

Security & tamper resistant fasteners

Authorised Distributor of





0

Antersterner.

# What are security & tamper resistant fasteners?

Special headed screws, nuts & bolts which are either permanently fixed or can only be removed using a matching driver tool.

## Why do I need them?

**Security...** The need to safeguard against theft and vandalism is increasingly an essential part of many design specifications.

**Safety...** Deal with stringent H&S laws, keep the public safe.

**Aesthetics...** Security fasteners are not only secure and vandal-resistant, but aesthetically pleasing to the eye complementing their surrounding environment.

# What are the consequences of not using them?

insurance claims	theft
crime	liability claims
lost revenue	pilferage
terrorism	vandalism
unauthorised access	trespassing
reputation	



## stamping out the impact of theft globally

# TR Fastenings - specialists in security and tamper-resistant type screws, nuts and bolts.

As a leading global engineering, manufacturer and supplier of industrial fastenings and associated components, TR Fastenings is committed to servicing the requirements of the tamper-resistant fastener market.

TR Fastenings has 31 locations, of which 8 are high volume production manufacturing sites. TR supplies in excess of 50 billion components annually to 5,000 companies globally across a wide range of industries.

Every industry has specific needs in both product and quality requirements which TR meet through an extensive portfolio of products across a wide scope of quality certifications.























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Solok



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## **Security Ratings**

# Tamper-resistant fastener security ratings explained.

Security fasteners are an essential component for protecting property and keeping people safe. But what level of security fastener should you specify to protect an assembly from theft/ tampering?

'It all depends on what your application is and how important it is to you that it is protected.'

To help you decide on the right solution for your application we have created this simple security fastener guide.

We have categorised our fasteners into 1-5 levels, 1 being the most popular/commonly used 'Entry Level Security' and 5 being the 'Maximum Security Level' available.

There can be serious consequences for not using the correct level of security fastener, which is why it's so important to get it right. Used correctly, security fasteners help:

- Prevent theft and deter vandalism
- Protect the general public from harm
- Create cost savings
- Maintain civil and social order
- Reduce risk of litigation cases



#### Entry level security

Fasteners offer protection from vandalism and opportunistic crime. Driver tools can be purchased by the general public.



#### Enhanced security

Fasteners are less common and less recognisable. Driver tooling is non-standard and harder for the general public to buy.



#### Medium security

Rarer, less well-known products. Supply of driver tooling is controlled, less readily available to buy, enhancing the security of the assembly.



#### High security

Either 1-way permanent fixings, or rare Hafrenpatented high security products requiring specialist tooling to remove (only available from Hafren approved distributors).



#### Maximum security

Highest security available. Products are either 1-way permanent fixings, or require bespoke exclusive, custom made driver tools to remove.



#### Kinmar Permanent The ultimate high security patented one-way nut.

**15** 

This patented permanent nut requires a matching driver socket for installation giving you guaranteed torgue levels and can be re-torqued if required. Not governed by a shear point and leaving no unplated surfaces, it leaves a clean smart finish.

- Stocked in Case Hardened Steel Zinc Plated (CR-3) and Geomet®, also stocked in A2 Stainless Steel
- Kinmar<sup>®</sup> Permanent drive is also stocked in bolt form M8 x 25mm / M8 x 40mm (Zinc Plated & Geomet®)
- Other materials and finishes available to order subject to minimum order quantities

#### How it works:



#### **Stock Range:**

Box Qty 100

Size					
Material	M5	M6	M8	M10	M12
Zinc Plated					
Geomet®					
A2 Stainless					
Driver Size	KM6P	KM6P	KM8P	KM10P	KM12P

#### Kinmar Removable

Unique Hafren segment shaped nut. The unmate two-way patented security nut - extra resilient to attack.

This patented removable nut requires a matching driver socket for installation and removal. This cost effective nut has a smooth aesthetically pleasing design which makes it an extremely versatile nut.

