



### Screw Gauges

Screw Diameter	mm	Nail Diameter	mm
4G	2.8	10G	3.2
5G	3.2	12G	2.8
6G	3.5	14G	2.0
7G	3.8	16G	1.6
8G	4.1		
9G	4.4		
10G	4.7		
12G	5.5		
14G	6.3		

### Washer Gauges

Imperial thickness	mm
22	0.75
20	0.95
18	1.2
16	1.6
14	2.0
12	2.5
10	3.0

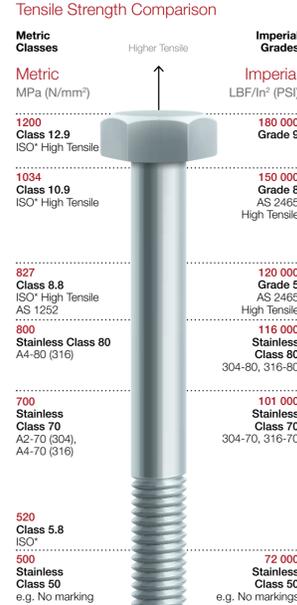
### Imperial Threads per Inch

Diameter (inches)	Threads per inch (TPI)			
	BSW	UNC	UNF	BSF
1/8"	40	40		
5/32"	32	32		
3/16"	24	24	32	32
1/4"	20	20	28	26
5/16"	18	18	24	22
3/8"	16	16	24	20
7/16"	14	14	20	18
1/2"	12	13	20	16
5/8"	11	11	18	14
3/4"	10	10	16	12
7/8"	9	9	14	11
1"	8	8	12	10
1 1/8"	7	7	12	9
1 1/4"	7	7	12	9
1 1/2"	6	6	12	8

### Metric Thread Forms and Pitch

Metric Diameter (mm)	Pitch (mm)	
	Coarse (standard)	Fine
2	0.40	
2.5	0.45	
3	0.50	0.35
4	0.70	0.50
5	0.80	0.75
6	1.00	0.75
8	1.25	1.00
10	1.50	1.00, 1.25
12	1.75	1.25, 1.50
14	2.00	1.50
16	2.00	1.50
18	2.50	1.50
20	2.50	1.50, 2.00
22	2.50	1.50
24	3.00	1.50, 2.00
27	3.00	1.50, 2.00
30	3.50	1.50, 2.00
33	3.50	2.00
36	4.00	1.50, 2.00
39	4.00	1.50, 2.00
42	4.50	2.00

### Class and Grade Tensile Strength Comparison



### Conversion Factor

1000 PSI (lbf/in²) = 6.8948 MPa 1 MPa = 145.038 PSI (lbf/in²)

\* Included in ISO\* Standards are: ISO 4014, ISO 4017, and ISO 4032

### Anchors

- Chem Set Stud
- Hollow Wall Anchor
- Drop In Anchor Standard
- Drop In Anchor Lipped
- Nylon Plug
- Metal Pin Anchor
- Nylon Pin Anchor Mushroom Head
- Nylon Pin Anchor Round Head
- Countersunk Screw Bolt
- Hex Flanged Screw Bolt
- Plasterboard Anchor
- Eye Screw Bolt
- C Hook Sleeve Anchor
- O Hook Sleeve Anchor
- Hex Sleeve Anchor
- CSK Sleeve Anchor
- Split Drive Anchor Countersunk
- Split Drive Anchor Mushroom Head
- Threaded Rod Anchor Steel Horizontal
- Threaded Rod Anchor Steel Vertical
- Threaded Rod Anchor Timber Horizontal
- Threaded Rod Anchor Timber Vertical
- Threaded Rod Anchor Concrete Vertical
- Through Bolt

### New Products

NEW products are often added to the Milsons range. Please visit our website for up to date information.

### Metric Hex Head Bolts AS/NZS1110/1111 Standard Measures

Metric Diameter, mm	M4	M5	M6	M8	M10	M12	M14	M16	M20	M22	M24	M27	M30	M33	M36
Hex Head Size Across Flat, mm	7	8	10	13	16	18	22	24	30	34	36	41	46	49	54.6
Pitch (Coarse), mm	0.7	0.8	1.0	1.24	1.5	1.75	2.0	2.0	2.5	2.5	3.0	3.0	3.5	3.5	4.0
Hex Head Height, mm	2.8	3.5	4.0	5.3	6.4	7.5	8.8	10.0	12.5	14.0	15.0	18.0	18.7	21	23
Thread Length ≥ 125, mm	Full	Full	16	18	22	26	30	34	38	46	50	60	66	72	78
Thread Length ≥ 125, mm	Full	Full	24	28	32	36	40	44	52	56	66	66	72	78	84

