

Aerospace Fastening

Solutions

Tooling



Huck Fasteners
an Alcoa business



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Because you keep the world flying...

The critical mission of manufacturing aircraft requires skill, precision and the right tools. Huck fasteners and installation tools have been a proud part of this mission – as a total solution provider - for more than 50 years. Huck fasteners are installed on nearly every commercial and military aircraft worldwide. And we continue to upgrade, revise and improve our fasteners and tools to help make your job easier, faster, and safer as aircraft design and technology advance.

Huck's Installation Equipment Division offers you a complete line of installation tools, hydraulic power sources and accessories. And all the technical support you'll need to keep your production running smoothly, efficiently, flawlessly. Don't hesitate to call us with any questions or special requirements you may have.

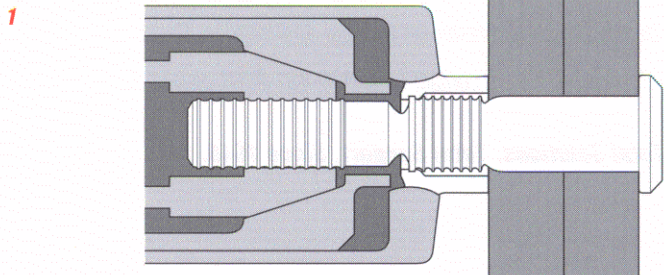
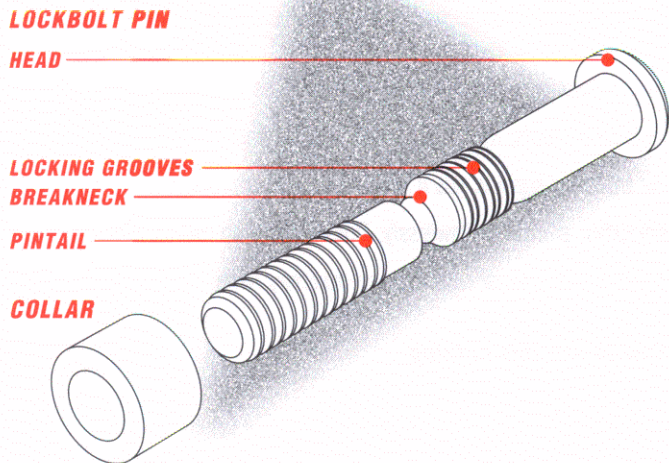
How to use this catalog

Each type of fastener has its own section. The Contents page and the first page of each section provide information that will help you identify the correct fasteners for your applications. For more information, please contact us at 800-431-3091 or 845-331-7300.

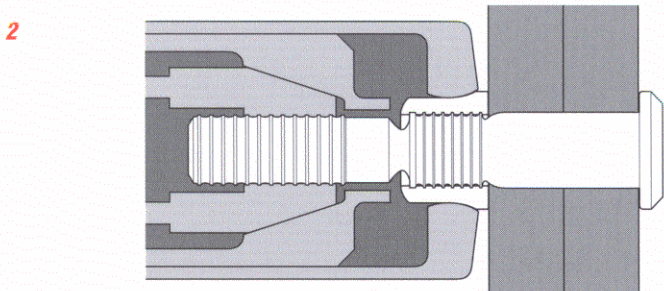
Total Solutions. Total Support. Since 1940.

The Lockbolt Fastener

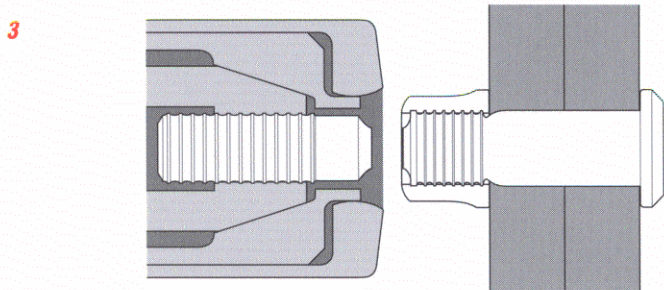
LOCKBOLT FASTENERS are two part fasteners consisting of a pin and collar and are manufactured in a wide variety of materials, head styles, finishes, diameters, and grip lengths. Huck lockbolt fasteners offer substantial advantages over threaded fasteners in performance and cost. Contact your local aerospace sales engineer for more information.



After the pin is inserted from one side of the work surface through a prepared hole, a collar is placed over the pintail. The nose assembly, fitted to an installation tool, is placed over the pintail.



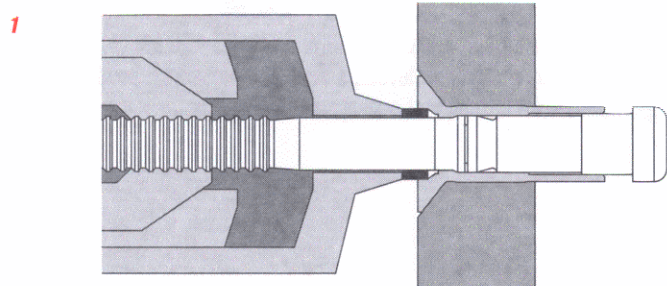
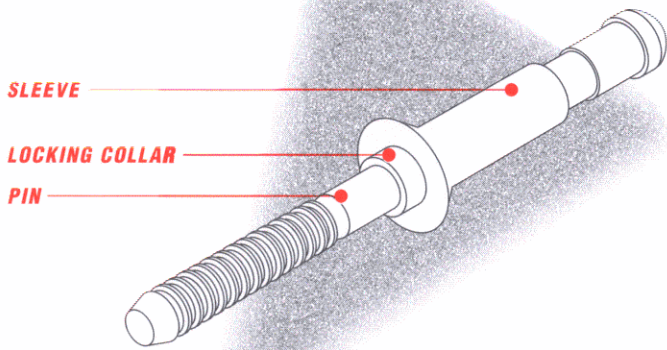
The chuck jaws in the nose assembly grip the pintail grooves. When the tool's trigger is pressed the chuck jaws move rearward, pulling on the pintail, seating the head, and eliminating any gap between work surfaces. The swage die in the outer sleeve of the nose assembly moves forward, swaging the collar material into the pin's locking grooves, providing a permanent lock between the pin and collar.



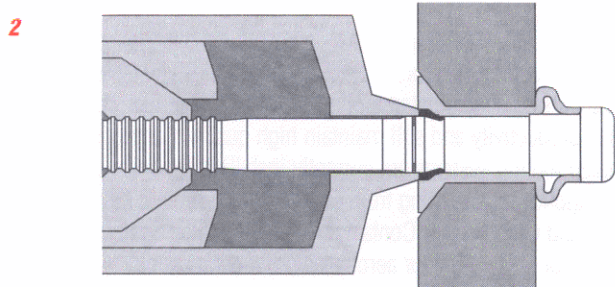
When collar swaging is complete, the tool continues to pull until, at a predetermined force, the pintail separates in tension at the breakneck. Releasing the trigger pushes the tool off the installed fastener.

The Blind Fastener

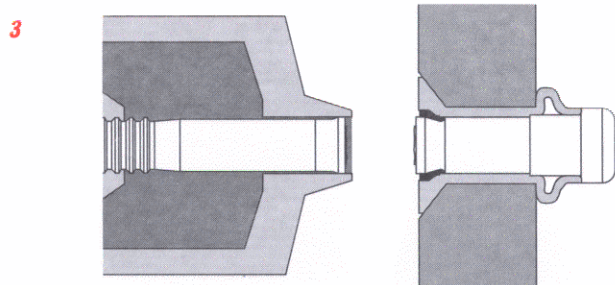
BLIND FASTENERS are single part fasteners consisting of a pin, sleeve, and locking collar and are available in a variety of configurations, materials, head styles, finishes, and diameters. Huck blind bolts and blind rivets provide unmatched performance in aerospace blind side applications—even in the most critical applications in high performance aircraft—and meet or exceed military specifications.



After the fastener is inserted from one side of the work surface through a prepared hole, the nose assembly, fitted to an installation tool, is placed over the pintail and the tool's trigger is pressed. As the pull piston and chuck jaws move rearward, the pin is pulled through the sleeve, expanding it.



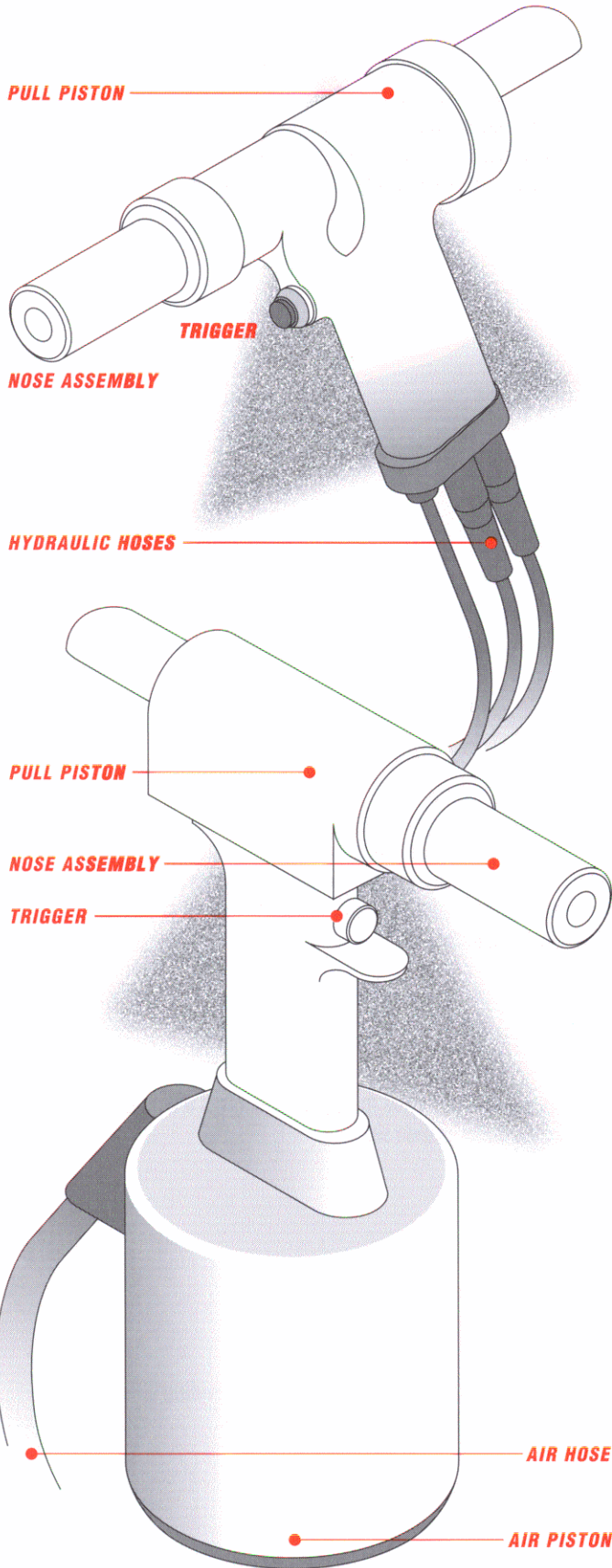
Continued pulling expands the sleeve and forms a bulbed blind head. The locking collar is then set.



The pin breaks at a predetermined location providing a flush installation with no need for additional finishing work.

Note: The illustration shows the installation of a Unimatic® (single action) blind fastener.

Installation Tooling



HYDRAULIC TOOLS are powered by hydraulic pressure supplied by a Huck POWERIG® Hydraulic unit. Since the hydraulic pressure is supplied externally, and not produced within the tool, few moving parts are required—the results are small (we produce tools with overall lengths less than 3"), lightweight, and dependable tools. Coupled with an offset nose assembly, these tools will install fasteners in the most demanding limited access applications.

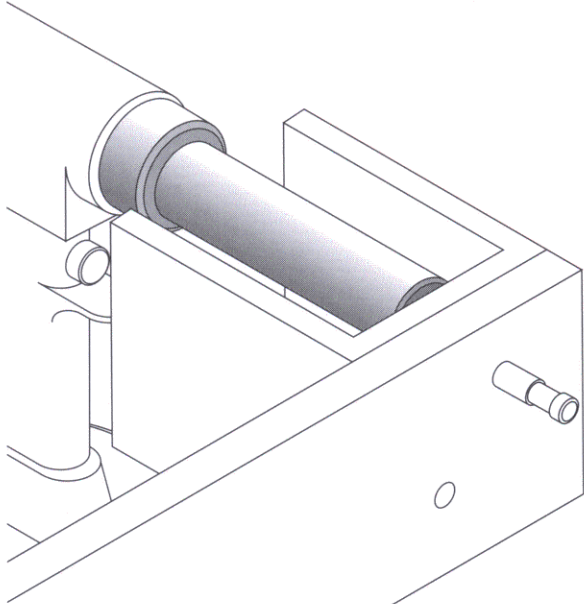
HYDRAULIC POWER UNITS provide pull and return pressure to operate hydraulic installation tooling. Huck POWERIG Hydraulic units are available as portable units that operate a single tool, as well as large production units for multiple tool use. For more information, refer to the POWERIG Hydraulic unit section.

PNEUMATIC TOOLS are heavy duty, reliable, and well suited for high production applications. Powered by 90-100 psi of air pressure, the hydraulic piston develops high pull pressures, producing optimum stroke for efficient one-cycle installations.

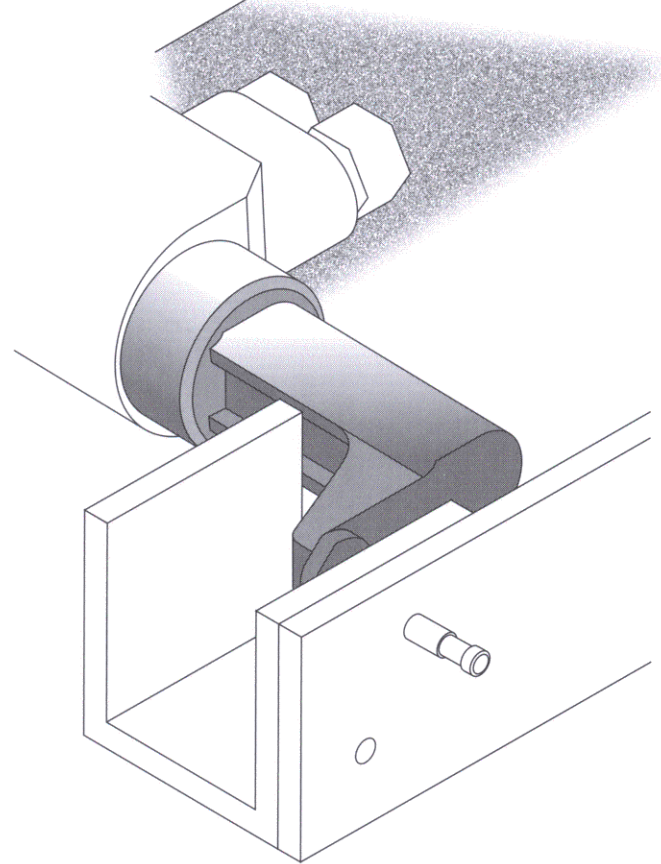
AUTOMATED INSTALLATION SYSTEMS offer speed and consistency and increase productivity. Huck stump-type fasteners coupled with Huck automated tooling provides the perfect way to increase productivity and still maintain high quality standards. Huck automated tooling systems are currently installing fasteners in production applications ranging from aircraft floor beams to fuselage sections and wing panels. Contact a Huck Automated Systems Specialist for help with your aerospace production needs.



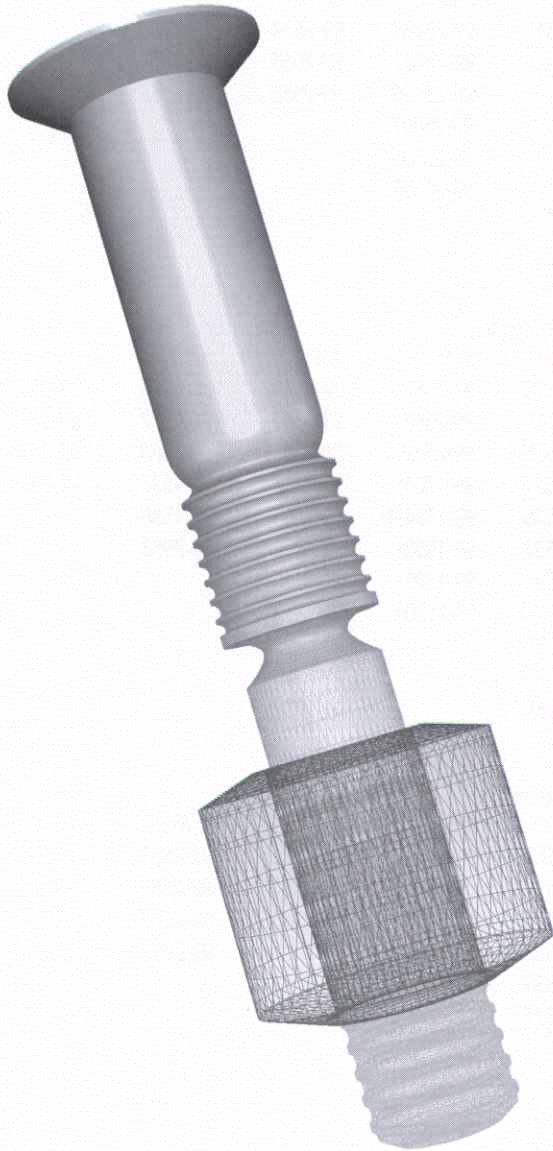
In-Line Nose Assembly



NOSE ASSEMBLIES attach to installation tools and, when placed over the fastener and pulled by the tool's piston, perform the actual installation function. A range of configurations provides access for limited clearance, offset, and deep access applications. Nose assemblies are designed to install specific fastener types and diameters.



Offset Nose Assembly



Includes part numbers:

GPL3S
GPL8T

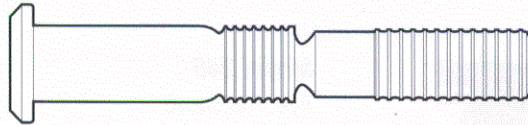
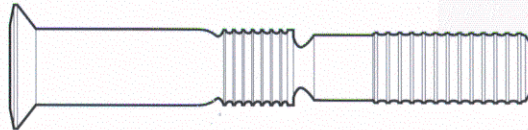
GPL6S
GPL7T
MGPL28T

Huck's Groove Proportioned (GP) lockbolt fastener is a high strength, close-toleranced aerospace fastener designed for use in both interference and clearance fit conditions. Common applications include fuselage panels, wing spars and wing splice stringers.

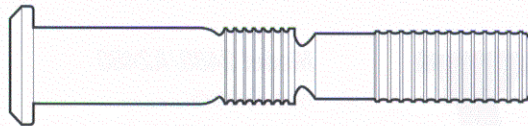
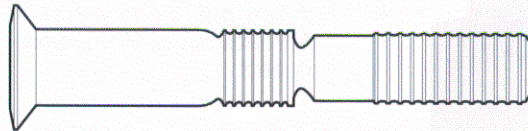
The GP fastener is offered in two versions to meet tension and shear demands.

GP fastener pins are marked with the Huck symbol, basic part number, and material code. Collars are color coded orange for tension and red for shear.

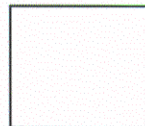
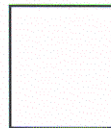
NOTE: These fasteners are available in Stump Type (without pintail) and are intended for hammer drive installation or automated installation. Contact Huck Installation Equipment Division for information on hammer driving and tooling requirements.



GP shear fasteners, flush and protruding heads.

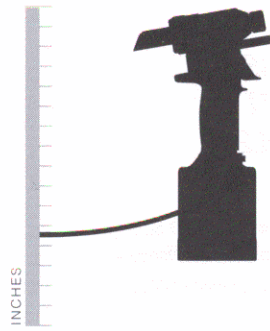


GP tension fasteners, flush and protruding heads.



GP shear collars (top), and tension collars (bottom).

GP® Groove Proportioned Lockbolt Fasteners



Model 244

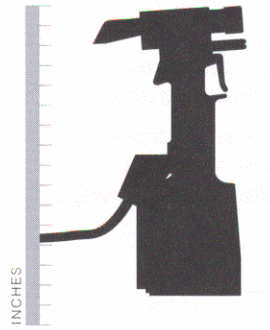
Type: Pneumatic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

1/8	5/32	3/16	1/4
99-2651	99-2548S	99-2554	99-2560 ²
	99-2548T	99-2555	99-2561 ²
	99-2549S	99-2556	99-2562 ²
	99-2549T		
	99-2550S ⁶		
	99-2550T ⁷		



Model 245

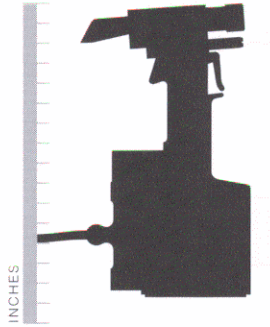
Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ²
99-2551T	99-2558	99-2564	99-2567	99-2570 ²
99-2552S	99-2559	99-2565	99-2568	99-2571 ²
99-2552T	99-1704 ³	99-1705 ³	99-1537 ⁴	99-2957 ²
99-2553S	99-1704-1 ³	99-1705-1 ³	99-1538 ⁴	
99-2553T	99-1508 ⁴	99-1720 ⁵	99-2953	
99-1703 ³	99-1509 ⁴	99-1720-1 ⁵		
99-1703-1 ³	99-1529 ⁴	99-1510 ⁴		
99-1506 ⁴		99-1511 ⁴		
99-1507 ⁴		99-1530 ⁴		
99-1528 ⁴		99-2952		



Model 246

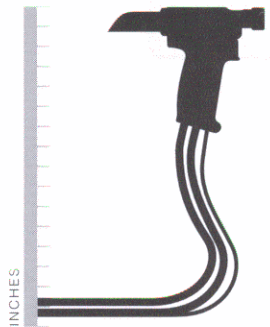
Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569
99-2551T	99-2558	99-2564	99-2567	99-2570
99-2552S	99-2559	99-2565	99-2568	99-2571
99-2552T		99-2952	99-2953	99-2957
99-2553S				
99-2553T				



Model 2480/A2480

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2548S	99-2554	99-2560 ¹		
99-2548T	99-2555	99-2561 ¹		
99-2549S	99-2556	99-2562 ¹		
99-2549T				
99-2550S				
99-2550T				

NOTE: Nose assemblies shown in italic are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number for example: 99-2549**CH**

¹ Will not install tension type DT alloy steel

² For installation of aluminium and shear fasteners only

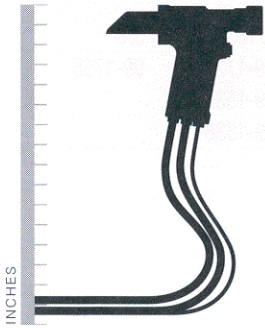
³ 99-1700 series nose assemblies require adapter part number 119400 and stroke limiter part number 118362

⁴ Requires adapter part number 117831 and stroke limiter part number 118362

⁵ Requires adapter part number 122134

⁶ Shear fastener

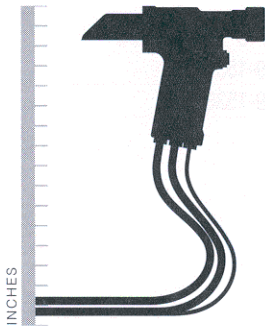
⁷ Tension fastener



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

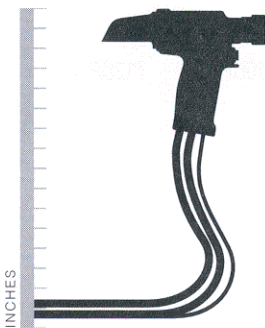
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ²
99-2551T	99-2558	99-2564	99-2567	99-2570 ²
99-2552S	99-2559	99-2565	99-2568	99-2571 ²
99-2552T		99-2952	99-2953	99-2957 ²
99-2553S				
99-2553T				



Model 2503/A2503³

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

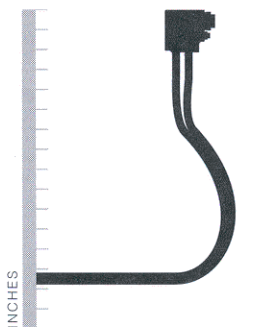
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ²
99-2551T	99-2558	99-2564	99-2567	99-2570 ²
99-2552S	99-2559	99-2565	99-2568	99-2571 ²
99-2552T		99-2952	99-2953	99-2957 ²
99-2553S				
99-2553T				



Model 2580

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ²
99-2551T	99-2558	99-2564	99-2567	99-2570 ²
99-2552S	99-2559	99-2565	99-2568	99-2571 ²
99-2552T		99-2952	99-2953	99-2957 ²
99-2553S				
99-2553T				



Model 206-375/A206-375

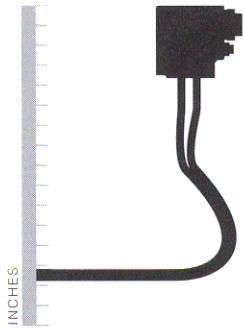
Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1703S	99-1704	99-1705 ⁴		
99-1703S-1	99-1704-1	99-1705-1 ⁴		
99-1703T				
99-1703T-1				

NOTE: Nose assemblies shown in *italic* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number for example: 99-2549**CH**

¹ Shear type only
² Increase pull pressure to 8400 psi of hydraulic unit
³ 4801 tools can use these noses
⁴ Remove stroke limiter for 1/4 diameter
⁵ Requires 125770 adapter

GP® Groove Proportioned Lockbolt Fasteners



Model 208-625/A208-625

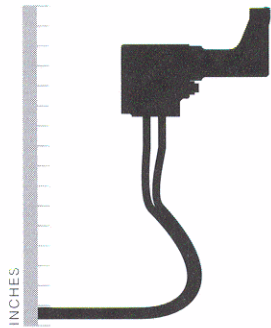
Type: Hydraulic

Applications: Limited clearance

Features: Offset piston for added tool clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
99-1506 ⁵	99-1508 ⁵	99-1510 ⁵	99-1720	99-1756
99-1507 ⁵	99-1509 ⁵	99-1511 ⁵	99-1537 ⁵	
99-1528 ⁵	99-1529 ⁵	99-1530 ⁵	99-1538 ⁵	



Model 208-625 with 125770 Adapter

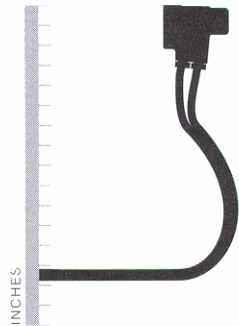
Type: Hydraulic

Applications: Limited clearance

Features: Offset tool design and repositionable hoses for installations in tight clearances.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
99-1506	99-1508	99-1510	99-1537	
99-1507	99-1509	99-1511	99-1538	
99-1528	99-1529	99-1530		



Model 700/A700 series

Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
	706GP	708GP	710GP	712GP

NOTE: Nose assemblies shown in *italic* are available in chisel design—lapped flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-25491**CH**

¹ Will not install tension type DT alloy steel

² For installation of aluminium fasteners only

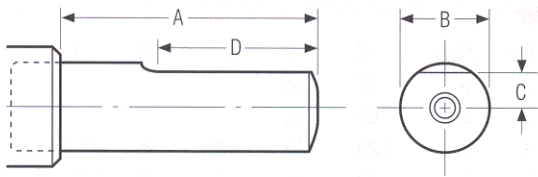


Figure 1

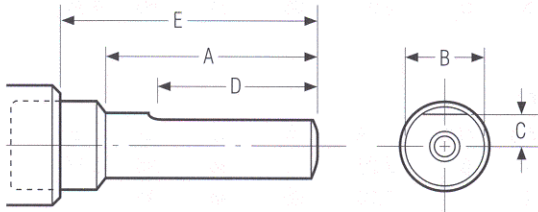


Figure 2

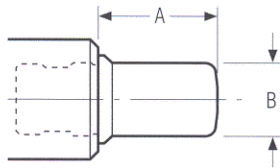


Figure 3

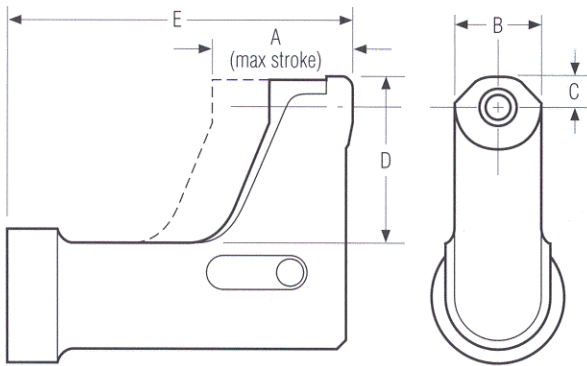


Figure 4

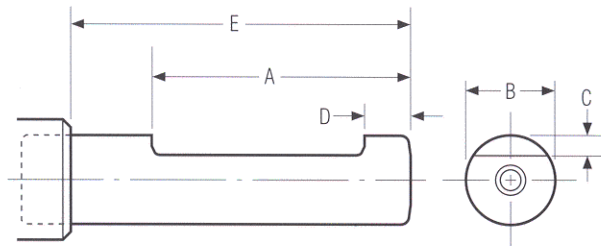


Figure 5

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2651	1	1	3.00	.59	.27		

5/32 Diameter

Nose Assy ¹	Fig	Flats	A	B	C	D	E
99-1506	3	0	.14	.88			
99-1507	3	0	1.19	.75			
99-1528	3	0	.47	.75			
99-1703	4	0	1.36	.78	.33	1.08	2.56
99-1703-1	4	0	1.36	.84	.33	1.71	3.36
99-2548S	2	1	.20	.64	.29	.15	.85
99-2548T	2	1	.20	.64	.29	.15	.85
99-2549S	2	1	1.20	.64	.29	1.15	1.85
99-2549T	2	1	1.20	.64	.29	1.15	1.85
99-2550S	2	1	3.70	.64	.29	3.65	4.35
99-2550T	2	1	3.70	.64	.29	3.65	4.35
99-2551S	2	1	.20	.64	.29	.32	1.10
99-2551T	2	1	.20	.64	.29	.32	1.10
99-2552S	2	1	1.30	.64	.29	1.45	2.25
99-2552T	2	1	1.30	.64	.29	1.45	2.25
99-2553S	2	1	3.80	.64	.29	3.95	4.75
99-2553T	2	1	3.80	.64	.29	3.95	4.75

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1508	3	0	.19	.88			
99-1509	3	0	1.19	.75			
99-1529	3	0	.50	.75			
99-1704	4	0	1.40	.78	.33	1.08	2.59
99-1704-1	4	0	1.40	.84	.33	1.71	3.30
99-2554	2	1	.25	.71	.32	.20	.85
99-2555	2	1	1.25	.71	.32	1.20	1.85
99-2556	2	1	3.75	.71	.32	3.70	4.35
99-2557	2	1	.25	.71	.32	.35	1.10
99-2558	2	1	1.30	.71	.32	1.45	2.20
99-2559	2	1	3.80	.71	.32	3.90	4.70

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1510	3	0	.19	.88			
99-1511	3	0	1.19	.75			
99-1530	3	0	.56	.75			
99-1705	4	0	1.40	.78	.33	1.08	2.60
99-1705-1	4	0	1.40	.84	.33	1.71	3.50
99-2560	1	1	.85	.76	.34	.20	
99-2561	1	1	1.85	.76	.34	1.20	
99-2562	1	1	4.35	.76	.34	3.75	
99-2563	1	1	1.10	.76	.34	.38	
99-2564	1	1	2.20	.76	.34	1.38	
99-2565	2	1	3.85	.76	.34	3.95	4.65
99-2952	5	0	2.89	1.06	.30	.58	4.34

¹ S-for use with shear fasteners T-for use with tension fasteners

GP® Groove Proportioned Lockbolt Fasteners

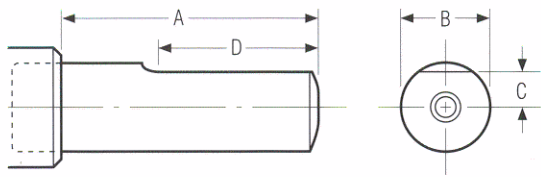


Figure 1

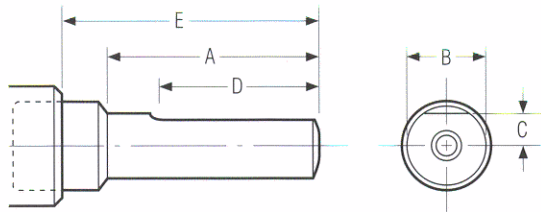


Figure 2

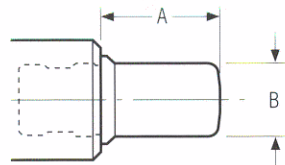


Figure 3

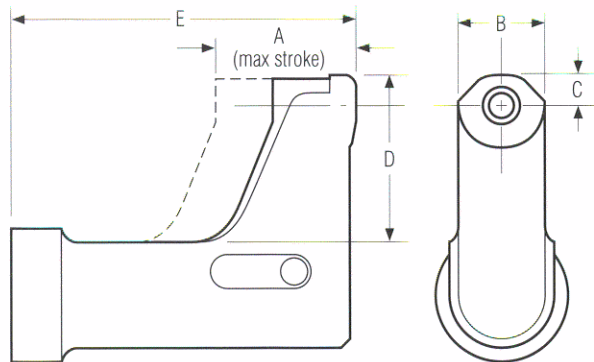


Figure 4

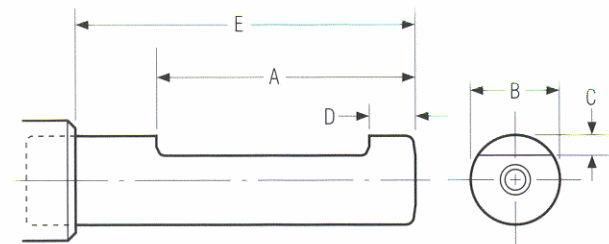


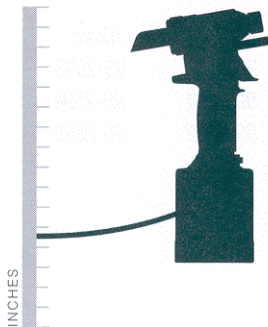
Figure 5

5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1537	3	0	.19	.88			
99-1538	3	0	.60	.75			
99-1720	4	0	2.20	1.13	.46	.98	3.17
99-2566	2	1	.40	.92	.43	.38	1.10
99-2567	2	1	1.55	.92	.43	1.50	2.20
99-2568	2	1	4.05	.92	.43	4.00	4.70
99-2953	5	0	2.91	1.06	.34	.60	4.35

3/8 Diameter

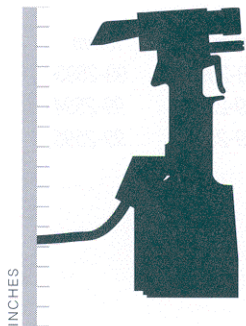
Nose Assy	Fig	Flats	A	B	C	D	E
99-1756	4	0	2.20	1.13	.46	.98	3.17
99-2569	1	1	1.10	1.06	.48	.45	
99-2570	1	1	2.50	1.06	.48	1.95	
99-2571	1	1	4.70	1.06	.48	4.05	
99-2957	5	0	2.91	1.06	.34	.60	4.35



Model 244

Type: Pneumatic
 Applications: High speed production
 Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

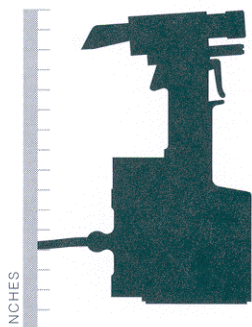
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2572	99-2578	99-2584		
99-2573	99-2579	99-2585		
99-2574	99-2580	99-2586		



Model 245

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 10mm diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2575	99-2581	99-2587	99-2590	99-2593
99-2576	99-2582	99-2588	99-2591	99-2595
99-2577	99-2583	99-2589	99-2592	
99-1706 ²	99-1707 ²	99-1552 ¹		
99-1706-1 ²	99-1707-1 ²	99-1553 ¹		
		99-1554 ¹		
		99-1708 ²		
		99-1708-1 ²		



Model 246

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 10mm diameter, heavy duty for years of dependable service. Minimum moving parts.

