



**HOWMET
AEROSPACE**

Auto-Bulb[®]

Bulbing Fastener for
Automated, High-Speed
Assemblies



Huck® Auto-Bulb®

An Easy-to-Install Bulbing Fastening System for Superior Blind Side Strength

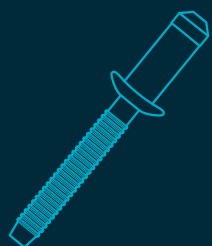
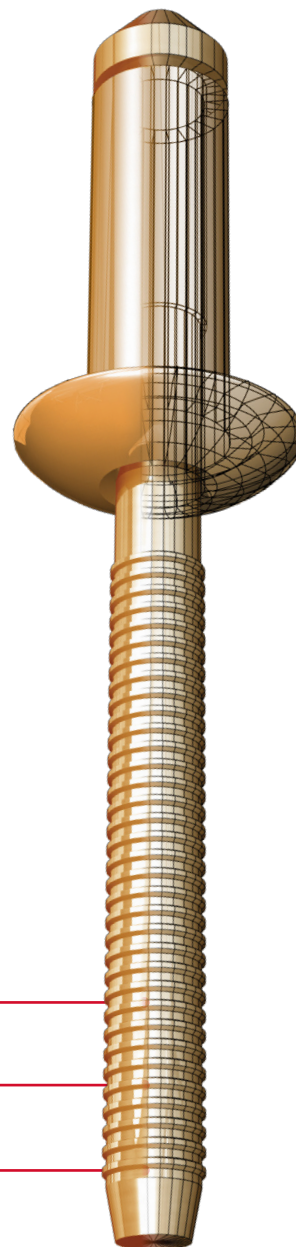
For use in a variety of applications including thin materials or delicate composites, Huck Auto-Bulb® is the perfect solution. Easy-to-install, it works by clamping the joint with a large diameter head and broad, blind side bulb, which spreads to diffuse the load over a larger area, ensuring permanent clamp. Now available in 400 stainless steel for enhanced corrosion resistance.

This high-reliability fastener offers an easy-to-use lead-in point in the form of a tapered, hole-seeking tip, which means fast, reliable installation. Because of its high pull-out strength, Auto-Bulb is an ideal choice for use within thin materials, and within oversized, misaligned, or slotted holes. Unlike other bulbing blind fasteners, Auto-Bulb's uniquely engineered bulbing system creates superior blind side bearing strength with the bulb always forming on the sheet line. Its positive mechanical pin retention ensures structural integrity.

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

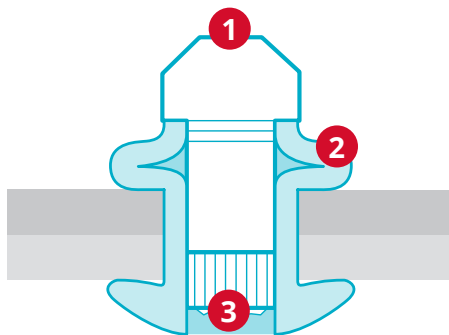
Materials Steel and 400 Series Stainless Steel

Headstyles Protruding, oval countersunk



- ✓ Unmatched installation speed
- ✓ Superior blind side strength
- ✓ Minimal blind side protrusion prior to installation
- ✓ Vibration resistance
- ✓ Steel and corrosion resistance 400 stainless steel
- ✓ High pull-out strength in thin materials
- ✓ Aesthetic blind side appearance

Secure, Fast Installation



- 1 Tapered hole seeking tip for quick and easy installation.
- 2 Unique band annealed bulbing system for superior blind side strength.
- 3 Positive mechanical pin retention ensures structural integrity.

Sheet-Line Bulb Comparison

Even in minimum-grip applications, Huck fasteners outperform the competition. They're engineered to form a bulb directly on the sheet line, precisely where it's needed, to prevent pull-through.

Bulb forms irregularly above sheet line resulting in lower installed values.