### Seismic/ETA Anchors

- Screw Bolt Seismic/ETA Hex Flanged
- Screw Bolt Seismic/ETA Countersunk
- Through Bolts Seismic
- Rod Hanger Seismic Concrete - Vertical
- Chemical Adhesive Seismic Pure Epoxy Resin
- Chemical Adhesive Seismic Hybrid Bonded
- Chemical Adhesive Seismic Polyester Resin Styrene Free
- Rawplug Multi Dispense Gun
- Blind Bolts
- The Standard Blind Bolt
- The Heavy Duty Bolt
- The Thin Wall Bolt

### Key to Finishes



### Metric Bolt Thread Length

Bolt Length, mm	Thread Length Calculation
0 to 125mm	2 x Diameter + 6mm
125 to 200mm	2 x Diameter + 12mm
200+mm	2 x Diameter + 25mm

### Screws

- Decking Screw Raised Head - T 17
- Decking Screw Square
- Bugle Batten Screw Knurled Shank T17 - Ribbed
- 12kN Kit
- 12kN Retro Kit
- 6kN Kit
- Coach Bolt & Nut
- Coach Screw
- Hex Bolts & Nut Torx Half Thread
- Hex Bolts & Nut Metric/Imperial
- Hex Bolt & Nut Metric Fine
- Grub Screw Metric/Imperial
- Grub Screw Metric Fine
- Shoulder Screw Metric/Imperial
- Stud Bar & Nut Metric/Imperial
- Stud Bar & Nut Metric Fine
- Shaft Collar

### Rivets

- Large Flange Rivet
- Dome Head Rivet

### Builders Hardware

- 12kN Kit
- 12kN Retro Kit
- 6kN Kit
- Bracing Bracket Kit with Screws & with Screw Bolts & Screws
- Concealed Purlin Cleat
- Sheet Bracing Strap
- Ceiling Tie
- Girt Plate
- Multi Grip
- Nail on Plate
- Joist Hanger
- Z and C Nail
- Panel Shims Plastic
- H-Packers Plastic

### Engineering Supplies

- Grease Nipple Straight & 45, 67, 90 Degree
- Hexagon Wrench Ball End, Short & Long Arm
- Key Steel

### Head Office

Palmerston North  
20 Kaimanawa St., PO Box 672  
Palmerston North, 4414  
Call us on 0800 507 444

### Bolts

- Coach Bolt & Nut
- Coach Screw
- Hex Bolts & Nut Torx Half Thread
- Hex Bolts & Nut Metric/Imperial
- Hex Bolt & Nut Metric Fine
- Grub Screw Metric/Imperial
- Grub Screw Metric Fine
- Shoulder Screw Metric/Imperial
- Stud Bar & Nut Metric/Imperial
- Stud Bar & Nut Metric Fine
- Shaft Collar

### Stud Bar & Nuts

- B7, B8M & L7 Studs
- B7, B8M & L7 Nuts

### Branches

Auckland  
71C Patiki Road, Avondale, Auckland, 1026  
Call us on 09 280 4609

Hamilton  
740 Arthur Porter Drive, Te Rapa, Hamilton, 3200  
Call us on 07 282 0490

Wellington  
126 Nelson St., Petone, Lower Hutt, 5012  
Call us on 04 282 1298

### Socket Head

- Button Head Screw
- Countersunk Screw
- Cap Screw Metric/Imperial
- Cap Screw Metric Fine
- Low Head Cap Screw
- Serrated Flange Nut Metric
- Nyloc Nut Metric/Imperial
- Strut Nut No Spring
- Strut Nut Long Spring
- Strut Nut Short Spring
- Wedge Nut
- Wing Nut Metric/Imperial
- Wing Nut Metric/Imperial
- Threaded Rod Metric/Imperial
- Custom Cut Threaded Rod Available!

### Threaded Rods

- Threaded Rod Metric/Imperial
- Threaded Rod Metric/Imperial

### Approximate Guide to Imperial and Metric Conversion

Inch	3/16	1/4	5/16	3/8	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2
Metric	M5	M6	M8	M10	M12	M14	M16	M20	M22	M24	M27	M30	M33	M36	M42	M48

### Nuts

- Barrel Nut
- Coupling Nut
- Belleville Washer
- Cup Washer
- D Ring
- D Shackle Long
- D Shackle Short
- Hex Nut Metric/Imperial
- Hex Nut Metric Fine
- Serrated Flange Nut Metric
- Nyloc Nut Metric/Imperial
- Strut Nut No Spring
- Strut Nut Long Spring
- Strut Nut Short Spring
- Wedge Nut
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### Stainless Hardware