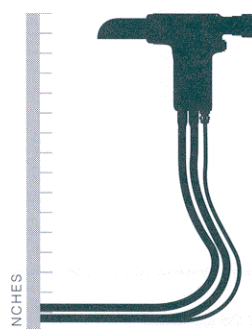
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2575	99-2581	99-2587	99-2590	99-2593
99-2576	99-2582	99-2588	99-2591	99-2595
99-2577	99-2583	99-2589	99-2592	



Model 247

Type: Pneumatic
 Applications: High speed production
 Features: Longer stroke than the Model 245, one cycle installation of fasteners to 6mm diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2575	99-2581	99-2587		
99-2576	99-2582	99-2588		
99-2577	99-2583	99-2589		



Model 2480/A2480

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

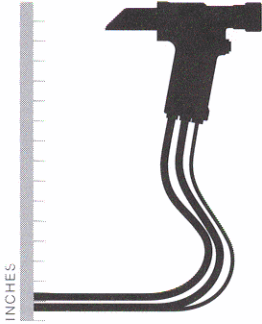
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2572	99-2578	99-2584		
99-2573	99-2579	99-2585		
99-2574	99-2580	99-2586		

NOTE: Nose assemblies shown in *italic* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2573**CH**

¹ Requires adapter part number 117831 and stroke limiter part number 118362

² Requires adapter part number 119400 and stroke limiter part number 118362

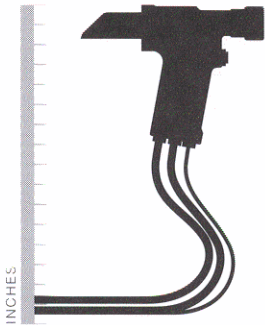
MGP® Groove Proportioned Lockbolt Fasteners



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

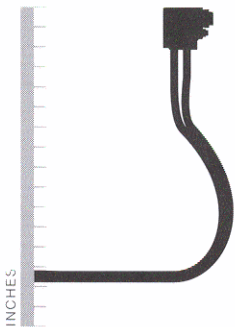
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2575	99-2581	99-2587	99-2590	99-2593 ¹
99-2576	99-2582	99-2588	99-2591	99-2594 ¹
99-2577	99-2583	99-2589	99-2592	99-2595 ¹



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

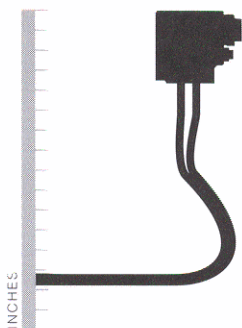
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2575	99-2581	99-2587	99-2590	99-2593 ¹
99-2576	99-2582	99-2588	99-2591	99-2594 ¹
99-2577	99-2583	99-2589	99-2592	99-2595 ¹



Model 206-375/A206-375

Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-1706	99-1707	99-1708 ²		
99-1706-1	99-1707-1	99-1708-1 ²		



Model 208-625/A208-625

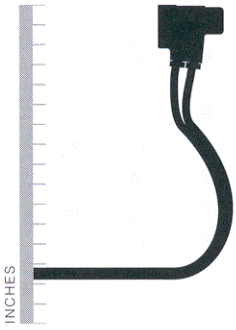
Type: Hydraulic
 Applications: Limited clearance
 Features: Offset piston for added tool clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
			99-1722	99-1760

NOTE: Nose assemblies shown in black are available in carbon-steel. Improved ribs for improved resistance to edge clearance. Specify by adding **CH** to part number. For example: 99-2575**CH**

¹ Raise POWERIG® Hydraulic Unit pull pressure to 8400 psi for this application

² Remove stroke limiter for 6mm



Model 700/A700 series

Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

4mm	5mm	6mm	8mm	10mm
	M705GP	M706GP	M708GP	M710GP



MGP® Groove Proportioned Lockbolt Fasteners

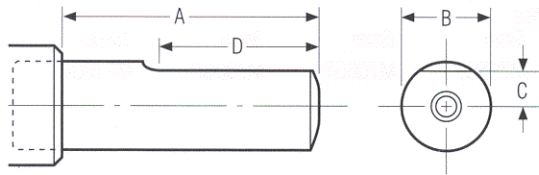


Figure 1

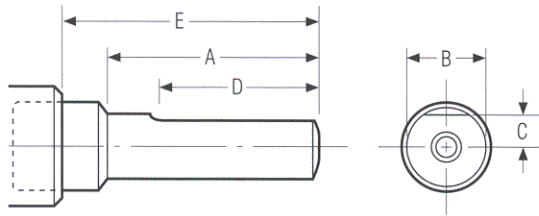


Figure 2

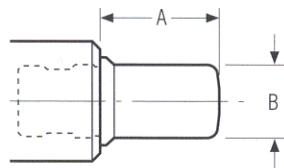


Figure 3

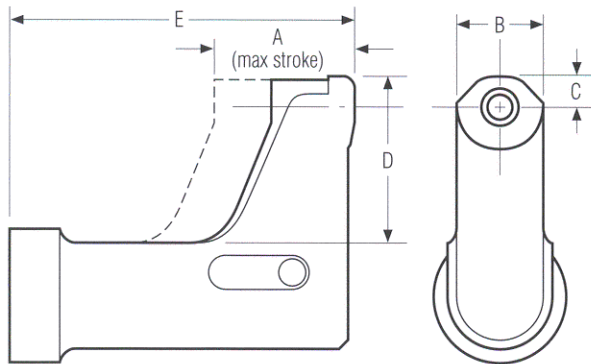


Figure 4

4mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1540	3	0	5	22			
99-1706	4	0	35	20	8	27	65
99-1706-1	4	0	35	21	8	43	85
99-2572	1	1	23	19	7	4	
99-2573	2	1	30	16	7	29	48
99-2574	2	1	93	16	7	93	112
99-2575	2	1	4	16	7	8	29
99-2576	2	1	31	16	7	37	57
99-2577	2	1	96	16	7	100	120

5mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1707	4	0	35	20	8	27	66
99-1707-1	4	0	35	21	8	43	86
99-2578	1	1	23	19	8	5	
99-2579	2	1	32	18	8	31	49
99-2580	2	1	95	18	8	95	112
99-2581	2	1	6	18	8	9	29
99-2582	2	1	34	18	8	36	57
99-2583	2	1	97	18	8	100	120

6mm Diameter (Dimensions in millimeters)

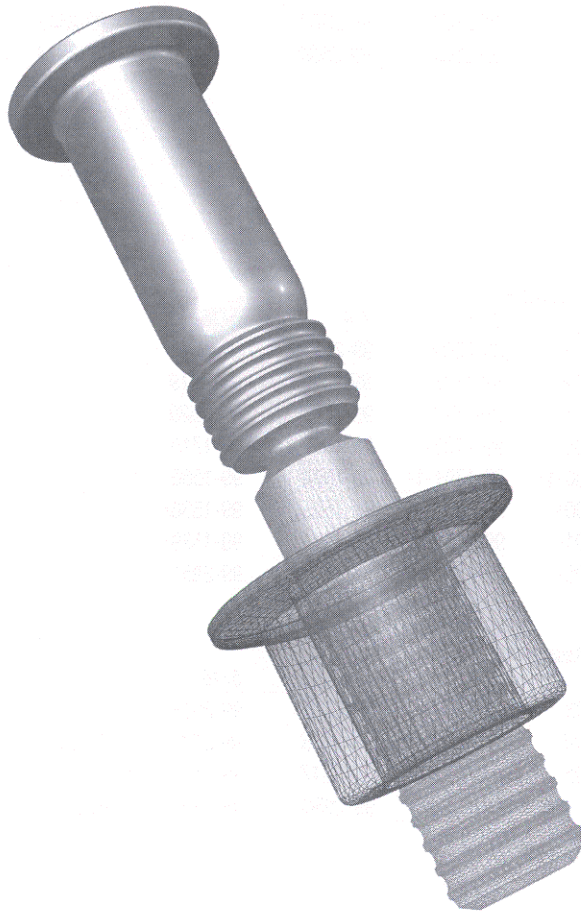
Nose Assy	Fig	Flats	A	B	C	D	E
99-1708	4	0	35	20	8	27	66
99-1708-1	4	0	35	21	8	43	86
99-2584	1	1	23	19	9	7	
99-2585	1	1	49	19	9	32	
99-2586	1	1	112	19	9	96	
99-2587	2	1	8	19	9	9	29
99-2588	2	1	35	19	9	36	57
99-2589	2	1	98	19	9	100	120

8mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1722	4	0	56	29	12	25	81
99-2590	1	1	30	23	11	13	
99-2591	2	1	39	23	11	39	58
99-2592	2	1	103	23	11	102	120

10mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-2593	1	1	30	27	12	13	
99-2594	1	1	65	27	12	48	
99-2595	1	1	120	27	12	103	



Includes part numbers:

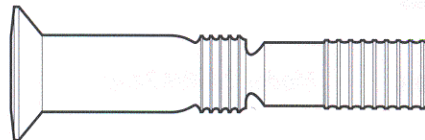
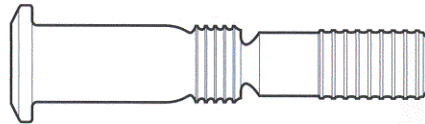
- | | |
|------------|--------------|
| LGPL2SC/SP | CIL8SC |
| LGPL4SC/SP | MLGPL22SC/SP |
| LGPL7SC | MLGPL28SC |
| LGPL8SC | MLGPL29SC/SP |
| LGPL9SC/SP | MCIL28SC |
| LGPL12SP | MCIL29SC/SP |
| CIL9SC/SP | |

Huck's Lightweight LGP lockbolt fastener is a high strength, lightweight aerospace fastener. Easily the most cost effective aerospace fastener available, the LGP fastener can help reduce aircraft weight and fastener installation time.

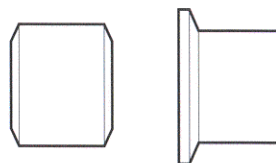
The following part numbers are referenced in this section: LGPL2S() and LGPL4S() for metallic applications; LGPL8SC, LGPL9S(), LGPL7SC, and LGPL12SP for composite applications. Although not all LGP fastener part numbers are included, the tooling in this section will install all LGP pull-type fasteners.

LGP fastener pins are marked with the Huck symbol, basic part number, and material code. Aluminum collars are color coded yellow.

NOTE: These fasteners are available in Stump Type (without pintail) and are intended for hammer drive installation or automated installation. Contact Huck Installation Equipment Division for information on hammer driving and tooling requirements.

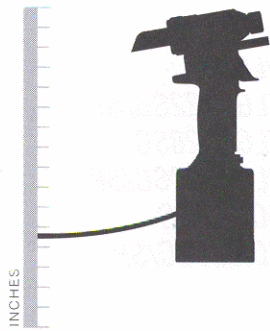


LGP shear and shear/tension fasteners, protruding and flush heads.



LGP collars, regular and flanged

LGP® Lightweight Lockbolt Fasteners



Model 244

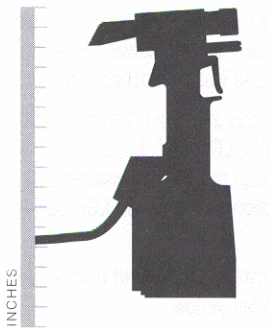
Type: Pneumatic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

1/8	5/32	3/16	7/32	1/4
99-2654	99-2500	99-2506	99-2675	99-2512
	99-2501	99-2507		99-2513
	99-2502	99-2508		99-2514



Model 245

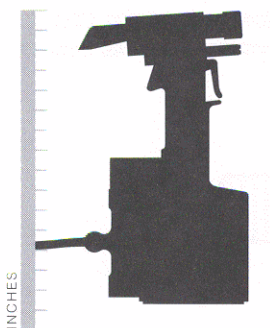
Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 5/16 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2503	99-2509	99-2515	99-2518	
99-2504	99-2510	99-2517	99-2519	
99-2505	99-2511	99-1702 ²	99-2520	
99-1700 ²	99-1701 ²	99-1702-1 ²	99-1719 ³	
99-1700-1 ²	99-1701-1 ²	99-1504 ⁴	99-1566 ¹	
99-1500 ⁴	99-1502 ⁴	99-1505 ⁴	99-1536 ⁴	
99-1501 ⁴	99-1503 ⁴	99-1527 ⁴	99-1539 ⁴	
99-1525 ⁴	99-1526 ⁴	99-2950	99-2951	



Model 246

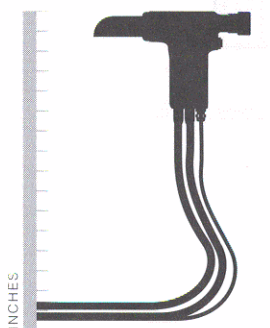
Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2503	99-2509	99-2515	99-2518	99-2521
99-2504	99-2510	99-2516	99-2519	99-2522
99-2505	99-2511	99-2517	99-2520	99-2523
		99-2950	99-2951	99-2956



Model 2480/A2480

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2500	99-2506	99-2512		
99-2501	99-2507	99-2513		
99-2502	99-2508	99-2514		

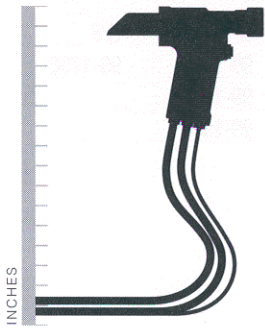
NOTE: Nose assemblies shown in *italic* are available in chisel design—squared flits for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2501**CH**

¹ Requires adapter part number 120750

² Requires adapter part number 119400

³ Requires adapter part number 122134 and stroke limiter part number 118362

⁴ Requires adapter part number 117831 and stroke limiter part number 118362



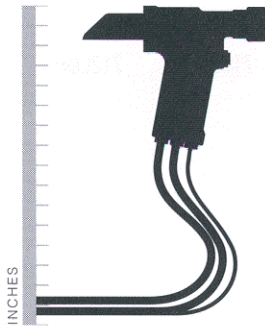
Model 2502/A2502

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2503	99-2509	99-2515	99-2518	99-2521 ¹
99-2504	99-2510	99-2516	99-2519	99-2522 ¹
99-2505	99-2511	99-2517	99-2520	99-2523 ¹
		99-2950	99-2951	99-2956 ¹



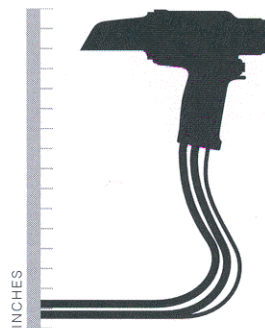
Model 2503/A2503

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2503	99-2509	99-2515	99-2518	99-2521 ¹
99-2504	99-2510	99-2516	99-2519	99-2522 ¹
99-2505	99-2511	99-2517	99-2520	99-2523 ¹
		99-2950	99-2951	99-2956 ¹



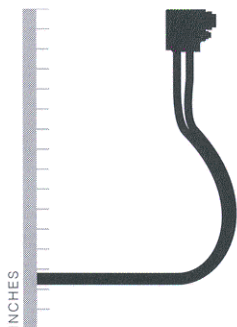
Model 2600/2600-16

Type: Hydraulic

Applications: High speed production

Features: High performance one piece cartridge style construction. Front and rear wipers for increased reliability.

Nose Assemblies	
7/16	1/2
99-2657	99-2669



Model 206-375/A206-375

Type: Hydraulic

Applications: Limited clearance

Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1700	99-1701	99-1702 ²		
99-1700-1	99-1701-1	99-1702-1 ²		

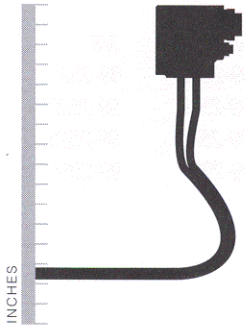
NOTE: Nose assemblies shown in *italic* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2501**CH**

¹ Raise POWERIG® Hydraulic Unit pull pressure to 8400 psi for this application

² Remove stroke limiter for 1/4 diameter

³ Requires 125770 adapter

LGP® Lightweight Lockbolt Fasteners



Model 208-625/A 208-625

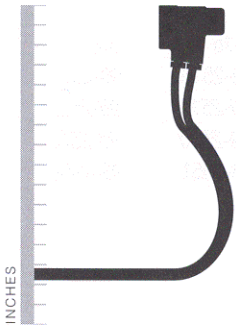
Type: Hydraulic

Applications: Limited clearance

Features: Offset piston for added tool clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
99-1506 ³	99-1508 ³	99-1510 ³	99-1720	99-1756
99-1507 ³	99-1509 ³	99-1511 ³	99-1537 ³	
99-1528 ³	99-1529 ³	99-1530 ³	99-1538 ³	



Model 700/A700 series

Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
	706LGP	708LGP	710LGP	712LGP

NOTE: Nose assemblies shown in italic are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2501**CH**

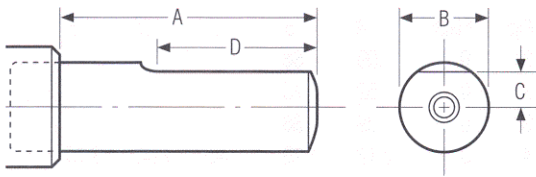


Figure 1

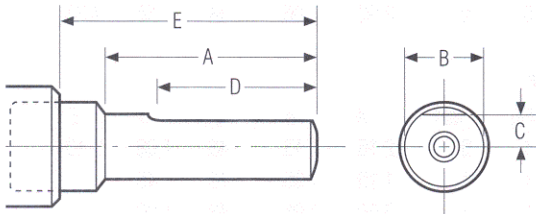


Figure 2

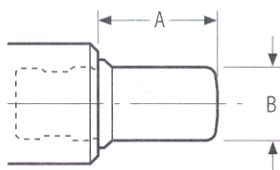


Figure 3

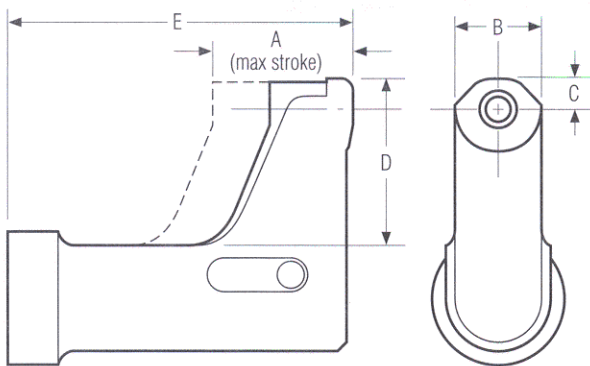


Figure 4

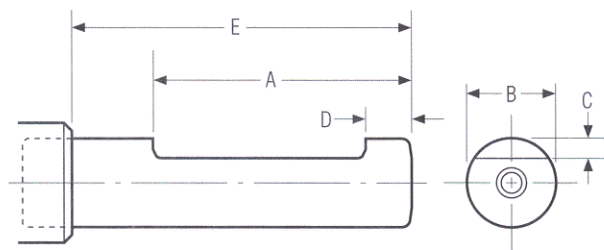


Figure 5

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2654	1	1	2.95	.59	.27		

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1500	3	0	.09	.87			
99-1501	3	0	1.19	.75			
99-1525	3	0	.42	.75			
99-1700	4	0	1.31	.78	.33	1.08	2.50
99-1700-1	4	0	1.31	.84	.33	1.71	3.31
99-2500	1	1	.15	.76	.29	.15	.80
99-2501	2	1	1.15	.64	.29	1.15	1.80
99-2502	2	1	3.60	.64	.29	3.60	4.30
99-2503	2	1	.20	.76	.29	.30	1.10
99-2504	2	1	1.25	.64	.29	1.40	2.15
99-2505	2	1	3.70	.64	.29	3.90	4.60

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1502	3	0	.09	.87			
99-1503	3	0	1.19	.75			
99-1526	3	0	.42	.75			
99-1701	4	0	1.31	.78	.33	1.08	2.50
99-1701-1	4	0	1.31	.84	.33	1.71	3.31
99-2506	1	1	.15	.76	.32	.15	.80
99-2507	2	1	1.15	.71	.32	1.15	1.80
99-2508	2	1	3.60	.71	.32	3.60	4.30
99-2509	2	1	.20	.76	.32	.30	1.10
99-2510	2	1	1.25	.71	.32	1.35	2.15
99-2511	2	1	3.70	.71	.32	3.90	4.60

7/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2675	1	1	2.93	.74	.34		

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1505	3	0	1.18	.75			
99-1504	3	0	.09	.88			
99-1527	3	0	.48	.75			
99-1702	4	0	1.31	.78	.33	1.08	2.50
99-1702-1	4	0	1.31	.84	.33	1.71	3.31
99-2512	1	1	.80	.76	.32	.20	
99-2513	1	1	1.18	.76	.35	1.20	
99-2514	1	1	4.30	.76	.35	3.70	
99-2515	2	1	.20	.76	.35	.30	1.05
99-2516	2	1	1.30	.76	.35	1.35	2.15
99-2517	2	1	3.80	.76	.35	3.85	4.65
99-2950	5	0	2.88	1.06	.30	.52	4.30

LGP® Lightweight Lockbolt Fasteners

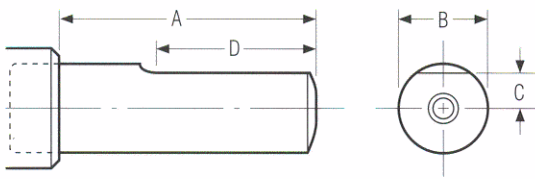


Figure 1

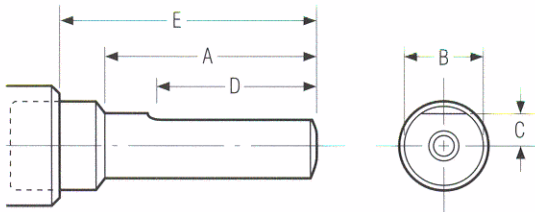


Figure 2

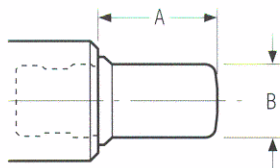


Figure 3

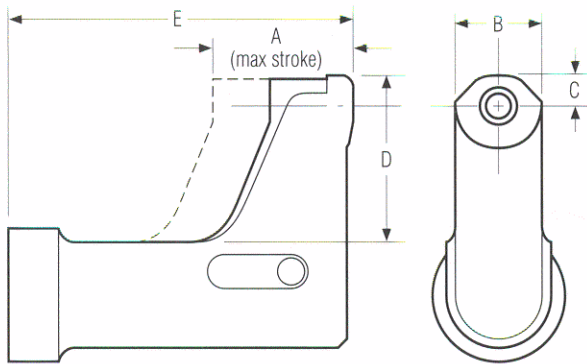
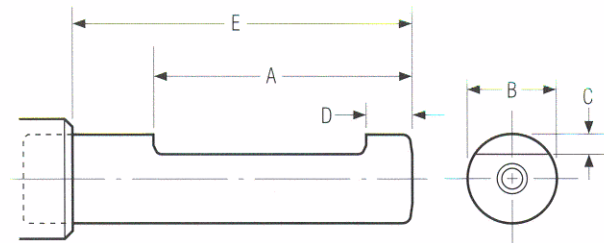


Figure 4



5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1536	3	0	.09	.88			
99-1539	3	0	.52	.75			
99-1566	3	0	.09	.88			
99-1719	4	0	2.12	1.13	.46	1.08	3.10
99-2518	2	1	.35	.92	.43	.35	1.10
99-2519	2	1	1.45	.92	.43	1.50	2.20
99-2520	2	1	3.95	.92	.43	3.95	4.70
99-2951	5	0	2.90	1.06	.34	.56	4.33

3/8 Diameter

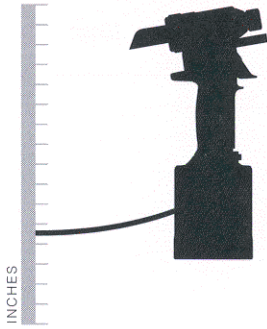
Nose Assy	Fig	Flats	A	B	C	D	E
99-1723	4	0	2.16	1.13	.46	1.08	3.13
99-2521	1	1	1.10	1.06	.43	.45	
99-2522	1	1	2.50	1.06	.48	1.80	
99-2523	1	1	4.70	1.06	.48	4.00	
99-2956	5	0	2.90	1.06	.34	.56	4.33

7/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2657	1	2	3.0	1.31	.61		

1/2 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2669	1	0	4.02	1.50			



Model 244

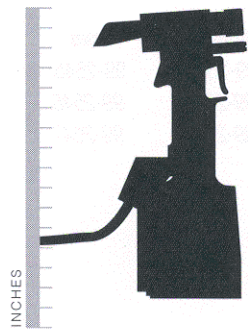
Type: Pneudraulic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

4mm	5mm	6mm	8mm	10mm
99-2524	99-2530	99-2536		
99-2525	99-2531	99-2537		
99-2526	99-2532	99-2538		



Model 245

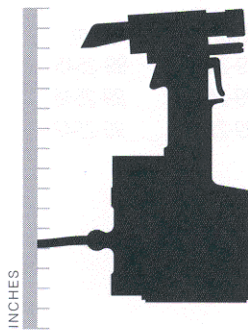
Type: Pneudraulic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 8mm diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

4mm	5mm	6mm	8mm	10mm
99-2527	99-2533	99-2539	99-2542	
99-2528	99-2534	99-2540	99-2543	
99-2529	99-2535	99-2541	99-2544	
99-1709 ¹	99-1710 ¹	99-1711 ¹	99-1721 ³	
99-1709-1 ¹	99-1710-1 ¹	99-1711-1 ¹	99-1561 ²	
99-1543 ²	99-1549 ²	99-1555 ²	99-1562 ²	
99-1544 ²	99-1550 ²	99-1556 ²	99-1563 ²	
99-1545 ²	99-1551 ²	99-1557 ²		



Model 246

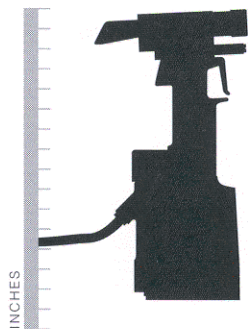
Type: Pneudraulic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 10mm diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

4mm	5mm	6mm	8mm	10mm
99-2527	99-2533	99-2539	99-2542	99-2545
99-2528	99-2534	99-2540	99-2543	99-2546
99-2529	99-2535	99-2541	99-2544	99-2547



Model 247

Type: Pneudraulic

Applications: High speed production

Features: Longer stroke than the Model 245, one cycle installation of fasteners to 6mm diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

4mm	5mm	6mm	8mm	10mm
99-2527	99-2533	99-2539		
99-2528	99-2534	99-2540		
99-2529	99-2535	99-2541		

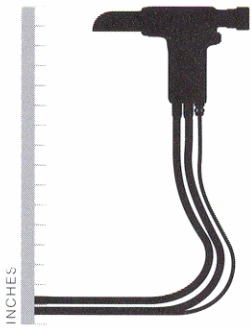
NOTE: Nose assemblies shown in *italic* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2525**CH**

¹ Requires adapter part number 119400 and stroke limiter part number 118362

² Requires adapter part number 117831 and stroke limiter part number 118362

³ Requires adapter part number 122134

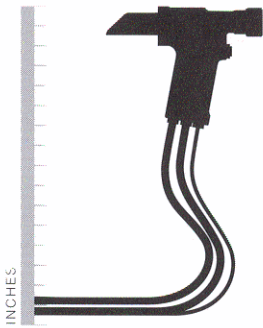
MLGP® Lightweight Lockbolt Fasteners



Model 2480/A2480

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

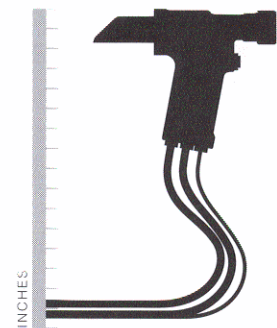
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2524	99-2530	99-2536		
99-2525	99-2531	99-2537		
99-2526	99-2532	99-2538		



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

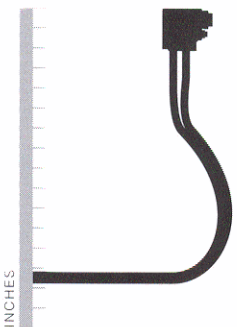
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2528	99-2533	99-2539	99-2542	99-2545 ¹
99-2529	99-2534	99-2540	99-2543	99-2546 ¹
	99-2535	99-2541	99-2544	99-2547 ¹



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

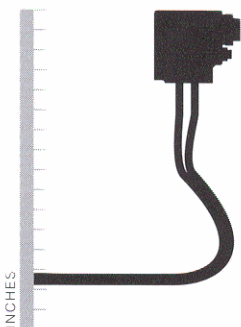
Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-2528	99-2533	99-2539	99-2542	99-2545 ¹
99-2529	99-2534	99-2540	99-2543	99-2546 ¹
	99-2535	99-2541	99-2544	99-2547 ¹



Model 206-375/A206-375

Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
99-1709	99-1710	99-1711		
99-1709-1	99-1710-1	99-1711-1		



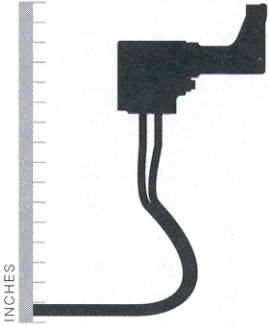
Model 208-625/A208-625

Type: Hydraulic
 Applications: Limited clearance
 Features: Offset piston for added tool clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
4mm	5mm	6mm	8mm	10mm
			99-1721	99-1758

NOTE: Nose assemblies shown in italic are available in offset design— tapered flats for approved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2524**CH**

¹ Increase pull pressure to 8400 psi of hydraulic unit

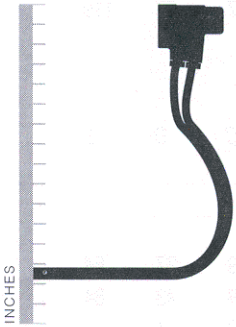


**Model 208-625
with 125770 Adapter**

Type: Hydraulic

Applications: Limited clearance

Features: Offset tool design and repositional hoses for installations in tight clearances.



Model 700/A700 series

Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

<i>4mm</i>	<i>5mm</i>	<i>6mm</i>	<i>8mm</i>	<i>10mm</i>
99-1543	99-1549	99-1555	99-1561	
99-1544	99-1550	99-1556	99-1562	
99-1545	99-1551	99-1557	99-1563	

Nose Assemblies

<i>4mm</i>	<i>5mm</i>	<i>6mm</i>	<i>8mm</i>	<i>10mm</i>
	M705LGP	M706LGP	M708LGP	M710LGP



NOTE: Nose assemblies shown in *italics* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-252**CH**

MLGP® Lightweight Lockbolt Fasteners

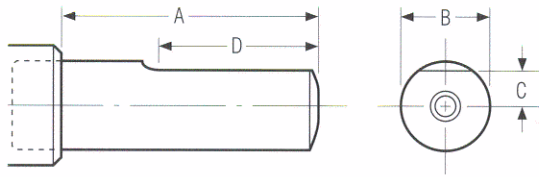


Figure 1

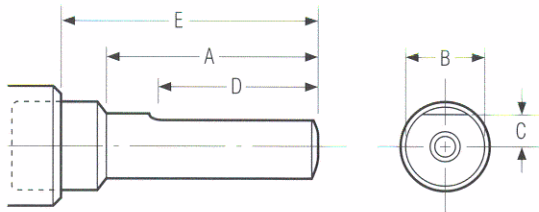


Figure 2

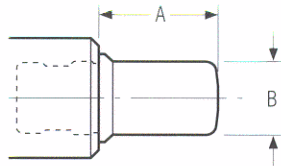


Figure 3

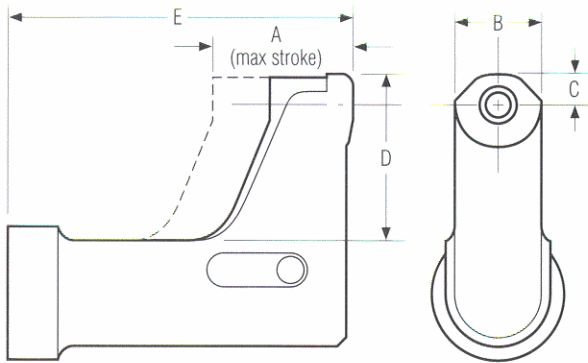


Figure 4

4mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1543	3	0	5	22			
99-1544	3	0	15	22			
99-1545	3	0	30	22			
99-1709	4	0	33	20	9	27	64
99-1709-1	4	0	33	21	9	43	84
99-2524	1	1	22	19	7	4	
99-2525	2	1	29	16	7	28	47
99-2526	2	1	92	16	7	91	110
99-2528	2	1	30	16	7	36	56
99-2529	2	1	94	16	7	99	119

5mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1549	3	0	5	22			
99-1550	3	0	15	22			
99-1551	3	0	30	22			
99-1710	4	0	33	20	9	27	64
99-1710-1	4	0	33	21	9	43	84
99-2530	1	1	21	19	8	4	
99-2531	2	1	29	18	8	28	46
99-2532	2	1	91	18	8	92	110
99-2533	2	1	5	19	8	7	27
99-2534	2	1	32	18	8	34	55
99-2535	2	1	95	18	8	98	118

6mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1555	3	0	5	22			
99-1556	3	0	15	22			
99-1557	3	0	30	22			
99-1711	4	0	33	20	9	27	64
99-1711-1	4	0	33	21	9	43	84
99-2536	1	1	22	19	9	4	
99-2537	1	1	47	19	9	30	
99-2538	1	1	110	19	9	93	
99-2539	2	2	5	19	9	7	27
99-2540	2	1	32	19	9	34	55
99-2541	2	1	97	19	9	98	118

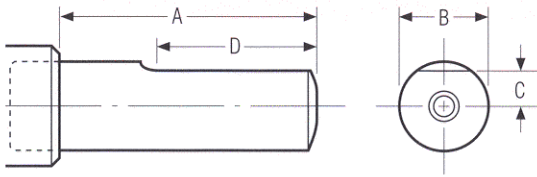


Figure 1

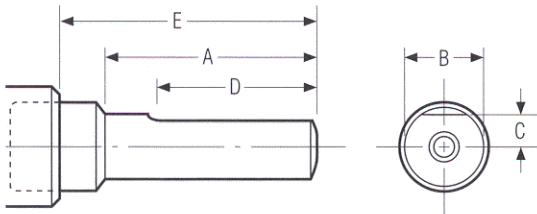


Figure 2

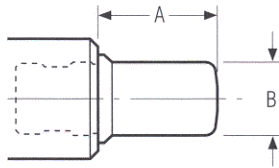


Figure 3

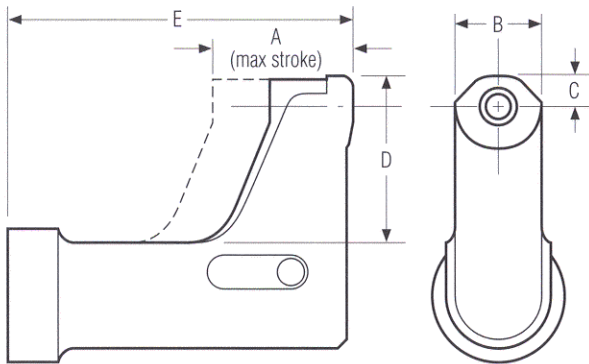


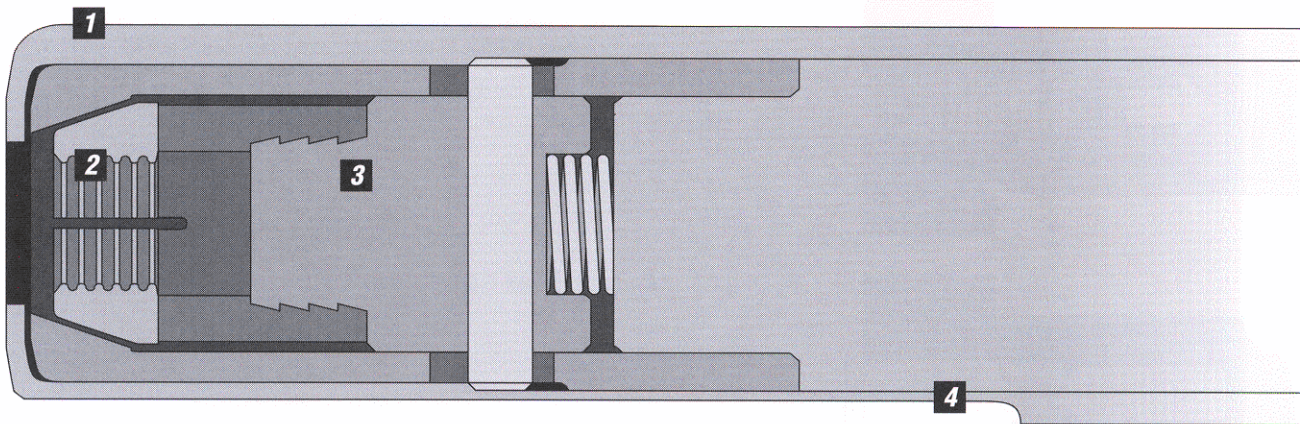
Figure 4

8mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1561	3	0	5	22			
99-1562	3	0	15	22			
99-1563	3	0	30	22			
99-1721	4	0	54	29	12	25	79
99-2542	2	1	9	23	11	9	28
99-2543	2	1	36	23	11	37	56
99-2544	2	1	100	23	11	100	119

10mm Diameter (Dimensions in millimeters)

Nose Assy	Fig	Flats	A	B	C	D	E
99-1758	4	0	55	29	12	25	79
99-2545	1	1	29	27	12	11	
99-2546	1	1	64	27	12	46	
99-2547	1	1	119	27	12	102	



- 1. Anvil is designed to guide the fastener pintail into the jaw assembly.**
- 2. Chuck jaws have been repositioned forward to improve engagement on fastener pintail.**
- 3. Barbed jaw guide. During fastener insertion cycle the jaws grip the pintail firmly. After completing the cycle, the jaws release the pintail.**
- 4. Flats enable the operator to get to those hard to reach spots in limited clearance applications.**

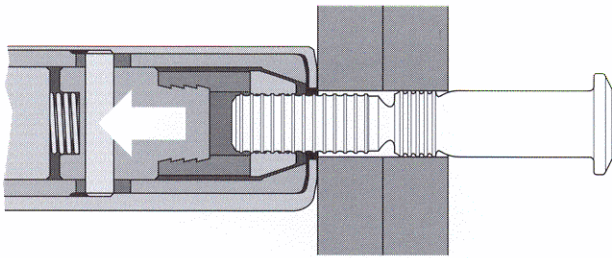
The Pull-In system is an alternative to the hammer drive method of installing fasteners in interference fit holes. Pull-In refers to an innovative, two stage fastener installation operation. Using a special Pull-In nose assembly, Huckbolt pins are first pulled into an interference fit hole without breaking off the pintail. The collar is then placed on the pin and using standard Huck installation tool, the collar is swaged and the pintail is broken off.

