



MANUFACTURERS OF
STUD BOLTS, THREADED RODS,
ANCHOR BOLTS, HEX BOLTS,
SOCKET SCREWS, HEX NUTS & WASHERS

Group PROFILE

The Classic Group comprises 4 operating companies in four business sectors: Industrial and Automotive Fasteners, Aluminium Extrusions, Steel Trading, and Architectural Hardware and Tools. Mr. Shabbir A. Shaikh, the Managing Director is also the founder of the Group. Classic Group is a closely held family owned company with the 5 core values of integrity, commitment, excellence, unity and passion embedded in its everyday work culture.

Our Group Head office is located in Sharjah – United Arab Emirates (U.A.E) and our manufacturing plants are situated in Sharjah, U.A.E and Mumbai, India. All four companies are ISO certified. We dedicate ourselves to operational excellence by pursuing continuous improvement in all of our operations. We are committed to work across our enterprise to deliver quality products and services that enable our customers to increase efficiency thus achieving a new level of progress.



Classic Group
Head Office



CLASSIC METALLIC SHEET FACTORY LLC (CMSF) - SHARJAH

Founded in 1992, Classic Metallic Sheet Factory LLC (Classic Metallic) is one of the leading Fastener and Fixings manufacturer and solutions provider in the Middle East. Classic Metallic Sheet Factory LLC comprises 4 divisions: Rivet manufacturing, Anchor Bolt (Bent Bolt) and Stud Bolt manufacturing, Steel Trading and Hot Dip Galvanizing. We are ISO 9001-2000 certified manufacturers of High Tensile Fasteners, Blind Rivets, Anchor Bolts; Type J and Type L (as per customer drawing), U Bolts and Stud Bolts with in-house Hot Dip Galvanizing and Fluoropolymer Coating facilities in the U.A.E.



CLASSIC EXTRUSIONS LLC (CLEX) - SHARJAH

Classic Extrusions LLC (CLEX) is located in the Sharjah Industrial Area 17. The sophisticated and modern plant is equipped with 1375 Ton & 1800 Ton Oil Hydraulic Extrusion Presses. The plant has an annual capacity of 10,800 Tons. Our products are available with standard thickness for medium to heavy applications suitable for anodizing, powder coating or any other surface treatment of different shapes and sizes.



CLASSIC FASTENING SYSTEMS PVT LTD (CFS) - MUMBAI

Classic Fastening Systems Pvt Ltd (CFS) is situated in New Mumbai. CFS has been incorporated on August 18th 2005 in the state of Maharashtra, India. The primary focus of the company is to manufacture quality fasteners for the local manufacturing industry. CFS has been established with a vision of becoming one of the leading suppliers of rivets and related tools to major industries throughout the Sub-Continent region.



CLASSIC METALLIC - FASTENER DIVISION - SHARJAH - UAE

Our latest venture has been the establishment of Classic Metallic - Fastener Division in 2008. This company has emerged as a pioneer in the fastener industry by being the first company in the Middle East to manufacture Cold Forging and Hot Forging Stainless Steel Fasteners. Situated in an area of 12,000 sq. mtr. and with the latest forging machines and quality control procedures, we can make Stainless Steel Bolts, Nuts, Socket Screws and Threaded Bars in SS304, SS316 and SS316L. Test certificates of wire rod and the final product are given to the customer as assurance that the products meet international standards and specifications.

Product RANGE



STUD BOLTS

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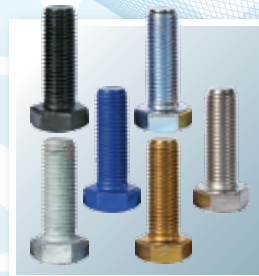
THREADED RODS

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ANCHOR BOLTS

Pages 5-6



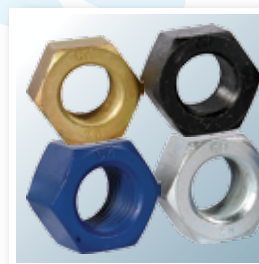
HEX BOLTS

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SOCKET SCREWS

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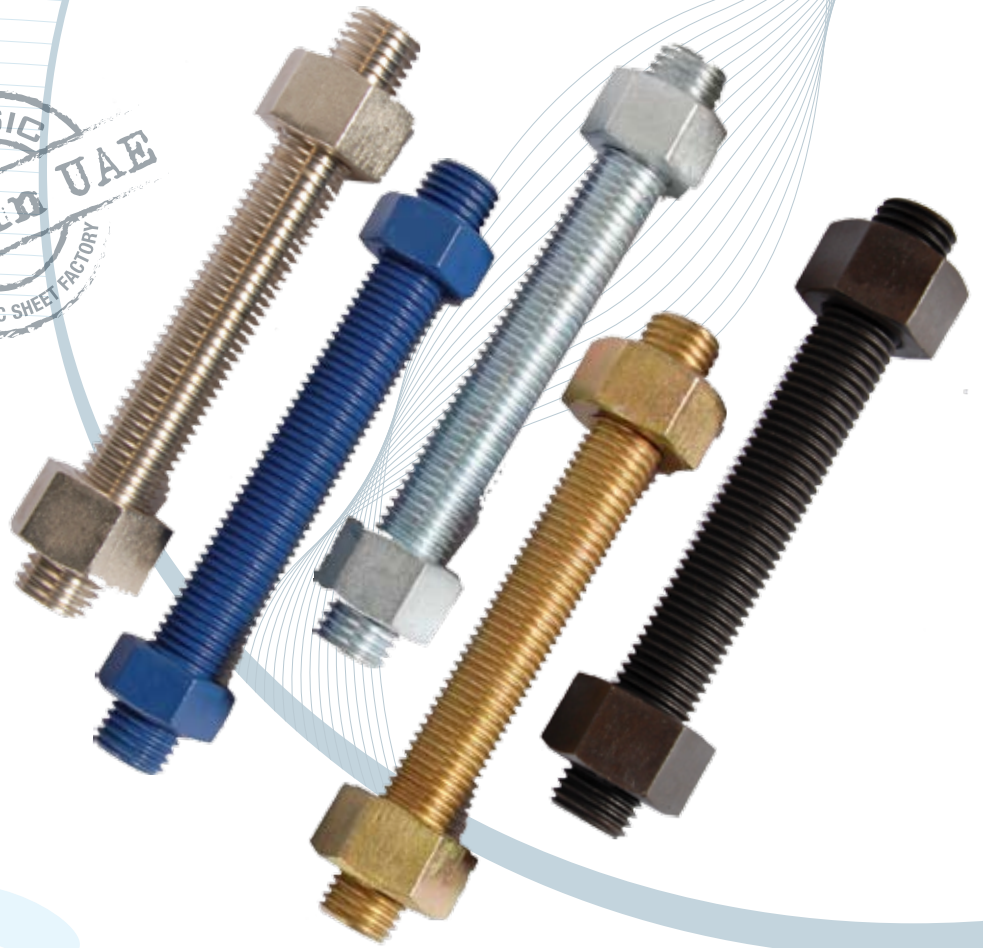
HEX NUTS

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WASHERS

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STUD BOLTS

Full Threaded Studs and Engineering Studs.

