

MECHANICAL COMPONENTS **CATALOGUE**

1.882 388

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Table of Contents

1.	INTRODUCTION	2
2.	PRECISION SCREWS	4
3.	NUTS	107
4.	BEARINGS	147
5.	HOSE CLAMPS	155
6.	RIVETS AND FASTENERS	161
7.	PULLEYS, GEARS & ROTARY COMPONENTS	175
8.	WASHERS	200
9.	ELECTRICAL FIXTURES	232
10.	CONCRETE SCREWS	242
11.	ASSEMBLY COMPONENTS	266
12.	HARDWARE FITTINGS	288
13.	SPECIALIST BOLTS	300
14.	CONCLUSION	306



Introduction

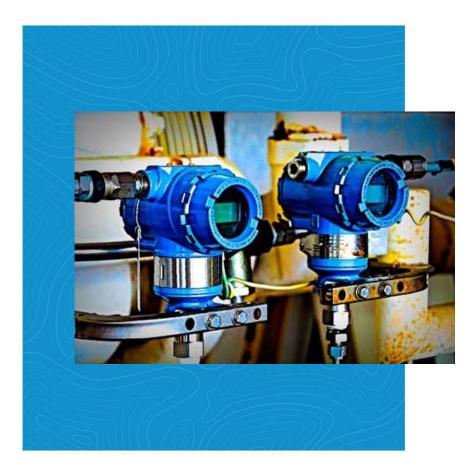
Galactic Networks Limited is a company created with a mandate to build sustainable networks across several economic platforms. We are a company on a mission to be global leaders in Manufacturing, Energy Trading, Investing, Intelligent Transportation Systems, even as we seek opportunities across multiple industries, one step at a time.

We are firm believers in the fact that everything is possible which is why our motto states "Infinite Possibilities". Our approach to world class service is a result of our research into the best global business practices.





PRECISION SCREWS



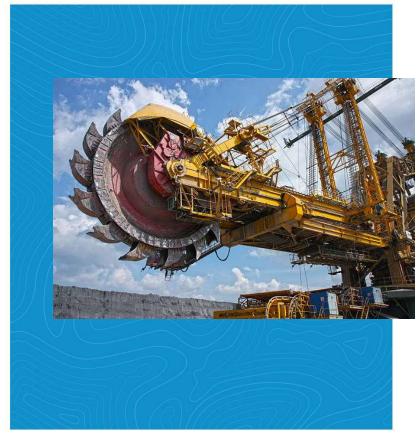
APPLICATIONS

Precision adjustment screws are used to provide micro positioning on precision instruments such as tables, optical mounts, microscopes, analytical instruments, and flow metering devices. Precision Screws are designed for a variety of purposes, though most are primarily intended to fasten two surfaces together. Screws can be used alongside Washers to prevent damage to the target housing, and with Hexagon Nuts to lock the fastener in place from behind.



PRECISION SCREWS IN

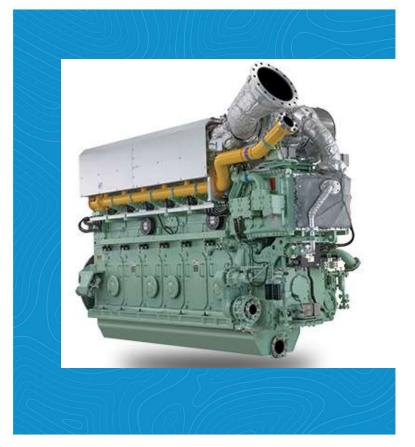
CATALOUGE



- 9. IMPERIAL LOW CAP HEAD SCREWS
- 11. TORX COUNTERSUNK THREAD ROLLING SCREWS STAINLESS STEEL A2
- 13. METRIC COACH BOLTS
- 15. SEALING SELF DRILLING HEXAGON BOLTS
- 17. IMPERIAL FULL THREAD CARRIAGE BOLTS
- 19. REDUCED SLOTTED PAN HEAD SCREWS
- 21. POZI RAISED COUNTERSUNK SEALING WOOD SCREWS
- 23. SECURITY 2 HOLE/SNAKE EYE PAN HEAD SCREWS
- 25. SLOTTED HIGH THUMB SCREWS DIN 465
- 27. KNURLED HIGH THUMB SCREWS DIN 464
- 29. KNURLED THIN THUMB SCREWS DIN 653



PRECISION SCREWS IN CATALOUGE CONTD.

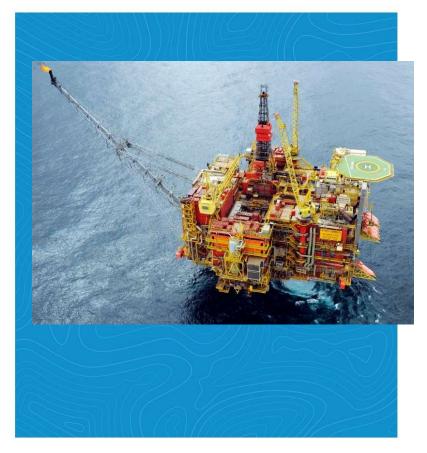


31. METRIC ULTRA LOW HEAD SOCKET SHOULDER SCREWS 33. POZI COUNTERSUNK THREAD ROLLING SCREWS - STAINLESS STEEL (A2) 35. SELF TAPPING SECURITY 2HOLE SNAKE EYE PAN HEAD SCREWS **37. METRIC CAPHEAD CAPTIVE SCREWS 39. TORX ULTRA LOW CAP HEAD SCREWS 41. SLOTTED ROUND HEAD SCREWS** 44. IMPERIAL SECURITY TORX BUTTON HEAD SCREWS **46. SLOTTED PAN HEAD SHOULDER SCREWS 48. TORX PAN HEAD THREAD ROLLING SCREWS 50. POZI COUNTERSUNK THREAD ROLLING SCREWS 52. TORX CAP SCREWS**

55. IMPERIAL BINDING PAN HEAD SCREWS



PRECISION SCREWS IN CATALOUGE CONTD.



57. METRIC SOCKET CAP HEAD SEALING SCREWS 59. METRIC SLOTTED MUSHROOM SCREWS 61. TORX PAN HEAD THREAD ROLLING SCREWS - STAINLESS STEEL (A2) **63. VENTED SOCKET CAP HEAD SCREWS 65. SERRATED SOCKET CAP HEAD SCREWS 67. FLANGED HEXAGON BOLT** 69. POZI PAN HEAD THREAD ROLLING SCREWS – STAINLESS STEEL (A2) 71. POZI COUNTERSUNK THREAD ROLLING SCREWS - STAINLESS STEEL (A2) 73. TORX COUNTERSUNK THREAD ROLLING SCREWS 75. METRIC PHILLIPS COUNTERSUNK SEALING SCREWS 77. SECURITY 2 HOLE/SNAKE EYE PAN HEAD SCREWS 79. POZI COUNTERSUNK WOOD SCREWS



PRECISION SCREWS IN CATALOUGE CONTD.



81. METRIC ULTRA LOW HEAD SOCKET SHOULDER SCREWS 83. IMPERIAL TORX PAN HEAD SEALING SCREWS **85. CROSS-SLOTTED MUSHROOM HEAD SCREWS 88. IMPERIAL SLOTTED MUSHROOM SCREWS 90. CAPSTAN SCREWS 92. IMPERIAL TORX SHOULDER SCREWS 94. FILLISTER SCREWS** 97. WING SCREWS **99. STRAIGHT WING NUTS 101. METRIC HEXAGON SEALING BOLTS** 103. METRIC SLOTTED HEAD PART THREADED SET/GRUB SCREWS 105. EYE BOLTS



IMPERIAL LOW CAP HEAD SCREWS



APPLICATIONS

Low head cap screws are **machine screws that feature a head containing a hexagonal socket**. The socket head makes it easy to securely install the screws with hex keys or hex socket bits, while their low head makes them suitable for installation in situations where there is limited clearance.

Imperial Low Cap Head Screws

Thread Size		Length (L)		Head Diameter (D)		Material		Finish	
1/4-20	27 *	1 inch	21 📤	0.27 inch	18 *	Stainless Steel (A2)	147 🔺	Matte Black	(49) *
3/8-16	24	() 1.1/2 inch	15	0.226 inch	18			🗌 Natural	49
5/16-18	24	1.1/4 inch	15	0.312 inch	36			Thread Locking	49
6-32	18	1.3/4 inch	9	0.375 inch	27				
8-32	18] 1/2 inch	21	0.437 inch	24				
0 10-24	18	() 1/4 inch	6	0.562 inch	24				
0 10-32	18	2 inch	9						
	-	3/4 inch	21 +		*		*		

Imperial Low Cap Head Screws

Thread Size		Length (L)		Head Diameter (D)	Head Diameter (D)		Material		Finish	
1/4-20	27 *	1.1/4 inch	15 🔶	0.27 inch	18 *	Stainless Steel (A2)	147 *	🗌 Matte Black	49	
3/8-16	24	1.3/4 inch	9	0.226 inch	18			🗌 Natural	49	
5/16-18	24	1/2 inch	21	0.312 inch	36			Thread Locking	49	
6-32	18	🗌 1/4 inch	6	0.375 inch	27					
8-32	18	2 inch	2	0.437 inch	24					
10-24	18	3/4 inch	21	0.562 inch	24					
10-32	18	3/8 inch	2							
	*	5/8 inch	21 🗸		-		-			





TORX COUNTERSUNK THREAD ROLLING SCREWS - STAINLESS STEEL (A2)



APPLICATIONS

Screws with a countersunk head are typically used in woodworking applications. When building furniture, manufacturers often use countersunk screws so that the heads don't protrude. If the head protrudes out of a piece of furniture, such as a recliner, it will likely be uncomfortable to consumers to use.

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
🗌 M2.5 (2.5mm)	12 *	4mm	2 ^	☐ T8	12 *	Stainless Steel (A2)	70 -	Matte Black	35
🗌 M3 (3mm)	14	🗍 5mm	2	0110	14			🗌 Natural	35
🗌 M4 (4mm)	16	🗍 6mm	6	☐ T20	16				
🗌 M5 (5mm)	14	🗌 8mm	10	☐ T25	14				
🗌 M6 (6mm)	14	[] 10mm	10	☐ T30	14				
		12mm	10						
		16mm	8						
	-	20mm	8.		_				

Torx Countersunk Thread Rolling Screws - Stainless Steel (A2)

Torx Countersunk Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
M2.5 (2.5mm)	12 *	🗍 6mm	6 *		12 🔶	Stainless Steel (A2)	70 -	🗌 Matte Black	35
🗌 M3 (3mm)	14	0 8mm	10	☐ T10	14			🗌 Natural	35
🗌 M4 (4mm)	16	0 10mm	10	☐ T20	16				
🗌 M5 (5mm)	14	12mm	10	T25	14				
🗌 M6 (6mm)	14	16mm	8	☐ T30	14				
		20mm	8						
		25mm	8						
		() 30mm	6 -						





METRIC COACH BOLTS



APPLICATIONS

Coach bolts are intended for use with wood and metal. They are ideal for tougher situations where a more heavy-duty fastening solution is required. Coach bolts are used for **connecting metal to timber, or to join heavy timbers**. They are often used now however with bare timber as the coach bolt has developed.

Metric Coach Bolts

Thread Size		Length (L)		Head Width A/F (J)		Material	Finish	
5mm	40 🔶	20mm	4	🗌 8mm	40 ^	Marine Stainless Steel	Matte Black	247 *
🗌 6mm	68	25mm	12	[] 10mm	68	(A4)	Natural	247
7mm	78	30mm	16	12mm	78	Stainless Steel (A2) 266		
8mm	88	35mm	16	[] 13mm	88			
🗌 10mm	86	40mm	20	17mm	86			
12mm	78	45mm	20	[] 19mm	78			
0 16mm	56	50mm	28	24mm	56			
	(55mm	24 +		Contract of the			

Thread Size		Length (L)		Head Width A/F (J)		Material	Finish	Finish	
5mm	40 *	🗍 130mm	24 🔺	08mm	40 *	Marine Stainless Steel	* 🗌 Matte Black	247	
🗌 6mm	68	🗌 140mm	22	0 10mm	68	(A4)	Natural	247	
7mm	78	🗌 150mm	20	12mm	78	Stainless Steel (A2) 266			
0 8mm	88	🗌 160mm	18	13mm	88				
] 10mm	86	🗌 170mm	2	17mm	86				
] 12mm	78	🗌 180mm	18	19mm	78				
0 16mm	56	🗌 190mm	2	24mm	56				
		200mm	16 🖕		100 million (100 million)				

Metric Coach Bolts

Thread Size		Length (L)		Head Width A/F (J)		Material	Finish	
5mm	(40) ^	190mm	2 *	08mm	40 *	Marine Stainless Steel	Matte Black	247
6mm	68	200mm	16	[] 10mm	68	(A4)	🗌 Natural	247
7mm	78	210mm	2	[] 12mm	78	Stainless Steel (A2) 266		
8mm	88	220mm	4	🗌 13mm	88			
)10mm	86	240mm	4	[] 17mm	86			
] 12mm	78	260mm	6	[] 19mm	78			
] 16mm	56	280mm	4	24mm	56			
		300mm	4 -					



SEALING SELF DRILLING HEXAGON BOLTS



APPLICATIONS

Self-drilling screws can be used for a wide variety of applications which involve fastening two different types of materials together. They are commonly used **to fasten metal to wood, or even metal to metal**.



Sealing Self Drilling Hexagon Bolts

Sealing Self Drilling Hexagon Bolts

Thread Size (T)	Overall Length (L)	Hexagon Width A/F (J)	Material	Finish
 No.12 (5.5mm) No.14 (6.3mm) 	 38mm 38mm 45mm 50mm 50mm 58mm 65mm 70mm 75mm 100mm 	_ 8mm 21 ▲	 Marine Stainless Steel (A4) / Carbon Steel Tip Stainless Steel (A2) Stainless Steel (A2) / Carbon Steel Tip 	🗌 Natural 🛛 🛛 🔁





IMPERIAL FULL THREAD

CARRIAGE BOLTS



APPLICATIONS

Imperial Full Thread Carriage Bolts are typically used to secure wood to metal and feature a smooth rounded head with a square neck, designed to be fastened using a spanner or wrench. Installing these bolts into a square hole offers a self-locking fastening solution.

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
1/2-13	21 *	1 inch	6	0.594 inch	24 ^	Stainless Steel (A2)	126 🔶	Matte Black	42
1/4-20	24	1.1/2 inch	15	0.719 inch	30			Natural	42
3/4-10	15	🗌 1.1/4 inch	6	0.844 inch	18			Thread Locking	42
3/8-16	18	2 inch	18	1.094 inch	21				
5/8-11	18	2.1/2 inch	18	1.344 inch	18				
5/16-18	30	2.1/4 inch	3	1.594 inch	15				
		2.3/4 inch	3						
		3 inch	18 🗸		Ļ				

Imperial Full Thread Carriage Bolts

Imperial Full Thread Carriage Bolts

Thread Size (T)	Length (L)		Head Diameter (D)		Material		Finish	
1/2-13	21 ^ 🗌 2 inch	18 *	0.594 inch	24 ^	Stainless Steel (A2)	126 *	Matte Black	42 *
1/4-20	24 2.1/2 inch	18	0.719 inch	30			Natural	42
3/4-10	15 2.1/4 inch	3	0.844 inch	18			Thread Locking	42
3/8-16	18 2.3/4 inch	3	1.094 inch	21				
5/8-11	18 3 inch	18	1.344 inch	18				
5/16-18	30 3.1/2 inch	18	1.594 inch	15				
	4 inch	18						
	↓ □ 5.1/2 inch	3 🗸		-		-		1





REDUCED SLOTTED PAN HEAD SCREWS



APPLICATIONS

Pan head wood screws are used **to fasten flat materials to timber**. Pan heads are like round heads, truss heads, and binding heads, although pan heads have largely replaced these other heads in modern screws.

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
🗌 M2 (2mm)	10 *	04mm	6	2.8mm	10 ^	🗍 Stainless Steel (A2)	92 *	🗌 Matte Black	33
🗌 M3 (3mm)	20	5mm	11	4mm	20			🗌 Natural	33
🗌 M4 (4mm)	20	🗍 6mm	14	5.5mm	20			Thread Locking	26
🗌 M5 <mark>(</mark> 5mm)	21	🗌 8mm	14	06.5mm	21				
🗌 M <mark>6 (</mark> 6mm)	21	() 10mm	14	🗌 8mm	21				
		[] 12mm	12						
		16mm	12						
	-	() 20mm	6.		-				

Reduced Slotted Pan Head Screws

Reduced Slotted Pan Head Screws

Thread Size (T)		Length (L)		Head Diameter ([Head Diameter (D)		Material		
🗌 M2 (2mm)	10 *	5mm	11 *	2.8mm	10 *	Stainless Steel (A2)	92 *	🗌 Matte Black	33
🗌 M3 (3mm)	20	🗌 6mm	14	4mm	20			🗌 Natural	33
🗌 M4 (4mm)	20	🗌 8mm	14	🗍 5.5mm	20			Thread Locking	26
🗌 M5 (5mm)	21	[] 10mm	14	06.5mm	21				
🗌 M6 (6mm)	21	[] 12mm	12	08mm	21				
		[] 16mm	12						
		20mm	6						
	-	25mm	3 -						





POZI RAISED COUNTERSUNK SEALING WOOD SCREWS



APPLICATIONS

Wood screws are handy for **quickly building jigs and clamping forms, joining cabinet and furniture parts, mounting hardware and trim, and much more**. Screws form strong connections between parts made from solid wood, plywood and other sheet goods without the need for cut joinery.

Pozi Raised Countersunk Sealing Wood Screws

Metric or Imperial?		Thread Size (T)		Length (L)		Sealing Washer Diameter		Screw Material	
🗌 Metric	53 *	🗌 No.9 (4.5mm)	(41) *	20mm	3 _	[] 15mm	22 *	Stainless Steel (A2)	53
		🗌 No.10 (5mm)	12	25mm	3	20mm	21		
				30mm	3	25mm	10		
				35mm	3				
				🗌 40mm	3				
				🗌 45mm	3				
				50mm	3				
	4			🗍 55mm	3 -		*		

Pozi Raised Countersunk Sealing Wood Screws

Metric or Imperial?	Thread Size (T)	Length (L)		Sealing Washer Dia	ameter	Screw Material	
Metric	3 🕋 🗌 No.9 (4.5mm)	🐴 🔺 🗌 60mm	U •	🗌 15mm	22 *	Stainless Steel (A2)	53
	🗌 No.10 (5mm)	12 65mm	2	20mm	21		
		70mm	3	25mm	10		
		🗌 80mm	2				
		90mm	0				
		0 100mm	2				
		120mm	2				
		150mm	2				





SECURITY 2 HOLE/SNAKE EYE PAN HEAD SCREWS



APPLICATIONS

These versatile security screws are ideal for a wide range of applications and are often used to secure glass panels and sign-age in place in both indoor and outdoor locations.

Thread Size (T)		Thread Length (E)		Drive Size		Material		Finish	
🗌 M3 (3mm)	9 *	🗍 6mm	3 📤	тнз	9 *	🗌 Stainless Steel (A2)	72 ^	Matte Black	24
🗌 M4 (4mm)	18	🗌 8mm	3	TH5	18			🗌 Natural	24
🗌 M5 (5mm)	18	[] 10mm	6	□ тн6	[18]			Thread Locking	24
M6 (6mm)	27	🗌 12mm	12	П ТН8	27				
		🗌 16mm	12						
		20mm	9						
		25mm	9						
	-	30mm	6 🗸		-				

Security 2Hole / Snake Eye Pan Head Screws

Security 2Hole / Snake Eye Pan Head Screws

Thread Size (T)		Thread Length (E)		Drive Size		Material		Finish	
M3 (3mm)	9 *	16mm	12 *	тнз	9 *	Stainless Steel (A2)	72 ^	🗌 Matte Black	24
🗌 M4 (4mm)	18	20mm	9	TH5	18			🗌 Natural	24
🗌 M5 (5mm)	18	25mm	9	□ тн6	18			Thread Locking	24
🗌 M6 (6mm)	27	30mm	6	П ТН8	27				
		35mm	3						
		40mm	3						
		45mm	3						
		□ 50mm	3 -						





SLOTTED HIGH THUMB SCREWS - DIN 465



APPLICATIONS

Thumb screws offer a hand-adjustment feature, which allows for simple action to fasten, tighten, loosen, or remove the screws. The main benefit is that no tools are needed, so assembly teams and end-user consumers can adjust the screws with thumb and forefinger alone.

Slotted High Thumb Screws - DIN 465

Thread Size (T)		Length (L)		Head Diameter (I	D)	Screw Material		Finish	
🗌 M3 (3mm)	18 *	🗍 6mm	9 *	12mm	18 *	Stainless Steel (A1)	66	Matte Black	22 *
M4 (4mm)	18	0 8mm	9	16mm	18			🗌 Natural	22
M5 (5mm)	18	0 10mm	12	20mm	18			Thread Locking	22
M6 (6mm)	12	() 12mm	12	24mm	12				
		16mm	12						
		20mm	12						
	*		+		*		*		-





KNURLED HIGH THUMB SCREWS – DIN 464



APPLICATIONS

- Safety covers for electronic gadgets.
- Battery covers of small electronic devices.
- High vibration Boats.
- Off-road vehicles.
- High stress, corrosive, and outdoor applications.
- Aerospace Applications.

Thread Size (T)		Length (L)		Head Diameter (D)		Screw Material		Finish	
🗌 M3 (3mm)	23 *	04mm	2 ^	[] 12mm	23 ^	Stainless Steel (A1)	119 *	Matte Black	40 *
M4 (4mm)	27	5mm	6	16mm	27			🗌 Natural	40
M5 (5mm)	24	🗍 6mm	9	20mm	24			Thread Locking	39
🗌 M6 (6mm)	21	🗌 8mm	12	24mm	21				
M8 (8mm)	15	[] 10mm	12	30mm	15				
M10 (10mm)	9	12mm	15	36mm	9				
		16mm	15						
		() 20mm	18 🗸						

Knurled High Thumb Screws - DIN 464

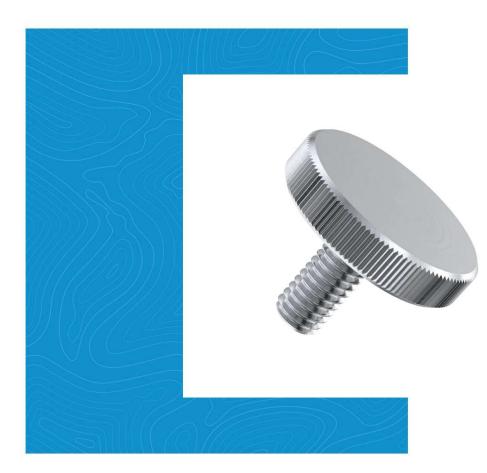
Knurled High Thumb Screws - DIN 464

Thread Size (T)		Length (L)		Head Diameter (D)		Screw Material		Finish	
🗌 M3 (3mm)	23 *	0 6mm	9 *	12mm	23 ^	Stainless Steel (A1)	119 *	🗌 Matte Black	40
🗌 M4 (4mm)	27	8mm	12	[] 16mm	27			🗌 Natural	40
🗌 M5 (5mm)	24	010mm	12	20mm	24			Thread Locking	39
🗌 M6 (6mm)	21	12mm	15	24mm	21				
🗌 M8 (8mm)	15	[] 16mm	15	30mm	15				
M10 (10mm)	9	20mm	18	36mm	9				
		25mm	15						
	-	30mm	15 -		-		-		





KNURLED THIN THUMB SCREWS - DIN 653



APPLICATIONS

The thumb screws are popularly used on: **Safety covers for electronic gadgets**. Battery covers of small electronic devices.

Knurled Thin Thumb Screws - DIN 653

Thread Size		Length (L)		Head Diameter (M	ax) (D)	Material		Finish	
🗌 M2 (2mm)	14 -	4mm	2 -	9.29mm	14 ^	Stainless Steel (A1)	254 *	🗌 Matte Black	87
🗌 M2.5 (2.5mm)	27	🗍 5mm	8	🗌 11.35mm	27			🗌 Natural	87
🗌 M3 (3mm)	27	🗌 6mm		12.35mm	27			Thread Locking	80
🗌 M3.5 (3.5mm)	30	🗌 8mm	14	14.35mm	30				
🗌 M4 (4mm)	27	[] 10mm	20	16.35mm	27				
🗌 M5 (5mm)	30	[] 12mm	23	20.42mm	30				
🗌 M6 (6mm)	30	[] 14mm	23	24.42mm	30				
M8 (8mm)	36	[] 16mm	21	30.42mm	36 .				

Knurled Thin Thumb Screws - DIN 653

Thread Size	Length (L)		Head Diameter (M	Head Diameter (Max) (D)			Finish	
🗌 M2 (2mm)	14 📤 🗌 18mm	24 *	🗌 11.35mm	27 *	Stainless Steel (A1)	254 *	🗌 Matte Black	87
🗌 M2.5 (2.5mm)	27 20mm	24	12.35mm	27			🗌 Natural	87
🗌 M3 (3mm)	27 22mm	18	14.35mm	30			Thread Locking	80
🗌 M3.5 (3.5mm)	30 25mm	18	016.35mm	27				
🗌 M4 (4mm)	27 28mm	12	20.42mm	30				
🗌 M5 (5mm)	30 30mm	12	24.42mm	30				
🗌 M6 (6mm)	30 32mm	6	30.42mm	36				
() M8 (8mm)	36 Jan 35mm	9.	36.5mm	33 -				

Knurled Thin Thumb Screws - DIN 653

Thread Size		Length (L)		Head Diameter (M	ax) (D)	Material		Finish	
M2.5 (2.5mm)	27 *	22mm	18 *	🗌 11.35mm	27 *	Stainless Steel (A1)	254 *	🗌 Matte Black	87
🗌 M3 (3mm)	27	25mm	18	12.35mm	27			🗌 Natural	87
M3.5 (3.5mm)	30	28mm	12	14.35mm	30			Thread Locking	80
🗌 M4 (4mm)	27	30mm	12	16.35mm	27				
🗌 M5 (5mm)	30	32mm	6	20.42mm	30				
🗌 M6 (6mm)	30	35mm	9	24.42mm	30				
M8 (8mm)	36	38mm	3	30.42mm	36				
M10 (10mm)	33 -	() 40mm	6 -	36.5mm	33 🗸		2		



METRIC ULTRA LOW HEAD SOCKET

SHOULDER SCREWS



APPLICATIONS

What are shoulder screws used for? Much like all other screws, shoulder screws are meant to **hold objects together and in a particular position**. However, these screws are designed for use in parts which requires a mounting pin, joint, shaft, dowel, pivot, or sliding motion.



Metric Ultra Low Head Socket Shoulder Screws

Thread Size (T)		Shoulder Diameter (d)		Shoulder Length (L)		Material	Finish	
🗌 M3 (3mm)	14 ^	_ 4mm	14 ^	4mm	6 ^	Marine Stainless Steel 54	🗌 Matte Black	27
🗌 M4 (4mm)	23	5mm (23	5mm	9	(A4)	🗌 Natural	27
🗌 M5 (5mm)	23	Gmm (23	0 6mm	12	Thread Locking Marine 24 Stainless Steel (A4)	Thread Locking	24
) M6 (6mm) 18	_ 8mm	18	08mm	12	Stamess Steer (A4)			
				[] 10mm	12			
				12mm	9			
				[] 16mm	9			
				20mm	9			





POZI COUNTERSUNK THREAD ROLLING SCREWS – STAINLESS STEEL (A2) APPLICATIONS



Screw threads have several

applications: Fastening: Fasteners such as wood screws, plastic screws, machine screws, nuts, and bolts. Connecting threaded pipes and hoses to each other and to caps and fixtures.

Thread Size (T)		Length (L)		Head Dia. (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	04mm	2 -	4.7mm	12 *	#1	26 *	🗌 Matte Black	35
🗍 M3 (3mm)	14	5mm	4	5.6mm	14	# 2	30	🗌 Natural	35
M4 (4mm)	16	() 6mm	6	07.5mm	16	() #3	14		
M5 (5mm)	14	0 8mm	10	9.2mm	14				
🗌 M6 (6mm)	14	[] 10mm	10	[] llmm	14				
		() 12mm	10						
		0 16mm	8						
		20mm	8.		-				

Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Head Dia. (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	0 6mm	6 ^	4.7mm	12 *	() #1	26 *	🗌 Matte Black	35
🗌 M3 (3mm)	14	🗍 8mm	10	5.6mm	14	# 2	30	🗌 Natural	35
M4 (4mm)	16	[] 10mm	10	07.5mm	16	# 3	14		
M5 (5mm)	14	[] 12mm	10	9.2mm	14				
M6 (6mm)	14	[] 16mm	8	[] llmm	14				
		20mm	8						
		25mm	6						
	~	30mm	6 🗸						





SELF TAPPING SECURITY 2HOLE SNAKE EYE PAN HEAD SCREWS



APPLICATIONS

Spanner (Snake-Eye) security bits are used
for making installations more secure. By
adding an unconventional drive stile in
public areas, they are much less likely to be
vandalized or tampered with on a whim.
Spanner screws can be seen commonly on
public applications such as: Bathroom
dividers and Public Art Displays.

Thread Size (T)		Nominal Length		Head Diameter (K)	Drive Size		Finish	
🗌 No. 6 (3.5mm)	16 🔶	1 inch (25.4mm)	12 🔺	5.4mm	10 *	ТНЗ	10 -	🗌 Matte Black	41 ~
🗌 No.4 (2.9mm)	10	1.1/2 inch (38.1mm)	12	6.7mm	16	TH4	16	🗌 Natural	41
🗌 No.8 (4.2mm)	16	1.1/4 inch (31.75mm)	10	🗌 8mm	16	TH5	16		
🗌 No.10 (4.8mm)	18	1/2 inch (12.7mm)	[10]	0 9.2mm	18	П тн6	18		
🗌 No.12 (5.5mm)	[10]	2 inch (50.8mm)	[10]	() 10.5mm	10	TH7	[10]		
🗌 No.14 (6.3mm)	12	2.1/2 inch (63.5mm)	2	12.2mm	12	□ тн8	12		
		3/4 inch (19.05mm)	10						
	~	3/8 inch (9.53mm)	8.				~		

Thread Size (T)		Nominal Length		Head Diameter (K)		Drive Size		Finish	
No. 6 (3.5mm)	16 🔺	1.1/2 inch (38.1mm)	12 *	() 5.4mm	10 🔺	□ тнз	10 *	🗍 Matte Black	[4]
🗌 No.4 (2.9mm)	10	1.1/4 inch (31.75mm)	10	6.7mm	16	TH4	16	🗌 Natural	[4]
🗌 No.8 (4.2mm)	16	1/2 inch (12.7mm)	10	() 8mm	16	☐ TH5	16		
🗌 No.10 (4.8mm)	18	2 inch (50.8mm)	10	0 9.2mm	18	□ тн6	18		
🗌 No.12 (5.5mm)	10	2.1/2 inch (63.5mm)	2	🗌 10.5mm	10	☐ TH7	10		
No.14 (6.3mm)	12	3/4 inch (19.05mm)	10	12.2mm	12	П ТН8	12		
		3/8 inch (9.53mm)	8						
	-	5/8 inch (15.88mm)	8 -		-		-		





METRIC CAP HEAD CAPTIVE SCREWS



APPLICATIONS

Captive screws are **fasteners designed to remain attached to guards or equipment**. A conventional screw typically passes through a clearance hole in one part and then screws into a threaded hole in a second part — so the first part is clamped to the second.

Thread Size (T)		Length (L)		Head Diameter (N	lax) (D)	Material		Finish	
M2 (2mm)	10 ^	08mm	2 ^	3.8mm	10 *	Stainless Steel (A2)	68 ^	Matte Black	24 ^
🗌 M <mark>3 (</mark> 3mm)	15	[] 10mm	2	5.5mm	15			🗌 Natural	25
🗌 M4 (4mm)	15	[] 12mm	5	7mm	15			Thread Locking	19
🗌 M5 (5mm)	13	14mm	5	08.5mm	13				
🗌 M6 (6mm)	15	[] 16mm	8	[] 10mm	15				
		() 20mm	9						
		25mm	12						
		30mm	9.						

Metric Cap Head Captive Screws

Metric Cap Head Captive Screws

Thread Size (T)		Length (L)		Head Diameter (M	ax) (D)	Material		Finish	
🗌 M2 (2mm)	10 ^	14mm	5 *	3.8mm	10 *	Stainless Steel (A2)	68 *	🗌 Matte Black	24
🗌 M3 (3mm)	15	16mm	8	5.5mm	15			🗌 Natural	25
🗌 M4 (4mm)	15	20mm	9	7mm	15			Thread Locking	19
🗌 M5 (5mm)	13	25mm	12	08.5mm	13				
🗌 M6 (6mm)	15	30mm	9	[] 10mm	15				
		35mm	6						
		40mm	9						
	-	50mm	3 🗸				_		





TORX ULTRA LOW CAP HEAD SCREWS



APPLICATIONS

Torx screws are typically used in **vehicles**, **motorcycles**, **bicycles**, **computer systems**, **hard disk drives and consumer electronics**. The unusual star-shaped head makes them far more secure than regular flat-head or cross-head screws and allows higher torque transmission so screws and bolts can be tightened more securely.