Compare the potential for structural damage between the Pull-In system and conventional impact fastening. Since LGP Lockbolts are pulled into place, not pushed, there is less chance for damage to the structure, reducing the incidence of rework and replacements. Chuck jaws accurately and quietly pull the fastener into position, reducing both vibration and damage potential. The operator has more control with less stress, less noise, and less fatigue.

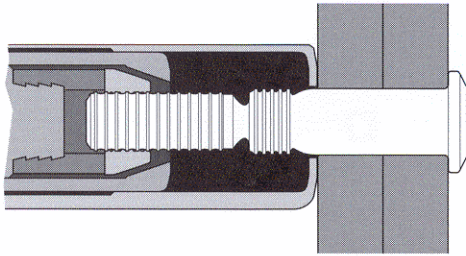
A minimum of .375 of pintail must be exposed to use the Pull-In system. Certain requirements related to material thickness, pin break, and tool pull capacity must be met as well.

Note: For your specific Pull-In installation application, contact your Huck representative for assistance.

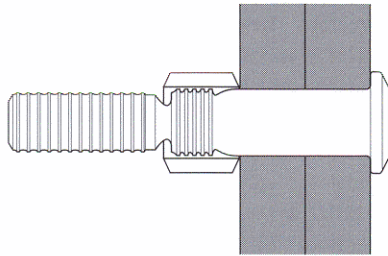
The Huck LGP® Lockbolt Pull-In Fastener Insertion System



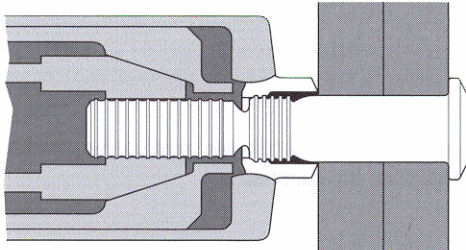
1. The pin is inserted from one side of the work surface. The Pull-In nose assembly is placed over the pintail. Note: a minimum of .375" (4 locking grooves) must protrude to ensure adequate pintail-chuck jaw engagement.



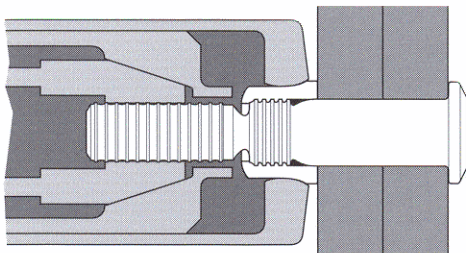
2. The tool trigger is depressed and the pin is pulled into the work piece.



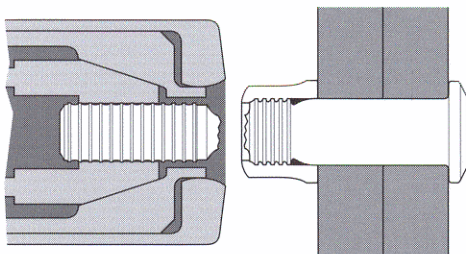
3. The Pull-In nose assembly is removed and a collar is placed over the pin-tail.



4. The Huck installation tool with a standard (swage) nose assembly is placed onto the fastener. Chuck jaws, housed in the nose assembly, grip the pintail grooves. The installation tool trigger is depressed, actuating the tool pull piston. The pull piston and chuck jaws move rearward while the nose assembly outer sleeve, housing a swage die, moves forward toward the work surface and begins swaging the collar material into the pin's locking grooves. This provides a permanent lock between the pin and collar.



5. Continued swaging of the collar forces the collar to stretch in length, resulting in a corresponding stretch of the pin. This precise lengthening of the pin and collar is what creates the high consistent clamp-up of the LGP lock-bolt system



6. When collar swaging is complete, the tool continues to pull until the pin breaks (at a predetermined force) at the breakneck. The tool trigger is released and the nose assembly with tool is pushed off the installed fastener, completing the installation cycle.

Note: The Pull-In system is affected by several variables, pin-break, tool pull capacity, interference fit dimensions for hole, and grip. The following pinbreak information is for titanium (V) material fasteners only.

Minimum Pinbreak Load

Use the correct pinbreak in the tooling computation to have the fastener properly installed when using a swage nose assembly for the final installation step.

Diameter	Fastener	Min. Pinbreak lbs.
5/32"	LGPL2S(-)-V05(-)	1600
	LGPL4S(-)-V05(-)	1600
3/16"	LGPL2S(-)-V06(-)	2200
	LGPL4S(-)-V06(-)	2200
1/4"	LGPL2S(-)-V08(-)	3400
	LGPL4S(-)-V08(-)	3400
5/16"	LGPL2S(-)-V10(-)	5350
	LGPL4S(-)-V10(-)	5350
3/8"	LGPL2S(-)-V12(-)	7700
	LGPL4S(-)-V12(-)	7700

Hydraulic Tool Pull Capacities

Tool	Pull Capacity	Operating Pressure
206-375	5875	5400
208-625	10071	5400
2502	7019	5400
2503	7019	5400
2502	10399	8000
2503	10399	8000
2480	5710	8400
2580	12047	5700

Pneudraulic Tool Pull Capacities

Tool	Pull Capacity	Operating Pressure
202	3890	90
244	4606	90
245	7750	90
246	9986	90
247	5282	90

Note: Minimum pinbreak and tool capacity are used to calculate the air and hydraulic pressures that the tools must be set at to pull in the fastener and not break the pintail off.

Hydraulic Tooling

To select the proper Powerig hydraulic unit pull pressure setting for hydraulic tools, use the following formula:

$$\frac{\text{min pinbreak} \times .66}{\text{tool pull capacity}} \times \text{operating pressure} = \text{pressure setting}$$

Example:

2400 tool pull capacity = 5710 lbs. at 8400 psi
 3/16 LGPL2S(-)-V06(-) fastener = 2200 min. pinbreak

$$\frac{2200 \times .66}{5710} \times 8400 = 2136 \text{ psi pull pressure}$$

Use T-10280 set-up gauge, with manual, to set the proper pull pressure.

Pneudraulic Tooling

To select the proper pre-set regulator for pneudraulic tools, use the following formula:

$$\frac{\text{min pinbreak} \times .66}{\text{tool pull capacity}} \times 90 = \text{pre-set regulator size}$$

Example:

245 tool pull capacity = 7500 lbs. at 90 psi
 3/16 LGPL2S(-)-V06(-) fastener = 2200 min. pinbreak

$$\frac{2200 \times .66}{7500} \times 90 = 17.42$$

Use pre-set regulator 120210-2 (see table).

Air Pressure Regulators for Pneudraulic Tooling

Regulator P/N	Pre-set (psi ±1)
120210-1	13
120210-2	17
120210-3	26
120210-4	35
120210-5	38
120210-6	45
120210-7	53
120210-8	65
120210-9	75
120210-10	85
120210-11	100

Note: For more information on using the Pull-In system and detailed specifications on minimum pinbreaks for other material fasteners, consult your local Huck representative.

The Huck LGP® Lockbolt Pull-In Fastener Insertion System

Tool	5/32	3/16	1/4	5/16	3/8	7/16
2480	99-1825	99-1826	99-1827			
	99-1825-1	99-1826-1	99-1827-1			
	99-1833 ²	99-1834 ²	99-1835 ²			
	99-1833-1 ²	99-1834-1 ²	99-1835-1 ²			
206-375	99-1833	99-1834	99-1835			
	99-1833-1	99-1834-1	99-1835-1			
206-625	99-1833	99-1834	99-1835			
	99-1833-1	99-1834-1	99-1835-1			
208-625	99-1833 ⁴	99-1834 ⁴	99-1835 ⁴	99-1836	99-1837	
	99-1833-1 ⁴	99-1834-1 ⁴	99-1835-1 ⁴			
2502-625	99-1828	99-1829	99-1830	99-1831	99-1832	
	99-1828-1	99-1829-1	99-1830-1	99-1831-1	99-1832-1	
	99-1833 ³	99-1834 ³	99-1835 ³			
	99-1833-1 ³	99-1834-1 ³	99-1835-1 ³	99-1836 ⁵	99-1837 ⁵	
2503-875	99-1828	99-1829	99-1830	99-1831	99-1832	99-1816
	99-1828-1	99-1829-1	99-1830-1	99-1831-1	99-1832-1	
	99-1833 ³	99-1834 ³	99-1835 ³			
	99-1833-1 ³	99-1834-1 ³	99-1835-1 ³	99-1836 ⁵	99-1837 ⁵	
202	99-1825	99-1826	99-1827			
	99-1825-1	99-1826-1	99-1827-1			
	99-1833 ¹	99-1834 ¹	99-1835 ¹			
	99-1833-1 ¹	99-1834-1 ¹	99-1835-1 ¹			
212	99-1825	99-1826	99-1827			
	99-1825-1	99-1826-1	99-1827-1			
	99-1833 ²	99-1834 ²	99-1835 ²			
	99-1833-1 ²	99-1834-1 ²	99-1835-1 ²			
244	99-1825	99-1826	99-1827			
	99-1825-1	99-1826-1	99-1827-1			
	99-1833 ¹	99-1834 ¹	99-1835 ¹			
	99-1833-1 ¹	99-1834-1 ¹	99-1835-1 ¹			
245	99-1828	99-1829	99-1830	99-1831	99-1832	
	99-1828-1	99-1829-1	99-1830-1	99-1831-1	99-1832-1	
	99-1833 ³	99-1834 ³	99-1835 ³			
	99-1833-1 ³	99-1834-1 ³	99-1835-1 ³	99-1836 ⁵	99-1837 ⁵	
246	99-1828	99-1829	99-1830	99-1831	99-1832	99-1816
	99-1828-1	99-1829-1	99-1830-1	99-1831-1	99-1832-1	
	99-1833	99-1834	99-1835			
	99-1833-1	99-1834-1	99-1835-1	99-1836 ⁵	99-1837 ⁵	
247	99-1828	99-1829	99-1830	99-1831	99-1832	
	99-1828-1	99-1829-1	99-1830-1	99-1831-1	99-1832-1	
	99-1833 ³	99-1834 ³	99-1835 ³			
	99-1833-1 ³	99-1834-1 ³	99-1835-1 ³	99-1836	99-1837	

¹ Requires adapter part number 122140

² Requires adapter part number 122145

³ Requires adapter part number 119400

⁴ Requires adapter part number 122477

⁵ Requires adapter part number 122134

⁶ Requires adapter part number 120750

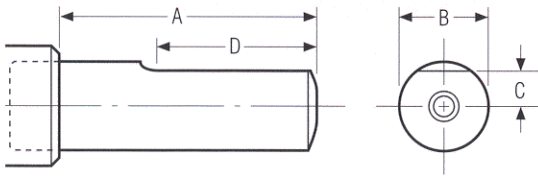


Figure 1

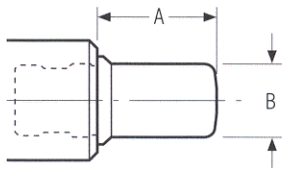


Figure 2

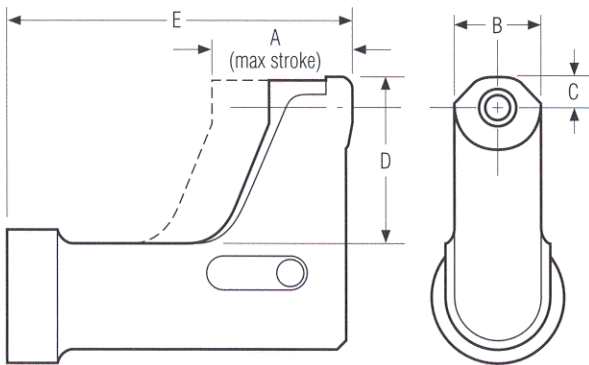


Figure 3

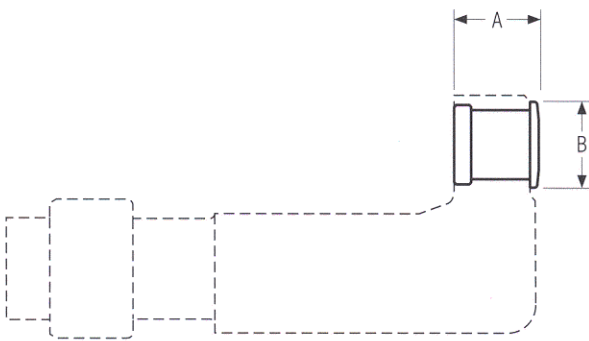


Figure 4 – shown with required adapter part number 120750

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1825	1	1	3.24	.64	.29	1.25
99-1825-1	1	1	5.49	.64	.29	3.87
99-1828	1	1	3.74	.64	.29	1.25
99-1828-1	1	1	5.99	.64	.29	4.24
99-1833	3	0	1.63	.78	.33	1.08
99-1833-1	3	0	1.63	.85	.33	1.71

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1826	1	1	3.24	.71	.32	1.25
99-1826-1	1	1	5.49	.71	.32	3.87
99-1829	1	1	3.74	.71	.32	1.25
99-1829-1	1	1	5.99	.71	.32	4.24
99-1834	3	0	1.63	.78	.33	1.08
99-1834-1	3	0	1.63	.85	.33	1.71

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1827	1	1	3.24	.75	.34	1.25	
99-1827-1	1	1	5.49	.75	.34	3.87	
99-1830	1	1	3.74	.75	.34	1.25	
99-1830-1	1	1	5.99	.75	.34	4.24	
99-1835	3	0	1.63	.78	.33	1.08	
99-1835-1	3	0	1.63	.85	.33	1.71	

5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1813	4	0	.10	.88			
99-1831	1	1	3.74	.92	.43	1.25	
99-1831-1	1	1	5.99	.92	.43	4.24	
99-1836	3	0	1.80	1.13	.46	1.08	

3/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1832	1	1	3.74	1.06	.48	1.25
99-1832-1	1	1	5.99	1.06	.48	4.24
99-1837	3	0	1.80	1.13	.46	1.08



Includes part numbers:

NAS 1446 - 1452

NAS 7034 - 7042

NAS 7014 - 7022

NAS 2406V - 2412V

NAS 1436 - 1442

NAS 7024 - 7032

NAS 7004 - 7012

NAS 2506V - 2512V

Designed for use in high-strength aerospace applications, the Huckbolt Fastener is readily adaptable to high volume production methods. Common applications include primary airframes, main spars, and engine mounts.

There is a wide variety of collar configurations and materials not shown. The tooling shown in this section will install all NAS Shear pull-type lockbolts.

NOTE: These fasteners are available in Stump Type (without pintail) and are intended for hammer drive installation or automated installation. Contact Huck Installation Equipment Division for information on hammer driving and tooling requirements.



Shear pull-type lockbolt fasteners, flush and protruding heads.



Collar for shear lockbolt fasteners

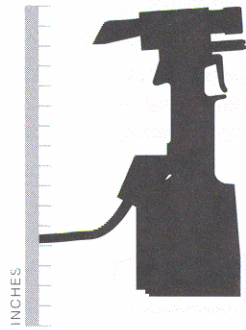
Shear Pull-Type HUCKBOLT® Fasteners



Model 244

Type: Pneumatic
 Applications: High speed production
 Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

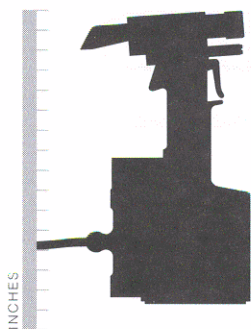
Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2651	99-2548S	99-2554	99-2560	
	99-2549S	99-2555	99-2561	
	99-2550S	99-2556	99-2562	



Model 245

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

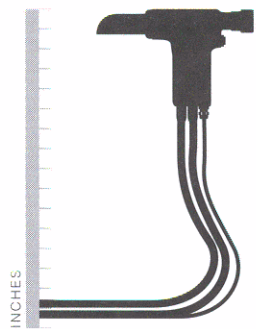
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ¹
99-2552S	99-2558	99-2564	99-2567	99-2570 ¹
99-2553S	99-2559	99-2565	99-2568	99-2571 ¹
99-1703 ²	99-1704 ²	99-1705 ²	99-1720 ⁴	
99-1703-1 ²	99-1704-1 ²	99-1705-1 ²	99-1720-1 ⁴	
99-1506 ³	99-1508 ³	99-1510 ³	99-1537 ³	
99-1507 ³	99-1509 ³	99-1511 ³	99-1538 ³	
99-1528 ³	99-1529 ³	99-1530 ³		



Model 246

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569
99-2552S	99-2558	99-2564	99-2567	99-2570
99-2553S	99-2558	99-2565	99-2568	99-2571



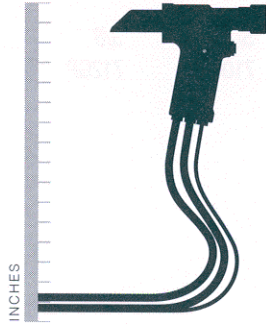
Model 2480/A2480

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2561	99-2548S	99-2554	99-2560	
	99-2549S	99-2555	99-2561	
	99-2550S	99-2556	99-2562	

NOTE: Nose assemblies shown in italic are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2548S**CH**

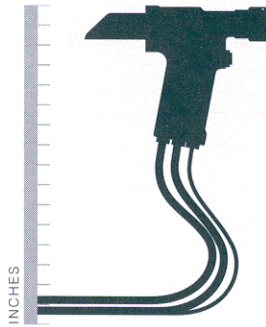
¹ Aluminium only
² Requires adapter part number 119400 and stroke limiter part number 118362
³ Requires adapter part number 117831 and stroke limiter part number 118362
⁴ Requires adapter part number 122134



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

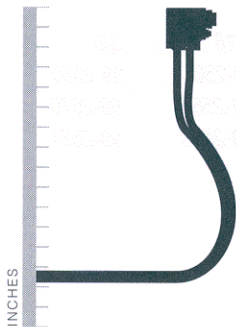
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ¹
99-2552S	99-2558	99-2564	99-2567	99-2570 ¹
99-2553S	99-2559	99-2565	99-2568	99-2571 ¹



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

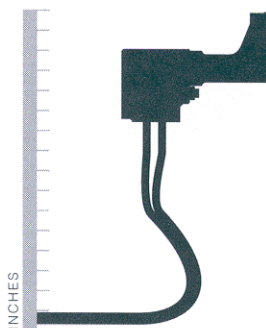
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551S	99-2557	99-2563	99-2566	99-2569 ¹
99-2552S	99-2558	99-2564	99-2567	99-2570 ¹
99-2553S	99-2559	99-2565	99-2568	99-2571 ¹



Model 206-375/A206-375

Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1703	99-1704	99-1705		
99-1703-1	99-1704-1	99-1705-1		



Model 208-625 with 125770 Adapter

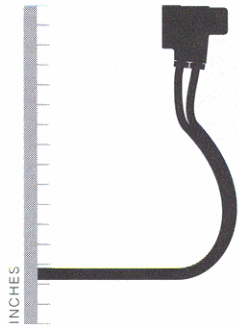
Type: Hydraulic
 Applications: Limited clearance
 Features: Offset tool design and repositional hoses for installations in tight clearances.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1528	99-1511	99-1530	99-1538	
99-1507	99-1509	99-1529	99-1537	
99-1506	99-1508	99-1511		
		99-1510		

NOTE: Nose assemblies shown in *italic* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2552*CH*

¹ Increase hydraulic unit pull pressure to 8400 psi

Shear Pull-Type HUCKBOLT® Fasteners



Model 700/A700 series

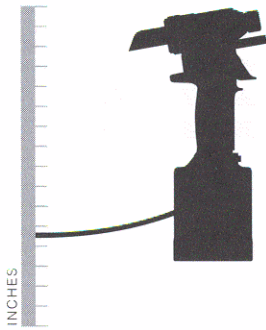
Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
706GP	708GP	710GP	712GP	



Model 244

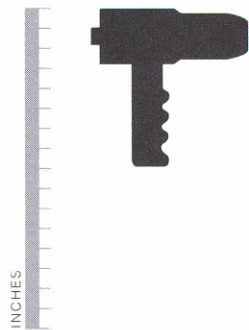
Type: Pneumatic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

<i>4mm</i>	<i>5mm</i>	<i>6mm</i>	<i>8mm</i>	<i>10mm</i>
99-2572	99-2578	99-2584		
99-2573	99-2579	99-2585		
99-2574	99-2580	99-2586		



Model 115

Type: Manual

Applications: Ideal for field maintenance and repair

Features: Powered by a standard 11/16 hex ratchet wrench

Nose Assemblies

<i>5/32</i>	<i>3/16</i>	<i>1/4</i>	<i>5/16</i>	<i>3/8</i>
99-2551S	99-2557	99-2563	99-2566	99-2569
99-2552S	99-2558	99-2564	99-2567	99-2570
99-2553S	99-2559	99-2565	99-2568	99-2571

NOTE: Nose assemblies shown in italic are available in chisel design — tapered flits for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2549**SCH**

¹ "E" (Aluminium) material fasteners only

Shear Pull-Type HUCKBOLT® Fasteners

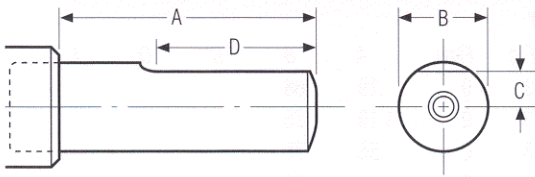


Figure 1

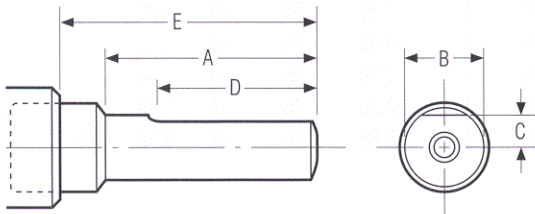


Figure 2

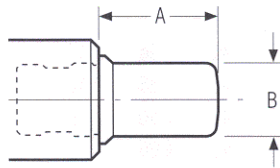


Figure 3

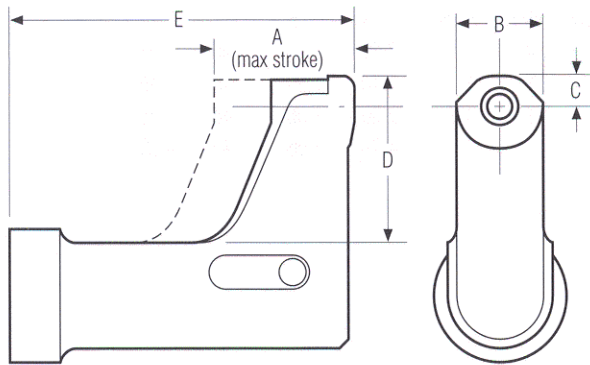


Figure 4

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2561	1	2	1.94	.75	.33	1.25	

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1506	3	0	.14	.88			
99-1507	3	0	1.19	.75			
99-1528	3	0	.47	.75			
99-1703	4	0	1.36	.78	.33	1.08	2.56
99-1703-1	4	0	1.36	.84	.33	1.71	3.36
99-2548S	2	1	.20	.64	.29	.15	.85
99-2549S	2	1	1.20	.64	.29	1.15	1.85
99-2550S	2	1	3.70	.64	.29	3.65	4.35
99-2551S	2	1	.20	.64	.29	.32	1.10
99-2552S	2	1	1.30	.64	.29	1.45	2.25
99-2553S	2	1	3.80	.64	.29	3.95	4.75

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1508	3	0	.19	.88			
99-1509	3	0	1.19	.75			
99-1529	3	0	.49	.75			
99-1704	4	0	1.40	.78	.33	1.08	2.59
99-1704-1	4	0	1.40	.84	.33	1.71	3.40
99-2554	2	1	.25	.71	.32	.20	.85
99-2555	2	1	1.25	.71	.32	1.20	1.85
99-2556	2	1	3.75	.71	.32	3.70	4.35
99-2557	2	1	.25	.71	.32	.35	1.10
99-2558	2	1	1.30	.71	.32	1.45	2.20
99-2559	2	1	3.80	.71	.32	3.90	4.70

Shear Pull-Type HUCKBOLT® Fasteners

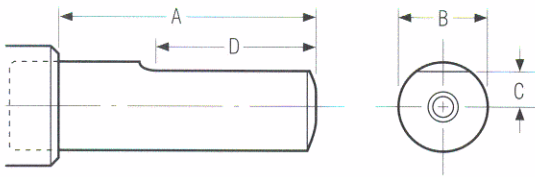


Figure 1

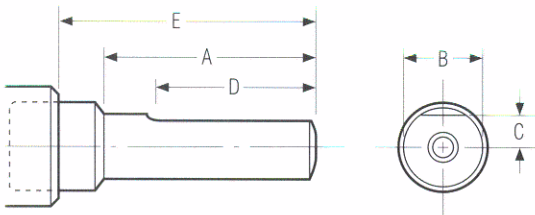


Figure 2

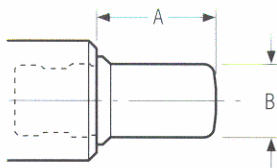


Figure 3

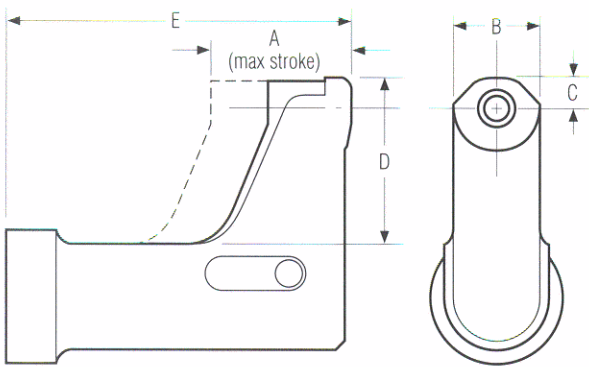


Figure 4

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1510	3	0	.19	.88			
99-1511	3	0	1.19	.75			
99-1530	3	0	.56	.75			
99-1705	4	0	1.40	.78	.33	1.08	2.59
99-1705-1	4	0	1.40	.84	.33	1.71	3.40
99-2560	1	1	.85	.76	.34	.20	
99-2561	1	1	1.85	.76	.34	1.20	
99-2562	1	1	4.35	.76	.34	3.75	
99-2563	1	1	1.10	.76	.34	.38	
99-2564	1	1	2.20	.76	.34	1.38	
99-2565	2	1	3.85	.76	.34	3.95	4.65

5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1537	3	0	.19	.88			
99-1538	3	0	.60	.75			
99-1720	4	0	2.20	1.13	.46	.98	3.17
99-2566	2	1	.40	.92	.43	.38	1.10
99-2567	2	1	1.55	.92	.43	1.50	2.20
99-2568	2	1	4.05	.92	.43	4.00	4.70

3/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1756	4	0	2.20	1.13	.46	.98	3.17
99-2569	1	1	1.10	1.06	.48	.45	
99-2570	1	1	2.50	1.06	.48	1.95	
99-2571	1	1	4.70	1.06	.48	4.05	



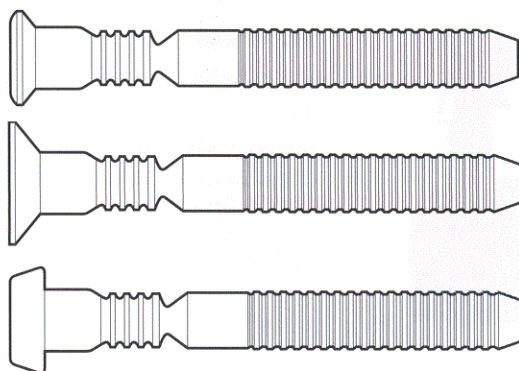
Includes part numbers:

NAS 1465 - 1472	NAS 1456 - 1462
NAS 1525 - 1532	NAS 1535 - 1542
NAS 6965 - 6972	NAS 1516 - 1522
NAS 2005V - 2012V	NAS 6955 - 6962
NAS 6935 - 6942	NAS 6946 - 6952
NAS 2125 - 2132	NAS 2115V - 2122V
NAS 1475 - 1482	NAS 2105V - 2112V

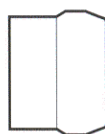
Designed for use in high-strength aerospace applications, the Huckbolt Fastener is readily adaptable to high volume production methods. Common applications include primary airframes, main spars, and engine mounts.

There is a wide variety of collar configurations and materials not shown. The tooling shown in this section will install all NAS Tension pull-type lockbolts.

NOTE: These fasteners are available in Stump Type (without pintail) and are intended for hammer drive installation or automated installation. Contact Huck Installation Equipment Division for information on hammer driving and tooling requirements.

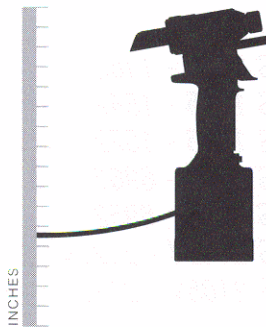


Tension pull-type lockbolt fasteners, crown, flush, and protruding heads.



Collar for tension lockbolt fasteners.

Tension Pull-Type HUCKBOLT® Fasteners



Model 244

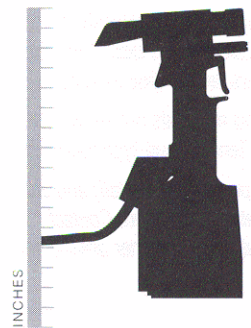
Type: Pneudraulic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

1/8	5/32	3/16	1/4
99-2651	99-2548T	99-2554	99-2560
	99-2549T	99-2555	99-2561
	99-2550T	99-2556	99-2562



Model 245

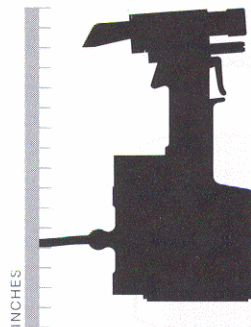
Type: Pneudraulic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2551T	99-2557	99-2563	99-2566	99-2569 ¹
99-2552T	99-2558	99-2564	99-2567	99-2570 ¹
99-2553T	99-2559	99-2565	99-2568	99-2571 ¹
99-1703 ³	99-1704 ³	99-1705 ³	99-1537 ⁴	
99-1703-1 ³	99-1704-1 ³	99-1705-1 ³	99-1538 ⁴	
99-1506 ⁴	99-1508 ⁴	99-1510 ⁴	99-1720 ⁵	
99-1507 ⁴	99-1509 ⁴	99-1511 ⁴		
99-1528 ⁴		99-1530 ⁴		



Model 246

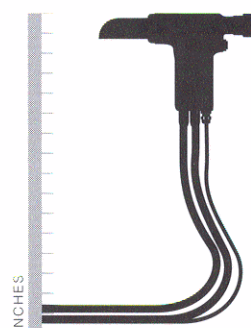
Type: Pneudraulic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2551T	99-2557	99-2563	99-2566	99-2569
99-2552T	99-2558	99-2564	99-2567	99-2570
99-2553T	99-2559	99-2565	99-2568	99-2571



Model 2480/A2480

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-2548T	99-2554	99-2560		
99-2549T	99-2555	99-2561		
99-2550T	99-2556	99-2562		

NOTE: Nose assemblies shown in italic are available in CHISEL design— tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2548**CH**

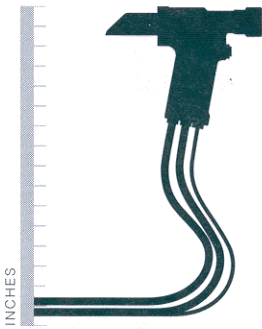
¹ "E" (Aluminium) or Titanium material only

² Will not install DT alloy steel

³ Requires adapter part number 119400 and stroke limiter part number 118362

⁴ Requires adapter part number 117831 and stroke limiter part number 118362

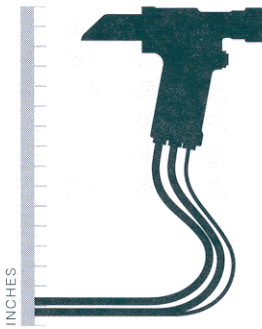
⁵ Requires adapter part number 122134



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

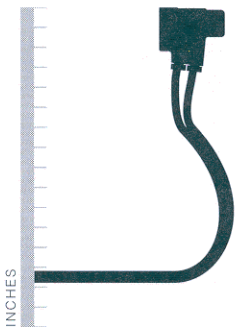
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551T	99-2557	99-2563	99-2566	99-2569 ¹
99-2552T	99-2558	99-2564	99-2567	99-2570 ¹
99-2553T	99-2559	99-2565	99-2568	99-2571 ¹



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551T	99-2557	99-2563	99-2566	99-2569 ¹
99-2552T	99-2558	99-2564	99-2567	99-2570 ¹
99-2553T	99-2559	99-2565	99-2568	99-2571 ¹



Model 700/A700 series

Type: Hydraulic
 Applications: Limited clearance
 Features: Built in nose assembly for convenience and dependability, in an extremely small package.