Standards:

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel , Alloy Steel & Stainless Steel.

Size Range

M6 to M100 in metric series

¼" to 4" in imperial.

Threads

UNC, 8UN, UNF, Metric Coarse and Metric Fine.

Typical Grades & Standards

ASTM A193 Grade B7, B7M ,B8, B8M & B16

ASTM A320 Grade L7 & L7M

Any other specific grade can be manufactured upon request with short lead times.

Ordering Information

- 1 Dimensions - Dia and Length.
- 2 Standard and Grade
- 3 Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)
- 4 Nut and washer quantity

THREADED RODS

Full Threaded Bars

Standards:

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel , Alloy Steel & Stainless Steel.

Size Range

M6 to M100 in metric series

1/4" to 4" in imperial.

Threads

UNC, 8UN, UNF, Metric Coarse and Metric Fine.

Typical Grades & Standards

ASTM A193 Grade B7, B7M ,B8, B8M & B16

ASTM A320 Grade L7 & L7M

Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80

BS 3692 / BS 4190 grade 4.6, 4.8, 5.6, 5.8, 8.8

Any other specific grade can be manufactured upon request with short lead times.

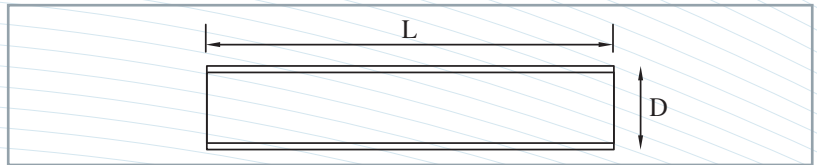
Ordering Information

- 1 Dimensions - Dia and Length.
- 2 Standard and Grade
- 3 Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)



Alloy Steel Threaded Rod ANSI B.1.1/BS4882

Material to ASMT A193-B7/B7M/B16/B8 & B8M

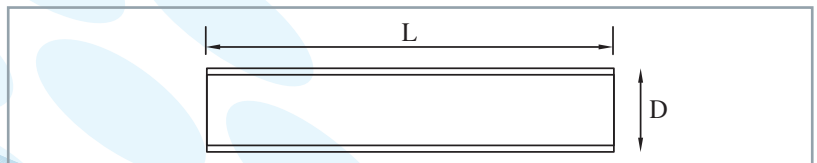


DIA. (D)	Thread per inch	Random Lengths (L)	Weight Kg/Ft.
1/4" UNC	20	★	0.130
5/16" UNC	18	★	0.163
3/8" UNC	16	★	0.195
7/16" UNC	14	★	0.228
1/2" UNC	13	★	0.250
9/16" UNC	12	★	0.293
5/8" UNC	11	★	0.372
3/4" UNC	10	★	0.560
7/8" UNC	9	★	0.771
1" UNC	8	★	1.018
1.1/8" UNC	7	★	1.298
1.1/8" UNS	8	★	1.298
1.1/4" UNC	7	★	1.639
1.1/4" UNS	8	★	1.639
1.3/8" UNC	6	★	2.032
1.3/8" UNS	8	★	2.032
1.1/2" UNC	6	★	2.425
1.1/2" UNS	8	★	2.425
1.5/8" UNS	8	★	2.934
1.3/4" UNS	8	★	3.403
1.7/8" UNS	8	★	3.911
2" UNS	8	★	4.458
2.1/4" UNS	8	★	5.648
2.1/2" UNS	8	★	7.115
2.3/4" UNS	8	★	8.865
3" UNS	8	★	10.636
3.1/4" UNS	8	★	12.200
3.1/2" UNS	8	★	15.510

L = 12 Feet

Alloy Steel Threaded Rod to DIN 975

Material to ASMT A193M-B7/B7M/B16/B8 & B8M



DIA. (D)	Thread per inch	Random Lengths (L)	Weight Kg/Mtr.
M8	1.25	★	0.31
M10	1.5	★	0.49
M12	1.75	★	0.73
M14	2	★	0.99
M16	2	★	1.33
M18	2.5	★	1.64
M20	2.5	★	2.06
M22	2.5	★	2.55
M24	3	★	2.98
M27	3	★	3.85
M30	3.5	★	4.70
M33	3.5	★	5.78
M36	4	★	6.85
M39	4	★	8.15
M42	4.5	★	9.40
M45	4.5	★	10.90
M48	5	★	12.40
M52	5	★	14.65
M56	5.5	★	16.90
M64	6	★	22.20
M72	6	★	28.51
M76	6	★	31.96

L = 3.66 Meters

ANCHOR BOLTS

Anchor bolts, Foundation bolts, Holding Down Bolts, U Bolts , Sag Rods & Tie Rods can be manufactured as per customer's drawing and as per grade required.

Standards

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel , Alloy Steel & Stainless Steel.

Size Range

M6 to M100 in metric series

¼" to 4" in imperial.

Threads

UNC, 8UN, UNF, Metric Coarse and Metric Fine.

Typical Grades & Standards

BS 3692 / BS 4190 grade 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9

ASTM A307, A325, A193, B7 & B16, ASTM A320 L7

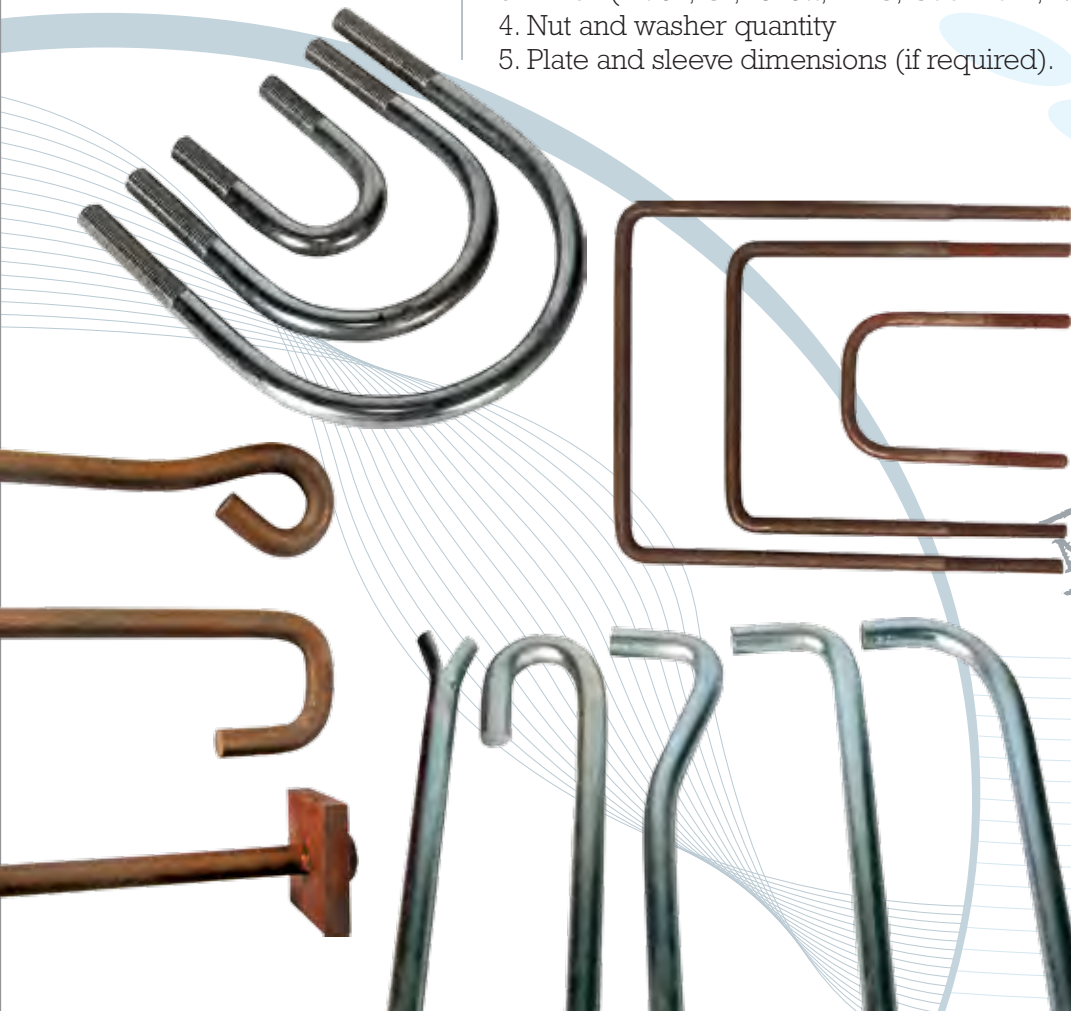
Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80, ASTM A193 Grade B8 & B8M

