X	X				
	28	X	X	X	X			
	32	X	X	X	X	X		
	40	X	X	X	X	X	X	
	50	X	X	X	X	X	X	X
	60	X	X	X	X	X	X	X
	70		X	X	X	X	X	X
	80		X	X	X	X	X	X
	90			X	X	X	X	X
	100			X	X	X	X	X
120				X	X	X	X	

NOTES & SPECIFICATIONS:

Material, case hardened alloy steel – shear strength: 825 MPa (120ksi)

ANSI B18.8.5M

Precision ground

Provide for air release (e.g., machine a flat, spiral, etc.)

CODING ON FOLLOWING PAGE

B

A

C

D

PULL DOWEL PIN CODING

(F91 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

08/06/08

NAAMS CODE		NOM. SIZE, AND LENGTH
COATED	UNCOATED	
F910616B	F910616	6x16
F910620B	F910620	6x20
F910624B	F910624	6x24
F910628B	F910628	6x28
F910632B	F910632	6x32
F910640B	F910640	6x40
F910650B	F910650	6x50
F910660B	F910660	6x60
F910820B	F910820	8x20
F910824B	F910824	8x24
F910828B	F910828	8x28
F910832B	F910832	8x32
F910840B	F910840	8x40
F910850B	F910850	8x50
F910860B	F910860	8x60
F910870B	F910870	8x70
F910880B	F910880	8x80
F911024B	F911024	10x24
F911028B	F911028	10x28
F911032B	F911032	10x32
F911040B	F911040	10x40
F911050B	F911050	10x50
F911060B	F911060	10x60
F911070B	F911070	10x70
F911080B	F911080	10x80
F911090B	F911090	10x90
F911010B	F911010	10x100
F911228B	F911228	12x28
F911232B	F911232	12x32
F911240B	F911240	12x40
F911250B	F911250	12x50

NAAMS CODE		NOM. SIZE, AND LENGTH
COATED	UNCOATED	
F911260B	F911260	12x60
F911270B	F911270	12x70
F911280B	F911280	12x80
F911290B	F911290	12x90
F911210B	F911210	12x100
F911212B	F911212	12x120
F911632B	F911632	16x32
F911640B	F911640	16x40
F911650B	F911650	16x50
F911660B	F911660	16x60
F911670B	F911670	16x70
F911680B	F911680	16x80
F911690B	F911690	16x90
F911610B	F911610	16x100
F911612B	F911612	16x120
F912040B	F912040	20x40
F912050B	F912050	20x50
F912060B	F912060	20x60
F912070B	F912070	20x70
F912080B	F912080	20x80
F912090B	F912090	20x90
F912010B	F912010	20x100
F912012B	F912012	20x120
F912550B	F912550	25x50
F912560B	F912560	25x60
F912570B	F912570	25x70
F912580B	F912580	25x80
F912590B	F912590	25x90
F912510B	F912510	25x100
F912512B	F912512	25x120

A

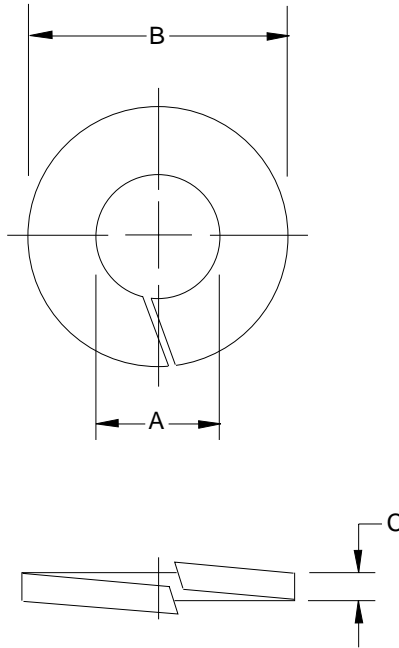
* COLOR NON-TAPPED END PER PAGE F-1.1

LOCK WASHER

(F63 SERIES)

Stamping

09/10/96



NAAMS CODE	NOMINAL WASHER SIZE	A	B	C
F630509	5	5.1	9.2	1.2
F630611	6	6.1	11.8	1.6
F630814	8	8.2	14.8	2.0
F631018	10	10.2	18.1	2.2
F631221	12	12.2	21.1	2.5
F631627	16	16.2	27.4	3.5
F632033	20	20.2	33.6	4.0
F632440	24	24.5	40.0	5.0