Thread Size		Length (L)		Head Diameter (D)		Material		Finish	
🗌 M3 (3mm)	18 *	6mm	6	0 6mm	18 ^	PEEK	28 *	Black	26
🗌 M4 (4mm)	21	🗌 8mm	9	08mm	21	D PPS	27	Brown	55
🗌 M5 (5mm)	20	[] 10mm		9mm	20	🗌 Reny	26		
🗌 M6 (6mm)	22	[] 12mm	12	[] 10mm	22				
		[] 16mm	12						
		20mm	12						
		25mm	10						
		() 30mm	6 .		-				

Thread Size	Length (L)	Head Diameter (D)	Material	Finish
🗌 M3 (3mm) 🛛 🚺 *	□10mm 🔟 *	6mm 18 *	○ PEEK 28 *	Black 26
M4 (4mm) 21	12mm 12	8mm 21	PPS 27	Brown 55
🗌 M5 (5mm) 🛛 🔼 🔼	16mm 12	9mm20	Reny 26	
🗌 M6 (6mm) 🛛 🔁	20mm 12	□10mm 22		
	25mm 10			
	30mm 6			
	35mm 🚺			
	40mm 2 🗸			





SLOTTED ROUND HEAD SCREWS



APPLICATIONS

A combination slotted/hex head cap is often used for **self-tapping screws for metal**, where the hex head enables greater torque during the initial self-tapping installation, while allowing the convenience of a slotted screwdriver to be used for removal and reinsertion.

Slotted Round Head Screws

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
1/4-20	48 ^	1 inch	42 ^	0.26 inch	46	🗌 Nylon	25 *	Matte Black	196 *
1/4-28	48	1.1/2 inch	30	0.59 inch	45	🗌 Stainless Steel (A2)	556	🗌 Natural	221
2-56	34	1.1/4 inch	32	0.162 inch	34			Thread Locking	164
2BA	12	1.3/4 inch	24	0.187 inch	34				
3-48	34	1/2 inch	42	0.189 inch	18				
3/8-16	39	[] 1/4 inch	26	0.211 inch	40				
_ 4-40	40	1/8 inch	10	0.236 inch	40				
04BA	14 -	2 inch	24	0.247 inch	14 .				

Slotted Round Head Screws

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
5/16-18	45 🔺	3 inch	18 *	0.309 inch	39 *	🗌 Nylon	25 *	🗌 Matte Black	196
6-32	46	() 3.1/2 inch	3	0.314 inch	12	🗍 Stainless Steel (A2)	556	🗌 Natural	221
6BA	18	3/4 inch	42	0.359 inch	99			Thread Locking	164
<u>8-32</u>	39	() 3/8 inch	39	0.472 inch	96				
10-24	51	() 3/16 inch	12	0.708 inch	39				
] 10-32	48	1 4 inch	3		7				
M3 (3mm)	7	 ∏4mm			6				
_) M4 (4mm)	6	5/8 inch	42 🗸	9mm	4 .		w		

Slotted Round Head Screws

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
GBA	18 *	9/16 inch	15 *	0.314 inch	12 *	🗍 Nylon	25 *	Matte Black	196
8-32	39	[] 10mm	6	0.359 inch	99	Stainless Steel (A2)	556	🗌 Natural	221
10-24	51	[] 12mm	2	0.472 inch	96			Thread Locking	164
10-32	48	[] 16mm	4	0.708 inch	39				
🗌 M3 (3mm)	7	20mm	4	5.5mm	7				
M4 (4mm)	6	22mm	0_	7mm	6				
🗌 M5 (5mm)	4	25mm	2	9mm	4				
M6 (6mm)	8.	30mm		[] 10mm	8		~		

Slotted Round Head Screws

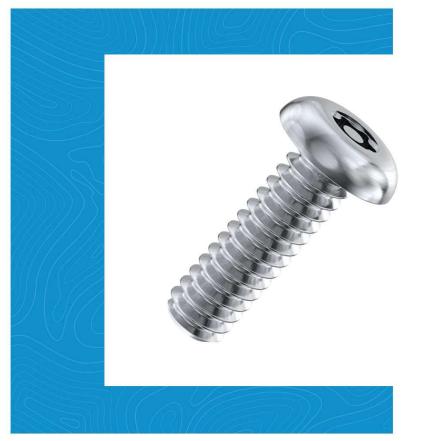
Thread Size (T)	Length (L)		Head Diameter (K)		Material		Finish	
6BA [18	6mm	2 *	0.314 inch	12 *	🗌 Nylon	25 *	🗍 Matte Black	196
8-32 39	6.5mm	0	0.359 inch	99	🗌 Stainless Steel (A2)	556	🗌 Natural	221
10-24 51	7/8 inch	40	0.472 inch	96			Thread Locking	164
10-32 48	7/16 inch	33	0.708 inch	39				
🗌 M3 (3mm) 🛛 🛛 🔽	0 8mm	3	5.5mm	7				
🗌 M4 (4mm) 🛛 🚺 🚺	9/16 inch	15	7mm	6				
🗌 M5 (5mm) 🛛 🔼 🐴	10mm	4	9mm	4				
🗍 M6 (6mm) 🛛 🖪	12mm	2 -	()10mm	8 -		~		





IMPERIAL SECURITY TORX

BUTTON HEAD SCREWS



APPLICATIONS

Torx screws are commonly found on automobiles, motorcycles, bicycle brake systems (disc brakes), hard disk drives, computer systems and consumer electronics.

Thread Size (T)		Length (L)		Security Torx D	rive Size	Material		Finish	
1/4-20	21 *	1 inch	21 📤	_ тв	9 *	Stainless Steel (A2)	135 🔶	🗌 Matte Black	45
3/8-16	12	1.1/2 inch	15	☐ T10	15			🗌 Natural	45
4-40	9	1.1/4 inch	18	☐ T15	21			Thread Locking	45
5/16-18	12	1/2 inch	18	T25	45				
6-32	15	1/4 inch	12	☐ T27	21				
8-32	21	2 inch	3	T40	12				
10-24	24	3/4 inch	21	☐ T45	12				
10-32	21	3/8 inch	15 🗸						

Imperial Security Torx Button Head Screws

Imperial Security Torx Button Head Screws

Thread Size (T)		Length (L)		Security Torx Drive Size		Material		Finish	
1/4-20	21 *	1.1/2 inch	15 *	☐ T8	9 *	Stainless Steel (A2)	135 ^	🗌 Matte Black	45
3/8-16	12	1.1/4 inch	18	0110	15			🗌 Natural	45
4-40	9	1/2 inch	18	T15	21			Thread Locking	45
5/16-18	12	1/4 inch	12	☐ T25	45				
6-32	15	2 inch	3	☐ T27	21				
8-32	21	3/4 inch	21	☐ T40	12				
10-24	24	3/8 inch	15	T45	12				
10-32	21	5/8 inch	12 🗸						





SLOTTED PAN HEAD

SHOULDER SCREWS



APPLICATIONS

Shoulder screws are meant to hold objects together and in a particular position. However, these screws are designed for use in parts which requires a mounting pin, joint, shaft, dowel, pivot, or sliding motion. A shoulder screw is a mechanical fastener that screws into one part and provides a freely rotating pin joint connection to another part. A shoulder screw is also called a shoulder bolt.

Thread Size (T)		Shoulder Diamet	er (d)	Shoulder Length	(L)	Material		Finish	
🗌 M2 (2mm)	18 *	2.8mm	18 *	[] 1mm	6	🗌 Stainless Steel (A1)	185 *	🗌 Matte Black	66
M2.5 (2.5mm)	21	3.5mm	21	2mm	10			🗌 Natural	66
🗌 M3 (3mm)	26	4mm	26	2.5mm	6			Thread Locking	53
🗌 M4 (4mm)	29	🗍 5.5mm	29	3mm	14				
🗌 M5 (5mm)	24	7mm	24	() 4mm	17				
🗌 M6 (6mm)	28	08mm	28	5mm	21				
🗌 M8 (8mm)	30	() 10mm	30	6mm	21				
() M10 (10mm)	9.	() 13mm	9	()8mm	18 🗸				

Slotted Pan Head Shoulder Screws

Slotted Pan Head Shoulder Screws

Thread Size (T)		Shoulder Diamete	r (d)	Shoulder Length (L)		Material		Finish	
🗌 M2 (2mm)	18 *	2.8mm	18 ^	6mm	21 *	🗌 Stainless Steel (A1)	185 *	Matte Black	66
🗌 M2.5 (2.5mm)	21	3.5mm	21	08mm	18			🗌 Natural	66
🗌 M3 (3mm)	26	□ 4 <mark>m</mark> m	26	0 10mm	18			Thread Locking	53
🗌 M4 (4mm)	29	(_) 5.5mm	29	12mm	18				
🗌 M5 (5mm)	24	07mm	24	16mm	18				
🗌 M6 (6mm)	28	8mm	28	20mm	9				
🗌 M8 (8mm)	30	[] 10mm	30	25mm	6				
() M10 (10mm)	9.	() 13mm	9 .	30mm	3 -		2		





TORX PAN HEAD THREAD ROLLING SCREWS



APPLICATIONS

Thread rolling screws are **designed for** reliable and secure fastening into materials such as plastic. They have a trilobular lobed cross-section, and form threads in pre-existing holes by pushing material outward during installation.

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
M2.5 (2.5mm)	12 *	4mm	2 📫	☐ T8	12 *	Stainless Steel (A2)	72 *	🗌 Matte Black	36
🗌 M3 (3mm)	14	_ 5mm	6	☐ T10	14			Natural	36
🗌 M4 (4mm)	16	🗍 6mm	6	T20	16				
() M5 (5mm)	16	🗌 8mm	10	T25	16				
M6 (6mm)	14	[] 10mm	10	☐ T30	14				
		[] 12mm	10						
		14mm	2						
		16mm	8						

Torx Pan Head Thread Rolling Screws - Stainless Steel (A2)

Torx Pan Head Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
M2.5 (2.5mm)	12 *	8mm	10 *	□т8	12 *	Stainless Steel (A2)	72 *	🗌 Matte Black	36
🗌 M3 (3mm)	14	010mm	10	☐ T10	14			🗌 Natural	36
M4 (4mm)	16	12mm	10	☐ T20	16				
🗌 M5 (5mm)	16	14mm	2	T25	16				
🗌 M6 (6mm)	14	16mm	8	☐ T30	14				
		20mm	8						
		25mm	6						
	-	30mm	6 🚽		~		*		



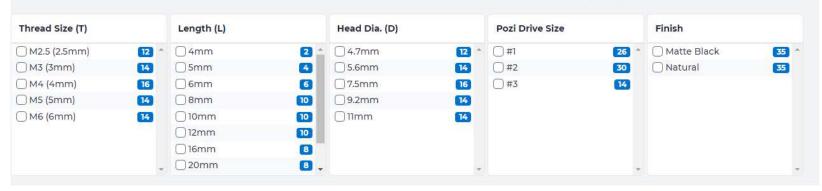


POZI COUNTERSUNK THREAD ROLLING SCREWS



APPLICATIONS

Screw threads have several applications: Fastening: Fasteners such as wood screws, plastic screws, machine screws, nuts, and bolts. Connecting threaded pipes and hoses to each other and to caps and fixtures.



Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Head Dia. (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	0 6mm	6 *	4.7mm	12 *	() #1	26 *	🗌 Matte Black	35
🗍 M3 (3mm)	14	0 8mm	10	5.6mm	14	# 2	30	🗌 Natural	35
M4 (4mm)	16	10mm	10	7.5mm	16	#3	14		
M5 (5mm)	14	[] 12mm	10	9.2mm	14				
M6 (6mm)	14	[] 16mm	8	[] llmm	14				
		20mm	8						
		25mm	6						
		30mm	6 -				-		





TORX CAP SCREWS



APPLICATIONS

Torx screws are typically used in vehicles, motorcycles, bicycles, computer systems, hard disk drives and consumer electronics. The unusual star-shaped head makes them far more secure than regular flathead or cross-head screws and **allows higher torque transmission so screws and bolts can be tightened more securely**

Thread Size (T)		Length (L)		Fully Threaded		Material	Finish	
🗌 M2 (2mm)	44 *	3mm	8	□ No	344 ^	Marine Stainless Steel	Matte Black	312
M2.5 (2.5mm)	62	4mm	12	🗌 Yes	564	(A4)	🗌 Natural	312
🗌 M3 (3mm)	88	🗍 5mm	22			Stainless Steel (A2) 454	Thread Locking	284
🗌 M4 (4mm)	150	6mm	34					
🗌 M5 (5mm)	144	🗋 8mm	34					
🗌 M6 (6mm)	138	0 10mm	34					
🗌 M8 (8mm)	138	[] 12mm	34					
M10 (10mm)	144	14mm	34 -					





Thread Size (T)		Length (L)		Fully Threaded		Material	Finish	
🗌 M2 (2mm)	44 *	45mm	60 *	□ No	344 ^	Marine Stainless Steel	🗌 Matte Black	312
🗌 M2.5 (2.5mm)	62	50mm	60	🗌 Yes	564	(A4)	🗌 Natural	312
🗌 M3 (3mm)	88	55mm	60			Stainless Steel (A2) 454	Thread Locking	284
🗌 M4 (4mm)	150	00mm	60					
🗌 M5 (5mm)	144	065mm	24					
🗌 M6 (6mm)	138	70mm	24					
🗌 M8 (8mm)	138	080mm	24					
M10 (10mm)	144	90mm	12 🗸					

Thread Size (T)		Length (L)		Fully Threaded		Material	Finish	
🗌 M2 (2mm)	44 ^	50mm	60 ^	□ No	344 *	Marine Stainless Steel	Matte Black	312
M2.5 (2.5mm)	62	55mm	60	🗌 Yes	564	(A4)	🗌 Natural	312
M3 (3mm)	88	0 60mm	60			Stainless Steel (A2) 454	Thread Locking	284
🗌 M4 (4mm)	150	65mm	24					
🗌 M5 (5mm)	144	70mm	24					
🗌 M6 (6mm)	138	080mm	24					
M8 (8mm)	138	90mm	12					
M10 (10mm)	144	() 100mm	12 🗸					





IMPERIAL BINDING PAN HEAD SCREWS



APPLICATIONS

Pan head screws are often used **to secure metal** components, such as machinery and automotive parts and accessories, such as license plates and head lights. Pan head screws are a common head type of non-countersunk screw head used **to** secure and fasten insulation. They have wide heads, a flat bearing surface, and a flat or slightly domed top surface with a recessed socket.

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
1/4-20	(48) ^	1 inch	36 📤	0.068 inch	3 _	Stainless Steel (A2)	489 🔶	Matte Black	166
1/4-28	(48)	🗍 1.1/2 inch	30	0.078 inch				🗌 Natural	166
2-56	34	🗌 1.1/4 inch	30	0.165 inch	57			Thread Locking	157
3-48	34	1.3/4 inch	24	0.209 inch	45				
3/8-16	39	1/2 inch	36	0.253 inch	39				
4-40	40	1/4 inch	24	() 4.6mm	34				
5-40	40] 1/8 inch	8	5.28mm	34				
5/16-18	45	2 inch	24	5.97mm	377 🗸				

Imperial Binding Pan Head Screws

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
3/8-16	39 *	2.1/2 inch	12 *	4.6mm	34 *	Stainless Steel (A2)	489 *	🗌 Matte Black	166
4-40	40	2.1/4 inch	9	5.28mm	34			🗌 Natural	166
5-40	40	2.3/4 inch	9	🗍 5.97mm	37			Thread Locking	157
5/16-18	45	3 inch	12	() 6.68mm	32				
6-32	44	3.1/2 inch	3	07.37mm	[44]				
8-32	39	3/4 inch	36	0 8.74mm	39				
10-24	39	3/8 inch	33	🗌 10.13mm	78				
10-32	39 🚽	3/16 inch	10 +	()13.34mm	39 🗸				

Imperial Binding Pan Head Screws

Thread Size (T)		Length (L)		Head Diameter (K)		Material		Finish	
3/8-16	39 *	3/8 inch	33 *	4.6mm	34 *	Stainless Steel (A2)	489 *	Matte Black	166
4-40	(40)	3/16 inch	10	5.28mm	34			🗌 Natural	166
5-40	(40)	4 inch	3	5.97mm	37			Thread Locking	157
5/16-18	(45)	5/8 inch	36	() 6.68mm	32				
6-32	44	5/16 inch	30	7.37mm	[44]				
8-32	39	7/8 inch	36	0 8.74mm	39				
10-24	39	7/16 inch	33	010.13mm	78				
10-32	39 🗸	() 9/16 inch	15 -	() 13.34mm	39 🖵				



METRIC SOCKET CAP HEAD SEALING SCREWS



APPLICATIONS

They are **used in military applications, to build and secure medical equipment and even in marine hulls**. They are also used in valves, electronic devices & panels, fuel tanks, food processing equipment, consumer products and more. The Socket Cap Seal Screw is safe, high quality and reliable.

Thread Size		Thread Length		O-Ring Material		Material		Finish	
🗌 M2 (2mm)	56 ^	4mm	24 -	🗍 Buna	118 *	🗍 Stainless Steel (A2)	472 *	🗍 Natural	236
M2.5 (2.5mm)	56	🗍 6mm	32	Fluorosilicone	118			Thread Locking	236
🗌 M3 (3mm)	72	8mm	32	🗌 Silicone	118				
🗌 M4 (4mm)	72	🗌 10mm	56	🗌 Viton	118				
🗍 M5 (5mm)	56	12mm	56						
🗌 M6 (6mm)	56	14mm	(40)						
🗌 M8 (8mm)	56	🗌 16mm	72						
M10 (10mm)	24	() 18mm	32 +				~		

Metric Socket Cap Head Sealing Screws

Metric Socket Cap Head Sealing Screws

Thread Size		Thread Length		O-Ring Material		Material		Finish	
M2.5 (2.5mm)	56 *	3 8mm	32 *	🗍 Buna	118 *	🗍 Stainless Steel (A2)	472 *	🗌 Natural	236
🗌 M3 (3mm)	72	[] 10mm	56	Fluorosilicone	TI8			Thread Locking	236
🗌 M4 (4mm)	72	() 12mm	56	🗌 Silicone	118				
🗌 M5 (5mm)	56	🗌 14mm	(40)	Viton	TIB				
🗌 M6 (6mm)	56	🗌 16mm	72						
M8 (8mm)	56	() 18mm	32						
🗌 M10 (10mm)	24	20mm	72						
(M12 (12mm)	24	25mm	56 🗸						





METRIC SLOTTED MUSHROOM SCREWS



APPLICATIONS

Mushroom Head Screws are wide headed, lower profile screws with a traditional slot drive. They are used for **bolting softer materials** and are usually manufactured with a full thread. Their mushroom head is larger in diameter to create a larger bearing surface.

Metric Slotted Mushroom Screws

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
🗌 M3 (3mm)	39 *	🗍 5mm	3 -	06.9mm	39 *	🗌 Nylon	47 *	🗌 Matte Black	89
🗌 M4 (4mm)	51	🗍 6mm	10	9mm	9	Stainless Steel (A2)	222	🗌 Natural	106
🗌 M5 (5mm)	63	06.5mm	0	🗌 10mm	42			Thread Locking	74
🗌 M6 (6mm)	66	08mm	15	🗌 11mm	12				
🗌 M8 (8mm)	50	[] 10mm	18	12.5mm	51				
		[] 12mm	18	[] 14mm	18				
		[] 16mm	23	15mm	48				
	_	() 20mm	23	()20mm	50		-		

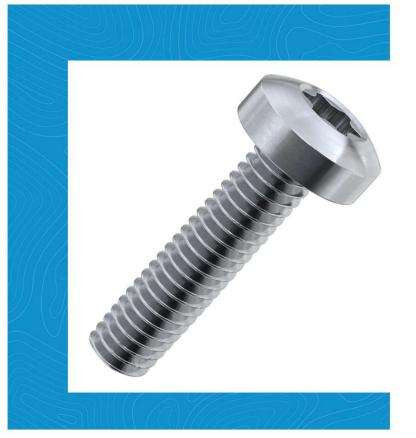
Metric Slotted Mushroom Screws

Thread Size (T)		Length (L)	Head Diameter (D)	Material	Finish
🗌 M3 (3mm)	39 ^	20mm3	▲ [] 6.9mm 39	• 🗍 Nylon 🛛 🐴 •	Matte Black 89
🗌 M4 (4mm)	51	22mm 1	9mm9	Stainless Steel (A2)	Natural 106
🗌 M5 (5mm)	63	25mm 18	[] 10mm 42		Thread Locking 74
🗌 M6 (6mm)	66	30mm 21	🗌 11mm 🛛 📭		
🗌 M8 (8mm)	50	35mm 16	[] 12.5mm [5]		
		040mm 18	14mm 18		
		45mm 15	15mm [48]		
	*	50mm 16	20mm 50	*	

Thread Size (T)		Length (L)		Head Diameter (D)	Material		Finish	
M3 (3mm)	39 *	40mm	18 *	6.9mm	39 *	Nylon	47 *	Matte Black	89
🗌 M4 (4 m m)	51	45mm	15	9mm	9	Stainless Steel (A2)	222	🗌 Natural	106
🗌 M5 (5mm)	63	50mm	16	[] 10mm	42			Thread Locking	74
🗌 M6 (6mm)	66	060mm	13	□ 11mm	12				
M8 (8mm)	50	70mm	12	12.5mm	51				
		080mm	10	14mm	18				
		90mm	9	15mm	48				
	-	100mm	9 .	20mm	50		-		



TORX PAN HEAD THREAD ROLLING SCREWS – STAINLESS STEEL (A2)



APPLICATIONS

Thread rolling screws are **designed for**

reliable and secure fastening into materials

such as plastic. They have a tri-lobular lobed

cross-section, and form threads in pre-

existing holes by pushing material outward

during installation.



Torx Pan Head Thread Rolling Screws - Stainless Steel (A2)

Torx Pan Head Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
M2.5 (2.5mm)	12 *	0 8mm	10 *	Птв	12 *	Stainless Steel (A2)	72 *	🗌 Matte Black	36
🗌 M3 (3mm)	14	10mm	10	☐ T10	14			🗌 Natural	36
M4 (4mm)	16	12mm	10	☐ T20	16				
🗌 M5 (5mm)	16	14mm	2	T25	16				
	14	16mm	8	☐ T30	14				
		20mm	8						
		25mm	6						
	~	30mm	6 🗸		~		*		



VENTED SOCKET CAP HEAD SCREWS



APPLICATIONS

A vented screw features a hollow core (has a hole drilled through it) and are specially designed to **allow the release of gases**, **contaminants, and pressure through the fastener**. Vented Screws are widely used within vacuum systems and enable faster, more efficient pump-down of HV, UHV, and EUV systems.

Thread Size		Length (L)		Head Diameter (D)		Material	Finish	
🗌 M2 (2mm)	2 -	4mm	2 📤	3.8mm	7 _	🗌 Marine Stainless Steel (A4) [2] *	🗌 Natural	85
🗌 M2.5 (2.5mm)	8	🗍 5mm	6	() 4.5mm	8	Stainless Steel (A2)	Thread Locking	57
🗌 M3 (3mm)	12	🗍 6mm	8	5.5mm	12			
🗌 M4 (4mm)	20	0 8mm	10	0 7mm	20			
🗌 M5 (5mm)	20	🗍 10mm	10	🗍 8.5mm	20			
🗌 M6 (6mm)	24	() 12mm	14	🗍 10mm	24			
🗌 M8 (8mm)	20	0 16mm	14	🗌 13mm	20			
() M10 (10mm)	18	20mm		16mm	18 🗸			

Vented Socket Cap Head Screws

Vented Socket Cap Head Screws

Thread Size		Length (L)		Head Diameter (D)		Material		Finish		
🗌 M3 (3mm)	12 *	20mm	10 *	5.5mm	12 *	🗌 Marine Stainless Steel (A4)	2 *	🗌 Natural	85 *	
M4 (4mm)	20	25mm		0 7mm	20	Stainless Steel (A2)	•	Thread Locking	57	
🗌 M5 (5mm)	20	🗍 30mm	12	🗌 8.5mm	20					
🗌 M6 (6mm)	24	🗍 35mm	12	[] 10mm	24					
M8 (8mm)	20	(40mm	10	🗌 13mm	20					
🗌 M10 (10mm)	18	45mm	8	[] 16mm	18					
M12 (12mm)	6	50mm	8	18mm	6					
M16 (16mm)	7 🗸	60mm	6 🗸	24mm	7 -		-		-	





SERRATED SOCKET CAP HEAD SCREWS



APPLICATIONS

Socket head cap screws are widely used in industrial production and assembly lines, including in the automotive sector, machine tooling applications and steel fabrication. Socket head cap screws are typically used in machine parts, die fixturing, and clamping. Socket head cap screws are ideal for applications in which there is not enough space to maneuver wrenches or sockets.

Thread Size	Length (L)		Head Diameter (D)		Material		Finish	
🗌 M8 (8mm) 🛛 🛛 🔁	 12mm 14mm 16mm 20mm 22mm 25mm 28mm 30mm 	2 2 2 2 2 2 2 2 2 2 2 2 2 2	☐ 13mm	28 *	C Stainless Steel (A2)	28	Matte Black Natural	14

Serrated Socket Cap Head Screws

Thread Size		Length (L)		Head Diameter (D)		Material		Finish	
M8 (8mm)	28 *	28mm	2 *	[] 13mm	28 *	🗌 Stainless Steel (A2)	28 *	🗌 Matte Black	14
		30mm	2					🗌 Natural	14
		35mm	2						
		() 40mm	2						
		🗌 45mm	2						
		🗍 50mm	2						
		🗍 55mm	2						
		() 60mm	2 -		-		·**.		





FLANGED HEXAGON BOLTS



APPLICATIONS

Hexagon flanged bolts are mainly use in **automotive/plumbing applications**. Hex Flange Bolts are **typically used for automotive and construction applications**. The flange directly underneath the hexagon-shaped head is designed to distribute the load and help protect the surface beneath and eliminates the potential need for a washer head

Flanged Hexagon Bolts

Thread Size (T)		Length (L)		Flange Diameter (D)		Material	Finish	
🗌 M5 (5mm)	66 *	0 8mm	6	[] 11.8mm	66 🔶	Marine Stainless Steel	* 🗌 Matte Black	102
🗌 M6 (6mm)	72	010mm	12	14.2mm	72	(A4)	Natural	102
🗌 M8 (8mm)	78	[] 12mm	18	[] 18mm	78	Stainless Steel (A2)	Thread Locking	102
🗌 M10 (10mm)	90	16mm	24	22.3mm	90			
		20mm	24					
		25mm	24					
		30mm	24					
	_	35mm	24					

Flanged Hexagon Bolts

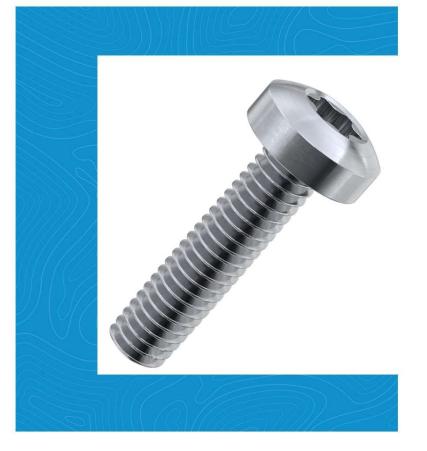
Thread Size (T)		Length (L)		Flange Diameter (D)	Material	Finish	
🗌 M5 (5mm)	66 ^	40mm	24 *	[] 11.8mm	66 *	Marine Stainless Steel	🗌 Matte Black	102
🗌 M6 (6mm)	72	45mm	24	14.2mm	72	(A4)	🗌 Natural	102
M8 (8mm)	78	50mm	24	[] 18mm	78	Stainless Steel (A2) 153	Thread Locking	102
] M10 (10mm)	90	55mm	18	22.3mm	90			
		060mm	18					
		65mm	6					
		70mm	12					
	~	080mm	12 🗸					

Flanged Hexagon Bolts

Thread Size (T)		Length (L)		Flange Diameter (D)		Material	Finish	
M5 (5mm)	66 *	50mm	24 *	[] 11.8mm	66 *	Marine Stainless Steel	Matte Black	102
🗌 M6 (6mm)	72	55mm	18	14.2mm	72	(A4)	🗌 Natural	102
🗌 M8 (8mm)	78	0 60mm	18	() 18mm	78	Stainless Steel (A2) 153	Thread Locking	102
🗌 M10 (10mm)	90	0 65mm	6	22.3mm	90			
		🗍 70mm	12					
		080mm	12					
		90mm	6					
		() 100mm	6 -		-			



POZI PAN HEAD THREAD ROLLING SCREWS – STAINLESS STEEL (A2)



APPLICATIONS

Thread rolling screws are **designed for reliable and secure fastening into materials such as plastic**. They have a tri-lobular lobed cross-section, and form threads in pre-existing holes by pushing material outward during installation.

Thread Size (T)		Length (L)		Head Diameter (D)	Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	_ 4mm	2 *	5mm	12 *	() #1	26 *	🗌 Matte Black	35
🗌 M3 (3mm)	14	5mm	6	6mm	14	# 2	30	🗌 Natural	35
🗌 M4 (4mm)	16	6mm	6	🗌 8mm	16	#3	14		
🗌 M5 (5mm)	14	🗌 8mm	10	[] 10mm	14				
() M6 (6mm)	14	[] 10mm	10	12mm	14				
		☐ 12mm	10						
		[] 16mm	8						
		20mm	8		100				

Pozi Pan Head Thread Rolling Screws - Stainless Steel (A2)

Pozi Pan Head Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Head Diameter (Head Diameter (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	6mm	6	_ 5mm	12 *	#1	26 *	Matte Black	35	
🗌 <mark>M3 (</mark> 3mm)	14	0 8mm	10	6mm	14	#2	30	🗌 Natural	35	
🗌 M4 (4mm)	16	[] 10mm	10	🗌 8mm	16	☐ #3	14			
🗌 M5 (5mm)	14	12mm	10	[] 10mm	14					
🗌 M6 (6mm)	14	[] 16mm	8	[] 12mm	14					
		20mm	8							
		25mm	6							
		30mm	6 🗸							





POZI COUNTERSUNK THREAD ROLLING SCREWS – STAINLESS STEEL (A2)



APPLICATIONS

Screw threads have several applications: Fastening: Fasteners such as wood screws, plastic screws, machine screws, nuts, and bolts. Connecting threaded pipes and hoses to each other and to caps and fixtures.

Thread Size (T)		Length (L)		Head Dia. (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	_ 4mm	2 📤	4.7mm	12 *	#1	26 🔶	🗌 Matte Black	35
🗌 M3 (3mm)	14	5mm	4	5.6mm	14	# 2	30	🗌 Natural	35
M4 (4mm)	16	6mm	6	7.5mm	16	#3	14		
M5 (5mm)	14	8mm	10	9.2mm	14				
M6 (6mm)	14	10mm	10	[] llmm	14				
		() 12mm	10						
		16mm	8						
	~	20mm	8						

Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Pozi Countersunk Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Head Dia. (D)		Pozi Drive Size		Finish	
🗌 M2.5 (2.5mm)	12 *	6mm	6 *	4.7mm	12 *	#1	26 🔶	🗌 Matte Black	35
🗍 M3 (3mm)	14	8mm	10	5.6mm	14	#2	30	🗌 Natural	35
M4 (4mm)	16	[] 10mm	10	7.5mm	16	#3	14		
M5 (5mm)	14	12mm	10	9.2mm	14				
🗌 M6 (6mm)	14	[] 16mm	8	🗌 11mm	14				
		20mm	8						
		25mm	6						
	~	30mm	6 🗸				*		





TORX COUNTERSUNK THREAD ROLLING SCREWS



APPLICATIONS

Thread rolling screws are **designed for** reliable and secure fastening into materials such as plastic. They have a trilobular lobed cross-section, and form threads in pre-existing holes by pushing material outward during installation.

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
M2.5 (2.5mm)	12 *	4mm	2 -	☐ T8	12 ^	Stainless Steel (A2)	70 ^	Matte Black	35
🗌 M3 (3mm)	14	5mm	2	011	14			🗌 Natural	35
🗌 M4 (4mm)	16	🗍 6mm	6	☐ T20	16				
🗌 M5 (5mm)	14	🗌 8mm	10	☐ T25	14				
🗌 M6 (6mm)	14	[] 10mm	10	☐ T30	14				
		12mm	10						
		() 16mm	8						
		20mm	8						

Torx Countersunk Thread Rolling Screws - Stainless Steel (A2)

Torx Countersunk Thread Rolling Screws - Stainless Steel (A2)

Thread Size (T)		Length (L)		Torx Drive Size		Material		Finish	
🗌 M2.5 (2.5mm)	12 ^	🗍 6mm	6 *	□т8	12 *	Stainless Steel (A2)	70 -	🗌 Matte Black	35
🗌 M3 (3mm)	14	0 8mm	10	☐ T10	14			🗌 Natural	35
🗌 M4 (4mm)	16	010mm	10	☐ T20	16				
🗌 M5 (5mm)	14	12mm	10	T25	14				
🗌 M6 (6mm)	14	16mm	8	☐ T30	14				
		20mm	8						
		25mm	8						
		() 30mm	6 🗸		~				





METRIC PHILLIPS COUNTERSUNK SEALING SCREWS



APPLICATIONS

This prevents contaminates such as air, water or micro particle materials from entering and degrading or corroding the product that they are fastened to. They are a proven product that is used in many high grade military applications where conditions are strict and requirements are usually very specific.

Thread Size		Thread Length (L)		O-Ring Material		Material		Finish	
M3 (3mm)	30 *	5mm	6 -	Buna	48 *	Stainless Steel (A2)	144 ^	🗌 Natural	72
M4 (4mm)	30	🗍 6mm	12	🗌 Fluorosilicone	48			Thread Locking	72
_) M5 (5mm)	30	🗌 8mm	18	Viton	48				
_) M6 (6mm)	30	[] 10mm	18						
] M8 (8mm)	24	🗌 12mm	24						
		🗌 16mm	24						
		20mm	18						
	_	25mm	12 -						

Metric Phillips Countersunk Sealing Screws

Metric Phillips Countersunk Sealing Screws

Thread Size		Thread Length (L)		O-Ring Material		Material		Finish	
🗌 M3 (3mm)	30 *	0 6mm	12 *	Buna	48 *	Stainless Steel (A2)	144	🗌 Natural	72
🗌 M4 (4mm)	30	0 8mm	18	Fluorosilicone	48			Thread Locking	72
🗌 M5 (5mm)	30	[] 10mm	18	Viton	48				
🗌 M6 (6mm)	30	12mm	24						
🗌 M8 (8mm)	24	[] 16mm	24						
		20mm	18						
		25mm	12						
	-	30mm	12 🗸				-		





SECURITY 2 HOLE/SNAKE EYE PAN HEAD SCREWS



APPLICATIONS

These versatile security screws are ideal for a wide range of applications and are often used to secure glass panels and sign-age in place in both indoor and outdoor locations.