- Stocked in Case Hardened Steel Zinc Plated (CR-3) and Geomet<sup>®</sup>, also stocked in A2 Stainless Steel
- Kinmar<sup>®</sup> Removable drive is also stocked in bolt form M8 x 25mm / M8 x 40mm (Zinc Plated & Geomet®)
- Other materials and finishes available to order subject to minimum order quantities



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### How it works:

Installed using matching driver socket

> Restricted availability of Kinmar<sup>®</sup> Removable driver socket to enchance level of security

#### Stock Range:

Box Qty 100

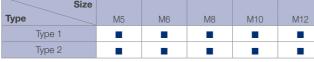
Size					
Material	M5	M6	M8	M10	M12
Zinc Plated					
Geomet®					
A2 Stainless					
Driver Size	KM6R	KM6R	KM8R	KM10R	KM12R

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The Nogo<sup>™</sup> is a 2-part enclosure offering the highest security for any nut or bolt.





Nogo<sup>™</sup> Technical info (mm)

LENGTH		Mea				
LENGTH	M5	M6	M8	M10	M12	│ <b>∕I⊷</b> ∽I∖ Ť∣
А	12.0	13.0	14.0	18.0	20.0	
В	20.0	22.0	28.4	31.8	35.8	
С	12.8	14.9	19.9	24.3	26.2	B

Power6<sup>™</sup>

Thread forming screws

(sometimes known as 'Self

cross-section rather than a

Stocked in Geomet<sup>®</sup> 500 B

Tri-lobular thread resists

Ideal for fencing and the

automotive industry.

circular one.

installation time.

1 WAY

Thread forming screws manufactured with a 'unique' 6-Lobe Pin drive.



2

Unique Power6<sup>™</sup> Tooling (Not compatible with standard 6-Lobe Pin tooling)



#### Not standard 6-Lobe Pin.

security.

#### Stock Range:

Length DRIVER SIZE Gauge 45mm M8 P6-40 Power6<sup>™</sup> Technical info (mm) M8  $\overline{\Box}$ 4.1 Pan Head 16.0

Other sizes available to order

Box Qty 100



Unique one-way pozidrive security system.

This drive system only operates in a clock-wise motion leaving a permanent finish. Ideal for easy and fast application using standard pozi screwdrivers.

- Stocked in Case Hardened Steel Zinc Plated (CR-3)
- Available in Twinthread Woodscrews
- Other materials, finishes and thread types can be manufactured to order subject to minimum order quantities



1

#### How it works:





One-way only

#### Stock Range:

Countersunk Zinc Plated Twinthread Woodscrews

Box Qtv 200

									-
	Length	3/4"	1"	1 <sup>1</sup> /4"	1 <sup>1</sup> /2"	2"	21/2"	3"	DRIVER
Gauge		19mm	25mm	32mm	38mm	50mm	63mm	75mm	SIZE
6	3.5mm								PZ2
8	4.2mm								PZ2
10	4.8mm								PZ2
12	5.5mm								PZ3

#### Sentinel® technical information (mm)

	$\sum$		TWINTHREAD V	VOODSCREWS	
) (२	) (	No. 6	No. 8	No. 10	No. 12
レ	シ	3.5mm	4.2mm	4.8mm	5.5mm
CSK	$\square$	6.8	8.2	9.8	11.7
HEAD	I Ref	2.5	2.9	3.5	4.2

## 5-Lobe Pin

A favourite for high torque applications.

Successor to the Resistorx, the 5-Lobe Pin has 5 lobes instead of 6, providing a higher level of security.

Stocked in A4-70 Stainless Steel Available in A2 Stainless Steel

Stocked in Button Head and Countersunk Head, Self Tapper and Machine Screws.

Made to measure specials available



5-Lobe Pin for extra security



Not standard 6-Lobe Pin drive

#### **Stock Range:**

Countersunk / Button Head | AB Type Self Tapping Screws Box Qtv 100

Button Head

A4-70 Self Tapper

Countersunk Head

A4-70 Self Tapper

Countersunk Head A4-70 Machine Screw

Button Head A4-70 Machine Screw

5 Lobe Pin Tooling

	ength	1/2"	3/4"	1"	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"	DRIVER
Gauge		13mm	19mm	25mm	38mm	50mm	SIZE
6	3.5mm						F15
8	4.2mm						F20
10	4.8mm						F25

Countersunk / Button Head | Metric Machine Screws

Box Qty 100

Stocked in A4-70 Stainless

Steel

Length Gauge	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm	30 mm	40 mm	50 mm	DRIVER SIZE
M3			▼								F10
M4											F20
M5		▼									F25
M6											F30
M8											F40

#### Head Styles

Countersunk only

 Button Head only Countersunk & Button Head

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This security drive ensures that each and every customer has their own unique 'one-of-a-kind' drive socket.

