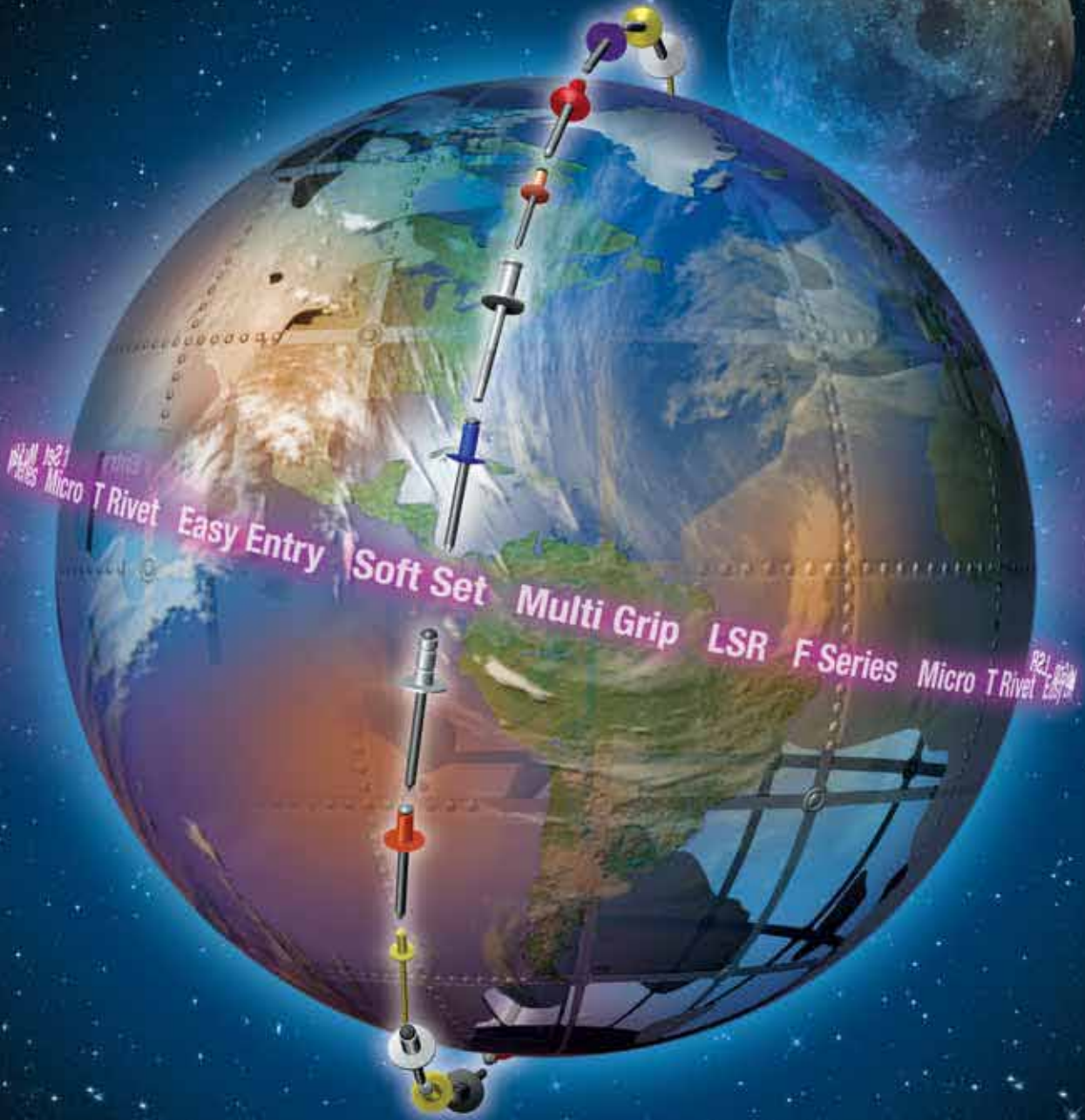


POP[®]

Blind Riveting Systems



**Emhart[®]
Teknologies**

POP[®]

www.emhart.com

Creating the Future Worldwide.



At Emhart Teknologies

, creating the future is about growth, about change and about taking risks. It is who we are and what we do. Our focus is to reduce the overall product assembly costs of our customers by anticipating needs and meeting those needs with technology and market-driven solutions.

Emhart is a global leader in the design and creation of unique assembly technologies, delivering depth and breadth of service and product through a flexible, cross-functional global organization.

Owning The Customer's Total Experience™

We provide every customer with the capability to satisfy every aspect of fastening and assembly technology. From concept through installation, around the corner and around the globe, Emhart develops and delivers solutions for challenging assembly applications.

Technology Optimization

Emhart has the ability to objectively match customer priorities, applications and manufacturing environment with the most appropriate assembly technology and fastening systems. We provide this capability through Application Engineers, and Mobile, Stationary and Virtual Innovation Centers located around the world. Each is electronically linked, capable of sharing application data and new design concepts with each other as well as with our customers.

System Integration

Emhart provides technological solutions in over 100 different countries. For each of these countries and for every application, we deliver innovative, integrated systems solutions from concept and design through system integration, worldwide.

Product Consultancy

Emhart employs Application Analysis and Value Engineering to demonstrate how our technology can enhance the assembly process, and Value Analysis to detail the cost/benefit relationship of applying our technologies.

Innovative Services

Emhart is infused with the spirit and culture of innovation. From our **Stationary Innovation Centers** to our unique **Mobile Innovation Centers**, Emhart has built a worldwide service and technology infrastructure to support our customers, 24 hours a day, seven days a week.



DODGE® GRIPCO® HELI-COIL® NPR® PARKER-KALON® POP® TUCKER® WARREN®

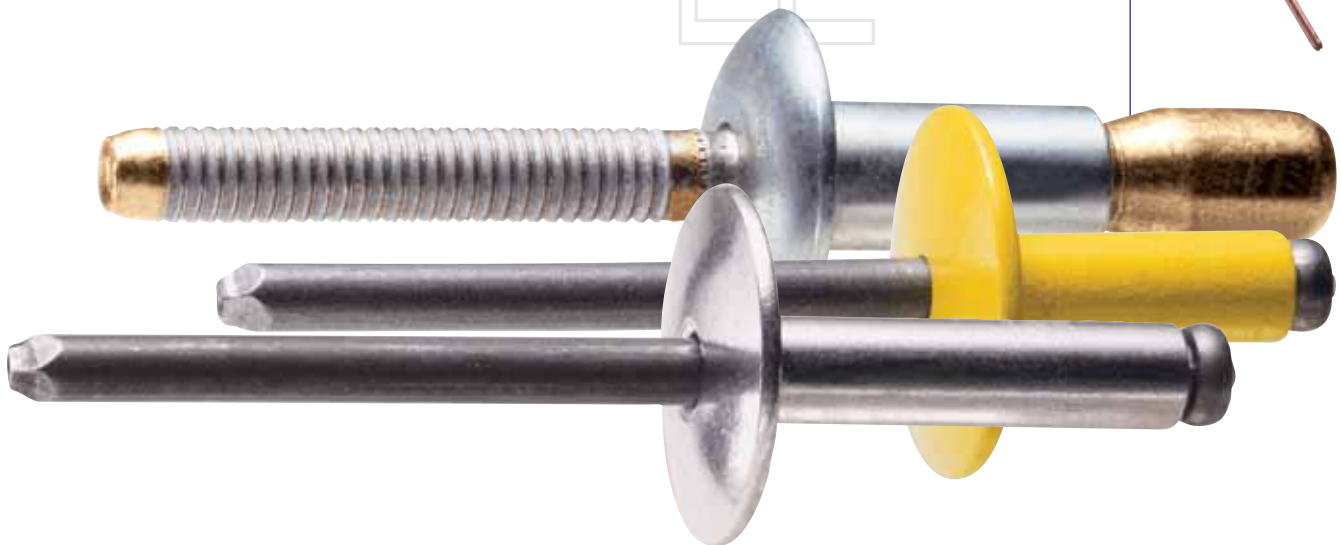


POP[®] Blind Rivets

POP[®] is not only the market leading innovator in blind rivets but also the original blind rivet manufacturer. Focused on value-added assembly technology, the extensive POP[®] product portfolio has been developed to increase the efficiencies within your manufacturing operations.

POP[®] remains committed to furthering our technology base and supporting the introduction of product breakthroughs. Extensive experience provides our customers with easy access to assembly solutions and to our dedicated Application Engineers who are readily available to offer application specific product development solutions.

Our customers can be assured that they will receive total support from a full service company. We believe in establishing strong, long term relationships. Our intention is to make certain that every effort is made to ensure that we continue to build on that relationship by exceeding our customers expectations with dedicated, quality service.



POP® Table of Contents

A Complete Range of Blind Riveting Products and Technical Information

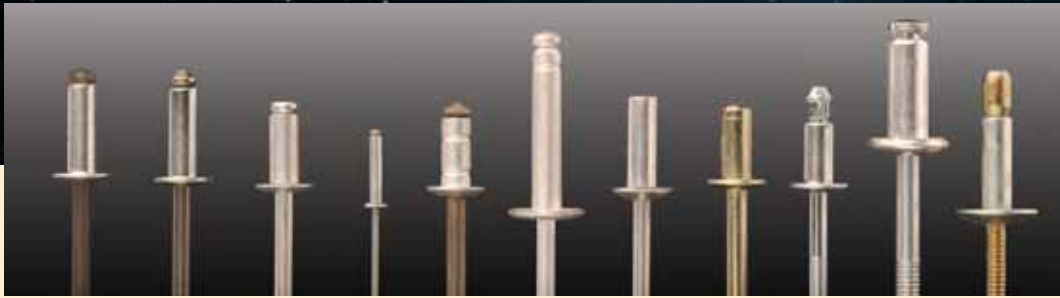
Body Style	Body Material	Mandrel Material	Head Style			Page
						
Open End	5052 Aluminum	Aluminum	●	●	●	8-10
	5056 Aluminum	Steel	●	●	●	10-13
	C1006-C1010 Steel	Steel	●	●	●	13-16
	300 Series Stainless Steel	Stainless Steel	●	●	●	17-18
	300 Series Stainless Steel	Steel	●	●	●	19-20
	110 Copper	Steel	●			20
	400 Monel	Steel	●		●	21-22
	400 Monel	Stainless Steel	●		●	23-24
Easy Entry	5056 Aluminum	Steel	●	●		25
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Soft Set	1100 Aluminum	Aluminum	●			26
Micro	5154 Aluminum	Steel	●			27
Multi Grip™	1100 Aluminum	Aluminum	●	●		28
	5052 Aluminum	Steel	●	●	●	28-30
	5052 Aluminum	Stainless Steel	●	●	●	30
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Closed End	1100 Aluminum	Aluminum	●			33
	5056 Aluminum	Steel	●	●	●	34-36
	C1002 Steel	Steel	●			37
	5056 Aluminum	Stainless Steel	●			37
	300 Series Stainless Steel	Stainless Steel	●			38
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T Rivets	5056 Aluminum	Steel	●	●		43
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As a result of our continuous design improvement, "POP" fastening products are subject to modifications. Technical data and drawings are available for any specific products upon request.

POP® Brand Rivets

Anatomy of the POP® Blind Rivet



Rivet Body Styles from left to right, Open End, Easy Entry, Soft Set, Micro, Multi Grip, LSR, Closed End, F Series, Self Plugger, T Rivet, Ultra Grip

The rivet body style you choose should possess all the necessary features and benefits unique to your specific application. Given the expansive list of options POP® offers, you can expect exceptional versatility and therefore design flexibility. Fastening with POP® Brand rivets will provide any number of innovative advantages, from faster assembly, to vibration proof riveting, to higher strength joints, to tamper proof capability and no surface marring. As the industry leader, Emhart is uniquely positioned to offer consistently lower in-place costs. Further, you can depend on both our Sales and Engineering teams who are always available to assist in your rivet selection process.



Custom Rivet Capabilities

Over and above our published rivet selection, POP® is poised as a unique resource that is both technology driven and customer oriented. As such, when you find the norm won't handle your unique circumstances, consult with our Application Engineers for your custom fastening solutions. Our capabilities include unique body features, exotic finishes and automation-friendly designs.



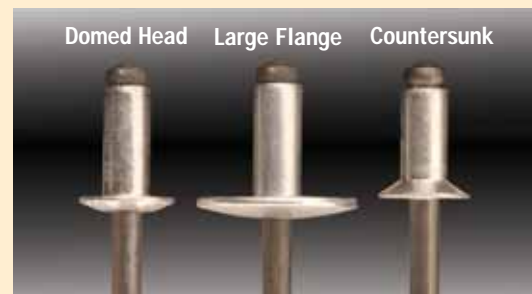
Specialized Rivet Finishes

A state of the art special rivet finish may solve either a strictly functional need or perhaps provide the necessary aesthetic characteristics for your application. From corrosion prevention to matching the most exotic of colors, POP® is committed to provide the complete solution to any application challenge. Utilize our Customer Service department, our Engineers and/or your local Sales Representative to supply you with our list of available finishes.



Rivet Materials

There is always an optimum solution to the question of what material should be considered when selecting the appropriate riveting system. The rivet assembly, both body and mandrel, can be of the same material or a composite of two different materials. Among the materials we manufacture are aluminum, steel, stainless steel, copper and monel. Should there be any assistance needed in determining the proper combination of materials, please contact us.



Rivet Head Styles

Your application will determine the most appropriate POP® rivet head style to be used. The Domed Head is the most versatile and commonly specified. This style will provide the necessary bearing surface to retain all but the extremely soft or brittle materials. In contrast, the Large Flange POP® rivets have twice the under-head bearing surface of comparable domed head rivets and are designed for applications where soft or brittle materials must be assembled to a rigid backing material. The Countersunk POP® rivet has a 120° head design and is specified whenever a flush surface is required.

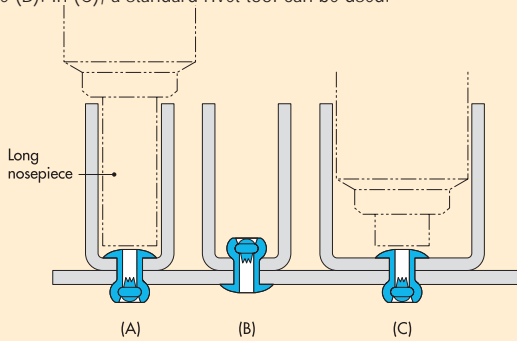
Emhart Technologies not only offers the services of our Applications Engineers to assist our customers, but also extends an invitation to visit our multi-million dollar **Shelton Innovation Center**. We also can bring our **Mobile Innovation Center** to you or you can simply tour our **Virtual Innovation Center** on the Emhart website: www.emhart.com. Emhart has built a worldwide service and technology infrastructure to support you 24 hours a day, 7 days a week.

POP® Design Guidelines

Relationship between Rivet and Workpiece

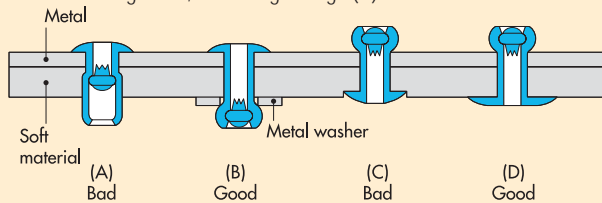
Channel Material

If the tool does not reach the bottom of a channel material, use a long nosepiece (A). The maximum application diameter of the long nosepiece is the same as the diameter of the rivet flange. The maximum length is 20mm. In this case, use a long mandrel rivet. If method (A) is not applicable, set the rivet from the opposite side (B). In (C), a standard rivet tool can be used.



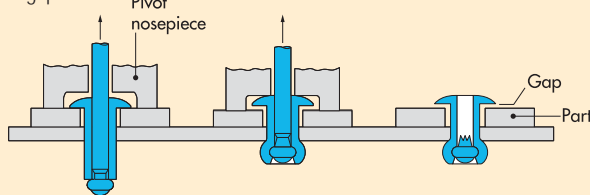
Soft to Hard Materials

When a standard type rivet is used to set soft materials onto hard materials, fracture of the soft material should be prevented when setting (A). When the soft material is positioned at the secondary side, use a metal washer (B). When it is located at the flange side, use a large flange (D) to distribute the stress.



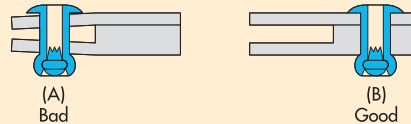
Pivot Fastening

When it is required to rotate a fastened part, use a pivot nosepiece to provide a small gap.



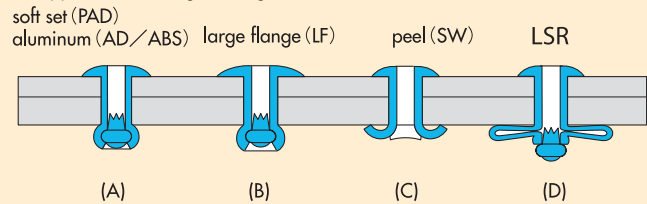
Gap Fastening

POP® Brand Rivets are widely used in assembling extruded sections because of the limited access and clearances involved. As shown in (A), avoid setting against unsupported internal sections, which results in poor rigidity. Select (B) to insure success.



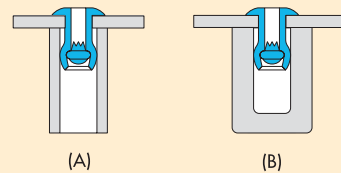
Plastic Material

Select soft set aluminum rivets (A), large flange rivets (B), Peel rivets (C) or LSR rivets (D) according to strength of resin workpiece. The standard types are also applicable to a high-strength resin material.



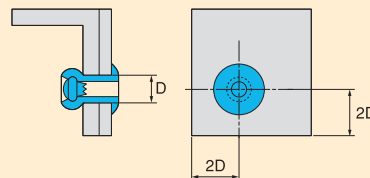
Fastening in Blind Hole

Taking advantage of the swollen rivet diameter after setting, it is possible to apply the rivet to a straight-through hole (A) or a blind hole (B).



Edge Distance

A distance of two times the rivet diameter (D) or more from the rivet center to the end of the workpiece is recommended to avoid material fracture.



Consult our Application Engineers to develop your design criteria.

POP® Design Guidelines

Galvanic Compatibility of Various Metals

When two metals are in electrical contact in the presence of an electrolyte, galvanic corrosion is possible. Metals farthest apart in a galvanic series will corrode most rapidly. Galvanic corrosion may be produced by two entirely different metals or two similar metals differing only slightly in

chemical composition or physical condition. To help prevent corrosion cells from forming, all cracks, crevices, sharp bends, scale and other surface deposits between interface areas should be avoided when possible.

Base Metal	Fastener Metal					
	Zinc and Galvanized Steel	Aluminum and Aluminum Alloys	Steel and Cast Iron	Copper and Monel	Martensitic Stainless Type 410	Austenitic Stainless Types 302/304 303, 305
Zinc and Galvanized Steel	■	■	■	■	■	■
Aluminum and Aluminum Alloys	■	■	■	■	Not Recommended	■
Steel and Cast Iron	■	■	■	■	■	■
Terne (Lead-Tin) Plated Steel Sheets	■	■	■	■	■	■
Copper and Monel	■	■	■	■	■	■
Ferritic Stainless Steel (Type 430)	■	■	■	■	■	■
Austenitic Stainless Steel (Types 302/304)	■	■	■	■	■	■

■ The corrosion of the base metal is *not* increased by the fastener.

■ The corrosion of the base metal is *marginally* increased by the fastener.

■ The corrosion of the base metal may be *markedly* increased by the fastener material.

■ The corrosion of the base metal is *not* increased by the fastener.

■ The corrosion of the base metal is *not* increased by the fastener.
The corrosion of the fastener *is* increased by the base metal.

■ The corrosion of the base metal is *marginally* increased by the fastener.
The plating on the fastener is *rapidly consumed*, leaving the the base fastener metal.