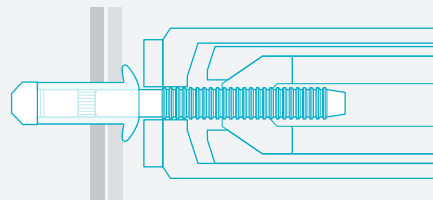


Competitor

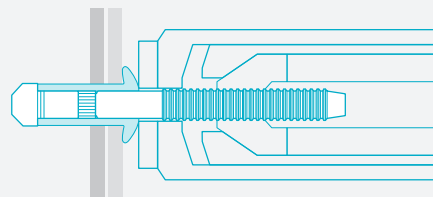
Bulb forms directly on sheet line.



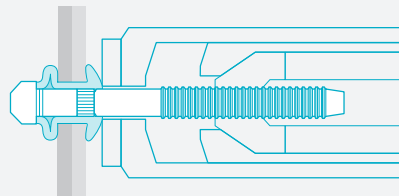
Auto-Bulb®



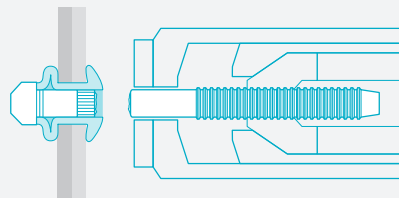
- 1 Insert the fastener into the hole and slip the installation tool over the pintail.



- 2 Press the trigger to initiate pulling action. As the tool pulls on the pintail, the solid pin head captures the end of the sleeve and acts to initiate bulb formation and draws the work pieces together.

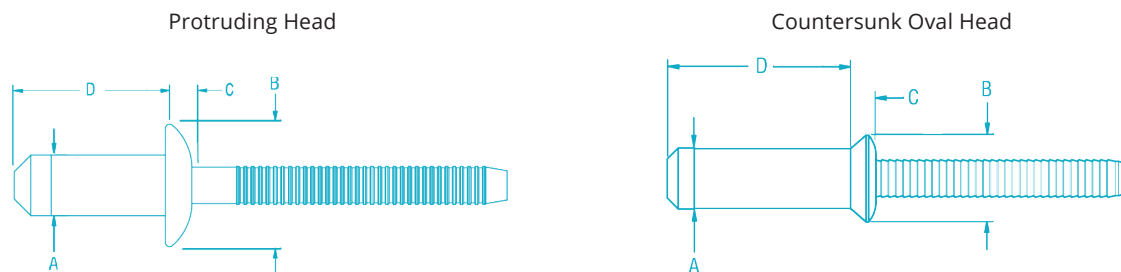


- 3 Continued pulling on the pintail expands the bulb to maximum allowable diameter.



- 4 A spline feature on the pin comes into contact with a step on the sleeve creating an interference lock between the pin and sleeve and the pin breaks. The pin will break close to flush in minimum grip and below flush as the grip increases.

