

STANLEY[®]
Engineered Fastening



Breakstem Riveting Systems

POP[®]  **Avdel**[®]

Breakstem Systems Performance Fasteners For Versatile Assembly



Breakstem fasteners

Joining components and diverse materials that vary in thickness and composition is a fundamental aspect of our breakstem fastening systems. The flexibility to meet a wide range of customer requirements ensures that an optimal fastening solution can be tailored to the needs of the application.

Breakstem fasteners are produced from high quality, durable materials manufactured using the cold forming process. Elements of the fastener design, cold forming process and additional operations produce each fastener's specific performance features and characteristics.

Installation

POP Avdel breakstem fasteners conform to the requirements of modern installation systems. They can be installed manually or automatically and can easily be integrated into existing installation processes. Breakstem fastening solutions can be used to simplify production flow and reduce assembly time while simultaneously improving quality and performance in the application. Whether you specialize in high volume production or small volume batches, we can recommend a fastening solution to match. Customised Multi-head Assembly Stations from POP Avdel can fasten any number of joints in a single operation while our hand tools provide flexible assembly solutions in many environments.



Applications

The wide range of breakstem fasteners can be used to fasten a variety of materials including soft, brittle and thin metals and plastics. They are designed to meet the highest quality standards and built to resist the toughest environmental extremities.

POP Avdel products have often been designed and developed in collaboration with our customers, assuring they've been designed with function and practicality at the forefront of the development.

Mission

To ensure reliable joint design nothing should be left to chance. From material selection to fastener design and installation tooling, every decision impacts the quality, reliability and cost of the final product. STANLEY Engineered Fastening provides highly skilled applications engineering services to ensure First Time Right Design™ and optimised joints. In partnership, our teams can recommend the best solution from the broadest product portfolio in the industry, optimising performance at the lowest possible cost for your specific application needs.

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Breakstem Systems

POP Avdel breakstem fasteners and installation tools are a high performance blind fastening system. For more than 100 years the POP and Avdel brands have been synonymous with world-leading, blind fastening systems. Used in all manufacturing industries throughout the world, there is a breakstem fastener and installation tool to suit virtually every assembly requirement. Key user benefits include:

Benefits of assembly

Extensive Product Choice

The breakstem range is now more extensive than ever. A wide choice of head styles, finishes and sizes are available as standard and new products have been introduced to expand the steel and stainless steel product ranges.

Installation Tools

A comprehensive range of high performance tools ensure reliable and accurate installation of our breakstem fasteners. Combining the latest design and engineering technology with robust and durable construction, the range includes hydro-pneumatic handtools, battery powered tools as well as fully automated, customised equipment for high volume production.

Multi-grip Capability

Stavex®, Avex®, Avibulb® XT, Avinox® XT, Vgrip®, Monobolt® and Klamp-Tite® breakstem fasteners offer multi-grip capability. By accommodating many variations in material thickness, just one fastener can be used in several assembly applications, reducing stock holding, time and costs.

Complete Hole Fill

Monobolt®, Stavex® and Avex® fasteners offer exceptional hole fill. Expanding to fill oversize, irregular, slotted or misaligned holes they create a high strength, vibration resistant joint.

Consistent, High Performance

Designed and manufactured to tight tolerances, POP Avdel breakstem fastening systems ensure consistently accurate and secure, high strength assembly.

Retained and Locked Stems

Most breakstem fasteners have a retained stem which provides strong, vibration resistant joints without electrical problems or rattling often caused by loose stems. For additional strength, Monobolt®, Interlock® and Klamp-Tite® stems are mechanically locked into the shell head while the splined stems of Hemlok® fasteners form interference locks.

Structural Assembly

Where load-bearing, structural joints are required, Avibulb® XT, Avinox® XT, Hemlok®, Interlock® and Monobolt® breakstem fasteners have been designed to offer high shear and tensile strength.

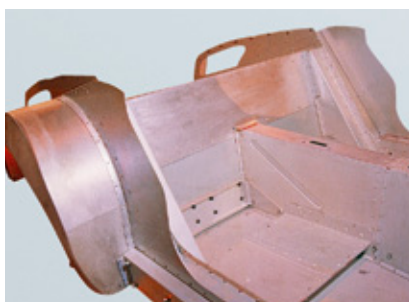
Customised Designs

As you would expect from a leader in fastening solutions, STANLEY Engineered Fastening has extensive experience in engineering and developing breakstem fasteners and tooling to unique customer requirements with many examples detailed in this catalog. Please contact us to discuss your special requirements.

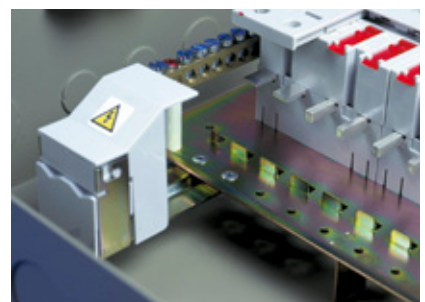
Domestic appliances



Car chassis



Electronic components



Selecting a Breakstem Fastener

Selecting a breakstem fastener is a simple process. The factors detailed below are designed to help you select a fastener suitable for your application:

Fastener Selection

Grip Range

The fastener should be selected to ensure that the thickness of the parent material(s) falls within the grip range. Most of our breakstem fasteners offer multi-grip capability, with Monobolt®, Stavex®, Vgrip®, and Avex® fasteners offering exceptional multi-grip performance.

Hole Size

This is specified on the relevant technical data sheet for the fastener. It is important to control the hole size accurately in order to ensure optimum fastener performance.

Hole Fill

Monobolt® and Interlock® fasteners provide excellent hole fill via a radially expanded body. Avex®, Stavex®, and Avibulb® fasteners also provide good hole fill.

Fully Sealed Fastening

Closed End Rivets should be specified for all of the many applications where a fully sealed fastening is essential. This rivet design produces a seal that prevents passage of liquid or vapor at pressures up to 6.9 bar.

Strength Characteristics

Hemlok®, Monobolt®, Klamp-Tite®, Stavex®, Vgrip®, Avinox® XT and Avibulb® XT fasteners all offer high shear and tensile strength. Please refer to the technical data sheets for typical strength values. For heavy duty applications, the Avbolt® blind structural fastener is the first choice. Details on Avbolt® can be found on our website or in the Lockbolt Systems catalog.

Load Spreading

Most of our breakstem fasteners have a large blind side bearing area. LSR and Klamp-Tite® fasteners provide exceptional load spreading capability and are ideal for use in thin sheet or low strength materials.

Corrosion Resistance

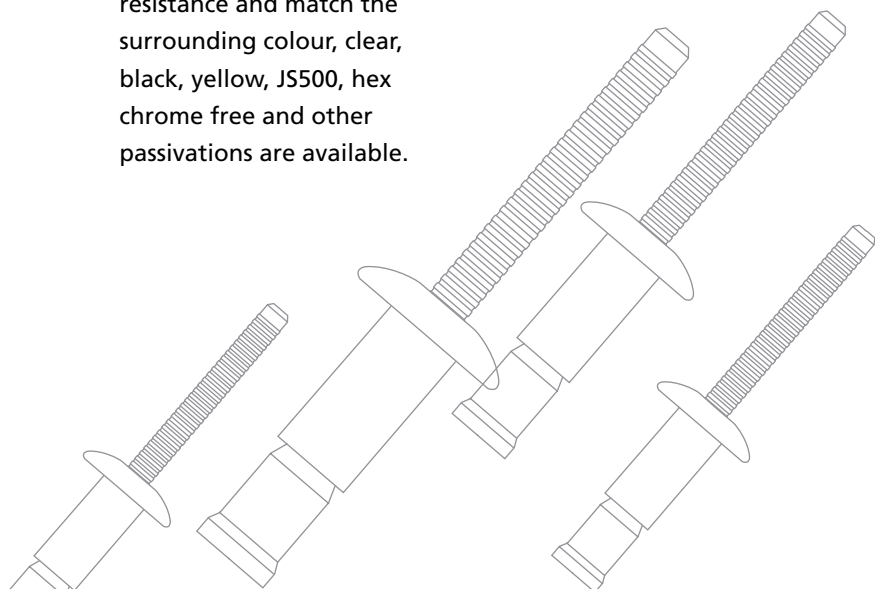
The selection of the material type and finish of the breakstem fastener should be made on the basis of the corrosion resistance required. Corrosion is best reduced by selecting a fastener material which is the same as the parent material(s). Stainless steel fasteners offer the best corrosion resistance.

Special Surface Coatings


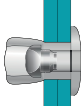

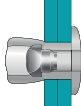

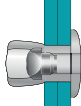

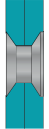

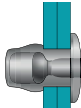

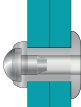

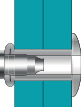

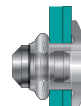

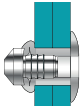

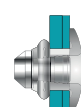

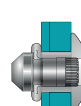
For improved corrosion resistance we can apply many protective coatings, including: Delta-Seal®, extra zinc plating, zinc-nickel plating and anodised finishes for aluminium alloy fasteners, with or without dyeing. Where it is important to improve corrosion resistance and match the surrounding colour, clear, black, yellow, J5500, hex chrome free and other passivations are available.

Important Information


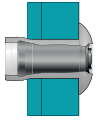

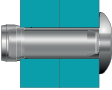

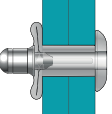

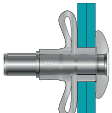

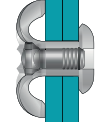

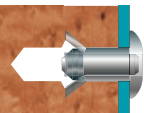

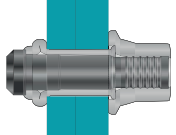
The information on this page should be used in conjunction with the technical data sheets for the individual fasteners. All test and performance data detailed on the datasheets reflect the ultimate strength of the fasteners, determined with representative samples and over multiple tests. We recommend that you use this data as a guide only, since other factors may affect the performance of the fastener. We strongly recommend you test the fastener in your application to determine exact performance levels.