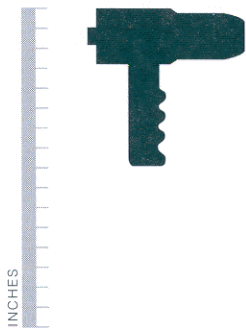
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
	706GP	708GP	710GP	712GP



Model 244

Type: Pneumatic
 Applications: High speed production
 Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2548T	99-2554 ³	99-2560 ²		
99-2549T	99-2555 ³	99-2561 ²		
99-2550T	99-2556 ³	99-2562 ²		



Model 115

Type: Manual
 Applications: Ideal for field maintenance and repair
 Features: Powered by a standard 11/16 hex ratchet wrench

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2551T	99-2557	99-2563	99-2566	99-2569
99-2552T	99-2558	99-2564	99-2567	99-2570
99-2553T	99-2559	99-2565	99-2568	99-2571

NOTE: Nose assemblies shown in *italics* are available in chisel design—tapered flats for improved centerline to edge clearance. Specify by adding **CH** to part number, for example: 99-2552**CH**

¹ Increase hydraulic unit pull pressure to 8400 psi
² "E" (Aluminium) material fasteners only
³ Will not install DT alloy steel

Tension Pull-Type HUCKBOLT® Fasteners

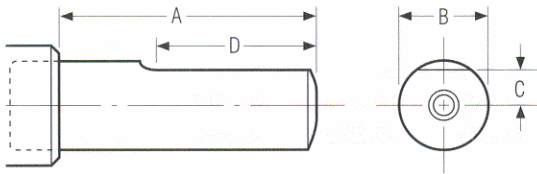


Figure 1

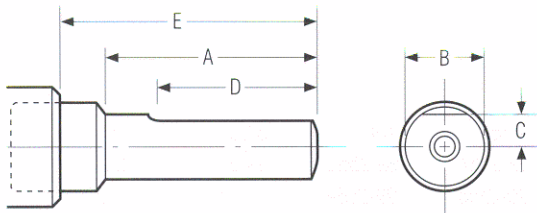


Figure 2

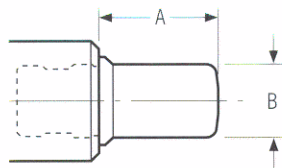


Figure 3

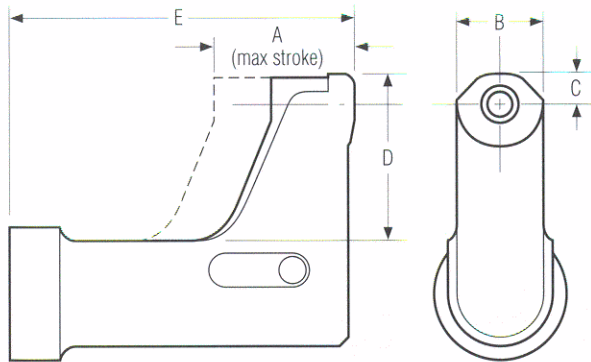


Figure 4

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2651	1	1	3.00	.59	.27	1.37	

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1506	3	0	.14	.88			
99-1507	3	0	1.19	.75			
99-1528	3	0	.47	.75			
99-1703	4	0	1.36	.78	.33	1.08	2.56
99-1703-1	4	0	1.36	.84	.33	1.71	3.36
99-2548T	2	1	.20	.64	.29	.15	.85
99-2549T	2	1	1.20	.64	.29	1.15	1.85
99-2550T	2	1	3.70	.64	.29	3.65	4.35
99-2551T	2	1	.20	.64	.29	.32	1.10
99-2552T	2	1	1.30	.64	.29	1.45	2.25
99-2553T	2	1	3.80	.64	.29	3.95	4.75

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1508	3	0	.19	.88			
99-1509	3	0	1.19	.75			
99-1704	4	0	1.40	.78	.33	1.08	2.59
99-1704-1	4	0	1.41	.78	.33	1.71	3.40
99-2554	2	1	.25	.71	.32	.20	.85
99-2555	2	1	1.25	.71	.32	1.20	1.85
99-2556	2	1	3.75	.71	.32	3.70	4.35
99-2557	2	1	.25	.71	.32	.35	1.10
99-2558	2	1	1.30	.71	.32	1.45	2.20
99-2559	2	1	3.80	.71	.32	3.90	4.70

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1510	3	0	.19	.88			
99-1511	3	0	1.19	.75			
99-1530	3	0	.56	.75			
99-1705	4	0	1.40	.78	.33	1.08	2.60
99-1705-1	4	0	1.40	.84	.33	1.71	3.50
99-2560	1	1	.85	.76	.34	.20	
99-2561	1	1	1.85	.76	.34	1.20	
99-2562	1	1	4.35	.76	.34	3.75	
99-2563	1	1	1.10	.76	.34	.38	
99-2564	1	1	2.20	.76	.34	1.38	
99-2565	2	1	3.85	.76	.34	3.95	4.65

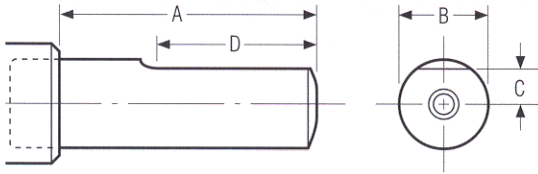


Figure 1

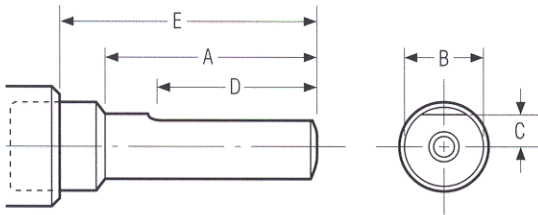


Figure 2

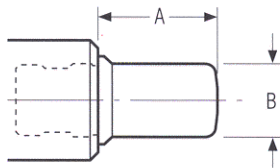


Figure 3

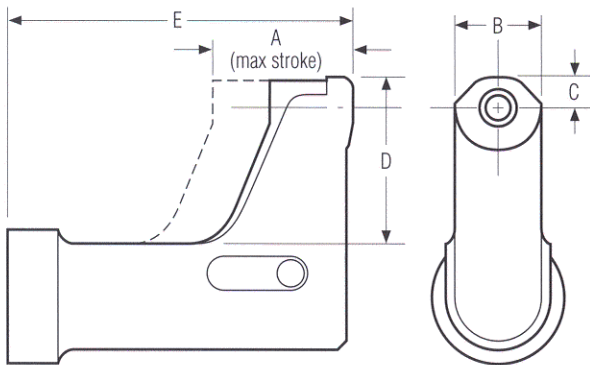


Figure 4

5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1537	3	0	.19	.88			
99-1538	3	0	.60	.75			
99-1720	4	0	2.20	1.13	.46	.98	3.17
99-2566	2	1	.40	.92	.43	.38	1.10
99-2567	2	1	1.55	.92	.43	1.50	2.20
99-2568	2	1	4.05	.92	.43	4.00	4.70

3/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2569	1	1	1.10	1.06	.48	.45	
99-2570	1	1	2.50	1.06	.48	1.95	
99-2571	1	1	4.70	1.06	.48	4.05	

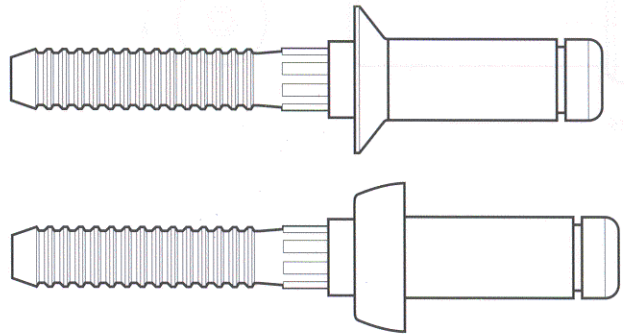


Includes part numbers:

MS21141(BP-EU)
MS90354(BP-T)
OBP-EU05 & 06
OBP-T05 & 06
7B100-EU05 & 06
4B100-T06

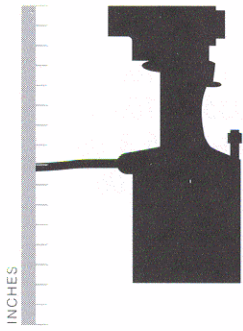
MS21140(B100-EU)
MS90353(B100-T)
OB100-EU05 & 06
OB100-T05 & 06
7B120-EU06
4B100-EU06

The Blind Bolt fastener is designed for highly-loaded structural applications for aircraft, missiles, and other aerospace vehicles. Due to its high vibration resistance, it performs flawlessly in applications such as wing flaps and landing gear and engine inlets.



The Double Action Blind Bolt fastener, with flush and protruding heads.

Double Action Blind Bolt Fasteners



Model 200

Type: Pneumatic

Applications: High speed production

Features: Lightweight, separate lock collar driving for blind rivet installation.

Nose Assemblies

5/32	3/16	1/4	5/16	3/8
99-600	99-589			
99-600-1	99-589-1			

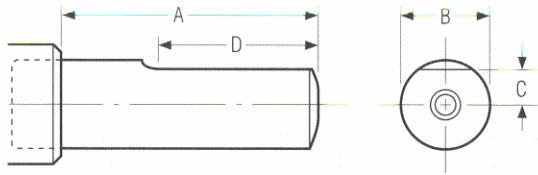


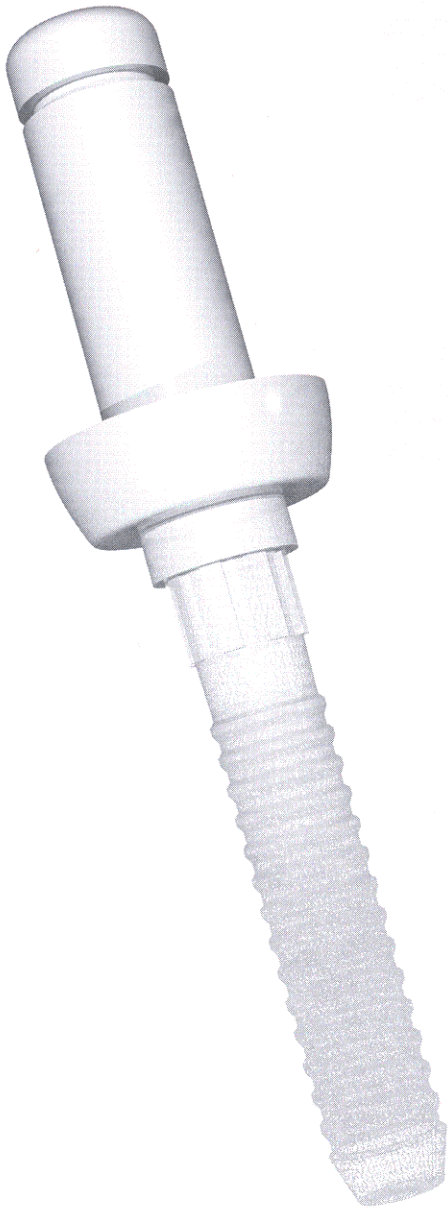
Figure 1

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-600	1	1	2.12	.88	.31	1.38
99-600-1	1	1	6.00	.88	.31	5.78

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-589	1	1	2.12	.88	.31	1.38
99-589-1	1	1	6.00	.94	.31	5.78

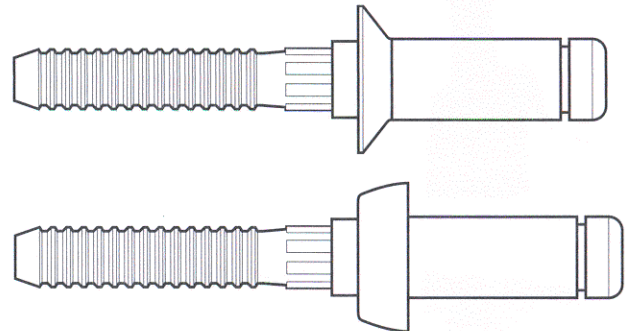


Includes part numbers:

MS21141U()(UBR-EU)	MS21140U()(UB100-EU)
MS90354U()(UBR-T)	MS90353U()(UB100-T)
MS90353S(SB100-T)	MS21140S(SB100-EU)
MS90354S(SBP-T)	MS21141S(UBP-EU)
OSBP-EU()	OSB100-EU()
OSBP-T()	OSB100-T()
OBP-EU()	OB100-EU()
OBP-T()	OB100-T()
UBP-MV()	UB100-MV()
SB100-T05 & 06	SB100-EU05 & 06
S7B100-EU	S4B100-T06
4B100-T08	

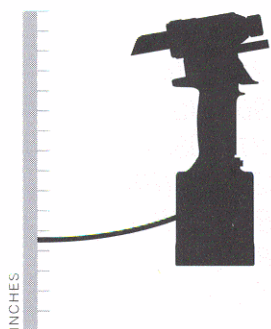
Used in such critical areas as jet engine inlets, Unimatic Blind Bolt fastener's wide blind side footprint ensures joint integrity and enhanced fatigue life. Use with confidence in general design applications, such as thin or thick sheet stackups. Unimatic Blind Bolt fasteners provide vibration resistant installations with positive locking FOD free mechanically locked collar.

NOTE: All single action blind bolt part numbers are not included in the above list, however, the tooling in this section will install all single action blind



The Unimatic Blind Bolt fastener, with flush and protruding heads.

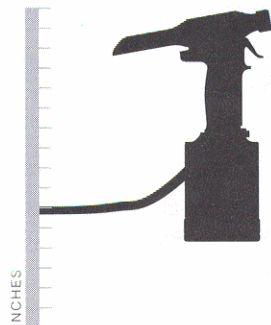
UNIMATIC® Single Action Blind Bolt Fasteners



Model 244

Type: Pneumatic
 Applications: High speed production
 Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

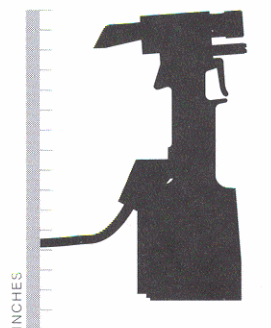
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2700	99-2706			
99-2701	99-2707			
99-2702	99-2708			



Model 202

Type: Pneumatic
 Applications: High volume production
 Features: Optimum stroke for one cycle installation.

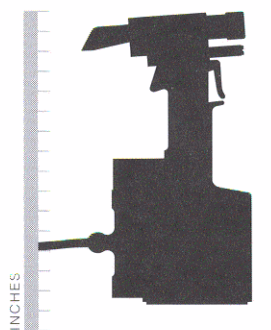
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2700	99-2706			
99-2701	99-2707			
99-2702	99-2708			



Model 245

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 5/16 diameter, heavy duty for years of dependable service. Minimum moving parts.

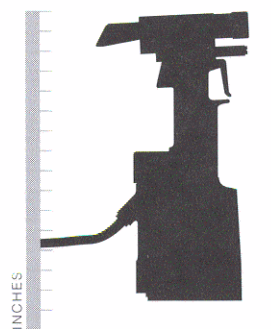
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2704	99-2710	99-2716	99-2719	
99-1513 ³	99-1514 ³	99-1515 ³		
99-1520 ³	99-1521 ³	99-1522 ³		
99-1712 ²	99-1713 ²	99-1714 ²		
99-1712-1 ²	99-1713-1 ²	99-1714-1 ²		



Model 246

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 3/8 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-2719	99-2719	99-2722
			99-1652	



Model 247

Type: Pneumatic
 Applications: High speed production
 Features: Longer stroke than the Model 245, one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

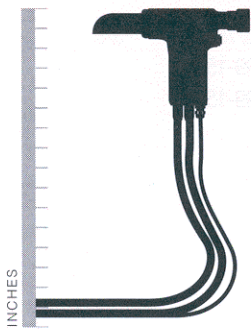
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2704	99-2710	99-2716	99-2719	
99-1513 ³	99-1514 ³	99-2717		
99-1520 ³	99-1521 ³	99-1515 ³		
99-1712 ²	99-1713 ²	99-1522 ³		
99-1712-1 ²	99-1713-1 ²	99-1714 ²		
		99-1714-1 ²		

¹ Requires adapter part number 102463

² Requires adapter part number 119400 and stroke limiter part number 118362

³ Requires adapter part number 117831 and stroke limiter part number 118362

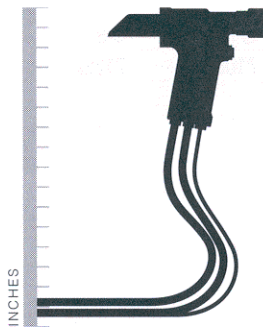
UNIMATIC® Single Action Blind Bolt Fasteners



Model 2480/A2480

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

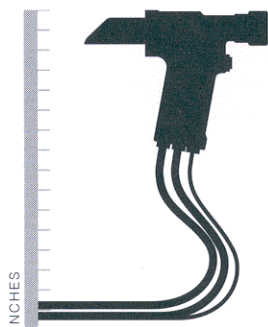
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-2700	99-2706			
99-2701	99-2707			
99-2702	99-2708			



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

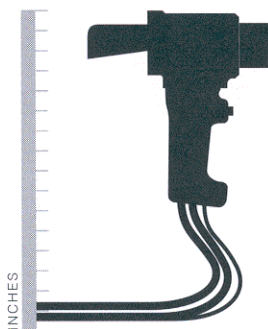
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-2716	99-2719	99-2722
		99-2717	99-2720	



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

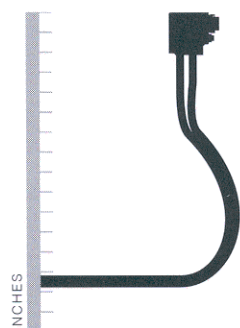
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-2716	99-2719	99-2722
		99-2717	99-2720	



Model 5901/A5901

Type: Hydraulic
 Applications: High volume production
 Features: Optimum stroke for one cycle installation and a single moving part requiring minimum maintenance.

Nose Assemblies			
	3/8	7/16	1/2
	H99-599	H99-738	H99-678

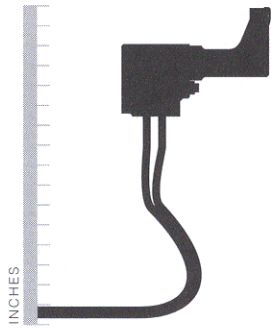


Model 206-375/A206-375

Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1712	99-1713	99-1714		
99-1712-1	99-1713-1	99-1714-1		

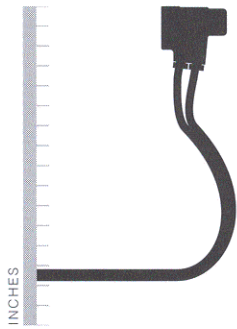
UNIMATIC® Single Action Blind Bolt Fasteners



**Model 208-625
with 125770 Adapter**

Type: Hydraulic
 Applications: Limited clearance
 Features: Offset tool design and
 repositional hoses for installations in
 tight clearances.

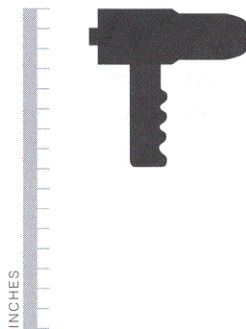
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-1500	99-1502	99-1504	99-1536	
99-1501	99-1503	99-1505	99-1539	
99-1525	99-1526	99-1527		



Model 700/A700 series

Type: Hydraulic
 Applications: Limited clearance
 Features: Built in nose assembly for
 convenience and dependability, in an
 extremely small package.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
	706BB	708BB	710BB	712BB



Model 115

Type: Manual
 Applications: Ideal for field maintenance
 and repair
 Features: Powered by a standard
 11/16 hex ratchet wrench

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-2716		
		99-2717		

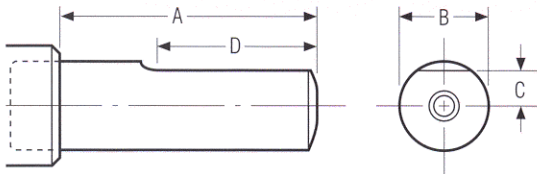


Figure 1

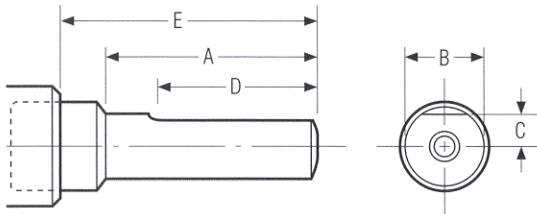


Figure 2

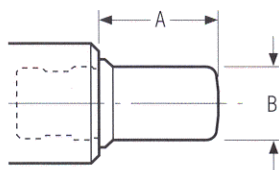


Figure 3

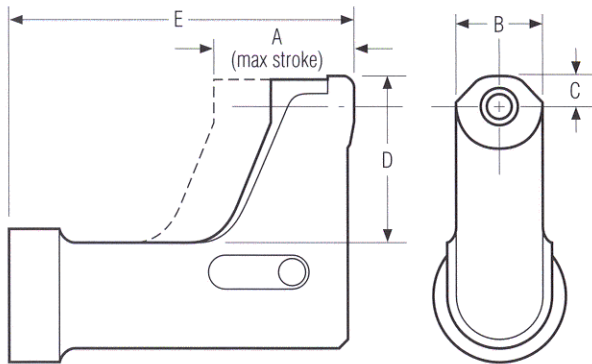


Figure 4

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2700	2	1	.48	.63	.29	.48	1.18
99-2701	1	0	2.06	.75	.38		
99-2702	2	1	3.98	.63	.29	3.98	4.68
99-2704	2	1	1.85	.63	.29	1.85	2.55
99-1513	3	0	.35	.88			
99-1517	3	0	.30	.88			
99-1520	3	0	1.18	.75			
99-1712	4	0	1.55	.78	.33	1.08	2.73
99-1712-1	4	0	1.55	.85	.33	1.71	3.55

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2706	2	1	.44	.70	.32	.44	1.14
99-2707	1	0	2.06	.75	.38		
99-2708	2	1	3.94	.70	.32	3.94	4.64
99-2710	2	1	1.79	.70	.32	1.79	2.49
99-1514	3	0	.35	.88			
99-1521	3	0	1.18	.75			
99-1713	4	0	1.55	.78	.33	1.08	2.73
99-1713-1	4	0	1.55	.85	.33	1.71	3.55

1/4 Diameter

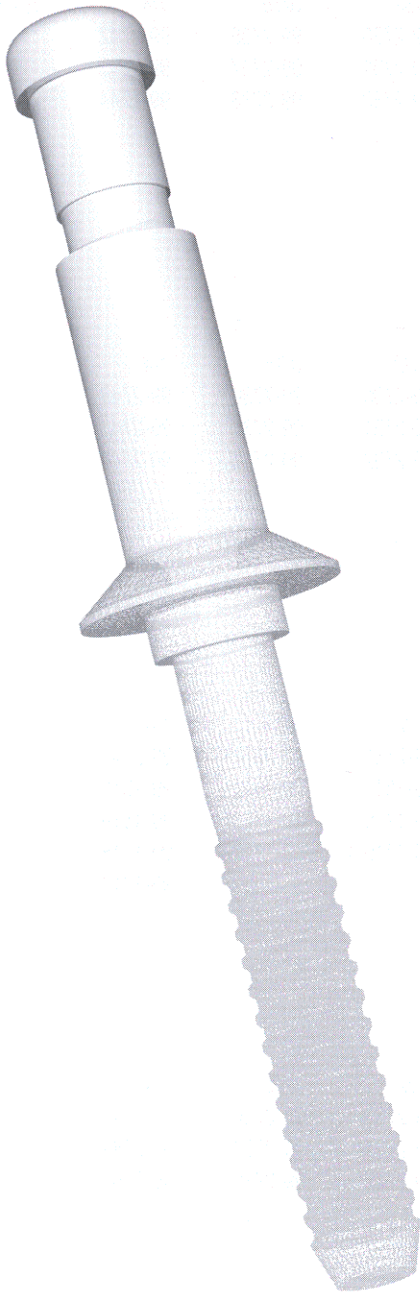
Nose Assy	Fig	Flats	A	B	C	D	E
99-2716	2	0	1.88	.81	.41		2.25
99-2717	2	0	1.88	.81	.41		7.25
99-1515	3	0	.35	.88			
99-1522	3	0	1.18	.75			
99-1714	4	0	1.55	.78	.33	1.08	2.73
99-1714-1	4	0	1.55	.85	.33	1.71	3.55

5/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-823	1	1	2.77	1.06	.44	2.16	
99-1651	2	1	2.42	.92	.39	1.88	2.72
99-2719	2	1	1.83	.92	.43	1.83	2.53
99-2720	2	1	4.68	.92	.39	4.37	4.97

3/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2722	1	1	2.77	1.06	.44	2.16	



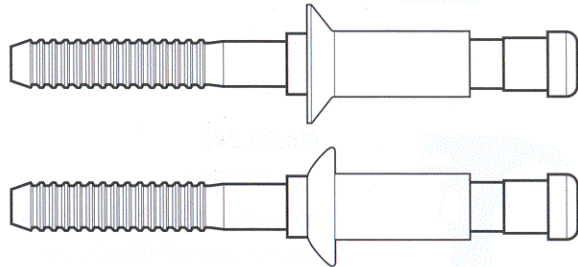
Includes part numbers:

NAS 1919B()S	NAS 1921B()S
NAS 1919M()S	NAS 1921M()S
NAS 1919C()S	NAS 1921C()S
OSMLSP()	OSMLS100()
SMLSP-BT	SMLS100-BT

The Unimatic Blind Rivet fastener provides uniform bulbed blind head configuration regardless of fastener diameter or material, and ensures joint integrity and enhanced fatigue life.

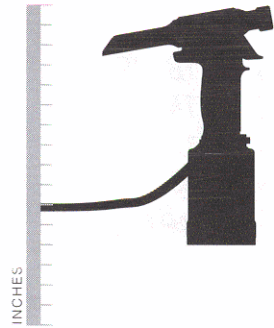
Use Unimatic Blind Rivet fasteners in general design applications, in thin sheet stackups, thin blind side sheet, or thick stackups.

Integrity and permanence mean the Unimatic lock collar is trusted by designers even in most demanding FOD critical applications such as high performance aircraft.



The Unimatic Blind Rivet fastener in flush and protruding head styles.

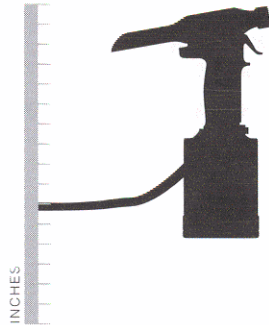
UNIMATIC® Single Action Blind Rivet Fasteners



Model 2012

Type: Pneumatic
 Applications: Medium production
 Features: Lightweight tool for fast, uniform installations.

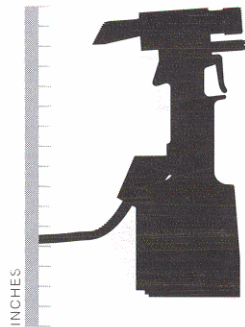
Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2724	99-2730	99-2736	99-2742	
99-2725	99-2731	99-2737	99-2743	
99-2726	99-2732	99-2738	99-2744	



Model 202

Type: Pneumatic
 Applications: High volume production
 Features: Optimum stroke for one cycle installation.

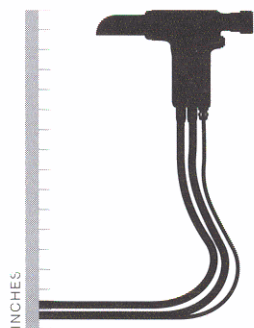
Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2724	99-2730	99-2736	99-2742	
99-2725	99-2731	99-2737	99-2743	
99-2726	99-2732	99-2738	99-2744	



Model 245

Type: Pneumatic
 Applications: High speed production
 Features: Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2725 ¹	99-2731 ¹	99-2737 ¹	99-2743 ¹	
99-1516 ³	99-1517 ³	99-1518 ³	99-1311	
99-1715 ²	99-1716 ²	99-1717 ²	99-1519 ³	
99-1715-1 ²	99-1716-1 ²	99-1717-1 ²	99-1718 ²	
			99-1718-1 ²	



Model 2480/A2480

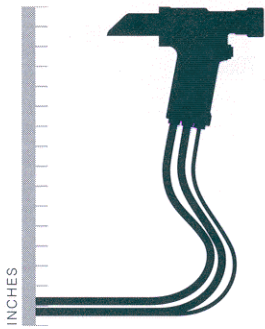
Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2724	99-2730	99-2736	99-2742	
99-2725	99-2731	99-2737	99-2743	
99-2726	99-2732	99-2738	99-2744	

¹ Requires adapter part number 102463

² Requires adapter part number 119400 and stroke limiter part number 118362

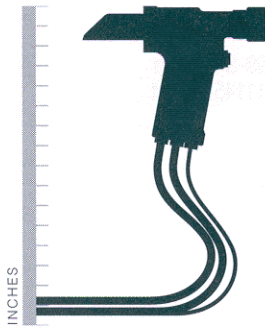
³ Requires adapter part number 117831 and stroke limiter part number 118362



Model 2502/A2502

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

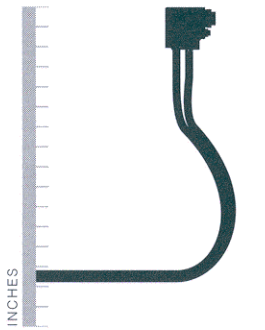
Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-2725	99-2731	99-2737	99-2746	
			99-2743	
			99-2744	



Model 2503/A2503

Type: Hydraulic
 Applications: High speed production
 Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance. Achieves the longest stroke available in this series of tooling.

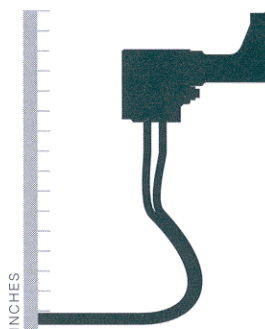
Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
			99-2746	
			99-2743	



Model 206-375/A206-375

Type: Hydraulic
 Applications: Limited clearance
 Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
99-1715	99-1716	99-1717	99-1718	
99-1715-1	99-1716-1	99-1717-1	99-1718-1	



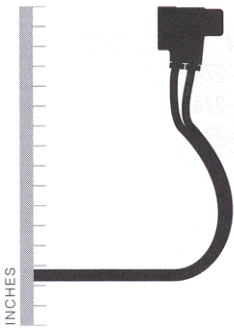
Model 208-625 with 125770 Adapter

Type: Hydraulic
 Applications: Limited clearance
 Features: Offset tool design and repositional hoses for installations in tight clearances.

Nose Assemblies				
1/8	5/32	3/16	1/4	5/16
		99-1518	99-1519	

¹ Requires adapter part number 102463

UNIMATIC® Single Action Blind Rivet Fasteners



Model 700/A700 series

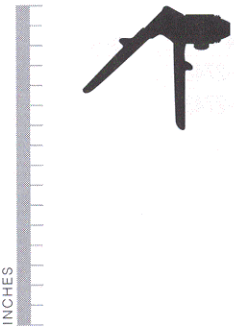
Type: Hydraulic

Applications: Limited clearance

Features: Built in nose assembly for convenience and dependability, in an extremely small package.

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
704BR	705BR	706BR	708BR	



Model HK150-S456

Type: Manual

Applications: Field repairs

Features: Lightweight and easy to handle. Supplied as a complete kit including nose assemblies and driving anvils.

NOTE: The Model HK150 includes the S456 nose assembly, adapter part number 122587 and inserts for 7/8, 5/32, and 3/16" fasteners.

Nose Assemblies

1/8	5/32	3/16
99-S456 with 111455 insert	99-S456 with 111456 insert	99-S456 with 111457 insert

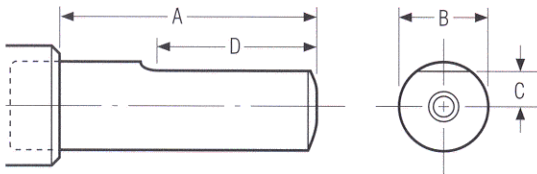


Figure 1

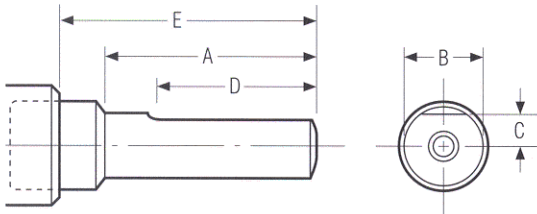


Figure 2

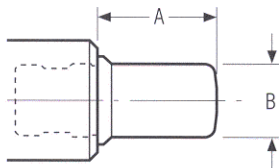


Figure 3

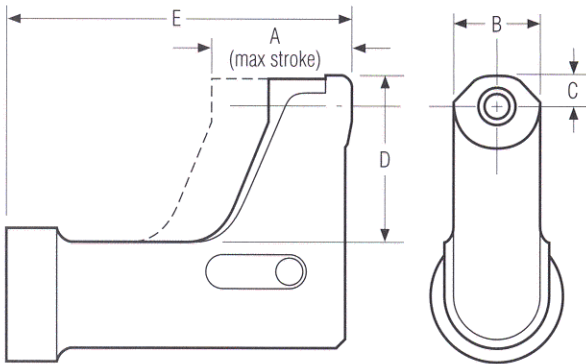


Figure 4

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-S456	2	1	3.51	.63	.23	1.36	4.64
99-2724	2	1	.54	.59	.27	.54	1.24
99-2725	2	1	2.05	.59	.24	2.05	2.55
99-2726	2	1	4.04	.59	.27	4.04	4.74
99-1033	2	1	1.73	.59	.24	1.73	2.29
99-1061	1	1	5.03	.62	.23	1.25	
99-1516	3	0	.30	.88			
99-1715	4	0	1.55	.78	.33	1.08	2.73
99-1715-1	4	0	1.55	.85	.33	1.71	3.55

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-S456	2	1	3.51	.63	.23	1.36	4.64
99-2730	2	1	.54	.63	.23	.54	1.24
99-2731	2	1	2.55	.59	.24	2.55	2.05
99-2732	2	1	4.04	.63	.29	4.04	4.74
99-1034	2	1	1.73	.59	.24	1.73	2.29
99-1062	1	1	5.03	.62	.23	1.25	
99-1517	3	0	.30	.88			
99-1716	4	0	1.55	.78	.33	1.08	2.73
99-1716-1	4	0	1.55	.85	.33	1.71	3.55

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-S456	2	1	3.51	.63	.23	1.36	4.64
99-2736	2	1	.51	.70	.32	.51	1.21
99-2737	2	1	2.05	.59	.24	2.05	2.55
99-2738	2	1	4.01	.70	.32	4.01	4.71
99-1035	2	1	1.73	.59	.24	1.73	2.29
99-1063	1	1	5.03	.62	.23	1.25	
99-1518	3	0	.30	.88			
99-1717	4	0	1.55	.78	.33	1.08	2.73
99-1717-1	4	0	1.55	.85	.33	1.71	3.55

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2742	1	1	1.12	.75	.34	.42	
99-2743	1	1	2.12	.75	.34	1.42	
99-2744	1	1	4.62	.75	.34	3.92	
99-2746	2	1	1.76	.75	.34	1.76	2.45
99-1313	1	2	1.98	.75	.33	1.35	
99-1311	2	0	1.65	.81			2.21
99-1519	3	0	.36	.88			
99-1718	4	0	1.55	.78	.33	1.08	2.73
99-1718-1	4	0	1.55	.85	.33	1.71	3.55



Includes part numbers:

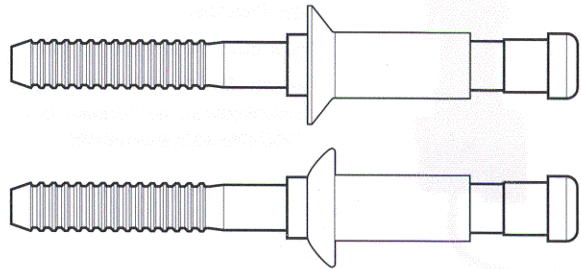
NAS 1919B

MLSP()

NAS 1921B

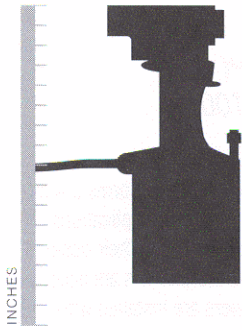
MLS100()

The unique controlled installation action of these blind rivets forms a wide-bearing head that assures integrity on thin sheet blind side applications. They can be used with confidence in FOD critical areas because of their positive mechanical lock feature. Aluminum Double Action Blind Rivets are acceptable in Kevlar and fiberglass applications. These fasteners are installed with shifting double action tools.



The Double Action Blind Rivet fastener in flush and protruding head styles.

Aluminum Double Action Blind Rivet Fasteners

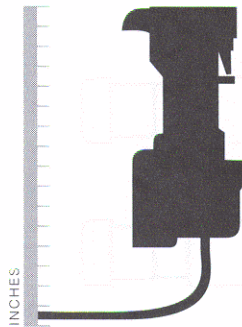


Model 200

Type: Pneudraulic

Applications: High speed production

Features: Lightweight, separate lock collar driving for blind rivet installation.



Model 350

Type: Pneumatic

Applications: High speed production

Features: Narrow centerline-to-edge measurement allows installations in limited clearance applications.