ASTM A675 Grade 90, ASTM A572 Grade 50 and ASTM F1554 grade 36, 55 and 105

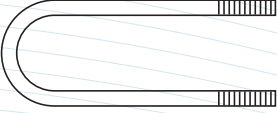
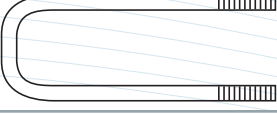
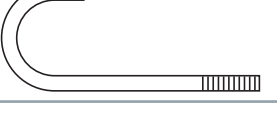



Any other specific grade can be manufactured upon request with short lead times.

Ordering Information

1. Dimensions.
2. Standard and Grade.
3. Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc.)
4. Nut and washer quantity
5. Plate and sleeve dimensions (if required).



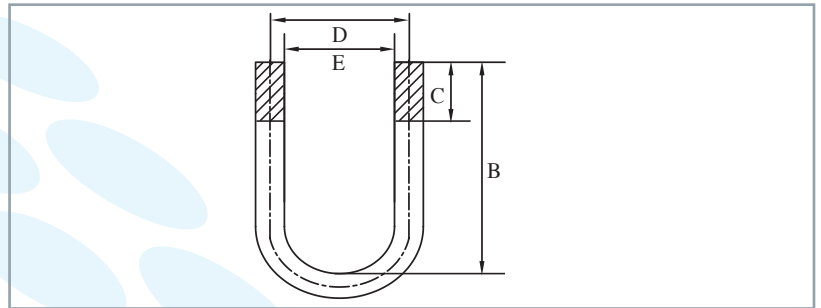
Specially Manufactured Items

	'U' Bolts Grip and Non Grip Type	N.B. (1/2") M15-(24") M600 DIA. Bar Size Range (1/4") M6 - (4") M100
	Square Bend 'U' Bolts	Bar Size Range (1/4") M6 - (4") M100
	'J' Foundation Bolts	Bar Size Range (1/4") M6 - (4") M100
	Double Ended Engineer Studs	Bar Size Range (1/4") M6 - (4") M100
	Waisted Double Ended Engineer Studs	Bar Size Range (1/4") M6 - (4") M100
	Tie Bars & Foundation Bolts	Bar Size Range (1/4") M6 - (4") M100

- All products are available with the appropriate grades of nuts and washers
- All forms of plating and coating can be carried out

Heavy Pattern 'U' Bolts to BS 3974

Material: Carbon Steel Self-Colour, Zinc and HDG/SS 304 and 316



Nominal Pipe Size	Pipe O.D. mm	Dia	B mm	C mm	D mm	E mm	R mm	Weight Each kilos
0.5" 015mm	21.3	M8	46	25	30	22	11	0.05
0.75" 020mm	26.9	M8	56	25	35	27	13.5	0.06
1" 025mm	33.7	M8	61	25	45	37	18.5	0.06
1.25" 032mm	42.4	M8	71	25	55	40	23.5	0.07
1.5" 040mm	48.3	M10	85	35	60	50	25	0.13
2" 050mm	60.3	M10	95	35	75	65	32.5	0.15
2.5" 065mm	76.1	M12	124	45	90	78	39	0.27
3" 080mm	88.9	M16	142	50	105	89	44.5	0.53
4" 100mm	114.3	M16	167	50	135	119	59.5	0.67
5" 125mm	139.7	M16	192	50	160	144	72	0.78
6" 150mm	168.3	M20	225	55	190	170	85	1.40
7" 175mm	193.7	M20	250	55	215	195	97.5	1.56
8" 200mm	219.1	M20	285	55	245	225	112.5	1.80
9" 225mm	244.5	M20	300	55	270	250	125	1.91
10" 250mm	273.0	M20	340	60	300	280	140	2.15
12" 300mm	323.9	M20	390	60	350	330	165	2.47
14" 350mm	355.6	M24	428	65	385	361	180.5	3.90
16" 400mm	406.4	M24	488	65	435	411	205.5	4.43
18" 450mm	457.0	M24	528	70	485	461	230.5	4.82
20" 500mm	508.0	M24	588	70	540	516	258	5.35
22" 550mm	559.0	M24	638	70	590	566	283	5.81
24" 600mm	610.0	M24	688	70	640	616	308	6.27

All the above supplied with Hex Nuts, Lock Nuts and Washers if required

HEX BOLTS

Hex Head and Heavy Hex Head in Full and Partial Threading.

Standards

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel , Alloy Steel & Stainless Steel.

Size Range

M6 to M64 in metric series

¼" to 2½" in imperial.

Bigger sizes can be manufactured as per order.

Threads

UNC, 8UN, UNF, Metric Coarse and Metric Fine.

Typical Grades & Standards

BS3692 / BS4190 grade 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9

ASTM A307 Grade A and B

ASTM A325

ASTM A193 Grade B7, B7M, B8, B8M & B16

ASTM A320 Grade L7 & L7M

Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80

Any other specific grade can be manufactured upon request with short lead times.