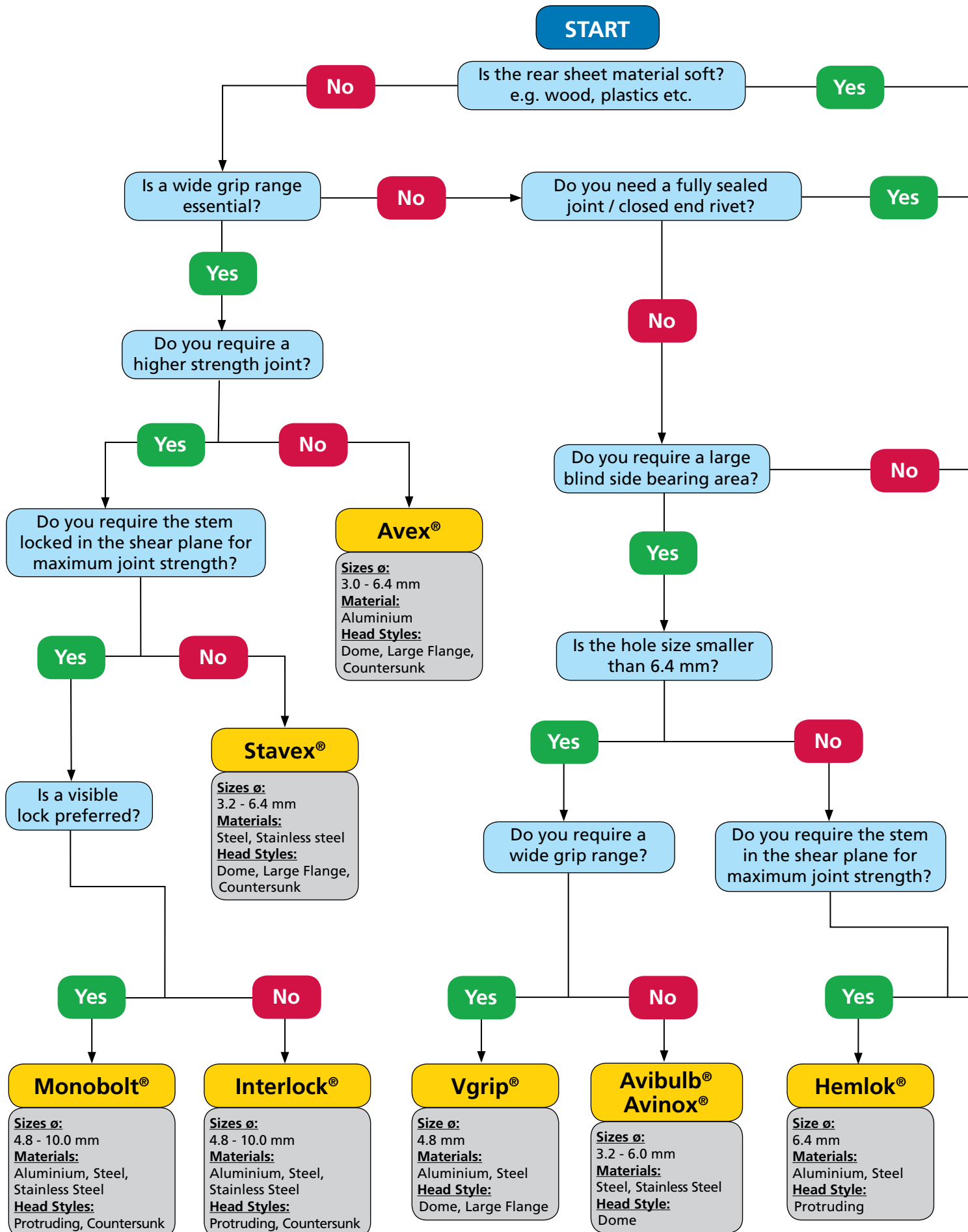
Product Capabilities

Blindside Head Type	Rivet Type	Placing Characteristics						Typical cross-section of placed fastener
		Blind side head size	Grip range	Hole fill ability	Clamp	Load-bearing stem	Vibration resistance	
Basic form	Open End 	*	*	*	*	*	*	
	Soft Set 	*	*	*	*	*	*	
	Micro Rivet 	*	*	*	*	*	*	
Flush	Pull-Thru (PT) 	**	*	**	*	—	*	
Sealed	Closed End 	*	*	*	*	*	*	
Large bearing surface	Avex® 	**	***	***	**	*	**	
	Stavex® 	**	***	***	**	*	**	
	Vgrip® 	**	***	**	**	**	**	
	Avibulb® Avinox® 	***	*	**	**	**	**	
	Avibulb® XT Avinox® XT 	***	**	**	***	**	**	
	Hemlok® 	***	*	**	***	***	**	

* = good performance, ** = better performance, *** = best performance, — = not applicable

Blindside Head Type	Rivet Type	Placing Characteristics						Typical cross-section of placed fastener
		Blind side head size	Grip range	Hole fill ability	Clamp	Load-bearing stem	Vibration resistance	
Conical form	Monobolt® 	*	***	***	**	***	**	
	Interlock® 	*	***	***	**	***	**	
Folding leg formation	LSR Bulbex® 	***	***	*	*	*	*	
	Klamp-Tite® 	***	***	*	**	**	**	
Peel type	T Rivet 	***	*	*	*	**	*	
	T-Lok® 	***	**	*	*	**	*	
Blind Lockbolt	Avbolt® 	If higher strengths or larger diameters are required, please refer to the POP Avdel "Lockbolt Systems" catalog.						

* = good performance, ** = better performance, *** = best performance



Selection Guide

This table is designed as a guide to help you select the most suitable breakstem fastener for your particular application. Full technical and performance data for each breakstem fastener can also be found on our website or contact your local STANLEY Engineered Fastening representative.

Product Range	Material					Head Style			Fastener Size (nom)								Page No.			
	Body		Stem			Dome	Large Flange	Countersunk	2.0 mm	2.4 / (2.5) ¹⁾ mm	2.8 mm	3.0 mm	3.2 mm	4.0 mm	4.8 mm	5.0 mm	6.0 mm	6.4 mm	Series No.	Description
Aluminium	Steel	Stainless Steel	Copper	Nickel-Copper	Aluminium															
Open End	•					•			•			•	•	•				AD ABS	12	44
	•					•							•	•	•			AD ABS LF	12	44
	•						•		•		•	•	•	•	•	•		TAPD/SNAD BS	12	46
	•						•						•	•	•			TAPD BS LF	12	48
	•						•		•				•	•	•			TAPK BS	12	49
	•							•					•	•	•			TAPD SS	12	50
		•					•				•	•	•	•	•	•	•	TSPD/SNSD BS	12	51
		•					•						•	•	•			TSPD BS LF	12	53
		•					•		•				•	•	•			TSPK BS	12	54
			•					•					•	•	•			SSD SSBS	12	55
			•					•					•		•			SSD SSBSLF	12	55
			•					•					•		•			SSK SSBS	12	55
				•			•						•	•				TCPD BS	12	56
					•		•				•		•	•	•			TLPD BS	12	57
					•		•				•		•	•	•			TLPK BS	12	58
				•		•						•	•	•			TLPD SS	12	59	
				•		•						•	•	•			TLPK SS	12	60	
Soft Set	•					•			• ¹⁾		•	•	•				PAD	13	61	
Micro	•					•			•								TAPD BS	14	62	
Pull-Thru		•				•					•						SKK PT	15	63	
Closed End	•					•							•	•	•			AD AH	16	64
	•						•						•	•	•		•	AD H/AD SB	16	65
	•						•						•	•	•			AK H	16	65
	•							•					•	•	•			AD SSH	16	66
	•							•					•	•	•			AK SSH	16	66
		•					•							•	•	•		SD SB	16	67
			•					•						•	•	•		TD GT	16	68
			•					•							•			TVD GT	16	69
Avex®						•							•	•	•		•	LD SB	16	70
	•					•							•	•	•			1661	17	71
	•					•								•				1641	17	72
	•					•							•	•	•			1604	17	73
	•						•						•	•	•			1663	17	74
Stavex®		•				•								•	•	•		1643	17	75
		•				•							•	•	•			BS01	18	76
		•				•							•		•			BS04	18	77
		•				•									•			BE34	18	78
Vgrip®			•				•						•	•	•			BS11	18	79
	•					•									•			VG11	19	80
	•					•									•			VG12	19	80
Avibulb®		•				•									•			VG21	19	81
		•				•									•			VG22	19	81
Avibulb®		•				•							•	•	•		•	BN01	20	82

Product Range	Material				Head Style				Fastener Size (nom)							Page No	
	Body		Stem		Dome/ Protruding Large Flange Countersunk	3.2 mm	4.0 mm	4.3 mm	4.8 mm	5.0 mm	6.4 mm	10.0 mm	Series No.	Description	Data sheet		
Aluminium	Steel	Stainless Steel	Copper	Aluminium												Steel	Stainless Steel
Avinox®		●			●				●	●	●		BE61	20	83		
			A4			A4			●	●	●		BE16	20	84		
Avibulb® XT		●			●						●		BN01	21	85		
Avinox® XT			●			●					●		BE61	21	86		
Hemlok®		●			●						●		2221	22	87		
	●				●						●		2241	22	88		
Monobolt®	●				●				●	●	●		2774	23	89		
	●				●				●	●	●		2764	23	90		
		●				●				●	●		2771	23	91		
		●				●				●	●		2761	23	92		
			●				●			●	●		2711	23	93		
			A4				A4			●	●		2717	23	94		
			●				●			●	●		2721	23	95		
Interlock®	●				●				●	●			BAPI	24	96		
		●				●				●	●		SSPI	24	97		
		●				●				●	●		SSCI	24	98		
			●			●				●	●		CCPI	24	99		
LSR / Bulbex®	●				●				●	●			ACD	25	100		
	●				●					●			ACD LF / BF41	25	101		
Klamp-Tite®	●				●				●	●			BAPKTR	26	102		
Peel Rivet	●				●				●	●			TAPD SO	29	103		
	●				●					●			TAPD SOLF	29	103		
T Rivet	●				●				●	●			BSPTS	27	104		
	●				●					●			BSLTS	27	104		
	●				●					●			BSCTS	27	104		
	●				●					●	●		AD TFBS	27	105		
T-Lok®		●			●					●			BM01	28	106		
Avex® Splined		●			●					●			1610	29	107		
Earth Tab Rivet		●			●					●			BN11	30	108		
Terminal Tag			●		●					●			PMC	30	109		

Open End Rivets

Non-structural blind breakstem rivet designed for a wide range of applications. Available in a variety of materials and combinations.



