IDENTIFING THREADS FOR FASTENERS

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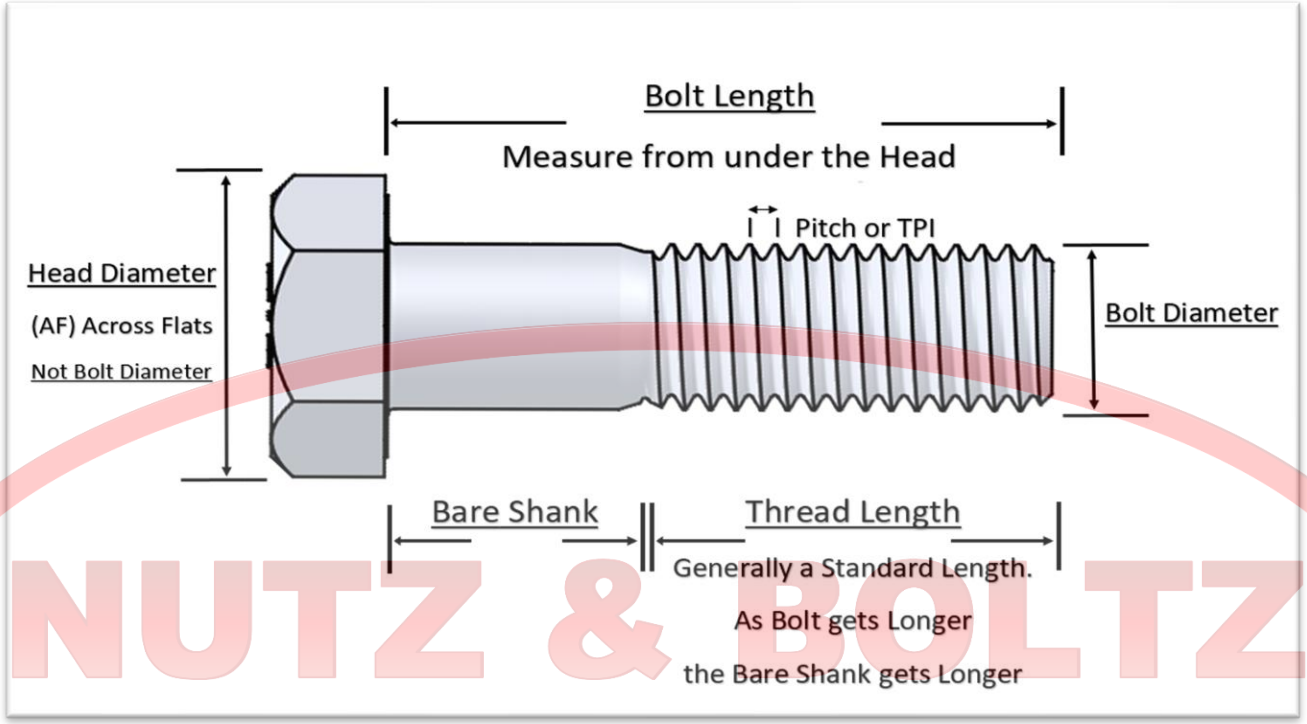

COMMON SIZES	METRIC		IMPERIAL		
	Uses **Pitch** as Thread Measurement		Uses **TPI** as Measurement		
Pitch type	**Coarse**	**Fine**	**UNC**	**UNF**	**BSW**
Sizes applicable Pitch = Metric Thread from Peak to Peak TPI = Imperial Threads per Inch Number of threads within 1 Inch of Thread	M2 (0.4p) M2.5 (0.45p) M3 (0.5p) M4 (0.7p) M5 (0.8p) M6 (1p) M8 (1.25p) M10 (1.5p) M12 (1.75p) M14 (2p) M16 (2p) M18 (2.5p) M20 (2.5p) M22 (2.5p) M24 (3p) M30 (3.5p) M33 (3.5p) M36 (4.0p)	M8 (1p) M10 (1.0p) M10 (1.25p) M12 (1.25p) M12 (1.5p) *Spark Plug* *M14 (1.25p)* M14 (1.5p) M16 (1.5p) M18 (1.5p) M20 (1.5p) M20 (2.0p) M22 (1.5p) M24 (1.5p) M24 (2.0p)	No.2 (56) No.3 (48) No.4 (40) No.5 (40) No.6 (32) No.8 (32) No.10 (24) No.12 (24) ¼ (20) 5/16 (18) 3/8 (16) 7/16 (14) 1/2 (13) 9/16 (12) 5/8 (11) 3/4 (10) 7/8 (9) 1 (8) 1-1/8 (7) 1-1/4 (7) 1-3/8 (6) 1-1/2 (6)	No.2 (64) No.3 (56) No.4 (48) No.5 (44) No.6 (40) No.8 (36) No.10 (32) No.12 (28) ¼ (28) 5/16 (24) 3/8 (24) 7/16 (20) 1/2 (20) 9/16 (18) 5/8 (18) 3/4 (16) 7/8 (14) 1” (14) 1” (12) 1-1/8 (12) 1-1/4 (12) 1-3/8 (12) 1-1/2 (12)	1/8 (40) 5/32 (32) 3/16 (24) ¼ (20) 5/16 (18) 3/8 (16) ½ (12)

