



Magna-Bulb[®]

Unique bulbing fastener
with large blind-side surface

High pull-out resistance

Mechanical, solid-circle lock
design for high strength

Broad bearing surface



Huck Magna-Bulb®

A unique bulbing fastener for superior blind side strength.

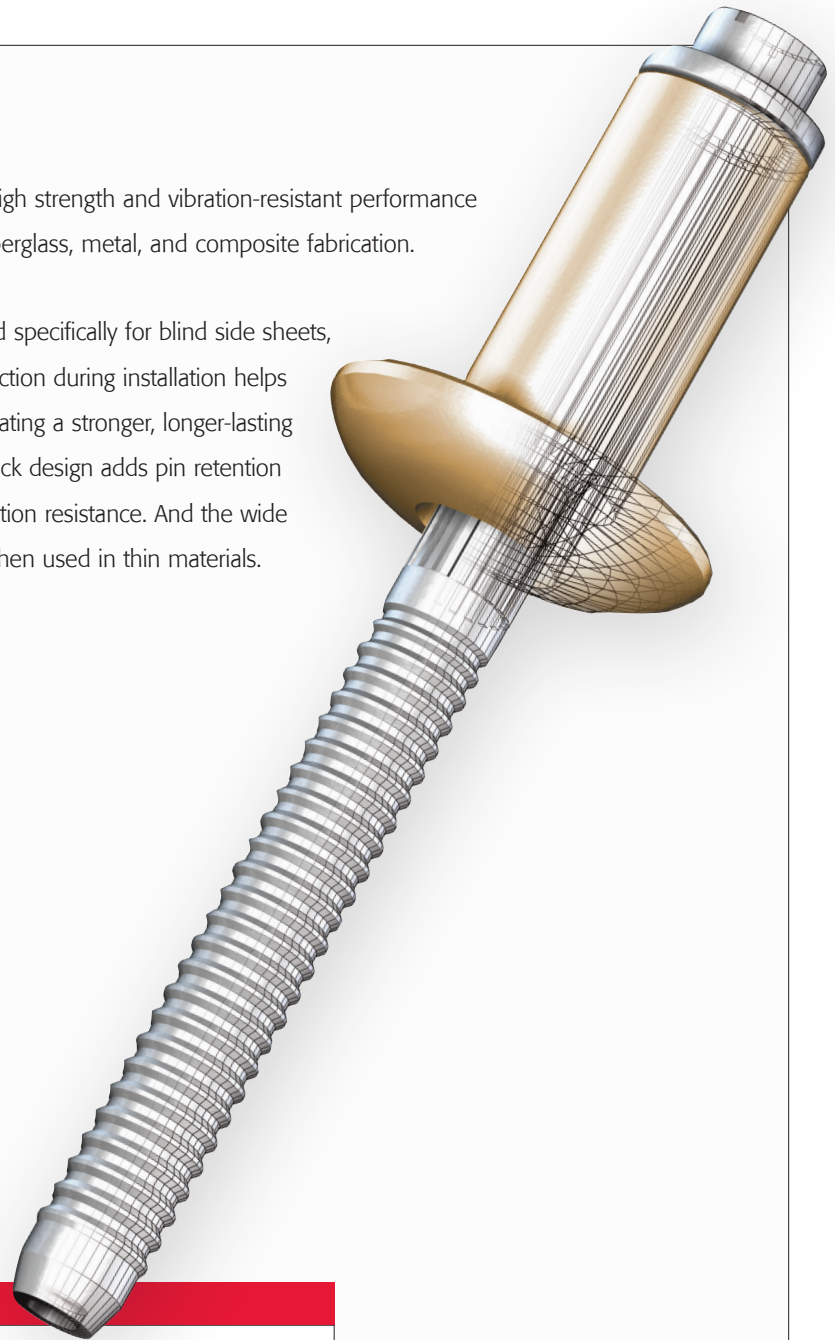
The Huck Magna-Bulb® was designed to offer high strength and vibration-resistant performance in a wide variety of materials, such as plastic, fiberglass, metal, and composite fabrication.