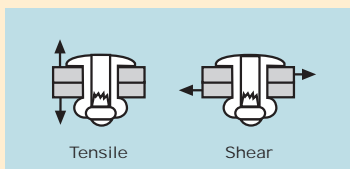
The plating on the fastener is *rapidly consumed*, leaving the bare fastener metal.
The corrosion of the fastener *is* increased by the base metal.

Note: Surface treatment and environment can change activity.

Primary Selection Criteria

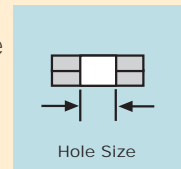
Tensile/Shear Performance

The tensile and shear figures quoted are indicative of the performance of the rivet. Actual performance will depend on work-piece material type and thickness.



Hole Size

This is the minimum recommended diameter of the drilled/punched hole, which should be burr free.



Joint Strength

First assess the tensile and shear loads the riveted joint must withstand in service.

The correct number and spacing of fastenings with a body of the correct diameter and material will achieve this performance specification.

As a guide to spacing, the distance between rivet centers should ideally be three times the body diameter. This factor can be increased or decreased, depending upon joint load, but testing is recommended before final production commitments are made. Rivets should also be set at a minimum of two diameters away from the edge of the work.

Actual performance will depend on component materials and thicknesses.

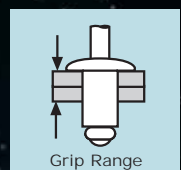
Joint Thickness

Having identified a rivet of the correct strength, calculate the combined thickness of the components to be joined.

An allowance should be included for any intermediate layer such as a sealant and/or for any gap between materials prior to setting. Then select the rivet length accommodating the calculated "grip".

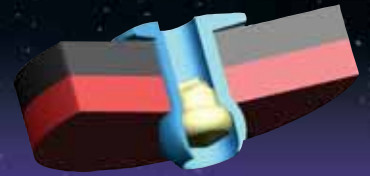
Recommended Grip Range





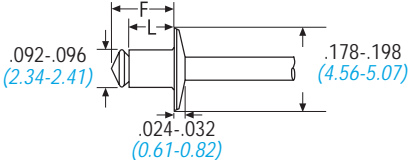
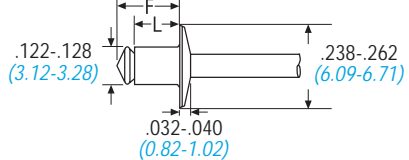
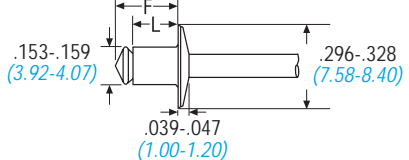
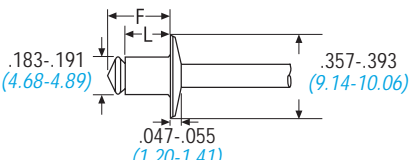
This is the recommended thickness range over which the body length will consistently provide a good setting in a hole of the specified diameter.



POP® Brand Open End Rivets

- Strong, low cost fastenings.
- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.

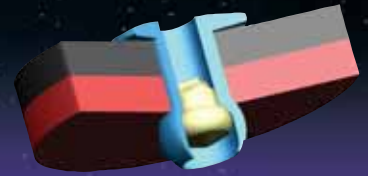


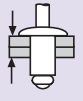



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5052 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain								
3/32 (2.4)	.225 (5.7)	.325 (8.3)	.032-.125 (.8-3.2)	AD 32 ABS	.097-.100 (2.46-2.54)		85 (378)	135 (600)
	.350 (8.9)	.450 (11.4)	.126-.250 (3.2-6.4)	AD 34 ABS				
	.475 (12.1)	.575 (14.6)	.251-.375 (6.4-9.5)	AD 36 ABS				
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (.8-1.6)	AD 41 ABS	.129-.133 (3.30-3.40)		155 (689)	235 (1045)
	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	AD 42 ABS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	AD 43 ABS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	AD 44 ABS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	AD 45 ABS				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	AD 46 ABS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.6-12.7)	AD 48 ABS				
	.750 (19.1)	.870 (22.1)	.501-.625 (12.7-15.9)	AD 410 ABS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	AD 52 ABS	.160-.164 (4.06-4.17)		225 (1000)	350 (1556)
	.338 (8.6)	.478 (12.1)	.126-.187 (3.2-4.8)	AD 53 ABS				
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AD 54 ABS				
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	AD 56 ABS				
	.650 (16.5)	.790 (20.1)	.376-.500 (9.6-12.7)	AD 58 ABS				
	.775 (19.7)	.915 (23.2)	.501-.625 (12.7-15.9)	AD 510 ABS				
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	AD 62 ABS	.192-.196 (4.88-4.98)		315 (1401)	500 (2224)
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	AD 64 ABS				
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	AD 66 ABS				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.6-12.7)	AD 68 ABS				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.7-15.9)	AD 610 ABS				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	AD 612 ABS				
	1.05 (26.7)	1.210 (30.7)	.751-.875 (19.1-22.2)	AD 614 ABS				
	1.175 (29.9)	1.335 (33.9)	.876-1.00 (22.3-25.4)	AD 616 ABS				

POP® Brand

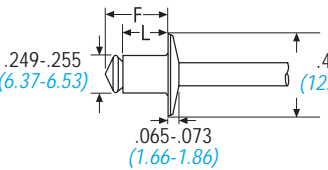
Open End Rivets

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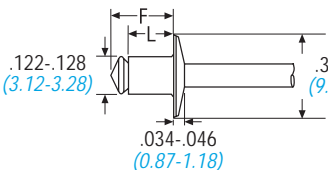
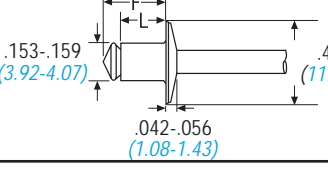
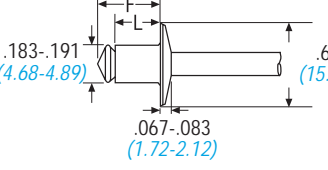


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In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)

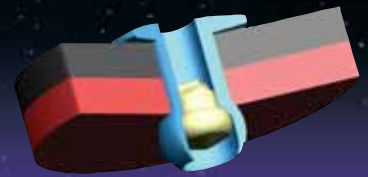
5052 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain





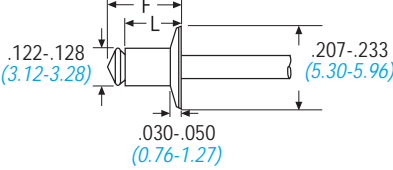
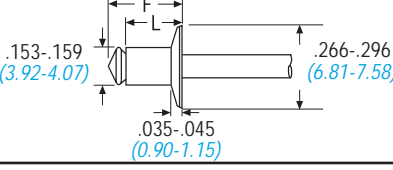
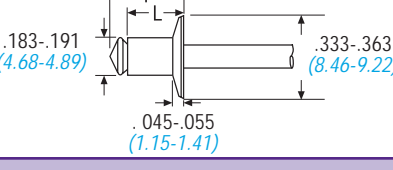
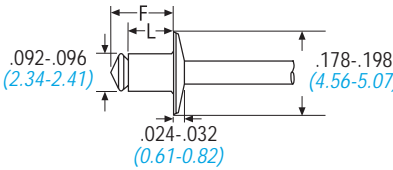
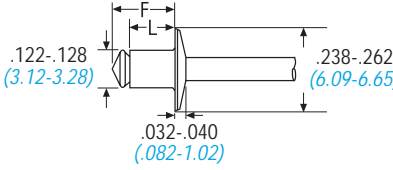
1/4 (6.4)	.350 (8.9)	.585 (14.9)	.062-.150 (1.5-3.8)	AD 82 ABS	.257-.261 (6.53-6.63)		600 (2669)	750 (3336)
	.475 (12.1)	.710 (18.0)	.063-.250 (1.6-6.4)	AD 84 ABS				
	.600 (15.2)	.835 (21.2)	.251-.375 (6.4-9.5)	AD 86 ABS				
	.725 (18.4)	.960 (24.4)	.376-.500 (9.5-12.7)	AD 88 ABS				
	.850 (21.6)	1.085 (27.6)	.501-.625 (12.8-15.9)	AD 810 ABS				
	.975 (24.8)	1.210 (30.7)	.626-.750 (15.9-19.1)	AD 812 ABS				
	1.100 (27.9)	1.335 (33.9)	.751-.875 (19.1-22.2)	AD 814 ABS				
	1.225 (31.1)	1.460 (37.1)	.876-1.00 (22.2-25.4)	AD 816 ABS				

5052 Aluminum Body/Aluminum Mandrel – Large Flange – Finish: Plain/Plain

1/8 (3.2)	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	AD 42 ABS LF	.129-.133 (3.30-3.40)		155 (689)	235 (1045)
	.313 (7.9)	.433 (11.0)	.126-.187 (3.2-4.8)	AD 43 ABS LF				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	AD 44 ABS LF				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	AD 46 ABS LF				
5/32 (4.0)	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AD 54 ABS LF	.160-.164 (4.06-4.17)		225 (1000)	350 (1556)
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	AD 56 ABS LF				
	.650 (16.5)	.790 (20.1)	.376-.500 (9.5-12.7)	AD 58 ABS LF				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	AD 64 ABS LF	.192-.196 (4.88-4.98)		315 (1401)	500 (2224)
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	AD 66 ABS LF				
	.675 (17.1)	.835 (21.2)	.376-.500 (9.5-12.7)	AD 68 ABS LF				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	AD 610 ABS LF				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	AD 612 ABS LF				
	1.175 (29.8)	1.335 (33.9)	.876-1.000 (22.2-25.4)	AD 616 ABS LF				

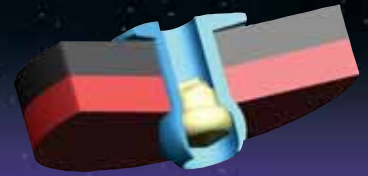
- Strong, low cost fastenings.
- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.

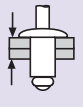



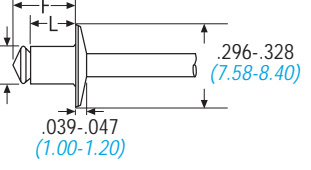
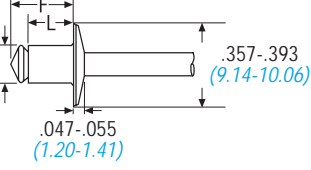
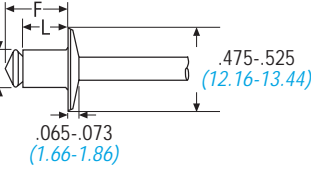


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5052 Aluminum Body/Aluminum Mandrel – 120° Countersunk – Finish: Plain/Plain								
1/8 (3.2)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	AK 42 ABS	.129-.133 (3.30-3.40)		155 (689)	235 (1045)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	AK 43 ABS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	AK 44 ABS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	AK 45 ABS				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	AK 46 ABS				
	.750 (19.1)	.870 (22.1)	.501-.625 (12.8-15.9)	AK 410 ABS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	AK 52 ABS	.160-.164 (4.06-4.17)		225 (1000)	350 (1556)
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AK 54 ABS				
	.525 (13.3)	.665 (16.9)	.313-.375 (7.9-9.5)	AK 56 ABS				
3/16 (4.8)	1.175 (29.9)	1.335 (33.9)	.876-1.00 (22.2-25.4)	AK 616 ABS	.192-.196 (4.88-4.98)		315 (1401)	500 (2224)
5056 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating								
3/32 (2.4)	.225 (5.7)	.325 (8.3)	.031-.125 (.8-3.2)	AD 32 BS	.097-.100 (2.46-2.54)		125 (378)	175 (778)
	.350 (8.9)	.450 (11.4)	.126-.250 (3.2-6.4)	AD 34 BS				
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (.8-1.6)	AD 41 BS	.129-.133 (3.30-3.40)		210 (934)	325 (1445)
	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	AD 42 BS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	AD 43 BS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.5)	AD 44 BS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.5-7.9)	AD 45 BS				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	AD 46 BS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.5-12.7)	AD 48 BS				
	.750 (19.1)	.870 (22.1)	.501-.625 (12.8-15.9)	AD 410 BS				

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Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)	
5056 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating									
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	AD 52 BS	.160-.164 (4.06-4.17)		340 (1512)	490 (2179)	
	.338 (8.6)	.478 (12.1)	.126-.187 (3.2-4.8)	AD 53 BS					
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AD 54 BS					
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	AD 56 BS					
	.650 (16.5)	.790 (20.1)	.376-.500 (9.5-12.7)	AD 58 BS					
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	AD 62 BS	.192-.196 (4.88-4.98)		445 (1979)	720 (3202)	
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	AD 64 BS					
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	AD 66 BS					
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	AD 68 BS					
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	AD 610 BS					
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	AD 612 BS					
	1.05 (26.7)	1.210 (30.7)	.751-.875 (19.1-22.2)	AD 614 BS					
	1.175 (29.9)	1.335 (33.9)	.876-1.00 (22.2-25.4)	AD 616 BS					
1/4 (6.4)	.475 (12.1)	.710 (18.0)	.063-.250 (1.6-6.4)	AD 84 BS	.257-.261 (6.53-6.63)		890 (3958)	1200 (5337)	
	.600 (15.2)	.835 (21.2)	.251-.375 (6.4-9.5)	AD 86 BS					
	.725 (18.4)	.960 (24.4)	.376-.500 (9.5-12.7)	AD 88 BS					
	.850 (21.6)	1.085 (27.6)	.501-.625 (12.8-15.9)	AD 810 BS					
	.975 (24.8)	1.210 (30.7)	.626-.750 (15.9-19.1)	AD 812 BS					
	1.225 (31.1)	1.460 (37.1)	.876-1.00 (22.2-25.4)	AD 816 BS					

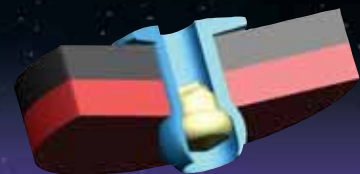






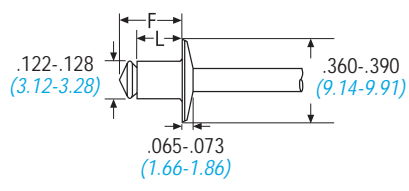
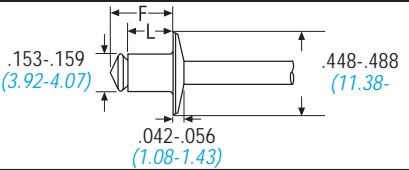
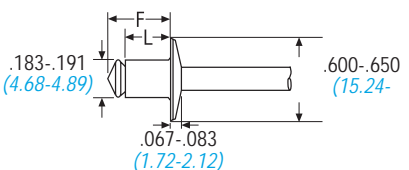
POP® Brand Rivets
In Hearth, Grill and
Patio Applications



POP® Brand Open End Rivets

- Strong, low cost fastenings.
- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.



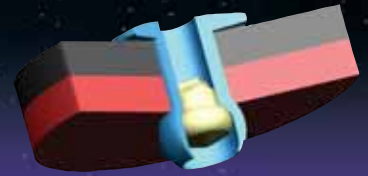
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5056 Aluminum Body/Steel Mandrel – Large Flange – Finish: Plain/Protective Coating								
1/8 (3.2)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	AD 42 BS LF	.129-.133 (3.30-3.40)		210 (934)	325 (1445)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	AD 43 BS LF				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	AD 44 BS LF				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	AD 45 BS LF				
5/32 (4.0)	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AD 54 BS LF	.160-.164 (4.06-4.17)		340 (1512)	490 (2179)
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	AD 64 BS LF	.192-.196 (4.88-4.98)		445 (1979)	720 (3202)
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	AD 66 BS LF				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	AD 68 BS LF				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	AD 610 BS LF				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	AD 612 BS LF				
	1.05 (26.7)	1.210 (30.7)	.751-.875 (19.1-22.2)	AD 614 BS LF				
	1.175 (29.9)	1.335 (33.9)	.876-1.00 (22.2-25.4)	AD 616 BS LF				

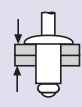



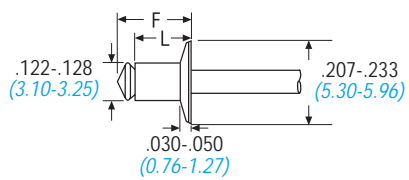
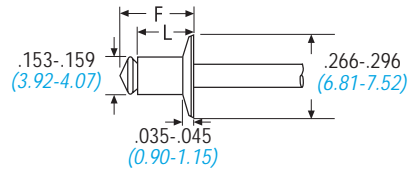
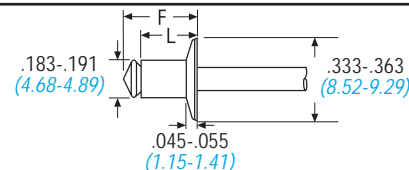
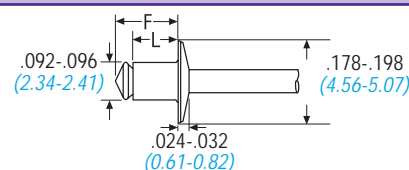
POP® Brand Rivets In Lighting Applications



POP® Brand Open End Rivets

- Strong, low cost fastenings.
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- Versatile for general fastening needs.
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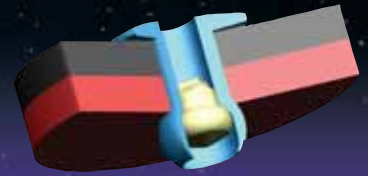
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5056 Aluminum Body/Steel Mandrel – 120° Countersunk – Finish: Plain/Protective Coating								
1/8 (3.2)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	AK 42 BS	.129-.133 (3.30-3.40)		210 (934)	325 (1445)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	AK 43 BS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	AK 44 BS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	AK 45 BS				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	AK 46 BS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.5-12.7)	AK 48 BS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	AK 52 BS	.160-.164 (4.06-4.17)		340 (1512)	490 (2179)
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	AK 54 BS				
	.52 (13.3)	.665 (16.9)	.313-.375 (7.9-9.5)	AK 56 BS				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	AK 64 BS	.192-.196 (4.88-4.98)		445 (1979)	720 (3202)
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	AK 66 BS				
C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating								
3/32 (2.4)	.225 (5.7)	.325 (8.3)	.032-.125 (.8-3.2)	SD 32 BS	.097-.100 (2.48-2.56)		150 (668)	205 (912)
	.350 (8.9)	.450 (11.4)	.126-.250 (3.2-6.4)	SD 34 BS				





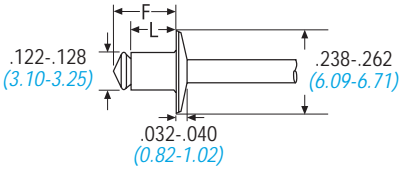
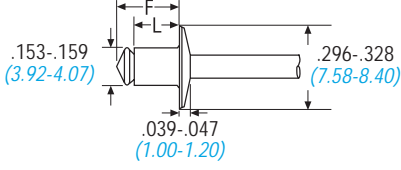
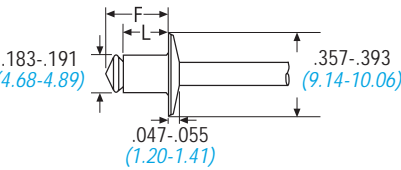
POP® Brand Rivets In Furniture Applications



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- Versatile for general fastening needs.
- Available in a range of sizes and materials.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating								
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (.8-1.6)	SD 41 BS	.129-.133 (3.30-3.40)		295 (1313)	425 (1891)
	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	SD 42 BS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SD 43 BS				
	.375 (9.5)	.495 (12.8)	.188-.250 (4.8-6.4)	SD 44 BS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	SD 45 BS				
	.500 (12.7)	.620 (15.8)	.313-.375 (7.9-9.5)	SD 46 BS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.5-12.7)	SD 48 BS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	SD 52 BS	.160-.164 (4.06-4.17)		410 (1825)	570 (2537)
	.338 (8.6)	.478 (12.1)	.126-.187 (3.2-4.8)	SD 53 BS				
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	SD 54 BS				
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	SD 56 BS				
	.650 (16.5)	.790 (20.1)	.376-.500 (9.5-12.7)	SD 58 BS				
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	SD 62 BS	.192-.196 (4.88-4.98)		590 (2626)	815 (3627)
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SD 64 BS				
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	SD 66 BS				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SD 68 BS				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SD 610 BS				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	SD 612 BS				
	1.05 (26.7)	1.210 (30.7)	.751-.875 (19.1-22.2)	SD 614 BS				
	1.175 (29.9)	1.335 (33.9)	.876-1.00 (22.2-25.4)	SD 616 BS				

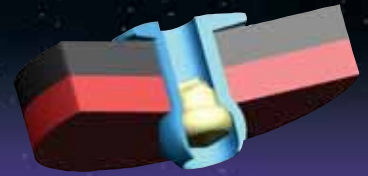






POP® Brand Rivets
In Heating,
Ventillation and Air
Conditioning
Applications



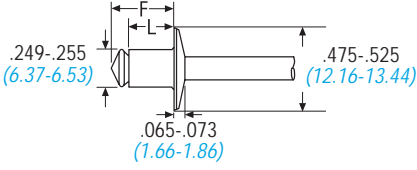
POP® Brand Open End Rivets

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- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.

