

## Huck-Fit® Lockbolt

Agrade 10.9, two piece fastener, providing high strength and resistance to vibratory loosening. The unique thread form allows pre-tightening fit-up prior to final swaging and, using standard impact wrenches, removal of fastener if required. Available in diameters 12 mm to 27 mm.

### High Strength

The unique tension-tension method of installation causes the fastener to develop its clamp force and tensile strength consistently every time.

### Visual Inspection

No need for X-ray of welds, or torque checking of bolts. Saves time and costs.

### Fast, Easy Installation

Reduces need for skilled labour, reduces rework and errors. Saves time and cost.

### Pre-Tightening Fit-Up Feature

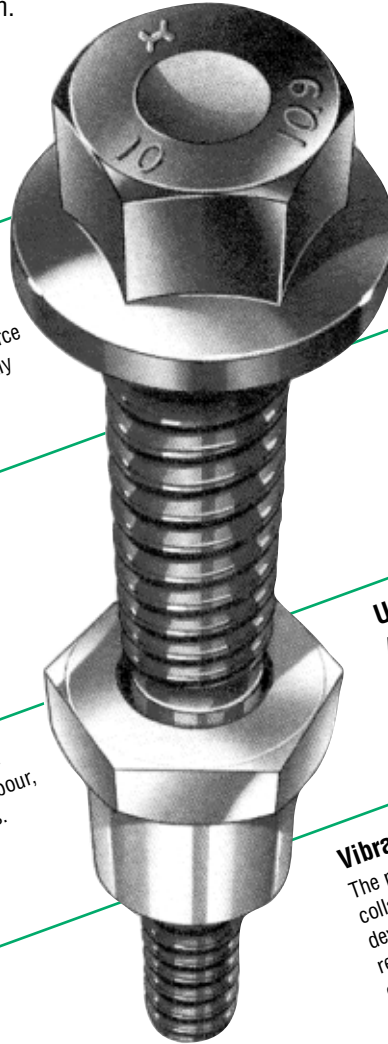
Permits structure alignment prior to final fixing.

### Unique Thread Form

Allows initial fit-up, as well as removal using standard impact wrenches.

### Vibration Resistant

The perfect match between the pin and the collar after swage, combined with the developed clamping force, delivers a vibration resistance many times superior to that of ordinary nuts and bolts.



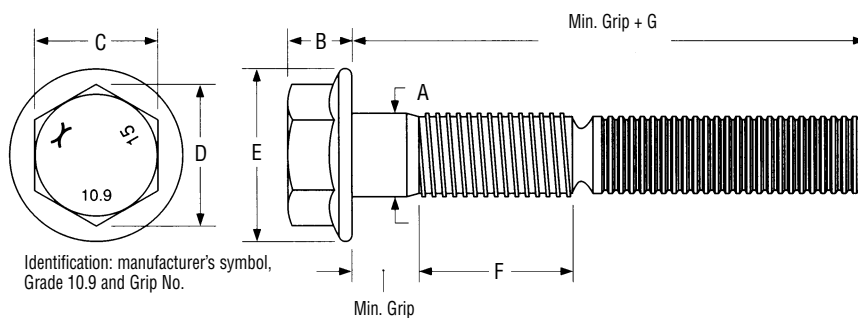
#### APPLICATIONS

- Truck Frames
- Construction
- Bridges
- Mining Equipment
- Off Road Vehicles
- Steel Making Plant

# Huck-Fit® Lockbolt

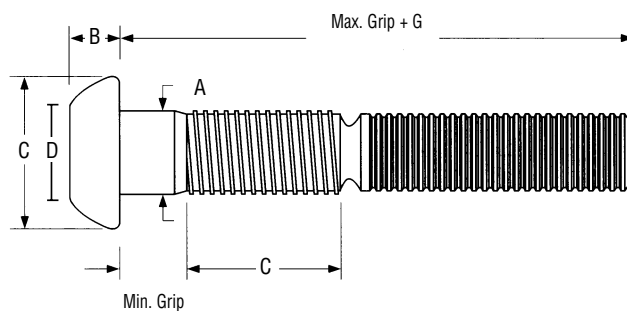


## Flanged Hex Head Pin MHFF



Diameter	A	B max	C max	D ref	E max	F±0.5	G max
12mm	11.73-12.00	10.8	15	17.0	24.7	32.6	82.6
14mm	13.73-14.00	12.0	18	20.4	28.5	35.2	85.5
16mm	15.73-16.00	13.7	21	23.9	32.8	38.6	95.2
20mm	19.67-20.00	17.0	27	30.8	40.8	44.3	111.4
22mm	21.67-22.00	18.3	30	34.2	44.1	47.7	118.1
24mm	23.67-24.00	19.5	34	38.7	49.0	48.9	132.6
27mm	26.67-27.00	22.1	36	40.4	53.9	56.2	139.9