As there are millions of variations to the Solok™ drive socket, your driver key will be specific to you, therefore enhancing the level of security. Every new user gets a Solok™ code to which their screws and tools are made, meaning even somebody else's Solok™ tools will not fit screws made to your code.

- Engineered to keep other driver bits out
- Full range of Self Tapping and Metric Machine Screws available made to your unique drive code
- Manufactured in Carbon Steel and Stainless Steel
- Available to order in various finishes and other thread types - subject to minimum order quantities

#### How it works:



#### Sizes available to order:

Varying minimum order quantities (MOQ) and tooling charges apply.

Countersunk or Button Head | Self Tapping Screws | From 4 x  $_{3/4}^{\rm vr}$  (2.9 x 9.5mm) to 14 x 2" (6.3 x 50mm) M00 2500

Countersunk or Button Head | Machine Screws | From M3 x 6mm to M16 x 100mm M0Q (M3 to M6 2500), (M8 2000), (M10 1500), (M12 1000)



Armour Ring

4

1

WAY

A simple conical collar which renders a standard hexagon nut or bolt tamper resistant.

The Armour Ring<sup>™</sup> can be applied to any British or DIN standard hexagon nuts or bolts using a standard hammer or Armour Ring<sup>™</sup> installation tool. It leaves a smooth clean finish which is often favoured by Health & Safety executives and isn't governed by a torque level like some one-way fasteners.

- Has been Home Office approved
- Stocked in Steel Zinc Plated (CR-3) and 303 S31 Stainless Steel





#### Stock Range:

Box Qty 100

Size											
Material	M6	M8	M10	M12	M16	M20					
Zinc Plated											
Stainless Steel											
Armour Ring™ Technical info (mm)											

#### Size Dimensions M8 M10 M12 M16 M20 M6 А 15.8 20.0 26.6 33.0 41.2 51.0 В 10.5 14.2 18.8 20.8 26.5 33.5 7.7 9.8 12.3 16.0 19.0 6.8

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## Scroll<sup>™</sup> Nut

High security removable nut with a unique 'Scroll' drive.



The rounded design of this nut gives no sharp angles to provide grip for normal hand tools. It can only be installed and removed using the matching Scroll<sup>™</sup> driver socket. Patented Scroll<sup>™</sup> design is interesting and pleasing to the eye.

- Stocked in 303 S31 Stainless Steel
- Scroll<sup>™</sup> drive available to order in bolt form
- The smallest and largest security nut available from stock – M3 to M30

### How it works:



#### Stock Range:

Qty 50

Size												
Material	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24	M30	
Stainless Steel												
Scroll™ Nut Technical info (mm)												

Box

#### 12.8 14.2 19.0 А 3.2 3.2 4.2 5.5 6.4 7.2 8.7 11.0 В 7.9 7.9 12.7 15.8 19.0 22.2 28.5 34.9 38.0 44.0 9.5



## 2-Hole

Popular aesthetically pleasing drive for any two-way application.

This drive system, sometimes known as Snake Eye® or Pig Nose is designed for low to medium torque applications. It has 2 holes drilled into the head which requires a unique 2-pin matching driver to install and remove it.

- Full range of Self Tapping and Metric Machine Screws stocked in A2 Stainless Steel
- Other styles of fasteners available in the 2-Hole drive system: Barrel Nuts, Male & Female Bolts, Grub Screws, Glass Screws, Large Disc Head Screws.



Pan Head A2 Self Tapper



Pan Head A2 Machine Screw

2-Hole Tooling

#### Stock Range:

Countersunk / Pan Head AB Type Self Tapping Screws

Box Qty 100

્રા	ength	<sup>3</sup> /8"	1/2"	<sup>5</sup> /8"	3/4"	1"	<b>1</b> <sup>1</sup> / <sub>4</sub> "	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"	2 <sup>1</sup> /2"		
Gauge	e	9.5mm	13mm	16mm	19mm	25mm	32mm	38mm	50mm	63mm	DRIVER SIZE	
4	2.9mm						▼				TH3	
6	3.5mm										TH4	
8	4.2mm										TH5	
10	4.8mm										TH6	
12	5.5mm										TH7	
14	6.3mm										TH8	

A2 Machine Screw

Countersunk / Raised Countersunk / Pan Head | Metric Machine Screws

Box Qty 100

Length Gauge	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50 mm	60 mm	DRIVER SIZE
M3		▼				▼	▼	▼	▼					TH3
M3.5				*			*	*		*		*		TH4
M4									▼					TH5
M5									▼					TH6
M6														TH8
M8		To order only												N8
M10		To order only												N14

#### Head Styles

▼ Countersunk only ★ Raised Countersunk only ● Pan Head only ■ Countersunk & Pan Head

#### For product dimensions see page 26

## Shear Nuts

The Shear System is a high security permanent fastener.