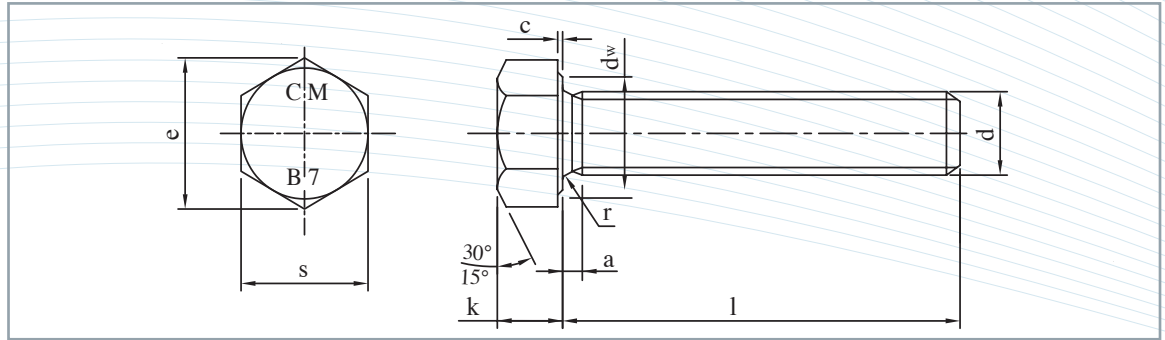
Ordering Information

- 1 Dimensions – Size Dia and Length.
- 2 Standard and Grade
- 3 Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)
- 4 Nut and washer quantity



DIN 933 HEXAGON HEAD BOLT

Material ASTM A193 Grade B7



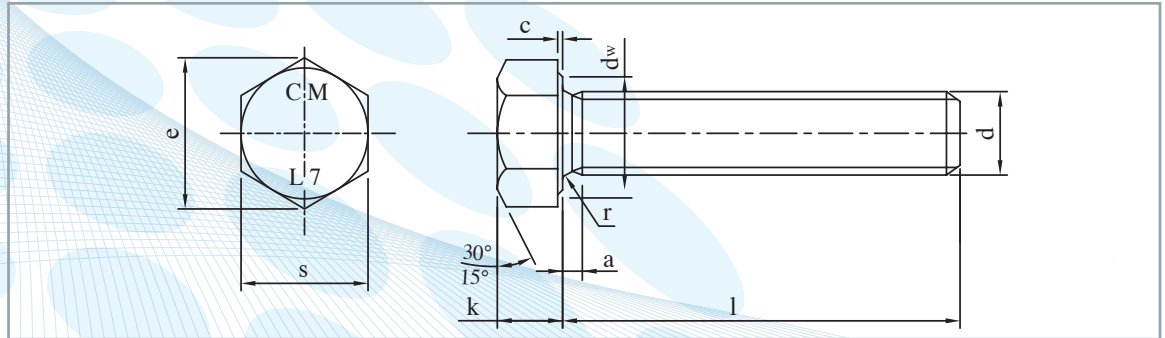
A193 B7 HEX BOLTS

Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner (e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
Thickness (k)	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
Depth(c)	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	59.90	64.70	74.20
Dia (d w)	Min															
Head Junction	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60
Radius (r)	Min															

l = Overall length of the Bolt

DIN 933 HEXAGON HEAD BOLT

Material ASTM A320 Grade L7

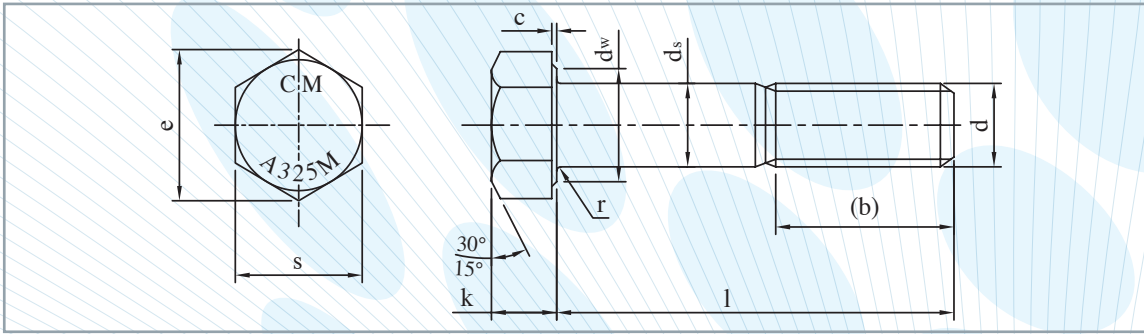


A320 L7 HEX BOLTS

Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner (e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
Thickness (k)	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
Depth(c)	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	59.90	64.70	74.20
Dia (d w)	Min															
Head Junction	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60
Radius (r)	Min															

l = Overall length of the Bolt

ASTM A325M HEX BOLTS



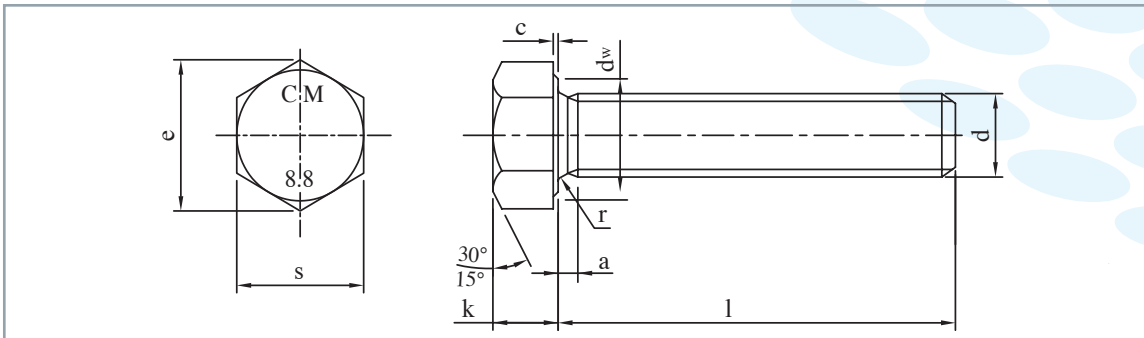
A325M HEX BOLTS

Threads (d)		M16	M20	M22	M24	M27	M30	M36
Across flat (s)	Min	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner (e)	Min	29.56	37.29	39.55	45.20	50.85	55.37	66.44
	Max	31.18	39.26	41.57	47.34	53.12	57.74	69.28
Head Thickness (k)	Min	9.25	11.60	13.10	14.10	16.10	17.65	21.45
	Max	10.75	13.40	14.90	15.90	17.90	19.75	23.55
Washer face Depth (c)	Min	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Max	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Washer face Dia (d w)	Min	24.90	31.40	33.30	38.00	42.80	46.50	55.90
Shank Diameter (d s)	Min	15.30	19.16	21.16	23.16	26.16	29.16	35.00
	Max	16.70	20.84	22.84	24.84	27.84	30.84	37.00
Head Junction Radius (r)	Min	0.60	0.80	0.80	1.00	1.20	1.20	1.50
Thread Length (b)	l < 100	31	36	38	41	44	49	56
	l > 100	38	43	45	48	51	56	63

l = Overall length of the Bolt

DIN 933 HEX SCREWS (FULL THREAD)