- Bow Shackle
- Collared Eye Bolt
- D Ring
- D Shackle Long
- D Shackle Short
- Eye Bolts With Nut & Washer
- Eye Nut
- S Hook
- Screw Eye
- Spring Hook With Eylet
- Square Eye Plate
- Swage Eye Terminal
- Swage Terminal
- Swivel Eye & Eye
- Swivel Jaw & Jaw
- Turnbuckle Hook & Eye
- Turnbuckle Jaw & Jaw
- Turnbuckle Jaw & Terminal
- U Bolt Nut & Washer
- Wire Eye Strap
- Wire Rope Grip
- Wire Rope Thimble
- Round Ring

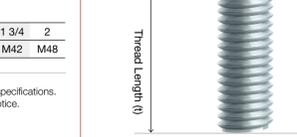
### Tools & Accessories

- Annular Cutters
- Drill Bits
- Masonry Drill Bits
- Impact Driver Bits
- Holesaws
- Impact Sockets
- Knives and Blades
- Reciprocating Saw Blades
- Tape Measures
- Taps & Dies
- Collated Nails
- Chemz Aerosols
- Adhesives & Sealants

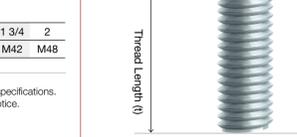
### Bolt Measurements Diagram



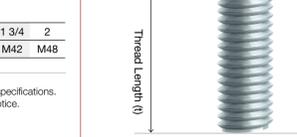
### Common Head Types



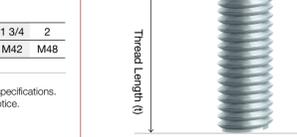
### Common Drive Types



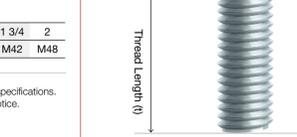
### Common Screw Points



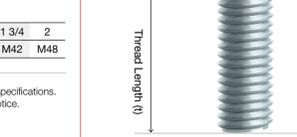
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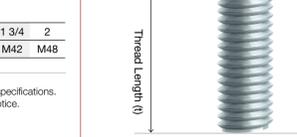
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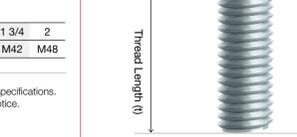
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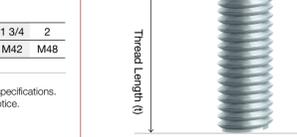
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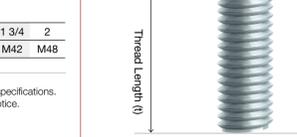
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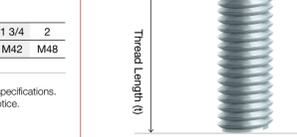
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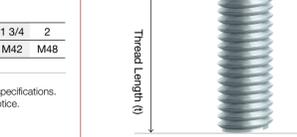
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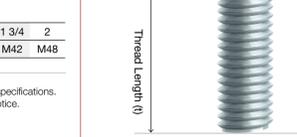
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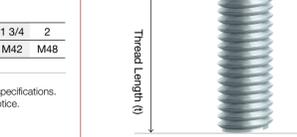
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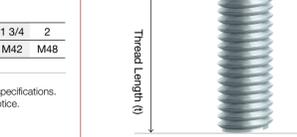
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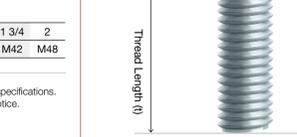
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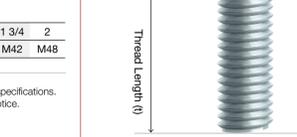
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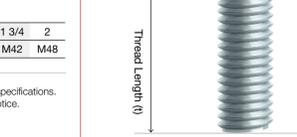
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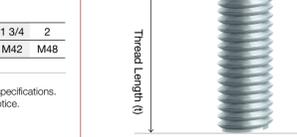
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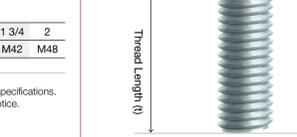
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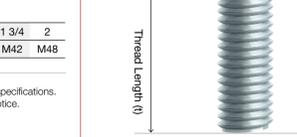
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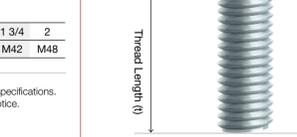
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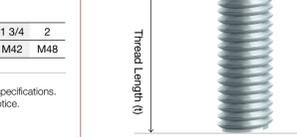
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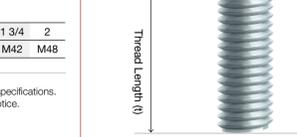
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