



**HOWMET
AEROSPACE**

Magna-Grip[®] The Original Wide Grip Range Fastener Proven in Thousands of Applications

Vibration Resistant
Flush-Breaking
Easy Installation

3/16" - 3/8"





Huck® Magna-Grip®

Magna-Grip® Fasteners. A Unique, Lock-Groove Design Ensures a Secure Installation

Huck® brand Magna-Grip fasteners offer a generous selection of diameters — from 3/16 to 3/8 inch — for light to heavy-duty applications. They break flush, every time, and provide multi-thickness capability thanks to a wide grip range for each diameter. With Magna-Grip fasteners you achieve clean installations across-the-board, for a variety of assembly thicknesses, while stocking less inventory.

In addition to consistent clamp force, shear, and tensile strength, the Huck Magna-Grip ensures absolute vibration resistance with a unique locking-groove design. It simply can't come loose no matter how demanding the application — which reduces rework and warranty claims, providing long-term savings for your company and increased satisfaction for your customers.

With Magna-Grip fasteners, quality installations do not depend upon the skill of the worker or a correctly calibrated tool. They install in seconds (up to 1,200 per hour) and require no more than a glance to confirm a correct installation: If the core pin is flush with the collar, the Magna-Grip fastener has been properly installed. It's that simple. And the installation process can be mastered in minutes with minimal training.

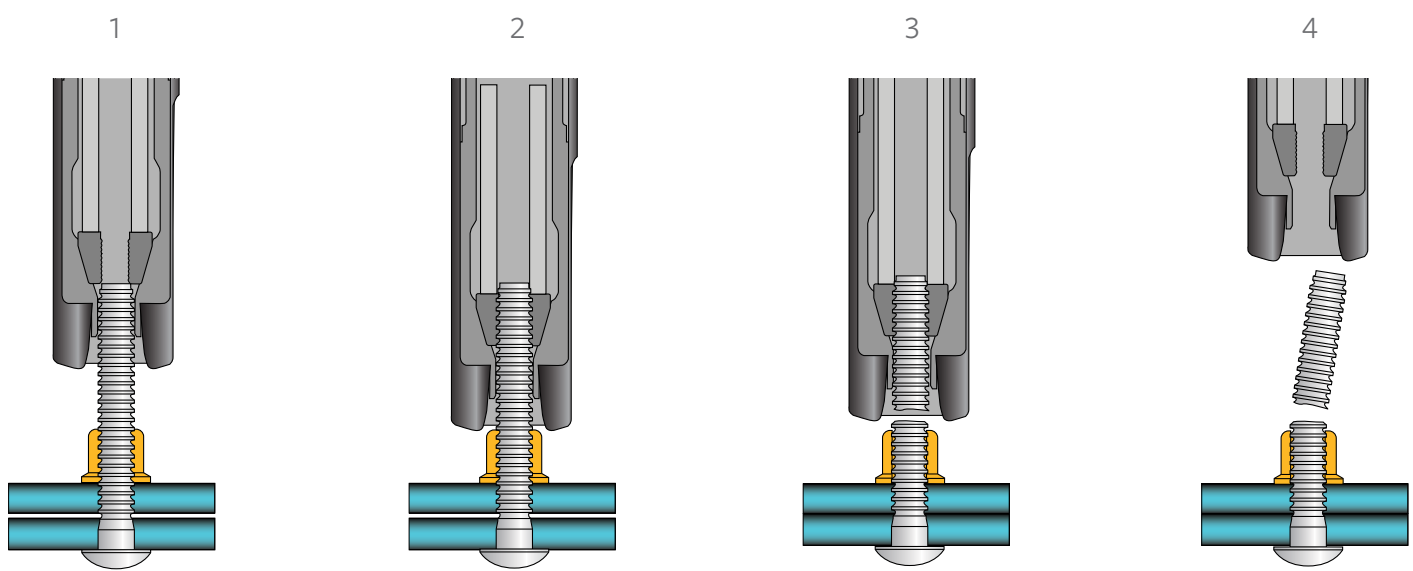


Magna-Grip Benefits

- Unmatched installation speed
- Low overall installed cost
- Vibration resistance
- Flush-breaking pin
- Quiet non-torque tools
- No repetitive stress injuries
- Eliminates need for secondary operations
- No special training or skills required for operators

Installation Sequence

Perfect installations do not depend upon worker skill or a precisely calibrated impact wrench — and can be achieved with just a few minutes training.