Both the Shear Nut and the Shear Bolt have a hexagon part which shears off at a predetermined torque. Installed using standard hex socket or spanner. Once installed, the Shear Nut leaves a tamper resistant cone.

 Shear Nuts stocked in; Zinc Plated (CR-3) Steel Galvanised Steel A2 Stainless Steel A4 Stainless Steel



Saddle Bolts stocked in M8X40 galvanised finish for use with D section palisade fencing.

Generally used in conjunction with M8 Galvanised shear nuts, or galvanised Kinmar® Permanent Nuts (see page 7).



#### Stock Range:

Box Qty 100

Size Material	M4	M5	M6	M8	M10	M12	M16	M20	M24
Zinc Plated Steel									
Galvanised									
A2 Stainless Steel									
A4 Stainless Steel									

## Shear Bolts

The Shear System is a high security permanent fastener.

Both the Shear Bolt and the Shear Nut have a hexagon part which shears off at a predetermined torque. Installed using standard hex socket or spanner. Once installed, the Shear Bolt leaves a tamper resistant head.

- Stocked in A2 Stainless Steel
- Shear Bolts can also be manufactured to order in most common materials and finishes

#### How it works:



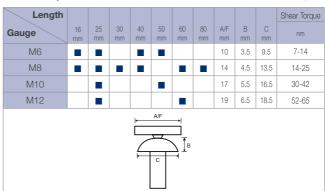
#### Stock Range:

Button Head A2 Stainless Steel

Box Qty 50

1

MAY





1

WAY

## Self Drillers

Self Drilling Screws manufactured with a 6-Lobe Pin drive.

Drilling tips provide fast and easy application eliminating the need to pre-drill. Installed and removed using 6-Lobe Pin tooling.

Stocked in Delta Protekt<sup>®</sup> Coated Steel

6-Lobe Pin Tooling



Countersunk Head Pan Head

Box Qty 100

Box Qty 100

#### **Stock Range:**

Countersunk Head

Gauge	Length	<sup>1</sup> /2" 13mm	<sup>3</sup> / <sub>4</sub> " 19mm	1" 25mm	1 <sup>1</sup> /2" 38mm	2" 50mm	DRIVER SIZE
8	4.2mm						T20
10	4.8mm						T25
12	5.5mm						T27

Pan Head

	Length	1/2"	3/4"	1"	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"	DRIVER
Gauge		13mm	19mm	25mm	38mm	50mm	SIZE
8	4.2mm						T20
10	4.8mm						T25
12	5.5mm						T27

#### **Technical Information:**

Gauge (Point size)	$\Box$	8 (2)	10 (3)	12 (3)
Material thickness Mild steel up to (m	nm)	1+2	2 + 2	2+3

All sizes shown are without min and max tolerances and are guide sizes.

## **Barrel Nut**

Ensures maximum security when clamping two materials together.

These Barrel Nuts (also known as Interscrews) are internally threaded parts that are ideal for clamping two pieces of material together when used with machine screws. Ideal for: playground equipment, ironmongery and signage to name but a few.

- Manufactured with a 6-Lobe Pin security drive
- Stocked in A2 Stainless Steel
- Available with Button head and Countersunk head





#### **Stock Range:**

Button Head

Box Qty 100 Length DRIVER SIZE Gauge 10mm 12mm 16mm 20mm 25mm 30mm M4 T20 M5 T25 M6 T30 M8 T40 M10 T45 

Countersunk

Box Qty 100

Length Gauge	12mm	16mm	20mm	25mm	DRIVER SIZE
M4	▼				T20
M5		▼			T25
M6		▼			T30
M8			▼		T40
M10				▼	T45



Expanding fixings giving fast and easy application for heavy duty security.

Security Anchors save time and money when fixing applications that require a firm hold. They are suitable for fixing to a wide range of base materials such as: brick, concrete, stone and masonry. Available in both permanent and removable options... for a hold that stays.