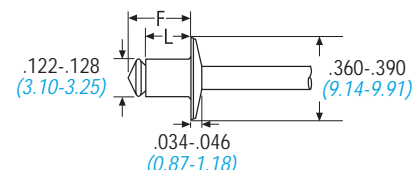
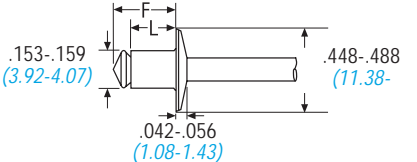


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)

C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating

1/4 (6.4)	.475 (12.1)	.710 (18.0)	.063-.250 (1.6-6.4)	SD 84 BS	.257-.261 (6.53-6.63)		1245 (5538)	1505 (6694)
	.600 (15.2)	.835 (21.2)	.251-.375 (6.4-9.5)	SD 86 BS				
	.725 (18.4)	.960 (24.4)	.376-.500 (9.5-12.7)	SD 88 BS				
	.850 (21.6)	1.085 (27.6)	.501-.625 (12.8-15.9)	SD 810 BS				
	.975 (24.8)	1.210 (30.7)	.626-.750 (15.9-19.1)	SD 812 BS				
	1.10 (27.9)	1.335 (33.9)	.751-.875 (19.1-22.2)	SD 814 BS				
	1.225 (31.1)	1.460 (37.1)	.876-1.00 (22.2-25.4)	SD 816 BS				

C1006-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Protective Coating

1/8 (3.2)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	SD 42 BS LF	.129-.133 (3.30-3.40)		295 (1313)	425 (1891)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SD 43 BS LF				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SD 44 BS LF				
5/32 (4.0)	.338 (8.6)	.478 (12.1)	.126-.187 (3.2-4.8)	SD 53 BS LF	.160-.164 (4.06-4.17)		410 (1825)	570 (2537)
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	SD 54 BS LF				
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	SD 56 BS LF				

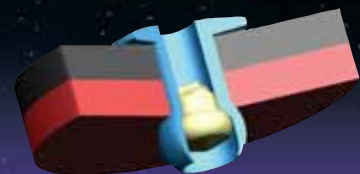
POP® Brand Rivets
In Building and
Construction Applications

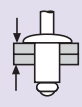



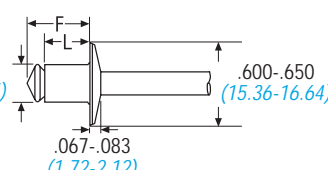
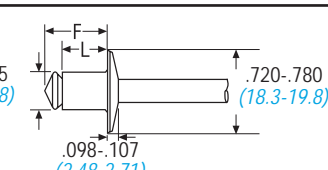
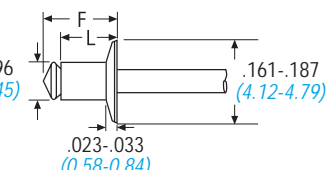
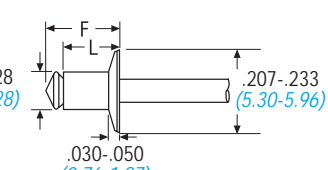
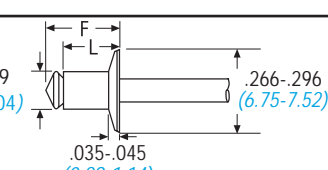
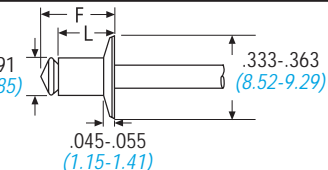


POP® Brand

Open End Rivets

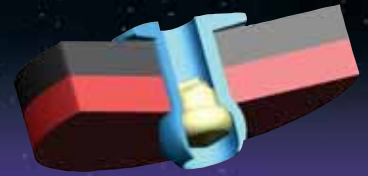
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



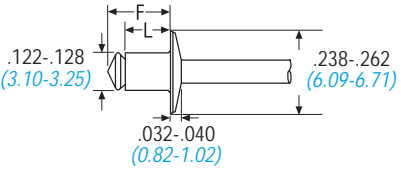
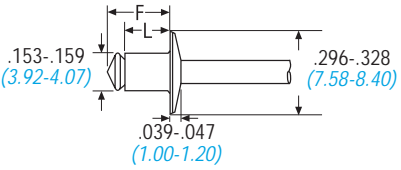
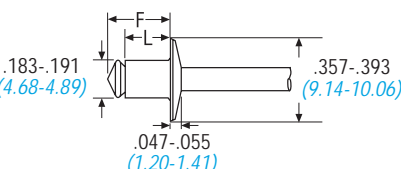


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)			Lbs. (N)
C1006-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Protective Coating								
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	SD 62 BS LF	.192-.196 (4.88-4.98)		590 (2626)	815 (3627)
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SD 64 BS LF				
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	SD 66 BS LF				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SD 68 BS LF				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SD 610 BS LF				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	SD 612 BS LF				
1.4 (6.4)	.600 (15.2)	.835 (21.2)	.251-.375 (6.4-9.5)	SD 86 BS LF	.257-.261 (6.53-6.63)		1245 (5538)	1505 (6694)
	.850 (21.6)	1.085 (27.6)	.501-.625 (12.7-15.8)	SD 810 BS LF				
	1.100 (27.9)	1.335 (33.9)	.751-.875 (19.1-22.2)	SD 814 BS LF				
C1006-C1010 Steel Body/Steel Mandrel – 120° Countersunk – Finish: Zinc/Protective Coating								
3/32 (2.4)	.225 (5.8)	.325 (8.3)	.063-.125 (1.6-3.2)	SK 32 BS	.097-.100 (2.46-2.54)		150 (668)	205 (912)
1/8 (3.2)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	SK 42 BS	.129-.133 (3.30-3.40)		295 (1313)	425 (1891)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SK 43 BS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SK 44 BS				
	.500 (12.7)	.620 (15.7)	.313-.375 (7.9-9.5)	SK 46 BS				
5/32 (4.0)	.650 (16.5)	.790 (20.1)	.376-.500 (9.6-12.7)	SK 58 BS	.160-.164 (4.06-4.17)		410 (1824)	570 (2537)
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SK 64 BS	.192-.196 (4.88-4.98)		590 (2626)	815 (3627)

POP® Brand Open End Rivets

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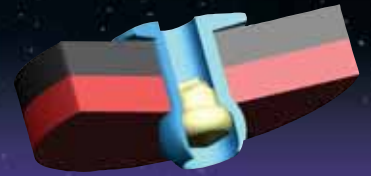
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
300 Series Stainless Steel Body/Stainless Steel Mandrel – Domed Head – Finish: Plain/Plain								
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (.8-1.6)	SSD 41 SSBS	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	SSD 42 SSBS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SSD 43 SSBS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SSD 44 SSBS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	SSD 45 SSBS				
	.500 (12.7)	.620 (15.8)	.313-.375 (7.9-9.5)	SSD 46 SSBS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.5-12.7)	SSD 48 SSBS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	SSD 52 SSBS	.160-.164 (4.06-4.17)		900 (4005)	1130 (5029)
	.338 (9.9)	.478 (12.1)	.126-.187 (3.2-4.8)	SSD 53 SSBS				
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	SSD 54 SSBS				
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	SSD 56 SSBS				
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	SSD 62 SSBS	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SSD 64 SSBS				
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	SSD 66 SSBS				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SSD 68 SSBS				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SSD 610 SSBS				
	1.17 (29.9)	1.335 (33.9)	.876-1.000 (22.3-25.4)	SSD 616 SSBS				





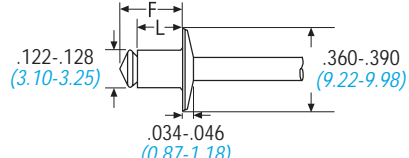
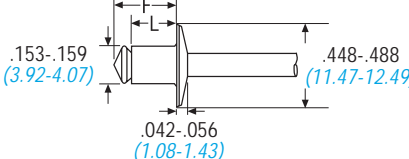
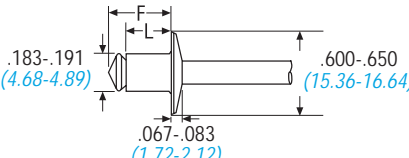
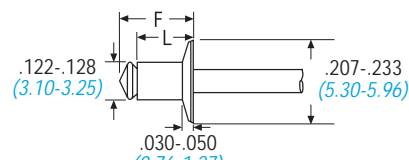
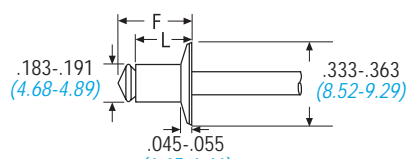
POP® Brand Rivets In Domestic Appliance Applications



POP® Brand Open End Rivets

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- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.



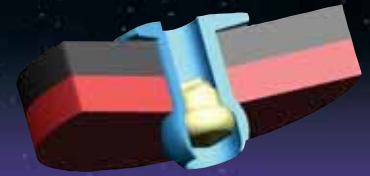
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
300 Series Stainless Steel Body/Stainless Steel Mandrel – Large Flange – Finish: Plain/Plain								
1/8 (3.2)	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	SSD 42 SSBS LF	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SSD 43 SSBS LF				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SSD 44 SSBS LF				
5/32 (4.0)	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	SSD 56 SSBS LF	.160-.164 (4.06-4.17)		900 (4005)	1130 (5029)
3/16 (4.8)	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SSD 68 SSBS LF	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SSD 610 SSBS LF				
	.925 (23.5)	1.085 (27.6)	.626-.750 (15.9-19.1)	SSD 612 SSBS LF				
300 Series Stainless Steel Body/Stainless Steel Mandrel – 120° Countersunk – Finish: Plain/Plain								
1/8 (3.2)	.275 (7.0)	.370 (9.4)	.063-.125 (1.6-3.2)	SSK 42 SSBS	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SSK 43 SSBS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SSK 44 SSBS				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SSK 64 SSBS	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SSK 68 SSBS				

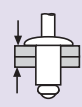



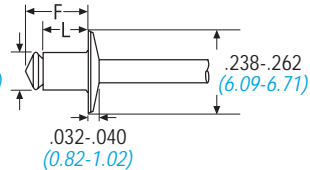
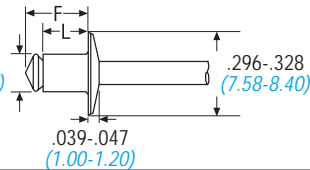
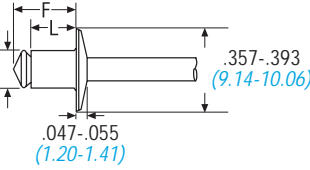
POP® Brand Rivets In Medical Devices and Equipment Applications



POP® Brand Open End Rivets

- Strong, low cost fastenings.
- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.



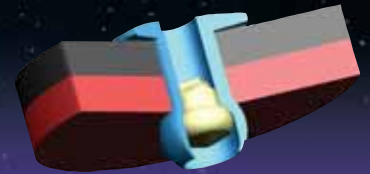
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)			In. (mm)
300 Series Stainless Steel Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating								
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (.8-1.6)	SSD 41 BS	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	SSD 42 BS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SSD 43 BS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SSD 44 BS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	SSD 45 BS				
	.500 (12.7)	.620 (15.8)	.313-.375 (7.9-9.5)	SSD 46 BS				
	.625 (15.9)	.745 (18.9)	.376-.500 (9.5-12.7)	SSD 48 BS				
5/32 (4.0)	.275 (7.0)	.415 (10.5)	.063-.125 (1.6-3.2)	SSD 52 BS	.160-.164 (4.06-4.17)		900 (4005)	1130 (5029)
	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	SSD 54 BS				
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	SSD 56 BS				
3/16 (4.8)	.300 (7.6)	.460 (11.7)	.063-.125 (1.6-3.2)	SSD 62 BS	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SSD 64 BS				
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	SSD 66 BS				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	SSD 68 BS				
	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SSD 610 BS				





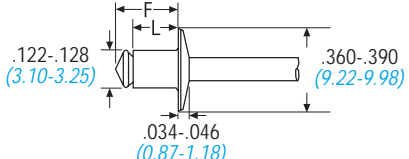
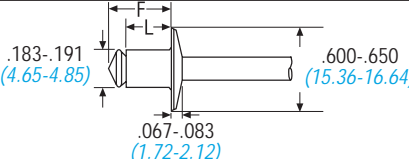
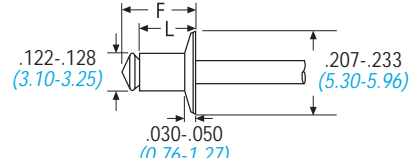
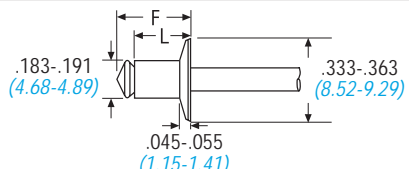
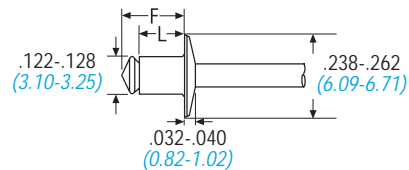
POP® Brand Rivets In Commercial Appliance Applications



POP® Brand Open End Rivets

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- Versatile for general fastening needs.
- Available in a range of sizes and materials.



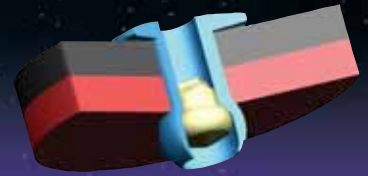
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
300 Series Stainless Steel Body/Steel Mandrel – Large Flange – Finish: Plain/Protective Coating								
1/8 (3.2)	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	SSD 42 BS LF	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	SSD 43 BS LF				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	SSD 44 BS LF				
3/16 (4.8)	.800 (20.3)	.960 (24.4)	.501-.625 (12.8-15.9)	SSD 610 BS LF	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
300 Series Stainless Steel Body/Steel Mandrel – 120° Countersunk – Finish: Plain/Protective Coating								
1/8 (3.2)	.275 (7.0)	.370 (9.4)	.063-.125 (1.6-3.2)	SSK 42 BS	.129-.133 (3.30-3.40)		550 (2448)	700 (3115)
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	SSK 64 BS	.192-.196 (4.88-4.98)		1000 (4450)	1375 (6119)
110 Copper Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating								
1/8 (3.2)	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	CD 42 BS	.129-.133 (3.30-3.40)		215 (957)	300 (1335)
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	CD 44 BS				
	.500 (12.7)	.620 (15.8)	.313-.375 (7.9-9.5)	CD 46 BS				





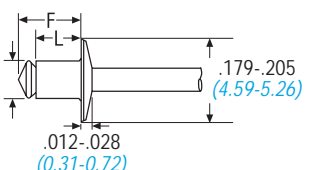
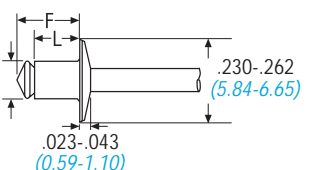
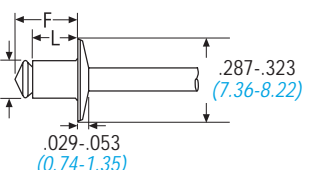
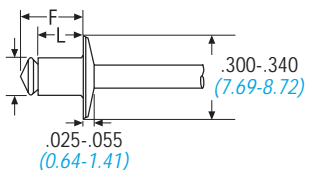
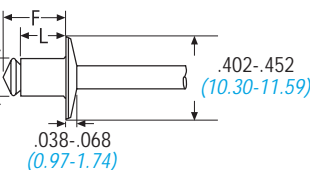


POP® Brand

Open End Rivets

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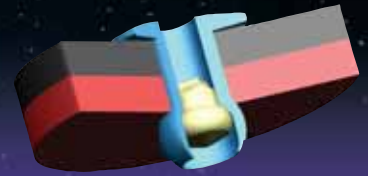






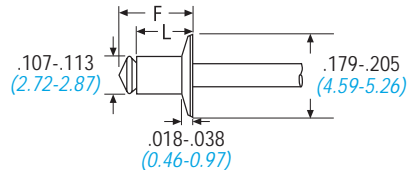
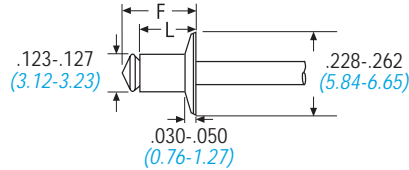
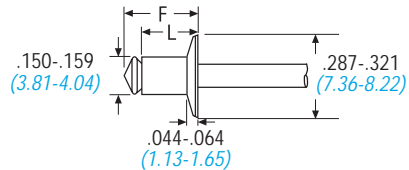
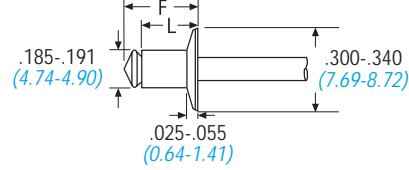
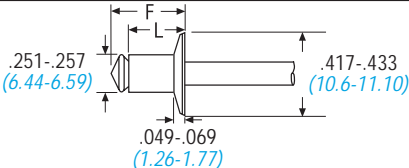
Nominal Rivet Diameter	(L)	(F)		Rivet Part Number				
	Nominal Rivet Body Length	Nominal Blind Side Protrusion						
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)
400 Monel Body/Steel Mandrel – Domed Head – Finish: Zinc/Zinc								
7/64 (2.4)	.195 (5.0)	.295 (7.5)	.020-.070 (.51-1.8)	MD 319 BS	.113-.117 (2.87-2.97)		258 (1150)	292 (1300)
	.217 (5.5)	.317 (8.1)	.070-.090 (1.8-2.3)	MD 321 BS				
1/8 (3.2)	.195 (5.0)	.315 (8.0)	0-.070 (0-1.8)	MD 419 BS	.129-.133 (3.30-3.40)		394 (1750)	562 (2500)
	.242 (6.2)	.362 (9.2)	.071-.121 (1.8-3.1)	MD 424 BS				
	.293 (7.5)	.413 (10.5)	.121-.168 (3.1-4.3)	MD 429 BS				
	.352 (9.0)	.472 (12.0)	.168-.227 (4.3-5.8)	MD 435 BS				
	.402 (10.3)	.522 (13.3)	.227-.277 (5.8-7.1)	MD 440 BS				
5/32 (4.0)	.242 (6.2)	.382 (9.7)	0-.098 (0-2.5)	MD 524 BS	.161-.165 (4.09-4.19)		675 (3000)	900 (4000)
	.305 (7.8)	.445 (11.3)	.098-.160 (2.5-4.1)	MD 530 BS				
	.375 (9.5)	.511 (13.0)	.160-.228 (4.1-5.8)	MD 537 BS				
	.405 (10.3)	.542 (13.8)	.228-.260 (5.8-6.6)	MD 540 BS				
	.453 (11.5)	.590 (15.0)	.260-.311 (6.6-7.9)	MD 545 BS				
3/16 (4.8)	.242 (6.2)	.402 (10.2)	0-.090 (0-2.3)	MD 624 BS	.192-.196 (4.88-4.98)		742 (3300)	844 (3750)
	.301 (7.7)	.461 (11.7)	.090-.148 (2.3-3.8)	MD 630 BS				
	.363 (9.3)	.523 (13.3)	.148-.199 (3.8-5.1)	MD 636 BS				
	.391 (10.0)	.551 (14.0)	.199-.227 (5.1-5.8)	MD 639 BS				
	.500 (12.8)	.660 (16.8)	.227-.336 (5.8-8.6)	MD 650 BS				
	.645 (16.5)	.805 (20.5)	.336-.488 (8.6-12.5)	MD 665 BS				
	.742 (19.0)	.902 (22.9)	.488-.586 (12.5-15.0)	MD 675 BS				
1/4 (6.4)	.500 (12.8)	.735 (18.7)	0-.297 (0-7.6)	MD 850 BS	.257-.261 (6.53-6.63)		1215 (5400)	1519 (6750)
	.703 (18.0)	.938 (23.8)	.297-.496 (7.6-12.7)	MD 870 BS				