Key features and benefits

- Cost effective standard rivet
- Installed quickly and easily
- Design of the stem head ensures positive retention after installation

Specifications

Sizes:

2.4 mm – 6.4 mm
(3/32" – 1/4")

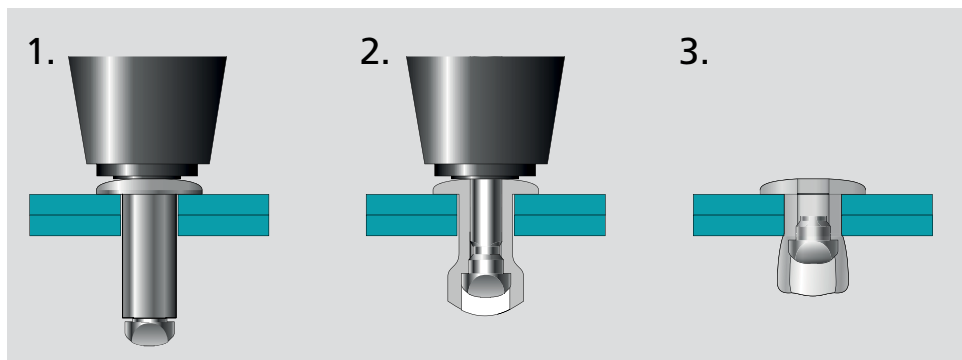
Materials:

Aluminium, Steel,
Stainless Steel, Copper,
Nickel Copper Alloy

Head Styles:

Dome, Large Flange,
Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- White goods
- Automotive
- Building & construction
- Furniture
- Lighting
- Hearth, grill
- Patio furniture
- Renewable energies

Automotive



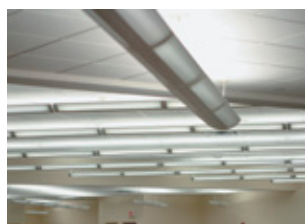
White goods



Snowmobile trailer



Lighting equipment



Conference room furnishings



Gutter



Soft Set Rivets

Almost identical in appearance as the open end, this rivet is engineered with a soft aluminium alloy body and mandrel preventing installation fractures on brittle materials.



Key features and benefits

- Designed for soft or brittle materials
- Incorporates a special Aluminium alloy
- Low clamping force

Specifications

Sizes:

2.5 mm – 4.0 mm (5/32")

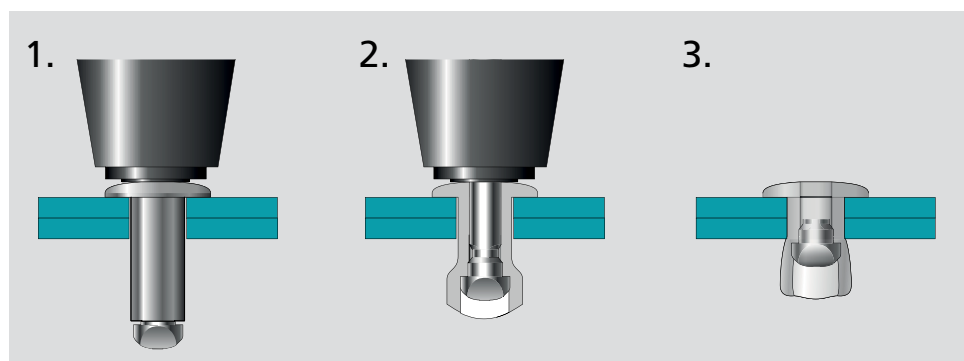
Materials:

Aluminium

Head Styles:

Dome

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Office furniture
- Mobile homes, caravans
- Public transportation
- Plastic components
- Electrical engineering
- Lighting

Conference room furnishings



Plastic school chair



Recreational vehicle



Plastic valve



Angle section to PCB



Playground equipment



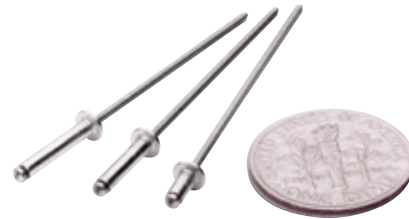
Micro Rivets

2 mm aluminium open end rivet designed for small micro-electronic applications.



Key features and benefits

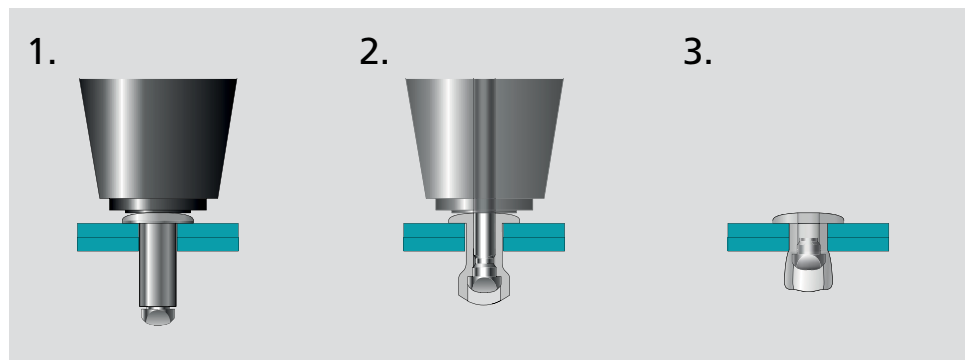
- Smallest blind rivet available
- Suitable for tight places
- Accommodates very small holes
- Requires access to primary side only
- Very low secondary side clearance
- Low head height
- Soft set body will not damage work piece
- Ideal for thin metal and printed circuit boards



Specifications

Size:
2.0 mm
Material:
Aluminium
Head Style:
Dome

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Electronic devices
- Telecommunications
- Vehicle electronics
- Entertainment systems

Electronics applications



Computer and mobile devices



Car entertainment



Automotive electronics



Pull-Thru (PT) Rivets

Unique double countersunk steel blind rivet provides a flush setting surface on both sides of the application.



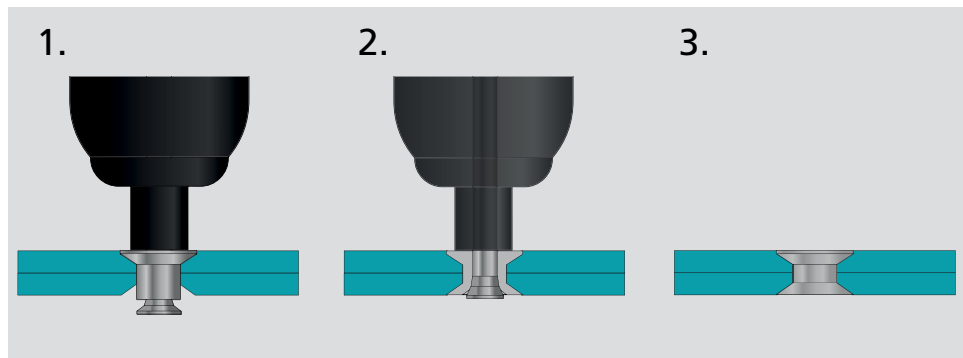
Key features and benefits

- Flush Set on both sides of the application on countersunk materials*
 - Insertion can be reversed improving rivet tool access
 - Unique "Pull-Thru" mandrel
 - No loose mandrel heads remain anywhere in the application
 - Mandrel head never breaks away from the mandrel
 - Consistent clamp force
 - Tight radial set provides increased structural rigidity
 - Colored mandrels for quick visual identification of different part sizes
 - High speed automation with POP Rivet Presenter facilitates a cycle time as fast as 2 seconds
- * Rear sheet tail protrusion of installed fastener up to 0.4 mm is permissible

Specifications

Size:
3.0 mm
Material:
Steel
Head Style:
Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

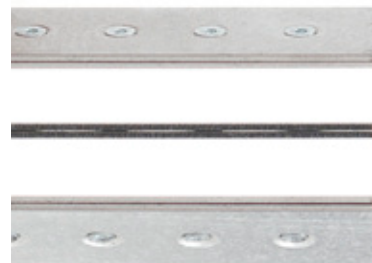
Assembly applications

- Electronic enclosures
- Computer servers
- Lighting

Server blade assembly



Flush setting surface on both sides of the application



Closed End Rivets

Exclusive rivet design featuring a cup shaped end configuration ideal for applications that need to be water tight or when stem retention is paramount.



Key features and benefits

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



Specifications

Sizes:

3.2 mm – 6.4 mm
(1/8" – 1/4")

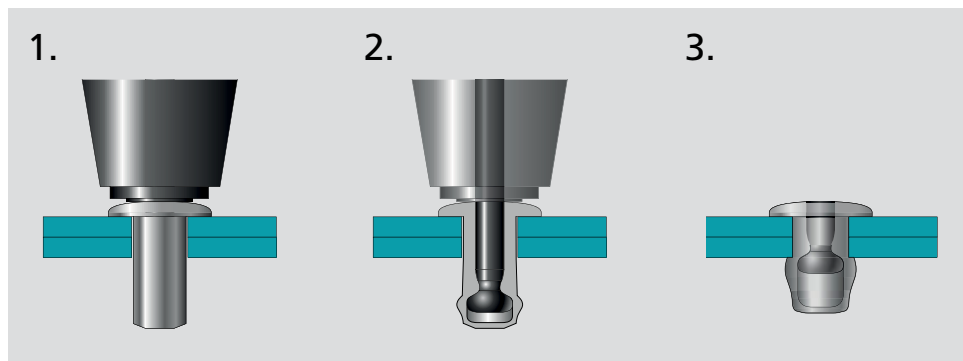
Materials:

Aluminium, Steel,
Stainless Steel, Nickel-
Copper Alloy

Head Styles:

Dome, Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- White goods
- Electronic enclosure
- Signs
- Outdoor cases
- Scoreboards
- LED signs
- Recreational vehicles

White goods



Lawn and garden



School bus



Electronic enclosure



Electronic switch



Sunroof



Multi-grip, aluminium alloy breakstem fasteners with a long and reliable track record in a wide range of applications and industries.