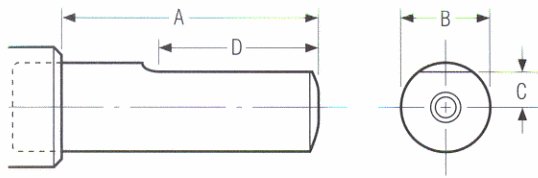


Figure 1

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
78972 ¹	78973 ¹	78974 ¹	99-740	
78978 ¹	78979 ¹	78980 ¹		
99-1013	99-458	99-459		

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
78972	78973	78974		

NOTE: Longest grips that can be installed with Model 350 Installation Tool are:

- MLSP-B4-6 MLSP-B5-7 MLSP-B6-7
- MLS100-B4-6 MLS100-B5-8 MLS100-B6-8

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1013	1	1	2.08	.88	.31	1.32
78972	1	1	2.41	.72	.22	1.50
78978	1	1	1.79	.72	.22	1.31

5/32 Diameter

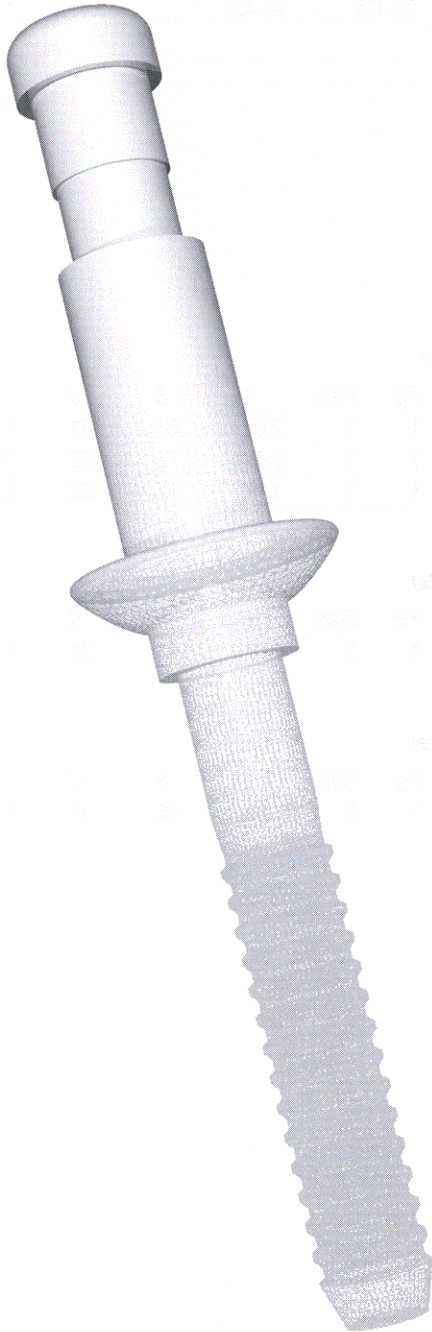
Nose Assy	Fig	Flats	A	B	C	D
99-458	1	1	2.08	.88	.31	1.32
78973	1	1	2.41	.72	.22	1.50
78979	1	1	1.79	.72	.22	1.31

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-459	1	1	2.08	.88	.31	1.32
78974	1	1	2.41	.72	.22	1.50
78980	1	1	1.79	.72	.22	1.31

1/4 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-740	1	1	2.19	.94	.31	1.38

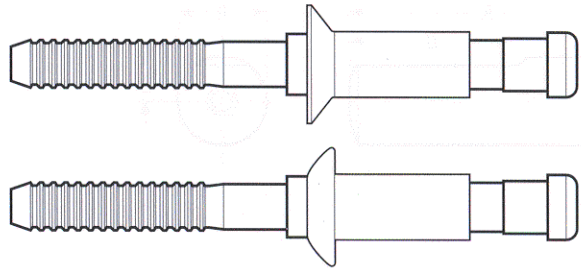


Includes part numbers:

NAS 1919M
NAS 1919C

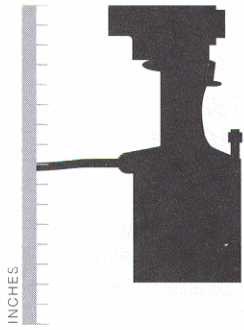
NAS 1921M
NAS 1921C
7MLS100-M

The unique controlled installation action of these blind rivets forms a wide-bearing head that assures integrity on thin sheet blind side applications. They can be used with confidence in FOD critical areas because of their positive mechanical lock feature. Monel and A-286 Double Action Blind Rivets are currently being used in composite applications of production aircraft.



The Double Action Blind Rivet fastener in flush and protruding head styles.

Monel and A-286 Double Action Blind Rivet Fasteners



Model 200

Type: Pneumatic

Applications: High speed production

Features: Lightweight, separate lock collar driving for blind rivet installation.

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
78972	99-458	99-459		
78978*				
99-1013				

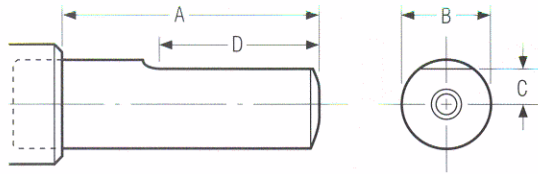


Figure 1

1/8 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1013	1	1	2.08	.88	.31	1.32
78972	1	1	2.41	.72	.22	1.50
78978	1	1	1.79	.72	.22	1.31

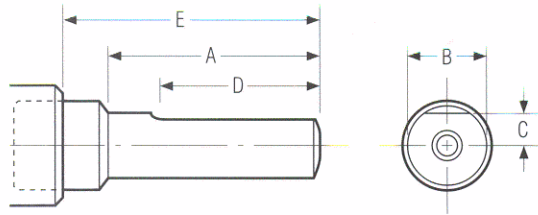


Figure 2

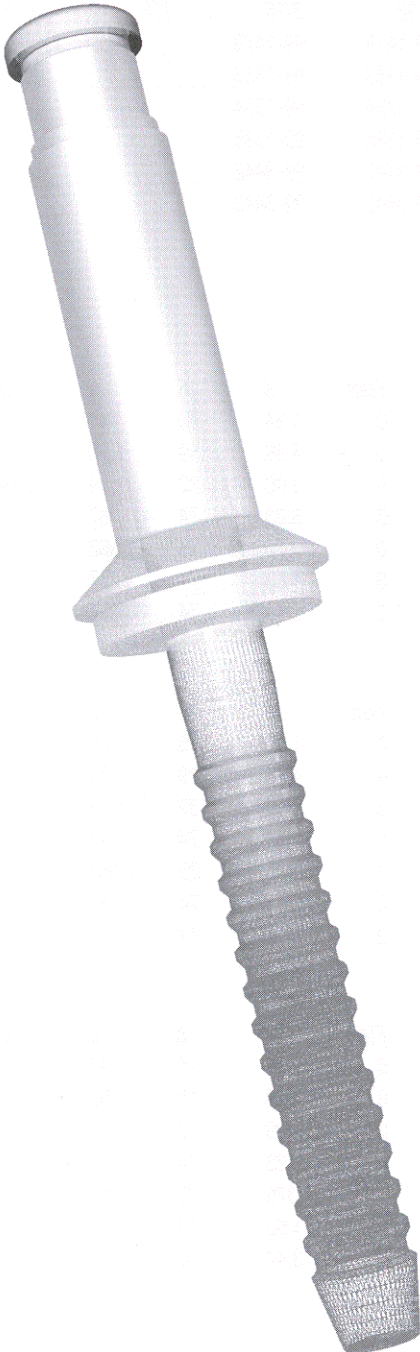
5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-458	1	1	2.08	.88	.31	1.32

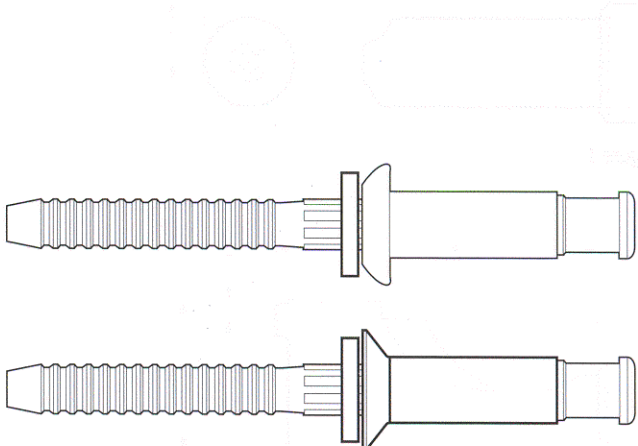
3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-459	1	1	2.08	.88	.31	1.32

* Non-Stock Standard

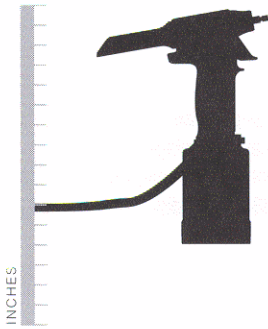


The HuckMAX™ Blind Rivet System is a general-purpose blind fastening system that is easy to install and offers significant advantages over generic systems. The blind side "Expander" component, for example, improves sheet take-up and load bearing to conform with M7885. In addition, the HuckMAX can be checked visually to see if it has locked.



The HUCK-MAX Blind Rivet fastener, protruding and 100° flush heads, nominal and oversize diameters.

HuckMAX™ Blind Rivet Fasteners



Model 2013

Type: Pneumatic

Applications: High speed production

Features: Small, lightweight tool for fast, uniform installations.

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
99-1479	99-1479	99-1479		
99-1333	99-1333	99-1333		
99-1334	99-1334	99-1334		
99-1335	99-1335	99-1335		
99-3442	99-3442	99-3442		
99-3443	99-3443	99-3443		

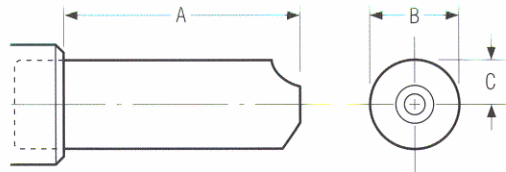


Figure 1

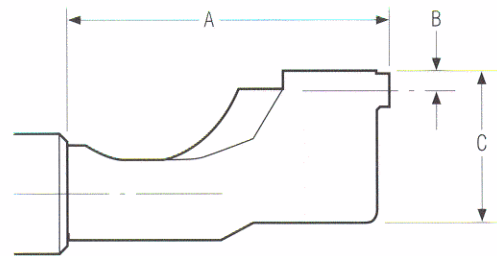


Figure 2

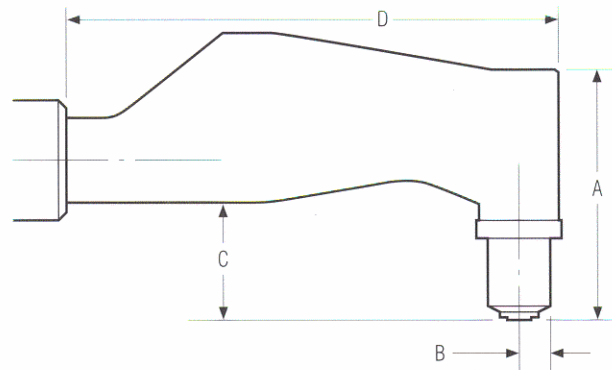


Figure 3

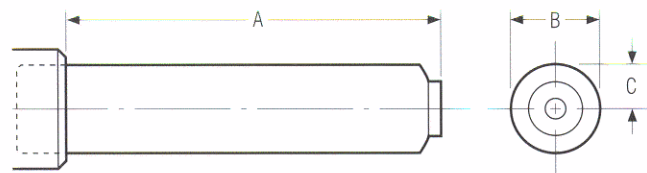


Figure 4

1/8 Diameter

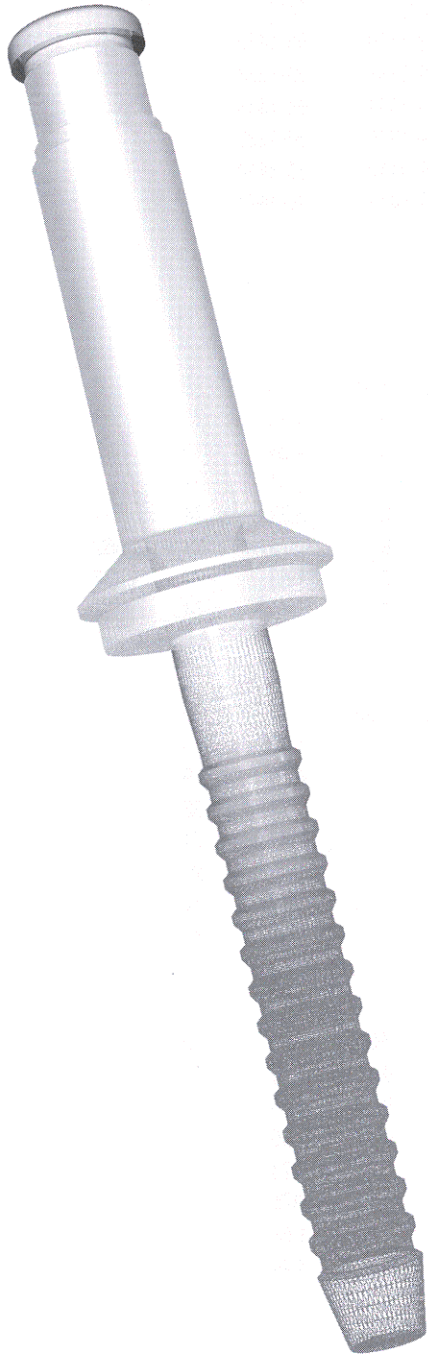
Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	

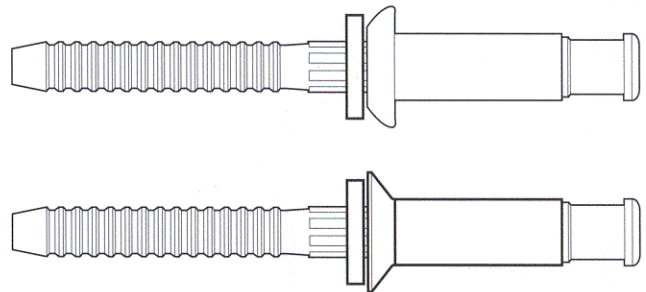


Includes part numbers:

- | | |
|-----------------|-----------------|
| HC 3212-()-() | HC 3242-()-() |
| HC 3213-()-() | HC 3243-()-() |
| HC 3222-()-() | HC 3245-()-() |
| HC 3223-()-() | HC 3252-()-() |
| | HC 3253-()-() |

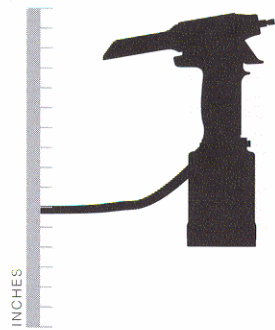
The HUCK-CLINCH Blind Rivet fastener is a high performance fastener featuring a high clinch function providing excellent sheet take-up. Shank expansion during installation of the Huck-Clinch fastener produces positive hole fill, and a stop washer ensures flush pin break.

The HUCK-CLINCH Blind Rivet fastener is designed to meet the requirements of MIL-R-885.



The HUCK-CLINCH Blind Rivet fastener, protruding and 100° flush heads, nominal and oversize diameters.

HUCK-CLINCH® Blind Rivet Fasteners



Model 2013

Type: Pneumatic

Applications: High speed production

Features: Small, lightweight tool for fast, uniform installations.

Nose Assemblies

1/8	5/32	3/16	1/4	5/16
99-1479	99-1479	99-1479		
99-1333	99-1333	99-1333		
99-1334	99-1334	99-1334		
99-1335	99-1335	99-1335		
99-3442	99-3442	99-3442		
99-3443	99-3443	99-3443		

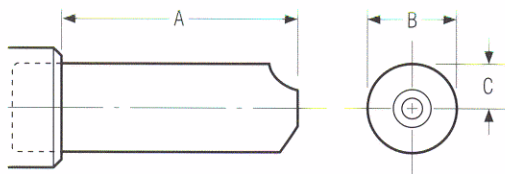


Figure 1

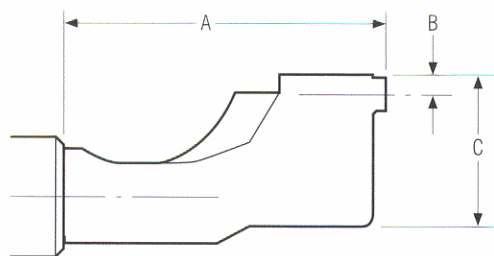


Figure 2

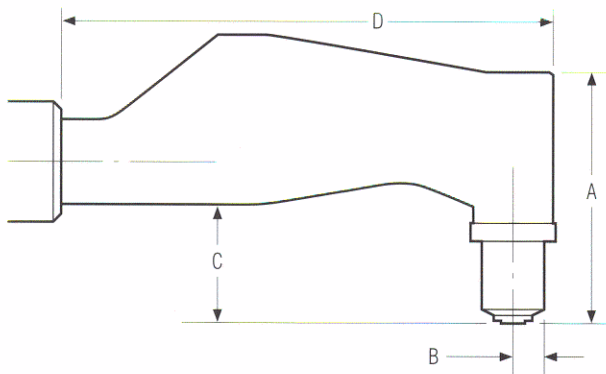


Figure 3

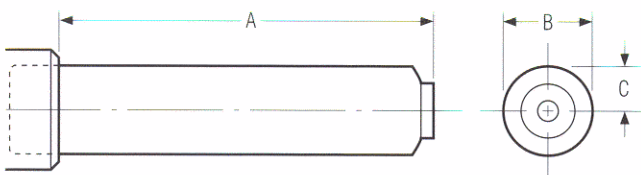


Figure 4

1/8 Diameter

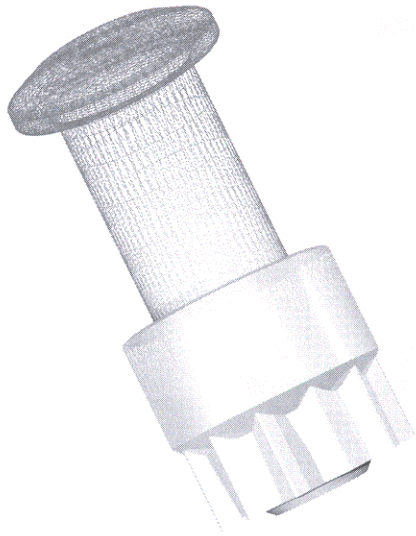
Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	

5/32 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	

3/16 Diameter

Nose Assy	Fig	Flats	A	B	C	D
99-1479	1	0	1.94	.75	.38	
99-1333	2	0	4.38	.19	1.50	
99-1334	3	0	3.00	.32	1.19	5.38
99-1335	4	0	3.23	.74	.37	
99-1336	2	0	3.375	.25	1.562	
99-3442	1	0	1.63	.74	.37	
99-3443	1	0	3.44	.74	.37	



Includes part numbers:

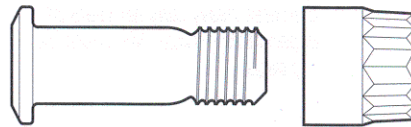
NAS4450()
NAS4458S
O3KSP-DT

NAS4452()
NAS4466S()
OKS200-DT

The HUCKRIMP® System is a unique method of locking the nut on a threaded pin and providing preload to a joint. It produces superior vibration resistance and very closely controlled joint preloads that can be controlled from 20% to 90% of yield as required.

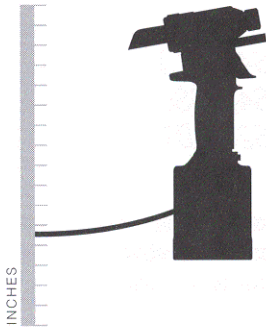
The nut locking and joint preload is obtained by coldworking the Krimpnut with the crimp tool after the nut has been installed on the Krimpin.

NOTE: For dimensional data concerning nose assemblies contact Huck Installation Equipment.



HUCKRIMP protruding head pin and collar.

HUCKRIMP® Fasteners



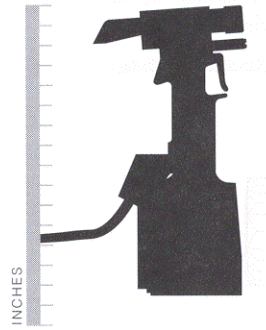
Model 244

Type: Pneumatic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-833 ¹	99-834 ^{1,2}			



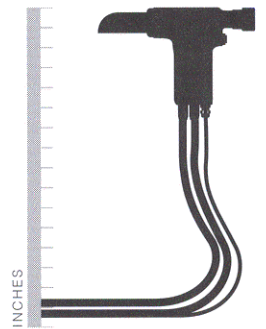
Model 245

Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 5/16 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
	99-1029*	99-799*		



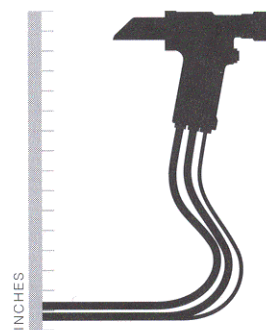
Model 2480/A2480

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, and powerful, with an inline piston for longer life.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-833 ¹	99-834 ²			



Model 2502/A2502

Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

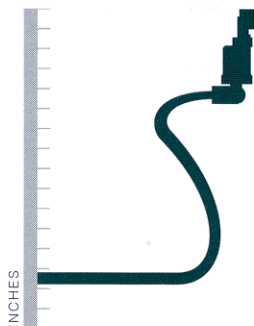
Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-799 ^{2*}	99-798 ^{1*}	99-797 ^{1*}

* Non-Stock Standard

¹ Aluminium KRIMPNUTS only

² Dash 1, 2 and 3 modifications available

³ Tool does not include hose and air trigger, add **-53** to model number to include these items



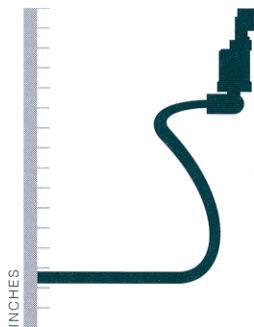
Model 568 (-53)³

Type: Hydraulic

Applications: Limited clearance

Features: Nose assembly rotates 360° and is offset 90°.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
99-881 ¹ *	99-883 ¹ *	99-885 ¹ *		
99-882 ¹ *	99-883-1*			



Model 574 (-53)³

Type: Hydraulic

Applications: Limited clearance

Features: Nose assembly rotates 360° and is offset 90°.

Nose Assemblies				
5/32	3/16	1/4	5/16	3/8
		99-885-1*		

* Non-Stock Standard

¹ Aluminium KRIMPNUTS only

² Dash 1, 2 and 3 modifications available

³ Tool does not include hose and air trigger, add **-53** to model number to include these items



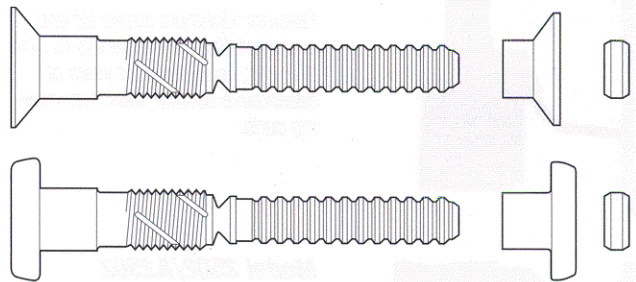
Includes part numbers:

AspFF
2AspFF & FP

2Asp509F & 509P
2AspPF & PP

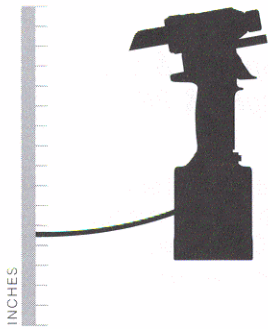
The Asp fastening system provides a simplified method of fastening composite, soft core, metallic, or other materials which are sensitive to fastener clamp-up or installation force considerations. Clamping force can be infinitely adjusted and then sustained by installation—accommodating the unique requirements of a given structural design.

The Asp fastener has a positive mechanical lock for use in vibration and FOD critical installations. It installs quickly and easily eliminating the need for potting, bushings, inserts, or step hole preparation.



Asp fastener showing flush and protruding heads, sleeves, and lock collars.

Asp® Fasteners



Model 244

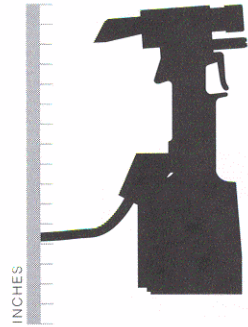
Type: Pneumatic

Applications: High speed production

Features: Lightweight tool for fast, uniform installations. Optimum stroke for one cycle installation of fasteners to 1/4 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

13/64 (06)	17/64 (08)	21/64 (10)
99-2642	99-2645	99-2648
99-2643	99-2646	99-2649



Model 245

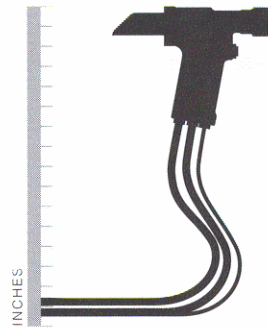
Type: Pneumatic

Applications: High speed production

Features: Optimum stroke for one cycle installation of fasteners to 5/16 diameter, heavy duty for years of dependable service. Minimum moving parts.

Nose Assemblies

13/64 (06)	17/64 (08)	21/64 (10)
99-2642 ¹	99-2645 ¹	99-2648 ¹
99-2643 ¹	99-2646 ¹	99-2649 ¹
99-1728 ²	99-1729 ²	99-1730 ²



Model 2502/A2502

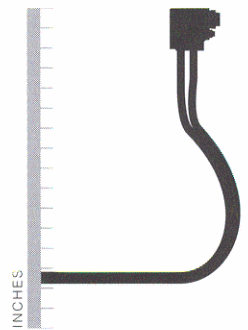
Type: Hydraulic

Applications: High speed production

Features: Small, lightweight, with just one moving part for increased reliability, and an offset piston for limited clearance.

Nose Assemblies

13/64 (06)	17/64 (08)	21/64 (10)
99-2642 ¹	99-2645 ¹	99-2648
99-2643 ¹	99-2646 ¹	99-2649
99-1728 ²	99-1729 ²	99-1730 ²



Model 206-375/A206-375

Type: Hydraulic

Applications: Limited clearance

Features: Uses offset nose assembly for added clearance, and only one moving part for minimum maintenance. Hoses can be repositioned.

Nose Assemblies

13/64 (06)	17/64 (08)	21/64 (10)
99-1728	99-1729	99-1730

¹ Requires adapter part number 102463

² Requires adapter part number 119400 and stroke limiter part number 118362

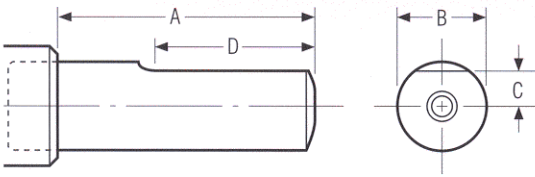


Figure 1

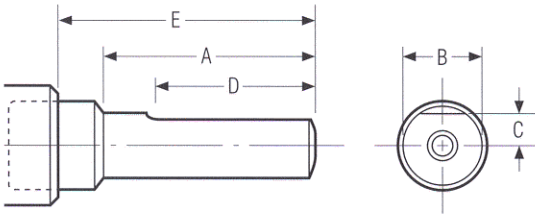


Figure 2

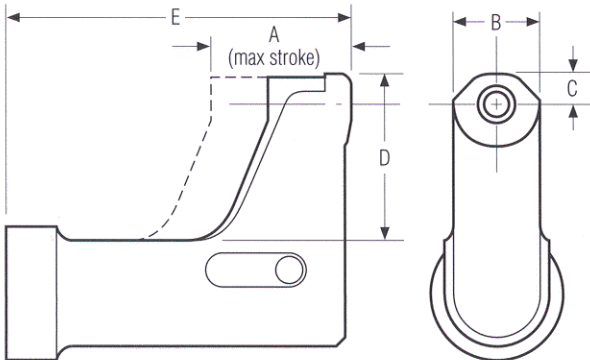


Figure 3

13/64 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-1728	3	0	1.48	.78	.33	1.58	2.69
99-2642	1	1	3.38	.75	.34	1.76	
99-2643	1	1	5.88	.75	.34	4.26	

17/64 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2645	1	1	2.09	.75	.33	1.50	
99-1729	3	0	1.51	.78	.33	1.58	2.72
99-2645	1	1	3.42	.75	.34	1.79	
99-2646	1	1	5.92	.75	.34	4.29	

21/64 Diameter

Nose Assy	Fig	Flats	A	B	C	D	E
99-2648	2	1	2.00	.81	.34	1.50	2.38
99-1730	3	0	1.54	.78	.33	1.58	2.75
99-2648	1	1	3.45	.92	.43	1.70	
99-2649	1	1	5.95	.92	.43	4.20	

Model 200 Pneudraulic Installation Tool

15

The Model 200 is designed to install fasteners requiring double action or single action installation tooling. It provides a separate lock collar driving function—the double action that drives the lock of blind rivet and blind bolt fasteners.

The Model 200 is a production tool that is easy to handle, and requires a minimum of maintenance. The light-

weight aluminum cylinder is steel sleeved, and to check reliability, factory tested for 2,000 cycles.

The power, speed, and accuracy of the Model 200 are obtained through a pneumatic-hydraulic intensifier system powered by 90-100 psi air.

Specifications

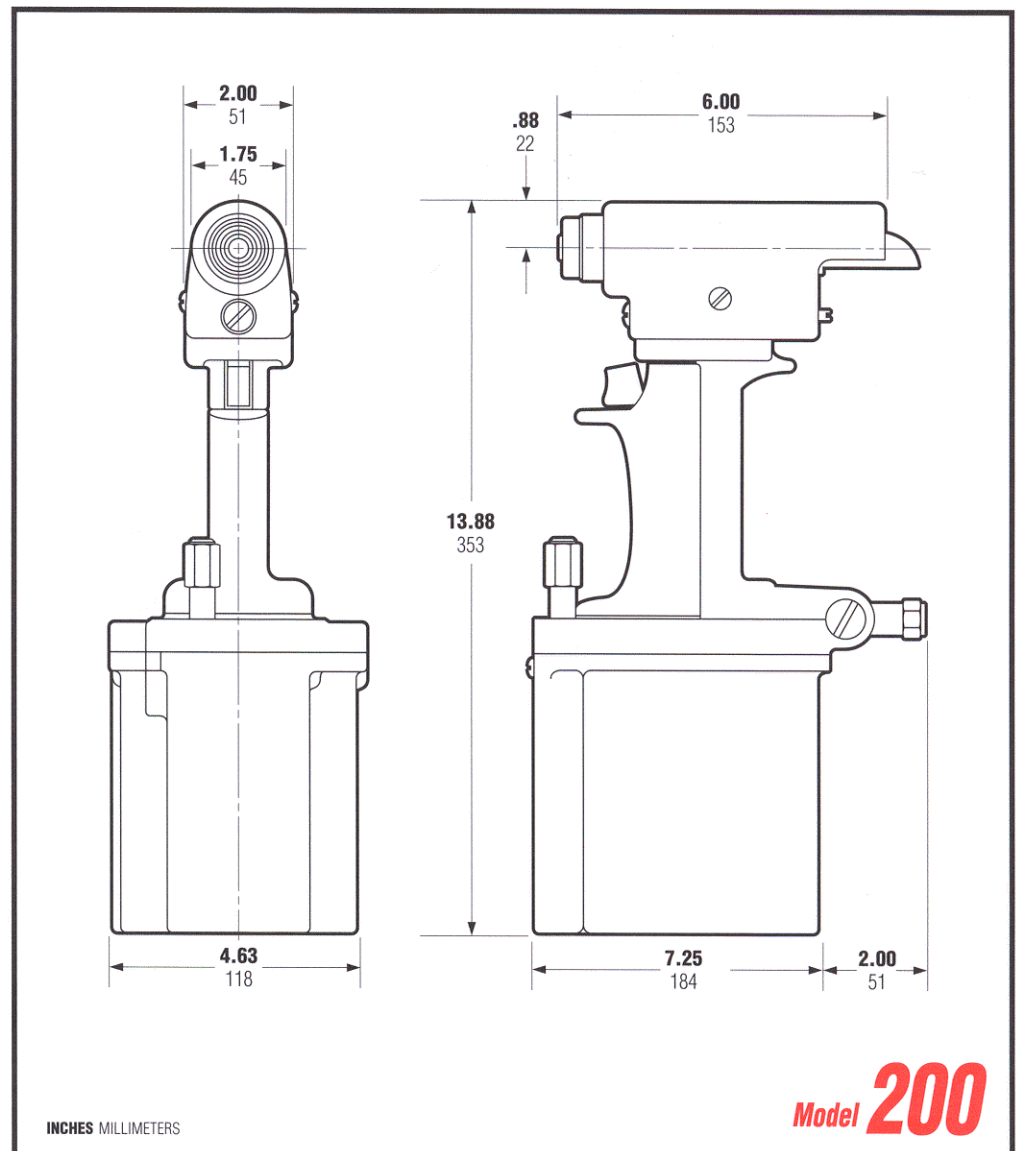
Weight:
10.50 lbs. (4.80 kg)

Air Pressure Required:
90-100 psi (620-690 kPa)

Air Consumption:
18 CFM (0.009 m³/s) based on 30 fastener installations per minute

Hydraulic Fluid:
Automatic Transmission Fluid
DEXRON II® or equivalent

Stroke:
1.19 in (30 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

DEXRON II® is a registered trademark of General Motors Corp.

Model 202 Pneudraulic Installation Tool

The Model 202 installation tool installs a wide range of Huck fasteners, as well as competitive products, with the appropriate nose assembly selection. The tool has features enabling it to install fasteners at high production rates with minimum operator fatigue.

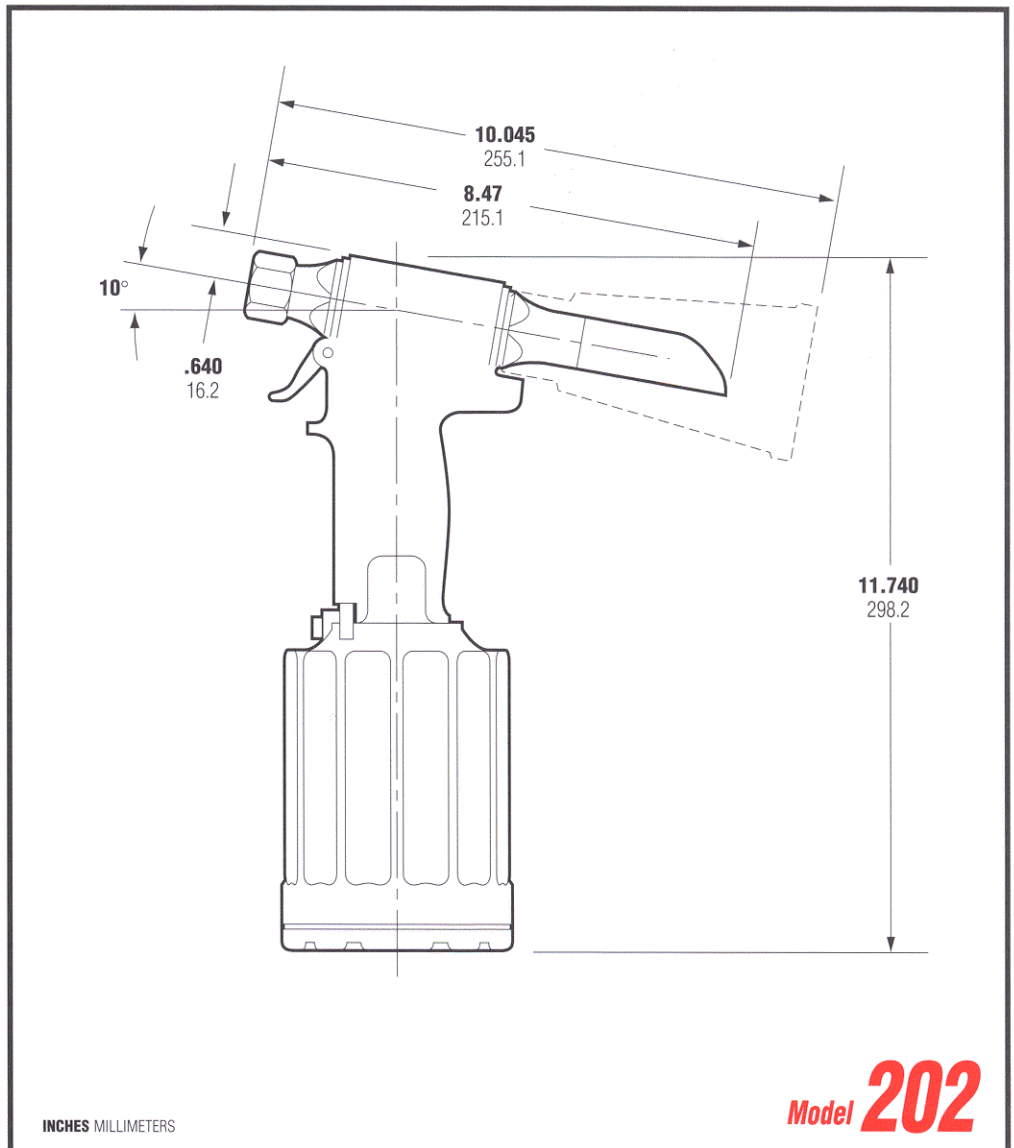
Model 202 can be used to install 3/16" and 1/4" blind rivets and blind bolts.