 Countersunk A2 6-Lobe Pin Sleeve Anchor



 Kinmar<sup>®</sup> Removable Steel Zinc Plated Sleeve Anchor

#### **Stock Range:**



(2)

WAY WAY

2. Button Head A2 6-Lobe Pin Sleeve Anchor



 Kinmar<sup>®</sup> Permanent Steel Zinc Plated Sleeve Anchor

Box Qty 50

Style		Anchor	Option	
Size	1	2	3	4
M6 x 45mm				
M6 x 50mm				
M8 x 50mm				
M8 x 55mm				
M8 x 60mm				
M8 x 70mm				
M8 x 75mm				
M8 x 80mm				
M8 x 90mm				
M10 x 60mm				
M10 x 65mm				
M10 x 70mm				
M10 x 80mm				
M10 x 95mm				

Please note these Anchors are not intended for heavy duty structural applications.

## **Clutch Head**

The original one-way security drive.

The special ridged design of this drive means that it can only operate in a clockwise motion. Installed using standard slotted screwdriver - no specialist tools required.

Stocked in; Case Hardened Steel
 Zinc Plated (CR-3) Woodscrews
 A2 Stainless Steel Self Tapping Screws
 A2 Stainless Steel Metric Machine Screws





Removal tool available for Stainless Steel only

#### **Stock Range:**

Countersunk Zinc Plated Woodscrews

Length Gauge		3/4"	1"	1 <sup>1</sup> / <sub>4</sub> "	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"	2 <sup>1</sup> / <sub>2</sub> "	3"
		19mm	25mm	32mm	38mm	50mm	63mm	75mm
6	3.5mm							
8	4.2mm							
10	4.8mm							
12	5.5mm							

Countersunk / Round Head A2 Stainless Steel Self Tapping Screws

Box Qty 100

Box Qty 200

	_ength	1/2"	3/4"	1"	1 <sup>1</sup> / <sub>4</sub> "	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"
Gauge		13mm	19mm	25mm	32mm	38mm	50mm
6	3.5mm	•					
8	4.2mm						
10	4.8mm	-	-				
14	6.3mm	-					

Round Head A2 Stainless Steel Metric Machine Screws

Box Qty 100

Length Gauge	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm	30 mm	35 mm	40 mm	45 mm	50 mm	60 mm
M4	-	-	-	-	-		-		-	-		
M5					-	-						
M6						-						
M8												

Head Styles

▲ Round Head only ■ Countersunk & Round Head

## **Pin Hex**

Hexagon socket screws manufactured with an internal pin.

This drive prevents removal with standard hexagon tools. Suitable for medium torgue applications and is one of the most difficult to remove without the matching driver.

- Full range of AB Self Tapping and Metric Machine Screws stocked in A2 Stainless Steel
- Other styles of fasteners in the Pin Hex drive system: Socket Cap Screws, Grub Screws and Barrel Nuts



Countersunk A2 Machine Screw

Countersunk

A2 Self

Tapper

Pin Hex Tooling

## Stock Range:

Countersunk / Button Head AB Type Self Tapping Screws

	Length	<sup>3</sup> /8"	1/2"	<sup>5</sup> /8"	3/4"	1"	<b>1</b> <sup>1</sup> / <sub>4</sub> "	<b>1</b> <sup>1</sup> / <sub>2</sub> "	2"	2 <sup>1</sup> /2"	3"	DRIVER
Gaug	е	9.5mm	13mm	16mm	19mm	25mm	32mm	38mm	50mm	63mm	75mm	SIZE
6	3.5mm											2mm
8	4.2mm											2.5mm
10	4.8mm											3mm
12	5.5mm											4mm
14	6.3mm											4mm

A2 Machine Screw

Countersunk / Raised Countersunk / Button Head Metric Machine Screws

Box Qty 100

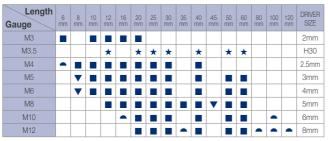
Button Head

Button Head

Box Qty 100

A2 Machine Screw

A2 Self Tapper



For product dimensions see page 27

#### Head Styles

- Countersunk only ★ Raised Countersunk only
- Button Head only Countersunk & Button Head



6-Lobe recess manufactured with an internal pin.