Grades 4.6, 8.8, 10.9, 12.9, A2 70, A2 80, A4 70 and A4 80

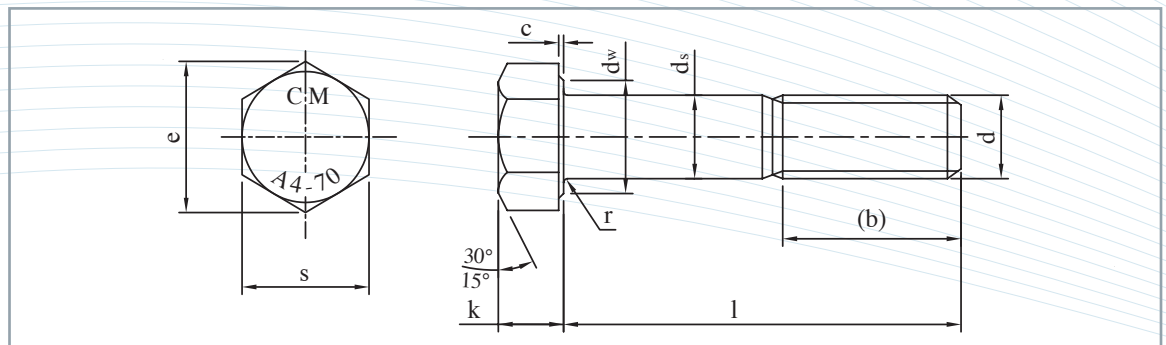


Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner (e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness (k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (d w)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	59.90	64.70	74.20
Head Junction Radius (r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

l = Overall length of the Bolt

DIN 931 HEX BOLTS (HALF THREAD)

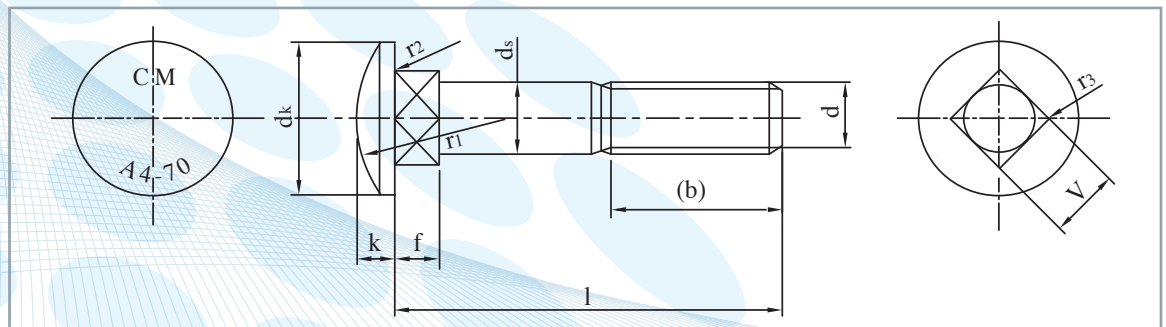
Grades – 4.6, 8.8, A2 70, A2 80, A4 70 and A4 80



Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner (e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness (k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
Washer face Depth (c)	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Washer face Dia (d _w)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
Washer face Dia (d _w)	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Shank Diameter (d _s)	Min	5.82	7.78	9.78	11.73	15.73	19.67	23.67	27.00	30.00	33.00	36.00	39.00	42.00	45.00	52.00
Shank Diameter (d _s)	Max	6.00	8.00	10.00	12.00	16.00	20.00	24.00	26.48	29.48	32.38	35.38	38.38	41.38	44.38	51.26
Head Junction Radius (r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60
Thread Length (b)	1<125*	18	22	26	30	38	46	54	60	66	-	-	-	-	-	-
	125<200	24	28	32	36	44	52	60	66	72	78	84	90	96	102	116
	1>200*	37	41	45	49	57	65	73	79	85	91	97	103	109	115	129

l = Overall length of the Bolt

DIN 603 STAINLESS STEEL CARRIAGE BOLT/MUSHROOM BOLT



Threads (d)		M6	M8	M10	M12
d _k	Min	15.45	19.35	23.35	29.35
	Max	16.55	20.65	24.65	30.65
d _s	Min	5.52	7.42	9.42	11.30
	Max	6.00	8.00	10.00	12.00
f	Min	3.40	4.40	5.40	7.25
	Max	4.60	5.60	6.60	8.75
k	Min	3.12	4.12	4.62	6.05
	Max	3.88	4.88	5.38	6.95
r ₁	Approx	12.60	16.00	19.20	24.10
r ₂	Max	0.50	0.50	0.50	1.00
r ₃	Max	0.90	1.20	1.50	1.80
v	Min	5.52	7.42	9.42	11.30
	Max	6.48	8.58	10.58	12.70
(b)	1<125*	18	22	26	30
	125<200	24	28	32	36
	1>200*	-	41	45	49

l = Overall length of the Bolt

SOCKET SCREWS

Socket Screws are also known as Allen Head Bolts and are fastened with a hex allen wrench. Socket Screws are available in various head styles and materials.

Standards

DIN/BS EN ISO

Material

Alloy Steel & Stainless Steel (304, 304L, 316, 316L)

Size Range

M5 to M24 in metric series

Bigger sizes can be manufactured as per order.

Threads

Metric Coarse and Metric Fine.

Typical Grades & Standards

A2-70/80, A4-70/80

DIN 912

DIN 7991

ISO 7380

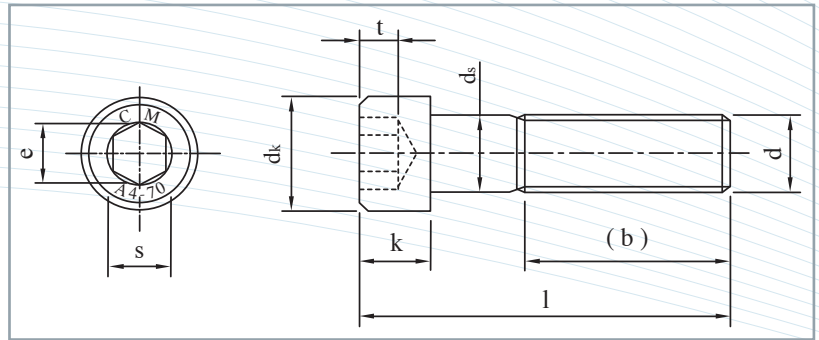
Any other specific grade can be manufactured upon request with short lead times.

Ordering information

- 1 Dimensions – Size Dia and Length.
- 2 Standard and Material Grade
- 3 Nut and Washer quantity



