



HOWMET
AEROSPACE

Magna-Grip®

The Original Wide
Grip Range Fastener



2 Huck® | Magna-Grip®

Huck® Magna-Grip®

Offering a Wide Grip Range and Uniform Installed Values

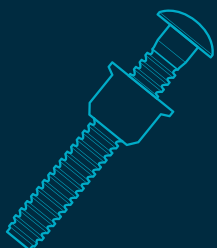
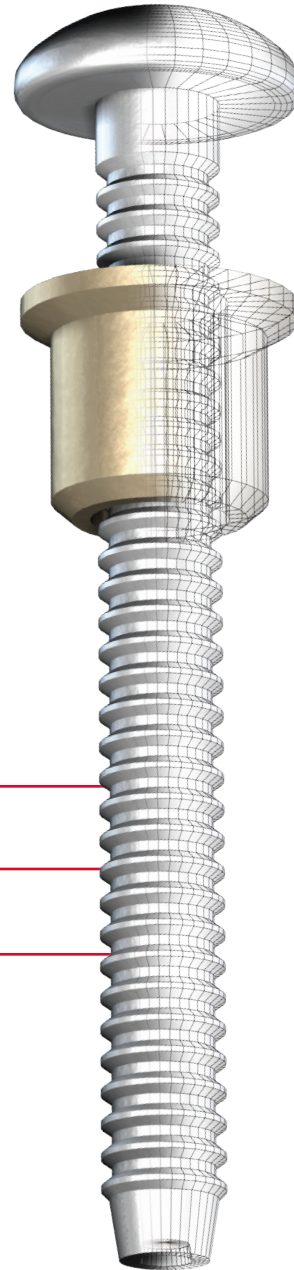
In applications where a wide grip range is required and a flush pin break to the collar is beneficial, Huck® Magna-Grip® is the ideal fastener for the job. In fact, Magna-Grip's wide grip range can replace up to 4 traditional HuckBolts.

Like all Huck engineered fasteners, Magna-Grip offers the highest level of vibration resistance possible. Magna-Grip installs reliably and consistently provides high, uniform installed values.

Available Sizes 3/16", 1/4", 5/16", 3/8"

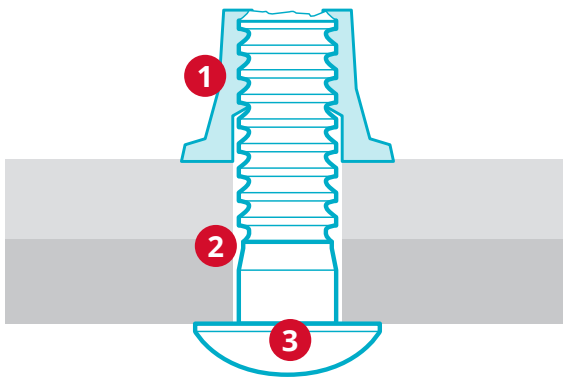
Materials Steel, Aluminum

Headstyles Button, Truss, Broad Truss, 90° Flush, 98T



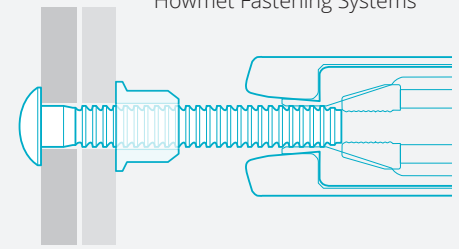
- ✓ Unmatched installation speed
- ✓ Low overall installed cost
- ✓ Vibration resistance
- ✓ Flush-breaking pin
- ✓ Eliminates need for secondary operations
- ✓ No special training or skills required for operators

Secure, Fast Installation

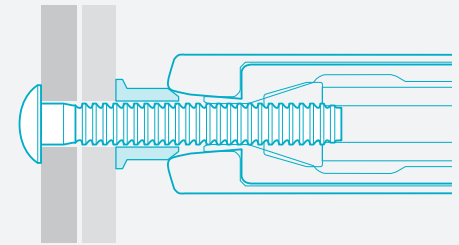


- 1 Flush-breaking, lock-groove design provides a wide grip range to reduce inventory requirements.
- 2 Collar material swaged into the annular pin grooves forms a permanent, vibration-proof connection that promotes increased customer satisfaction and reduced warranty claims.
- 3 Hole preparation isn't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