Security 2Hole / Snake Eye Pan Head Screws

Thread Size (T)	Thread Length (E)	Drive Size	Material	Finish
🗌 M3 (3mm) 🦳 🧐	6mm 3		🗌 Stainless Steel (A2) 🛛 🔭 👗	Matte Black 24
🗌 M4 (4mm) 🛛 🚹 📵	🗌 8mm 🛛 🛐	TH5 18		🗋 Natural 🛛 🔁 🔼
🗌 M5 (5mm) 🛛 🚹 🔢	[] 10mm [6]	□тн6 🚯		Thread Locking
M6 (6mm) 27	12mm 12	_ тнв 27		
	□ 16mm 12			
	20mm			
	25mm9			
	. 🗋 30mm 🚺 🧃			

Security 2Hole / Snake Eye Pan Head Screws

Thread Size (T)		Thread Length (E)		Drive Size		Material		Finish	
🗌 M3 (3mm)	9 ^	16mm	12 *	тнз	9 *	Stainless Steel (A2)	72 *	Matte Black	24
🗌 M4 (4mm)	18	20mm	9	TH5	18			🗌 Natural	24
🗌 M5 (5mm)	18	25mm	9	□ тн6	18			Thread Locking	24
🗌 M6 (6mm)	27	30mm	6	□ тн8	27				
		35mm	3						
		40mm	3						
		45mm	3						
		() 50mm	3 -						





POZI COUNTERSUNK WOOD SCREWS



APPLICATIONS

Components within this range are commonly used for fastening two pieces of wood together. Pozi Countersunk Wood Screws are designed with a partially threaded shaft, which allows them to hold a panel (such as a floorboard) to a piece of structural timber. Wood Screws also have a coarse thread, specially designed for use in joinery and wooden assemblies.

Pozi Countersunk Wood Screws

Thread Size (T)		Length (L)		Head Diameter ()	Material		Finish	
🗌 No.4 (3mm)	10 *	12mm	(4) _	5.6mm	10 🔶	Stainless Steel (A2)	124 *	🗌 Matte Black	62
🗌 No.6 (3.5mm)	16	16mm	6	06.5mm	16			🗌 Natural	62
🗌 No.8 (4mm)	20	20mm	10	7.5mm	20				
🗌 No.9 (4.5mm)	20	25mm	12	08.3mm	20				
🗌 No.10 (5mm)	28	30mm	12	9.2mm	28				
🗌 No.14 (6mm)	30	35mm	10	[] 11mm	30				
		40mm	10						
	~	45mm	8.		*				





METRIC ULTRA LOW HEAD

SOCKET SHOULDER SCREWS



APPLICATIONS

What are shoulder screws used for?

Much like all other screws, shoulder

screws are meant to hold objects

together and in a particular position.

However, these screws are designed for use in parts which requires a mounting pin, joint, shaft, dowel, pivot, or sliding motion.



Metric Ultra Low Head Socket Shoulder Screws

Thread Size (T)		Shoulder Diameter (d)	Shoulder Length (L)		Material	Finish	
🗌 M3 (3mm)	14 *	4mm	14 ^	4mm	6 *	Marine Stainless Steel 54 *	🗌 Matte Black	27 ^
🗌 M4 (4mm)	23	5mm	23	5mm	9	(A4)	🗌 Natural	27
M5 (5mm)	23	6mm	23	0 6mm	12	Thread Locking Marine 24 Stainless Steel (A4)	Thread Locking	24
🗌 M6 (6mm)	18	🗌 8mm	18	08mm	12	Stamess Steer (AH)		
				[] 10mm	12			
				[] 12mm	9			
				16mm	9			
				20mm	9.			





IMPERIAL TORX PAN HEAD SEALING SCREWS



APPLICATIONS

A variety of sealing screws, which are **designed to seal out contaminants and prevent leaks**. Sealing fasteners are made of corrosionresistant metals, such as stainless steel and steel alloys, titanium, or Brass and Monel. This means they can easily be cleaned and are impervious to alcohol and other disinfectants.



Imperial Torx Pan Head Screws

Thread Size (T)	Thread Length (L)	Torx Size	Material	Finish
1/4-20	1 inch 21 *	☐ T10	Stainless Steel (A2)	Matte Black 36
3/8-16	1.1/2 inch	☐ T15		Natural 36
4-40	1.1/4 inch	T20		Thread Locking 36
5/16-18	1/2 inch 18	T25 30		
6-32 15	1/4 inch 9	T30		
8-32 15	3/4 inch 21	T40 9		
10-24 15	3/8 inch 9	T45		
10-32	5/16 inch 3 -	· · · · · · · · · · · · · · · · · · ·	×	





CROSS-SLOTTED MUSHROOM HEAD SCREWS



APPLICATIONS

Mushroom Head Screws are wide headed, lower profile screws with a traditional slot drive. They are used for **bolting softer materials** and are usually manufactured with a full thread. These heads, which have a slight circular shape where the slots cross, **provide a larger mating surface between the screw and the screwdriver.**

Cross-Slotted Mushroom Head Screws

Thread Size (T)		Thread Length (L)		Head Diameter (D)		Material		Finish	
🗌 M4 (4mm) 🚺	6	08mm	12 🔺	[] 10mm	66 ^	Marine Stainless Steel (A4)	204 ^	Matte Black	140
□ M5 (5mm) 78	8	0 10 mm	20	12.5mm	78	Nylon	8	🗌 Natural	140
M6 (6mm)90	0	12mm	24	🗌 15mm	90	Stainless Steel (A2)	204	Thread Locking	136
□ M8 (8mm) 97	2	16mm	30	20mm	92				
M10 (10mm)90	0	20mm	32	25mm	90				
		25mm	32						
		30mm	32						
	*	35mm	30 🗸		w.		-		

Cross-Slotted Mushroom Head Screws

Thread Size (T)	Thread Length (L)	Head Diameter (D)		Material		Finish	
M4 (4mm) 66 ^	40mm 30	• [] 10mm	66 ^	Marine Stainless Steel (A4)	204 ^	Matte Black	140
M5 (5mm) 78	45mm 30	12.5mm	78	Nylon	8	🗌 Natural	140
M6 (6mm) 90	50mm 30	15mm	90	Stainless Steel (A2)	204	Thread Locking	136
M8 (8mm) 92	55mm 24	20mm	92				
M10 (10mm) 90	60mm 24	25mm	90				
	65mm 18						
	070mm 18						
	80mm 18	•	Ψ.		~		

Cross-Slotted Mushroom Head Screws

Thread Size (T)	Thread Length (L)	Head Diameter (D)	Material	Finish
M4 (4mm) 66 ^	50mm 30 *	0 10mm 66	Marine Stainless Steel (A4) 204 ^	Matte Black
M5 (5mm) 78	55mm 24	12.5mm 78	Nylon B	Natural 140
M6 (6mm) 90	60mm 24	15mm 90	Stainless Steel (A2) 204	Thread Locking 136
M8 (8mm) 92	65mm 18	20mm 92		
M10 (10mm) 90	070mm 18	25mm 90		
	80mm 18			
	90mm6			
	0 100mm 6 -		•	





IMPERIAL SLOTTED MUSHROOM SCREWS



APPLICATIONS

Mushroom Head Screws are wide headed, lower profile screws with a traditional slot drive. They are used for **bolting softer materials** and are usually manufactured with a full thread. Their mushroom head is larger in diameter to create a larger bearing surface.

Thread Size (T)		Length (L)		Head Diameter (D)	Material		Finish	
□ 1/4-20	39 *	1 inch	24 -	0.15 inch	27 📤	🗍 Stainless Steel (A2)	276 -	🗌 Matte Black	92 -
1/4-28	39	1.1/2 inch	21	0.128 inch	3			Natural	92
3/8-16	33	1.1/4 inch	21	0.183 inch	18			Thread Locking	92
5/16-18	33	1.3/4 inch	18	0.215 inch	21				
6-32	27	1/2 inch	24	0.321 inch	27				
8-32	33	1/4 inch	12	0.384 inch	33				
10-24	36	2 inch	18	0.448 inch	69				
0 10-32	36 -	2.1/2 inch	12 🗸	0.573 inch	51 +		-		

Features									
Thread Size (T)		Length (L)		Head Diameter (I	0)	Material		Finish	
□ 1/4-20	39 *	2.1/2 inch	12 *	0.183 inch	18 *	Stainless Steel (A2)	276 -	🗍 Matte Black	92 🔺
1/4-28	39	3 inch	12	0.215 inch	21			🗌 Natural	92
3/8-16	33	3/4 inch	24	0.321 inch	27			Thread Locking	92
5/16-18	33	3/8 inch	18	0.384 inch	33				
6-32	27	5/8 inch	24	0.448 inch	69				
8-32	33	5/16 inch	12	0.573 inch	5				
10-24	36	7/8 inch	24	0.698 inch	15				
10-32	36 🗸	7/16 inch	12 🗸	0.823 inch	12 -		-		~





CAPSTAN SCREWS



APPLICATIONS

Applications that the Slotted Capstan Screw can be found in include **meteorology**, the science of **measurement**, or most often within **musical instruments such as pianos**, due to their fine incremental adjustment capabilities

Capstan Screws

Thread Size (T)		Length (L)		Head Diameter ())	Finish		Screw Material	
🗌 M3 (3mm)	23 *	🗌 6mm	6 *	🗍 5.5mm	23 *	🗌 Matte Black	30 ^	🗍 Stainless Steel (A1)	89
🗌 M4 (4mm)	27	0 8mm	9	7mm	27	Natural	30		
🗌 M5 (5mm)	21	010mm	12	08.5mm	21	Thread Locking	29		
M6 (6mm)	18	[] 12mm	12	[] 10mm	18				
		16mm	12						
		20mm	12						
		25mm	9						
	-	() 30mm	9 -		*				





IMPERIAL TORX SHOULDER SCREWS



APPLICATIONS

What are shoulder screws used for? Much like all other screws, shoulder screws are meant **to hold objects together and in a particular position**. However, these screws are designed for use in parts which requires a mounting pin, joint, shaft, dowel, pivot, or sliding motion.



Imperial Torx Shoulder Screws

Imperial Torx Shoulder Screws

Thread Size (T)		Shoulder Diameter (d)		Shoulder Length (L)		Material		Finish	
4-40	12 *	🗍 1/4 inch	18 ^	1/2 inch	6	🗍 Stainless Steel (A2)	48 *	🗌 Matte Black	24
8-32	18	☐ 1/8 inch	12	1/4 inch	6			🗌 Natural	24
10-32	18	🗌 3/16 inch	18	1/8 inch	6				
				3/4 inch	4				
				3/8 inch	6				
				3/16 inch	6				
				5/8 inch	4				
			-	□ 5/16 inch	6 -		<u>_</u>		





FILLISTER SCREWS



APPLICATIONS

Slotted Fillister head machine screws have a large over sized head and are used **to attach metal to metal or metal to wood**. A Fillister head machine screw, sometimes called a cheese head screw, is like a Pan head machine screw but with greater side height.

Fillister Screws

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
0-80	36 📤	1 inch	60 📤	0.14 inch	62 ^	Stainless Steel (A2)	805 ^	Matte Black	277
1-64	31	🗌 1.1/2 inch	39	0.27 inch	46			🗌 Natural	277
1-72	31	🗌 1.1/4 inch	39	0.096 inch	36			Thread Locking	251
1/4-20	45	🗌 1.1/8 inch	4	0.118 inch	62				
1/4-28	45	1.3/4 inch	30	0.161 inch	68				
2-56	31	1/2 inch	60	0.183 inch	74				
2-64	31	🗌 1/4 inch	45	0.205 inch	38				
3-48	37	1/8 inch	18	0.226 inch	88				

Fillister Screws

Thread Size (T)		Length (L)	Head Diameter (D)		Material		Finish	
3-56	31 *	□ 2 inch	30 * 0.183 inch	74 ^	Stainless Steel (A2)	805 *	Matte Black	277
3/8-16	45	The second s	21 0.205 inch	38			🗌 Natural	277
_ 4-40	40	☐ 2.1/4 inch	6 0.226 inch	88			Thread Locking	251
4-48	34	2.3/4 inch	6 0.313 inch	106				
5-40	38	☐ 3 inch	21 0.357 inch	42				
5/16-18	48		12 0.414 inch	90				
6-32	46		60 0.518 inch	48				
6-40	42 +		57 🗸 🗌 0.622 inch	36 🗸		-		



Fillister Screws

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
5-40	38 *	() 3/16 inch	28	0.183 inch	74 *	Stainless Steel (A2)	805 *	🗌 Matte Black	277 *
5/16-18	48	4 inch	12	0.205 inch	38			🗌 Natural	277
6-32	46	() 4.1/2 inch	3	0.226 inch	88			Thread Locking	251
6-40	42	5 inch	6	0.313 inch	106				
8-32	46	() 5/8 inch	60	0.357 inch	42				
10-24	53	5/16 inch	54	0.414 inch	90				
010-32	53	5/32 inch	2	0.518 inch	48				
12-24	42 🗸	☐ 6 inch	3 -	0.622 inch	36 🗸		~		-

Fillister Screws

Thread Size (T)		Length (L)		Head Diameter (D)		Material		Finish	
5-40	38 ^	5 inch	6 *	0.183 inch	74 *	🗍 Stainless Steel (A2)	805 *	🗌 Matte Black	277
5/16-18	48	🗍 5/8 inch	60	0.205 inch	38			🗌 Natural	277
6-32	46	5/16 inch	54	0.226 inch	88			Thread Locking	251
<mark>6-40</mark>	42	5/32 inch	2	0.313 inch	106				
8-32	46	🗍 6 inch	3	0.357 inch	42				
10-24	53	☐ 7/8 inch	60	0.414 inch	90				
10-32	53	7/16 inch	48	0.518 inch	48				
12-24	42 -	9/16 inch	21 .	0.622 inch	36 🗸				





WING SCREWS



APPLICATIONS

The wing nut should be used **in a setting** where the fastener that is to be used needs to be opened and fastened with ease and in a frequent manner. A good example of this is when you need to fasten a lid on a particular type of machinery, but in such a manner that you will still have easy access to it when you need to.

Wing Screws

Thread Size (T)		Thread Length (E)		Wing Width (W)		Material	Finish	
🗌 M3 (3mm)	24 *	[] 10mm	18 🔶	[] 17.6mm	56 *	Marine Stainless Steel	Matte Black	128
M4 (4mm)	32	[] 12mm	18	22.5mm	40	(A4)	Natural	128
M5 (5mm)	40	[] 16mm	24	27.8mm	40	Stainless Steel (A2)		
🗌 M6 (6mm)	40	20mm	28	30.3mm	44			
M8 (8mm)	44	25mm	28	36.2mm	40			
M10 (10mm)	40	30mm	28	62mm	36			
M12 (12mm)	36	35mm	24					
		() 40mm	24 🗸					

Wing Screws

Thread Size (T)		Thread Length (E)		Wing Width (W)		Material	Finish	
🗌 M3 (3mm)	24 *	25mm	28 ^	017.6mm	56 *	Marine Stainless Steel	Matte Black	128
🗌 M4 (4mm)	32	30mm	28	22.5mm	40	(A4)	🗌 Natural	128
🗌 M5 (5mm)	40	35mm	24	27.8mm	40	Stainless Steel (A2)		
🗌 M6 (6mm)	40	40mm	24	30.3mm	44			
🗌 M8 (8mm)	44	45mm	20	36.2mm	40			
🗌 M10 (10mm)	40	50mm	20	62mm	36			
🗌 M12 (12mm)	36	55mm	12					
		() 60mm	12 🗸					





STRAIGHT WING NUTS



APPLICATIONS

Wing nuts work like most other nuts: They are designed **to hold two or more objects together when used in conjunction with a bolt**. You can twist a wing nut onto the end of a bolt to prevent the connected objects from pulling away.



Straight Wing Nuts

Thread Size	Nut Length (d1)	Base Di	ameter (d3) Wir	ing Width	Material
🗌 M6 (6mm)	2 ^ 🗌 46mm	🖪 * 🗌 13mm		6mm 🕢 🐴	🗌 Stainless Steel 🛛 🖪 *
_) M8 (8mm)	▲ 58mm	4 🗌 16mn	n 🖪 🗌 7	7mm 🛛 🔼	
○ M10 (10mm)	2				
		*			



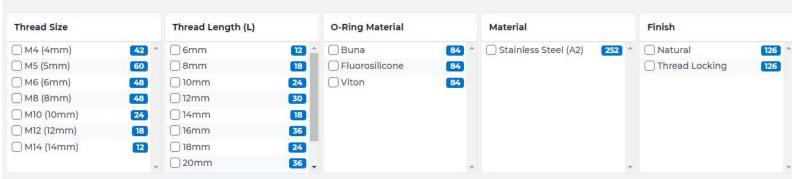


METRIC HEXAGON SEALING BOLTS



APPLICATIONS

Self-sealing bolts offer a reliable and reusable seal, preventing (or containing!) contamination from dust, air, water, lubricants and other liquid or gaseous substances. They are suitable for any kind of environment and industry as required. They occasionally when are used continuous vibration might normally cause problems.



Metric Hexagon Sealing Bolts

Metric Hexagon Sealing Bolts

Thread Size		Thread Length (L)		O-Ring Material		Material		Finish	
🗌 M4 (4mm)	42 *	[] 10mm	24	Buna	84 ^	Stainless Steel (A2)	252 *	Natural	126
🗌 M5 (5mm)	60	[] 12mm	30	Fluorosilicone	84			Thread Locking	126
🗌 M6 (6mm)	48	14mm	18	Viton	84				
🗌 M8 (8mm)	48	[] 16mm	36						
🗌 M10 (10mm)	24	18mm	24						
🗌 M12 <mark>(</mark> 12mm)	18	20mm	36						
🗌 M14 (14mm)	12	22mm	18						
		25mm	36 -						



METRIC SLOTTED HEAD PART THREADED SET/GRUB SCREWS



APPLICATIONS

Well, the grub screw is generally used **to secure an item against another item, without the use of a nut**. This is important, because the ability to secure without a nut makes the grub screw very versatile and means that a grub screw can be used in applications that require a very small and unobtrusive fixing.

Thread Size (T)		Length (L)		Pitch		Screw Material	Finish	
🗌 M2 (2mm)	4	6mm	8 📤	0.4mm	4 *	Marine Stainless Steel	🗌 Matte Black	97
M3 (3mm)	36	8mm	20	0.5mm	36	(A4)	🗌 Natural	97
	54	0 10mm	21	0.7mm	54	Stainless Steel (A1)	Thread Locking	95
M5 (5mm)	57	🗌 12mm	24	0.8mm	57			
M6 (6mm)	45	() 16mm	30	[] 1mm	45			
M8 (8mm)	51	[] 18mm	6	1.25mm	51			
🗌 M10 (10mm)	42	20mm	36	1.5mm	42			
		25mm	30 🗸					

Metric Slotted Head Part Threaded Set / Grub Screws

Metric Slotted Head Part Threaded Set / Grub Screws

Thread Size (T)		Length (L)		Pitch		Screw Material	Finish	
🗌 M2 (2mm)	4 *	[] 18mm	6 ^	0.4mm	4 *	Marine Stainless Steel	Matte Black	97 *
🗌 M3 (3mm)	36	20mm	36	0.5mm	36		Natural	97
🗌 M4 (4mm)	54	25mm	30	0.7mm	54		Thread Locking	95
🗌 M5 (5mm)	57	30mm	30	0.8mm	57			
🗌 M6 (6mm)	45	35mm	30	[] 1mm	45			
🗌 M8 <mark>(</mark> 8mm)	51	40mm	30	1.25mm	51			
🗌 M10 (10mm)	42	45mm	12	[] 1.5mm	42			
		□ 50mm	12 -				-	





EYE BOLTS



APPLICATIONS

Eye bolts can be used as a connection point for **rigging**, **anchoring**, **pulling**, **pushing**, **or hoisting applications**. Although eye bolts are commonly used in industrial applications.

Eye Bolts

Thread Size		Length (L)		External Eye Diameter	(D)	Material	Finish	
🗌 M6 (6mm)	32 *	30mm	8	14mm - 13.57mm	32 *	Marine Stainless Steel	* 🗌 Matte Black	156
🗌 M8 (8mm)	52	35mm	8	🗌 18mm - 17.57mm	52	(A4)	🗌 Natural	156
🗌 M10 (10mm)	52	40mm	12	20mm - 19.48mm	52	Stainless Steel (A2)		
🗌 M12 (12mm)	56	45mm	12	25mm - 24.48mm	56			
M16 (16mm)	48	50mm	16	32mm - 31.38mm	48			
🗌 M20 (20mm)	40	🗍 55mm	16	0 40mm - 39.38mm	40			
🗌 M24 (24mm)	32	060mm	20	45mm - 44.38mm	32			
		065mm	16 -		-		-	

Eye Bolts

Thread Size		Length (L)		External Eye Diameter	(D)	Material	Finish	
🗌 M6 (6mm)	32 *	0 65mm	16 🔺	14mm - 13.57mm	32 *	Marine Stainless Steel	🗌 Matte Black	156
🗌 M8 (8mm)	52	070mm	24	🗌 18mm - 17.57mm	52	(A4)	🗌 Natural	156
🗌 M10 (10mm)	52	75mm	20	20mm - 19.48mm	52	Stainless Steel (A2)		
🗌 M12 (12mm)	56	0 80mm	24	25mm - 24.48mm	56			
🗌 M16 (16mm)	48	90mm	24	32mm - 31.38mm	48			
🗌 M20 (20mm)	40	0 100mm	24	0 40mm - 39.38mm	40			
🗌 M24 (24mm)	32	🗌 110mm	20	🗌 45mm - 44.38mm	32			
	*	120mm	20 🗸		-			

Eye Bolts

Thread Size		Length (L)		External Eye Diameter	(D)	Material	Finish	
	32 *	080mm	24 *	🗍 14mm - 13.57mm	32 *	Marine Stainless Steel	Matte Black	156
M8 (8mm)	52	90mm	24	🗌 18mm - 17.57mm	52	(A4)	🗌 Natural	156
_) M10 (10mm)	52	0 100mm	24	20mm - 19.48mm	52	Stainless Steel (A2) 156		
_ M12 (12mm)	56	🗌 110mm	20	25mm - 24.48mm	56			
_ M16 (16mm)	48	[] 120mm	20	32mm - 31.38mm	48			
M20 (20mm)	40	[] 130mm	16	0 40mm - 39.38mm	40			
M24 (24mm)	32	140mm	16	🗌 45mm - 44.38mm	32			
		150mm	16 🗸					



NUTS



APPLICATIONS

A nut is a mechanical fastener with a threaded hole. It is attached to a bolt, screw or stud to provide a clamping force and prevent axial **movement**. For example, a bolt is inserted through two parts, with aligned holes, and a nut is then screwed onto the bolt. Applications include industrial valves used in petrochemical, oil and gas industries, water and sewage, and for the connection of pipes and flanges, etc.



NUTS IN CATALOUGE



- 109. BUMAX (FLANGED) LOCKING NUTS
- 111. CAGE NUTS
- 113. STEEL/BRONZE CYLINDRICAL TRAPEZOIDAL LEADSCREW NUTS
- 115. METRIC CYLINDRICAL CONNECTOR NUTS
- 117. SOCKET COUNTERSUNK BARREL NUTS
- 119. HEXAGON NYLON LOCKING NUTS
- 121. THIN CASTLE NUTS
- 123. CASTLE NUTS
- 125. HEXAGONAL TRAPEZOIDAL LEADSCREW NUTS
- 127. METAL LOCKING NUTS
- 129. STEEL CYLINDRICAL TRAPEZOIDAL LEADSCREW NUTS
- 131. CAP NUTS
- 133. METRIC HEXAGONAL STUD CONNECTOR NUTS
- 135. SLOTTED ROUND NUTS
- 137. PIPE NUTS
- 139. SHEAR NUTS
- 141. TEE NUTS
- 143. METRIC DOME NUTS
- 145. FLANGED TRAPEZOIDAL LEADSCREW NUTS



BUMAX (FLANGED) LOCKING NUTS



APPLICATIONS

This specially designed base acts as an integrated, non-spinning washer. Flange nuts speed up assembly and find use in applications where their large bearing surface covers oversized holes or slots. Some typical applications

include automotive assembly

Bumax Flanged Locking Nuts

Thread Size		Hexagon Width A	4/F (max) (J)	Nut Thickness (T)		Material		Finish	
🗌 M6 (6mm)	1 *	[] 10mm	0 *	6mm	0 *	🗌 Bumax 88	4 *	🗌 Natural	4
🗌 M8 (8mm)	0	() 13mm	0	08mm	0				
M10 (10mm)	0	15mm	0	[] 10mm					
🗌 M12 (12mm)	0	18mm	0	[] 12mm	0				
		lonin	U						



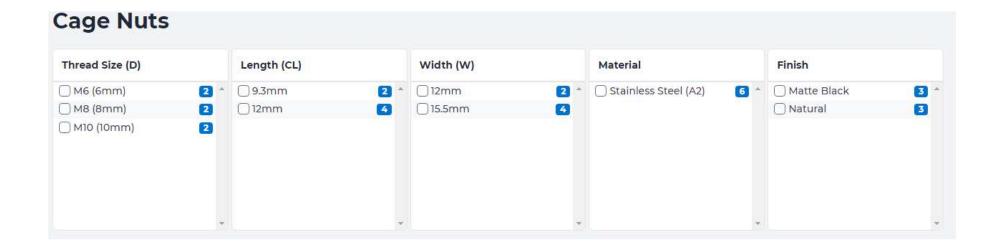


CAGE NUTS



APPLICATIONS

Cage Nuts (also called Clip Nuts) are widely used in rack mounting and computer construction. The cage of this type of nut is generally clipped to a square hole in sheet metal, or to a metal mesh, creating a light-duty fixture which is versatile, easily installed, and easily replaced if damaged. Cage Nuts are particularly useful with housings which are too thin or soft to create a suitably threaded bore.







STEEL/BRONZE CYLINDRICAL TRAPEZOIDAL

LEADSCREW NUTS



APPLICATIONS

A lead screw is sometimes referred to as a "power screw" or a "translation screw". They are used within motion control devices to transform rotary or turning movements into linear movements. The Screw Nut is a sliding feed nut compatible with the standards for a 30-degree trapezoidal screw thread.

Steel Cylindrical Trapezoidal Leadscrew Nuts

Lead screw diameter (D)	Lead (L)		Number of starts		Nut diameter (OD)		Screw hand	
🗌 10mm 🧧	🖸 📩 🗌 2mm	2 *		26 *	22mm	(4) *	🗌 Left	13
🗌 12mm 🚺	3 🗍 3mm	6	2	0	() 26mm	3	🗌 Right	14
🗍 14mm 🛛 🗧	4mm	8			🗍 30mm	6		
16mm [2 🗍 5mm	8			36mm	2		
🗌 18mm 🥂 🚺	2 🗌 6mm	3			🗍 40mm	2		
🗌 20mm 🛛 🚺	2				() 45mm	6		
🗌 22mm 🧧	2				🗍 50mm	(4)		
24mm	2 🖕			~	0 60mm	4 -		

Steel Cylindrical Trapezoidal Leadscrew Nuts

Lead screw diameter (D)		Lead (L)		Number of starts		Nut diameter (OD)		Screw hand	
16mm	2 *	2mm	2 *	01	26 🔺	22mm	(3 *	🗌 Left	13
🗌 18mm	2	🗍 3mm	6	2	0	26mm	3	Right	14
20mm	2	4mm	8			30mm	6		
22mm	2	🗍 5mm	8			36mm	2		
24mm	2	🗌 6mm	3			() 40mm	2		
26mm	2					45mm	6		
28mm	2					_ 50mm	6		
30mm	2 🗸		*		*	0 60mm	4 -		

Lead screw diameter	Lead		Number of starts		Nut diameter (OD)		Screw hand	
] 10mm	🥶 🔄 2mm	2 ^	01	26 *	22mm	6	Left	13
] 12mm	3 3mm	6	2	0	26mm	3	Right	14
] 14mm	▲ □ 4mm	8			30mm	4		
] 16mm	2 0 5mm	8			36mm	2		
] 18mm	2 🗍 6mm	3			() 40mm	2		
] 20mm	2				() 45mm	6		
_ 22mm	2				🗍 50mm	6		
24mm	2 -				0 60mm	4 -		



METRIC CYLINDRICAL CONNECTOR NUTS



APPLICATIONS

Metric Cylindrical Connector Nuts are a specialised component, commonly used on circuit boards, and are **designed to connect or space two parallel Screws or Threaded Bars**.

Metric Cylindrical Connector Nuts

🗌 M6 (6mm)							
	12 * () 20mm	12 ^	0 10mm	12 *	Marine Stainless Steel 38	🗌 Matte Black	38
🗌 M8 (8mm) 🛛 🚦	24 25mm	12	🗌 11mm	24	(A4)	🗌 Natural	38
🗌 M10 (10mm)	16 30mm	16	() 13mm	16	Stainless Steel (A2)		
🗌 M12 (12mm)	12 35mm	4	() 15mm	12			
🗌 M16 (16mm)	8 () 40mm	16	25mm	8			
🗌 M20 (20mm)	4 050mm	16	28mm	4			





SOCKET COUNTERSUNK

BARREL NUTS



APPLICATIONS

Countersunk socket head barrel nuts in 300 series stainless steel feature the same head diameter as their' **mating countersunk hex socket screws**. Most used in architectural joinery features with glass, steel and timber materials using a channel design in overhead or vertical panels. 302 grade stainless steel.



Socket Countersunk Barrel Nuts

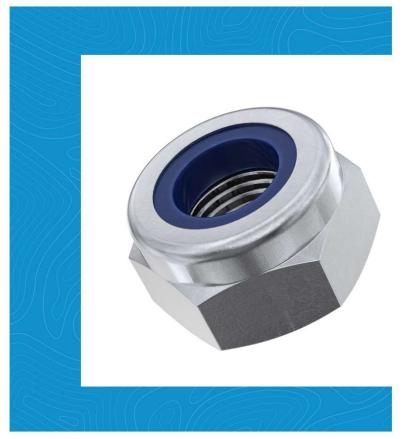
Thread Size		Length (L)		Outside Diameter	(d)	Material		Finish	
🗌 M4 (4mm)	2 *	[] 12mm	2 *	5mm	2 *	🗌 Marine Stainless Steel	10 *	Matte Black	12 📍
🗌 M5 (5mm)	4	15mm	6	6.5mm	4	(A4)		🗌 Natural	12
M6 (6mm)	6	16mm	8	08mm	4	Stainless Steel (A1)	14		
M8 (8mm)	6	20mm	8	🗌 llmm	4				
M10 (10mm)	6	25mm	2	14mm	6				
M12 (12mm)	6			16mm	4				
☐ M16 (16mm)	2			22mm	2		2		





HEXAGON NYLON

LOCKING NUTS



APPLICATIONS

Nylon lock nuts are used across a wide variety of industries, including in **appliances**, **computers**, **furniture**, **medical equipment**, **vehicles**, **sheet metal**, **and aircraft**. Heavier nylon insert lock nuts are used in buildings, on bridges, and in railroad equipment. Nylon's advantages include resistance to greases and oils; a low coefficient of friction; ability to maintain its strength when exposed to heat.

Hexagon Nylon Locking Nuts

Thread Size	Nut Width A/F (J) [M	ax] Total Thickness (L) [Max]	Material		Finish	
M1.6 (1.6mm)	2 🔺 🗋 2.2mm	2 🚖 🗍 1.65mm	2 📤	Grade 8 Carbon Steel	18 *	🗌 Hot Dip Galvanised	6
🗌 M2 (2mm)	1 0 4mm	1 2.80mm	0	Grade 10 Carbon Steel	18	🗌 Natural	36
🗌 M2.5 (2.5mm)	2 🗍 5mm	2 3.60mm	2	🗌 Marine Stainless Steel (A4)	17	C Zinc Plated	30
🗌 M3 (3mm)	3 🗍 5,50mm	3 🗍 4mm	3	Stainless Steel (A2)	19		
🗌 M3.5 (3.5mm)	1 🗍 🗍 6mm	1 🗍 4.50mm	0				
🗌 M4 (4mm)	3 7mm	3 🖸 5mm	6				
🗌 M5 (5mm)	3 🖸 8mm	🔳 🗌 6mm	6				
M6 (6mm)	4 - 10mm	🝊 🚽 🗍 8mm	5 .		~		

Hexagon Nylon Locking Nuts

Thread Size		Nut Width A/F (J) [Max]		Total Thickness (L) [Max]		Material		Finish	
🗌 M8 (8mm)	5 *	🗌 13mm	5 * (] 10mm	5 *	Grade 8 Carbon Steel	3 ^	Hot Dip Galvanised	6
🗌 M10 (10mm)	5	🗍 17mm	5 (] 12mm	5	🗌 Grade 10 Carbon Steel 🛛 🚺	8	🗌 Natural	36
🗌 M12 (12mm)	5	🗌 19mm	5 (] 14mm	(4)	🗌 Marine Stainless Steel (A4) 🧧	7	Zinc Plated	30
🗌 M14 (14mm)	4	22mm	(] 16mm	5	🗍 Stainless Steel (A2)	9		
M16 (16mm)	5	24mm	5] 18.50mm	3				
M18 (18mm)	3	27mm	3	20mm	5				
🗌 M20 (20mm)	5	30mm	5 (22mm	2				
M22 (22mm)	2 .	32mm	2 . (24mm	5.				

rexagon Nyi	on Locking Nut	LS .					Drag the cursor around the area you want to capture.		
Thread Size	Nut Width A/F (J) [I	Max]	Total Thickness (L)	[Max]	Material		Finish		
M22 (22mm)	2 * 🗍 32mm	2 *	22mm	2 *	Grade 8 Carbon Steel	18 ^	Hot Dip Galvanised	6	
M24 (24mm)	5 36mm	5	24mm	5	🗍 Grade 10 Carbon Steel	18	🗌 Natural	36	
M27 (27mm)	2 0 41mm	2	27mm	2	Marine Stainless Steel (A4)	17	C Zinc Plated	30	
M30 (30mm)	3 🗌 46mm	3	30mm	3	🗍 Stainless Steel (A2)	19			
M33 (33mm)	3 🗍 50mm	3	33mm	3					
🗌 M36 (36mm)	🚳 🗌 🖸 55mm	6	36mm	6					
🗌 M42 (42mm)	0 () 65mm	0	42mm	0					
M48 (48mm)	1 - () 75mm		() 48mm	0 🗸					



THIN CASTLE NUTS



APPLICATIONS

A castellated nut, also known as a castle nut, has three notches in one end, giving an appearance like the crenellated battlements of a castle. Castellated nuts are a positive locking device that's used to ensure that the nut remains affixed and resists vibration.