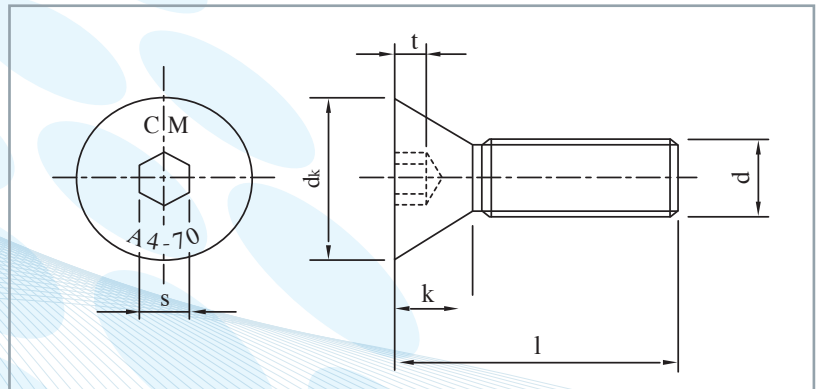
DIN 912 STAINLESS STEEL HEXAGON SOCKET HEAD CAPSCREW



Threads (d)		M6	M8	M10	M12
dk	Min	9.78	12.73	15.73	17.73
	Max for Plain Heads	10.00	13.00	16.00	18.00
	Max for Knurled Heads	10.22	13.27	16.27	18.27
ds	Min	5.82	7.78	9.78	11.73
	Max	6.00	8.00	10.00	12.00
s	Min	5.02	6.02	8.025	10.025
	Max	5.14	6.14	8.175	10.175
e	Min	5.723	6.863	9.149	11.429
k	Min	5.70	7.64	9.64	11.57
	Max	6.00	8.00	10.00	12.00
t	Min	3.00	4.00	5.00	6.00
(b)	Ref	24	28	32	36

l = Overall length of the Bolt

DIN 7991 STAINLESS STEEL HEXAGON SOCKET COUNTERSUNK SCREW



Threads (d)	M6	M8	M10	M12
dk	12.00	16.00	20.00	24.00
s	4.00	5.00	6.00	8.00
k	3.30	4.40	5.50	6.50
t	2.50	3.50	4.40	4.60

l = Overall length of the Bolt

NUTS

Standard Hex Nut, Heavy Hex Nut, Hex Coupling Nut, Nylon Lock Nut, Spring Nut, Dome Nut and Wing Nut.

Standards

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

Size Range

M6 to M64 in metric series

¼" to 2-½" in imperial.

Bigger sizes can be manufactured as per order.

Threads

UNC, 8UN, UNF, Metric Coarse and Metric Fine.

Typical Grades & Standards

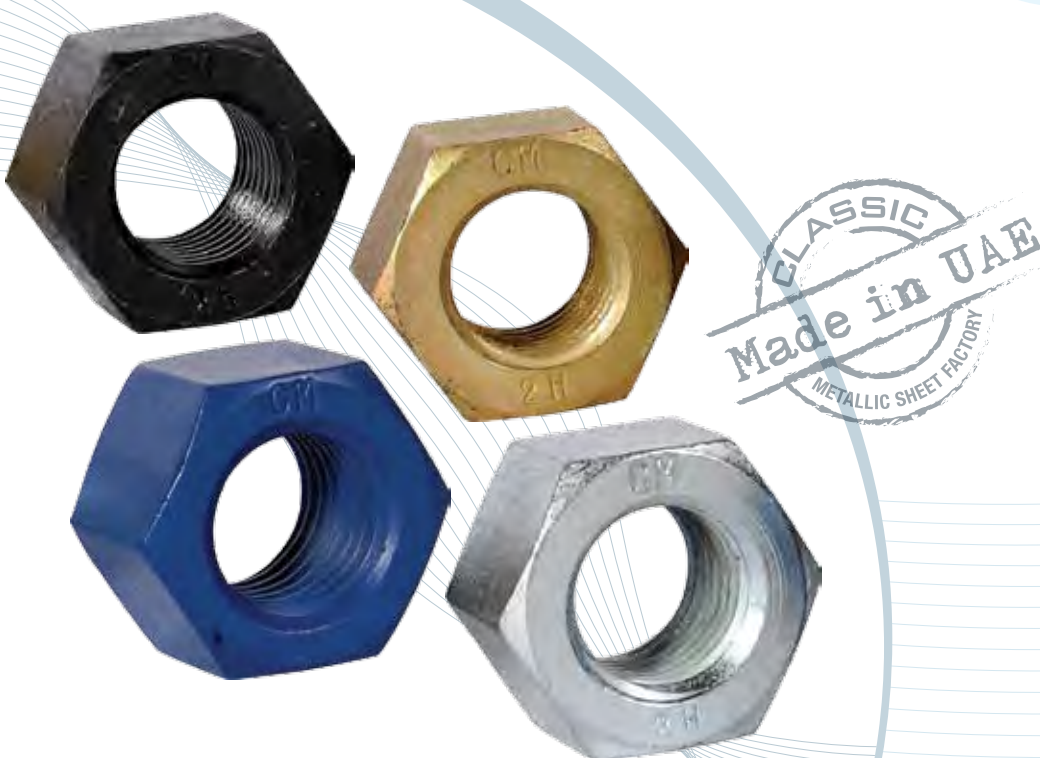
DIN 934 Class 4, 8, 10, 12, A270, A280, A470 and A480

ASTM A194/A194M Grades 2H, 2HM, 4L, 7L and 7LM

ASTM A563/563M Grades 8, 10S, A, B, C, D, DH, DH3

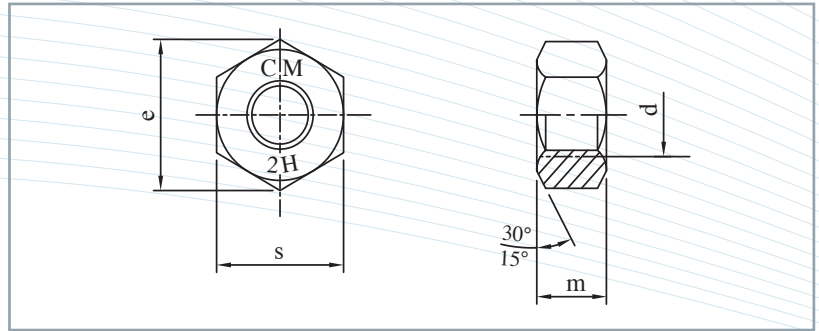
Ordering Information

- 1 Dimensions - Size.
- 2 Standard and Grade
- 3 Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)



HEAVY HEX NUTS TO DIN 934 (H=D)

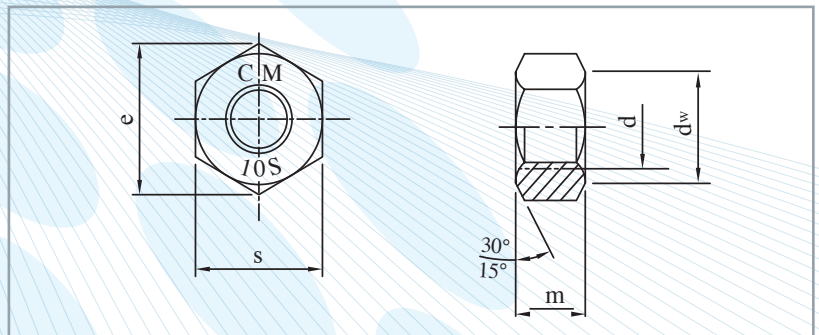
Material ASTM A194 Grade 2H/2HM/4L,7L,7LM



A194 HEAVY HEX NUTS

Dia. (D)	Thread Pitch	Across Flats AF	Thickness (m)	Weight KG/100
M8	1.25	13	8	0.65
M10	1.5	17	10	1.45
M12	1.75	19	12	2.17
M14	2	22	14	3.13
M16	2	24	16	4.16
M18	2.5	27	18	6.20
M20	2.5	30	20	8.05
M22	2.5	32	22	9.85
M24	3	36	24	13.80
M27	3	41	27	20.65
M30	3.5	46	30	27.90
M33	3.5	50	33	36.00
M36	4.0	55	36	49.15
M39	4.0	60	39	62.75
M42	4.5	65	42	81.50
M45	4.5	70	45	100.00
M48	5.0	75	48	122.00
M52	5.0	80	52	152.50
M56	5.5	85	56	177.50
M64	6.0	95	64	247.50
M72	6.0	105	72	334.50
M76	6.0	110	76	380.00