This unique, clamp-type fastener was engineered specifically for blind side sheets, featuring a broader bearing surface. Its bulbing action during installation helps spread the load over a wider area, ultimately creating a stronger, longer-lasting connection. An internal mechanical solid-circle lock design adds pin retention strength while ensuring the highest level of vibration resistance. And the wide bulb on the blind side eliminates pull-through when used in thin materials.

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

Materials: Steel

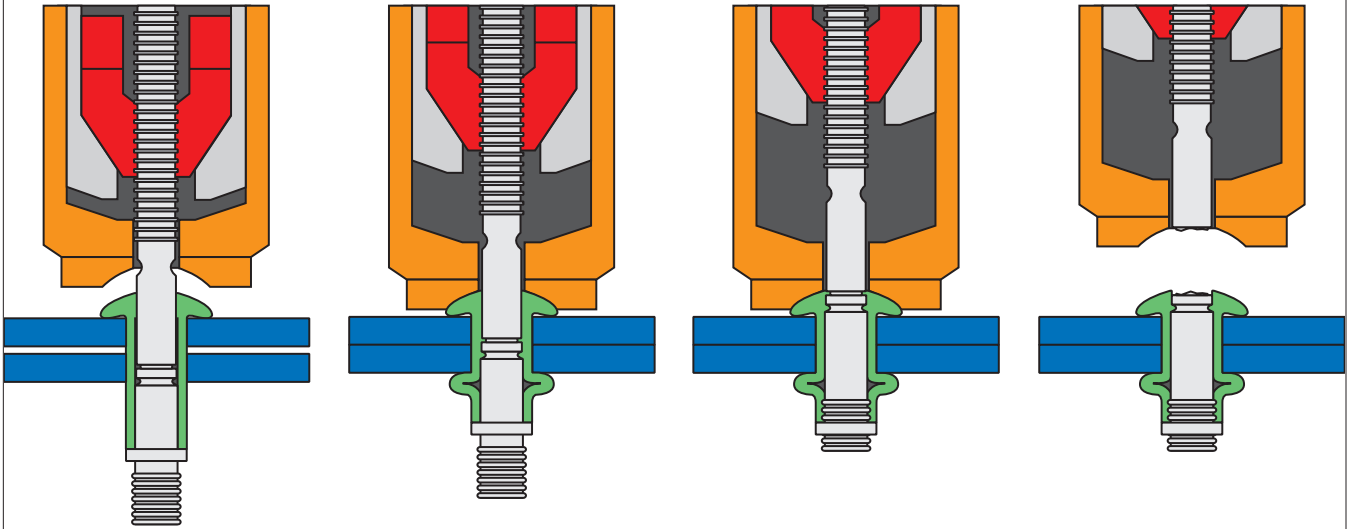
Headstyles: Protruding,
100° Oval Countersunk



Magna-Bulb® Benefits

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

Installation Sequence



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

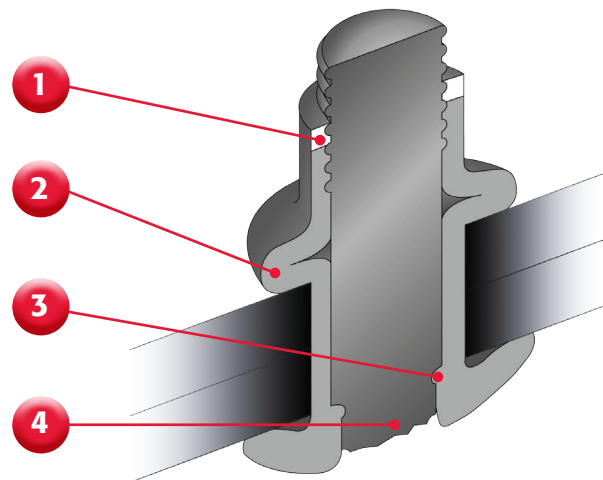
Press the trigger to initiate pulling action. As the tool pulls on the pintail, the shear ring feature on the pin acts to initiate bulb formation and draws the work pieces together.