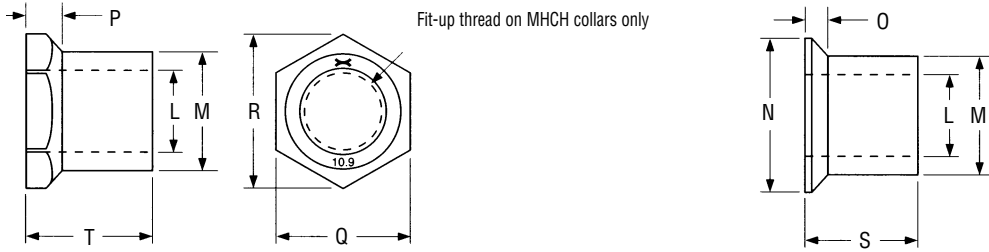
## Round Head Pin MHFR



Diameter	A	B max	C max	D ref	F±0.5	G max
12mm	11.73-12.00	8.0	22.7	9.2	32.6	82.6
16mm	15.73-16.00	10.7	30.5	13.1	38.6	95.2
20mm	19.67-20.00	13.4	38.3	15.4	44.3	111.4
22mm	21.67-22.00	14.6	41.8	17.3	47.7	118.1
24mm	23.67-24.00	15.5	46.0	20.3	48.9	132.6
27mm	26.67-27.00	17.4	51.4	22.8	56.2	139.9

Huck-Fit® Lockbolt

## Collar Dimensions



**Hex Flange Collar MHCH/MHBH**

**Round Flange Collar MHBF<sup>1</sup>**

Dia.	L±0.1	M±0.1	N max	O ref	P ref	Q max	R ref	S±0.4	T±0.4
12mm	12.3	19.3	26.0	3.0	7.1	22.0	24.9	18.5	22.6
14mm	14.3	23.1	30.2	3.5	7.3	26.0	30.3	21.5	25.2
16mm	16.5	25.6	34.5	3.5	8.7	30.0	33.7	23.4	28.6
20mm	20.3	32.0	42.8	5.0	10.5	36.0	41.0	28.8	34.3
22mm	22.7	35.5	47.6	4.8	11.5	38.0	44.0	31.0	37.7
24mm	24.3	38.3	51.4	5.6	10.6	41.0	47.2	33.9	38.9
27mm	27.3	43.5	57.8	6.8	13.2	46.0	52.2	39.8	46.2

## Grip Data

Grip Number	Range (mm) min-max
10 <sup>2</sup>	5-15
15	10-20
20	15-25
25	20-30
30	25-35
35	30-40
40	35-45
45	40-50
50	45-55
55	50-60
60	55-65
65	60-70
70	65-75
75	70-80
80	75-85
85	80-90
90	85-95
95	90-100
100	95-105

Round flange collars provide additional grip as follows:

Diameter	Add to max grip
12mm	4.0
14mm	4.0
16mm	5.0
20mm	5.5
22mm	6.5
24mm	5.0
27mm	6.5

## Minimum Installed Values kN

Diameter	Shear	Tensile	Clamp
12mm	70.1	88.2	61.0
14mm	95.9	120.0	83.1
16mm	126.0	163.6	113.4
20mm	197.0	255.4	176.8
22mm	239.0	315.4	231.3
24mm	285.2	368.2	254.8
27mm	362.1	478.2	329.9

Minimum values, in kilonewtons, of installed fasteners to meet ISO 898 Grade 10.9 high strength bolts. 1kN = 102 kgf or 225 lb.  
Approvals from National Institutes of Steel Construction are available on request.  
Clamp force is measured using Skidmore-Wilhelm tester.

## Inspection Data

Should 'A', 'B' or 'E' dimensions exceed the given values, the fastener is out-of grip. A 'C' dimension less than the given value indicates an incomplete swage. A 'D' dimension greater than the given values indicates an incorrect or worn anvil on the installation tool.