HEAD & GRADE TYPES

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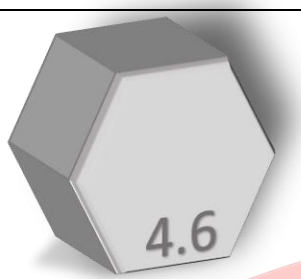
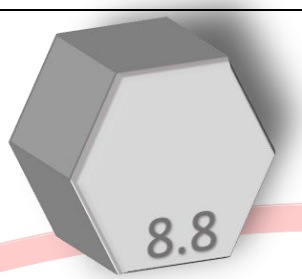
METRIC MARKINGS



4.6 – Mild Steel
Commercial Grade
Available in the following:

Hex Bolts M5 – M20
Purlin Bolts M12 - M16
Cuphead M6 – M20
Coach Screw M6 – M16
Metal Thread M2 – M8
SEMS M4 – M8

** Coarse Only **



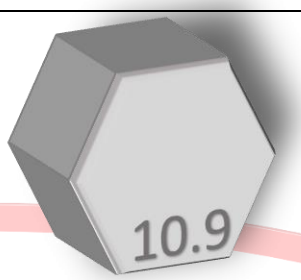
8.8 – Hi Tensile
Common Grade
Available in the following:

Hex Bolts M5 – M36
Flange Bolt M5 – M12

** Coarse & Fine **

Purlin Bolts M12 - M16
Cuphead M6 – M12

** Coarse Only **

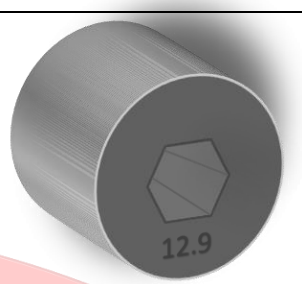


10.9 – Hi Tensile
Industrial Grade
Available in the following:

Hex Bolts M5 – M30
Flange Bolt M10 – M14
Cuphead M10

ALLEN KEY BOLTS
Socket Head M2 – M24
Button Head M3 – M16
CSK Flat Head M3 – M20

** Coarse & Fine **

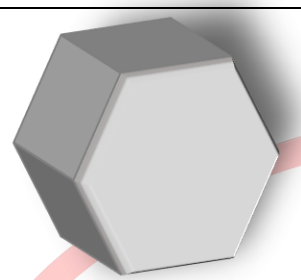


12.9 – Hi Tensile
Speciality Grade
Available in the following:

Flange Bolt M10 – M14

ALLEN KEY BOLTS
Socket Head M2 – M24
Button Head M3 – M16
CSK Flat Head M3 – M20
** 14.9 – Hi Tensile **
Grub Screws M2 – M20
** Coarse & Fine **

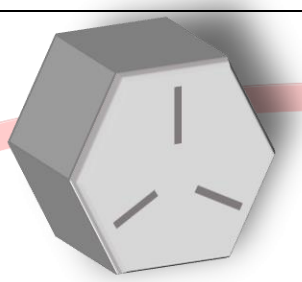
IMPERIAL MARKINGS



Grade 2 – Mild Steel
Commercial Grade
Available in the following:

Hex Bolts 3/16 – 5/8
Metal Thread 1/8 – 5/16

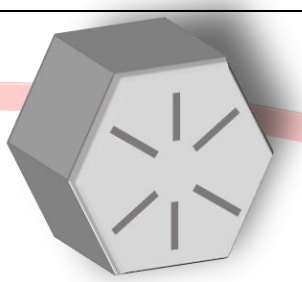
** BSW Only **



Grade 5 – Hi Tensile
Common Grade
Available in the following:

Hex Bolts 1/4 – 7/16
** UNC & UNF **

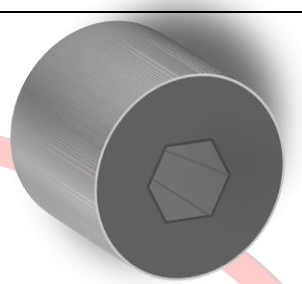
Flange Bolt 1/4 – 7/16
** UNC Only **



Grade 8 – Hi Tensile
Industrial Grade
Available in the following:

Hex Bolts 1/4 – 1-1/2
** UNC & UNF **

Cuphead 7/16 – 1/2
Plow Bolt 3/8 – 1-1/4
** UNC Only **



1936 Series - Hi Tensile
Speciality Grade
Available in the following:

ALLEN KEY BOLTS
Socket Head 4-40 – 1"
Button Head 4-40 – 1/2
CSK Flat Head 4-40 – 3/4
Grub Screws 4-40 – 3/4
** UNC & UNF **
[1936 Series = 12.9]

