



HOWMET
AEROSPACE

Magna-Bulb®

Unique Bulbing Fastener with
Large Blind-Side Surface

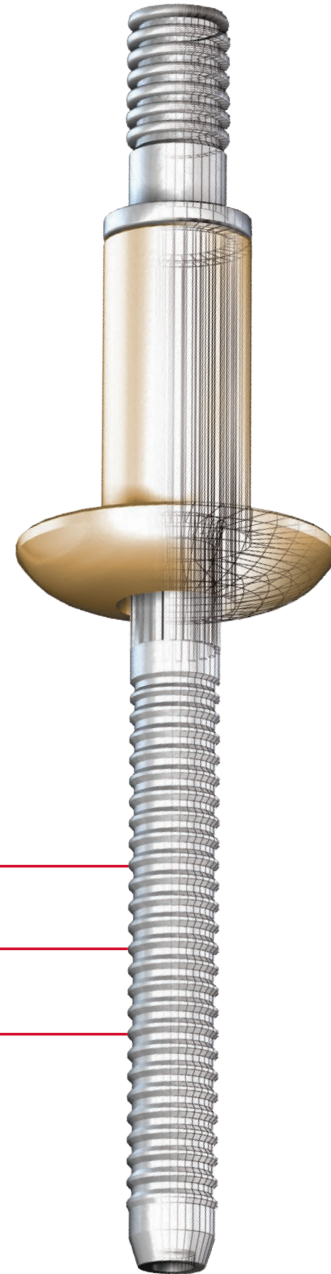


Huck® Magna-Bulb®

A Unique Bulbing Fastener with High Shear Strength

Huck Magna-Bulb® is a unique, clamp-type fastener offering high shear strength in specific applications. Its bulbing action during installation spreads the load over more surface area, supplying a stronger, longer-lasting connection, while offering superior blind side strength.

This increased bearing area makes Magna-Bulb ideal for pull-out resistance in thin materials, and oversized or misaligned holes. Positive, mechanical pin-retention ensures structural integrity no matter what the application.



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

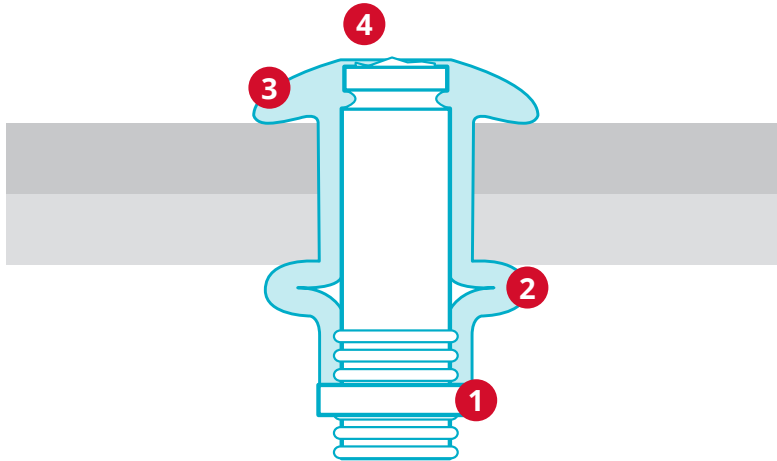
Materials Steel

Headstyles Protruding, Truss, 100° Oval Flush

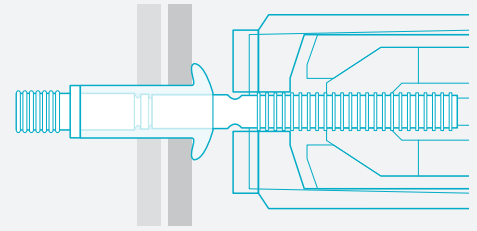


- ✓ Unmatched installation speed
- ✓ Low overall installed cost
- ✓ Vibration resistance
- ✓ Weather-resistant seal
- ✓ Quiet non-torque tools
- ✓ No repetitive stress injuries
- ✓ Eliminates need for secondary operations
- ✓ No special training or skills required for operators