Thread Size (T)	Nut Width A/F (F)	Nut Thickness (T)		Material		Finish	
🗌 M6 (6mm)	🖪 🚖 🗌 10mm	💽 📤 🗌 3.5mm	4 *	🗌 Marine Stainless Steel	22 *	🗌 Matte Black	22
🗌 M8 (8mm)	🖸 🗌 13mm	4.5mm	4	(A4)		🗌 Natural	22
🗌 M10 (10mm)	[] 17mm [] 17mm []	🔄 🗌 5mm	4	Stainless Steel (A2)	22		
🗌 M12 (12mm)	(4) [19mm	🔄 🗌 6mm	4				
🗌 M14 (14mm)	4 22mm		8				
🗌 M16 (16mm)	4 🗌 🖸 24mm	💽 📕 🗍 8mm	8				
🗌 M18 (18mm)	4 27mm	🔄 🗌 9mm	4				
M20 (20mm)	4 _ 🗍 30mm	🛃 🖕 🗌 11mm	8				

Thin Castle Nuts

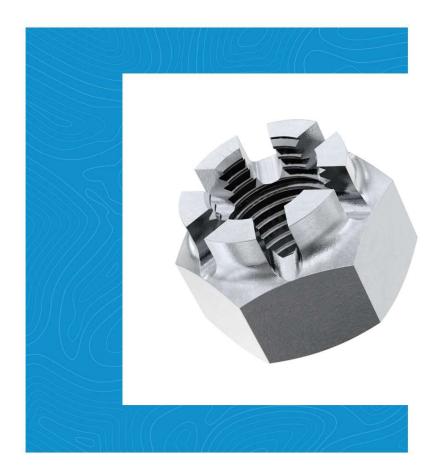
Thin Castle Nuts

Thread Size (T)		Nut Width A/F (F)		Nut Thickness (T)		Material	Finish	
🗌 M12 (12mm)	6 *	0 19mm	4	3.5mm	4	Marine Stainless Steel	Matte Black	22 *
🗌 M14 (14mm)	6	22mm	6	4.5mm	4	(A4)	🗌 Natural	22
🗌 M16 (16mm)	6	24mm	4	5mm	4	Stainless Steel (A2)		
🗌 M18 (18mm)	4	27mm	4	6mm	4			
🗌 M20 (20mm)	3	30mm	4	7mm	8			
🗌 M24 (24mm)	6	36mm	4	08mm	8			
🗌 M27 (27mm)	6	41mm	4	9mm	4			
() M30 (30mm)	4	A6mm	4	()11mm	8			





CASTLE NUTS



APPLICATIONS

They are also known as castellated nuts, which are particularly useful for **locking** certain items in place on a project when you don't want to use special locking nuts and bolts. A castle nut is easy to use because you can thread it without using a wrench initially.

Castle Nuts

Thread Size (T)	Nut Width A/F (F)	12 -	Nut Thickness (T)		Material	Finish	
🗌 M5 (5mm)	🝊 🚖 🗍 08mm	4	4mm	4	Marine Stainless Steel	Matte Black	28
🗌 M6 (6mm)	4 🗌 10mm	4	5mm	4	(A4)	Natural	28
M8 (8mm)	(4	6.5mm	4	Stainless Steel (A2) 28		
🗌 M10 (10mm)	(17mm	4	08mm	4			
🗌 M12 (12mm)	🗿 🗌 🗍 19mm	4	[] 10mm	4			
🗌 M14 (14mm)	4 22mm	4	🗌 11mm	4			
🗌 M16 (16mm)		4	[] 13mm	4			
() M18 (18mm)	4 _ 0 27mm	4.	[] 15mm	4.			

Castle Nuts

Thread Size (T)	Nut Width A/F (F)		Nut Thickness (T)		Material		Finish	
🗌 M16 (16mm)		(4) *	13mm	4 *	Marine Stainless Steel	28	🗌 Matte Black	28
🗌 M18 (18mm)	27mm 27mm	4	() 15mm	4	(A4)		🗌 Natural	28
M20 (20mm)	30mm	4	[] 16mm	4	Stainless Steel (A2)	28		
🗌 M22 (22mm)	🖸 🗌 32mm	6	18mm	4				
🗌 M24 (24mm)	36mm	4	[] 19mm	4				
🗌 M27 (27mm)	41mm	4	22mm	4				
🗌 M30 (30mm)	G □ 46mm	6	24mm	4				
M36 (36mm)	4 🗸 🗍 55mm	4	29mm	4 -		-		





HEXAGONAL TRAPEZOIDAL LEADSCREW NUTS



APPLICATIONS

Trapezoidal Round Coupling Nuts are internally threaded fasteners that are used for joining two externally threaded fasteners together that have trapezoidal thread. Trapezoidal Thread is often used where large screw loads are required. Common uses are as the lead screw of a lathe or in a vise

Lead screw diameter		Lead		Number of starts		Nut Width A/F (J)		Screw hand	
🗌 10mm	4	2mm	2 *	01	26 ^	🗌 17mm	4 *	🗍 Left	13
12mm	2	🗌 3mm	6			🗌 19mm	2	Right	13
[] 14mm	4	4mm	8			22mm	4		
🗌 16mm	2	🗍 5mm	8			27mm	4		
🗌 18mm	2	🗍 6mm	2			🗍 30mm	4		
20mm	2					36mm	4		
22mm	2					41mm	2		
24mm	2.					(46mm	2 .		

Hexagonal Trapezoidal Leadscrew Nuts

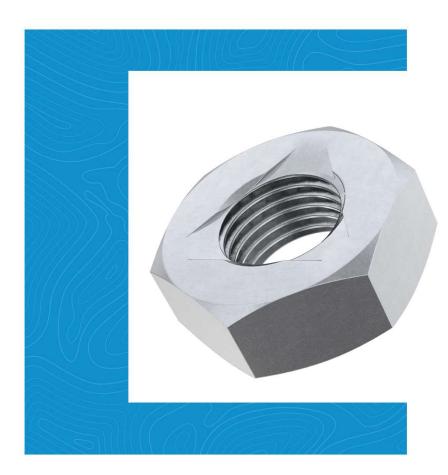
Hexagonal Trapezoidal Leadscrew Nuts

Lead screw diame	eter	Lead		Number of starts		Nut Width A/F (J)		Screw hand	
16mm	2 *	2mm	2 *	01	26 ^	🗍 17mm	4	🗌 Left	13
18mm	2	3mm	6			🗌 19mm	2	Right	13
20mm	2	4mm	8			22mm	4		
22mm	2	5mm	8			27mm	4		
24mm	2	🗌 6mm	2			🗍 30mm	4		
26mm	2					36mm	4		
28mm	2					🗌 41mm	2		
30mm	2 -					0 46mm	2		





METAL LOCKING NUTS



APPLICATIONS

All-Metal Lock Nuts prevent against loosening, providing resistance when tightened down on a bolt thread.

Thread Size	Nut Width A/F (F)		Nut Thickness (Max)	(T)	Material		Finish	
🗌 M3 (3mm)	🝊 📥 🗍 5.5mm	(4)	3.7mm	6	Duplex Stainless Steel	-	🗍 Matte Black	29
🗌 M4 (4mm)	7mm	4	() 4.2mm	6	🗌 Marine Stainless Steel (A4) 🚺		🗌 Natural	29
🗌 M5 (5mm)	🔇 🗌 8mm	4	5.1mm	4	Stainless Steel (A2) 26			
🗌 M6 (6mm)	6 🗍 10mm	6	🗍 6mm	6				
🗌 M7 (7mm)	2 🗌 🗌 11mm	2	0 7mm	2				
🗌 M8 (8mm)	6 🗍 13mm	6	🗌 8mm	6				
🗌 M10 (10mm)	6 🗍 17mm	6	🗍 10mm	6				
🗌 M12 (12mm)	6 🗸 🗋 19mm	6	12mm	6 🗸		4		4

Metal Locking Nuts

Metal Locking Nuts

Thread Size		Nut Width A/F (F)	Nut Thickness (Max) (T)	Nut Thickness (Max) (T)		Finish	
🗌 M8 (8mm)	6	[] 13mm	🗍 8mm	6	🗌 Duplex Stainless Steel 🛛 🚺 *	🗌 Matte Black	29 *
🗌 M10 (10mm)	6	0 17mm 6	🗌 10mm	6	🗌 Marine Stainless Steel (A4) 🛽 18	🗌 Natural	29
M12 (12mm)	6	[] 19mm [6]	0 12mm	6	Stainless Steel (A2)		
M14 (14mm)	2	22mm 2	14mm	2			
M16 (16mm)	6	24mm 6	0 16mm	6			
🗌 M20 (20mm)	6	30mm 6	20mm	6			
M22 (22mm)	2	32mm 2	22mm	2			
M24 (24mm)	4 -	🗍 36mm 🛛 🖪 🚽	24mm	4 -	*		



STEEL CYLINDRICAL TRAPEZOIDAL LEADSCREW NUTS



APPLICATIONS

A lead screw is sometimes referred to as a "power screw" or a "translation screw". They are used within motion control devices **to transform rotary or turning movements into linear movements.** The Screw Nut is **a sliding feed nut compatible with the standards for a 30-degree trapezoidal screw thread**.

Lead screw diameter (D)	Lead (L)		Number of starts		Nut diameter (OD)		Screw hand	
] 10mm	6	2mm	2 *	01	26 *	22mm	6 *	Left	13 ^
12mm	3	3mm	6	2	0	26mm	3	Right	14
14mm	6	4mm	8			30mm	4		
16mm	2	5mm	8			36mm	2		
🗍 18mm	2	🗍 6mm	3			🗍 40mm	2		
20mm	2					🗍 45mm	6		
22mm	2					🗍 50mm	6		
24mm	2 +		*		~	() 60mm	4 -		-

Steel Cylindrical Trapezoidal Leadscrew Nuts

Steel Cylindrical Trapezoidal Leadscrew Nuts

Lead screw diameter (D)	Lead (L)	Number of starts	Nut diameter (OD)	Screw hand
🗌 16mm 🛛 🔁 🕇	2mm 2 *	1 26 *	22mm 4	Left 13 *
□ 18mm 2	3mm6	2	26mm 3	Right 14
20mm 2	🗍 4mm 🛛 🖪		30mm 4	
22mm 2	5mm 🛽 🖪		36mm 2	
24mm 2	6mm 3		_ 40mm 2	
26mm 2			45mm 🙆	
28mm 2			_ 50mm	
🗍 30mm 🚺 🗸	· · · · · · · · · · · · · · · · · · ·		🗌 60mm 🧉 🗸	*





CAP NUTS



APPLICATIONS

A cap nut serves to protect the bolt threads underneath, but also provides a cleaner appearance, and may improve safety on certain joints and applications. When your application requires a smooth finish, or all rough-edged fasteners and exposed threads must be covered, cap nuts provide an excellent solution.

Cap Nuts

Thread Size (T)	Nut Width A/F (J)	Nut Length (T)		Material		Finish	
🗌 M3 (3mm)	🖪 📤 🗌 5.5mm	💽 🚖 🗍 4mm	4	🗌 Marine Stainless Steel	30	🗌 Matte Black	30
🗌 M4 (4mm)	4 🗍 7mm	4.4mm	6	(A4)		🗌 Natural	30
🗌 M5 (5mm)	4 8mm	5.2mm	6	Stainless Steel (A2)	30		
🗌 M6 (6mm)	10mm	3 07mm	6				
🗌 M8 (8mm)	4 🗌 13mm	🧉 🗌 9.5mm	4				
🗌 M10 (10mm)	17mm	🔄 🗌 11mm	4				
🗌 M12 (12mm)	3 🗍 19mm	[4] 🗌 13.6mm	4				
() M14 (14mm)	4 _ □22mm	4 _ [] 15mm	4.				

Cap Nuts

Thread Size (T)		Nut Width A/F (J)		Nut Length (T)		Material		Finish	
🗌 M14 (14mm)	(22mm	<u> </u>	15mm	4	Marine Stainless Steel	30	Matte Black	30
🗌 M16 (<mark>1</mark> 6mm)	4 (24mm	4	🗌 17mm	4	(A4)		🗌 Natural	30
🗌 M18 (18mm)	4 (_) 27mm	4	[] 19mm	4	Stainless Steel (A2)	30		
M20 (20mm)	4		4	21mm	4				
🗌 M22 (22mm)	4		6	22mm	4				
🗌 M24 (24mm)	4		4	24mm	4				
🗌 M27 (27mm)	4] 41mm	6	26mm	4				
() M30 (30mm)	4 - (4 -	28mm	4 -		2		





METRIC HEXAGONAL STUD

CONNECTOR NUTS



APPLICATIONS

Stud and connector nuts are essentially extended hexagon nuts_that are traditionally used to connect together two lengths of studding (threaded bar). They are also used for many other applications where a longer nut is required. These nuts are supplied with metric coarse threads, in either a zinc plated or stainless steel finish

Thread Size	Nut	Width Across Flats (J)	Nut Length (L)		Material		Finish	
🗌 M5 (5mm)	2 ^ () 8r	nm 🛛 🔁 🖆	15mm	2 ^	🗍 Marine Stainless Steel	18	Matte Black	19
🗌 M6 (6mm)	4 0 10	mm 🔼	[] 18mm	4	(A4)		Natural	19
🗌 M8 (8mm)	G 0 13	mm 🛛 🔼	24mm	4	Stainless Steel (A2)	20		
🗌 M10 (10mm)	3 017	mm 🔼	30mm	4				
🗌 M12 (12mm)	(19)	mm 🛛 🚳	36mm	4				
🗌 M14 (14mm)	4 0 22	2mm 🖪	42mm	4				
🗌 M16 <mark>(</mark> 16mm)	4 24	mm 🖪	48mm	4				
() M20 (20mm)	4 _ 030	0mm 🗛 -	() 60mm	4 -				

Metric Hexagonal Stud Connector Nuts

Metric Hexagonal Stud Connector Nuts

Thread Size		Nut Width Across Flats (J)	Nut Length (L)		Material	Finish	
🗌 M8 (8mm)	4	🗌 13mm 🛛 🗳 *	24mm	(4) *	Marine Stainless Steel	Matte Black	19
M10 (10mm)	4	17mm	30mm	4	(A4)	🗌 Natural	19
M12 (12mm)	4	🗌 19mm 🧉	36mm	4	Stainless Steel (A2) 20		
🗌 M14 (14mm)	4	22mm 4	42mm	4			
M16 (16mm)	4	24mm 4	48mm	4			
() M20 (20mm)	4	30mm 🔄	00mm	4			
M24 (24mm)	4	36mm 4	72mm	4			
(M30 (30mm)	4 -	() 46mm 🛛 🛃	90mm	4 -			





SLOTTED ROUND NUTS



APPLICATIONS

The Slotted Round Nut is used across several applications including **electrical engineering**. They can be tightened by means of a slotted screwdriver and are intended to be used for locking components where no specific prestressing forces are required.

Slotted nuts are used in applications where vibration or motion might undo the locknut.

Thread Size (T) Nut Thickness (L) External Diameter (D) Material Finish 2mm 4 4.5mm 4 Marine Stainless Steel (A4) 20 ^ Matte Black 20 ^ M2 (2mm) 4 M2.5 (2.5mm) 2.2mm 4 5.5mm 4 Stainless Steel (A1) 18 Natural 4 20 M3 (3mm) 4 2.5mm 4 6mm 4 Stainless Steel (A4) 2 4 M3.5 (3.5mm) 4 3mm 4 **7**mm M4 (4mm) 4 3.5mm 0 8mm 4 4 4 3 4 M5 (5mm) 4.2mm 9mm M6 (6mm) 🗌 11mm 4 5mm 4 4 4 _ 6.5mm 4 _ 14mm 4. M8 (8mm)

Slotted Round Nuts

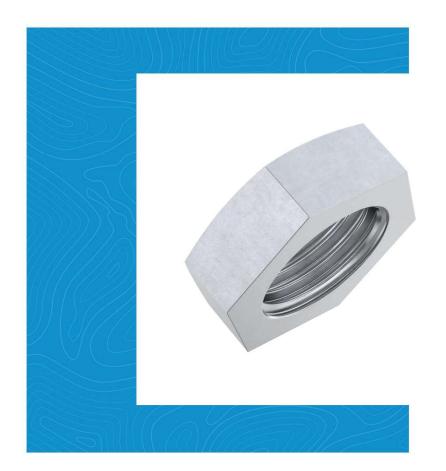
Slotted Round Nuts

Thread Size (T)		Nut Thickness (L)		External Diameter (D)		Material		Finish	
M3.5 (3.5mm)	4 *	3mm	4	7mm	4 *	Marine Stainless Steel (A4)	20 ^	Matte Black	20
M4 (4mm)	6	3.5mm	4	8mm	4	Stainless Steel (A1)	18	🗌 Natural	20
🗌 M5 (5mm)	4	4.2mm	4	9mm	4	Stainless Steel (A4)	2		
M6 (6mm)	4	5mm	4	🗌 11mm	4				
M8 (8mm)	4	6.5mm	4	14mm	4				
M10 (10mm)	4	8mm	4	[] 18mm	4				
M12 (12mm)	2	0 10mm	2	21mm	2				
M16 (16mm)	2 -	12mm	2 .	26mm	2 🗸		-		





PIPE NUTS



APPLICATIONS

A pipe nut is a type of pipe fitting is used in plumbing system **to join multiple pipes of same size or different sizes, to regulate the flow or to measure the flow.**

Pipe Nuts

Thread Size	Nut Length (L)		Hexagon A/F (F)		Material	Finish	
G 1 inch	🖪 👛 🗌 6mm - 6.4mm	16 🔶	18mm	4	Marine Stainless Steel 34	Matte Black	34
G 1.1/2 inch	4 🗌 7mm - 7.5mm	4	[] 19mm	4	(A4)	Natural	34
G 1.1/4 inch	🕘 🗌 8mm - 8.5mm	16	21mm	4	Stainless Steel (A2) 34		
G 1.1/8 inch	9mm 9.5mm	12	22mm	6			
G 1/2 inch	🔳 🗌 10mm - 10.5mm	4	27mm	4			
🗌 G 1/4 inch	Ilmm - 11.7mm	4	32mm	8			
G 1/8 inch	8 🗌 12mm - 12.7mm	4	34mm	8			
G 2 inch	🝊 🖕 🗌 13mm - 13.7mm	4 -	36mm	4.			

Pipe Nuts

Thread Size		Nut Length (L)	Hex	(agon A/F (F)		Material		Finish	
🗍 G 1/4 inch	8 *	7mm - 7.5mm	4 3	6mm	6 *	Marine Stainless Steel	34	🗌 Matte Black	34
🗌 G 1/8 inch	8	🗍 8mm - 8.5mm	16 4	Imm	4	(A4)		🗌 Natural	34
G 2 inch	4	🗍 9mm 9.5mm	12 04	6mm	4	🗌 Stainless Steel (A2)	34		
🗌 G 3 inch	4	🗌 10mm - 10.5mm	(3) 5	0mm	4				
🗌 G 3/4 inch	4	🗌 11mm - 11.7mm	4 5	5mm	6				
🗌 G 3/8 inch	4	12mm - 12.7mm	6	0mm	4				
🗌 G 5/8 inch	8	🗍 13mm - 13.7mm	4 07	5mm	4				
G 7/8 inch	4 -	19mm - 19.8mm		05mm	4 -		-		





SHEAR NUTS



APPLICATIONS

Shear nuts deliver a simple, low-cost solution for any project where a permanent fixing is required. For example, they are used **to anchor park benches to preembedded fixing studs, or for securing street sign-age**, thus providing an effective deterrent against theft or vandalism.

Shear Nuts

Thread Size	Nut Width (A/F) (J)	Nut Thickness (H)		Material		Finish	
🗌 M4 (4mm)	2 📤 🗌 7mm	2 📤	3.5mm	2 *	Case Hardened Steel	13 ^	Bright Zinc Plated	7 ^
🗌 M5 (5mm)	2 🗌 10mm	6	4mm	2	🗌 Marine Stainless Steel	10	🗌 Galvanised	6
🗌 M6 (6mm)	5 🗍 13mm	5	5mm	2	(A4)		🗌 Matte Black	13
🗌 M8 (8mm)	6 🗍 17mm	6	🗍 5.5mm	2	Stainless Steel (A2)	16	🗌 Natural	13
🗌 M10 (10mm)	6 🗌 19mm	4	07mm	2				
M12 (12mm)	6 20mm	2						
🗌 M16 (16mm)	6 22mm	2						
() M20 (20mm)	4 _ ○24mm	6 🗸		_				

Shear Nuts

Thread Size	Nut Width (A/F) (3	3)	Nut Thickness (H)		Material		Finish	
🗌 M5 (5mm)	2 * 🗌 17mm	6 *	3.5mm	2 *	Case Hardened Steel	13 *	Bright Zinc Plated	7
🗌 M6 (6mm)	5 🗌 🗌 19mm	4	4mm	2	Marine Stainless Steel	10	Galvanised	6
🗌 M8 (8mm)	6 20mm	2	5mm	2	(A4)		🗌 Matte Black	13
🗌 M10 (10mm)	6 22mm	2	5.5mm	2	Stainless Steel (A2)	16	🗌 Natural	13
🗌 M12 (12mm)	6 24mm	6	7mm	2				
🗌 M16 (16mm)	6 30mm	3						
🗌 M20 (20mm)	32mm	0						
() M24 (24mm)	2 36mm			~				





TEE NUTS



APPLICATIONS

Tee nuts can be used to fasten materials such as wood, plastic or composite material in such a manner that it will leave a flush surface. This makes it ideal for all sorts of assembly, including in the manufacture of some types of toys such as slides. The tee nut has a long body and a flange in one end. It is also used for **particle** or composite materials workpiece, leaving a flush surface.



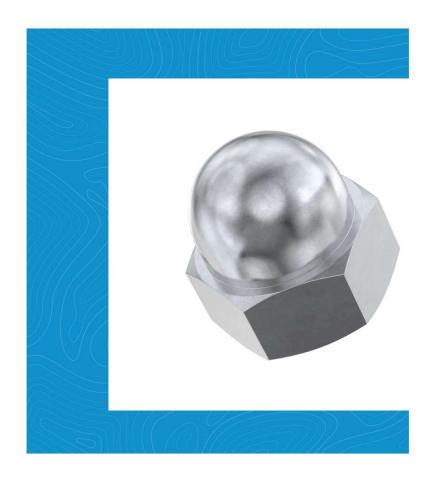
Tee / T Nuts

Thread Size		Total Length (L)		Nut Thickness (T)		Material		Finish	
M5 (5mm)	2 ^		2 ^	6.7mm	2 ^	Stainless Steel (A2)	8 *	Matte Black	4
M6 (6mm)	2	9mm	2	7.8mm	2			🗌 Natural	4
M8 (8mm)	2		2	9.5mm	2				
M10 (10mm)	2	[] 12mm	2	0 10.2mm	2				
	*		Ŧ		*		*		





METRIC DOME NUTS



APPLICATIONS

Dome nuts **cover the threaded end of a fastener** meaning that they are especially suitable for when a nut is used in applications where the aesthetics matter. The domed head also acts as a shield from any ends on fasteners that could potentially be dangerous such as sharp bolt threads.

Thread Size		Nut Width A/F (J)		Nut Length (E)		Material		Finish	
🗌 M3 (3mm)	7	22mm	4 *	2.4mm	6	Brass	7 *	Black	6
🗍 M4 (4mm)	5	24mm	4	3mm	0	Marine Stainless Steel	30	🗌 Matte Black	31
M5 (5mm)	7	27mm	4	3.2mm	5	(A4)	_	🗌 Natural	44
M6 (6mm)	7	30mm	6	4mm	7	Nylon	12		
🗌 M7 (7mm)	2	32mm	4	5mm	7	Stainless Steel (A2)	32		
🗌 M8 (8mm)	7	36mm	6	6.5mm	7				
🗍 M10 (10mm)	7	41mm	4	🗍 8mm	7				
() M12 (12mm)	7	() 46mm	4	() 10mm	7				

Metric Dome Nuts

Metric Dome Nuts

Thread Size		Nut Width A/F (J)		Nut Length (E)		Material		Finish	
🗌 M14 (14mm)	4 *	22mm	4	[] 11mm	4 *	Brass	7 ^	Black	6
🗌 M16 (16mm)	4	24mm	4	[] 13mm	4	🗌 Marine Stainless Steel	30	🗌 Matte Black	31
🗌 M18 (18mm)	4	27mm	4	[] 15mm	4	(A4)	_	🗌 Natural	44
🗌 M20 (20mm)	4	30mm	6	[] 16mm	4	() Nylon	12		
🗌 M22 (22mm)	6	32mm	4	[] 18mm	4	Stainless Steel (A2)	32		
🗌 M24 (24mm)	3	36mm	4	[] 19mm	6				
🗌 M27 (27mm)	3	4lmm	4	22mm	6				
M30 (30mm)	4	- 46mm	6	24mm	4 -				





FLANGED TRAPEZOIDAL LEADSCREW NUTS



APPLICATIONS

Examples include laboratory and life sciences equipment such DNA as sampling, scanning and fluid handling devices. Others include engraving, rapid prototyping, inspection, and data storage. Lead screws are also used in heavy lifting applications when combined with a metallic (typically bronze) nut. Lead screws are commonly used in linear actuators, machine slides (such as in machine tools), vises, presses, and jacks.

Lead screw diameter (D)	Lead (L)		Number of starts		Nut diameter (OD)		Screw hand	
🗌 10mm 🛛 🔁 🖆	2mm	2 *	01	22 *	25mm	3 ^	🗌 Left	
🗌 12mm 🛛 🛐	🗍 3mm	6	2	10	28mm	12	Right	21
🗌 14mm 🛛 🛐	() 4mm	7			32mm	9		
🗌 16mm 🛛 🛐	🗍 5mm	8			🗌 38mm	8		
□ 18mm 3	6mm	4						
20mm 3	🗌 8mm	3						
22mm 3	() 10mm	3						
24mm 3 .	[] 12mm	1.						

Flanged Trapezoidal Leadscrew Nuts

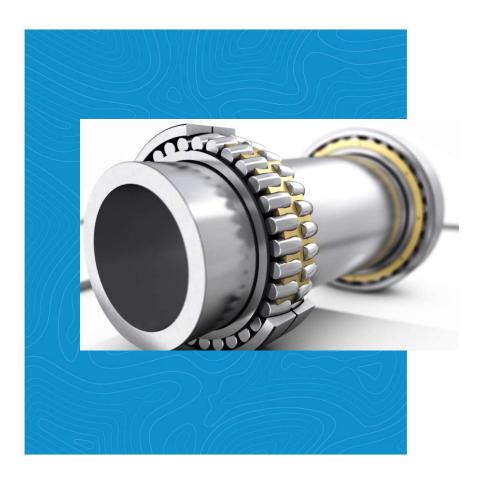
Flanged Trapezoidal Leadscrew Nuts

Lead screw diameter (D)	Lead (L)		Number of starts		Nut diameter (OD)		Screw hand	
16mm 3 *	2mm	2 *	01	22 *	25mm	3 ^	🗍 Left	
18mm 3	3mm	6	2	10	28mm	12	Right	21
20mm3	4mm	7			32mm	9		
22mm 3	5mm	8			🗌 38mm	8		
24mm3	6mm	4						
_ 26mm 2	0 8mm	3						
28mm3	[] 10mm	3						
30mm 🖪 🚽	12mm	0.		-				_





BEARINGS



APPLICATIONS

A bearing is a machine element that **constrains** relative motion to only the desired motion and reduces friction between moving parts. Its common applications include gearboxes, wind turbines, material handling, pumps, fans and blowers, mining and construction equipment, etc. For example, cylindrical roller bearings are designed to carry heavy radial loads and is suitable for high-speed applications.



LIST OF BEARINGS IN CATALOUGE

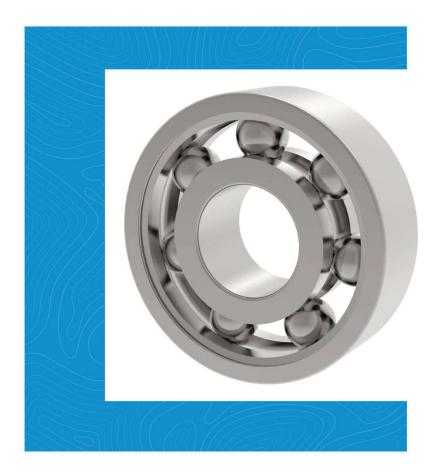


149. ROTARY BEARING A

152. ROTARY BEARING B



ROTARY BEARINGS A



APPLICATIONS

Designed to enable rotational or linear movement in a device, bearings are **machine elements that are used to reduce friction between moving parts and to enhance the speed and efficiency of a system**. Applications include:

- Aviation Cargo Systems
- Aerospace Wing Actuators
- A.T.M & Card Readers
- Commercial Blenders & Dental Hand Tools.
- Electrical Motors.

Bearing Size		Internal Diameter (d)	External Diam	eter (D)	Туре		Material	
609	6	9mm16	16mm	(B) ^	Double Seal (2RS)	55 🔺	Acetal Plastic	27
618/4	2	[] 10mm	17mm	10	Double Shield (2Z)	66	Stainless Steel	187
618/5	2	12mm	19mm	17	Open	66		
618/6	3	15mm	20mm	3	Single Shield (Z)	27		
618/7	3	17mm 18		4				
618/8	3	20mm18	 22mm	13				
618/9	3	22mm9		14				
619/3	2 🗸	25mm 18	→ □26mm	13 🗸		-		

Rotary Bearings

Bearing Size		Internal Diameter (c	1)	External Diamete	er (D)	Туре		Material	
60/22	3 -	3mm	6	08mm	2 📤	Double Seal (2RS)	55 *	Acetal Plastic	27
62/22	3	4mm		9mm	2	Double Shield (2Z)	66	🗌 Stainless Steel	187
63/22	3	🗍 5mm	13	[] 10mm	2	🗌 Open	66		
604	3	6mm	16	[] 11mm	4	Single Shield (Z)	27		
605	3	🗌 7mm	16	12mm	3				
0606	4	🗌 8mm	16	13mm	9				
607	4	9mm	16	14mm	6				
608	6.	() 10mm	19	() 15mm	3.				

Rotary Bearings

Bearing Size	Internal Diameter	(d)	External Diameter (D)		Type		Material	
609		16 *		10	Double Seal (2RS)	55 *	Acetal Plastic	27
618/4	2 010mm	19	☐ 30mm	10	Double Shield (2Z)	66	🗌 Stainless Steel	187
618/5	2 🗌 12mm	19	32mm	m	Open	66		
618/6	3 🗍 15mm	[19]	35mm	12	Single Shield (Z)	27		
618/7	3 🗌 17mm	18		10				
618/8	3 20mm	18	☐ 40mm	6				
☐ 618/9	3 22mm	9	142mm					
619/3	2 🗸 🗋 25mm	18 🗸	144mm	3 -		÷		

Rotary Bearings

Bearing Size		Internal Diameter (d)		External Diameter (D	0)	Туре		Material	
0 609	<u>6</u> *	9mm	16 *	40mm	4 *	Double Seal (2RS)	55 *	Acetal Plastic	27
618/4	2	[] 10mm	19	42mm		Double Shield (2Z)	66	Stainless Steel	187
618/5	2	[] 12mm	19	44mm	3	🗌 Open	66		
618/6	3	[] 15mm	19	47mm	12	Single Shield (Z)	27		
618/7	3	0 17mm	18	50mm	3				
618/8	3	20mm	18	52mm	8				
0 618/9	3	22mm	9	56mm	3				
619/3	2	25mm	18	62mm	4 -		~		



ROTARY BEARINGS B



APPLICATIONS

Designed to enable rotational or linear movement in a device, bearings are **machine elements that are used to reduce friction between moving parts and to enhance the speed and efficiency of a system**. Applications include:

- Aviation Cargo Systems
- Aerospace Wing Actuators
- A.T.M & Card Readers
- Commercial Blenders & Dental Hand Tools.
- Electrical Motors.

Bearing Size		Internal Diameter (d)		External Diameter (D)		Туре		Material	
60/22	3 *	3mm	6 _	08mm	2 📤	Double Seal (2RS)	55 *	Acetal Plastic	27 ^
62/22	3	4mm		9mm	2	Double Shield (2Z)	66	🗌 Stainless Steel	187
63/22	3	5mm	13	[] 10mm	2	Open	66		
604	3	🗍 6mm	16	[]]mm	4	Single Shield (Z)	27		
605	3	🗍 7mm	16	12mm	3				
606	4	() 8mm	16	13mm	9				
607	6	9mm	16	14mm	6				
608	6	10mm	19	() 15mm	3 .				