POP® Brand

Open End Rivets

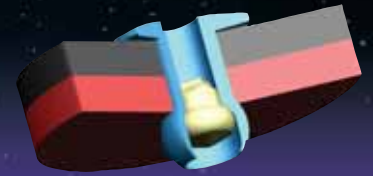
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



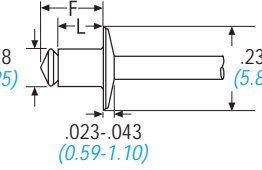
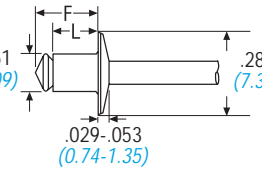
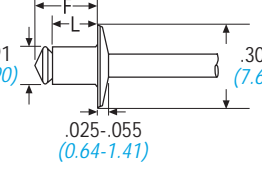


Nominal Rivet Diameter	(L)	(F)		Rivet Part Number				
	Nominal Rivet Body Length	Nominal Blind Side Protrusion						
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)
400 Monel Body/Steel Mandrel – 120° Countersunk – Finish: Zinc/Zinc								
7/64 (2.4)	.215 (5.5)	.315 (8.0)	0-.090 (0-2.3)	MK 319 BS	.113-.117 (2.87-2.97)		258 (1150)	292 (1300)
	.234 (6.0)	.334 (8.5)	.090-.109 (2.3-2.8)	MK 321 BS				
1/8 (3.2)	.227 (5.8)	.347 (8.8)	0-.098 (0-2.5)	MK 419 BS	.129-.133 (3.28-3.38)		394 (1750)	562 (2500)
	.273 (7.0)	.393 (10.0)	.098-.148 (2.5-3.8)	MK 424 BS				
	.332 (8.5)	.452 (11.5)	.148-.199 (3.8-5.1)	MK 429 BS				
	.391 (10.0)	.511 (13.0)	.199-.259 (5.1-6.6)	MK 435 BS				
	.438 (11.2)	.558 (14.2)	.259-.309 (6.6-7.9)	MK 440 BS				
5/32 (4.0)	.281 (7.2)	.421 (10.7)	0-.129 (0-3.3)	MK 524 BS	.153-.159 (3.88-4.04)		675 (3000)	900 (4000)
	.340 (8.7)	.480 (12.2)	.129-.188 (3.3-4.8)	MK 530 BS				
	.410 (10.5)	.550 (14.0)	.188-.258 (4.8-6.6)	MK 537 BS				
	.441 (11.3)	.581 (14.8)	.258-.289 (6.6-7.4)	MK 540 BS				
	.488 (12.5)	.628 (16.0)	.289-.336 (7.4-8.6)	MK 545 BS				
3/16 (4.8)	.290 (7.4)	.450 (11.4)	0-.120 (0-3.1)	MK 624 BS	.192-.196 (4.88-4.98)		742 (3300)	844 (3750)
	.383 (9.0)	.543 (13.8)	0-.180 (0-4.6)	MK 630 BS				
	.410 (10.5)	.570 (14.5)	.180-.227 (4.6-5.8)	MK 636 BS				
	.430 (11.0)	.590 (15.0)	.227-.259 (5.8-6.6)	MK 639 BS				
	.547 (14.0)	.707 (18.0)	.259-.367 (6.6-9.4)	MK 650 BS				
	.703 (18.0)	.863 (21.9)	.367-.516 (9.4-13.2)	MK 665 BS				
	.801 (20.5)	.961 (24.4)	.516-.617 (13.2-15.8)	MK 675 BS				
1/4 (6.4)	.565 (14.5)	.745 (19.1)	.151-.300 (3.8-7.6)	MK 850 BS	.257-.261 (6.53-6.63)		1215 (5400)	1519 (6750)
	.763 (19.4)	.885 (22.5)	.301-.500 (7.6-12.7)	MK 870 BS				

POP® Brand Open End Rivets

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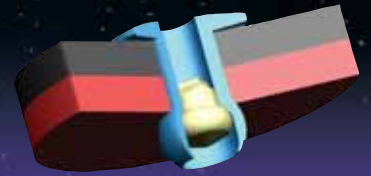
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
400 Monel Body/Stainless Steel Mandrel – Domed Head – Finish: Zinc/Plain								
1/8 (3.2)	.195 (5.0)	.315 (8.0)	0-.070 (0-1.8)	MD 419 SSBS	.129-.133 (3.28-3.38)		394 (1750)	562 (2500)
	.242 (6.2)	.362 (9.2)	.07-.121 (1.8-3.1)	MD 424 SSBS				
	.293 (7.5)	.413 (10.5)	.121-.168 (3.1-4.3)	MD 429 SSBS				
	.352 (9.0)	.472 (12.0)	.168-.227 (4.3-5.8)	MD 435 SSBS				
	.402 (10.3)	.522 (13.3)	.227-.277 (5.8-7.1)	MD 440 SSBS				
5/32 (4.0)	.242 (6.2)	.382 (9.7)	0-.098 (0-2.5)	MD 524 SSBS	.161-.165 (4.09-4.19)		675 (3000)	900 (4000)
	.305 (7.8)	.445 (11.3)	.098-.160 (2.5-4.1)	MD 530 SSBS				
	.375 (9.5)	.511 (13.0)	.160-.228 (4.1-5.8)	MD 537 SSBS				
	.405 (10.3)	.542 (13.8)	.228-.260 (5.8-6.6)	MD 540 SSBS				
	.453 (11.5)	.590 (15.0)	.260-.311 (6.6-7.9)	MD 545 SSBS				
3/16 (4.8)	0.242 (6.2)	.402 (10.2)	0-.090 (0-2.3)	MD 624 SSBS	.192-.196 (4.88-4.98)		742 (3300)	843 (3750)
	.301 (7.7)	.461 (11.7)	.090-.148 (2.3-3.8)	MD 630 SSBS				
	.363 (9.3)	.523 (13.3)	.148-.199 (3.8-5.1)	MD 636 SSBS				
	.391 (10.0)	.551 (14.0)	.199-.227 (5.1-5.8)	MD 639 SSBS				
	.500 (12.8)	.660 (16.8)	.227-.336 (5.8-8.6)	MD 650 SSBS				
	.645 (16.5)	.805 (20.5)	.336-.488 (8.6-12.5)	MD 665 SSBS				
	.742 (19.0)	.902 (22.9)	.488-.586 (12.5-15.0)	MD 675 SSBS				





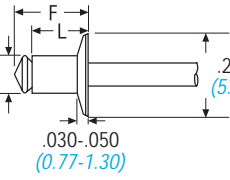
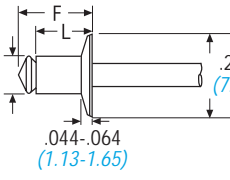
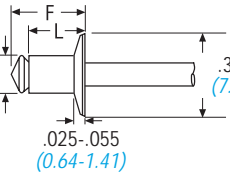
POP® Brand Rivets In Lawn And Garden Applications



POP® Brand Open End Rivets

- Strong, low cost fastenings.
- Ideal for wide range of applications.
- Versatile for general fastening needs.
- Available in a range of sizes and materials.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
400 Monel Body/Stainless Steel Mandrel – 120° Countersunk – Finish: Zinc/Plain								
1/8 (3.2)	.227 (5.8)	.347 (8.8)	0-.098 (0-2.5)	MK 419 SSBS	.129-.133 (3.28-3.38)	 .123-.127 (3.15-3.28) .228-.244 (5.80-6.20) .030-.050 (0.77-1.30)	394 (1750)	562 (2500)
	.273 (7.0)	.393 (10.0)	.098-.148 (2.5-3.8)	MK 424 SSBS				
	.332 (8.5)	.452 (11.5)	.148-.199 (3.8-5.1)	MK 429 SSBS				
	.391 (10.0)	.511 (13.0)	.199-.259 (5.1-6.6)	MK 435 SSBS				
	.438 (11.2)	.558 (14.2)	.259-.309 (6.6-7.9)	MK 440 SSBS				
5/32 (4.0)	.281 (7.2)	.421 (10.7)	0-.129 (0-3.3)	MK 524 SSBS	.161-.165 (4.09-4.19)	 .154-.161 (3.90-4.09) .290-.324 (7.36-8.23) .044-.064 (1.13-1.65)	675 (3000)	900 (4000)
	.340 (8.7)	.480 (12.2)	.129-.188 (3.3-4.8)	MK 530 SSBS				
	.410 (10.5)	.550 (14.0)	.188-.258 (4.8-6.6)	MK 537 SSBS				
	.441 (11.3)	.581 (14.8)	.258-.289 (6.6-7.4)	MK 540 SSBS				
	.488 (12.5)	.628 (16.0)	.289-.336 (7.4-8.6)	MK 545 SSBS				
3/16 (4.8)	.383 (9.0)	.543 (13.8)	0-.180 (0-4.6)	MK 630 SSBS	.192-.196 (4.88-4.98)	 .185-.191 (4.70-4.88) .300-.330 (7.85-8.40) .025-.055 (0.64-1.41)	742 (3300)	843 (3750)
	.410 (10.5)	.570 (14.5)	.180-.227 (4.6-5.8)	MK 636 SSBS				
	.430 (11.0)	.590 (15.0)	.227-.259 (5.8-6.6)	MK 639 SSBS				
	.547 (14.0)	.707 (18.0)	.259-.367 (6.6-9.4)	MK 650 SSBS				
	.703 (18.0)	.863 (21.9)	.367-.516 (9.4-13.2)	MK 665 SSBS				
	.801 (20.5)	.961 (24.4)	.516-.617 (13.2-15.8)	MK 675 SSBS				

POP® Brand Rivets In Storage and Handling Applications

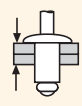


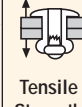
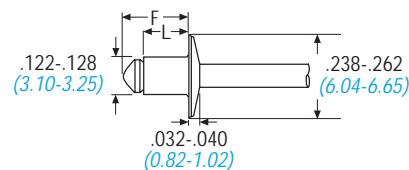
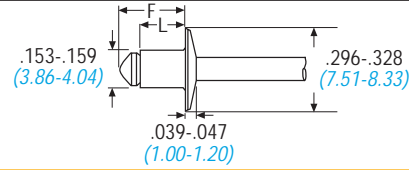
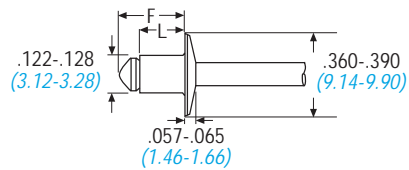
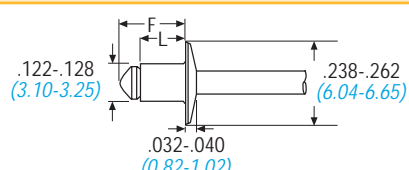
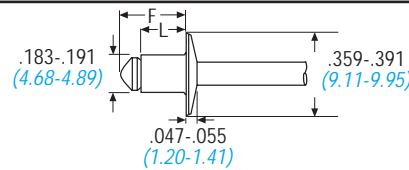
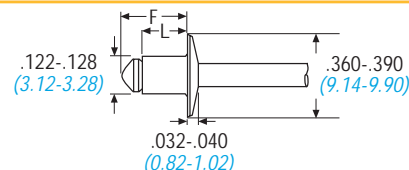


POP® Brand

Easy Entry Rivets

- Aligns odd shaped and misaligned holes with a unique mandrel head design.
- Large expansion capabilities for strong, tight fit.
- Increases productivity while reducing assembly time.

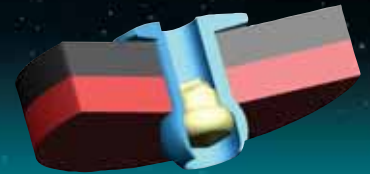






Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)			In. (mm)
5056 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating								
1/8 (3.2)	.250 (6.4)	.415 (10.5)	.031-.094 (.8-2.4)	EAD 42 BS	.129-.133 (3.28-3.38)		210 (935)	325 (1446)
	.313 (8.0)	.478 (12.1)	.095-.156 (2.4-4.0)	EAD 43 BS				
	.375 (9.5)	.540 (13.7)	.157-.218 (4.0-5.5)	EAD 44 BS				
5/32 (4.0)	.400 (10.2)	.565 (14.4)	.188-.218 (4.8-5.5)	EAD 54 BS	.160-.164 (4.06-4.17)		340 (1513)	490 (2181)
5056 Aluminum Body/Steel Mandrel – Large Flange – Finish: Plain/Protective Coating								
1/8 (3.2)	.375 (9.5)	.540 (13.7)	.157-.218 (4.0-5.5)	EAD 44 BS LF	.129-.133 (3.28-3.38)		210 (935)	325 (1446)
C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating								
1/8 (3.2)	.250 (6.4)	.415 (10.5)	.031-.094 (.8-2.4)	ESD 42 BS	.129-.133 (3.28-3.38)		295 (1313)	425 (1891)
	.313 (8.0)	.478 (12.1)	.095-.156 (2.4-4.0)	ESD 43 BS				
	.375 (9.5)	.540 (13.7)	.157-.218 (4.0-5.5)	ESD 44 BS				
3/16 (4.8)	.425 (10.8)	.660 (16.8)	.126-.218 (3.2-5.5)	ESD 64 BS	.192-.196 (4.88-4.98)		590 (2626)	815 (3627)
	.550 (14.0)	.785 (19.9)	.251-.343 (6.4-8.7)	ESD 66 BS				
C1006-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Protective Coating								
1/8 (3.2)	.375 (9.5)	.540 (13.7)	.157-.218 (4.0-5.6)	ESD 44 BS LF	.129-.133 (3.28-3.38)		295 (1313)	425 (1891)

POP® Brand

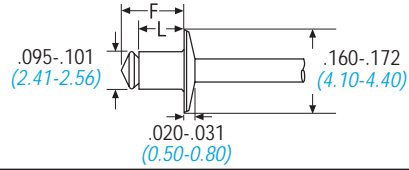
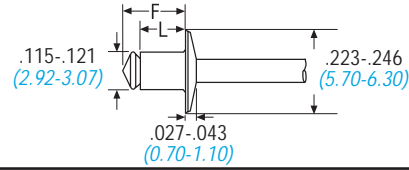
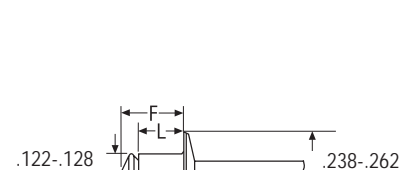
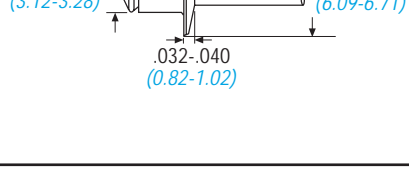
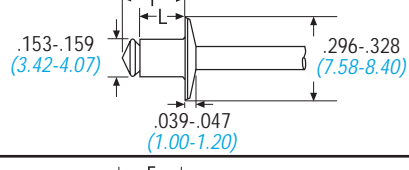
Soft Set Rivets

- Designed for soft or brittle materials.
- 1100 Aluminum Alloy.
- Low clamping force.
- Available in 3/32" thru 3/16".
- Low cost.

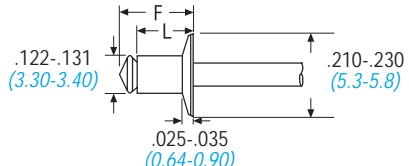


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)

1100 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain

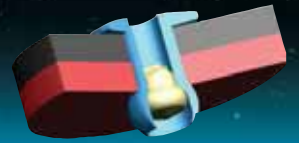
.098 (2.5)	.287 (7.3)	.421 (10.7)	.126-.189 (3.2-4.8)	PAD 25M3 ABS	.100-.104 (2.54-2.64)		60 (270)	74 (330)
	.350 (8.9)	.484 (12.3)	.189-.252 (4.8-6.4)	PAD 25M4 ABS				
	.448 (11.4)	.583 (14.8)	.252-.315 (6.4-8.0)	PAD 25M5 ABS				
.118 (3.0)	.315 (8.1)	.492 (12.5)	.126-.189 (3.2-4.8)	PAD 30M3 ABS	.120-.124 (3.05-3.15)		69 (310)	94 (420)
	.385 (9.8)	.559 (14.2)	.189-.252 (4.8-6.4)	PAD 30M4 ABS				
	.456 (11.6)	.630 (16.0)	.252-.315 (6.4-8.0)	PAD 30M5 ABS				
1/8 (3.2)	.188 (4.8)	.308 (7.8)	.032-.062 (1.1-1.6)	PAD 41 ABS	.129-.133 (3.28-3.38)		65 (289)	85 (378)
	.250 (6.4)	.370 (9.4)	.063-.125 (1.6-3.2)	PAD 42 ABS				
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	PAD 43 ABS				
	.375 (9.5)	.495 (12.8)	.188-.250 (4.8-6.4)	PAD 44 ABS				
	.438 (11.1)	.558 (14.2)	.251-.312 (6.4-7.9)	PAD 45 ABS				
	.500 (12.7)	.620 (15.8)	.313-.375 (7.9-9.5)	PAD 46 ABS				
5/32 (4.0)	.400 (10.2)	.540 (13.7)	.188-.250 (4.8-6.4)	PAD 54 ABS	.160-.164 (4.06-4.17)		105 (467)	145 (645)
	.525 (13.3)	.665 (16.9)	.251-.375 (6.4-9.5)	PAD 56 ABS				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.126-.250 (3.2-6.4)	PAD 64 ABS	.192-.196 (4.88-4.98)		145 (645)	205 (912)
	.550 (14.0)	.710 (18.0)	.251-.375 (6.4-9.5)	PAD 66 ABS				
	.675 (17.2)	.835 (21.2)	.376-.500 (9.5-12.7)	PAD 68 ABS				





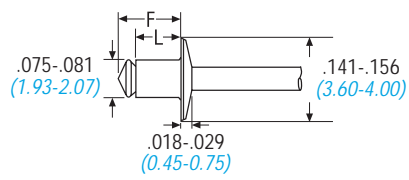
1100 Aluminum Body/Aluminum Mandrel – Countersunk – Finish: Plain/Plain

1/8 (3.1)	.250 (6.5)	.370 (9.4)	.063-.125 (1.6-3.2)	PAK 42 ABS	.129-.133 (3.30-3.40)		65 (289)	85 (378)
	.313 (8.0)	.433 (11.0)	.126-.187 (3.2-4.8)	PAK 43 ABS				
	.375 (9.5)	.495 (12.6)	.188-.250 (4.8-6.4)	PAK 44 ABS				

POP® Brand Micro Rivets

- Very low secondary side clearance.
- Suitable for tight spaces.
- Smallest blind breakstem rivet available.
- Low head height.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5154 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Zinc								
.078 (2.0)	.161 (4.1)	.295 (7.5)	0-.063 (0-1.6)	TAPD 20M1 BS	.080-.084 (2.03-2.13)		66 (295)	87 (390)
	.224 (5.7)	.358 (9.1)	.039-.126 (1.0-3.2)	TAPD 20M2 BS				
	.291 (7.4)	.425 (10.8)	.126-.189 (3.2-4.8)	TAPD 20M3 BS				
	.354 (9.0)	.488 (12.4)	.189-.252 (4.8-6.4)	TAPD 20M4 BS				
	.421 (10.7)	.555 (14.1)	.252-.315 (6.4-8.0)	TAPD 20M5 BS				



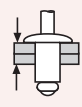



POP® Brand Rivets
In Micro-Electronics
Applications



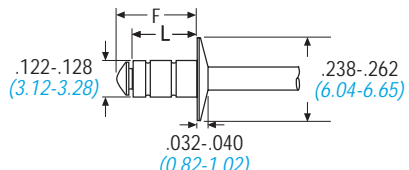
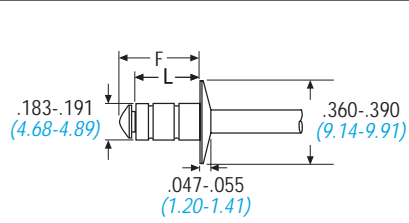
POP® Brand Multi-Grip™ Rivets

- Accommodates oversized and irregular sized holes.
- Vibration and moisture resistant.
- Wide grip range.
- Reduces inventory.