A563M - 10S HEAVY HEX NUTS

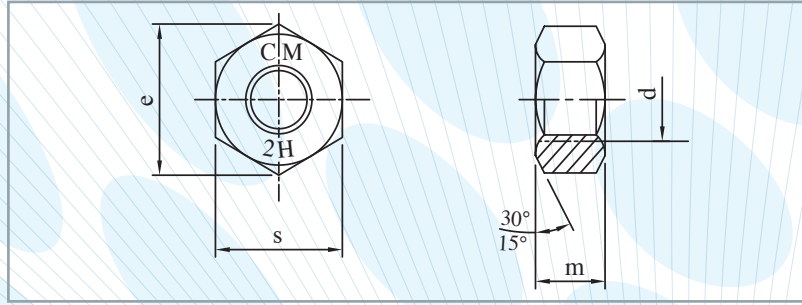


A563M - 10S HEAVY HEX NUTS

Threads (d)		M12	M16	M20	M22	M24	M27	M30	M36
Across flat (s)	Min	20.16	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	21.00	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner (e)	Min	22.78	29.56	37.29	39.55	45.20	50.85	55.37	66.44
Nut	Min	11.90	16.40	19.40	22.30	22.90	26.30	29.10	35.00
	Max	12.30	17.10	20.70	23.60	24.20	27.60	30.70	36.60
Thickness (m)	Max	12.30	17.10	20.70	23.60	24.20	27.60	30.70	36.60
Bearing face Dia(dw)	Min	19.20	24.90	31.40	33.30	38.00	42.80	46.60	55.90

HEAVY HEX NUTS TO ANSI B18.2.2

Material ASTM A194 Grade 2H/2HM/4L, 7L, 7LM



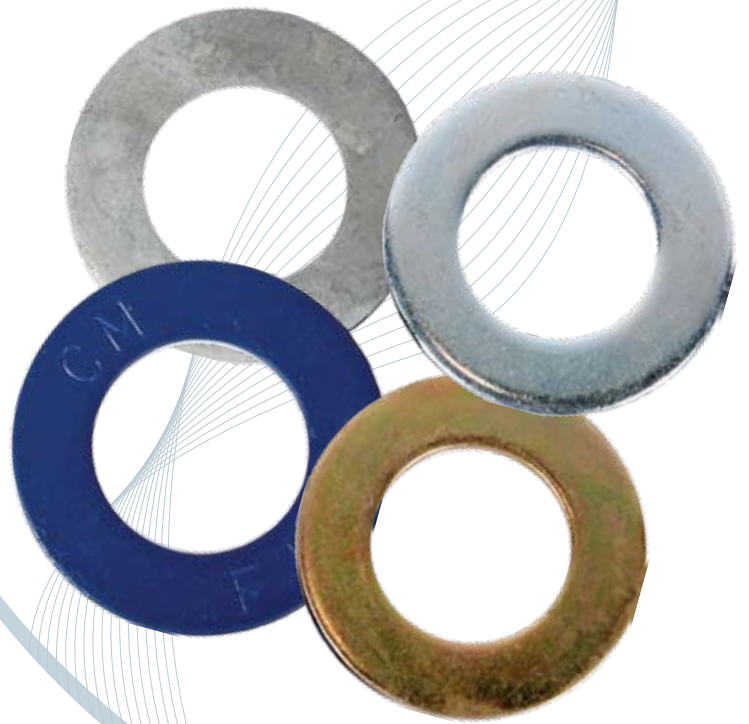
A194 HEAVY HEX NUTS

Dia. (D)	Thread Pitch	Across Flats A/F	Thickness (m)	Weight KG/100
1/4" UNC	20	7/16"	1/4"	0.3
5/16" UNC	18	1/2"	5/16"	0.4
3/8" UNC	16	11/16"	3/8"	1.4
7/16" UNC	14	3/4"	3/16"	1.9
1/2" UNC	13	7/8"	1/2"	3
9/16" UNC	12	15/16"	9/16"	3.7
5/8" UNC	11	1.1/16"	5/8"	5.4
3/4" UNC	10	1.14"	3/4"	8.8
7/8" UNC	9	1.7/16"	7/8"	13.5
1" UNC	8	1.5/8"	1"	19.3
1.1/8" UNS	8	1.13/16"	1.1/8"	26.9
1.1/4" UNS	8	2"	1.1/4"	35.7
1.3/8" UNS	8	2.3/16"	1.3/8"	46.3
1.1/2" UNS	8	2.3/8"	1.1/2"	59.5
1.5/8" UNS	8	2.9/16"	1.5/8"	73.6
1.3/4" UNS	8	2.3/4"	1.3/4"	92.7
1.7/8" UNS	8	2.15/16"	1.7/8"	109.5
2" UNS	8	3.1/8"	2"	135.8
2.1/4" UNS	8	3.1/2"	2.1/4"	190.3
2.1/2" UNS	8	3.7/8"	2.1/2"	256
2.3/4" UNS	8	4.1/4"	2.3/4"	335
3" UNS	8	4.5/8"	3"	432
3.1/4" UNS	8	5"	3.1/4"	543
3.1/2" UNS	8	5.3/4"	3.1/2"	694

DIN 934 HEX NUTS

DIN 934 HEX NUTS

Threads (d)	Across flat (s)	Across corner (e)	Nut Thickness (m)
M6	10.00	11.05	6.00
M8	13.00	14.38	6.50
M10	17.00	18.90	8.00
M12	19.00	21.10	10.00
M16	24.00	26.75	13.00
M20	30.00	32.95	16.00
M24	36.00	39.55	19.00
M27	41.00	45.20	22.00
M30	46.00	50.85	24.00
M33	50.00	55.37	26.00
M36	55.00	60.79	29.00
M39	60.00	66.44	31.00
M42	65.00	71.30	34.00
M45	70.00	76.95	36.00
M48	75.00	82.60	38.00
M52	80.00	88.25	42.00
M56	85.00	93.56	45.00
M64	95.00	104.86	51.00
M72	105.00	116.16	58.00



WASHERS

Plain Washers, Spring Lock Washers and Hardened Steel Washers.

Standards

ASTM/ASME/BS/DIN/BS EN ISO /JIS

Material

Mild Steel, Carbon Steel , Alloy Steel & Stainless Steel.

Size Range

M6 to M64 in metric series

¼" to 2-½" in imperial.

Bigger sizes can be manufactured as per order.