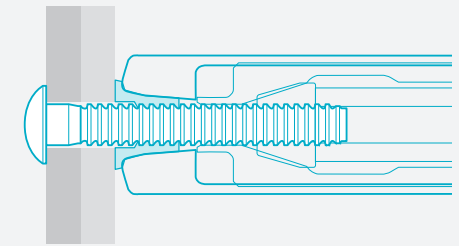
Howmet Fastening Systems



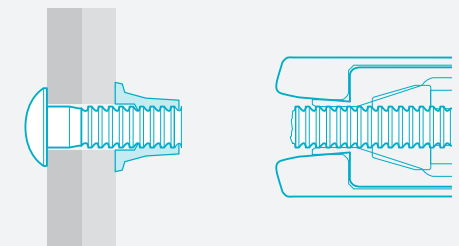
- 1 Insert fastener through a prepared hole. The precision collar is placed over the other end.



- 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.

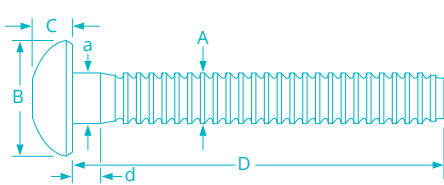


- 3 The tool moves forward over the collar, molding the collar material into the grooves of the pin. This process, called swaging, causes a precise stretching of the pin and collar, developing the fastener's clamping force.

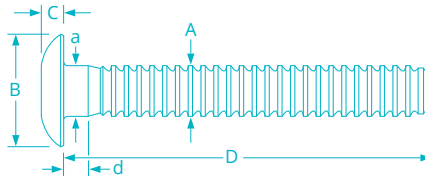


- 4 When swaging is complete the pintail is automatically tensioned off, flush with the end of the collar. The tool then pushes off from the collar. The result is a permanent, mechanically locked fastener

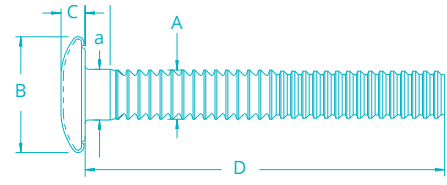
Data and Dimensions



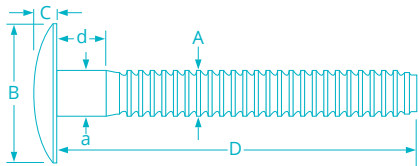
Button Head MGPB



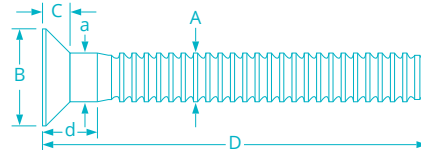
Truss Head MGPT



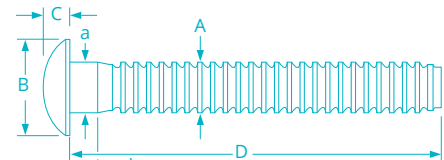
Stainless Encapsulated Head MGPTC



Broad Truss Head MGP30



90° Flush Head MGP90



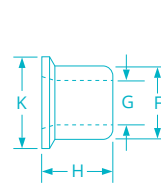
Rivet Head MGP98T

Magna-Grip Dimensions

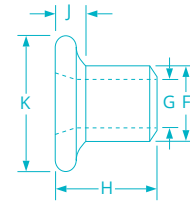
DIA.	GRIP NUMBER	GRIP RANGE	HOLE SIZE MAX	A MAX	B	C	D	a MAX	d REF
Button Head									
6 (3/16")	10	.062-.625	.219	.186	.360-.390	.111-.127	1.771-1.831	.192	.087
	20	.312-1.250	.219	.186	.360-.390	.111-.127	2.353-2.413	.192	.312
8 (1/4")	10	.125-.625	.281	.250	.480-.520	.135-.155	1.965-2.040	.259	.125
	20	.312-1.250	.281	.250	.480-.520	.135-.155	2.560-2.635	.259	.312
10 (5/16")	12	.125-.750	.359	.312	.600-.650	.180-.205	2.340-2.390	.322	.100
	22	.625-1.375	.359	.312	.600-.650	.180-.205	2.840-2.890	.322	.550
12 (3/8")	14	.188-.875	.422	.375	.720-.780	.220-.250	2.875-2.925	.385	.188
	26	.812-1.625	.422	.375	.720-.780	.220-.250	3.500-3.550	.385	.810
Truss Head Dimensions									
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									
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									
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									
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
	14	.188-.875	.422	.375	.860	.210	2.875-2.925	.385	.188
12 (3/8")	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									
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