Rotary Bearings

Rotary Bearings

Bearing Size		Internal Diameter (d)	External Diamete	er (D)	Туре		Material	
0 609	4	9mm	16 *	016mm	B ^	Double Seal (2RS)	55 *	Acetal Plastic	27
618/4	2	010mm	19	017mm	10	Double Shield (2Z)	66	Stainless Steel	187
618/5	2	12mm	19	[] 19mm	17	Open	66		
618/6	3	15mm	19	20mm	3	Single Shield (Z)	27		
618/7	3	0 17mm	18	21mm	6				
618/8	3	20mm	18	22mm	13				
618/9	3	22mm	9	24mm	14				
619/3	2 🗸	25mm	18 -		13 🗸				



Bearing Size		Internal Diameter (d)		External Diameter (D)		Туре		Material	
609	4	9mm	16 🔶		10	Double Seal (2RS)	55 *	Acetal Plastic	27 ^
618/4	2	[] 10mm	19	☐ 30mm	10	Double Shield (2Z)	66	🗌 Stainless Steel	187
618/5	2	[] 12mm	19	☐ 32mm		🗌 Open	66		
618/6	3	15mm	19	35mm	12	Single Shield (Z)	27		
618/7	3	0 17mm	18	☐ 37mm	10				
618/8	3	20mm	18	140mm	4				
0 618/9	3	22mm	9	☐ 42mm					
619/3	2 🗸	25mm	18 🗸		3 -		÷.		-

Rotary Bearings

Deterry	Dee	wine or o
Rotary	Bea	rings

Bearing Size		Internal Diameter (d)		External Diameter	(D)	Туре		Material	
0 609	<u> </u>	9mm	16 *	40mm	(4) *	Double Seal (2RS)	55 *	🗌 Acetal Plastic	27
0 618/4	2	[] 10mm	19	42mm		Double Shield (2Z)	66	Stainless Steel	187
618/5	2	12mm	19	44mm	3	🗌 Open	66		
618/6	3	[] 15mm	19	47mm	12	Single Shield (Z)	27		
618/7	3	17mm	18	50mm	3				
618/8	3	20mm	18	52mm	8				
618/9	3	22mm	9	56mm	3				
619/3	2 -	25mm	18	62mm	4 -				





HOSE CLAMPS



APPLICATIONS

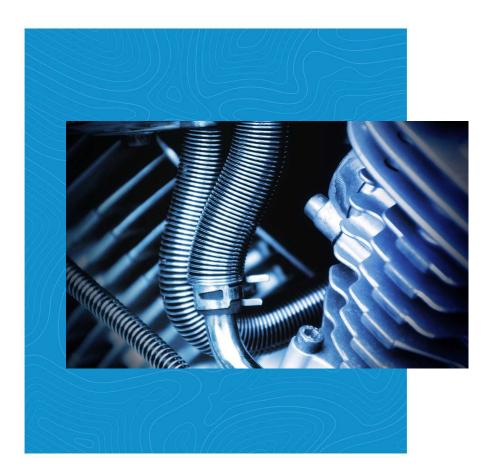
T-bolts are ideal as clamps for high-pressure hose and for use with silicone hoses.

Applications and industries:

- •Wire-reinforced hoses.
- •Automotive fuel lines and exhaust hoses.
- •Plumbing seal hoses, water pipes and marine sink outlets.
- •Signage, temporary repairs, sealing large containers.



HOSE CLAMPS IN CATALOUGE



157. T-BOLT CLAMPS

159. WORM DRIVE HOSE CLAMPS



T-BOLT CLAMPS



APPLICATIONS

T-Bolt clamps provide uniform sealing pressure for a positive, reliable seal. Designed for use in high vibration and large diameter applications common in heavy industrial trucks, machinery, off-road equipment, agricultural irrigation and machinery. T Bolt Clamps are designed to secure pipes and hoses at high pressure, and turbo pressure hoses, etc.

T Bolt Clamps

Metric or Imperial?		Diameter (d)		Clip Width (W)		Bolt size (B)		Material	
🗌 Metric	16 🔶	🗍 17 - 19mm	0 🛓	[] 18mm	3 *	☐ M5 x 40	3 *	🗍 Stainless Steel (A2)	16
		20 - 22mm	0	20mm	4	🗌 M6 x 50	6		
		26 - 28mm	0	() 22mm	5	☐ M6 x 60	6		
		29 - 31mm	0	24mm	6	M8 x 70	3		
		🗍 32 - 35mm	0			M8 x 75	0		
		🗍 36 - 39mm	0			M8 x 80	0		
		🗍 40 - 43mm	0						
	~	🗌 44 - 47mm	0		*		÷		

T Bolt Clamps

Metric or Imperial?		Diameter (d)	Clip Width (W)	Bolt size (B)	Material
Metric	16 *	48 - 51mm	18mm 3 *	☐ M5 x 40 3 *	🗍 Stainless Steel (A2)
		🗍 52 - 55mm 🚺	20mm 🕑	☐ M6 x 50	
		🗍 56 - 59mm 🚺	22mm 5	☐ M6 x 60 🛛 🛃	
		0 64 - 67mm	24mm (4	M8 x 70 3	
		🗌 68 - 73mm 🚺		□ M8 x 75 1	
		0 74 - 79mm		□ M8 x 80 1	
		🗌 83 - 88mm 🚺			
	~	🗍 104 - 112mm 🚺 🦷		*	





WORM DRIVE HOSE CLAMPS



APPLICATIONS

For anything water-related, these are handy for fastening piping sections and clamping silicone hoses, and it's best to use either Hi-Torque Stainless Steel Worm Drive hose clamps, Hi-Grip 304 Stainless (A2), or Hi-Grip 316 Stainless (A4) as they all offer maximum corrosion resistance. A hitorque clamp that prevents hose connections from slacking, and they also prevent leakage. When the included screw is turned on the clamp worm drive, it acts like a worm drive pulling the threads of the band.

Worm Drive Hose Clamps

Diameter		Clip Width (W)		Barrel Width (B)		Material	Finish	
8mm-12mm	0 🗅	9mm	22 *	14mm	18 🔺	Marine Stainless Steel (A4) 26	Natural	62
0 10mm-16mm	3	[] 12mm	[40]	20mm	34	🗍 Stainless Steel 🚺 🚺		
12mm-22mm	5					Stainless Steel (A2) 26		
🗌 16mm-25mm	2							
🗌 16mm-27mm	4							
20mm-32mm	5							
25mm-40mm	5							
30mm-45mm	4 -		~					

Worm Drive Hose Clamps

Diameter	Clip Width (W)	B	arrel Width (B)		Material	Finish	
32mm-50mm	1 • 9mm	2 - 0	14mm	18 🔺	🗌 Marine Stainless Steel (A4) 🔼	Natural	62
🗌 35mm-50mm	12mm	40	20mm	34	🗌 Stainless Steel 🛛 🔟		
040mm-60mm	5				Stainless Steel (A2)		
🗌 50mm-70mm	5						
60mm-80mm	2						
🗌 70mm-90mm	2						
🗌 80mm-100mm	2						
90mm-110mm	2 .						

Worm Drive Hose Clamps

Diameter		Clip Width (W)		Barrel Width (B)		Material	Finish	
70mm-90mm	2 *	[] 9mm	22 *	[] 14mm	18 -	🗌 Marine Stainless Steel (A4) 🛛 26	* 🗍 Natural	62
80mm-100mm	2	🗌 12mm	40	20mm	34	Stainless Steel		
90mm-110mm	2					Stainless Steel (A2)		
] 100mm-120mm	2							
] 110mm-130mm	2							
] 120mm-140mm	2							
] 130mm-150mm	2							
) 140mm-160mm	2 -		-		~		*	



RIVETS AND FASTENERS



APPLICATIONS

RIVETS

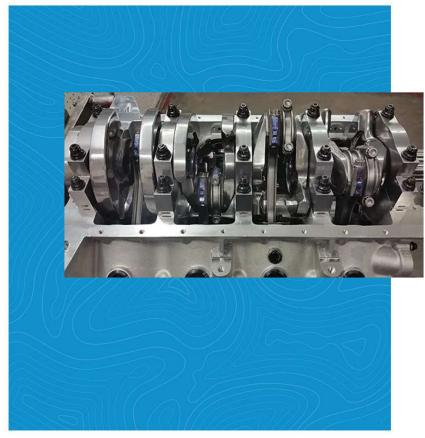
- □ Aerospace
- Aluminium boats
- □ Military equipment
- Electric and magnetic motors
- Construction Applications

FASTENERS

- □ Aerospace
- □ Automotive industries
- □ Petrochemical, Nuclear, and Marine, etc.



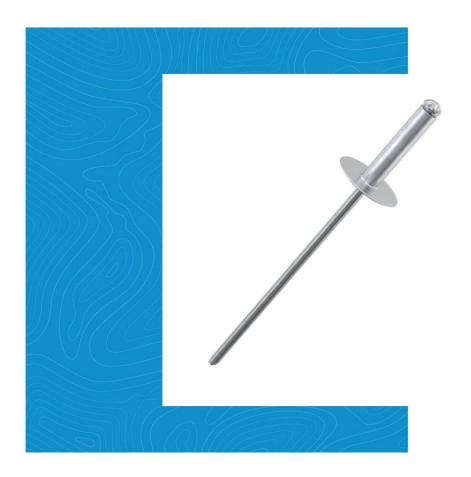
RIVETS/FASTENERS IN CATALOUGE



- 163. FLANGED BLIND RIVETS
- 166. BUTTON HEAD SOLID RIVETS
- 169. HAMMER DRIVE ROUND HEAD FASTENERS
- 171. COUNTERSUNK SOLID RIVETS
- 173. HAMMER DRIVE ROUND HEAD FASTENERS



FLANGED BLIND RIVETS



APPLICATIONS

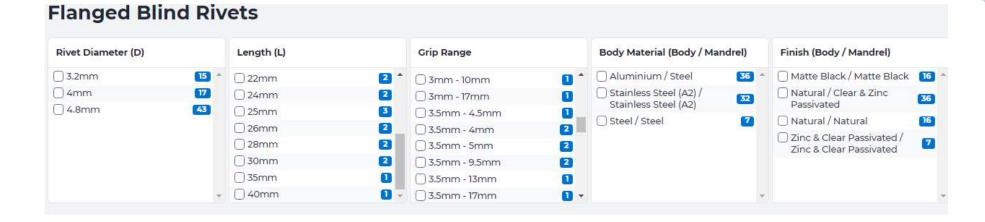
Most of them are used in Trailers, Air crafts, Machinery, Jeans, Small Electronics, Structural Battleships Beams, and Submersibles. Rivets are essential in the buildings, construction of cookware, jewellery, and so much more because they are cost-effective and the preferred way to permanently fasten a variety of materials like wood, metal, and plastic.

Rivet Diameter (D) Length (L) **Grip Range** Body Material (Body / Mandrel) Finish (Body / Mandrel) 3.2mm 15 Aluminium / Steel 36 🗌 Matte Black / Matte Black 🛛 🚺 🔺 * 22mm 2 * 2mm - 3.5mm Stainless Steel (A2) / Stainless Steel (A2) 4mm 17 Natural / Clear & Zinc 24mm 2 2mm - 4mm 2 36 32 Passivated 04.8mm 43 25mm 3 2mm - 9mm 16 Steel / Steel 7 Natural / Natural 26mm 2 2mm - 23mm Zinc & Clear Passivated / 7 28mm 2 2mm - 30mm Zinc & Clear Passivated 2 30mm 2.5mm - 5.5mm 2 35mm 2 3mm - 4mm + 🗍 40mm 1 3mm - 6mm 0 -

Flanged Blind Rivets

Flanged Blind Rivets

Rivet Diameter (D)	Length (L)		Grip Range		Body Material (Body / Ma	ndrel)	Finish (Body / Mandrel)	
3.2mm	6mm	5 📤	0.5mm - 1mm	0 _	🗌 Aluminium / Steel	36 *	🗌 Matte Black / Matte Black	16
🗍 4mm 🛛 🚺	0 8mm	6	🗌 1mm - 3.5mm	2	Stainless Steel (A2) /	32	🗌 Natural / Clear & Zinc	36
_] 4.8mm	10mm	.	🗍 1mm - 7.5mm		Stainless Steel (A2)		Passivated	
	0 12mm		🗌 1mm - 7mm	0	Steel / Steel	7	Natural / Natural	16
	() 14mm	9	🗌 1mm - 8mm	0			Zinc & Clear Passivated / Zinc & Clear Passivated	7
	16mm	8	🗌 1mm - 17mm	0			Zinc a clear Passivated	
	() 18mm	6	🗌 1mm - 23mm	0				
	↓ □ 20mm	6 🗸	() 1.5mm - 1mm	2 +				



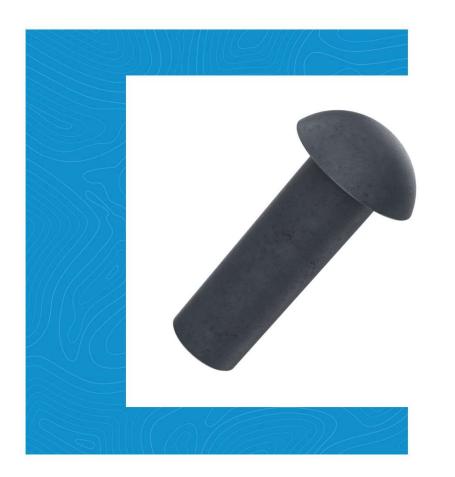
Flanged Blind Rivets

Rivet Diameter (D)		Length (L)	Grip Range	Body Material (Body / Mandrel)	Finish (Body / Mandrel)
] 3.2mm	15 *	22mm 2	• _ 4mm - 2mm	Aluminium / Steel	Matte Black / Matte Black
] 4mm	17	24mm 2	4.5mm - 5mm	Stainless Steel (A2) / Stainless Steel (A2)	Natural / Clear & Zinc Passivated
4.8mm	(43)	25mm 3	4.5mm - 24.5mm		
		26mm 2	5mm - 12mm	🗌 Steel / Steel 🛛 🚺	Natural / Natural
		28mm 2	🗍 5mm - 19.5mm 🚺		Zinc & Clear Passivated / Zinc & Clear Passivated
		30mm 2	6mm - 8mm 2		
		35mm 1	6.5mm - 6mm 2		
		0 40mm	- 🗍 6.5mm - 11.5mm 🚺 -	•	





BUTTON HEAD SOLID RIVETS



APPLICATIONS

Heating, Air Conditioning – Use our button head rivets for Blower Housings, Duct Joints, Hanger Straps, Louvres, Handles, Nameplates.

Button Head Solid Rivets

Max Rivet Diamete	er (R)	Length (L)		Grip Length		Material		Finish	
2mm	(40) *	6mm	18 🔺] 1mm	(4) ^	Marine Stainless Steel	122	🗌 Matte Black	135
2.5mm	20	8mm	18	2mm	8	(A4)		🗌 Natural	135
3mm	(40)	[] 10mm	22	2.5mm	6	Stainless Steel (A2)	148		
4mm	60	[] 12mm	22	🗍 3mm	8				
🗌 5mm	54	🗌 14mm	22	4mm	14				
🗌 6mm	56	🗌 16mm	22	4.5mm	12				
		🗌 18mm	22	🗍 5.5mm	8				
	· ·	20mm	22 🗸	6mm	10 🖵		-		

Button Head Solid Rivets

Max Rivet Diameter (R)		Length (L)		Grip Length		Material		Finish	
2mm	40 *	25mm	22 *	12.5mm	6 *	Marine Stainless Steel	122	Matte Black	135
2.5mm	20	28mm	10	🗌 13mm	12	(A4)		🗌 Natural	135
3mm	40	30mm	12	0 14mm	14	Stainless Steel (A2)	148		
🗌 4mm	60	🗍 35mm	12	🗌 15mm	6				
🗍 5mm	54	40mm	10	() 16mm	14				
🗌 6mm	56	45mm	6	0 17mm	8				
		🗍 50mm	6	() 18mm	14				
	-	() 60mm	2 -	() 19mm	2 -		-		

Button Head Solid Rivets

Max Rivet Diameter	(R)	Length (L)		Grip Length		Material		Finish	
2mm	40 *	20mm	22 *	0 6.5mm	4	Marine Stainless Steel	122	Matte Black	135
2.5mm	20	22mm	22	0 7mm	6	(A4)		🗌 Natural	135
3mm	(40)	25mm	22	0 7.5mm	14	🗍 Stainless Steel (A2)	148		
4mm	60	() 28mm	10		6				
5mm	54	30mm	12	() 9mm	10				
6mm	56	35mm	12	9.5mm	12				
		40mm	10	[] 11mm	22				
	~	() 45mm	6 -	12mm			~		

Button Head Solid Rivets

Max Rivet Diameter	r (R)	Length (L)		Grip Length		Material		Finish	
2mm	40 *	25mm	22 *	25mm	(4) *	🗍 Marine Stainless Steel	122	🗌 Matte Black	135
2.5mm	20	28mm	10	26mm	6	(A4)		🗌 Natural	135
🗍 3mm	(40)	30mm	12	30mm	2	Stainless Steel (A2)	148		
🗌 4mm	60	35mm	12	32mm	8				
🗍 5mm	54	0 40mm	10	34mm	2				
🗌 6mm	56	0 45mm	6	35mm	6				
		🗍 50mm	6	38mm	6				
	-	() 60mm	2 -	42mm	2 -		~		

Button Head Solid Rivets

Max Rivet Diamete	r (R)	Length (L)	Grip Length	Material	Finish
2mm	40 *	25mm 22	19mm 2	Marine Stainless Steel	Matte Black
2.5mm	20	28mm 10	20mm 8	(A4)	🗌 Natural 🛛 🚺 🚺
3mm	(40)	30mm 12	21mm 4	Stainless Steel (A2)	
🗌 4mm	60	35mm 12	22mm 4		
🗍 5mm	54	0 40mm	24mm 4		
🗌 6mm	56	_ 45mm 6			
		50mm 6	26mm 4		
	*	0 60mm 2	- 030mm 2	¥	





HAMMER DRIVE ROUND HEAD FASTENERS



APPLICATIONS

Hammer drive screws are commonly used for attaching nameplates, wall signs, and other similar applications. Drive screws feature round, un-slotted heads, multiple start threads with large helical angles, and an un-threaded pilot point.

Thread Size		Thread Length (L)		Nose Diameter (Max) (T)		Material		Finish	
No.00 (0.060 inch)	10 🔶] 1/2 inch 12.7mm	12 ^	0.049 inch 1.245mm	10 ^	Stainless Steel (A2)	67 ^	Matte Black	33
🗌 No.0 (0.075 inch)	10	1/4 inch 6.35mm	12	0.063 inch 1.6mm	10			🗌 Natural	34
No.2 (0.100 inch)	12	1/8 inch 3.175mm	6	0.083 inch 2.108mm	12				
No.4 (0.116 inch)	8	3/4 inch 19.05mm	0	0.096 inch 2.438mm	8				
No.6 (0.140 inch)	1	3/8 inch 9.525mm	14	0.116 inch 2.946mm					
No.8 (0.167 inch)	8	3/16 inch 4.763mm	8	0.136 inch 3.454mm	8				
🗌 No.10 (0.182 inch)	4	5/8 inch 15.875mm	2	0.150 inch 3.81mm	4				
No.12 (0.212 inch)	2	5/16 inch 7.938mm	12	0.177 inch 4.496mm	2.				

Thread Size		Thread Length (L)		Nose Diameter (Max) (T)		Material		Finish	
🗌 No.0 (0.075 inch)	10 *	1/2 inch 12.7mm	12 *	0.049 inch 1.245mm	10 -	🗍 Stainless Steel (A2)	67 ^	🗌 Matte Black	33
🗌 No.2 (0.100 inch)	12	1/4 inch 6.35mm	12	0.063 inch 1.6mm	10			🗌 Natural	34
🗌 No.4 (0.116 inch)	8	🗌 1/8 inch 3.175mm	6	0.083 inch 2.108mm	12				
No.6 (0.140 inch)		🗌 3/4 inch 19.05mm	0	0.096 inch 2.438mm	•				
🗌 No.8 (0.167 inch)	8	3/8 inch 9.525mm	14	0.116 inch 2.946mm					
No.10 (0.182 inch)	6	3/16 inch 4.763mm	8	0.136 inch 3.454mm	8				
🗌 No.12 (0.212 inch)	2	5/8 inch 15.875mm	2	0.150 inch 3.81mm	4				
No.14 (0.242 inch)	2	5/16 inch 7.938mm	12	0.177 inch 4.496mm	2.				2





COUNTERSUNK SOLID RIVETS



APPLICATIONS

Rivets which use mechanical force on parts to join the parts together permanently. The process of joining these parts together is riveting. Solid rivets are used in applications where **reliability and safety count**. A typical application for solid rivets can be found within the structural parts of aircraft.

Max Rivet Diamet	er (R)	Length (L)		Grip Length		Material		Finish	
2mm	20 *	() 6mm	6	3.5mm	2 _	Stainless Steel (A2)	120 *	Matte Black	60
🗌 3mm	20	🗌 8mm	8	4mm	6			🗌 Natural	60
4mm	26	[] 10mm	10	🗍 5mm	2				
5mm	26	[] 12mm	10	5.5mm	2				
🗍 6mm	28	🗌 14mm	10	🗍 6mm	(4)				
		() 16mm	[10]	🗍 6.5mm	2				
		🗌 18mm	[10]	🗍 7mm	6				
	~	20mm	10 🖕	0 7.5mm	4 -		~		

Countersunk Solid Rivets

Countersunk Solid Rivets

Max Rivet Diameter (R)		Length (L)	Grip Length		Material		Finish	
2mm	20 *	22mm	10 🔺 🗌 8.5mm	2 *	Stainless Steel (A2)	120	Matte Black	60 *
] 3mm	20	25mm	10 9mm	4			🗌 Natural	60
4mm	26	28mm	6 9.5mm	4				
🗍 5mm	26	30mm	6 🗌 10mm	4				
🗍 6mm	28	35mm	6 0 10.5mm	6				
			11.5mm	2				
		45mm	2 🗋 12mm	8				
			2 0 13mm	6				





HAMMER DRIVE ROUND HEAD FASTENERS



APPLICATIONS

Hammer drive screws are commonly used for attaching nameplates, wall signs, and other similar applications. Drive screws feature round, un-slotted heads, multiple start threads with large helical angles, and an un-threaded pilot point.

Thread Size		Thread Length (L)		Nose Diameter (Max) (T)		Material		Finish	
🗌 No.00 (0.060 inch)	10 ^	1/2 inch 12.7mm	12 ^	0.049 inch 1.245mm	10 ^	Stainless Steel (A2)	67 ^	Matte Black	33
No.0 (0.075 inch)	10	1/4 inch 6.35mm	12	0.063 inch 1.6mm	10			🗌 Natural	34
No.2 (0.100 inch)	12	1/8 inch 3.175mm	6	0.083 inch 2.108mm	12				
No.4 (0.116 inch)	8	🗍 3/4 inch 19.05mm	0	0.096 inch 2.438mm	8				
No.6 (0.140 inch)	1	3/8 inch 9.525mm	14	0.116 inch 2.946mm					
No.8 (0.167 inch)	8	🗍 3/16 inch 4.763mm	8	0.136 inch 3.454mm	8				
No.10 (0.182 inch)	6	🗌 5/8 inch 15.875mm	2	0.150 inch 3.81mm	4				
No.12 (0.212 inch)	2	5/16 inch 7.938mm	12	0.177 inch 4.496mm	2 .				

Thread Size		Thread Length (L)		Nose Diameter (Max) (T)		Material		Finish	
No.0 (0.075 inch)	10 *	1/2 inch 12.7mm	12 *	0.049 inch 1.245mm	10 🔶	Stainless Steel (A2)	67 *	🗌 Matte Black	33
No.2 (0.100 inch)	12	1/4 inch 6.35mm	12	0.063 inch 1.6mm	10			🗌 Natural	34
🗌 No.4 (0.116 inch)	8	1/8 inch 3.175mm	6	0.083 inch 2.108mm	12				
🗌 No.6 (0.140 inch)		🗍 3/4 inch 19.05mm	0	0.096 inch 2.438mm	•				
🗌 No.8 (0.167 inch)	8	3/8 inch 9.525mm	14	0.116 inch 2.946mm					
No.10 (0.182 inch)	6	3/16 inch 4.763mm	8	0.136 inch 3.454mm	8				
🗌 No.12 (0.212 inch)	2	5/8 inch 15.875mm	2	0.150 inch 3.81mm	4				
No.14 (0.242 inch)	2 -	5/16 inch 7.938mm	12 🗸	0.177 inch 4.496mm	2.		~		-





APPLICATIONS



Automotive engines such as cars, trucks, buses
 Stationary Power Generators
 Marine Engines

□ Air compressor engines, etc.

GEARS

Pumps Power plants

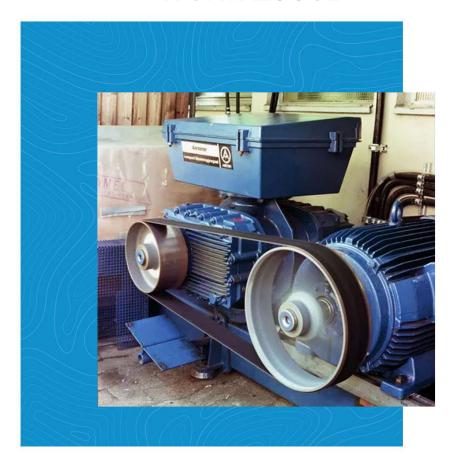
Material handling systems

□ Aerospace and aircraft

□ Railways



PULLEYS, GEARS & ROTARY COMPONENTS IN CATALOUGE



177. SPUR GEARS

- 181. 3M HD TIMING PULLEYS
- 183. T2.5 TIMING PULLEYS
- 185. 5M HTD TIMING PULLEYS
- 187. 8M HTD TIMING PULLEYS
- 189. AT10 TIMING PULLEYS
- 191. INTERNAL GEARS
- 193. BACKLASH CONTROL SPUR GEARS
- 195. ADJUSTING RINGS
- 197. PARALLEL KEYS



SPUR GEARS



APPLICATIONS

Examples of high-speed applications that use spur despite their high noise levels qears include consumer appliances such as washing machines and blenders. They are often used in aircraft engines, trains, and even bicycles. They are quite reliable and offer constant velocity. Other mechanical applications, include clocks, electric screwdrivers, material handling pumps, equipment, power plant machinery, etc.

Spur Gears

Pitch		Number of teeth	Pitch Circle Dia. (PCD)	Bore Diameter (B)	Material Specification
0.3 MOD	29 🔺	10 2	4.2mm1	2mm 🔟	Brass,
0.5 MOD	64	12 2	4.5mm	3mm	CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	14 4	4.8mm1	0 4mm 🛛 📵	
0.75 MOD	66	15 4	5mm1	5mm [16]	
		16 6	5.4mm	6mm 43	
		18 6	6mm 2	8mm 27	
		20 7	7mm	🗍 12mm 🛛 🛐	
	-	24 5	□7.2mm 1	🚬 🗋 15mm 🛛 🔁 .	

Spur Gears

Pitch		Number of teeth		Pitch Circle Dia. (PCD)	Bore Diameter (B)		Material Specification
0.3 MOD	29 🔺	(_)25	5 🔺	[] 7.2mm	3mm	55 *	Brass,
0.5 MOD	64	26	2	7.5mm3	4mm		CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	28	5	Bmm 1	5mm	16	
0.75 MOD	66	30	5	8.4mm	🗍 6mm	43	
		32	4	9mm3	8mm	27	
		35	3	9.6mm1	12mm	3	
		36	6	[]10mm [2		22	
		40	5	[] 10.5mm [2	No Bore	5.	4

Spur Gears

Pitch		Number of teeth		Pitch Circle Dia. (PCD)		Bore Diameter (B)		Material Specification
0.3 MOD	29 *	42	3 *	010.8mm	1	3mm	55 *	Brass,
0.5 MOD	64	45	5	[] 11.2mm		4mm	8	CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	48	5	🗌 11.25mm	0	🗍 5mm	16	
0.75 MOD	66	50	6	[] 12mm	5	🗌 6mm	43	
		55	6	12.5mm	0	🗌 8mm	27	
		56	6	12.8mm	2	[] 12mm	3	
		58	4	13mm	0	() 15mm	22	
		60	6	13.5mm	3	🗍 No Bore	5 .	1

Spur Gears

Pitch		Number of teeth	Pitch Circle Dia. (PCD)	Bore Diameter (B)	Material Specification
0.3 MOD	29 *	62 4	14mm	🗍 3mm 🛛 🗾 *	🗍 Brass,
🗌 0.5 MOD	64	64 6	14.4mm 3	4mm8	CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	65 4	15mm	5mm 16	
0.75 MOD	66	66 3	□16mm 3	6mm 43	
		68 4	□ 16.8mm 🚺	8mm 27	
		70 6	□ 17.5mm 1	🗌 12mm 🗾	
		72 6	18mm 3	□ 15mm 22	
	-	75 5 -	☐ 18.75mm	🗌 No Bore 🛛 🗗 🚽	4

Spur Gears

Pitch		Number of teeth	P	Pitch Circle Dia. (PCD)		Bore Diameter (B)		Material Specification
0.3 MOD	29 *	80	6 6]19.2mm3	•	3mm	55 *	Brass,
0.5 MOD	64	84	2] 19.5mm		🗌 4mm		CuZn38Pb2/CuZn39Pb3
	31	85	4] 19.8mm		5mm	16	
0.75 MOD	66	90	6)20mm 🛛 🕰		🗌 6mm	43	
		95	4			0 8mm	27	
		96)21.6mm		12mm	3	
		0100	6 0]22.4mm 2		🗌 15mm	22	
	*	105	4 • C	22.5mm	-	🗌 No Bore	5 🗸	<

Pitch		Number of teeth	Pitch Circle Dia. (PCD)	Bore Diameter (B)		Material Specification
0.3 MOD	29 ^	95	 24mm 24mm 	* 3mm	55 *	Brass,
0.5 MOD	64	96	1 25mm 2	4mm	8	CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	100	6 25.6mm	5mm	16	
0.75 MOD	66	105	 ✓ ✓	6mm	43	
		0 108	1 027mm 2	Bmm	27	
		110	(27.5mm 2	12mm	3	
		115	2 28mm 2	15mm	22	
	*	120	(4) ↓ (28,8mm) (2)	• No Bore	5 -	4

Spur Gears

Pitch	Number of teeth	Pitch Circle Dia. (PCD)	Bore Diameter (B))	Material Specification
0.3 MOD 29	↑ □95	▲ U 28.8mm	▲] 3mm	55 *	Brass,
0.5 MOD 64	96	29mm 2	 4mm	8	CuZn38Pb2/CuZn39Pb3
0.8 MOD 3	100	6 _ 30mm 4) 5mm	16	
0.75 MOD 60	105	4 J3Imm 2	G 6mm		43 27
	□ 108	1 () 31.5mm	■ _ 8mm		
	() 110	32mm 3		3	
	○ 115	2 32.4mm	() 15mm	22	
		32 5mm 2	- No Bore		1
	- 120	32.5mm 2 	→ No Bore	5 -	4.