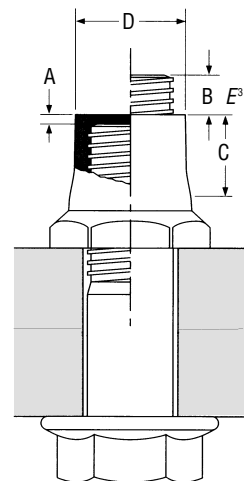
Dia.	A max	B max	C min	D max	E max <sup>2</sup>
12mm	0.6	10.6	13.8	18.3	14.7
14mm	0.6	10.6	15.9	21.9	14.4
16mm	0.6	10.6	17.7	24.1	15.8
20mm	0.6	10.6	21.2	30.3	16.1
22mm	0.6	10.6	23.4	33.4	17.3
24mm	0.6	10.6	25.3	36.3	15.7
27mm	0.6	10.6	29.5	41.3	17.1

A properly installed fastener will possess the dimensions given here. Visual inspection is sufficient.  
1 Non-standard, available on request 2 Please call for availability 3 E dimension for MHBF collars only

## Hole Data

Diameter	Maximum Hole Diameter
12mm	13.5 (14.0*)
14mm	15.5 (16.0*)
16mm	17.5 (18.0*)
20mm	22.0
22mm	24.0
24mm	26.0
27mm	30.0

\*For MHBF pins  
For hole diameters smaller than H dimensions (see drawings), the hole may have to be chamfered for proper head seating.



## How to Order Metric Huck-Fit Pins

Follow the form below to construct a part number for ordering Metric Huck-Fit pins. Refer to the Grip Data chart for grip numbers.

**MHF (STYLE) (TYPE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER) (FINISH)**

Example: **MHFF-DT16-20** is a Metric Huck-Fit Pin, Flanged Head, Pull Type, Alloy Steel, 16mm Diameter, Grip 20, Black Standard Finish

Style	Material	DT	Diameter	Grip	Finish
Hex Head	Steel		12mm	12	Black Standard
Flanged Head			14mm	14	Zinc Clear Chromate
Round Head			16mm	16	Zinc Gold Chromate
			20mm	20	
			22mm	22	
			24mm	24	
			27mm	27	

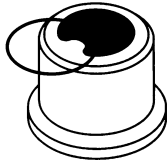
## Metric Huck-Fit Collars

Follow the form below to construct a part number for ordering Metric Huck-Fit collars.

**MH (STYLE) - (MATERIAL) (DIAMETER) - (FINISH) (OPTIONS)**

Example: **MHCH-R16U** is a Metric Huck-Fit Collar, Threaded, Hex Flange, Steel, 16mm Diameter, Zinc Gold Chromate Finish

Style	Material	R	Diameter	Finish	Options
Thread, hex flange	Steel		12mm	Standard	No Tab-Lok
No thread, hex flange			14mm	Zinc Gold Chromate	Tab-Lok for MHBH/BF only
No thread, hex flange			16mm		
No thread, round flange			20mm		
			22mm		
			24mm		
			27mm		



### TAB-LOK™

The Tab-Lok feature makes sure the collar stays on the pin, before installation, in overhead and down slanted pin placements. To order Tab-Lok collars refer to 'Options' in the 'How to Order' section of this brochure.

## Huck-Fit® Installation Tooling

### Standard Tooling

HPT tooling represents the most current technology in Huck tooling. It is designed for production applications, has improved clearance for easier handling and is lighter in weight compared to standard tooling. Where standard tooling is used, the listed nose assemblies in the chart are available.