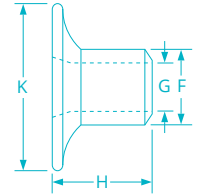
COLLAR	DIA.	F	G	H	K
MGC	3/16"	.305-.315	.188-.204	.267-.283	.360-.390
	1/4"	.395-.405	.250-.260	.365-.385	.485-.515
	5/16"	.500-.510	.310-.320	.430-.450	.605-.645
	3/8"	.600-.612	.375-.385	.495-.515	.735-.765
MGCS	3/16"	.305-.315	.186-.196	.295-.315	.495-.535
	1/4"	.395-.405	.247-.260	.432-.462	.665-.715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



Standard Flange
MGC



Medium Flange
MGCS

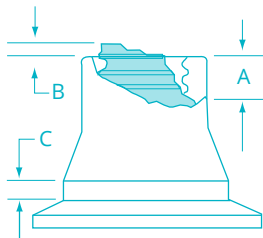


Wide Flange
MGCW

Installed Values in Nominal Grip (lbf)

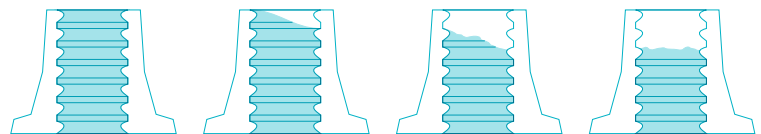
DIA.		ALUMINUM		STEEL	
		MIN.	TYPICAL	MIN.	TYPICAL
3/16"	Shear	750	1000	1725	2000
	Tensile	900	1300	1650	2700
	Clamp	550	800	1025	1500
1/4"	Shear	1200	1600	2200	2700
	Tensile	1620	2500	2950	4000
	Clamp	950	1400	1350	2000

DIA.		ALUMINUM		STEEL	
		MIN.	TYPICAL	MIN.	TYPICAL
5/16"	Shear	2200	2700	3000	3900
	Tensile	2500	4100	4400	6200
	Clamp	1600	2200	2300	2900
3/8"	Shear	3000	3900	4200	6000
	Tensile	4000	5500	6000	9000
	Clamp	2400	3200	3200	4000

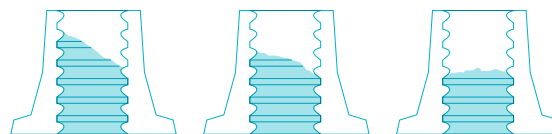


Inspection Data

DIA.	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



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.

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

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

Please refer to the dimensional data chart.

FINISH	CODE
Zinc	G
Zinc Plating with Zinc Phosphate	GP
Zinc Electroplate, Black Dyed Trivalent Chromate	BL

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

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

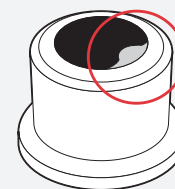
FINISH	GRADE	CODE
Zinc Electroplate, Trivalent Chromate	2	G
Zinc Electroplate, Yellow Dyed Trivalent Chromate	2	U

OPTIONS	CODE
Tab-Lok	L

Additional coating options available.

Tab-Lok™

The optional Tab-Lok feature makes sure the collar stays on the pin, before installation, in overhead and down slanted pin placements.



Installation Tooling

Installation Tools

NOSE ASSEMBLY	SIZE	BATTERY	HYDRAULIC ¹				PNEUDRAULIC	
		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).



Model BV4500-118



Model 2480



Model 2581



Model 256



Model 2025

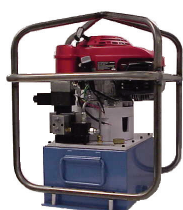
Tooling Weight and Dimensions

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



Model 913H



Model 918



Model 940



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Howmet Fastening Systems

Industrial Division Brands



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