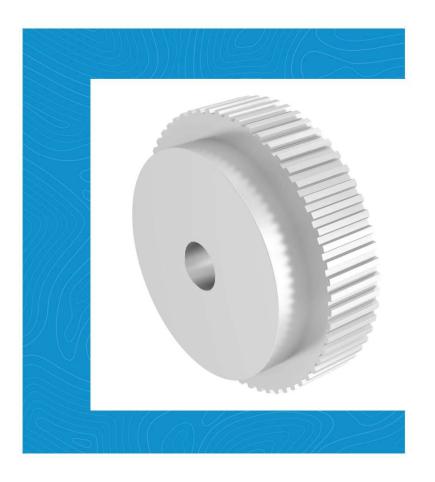
Spur Gears

Pitch		Number of teeth	Pitch Circle Dia. (PCD)	Bore Diameter (I	B)	Material Specification
0.3 MOD	29 *	95	🕢 🔺 🗌 33.75mm 📃	• 3mm	55 *	🗍 Brass,
0.5 MOD	64	96	1 34mm	0 4mm		CuZn38Pb2/CuZn39Pb3
0.8 MOD	31	0100	6 35mm 2	5mm	16	
0.75 MOD	66	105	36mm 5	6mm	43	
		108	1 37.5mm 4	8mm	27	
		110	38.4mm1	12mm	3	
		115	2 40mm 3	🗌 15mm	22	
		120	41.25mm 2	- No Bore	5 -	4





3M HD TIMING PULLEYS



APPLICATIONS

High Torque Drive (HTD) Belts have a parabolic tooth profile that enables increased surface area contact between the pulleys and the belts. Timing belt pulleys are utilized when two shafts need to be precisely linked for homogeneous rotation. Applications include:

- (1) Washing machines
- (2) Alternators in automobiles.
- (3) Flour mills.
- (4) Milling Machines, Drilling machine, etc.
- (5) Paper mills & Conveyors

3M HTD Timing Pulleys

Material		Belt Width	Pitch (P)		Number of teeth		PCD	
Aluminium	31 *	[] 6mm	20 * 🗌 3mm	31 *	0 10	2 *	9.55mm	2
		🗍 9mm			12	2	🗌 11.46mm	2
					14	2	13.37mm	2
					15	2	14.32mm	2
					16	2	🗍 15.28mm	2
					18	2	🗌 17.19mm	2
					20	2	🗍 19.1mm	(2)
	*		*		21	2 🗸	20.05mm	2

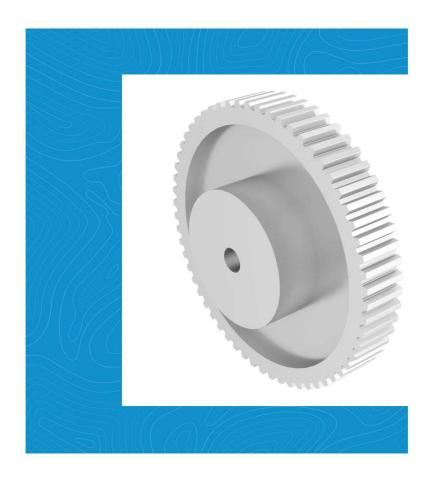
3M HTD Timing Pulleys

Material		Belt Width		Pitch (P)		Number of teeth		PCD	
Aluminium	31 *	6mm	20	3mm	31 *	22	1 *	21.01mm	
		🗍 9mm				24	0	22.92mm	0
						26		24.83mm	0
					28	0	26.74mm	0	
					30 32	30	0	28.65mm	0
						32	2	30.56mm	2
						36	2	34.38mm	2
						40	0_	38.2mm	0

3M HTD Timing Pulleys Belt Width Pitch (P) Number of teeth PCD Material 31 * 🗌 6mm 20 * 3mm Aluminium 31 ^ 30 1 ^ 28.65mm 0 09mm n 32 30.56mm 2 2 34.38mm 36 2 2 40 38.2mm 0 2 044 42.02mm 2 48 ______45.84mm 0 60 57.3mm 0 -- 72 68.75mm



T2.5 TIMING PULLEYS



APPLICATIONS

High Torque Drive (HTD) Belts have a parabolic tooth profile that enables increased surface area contact between the pulleys and the belts. Timing belt pulleys are utilized when two shafts need to be precisely linked for homogeneous rotation. Applications include:

- (1) Washing machines
- (2) Alternators in automobiles.
- (3) Flour mills.
- (4) Milling Machines, Drilling machine, etc.
- (5) Paper mills & Conveyors

T2.5 Timin	g Pulley	/S							
Pitch (P)		Number of teeth		PCD		Belt Width		Material	
2.5mm		24	0 📤	[] 19.1mm	0 _	6mm		Aluminium	11 *
		25	0	19.89mm	0				
		26	0	20.69mm	0				
		28	0	22.28mm	0				
		30	0	23.87mm	0				
		32	0	25.46mm	0				
		36	0	28.65mm					
		40		31.83mm	1.		*		~

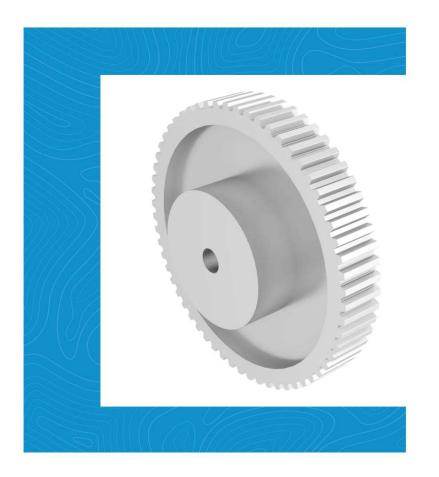
T2.5 Timing Pulleys

Pitch (P)	Number of teeth	PCD		Belt Width		Material	
] 2.5mm 🛄	▲ 28	1 ^ 22.28mm	0 *	🗍 6mm	11 *	Aluminium	
33 36 40 44	30	1 23.87mm	0				
	32	1 = 25.46mm	0				
	36	1 28.65mm	0				
	☐ 40	1 🗋 31.83mm	0				
	0 44	1 🗍 35.01mm					
	48	1 🗍 38.2mm	0				
	- 0 60	1 - 47.75mm			*		





5M HTD TIMING PULLEYS



APPLICATIONS

High Torque Drive (HTD) Belts have a parabolic
tooth profile that enables increased surface area
contact between the pulleys and the belts. Timing
belt pulleys are utilized when two shafts need to be
precisely linked for homogeneous rotation. Belt
Drives are used in the following applications:
(1) Washing machines

- (2) Alternators in automobiles.
- (3) Milling Machines, Drilling machine, etc.
- (4) Paper mills & Conveyors

Pitch (P)		Number of teeth		PCD		Belt Width		Bore Diameter (B)	
🗍 5mm	43 *	0 12	0 📤	[] 19.1mm	0 🗅	9mm	15 *	4mm	0
		14	3	22.28mm	3	() 15mm	14	6mm	33
		15	3	23.87mm	3	25mm	[14]	8mm	9
	16	3	25.46mm	3					
		0 18	3	28.65mm	•				
		20	3	🗍 31.83mm	3				
		21	3	33.42mm	3				
	*	22	3 .	35.01mm	3 🗸				

5M HTD Timing Pulleys

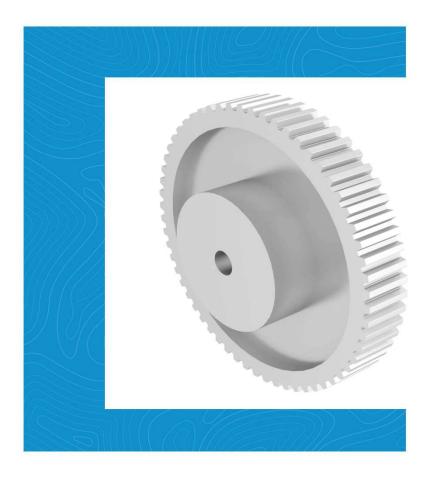
5M HTD Timing Pulleys

Pitch (P)	Number of teeth	PCD		Belt Width		Bore Diameter (B)	
] 5mm	43 ^ () 22	3 ^ 🗍 35.01mm	3 ^	0 9mm	15 *	() 4mm	0
	24	3 🗍 38.2mm	3	🗌 15mm	14	6mm	33
	26	3 🗍 41.38mm	3	25mm	14	🗌 8mm	9
28 30 32 36	28	3 _ () 44.56mm	3_				
	30	3 🗍 47.75mm	3				
	32	3 🗍 50.93mm	3				
	36	3 🗍 57.3mm	3				
	÷ ()40	🛐 🚽 🗍 63.66mm	13 🗸		-		





8M HTD TIMING PULLEYS



APPLICATIONS

High Torque Drive (HTD) Belts have a parabolic tooth profile that enables increased surface area contact between the pulleys and the belts. Timing belt pulleys are utilized when two shafts need to be precisely linked for homogeneous rotation. They are used in the following applications:

- (1) Washing machines to transfer power from the motor shaft to the drum shaft.
- (2) Alternators in automobiles
- (3) Milling Machines, Drilling machine, etc.
- (4) Paper mills & Conveyors, etc.



8M HTD Timing Pulleys

Pitch (P)		Number of teeth		PCD		Belt Width		Bore Diameter (B)	
8mm	84 ^	22	4	56.02mm	4	20mm	21 ^	12mm	6 ^
		24	3	61.12mm	4	30mm	21	15mm	28
		26	3	66.21mm	6	50mm	21	18mm	8
		28	4	71.3mm	4	85mm	21	20mm	14
		30	4	76.39mm	4			24mm	4
		32	4	81.49mm	4				
		34	4	86.58mm	4				
	*	36	4.	91.67mm	4.				-





AT10 TIMING PULLEYS

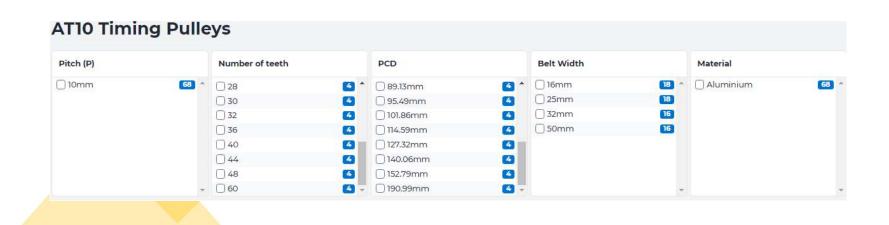


APPLICATIONS

The AT10 timing pulleys are designed for all types of AT10 polyurethane belts with pitch 10.0 mm. They are typically used in machine tools, packaging machines, printers, single-purpose machines, in the food, paper and glass industry and many other industries.

Pitch (P)		Number of teeth		PCD		Belt Width		Material	
] 10mm	68 *	15	2 ^	47.75mm	2 📤	0 16mm	18 *	Aluminium	68
		16	2	50.93mm	2	25mm	18		
		18	6	57.3mm	4	32mm	16		
		19	3	060.48mm	4	🗍 50mm	16		
		20	(4)	🗌 63,66mm	6				
		22	6	0 70.03mm	6				
		24	6	76.39mm	6				
	-	25	6 -	79.58mm	4.				

Pitch (P)		Number of teeth		PCD		Belt Width		Material	
] 10mm	68 *	26	<u>(4</u> •	0 82.76mm	<u>4</u> ×	[] 16mm	18 🔶	Aluminium	68
		27	4	🗌 85.94mm	(4)	25mm	18		
		28	4	🗌 89.13mm	(4)	32mm	16		
		30	4	🗍 95.49mm	(4)	50mm	16		
		32	6	🗌 101.86mm	(4)				
		36	4	114.59mm	4				
		0 40	4	127.32mm	4				
		0 44	6	140.06mm	4				





INTERNAL GEARS



APPLICATIONS

Internal gears are primarily used for **planetary** gear drives. Spur gears are generally seen as best for applications that require speed reduction and torque multiplication, such as ball mills and crushing equipment. Gears are used for the transmission of power. Internal Gears are gear teeth generated in the internal diameter of a cylinder while external gears have the gear teeth generated on the outside diameter of the component.

Pitch (m)		Number of teeth		Face Width (b)		Pitch Circle Dia. (PCD)		Material	
0.5MOD	5 *	0 60	3 ^	3mm	5 *] 30mm	1	Brass	10
	5	80	3	7mm	5	40mm	1	🗌 Steel	5
	5	090	3	[] 10mm	5	() 45mm			
		100	3			48mm	0		
		120	3			50mm	0		
						🗌 60mm	2		
						🗌 64mm			
						72mm	0.		

Internal Gears

Internal Gears

Pitch (m)	Number of teeth		Face Width (b)		Pitch Circle Dia. (PCD)	Material	
0.5MOD	60	3 ^	3mm	5 ^	0 60mm	2 *	Brass	10
0.8MOD	3 080	3	7mm	5	0 64mm	0	🗌 Steel	5
	90	3	[] 10mm	5	72mm	0		
	0 100	3			0 80mm	2		
	120	3			🗍 90mm	0		
					0 96mm	0		
					🗌 100mm	0		
		÷.			() 120mm	1		





BACKLASH CONTROL SPUR GEARS



APPLICATIONS

Backlash is necessary **to provide the running clearance needed to prevent binding of the mating gears**, which can result in heat generation, noise, abnormal wear, overload, and/or failure of the drive transmissions. Applications include:

- Conveyor systems & Machine Tools
- Speed reducers.
- Engines and mechanical transportation systems.
- Gear pumps and motors.

Backlash Control Spur Gears

Pitch (m)	Number of teeth		Pitch Circle Dia. (I	PCD)	Bore Diameter (De	d)	Material	
1.5MOD 4	▲ <u>30</u>	1 ^	60mm	2 *	12mm	3 *	🗌 Steel	12
	40	2	70mm	0	🗌 15mm	3		
2MOD 4	50	2	75mm	0	20mm	5		
	60	2	080mm	2	25mm	0		
	70	0	90mm	0				
	80	2	[] 100mm	2				
	100		120mm	3				
	_ 120	0.				~		





ADJUSTING RINGS



APPLICATIONS

Commonly found in power transmission applications, shaft collars are ring-shaped plastic or metal devices that clamp around a shaft. The purpose of the collar is usually to hold motor components, gear assemblies, sprockets, bearings, and other parts in place and sometimes facilitate their proper movement.

Adjusting Rings

Inside Diameter (D)		Outside Diameter (d2)		Width (D3)		Set Screw (W)		Material	
04mm	2 📤	08mm	2 _	5mm	2 📤	🗌 M3 X 4mm	4 _	🗌 Black Stainless Steel	36
🗍 5mm	2	[] 10mm	2	6mm	2	🗌 M4 X 5mm	2	(A2)	
6mm	2	[] 12mm	2	8mm	4	🗌 M4 X 6mm	2	Stainless Steel (A2)	36
0 8mm	2	🗌 16mm	2	010mm	6	M5 X 8mm	6		
9mm	2	() 18mm	2	[] 12mm	10	🗌 M6 X 8mm	14		
[] 10mm	2	20mm	4	[] 14mm	6	🗌 M6 X 10mm	2		
🗌 11mm	2	22mm	4	[] 16mm	20	🗌 M8 X 10mm	6		
[] 12mm	2.	25mm	4.	[] 18mm	8.	M8 X 12mm	14 +		

Adjusting Rings

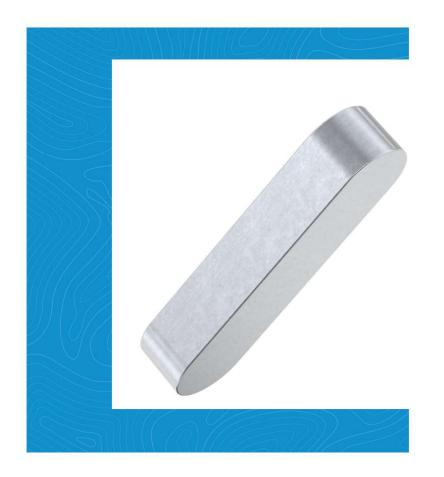
Inside Diameter (D)		Outside Diameter (d2)		Width (D3)		Set Screw (W)		Material	
🗌 13mm	2 *	28mm	2 ^	08mm	4	🗌 M5 X 8mm	6 *	Black Stainless Steel	36
14mm	2	32mm	4	[] 10mm	6	🗌 M6 X 8mm	14	(A2)	
15mm	2	36mm	2	12mm	10	M6 X 10mm	2	Stainless Steel (A2)	36
🗌 16mm	2	40mm	6	14mm	6	🗌 M8 X 10mm	6		
🗌 18mm	2	45mm	0	[] 16mm	20	M8 X 12mm	14		
20mm	2	50mm	•	[] 18mm	8	M10 X 16mm	8		
22mm	2	56mm	6	20mm	6	M10 X 20mm	6		
24mm	2 +	63mm	2 -	22mm		M12 X 20mm	8		

Adjusting Rings

Inside Diameter (D)		Outside Diameter	r (d2)	Width (D3)		Set Screw (W)		Material	
25mm	2 ^	56mm	6 *	🗌 8mm	<u>(4</u>	M5 X 8mm	6 *	Black Stainless Steel	36
26mm	2	🗌 63mm	2	[] 10mm	6	M6 X 8mm	14	(A2)	
28mm	2	70mm	2	() 12mm	10	🗌 M6 X 10mm	2	Stainless Steel (A2)	36
	2	080mm	4	[]]14mm	6	M8 X 10mm	6		
	2	90mm	2	16mm	20	M8 X 12mm	14		
34mm	2	[] 100mm	4	[] 18mm	8	M10 X 16mm	8		
_) 35mm	2	🗌 110mm	4	20mm	6	M10 X 20mm	6		
36mm	2 -	125mm	4 -	22mm	8 -	M12 X 20mm	8 🗸		



PARALLEL KEYS



APPLICATIONS

A Shaft key is a piece of metal used to connect a rotating machine element to the shaft. A shaft key prevents a relative rotation between the two parts and may enable torque transmission to occur. Applications include the following: light-duty or low power transmission, Machine tool, heavy-duty application, for preventing rotation of gears and pulleys on the shaft.

Parallel Keys

Height (H)		Length (L)		Width (B)		Material	Finish	
3mm	8 *	8mm	2 📤	3mm	8 *	Marine Stainless Steel (A4) 244	A Matte Black	122 *
4mm	26	10mm	8	4mm	26		Natural	122
5mm	24	12mm	10	5mm	24			
6mm	40	14mm	8	6mm	40			
7mm	46	16mm	12	8mm	(46)			
8mm	72	18mm	10	0 10mm	38			
9mm	28	20mm	12	12mm	34			
	-	22mm	8	14mm	28 🗸		*	-

Parallel Keys

Height (H)		Length (L)		Width (B)		Material		Finish	
3mm	8 *	25mm	12 🔺	3mm	8 *	Marine Stainless Steel (A4)	244 *	Matte Black	122 *
4mm	26	28mm	4	4mm	26			Natural	122
5mm	24	30mm	14	5mm	24				
6mm	40	32mm	10	6mm	40				
7mm	46	35mm	2	8mm	46				
8mm	72	36mm	14	010mm	38				
9mm	28	38mm	2	12mm	34				
		40mm	14	14mm	28 🖕		~		



Parallel Keys

Height (H)		Length (L)		Width (B)		Material		Finish	
3mm	8 -		10	3mm	8 *	Marine Stainless Steel (A4)	244 *	Matte Black	122 ^
4mm	26	50mm	14	4mm	26			Natural	122
5mm	24	☐ 54mm	2	5mm	24				
6mm	40	55mm	6	6mm	(40)				
7mm	46	☐ 56mm	6	🗌 8mm	46				
8mm	72	60mm	10	0 10mm	38				
9mm	28	☐ 63mm	8	[] 12mm	34				
	*	65mm	2 -	14mm	28 🗸		*		-

Parallel Keys

Height (H)		Length (L)		Width (B)		Material	Finish	
3mm	8 *	070mm	10 *	3mm	8 *	Marine Stainless Steel (A4)	🕰 🔺 🗌 Matte Black	122 ^
4mm	26	75mm	2	4mm	26		🗌 Natural	122
5mm	24	080mm	8	🗍 5mm	24			
6mm	40	90mm	8	6mm	40			
7mm	46	100mm	10	8mm	46			
8mm	72	[] 110mm	3	0 10mm	38			
9mm	28	120mm	2	[] 12mm	34			
	*	125mm	2 🗸	14mm	28 🖕			





WASHERS



APPLICATIONS

The primary purpose of most washers is to evenly distribute the load of the threaded fastener with which they are used. Threaded fasteners stress the material in which they are driven. Driving a screw into wood, for example, may cause the wood to crack around the surface. Most notably, washers protect the surface from damage during installation. They distribute the pressure and prevent the fastener from moving or corroding.



WASHERS IN CATALOUGE



203. BELLEVILLE WASHERS

205. CRINKLE WASHERS

207. DISC SPRINGS

209. FEMALE SPHERICAL SEAT WASHERS

211. MALE SPHERICAL SPRING WASHERS

213. IMPERIAL RECTANGULAR PROFILE SPRING WASHERS

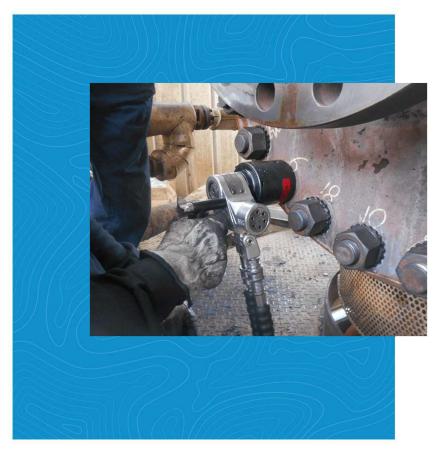
215. METRIC RECTANGULAR PROFILE SPRING WASHERS

218. SEALING WASHERS



WASHERS

IN CATALOUGE CONTD.



220. SPLIT SPRING WASHERS

222. SPRING WASHERS

224. SQUARE PROFILE SPRING WASHERS

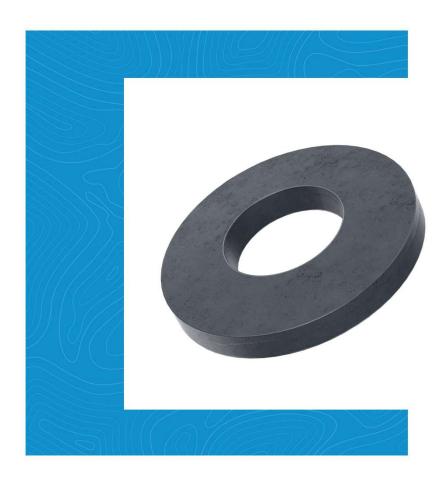
226. SQUARE TAPER WASHERS FOR U-SECTIONS

228. SHOULDER WASHERS

230. IMPERIAL EXTERNAL LOCKING WASHERS



BELLEVILLE WASHERS



APPLICATIONS

Belleville Washers are often used to solve vibration, thermal expansion, relaxation and bolt creep problems. Belleville washers are typically used in conditions of high current loading or cycling. They are used to absorb vibration and can maintain pre-load in bolted joints, indicating correct pre-load based on the gap between adjacent washers. They can also help with "bolt creep" or stress relaxation between a bolt and washer.

Belleville Washers

For Use With Thread Size		External Diameter (OD)		Thickness (T)		Material	F	Finish	
🗌 M3 (3mm)	4	07mm	4	0.6mm	(4) <u>*</u>	🗌 Acetal 🧕 🖉	• C	Matte Black	26
M3.5 (3.5mm)	0	7.54mm	0	0.69mm	0	🗌 Marine Stainless Steel (A4) [26]	C	Natural	35
🗌 M4 (4mm)	5	0 8.03mm		0.76mm	0	Stainless Steel (A2)			
🗍 M5 (5mm)	6	0 9mm	6	0.79mm	0				
🗌 M6 (6mm)	6	0 9.27mm	0	🗌 0.89mm	2				
🗌 M8 (8mm)	5	🗍 10.57mm	0	0.97mm					
🗌 M10 (10mm)	6	🗍 11mm	6	🗍 0.99mm					
() M12 (12mm)	6	() 11.37mm	0.	1mm	4 -		~		

Belleville Washers

For Use With Thread Si	ze	External Diameter (OD)	Thickness (T)		Material	Finish	
🗌 M10 (10mm)	6 *	0 14mm		- 3	🗋 Acetal 🛛 🧕 *	Matte Black	26
🗌 M12 (12mm)	4	14.33mm	1 0 1.22mm	0	🗌 Marine Stainless Steel (A4) 🔼	🗌 Natural	35
🗌 M14 (14mm)	4	0 16.76mm	1 🗌 1.4mm	0	Stainless Steel (A2)		
🗌 M16 (16mm)	6	() 18mm	3 🗌 🗌 1.5mm	6			
🗌 M18 (18mm)	6	21.54mm	2 🗌 2mm	6			
🗌 M20 (20mm)	6	23mm	3 🖉 🗋 2.5mm	6			
🗌 M22 (22mm)	6	29mm	3 🖸 3mm	(4)			
M24 (24mm)	4 -	35mm	4 🗸 🗍 3.5mm	4 -			

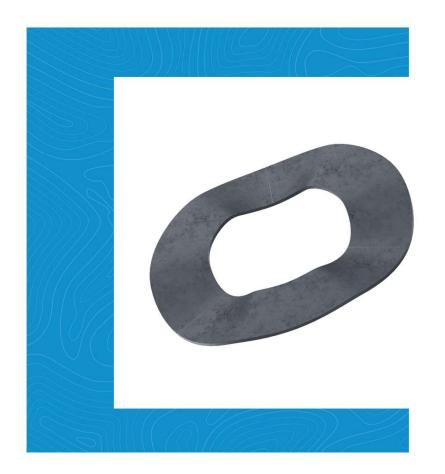
Belleville Washers

For Use With Thread Siz	ze	External Diameter (OD))	Thickness (T)		Material	Finish	
🗌 M10 (10mm)	6 *	23mm	6	2.5mm	6 *	🗌 Acetal 🧕	Matte Black	26
🗌 M12 (12mm)	4	() 29mm	4	3mm	6	🗌 Marine Stainless Steel (A4) [26]	🗌 Natural	35
🗌 M14 (14mm)	(4)	35mm	4	3.5mm	4	Stainless Steel (A2) 26		
🗌 M16 (16mm)	4	🗍 39mm	4	🗍 4mm	4			
M18 (18mm)	6	0 42mm	6	0 4.5mm	4			
🗌 M20 (20mm)	6	0 45mm	4	🗌 5mm	4			
M22 (22mm)	6	🗌 49mm	6	🗍 5.5mm	6			
M24 (24mm)	4 -	() 56mm	4 -	6mm	4 🗸		*	





CRINKLE WASHERS



APPLICATIONS

Crinkle Washers are a component designed for pre-loading and spacing, to improve the number of points of contacts and provide increased stability. Crinkle washers are commonly used in many electronic, food, chemical and construction applications.

For Use With Thread Size	External Diameter (D)	Thickness (T)		Material		Finish	
🗌 M1.6 (1.6mm) 🛛 💈	▲] 3.7mm	2 ^	0.16mm	8 *	Stainless Steel (A2)	26 ^	Matte Black	13
_ M2 (2mm) 2	4.6mm	2	0.2mm	2			🗌 Natural	13
🗌 M2.5 (2.5mm) 🔹 🔼	5.8mm	2	0.28mm	2				
🗌 M3 (3mm) 🔹 💈	0.4mm	2	0.3mm	2				
🗌 M3.5 (3.5mm) 🛛 🔁	6.9mm	2	0.4mm	4				
🗌 M4 (4mm) 🔹 💈	08.1mm	2	0.55mm	4				
🗌 M5 (5mm) 🛛 🔁	9.2mm	2	0.7mm	4				
🗌 M6 (6mm) 🛛 🔼	11.5mm	2 +		1.1.1.1				

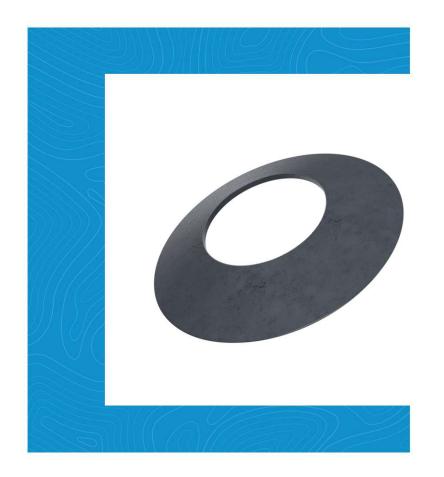
Crinkle Washers

Crinkle Washers

For Use With Thread	Size	External Diameter (D)		Thickness (T)		Material		Finish	
🗌 M4 (4mm)	2 *	8.1mm	2 *	0.16mm	8 *	Stainless Steel (A2)	26 *	🗌 Matte Black	13 *
M5 (5mm)	2	0.2mm	2	0.2mm	2			🗌 Natural	13
M6 (6mm)	2	🗌 11.5mm	2	0.28mm	2				
M8 (8mm)	2	[] 15mm	2	0.3mm	2				
M10 (10mm)	2	[] 19.6mm	2	0.4mm	4				
() M12 (12mm)	2	22mm	2	0.55mm	4				
🗌 M16 (16mm)	2	27.8mm	2	0.7mm	4				
M20 (20mm)	2 -	34.7mm	2 -						



DISC SPRINGS



APPLICATIONS

A disc spring is **a spring washer with a conical shape**. This shape gives the spring washer its flexible effect. Disc springs are also called Belleville spring washers and conical spring washers. The properties of the disc spring make it unique in applications where space is limited – but where high force is wanted.

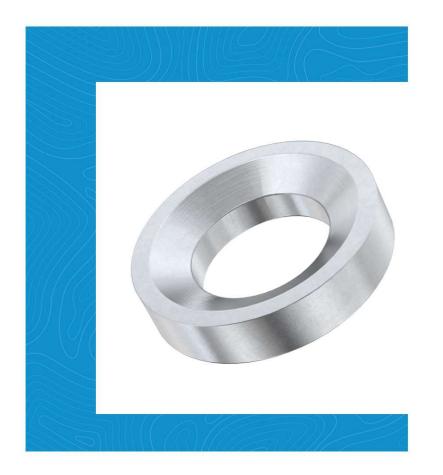
External Diameter (OD)	Hole Dia. (ID)	Thickness (T)		Material		Finish	
6mm 🛛 🕻	3.2mm	▲ ○ 0.2mm	2 📤	Stainless Steel (A1)	80 *	Matte Black	40
8mm 🖪	0 4.2mm	10 0.25mm	2			Natural	40
10mm 6	5.2mm	6 🗍 0.3mm	4				
12mm6	0.2mm	0.4mm	10				
🗌 12.5mm 🛛 🖪	7.2mm	2 0.5mm	12				
] 14mm 2	0 8.2mm	10 0.6mm	4				
] 15mm [2]	0.2mm		6				
🗍 16mm 🚺 🥫	. 10.2mm	10 _ 0.8mm	6 🗸				

External Diameter (OD)	Hole Dia. (ID)	Thickness (T)		Material		Finish	
🗍 16mm 🚺 🗖	0 8.2mm	10 * 🗍 0.9mm	6	Stainless Steel (A1)	80 *	Matte Black	40
🗌 18mm 🚺	0 9.2mm		6			Natural	40
20mm 12	0 10.2mm	10 ()1.1mm	4				
🗌 25mm 🛛 🚺 🔤	12.2mm	■ □ 1.25mm	4				
28mm 🛃	14.2mm		6				
🗌 31.5mm 🛛 🕢 🕢	🗌 16.3mm	① 1.75mm ③	2				
🗌 35.5mm 🛛 🖪	18.3mm		4				
🗌 40mm 🥫 💂	20.4mm		2 -		*		

External Diame	ter (OD)	Hole Dia. (ID)		Thickness (T)		Material		Finish	
🗌 16mm	6 *	0 8.2mm	10 *	0.9mm	6 *	🗍 Stainless Steel (A1)	80 *	🗌 Matte Black	40
0 18mm	6	🗌 9.2mm	4	🗌 1mm	6			Natural	40
20mm	12	010.2mm	10	🗌 1.1mm	4				
25mm		12.2mm	8	() 1.25mm	4				
28mm	4	14.2mm	6	() 1.5mm	6				
31.5mm	4	16.3mm	4	() 1.75mm	2				
35.5mm	6	18.3mm	4	2mm	4				
40mm	6 -	20.4mm	6 -	2.25mm	2 -		-		



FEMALE SPHERICAL SEAT WASHERS



APPLICATIONS

The spherical washer, used in combination with the conical seat, **guarantees a safe locking function on non-parallel bearing surfaces – when the hole and bolt are not perfectly aligned**. Working together, the spherical washer and conical seat compensate each other to a maximum of 3 degrees.

Female Spherical Seat Washers

For Use With Thread Size	External Diameter (OD)	Washer Height (H)		Material	Finish	
🗌 M6 (6mm) 🛛 🛐 ^	[] 12mm 3	* 🗍 2.8mm	3 ^	Marine Stainless Steel	🗍 Matte Black	15
🗌 M8 (8mm) 🛛 🖪	17mm 4	3.5mm	4	(A4)	🗌 Natural	16
🗌 M10 (10mm) 🛛 🧉	21mm 4	4.2mm	4	Stainless Steel (A2) 15		
🗌 M12 (12mm) 🛛 🖪	24mm 4	5mm	4			
🗌 M14 (14mm) 🛛 🧉	28mm 4	5.6mm	4			
🗌 M16 (16mm) 🛛 🗳	30mm 4	06.2mm	4			
🗌 M20 (20mm) 🛛 🧉	36mm 4	07.5mm	4			
🗌 M24 (24mm) 🛛 🖪 🖕	044mm 4	_ () 9.5mm	4 .			





MALE SPHERICAL WASHERS



APPLICATIONS

The spherical washer, used in combination with the conical seat, **guarantees a safe locking function on non-parallel bearing surfaces – when the hole and bolt are not perfectly aligned**. Working together, the spherical washer and conical seat compensate each other to a maximum of 3 degrees.

Male	Spher	ical W	ast	ners

For Use With Thread Size	External Diameter (W)	Washer Height (H)		Material	Finish	
🗌 M6 (6mm) 🛛 🖪	12mm 4	2.3mm	4	Marine Stainless Steel	* 🗌 Matte Black	20
M8 (8mm)	🗌 17mm 🛛 🛃	3.2mm	4	(A4)	🗌 Natural	20
M10 (10mm)	21mm	4mm	4	Stainless Steel (A2)		
M12 (12mm)	24mm4	4.6mm	4			
🗌 M14 (14mm) 🧉	28mm4	5mm	6			
M16 (16mm) 4	30mm	5.3mm	4			
M20 (20mm)	36mm	6.3mm	4			
M24 (24mm)		. 08.2mm	6.			

Male Spherical Washers

For Use With Thread Size	External Diameter (W)	Washer Height (H)	Material	Finish
🗌 M14 (14mm) 🛛 🛃 *	28mm 4 *	5mm 4 *	Marine Stainless Steel	Matte Black 20
🗌 M16 (16mm) 🛛 🔼 🔺	30mm 4	5.3mm 4	(A4)	Natural 20
🗌 M20 (20mm) 🥂 🧧 🔄	36mm 4	6.3mm 4	Stainless Steel (A2) 24	
🗌 M24 (24mm) 🛛 🖪	🗌 44mm 🛛 🔼	8.2mm		
🗌 M30 (30mm) 🛛 🔼 💈	56mm 2	11.2mm 2		
🗌 M36 (36mm) 📀 🔼	68mm 2	14mm 2		
🗌 M42 (42mm) 🛛 🔼	☐ 78mm	17mm 2		
🗍 M48 (48mm) 🛛 🛛 💂	92mm2 -	21mm 2 🗸		





IMPERIAL RECTANGULAR

PROFILE SPRING WASHERS



APPLICATIONS

Spring washers are locking washers that are used when there is a need to prevent a fastener from loosening as a result of vibration. They are also often called split lock or split ring washers.

Size		External Diamete	er (OD)	Uncompressed Hei	ght	Material	Finish	
1 inch	4 _	0.15 inch	2 📤	(L)		Marine Stainless Steel	* 🗌 Matte Bla	ck 46 *
1.1/2 inch	4	0.25 inch	3	0.02 inch	2 📤	(A4)	🗌 Natural	47
1.1/4 inch	4	0.68 inch	6	0.04 inch	•	Stainless Steel (A1) 48		
1.1/8 inch	4	0.137 inch	2	0.07 inch	4	Stainless Steel (A2)		
1.3/8 inch	4	0.172 inch	6	0.022 inch	2			
1/2 inch	4	0.195 inch	4	0.035 inch	4			
1/4 inch	4	0.209 inch	6	0.047 inch	8			
🗍 3/4 inch 🚺 📮	0.236 inch	4 .	0.055 inch	4				
				0.062 inch	6.			