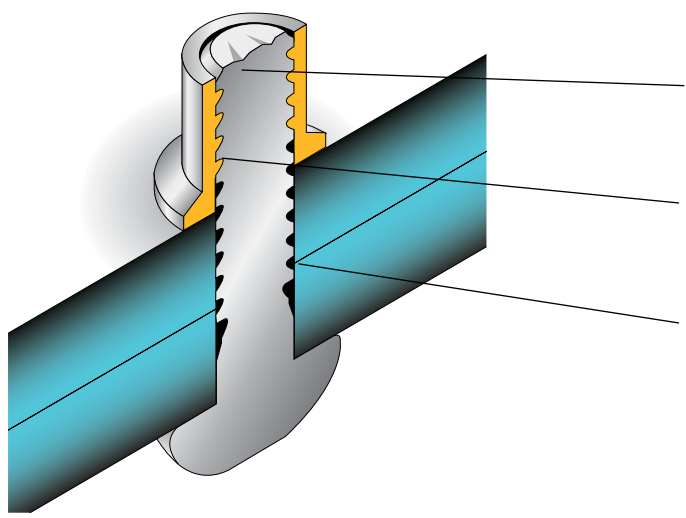
1
The fastener pin is inserted through a prepared hole. The precision collar is placed over the other end.

2
The Huck installation tool is applied and engages the pin. When the tool is activated, it pulls the pin in a straight line while pushing down on the collar.

3
The tool moves forward over the collar, molding the collar material into the grooves of the pin. This process, called “swaging” causes a precise stretching of the pin and collar, developing the fastener’s clamping force.

4
When swaging is complete the pintail is automatically tensioned off, flush with the end of the collar. The tool then pushes off from the collar. The result is a permanent, mechanically locked fastener.

Secure, Fast Installation

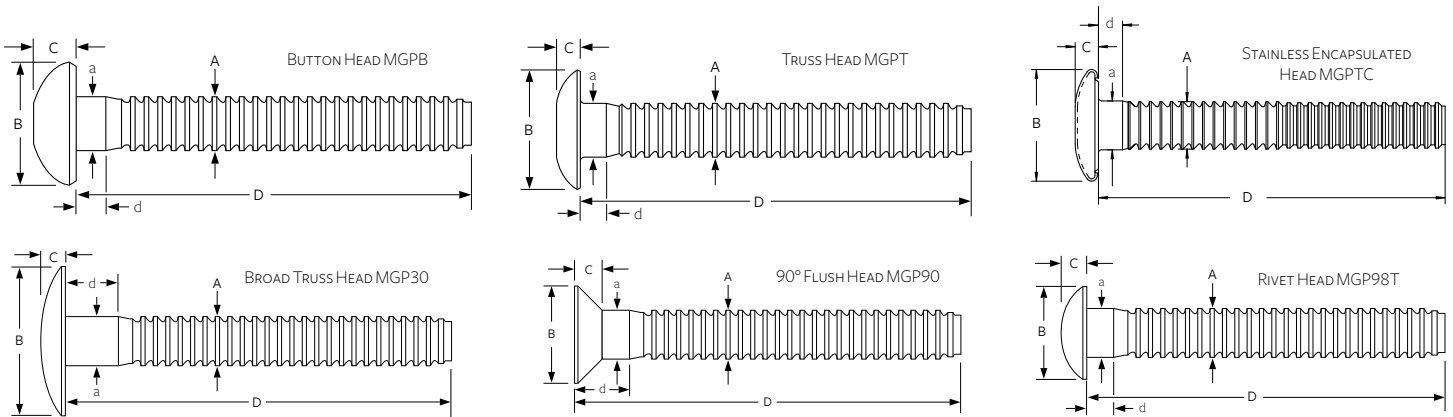


- Flush-breaking, lock-groove design provides a wide grip range to reduce inventory requirements. Easy, consistently accurate installations minimize operator errors and rework costs.
- Collar material swaged into the annular pin grooves forms a permanent, vibration-proof connection that promotes increased customer satisfaction and reduced warranty claims.
- Hole preparation isn't critical. Built-in system values yield high, consistent clamp loads, and gap removal.

For Oversized Holes: To optimize clamp, hardened washers such as ASTM F436, DIN 6916 or EN 14399-6 are recommended for use with oversize holes and slots, along with good bolting practice.