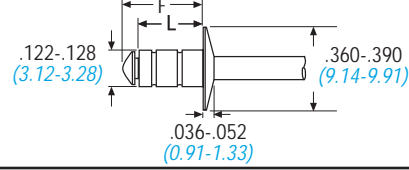
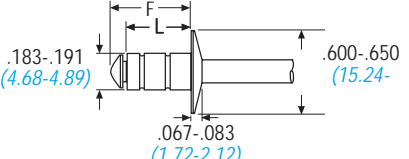


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)

1100 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain

1/8 (3.2)	.313 (7.9)	.433 (11.0)	.039-.187 (1.0-4.7)	AD 41-43 ABS	.129-.142 (3.28-3.61)		65 (287)	85 (378)
	.453 (11.5)	.573 (14.6)	.157-.312 (3.9-7.9)	AD 43-45 ABS				
	.594 (15.0)	.714 (18.1)	.251-.437 (6.3-11.0)	AD 45-47 ABS				
3/16 (4.8)	.425 (10.7)	.585 (14.9)	.063-.250 (1.6-6.3)	AD 62-64 ABS	.192-.205 (4.88-4.98)		145 (644)	205 (911)
	.605 (15.3)	.765 (19.4)	.188-.375 (4.7-9.5)	AD 63-66 ABS				
	.716 (18.2)	.876 (22.3)	.251-.500 (6.3-12.7)	AD 66-68 ABS				
	1.05 (26.6)	1.21 (30.7)	.438-.750 (11.1-19.0)	AD 68-612 ABS				

1100 Aluminum Body/Aluminum Mandrel – Large Flange – Finish: Plain/Plain

1/8 (3.2)	.313 (7.9)	.433 (11.0)	.039-.187 (1.0-4.7)	AD 41-43 ABS LF	.129-.142 (3.28-3.61)		65 (287)	85 (378)
3/16 (4.8)	.425 (10.7)	.585 (14.9)	.063-.250 (1.6-6.3)	AD 62-64 ABS LF	.192-.205 (4.88-4.98)		145 (644)	205 (911)
	.605 (15.3)	.765 (19.4)	.188-.375 (4.7-9.5)	AD 63-66 ABS LF				
	1.05 (26.6)	1.21 (30.7)	.438-.750 (11.1-19.0)	AD 68-612 ABS LF				

POP® Brand Rivets In Recreational Vehicles Applications



POP® Brand Multi-Grip™ Rivets

- Accommodates oversized and irregular sized holes.
- Vibration and moisture resistant.
- Wide grip range.
- Reduces inventory.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	Grip Range	Rivet Part Number	Hole Size		Shear Strength	Tensile Strength
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)

5052 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating

1/8 (3.2)	.313 (8.0)	.433 (11.0)	.039-.187 (1.0-4.8)	AD 41-43 BS	.129-.142 (3.28-3.61)		150 (667)	220 (978)
	.453 (11.5)	.573 (14.6)	.157-.312 (4.0-7.9)	AD 43-45 BS				
	.594 (15.1)	.714 (18.1)	.251-.437 (6.4-11.1)	AD 45-47 BS				
5/32 (4.0)	.400 (10.2)	.540 (13.7)	.047-.250 (1.2-6.4)	AD 52-54 BS	.160-.173 (4.06-4.39)		250 (1112)	360 (1601)
	.485 (12.3)	.625 (15.9)	.126-.312 (3.2-7.9)	AD 53-55 BS				
	.715 (18.2)	.855 (21.7)	.251-.500 (6.4-12.7)	AD 56-58 BS				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.063-.250 (1.6-6.4)	AD 62-64 BS	.192-.205 (4.88-5.21)		350 (1556)	505 (2246)
	.605 (15.4)	.765 (19.4)	.188-.375 (4.8-9.5)	AD 63-66 BS				
	.716 (18.2)	.876 (22.3)	.251-.500 (6.4-12.7)	AD 66-68 BS				
	1.05 (26.7)	1.21 (30.7)	.438-.750 (11.1-19.1)	AD 68-612 BS				
1/4 (6.4)	.600 (15.2)	.780 (19.8)	.080-.350 (2.0-8.9)	AD 82-86 BS	.257-.275 (6.53-6.99)		460 (2046)	560 (2491)





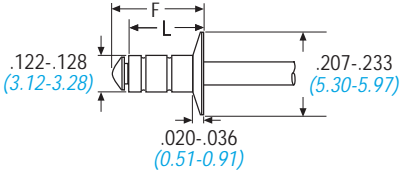
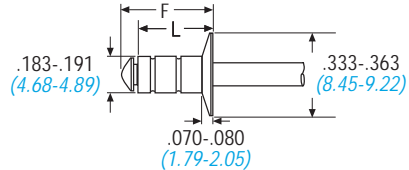
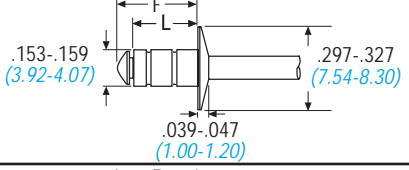
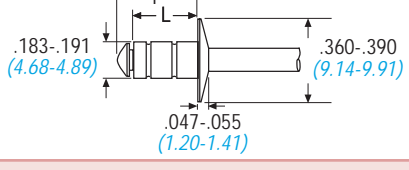
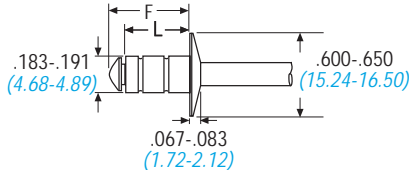
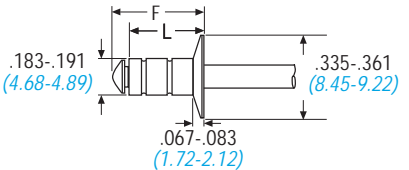
5052 Aluminum Body/Steel Mandrel – Large Flange – Finish: Plain/Protective Coating

1/8 (3.2)	.313 (8.0)	.433 (11.0)	1.0-.187 (.990-4.8)	AD 41-43 BS LF	.129-.142 (3.28-3.61)		150 (667)	220 (978)
	.453 (11.5)	.573 (14.6)	.157-.312 (4.0-7.9)	AD 43-45 BS LF				
5/32 (4.0)	.400 (10.2)	.540 (13.7)	.047-.250 (1.2-6.4)	AD 52-54 BS LF	.160-.173 (4.06-4.39)		250 (1112)	360 (1601)
	.485 (12.3)	.625 (15.9)	.126-.312 (3.2-7.9)	AD 53-55 BS LF				
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.063-.250 (1.6-6.4)	AD 62-64 BS LF	.192-.205 (4.88-5.21)		350 (1556)	505 (2246)
	.716 (18.2)	.876 (22.3)	.251-.500 (6.4-12.7)	AD 66-68 BS LF				
	1.05 (26.7)	1.21 (30.7)	.438-.750 (11.1-19.1)	AD 68-612 BS LF				

POP® Brand Multi-Grip™ Rivets

- Accommodates oversized and irregular sized holes.
- Vibration and moisture resistant.
- Wide grip range.
- Reduces inventory.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
5052 Aluminum Body/Steel Mandrel – 120° Countersunk – Finish: Plain/Protective Coating								
1/8 (3.2)	.375 (9.5)	.477 (12.1)	.039-.252 (1.0-6.4)	AK 41-44 BS	.129-.142 (3.28-3.61)	 .122-.128 (3.12-3.28) .207-.233 (5.30-5.97) .020-.036 (0.51-0.91)	150 (667)	220 (978)
3/16 (4.8)	.565 (14.4)	.725 (18.4)	.126-.375 (3.2-9.6)	AK 64-66 BS	.192-.205 (4.88-5.21)	 .183-.191 (4.68-4.89) .333-.363 (8.45-9.22) .070-.080 (1.79-2.05)	350 (1556)	505 (2246)
	.716 (18.2)	.876 (22.3)	.251-.500 (6.4-12.7)	AK 66-68 BS				
5052 Aluminum Body/Stainless Steel Mandrel – Domed Head – Finish: Plain/Plain								
5/32 (4.0)	.715 (18.2)	.855 (21.7)	.376-.500 (9.6-12.7)	AD 56-58 SSBS	.160-.173 (4.06-4.39)	 .153-.159 (3.92-4.07) .297-.327 (7.54-8.30) .039-.047 (1.00-1.20)	250 (1111)	360 (1600)
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.063-.250 (1.6-6.4)	AD 62-64 SSBS	.192-.205 (4.88-5.21)	 .183-.191 (4.68-4.89) .360-.390 (9.14-9.91) .047-.055 (1.20-1.41)	350 (1556)	505 (2246)
	.605 (15.4)	.765 (19.4)	.188-.375 (4.8-9.5)	AD 63-66 SSBS				
5052 Aluminum Body/Stainless Steel Mandrel – Large Flange – Finish: Plain/Plain								
3/16 (4.8)	.425 (10.8)	.585 (14.9)	.063-.250 (1.6-6.4)	AD 62-64 SSBS LF	.192-.205 (4.88-5.21)	 .183-.191 (4.68-4.89) .600-.650 (15.24-16.50) .067-.083 (1.72-2.12)	350 (1556)	505 (2246)
	.716 (18.2)	.876 (22.3)	.126-.500 (3.2-12.7)	AD 64-68 SSBS LF				
	1.05 (26.7)	1.210 (30.7)	.438-.750 (11.1-19.1)	AD 68-612 SSBS LF				
5052 Aluminum Body/Stainless Steel Mandrel – 120° Countersunk – Finish: Plain/Plain								
3/16 (4.8)	.565 (14.4)	.725 (18.4)	.126-.375 (3.2-9.6)	AK 64-66 SSBS	.192-.205 (4.88-5.21)	 .183-.191 (4.68-4.89) .335-.361 (8.45-9.22) .067-.083 (1.72-2.12)	350 (1556)	505 (2246)

POP® Brand Multi-Grip™ Rivets

- Extended Grip Range Capability.
- Mandrel Head Retention.
- Tolerant of Oversized Holes.
- Rattle Resistant.
- Increased Secondary Side Expansion.

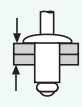





Nominal Rivet Diameter	(L) Maximum Rivet Body Length	(F) Maximum Blind Side Protrusion	Grip Range	Rivet Part Number	Hole Size	Dimensions			Nominal Shear Strength	Nominal Tensile Strength
						(D) Body Diameter	(H) Flange Thickness	(E) Flange Diameter		
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)	In. (mm)	In. (mm)	Lbs. (N)	Lbs. (N)
C1002-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating										
1/8 (3.2)	.334 (8.5)	.512 (13.0)	.059-.197 (1.5-5.0)	MG21-03208-210	.130-.134 (3.3-3.4)	.120-.129 (3.05-3.28)	.031-.047 (0.80-1.20)	.228-.260 (5.80-6.60)	270 (1200)	360 (1600)
	.492 (12.5)	.669 (17.0)	.157-.315 (4.0-8.0)	MG21-03212-210						
5/32 (4.0)	.413 (10.5)	.591 (15.0)	.059-.256 (1.5-6.5)	MG21-04010-210	.161-.165 (4.1-4.2)	.152-.160 (3.85-4.08)	.039-.055 (1.00-1.40)	.291-.327 (7.40-8.30)	370 (1650)	540 (2400)
	.649 (16.5)	.827 (21.0)	.157-.472 (4.0-12.0)	MG21-04016-210						
3/16 (4.8)	.413 (10.5)	.610 (15.5)	.059-.236 (1.5-6.0)	MG21-04810-210	.193-.197 (4.9-5.0)	.183-.192 (4.65-4.88)	.047-.063 (1.20-1.60)	.354-.386 (9.00-9.80)	607 (2700)	719 (3200)
	.649 (16.5)	.846 (21.5)	.157-.433 (4.0-11.0)	MG21-04816-210						
C1002-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Protective Coating										
1/8 (3.2)	.334 (8.5)	.512 (13.0)	.059-.197 (1.5-5.0)	MG22-03208-210	.130-.134 (3.3-3.4)	.120-.129 (3.05-3.28)	.038-.058 (0.97-1.47)	.356-.395 (9.03-10.03)	270 (1200)	360 (1600)
	.492 (12.5)	.669 (17.0)	.157-.315 (4.0-8.0)	MG22-03212-210						
5/16 (4.0)	.413 (10.5)	.591 (15.0)	.059-.256 (1.5-6.5)	MG22-04010-210	.161-.165 (4.1-4.2)	.152-.160 (3.85-4.08)	.054-.070 (1.37-1.78)	.430-.489 (10.90-12.42)	370 (1650)	540 (2400)
	.649 (16.5)	.827 (21.0)	.157-.472 (4.0-12.0)	MG22-04016-210						
3/16 (4.8)	.413 (10.5)	.610 (15.5)	.059-.236 (1.5-6.0)	MG22-04810-210	.193-.197 (4.9-5.0)	.183-.192 (4.65-4.88)	.068-.084 (1.73-2.13)	.610-.650 (15.50-16.50)	607 (2700)	719 (3200)
	.649 (16.5)	.846 (21.5)	.157-.433 (4.0-11.0)	MG22-04816-210						

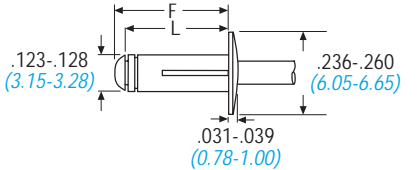
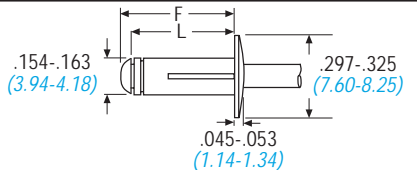
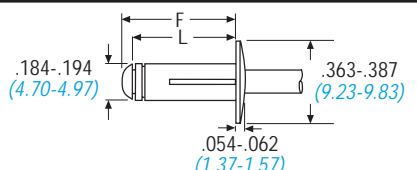
POP® Brand Load Spreading Rivets (LSR)

- Splits to provide large secondary bearing surface.
- Will not crack soft or brittle material.
- Eliminates need for backup washers.

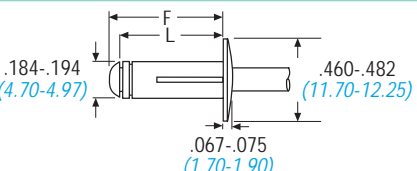
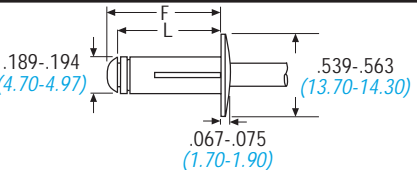


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Nominal Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength
	In. (mm)	In. (mm)	In. (mm)		In. (mm)		

5154 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain

1/8 (3.2)	.664 (16.9)	.755 (19.2)	0-.250 (0-6.4)	ACD 408 AS	.129-.133 (3.28-3.38)		124 (550)	202 (900)
5/32 (4.0)	.689 (17.5)	.780 (19.8)	0-.250 (0-6.4)	ACD 508 ASM	.165-.169 (4.19-4.30)		202 (900)	292 (1300)
	.838 (21.3)	.929 (23.6)	.118-.375 (3.0-9.5)	ACD 512 ASM				
	.984 (25.0)	1.071 (27.2)	.197-.472 (5.0-12.0)	ACD 516 ASM				
3/16 (4.8)	.689 (17.5)	.800 (20.3)	0-.250 (0-6.4)	ACD 608 ASM	.197-.205 (5.00-5.21)		225 (1000)	312 (1400)
	.795 (19.8)	.890 (22.6)	.118-.375 (3.0-9.5)	ACD 612 ASM				
	.925 (23.5)	1.040 (26.4)	.197-.472 (5.0-12.0)	ACD 616 ASM				

5154 Aluminum Body/Aluminum Mandrel – Large Flange – Finish: Plain/Plain

3/16 (4.8)	.690 (17.5)	.800 (20.3)	0-.250 (0-6.4)	ACD 608 ASM LF12	.197-.205 (5.00-5.21)		225 (1000)	312 (1400)
	.787 (19.8)	.890 (22.6)	.118-.375 (3.0-9.5)	ACD 612 ASM LF12				
	.925 (23.5)	1.040 (26.4)	.197-.469 (5.0-12.0)	ACD 616 ASM LF12				
3/16 (4.8)	.690 (17.5)	.800 (20.3)	0-.250 (0-6.4)	ACD 608 ASM LF14	.197-.205 (5.00-5.21)		225 (1000)	312 (1400)
	.787 (19.8)	.890 (22.6)	.118-.375 (3.0-9.5)	ACD 612 ASM LF14				
	.925 (23.5)	1.040 (26.4)	.197-.469 (5.0-12.0)	ACD 616 ASM LF14				





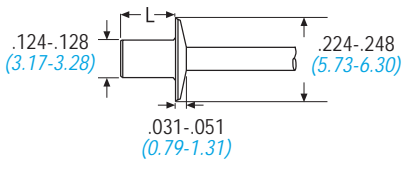
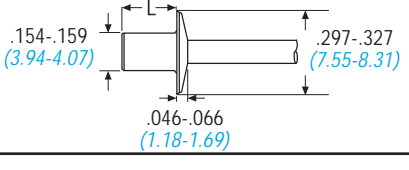
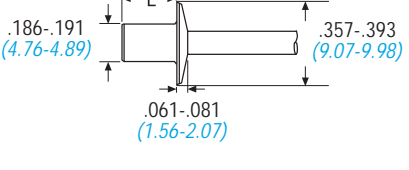
POP® Brand Rivets In Automotive Applications



POP® Brand Closed End Rivets

- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)						
1100 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain							
1/8 (3.2)	.237 (6.0)	.032-.062 (.8-1.6)	AD 41 AH	.129-.133 (3.28-3.38)		105 (467)	150 (667)
	.301 (7.7)	.063-.125 (1.6-3.2)	AD 42 AH				
	.362 (9.2)	.126-.187 (3.2-4.8)	AD 43 AH				
	.425 (10.8)	.188-.250 (4.8-6.4)	AD 44 AH				
5/32 (4.0)	.440 (11.2)	.188-.250 (4.8-6.4)	AD 54 AH	.160-.164 (4.06-4.17)		155 (689)	240 (1067)
	.502 (12.8)	.251-.312 (6.4-7.9)	AD 55 AH				
3/16 (4.8)	.330 (8.4)	.063-.125 (1.6-3.2)	AD 62 AH	.192-.196 (4.88-4.98)		220 (978)	310 (1378)
	.455 (11.6)	.126-.250 (3.2-6.4)	AD 64 AH				
	.580 (14.7)	.313-.375 (7.9-9.5)	AD 66 AH				
	.705 (17.9)	.376-.500 (9.5-12.7)	AD 68 AH				

POP® Brand Rivets In Equipment And Machinery Applications



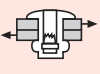

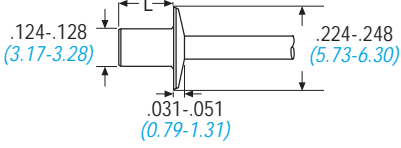
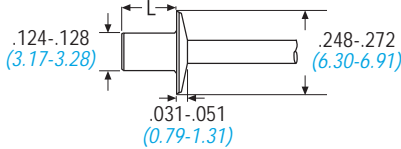
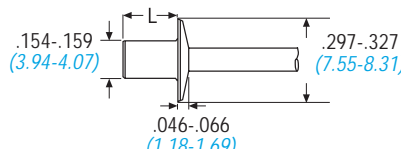
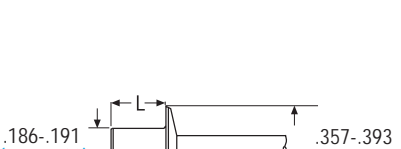
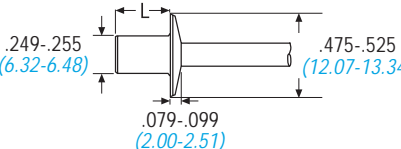


POP® Brand

Closed End Rivets

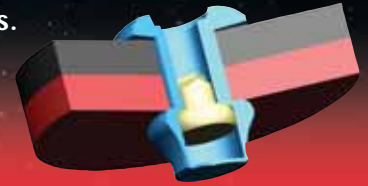
- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.