Data and Dimensions



Protruding Head Dimensions

DIA.	STEEL	STAINLESS	GRIP RANGE	GRIP RANGE (METRIC)	HOLE SIZE	A MAX	B NOM	BROCH C MAX	BROCH D MAX
6 (3/16")	ABP-R6-M2	—	.075 - .110	1.9 - 2.8	.191 - .201	0.190	0.375	0.101	0.471
	ABP-R6-M3	—	.086 - .150	2.2 - 3.8	.191 - .201	0.190	0.375	0.101	0.510
	ABP-R6-M4	—	.126 - .189	3.2 - 4.8	.191 - .201	0.190	0.375	0.101	0.550
	ABP-R6-M5	—	.165 - .228	4.2 - 5.8	.191 - .201	0.190	0.375	0.101	0.589
	ABP-R6-M6	—	.205 - .268	5.2 - 6.8	.191 - .201	0.190	0.375	0.101	0.629
	ABP-R6-M7	—	.244 - .307	6.2 - 7.8	.191 - .201	0.190	0.375	0.101	0.668
	ABP-R6-M8	—	.283 - .347	7.2 - 8.8	.191 - .201	0.190	0.375	0.101	0.708
	ABP-R6-M9	—	.323 - .386	8.2 - 9.8	.191 - .201	0.190	0.375	0.101	0.747
	ABP-R6-M10	—	.362 - .425	9.2 - 10.8	.191 - .201	0.190	0.375	0.101	0.787
	ABP-R6-M11	—	.402 - .465	10.2 - 11.8	.191 - .201	0.190	0.375	0.101	0.826
	ABP-R6-M12	—	.441 - .502	11.2 - 12.8	.191 - .201	0.190	0.375	0.101	0.866
	ABP-R6-M13	—	.481 - .544	12.2 - 13.8	.191 - .201	0.190	0.375	0.101	0.905
	ABP-R6-M14	—	.520 - .583	13.2 - 14.8	.191 - .201	0.190	0.375	0.101	0.945
	ABP-R6-M15	—	.560 - .623	14.2 - 15.8	.191 - .201	0.190	0.375	0.101	0.984
	ABP-R6-M16	—	.599 - .662	15.2 - 16.8	.191 - .201	0.190	0.375	0.101	1.024
	ABP-R6-M17	—	.639 - .702	16.2 - 17.8	.191 - .201	0.190	0.375	0.101	1.063
	ABP-R6-M18	—	.678 - .741	17.2 - 18.8	.191 - .201	0.190	0.375	0.101	1.103
8 (1/4")	ABP-R8-M2	ABP-4U8-M2	.060 - .138	1.5 - 3.5	.261 - .272	0.260	0.512	0.130	0.622
	ABP-R8-M3	ABP-4U8-M3	.110 - .189	2.8 - 4.8	.261 - .272	0.260	0.512	0.130	0.673
	ABP-R8-M4	ABP-4U8-M4	.150 - .229	3.8 - 5.8	.261 - .272	0.260	0.512	0.130	0.713
	ABP-R8-M5	ABP-4U8-M5	.189 - .268	4.8 - 6.8	.261 - .272	0.260	0.512	0.130	0.752
	ABP-R8-M6	ABP-4U8-M6	.229 - .308	5.8 - 7.8	.261 - .272	0.260	0.512	0.130	0.792
	ABP-R8-M7	ABP-4U8-M7	.268 - .346	6.8 - 8.8	.261 - .272	0.260	0.512	0.130	0.831
	ABP-R8-M8	ABP-4U8-M8	.308 - .387	7.8 - 9.8	.261 - .272	0.260	0.512	0.130	0.871
	ABP-R8-M9	ABP-4U8-M9	.346 - .425	8.8 - 10.8	.261 - .272	0.260	0.512	0.130	0.910
	ABP-R8-M10	ABP-4U8-M10	.387 - .466	9.8 - 11.8	.261 - .272	0.260	0.512	0.130	0.950
	ABP-R8-M11	ABP-4U8-M11	.425 - .504	10.8 - 12.8	.261 - .272	0.260	0.512	0.130	0.988
	—	ABP-4U8-M12	.466 - .545	11.8 - 13.8	.261 - .272	0.260	0.512	0.130	1.029
	—	ABP-4U8-M13	.504 - .583	12.8 - 14.8	.261 - .272	0.260	0.512	0.130	1.068
	—	ABP-4U8-M16	.622 - .701	15.8 - 17.8	.261 - .272	0.260	0.512	0.130	1.186
	ABP-R8-M19	ABP-U8-M19	.741 - .820	18.8 - 20.8	.261 - .272	0.260	0.512	0.130	1.305