Specifications

Weight:
5.50 lbs. (2.5 kg)

Air Pressure Required:
90 psi (620 kPa)

Stroke:
.75 in (19.1 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 244 Pneudraulic Installation Tool

15

Weighing in at less than 6 pounds the Huck Model 244 is the solution to operator fatigue and reduced productivity. The Model 244 was designed to install at high volumes lockbolt and blind fasteners through 1/4".

Specifications

Weight:

5 lbs. 11oz

Air Pressure Required:

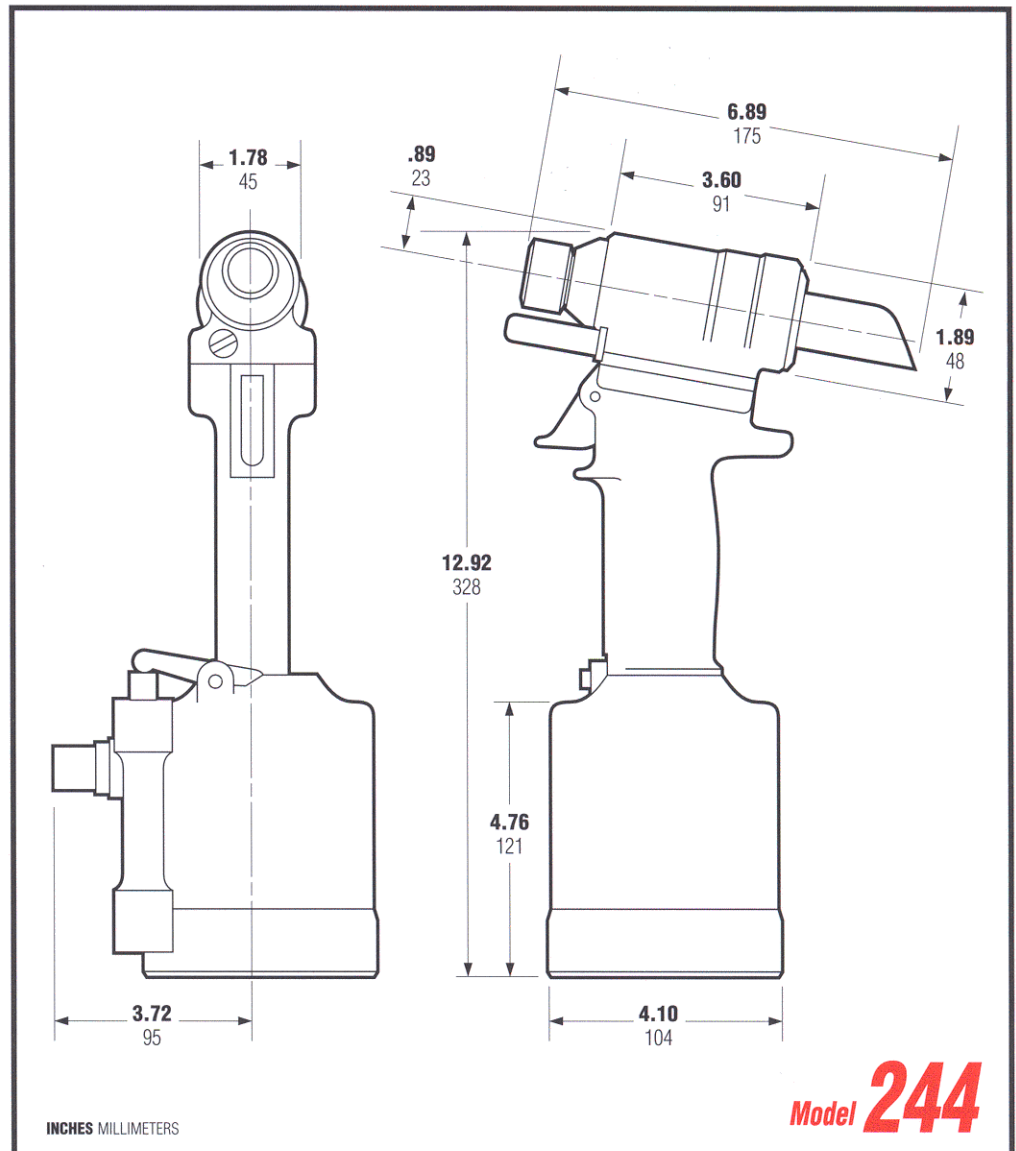
90-100 psi

Hydraulic Fluid:

Automatic Transmission Fluid
DEXRON II® or equivalent

Stroke:

.562 in



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 244

Model 245 (formerly Model 225) is a high-speed production tool with optimum stroke for one-cycle installation. It features an eccentric pull piston for limited clearance applications. Model 245 can be used with a wide range of HUCKBOLT® fasteners and Huck Blind Fasteners.

The hydraulic system of Model 245 has a special reservoir to ensure full strokes during fastener installation. An air pressure of 90 psi powers the pneudraulic system, which develops hydraulic pressure for the pull stroke. A convenient hydraulic fluid sight gauge is provided for fluid

level checking.

Every Model 245 is factory tested for 2,000 cycles. Chrome-plated piston rods extend the life of the seals, and relief valves in both the air and hydraulic circuitry give double protection.

Specifications

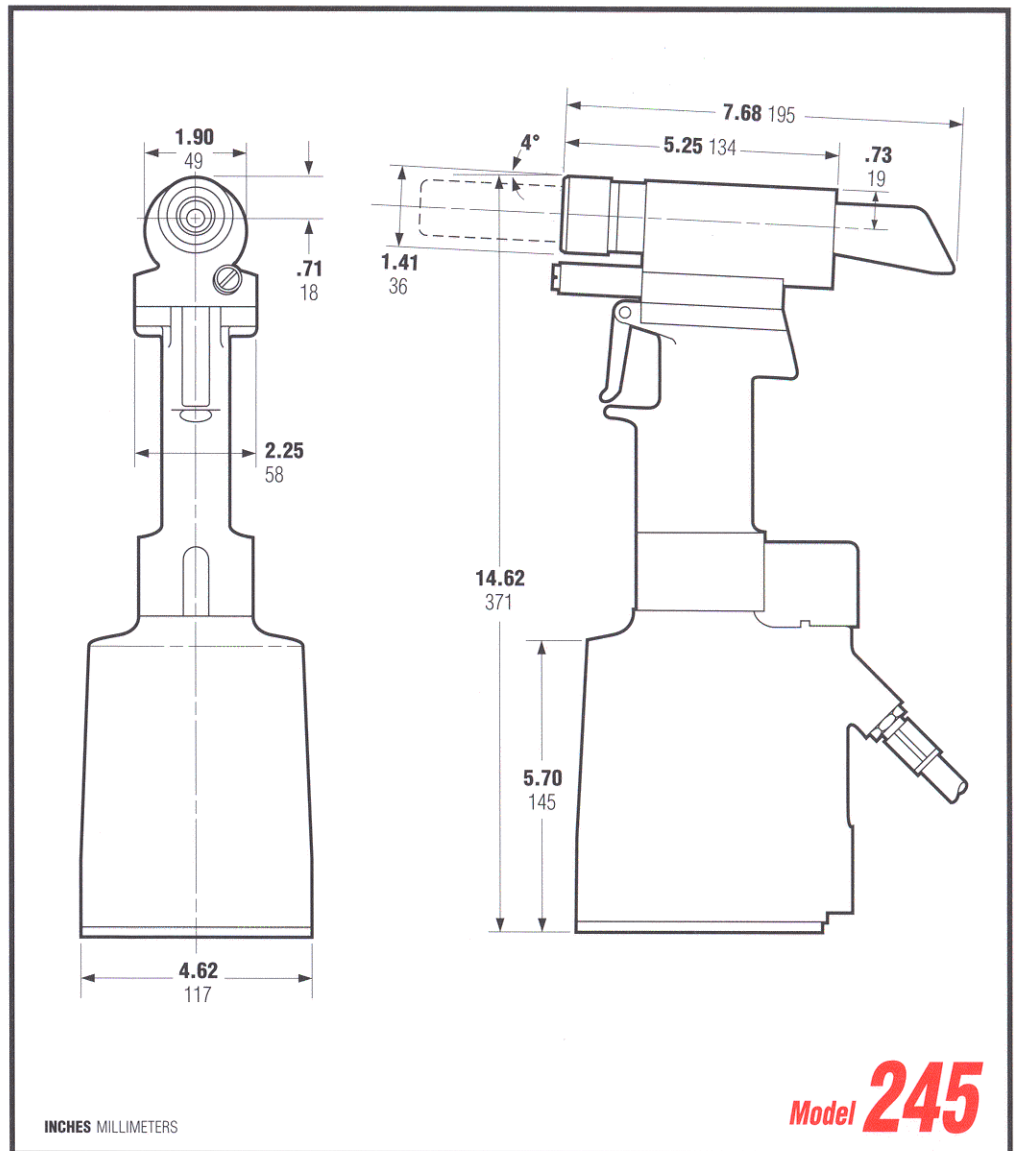
- Weight:*
9.30 lbs. (4.22 kg)

- Air Pressure Required:*
90 psi (620 kPa)

- Air Consumption:*
20 CFM (0.009 m³/s) based on 30 fastener installations per minute

- Hydraulic Fluid:*
Automatic Transmission Fluid
DEXRON II® or equivalent

- Stroke:*
.63 in (16 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

DEXRON II® is a registered trademark of General Motors Corp.

INCHES MILLIMETERS

Model 245

Model 246 Pneudraulic Installation Tool

15

The high speed Model 246 (formerly Model 226) production tool features optimum stroke for one-cycle installation and has an eccentric pull piston for limited clearance applications. This fast tool can be used with a wide range of HUCKBOLT® Fasteners and Huck Blind Fasteners including 5/16" and 3/8" diameter GP® (Groove Proportioned) and LGP® (Lightweight Groove Proportioned) Fasteners.

The Model 246 hydraulic system uses a special reservoir to ensure full strokes during fastener installation. More powerful than Model 245, an air pressure of 105-110 psi pow-

ers the Model 246 pneudraulic system to develop hydraulic pressure for the pull stroke. A hydraulic fluid sight gauge is included for checking the fluid level.

Factory-tested for 2,000 cycles, Model 246 has chrome-plated piston rods to extend the life of the seals and relief valves in both the air and hydraulic circuitry for double protection.

Specifications

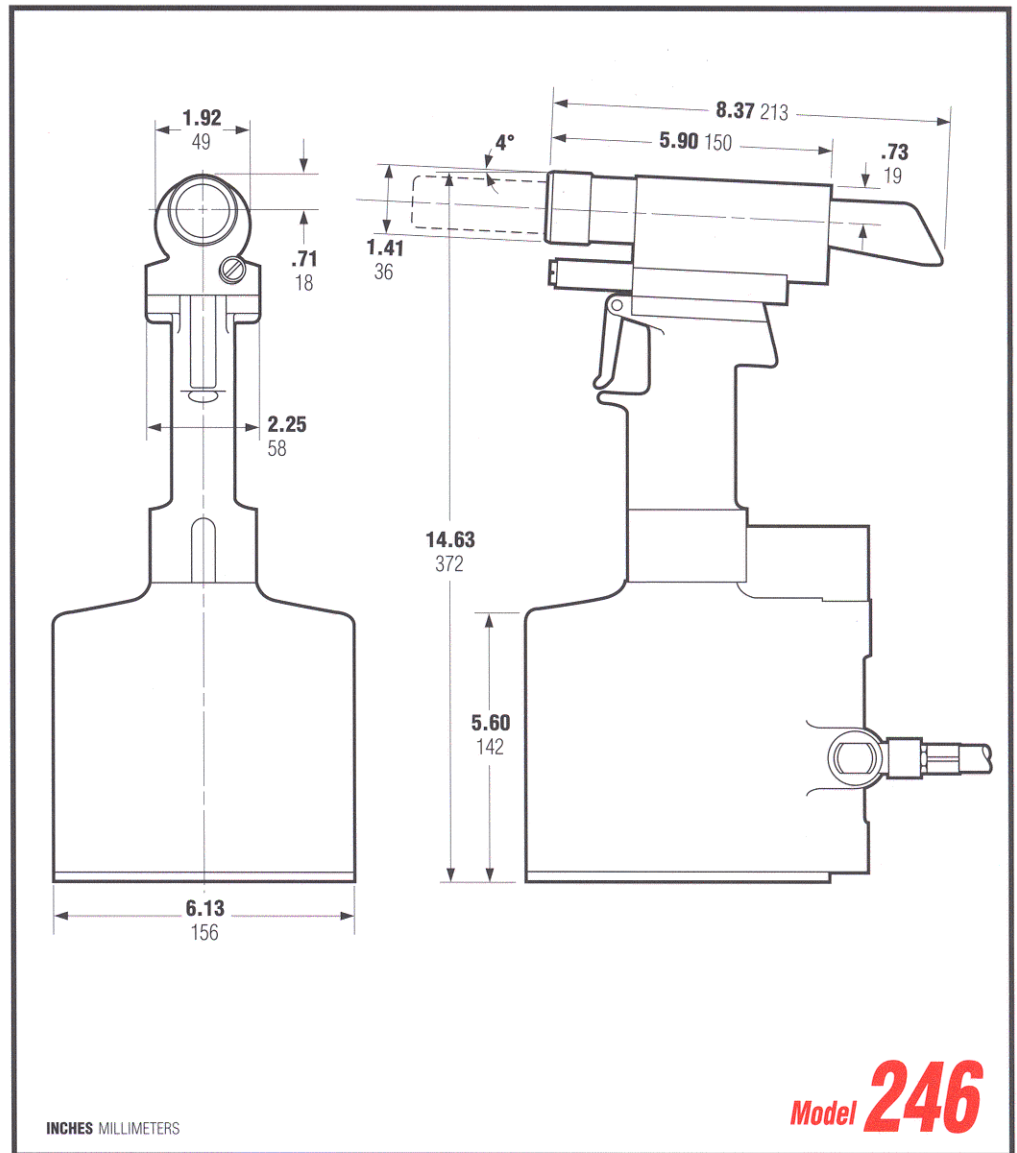
Weight:
12.30 lbs. (5.58 kg)

Air Pressure Required:
90-110 psi (630-760 kPa)

Air Consumption:
30 CFM (0.014 m³/s) based on 18-20 fastener installations per minute

Hydraulic Fluid:
Automatic Transmission Fluid
DEXRON II® or equivalent

Stroke:
.88 in (22 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

DEXRON II® is a registered trademark of General Motors Corp.

INCHES MILLIMETERS

Model 246

Model 247 Pneudraulic Installation Tool

15

Model 247 is a high-speed production tool similar to the Model 245 but with a longer stroke for one-cycle installation. It features an eccentric pull piston for limited clearance applications. Model 247 can be used with a wide range of HUCKBOLT® fasteners and Huck Blind Fasteners.

The hydraulic system of Model 247 has a special reservoir to ensure full strokes during fastener installation. An air pressure of 90 psi powers the pneudraulic system, which develops hydraulic pressure for the pull stroke. A convenient hydraulic fluid

sight gauge is provided for fluid level checking.

Every Model 247 is factory tested for 2,000 cycles. Chrome-plated piston rods extend the life of the seals, and relief valves in both the air and hydraulic circuitry give double protection.

Specifications

Weight:

10.01 lbs. (4.54 kg)

Air Pressure Required:

90 psi (620 kPa)

Air Consumption:

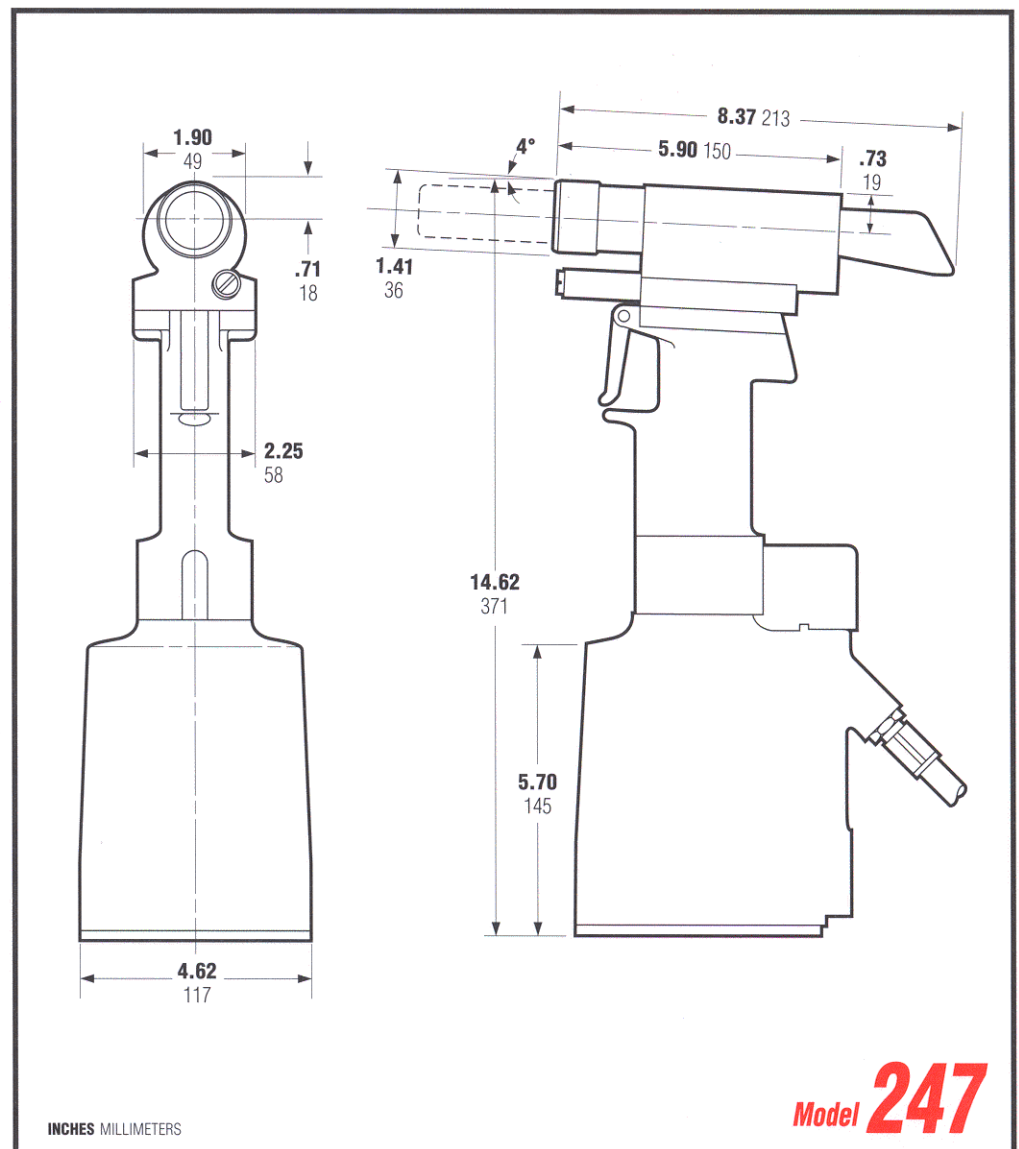
20 CFM (0.009 m³/s) based on 30 fastener installations per minute

Hydraulic Fluid:

Automatic Transmission Fluid
DEXRON II® or equivalent

Stroke:

.88 in (22 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

DEXRON II® is a registered trademark of General Motors Corp.

INCHES MILLIMETERS

Model **247**

The Huck 2012 is precision engineered for ease of use and built tough to stand up to the most demanding working conditions in high volume applications—and the ergonomic design and lightweight construction reduces operator fatigue. With fewer moving parts, the 2012 is dependable and easy to maintain. The 2012 installs blind bolt and blind rivet fasteners easily, quickly and uniformly, while maintaining the standards required of the aerospace industry.

With the Huck 2012 you can install any O4 through O6 diameter blind bolt and blind rivet fasteners having a pinbreak of 2670 lbs or less, UNIMATIC®, TI-MATIC® and ASP® fasteners. The 2012 accepts a full range of nose assemblies for all fastener sizes and installation situations.

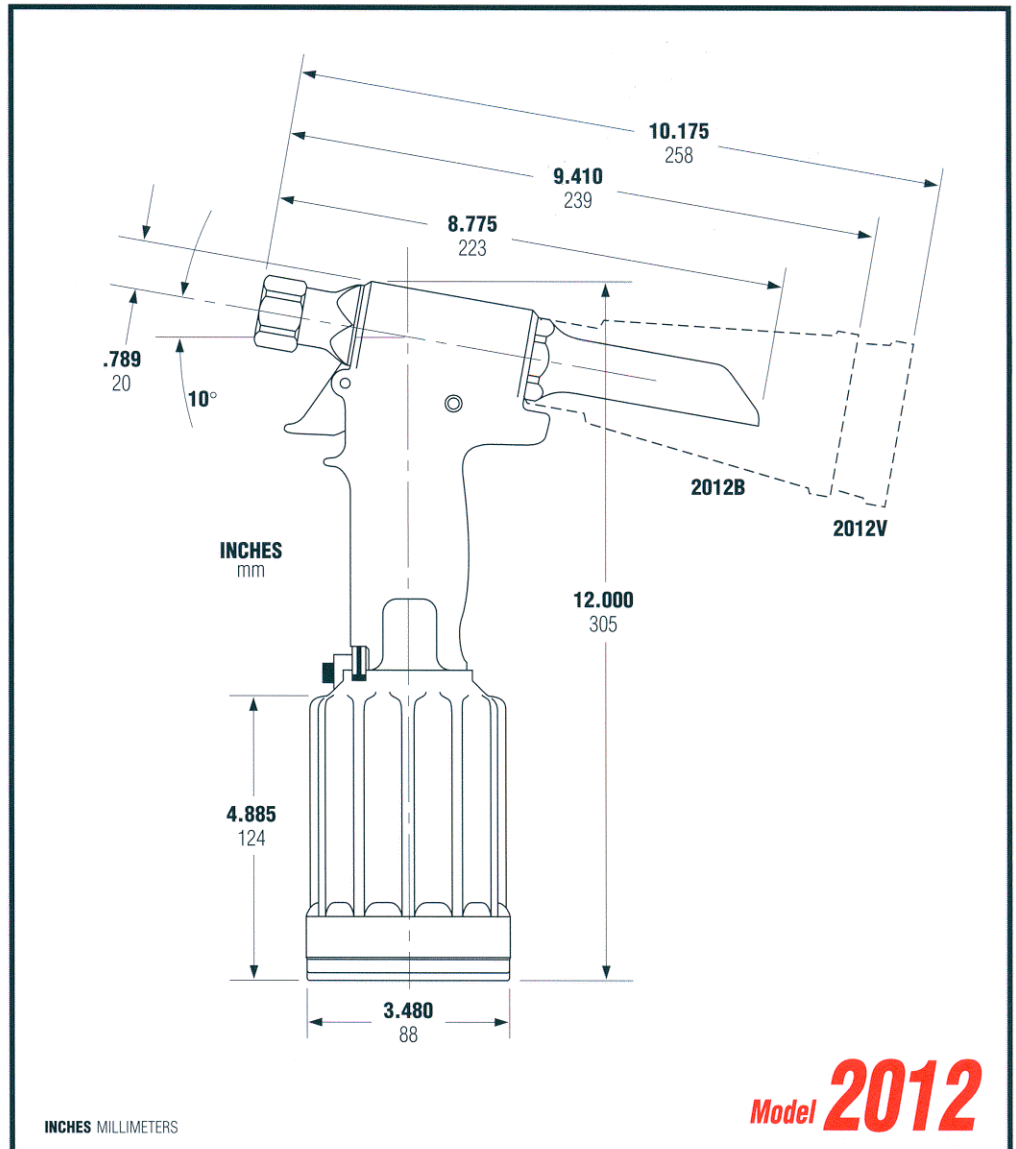
The 2012 accepts a full range of nose assemblies for all fastener sizes and installation situations.

Specifications

Weight:
4.4 lbs. (2.0 kg)

Pull Pressure (max.):
2670 psi
(11.87 kN)

Stroke:
.650 in (16.5 mm)



The Huck 2013 is precision engineered for ease of use and built tough to stand up to the most demanding working conditions—the ergonomic design and light-weight construction reduces operator fatigue. The 2013 is dependable and easy to maintain. The 2013 installs 1/8", 5/32" and 3/16" HuckMAX™, HUCK-CLINCH™, AllMax and

CherryMax® fasteners easily, quickly and uniformly, while maintaining the standards required of the aerospace industry, and without the need to change nose assemblies.

Specifications

Weight:
4.5 lbs. (2.1 kg)

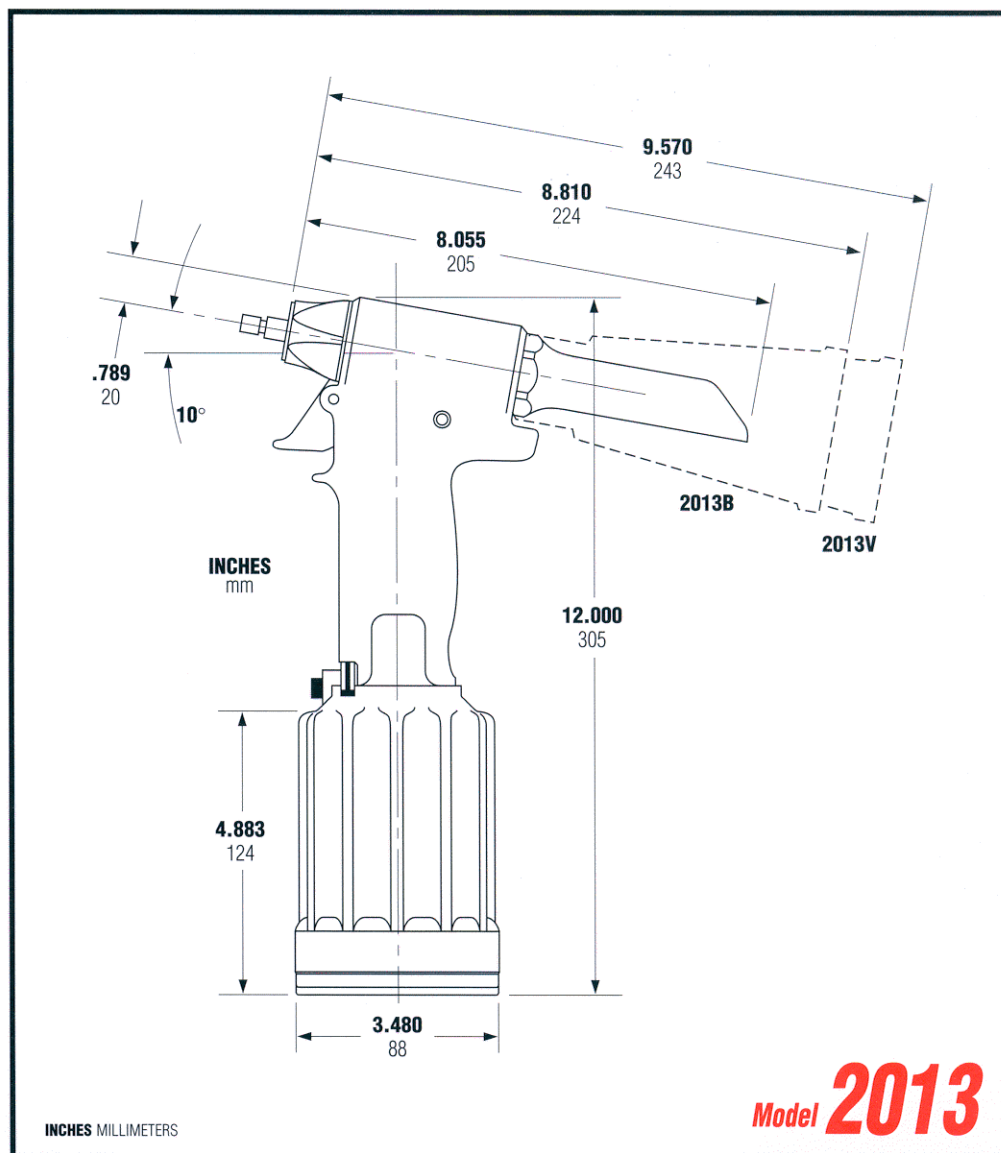
Air Pressure Required:
90-100 psi (620-690 kPa)

Air Consumption:
3.9 CFM (0.002 m³/s) based on 20 fastener installations per minute

Noise Level:
85 dbA maximum at 90 psi

Stroke:
.650 in

CherryMax® is a registered trademark of Textron, Inc.



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

DEXRON II® is a registered trademark of General Motors Corp.
CheeryMAX® is a registered trademark of Textron, Inc.

Model **2013**

Model 350 Pneumatic Installation Tool

Model 350 is a double-action, high-speed production tool that installs 1/8", 5/32", and 3/16" Aluminium Double Action Blind Rivets. The narrow centerline-to-edge measurement of the Model 350 allows work in limited clearance areas.

Light and easy-to-handle, this tool weighs a mere 7.00 lbs, which minimizes fatigue during use.

90-100 psi air pressure capable of 6 cfm is required to operate the Model 350 Pneumatic Installation Tool. A variety of nose assemblies can be

used with different fasteners.

The Model 350 can be converted to single-action for installation of UNIMATIC® blind rivets. See instruction manual.

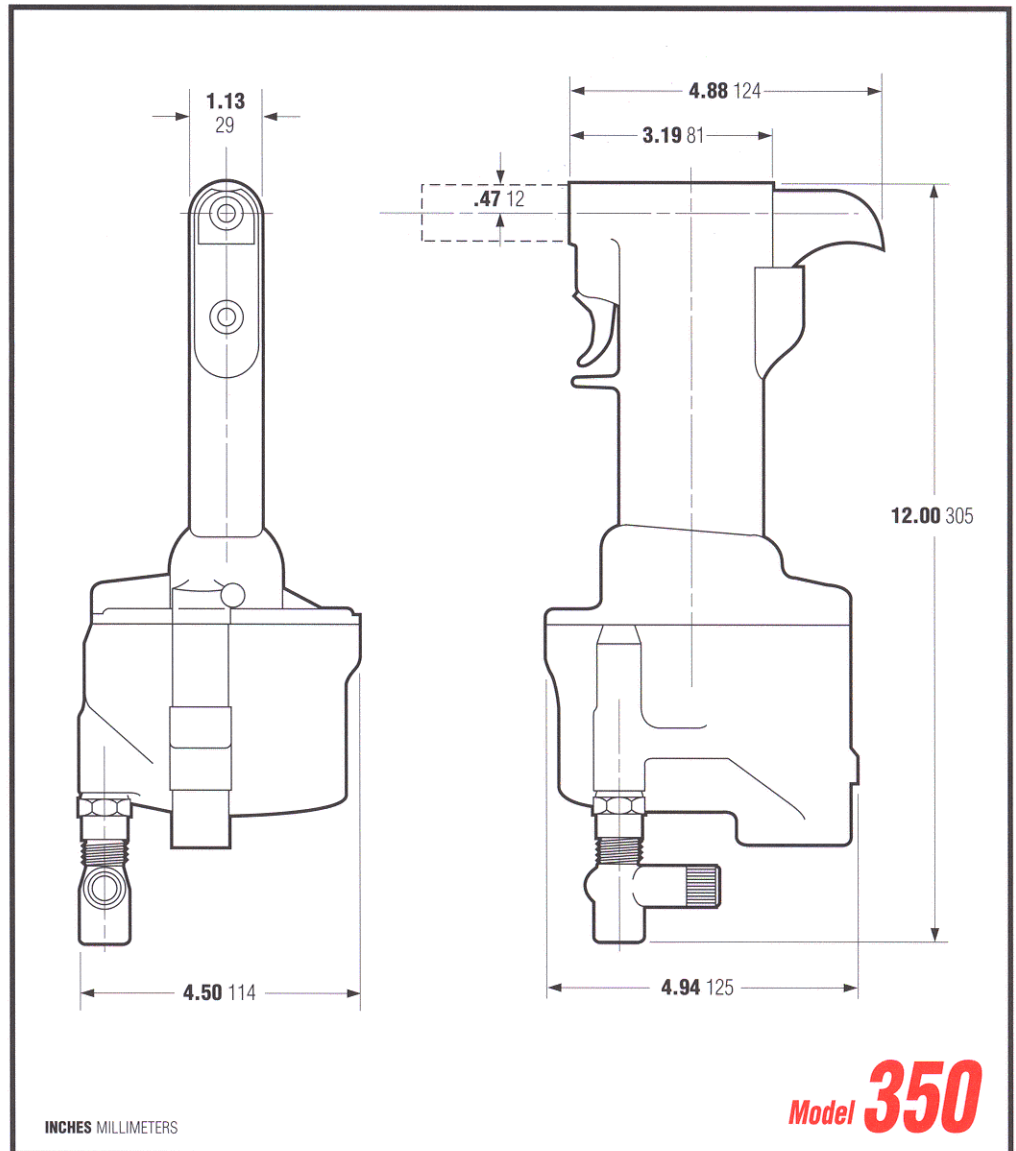
Specifications

Weight:
7.00 lbs. (3.18 kg)

Air Pressure Required:
90 psi (620 kPa)

Air Consumption:
6 CFM (0.003 m³/s) based on 20 fastener installations per minute

Stroke:
.81 in (21 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 206-375 Hydraulic Installation Tool

Models 206-375 and A206-375 are lightweight mini-tools that are easy to use and convenient for installing fasteners in limited clearance areas. Model 206-375 is a single action tool with only one moving part, which keeps maintenance to a minimum, and is designed to install Huck Blind Bolt Fasteners and HUCKBOLT® fasteners.

Each Model 206-375 is a cylinder and piston assembly with one unloading valve to relieve hydraulic pressure at both ends of the stroke.

The design includes an offset piston for added tool clearance. A stop for the anvil holder permits nose rotation to 80°.

Model 206-375 is equipped with a 12-foot hydraulic hose and electric control cord. The Model A206-375 is equipped with an air trigger for use with The 942 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

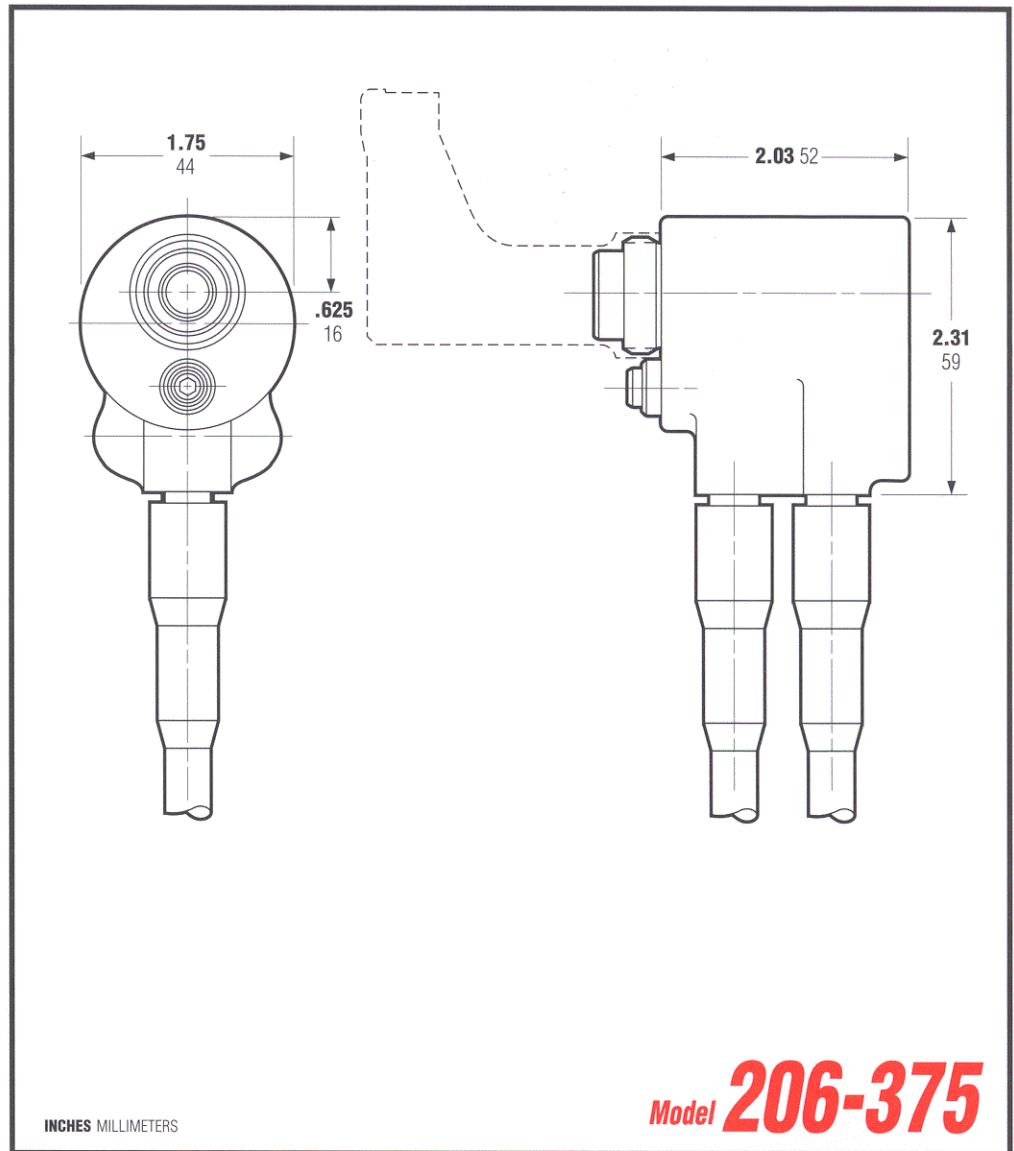
Specifications

Weight:
3.37 lbs. (1.50 kg)

Pull Pressure (max.):
5,400-5,700 psi
(37,250-39,300 kPa)

Return Pressure (max.):
2,200-2,400 psi
(15,200-16,500 kPa)

Stroke:
Standard: .375 in (9.52 mm)
Optional: Tool stroke can be increased to .50 in (12.7 mm) by removal of stroke limiter. See instruction manual.