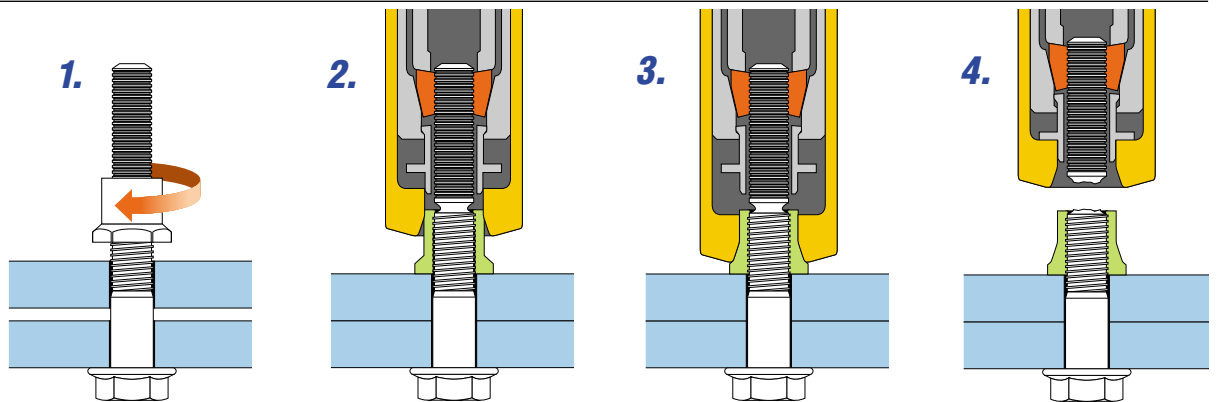
### The Huck-Fit HPT Tool System

The Huck-Fit HPT tool system comprises a tool and nose assembly. The tool powers the nose assembly, which provides the installation link between the fastener and the tool. The choice of tool and nose assembly is determined by the fastener diameter and the application.

### Installation Tools

The HPT tools are hydraulically powered, hand held units. The weight of this line of tooling is about one half of conventional tools. All tools connect to a POWERIG hydraulic unit designed to provide pressurized hydraulic fluid to the installation tool.

### Installation Sequence



- Step 1.** The pin is inserted through a prepared hole. The collar is threaded onto the pin.
- Step 2.** The nose assembly, attached to HUCK's installation tool, is placed over the pintail. The nose assembly pulls on the pintail, drawing the work pieces together.
- Step 3.** Continued pulling on the pintail moves the anvil forward, swaging the collar into the locking grooves. The controlled swaging lengthens the collar to develop clamp.
- Step 4.** When the swaging is completed, the pintail separates from the pin, and the tool ejects the swaged collar out of the anvil, completing the installation.

## Huck-Fit® Installation Tooling

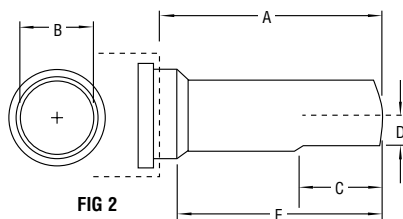
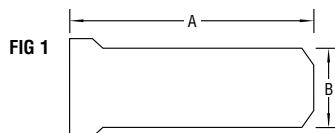
### Nose Assemblies, Installation, Tooling, Hose Kits and Power Units

**Nose Assemblies** - attached to the installation tool, are designed to install a specific diameter MHP fastener.

**Installation Tools** - hand held and operated by hydraulic pressure, work with the nose assembly to swage the collar onto the pin.

**Hose Kits** - available in various lengths, connect the installation tools to the POWERIG® Hydraulic units.

**POWERIG® Hydraulic Units** - powered by petrol, diesel or electricity, provide hydraulic pressure to power the installation.



### Hydraulic Tooling

Diameter	Nose Ass.	Fig.	A mm	B mm	C mm	D mm	E mm	Hydraulic Tooling
12 mm	99-6400	1	135.6	42.8	-	-	-	HPT25RH
12 mm	99-5406	2	104.1	44.5	55.4	20.7	-	<b>2620-PT</b>
14 mm	99-6402	1	169.1	49.5	-	-	-	HPT35RH
14 mm	99-5408	2	94.9	44.5	76.2	19.7	83.3	<b>2624 / 2628</b>
16 mm	99-6302	1	172.4	49.5	-	-	-	HPT35RH
16 mm	99-5300	2	100.3	55.5	58.4	24.5	-	<b>2624 / 2628</b>
20 mm	99-6405	1	194.1	55.5	-	-	-	HPT57RH
20 mm	99-5414	2	69.2	69.9	58.4	31.5	-	506
22 mm	99-6305	1	213.2	69.9	-	-	-	HPT70
22 mm	99-5416	2	83.5	82.6	54	36.4	-	<b>507</b>
24 mm	99-6406	1	237.0	82.6	-	-	-	HPT90
24 mm	99-5418	2	88.5	82.6	69.9	38.1	-	<b>507</b>
27 mm	99-6407	1	254.0	95.3	-	-	-	HPT115

Items in **bold** are part of our FOCUS Tooling Range

Note: Other tool and nose assembly combinations may be available for specific applications. Please contact Huck for details.