



























# **Huck LockBolts**

#### **Key Benefits:**

• Permanent, mechanically locked fastener

C6L® - The Original Huck Design

- Installation process automatically provides fastener values
- No torque or re-torque required
- Unlike conventional nuts and bolts, they will not work loose, even during extreme vibration
- Rapid installation with quick and easy visual inspection
- Excellent gap closure capability
- Can be installed onto angled surfaces (5° maximium)
- Tamperproof



5.8 grade small diameter Lockbolt

of quality, safety and performance

headstyle for palisade fencing

Made to British Standard B7805: Part 1: 1997: A mark

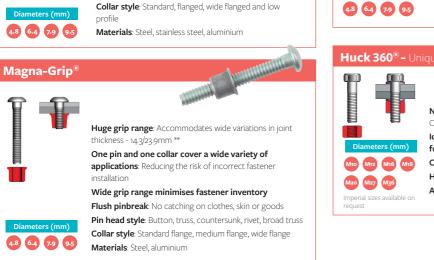
Wide flange collar available: Enables installation into

Pin head style: Brazier, truss, countersunk, specific









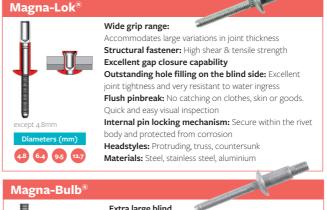


# Hucktainer® - Designed specifically for joining composite board in trailer applications. Will not crush or damage the composite board Integral seal around pin head prevents moisture ingress Low profile on both sides when installed: No catching on clothes, skin or goods. Not as grip sensitive as some competitor products Pin head style: Standard low profile, encapsulated in plastic Sleeve style: Wide bearing medium bearing, clearance Short grip version available Materials: Steel

# **Huck Structural Blind Fasteners**

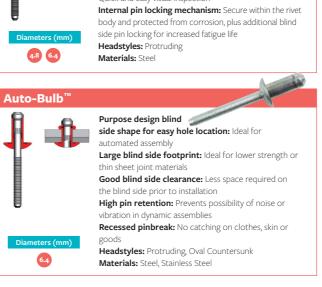
#### **Key Benefits:**

- Internal locking mechanism retains the pin
  - Structural fastener after installation
  - Higher strength than a standard open end blind fastener
- Ideal for use where access is limited on one side of the application
- Preassembled fastener Insert one part in the hole and install
- A variety of installation tooling options available









Very high strength/diameter ratio: Can be used in demanding structural applications as an alternative to threaded fasteners or welding

Very high joint tightness when compared to conventional blind fasteners

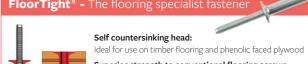
Very resistant to tampering, extremely hard to remove Excellent gap closure capability

Large blind side footprint: Ideal for lower strength or thin sheet joint materials

Headstyles: Protruding

Materials: Steel

FloorTight® - The flooring specialist fastener



Superior strength to conventional flooring screws: Reduces the number of fasteners required and number of drilled holes

3 Clamp strengths available to suit your joint. No crushing or pulling through the board

Recessed pinbreak: No catching on clothes, skin or goods

Headstyles: Standard flange and wide flange

Materials: Steel

# Penta-Lok™ - Specifically Designed for the Composite Panel Market



**BOM®** 

Specifically for joining load restrain profiles to lightweight panel

Penta-Lok "claws" unfurl and install inside the actual panel not on the blind side/back of panel

**High pull out strength:** Due the load spread of the "claws" inside the lightweight panel of approximately 16mm.

**No through hole required in the lightweight panel:** Penta-Lok only needs a minimum 8mm of depth in the

lightweight panel to insert the blind side of the fastener **Headstyles:** Protruding

Materials: Steel

#### Magna-Tite™ - The roofing specialist fastener



4.8 6.4

Polymer watertight seal:
Ideal for roofing or similar applications

**Extra large blind side footprint:** Ideal for lower strength or thin sheet joint materials

**Low clamp load:** Perfect for use in thin sheet material,

Flush pinbreak: No catching on clothes, skin or goods.
Quick and easy visual inspection

Headstyles: Protruding, Low Profile, Shaveable, 100° Oval
Materials: Aluminium

Individual fastener benefits will vary depending on the application they are used in. Please discuss with your HFS Customer Manager prior to fastener choice.