Continued pulling on the pintail expands the bulb to maximum allowable diameter. The shear ring then breaks and catches on the annular grooves as the pin continues to draw down inside the sleeve.

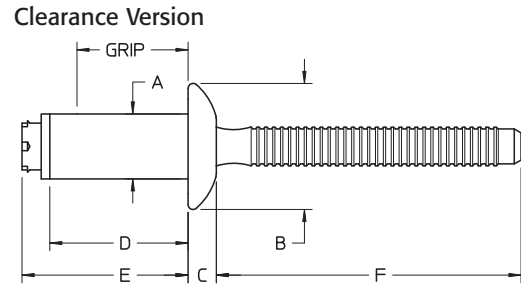
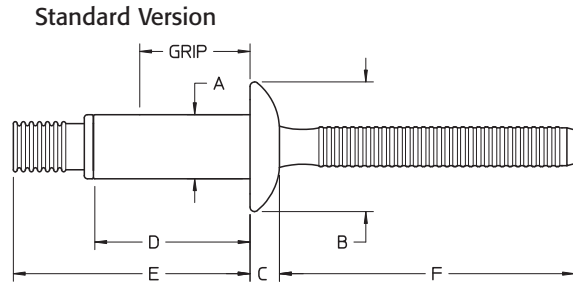
A solid circle lock between the pin and sleeve is formed just prior to the pin breaking flush with the sleeve head, completing the installation.

Secure, Fast Installation

1. A unique shear ring design promotes bulb formation and grip adjustment for flush break throughout the grip range.
2. The bulb provides the fastener with a broader surface area, ensuring permanent clamp.
3. The unique solid-circle lock design ensures maximum strength and resistance to vibration.
4. The Magna-Bulb breaks flush throughout the entire grip range, eliminating cosmetic finish work and ensuring secure installation with only a visual inspection required.