Data and Dimensions

Head Style Options



Button Head Dimensions

DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
6 (3/16")	10	.062-.625	.0219	.0186	.360-.390	.111-.127	1.771-1.831	.192	.087
	20	.312-1.250	.0219	.0186	.360-.390	.111-.127	2.353-2.413	.192	.312
8 (1/4")	10	.125-.625	.0281	.0250	.480-.520	.135-.155	1.965-2.040	.259	.125
	20	.312-1.250	.0281	.0250	.480-.520	.135-.155	2.560-2.635	.259	.312
10 (5/16")	12	.125-.750	.0359	.0312	.600-.650	.180-.205	2.340-2.390	.322	.100
	22	.625-1.375	.0359	.0312	.600-.650	.180-.205	2.840-2.890	.322	.550
12 (3/8")	14	.188-.875	.0422	.0375	.720-.780	.220-.250	2.875-2.925	.385	.188
	26	.812-1.625	.0422	.0375	.720-.780	.220-.250	3.500-3.550	.385	.810

Truss Head Dimensions

DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
8 (1/4")	10	.125-.625	.281	.250	.530-.595	.115-.135	1.965-2.040	.259	.125
	20	.312-1.250	.281	.250	.530-.595	.115-.135	2.560-2.635	.259	.312
10 (5/16")	12	.125-.750	.359	.312	.700-.795	.125-.175	2.340-2.390	.322	.100
	22	.625-1.375	.359	.312	.700-.795	.125-.175	2.840-2.890	.322	.550
12 (3/8")	14	.188-.875	.422	.375	.830-.920	.150-.215	2.875-2.925	.385	.188
	26	.812-1.625	.422	.375	.830-.920	.150-.215	3.500-3.550	.385	.810

Broad Truss Head Dimensions

DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
8 (1/4")	10	.125-.625	.281	.250	.900-.970	.135-.165	1.965-2.040	.259	.125
	24	.562-1.500	.281	.250	.900-.970	.135-.165	2.810-2.885	.259	.562
12 (3/8")	14	.188-.875	.422	.375	1.175-1.255	.185-.215	2.875-2.925	.385	.188
	24	.688-1.500	.422	.375	1.175-1.255	.185-.215	3.375-3.425	.385	.680

90° Flush Head Dimensions

DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
6 (3/16")	10	.062-.625	.219	.186	.325-.360	.075-.090	1.771-1.831	.192	-
	20	.312-1.250	.219	.186	.325-.360	.075-.090	2.353-2.413	.192	.312
8 (1/4")	10	.125-.625	.281	.250	.435-.475	.115-.130	1.965-2.040	.259	-
	20	.312-1.250	.281	.250	.435-.475	.115-.130	2.560-2.635	.259	.312
12 (3/8")	14	.250-.875	.422	.375	.650-.715	.175-.195	2.875-2.925	.385	-
	26	.812-1.625	.422	.375	.650-.715	.175-.195	3.500-3.550	.385	.810

Stainless Encapsulated Head Dimensions

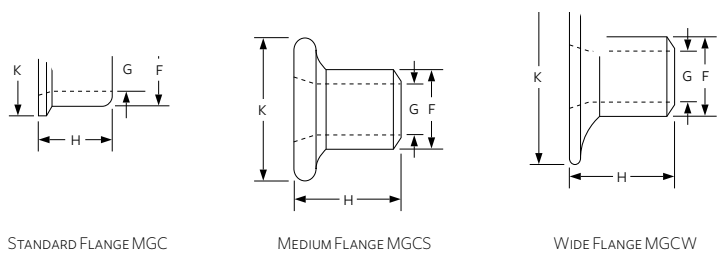
DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
8 (1/4")	10	.125-.625	.281	.250	.620	.165	1.965-2.040	.259	.125
	20	.312-1.250	.281	.250	.620	.165	2.560-2.635	.259	.312
	32	1.062-2.000	.281	.250	.620	.165	3.310-3.385	.259	1.062
10 (5/16")	12	.125-.750	.359	.311	.810	.175	2.340-2.390	.322	.100
12 (3/8")	14	.188-.875	.422	.375	.860	.210	2.875-2.925	.385	.188
	26	.812-1.625	.422	.375	.860	.210	3.500-3.550	.385	.810
	32	1.188-2.000	.422	.375	.860	.210	3.875-3.925	.385	1.185

Rivet Head Dimensions

DIAMETER	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
6 (3/16")	10	.062-.625	.219	.186	.467-.488	.098-.110	1.771-1.831	.192	.087
	20	.312-1.250	.219	.186	.467-.488	.098-.110	2.353-2.413	.192	.312