<sup>\*</sup> Special tab collar is needed to perform this function. \*\* Based on 6.4mm diameter. Two different grip lengths available. \*\*\* As long as the nut and bolt set remain free spinning after removal Individual fastener benefits will vary depending on the application they are used in. Please discuss with your HFS Customer Manager prior to fastener choice.

		Based on Diameter: 6.4mm Material: Steel				Material		Diamete	er (mm)							
4.8 to 9.5mm Diameter Lockbolts	Material Grade	Shear Strength	Tensile Strength	Clamp Strength	Steel	Stainless Steel	Aluminium	4.8	6.4	7.9	9.5	×		11	1	
C6L	5.8				•	•	•	•	•	•	•		•			
C120L	8.8				•			•	•	•	•		•			
Magna-Grip					•		•	•	•	•	•	•	•	•		
BobTail	5.8/8.8				•	•			•	•	•		•		•	•

#### Key for 4.8 to 9.5mm Diameter

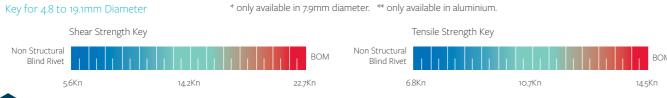


		Based on Diameter: 16mm Material: Steel only				Material				Diameter (mm)														
12 to 36mm Diameter Lockbolts	Material Grade	Shear Strength	Tensile Strength	Clamp Strength	Steel	Stainless Steel	Aluminium	12.0	12.7	14.0	15.9	16.0	19.1	20.0	22.2	24.0	25.4	27.0	30.0	36.0			Z	<b>1</b> ×
C50L	8.8				•	•	•		•		•		•		•		•				•			
BobTail	8.8/10.9				•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•

#### Key for 12 to 34.9mm Diameter



		ameter: 6.4mm ial: Steel	Material						Diamet	er (mm)										
Structural Blind Fasteners	Shear Strength	Tensile Strength	Steel	Stainless Steel	Aluminium	4.8	6.4	7.9	9.5	12.7	15.9	19.1	Ŋ.	ĺ.		1	<b>-1</b> -	4		
Magna-Lok			•	•	•	•	•		•	•			•	•	•	•				
HuckLok			•			•	•						•	• Double		•	•			
Magna-Bulb			•			•	•	•						•		•	•	•		
Auto-Bulb			•	•			•									•	•			•
BOM			•			•	•	•	•	•	•	•		•	•		•			
FloorTight	*	*	•					•					•	•		•		•		
Magna-Tite	**	**			•	•	•						•			•	•		•	
Penta-Lok			•				•									•				





Expanding (HuckLok)

3585

2583

Hydraulic installation tool. Installs

12, 14, 15.9, & 19.1mm diameter

Lockbolts and 15.9 & 19.1 mm

BOM® structural blind rivets.

Hydraulic installation with extra

long stroke. Ideal for installing

9.5mm Magna-Lok® and 7.9 mm

Will also install 7.9 and

9.5mm Lockbolts &

structural blind rivets.

Floortight®.

# How It Works

#### **Huck Lockbolts**

Clamp Force or Pre-Load: In the initial stages of the installation process, the tool engages and pulls on the pintail. The joint is pulled together before the conical shaped cavity of the nose assembly is forced down the collar. This progressively locks (swages) it into the grooves of the harder pin. The pin and swaged collar combine to form the installed fastener.

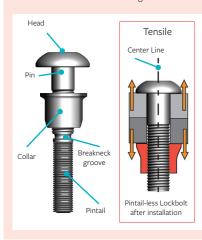
The squeezing action reduces the diameter of the collar, increasing its length. This in turn stretches the pin, generating a clamp force over the joint

**Shear strength of Lockbolts** vary according to the material strength and minimal diameter of the fastener. By increasing the diameter or the grade of material, the shear strength of the fastener can be increased.

The tensile strength of Lockbolts is dependent on the shear resistance of the collar material and the number of grooves it fills.

Shear Line

Lockbolt after



# **Huck Structural Blind Fasteners**

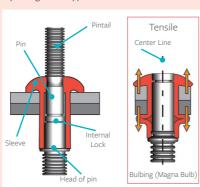
The shear strength of structural blind fasteners is generated by the combined resistance against failure of the pin and sleeve. This takes place along the joint's shear line between fastened plates.