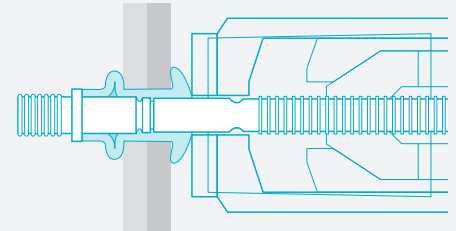
Secure, Fast Installation



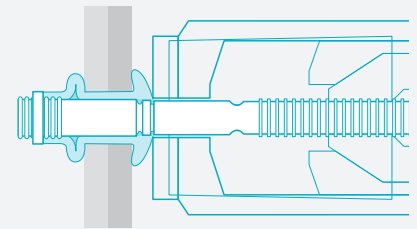
- 1 Shear ring design promotes bulb formation and grip adjustment for flush break throughout the grip range
- 2 The wide blind footprint (bulb) gives the fastener a broader bearing surface, spreading the load out for greater strength and high pull out resistance
- 3 Unique solid circle lock ensures maximum strength and resistance to vibration
- 4 Breaking flush throughout the entire grip range, the Magna-Bulb fastener eliminates costly cosmetic finish work. Simple visual inspection ensures that the fastener is installed correctly.



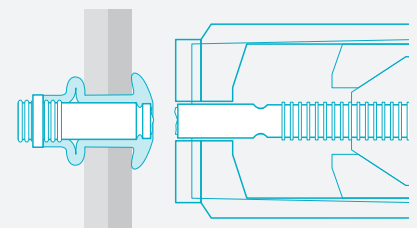
- 1 Insert the fastener into the hole and slip the installation tool over the pintail.



- 2 Press the trigger to initiate pulling action. As the tool pulls on the pintail, the pin (mandrel) expands the sleeve and begins drawing the work pieces together.

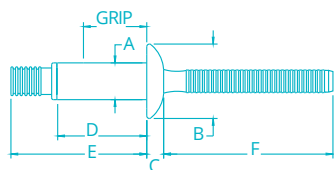


- 3 Press the trigger to initiate pulling action. As the tool pulls on the pintail, the pin (mandrel) expands the sleeve and begins drawing the work pieces together.

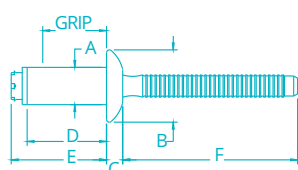


- 4 A solid circle lock between the pin and sleeve is formed just prior to the pin breaking flush with the sleeve head, completing the installation.