Size	External Diameter (OD)	Uncompressed Height	Material	Finish
🗌 3/8 inch 🛛 🧧	●	(L)	Marine Stainless Steel 44	Matte Black 46
5/8 inch	3 🗌 🔤	0.062 inch 🛃 🔺	(A4)	Natural 47
5/16 inch	0.334 inch	🗌 0.109 inch 🛛 💽	🗌 Stainless Steel (A1) 🛛 🗛	_
0 7/8 inch	0.377 Inch	0.125 inch 🖪	🗌 Stainless Steel (A2)	
□ 7/16 inch	0.487 inch	0.141 inch		
9/16 inch	0.505 11011	0.156 inch		
	0.776 Inch 4	0.171 inch		
	0.069 Inch 4	0.188 inch		
🗌 No.1 (0.075 inch) 🛛 🚺	2 🔹 🗍 0.965 inch 🛛 🖪 🤨	0.203 inch		
		_ •		

Size		· · · · · · · · · · · · · · · · · · ·		Uncompressed Height			
No.2 (0.088 inch)	4	1.072 inch	(4) *	(L)	Marine Stainless Steel 44	🗌 Matte Black	[46]
No.3 (0.101 inch)	4	1.264 inch	5	0.203 inch	(A4)	Natural	47
No.4 (0.114 inch)	6	1.455 inch	4	0.234 inch 5	Stainless Steel (A1)		
No.5 (0.127 inch)	4	1.647 inch	4	0.266 inch	Stainless Steel (A2)		
No.6 (0.141 inch)	4	🗌 1.838 inch	4	0.297 inch			
No.8 (0.167 inch)	4	2.21 inch	4	0.328 inch 4			
No.10 (0.193 inch)	4	2.028 inch	4	0.359 inch			
No.12 (0.22 inch)	4 -	2.409 inch	4	0.391 inch 4	-		,
<u> </u>				0.422 inch			



METRIC RECTANGULAR

PROFILE SPRING WASHERS



APPLICATIONS

Spring washers, which have axial flexibility and are used to prevent fastening or loosening due to vibrations. Locking washers, which prevent fastening or loosening by preventing unscrewing rotation of the fastening device; locking washers are usually also spring washers. Spring washers should be used on the nut side of the fastener. If an additional washer is required to spread the load (as in our image above) it should be used between the spring washer and the mounting surface.

Size		External Diameter (OD)	Uncompressed	Height (L)	Material		Finish	
🗌 M1.6 (1.6mm)	4	3.4mm4	0.8mm	4	Duplex Stainless Steel	10 *	🗌 Matte Black	57
M2 (2mm)	6	4.4mm4	□ 1mm	4	High Tensile Steel (8.8)	9	🗌 Natural	57
M2.5 (2.5mm)	4	5.1mm 4	0 1.2mm	4	(A4)	52	C Zinc Plated	9
🗌 M3 (3mm)	4	6.2mm 4	1.6mm	8		52		
M3.5 (3.5mm)	4	6.7mm 4	1.8mm	5				
🗌 M4 (4mm)	5	☐ 7.6mm	2.4mm	5				
🗌 M5 (5mm)	5	9.2mm 5	3.2mm					
M6 (6mm)	7	11.8mm 7	_ 04mm	7.		-		

Metric Rectangular Profile Spring Washers

Metric Rectangular Profile Spring Washers

Size		External Diameter (OD)	Uncompressed Height (L)	Material	Finish
M7 (7mm)	3 *	12.8mm	4.4mm*	Duplex Stainless Steel 10 *	🗌 Matte Black 🛛 🛐
M8 (8mm)	7	14.8mm 7	5mm7	🗌 High Tensile Steel (8.8) 🧿	Natural 57
M10 (10mm)	7	🗌 18.1mm 🛛 🔽	6mm	Marine Stainless Steel	Zinc Plated
M12 (12mm)	7	21.1mm 7	7mm	(A4)	
M14 (14mm)	0	24.1mm 4	8mm9	Stainless Steel (A1) 52	
M16 (16mm)	7	27.4mm 7	010mm		
M18 (18mm)	4	29.4mm 4	12mm 16		
M20 (20mm)	5 -	33.6mm 5	□ 16.5mm 12 -	-	

Size		External Diameter (OD)		Uncompressed He	ight (L)	Material		Finish	
🗌 M22 (22mm)	4	35.9mm	4	4.4mm	7 *	Duplex Stainless Steel	10 ^	Matte Black	57
🗌 M24 (24mm)	5	40mm	5	5mm	2	High Tensile Steel (8.8)	9	🗌 Natural	57
🗌 M27 (27mm)	4	43mm	4	6mm	4	Marine Stainless Steel	52	C Zinc Plated	9
🗌 M30 (30mm)	4	48.2mm	8	🗌 7mm		(A4)			
🗌 M33 (33mm)	4	56mm	4	08mm	9	Stainless Steel (A1)	52		
🗌 M36 (36mm)	4	00mm	4	010mm	9				
🗌 M39 (39mm)	4	68.2mm	4	[] 12mm	16				
M42 (42mm)	4 -	() 71.2mm	4	() 16.5mm	12 🗸		-		

Metric Rectangular Profile Spring Washers

Metric Rectangular Profile Spring Washers

Size		External Diameter (OD)		Uncompressed Heig	ht (L)	Material		Finish	
🗌 M27 (27mm)	4	40mm	5 *	4.4mm	7 *	Duplex Stainless Steel	10 *	🗌 Matte Black	57
🗌 M30 (30mm)	4	43mm	4	5mm	7	High Tensile Steel (8.8)	9	Natural	57
🗌 M33 (33mm)	4	48.2mm	8	🗍 6mm	4	Marine Stainless Steel	52	C Zinc Plated	9
🗌 M36 (36mm)	4	56mm	4	07mm		(A4)	\equiv		
🗌 M39 (39mm)	4	00mm	4	0 8mm	9	Stainless Steel (A1)	52		
🗌 M42 (42mm)	4	68.2mm	4	[] 10mm	9				
🗌 M45 (45mm)	4	71.2mm	4	[] 12mm	16				
() M48 (48mm)	4	() 75mm	4	16.5mm	12 🗸		2		





SEALING WASHERS



APPLICATIONS

Sealing washer applications include **use for liquid protection and dust protection**. Sealing washers superbly protect bolts, screws and other fasteners or threaded surfaces, particularly when used to prevent the ingress of water and other liquids.

Features								
Internal Diameter (I	D)	External Diameter (OD)	Total Thickness	(T+W)	Material		Finish	
🗍 4.7mm	1	[] 12mm [3]	2.8mm	38 *	Stainless Steel (A2)	38 -	🗌 Natural	38 *
() 4.8mm	2	12.5mm						
🗍 5.2mm	2	14mm 5						
() 5.3mm	4	16mm						
🗍 5.5mm	0	17mm 🚺						
() 6mm	2	🗍 19mm 🧧						
6.2mm	0	22mm 4						
0 6.7mm	7 -	25mm 5	+	*		~		*

Features									
Internal Diamete	er <mark>(ID)</mark>	External Diamete	er (OD)	Total Thickness	(T+W)	Material		Finish	
6mm	2 *	12.5mm	1	2.8mm	38 *	Stainless Steel (A2)	38 *	Natural	38 *
0 6.2mm	0	14mm	5						
0 6.7mm	7	16mm	8						
0 6.8mm	63	[] 17mm	0						
0 8.4mm	5	19mm	6						
🗌 8.5mm	6	22mm	(4)						
0 10.5mm	2	25mm	5						
🗌 13mm		29mm	5		*		-		-





SPLIT SPRING WASHERS



APPLICATIONS

Split washers can **prevent bolts from loosening due to vibrations**. As a machine or piece of equipment vibrates, the split washer will push back into it. Split washers are ideal for applications involving vibrations because they prevent the bolts with which they are used from loosening

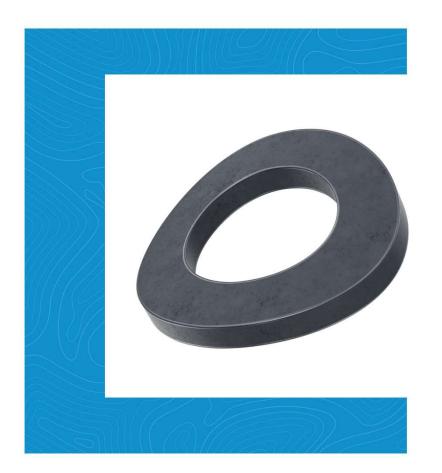
For Use With Thread Size	External Diameter (D)	Uncompressed Height	Material	Finish
🗌 M2 (2mm) 🛛 🛃 📥	_ 4.4mm 🖪	(S)	Marine Stainless Steel	Matte Black 42
🗌 M2.3 (2.3mm) 🛛 🖪	_ 4.9mm 4	0.7mm-0.9mm 🛛 🛃	(A4)	Natural 42
🗌 M2.5 (2.5mm) 🛛 🖪	5.1mm 4	0.9mm-1.1mm	Stainless Steel (A1) 42	
🗌 M2.6 (2.6mm) 🛛 🧧	5.2mm (4)	□ 1.1mm-1.3mm		
🗌 M3 (3mm) 🛛 🖪	6.2mm 4	1.2mm-1.4mm		
🗌 M3.5 (3.5mm) 🛛 🖪	6.7mm 4	🗌 1.5mm-1.7mm 🛛 🖪		
🗌 M4 (4mm) 🛛 🖪	□ 7.6mm ④	2mm-2.2mm 4		
🗌 M5 (5mm) 🛛 🗛 🗸	9.2mm (4)	2.45mm-2.75mm		
		2.85mm-3.15mm 4		

For Use With Thread Size	External Diameter (D)	Uncompressed Height	Material	Finish
🗌 M6 (6mm) 🛛 🗛 🔦	🗌 11.8mm 🧉	(S)	Marine Stainless Steel	Matte Black 42
	14.8mm 🛃	0 2.85mm-3.15mm 🛛 🐴 📤	(A4)	🗌 Natural 🛛 🕰
M10 (10mm)	🗌 18.1mm 🧉	3.35mm-3.65mm 4	Stainless Steel (A1) 42	
🗌 M12 (12mm) 🛛 🖪 📕	21.1mm 🕑	3.9mm-4.3mm 4		
🗌 M14 (14mm) 🛛 🕢 🖪	24.1mm 4	0 4.5mm-5.1mm 🛛 🔳 🔤		
🗌 M16 (16mm) 🛛 🖪 🗌	27.4mm	5.1mm-5.9mm 🔳		
M18 (18mm) 🛛 😽 🧐	29.4mm	6.5mm-7.5mm 🛽 📵		
🗌 M20 (20mm) 🛛 🛃 🗸	🗌 33.6mm 🧉	9.5mm-10.5mm 🛛		
		🗌 10.3mm-11.3mm 🛛 🗲 🚽		

For Use With Thread Size	External Diameter (D)	Uncompressed Height	Material	Finish
🗌 M16 (16mm) 🛛 🖪 🔦	27.4mm 🖪 *	(S)	Marine Stainless Steel	Matte Black 42
🗌 M18 (18mm) 🛛 🖪	29.4mm 🖪	2.85mm-3.15mm	(A4)	🗌 Natural 🛛 🛃
🗌 M20 (20mm) 🛛 🛃	33.6mm 4	3.35mm-3.65mm 4	Stainless Steel (A1)	
🗌 M22 (22mm) 🛛 🖪	35.9mm 4	3.9mm-4.3mm		
🗌 M24 (24mm) 🛛 🛃 🔄	40mm	() 4.5mm-5.1mm [8]		
🗌 M27 (27mm) 🛛 🕢	🗌 43mm 🛛 🖪	5.1mm-5.9mm 🔳		
🗌 M30 (30mm) 🛛 🖪	48.2mm	🗌 6.5mm-7.5mm 🛛 📵		
🗌 M36 (36mm) 🛛 🛃 💂	🗍 58.2mm 🛛 🛃 🖵	9.5mm-10.5mm		
		🗌 10.3mm-11.3mm 🛛 🧧 🚽		



SPRING WASHERS



APPLICATIONS

Spring washers should be used **on the nut side of the fastener**. If an additional washer is required to spread the load (as in our image above) it should be used between the spring washer and the mounting surface, that is the spring washer should be positioned next to the nut.

For Use With Threa	d Size	External Diameter (O		Uncompressed Height		Material		Finish	
🗌 M1.4 (1.4mm)	2 _	3mm	(Ma	ax) (S)		Stainless Steel (A1)	30 *	Matte Black	15
M1.6 (1.6mm)	2	4mm		8mm	2 📫			Natural	15
🗌 M1.7 (1.7mm)	2	4.5mm	2 0.	9mm	4				
🗌 M2 (2mm)	2	5mm	2 [] In	nm	4				
🗌 M2.3 (2.3mm)	2	5.5mm	G [] 1.1	lmm	4				
🗌 M2.5 (2.5mm)	2	🗍 6mm	2 013	3mm	2				
🗌 M2.6 (2.6mm)	2	0 7mm	2 1.4	4mm	2				
🗌 M3 (3mm)	2 🗸	🗌 8mm	2	6mm	2		*		
			01.8	Bmm	2 🗸				

For Use With Thread	Size	External Diameter (OD)		Uncompressed Height	Material		Finish	
🗌 M3 (3mm)	2 *	🗍 6mm	2 *	(Max) (S)	Stainless Steel (A1)	30 *	Matte Black	15
🗌 M3.5 (3.5mm)	2	🗌 7mm	2	□ 1.3mm 2 *			🗌 Natural	15
🗌 M4 (4mm)	2	🗌 8mm	2	□ 1.4mm 2				
🗌 M5 (5mm)	2	🗌 10mm	2	□ 1.6mm 2				
🗌 M6 (6mm)	2	🗌 11mm	2	□1.8mm 2				
🗌 M7 (7mm)	2	🗌 12mm	2	2.2mm 2				
🗌 M8 (8mm)	2	🗌 15mm	2	2.4mm 2				
🗌 M10 (10mm)	2 -	🗌 18mm	2 🗸	3.4mm 2		-		1
				4mm 2 -				





SQUARE PROFILE SPRING WASHERS



APPLICATIONS

Spring washers should be used **on the nut side of the fastener**. If an additional washer is required to spread the load (as in our image above) it should be used between the spring washer and the mounting surface, that is the spring washer should be positioned next to the nut.

For Use With Three	ad Size	External Diamet	ter (OD)	Uncompressed Height	Material	Finish		
🗌 M3 (3mm)	6 -	5.6mm	6 📤	(T)	Marine Stainless Steel 32	Hot Dip Galvanised	6	
M3.5 (3.5mm)	4	06.1mm		2mm	(A4)	Matte Black	32	
🗌 M4 (4mm)	6	7mm	6	2.4mm6	Phosphor Bronze	Natural	39	
🗌 M5 (5mm)	6	8.8mm	6	3.2mm 12	Spring Steel	Zinc Plated		
🗌 M6 (6mm)	6	9.9mm	6	_ 4mm 6	Stainless Steel (A1) 32			
🗌 M8 (8mm)	6	12.7mm	6	5mm14				
🗌 M10 (10mm)	7	0 16mm	7	6mm 5				
M12 (12mm)	7.	18mm	7.	7mm				
				9mm				

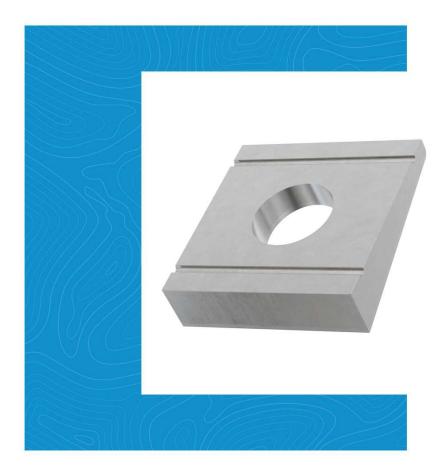
Features

For Use With Thre	ad Size	External Diameter (OD)	Uncompressed Height	Material	Finish		
🗌 M14 (14mm)	5 *	21.1mm 5 *	(Т)	Marine Stainless Steel 32	Hot Dip Galvanised		
M16 (16mm)	6	24.4mm 6	3.2mm 22 *	(A4)	Matte Black 32		
🗌 M18 (18mm)	4	26.4mm 4	6	Phosphor Bronze	Natural 39		
🗌 M20 (20mm)	6	30.6mm 6	□ 5mm 14	Spring Steel	🗌 Zinc Plated 🛛 🔳		
🗌 M22 (22mm)	4	32.9mm 4	6mm 5	Stainless Steel (A1) 32			
🗌 M24 (24mm)	6	35.9mm 6	7mm10				
🗌 M27 (27mm)	4	🗌 38.9mm 🛛 🖪	9mm				
🗌 M30 (30mm)	5 🗸	🗌 44.1mm 🛛 📮	010mm 10	*			
			🗍 12mm 🚺 📮				





SQUARE TAPER WASHERS FOR U-SECTIONS



APPLICATIONS

Taper Washer are square or half round, Taper washers are designed to be used **on channel sections, underneath nuts with tapered flanges to enable the bolt assembly to fit square when tightened**.

Square Taper Washers for U-Sections

Size	Length 1 Max (A)		Length 2 Max (B)		Material		Finish	
M8 (8mm)		8 *	22.65mm	8 *	(A4)		Matte Black	10 *
○ M10 (10mm) ○ M12 (12mm)		4	30.65mm	4	Stainless Steel (A2)	2	Natural	10
M16 (16mm)		6	44.8mm	4				
M20 (20mm)								
	*	*		÷		v		*





SHOULDER WASHERS

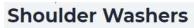


APPLICATIONS

A shoulder washer **insulates a screw**, **rivet**, **or wire from an assembly or can be inserted into a housing to provide a bearing surface for rotary applications**. The flange on the shoulder washer is used to positively locate the bushing when it is installed or to provide a thrust bearing surface.

Shoulder Washers

Size		Shoulder Diameter (d)	Shoulder Length (L)		Material		Finish	
2.1mm	1	🗌 3mm 📃	3 🔺 🗌 0.6mm	0 ^	□ Nylon	130 ^	Black	50 ^
2.6mm	3	3.2mm	1 0.8mm	6			🗌 Natural	80
2.7mm	0	3.4mm	1 [] 1mm	3				
2.95mm	1	3.5mm	6 🗌 1.1mm	0				
🗌 3mm	2	🗍 3.6mm	1 🗌 1.2mm	0				
3.1mm	12	3.7mm	B [] 1.3mm	4				
🗌 3.5mm	2	🗌 3.9mm 🛛 🚺	4 🗌 1.4mm	0				
() 4mm	2 _	() 4.2mm	1 🖕 🗌 1.5mm	0.		1.000		



Size		Shoulder Diameter (d)		Shoulder Length (L)		Material		Finish	
5.2mm	10 🔶	4.3mm	8 *] 1.6mm	7 *	Nylon	130 *	Black	50
🗌 6.1mm	3	04.4mm	1	01.7mm	7			🗌 Natural	80
🗌 6.2mm	10	4.5mm	2	2mm	30				
🗌 6.4mm	0	4.8mm	0	2.1mm	0				
🗌 6.5mm	3	4.9mm	2	2.2mm	0				
🗌 8.2mm	6	5.1mm	0	2.3mm	0				
🗌 8.5mm	2	5.2mm	9	2.4mm	7				
010.2mm	5.	5.5mm	2	2.5mm	5 -				

Size	Shoulder Diameter (d) Shoulder Length	(L)	Material		Finish	
10.5mm	1 ^ () 5.9mm	3 * 3.2mm	4	Nylon	130 *	Black	50
	3 0 6mm	1 3.5mm	0			Natural	80
] 12.5mm	2 0 6.2mm	1 04mm	4				
] 14.2mm	2 0 6.3mm	1 () 4.5mm	2_				
) 16.2mm	0 6.4mm	2 04.7mm	6				
	3 0 6.5mm	3 06mm	2				
	9 6.6mm	8 🗌 6.4mm	6				
	📕 🗸 🗌 6.9mm	5 🗸 🗌 7.4mm	1		4		6



IMPERIAL EXTERNAL LOCKING WASHERS



APPLICATIONS

An external tooth lock washer has teeth that extend radially outward to bite into the bearing surface. Like internal tooth lock washers, they are designed **to prevent a nut or bolt head from loosening with the strut action of the teeth**. An external tooth lock washer has teeth that extend radially outward to bite into the bearing surface.

Imperial External Locking Washers

For Use With Thread Size	External Diameter (D)	Thickness (T)		Material		Finish	
1 inch	2 📤 🗌 0.9 inch	2 📤 🗌 0.02 inch	2 📤	Stainless Steel (A2)	34 ^	Matte Black	17
1/2 inch	2 0.26 inch	2 0.04 inch	4			Natural	17
□ 1/4 inch	2 0.32 inch	2 0.05 inch	2				
3/4 inch	2 0.41 inch	2 🗌 0.06 inch	2				
3/8 inch	2 0.51 inch	2 0.014 inch	2				
5/8 inch	2 0.61 inch	2 0.016 inch	2				
5/16 inch	2 0.76 inch	2 0.018 inch	2				
7/8 inch	2 0.210 inch	2 🖉 🗍 0.022 inch	2 .		-		

Imperial External Locking Washers

For Use With Thread Size	External Diameter (D)	Thickness (T)		Material		Finish	
	2 • 0.235 inch	2 ^ () 0.023 inch	2 *	Stainless Steel (A2)	34 ^	🗌 Matte Black	17
	2 0.285 inch	2 0.024 inch	2			Natural	17
No.2 (0.210 inch)	2 0.381 inch	2 0.027 inch	2				
No.3 (0.235 inch)	2 0.475 inch	2 0.028 inch	2				
	2 0.694 inch	2 0.034 inch	2				
	2 1.07 inch	2 0.045 inch	2				
	2 1.26 inch	2 0.055 inch	2				
	2 - 1.41 inch	2 🗸 🗌 0.067 inch	2 -		*		

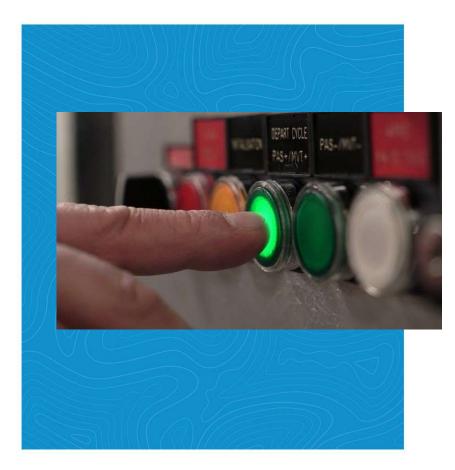
Imperial External Locking Washers

For Use With Thread Size		External Diameter (D)		Thickness (T)		Material		Finish	
9/16 inch	2 *	0.285 inch	2 *	0.023 inch	2 *	Stainless Steel (A2)	34 *	Matte Black	17 -
No.2 (0.210 inch)	2	0.381 inch	2	0.024 inch	2			Natural	17
No.3 (0.235 inch)	2	0.475 inch	2	0.027 inch	2				
No.4 (0.26 inch)	2	0.694 inch	2	0.028 inch	2				
No.6 (0.285 inch)	2	1.07 inch	2	0.034 inch	2				
No.8 (0.32 inch)	2	1.26 inch	2	0.045 inch	2				
No.10 (0.381 inch)	2	1.41 inch	2	0.055 inch	2				
No.12 (0.41 inch)	2 -	1.62 inch	2 .	0.067 inch	2 🗸		*		





ELECTRICAL FIXTURES



APPLICATIONS

The items used in domestic and industrial electrical wiring are called electrical accessories, e.g., switch, holder, socket, plug-top, ceiling rose, fuse cut-out etc. A switch is used to make a circuit ON and OFF. A holder is used with a lamp, a ceiling rose is used with a ceiling fan, tube light or a pendant lamp.



ELECTRICAL FIXTURES IN CATALOUGE



234. CAM SWITCHES

236. MONOBLOCK BUZZERS

238. PLASTIC BODY PUSH BUTTONS

240. THREAD REDUCERS



CAM SWITCHES



APPLICATIONS

- Oil and gas.
- Food & beverage.
- Panel builders and electrical enclosure.
- Machine tools & wood industry.
- Packaging.
- Kneading-trough.
- Vegetable cutting machine



Cam Switches

Poles		Schema Version		Rated Thermal Cu	irrent (A)	Material		Finish	
	8 *	01	8 *	10Amp	10 *	🗋 PA	39 *	Black	19
2	8	2	8	16Amp	9			Red	20
3	8	3	8	20Amp	10				
3 + Neutral	7	4	8	25Amp	10				
4	8	5	7						
	*		-		w.				





MONOBLOCK BUZZERS



APPLICATIONS

- Communication Devices
- Electronics used in Automobiles
- Alarm Circuits
- Portable Devices
- Security Systems
- ✤ Timers
- Household Appliances
- Electronic Metronomes
- Game Shows

Monoblock Buzzers

Width		Feature		Nominal Voltage		Material		Finish	
22mm	6 *	LED Illumination	2 *	24 AC/DC	2 *	□ PA	4 *	Black	2
				220V AC	2			Red	2





PLASTIC BODY

PUSH BUTTONS



APPLICATIONS

They are used in the following devices: kitchen appliances, magnetic locks, and several other mechanical and electronic devices used across homes or industries. Push buttons can be explained as simple power controlling switches of a machine or appliance. These are generally metal or thermoplastic switches that are intended to grant easy access to the user.

Plastic Body Push Buttons

Contact Type	Width	Button Type	Material	Finish	
	3 ^ 🗌 22mm	18 🔶 🗌 Flush	18 ^ 🗌 Polyamide	18 * 🗌 Black	3 *
	15			Blue	3
				Green	3
				Red	3
				🗌 White	3
				☐ Yellow	3
					_
	-			-	





THREAD REDUCERS



APPLICATIONS

Thread Reducer Adapters, sometimes known as plumbing adapters or thread reducing attachments are a type of mechanism which are used **to change the size of the threads**. They are designed to reduce threaded holes or clearance holes to smaller thread sizes.

Thread Reducers

Male Thread Size (A)		Female Thread Size (B)		Length (L)		Material		Finish	
M16 x 1.5mm	3 *	M12 x 1.5mm	10 🔶	8mm	17 *	Brass	17 *	Black	22 ^
M20 x 1.5mm	6	M16 x 1.5mm		0 10mm	22	Polyamide	44	Dark Grey	22
M25 x 1.5mm	7	M20 x 1.5mm		[] 12mm	22			Nickel Plated	17
M25 x1.5mm	0	M25 x 1.5mm							
M32 x 1.5mm	11	M32 x 1.5mm	9						
M40 x 1.5mm	1	M40 x 1.5mm	6						
M50 x 1.5mm	11	M50 x 1.5mm	3						
M63 x 1.5mm	11 .		*		*		*		





CONCRETE SCREWS



APPLICATIONS

Masonry fixings are anchors used to fasten or attach an item to masonry. They can be used with various kinds of masonry including brick and blocks, as well as concrete. Self Tapping Masonry Anchor is used for fastening into substrates such as stone, concrete and concrete block, amongst other masonry materials.



CONCRETE SCREWS IN CATALOUGE



244. HEXAGON MASONRY ANCHORS
246. FLANGED HEXAGON MASONRY ANCHORS
248. PERMANENT SLEEVE ANCHORS
250. REMOVABLE SLEEVE ANCHORS
252. SECURITY TORX BUTTON HEAD SLEEVE ANCHORS
254. SQUARE DRIVE DECKING SCREWS
256. TORX COUNTERSUNK MASONRY ANCHORS
258. TORX PAN HEAD MANSORY ANCHORS
260. SECURITY TORX COUNTERSUNK SLEEVE ANCHORS
262. RAWL PLUGS - LARGE TUBS
264. RAWL PLUGS - MEDIUM BAGS



HEXAGON MASONRY ANCHORS



APPLICATIONS

- Window installations
- ✤ Shutters and guards.
- ✤ Interior hand-rails.
- ✤ Interior lighting fixtures.
- ✤ Metal door frames.
- Thresholds.
- ✤ Joint flashing.
- ✤ Screened Enclosures

Hexagon Masonry Anchors

Pilot Hole/Drill Size		Clearance Diameter	Drive Size		Anchor Length (L)		Material	
0 8mm	12 ^	0 10mm	15mm	12 *	60mm	4 *	Galvanised Steel	14 ^
[] 10mm	1	12mm	17mm		75mm	4	O Yellow Zinc Plated	31
12mm	12	14mm 12	19mm	12	0 80mm	0	Steel	
14mm	5	[] 18mm [5	24mm	5	() 100mm			
[] 16mm	5	20mm 5	27mm	5	() 130mm	7		
					🗍 150mm	12		
					200mm	6		
	Ψ.		*	*		*		*





FLANGED HEXAGON MASONRY ANCHORS



APPLICATIONS

- Window installations
- □ Shutters and guards.
- □ Interior hand-rails.
- □ Interior lighting fixtures.
- Metal door frames.
- Thresholds.
- □ Joint flashing.
- □ Screened Enclosures



Flanged Hexagon Masonry Anchors

Pilot Hole / Drill S	ize	Clearance Diameter		Drive Size		Anchor Length (L)		Material	
5mm	4 *	7mm	4 *	8mm	4 *	30mm	2 ^	Galvanised Carbon	3
6mm	9	🗌 8mm	9	0 10mm	9	50mm	3	Steel Yellow Zinc Plated Steel	10
						75mm	3		
						0 100mm	3		
						130mm	0		
						150mm			





PERMANENT SLEEVE ANCHORS



APPLICATIONS

These anchors used the are in construction industry for buildings, and types of civil/building, other and engineering works, respectively. They are against durable adverse weather conditions.

Kinmar® Permanent Sleeve Anchors

Thread Size (T)	Length (L)		Drive Size		Material		Finish	
🗌 мб	45mm	1 ^	□ КМ6Р	0 ^	Case Hardened Steel	9 ^	C Zinc Plated	9 *
☐ M8	50mm		КМ8Р	4				
☐ M10 4	60mm	2		4				
	70mm	2						
	080mm							
	90mm	0						
	95mm	0						





REMOVABLE SLEEVE ANCHORS



APPLICATIONS

These are anchors used in the construction industry for buildings, and other types of civil/building engineering works, respectively. They are durable against adverse weather conditions.

Kinmar® Removable Sleeve Anchors

Thread Size (T)		Length (L)		Drive Size		Material		Finish	
🗌 M6 (6mm)	1 ^	45mm	1		1 ^	Case Hardened Steel	9 ^	C Zinc Plated	9
🗌 M8 (8mm)	4	50mm	0	KM8R	6				
M10 (10mm)	4	060mm	2	C KMIOR	4				
		70mm	2						
		🗌 80mm	0						
		90mm	0						
		95mm	0						
									3





SECURITY TORX BUTTON HEAD SLEEVE ANCHORS



APPLICATIONS

These are anchors used in the construction industry for buildings, and other types of civil/building engineering works, respectively. They are durable against adverse weather conditions.



Security Torx Button Head Sleeve Anchors

Thread Size (T)	Length (L)		Drive Size		Material		Finish	
🗌 M6 (6mm) 🛛 🚺	* 045mm	0 ^	☐ T30	1	Stainless Steel (A2)	5 *	Natural	5 *
🗌 M8 (8mm) 🛛 🔼	55mm	0	T40	2				
M10 (10mm) 2	65mm	0	T45	2				
	75mm	0						
	080mm	0						
		*		*		-		





SQUARE DRIVE DECKING SCREWS



APPLICATIONS

Square Drive Screws are designed for use in **furniture manufacturing operations and other demanding industries using hard woods and other "tough" materials**. "Drywall" screws are made of hardened , brittle steel and will often snap under the loads applied to drive them in joining two pieces of wood.



Square Drive Decking Screws - Stainless Steel (A2)

Thread Size (d1)		Length (L)		Head Diameter (D)		Drive Size		Finish	
No.8 (4.80mm)	8 *	2 inch (50.8mm)	2 *	0 8.5mm	8 *	🗌 No.2	14 *	Matte Black	7
🗌 No.10 (5.2mm)	6	2.1/2 inch (63.5mm)	4	0 8.9mm	6			🗌 Natural	7
		2.1/4 inch (57.15mm)	2						
		3 inch (76.2mm)	4						
		3.1/2 inch (88.9mm)	2						
	~		~		~				





TORX COUNTERSUNK MASONRY ANCHORS



APPLICATIONS

Masonry anchors are anchors used **to fasten or attach an item to the masonry**. Masonry anchors refer to anchors that are used in all types of masonry including concrete, brick and block or CMU. There are three basic types of masonry anchors: Expansion anchors such as the wedge anchor or sleeve anchor.

Torx Countersunk Masonry Anchors

Pilot Hole / Drill Size		Clearance Diameter		Drive Size		Anchor Length (L)		Material
]5mm	4	07mm	4 *	☐ T25	4 *	30mm	0 *	Yellow Zinc Plated Steel 9
] 6mm	5	(] 8mm	5	☐ T30	5	50mm	2	
						75mm	2	
						[] 100mm	2	
						[] 130mm	0	
						🗍 150mm	0	





TORX PAN HEAD MANSORY ANCHORS



APPLICATIONS

These are anchors used in the construction industry for buildings, and other types of civil/building engineering works, respectively. They are durable against adverse weather conditions.

Torx Pan Head Masonry Anchors

Pilot Hole/Drill Size	Clearance	Diameter	Drive Size		Anchor Length (L)		Material
5mm3	* 🗌 8mm	3 *	T25	3 *	30mm	1 *	🗌 Yellow Zinc Plated Steel 🔽
🗌 6mm 🛛 🔼 🛃	0 10mm	(4)	☐ T30	4	🗌 50mm	2	
					75mm	2	
					🗌 100mm	2	
	-					_	





SECURITY TORX COUNTERSUNK SLEEVE ANCHORS



APPLICATIONS

These are anchors used in the construction industry for buildings, and other types of civil/building engineering works, respectively. They are durable against adverse weather conditions.