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 206-375

INCHES MILLIMETERS

Model 206-625 Hydraulic Installation Tool

Models 206-625 and A206-625 are lightweight mini-tools that are easy to use and convenient for installing fasteners in limited clearance areas. Model 206-625 is a single action tool with only one moving part, which keeps maintenance to a minimum, and is designed to install Huck Blind Bolt Fasteners and HUCKBOLT® fasteners.

Each Model 206-625 is a cylinder and piston assembly with one unloading valve to relieve hydraulic pressure at both ends of the stroke.

The design includes an offset piston for added tool clearance. A stop for the anvil holder permits nose rotation to 80°.

Model 206-625 is equipped with a 12-foot hydraulic hose and electric control cord. The Model A206-625 is equipped with an air trigger for use with The 942 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

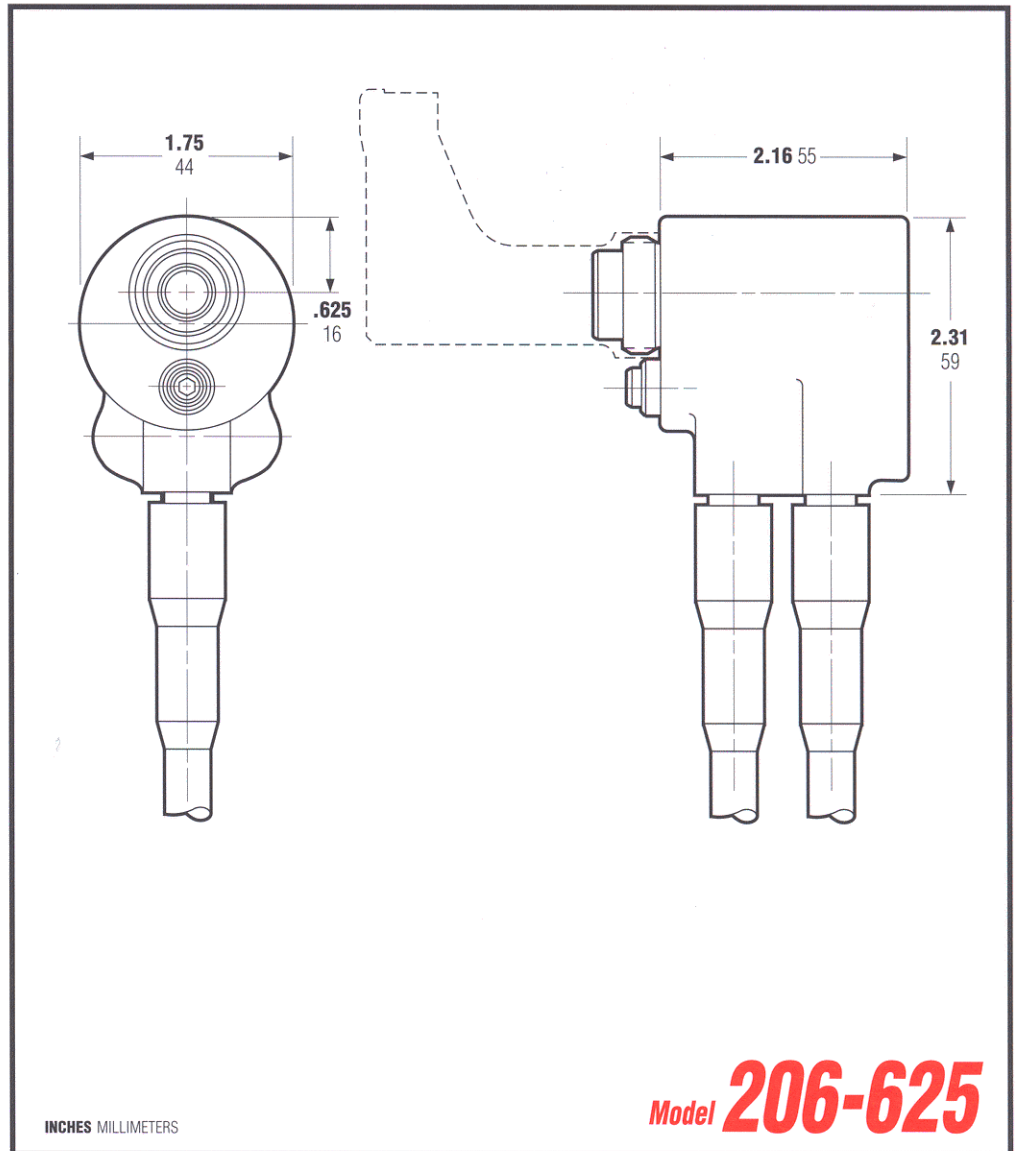
Specifications

Weight:
3.62 lbs. (1.64 kg)

Pull Pressure (max.):
5,400-5,700 psi
(37,250-39,300 kPa)

Return Pressure (max.):
2,200-2,400 psi
(15,200-16,500 kPa)

Stroke:
.625 in (15.9 mm)



Model **206-625**

Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

INCHES MILLIMETERS

Model 208-625 Hydraulic Installation Tool

Model 208-625 and A208-625 are lightweight mini-tools that are easy to use and convenient for installing fasteners in limited clearance areas. Model 208-625 is a single action tool with only one moving part, which keeps maintenance to a minimum, and is designed to install Huck Blind Bolt Fasteners and HUCKBOLT® fasteners.

Each Model 208-625 is a cylinder and piston assembly with an unloading valve to relieve hydraulic pressure at both ends of the stroke.

The design includes an offset piston for added tool clearance. A stop for the anvil holder permits nose rotation to 80°.

Model 208-625 is equipped with a 12-foot hydraulic hose and electric control cord. Model A208-625 is equipped with an air trigger for use with The Model 942 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

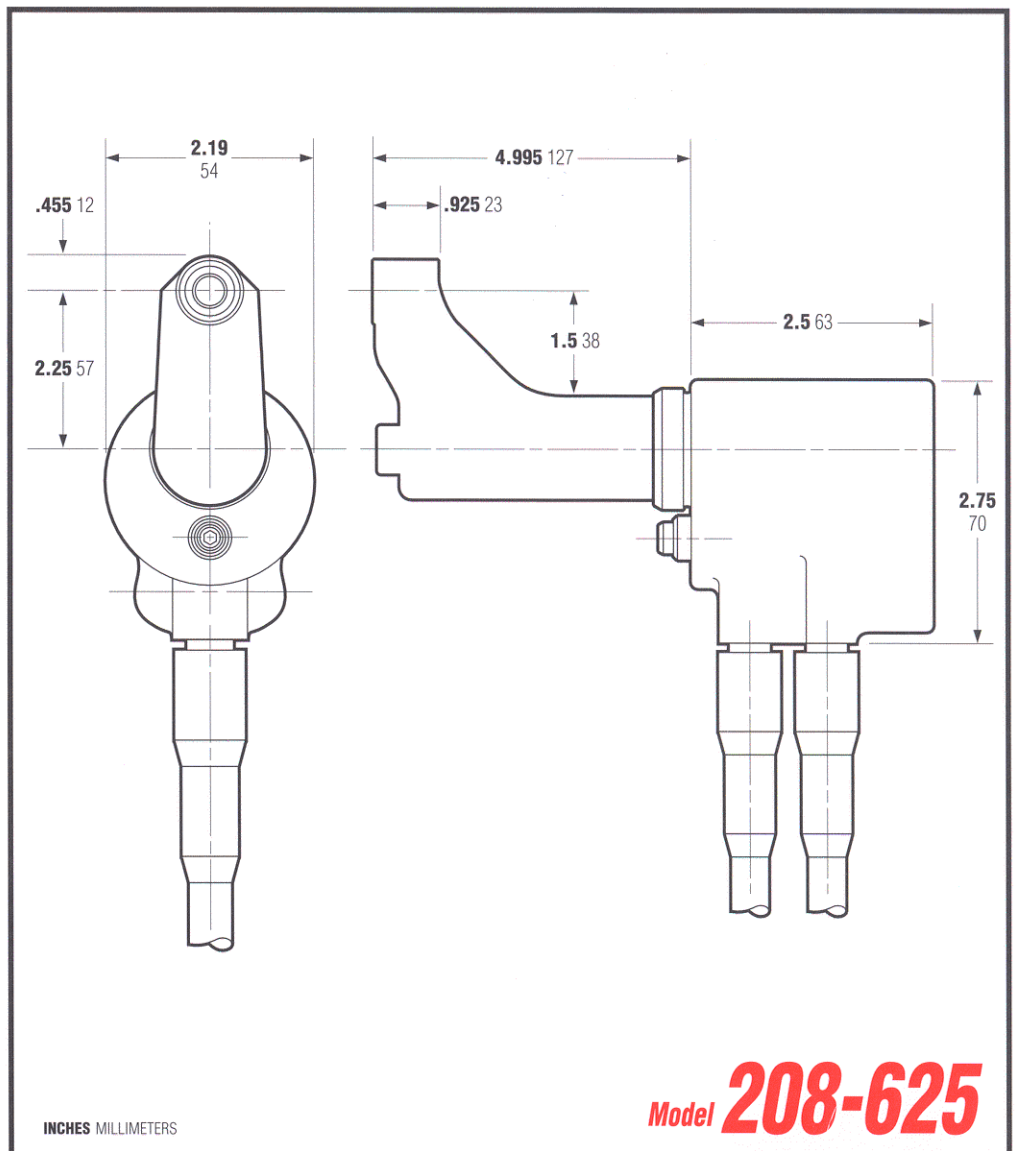
Specifications

Weight:
3.96 lbs. (1.8 kg)

Pull Pressure (max.):
5,400-5,700 psi
(37,200-39,300 kPa)

Return Pressure (max.):
2,200-2,400 psi
(15,000-16,500 kPa)

Stroke:
Standard: .625 in (15.8 mm)
Optional: Tool stroke can be increased to .75 in (19 mm) by removal of stroke limiter. See instruction manual.



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 700 Series Hydraulic Installation Tool

15

Designed for convenience and dependability, the 700 Series of lightweight mini-tools can be used to install a variety of Huck fasteners. Their small size, configuration and lightweight hydraulic hoses allow easy access to close clearance areas. All feature only one moving part for increased reliability and productivity.

All 700 Series tools are powered by Huck POWERIG® Hydraulic Units. Installation cycles are controlled by a 24 volt electric trigger. Air triggers are available, use an 'A' prefix when

specifying tool (ie: A706GP). All hoses and electric control cords are 12 feet long, and are equipped with quick connects.

This family of tools features a specific tool for each size fastener. The diameter and type of fastener determines the tool model. For example, a 706 LGP tool is used to install 3/16" diameter LGP® fasteners. When ordering, please specify both the tool model number and the fastener type (for example, Model 706 LGP).

Specifications

Weight:

- 706: 3.00 lbs. (1.35 kg)
- 708: 3.50 lbs. (1.57 kg)
- 710: 4.00 lbs. (1.80 kg)
- 712: 4.50 lbs. (2.02 kg)

Pull pressure (max.):

5,400 psi (37,230 kPa)

Return Pressure (max.):

2,800 psi (19,300 kPa)

Stroke:

- Model 706: .38 in (10 mm)
- Model 708: .50 in (13 mm)
- Model 710: .63 in (16 mm)
- Model 712: .75 in (19 mm)

Model	A	B	C	D	E	Model	A	B	C	D	E
706LGP	in 1.60	.47	2.57	.60	.54	706GP	in. 1.60	.47	2.66	.69	.54
	mm 41	12	65	15	14		mm 41	12	68	18	14
708LGP	in 1.79	.53	2.83	.68	.59	708GP	in. 1.79	.53	2.92	.76	.59
	mm 45	13	72	17	15		mm 45	13	74	19	15
710LGP	in 2.04	.63	3.23	.88	.69	710GP	in. 2.04	.63	3.31	.97	.69
	mm 52	16	82	22	17		mm 52	16	84	25	18
712LGP	in 2.38	.69	3.60	.90	.79	712GP	in. 2.38	.69	3.65	.90	.79
	mm 60	17	91	23	20		mm 60	17	93	23	20

The dimensions shown in the table above are a partial listing of the 700 Series tools, Contact Huck Installation Equipment Division for your specific requirements.

Model 700 Series

Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 2480 Hydraulic Installation Tool

The lightweight (3 lbs) Model 2480 is designed for the high speed installation of a wide variety of HUCKBOLT® fasteners and Huck Blind Bolt Fasteners including 3/16" and 1/4" diameter LGP® Fasteners. The tight centerline-to-edge measurement of the Model 2480 allows work in limited clearance areas. The pintail deflector is heavy duty and tear-resistant. The Model 2480 features only one moving part for increased reliability and productivity. Model 2480 is equipped with a 12-

foot hydraulic hose and electric control cord. Model A2480 is equipped with an air trigger for use with The Model 956 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

The Model 2480 has replaced the Model 2400 and 2702.

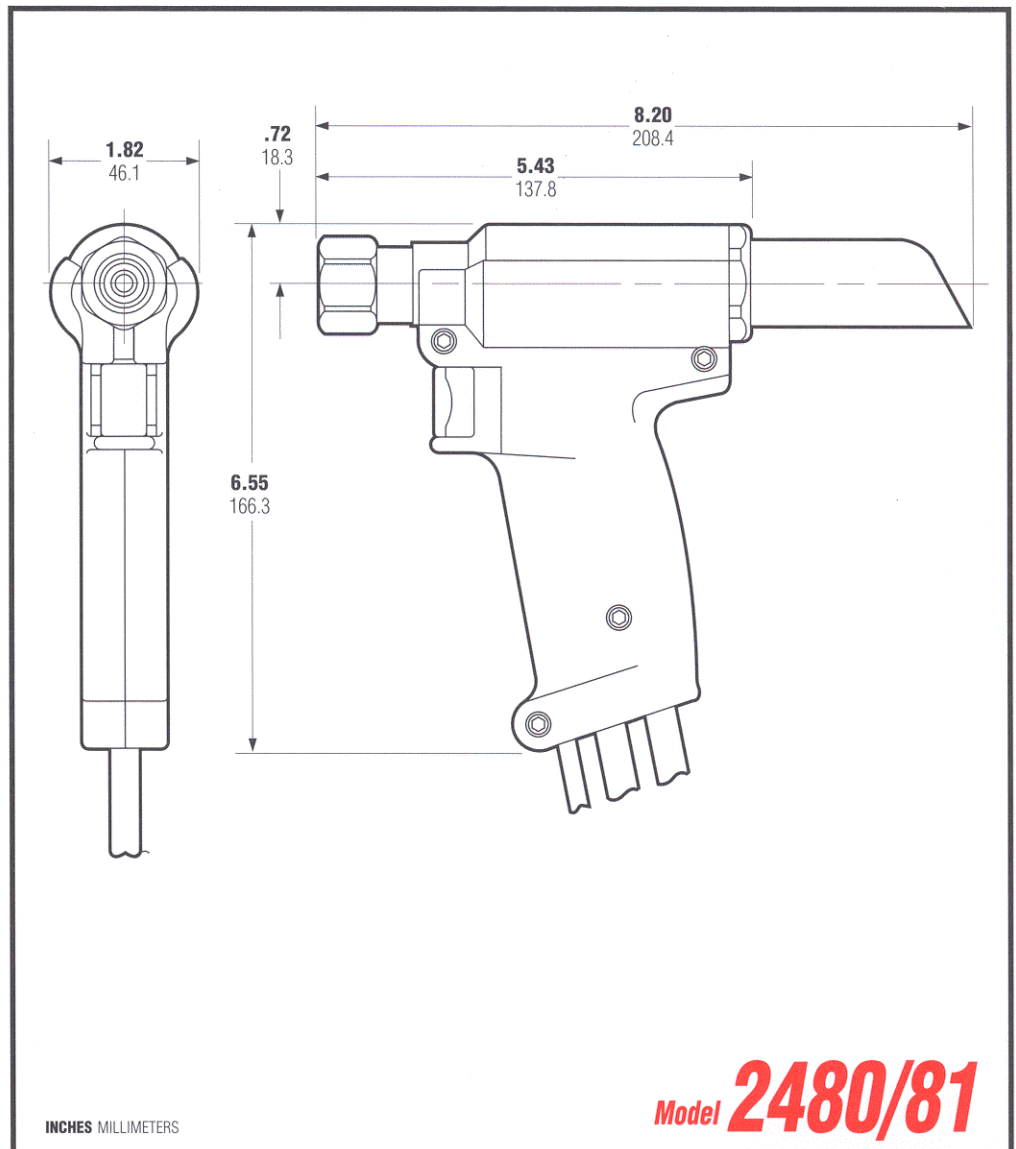
Specifications

Weight:
2.2 lbs. (1.0 kg)

Pull Pressure (max.):
8,400 psi
(57,900 kPa)

Return Pressure (max.):
3,200 psi
(22,100 kPa)

Stroke:
.875 in (22.2 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 2502/2503 Hydraulic Installation Tool

15

The lightweight Model 2502/2503 hydraulic tool is designed to install a wide range of HUCKBOLT® fasteners and Huck Blind Bolt Fasteners, including 3/8" diameter GP® and LGP® Fasteners. Weighing only 5 lbs, the Model 2502/2503 has only one moving part for increased reliability and productivity. The offset piston design makes limited clearance areas easily accessible.

Model 2502/2503 is equipped with a 12-foot hydraulic hose and electric control cord. Models A2502/A2503 are equipped with an air trigger for use with The Model 942 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

The Model 2502 has replaced The Model 4802. The Model 2503 has replaced The Model 4803.

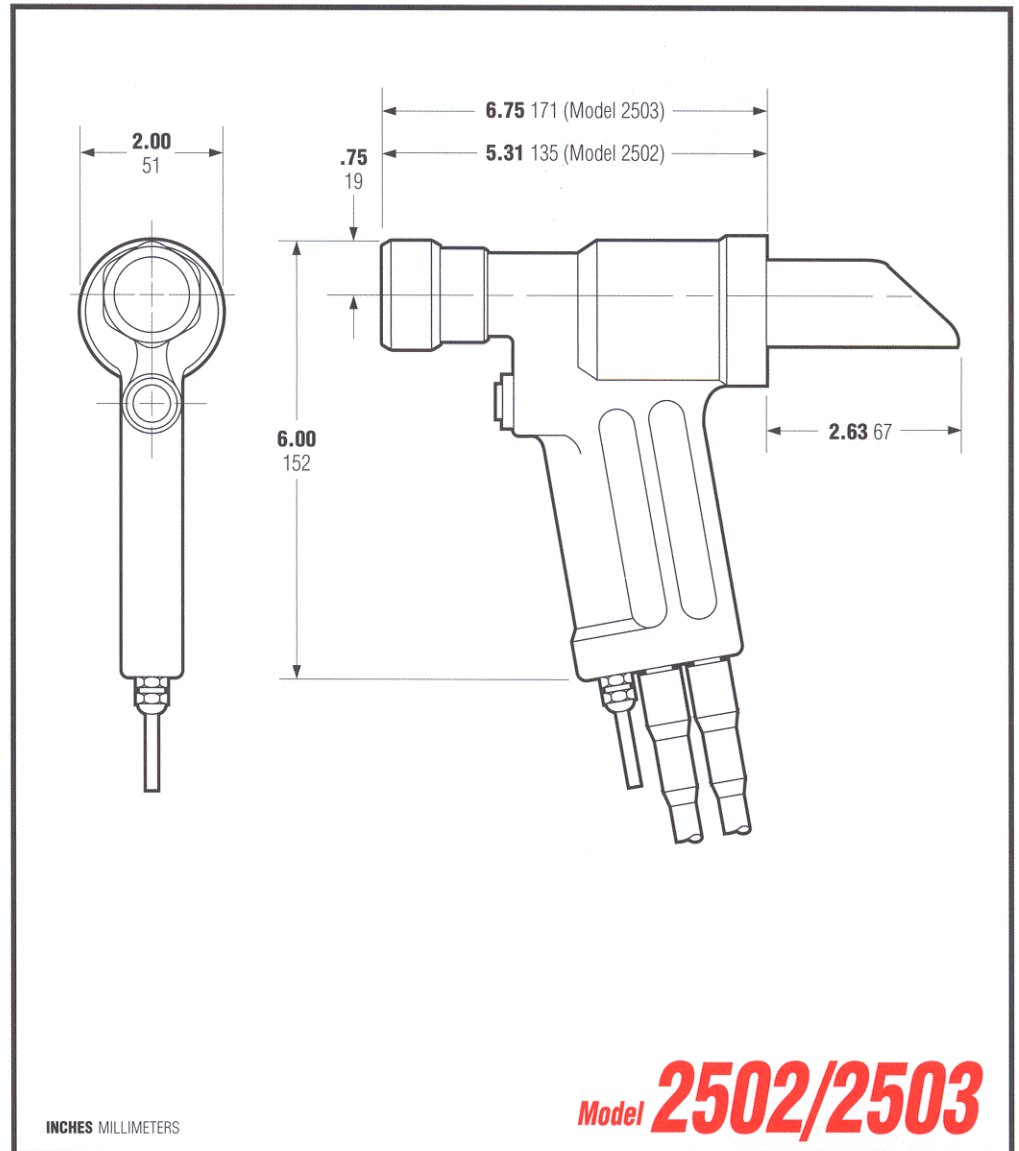
Specifications

Weight:
4.50 lbs. (2.04 kg)

Pull Pressure (max.):
8,400 psi (59,000 kPa)

Return Pressure (max.):
2,200 psi (15,180 kPa)

Stroke:
Model 2502: .75 in (19mm)
Model 2503: 1.50 in (38 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 2580 Hydraulic Installation Tool

The lightweight (6.58 lbs) Model 2580 is designed for the high speed installation of a wide variety of HUCKBOLT® fasteners and Huck Blind Bolt Fasteners including 3/16" and 1/4" diameter LGP® Fasteners. The tight centerline-to-edge measurement of the Model 2580 allows work in limited clearance areas. The pintail deflector is heavy duty and tear-resistant. The Model 2580 features only one moving part for increased reliability and productivity.

Model 2580 is equipped with a 12-foot hydraulic hose and electric control cord. Model A2580 is equipped with an air trigger for use with The Model 956 POWERIG® Hydraulic Unit. Control tubing (pneumatic) with quick connects are provided for attachment to a POWERIG® Hydraulic Unit.

The Model 2580 has replaced the Model 2400 and 2702.

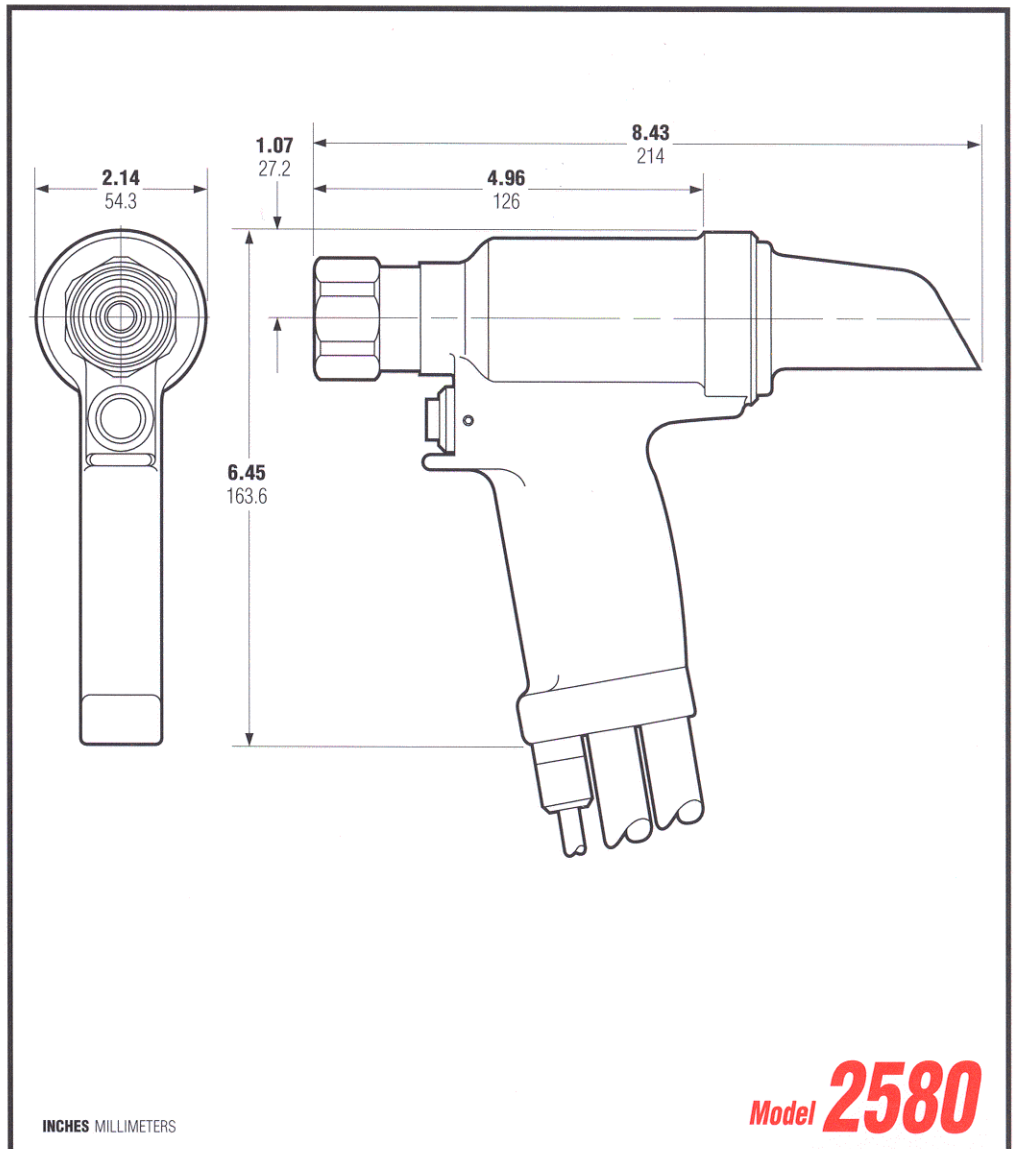
Specifications

Weight:
6.58 lbs. (2.98 kg)

Pull Pressure (max.):
7,400 psi

Return Pressure (max.):
3,200 psi

Stroke:
.938 in (23.8 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 2600 Hydraulic Installation Tool

15

Designed to replace the Huck Model 4801, the Model 2600 has been upgraded with a heavier-gauge, fully rotatable nose for longer nose life and improved access. Its cartridge-style construction makes it easy to assemble and maintain, and the ergonomic design of its one-piece handle/cylinder reduces its weight and provides better balance.

Front and rear wipers help keep the tool up and running, and the reduced envelope containing the

electrical connector and the dripless hydraulic connectors increases the tool's maneuverability, while reducing its weight even further.

The Model 2600 has a pulling capacity of 5,700 psi: 13,480 lbs. (61.4kN). It features a fully rotatable steel-reinforced deflector for easier access with the tool, and a piston which will allow a 7/16" pintail to pass through.

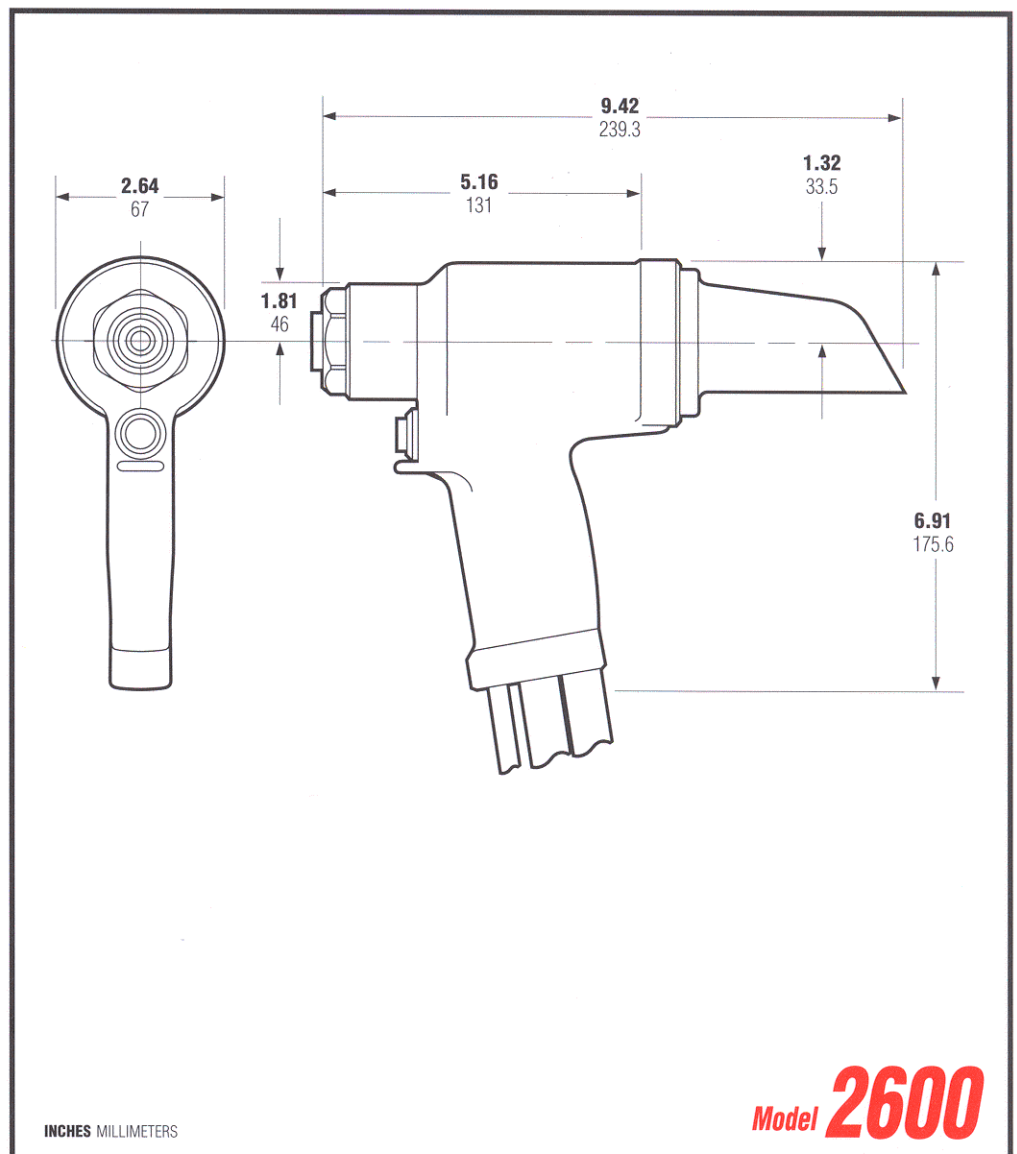
Specifications

Weight:
8.625 lbs. (3.91 kg)

Pull Pressure (max.):
5,700 psi

Return Pressure (max.):
2,800 psi

Stroke:
1.25 in (31.75 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

The Model 115 installation tool is a sturdy, manually-operated tool designed to install Huckbolt® Fasteners and Huck Single Action Blind Fasteners 1/8" through 3/8" diameters.

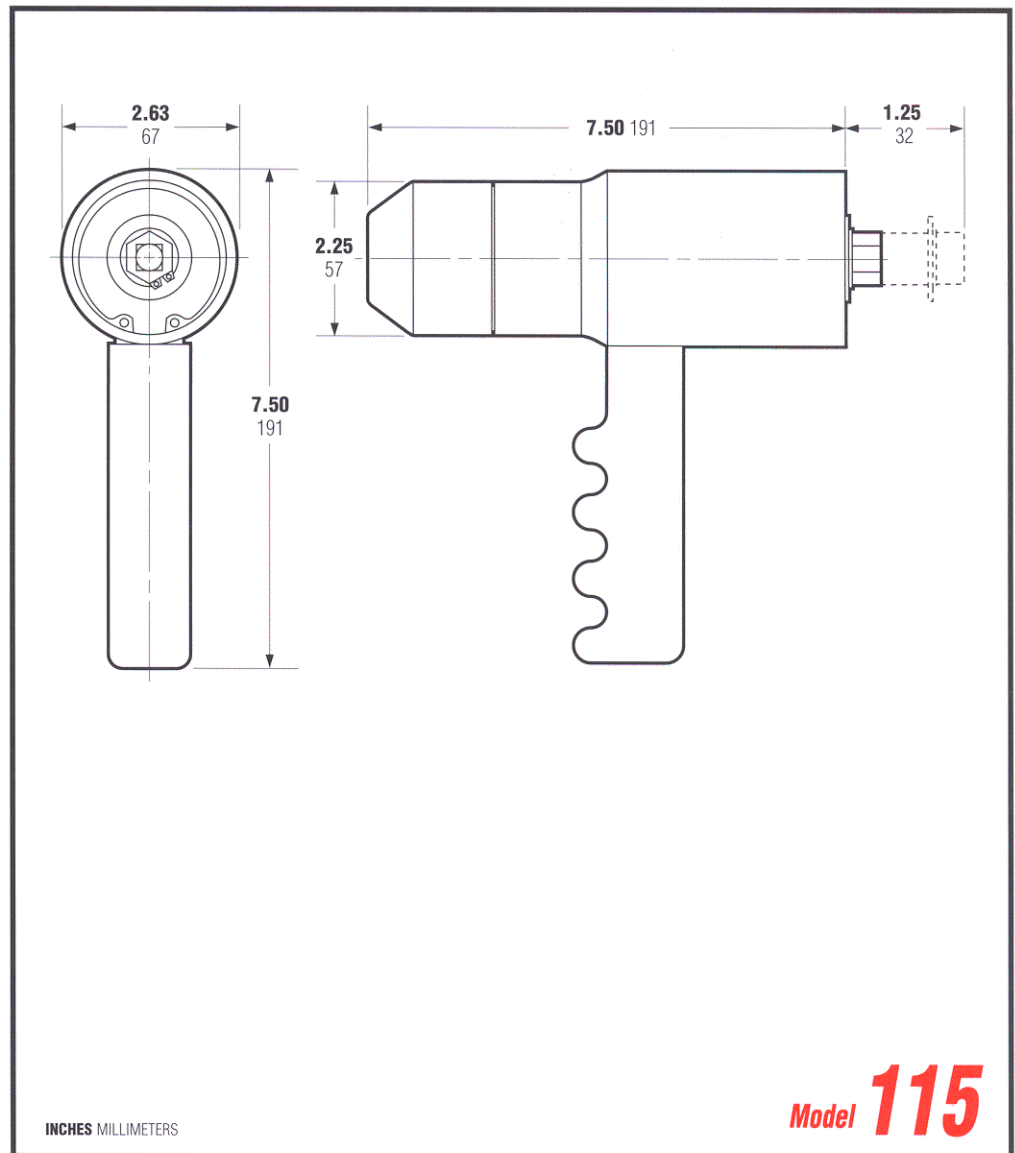
Entirely operated by hand power, the Model 115 tool is ideally suited to field applications where pneumatic or hydraulic power is not available.

Incorporated into the design is a proven, frictionless ball screw that requires only minimum operator effort to develop maximum pull.

Specifications

Weight:
5.0 lbs. (2.27 kg)

Stroke:
1.25 in (32 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.

