



# Auto-Bulb<sup>®</sup>

Bulbing Fastener for  
Automated, High-Speed  
Assemblies



# Huck® Auto-Bulb®

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

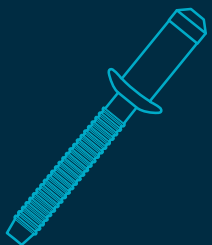
For use in a variety of applications including thin materials or delicate composites, Huck Auto-Bulb® is the perfect solution. Easy-to-install, it works by clamping the joint with a large diameter head and broad, blind side bulb, which spreads to diffuse the load over a larger area, ensuring permanent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

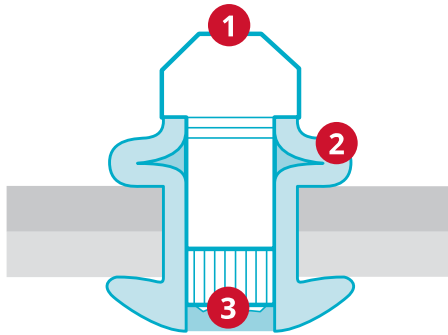
**Headstyles** Protruding, oval countersunk



- ✓ 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.

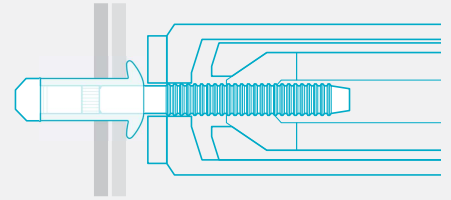


Competitor

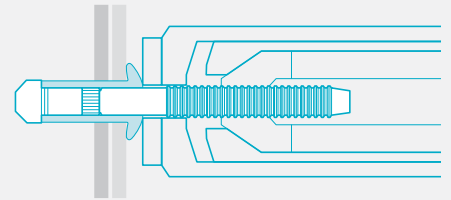
Bulb forms directly on sheet line.



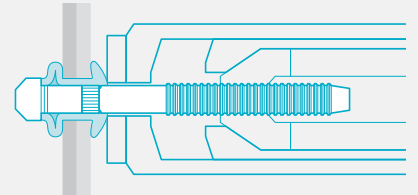
Auto-Bulb®



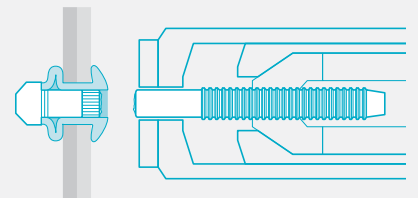
- 1 Insert the fastener into the hole and slip the installation tool over the pintail.



- 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.



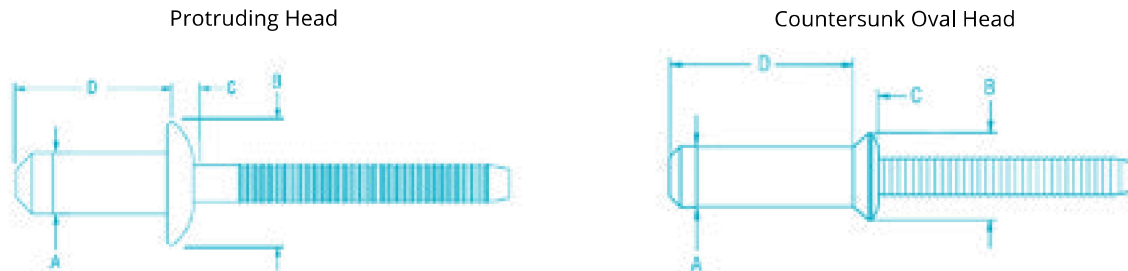
- 3 Continued pulling on the pintail expands the bulb to maximum allowable diameter.



- 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

## Head Style Options



### Protruding Head Dimensions

| DIA.         | STEEL      | STAINLESS   | GRIP RANGE  | GRIP RANGE (METRIC) | HOLE SIZE   | A MAX | B NOM | BROCH C MAX | BROCH D MAX |
|--------------|------------|-------------|-------------|---------------------|-------------|-------|-------|-------------|-------------|
| 6<br>(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<br>(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

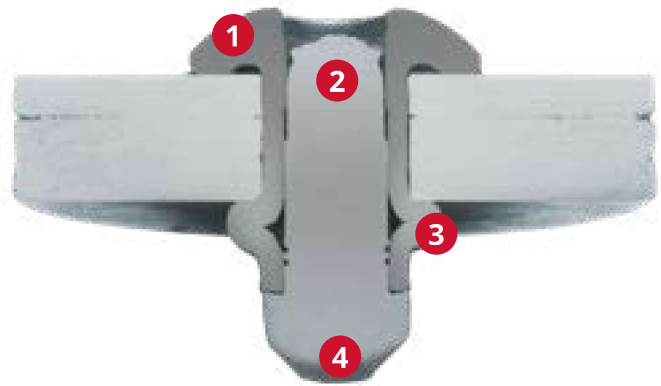
| DIA.         | STEEL       | STAINLESS | GRIP RANGE  | GRIP RANGE (METRIC) | HOLE SIZE   | A MAX | B NOM | BROCH C MAX | BROCH D MAX |
|--------------|-------------|-----------|-------------|---------------------|-------------|-------|-------|-------------|-------------|
| 12<br>(3/8") | ABV-R12-6   | —         | .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.