NOTES & SPECIFICATIONS:

Material, Carbon Steel
Hardness, Rc 45-51

HEX CASTLE NUT COARSE THREAD

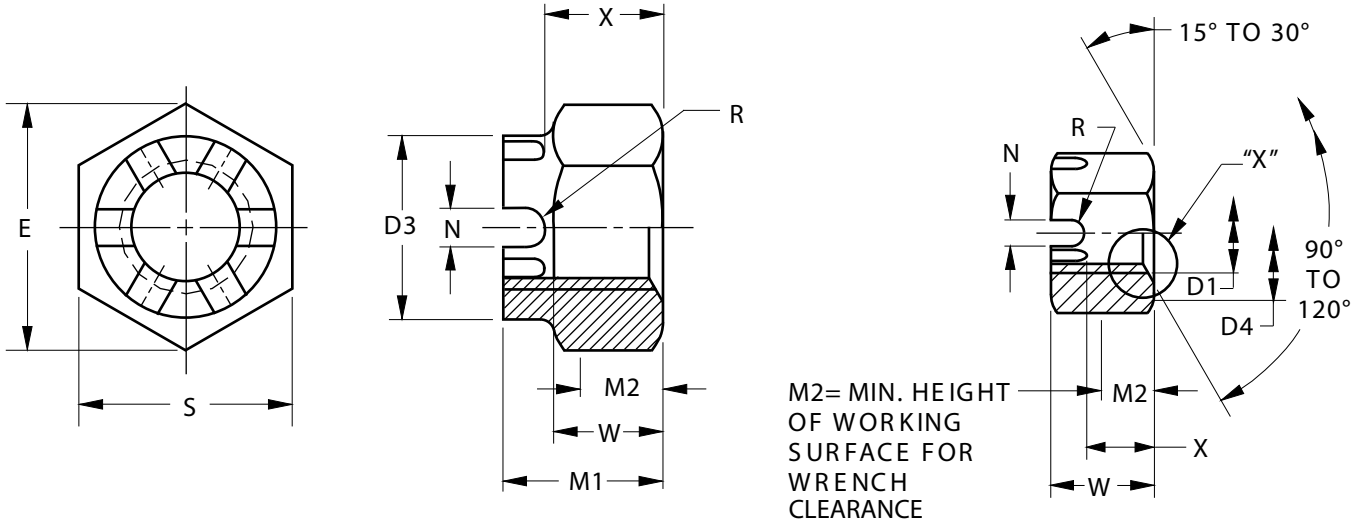
(F92 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

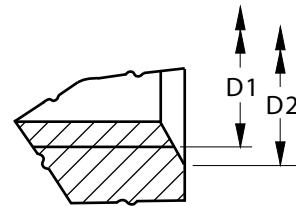
10/20/10



FROM 12 mm NOMINAL
THREAD DIAMETER

UP TO 10 mm NOMINAL
THREAD DIAMETER

M2= MIN. HEIGHT
OF WORKING
SURFACE FOR
WRENCH
CLEARANCE



VIEW "X"

NOTES & SPECIFICATIONS:

- Thread class 4g 6g
- Conforms to ISO 7035
- Coated Nuts (See page F1.2)

CODING ON FOLLOWING PAGE

HEX CASTLE NUT COARSE THREAD

(F92 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/20/10

NAAMS CODE		THREAD NOMINAL NUT Ø & PITCH D1	D2 MIN.	D3 MAX.	D4 MIN.	E MIN.
COATED	UNCOATED					
F920610B	F920610	M6 x 1	6	—	8.9	11.05
F920812B	F920812	M8 x 1.25	8	—	11.6	14.38
F921015B	F921015	M10 x 1.5	10	—	14.6	17.77
F921217B	F921217	M12 x 1.75	12	16	16.6	20.03
F921620B	F921620	M16 x 2	16	22	22.5	26.75
F921825B	F921825	M18 x 2.5	18	25	24.9	29.56
F922025B	F922025	M20 x 2.5	20	28	27.7	32.95
F922430B	F922430	M24 x 3	24	34	33.2	39.55
F923035B	F923035	M30 x 3.5	30	42	42.7	50.85
F923640B	F923640	M36 x 4	36	50	51.1	60.79

NAAMS CODE		M1 MAX.	*M2 MIN.	N MIN.	S MAX.	W MAX.	X
COATED	UNCOATED						
F920610B	F920610	7.5	3.8	2	10	7.5	5
F920812B	F920812	9.5	4.9	2.5	13	9.5	6.5
F921015B	F921015	12	6.1	2.8	16	12	8
F921217B	F921217	15	7.7	3.5	18	10	10
F921620B	F921620	19	9.8	4.5	24	13	13
F921825B	F921825	21	11.2	4.5	27	15	15
F922025B	F922025	22	11.9	4.5	30	16	16
F922430B	F922430	27	14.2	5.5	36	19	19
F923035B	F923035	33	18.2	7	46	24	24
F923640B	F923640	38	21.9	7	55	29	29

*Minimum height of working surface for wrench clearance.