Security Torx Countersunk Sleeve Anchors

Thread Size (T)		Length (L)		Drive Size		Material		Finish	
M6 (6mm)	1 *	50mm	1 *	☐ T30	1 ^	Stainless Steel (A2)	5 *	Natural	5 *
🗌 M <mark>8 (</mark> 8mm)	2	55mm	0	T40	2				
🗌 M10 (10mm)	2	60mm	0	T45	2				
		0 80mm	2						





RAWL PLUGS – LARGE TUBS



APPLICATIONS

A wall plug (commonly called a rawl plug) is used **to ensure screws driven into masonry walls provide a secure fixing**. Without them, screws would not grip into masonry and would not provide adequate compressive force to ensure a secure, permanent fixing.



Rawlplugs - Large Tubs

Plug Length	Hole Diameter	Screw Diameter Range	No of Plugs	Material
28mm 2	6mm 2	* 🗍 3.0mm - 5mm 🛛 🔰 *	🗌 450 Plugs/450 Screws 🗻 *	🗍 Blue Plastic 🚺 *
30mm 2	_ 7mm 2	04.0mm - 6mm 2	500 Plugs	Brown Plastic 2
☐ 32mm 1	_ 8mm	4.5mm - 6mm	500 Plugs/500 Screws 1 700 Plugs 1 1000 Plugs 1	Red Plastic 2





RAWL PLUGS - MEDIUM BAGS



APPLICATIONS

A wall plug (commonly called a rawl plug) is used **to ensure screws driven into masonry walls provide a secure fixing**. Without them, screws would not grip into masonry and would not provide adequate compressive force to ensure a secure, permanent fixing.

Rawlplugs - Medium Bags

Plug Length	Fixture Hole Diameter	Screw Diameter Range	No Of Plugs	Material
28mm 2 *	6mm2 ▲	3mm - 4.5mm	300 Plugs/300 Screws 2 *	Brown Plastic 2 *
30mm 2	_ 7mm 2	3mm - 5mm 1 4mm - 6mm 1 4.5mm - 6mm 1	☐ 350 Plugs/350 Screws 1 ☐ 500 Plugs/500 Screws 1	Red Plastic 2
*		*		*





ASSEMBLY COMPONENTS



APPLICATIONS

These are structural components such as frame members, pipe plugs, axles, self tapping inserts, studs, fasteners, seals, and leadscrews. These are mechanisms that control movement in various ways such as gear trains, belt or chain drives, linkages, cam and follower systems, including brakes and clutches. The are used from Automotive, Aerospace, Manufacturing, Energy and Power application amongst other applications.



ASSEMBLY COMPONENTS IN CATALOUGE



268. GAS PIPE PLUGS

270. HEXAGON HEAD PIPE PLUGS

272. IMPERIAL SOCKET PIPE PLUGS

274. METRIC SLOTTED BALL/SPRING SET/GRUB SCREWS

276. METRIC FLAT HEAD SOCKET PIPE PLUGS

278. SELF TAPPING INSERTS

280. THREADED WELD STUDS

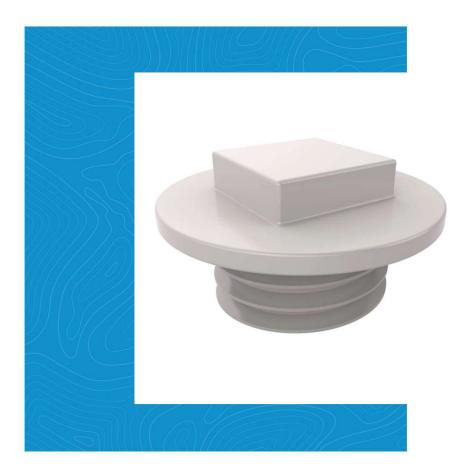
282. TRAPEZOIDAL LEADSCREWS

284. SELF DRILLING FLANGED HEXAGONAL BOLTS

286. METRIC LEFT HAND THREADED BARS



GAS PIPE PLUGS



APPLICATIONS

Pipe Plugs are a strong nylon plug for inner gas threads of ¼" up to 1 ¼. These polyamide threaded plugs are resistant to most chemicals and provide protection against salt water and moisture.

Gas Pipe Plugs

Thread Type	Thread Size		Overall Diameter (D)		Thread Length (E)		Material	
🗌 Gas - Imperial	2 ↑ □1 inch	1	0.63 inch	0 ^	0.276 Inch	2 *	D PA	7
	() 1-1/4 Inch	0	0.512 Inch	0	0.315 Inch	0		
	1/2 inch	0	0.827 Inch	0	0.354 Inch	0		
	() 1/4 inch	0	1.063 Inch	0	0.433 Inch	3		
	🗌 1/8 inch	0	() 1.339 Inch	0				
	3/4 inch	0	🗌 1.614 inch	0				
	3/8 inch	0	2.087 Inch	0				
				*				





HEXAGON HEAD PIPE PLUGS



APPLICATIONS

Hex plug is an important pipe fitting. Like a normal pipe plug, the hex pipe plug is threaded in the end and the cover, or the top of the plug takes a hexagon shape. The hex pipe plugs are considered an easy and cost-effective way to plug your pipe. The basic purpose is **to stop the flow**.

Hexagon Head Pipe Plugs

Metric or Imperial		Thread Size		Flange Diameter (FD)		Length (L)		Material
🗌 Imperial	44 *	1 inch	4	[] 14mm	8	🗍 8mm	(4)	Black Marine Stainless
🗍 Metric	52	1.1/2 inch	4	🗌 17mm	6	[] 17mm	8	Steel (A4)
		1.1/4 inch	4	18mm	6	21mm	20	Black Stainless Steel (A2)
		1.3/4 inch	4	[] 19mm	6	24mm	6	Marine Stainless Steel (A4)
		🗍 1/2 inch	(4)	🗌 21mm	4	26mm	12	Stainless Steel (A2)
		🗍 1/4 inch	4	22mm	(4)	27mm	4	
		🗍 1/8 inch	6	🗌 23mm	(4)	🗌 30mm	20	
		2 inch	4	25mm	4 -	32mm	4 -	

Hexagon Head Pipe Plugs

Metric or Imperial	Thread Size	Flange Diameter (F	D)	Length (L)		Material
🗌 Imperial	44 🔺 🗍 3/4 inch	4 🔿 26mm	8 *] 21mm	20	Black Marine Stainless
] Metric	52 3/8 inch	4 27mm	6	24mm	6	Steel (A4)
	□ 5/8 inch	29mm	6	26mm	12	Black Stainless Steel (A2)
	□ M8	4 🖸 🖸 31mm	6	27mm	6	Marine Stainless Steel (A4)
		32mm	8	30mm	20	Stainless Steel (A2)
	M12	36mm	8	32mm	4	
	☐ M14	4 39mm	6	33mm	12	
	M16	🝊 🗸 🗍 49mm	4 -	☐ 40mm	4 -	

Hexagon Head Pipe Plugs

Metric or Imperial		Thread Size		Flange Diameter (FD)	Length (L)		Material
🗌 Imperial	44 *	M16	(4) *] 31mm	4	21mm	20 📤	Black Marine Stainless
Metric	52	M18	4	🗍 32mm	8	24mm	6	Steel (A4)
		M20	4	36mm	8	26mm	12	Black Stainless Steel (A2)
		M22	6	39mm	6	27mm	6	Marine Stainless Steel (A4)
		☐ M24	6	49mm	6	30mm	20	Stainless Steel (A2)
		☐ M26	6	55mm	6	32mm	4	
		☐ M27	6	() 62mm	4	33mm	12	
		☐ M30	8 -	() 68mm	4 -	() 40mm	6	



IMPERIAL SOCKET PIPE PLUGS



APPLICATIONS

There are three main purposes of pipe plugs. These are **temporary sealing or stopping the fluid flow in a pipeline, leak testing and by-passing the flow**. They are also used for blocking the ends of pipes to prevent the entry of dirt and other contaminants during construction.

Imperial Socket Pipe Plugs

Thread Size		Length (L)		Drive Width A/F (J)		Material	Finish	
1 inch	5 📤	0.5 inch	2 *	0.25 inch	2 ^	🗌 Carbon Steel 🗧 🔳 🔺	🗍 Matte Black	18 *
1.1/2 inch	6	0.25 inch	0	0.186 inch	0	Marine Stainless Steel (A4) 18	🗌 Natural	29
1.1/4 inch	6	0.315 inch	4	0.188 inch	0	Stainless Steel (A2)		
1/2 inch	6	0.375 inch	0	0.197 inch	6			
1/4 inch	6	0.394 inch	12	0.276 inch	4			
1/8 inch	6	0.437 inch	0	0.312 inch	2			
2 inch	63	0.472 inch	8	0.315 inch	4			
3/4 inch	6 🗸	0.562 inch	2 .	0.375 inch	2 +			

Imperial Socket Pipe Plugs

Thread Size	Length (L)		Drive Width A/F (J)		Material		Finish	
1 inch	5 📤 🗌 0.562 inch	2 *	0.394 inch	6	Carbon Steel	11 *	Matte Black	18
1.1/2 inch	O.625 inch	0	0.472 inch	4	🗍 Marine Stainless Steel (A4)	18	🗌 Natural	29
🗌 1.1/4 inch	O.687 inch	0	0.562 inch	2	Stainless Steel (A2)	18		
] 1/2 inch	6 🗌 0.709 inch	6	0.625 inch	0				
🗌 1/4 inch	6 🗌 0.787 inch	6	0.669 inch	6				
🗌 1/8 inch	0.812 inch	0	0.866 inch	4				
2 inch	0.866 inch	6	0.945 inch	6				
3/4 inch	6 - 🗍 1 inch	0 -	1.26 inch	4 -		~		

Imperial Socket Pipe Plugs

Thread Size		Length (L)		Drive Width A/F (J)		Material		Finish	
] 1.1/2 inch	6	0.562 inch	2 *	0.394 inch	6 *	🗌 Carbon Steel		Matte Black	18
] 1.1/4 inch	63	0.625 inch	0	0.472 inch	4	🗌 Marine Stainless Steel (A4) 🚺	3	🗌 Natural	29
] 1/2 inch	6	0.687 inch	0	0.562 inch	2	🗌 Stainless Steel (A2)	3		
] 1/4 inch	6	0.709 inch	6	0.625 inch	0_				
🗍 1/8 inch	6	0.787 inch	6	0.669 inch	6				
2 inch	6	0.812 inch	0	0.866 inch	6				
] 3/4 inch	6	0.866 inch	6	0.945 inch	6				
3/8 inch	6 -	1 inch	0 -	1.26 inch	4 -		-		



METRIC SLOTTED BALL AND SPRING SET/GRUB SCREWS



APPLICATIONS

Well, the grub screw is generally used **to** secure an item against another item, without the use of a nut. This is important, because the ability to secure without a nut makes the grub screw very versatile and means that a grub screw can be used in applications that require a very small and unobtrusive fixing.

Metric or Imperial?		Thread Size (D)		Body Length (L)		Material		Finish	
🗌 Metric	18 ^	🗌 M3 (3mm)	2 *	7mm	0 _	Burnished Steel	9 *	🗌 Natural	18
		🗌 M4 (4mm)	2	7.5mm	0	🗌 Stainless Steel	9		
		🗌 M5 (5mm)	2	010mm	2				
		🗌 M6 (6mm)	2	13mm	2				
		🗌 M8 (8mm)	2	() 15mm	2				
		🗌 M10 (10mm)	2	() 17.5mm	2				
		M12 (12mm)	2	21mm	2				
	~	() M16 (16mm)	2.	24.5mm	2 🗸				

Metric Slotted Ball And Spring Set / Grub Screws

Metric Slotted Ball And Spring Set / Grub Screws

Metric or Imperial?		Thread Size (D)		Body Length (L)		Material		Finish	
O Metric	18 *	M4 (4mm)	2 *	[] 10mm	2 *	Burnished Steel	9 ^	🗌 Natural	18 ^
		🗍 M5 (5mm)	2	() 13mm	2	🗌 Stainless Steel	9		
		🗌 M6 (6mm)	2	[] 15mm	2				
	🗌 M8 (8mm)	2	[]] 17.5mm	2					
	🗌 M10 (10mm)	2	21mm	2					
	🗌 M12 (12mm)	2	24.5mm	2					
		🗌 M16 (16mm)	2	27.5mm	2				
	-	() M20 (20mm)	2 .	34mm	2 -		-		





METRIC FLAT HEAD SOCKET PIPE PLUGS



APPLICATIONS

They are used for the temporary sealing or stopping the fluid flow in a pipeline, leak testing and by-passing the flow. They are also used for blocking the ends of pipes to prevent the entry of dirt and other contaminants during construction, maintenance or repair of pipelines

Thread Size	Length (L)		Hexagon Width	A/F (J)	Material	Finish	
🗌 M10 (10mm)		4 *	5mm	4 *	Marine Stainless Steel	* 🗍 Matte Black	24 *
🗌 M12 (12mm)	3 🗌 15mm	12	6mm	8	(A4)	🗌 Natural	24
🗌 M14 (14mm)	3 🗌 16mm	4	🗌 8mm	8	Stainless Steel (A2) 24		
M16 (16mm)	3 🗌 18mm	12	[] 10mm	8			
M18 (18mm)	3 20mm	16	[] 12mm	12			
M20 (20mm)	3		017mm	8			
🗌 M22 (22mm)	4						
M24 (24mm)	4 .					-	

Metric Flat Head Socket Pipe Plugs

Metric Flat Head Socket Pipe Plugs

Thread Size	Length (L)	Hexagon Width A/F (J)	Material	Finish
🗌 M16 (16mm) 🛛 🖪	* 🗍 11mm 🛛 🖪	* 🗍 5mm 🖪 *	Marine Stainless Steel 24	Matte Black 24
🗌 M18 (18mm) 🛛 🧐	15mm 12	6mm 🖪	(A4)	Natural 24
🗌 M20 (20mm) 🛛 🖪	16mm	8mm (8)	Stainless Steel (A2) 24	
🗌 M22 (22mm) 🛛 🖪	18mm 12	[] 10mm [8]		
🗌 M24 (24mm) 🛛 🖪	20mm [16]	12mm 12		
🗌 M26 (26mm) 🛛 🖪		□ 17mm 🔳		
M27 (27mm) 3				
M30 (30mm) 🛛 🔳				





SELF TAPPING INSERTS



APPLICATIONS

Threaded inserts are commonly used in plastic casings, housing, and parts to create a metal thread (typically: brass or stainless steel) to allow for screws to be used in the assembly of many consumer electronics and consumer products.

Internal Thread Size (d)	Length (L)	External Diameter (D)	Material		Finish	
🗌 M3 (3mm) 🛛 🛛 🚺	2 🚖 🗌 6mm	2 🚔 🗍 5mm 🛛 🔼	Stainless Steel (A	(1) 22 ^	🗍 Matte Black	
🗌 M4 (4mm) 🛛 🛛 🚺	2 08mm	2 6.5mm 2			🗌 Natural	
🗌 M5 (5mm) 🛛 🚺	2 0 <mark>10</mark> mm	2 08mm 2				
🗌 M6 (6mm) 🛛 🚺	2 14mm	2 🗍 10mm 🛛 2	1			
🗌 M8 (8mm) 🛛 🚺	2 15mm	2 🗍 12mm 🛛 🙎				
🗌 M10 (10mm) 🛛 🛛 🚺	2 🗌 18mm	2 🗌 14mm 🛛 2)			
🗌 M12 (12mm) 🛛 🛛 🚺	2 22mm	👍 🗌 16mm 🛛 🔼				
🗌 M14 (14mm) 🛛 🚺	2 24mm	🝊 🖕 🗌 18mm 🛛 🔁 🔁				

Self Tapping Inserts

Self Tapping Inserts

Internal Thread Size (d)		Length (L)		External Diameter	(D)	Material		Finish	
🗌 M6 (6mm)	2 *	🗌 8mm	2 *	[] 10mm	2 *	Stainless Steel (A1)	22 *	Matte Black	
🗌 M8 (8mm)	2	010mm	2	[] 12mm	2			🗌 Natural	1
🗌 M10 (10mm)	2	14mm	2	[] 14mm	2				
🗌 M12 (12mm)	2	🗌 15mm	2	[] 16mm	2				
🗌 M14 (14mm)	2	[] 18mm	2	18mm	2				
🗌 M16 (16mm)	2	22mm	4	20mm	2				
M18 (18mm)	2	24mm	6	22mm	2				
() M20 (20mm)	2 .	27mm	2 -	26mm	2 -		-		



THREADED WELD STUDS



APPLICATIONS

- > Automotive
- Construction
- Catering and Food Processing
- Decorative and Consumer Items
- Electrical Items
- Farming and Agriculture
- ➤ Furniture
- Heating and Ventilation
- > Industrial
- > Shipbuilding
- Signs and Lettering

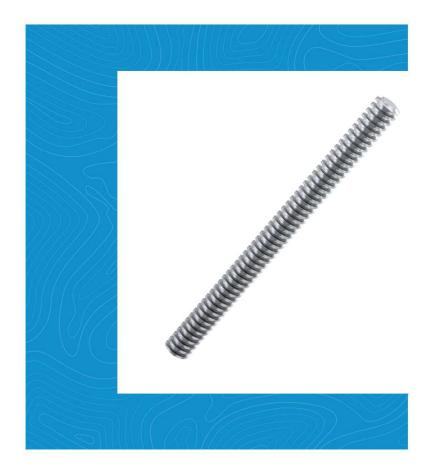
Thread Size		Length (L)		Head Diameter (D)		Material		Finish	
🗌 M3 (3mm)	20 *	0 6mm	6 _	4.7mm - 4.3mm	20 *	Stainless Steel (A2)	150 ^	🗌 Matte Black	75 ^
🗍 M4 (4mm)	28	0 8mm	10	5.7mm - 5.3mm	28			🗌 Natural	75
🗌 M5 (5mm)	28	[] 10mm	10	6.7mm - 6.3mm	26				
M6 (6mm)	26	[] 12mm	12	7.7mm - 7.3mm	28				
🗌 M8 (8mm)	26	16mm	12	🗌 11mm - 9mm	26				
M10 (10mm)	22	20mm	12	🗌 12mm - 10mm	22				
		25mm	12						
		30mm	12 +		*				

Thread Size		Length (L)		Head Diameter (D)		Material		Finish	
🗌 M3 (3mm)	20 *	25mm	12 ^	4.7mm - 4.3mm	20 *	Stainless Steel (A2)	150 *	Matte Black	75 *
🗌 M4 (4mm)	28	30mm	12	5.7mm - 5.3mm	28			🗌 Natural	75
🗌 M5 (5mm)	28	35mm	12	🗌 6.7mm - 6.3mm	26				
🗌 M6 (6mm)	26	40mm	12	7.7mm - 7.3mm	28				
🗌 M8 (8mm)	26	45mm	10	🗌 11mm - 9mm	26				
🗌 M10 (10mm)	22	50mm	10	12mm - 10mm	22				
		() 55mm	10						
		☐ 60mm	10 🗸		4		-		





TRAPEZOIDAL LEADSCREWS



APPLICATIONS

Trapezoidal lead screws are used for fast movements lead screws with large threads are the best choice, while small threads should be chosen for transmitting large forces. They are the most common forms used for **lead screws (power screws)**. They are typically found where large loads are required, as in a vise or the lead screw of a lathe.

Lead screw diameter (D)	Lead (L)		Number of starts		Lead screw length (N	I)	Screw hand	
[] 12mm 3	3mm	2 *	01	18 ^	000mm	23 *	🗍 Left	8
🗌 14mm 🛛 🔼	04mm	8	2	5			🗌 Right	15
🗌 16mm 🛛 🛐	5mm	6						
18mm	🗌 6mm	3						
🗌 20mm 🛛 🛐	🗍 8mm	2						
24mm 2	0 10mm	0						
25mm 3	12mm	0						
26mm 🚺	*			~				

Trapezoidal Leadscrews - Stainless Steel (A2)

Trapezoidal Leadscrews - Stainless Steel (A2)

Lead screw diameter	(D)	Lead (L)		Number of starts		Lead screw length (N)	Screw hand	
0 16mm	3 *	3mm	2 *	01	18 ^	0 1000mm	23 *	🗌 Left	8
18mm	2	4mm	8	2	5			Right	15
20mm	3	🗍 5mm	6						
24mm	2	🗌 6mm	3						
25mm	3	🗌 8mm	2						
26mm	0	0 10mm	0						
28mm	0	☐ 12mm	0						
() 30mm	3 🗸								-



SELF DRILLING FLANGED HEXAGON BOLTS



APPLICATIONS

Self-drilling screws can be used for a wide variety of applications which involve fastening two different types of materials together. They are commonly used **to fasten metal to wood, or even metal to metal.**

Thread Size (T)	Overall Length (L)		Hexagon Width Across Flats	Material		Finish	
🗌 No.6 (3.5mm)	12 * 🗍 9.5mm	(J)		Stainless Steel (A2)	133 ^	🗍 Matte Black	66
🗌 No.7 (3.9mm)	14 🗌 13mm	8 5.5mm	26	Carbon Steel (A4) /	4	🗌 Natural	71
🗌 No.8 (4.2mm)	16 [] 16mm	12 7mm	16				
🗌 No.10 (4.8mm)	26 19mm	12 08mm	62				
🗌 No.12 (5.5mm)	41 22mm	10mm	28				
🗌 No.14 (6.3mm)	28 25mm	10.5mm	5				
	28mm	2					
	30mm	2 .			-		

Self Drilling Flanged Hexagon Bolts

ad Size (T) C	Overall Length (L)	Hexagon Width Across Flats	Material	Finish
.6 (3.5mm) 🚺 🚺 🔶 🗌	_] 32mm 🚺 🔺	(כ)	🗌 Stainless Steel (A2) 🛛 🚺 🕯	Matte Black 66
.7 (3.9mm) 🚺 🗌	35mm	5.5mm 26 *	Stainless Steel (A4) /	🗌 Natural 🛛 📶
.8 (4.2mm) 16	38mm	_ 7mm 16	Carbon Steel Tip	
.10 (4.8mm) 26	45mm6	8mm 62		
.12 (5.5mm) 🐴 🗌]50mm 🥑	10mm 28		
.14 (6.3mm) 28	60mm6	□10.5mm 5		
C	65mm			
C	70mm 🛛 🔼			
				c

Self Drilling Flanged Hexagon Bolts

No.8 (4.2mm) 16 80mm 2 7mm 16 Carbon Steel Tip 4 No.10 (4.8mm) 26 90mm 6 8mm 62 10mm 63	
No.8 (4.2mm) 16 80mm 2 7mm 16 Carbon Steel Tip 4 No.10 (4.8mm) 26 90mm 6 8mm 62	
No.8 (4.2mm) 16 80mm 2 9mm 16 Carbon steer np 2 No.10 (4.8mm) 26 90mm 6 8mm 62	71
No.12 (5.5mm) (4) 0100mm (4) 0100mm (4) 0100mm (28)	
No.14 (6.3mm) 28 110mm 4 10.5mm 5	
120mm 2	
" 🗍 150mm 🛛 🛃 "	



METRIC LEFT HAND THREADED BARS



APPLICATIONS

Left-Hand Thread is the term that is used for a thread where the nut tightens in the opposite direction to normal. It is **commonly used on items that rotate in a manner that could cause a normal righthanded nut to loosen**; for example, the pedal of a bicycle on the left-hand side.

Thread Size (T)		Length (L)		Thread Pitch		Material		Finish	
🗌 M2 (2mm)	2 -	[] 12mm	2 -	0.4mm	2 📤	🗌 Brass 🚺	3 ^	🗌 Natural	430
🗌 M2.5 (2.5mm)	2	[] 16mm	4	0.45mm	2	🗌 Duplex Stainless Steel 🛛 💽	7	Zinc Plated	6
🗌 M3 (3mm)	5	20mm	6	0.5mm	5	High Tensile Stainless		C Zinc and Clear	12
🗌 M4 (4mm)	6	25mm	8	0.7mm	6	Steel (A4-80)		Passivated	
🗌 M5 (5mm)	6	30mm	10	0.8mm	6	High Tensile Steel (8.8)			
🗌 M6 (6mm)	47	35mm	10	🗌 lmm	47	High Tensile Steel (10.9)	2		
🗌 M8 (8mm)	57	40mm	12	1.25mm	57	A4)	3		
M10 (10mm)	59 🖕	45mm	12 🗸	1.5mm	59 🗸	Mild Steel (Grade 4.6)	-		

Metric Threaded Bars

Metric Left Hand Thread Threaded Bars

Thread Size (T)	Length (L)		Pitch		Material		Finish	
🗌 M8 (8mm)	4 🚺 1000mm	44 ^	0.8mm	(3 *	Black Stainless Steel	0	🗌 Matte Black	22
🗌 M10 (10mm)	4		🗌 lmm	6	(A2)		🗌 Natural	22
🗌 M12 (12mm)	4		1.25mm	4	(A4)	24		
🗌 M14 (14mm)	2		☐ 1.5mm	4	Stainless Steel (A2)	19		
🗌 M16 (16mm)	(4)		□1.75mm	4 6 6	<u> </u>			
🗌 M18 (18mm)	2		2mm					
🗌 M20 (20mm)	4		2.5mm					
() M24 (24mm)	4		3mm	4 -				9





HARDWARE FITTINGS

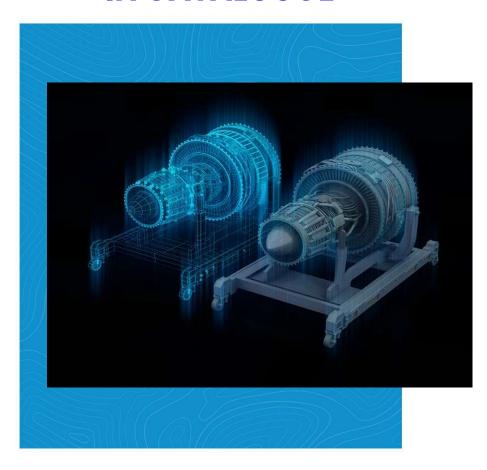


APPLICATIONS

These are structural components such as frame members, pipe plugs, axles, self tapping inserts, studs, fasteners, seals, and leadscrews. These are mechanisms that control movement in various ways such as gear trains, belt or chain drives, linkages, cam and follower systems, including brakes and clutches. The are used from Automotive, Aerospace, and Manufacturing applications, etc.



HARDWARE FITTINGS IN CATALOUGE



290. CASTORS WITH BOLT HOLE

292. CONICAL WITH HANDLES

294.STANDARD HANDWHEEL

296. GRIP KNOBS

298. QUARTER TURN LOCKS



CASTORS WITH BOLT HOLE



APPLICATIONS

Bolt-hole casters can be attached to racks, carts, furniture, and other equipment to allow them to roll, which reduces the effort required to move or reposition the equipment. Also known as hollow-kingpin casters, they have an open hole that provides versatility when mounting the casters to equipment.

Industrial Castors With Bolt Hole

Wheel Diameter (D)		Wheel Width (T)		Fixing Plate Diameter (d)		Fixing Hole Diameter (F)		Material	
40mm	2 ^	[] 17mm	2 📤	33.5mm	14 ^	9mm	2 *	Stainless Steel	8
50mm	8	17.5mm		48mm	24	0 10mm	14	Steel	52
60mm	8	🗌 18mm	4	57mm	16	10.9mm	2		
63mm	4	18.5mm	3	64mm	6	12mm	38		
75mm	4	20mm	4			13.2mm	2		
080mm	14	21.5mm	4			15.6mm	2		
[] 100mm	10	22mm	15						
125mm	10 🗸	23mm	3.		*		Ŧ		

Industrial Castors With Bolt Hole

Wheel Diameter (D)		Wheel Width (T)		Fixing Plate Diameter	(d)	Fixing Hole Diameter (F)	Material	
40mm	3 *	21.5mm	4 ^	33.5mm	14 *	9mm	2 ^	Stainless Steel	8 *
50mm	3	22mm	15	48mm	24	10mm	14	Steel	52
60mm	3	23mm	3	57mm	16	🗌 10.9mm	2		
63mm	3	24mm	2	64mm	6	12mm	38		
□75mm [4	3	27mm	12			13.2mm	2		
80mm	3	28mm	4			15.6mm	2		
100mm		30mm	4						
125mm		39mm	2 🗸		-		*		-



CONICAL HANDLES



APPLICATIONS

Handles are rounded handles that users can firmly and comfortably hold onto a piece of machinery or operate a control. The devices may be axisymmetric, spherical, or T-shaped. Handles are used to transmit a force between a person's hand and an object.

Conical Handles

Thread Size (d)		Thread Length (E)		Knob Length (L)		Material		Finish	
M6 (6mm)	2 *	0 10mm	4 *	50mm	5 *	Polyamide	15 *	Black	15 *
M8 (8mm)	7	23mm	3	00mm	2				
M10 (10mm)	5	30mm	4	70mm	3				
M12 (12mm)	0	31mm	2	080mm	3				
		32mm	2	🗌 89.5mm	2				
	-		*		-		+		+





STANDARD HANDWHEEL



APPLICATIONS

applications There are many for handwheels. Some devices are used to manually operate valves. Others are used to adjust tables and cutters on machine tools, or to manually drive printing In the industry, presses. handwheels are used to regulate roll tension and feed paper and other materials

Standard Handwheels

Thread Size		Handwheel Diamete	er (D)	Wheel Shape		Material		Finish	
M6 (6mm)	12 *	30mm	4 -	Scalloped	25 🔺	Polyamide	4 9 ^	Black	49 ^
M8 (8mm)	33	40mm	24	Star					
☐ M10 (10mm)	4	45mm	2	Triangular 13	13	13			
			7						
		060mm	12						
	-		-		-		-		-





GRIP KNOBS



APPLICATIONS

Suitable for confined spaces. Available with knurled texture for no-slip grip. Female Grip Hand Knobs have rough ridges around the outside of the handle creating a firm gripping surface that is also comfortable. These durable knobs fit onto male applications and are resistant to oils, fuels, and greases.

Grip Knobs

Thread Size	Overall	Diameter (D)	Overall Height (H)		Male or Female		Material	
M4 (4mm) 7	^]14mn	n 🚺 ^	🗌 11mm	4 ^	🗌 Female	9 *	Phenolic	3 ^
M5 (5mm) 7	15mm	n 🔒	16mm	5	Male	20	Polyamide	26
□ M6 (6mm) 9	20mr	n 2	26mm	2				
M8 (8mm) 6	22mm	n 🖪						
	23mn	n 🚺						
	28mr	n 🖪						
	•	*		*		*		





QUARTER TURN LOCKS



APPLICATIONS

Quarter-turn locks can be used to hold closed all sorts of hatches, switch cabinets, metal lockers, machine doors etc. They are easy to operate and very robust. They are ideal for cabinet construction, for all branches of transport and for assembly and logistics vehicles.



Quarter Turn Locks

Head Style	Grip Range (H)		Handle Type	Material	Finish	
	* 20mm	8 ^	Left / Right Hand	Die-Cast Zinc Alloy 24	Black Coated	12 4
	27mm	8			Chrome Plated	12
	30mm					
	¥	*	· · · · · · · · · · · · · · · · · · ·	•	*	4





Oil and Gas Applications

SPECIALIST BOLTS



In this section of the catalogue, will we basically the give properties of the bolts that we use in the oil and gas industry. Applications include Pressure Vessels, Pumps, Valves, Actuators, pipeline heads, well Fabrications, petrochemical plants and drilling equipment.



OFFSHORE OIL RIG

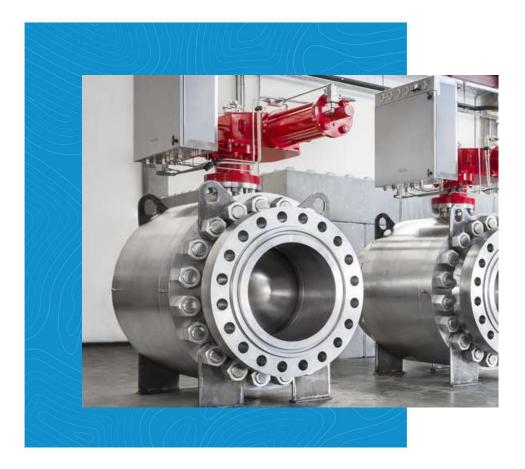
APPLICATION



There is need for reliability of fasteners, bolts and nuts because of the harsh environment. We use a wide range of materials which are namely (AISI 4340, A453, Grade 660 ABCD, Duplex and Super duplex UNS 32760, Inconel 718 and 625) Applications include BOP, Christmas Trees, Riser Bolts Structures, Piping, Spool, Flow lines and moorings.



PETROCHEMICAL APPLICATIONS



In terms of materials, we offer the following grades namely **AISI 4340**, **A453**, **Grade 660**, **Duplex and Super Duplex UNS 32760**, **Inconel 718 and 625)**. Other applications include BOP, Christmas Trees, Riser Bolt Structures, Piping, Spool, Flow line, Moorings, etc.



PETROCHEMICAL APPLICATION CONTD.



Our products are used in the chemical and Petrochemical industries and there are used in equipment such as heat exchangers, valves, pressure vessels. Our finished products include threaded rods, studs, nuts, washers, and semi finished products (bars, hex blanks, nut blanks, socket blanks, etc). Parts such as stud bolts, nuts, socket screws, washers, hex bolts with the relevant coatings. The standards we work with include EN, AFNOR, DIN, ANSI, ASTM, RCCM standards.



CONSTRUCTION APPLICATION



Modern construction requires that very quality bolt and stud materials which will not fail when load is applied on it. Therefore, we are dedicated to the make sure that we deliver high grade fasteners specific for construction your requirements in line with global standards.



STUDS USED IN CONSTRUCTION



Our products are approved to ISO 9001:2008, ISO 14001:2004 and OHAS 18001. We have strict quality control checks for all our products and throughout all stages of production. We understand the ripple effect of poor quality when it comes to fasteners in the construction, and we have solutions to the problems. We can manufacture from M12 - M30 including other sizes.



CONCLUSION



We want to thank you for taking out time to go through this catalogue. Upon request we will send you a detailed document of any part you might wish to buy from us.

Also, we will send you and invoice which will include the cost of the part as it is not mentioned in the document, plus shipping arrangement and all the information you may require.

We hope to shake hands with you as we offer our world class service to your organisation. Welcome on board.





Thank Yo

We make and bring your idea to life