The tensile strength of structural blind fasteners differs to that of Lockbolts, as they form a blind side positive lock either by bulbing or expanding of the sleeve. The sleeve, assisted by the permanently secured pin, therefore resists failure along its centre line.

1. Bulbing – the sleeve of the fastener is compressed, causing it to fold outwards to form a bulb. This forms itself tightly against the joint material. Once the pin is permanently locked into place the pintail will break off, completing the

2. Expanding – pulling on the pintail causes the head of the pin to draw into the sleeve. This expansion causes a foot print to form against the joint material.

**Note:** The pre-load of blind rivets is generally not published, as it varies widely depending on the application



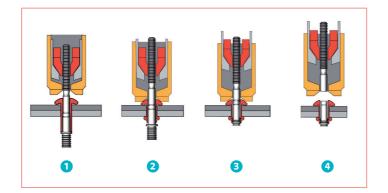
# Installation Sequence

#### Lockbolt installation sequence

- Pin placed into prepared hole
  - Collar placed over pin
- 2 Tool is placed over the fastener pintail and activated
  - Pin head pulled against material
  - Anvil pushes collar against joint
  - Initial clamp generated
- Tool swages collar, increasing clamp
- 4 Pintail breaks, installation complete

#### Blind Fastener installation sequence

- Pin placed into prepared hole
  - Tool is placed over the fastener pintail
- Tool activated
  - Deforming of blind side begins
- Joint tightened
  - Internal locking mechanism formed
- Pintail breaks, installation complete



# **Huck Tooling Systems**

Many different types of Huck installation tooling systems are available. Some of the most popular tools are shown below, but this is just a small part of our range. Discuss your requirements with our dedicated Systems Engineering Team to find the optimum solution to suit your need.

#### The basic tooling requirements to install Huck fasteners:

- Installation Tool Either pneudraulic or hydraulic
- Nose Assembly To match with the fastener and tool
- **Powerig®** To supply power to hydraulic tools
- Additional Hose Set Sometimes required to connect hydraulic tools to the Powerig

#### **Huck Range Force™ Battery Installation Tool**



Battery powered installation too with electronically adjustable pull force control. Installs structural blind rivets and LockBolts up to 6.4mm.

### **HuckForce Powerig<sup>™</sup> Range**



3 phase electric power rig options, suitable for use with all Huck installation tools.



# Swageforward® Range



purposes only, other tools are available in Swageforward range

- 15,9 - 16 19,1 - 20 - 22,2 - 25.4 -27 - 30 - 36

Hydraulic tooling. Ideal for use when application space is limited. Installs 9.5mm and 12 -25.4mm BobTail LockBolts.

## 202V / 2025LB



Pneudraulic installation tool with vacuum pintail collection bottle. Installs 4.8 & 6.4mm structural blind rivets and small diameter LockBolts (2025LB only)

#### 2480L



Hydraulic compact installation tool; high speed & high durability. Ideal for high volume production to install 4.8 & 6.4 mm small diameter LockBolts and structural blind rivets.

# The **Unshakeable World** of Huck Fastening Systems

For more than 60 years, the business Lou Huck founded and the fasteners he designed are still solving the problem of coping with extreme stress and vibration, providing strength and facilitating lighter, stronger, more durable structures.

Today the product range based on his original drawing of a Lockbolt now known as the HuckBolt® has evolved to include small and large diameter fasteners, medium and heavy duty blind fasteners and associated installation tooling.

# Solution Needed, Solution Provided

Make our engineers part of your team at the concept stage. Their unrivalled knowledge of advanced fastener function can make the impossible possible. A standard fastener in our range may provide your answer. If not, we can produce a cost-effective tailor-made solution.

#### The Huck Fastening System - Key Benefits:

- Will not loosen even under extreme vibration
- Maintenance free joints no need to torque or re-torque
- Lower lifetime total cost of joint high shear and tensile strengths for increased fatigue life of the joint
- High speed, easy to install systems can reduce production time by 75%
- Improves health and safety replace welded joints
- Tamperproof once installed cannot be removed without specialist tooling





# Contact us



Howmet Fastening Systems Ltd. Unit C, Stafford Park 7, Telford TF3 3BQ

Tel: +44 (0) 1952 204 603 Fax: +44 (0) 1952 204670 Email: enquiries@hfsindustrial.com Web: www.hfsindustrial.com



**Disclaimer:** The information contained in this publication is only for general guidance with regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in HFS's written quotations, acknowledgments, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.