Popular security drive for high torque applications. Quickly and easily installed and removed using matching tooling.

- Full range of AB Self Tapping and Metric Machine Screws stocked in A2 Stainless Steel
- Other styles of fasteners in the 6-Lobe Pin drive system
- Barrel Nuts
- Grub Screws
- Concrete Tapping Screws
- Tri-Lobular Metal Thread Screw/Taptite
- Plastic Tapping Screws



Raised Countersunk A2 Machine Screw

Stock Range:

6-Lobe Pin Toolina

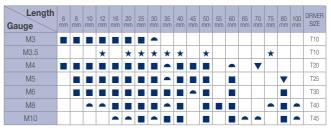
Countersunk / Button Head AB Type Self Tapping Screws

Box Qty 100

<u> </u>	ength	3/8"	1/2"	5/8"	3/4"	1"	1 <sup>1</sup> / <sub>4</sub> "	1 <sup>1</sup> / <sub>2</sub> "	13/4"	2"	21/2"	3"	4"	DRIVER
Gauge	•	9.5mm	13mm	16mm	19mm	25mm	32mm	38mm	44mm	50mm	63mm	75mm	100mm	SIZE
4	2.9mm			▼		▼								T10
6	3.5mm						▼							T10/T15
8	4.2mm								▼		▼			T15/T20
10	4.8mm										▼	▼	▼	T25
12	5.5mm				▼									T27
14	6.3mm													T30

Countersunk / Raised Countersunk / Button Head Metric Machine Screws

#### Box Qty 100



#### Head Styles

Countersunk only ★ Raised Countersunk only

 Button Head only Countersunk & Button Head



Countersunk

A2 Self

Tapper





Widely used vandal deterrent fixing.

This quick and easy to install security fastener is a favourite for applications in recess or channel due to its tall head design.

 Stocked in A2 Stainless Steel



(2) WAY

Install with matching driver (key wrench)



#### **Stock Range:**

Box Qty 100

Length					
Gauge	20mm	30mm	40mm	50mm	DRIVER SIZE
M8					TRI-8

#### Tri-Head Technical info (mm)

L	DIMENSION	А	В	С	D
	20mm	14.0	9.5	6.3	1.7
	30mm	14.0	9.5	6.3	1.7
	40mm	14.0	9.5	6.3	1.7
	50mm	14.0	9.5	6.3	1.9

### **Technical information**

#### 2-Hole

$\left( \right)$		SE	ELF T/	APPI	NG S(	CREV	VS	METRIC MACHINE SCREWS					
(0)	O)	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14	M3	M3.5	M4	ME	MC	
$\sim$		2.9 mm	3.5 mm	4.2 mm	4.8 mm	5.5 mm	6.3 mm	IVIO	10.0	IVI4	M5	M6	
PAN		5.4	6.7	8.0	9.3	10.6	12.2	5.9	N/A	7.8	9.8	11.8	
HEAD	$\square^{\mathrm{I}}$	1.7	2.0	2.4	1.7	3.1	3.6	1.7	N/A	2.4	3.0	3.6	
CSK	$\square$	5.4	6.6	7.9	9.2	10.5	12.2	5.4	N/A	7.3	9.0	10.8	
HEAD	∏_Ref	1.7	2.1	2.5	2.9	3.4	3.9	1.7	N/A	2.2	2.5	3.0	
RAISED CSK		N/A	6.3	N/A	N/A	N/A							
HEAD	Ref	N/A	1.9	N/A	N/A	N/A							

### 5-Lobe / 6-Lobe Pin

603	)		SELF	TAPPI	NG SC	REWS		METRIC MACHINE SCREWS							
Sold and the second sec	5	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14								
	S)	2.9 mm	3.5 mm	4.2 mm	4.8 mm	5.5 mm	6.3 mm	MЗ	M3.5	M4	M5	M6	M8	M10	
BUTTON		5.5	6.7	7.4	9.3	10.3	11.0	5.6	N/A	7.4	9.3	10.3	13.8	17.3	
HEAD	$\bigcirc^{\mathrm{I}}$	1.7	2.5	2.1	2.6	3.2	3.4	1.7	N/A	2.2	2.8	3.3	4.4	5.5	
CSK	$\square$	4.9	6.6	7.9	9.3	10.6	12.2	5.7	N/A	7.8	9.8	11.8	15.8	19.7	
HEAD		1.5	2.1	2.5	3.0	3.4	3.8	1.7	N/A	2.3	2.8	3.3	4.4	5.5	
RAISED CSK		N/A	6.4	N/A	N/A	N/A	N/A	N/A							
HEAD		N/A	1.8	N/A	N/A	N/A	N/A	N/A							