COTTER PIN (SPLIT PIN)

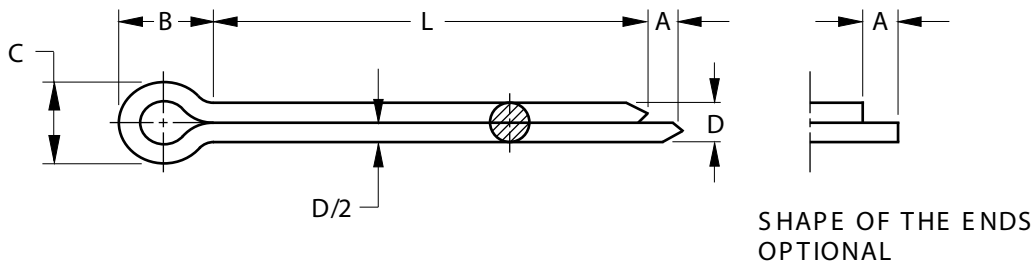
(F93 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/20/10



NOMINAL PIN SIZE	D _{H13}		A		B	C	
	MAX.	MIN.	MAX.	MIN.		MAX.	MIN.
1	0.9	0.8	1.6	0.8	3.0	1.8	1.6
1.6	1.4	1.3	2.5	1.25	3.2	2.8	2.4
2	1.8	1.7	2.5	1.25	4.0	3.6	3.2
3.2	2.9	2.7	3.2	1.6	6.4	5.8	5.1
4	3.7	3.5	4.0	2.0	8.0	7.4	6.5
5	4.6	4.4	4.0	2.0	10.0	9.2	8.0
6.3	5.9	5.7	4.0	2.0	12.6	11.8	10.3
8.0	7.5	7.3	4.0	2.0	16.0	15.0	13.1
10	9.5	9.3	6.3	3.15	20.0	19.0	16.6

NOTES & SPECIFICATIONS:

Conforms to ISO 1234
Break all edges, no burrs.

CODING ON FOLLOWING PAGE

COTTER PIN (SPLIT PIN)

(F93 SERIES)

GLOBAL STANDARD COMPONENTS



Stamping

10/20/10

PIN DIA. (mm)			1.0	1.6	2.0
NOMINAL LENGTH (L)	MIN.	MAX.	NAAMS CODE	NAAMS CODE	NAAMS CODE
8	7.5	8.5	F9301008	F9301608	-----
10	9.5	10.5	F9301010	F9301610	F9302010
12	11	13	F9301012	F9301612	F9302012
16	15	17	F9301016	F9301616	F9302016
20	19	21	F9301020	F9301620	F9302020
25	24	26	-----	F9301625	F9302025
32	30.5	33.5	-----	F9301632	F9302032
40	38.5	41.5	-----	-----	F9302040

PIN DIA. (mm)			3.2	4.0	5.0
NOMINAL LENGTH (L)	MIN.	MAX.	NAAMS CODE	NAAMS CODE	NAAMS CODE
16	15	17	F9303216	-----	-----
20	19	21	F9303220	F9304020	-----
25	24	26	F9303225	F9304025	F9305025
32	30.5	33.5	F9303232	F9304032	F9305032
40	38.5	41.5	F9303240	F9304040	F9305040
50	48.5	51.5	F9303250	F9304050	F9305050
63	61.5	64.5	F9303263	F9304063	F9305063

PIN DIA. (mm)			6.3	8.0	10.0
NOMINAL LENGTH (L)	MIN.	MAX.	NAAMS CODE	NAAMS CODE	NAAMS CODE
32	30.5	33.5	F9306332	-----	-----
40	38.5	41.5	F9306340	F9308040	-----
50	48.5	51.5	F9306350	F9308050	-----
63	61.5	64.5	F9306363	F9308063	F9310063