Collar Dimensions

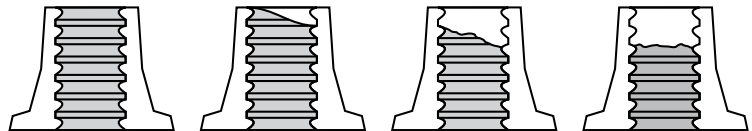
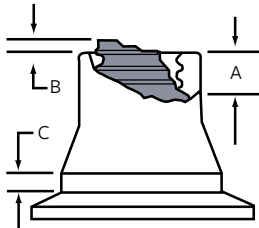
COLLAR	DIAMETER	F	G	H	K
MGC	3/16"	.305-.315	.188-.204	.267-.283	.360-.390
	1/4"	.395-.405	.250-.260	.365-.385	.485-.515
	5/16"	.500-.510	.310-.320	.430-.450	.605-.645
	3/8"	.600-.612	.375-.385	.495-.515	.735-.765
MGCS	3/16"	.305-.315	.186-.196	.295-.315	.495-.535
	1/4"	.395-.405	.247-.260	.432-.462	.665-.715
MGCW	3/16"	.305-.315	.188-.204	.295-.335	.640-.755
	1/4"	.395-.405	.250-.260	.435-.460	.855-1.005



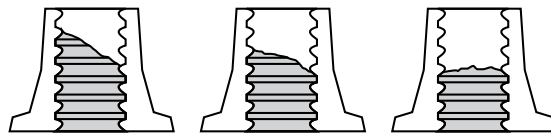
Installed Values in Nominal Grip (lbf)

DIAMETER		ALUMINUM		STEEL		DIAMETER		ALUMINUM		STEEL	
		MINIMUM	TYPICAL	MINIMUM	TYPICAL			MINIMUM	TYPICAL		
3/16"	SHEAR	750	1000	1725	2000	5/16"	SHEAR	2200	2700	3000	3900
	TENSILE	900	1300	1650	2700		TENSILE	2500	4100	4400	6200
	CLAMP	550	800	1025	1500		CLAMP	1600	2200	2300	2900
1/4"	SHEAR	1200	1600	2200	2700	3/8"	SHEAR	3000	3900	4200	6000
	TENSILE	1620	2500	2950	4000		TENSILE	4000	5500	6000	9000
	CLAMP	950	1400	1350	2000		CLAMP	2400	3200	3200	4000

Data and Dimensions



Acceptable Features- Substantially flush with end of collar up to a maximum of two lock witness marks within collar.



Unacceptable Features- Three witness marks within collar.

Inspection Data			
DIAMETER	A MAX	B MAX	C MAX
6 (3/16")	.062	.031	.050
8 (1/4")	.125	.093	.100
10 (5/16")	.187	.140	.100
12 (3/8")	.250	.171	.100

Ordering Information

Follow the tables below to construct part numbers for ordering Magna-Grip pins and collars. Refer to the Grip Data chart for grip numbers.

Pins

MGP (HEAD STYLE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER) (FINISH)

Example: MGPB-R8-10G is a Magna-Grip fastener, Button Head, Steel, 1/4" Diameter, Grip 10 with a Zinc Finish

HEAD STYLE	PREFIX
BUTTON HEAD	B
TRUSS HEAD	T
BROAD TRUSS HEAD	30
RIVET HEAD	98T
90° FLUSH HEAD	90

MATERIAL	CODE
STEEL	R
ALUMINUM	E

DIAMETER	CODE
3/16"	6
1/4"	8
5/16"	10
3/8"	12

GRIP NUMBER
PLEASE REFER TO THE DIMENSIONAL DATA CHART.

FINISH	CODE
ZINC	G
ZINC PLATING WITH ZINC PHOSPHATE	GP

Collars

(FLANGE STYLE) - (MATERIAL) (DIAMETER) (FINISH) (OPTIONS)

Example: MGCW-R8UL is a wide Flange Magna-Grip Collar, Steel, 1/4" Diameter, Zinc Finish with Tab-Lok

FLANGE STYLE	PREFIX
STANDARD	MGC
MEDIUM	MGCS
WIDE	MGCW

MATERIAL	CODE
STEEL	R
ALUMINUM	F

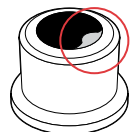
DIAMETER	CODE
3/16"	6
1/4"	8
5/16"	10
3/8"	12

FINISH	CODE
ZINC	U

OPTIONS	CODE
TAB-LOK	L

Tab-Lok™

The Tab-Lok feature makes sure the collar stays on the pin, before installation, in overhead and down slanted pin placements. To order Tab-Lok collars refer to adjacent charts.