Please note Raised Countersunk Head are only stocked in the 6-Lobe Pin drive

#### 6-Lobe Pin Self Drillers

R	3	No. 8	No. 10	No. 12
G	J.	4.2mm	4.8mm	5.5mm
PAN HEAD		7.9	9.3	10.6
PAN HEAD	$\Box^{\mathrm{I}}$	2.9	3.4	3.9
CSK	T	7.9	9.3	10.6
HEAD	∏Ref ∏Ref	2.5	3.0	3.4

All measurements in mm unless specified, subject to tolerances.

## **Technical information**

#### **Pin Hex**

	7	SE	ELF TAF	PPING	SCREV	VS	METRIC MACHINE SCREWS							
	) )	No. 6	No. 8	No. 10	No. 12	No. 14								
	Ľ	3.5 mm	4.2 mm	4.8 mm	5.5 mm	6.3 mm	M3	M3.5	M4	M5	M6	M8	M10	M12
BUTTON		6.7	7.4	9.3	10.3	11.0	5.5	N/A	7.4	9.3	10.3	13.7	17.1	21.0
HEAD	$\square^{\mathrm{I}}$	2.5	2.1	2.6	3.2	3.4	1.5	N/A	2.2	2.8	3.3	4.4	5.5	6.5
CSK	$\square$	6.6	7.9	9.3	10.4	12.4	5.7	N/A	7.8	9.8	11.8	15.8	19.7	24.0
HEAD	Ref	2.1	2.5	3.0	3.4	3.8	1.7	N/A	2.3	2.8	3.3	4.4	5.5	6.5
RAISED		N/A	N/A	N/A	N/A	N/A	N/A	6.4	N/A	N/A	N/A	N/A	N/A	N/A
HEAD	Ref	N/A	N/A	N/A	N/A	N/A	N/A	1.8	N/A	N/A	N/A	N/A	N/A	N/A

#### **Clutch Head**

Λ				HREAD		SELF	TAPPI	NG SCF	REWS	METRIC MACHINE SCREWS			
	$\rightarrow$	No. 6	No. 8	No. 10	No. 12	No. 6	No. 8	No. 10	No. 14				
V	$\mathcal{V}$	3.5 mm	4.2 mm	4.8 mm	5.5 mm	3.5 mm	4.2 mm	4.8 mm	6.3 mm	M4	M5	M6	M8
ROUND		N/A	N/A	N/A	N/A	6.3	7.6	8.8	11.7	7.4	9.3	10.2	13.0
HEAD	Ref	N/A	N/A	N/A	N/A	2.5	2.9	3.4	4.4	2.8	3.2	3.5	4.8
CSK	$\square$	7.0	8.3	9.3	11.0	6.8	8.1	9.4	N/A	N/A	N/A	N/A	N/A
HEAD	Ref	3.5	4.6	5.0	5.4	3.2	3.8	4.4	N/A	N/A	N/A	N/A	N/A

### Kinmar<sup>®</sup> Permanent

SIZE	M5	M6	M8	M10	M12	
А	12.1	12.1	16.1	20.1	24.2	
В	5.6	5.6	7.3	9.2	10.6	

#### Kinmar<sup>®</sup> Removable

SIZE	M5	M6	M8	M10	M12	
A	12.1	12.1	16.1	20.1	24.2	∠ ⊂ ∆   <sup>B</sup>
В	5.8	5.8	7.3	9.2	10.6	

## **Technical information**

#### **Button Head Barrel Nuts**

SIZE	M4	M5	M6	M6	M8	M8	M10	
DIMENSION	10 mm	10 mm	12 mm	25 mm	16 mm	30 mm	20 mm	<b>←</b> →
А	9.2	10	12	12	14.3	14.3	18	
В	2.8	3.3	4.4	4.4	5	5	5.8	
С	10	10	12	25	16	30	20	E
D	5.3	6.4	8	8	10	10	12.5	│ ±Li ⊔⊥ │ ⊷→│
E	6	6	9	20	12	25	14	D