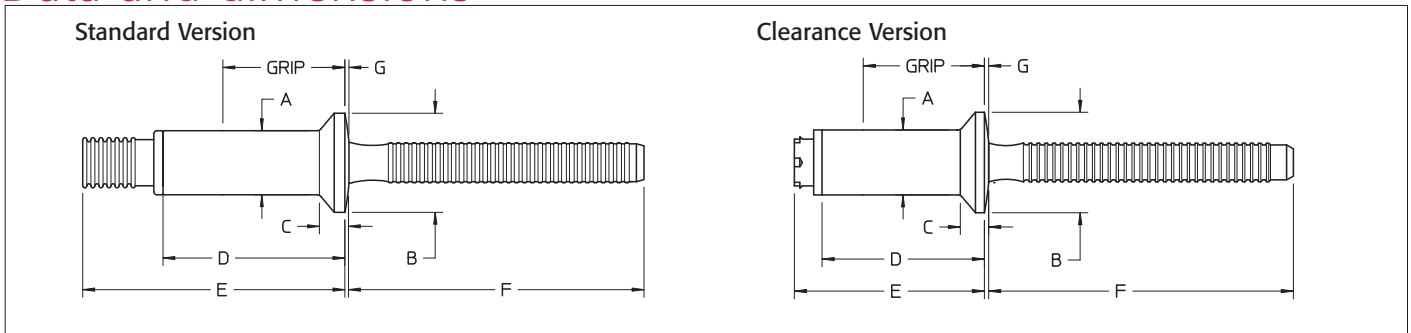
Data and dimensions



Protruding Head Dimensions

Diameter	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
6 (3/16")	MBP-R6-M2	MBCP-R6-M2	.075 – .110	1.9 – 2.8	.191 – .201	0.187	0.395	0.101	0.325	0.588	0.403	1.084 / 1.079(MBCP)
	MBP-R6-M3	MBCP-R6-M3	.087 – .150	2.2 – 3.8	.191 – .201	0.187	0.395	0.101	0.365	0.668	0.481	1.044 / 1.039(MBCP)
	MBP-R6-M4	MBCP-R6-M4	.126 – .189	3.2 – 4.8	.191 – .201	0.187	0.395	0.101	0.404	0.691	0.505	1.060 / 1.055(MBCP)
	MBP-R6-M5	MBCP-R6-M5	.165 – .228	4.2 – 5.8	.191 – .201	0.187	0.395	0.101	0.443	0.730	0.544	1.060 / 1.055(MBCP)
	MBP-R6-M6	MBCP-R6-M6	.205 – .268	5.2 – 6.8	.191 – .201	0.187	0.395	0.101	0.483	0.770	0.584	1.060 / 1.055(MBCP)
	MBP-R6-M7	MBCP-R6-M7	.244 – .307	6.2 – 7.8	.191 – .201	0.187	0.395	0.101	0.522	0.809	0.623	1.060 / 1.055(MBCP)
	MBP-R6-M8	MBCP-R6-M8	.283 – .347	7.2 – 8.8	.191 – .201	0.187	0.395	0.101	0.562	0.849	0.663	1.060 / 1.055(MBCP)
	MBP-R6-M9	MBCP-R6-M9	.323 – .386	8.2 – 9.8	.191 – .201	0.187	0.395	0.101	0.601	0.888	0.702	1.060 / 1.055(MBCP)
	MBP-R6-M10	MBCP-R6-M10	.362 – .425	9.2 – 10.8	.191 – .201	0.187	0.395	0.101	0.640	0.927	0.741	1.060 / 1.055(MBCP)
	MBP-R6-M11	-	.402 – .465	10.2 – 11.8	.191 – .201	0.187	0.395	0.101	0.680	0.967	-	1.060
	MBP-R6-M12	-	.441 – .504	11.2 – 12.8	.191 – .201	0.187	0.395	0.101	0.719	1.006	-	1.060
	MBP-R6-M13	-	.481 – .544	12.2 – 13.8	.191 – .201	0.187	0.395	0.101	0.759	1.046	-	1.060
	MBP-R6-M14	-	.520 – .583	13.2 – 14.8	.191 – .201	0.187	0.395	0.101	0.798	1.085	-	1.060
	8 (1/4")	MBP-R8-M2	MBCP-R8-M2	.060 – .138	1.5 – 3.5	.261 – .272	0.253	0.530	0.125	0.437	0.773	0.547
MBP-R8-M3		MBCP-R8-M3	.110 – .189	2.8 – 4.8	.261 – .272	0.253	0.530	0.125	0.488	0.860	0.649	1.147
MBP-R8-M4		MBCP-R8-M4	.150 – .229	3.8 – 5.8	.261 – .272	0.253	0.530	0.125	0.528	0.940	0.728	1.107
MBP-R8-M5		MBCP-R8-M5	.189 – .268	4.8 – 6.8	.261 – .272	0.253	0.530	0.125	0.567	0.912	0.701	1.174
MBP-R8-M6		MBCP-R8-M6	.229 – .308 / .229 – .306(MBCP)	5.8 – 7.8	.261 – .272	0.253	0.530	0.125	0.607	0.947	0.737	1.179