Key features and benefits

- Multi-grip capability accommodates wide variations in material thickness
- One fastener can be used to replace several standard grip fasteners thus reduced fastener inventory and simpler stock control
- Good hole fill provides strong, vibration resistant joints
- Compensates for irregular, oversized, slotted or misaligned holes
- Can stop sheet movement in non-standard holes
- Retained stem avoids damage, electrical problems or rattling caused by loose stems
- Provides a large blind side bearing area against the rear sheet
- Spreads the tail bearing load/clamp load on the rear sheet making it ideal for use in thin sheet materials

Specifications

Sizes:

3.0 mm to 6.4 mm (1/4")

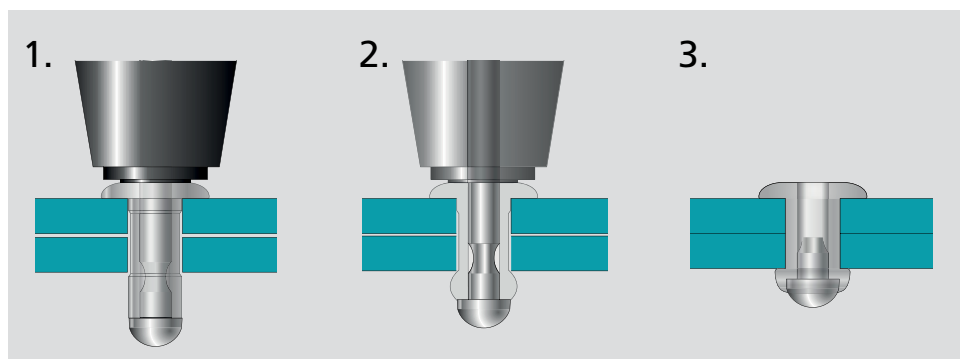
Materials:

Aluminium

Head Styles:

Dome, Large Flange,
Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Commercial vehicles
- Domestic appliances
- Electronics
- Electrical equipment
- General light industrial
- Heating and ventilation

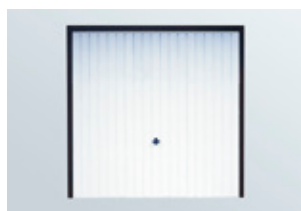
Garage doors



Domestic heating systems



Car chassis



Stavex®

Multi-grip, high strength steel and stainless steel breakstem fasteners.



Key features and benefits

- High shear and tensile strength provides strong, vibration resistant joints
- Stainless steel option provides high corrosion resistance and is ideal for applications requiring elevated temperatures
- Multi-grip capability accommodates wide variations in material thickness
- One fastener can be used to replace several standard grip fasteners thus reduced fastener inventory and simpler stock control
- Good hole fill compensates for irregular, oversized, slotted or misaligned holes and can stop movement in non-standard holes
- Retained stem avoids damage, electrical problems or rattling caused by loose stems
- Provides a large blind side bearing area against the rear sheet
- Spreads the tail bearing load/clamp load on the rear sheet making it ideal for use in thin sheet materials

Specifications

Sizes:

3.2 mm – 6.4 mm
(1/8" – 1/4")

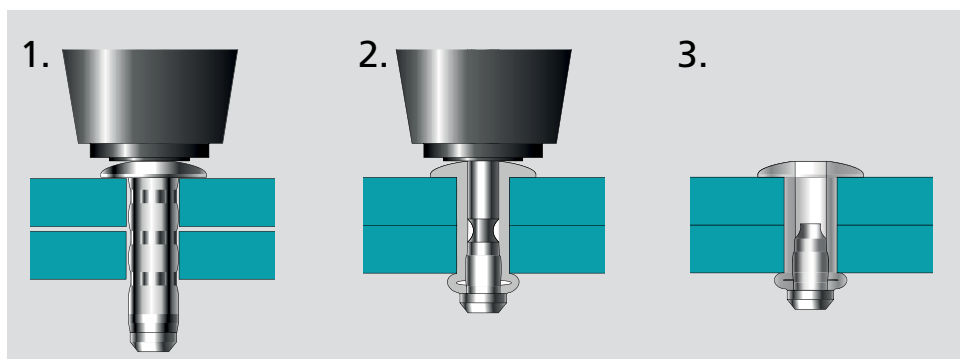
Materials:

Steel, Stainless Steel

Head Styles:

Dome, Large Flange,
Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Commercial vehicles
- Domestic appliances
- Electronics
- Electrical equipment
- General light industrial
- Heating and ventilation

Snowmobile



Passenger air bag



Roll-up security door



Vgrip®

High performance, multi-grip rivet with excellent claim properties and a wide blind side spread. Also features a positively retained stem head and a grooved stem for optimum tool jaw life.



Key features and benefits

- Multi-grip capability (covers 4.0mm) enabling SKU reduction and improved stock management
- Single bulb setting in all grip thicknesses gives superior aesthetic finish and evenly distributes contact pressure over the application
- Provides a large blind side bearing area for increased tensile strength
- Moderate hole fill therefore, avoiding pressure on holes
- Locked stem eliminates rattle or any risk of head ejection
- Special "Soft Set", "HS" (High Strength), "ZRE" (Zero Radial Expansion) and "ZRS" (Zero Radial Sliding) versions available on request

Specifications

Sizes:

4.8 mm (3/16")

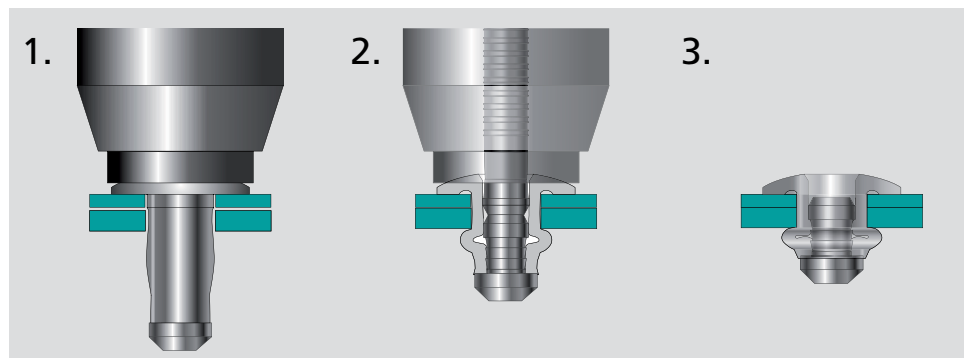
Materials:

Aluminium, Steel

Head Styles:

Dome, Large flange

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive components
- White goods
- General industrial
- Renewable energies

Automotive



Solar panels



Ladders



White goods



Automotive car seat



Bumper



Avibulb® & Avinox®

High strength steel (Avibulb®) and stainless steel (Avinox®) breakstem fasteners with excellent bulbing tail formation. Ideal for thin sheet materials.



Key features and benefits

- High shear and tensile strength providing strong, vibration resistant joints
- Stainless steel Avinox® for high corrosion resistance and applications requiring elevated temperatures
- Provides a large blind side bearing area against the rear sheet
- Spreads the tail bearing load/clamp load on the rear sheet making it ideal for use in thin sheet materials
- Good hole fill compensates for irregular, oversized, slotted or misaligned holes
- Retained stem avoids damage, electrical problems or rattling caused by loose stems

Specifications Typical placing sequence

Sizes:

3.2 mm – 4.8 mm

(1/8" – 3/16"),

Avibulb® up to 6.0 mm

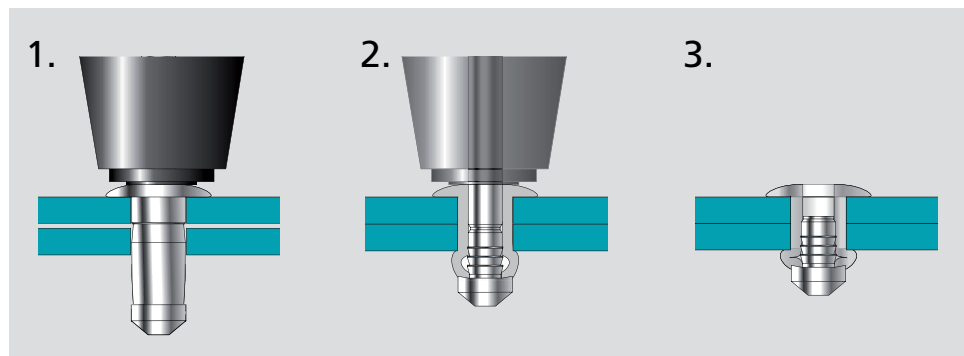
Materials:

Steel, Stainless Steel,

A4 Stainless Steel

Head Style:

Dome



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Cabinets and enclosures
- Heating and ventilation
- Telecommunications
- General light industrial

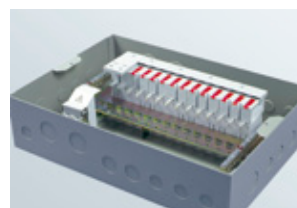
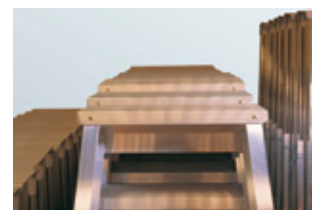
Telecommunications cabinets



Electronic components

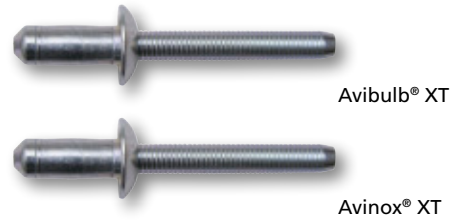


Ladders



Avibulb® XT y Avinox® XT

Avibulb® XT (steel) and Avinox® XT (stainless steel) are high performance structural breakstem fasteners with excellent bulbing tail formation, ideal for thin sheet materials. The new fasteners feature a wide grip range, especially suited for applications with varying sheet thicknesses.



Key features and benefits

- High shear and tensile strength and high residual clamp load providing strong, vibration resistant joints
- Multi-grip capability accommodates wide variations in material thickness
- Spreads the tail bearing load/clamp load on the rear sheet making it ideal for use in thin sheet materials
- Suitable also in softer materials
- Retained stem avoids damage, electrical problems or rattling caused by loose stems
- Underhead recess accommodates burrs around holes and spreads the load evenly on the top sheet
- Stainless steel Avinox® XT for high corrosion resistance and applications requiring elevated temperatures

Specifications

Sizes:

6.4 mm (1/4")

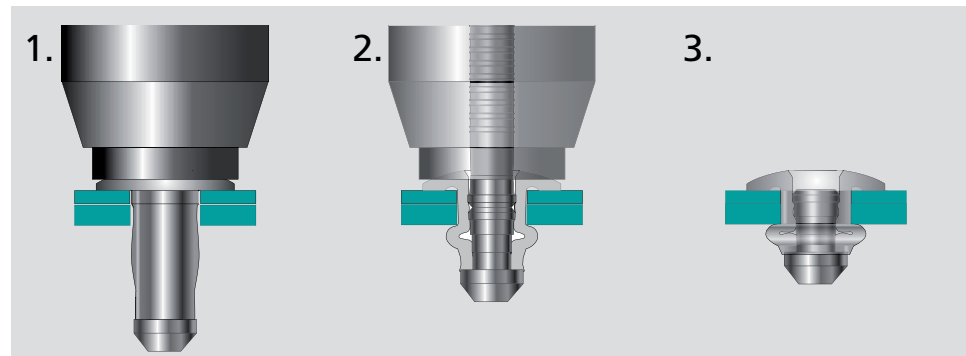
Materials:

Steel, Stainless Steel

Head Style:

Dome

Typical placing sequence



Avdel Patent Protected

Please visit our website for fastener placing animations and technical data.