#### **Countersunk Barrel Nuts**

SIZE	M4	M5	M6	M8	M10	A →
DIMENSION	12 mm	16 mm	16 mm	20 mm	25 mm	
А	7.8	9.8	11.8	15.8	19.7	с
В	5.3	6.4	8.0	10.0	12.5	
С	6	6	7	10	14	  ←→  B

#### **Shear Nuts Galvanised**

SIZE	Ξ	M8	M10	M12	M16	M20	M24	L AF J
AF		17.0	19.0	22.0	24.0	30.0	36.0	
В		12.8	15.0	16.5	22.0	28.5	34.5	В
Shear Torque	nm	14-28	34-48	45-62	80-95	100-140	360-420	└───┘↓

#### **Shear Nuts Steel Zinc Plated**

SIZ	Έ	M6	M8	M10	M12	M16	M20	M24
AF	=	13.0	17.0	19.0	22.0	24.0	30.0	36.0
В		10.0	12.8	15.0	16.5	22.0	28.5	34.5
Shear Torque	nm	7-14	14-28	34-48	45-62	74-90	100-140	360-420

### Shear Nuts A2/A4 Stainless Steel

SIZE		M4	M5	M6	M8	M10	M12	M16
AF		7.0	10.0	10.0	13.0	17.0	19.0	24.0
В		9.1	9.1	9.5	12.0	15.0	16.0	22.0
Shear Torque	nm	5-9	7-12	7-14	14-28	40-56	55-70	74-90

All measurements in mm unless specified, subject to tolerances.



We are able to offer a bespoke made to measure range of security fasteners.

With all types of specials, minimum order quantities and varying lead times apply depending on your size and material requirements. We have listed some available thread types, materials and finishes, but you may be looking for something totally different and unique. If so, send us your drawings and samples and we'll get you a quote.

Materials
A2 Stainless Steel
A4 Stainless Steel
Carbon Steel
Aluminium
Brass
A1 303

Plating
Polished
Zinc & Yellow
Zinc Plated
Chrome Plated
Galvanised/Geomet®
Black Passivated
Brass Plated
Nickel Plated
0

#### Copper Plated

#### Thread Types

Self Drilling Screws
Self Tapping Screws:
- AB Type
<ul> <li>В Туре</li> </ul>
Machine Screws:
- Metric
- Imperial
<ul> <li>British Standard</li> </ul>
Woodscrews:
<ul> <li>Single Thread</li> </ul>
- Twinthread
<ul> <li>Hi-Lo thread</li> </ul>
Thread forming Screws:
- Tri-Lobal
<ul> <li>Paint Clearing</li> </ul>
<ul> <li>Plastic Forming</li> </ul>
Dog Point Screws
Security Rating

Available in levels 1-5

<ul> <li>Button Head</li> </ul>
Countersunk
Pan Head
<ul> <li>Raised Countersunk</li> </ul>
Round Head
<ul> <li>Flange Button Head</li> </ul>

Head Shapes

1 2 3 4 5

#### Patching/Painted Heads

- Painted Heads
- Powder Coated
- Thread Patching
- Thread Facility
  Thread Lubrication
  Thread Locking



#### **Car Park Security**

Kinmar<sup>®</sup> Removable is an ideal choice for car park applications especially on features including barriers and entry security. It can only be removed with the product specific driver tooling.















The 6-Lobe Pin Barrel Nut was used extensively throughout The Shard build to provide maximum security when clamping materials together.

It's special head design offers peace of mind against theft and unauthorised tampering. These Hafren nuts also enjoy some of the best views in town!









#### **Street Furniture**

Available in a wide range of styles and drives, including Barrel Nuts, Self Drillers & Sleeve Anchors



6-Lobe Pin







With many coastal towns benefiting from a resurgence in popularity and an increase in revenue generated by tourism. There has been a sharp rise in redevelopment and regeneration.

Security Fasteners such as the Kinmar® Removable play a valuable role in helping protect property and ensuring the safety of the general public.











#### **Sky Gardens**









#### **Public Transport**

Transport systems are an essential element of modern societies - particularly cities.

Public transport facilities are prime targets for terrorists and criminals, which makes it essential to develop solutions to prevent crime on public transport systems.









Please contact your local office for further information, or email sales@trfastenings.com

Visit our global website to see our full range of products available: www.trfastenings.com