*Special orders only - Minimum quantities apply

Countersunk Oval Head Dimensions

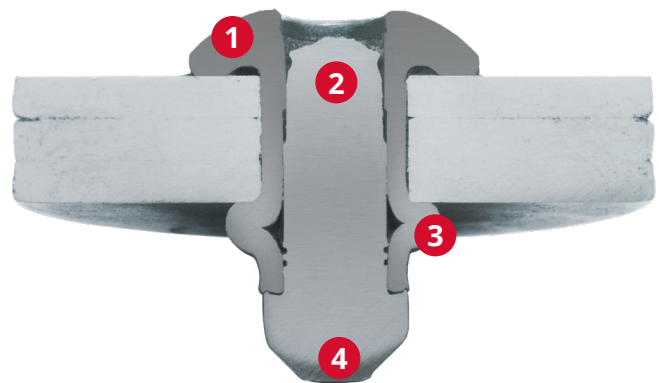
DIA.	STEEL	STAINLESS	GRIP RANGE	GRIP RANGE (METRIC)	HOLE SIZE	A MAX	B NOM	BROCH C MAX	BROCH D MAX
12 (3/8")	ABV-R12-6	—	.313 - .437	8.0 - 11.1	.392 - .408	0.393	0.572	0.175	1.115
	ABV-R12-8	—	.438 - .562	11.1 - 14.3	.392 - .408	0.393	0.572	0.175	1.240
	ABV-R12-10	—	.563 - .687	14.3 - 17.4	.392 - .408	0.393	0.572	0.175	1.365
	ABV-R12-10X	—	.530 - .655	13.5 - 16.6	.392 - .408	0.393	0.572	0.175	1.345
	ABV-R12-12	—	.688 - .812	17.5 - 20.6	.392 - .408	0.393	0.572	0.175	1.490
	ABV-R12-14	—	.813 - .937	20.7 - 23.8	.392 - .408	0.393	0.572	0.175	1.615

Typical Installed Values in Nominal Grip

MATERIAL	DIA.	SHEAR		TENSILE		PIN RETENTION	
		MIN	TYPICAL	MIN	TYPICAL	MIN	TYPICAL
Steel	6 (3/16")*	1400	1450	875	1100	150	300
	8 (1/4")	2600	3400	1600	2100	300	550
	12 (3/8")	6000	7800	4000	4300	600	1200
400 Series Stainless	6 (3/16")*	1400	1450	875	1100	150	300
	8 (1/4")	2600	3400	1600	2100	300	600

* Special orders only – Minimum quantities apply

- 1 Undercut fillet allows seating in burred holes.
- 2 Aesthetic blind side appearance
- 3 Maintains a thicker sleeve wall to help ensure the structural strength of the joint.
- 4 Pin remains in shear plane for superior strength



Ordering Information

Follow the form below to construct a part number for ordering Huck Auto-Bulb blind fasteners. Refer to the Grip Data chart for grip numbers.