HEAD STYLES & STRENGTH CHART

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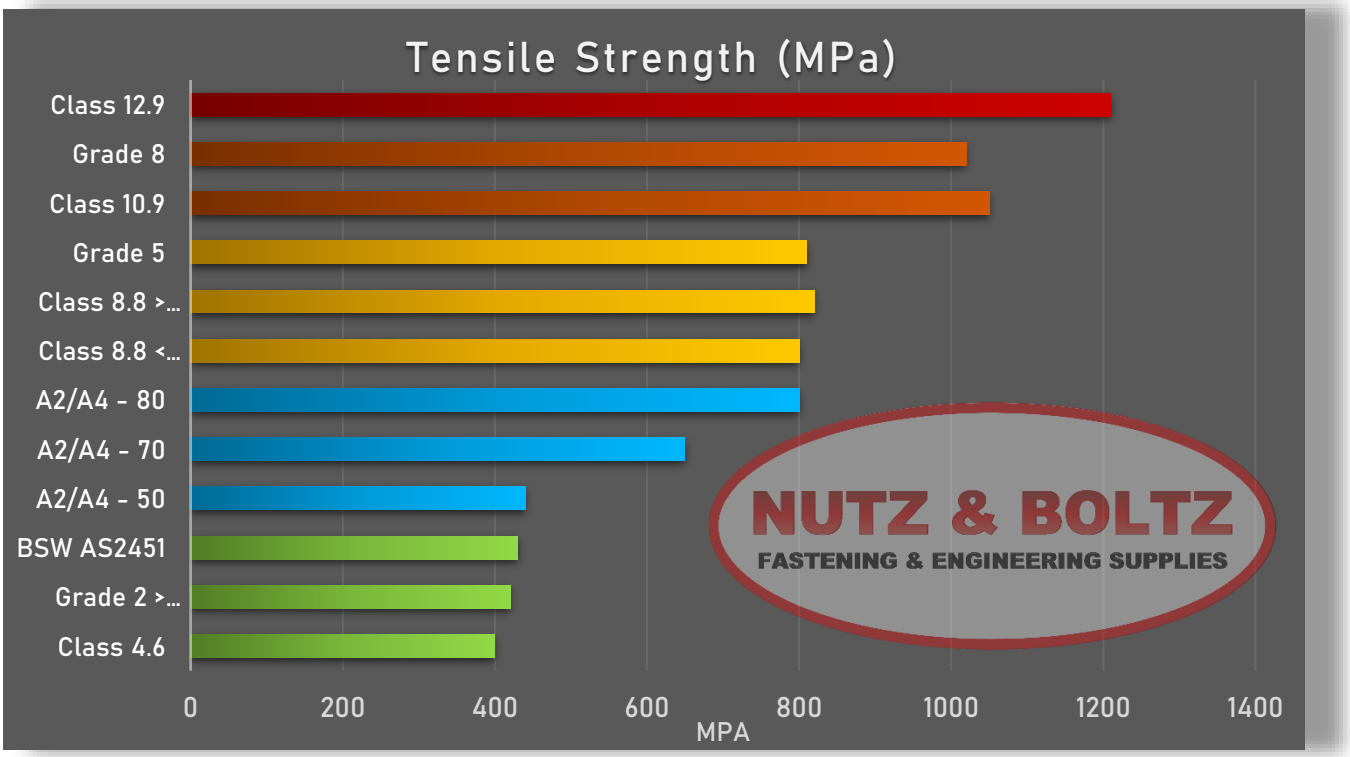
Hex Head	Flange Head	Socket Head	Button Head	Flat Head	Grub
					
Cuphead	Plow	Pan	Mushroom	Countersunk	Raised CSK

These are some of the more Common Head Styles



HOW TO IDENTIFY EXACT BOLT REQUIRED FROM SAMPLE

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Using what we know from the Bolt diagram,
the Thread Chart and the
Bolt Head marking section,
we can now identify almost
any of the common Bolts / Fasteners.

FIRSTLY:

Measure the diameter of the sample bolt.
(Vernier Calipers are best for this part).
Keep in mind that a bolt doesn't always
Measure its exact diameter.
Eg. M12 bolt measures around 11.86mm.
So, allow 0.15 – 0.25mm less than diameter.

SECONDLY:

Measure the Threads to determine Pitch or TPI.
(A Thread Gauge is best for this part).
If we look at the Head of the Bolt and
observe markings, along with the diameter
we established with the Verniers,
we can calculate it being Metric or Imperial.
If it is confirmed as a Metric Bolt, using the
Pitch section of Chart in conjunction with the
Thread Gauge, we can confidently know the
Bolt required.

LASTLY:

Using a Ruler or the Vernier Calipers, measure
the length of the Bolt from Under the Head,
(If it is a Bolt, or from Top of the Head if its Countersunk)
Now we have the Diameter, Thread and Length.