MBP-R8-M7		MBCP-R8-M7	.268 – .346	6.8 – 8.8	.261 – .272	0.253	0.530	0.125	0.646	0.986	0.776	1.179
MBP-R8-M8		MBCP-R8-M8	.308 – .387	7.8 – 9.8	.261 – .272	0.253	0.530	0.125	0.686	1.026	0.816	1.179
MBP-R8-M9		MBCP-R8-M9	.346 – .425	8.8 – 10.8	.261 – .272	0.253	0.530	0.125	0.725	1.065	0.855	1.179
MBP-R8-M10		-	.387 – .466	9.8 – 11.8	.261 – .272	0.253	0.530	0.125	0.765	1.105	-	1.179
MBP-R8-M11		MBCP-R8-M11	.425 – .504	10.8 – 12.8	.261 – .272	0.253	0.530	0.125	0.804	1.144	0.934	1.179
MBP-R8-M12		-	.466 – .545	11.8 – 13.8	.261 – .272	0.253	0.530	0.125	0.844	1.184	-	1.179
MBP-R8-M13		MBCP-R8-M13	.504 – .583	12.8 – 14.8	.261 – .272	0.253	0.530	0.125	0.883	1.223	1.013	1.179
-		MBCP-R8-M16	.622 – .701	15.8 – 17.8	.261 – .272	0.253	0.530	0.125	1.002	-	1.132	1.178
MBP-R8-M18		-	.701 – .780	17.8 – 19.8	.261 – .272	0.253	0.530	0.125	1.079	1.419	-	1.179
MBP-R8-M19		MBCP-R8-M19	.741 – .820 / .740 – .819(MBCP)	18.8 – 20.8	.261 – .272	0.253	0.530	0.125	1.120	1.460	1.250	1.179
-		MBCP-R8-M25	.976 – 1.055	24.8 – 26.8	.261 – .272	0.253	0.530	0.125	1.359	-	1.489	1.176
-	MBCP-R8-M29	1.134 – 1.213	28.8 – 30.8	.261 – .272	0.253	0.530	0.125	1.512	-	1.642	1.179	
-	MBCP-R8-M31	1.212 – 1.291	30.8 – 32.8	.261 – .272	0.253	0.530	0.125	1.592	-	1.722	1.179	
MBP-R8-M32	-	1.252 – 1.331	31.8 – 33.8	.261 – .272	0.253	0.530	0.125	1.632	1.972	-	1.179	
10 (5/16")	MBP-R10-3	-	.150 – .250	3.8 – 6.4	0.3275 – .340	0.316	0.655	0.152	0.620	1.104	-	1.379
	MBP-R10-4	-	.200 – .300	5.1 – 7.6	0.3275 – .340	0.316	0.655	0.152	0.670	1.154	-	1.379
	MBP-R10-5	-	.250 – .350	6.4 – 8.9	0.3275 – .340	0.316	0.655	0.152	0.720	1.204	-	1.379
	MBP-R10-6	-	.300 – .400	7.6 – 10.2	0.3275 – .340	0.316	0.655	0.152	0.770	1.254	-	1.379
	MBP-R10-7	-	.350 – .450	8.9 – 11.4	0.3275 – .340	0.316	0.655	0.152	0.820	1.304	-	1.379
	MBP-R10-8	-	.400 – .500	10.2 – 12.7	0.3275 – .340	0.316	0.655	0.152	0.870	1.354	-	1.379
	MBP-R10-9	-	.450 – .550	11.4 – 14.0	0.3275 – .340	0.316	0.655	0.152	0.920	1.404	-	1.379
	MBP-R10-10	-	.500 – .600	12.7 – 15.2	0.3275 – .340	0.316	0.655	0.152	0.970	1.454	-	1.379