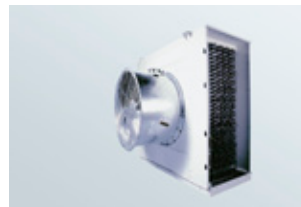
Assembly applications

- Automotive
- Truck and trailer
- Cabinets and enclosures
- Heating and ventilation
- Telecommunications
- Domestic appliances
- Renewable energies
- Industrial equipment

Telecommunications cabinets



Industrial refrigeration



Vehicle panels



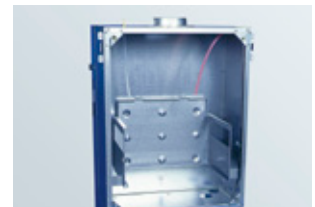
Solar panels



Washing machine



Heating and ventilation



Hemlok[®]

Structural breakstem fasteners with exceptional shear and tensile strength and a large blind side bearing area against the rear sheet.



Key features and benefits

- All steel version provides exceptional shear and tensile strength
- Large blind side bearing area spreads the tail bearing load/clamp load on the rear sheet reducing creep e.g. in plastic material
- Interference lock formed by a splined stem provides strong, vibration resistant joints
- No damage, electrical problems or rattling caused by loose stems

Specifications Typical placing sequence

Sizes:

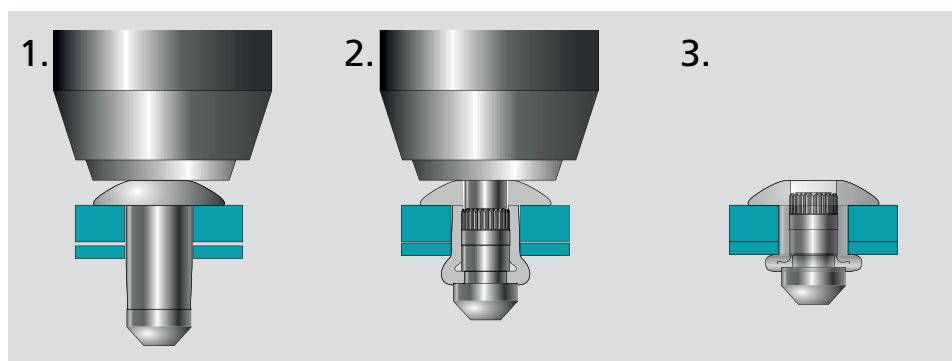
6.4 mm (1/4")

Materials:

Aluminium, Steel

Head Style:

Protruding



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Warehouse racking
- Ladders

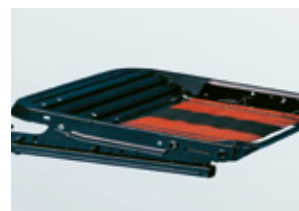
Scaffold tower



Step ladder



Car seat base



Vehicle mud flaps



Monobolt®

Multi-grip structural breakstem fasteners providing a fully sealed joint and visible lock.



Key features and benefits

- Excellent hole fill via radially expanded body provides very strong, vibration resistant joints and compensates for irregular, oversized, slotted or misaligned holes
- Good sheet take-up performance for large gap closing capability
- Stem mechanically locked into body avoids damage, electrical problems or rattling caused by loose stems
- Multi-grip capability
- High shear and tensile strength
- Visible lock for quick and easy inspection

Specifications

Sizes:

4.8 mm, 6.4 mm and 10 mm
(3/16", 1/4" and 3/8")

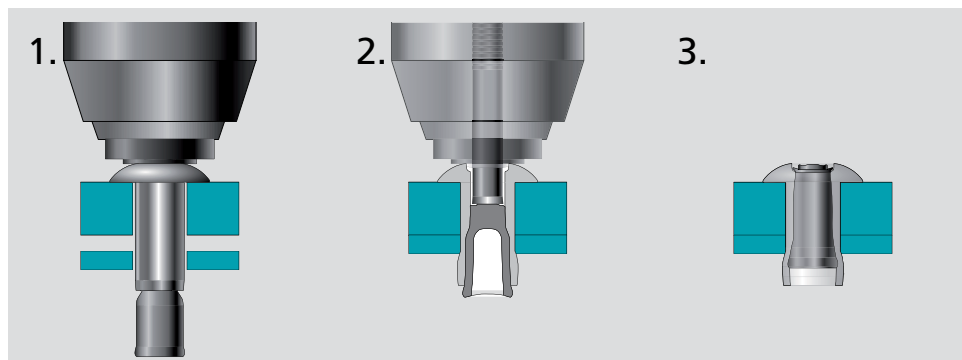
Materials:

Aluminium, Steel,
Stainless Steel,
A4 Stainless Steel

Head Styles:

Protruding, Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Cabinets and enclosures
- Commercial vehicles
- Domestic appliances
- Heating and ventilation

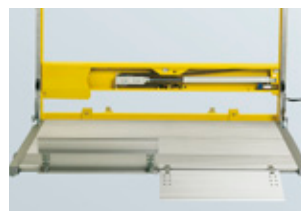
Car chassis



Column tail lifts



Product cooler



Interlock[®]

Multi-grip structural breakstem fasteners providing a fully sealed joint.



Key features and benefits

- Excellent hole fill via radially expanded body provides greater joint integrity, added water resistance and compensates for irregular, oversized, slotted or misaligned holes
- Can stop sheet movement in non-standard holes
- Good sheet take-up performance for large gap closing capability
- Stem mechanically locked into body avoids damage, electrical problems or rattling caused by loose stems
- Multi-grip capability accommodates wide variations in material thickness
- High shear and tensile strength requires fewer rivets per assembly

Specifications Typical placing sequence

Sizes:

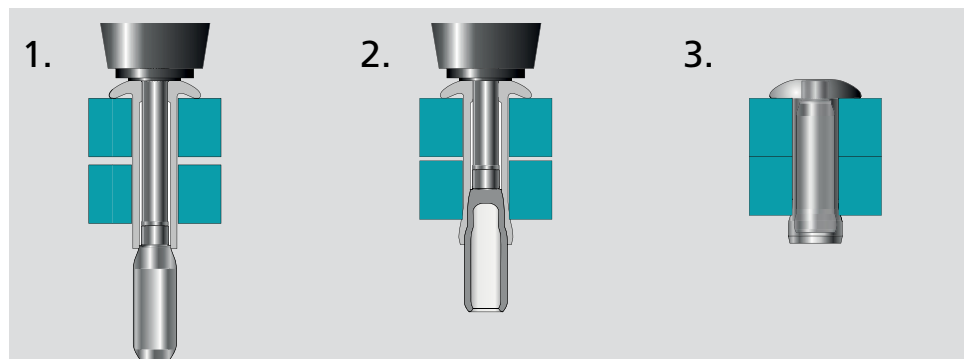
4.8 mm, 6.4 mm and 10 mm
(3/16", 1/4" and 3/8")

Materials:

Aluminium, Steel

Head Styles:

Protruding, Countersunk



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Cabinets and enclosures
- Commercial vehicles
- Domestic appliances
- Heating and ventilation

Truck trailer



Heat exchanger



LSR / Bulbex[®]

Aluminium alloy breakstem fasteners with a split tail formation providing a very large blind side bearing area against the rear sheet. Ideal for use with plastic and low strength material.



Key features and benefits

- Split tail formation provides a very large blind side bearing area against the rear sheet
- Spreads the tail bearing load/clamp load on the rear sheet providing high resistance to pull-out loads
- Multi-grip capability accommodates wide variations in material thickness
- Retained stem avoids damage, electrical problems or rattling caused by loose stems

Specifications

Sizes:

3.2 mm, 4.0 mm and
4.8 mm

(1/8", 5/32" and 3/16")

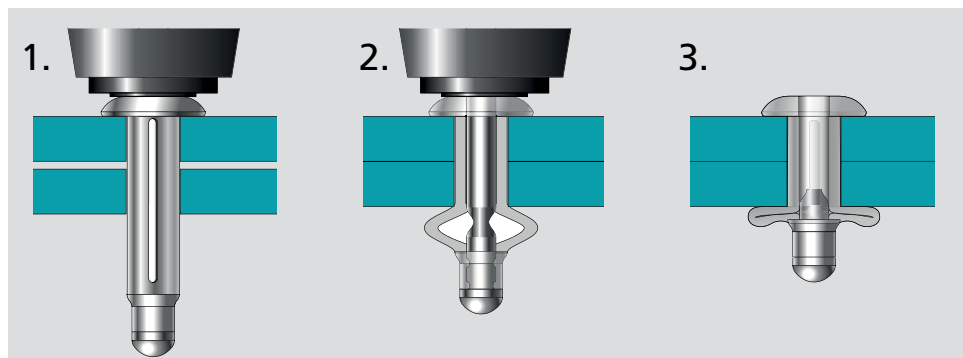
Material:

Aluminium

Head Styles:

Dome, Large Flange

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Caravans/RV
- Mobile homes
- Domestic appliances
- Plastic components

Caravans/RV



Mobile homes



Speaker systems



Klump-Tite®

Aluminium alloy fasteners with a very large blind side bearing area against the rear sheet. Ideal for use in thin sheet or low strength materials.