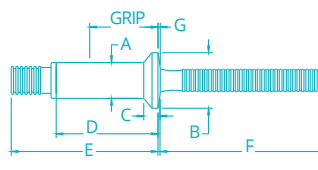
Data and Dimensions



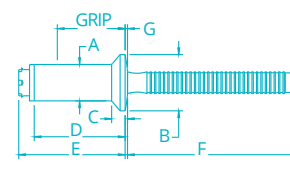
Standard
Protruding Head



Clearance
Protruding Head



Standard
Oval Head



Clearance
Oval Head

Magna-Bulb Dimensions

DIA.	STANDARD	CLEARANCE	GRIP RANGE (IN)	GRIP RANGE (MM)	HOLE SIZE	A NOM	B MAX	C MAX	D MAX	STANDARD E MAX	CLEARANCE E MAX	F MIN
Protruding Head												
6 (3/16")	MBP-R6-M2	MBCP-R6-M2	.075-.110	1.9-2.8	.191-.201	.187	.395	.101	.325	.588	.403	1.084 / 1.079(MBCP)
	MBP-R6-M3	MBCP-R6-M3	.087-.150	2.2-3.8	.191-.201	.187	.395	.101	.365	.668	.481	1.044 / 1.039(MBCP)
	MBP-R6-M4	MBCP-R6-M4	.126-.189	3.2-4.8	.191-.201	.187	.395	.101	.404	.691	.505	1.060 / 1.055(MBCP)
	MBP-R6-M5	MBCP-R6-M5	.165-.228	4.2-5.8	.191-.201	.187	.395	.101	.443	.730	.544	1.060 / 1.055(MBCP)
	MBP-R6-M6	MBCP-R6-M6	.205-.268	5.2-6.8	.191-.201	.187	.395	.101	.483	.770	.584	1.060 / 1.055(MBCP)
	MBP-R6-M7	MBCP-R6-M7	.244-.307	6.2-7.8	.191-.201	.187	.395	.101	.522	.809	.623	1.060 / 1.055(MBCP)
	MBP-R6-M8	MBCP-R6-M8	.283-.347	7.2-8.8	.191-.201	.187	.395	.101	.562	.849	.663	1.060 / 1.055(MBCP)
	MBP-R6-M9	MBCP-R6-M9	.323-.386	8.2-9.8	.191-.201	.187	.395	.101	.601	.888	.702	1.060 / 1.055(MBCP)
	MBP-R6-M10	MBCP-R6-M10	.362-.425	9.2-10.8	.191-.201	.187	.395	.101	.640	.927	.741	1.060 / 1.055(MBCP)
	MBP-R6-M11	-	.402-.465	10.2-11.8	.191-.201	.187	.395	.101	.680	.967	-	1.060
	MBP-R6-M12	-	.441-.504	11.2-12.8	.191-.201	.187	.395	.101	.719	1.006	-	1.060
	MBP-R6-M13	-	.481-.544	12.2-13.8	.191-.201	.187	.395	.101	.759	1.046	-	1.060
	MBP-R6-M14	-	.520-.583	13.2-14.8	.191-.201	.187	.395	.101	.798	1.085	-	1.060
8 (1/4")	MBP-R8-M2	MBCP-R8-M2	.060-.138	1.5-3.5	.261-.272	.253	.530	.125	.437	.773	.547	1.198
	MBP-R8-M3	MBCP-R8-M3	.110-.189	2.8-4.8	.261-.272	.253	.530	.125	.488	.860	.649	1.147
	MBP-R8-M4	MBCP-R8-M4	.150-.229	3.8-5.8	.261-.272	.253	.530	.125	.528	.940	.728	1.107
	MBP-R8-M5	MBCP-R8-M5	.189-.268	4.8-6.8	.261-.272	.253	.530	.125	.567	.912	.701	1.174
	MBP-R8-M6	MBCP-R8-M6	.229-.308 / .229-.306 (MBCP)	5.8-7.8	.261-.272	.253	.530	.125	.607	.947	.737	1.179
	MBP-R8-M7	MBCP-R8-M7	.268-.346	6.8-8.8	.261-.272	.253	.530	.125	.646	.986	.776	1.179
	MBP-R8-M8	MBCP-R8-M8	.308-.387	7.8-9.8	.261-.272	.253	.530	.125	.686	1.026	.816	1.179
	MBP-R8-M9	MBCP-R8-M9	.346-.425	8.8-10.8	.261-.272	.253	.530	.125	.725	1.065	.855	1.179
	MBP-R8-M10	-	.387-.466	9.8-11.8	.261-.272	.253	.530	.125	.765	1.105	-	1.179
	MBP-R8-M11	MBCP-R8-M11	.425-.504	10.8-12.8	.261-.272	.253	.530	.125	.804	1.144	.934	1.179
	MBP-R8-M12	-	.466-.545	11.8-13.8	.261-.272	.253	.530	.125	.844	1.184	-	1.179
	MBP-R8-M13	MBCP-R8-M13	.504-.583	12.8-14.8	.261-.272	.253	.530	.125	.883	1.223	1.013	1.179
	-	MBCP-R8-M16	.622-.701	15.8-17.8	.261-.272	.253	.530	.125	1.002	-	1.132	1.178
	MBP-R8-M18	-	.701-.780	17.8-19.8	.261-.272	.253	.530	.125	1.079	1.419	-	1.179
	MBP-R8-M19	MBCP-R8-M19	.741-.820 / .740-.819 (MBCP)	18.8-20.8	.261-.272	.253	.530	.125	1.120	1.460	1.250	1.179
	-	MBCP-R8-M25	.976-1.055	24.8-26.8	.261-.272	.253	.530	.125	1.359	-	1.489	1.176
	-	MBCP-R8-M29	1.134-1.213	28.8-30.8	.261-.272	.253	.530	.125	1.512	-	1.642	1.179
	-	MBCP-R8-M31	1.212-1.291	30.8-32.8	.261-.272	.253	.530	.125	1.592	-	1.722	1.179
	MBP-R8-M32	-	1.252-1.331	31.8-33.8	.261-.272	.253	.530	.125	1.632	1.972	-	1.179