Model 115

Model HK 150 Manual Installation Tool

15

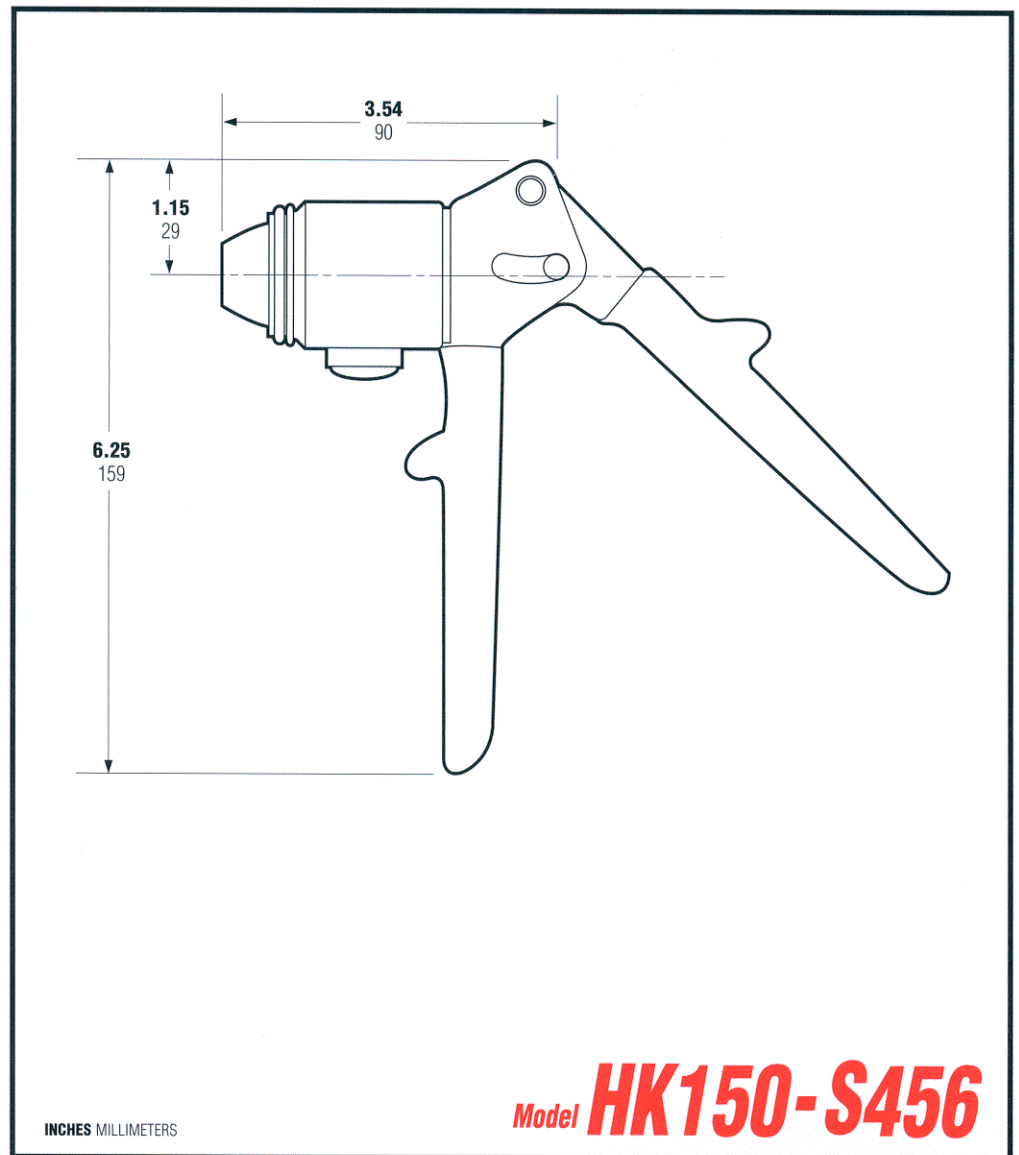
The Model HK 150 Installation Kit consists of a manually operated, hydraulically powered installation tool and nose assembly designed to install UNIMATIC® (NAS 1919S and NAS 1921S) and Commercial Single Action (CSMLS) Blind Rivets. This kit is designed to install a few fasteners for emergency repair where compressed air is not available. Maximum grip for all diameters is 08.

A fastener is installed by squeezing the pump handle, in full length strokes, until the pintail breaks. A release button on the side of the tool allows the tool piston and nose assembly to return, ready to install another fastener.

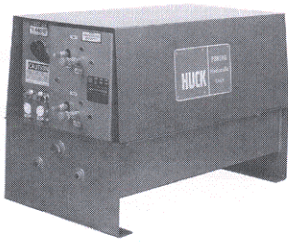
Specifications

Weight:
18 oz (.51 kg)

Stroke:
.63 in (16 mm)



Note: This tool must be equipped with a nose assembly designed for the installation of a specific fastener. Nose assemblies must be ordered separately.



Model 918/918-5

Electrically powered and electrically actuated, twin 2 gpm systems for production applications. Operates 2 tools simultaneously and independently of each other. Powerful enough to operate equipment up to 100 feet from the hydraulic unit. Delivers 8400 psi working pressure. Simple adjustment allows tools requiring different hydraulic pressures to be used. 22 gallon reservoir system with fan radiator air/oil heat exchanger. Unit is semi-portable and can be moved with a fork lift truck.

System: Single open center circuit with 8,400 psi max, 2 gpm each circuit for 918, 1.33 gpm each circuit for 918-5

Pump: Axial 6 piston SPLIT FLOW Constant Displacement Hydraulic Piston Pump direct mounted on motor

Oil Control: Four way solenoid operated Directional Valve, pressure relief valve, and idler valve on each circuit

Reservoir Capacity: 22 gallons (center of sight gauge)

Cooler: Fan and radiator air/oil heat exchanger

Remote Control: 24 volt control circuit

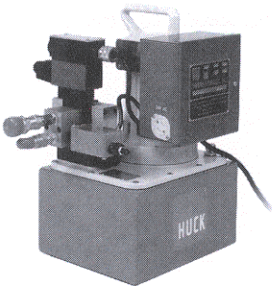
Power Source: 10 HP electric motor 220 or 440 volts, 60 hertz, 3 phase (components shipped with unit allow change over to 220 volts, 60 hertz, 3 phase operation)

Dimensions: 44" long, 25" wide, 30" high

Weight: Dry 585 lbs, operational 708 lbs

Hydraulic Fluid: Fire-resistant hydraulic fluid—Dexron II® or equivalent

Option: 918-5 equipped to operate 3 tools



Model 940

Portable electrically powered, single 70 cu in/min system designed to operate hydraulic installation tools. Delivers 8,400 psi working pressure. Simple adjustable hydraulic outputs. Pump output directional valve is controlled from installation equipment by 24 volt control circuit. Unit automatically turns off when the equipment switch is released and installation cycle is completed.

System: Single open center circuit with 8,400 psi max, 70 cu in/min at 5,000 psi

Pump: 2 stage, gear piston type

Oil Control: Four way solenoid operated Directional Valve

Reservoir Capacity: 1.5 gallons

Remote Control: 24 volt control circuit

Power Source: 1 1/8 hp, 12,000 rpm 115 volt, 50/60 hertz, AC single phase

Dimensions: 12.5" long, 10.5" wide, 18" high

Weight: Dry 66 lbs, operational 74.5 lbs

Hydraulic Fluid: Fire-resistant hydraulic fluid—Dexron II® or equivalent

Options: 940-220 electrical system 220 volt, 50/60 hertz, AC single phase

POWERIG® Hydraulic Units



Model 956

Portable air powered, air actuated single 40 cubic in/min hydraulic power source. Designed to operate hydraulic installation tools identified by a prefix A (ie: A206-375) in the model number. Delivers 8,400 psi working pressure. Hydraulic fluid directional flow is remotely controlled by a trigger in the installation tool. Twin hydraulic pumps operate independently resulting in rapid tool pull piston movement. The unit has a built-in regulator for adjusting hydraulic pressures. Quick disconnect hydraulic couplings and air control socket are included to attach equipment hydraulic hoses and air control tube.

System: Single open center circuit with 8,400 psi max 40 cu in/min at 5,000 psi

Pump: 2 Independent Air Motors Rapid Advance and Swage

Oil Control: Four way air piloted directional valve

Reservoir Capacity: 1.56 qt

Power Source: Compressed air 90-100 psi

Air Consumption: 20 cfm

Dimensions: 12" long, 8" wide, 13.25" high

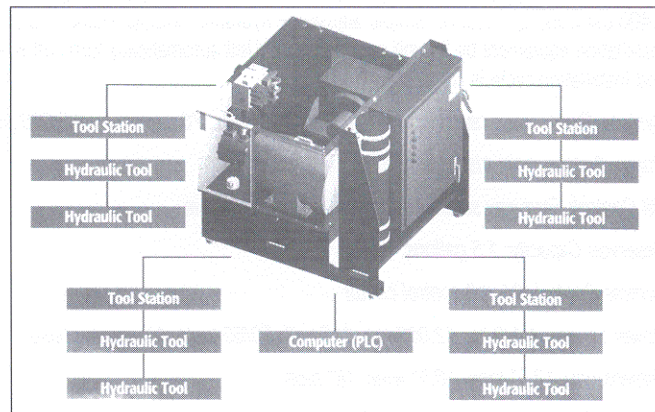
Weight: Dry 21 lbs, operational 29.75 lbs

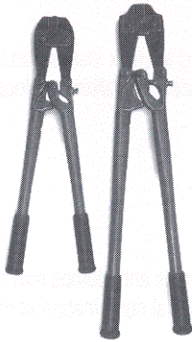
Hydraulic Fluid: Automatic transmission fluid—Dexron II® or equivalent

Note: The 942 is a low to medium volume production unit for use with all tools prefixed 'A' specifying air trigger option

Custom Designed Hydraulic Systems

Special multi-tool hard plumbed hydraulic systems can be designed to meet customer specific requirements.





Manual Collar Cutters – Model 105 Series

Model	Diameter	Fastener Type
105-5	5/32	GP, LGP, NAS Tension and Shear lockbolts
105-6	3/16	GP, LGP, NAS Tension and Shear lockbolts
105-8	1/4	GP, LGP, NAS Tension and Shear lockbolts
105-10	5/16	GP, LGP, NAS Tension and Shear lockbolts
105-12	3/8	GP, LGP, NAS Tension and Shear lockbolts

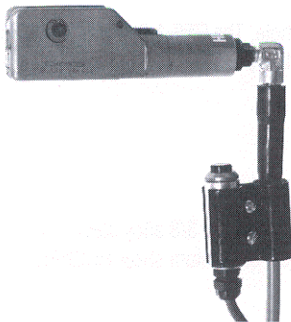


Tool Mounted Collar Cutters

Designed to attach to installation tool Models 212, 230, 244, 2480, HK150¹, 245², 246², 2502², 2503², and 4801².

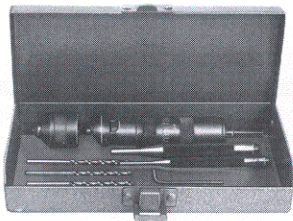
Model	Diameter	Fastener Type
TM6CCFT	3/16	Flanged titanium lockbolts
TM6CCLGP/GP	3/16	GP, LGP, NAS lockbolts
TM8CCFT	1/4	Flanged titanium lockbolts
TM8CCLGP/GP	1/4	GP, LGP, NAS lockbolts

548-05	5/32	Non-flanged aluminum GP, LGP, and NAS lockbolts
546	3/16	Non-flanged aluminum GP, LGP, and NAS lockbolts
548	1/4	Non-flanged aluminum GP, LGP, and NAS lockbolts
548-10	5/16	Non-flanged aluminum GP, LGP, and NAS lockbolts



Hydraulic Collar Cutters

Model	Fastener Diameter	POWERIG® Hydraulic Unit
6CCFT	3/16	913, 918, 940
8CCFT	1/4	913, 918, 940
6CCGP/LGP	3/16	913, 918, 940
8CCGP/LGP	1/4	913, 918, 940
A6CCFT	3/16	942
A8CCFT	1/4	942
A6CCGP/LGP	3/16	942
A8CCGP/LGP	1/4	942



Blind Fastener Removal Kits – Model 105 Series

Model 105 series removal kits are used in conjunction with a portable electric drill to remove installed blind bolts and blind rivets.

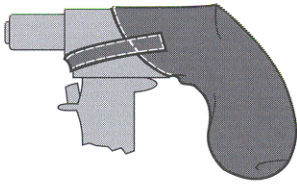
Blind Bolts		Blind Rivets	
Diameter	Kit Number	Diameter	Kit Number
5/32	105-50	1/8	105-24
3/16	105-60	5/32	105-25
1/4	105-80	3/16	105-26
5/16	105-100	1/4	105-28
3/8	105-120		

¹ Requires adapter part number 121991

² Requires adapter part number 102463

³ Designed for limited use

Accessories



Pintail Catcher – Model 111247

Model 111247 is a lightweight durable canvas adjustable pintail catcher that is attached to Huck installation tools to catch pintails as they are ejected. Easy to install and easy to empty—eliminates the hazard of walking on loose pintails or leaving them in assembled parts.

Pin Position and Swage Gages

Though visual inspection of pin position and swage is usually adequate, HUCKBOLT® pins and stumps may be checked with Huck gages. Various gages are available, determined by the type and material combination of the installed fasteners.



Grip Gage – Model 105093

Use this gage for determining material thickness and fastener grip length when using NAS Shear and Tension lockbolts, MS21140 and MS21141 blind fasteners, MS90353 and MS 90354 blind fasteners, and NAS 1919 and NAS 1921 blind fasteners.

Grip Gage – Model 122666

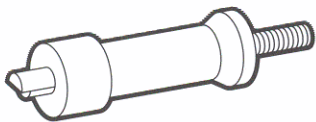
Use this gage for determining material thickness and fastener grip length when using GP® Lockbolt fasteners.

Grip Gage – Model 122666

Use this gage for determining material thickness and fastener grip length when using LGP® Lockbolt fasteners.

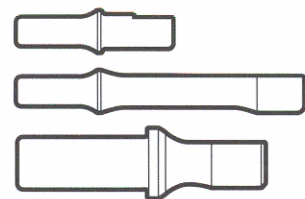
Grip Gage – Model 122667

Use this gage for determining material thickness and fastener grip length when using MLGP® Lockbolt fasteners.



Grip Gage – Models G58-1 and G58-2

Simple and accurate gages for determining the required grip length for a prepared hole. The G58-1 is for 1/8 and 5/32 diameter fasteners, the G58-2 is for 3/16 and 1/4 diameter fasteners. For the G58-1 grip equals 1/2" less protrusion, for the G58-2 grip equals 1" less protrusion.



Hammer Sets

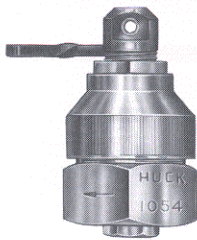
HUCKBOLT® fastener hammer sets are used with standard air hammers to drive 5/32 through 3/8 alloy steel, titanium, or aluminum tension type HUCKBOLT® stump fasteners or 1/8 through 3/8 alloy steel or titanium shear HUCKBOLT® stump fasteners.

NOTE: Contact Huck Installation Equipment Division for additional information on stump fastener installation.

Squeezer Sets

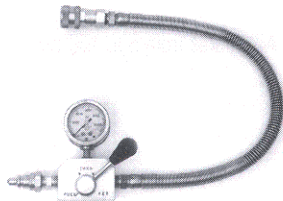
Huck squeezer sets allow HUCKBOLT® stump fasteners to be installed by using a squeezer yoke, or may be inserted in standard stump set holders.

NOTE: Contact Huck Installation Equipment Division for additional information on stump fastener installation.



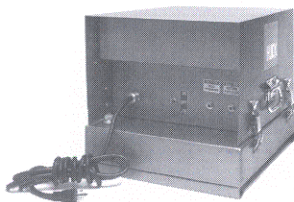
Double Drive Valve – Model 1054

Model 1054 is a special valve for two step fastener installation used with pneumatic and pneudraulic installation tools. The valve attaches to the installation tool at the air inlet where the operator may conveniently select high or low pressure. Double drive refers to a two stage operation where lockbolt pins are first pulled into an interference fit at low pressure, then with the valve set to high pressure, the collar is swaged and installation completed. Huck double drive valves must be used with self-releasing nose assemblies.



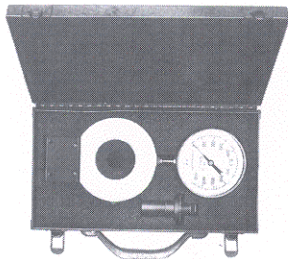
Hydraulic Pressure Checking Gauge – Model T-124833

Model T-10280 is a gauge set-up used to set and check the PULL and RETURN pressures on POWERIG® Hydraulic Units. This gauge is a valuable tool for trouble shooting tools and hydraulic units.



Fill and Bleed Unit – Model 970-100

This unit provides a fast and efficient means of filling with hydraulic fluid and bleeding air from Huck pneudraulic installation tools. It is specifically recommended for Models 200, 245, and 246 installation tools.



Shift Setting Kit – Part Number 107569

The preferred method for shift setting—uses a Skidmore-Wilhelm tester to accurately check the spindle load at shift on the Model 200 installation tool.

Shift Setting Kit – Part Number 101300

An alternative method for shift setting—uses a hydraulic pressure gauge to check the hydraulic pressure at shift in pounds per square inch on the Model 200 installation tool.

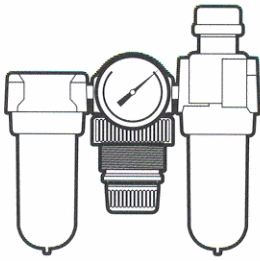
NOTE:: To install double action fasteners, the shift valve of the Model 200 installation tool must be adjusted to insure proper fastener installation.

Hydraulic Hose and Control Cord Kits

These hydraulic hose and control cord kits are designed to extend the distance Huck installation tools may be used from the power source. Each kit contains two hydraulic hoses, control cord, hydraulic couplers, and electrical connectors.

<i>Length</i>	<i>Part Number</i>
12'	110838
26'	110839
38'	110840
52'	110841

Accessories

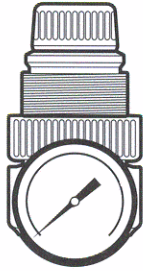


Pressure Regulator, Filter and Lubricator Assembly

Use this regulator to provide clean, lubricated, and regulated air for any Huck air operated installation tool. Reduces maintenance and improves performance.

Part Number

506120



Adjustable Pressure Regulator

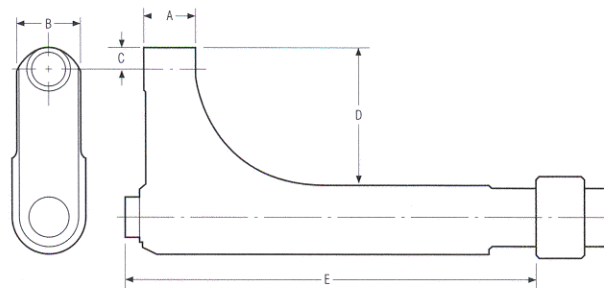
This regulator provides reduced air pressure, for use with the Huck Pull-In system. Adjustable from 5 to 100 psi.

Part Number

506118

The adapters in this section are designed to provide greater flexibility to Huck installation tools. Adapters are available to provide longer reach, offset, and rotation of nose assemblies. It is recommended that adapters which permit a smaller nose assembly to be used on a larger tool be used only occasionally or for emergency use.

Adapter	Type	Tool	Nose Assembly	Length
102463	Rotatable	353 245, 246 2502, 2503 ¹ 4801	352 spindle size	1.50
104627	Rotatable	352, 244 2702	352 spindle size	1.25
119400	Adapter for offset	245 ² 2502, 2503 ¹	1700 series	2.00
122134	Adjustable for location	245, 246 ² 2502, 2503 ¹	1700 series	2.19
122140	Adjustable for location	230	1700 series	1.63
122145	Adjustable for location	2480	1700 series	1.63
122145-1	Adjustable for location	202, 2012	1700 series	1.63
123437	Spindle adapter	230	99-1097,-1098,-1099 -1100,-1101,-1102	.500
123437-1	Spindle adapter	202	99-1097,-1098,-1099 -1100,-1101,-1102	.500
123437-2	Spindle adapter	202	99-1333,-1335,-1336	.547
123437-3	Spindle adapter	230	99-1333,-1335,-1336	.547
117831	Rotatable offset ²	245 2502, 2503 ¹	1500 series	see below
120750	Rotatable offset	245, 246 2502, 2503 ¹	99-1566, 99-1813 (pull-in)	see below
120804	Rotatable offset	245 2502, 2503 ¹	1500 series	see below
104406	Spindle adapter	200	352 spindle size	2.00
121395	Spindle adapter	245 2502, 2503 ¹	230 spindle size	.94
121395	Spindle adapter	HK150	230 or 352 self-releasing nose assembly	.94
122587	Spindle adapter	208-625	206-375 spindle size	1.13
125770	Offset adapter	208-625	1500 series	4.99



Offset Adapter Dimensions

Model	A	B	C	D	E
117831	.94	1.25	.44	1.06	4.06
120750	.78	1.38	.50	1.25	4.13
120804	.94	1.25	.44	2.63	7.31
125770	.92	1.28	.45	1.95	4.99

¹ also fits 2500 tool

² Requires a stroke limiter

Fastener Material Code

<i>Code</i>	<i>Material</i>
A	2117 Aluminum
AC	2219 Aluminum
B	5056 Aluminum
C	2024 Aluminum
E	7075 Aluminum
F	6061 Aluminum
BR	1038 and 1541 Carbon steel
R	Carbon steel
DT	8740 Alloy steel
T	4027 or 4037 Steel
EU	A-286 Stainless steel
M	Monel
V	6AL-4V Titanium

Stroke Limiters

Stroke limiters reduce the stroke of the installation tool to allow the use of offset nose assemblies in minimum clearance conditions. Stroke limiters prevent structural damage in clearance applications.

<i>Tool</i>	<i>Stroke Limiter</i>	<i>Unload Valve</i>	<i>Adapter</i>	<i>Nose Assembly</i>
245	—	—	—	Standard inline
245	118362	—	117831	99-1500 series
245	118362	—	119400	99-1700 series
2502	—	118817-2	—	Standard inline
2502-625	120739	118817-4	117831	99-1500 series
2502-625	120739	118817-4	119400	99-1700 series
2503	—	118817-3	—	Standard inline
2503-875	120740	118817-5	117831	99-1500 series
2503-875	120740	118817-5	119400	99-1700 series
206-375	119847	119422-1	—	99-1700 series
206-500 ¹	—	119422	—	99-1700 series
208-625	120021	120020-1	—	99-1719, 99-1720, 99-1721, 99-1722
208-750 ¹	—	120020	—	99-1723, 99-1724, 99-1725, 99-1727 99-1806, 99-1807, 99-1836, 99-1837
245	118362	—	120750	99-1566, 99-1813
2502	120739	118817-4	120750	99-1566, 99-1813
2503	120740	118817-5	120750	99-1566, 99-1813

For additional information on tooling stroke consult Huck Installation Equipment Division.

¹ Remove the standard stroke limiter and change the unloading valve in order to install:
 206-500 1/4 Tension type Huckbolts in maximum grip conditions
 208-750 5/16 and 3/8 Tension type Huckbolts in maximum grip conditions and all LGP fasteners used in Pull-In system

Nose Assembly Cross Reference for Previous Part Numbers

<i>Old NA Number</i>	<i>Superseded By</i>	<i>Diameter</i>	<i>Fastener</i>	<i>Size¹</i>	<i>New NA Number</i>
92221		06	NAS	352	99-2555
92223		06	NAS	352	99-2556
99-100		12	NAS	353	99-2570
99-1025		08	BR	352	99-2743
99-1037		05	BR	206-375	99-1716 ²
99-1037-2		05	BR	206-375	99-1716-1 ²
99-1038		06	BR	206-375	99-1717 ²
99-1038-2		06	BR	206-375	99-1717-1 ²
99-1064		06	BR	206-375	99-1717 ²
99-1077		04	MGP	206-375	99-1706 ²
99-1078		05	MGP	206-375	99-1707 ²
99-1103	99-2555	06	GP	352	99-2555
99-1104	99-2564	08	GP	353	99-2564
99-1105	99-2567	10	GP	353	99-2567
99-1106	99-2570	12	GP	353	99-2570
99-1113	99-2555	06	GP	352	99-2555
99-1113-1	99-2556	06	GP	352	99-2556
99-1114	99-2565	08	GP	353	99-2565
99-1115	99-2568	10	GP	353	99-2568
99-1116	99-2571	12	GP	353	99-2571
99-1142	99-2550	05	GP	352	99-2550
99-1146	99-1705 W 206-375	08	GP	206-375	99-1705 ²
99-1146-2	99-1705 W 206-375	08	GP	206-375	99-1705-1 ²
99-1147	99-2549	05	GP	352	99-2549
99-1153	99-1704 W 206-375	06	GP	206-375	99-1704 ²
99-1153-2		06	GP	206-375	99-1704-1 ²
99-1154	99-2561	08	GP	352	99-2561
99-1155	99-2562S	08	GP	352	99-2562
99-1161	99-2557	06	GP	353	99-2558
99-1173		06	LGP	352	99-2508
99-1174		08	LGP	353	99-2517
99-1175		10	LGP	353	99-2519
99-1176		12	LGP	353	99-2523
99-1177		05	LGP	352	99-2502
99-1183		06	LGP	352	99-2507
99-1184		08	LGP	353	99-2516
99-1185		10	LGP	353	99-2520
99-1186		12	LGP	353	99-2522
99-1187		05	LGP	352	99-2501
99-1189	99-2572	4MM	MGP	352	99-2573
99-1190	99-2574	4MM	MGP	352	99-2574
99-1191		05	MGP	206-375	99-1707 ²
99-1192	99-2579	05	MGP	352	99-2579
99-1193	99-2580	05	MGP	352	99-2580
99-1194		05	MGP	206-375	99-1707 ²
99-1195	99-2540	6MM	MLGP	353	99-2540
99-1196	99-2541	6MM	MLGP	353	99-2541
99-1197		06	MGP	206-375	99-1708 ²
99-1209		8MM	MLGP	353	99-2543

¹ The Model 352 and Model 353 are listed to indicate spindle size and are not necessarily the recommended tool and nose assembly combination. The Model 352 is representative of Models 229, 230, and 2400. The Model 353 is representative of Models 245, 246, 4800 series, and 2500 series.

² Old nose assembly and installation tool have been replaced by the indicated tool and nose assembly. Refer to tooling selection charts for more information.

Nose Assembly Cross Reference for Previous Part Numbers—continued

Old NA Number	Superseded By	Diameter	Fastener	Size ¹	New NA Number
99-1210		10MM	MLGP	353	99-2594
99-1211		04	MGP	206-375	99-1706 ²
99-1223		06	LGP	206-375	99-1701 ²
99-1224		08	LGP	206-375	99-1702 ²
99-1233		06	LGP	353	99-2510
99-1234		08	LGP	352	99-2513
99-1239		08	LGP	352	99-2514
99-1267	99-1705 W 206-375	08	GP	206-375	99-1705 ²
99-1281		08	LGP	353	99-2950
99-1282		10	LGP	353	99-2951
99-1301	99-2952	08	GP	353	99-2952
99-1312		08	BR	206-375	99-1708 ²
99-1317		05	LGP	206-375	99-1700 ²
99-1318		06	LGP	206-375	99-1701 ²
99-1610	99-1610-353	10	GP	353	99-2567
99-1611	99-1611-353	12	GP	353	99-2571
99-1612		12	GP	353	99-2569
99-1616		4MM	MGP	353	99-2576
99-1617		4MM	MGP	353	99-2577
99-1619		4MM	MLGP	353	99-2528
99-1620		4MM	MLGP	353	99-2529
99-1622		5MM	MGP	353	99-2582
99-1623		5MM	MGP	353	99-2583
99-1625		5MM	MLGP	353	99-2534
99-1626		5MM	MLGP	353	99-2535
99-1628		6MM	MGP	353	99-2588
99-1629		6MM	MGP	353	99-2589
99-1631		5MM	MLGP	353	99-2540
99-1632		6MM	MLGP	353	99-2541
99-1634		8MM	MGP	353	99-2591
99-1635		8MM	MGP	353	99-2592
99-1637		8MM	MLGP	353	99-2543
99-1638		8MM	MLGP	353	99-2544
99-1640		10MM	MGP	353	99-2594
99-1641		10MM	MGP	353	99-2595
99-1643		10MM	MLGP	353	99-2546
99-1644		10MM	MLGP	353	99-2547
99-1662		5MM	MLGP	353	99-2504
99-1663		05	LGPL	353	99-2505
99-1663CH		05	LGPL	353	99-2505CH
99-1665		06	LGPL	353	99-2510
99-1666		06	LGP	353	99-2511
99-1668		08	LGP	353	99-2516
99-1669		08	LGP	353	99-2517
99-1669CH		08	LGP	353	99-2517CH
99-1671		10	LGP	353	99-2519
99-1672		10	LGP	353	99-2520
99-1672CH		10	LGP	353	99-2520CH
99-1674		12	LGP	353	99-2522

¹ The Model 352 and Model 353 are listed to indicate spindle size and are not necessarily the recommended tool and nose assembly combination. The Model 352 is representative of Models 229, 230, and 2400. The Model 353 is representative of Models 245, 246, 4800 series, and 2500 series.

² Old nose assembly and installation tool have been replaced by the indicated tool and nose assembly. Refer to tooling selection charts for more information.

Nose Assembly Cross Reference for Previous Part Numbers—continued

Old NA Number	Superseded By	Diameter	Fastener	Size ¹	New NA Number
99-1675		12	LGP	353	99-2523
99-1675CH		12	LGP	353	99-2523CH
99-1666CH		06	LGP	353	99-2511CH
99-1683	99-2552S	05	GP	353	99-2552S
99-1684	99-2553S	05	GP	353	99-2553S
99-1686	99-2558	06	GP	353	99-2558
99-1687	99-2559	06	GP	353	99-2559
99-1689	99-2564	08	GP	353	99-2564
99-1690	99-2565	08	GP	353	99-2565
99-1692	99-2567	10	GP	353	99-2567
99-1693	99-2568	10	GP	353	99-2568
99-1695	99-2570	12	GP	353	99-2570
99-1696	99-2571	12	GP	353	99-2571
99-1800		05	LGP	353	99-1828
99-1801		06	LGP	353	99-1829
99-1802		08	LGP	353	99-1830
99-1803		10	LGP	353	99-1831
99-1804		12	LGP	353	99-1832
99-1805		05	LGP	206-375	99-1833
99-1806		06	LGP	206-375	99-1834
99-1807		08	LGP	206-375	99-1835
99-1808		10	LGP	208-625	99-1836
99-1809		12	LGP	208-625	99-1837
99-55		05	NAS	352	99-2548T
99-608		06	NAS	352	99-2555
99-609		08	NAS	353	99-2564
99-613	99-1613-353	12	NAS	353	99-2570
99-620	99-1602T-352	05	NAS	352	99-2549S
99-622	99-1610-353	10	NAS	353	99-2567
99-626	99-1601T-352	05	NAS	352	99-2549T
99-634		08	NAS	352	99-2561
99-69		06	NAS	353	99-2557
99-870		05	NAS	206-375	99-1703 ²
99-870NW		05	NAS	206-375	99-1703-1 ²
99-871		06	NAS	206-375	99-1704 ²
99-871NW		06	NAS	206-375	99-1704-1 ²
99-891		08	NAS	206-375	99-1705 ²
99-904		05	BB	206-375	99-1712 ²
99-904-2		05	BB	206-375	99-1712-1 ²
99-905		06	BB	206-375	99-1713 ²
99-905-2		06	BB	206-375	99-1713-1 ²
99-906		08	BB	206-375	99-1714 ²
99-906-2		08	BB	206-375	99-1714-1 ²
99-926	99-1605-352	06	NAS	352	99-2556
99-927	99-1608-353	08	NAS	353	99-2565
99-955		06	NAS	352	99-2555
99-956	99-1604-352	06	NAS	352	99-2555
99-957		08	NAS	353	99-2563
99-958	99-1607-353	08	NAS	353	99-2564
99-99		10	NAS	353	99-2567

¹ The Model 352 and Model 353 are listed to indicate spindle size and are not necessarily the recommended tool and nose assembly combination. The Model 352 is representative of Models 229, 230, and 2400. The Model 353 is representative of Models 245, 246, 4800 series, and 2500 series.

² Old nose assembly and installation tool have been replaced by the indicated tool and nose assembly. Refer to tooling selection charts for more information.

Warranty

The ninety day warranty herein expressed shall be the exclusive warranty on items manufactured by seller and shall be in the place and stead of any other warranty, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Seller shall not be liable for any loss or damage resulting from delays or non-fulfillment of orders owing to strikes, fires, accidents, transportation companies, or for any reason or reasons beyond the control of seller or its suppliers.

All warranty claims must be submitted to the seller in writing, within 90 days from date of shipment, and no returns will be accepted without written permission.

Other provisions hereof notwithstanding, seller shall not be liable for any loss of business, profits or any incidental or consequential damages incurred by Buyer or any third person in connection with the items or use thereof, however caused.

Tool Warranty

Seller expressly disclaims any warranty express or implied, as to the condition, design, operation, merchantability or fitness for use of any tool, or part(s) thereof not manufactured by seller. The only warranties made with respect to such tool or part(s) thereof are those made by the manufacturer thereof and seller agrees to cooperate with buyer in enforcing such warranties when such action is necessary. Seller agrees to repair or replace F.O.B. seller's plant, any tool or part(s) thereof manufactured by it and proved to seller to be defective due to faulty workmanship or material.

Warranty on "Other Items"

With regard to items other than FASTENERS and TOOLS ("OTHER ITEMS"), seller expressly disclaims any warranty, express or implied, as to the condition, design, operation, merchantability or fitness for use of any "OTHER ITEMS", or part(s) thereof not manufactured by seller. The only warranties made with respect to such "OTHER ITEMS", or part(s) thereof are those made by the manufacturer thereof and seller agrees to cooperate with buyer in enforcing such warranties when such action is necessary.

Seller agrees to repair or replace FOB seller's plant, any "OTHER ITEMS", or part(s) thereof manufactured by it and proved to seller to be defective due to faulty workmanship or material.

Huck Installation Equipment

Huck International Inc. reserves the right to make changes in specifications and design and to discontinue models without notice.

Huck Installation Equipment should be serviced by trained servicemen only.

Always give the Serial No. of the equipment when corresponding or ordering service parts.

Complete repair facilities are maintained by Huck International Inc. Please contact one of the offices listed below.

Eastern

1 Corporate Drive, Kingston NY 12401
Telephone: 845-331-7300, FAX 845-334-7333

Western

900 Watsoncenter Road, Carson CA 90745
Telephone: 310-830-8200, FAX 310-830-1436

Canada

326 Humber College Boulevard, Rexdale Ontario M9W 5P4, Canada
Telephone: 416-675-3400, FAX 416-675-5917

Outside USA and Canada

Contact your nearest Huck International Office.

In addition to the above repair facilities, there are Authorized Tool Service Centers (ATSC) located throughout the United States. These service centers offer repair services, spare parts, Service Parts Kits, Service Tool Kits and Nose Assemblies. Please contact your Huck representative or the nearest Huck Office for the ATSC in your area.

Products covered in this catalog may be covered by one of the following U.S. patents. Additional patents are active or applied for.

Installation tools:

200 - 4,118,969
227 - 4,964,292 4,878,372 4,580,435
230 - 4,964,292 4,878,372 4,580,435
245 - 4,597,263
246 - 4,597,263
247 - 4,597,263
2400 - 3,534,580
2502 - 3,534,580
2503 - 3,534,580
700 Series - 3,534,580
209 - 4,615,206
HK 150 - 4,031,619 4,263,801 4,520,648 4,342,216 4,653,308

Nose Assemblies:

99-1800 Series - 4,989,442
99-1700 Series - 4,796,455
99-1493 Series - 4,813,261
99-1800 Offset - 4,796,455
Unitized Jaws - 4,347,728
Shark Bite Nose Assembly - 5,036,572

Adaptors:

120804 - 4,813,261
117831 - 4,813,261
119400 - 4,896,522

The Future of Fastening Technology, The Future of Assembly Technology, and The Future of Tooling Technology are service marks of Huck International Inc. Huck provides technical assistance regarding the use and application of Huck fasteners and tooling.

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