Installation Tooling

Installation Tools

NOSE ASSEMBLY	SIZE	BATTERY TOOLS	HYDRAULIC TOOLS ¹				PNEUDRAULIC TOOLS	
		TOOL MODEL						
	BV4500-118	2480	2581	2600	256	2025		
3/16"	99-3201	99-3201	99-3206	-	99-3206	99-3201		
1/4"	99-3204	99-3204	99-3207	-	99-3207	99-3204		
5/16"	-	-	99-1439	99-3217	99-1439	-		
3/8"	-	-	99-1440	99-3220	99-1440	-		

¹Requires a PowerRig to operate.
PowerRigs that may be used: 918, 940, 968 and 913H (gas powered).



Tooling Weight and Dimensions

MODEL	TYPE	WEIGHT	LENGTH	HEIGHT	WIDTH
BV4500-118	BATTERY	5 LBS	14.25"	10.63"	3.75"
2480	HYDRAULIC	2.2 LBS	8.6"	6.5"	1.9"
2581	HYDRAULIC	5.5 LBS	8.4"	7.1"	2.1"
2600	HYDRAULIC	7.3 LBS	9.4"	6.9"	2.65"
256	PNEUDRAULIC	11.1 LBS	7.8"	14.9"	6.1"
2025	PNEUDRAULIC	5.75 LBS	8.4"	12.5"	4.4"

Huck POWERIG[®] Hydraulic Units

MODEL 918	MODEL 940	MODEL 913H	MODEL 968 (NOT SHOWN) ²
HIGH-PRODUCTION APPLICATIONS	PORTABLE; PRODUCTION AND REPAIR	PORTABLE; PRODUCTION AND REPAIR	PORTABLE; PRODUCTION AND REPAIR
OPERATES UP TO 2 TOOLS; 2 GPM FLOW RATE	70 IN ³ /MIN FLOW RATE	139 IN ³ /MIN FLOW RATE	50 IN ³ /MIN FLOW RATE
ELECTRICALLY POWERED; 220, 440, OR 550 VOLTS, 3 PHASE	ELECTRICALLY POWERED; 115 OR 220 VOLTS, SINGLE PHASE	GASOLINE POWERED	COMPRESSED AIR MINIMUM 50 CPM
WEIGHS 708 LBS, OPERATIONAL	WEIGHS 75 LBS	WEIGHS 175 LBS	WEIGHS 93 LBS, OPERATIONAL
44"L x 25"W x 30"H	12.5"L x 10.5"W x 18"H	24"L x 21"W x 27"H	10.5"L x 16.3"W x 15.7"H

²Requires air-triggered tools





**HOWMET
AEROSPACE**

Howmet Fastening Systems

Industrial Division Brands



Huck, Marson, Recoil, Keysert, Camloc, Simmonds and Snep are trademarks of Howmet Aerospace Inc. and/or its subsidiaries.

North America

Waco Operations

PO Box 8117
8001 Imperial Drive
Waco, TX 76714-8117
Tel: +1 800-388-4825
Fax: +1 800-798-4825
hfs.sales.waco@howmet.com

Kingston Operations

1 Corporate Drive
Kingston, NY 12401
Tel: +1 800-278-4825
Fax: +1 845-334-7333
hfs.sales.kingston@howmet.com

Tracy Operations

1925 North MacArthur Drive
Tracy, CA 95376
Tel: +1 800-826-2884
Fax: +1 800-573-2645
hfs.sales.idg@howmet.com

Global

Telford Operations

Unit C, Stafford Park 7
Telford, Shropshire
England TF3 3BQ
Tel: +44 (0) 1952-290011
Fax: +44 (0) 1952-290459
thisales@howmet.com

Suzhou Operations

58 Yinsheng Road,
SIP Suzhou, Jiangsu
215126 China
Tel: +86-512-62863800-8888

Melbourne Operations

1508 Centre Road
Clayton, Victoria
Australia 3168
Tel: +613-8545-3333
Fax: +613-8545-3390
hfs.sales@howmet.com

Tokyo Operations (Japan & Korea)

1013 Hibiya U-1 Bldg.
Uchisaiwai-cho 1-1-7
Chiyoda-ku, Tokyo
100-0011 Japan
Tel: +81-3-3539-6594
Fax: +81-3-3539-6585

hfsindustrial.com

[YouTube.com/HFSIndustrial](https://www.youtube.com/HFSIndustrial)

The information contained in this publication is only for general guidance, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in Howmet Fastening Systems' written quotations, acknowledgments, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.