Magna-Bulb Dimensions

DIA.	STANDARD	CLEARANCE	GRIP RANGE (IN)	GRIP RANGE (MM)	HOLE SIZE	A NOM	B MAX	C MAX	D MAX	STANDARD E MAX	CLEARANCE E MAX	F MIN
Protruding Head												
10 (5/16")	MBP-R10-3	-	.150-.250	3.8-6.4	.3275-.340	.316	.655	.152	.620	1.104	-	1.379
	MBP-R10-4	-	.200-.300	5.1-7.6	.3275-.340	.316	.655	.152	.670	1.154	-	1.379
	MBP-R10-5	-	.250-.350	6.4-8.9	.3275-.340	.316	.655	.152	.720	1.204	-	1.379
	MBP-R10-6	-	.300-.400	7.6-10.2	.3275-.340	.316	.655	.152	.770	1.254	-	1.379
	MBP-R10-7	-	.350-.450	8.9-11.4	.3275-.340	.316	.655	.152	.820	1.304	-	1.379
	MBP-R10-8	-	.400-.500	10.2-12.7	.3275-.340	.316	.655	.152	.870	1.354	-	1.379
	MBP-R10-9	-	.450-.550	11.4-14.0	.3275-.340	.316	.655	.152	.920	1.404	-	1.379
	MBP-R10-10	-	.500-.600	12.7-15.2	.3275-.340	.316	.655	.152	.970	1.454	-	1.379

DIA	STANDARD	CLEARANCE	GRIP RANGE (IN)	GRIP RANGE (MM)	HOLE SIZE	A NOM	B MAX	C MAX	D MAX	STANDARD E MAX	CLEARANCE E MAX	F MIN	G (REF)
Oval Head Dimensions													
8 (1/4")	MBV-R8-M4	-	.150-.229	3.8-5.8	.261-.272	.253	.410	.130	.528	.864	-	1.199	0.030
	MBV-R8-M5	-	.189-.268	4.8-6.8	.261-.272	.253	.410	.130	.567	.939	-	1.160	0.030
	MBV-R8-M6	-	.229-.308	5.8-7.8	.261-.272	.253	.410	.130	.607	1.019	-	1.120	0.030
	MBV-R8-M7	-	.269-.348	6.8-8.8	.261-.272	.253	.410	1.130	.647	.992	-	1.186	0.030
	-	MBCV-R8-M7.5	.290-.370	7.4-9.4	.261-.272	.253	.410	.130	.667	-	0.801	1.166	0.030
	MBV-R8-M9	-	.346-.425	8.8-10.8	.261-.272	.253	.410	.130	.725	1.065	-	1.192	0.030
	MBV-R8-M10	-	.387-.466	9.8-11.8	.261-.272	.253	.410	.130	.765	1.105	-	1.192	0.030
	MBV-R8-M13	-	.504-.583	12.8-14.8	.261-.272	.253	.410	.130	.883	1.223	-	1.192	0.030
10 (5/16")	MBV-R8-M19	MBCV-R8-M19	.741-.820 / .740-.818 (MBCV)	18.8-20.8	.261-.272	.253	.410	.130	1.120	1.460	1.250	1.192	0.030
	MBV-R10-5	-	.250-.350	6.4-8.9	.3275-.340	.316	.460	.160	.770	1.254	-	1.334	0.047
	MBV-R10-6	-	.300-.400	7.6-10.2	.3275-.340	.316	.460	.160	.820	1.304	-	1.334	0.047
	MBV-R10-7	-	.350-.450	8.9-11.4	.3275-.340	.316	.460	.160	.870	1.354	-	1.334	0.047
	MBV-R10-8	-	.400-.500	10.2-12.7	.3275-.340	.316	.460	.160	.920	1.404	-	1.334	0.047
	MBV-R10-9	-	.450-.550	11.4-14.0	.3275-.340	.316	.460	.160	.970	1.454	-	1.334	0.047
	MBV-R10-10	-	.500-.600	12.7-15.2	.3275-.340	.316	.460	.160	1.020	1.504	-	1.334	0.047
	MBV-R10-11	-	.550-.650	14.0-16.5	.3275-.340	.316	.460	.160	1.070	1.554	-	1.334	0.047
	MBV-R10-12	-	.600-.700	15.2-17.8	.3275-.340	.316	.460	.160	1.120	1.604	-	1.334	0.047
	MBV-R10-13	-	.650-.750	16.5-19.1	.3275-.340	.316	.460	.160	1.170	1.654	-	1.334	0.047