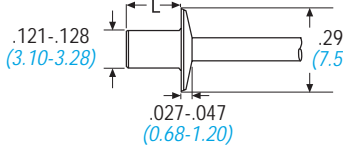
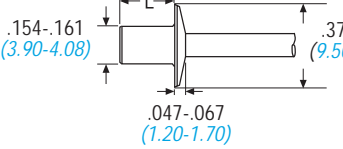
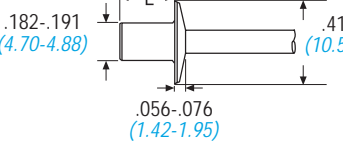


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)						
5056 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating							
1/8 (3.2)	.237 (6.0)	.032-.062 (.8-1.6)	AD 41 H	.129-.133 (3.28-3.38)		305 (1356)	385 (1712)
	.301 (7.7)	.063-.125 (1.6-3.2)	AD 42 H				
	.362 (9.2)	.126-.187 (3.2-4.8)	AD 43 H				
	.425 (10.8)	.188-.250 (4.8-6.4)	AD 44 H				
1/8 (3.2)	.487 (12.4)	.251-.312 (6.4-7.9)	AD 45 H	.129-.133 (3.28-3.38)		305 (1356)	385 (1712)
	.550 (14.0)	.313-.375 (7.9-9.5)	AD 46 H				
	.675 (17.2)	.376-.500 (9.5-12.7)	AD 48 H				
5/32 (4.0)	.315 (8.0)	.063-.125 (1.6-3.2)	AD 52 H	.160-.164 (4.06-4.17)		430 (1912)	605 (2691)
	.377 (9.6)	.126-.187 (3.2-4.8)	AD 53 H				
	.440 (11.2)	.188-.250 (4.8-6.4)	AD 54 H				
	.502 (12.8)	.251-.312 (6.4-7.9)	AD 55 H				
3/16 (4.8)	.330 (8.4)	.063-.125 (1.6-3.2)	AD 62 H	.192-.196 (4.88-4.98)		575 (2557)	840 (3736)
	.392 (10.0)	.126-.187 (3.2-4.8)	AD 63 H				
	.455 (11.6)	.188-.250 (4.8-6.4)	AD 64 H				
	.517 (13.1)	.251-.312 (6.4-7.9)	AD 65 H				
	.580 (14.7)	.313-.375 (7.9-9.5)	AD 66 H				
	.705 (17.9)	.376-.500 (9.5-12.7)	AD 68 H				
1/4 (6.4)	.485 (12.3)	.126-.250 (3.2-6.4)	AD 84 H	.257-.261 (6.53-6.63)		900 (4003)	1100 (4893)
	.610 (15.5)	.251-.375 (6.4-9.5)	AD 86 H				

POP® Brand Closed End Rivets

- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)					In. (mm)	In. (mm)
5056 Aluminum Body/Steel Mandrel – Large Flange – Finish: Plain/Protective Coating							
1/8 (3.2)	.262 (6.7)	0-.063 (0-1.6)	AD 402 SBM LF8	.129-.133 (3.28-3.38)		305 (1358)	385 (1712)
	.324 (8.3)	.063-.125 (1.6-3.2)	AD 404 SBM LF8				
	.387 (9.9)	.125-.188 (3.2-4.8)	AD 406 SBM LF8				
5/32 (4.0)	.332 (8.5)	0-.125 (0-3.2)	AD 504 SBM LF10	.160-.164 (4.06-4.17)		430 (1913)	605 (2691)
	.394 (10.2)	.125-.188 (3.2-4.8)	AD 506 SBM LF10				
	.461 (11.8)	.188-.250 (4.8-6.4)	AD 508 SBM LF10				
	.523 (13.4)	.250-.309 (6.4-7.9)	AD 510 SBM LF10				
3/16 (4.8)	.348 (8.9)	0-.125 (0-3.2)	AD 604 SBM LF11	.192-.196 (4.88-4.98)		575 (2558)	840 (3736)
	.410 (10.5)	.125-.188 (3.2-4.8)	AD 606 SBM LF11				
	.473 (12.1)	.188-.250 (4.8-6.4)	AD 608 SBM LF11				
	.527 (13.5)	.250-.309 (6.4-7.9)	AD 610 SBM LF11				
	.590 (15.1)	.309-.371 (7.9-9.5)	AD 612 SBM LF11				

POP® Brand Rivets In Playground Equipment Applications



POP® Brand Closed End Rivets

- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.



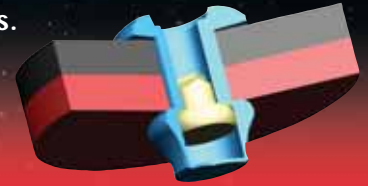
Nominal Rivet Diameter	(L) Nominal Rivet Body Length		Rivet Part Number	Hole Size		Strength	
	In. (mm)	In. (mm)				Grip Range In. (mm)	Shear Strength Lbs. (N)
5056 Aluminum Body/Steel Mandrel – 120° Countersunk – Finish: Plain/Protective Coating							
1/8 (3.2)	.277 (7.0)	.031-.062 (.8-1.6)	AK 41 H	.129-.133 (3.28-3.38)		305 (1358)	385 (1712)
	.341 (8.7)	.063-.125 (1.6-3.2)	AK 42 H				
	.402 (10.2)	.126-.250 (3.2-6.4)	AK 43 H				
	.466 (11.8)	.188-.250 (6.4-7.9)	AK 44 H				
	.528 (13.4)	.251-.312 (7.9-9.5)	AK 45 H				
	.591 (15.0)	.313-.375 (9.5-12.7)	AK 46 H				
5/32 (4.0)	.307 (7.8)	.032-.062 (1.6-3.2)	AK 51 H	.160-.164 (4.06-4.17)		430 (1913)	605 (2691)
	.370 (9.4)	.063-.125 (3.2-4.8)	AK 52 H				
	.432 (11.0)	.126-.187 (4.8-6.4)	AK 53 H				
	.475 (12.6)	.251-.312 (6.4-7.9)	AK 55 H				
	.558 (14.2)	.313-.375 (7.9-9.5)	AK 56 H				
3/16 (4.8)	.395 (10.0)	.063-.125 (1.6-3.2)	AK 62 H	.192-.196 (4.88-4.98)		575 (2558)	840 (3736)
	.520 (13.2)	.126-.250 (3.2-6.4)	AK 64 H				
	.645 (16.4)	.251-.375 (6.4-9.5)	AK 66 H				

POP® Brand Rivets In Personal Watercraft Applications



POP® Brand Closed End Rivets

- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.

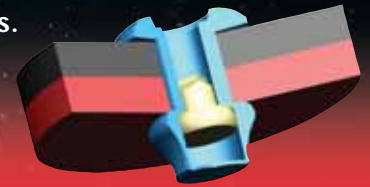




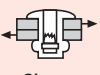

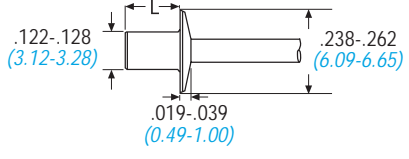
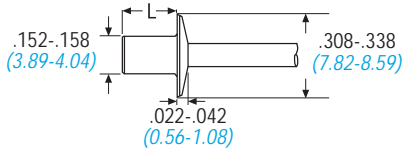
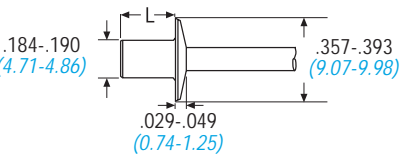
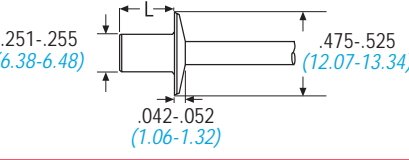
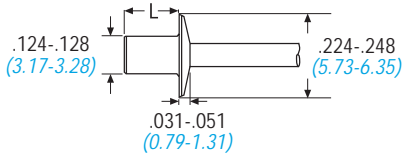
Nominal Rivet Diameter	(L) Nominal Rivet Body Length	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)					In. (mm)	In. (mm)
C1002 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Zinc							
1/8 (3.2)	.382 (9.7)	.062-.187 (1.6-4.8)	SD 46 SB	.129-.133 (3.28-3.38)		259 (1150)	270 (1200)
5/32 (4.0)	.040 (10.2)	.062-.187 (1.6-4.8)	SD 56 SB	.160-.164 (4.06-4.17)		389 (1730)	418 (1860)
3/16 (4.8)	.362 (9.2)	0-.125 (0-3.2)	SD 64 SB	.192-.196 (4.88-4.98)		545 (2425)	638 (2840)
	.488 (12.4)	.126-.250 (3.2-6.4)	SD 68 SB				
C1002 Steel Body/Steel Mandrel – 120° Countersunk – Finish: Zinc/Zinc							
1/8 (3.2)	.295 (7.5)	0-.098 (0-2.5)	SK 41 H	.129-.133 (3.28-3.38)		315 (1400)	405 (1800)
	.358 (9.1)	.098-.161 (2.5-4.1)	SK 42 H				
	.422 (10.7)	.161-.220 (4.1-5.6)	SK 43 H				
	.484 (12.3)	.220-.283 (5.6-7.2)	SK 44 H				
5056 Aluminum Body/Stainless Steel Mandrel – Domed Head – Finish: Plain/Plain							
3/16 (4.8)	.455 (11.6)	.126-.250 (3.2-6.4)	AD 64 SSH	.192-.196 (4.88-4.98)		575 (2559)	840 (3738)
	.580 (14.7)	.313-.375 (7.9-9.5)	AD 66 SSH				
	.705 (17.9)	.376-.500 (9.5-12.7)	AD 68 SSH				

POP® Brand

Closed End Rivets

- Seals out moisture, air and other contaminants.
- Higher tensile and shear strength than the equivalent open end rivet.
- 100% mandrel head retention guaranteed.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)						
300 Stainless Steel Body/Stainless Steel Mandrel – Domed Head – Finish: Plain/Plain							
1/8 (3.2)	.258 (6.6)	0-.063 (0-1.6)	SSD 41 SSH	.129-.133 (3.28-3.38)		472 (2100)	499 (2220)
	.313 (8.0)	.063-.125 (1.6-3.2)	SSD 42 SSH				
	.379 (9.7)	.125-.188 (3.2-4.8)	SSD 43 SSH				
	.441 (11.3)	.188-.250 (4.8-6.4)	SSD 44 SSH				
	.504 (12.9)	.250-.309 (6.4-7.9)	SSD 45 SSH				
5/32 (4.0)	.338 (8.6)	0-.125 (0-3.2)	SSD 52 SSH	.160-.164 (4.06-4.17)		742 (3300)	899 (4000)
	.394 (10.2)	.125-.188 (3.2-4.8)	SSD 53 SSH				
	.461 (11.8)	.188-.250 (4.8-6.4)	SSD 54 SSH				
	.523 (13.4)	.250-.309 (6.4-7.9)	SSD 55 SSH				
3/16 (4.8)	.359 (9.2)	0-.125 (0-3.2)	SSD 62 SSH	.192-.196 (4.88-4.98)		966 (4300)	990 (4400)
	.422 (10.8)	.125-.188 (3.2-4.8)	SSD 63 SSH				
	.488 (12.5)	.188-.250 (4.8-6.4)	SSD 64 SSH				
	.605 (15.5)	.250-.371 (6.4-9.5)	SSD 66 SSH				
	.723 (18.5)	.371-.500 (9.5-12.7)	SSD 68 SSH				
1/4 (6.4)	.555 (14.2)	0-.250 (0-6.4)	SSD 84 SSH	.257-.261 (6.53-6.63)		1528 (6800)	1955 (8700)
	.613 (15.7)	.250-.311 (6.4-7.9)	SSD 85 SSH				
	.801 (20.5)	.312-.500 (7.9-12.7)	SSD 88 SSH				
110 Copper Body/Steel Mandrel – Domed Head – Finish: Plain/Protective Coating							
1/8 (3.2)	.362 (9.2)	.126-.187 (3.2-4.8)	CD 43 H	.129-.133 (3.28-3.38)		270 (1202)	335 (1490)
	.425 (10.8)	.188-.250 (4.8-6.4)	CD44 H				
	.487 (12.4)	.251-.312 (6.4-7.9)	CD 45 H				

POP® Brand F Series Rivets

- Locked, rattle free mandrel.
- Superior shear and tensile strength, soft and brittle materials inclusive.
- Provides excellent joint integrity.
- Fills irregular holes.



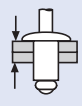



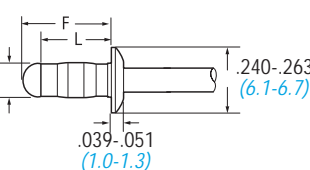
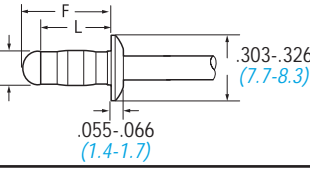
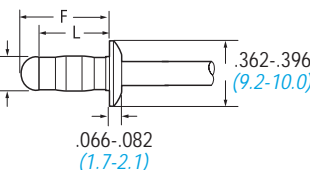
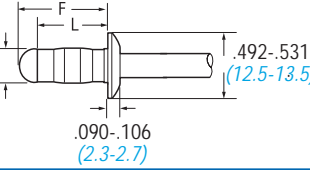
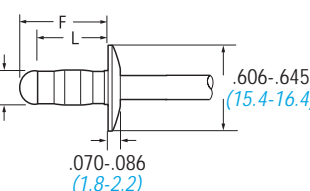
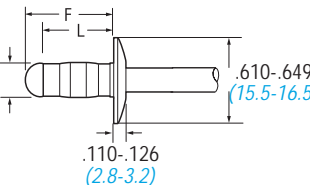
Nominal Rivet Diameter	(L) Rivet Body Length	Grip Range	Rivet Part Number	Hole Size		Shear Strength	Tensile Strength
In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)
5052 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Zinc							
1/8 (3.2)	.315 (8.0)	.057-.137 (1.5-3.5)	FAD 3208 BS	.130-.134 (3.30-3.40)		191 (850)	207 (925)
3/16 (4.8)	.433 (11.0)	.057-.137 (1.5-3.5)	FAD 4811 BS	.193-.197 (4.90-5.00)		415 (1850)	460 (2050)
	.551 (14.0)	.137-.236 (3.5-6.0)	FAD 4814 BS			472 (2100)	494 (2200)
	.629 (16.0)	.236-.334 (6.0-8.5)	FAD 4816 BS			697 (3100)	494 (2200)
C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Zinc							
5/32 (4.0)	.393 (10.0)	.057-.137 (1.5-3.5)	FSD 4010 BS	.161-.165 (4.10-4.20)		786 (3500)	629 (2800)
	.472 (12.0)	.137-.236 (3.5-6.0)	FSD 4012 BS				
3/16 (4.8)	.472 (12.0)	.057-.137 (1.5-3.5)	FSD 4812 BS	.193-.197 (4.90-5.00)		810 (3600)	955 (4250)
	.590 (15.0)	.137-.236 (3.5-6.0)	FSD 4815 BS			1033 (4600)	899 (4000)
	.669 (17.0)	.236-.334 (6.0-8.5)	FSD 4817 BS			1280 (5700)	798 (3550)

POP® Brand Rivets In Transportation Applications







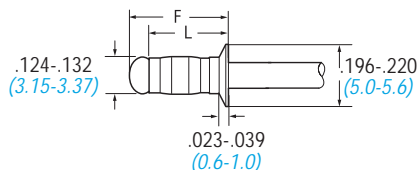
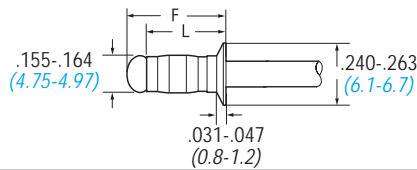
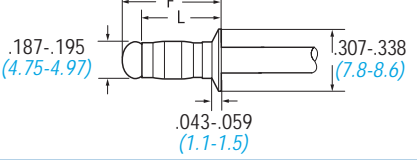
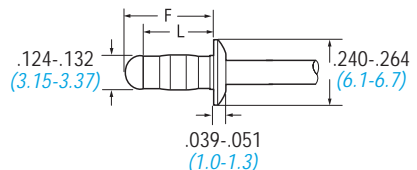
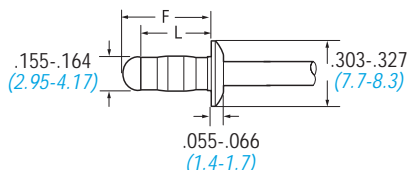
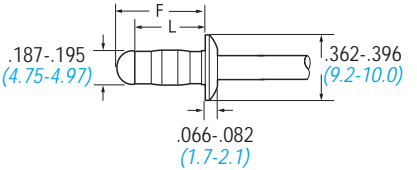
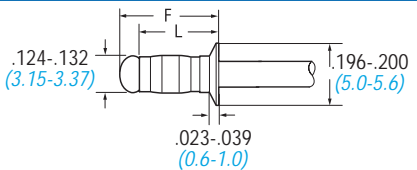
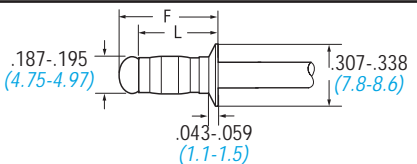
- Excellent Mandrel Retention.
- Excellent Rattle Resistance.
- Consistent and Stable Clamp Force.