Typical Grades & Standards

DIN 125/A

DIN 127/B

DIN 9021

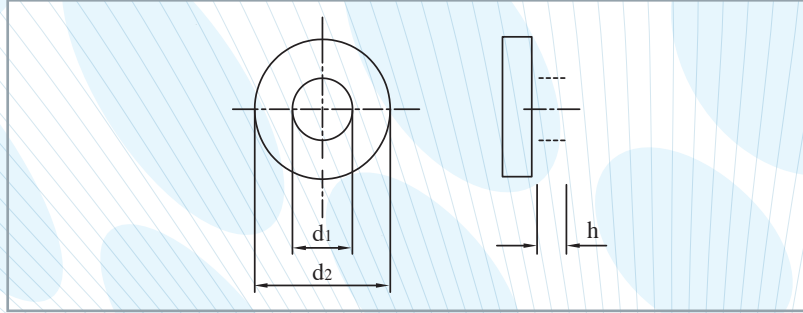
ASTM F436 and F436M

Any other specific grade can be manufactured upon request with short lead times.

Ordering information

- 1 Dimensions – Size.
- 2 Standard and Grade
- 3 Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc.)

DIN 125 FLAT WASHER



Washer Size	Inner Diameter (d1)	Outer Diameter (d2)	Thickness (h)
M6	6.40	12.00	1.60
M8	8.40	16.00	1.60
M10	10.50	20.00	2.00
M12	13.00	24.00	2.50
M16	17.00	30.00	3.00
M20	21.00	37.00	3.00
M24	25.00	44.00	4.00
M27	28.00	50.00	4.00
M30	31.00	56.00	4.00
M33	34.00	60.00	5.00
M36	37.00	66.00	5.00
M39	40.00	72.00	6.00
M42	43.00	78.00	7.00
M45	46.00	85.00	7.00
M48	50.00	92.00	8.00
M52	54.00	98.00	8.00
M56	58.00	105.00	9.00
M64	66.00	115.00	9.00
M72	74.00	125.00	10.00

F436M WASHER

Washer Size	Inner Diameter (d1)		Outer Diameter (d2)		Thickness (h)	
	Max.	Min.	Max.	Min.	Max.	Min.
12	14.40	14.00	27.00	25.70	4.60	3.10
14	16.40	16.00	30.00	28.70	4.60	3.10
16	18.40	18.00	34.00	32.40	4.60	3.10
20	22.50	22.00	42.00	40.40	4.60	3.10
22	24.50	24.00	44.00	42.40	4.60	3.40
24	26.50	26.00	50.00	48.40	4.60	3.40
27	30.50	30.00	56.00	54.10	4.60	3.40
30	33.60	33.00	60.00	58.10	4.60	3.40
36	39.60	39.00	72.00	70.10	4.60	3.40
42	45.60	45.00	84.00	81.10	7.20	4.60
48	52.70	52.00	95.00	92.80	7.20	4.60
56	62.70	62.00	101.00	104.50	8.70	6.10
64	70.70	70.00	187.00	115.80	8.70	6.10
72	78.70	76.00	130.00	127.50	8.70	6.10

In-House TESTING

Classic Metallic Sheet Factory LLC has its own in house quality control department that works in conjunction with several leading external test houses to provide accurate certification, from raw material testing to verification of finished products and coatings through destructive and non-destructive testing.



UNIVERSAL TESTING MACHINE

Fully Computerized Universal Testing Machine used for testing the tensile strength of the wire rod/products and also the upset test for the product.



HARDNESS TESTING MACHINE

To test the Rockwell Hardness in C Scale and B Scale for the Products, tools and Wire Rod.



PROFILE PROJECTOR

Profile Image Projector for checking profile dimensions such as thread angle, head junction radius and tools Profile.



CHEMICAL ANALYSIS

To test Chemical composition of elements in Wt%.

ELCOMETER

This inspection instrument is used for quality control of surface coatings. This hand held device gives fast and accurate results for coating thickness gauge.



PACKAGING

SMALL BOXES:

We carefully pack exact quantities as per customer's order. Boxes are strong enough to withstand the weight of the products and labels are carefully printed with required specifications on each box.

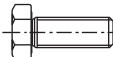
STANDARD CARTONS:

Small boxes are put in outer cartons with a maximum weight of 25 Kg. Each outer carton also has a label with required information.

STANDARD PALLET:



STANDARD LABEL

DIN 933	Stainless steel Hex Screw
A2 - 70	QTY : 50 Nos
	Lot No : CM 315
	M10 X 50

CERTIFICATES



Material FINISHES

Hot Dip Galvanizing

STD	COMPONENTS
ASTM A153	Rolled/Pressed/Steel/Hardware
ASTM A641	Carbon Steel Wire (Nails/Staples etc)
ASTM B695	Iron & Steel
ASTM A123	Iron & Steel Anchor Bolts, Fabricated Products
BS EN ISO1461	Heavy Zinc Deposit 388.1 to 76.2 microns

ELECTRO-DEPOSITED Zinc Plating

ASTM B633	Iron & Steel Products
BS 3382 PART 2	Bright Finish

ELECTRO-DEPOSITED Cadmium Plating

BS 3382 PART1	Semi-Bright Finish
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ELECTRO-DEPOSITED Nickel Cadmium Plating

AMS 2416	Steel
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ELECTRO-DEPOSITED Nickel & Nickel Plus Chromium



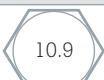

BS 3382 PART 3 & 4	Steel & Copper Alloy
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PTFE (FLUOROPOLYMER Coating)

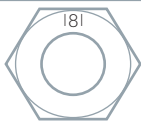


XYLAN 1070	Colour - Red, Medium Dark Blue, Green, Orange, Yellow, Black
XYLAN 1052	Blue
XYLAN 1424	Water Base Blue
XYLAN Standard	Aluminium "cermet" Coating
XYLAN Cobalt Blue 1514	Blue

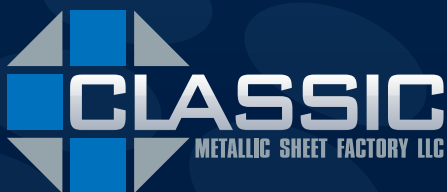
Technical INFORMATION

MECHANICAL PROPERTIES PER ISO 898-1 (Externally Threaded Fasteners)

Metric Property Class	Material	Size Range	Min. Proof Strength MPa	Min. Tensile Strength MPa	Core Hardness Rockwell		Min. Yield Strength MPa	Grade Identification Marking
					Min.	Max.		
4.6	Low or Medium Carbon Steel	M5-M39	225	400 (58,000 PSI)	B67	B99.5	240	
8.8	Medium Carbon Steel: quenched & tempered	M5-M16	580	800 (116,000 PSI)	C22	C32	640	
		M18-M39	600	830 (120,000 PSI)	C23	C34	660	
10.9	Alloy Steel quenched & tempered	M5-M39	830	1040 (150,800 PSI)	C32	C39	940	
12.9	Alloy Steel quenched & tempered	M1.6-M39	970	1220 (177,000 PSI)	C39	C44	1100	

MECHANICAL PROPERTIES PER DIN 267 PART 4 (Internally Threaded Fasteners)

Property Class	Typical Material	Proof Stress MPa	Core Hardness Rockwell (max.)	Grade Identification Marking
Class 8	Low to Medium Carbon Steel	800	C30	
Class 10	Medium Carbon Steel; quenched & tempered	1000	C36	
Class 12	Medium Carbon Steel; quenched & tempered	1200	C36	



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