Data and dimensions



Oval Head Dimensions

Diameter	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)
8 (1/4")	MBV-R8-M4	-	.150 – .229	3.8 – 5.8	.261 – .272	0.253	0.410	0.130	0.528	0.864	-	1.199	0.030
	MBV-R8-M5	-	.189 – .268	4.8 – 6.8	.261 – .272	0.253	0.410	0.130	0.567	0.939	-	1.160	0.030
	MBV-R8-M6	-	.229 – .308	5.8 – 7.8	.261 – .272	0.253	0.410	0.130	0.607	1.019	-	1.120	0.030
	MBV-R8-M7	-	.269 – .348	6.8 – 8.8	.261 – .272	0.253	0.410	1.130	0.647	0.992	-	1.186	0.030
	-	MBCV-R8-M7.5	.290 – .370	7.4 – 9.4	.261 – .272	0.253	0.410	0.130	0.667	-	0.801	1.166	0.030
	MBV-R8-M9	-	.346 – .425	8.8 – 10.8	.261 – .272	0.253	0.410	0.130	0.725	1.065	-	1.192	0.030
	MBV-R8-M10	-	.387 – .466	9.8 – 11.8	.261 – .272	0.253	0.410	0.130	0.765	1.105	-	1.192	0.030
	MBV-R8-M13	-	.504 – .583	12.8 – 14.8	.261 – .272	0.253	0.410	0.130	0.883	1.223	-	1.192	0.030
	MBV-R8-M19	MBCV-R8-M19	.741 – .820 / .740 – .818(MBCV)	18.8 – 20.8	.261 – .272	0.253	0.410	0.130	1.120	1.460	1.250	1.192	0.030
10 (5/16")	MBV-R10-5	-	.250 – .350	6.4 – 8.9	0.3275 – .340	0.316	0.460	0.160	0.770	1.254	-	1.334	0.047
	MBV-R10-6	-	.300 – .400	7.6 – 10.2	0.3275 – .340	0.316	0.460	0.160	0.820	1.304	-	1.334	0.047
	MBV-R10-7	-	.350 – .450	8.9 – 11.4	0.3275 – .340	0.316	0.460	0.160	0.870	1.354	-	1.334	0.047
	MBV-R10-8	-	.400 – .500	10.2 – 12.7	0.3275 – .340	0.316	0.460	0.160	0.920	1.404	-	1.334	0.047
	MBV-R10-9	-	.450 – .550	11.4 – 14.0	0.3275 – .340	0.316	0.460	0.160	0.970	1.454	-	1.334	0.047
	MBV-R10-10	-	.500 – .600	12.7 – 15.2	0.3275 – .340	0.316	0.460	0.160	1.020	1.504	-	1.334	0.047
	MBV-R10-11	-	.550 – .650	14.0 – 16.5	0.3275 – .340	0.316	0.460	0.160	1.070	1.554	-	1.334	0.047
	MBV-R10-12	-	.600 – .700	15.2 – 17.8	0.3275 – .340	0.316	0.460	0.160	1.120	1.604	-	1.334	0.047
	MBV-R10-13	-	.650 – .750	16.5 – 19.1	0.3275 – .340	0.316	0.460	0.160	1.170	1.654	-	1.334	0.047

Blind Fastener Values

			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	Material	Code	Diameter	Code
Protruding Head	P	Steel	R	3/16"	6
Oval Head	V			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

Huck Magna-Bulb® Installation Tooling

Installation Tools										
Pneudraulic Tools									Hydraulic Tools	
Tool Model	Size	245/255	246/256	2015	202	2024*	2025	AK175-I**	2480	2580
Nose Assembly	3/16"	99-3327	99-3327	Included	99-3303	99-3303	99-3303	Included	99-3303	99-3327
	3/16" & 1/4"	-	-	-	99-3487**	99-3487**	99-3487**	-	-	-
	1/4"	99-3328	99-3328	-	99-3305	99-3305	99-3305	-	99-3305	99-3328
	5/16"	99-3307	99-3307	-	-	-	-	-	-	99-3307

* Recommended

** Not recommended for high volume production.

Tooling Weight and Dimensions						
Model	Type	Weight	Length	Height	Width	
245	pneudraulic	8.8 lbs	8"	15.1"	4.7"	
246	pneudraulic	11.1 lbs	8.7"	15.1"	6.3"	
255	pneudraulic	8.8 lbs	7.1"	14.9"	4.9"	
256	pneudraulic	11.1 lbs	7.9"	14.9"	6.3"	
2015	pneudraulic	4.9 lbs	10.6"	12"	3.5"	
202	pneudraulic	5.1 lbs	8.6"	12.6"	4.4"	
2024*	pneudraulic	5.75 lbs	8.9"	12.6"	4.4"	
2025	pneudraulic	5.8 lbs	8.5"	12.7"	4.4"	
AK175-I**	pneudraulic	28 oz.	7.2"	6"	1"	
2480	hydraulic	2.2 lbs	8.2"	6.6"	1.9"	
2580	hydraulic	6.6 lbs	8.5"	7.3"	2.2"	

* Recommended

** Not recommended for high volume production.



Model 2025



Model AK175-I



Model 2480



For more than 120 years, the name Alcoa has been recognized worldwide as a strong leader in product quality and customer support. These strengths are found in every product manufactured for Alcoa Fastening Systems, offering the greatest breadth and depth of fastening system solutions in the industry.

Alcoa Fastening Systems (AFS) maintains company offices in the United States and in many other countries. AFS fastener distributors are also located in many of the world's industrial centers, where they provide a ready source of AFS fasteners, installation tools, tool parts, and application assistance.

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