Nominal Rivet Diameter	(L) Maximum Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
C1002-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Protective Coating								
1/8 (3.2)	.315 (8.0)	.440 (11.2)	.063-.125 (1.6-3.2)	SD 42 HR	.133-.141 (3.4-3.6)		325 (1450)	382 (1700)
	.378 (9.6)	.503 (12.8)	.125-.187 (3.2-4.8)	SD 43 HR				
	.440 (11.2)	.566 (14.4)	.187-.250 (4.8-6.4)	SD 44 HR				
5/32 (4.0)	.354 (9.0)	.492 (12.5)	.063-.125 (1.6-3.2)	SD 52 HR	.165-.173 (4.2-4.4)		449 (2000)	584 (2600)
	.417 (10.6)	.555 (14.1)	.125-.187 (3.2-4.8)	SD 53 HR				
	.480 (12.2)	.618 (15.7)	.187-.250 (4.8-6.4)	SD 54 HR				
3/16 (4.8)	.362 (9.2)	.531 (13.5)	.063-.125 (1.6-3.2)	SD 62 HR	.196-.212 (5.0-5.4)		696 (3100)	764 (3400)
	.425 (10.8)	.594 (15.1)	.125-.187 (3.2-4.8)	SD 63 HR				
	.488 (12.4)	.657 (16.7)	.187-.250 (4.8-6.4)	SD 64 HR				
	.551 (14.0)	.720 (18.3)	.250-.312 (6.4-8.0)	SD 65 HR				
1/4 (6.4)	.444 (11.3)	.624 (16.0)	.047-.187 (1.2-4.8)	SD 83 HR	.250-.258 (6.35-6.51)		876 (3900)	1202 (5350)
	.570 (14.5)	.755 (19.2)	.187-.312 (4.8-8.0)	SD 85 HR				
C1002-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Protective Coating								
3/16 (4.8)	.362 (9.2)	.531 (13.5)	.063-.125 (1.6-3.2)	SD 62 HR LF	.196-.212 (5.0-5.4)		696 (3100)	764 (3400)
	.425 (10.8)	.594 (15.1)	.125-.187 (3.2-4.8)	SD 63 HR LF				
	.488 (12.4)	.657 (16.7)	.187-.250 (4.8-6.4)	SD 64 HR LF				
	.551 (14.0)	.720 (18.3)	.250-.312 (6.4-8.0)	SD 65 HR LF				
1/4 (6.4)	.444 (11.3)	.624 (16.0)	.047-.187 (1.2-4.8)	SD 83 HR LF	.250-.258 (6.35-6.51)		876 (3900)	1202 (5350)
	.570 (14.5)	.755 (19.2)	.187-.312 (4.8-8.0)	SD 85 HR LF				

- Excellent Mandrel Retention.
- Excellent Rattle Resistance.
- Consistent and Stable Clamp Force.

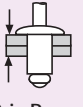





Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
Steel Body/Steel Mandrel – 120° Countersunk – Finish: Zinc/Protective Coating								
1/8 (3.2)	.315 (8.0)	.440 (11.2)	.078-.125 (2.0-3.2)	SK 42 HR	.133-.138 (3.4-3.5)		213 (950)	269 (1200)
	.378 (9.6)	.503 (12.8)	.125-.187 (3.2-4.8)	SK 43 HR				
	.440 (11.2)	.566 (14.4)	.187-.250 (4.8-6.4)	SK 44 HR				
5/32 (4.0)	.354 (9.0)	.492 (12.5)	.078-.125 (2.0-3.2)	SK 52 HR	.165-.169 (4.2-4.4)		292 (1300)	449 (2000)
	.417 (10.6)	.555 (14.1)	.125-.187 (3.2-4.8)	SK 54 HR				
	.480 (12.2)	.618 (15.7)	.187-.250 (4.8-6.4)	SK 56 HR				
3/16 (4.8)	.425 (10.8)	.555 (15.1)	.093-.187 (2.4-4.8)	SK 63 HR	.196-.205 (5.0-5.2)		696 (3100)	764 (3400)
	.488 (12.4)	.657 (16.7)	.187-.250 (4.8-6.4)	SK 64 HR				
Stainless Steel Body/Stainless Steel Mandrel – Domed Head– Finish: Plain/Plain								
1/8 (3.2)	.315 (8.0)	.441 (11.2)	.063-.126 (1.6-3.2)	SSD 42 SSHR	.134-.142 (3.4-3.6)		427 (1900)	562 (2500)
	.378 (9.6)	.503 (12.8)	.126-.189 (3.2-4.8)	SSD 43 SSHR				
	.441 (11.2)	.567 (14.4)	.189-.252 (4.8-6.4)	SSD 44 SSHR				
5/32 (4.0)	.354 (9.0)	.492 (12.5)	.063-.126 (1.6-3.2)	SSD 52 SSHR	.165-.173 (4.2-4.4)		630 (2800)	855 (3800)
	.417 (10.6)	.555 (14.1)	.126-.189 (3.2-4.8)	SSD 53 SSHR				
	.480 (12.2)	.618 (15.7)	.189-.252 (4.8-6.4)	SSD 54 SSHR				
3/16 (4.8)	.362 (9.2)	.545 (13.9)	.063-.125 (1.6-3.2)	SSD 62 SSHR	.196-.212 (5.0-5.4)		1056 (4700)	1124 (5000)
	.425 (10.8)	.610 (15.5)	.125-.187 (3.2-4.8)	SSD 63 SSHR				
	.488 (12.8)	.673 (17.1)	.187-.250 (4.8-6.4)	SSD 64 SSHR				
Stainless Steel Body/Stainless Steel Mandrel – 120° Countersunk – Finish: Plain/Plain								
1/8 (3.2)	.441 (11.2)	.441 (11.2)	.079-.125 (2.0-3.2)	SSK 42 SSHR	.134-.142 (3.4-3.6)		315 (1400)	450 (2000)
	.504 (12.8)	.504 (12.8)	.126-.189 (3.2-4.8)	SSK 43 SSHR				
	.567 (14.4)	.567 (14.4)	.189-.252 (4.8-6.4)	SSK 44 SSHR				
3/16 (4.8)	.425 (10.8)	.555 (15.1)	.094-.187 (2.4-4.8)	SSK 63 SSHR	.196-.205 (5.0-5.2)		831 (3700)	1124 (5000)
	.488 (12.4)	.657 (16.7)	.187-.250 (4.8-6.4)	SSK 64 SSHR				

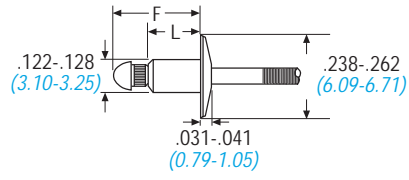
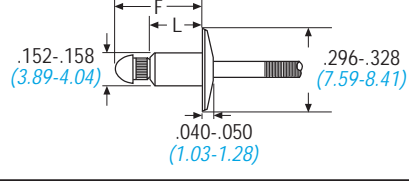
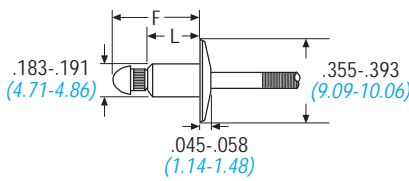
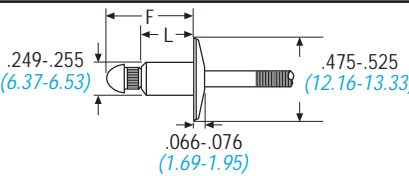
POP® Brand Self Plugger Rivets

- Mandrel remains locked in shear plain for optimum strength.
- Rattle resistant.
- Mandrel gripping rings provide optimum set.

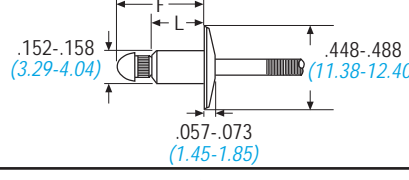
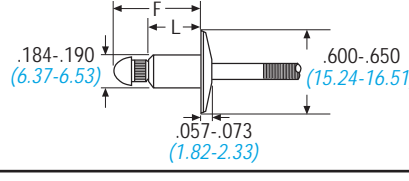
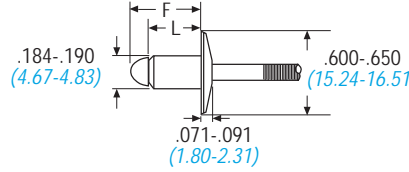


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength
In. (mm)	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)

C1006-C1010 Steel Body/ Steel Mandrel – Domed Head – Finish: Zinc/Zinc

1/8 (3.2)	.250 (6.4)	.452 (11.5)	.063-.125 (1.6-3.1)	SD 42 SP.093	.129-.133 (3.30-3.40)		450 (2007)	350 (1556)
	.329 (8.4)	.528 (13.4)	.150-.195 (3.8-4.9)	SD 43 SP.165				
	.391 (19.93)	.590 (15.0)	.185-.240 (4.6-6.0)	SD 44 SP.185				
	.507 (12.9)	.706 (17.9)	.312-.360 (7.9-9.1)	SD 46 SP.312				
5/32 (4.0)	.437 (11.1)	.669 (17.0)	.205-.260 (5.2-6.6)	SD 55 SP.218	.160-.164 (4.06-4.17)		525 (2335)	500 (2224)
	.562 (14.3)	.794 (20.2)	.241-.368 (6.1-9.3)	SD 56 SP.241				
3/16 (4.8)	.315 (8.0)	.612 (13.8)	.062-.125 (1.5-3.1)	SD 62 SP.093	.192-.196 (4.88-4.98)		900 (4005)	700 (3113)
	.378 (9.6)	.668 (17.0)	.065-.187 (1.6-4.7)	SD 63 SP.130				
	.425 (10.8)	.693 (17.6)	.126-.250 (3.2-6.4)	ESD 64 SP.187*				
	.440 (11.2)	.702 (17.8)	.181-.272 (4.6-6.9)	SD 64 SP.220				
	.700 (17.7)	.950 (24.1)	.376-.500 (9.6-12.7)	SD 68 SP.437				
1/4 (6.4)	.365 (9.3)	.650 (16.5)	.062-.125 (1.5-3.1)	SD 82 SP.093	.257-.261 (6.53-6.63)		1750 (7788)	1400 (6227)

C1006-C1010 Steel Body/ Steel Mandrel – Large Flange – Finish: Zinc/Zinc

5/32 (4.0)	.300 (7.6)	.503 (12.8)	.063-.125 (1.6-3.1)	SD 52 SP LF.093	.160-.164 (4.06-4.17)		525 (2335)	500 (2224)
	.417 (10.6)	.628 (16.0)	.129-.256 (3.2-6.5)	SD 54 SP LF.129				
	.525 (13.3)	.794 (20.17)	.126-.343 (3.2-8.7)	SD 56 SP LF.129				
3/16 (4.8)	.700 (17.7)	.918 (23.3)	.407-.467 (10.3-11.8)	SD 68 SP LF.225	.192-.196 (4.88-4.98)		900 (4005)	700 (3113)
	.442 (11.2)	.579 (14.7)	.187-.235 (4.7-6.0)	SD 64 SPR LF.187**				
	.575 (14.6)	.793 (20.1)	.210-.327 (5.3-8.3)	SD 65 SPR LF.225**				
	.566 (14.4)	.716 (20.1)	.188-.384 (4.7-9.7)	SD 66 SPR LF.210**				
	.566 (14.4)	.716 (20.1)	.210-.375 (5.3-9.3)	SD 66 SPR LF.225**				
								

(*) E: Equipped with Easy Entry Mandrel

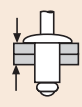



(**) R: Recessed Body

Note: Please call to request custom specifications.

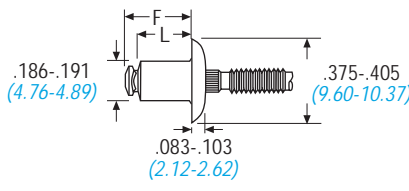
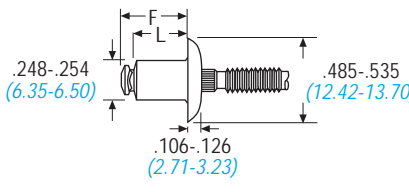
POP® Brand T Rivets

- Provides large secondary bearing surface.
- Flush break provides high shear and tensile strength.
- Exceptional pull-up/clamp-up properties.

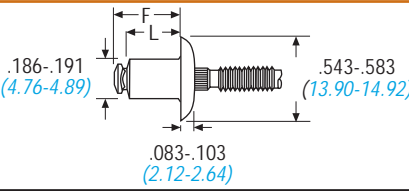
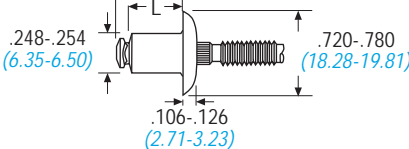


Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size		 Shear Strength	 Tensile Strength
	In. (mm)	In. (mm)	In. (mm)		In. (mm)		Lbs. (N)	Lbs. (N)

5056 Aluminum Body/Steel Mandrel – Domed Head – Finish: Plain/Zinc

3/16 (4.8)	.447 (11.4)	.565 (14.4)	.032-.140 (.8-3.6)	AD 6140 TFBS	.192-.196 (4.88-4.98)		950 (4228)	600 (2670)
	.510 (13.0)	.630 (16.0)	.141-.187 (3.6-4.8)	AD 6187 TFBS			1025 (4561)	
	.572 (14.5)	.690 (17.5)	.188-.250 (4.8-6.4)	AD 6250 TFBS			1050 (4670)	
	.635 (16.1)	.755 (19.2)	.251-.312 (6.4-7.9)	AD 6312 TFBS			1125 (5006)	
	.697 (17.7)	.820 (20.8)	.313-.375 (8.0-9.5)	AD 6375 TFBS			1200 (5340)	
	.760 (19.3)	.880 (22.4)	.376-.437 (9.5-11.1)	AD 6437 TFBS			1275 (5674)	
	.822 (20.9)	.940 (23.9)	.438-.519 (11.1-13.2)	AD 6519 TFBS			1350 (6008)	
1/4 (6.4)	.500 (12.7)	.625 (15.9)	.032-.140 (.8-3.6)	AD 8140 TFBS	.257-.261 (6.53-6.63)		1425 (6341)	1110 (4940)
	.552 (14.0)	.710 (18.0)	.141-.187 (3.6-4.8)	AD 8187 TFBS			1575 (7009)	
	.615 (15.6)	.775 (19.7)	.188-.250 (4.8-6.4)	AD 8250 TFBS			1650 (7343)	
	.677 (17.2)	.840 (21.3)	.251-.312 (6.4-7.9)	AD 8312 TFBS			1775 (7899)	
	.740 (18.8)	.900 (22.9)	.313-.375 (8.0-9.5)	AD 8375 TFBS			2050 (9123)	
	.802 (20.4)	.960 (24.4)	.376-.437 (9.5-11.1)	AD 8437 TFBS			2150 (9568)	
	.865 (22.0)	1.025 (26.0)	.437-.519 (11.1-13.2)	AD 8519 TFBS			2325 (10346)	
	.937 (23.8)	1.094 (27.8)	.520-.620 (13.2-15.8)	AD 8620 TFBS			2400 (10680)	





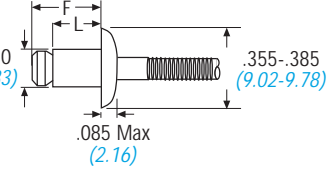
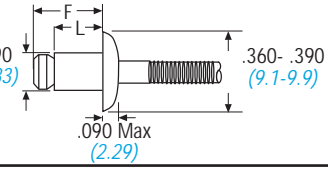
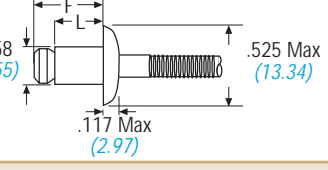
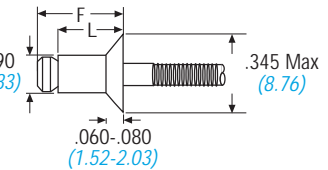
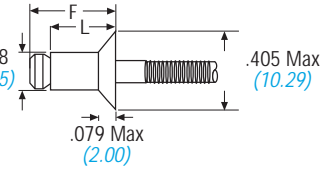
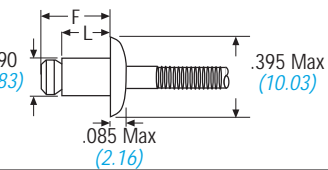
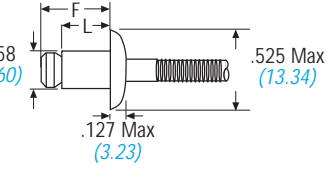
5056 Aluminum Body/Steel Mandrel – Large Flange – Finish: Plain/Zinc

3/16 (4.2)	.382 (9.7)	.500 (12.7)	.046-.140 (1.2-3.6)	AD 6075 TFBS LF	.192-.196 (4.88-4.98)		950 (4228)	600 (2670)
	.447 (11.4)	.565 (14.4)	.032-.140 (.8-3.6)	AD 6140 TFBS LF				
1/4 (6.4)	.500 (12.7)	.625 (15.9)	.032-.140 (.8-3.6)	AD 8140 TFBS LF	.257-.261 (6.53-6.63)		1425 (6341)	1110 (4940)

POP® Brand Ultra Grip™ Rivets

- High shear & tensile strength.
- Superior holding power (clamp up).
- Fastens over wide grip range.
- Locking feature prevents loosening of mandrel from vibration.



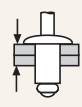



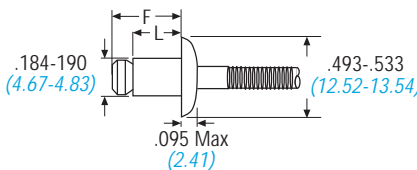
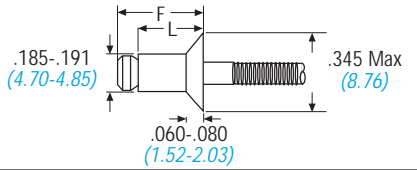
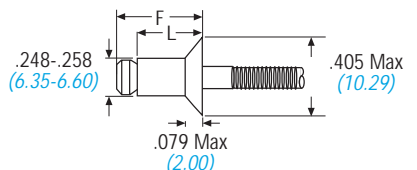
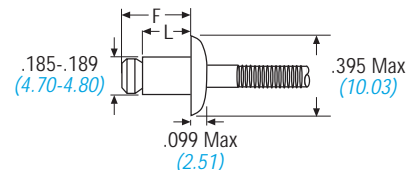
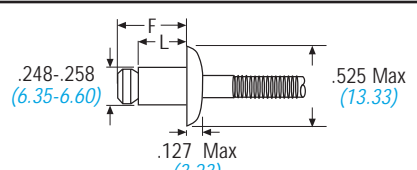
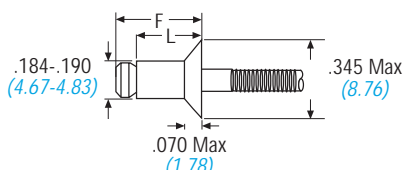
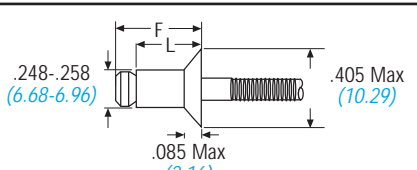
Nominal Rivet Diameter	(L) Maximum Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)			Lbs. (N)
5056 Aluminum Body/Aluminum Mandrel – Domed Head – Finish: Plain/Plain								
3/16 (4.8)	.413 (10.5)	.720 (18.3)	.062-.270 (1.6-6.9)	AD 6270 UG	.191-.201 (4.85-5.10)		700 (3113)	500 (2224)
3/16 (4.8)	.572 (14.5)	.880 (22.4)	.214-.437 (5.4-11.1)	AD 6437 UG	.191-.201 (4.8-5.1)		500 (2224)	700 (3113)
	.572 (14.5)	1.020 (25.9)	.062-.437 (1.6-11.1)	AD 6437 UGX				
1/4 (6.4)	.560 (14.2)	.970 (24.6)	.080-.375 (2.0-9.5)	AD 8375 UG	.261-.272 (6.63-6.91)		1300 (5783)	890 (3960)
5056 Aluminum Body/Aluminum Mandrel – 100° Countersunk – Finish: Plain/Plain								
3/16 (4.8)	.486 (12.3)	.795 (20.2)	.125-.331 (3.2-8.4)	AK 6331 UG	.191-.201 (4.85-5.15)		700 (3113)	500 (2224)
	.653 (16.6)	.929 (23.6)	.305-.500 (7.8-12.7)	AK 6500 UG				
1/4 (6.4)	.660 (16.8)	1.059 (27.9)	.160-.475 (4.1-12.1)	AK 8475 UG	.261-.272 (6.63-6.91)		1300 (5783)	890 (3690)
C1006-C1010 Steel Body/Steel Mandrel – Domed Head – Finish: Zinc/Zinc								
3/16 (4.8)	.415 (10.5)	.743 (18.9)	.062-.270 (1.6-6.9)	SD 6270 UG	.191-.201 (4.85-5.15)		1450 (6452)	1200 (5340)
	.582 (14.8)	1.011 (25.7)	.062-.437 (1.6-11.1)	SD 6437 UGX*				
1/4 (6.4)	.560 (14.2)	.999 (25.4)	.080-.375 (2.0-9.5)	SD 8375 UG	.261-.272 (6.63-6.91)		2750 (12237)	2200 (9790)
	.810 (20.6)	1.220 (31.0)	.080-.625 (2.0-15.9)	SD 8625 UGX*				

(*) X Extended Grip Range

POP® Brand Ultra Grip™ Rivets

- High shear & tensile strength.
- Superior holding power (clamp up).
- Fastens over wide grip range.
- Locking feature prevents loosening of mandrel from vibration.