Key features and benefits

- Split tail formation spreads the tail bearing load/ clamp load on the rear sheet
- Ideal for use in thin sheet materials offering high resistance to pull-out loads
- Multi-grip capability accommodates wide variations in material thickness
- Stem is mechanically locked into body providing very strong, vibration resistant joints
- Visible lock for quick and easy inspection
- Optional underhead washer provides a weather-proof seal

Specifications

Sizes:

4.8 mm and 6.4 mm
(3/16" and 1/4")

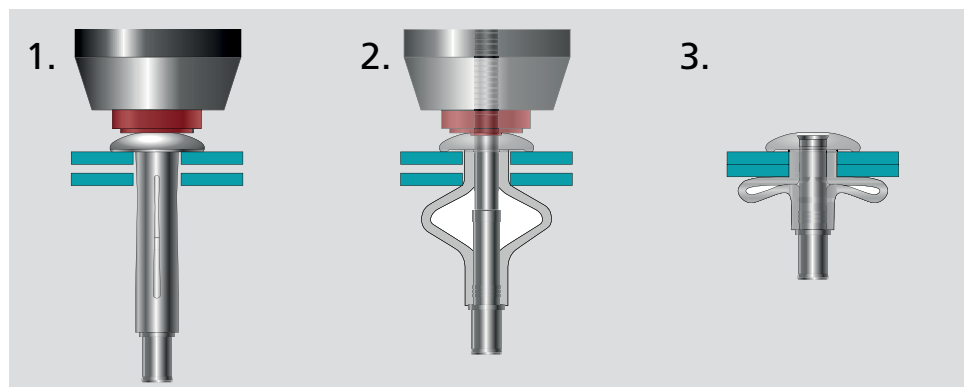
Material:

Aluminium

Head Style:

Protruding

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Container
- Cladding
- Commercial vehicles

Refrigerated truck



Refrigerated truck



T Rivet

Peel-type structural breakstem rivet providing good vibration resistance and shear and tensile strength.



Key features and benefits

- High clamp-up where there is sheet separation
- Visible lock - T Rivet can withstand severe vibration without loss of the stem's plug section
- Multi-grip version available



Peel-type closing head of a T Rivet

Specifications

Sizes:

4.8 mm – 6.4 mm
(3/16" – 1/4")

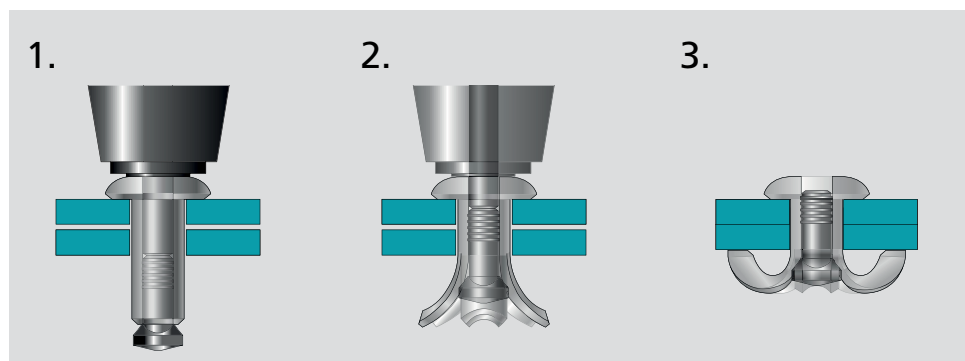
Material:

Aluminium

Head Styles:

Dome/Protruding, Large Flange, Countersunk

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Assembly applications

- Automotive
- Cabinets and enclosures
- Commercial vehicles
- Heating and ventilation
- Car door
- Honeycomb materials
- Car chassis

Commercial vehicles



Heating and ventilation



Automotive seat back



T-Lok[®]

Cost-effective and efficient method of attaching metal to wood or other soft material without through holes.



Key features and benefits

- 'Peel-type' tail formation makes it ideal for joining metal to wood, board or low density plastic
- Large bearing surface expands into blind hole providing superior pull-out force
- Ideal replacement for wood screws or self-tapping screws
- Multi-grip capability accommodates wide variations in material thickness

Specifications

Sizes:

4.3 mm and 4.8 mm (3/16")

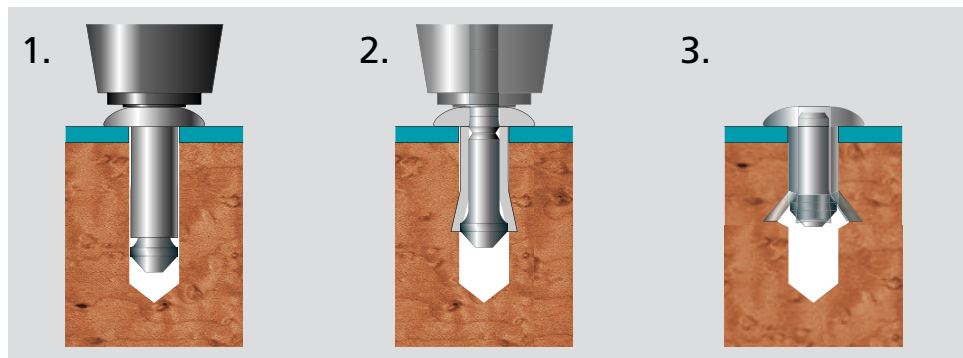
Material:

Steel

Head Style:

Dome

Typical placing sequence

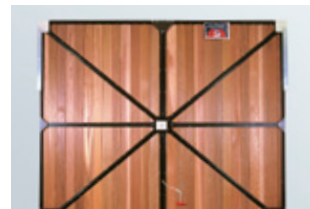
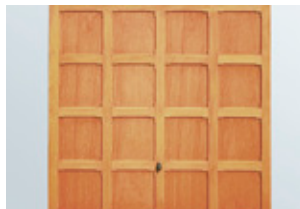


Please visit our website for fastener placing animations and technical data.

Assembly applications

- Garage doors
- Furniture

Garage doors



Furnitures



Speciality Breakstem Fasteners

Peel Rivet

The Peel rivet is designed so that the body peels into "petals" to fasten the application pieces together. This peeling process allows minimum force to be applied during the setting process, thereby protecting the work piece material.

- Ideal for joining softer and more brittle materials such as plastics, rubber, wood, GFPR or laminates
- Material: Aluminium
- Sizes: 3.2 mm - 4.8 mm
- Head Style: Dome



Blindside set view

Avex® Splined

Designed with steel splines for electrical continuity in earthing applications.

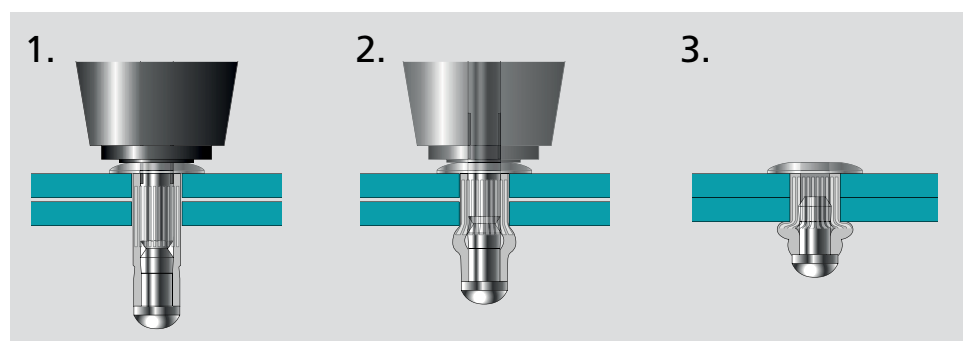
- Steel splines break through a coating thickness of up to 0.3 mm
- Multi-grip capability
- Good hole fill for a strong and vibration resistant joint
- Retained stem – no damage, electrical problems or rattling caused by loose stems



Specifications

Sizes:
4.0 mm – 4.8 mm
(5/32" – 3/16")
Material:
Steel
Head Style:
Dome

Typical placing sequence



Please visit our website for fastener placing animations and technical data.

Speciality Breakstem Fasteners

Earth Tab Rivet

Cost effective earthing point for thin sheet metal, with paint piercing capability to ensure good electrical conductivity.



- Twin tabs allow one or two connections
- Fast installation of a one piece assembly
- Works on a single phase power supply of 240 volts or below
- Provides a resistance to or below 0.1 ohms
- Tested and approved to EN 60335-1 and BS 3456 Parts 201, clauses 27, 28, 31
- For 5.2 mm holes and a material thickness of 1.0 – 1.5 mm
- Steel body and stem with brass tab

Terminal Tag

Copper body rivet and brass tag assembly for electrical conductivity.

- Splines on body to aid efficient earthing connection in pre-painted sheets
- For 5.2 mm holes and a material thickness of up to 2.0 mm
- Range of single or multiple tag assemblies available



Customised Designs

As you would expect from a leader in fastening solutions, we can design and manufacture breakstem rivets with a wide variety of forms and finishes to meet your unique assembly requirements. Shown below are just a few examples of our customised capabilities. Whether you require custom fastener geometry, a particular finish, different fastener material, limited access placing tooling, or anything else we don't offer as standard, please contact us to discuss your special requirements.



Avinox® Breakstem Fastener - Special Body Design

- Special underhead shoulder for automotive application for fixation inclusive compensation of different heat expansion of metal and plastic materials
- Stainless steel material resists corrosion by road salts



Hemlok® Structural Breakstem Fastener - Blue Delta Seal® Coating

- Steel, Delta Seal® blue
- High performance coating & blue colour for identification



Stavex® - Dedicated Grip Range

- Stainless Steel
- Dedicated grip range and very short stem to suit a customer's restricted access application



Stavex® Breakstem Fastener - RoHS Compliant Zinc & Black Finish

- Steel, Zinc & black finish
- Complies with RoHS standards & normally used in automotive interiors



Monobolt® Structural Breakstem Fastener - Grade 316 Stainless Steel

- Grade 316 / A4 Stainless Steel (see Monobolt 2717 series data sheet)
- High corrosion resistant grade rivet



Monobolt® Structural Breakstem Fastener - Cone Stem

- Steel
- Cone stem for easy hole access, for automated installation



Open End Cap Rivets

- Aluminium
- Pre-assembled rivet with plastic cap
- For waterproof applications



Open End Painted Rivets

- Aluminium or Steel
- Match the rivet color to your specific color application

Installation Tool Selection Guide

This table is designed as a guide to help you select the most suitable tool for your particular breakstem rivet. Full technical data can also be found on our website or contact your STANLEY Engineered Fastening representative.