Blind Fastener Values - lbf (KN)

DIA.	PART NO.	GRIP	SHEAR		TENSILE		PIN RETENTION	
			MIN	TYP	MIN	TYP	MIN	TYP
6 (3/16")	MBP/MBV	All grips	1950	2100	1050	1150	150	300
	MBC	All grips	1650	1900	850	1025	150	300
8 (1/4")	MBP/MBV	-M2	2600	N/A	1900	N/A	300	550
		-M3	2700	N/A	1900	2300	300	550
		-M4	2760	N/A	1900	2300	300	550
		-M5	3000	3450	1900	2350	300	550
		-M6	3200	3450	1900	2350	300	550
		-M7 and Higher	3500	3650	1900	2500	300	550
	MBC	-M2	2300	N/A	1600	1750	300	550
		-M3	2400	N/A	1600	1750	300	550
		-M4	2500	N/A	1600	1800	300	550
		-M5	3000	3200	1600	1825	300	550
		-M6	3000	3450	1600	1850	300	550
		-M7 and Higher	3000	3450	1600	1950	300	550
10 (5/16")	MBP/MBV	All grips	5000	5500	2960	3850	470	1200

Ordering Information

Follow the form below to construct a part number for ordering Huck Magna-Bulb blind fasteners. Refer to the data and dimensions chart for grip numbers.

Standard Version

MB (HEAD STYLE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER)

Example: MBP-R6-M4 is a Protruding Head Magna-Bulb, Steel, 3/16" Diameter, M4 Grip.

Clearance Version

MBC (HEAD STYLE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER)

Example: MBCP-R8-M3 is a Protruding Head Clearance Magna-Bulb, Steel, 1/4" Diameter, M3 Grip.

HEAD STYLE	PREFIX
Protruding Head	P
Oval Head	V

MATERIAL	CODE
Steel	R

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

Materials and Finishes

MATERIAL	SLEEVE	PIN	SLEEVE FINISH	PIN FINISH
Steel	Low Carbon Steel	Medium Carbon Steel	Zinc Plate / Chromate / Gold Dye	Zinc Plated Clear Chromate



Installation Tooling

Nose Assembly

SIZE	BATTERY	PNEUDRAULIC		HYDRAULIC	
	TOOL MODEL				
	BV4500-118	256	2024*	2480	2581
3/16"	99-3303	99-3327	99-3303	99-3303	99-3327
3/16" & 1/4"	99-3487**	-	99-3487**	-	-
1/4"	99-3305	99-3328	99-3305	99-3305	99-3328
5/16"	-	99-3307	-	-	99-3307

Tooling Weight and Dimensions

MODEL	TYPE	WEIGHT	LENGTH	HEIGHT	WIDTH
BV4500-118	Battery	5 lbs	9.06"	9.42"	3.15"
256	Pneudraulic	11.1 lbs	7.9"	14.9"	6.3"
2024*	Pneudraulic	5.75 lbs	8.9"	12.6"	4.4"
2480	Hydraulic	2.2 lbs	8.2"	6.6"	1.9"
2581	Hydraulic	5.5 lbs	8.4"	7.1"	2.1"

* Recommended
** Not recommended for high volume production.





Howmet Fastening Systems

Industrial Division Brands



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Contact Applifast

251 Cree Crescent
Winnipeg, MB
Canada R3J 3X4

Tel: 204 837 8361 • 1 800 563 1293
Fax: 204 837 3520 • 1 800 974 1494
info@applifast.com



applifast.com