Nominal Rivet Diameter	(L) Nominal Rivet Body Length	(F) Maximum Blind Side Protrusion	 Grip Range	Rivet Part Number	 Hole Size	 Shear Strength	 Tensile Strength	
	In. (mm)	In. (mm)	In. (mm)		In. (mm)	Lbs. (N)	Lbs. (N)	
C1006-C1010 Steel Body/Steel Mandrel – Large Flange – Finish: Zinc/Zinc								
3/16 (4.8)	.415 (10.5)	.710 (18.0)	.062-.270 (1.6-6.9)	SD 6270 UG LF	.191-.201 (4.85-5.15)		1450 (6452)	1200 (5340)
	.572 (14.5)	.865 (22.0)	.214-.437 (5.4-11.1)	SD 6437 UG LF				
C1006-C1010 Steel Body/Steel Mandrel – 100° Countersunk – Finish: Zinc/Zinc								
3/16 (4.8)	.486 (12.3)	.795 (20.2)	.125-.331 (3.2-8.4)	SK 6331 UG	.191-.201 (4.85-5.10)		1450 (6452)	1200 (5340)
1/4 (6.4)	.660 (16.8)	1.059 (27.9)	.160-.475 (4.1-12.1)	SK 8475 UG	.261-.272 (6.63-6.91)		2500 (11125)	1850 (8233)
	.910 (23.1)	1.309 (33.2)	.415-.725 (10.5-18.4)	SK 8725 UG				
300 Stainless Steel Body/Stainless Steel Mandrel – Domed Head – Finish: Plain/Plain								
3/16 (4.8)	.415 (10.5)	.720 (18.3)	.062-.270 (1.6-6.9)	SSD 6270 UG	.191-.201 (4.85-5.11)		1600 (7120)	1100 (4895)
1/4 (6.4)	.560 (14.2)	.995 (25.3)	.080-.375 (2.0-9.5)	SSD 8375 UG	.261-.272 (6.63-6.91)		2500 (11125)	2000 (8900)
	.810 (20.6)	1.245 (31.6)	.350-.625 (8.9-15.9)	SSD 8625 UG				
	.810 (20.6)	1.434 (36.4)	.080-.625 (2.0-15.9)	SSD 8625 UGX*				
300 Stainless Steel Body/Stainless Steel Mandrel – 100° Countersunk – Finish: Plain/Plain								
3/16 (4.8)	.486 (12.3)	.762 (19.4)	.125-.331 (3.2-8.4)	SSK 6331 UG	.191-.201 (4.85-5.11)		1400 (6230)	1000 (4450)
1/4 (6.4)	.660 (16.8)	1.059 (27.9)	.160-.475 (4.1-12.1)	SSK 8475 UG	.261-.272 (6.63-6.91)		2500 (11125)	2000 (8900)

(*) X Extended Grip Range

POP® Trouble Shooting Guide

Description of Typical Problem



Pull Thru



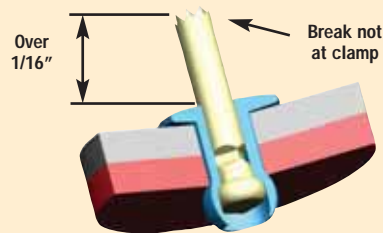
Partial Pull Thru



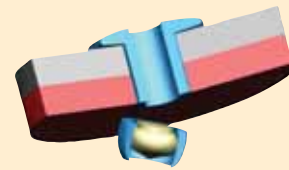
Head Popper



Loose Set/Plate Freeze



High Mandrel Break



Sheared Secondary Head

Potential Cause	Problem Type						
	Pull Thru's	Partial Pull Thru's	Head Popper	Loose Sets	Plate Freeze	High Mandrel Breaks	Sheared Secondary Head
Over maximum recommended hole							
Under minimum recommended hole							
Grip thickness over maximum							
Grip thickness under maximum							
Improper Hole Condition							
Excessive variation in size							
Noncircular hole							
Tapered hole							
Burrs and sharp edges							
Applicable material too soft							
Non-perpendicular set (improper alignment of tooling to application)							
Wrong nosepiece on tooling							
Gap between material thicknesses							
Insufficient secondary side clearance							

= APPLICABLE
 = NOT APPLICABLE

If modification to the system does not resolve the problem, please contact our application engineers and be prepared to supply the following information and samples.

- Company Name / Contact Name
- Address / Tel. # / Fax #
- Sales representative or Distributor
- Frequency of failure

- Rivet part number
- Affected quantities
- Affected lot numbers
- Hole sizes (tolerances)
- Grip thickness (ranges)

- Tooling information
- Tooling nosepiece
- 50 unset rivets for tests
- Samples of failed rivets
- Sample of application

POP® Brand Rivets

Tool Selection Guide

Tool	Rivet Material		Multi Grip									Closed End			
			Micro			Soft Set						Easy Entry			
			Open End												
Body	Mandrel	0.078" (2 mm)	3/32" (2.4 mm)	0.098" (2.5 mm)	7/64" (2.8 mm)	0.118" (3 mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/4" (6.4mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/4" (6.4mm)	
1600	Aluminum	Aluminum		●	●		●	●	●			●	●		
	Aluminum	Steel	●	●			●	●	●			●	●		
510A 511A 2101 5251A	Aluminum	Aluminum		●				●	●	●		●	●	●	
	Aluminum	Steel		●				●	●	●†		●	●		●
	Steel	Steel		●				●	●†			●			
	Monel	Steel				●		●							
	Stainless	Steel						●				●			
	Stainless	Stainless						●				●			
2100 5250A 5800	Aluminum	Aluminum		●				●	●	●		●	●	●	
	Aluminum	Steel		●				●	●	●		●	●	●	
	Aluminum	Stainless						●	●	●		●	●	●	
	Steel	Steel		●				●	●	●		●	●	●	
	Monel	Steel				●		●	●	●					
	Monel	Stainless						●	●	●					
	Stainless	Steel						●	●	●					
	Stainless	Stainless						●	●	●		●	●	●	
540 5400 5400LS	Aluminum	Aluminum		●				●	●	●	●	●	●	●	
	Aluminum	Steel		●				●	●	●	●	●	●	●	●
	Aluminum	Stainless						●	●	●	●	●	●	●	●
	Steel	Steel		●				●	●	●	●	●	●	●	●
	Monel	Steel				●		●	●	●	●	●	●	●	●
	Monel	Stainless						●	●	●	●	●	●	●	●
	Stainless	Steel						●	●	●	●	●	●	●	●
AutoSet®	Aluminum	Aluminum		●				●	●	●		●	●	●	
	Aluminum	Steel		●				●	●	●		●	●	●	
	Aluminum	Stainless						●	●	●		●	●	●	
	Steel	Steel		●				●	●†	●†		●	●	●	
	Stainless	Steel						●	●			●			
	Stainless	Stainless						●	●			●			

Tool	Rivet Material		HR															
			Self Plugger				F Series			LSR			T Rivet		Ultra Grip			
			1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/4" (6.4mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	1/8" (3.2mm)	5/32" (4.0mm)	3/16" (4.8mm)	3/16" (4.8mm)	1/4" (6.4mm)	3/16" (4.8mm)	1/4" (6.4mm)		
1600 510A 511A, 2101 5251A	Aluminum	Aluminum										●	●	●*				
	Aluminum	Steel						●										
	Steel	Steel	●															
2100 5250A 5800	Aluminum	Aluminum										●	●			●		
	Aluminum	Steel						●	●	●								
	Steel	Steel	●	●	●											●		
540 5400 5400 LS	Aluminum	Aluminum										●	●	●			●	●
	Aluminum	Steel						●	●	●								
	Steel	Steel	●	●	●	●		●	●	●						●	●	
AutoSet®	Aluminum	Aluminum															●	
	Aluminum	Steel						●	●	●								
	Steel	Steel	●	●	●‡													

(†) Except Multi Grip, (*) Except ProSet™ 1600, (‡) Except Self Plugger

POP® Brand Rivet Tool Systems Portfolio

Innovations in Blind Rivet Assembly



ProSet® 1600/MCS

The ProSet® 1600 is the smallest and lightest of the POP® blind rivet tool family. The ProSet® 1600 is designed to facilitate blind rivet installation in applications with limited access. An optional

Mandrel Collection System (MCS) version is available.



PRG/MCS 510A

This simple, effective pneumatic tool is small, lightweight and has a solid cast aluminum construction. An optional Mandrel Collection System (MCS) version is also available. The PRG/MCS 511A offers an extended nose housing (1-7/8" larger than 510A) for extra reach and improved access.



PRG/MCS 540

The heavy-duty, pneumatic-hydraulic 540 is extremely strong and robust as a result of the solid cast construction. As such, it is



unbeatable for efficient riveting on mass-production lines. It comes standard as a PRG version. An optional Mandrel Collection System (MCS) version is also available.



PRT/MCS 5400

Offering a number of options to meet customer requirements, the 5400 family members are all capable of setting the entire range of POP® blind rivets. The 5400 features light trigger action, ease of handling and an air line



attached at the tool centerline for less resistance to operator movement. The Long Stroke version, PRT/MCS 5400 LS, provides a stroke of 26mm for setting longer and more specialized rivets.

ProSet® 2100/MCS

The newest innovation in blind riveting is the ProSet® family of rivet tools. The ProSet® provides leading industry enhancements, such as its patent-pending Auto Shut-Off Mandrel Collection System (MCS) designed to conserve air consumption when the tool is not in use. While incorporating the latest in ergonomic design, the patent-pending front end requires **no** tools for removal during routine maintenance and is a first in the industry. The ProSet® 2101 offers a reduced nose housing diameter (0.689") for narrow access applications. The ProSet® tool is capable of setting rivets from 1/8"-3/16".



Quick and easy jaw service without tools.



PRT/MCS 5250A

The 5250A In-Line Riveter offers a range of features contributing to new standards in operator comfort and ease of movement. This style of setting tool accommodates the natural movements associated with vertical riveting operations at assembly benches or work stations. The 5251A offers a reduced nose housing diameter for limited access applications. The MCS model is equipped with a large capacity remote mandrel collection container (MCS5000).



MCS 5800

Ideal for site and maintenance work, the cordless 12 Volt MCS 5800 also expands options on the production line allowing blind rivets to be installed at assembly stations where there is no convenient available air supply. Designed and constructed to withstand industrial conditions, the MCS 5800 is easy to use, well balanced and comfortable. The high-capacity, rechargeable battery pack has the endurance to set up to 1900 rivets and can be recharged in just an hour.



Rivet Presenter

The Rivet Presenter (RP) provides the ability to automatically load rivets into a hand-held POP® rivet tool equipped with a Mandrel Collection System (MCS). This system feeds up to 30 rivets/min. without an operator handling the rivets. The RP is equipped for 1/8", 5/16" & 3/16" rivets.

The Remote Rivet Presenter (RRP) is designed for use in either semi-automatic or fully robotic riveting applications. Equipped with an umbilical, it creates the flexibility to feed rivets, up to 1/4", from 30 ft. away. Used with all POP power tools.



Point & Set®

A portable, self-contained, high speed riveting system designed to dramatically improve productivity in most high-volume blind riveting applications. Rivets are automatically delivered and loaded into the tool - on demand; the operator need never touch the rivets. Multiple configurations are available with either Pistol Grip or In-line and Umbilical packages from 6-12 feet. The system is capable of feeding/setting 1/8" - 3/16" standard off-the-shelf POP® pull stem blind rivets.



AutoSet®

AutoSet® is a state-of-the-art hand held riveting system that uses rivets pre-loaded on tape to enable auto-feeding. A two (2) second cycle time and less than ten (10) second re-load means increased productivity and decreased in-place installation cost. A built-in vacuum Mandrel Collector System (MCS) maintains rivets in the tool in any attitude. Targeted for mid to high volume applications, this fully portable and ergonomically balanced tool can be suspended either horizontally or vertically. Capable of setting 1/8" to 3/16" rivets.



Easy to Feed



Built-in MCS

POP® Brand SmartSet® Monitoring System POP® Hand Rivet Tools, Kits & Accessories



SmartSet®

This rivet monitoring device is designed to ensure your blind rivets have been properly set in your application. SmartSet confirms that the right rivet is being used, that each hole has a fastener installed and monitors the correct rivet setting sequence.

The built-in sensor provides read-outs during the setting cycle and records all of the variables. Once SmartSet has learned the settings, you receive either a GO or NO GO result. The instant feedback does not rely upon operator skill. SmartSet is real time technology that will store, download and track historical information. System is adaptable for use with the full range of POP power tools. When the application needs verification, count on SmartSet.

PowerLink Leverlite™

A powerful manual riveter for setting the largest POP® rivets sizes where power is not available. Durable cast body construction and long handles make it easier to set up to a 1/4" diameter rivet in all materials. Long 5.9" (15mm) nose housing improves access and versatility. Equipped with wrench & nosepieces to set 1/8", 5/32", 3/16", 1/4" standard rivets and 1/4" T-Rivet®. Weight: 4 lb (1.8 Kg).

Model # PL-LEVERLITE



PowerLink Plus™

All steel compact design linkage for improved strength and longevity this manual tool is ideal where lateral space is limited. Features a stroke adjustment lock-nut on the nose housing to set up to 1/4" rivets. Includes interchangeable 1/8", 5/32", 3/16" and 1/4" nosepieces and wrench. Weight: 4 lb (1.8 Kg).

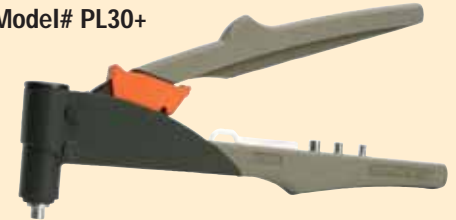
Model # PL-PLUS



PowerLink 30®+

Advanced design industrial quality manual rivet tool. A compound link and soft grips make it comfortable and easier to use. A shorter grip opening ergonomically designed to operate with one hand. Innovative latch design keeps handles closed without cumbersome chains. Stored inside the handle, this tool is equipped with a wrench and nosepieces to set 1/8", 5/32" and 3/16". Weight: 1.2 lb (0.55 Kg).

Model# PL30+



PowerLink 30® Repair Kit

Contains one PowerLink 30® rivet tool in a rugged carrying case AND an assortment of FOUR popular rivets sizes including MultiGrip, Close End, Grooved and POP Plus rivets and 1/8" backup washers ideal for around home, garage and garden repairs. **Model # PL30-REPAIR**



PowerLink 30® MRO Kit

A rugged carrying case that easily fits in a toolbox contains a PowerLink 30® rivet tool AND an assortment of FIVE popular Maintenance, Repair & Overhaul rivets sizes/materials and 1/8" & 3/16" backup washers for soft materials and oversize holes.

Model # PL30-MRO



POP Research & Development Kit.

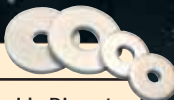
Practical for development programs, this kit provides a practical assortment of 12 types of multi-purpose and specialty POP Brand Rivets. **Model # BRK500RD.**

POP Marine Kit.

Designed for boat repair and salt water-applications, this kit contains 12 of the most widely used Stainless Steel POP Brand rivets. **Model #BRK300SS.**

POP® Washers (Back-up Plates)

Description	Part Number	Outside Diameter	Inside Diameter
Backup Plate (Steel)	SBUP 1/8"	.375	.129
	SBUP 3/16"	.375	.192
Backup Plate (Aluminum)	ABUP 1/8"	.375	.129
	ABUP 3/16"	.375	.192



POP® Mushroom Plugs

Description	Part Number	Lead-in Dia.	Plug Dia.	Stem Dia.
Plug for 3/16" Aluminum Rivet	MPA61	.096	.432	.1195
	MPA6	.116	.432	.127



Emhart Teknologies

Emhart Teknologies

applies unconventional thinking and innovation, routinely combining multiple technologies in new ways to create cost-effective assembly systems. Focused on intimate customer relationships in every phase of the manufacturing process, Emhart provides assembly solutions through computer-based modeling and value analysis from mobile and stationary innovation centers located around the Globe and online at www.emhart.com.

Dodge Threaded Inserts for plastic are designed to provide strong metal threads in soft materials. Dodge inserts are installed in a variety of ways including semi- and full automation using ultrasonic welding, hot or cold press-in, mold-in and self-threading.

- Application and Product Development
- Pre-production Prototyping and Sampling
- Extensive Product Range
- Installation Equipment Coordination

Heli-Coil precision formed stainless steel wire inserts for tapped threads in any materials provide permanent, conventional 60-degree internal screw threads that accommodate any standard bolt or screw.

- Tangless®
- Gall Resistant
- Self Locking
- Cordless Installation System

Parker-Kalon Specialty threaded fasteners set the industry standard for quality and consistency, providing high performance assembly for metal, plastic and masonry applications.

- Value-added design and engineering services
- QS and ISO certified
- Thread rolling, thread forming and self-drilling screws
- Assembled screws
- Weld screws and weld pins

Tucker Assembly Systems

from fully automated drawn ARC stud, Nut (NutFast®) and bracket (WeldFast™) welding to automatic plastic clip assembly and self-piercing riveting; Tucker supplies the most innovative and cost-effective assembly systems in the world.

- Application-Based Product Design
- Full System Approach
- Performance Monitoring, Self-Compensation and Diagnostics
- Production Line Integration

Warren Metal and Plastic Clips

The no-hole, fastening system combines plastic clips, studs and TUCKER welding equipment to retain insulation, route wire or ground electrical systems. Warren metal clips fasten plastic moldings and decorative parts.

- Design Flexibility
- Snap-on, Serviceable and Reusable
- Designed For Specific Applications
- Part of an Integrated System

Gripco Prevailing torque nuts and assemblies are an integral part of OEM assembly operations, providing exceptional performance and simplification of the assembly process.

- Application and Standards Engineering
- Extensive Product Selection
- Cold and Hot Forming
- Heat Treating and Plating



Download Emhart Catalogs and Manuals @ www.emhart.com.

Product Portfolio

Emhart
Teknologies

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