Fastener Type	Ø mm (inch)	Battery Tools		Power Tools					Hand Tools				
		ProSet® Tool ¹⁾		ProSet® Tool ¹⁾					TT55D	PS15-CS	PS25	PS40	PS45
		PB2500	PB3400	XT1	XT2	XT3 ²⁾	XT4 ²⁾	7287 ³⁾					
Open End	2.4 (3/32")	○		●					●				
	3.0 & 3.2 (1/8")	●		●	●				●	●	●	●	●
	4.0 (5/32")	●		●	●	●	●		●	●	●	●	●
	4.8 & 5.0 (3/16")	●	○*		●	●	●			●	●	●	●
	6.0 & 6.4 (1/4")		●*			●	●	○			●	●	●
Soft Set	2.5	○		●					●				
	3.0 & 3.2 (1/8")	●		●	●				●	●	●	●	●
	4.0 (5/32")	●		●	●	●	●		●	●	●	●	●
Micro Rivet	2.0	○		○									
Pull-Thru (PT)	3.0	○		●	●								
Closed End	3.2 (1/8")	○		●	●				●	●	●	●	●
	4.0 (5/32")	○		●	●	●	●		●	●	●	●	●
	4.8 (3/16")	○	○*		●	●	●			●	●	●	●
	6.4 (1/4")		○*			●	●	○			●	●	●
Avex®	3.0	●		●	●				●	●	●	●	●
	3.2 (1/8")	●		●	●				●	●	●	●	●
	4.0 (5/32")	●		●	●	●	●		●	●	●	●	●
	4.8 (3/16")	●	○		●	●	●			●	●	●	●
	6.4 (1/4")		●			●	●	○			●	●	●
Stavex®	3.2 (1/8")	●		●	●						●	●	●
	4.0 (5/32")	●		●	●	●	●				●	●	●
	4.8 (3/16")	●	○		●	●	●			●	●	●	●
	6.4 (1/4")		●			○	○	○				●	●
Vgrip®	4.8 (3/16")				●							●	●
Avibulb® Avinox®	3.2 (1/8")	●		●	●							●	●
	4.0 (5/32")	●		●	●	●	●					●	●
	4.8 (3/16")	○	○		●	●	●					●	●
	6.0		●			●	●	○					●
Avinox® XT Avibulb® XT	6.4 (1/4")		○			○	○	○					
Hemlok®	6.4 (1/4")		●			○	○	○					
Monobolt®	4.8 (3/16")	○	○			○	○	○					
	6.4 (1/4")		○					○					
	10.0 (3/8")							○					
Interlock®	4.8 (3/16")	○	○		●	●		○					
	6.4 (1/4")		●					○					
	10.0 (3/8")							○					
LSR / Bulbex®	3.2 (1/8")	●		●	●				●	●	●	●	●
	4.0 (5/32")	●		●	●	●	●		●	●	●	●	●
	4.8 (3/16")	●	○		●	●	●			●	●	●	●
Klamp-Tite®	4.8 (3/16")	●	○			○	○	○					
	6.4 (1/4")		○				○	○					
Peel Rivet	3.2 (1/8")								●	●	●	●	●
	4.0 (5/32")								●	●	●	●	●
	4.8 (3/16")									●	●	●	●
T Rivet	4.8 (3/16")	○	○			○	○	○					
	6.4 (1/4")		●				○	○					
T-Lok®	4.3				●	●	●						
	4.8 (3/16")	●	○			○	●	●					
Earth Tab Rivet	4.0 (5/32")								●	●	●	●	●
Terminal Tag	4.0 (5/32")											●	●

¹⁾ Complete tool comprises of base tool, nose assembly and nose tip(s)
²⁾ Recommended for rivet diameters 4.8 mm (3/16") and greater
³⁾ Type 7287 is a base tool, nose equipment needs to be ordered separately

● Placing capability complete tool
○ Requires additional nose assembly/nose tip
* All standard product can be placed with the PB3400.
Any product highlighted with * in the above table, may have specials where the mandrel length exceeds 55mm.
These cannot be placed with this tool

Hand Tools



TT55D



PS15-CS



PS25

TT55D The Classic Hand Plier Rivet Tool

- Ideal for on-site or low production use
- Robust and lightweight
- Rivet retaining handle design for one-handed riveting
- Supplied with nosepieces for 2.4 mm, 3.0/3.2 mm and 4.0 mm rivets
- Supplied with nosepiece wrench

Weight	0.4 kg
Length	229 mm

Rivet Material	Rivet Diameter [mm/(in)]		
	2.4 & 2.8 (3/32")	3.0 & 3.2 (1/8")	4.0 (5/32")
Aluminium	•	•	•
Steel	•	•	•
Stainless Steel		•	•

PS15-CS Professional Hand Plier Rivet Tool

- Professional, robust cast aluminium and steel construction
- Contoured handle grips for comfort
- Rivet retaining handle design for one-handed riveting
- Handle spring and clasp upgrade available separately
- Supplied with nosepieces for 3.0/3.2 mm, 4.0 mm and 4.8/5.0 mm rivets
- Supplied with nosepiece wrench

Weight	0.6 kg
Length	245 mm

Rivet Material	Rivet Diameter [mm/(in)]		
	3.0 & 3.2 (1/8")	4.0 (5/32")	4.8 & 5.0 (3/16")
Aluminium	•	•	•
Steel	•	•	•
Stainless Steel	•	•	

PS25 Heavy Duty Lazy Tong Rivet Tool

- Professional heavy duty grade, robust aluminium and steel construction
- Contoured handle grip for comfort
- Supplied with nosepieces for 3.0/3.2 mm, 4.0 mm, 4.8/5.0 mm, 6.0 mm and 6.4 mm rivets
- Supplied with nosepiece wrench that doubles as a lever lock

Weight	2.3 kg
Length closed	305 mm
Length extended	805 mm

Rivet Material	Rivet Diameter [mm/(in)]			
	3.0 & 3.2 (1/8")	4.0 (5/32")	4.8 & 5.0 (3/16")	6.0 & 6.4 (1/4")
Aluminium	•	•	•	•
Steel	•	•	•	•
Stainless Steel	•	•	•	•

Hand Tools



PS40



PS45

PS40 Professional Lever Rivet Tool

- Professional, robust steel construction
- Optimal pulling force
- Adjustable front sleeve to optimise stroke set up
- Integral removable stem collector
- Supplied with nosepieces for 3.0/3.2 mm, 4.0 mm, 4.8/5.0 mm, 6.0 mm and 6.4 mm rivets
- Supplied with nosepiece wrench

Weight	1.9 kg
Length	515 mm

Rivet Material	Rivet Diameter [mm/(in)]			
	3.0 & 3.2 (1/8")	4.0 (5/32")	4.8 & 5.0 (3/16")	6.0 & 6.4 (1/4")
Aluminium	•	•	•	•
Steel	•	•	•	•
Stainless Steel	•	•	•	•

PS45 Heavy Duty Lever Rivet Tool

- Professional standard, heavy duty steel construction
- Multi-position telescopic levers extend to maximize leverage and pulling force
- Adjustable front sleeve to optimise stroke set up
- Non-extended position makes tool more compact
- Integral removable stem collector
- Supplied with nosepieces for 3.0/3.2 mm, 4.0 mm, 4.8/5.0 mm, 6.0 mm and 6.4 mm rivets
- Supplied with nosepiece wrench

Weight	2.6 kg
Length	490 mm
Length extended	665 mm

Rivet Material	Rivet Diameter [mm/(in)]			
	3.0 & 3.2 (1/8")	4.0 (5/32")	4.8 & 5.0 (3/16")	6.0 & 6.4 (1/4")
Aluminium	•	•	•	•
Steel	•	•	•	•
Stainless Steel	•	•	•	•

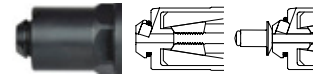
Battery Tools

ProSet® PB2500 & ProSet® PB3400

High speed cordless power tools with great strength and endurance

Lightweight and powerful tools with excellent ergonomics, great strength and great added features. Ensures high productivity and improves your return on investment with very low installation cost.

- **Durable** brushless motor that requires minimal maintenance
- **Long lasting** battery capable of placing an average of 1,200 ø4.8 mm standard blind rivets (PB2500, 2.0Ah) respectively 1,000 ø6,4 mm structural blind rivets (PB3400, 4.0Ah) per charge
- **Time saving** continuous operation in production environments without "tool overload"
- **Easy to use:**
 - Tool free, quick release nose housing and jaw guide removal and installation
 - All nose pieces for the POP Avdel rivets range include a rivet holding mechanism to allow the use of the tool in any direction - even upside down
 - Quick slide battery installation; Push button for easy removal of the battery from the tool
- **Warranty Europe:** 2 years in total (1 year & 1 year extension with online registration)



Rivet holding mechanism



Integral mandrel collector



Easy nose housing removal



Robust tool case for outdoor installation



PB3400 with quick release removable mandrel collector

Specifications ProSet® PB2500

Dimensions L x H	320 mm x 240 mm
Battery	DEWALT 18V Li-Ion 2.0Ah
Charger	DEWALT DCB115, with progress lamp display, 30 min. charge time (2.0 Ah)
Stroke	25 mm
Pulling force	8,500 N
Noise level	74 dB(A)
Capacity	Standard rivets ø 2.4 - 4.8 mm
Weight	1.69 kg including battery

Specifications ProSet® PB3400

Dimensions L x H	336 mm x 255 mm (2.0 Ah) 336 mm x 275 mm (4.0 Ah)
Battery	DEWALT 18V XR Li-Ion 2.0Ah or DEWALT 18V XR Li-Ion 4.0Ah
Charger	DEWALT DCB115, with progress lamp display, 30 min. charge time (2.0 Ah)
Stroke	30 mm
Pulling force	18,000 N
Noise level	77 dB(A)
Capacity	Blind rivets ø 4.8 - 6.4 mm
Weight	2.10 kg including 2.0 Ah battery 2.42 kg including 4.0 Ah battery

Power Tools

ProSet® XT Range Hydro-pneumatic Blind Rivet Tools

The POP Avdel ProSet® XT tool line has many innovative high performance features including a patented "Quick Disconnect" nose housing and jaw case for rapid cleaning and maintenance of the front end without the need for any tools. The quick disconnect Mandrel Collection System (MCS) safely collects spent mandrels for quick, easy disposal and cleaner work areas. An air-isolation switch on the MCS prevents air flow when the MCS is disconnected. A left or right 90° swivel air fitting ensures the tools can be adapted to virtually any workstation configuration, while the "on/off" switch minimises air consumption and noise.