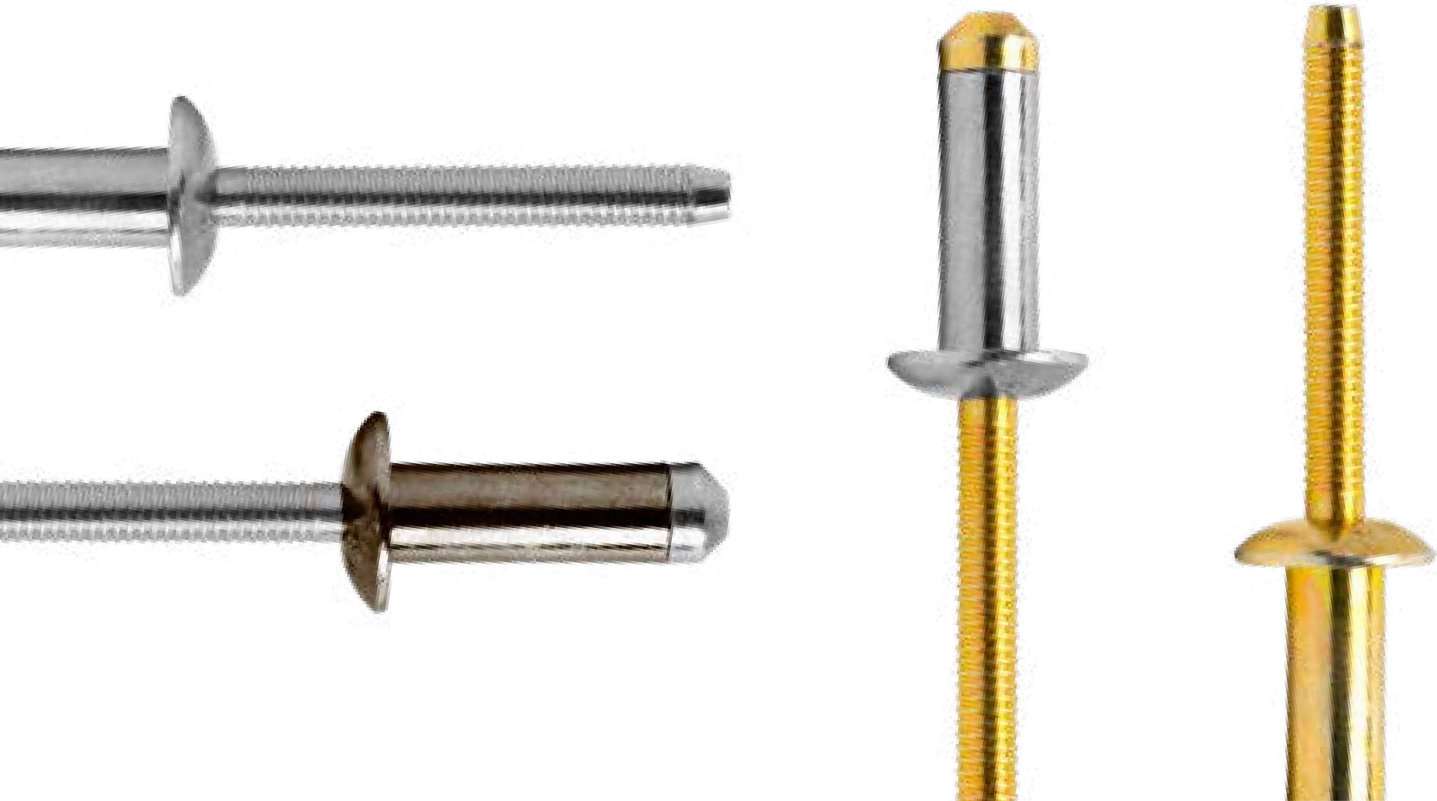
## Ordering Information

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<br>ASSEMBLY | SIZE         | BATTERY TOOLS | PNEUDRAULIC TOOLS |          | HYDRAULIC TOOLS |         |
|------------------|--------------|---------------|-------------------|----------|-----------------|---------|
|                  |              | 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.