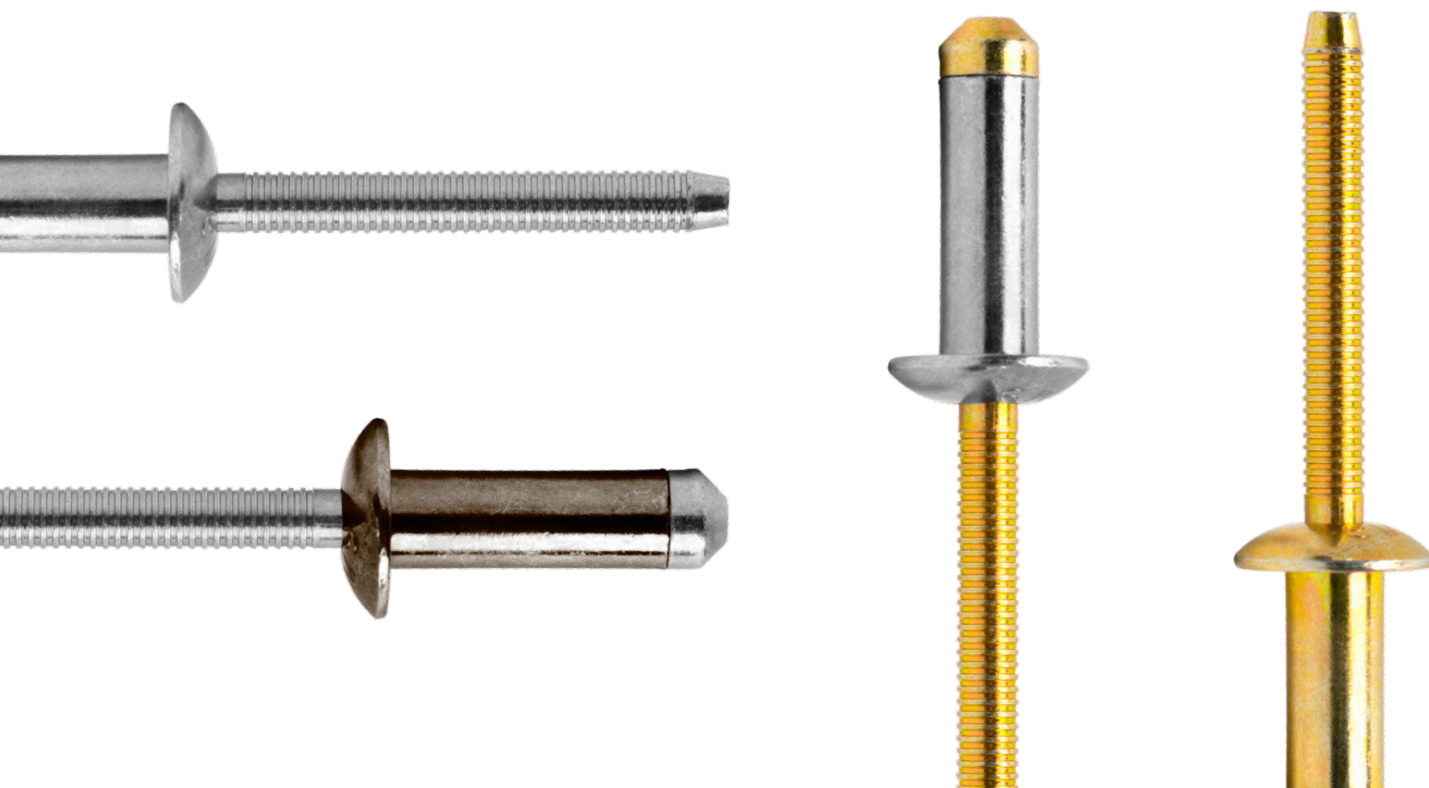
AB (HEAD STYLE) - (MATERIAL) (DIAMETER) - (GRIP NUMBER)

Example: ABP-R8-M4 is a Protruding Head Auto-Bulb, Steel, 1/4" Diameter, M4 Grip.

HEAD STYLE	CODE	MATERIAL	CODE	DIA.	CODE
Protruding	P	Steel	R	3/16"	6
Countersunk Oval Head	V	400 Series Stainless Steel	4U	1/4"	8
				3/8"	12

Materials and Finishes

MATERIAL	SLEEVE	PIN	SLEEVE FINISH	PIN FINISH
Steel	Low Carbon Steel	Medium Carbon Steel	Zinc Plate / Chromate / Gold Dye	Zinc Plate / Chromate / Gold Dye
400 Series Stainless Steel	400 Series	400 Series	Passivated / Clear Sealer	Zinc Plated Clear Chromate / Clear Sealer



Installation Tooling



Installation Tools

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*	99-3487	—
	1/4"	99-3305	99-3328	99-3305	99-3305	99-3328
	3/8"	—	99-3318	—	—	99-3318

* Not for high volume installation

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	7.8"	14.9"	6.1"
2024*	Pneudraulic	5.75 lbs	8.9"	12.6"	4.4"
2480	Hydraulic	2.2 lbs	8.6"	6.5"	1.9"
2581	Hydraulic	5.5 lbs	8.4"	7.1"	2.1"

* Recommended for high volume production.



Howmet Fastening Systems

Industrial Division Brands



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