Features and Benefits

Performance

- High force-to-weight ratio
- Quick disconnect nose housing and jaw case for easy maintenance and service
- Clear quick release mandrel collector bottle reduces downtime
- Integral exhaust valves for fast setting cycles

Ergonomic

- Class-leading lightweight construction with balanced handling
- Comfortable, low activation force trigger
- Adjustable vacuum exhaust direction

Economy & Safety

- Air isolation switch during MCS removal
- On/Off, left or right swivel air fitting provides flexibility and conserves energy



Quick release Mandrel Collection System MCS



Quick disconnect nose housing and jaw case (without tools)



Power Tools

ProSet® XT1 - *The Lightweight*

Compact, lightweight and reliable pneumatic/hydraulic power tool, ideal for production line environments.

In its class the ProSet XT1 is among the highest force-to-weight ratio blind riveting tools in the industry. Innovative ergonomic design for maximum user efficiency and comfort.

Specifications

Weight, incl. nose equipment	1.15 kg
Weight, without nose equipment	1.05 kg
Pull force at 5.5 bar	6.5 kN
Force/Weight ratio	5.65 kN/kg
Stroke (min.)	18 mm
Cycle time (approximate)	0.4 sec
Air supply pressure (dry, filtered)	5.0 - 6.0 bar
Free air volume at 5.5 bar	1.5 l
Noise level	77.95 dB(A)



ProSet® XT2 - *The Flexible*

The ProSet XT2 tool sets new standards for pneumatic rivet tools. Designed specifically to set a wide range of breakstem rivets, this tool delivers 8.9 kN of pull force with an outstanding force-to-weight ratio of 7.18 kN/kg.

The robust tool rubber base is designed to avoid damage. Latest technology lip seals maximise re-priming intervals. Piston bearing rings ensure maximum robustness and tool life.

Specifications

Weight, incl. nose equipment	1.24 kg
Weight, without nose equipment	1.13 kg
Pull force at 5.5 bar	8.9 kN
Force/Weight ratio	7.18 kN/kg
Stroke (min.)	20 mm
Cycle time (approximate)	0.6 sec
Air supply pressure (dry, filtered)	5.0 - 6.0 bar
Free air volume at 5.5 bar	2.2 l
Noise level	77.1 dB(A)



Power Tools

ProSet® XT3 - *The High Performer*

The ProSet XT3 can be used in a variety of applications, setting a large range of breakstem rivets, lockbolts and sealing plug sizes. The extremely large stroke of 26 mm allows the placement of longer rivets like Monobolt and Interlock in one set.

Specifications

Weight, incl. nose equipment	2.14 kg
Weight, without nose equipment	2.0 kg
Pull force at 5.5 bar	17.0 kN
Force/Weight ratio	7.94 kN/kg
Stroke (min.)	26 mm
Cycle time (approximate)	0.9 sec
Air supply pressure (dry, filtered)	5.0 - 7.0 bar
Free air volume at 5.5 bar	6.3 l
Noise level	78.4 dB(A)



ProSet® XT4 - *The Power Pack*

The ProSet XT4 is the strongest tool of the ProSet family. With 23 kN the XT4 delivers the highest pull force in the range but weighs in at just about 2 kg. Beside structural breakstem rivets, the high capacity of the XT4 also allows to install Avdelok, Maxlok and Avtainer lockbolts. The tool features an ultra-high tensile piston rod for maximum tool life and a hydraulic damping for smooth operation.

Specifications

Weight, incl. nose equipment	2.16 kg
Weight, without nose equipment	2.0 kg
Pull force at 5.5 bar	23.0 kN
Force/Weight ratio	10.65 kN/kg
Stroke (min.)	18 mm
Cycle time (approximate)	1.0 sec
Air supply pressure (dry, filtered)	5.0 - 7.0 bar
Free air volume at 5.5 bar	6.3 l
Noise level	77.9 dB(A)



Power Tools

7287 Model

Hydro-pneumatic split tool with a lightweight placing head able to place Monobolt® and Interlock® structural blind rivets up to \varnothing 10 mm, as well as lockbolts and Avseal® sealing plugs.

Features and Benefits

- Hydro-pneumatic split tool
- Extended stroke and pull force
- Installation of large fasteners with single pull action, does not require second actuation (two pulls)
- Short cycle time can increase assembly capacity
- Lightweight placing head reduces operator fatigue
- Remote intensifier mounted on castors for flexible use in the assembly line
- 3 m hose length

Specifications

Pistol Weight	(without equipment)	1.47 kg
	(with equipment)	< 2.5 kg
Total weight	(without equipment)	40 kg
Pull Force @ 5.5 bar		32.4 kN
Stroke	min. under load	29 mm
	free cycling	32 mm
Cycle time (approx.)		1.7 sec
Air supply pressure		5.0 - 7.0 bar
Free air volume at 5.5 bar		3.5 l
Noise level		75 dB(A)



Power Tools

MCS5000

The MCS5000 remote vacuum rivet stem collector can hold up to 8500 spent stems increasing production line efficiency and promoting easy removal and recycling of scrap stems. The MCS5000 is compatible with all pneumatic POP Avdel tools. Adapter kits are required and sold separately (see below).

Specifications MCS5000

Weight	2.2kg
Length	414 mm
Diameter	356 mm
Air pressure	6.1 bar max.
Air consumption	317 litres/min
Max. tube length	4.5 m
Max. rise	1.8 m
Max. mandrel length	50 mm
Capacity	Up to 8500 spent stems

MCS5000 Adapter Kits

Tool	Adapter Kit Part No
ProSet® XT1	TRM00309
ProSet® XT2	TRM00310
ProSet® XT3	76003-20600 (*)
ProSet® XT4	76003-20600 (*)

(*) Additional kit (Part No 76003-20700) is required for 6.4 mm rivets.



Riveting Systems

Rivet Presenter

Rotary bowl rivet feeding system

Used in conjunction with our rivet tools the Rivet Presenter System offers single-handed, high-speed rivet feeding and setting. Automatic rivet stem collection of up to 8500 stems can be achieved by adding the MCS5000 remote stem collector.

Each time the front of the rivet tool is inserted into the receptacle at the front of the Rivet Presenter, a rivet is automatically and instantaneously loaded into the front of the tool. Rivets are stored in a rotary feeder bowl and continuously fed down a track into the receptacle ready for the next cycle.



Features and Benefits

- Feeder bowl capacity up to 1000 rivets
- Feeder bowl refilled in a few seconds
- Significant reductions in riveting cycle times possible
- Manual rivet feeding is eliminated enabling a white glove environment
- Single-handed operation leaves one hand free for other operations
- Enclosed feeder bowl and stem collection help keep working environment free from spilt rivets and stems
- For use with 3.2 mm - 4.8 mm rivets

Specifications

Model Number	For Rivet Diameter	Rivet Capacity
RP4-E	3.2 mm (1/8")	1000 Rivets
RP5-E	4.0 mm (5/32")	600 Rivets
RP6-E	4.8 mm (3/16")	400 Rivets
Height	337 mm	
Length	553 mm	
Width	223 mm	
Weight	10.5 kg	
Air pressure	4.8 - 6.1 bar, dry filtered	
Power supply	240 VAC, 50-60 Hz (0.25 Amp)	

Receptacle

Tool Series	Rivet Diameter [mm/(in)]		
	3.2 (1/8")	4.0 (5/32")	4.8 (3/16")
ProSet® XT1	RP4-486	RP5-486	RP6-486
ProSet® XT2	RP4-350	RP5-350	RP6-350
ProSet® XT3	RP4-501	RP5-501	RP6-501
ProSet® XT4	RP4-501	RP5-501	RP6-501

In addition to the RP unit you must order a receptacle specific to each ProSet tool. eg; to set a 3.2 mm rivet with ProSet XT1 order RP4-486 receptacle.

Riveting Systems

Vertical Riveting Tool HTB500

The breakstem rivet tool HTB 500 has been specifically designed for vertical down riveting. It is a hydraulically operated processing equipment for gentle and reliable rivet joints.

The pneumatic control and the pneumatic-hydraulic pressure intensifier, as well as the remote rivet stem collector are mounted in a separate supply unit. The trigger is integrated in the ergonomic handhold at the equipment barrel.

Features and Benefits

- Gentle and reliable rivet joints
- Simple positioning of the rivet equipment
- Quick and easy equipment handling
- Ergonomically handling for vertical processing positions
- Automatically shutdown of rivet stem aspiration

Specifications

Stroke	24 mm
Pull force	26 kN at 6.0 bar
Operating pressure	6.0 bar
Air consumption	5.7 l free air/ set at 5.5 bar
Hose length	3.0 m
Placing capability	Breakstem rivets \varnothing 3.2 - 6.5mm

Part-No. 78200-020058

Placing equipment has to be ordered separately.



The supply unit contains pressure intensifier, pneumatic control and rivet stem collector.

Riveting Systems

Customised Assembly Systems

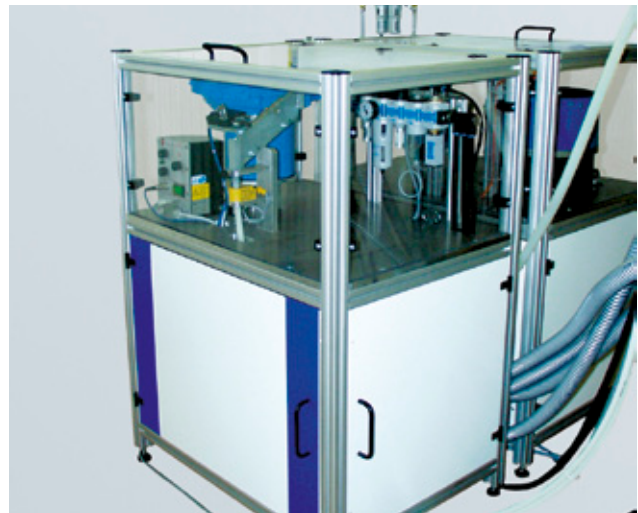
From simple twin-headed modules to multi-headed, customised equipment, these systems can dramatically reduce assembly time and costs while improving consistency of placing. These systems can be designed for virtually any application or assembly environment and process monitoring equipment or clamping modules can be easily integrated. The direction, type and number of assembly heads can all be customised. We have designed equipment with two heads to over eighty heads but the configurations are virtually limitless.

- High speed assembly
- Assembly of any configuration
- Fastening at any angle
- Synchronous fastener placement
- Highly controlled assembly
- Process flexibility
- Integration into assembly lines
- Improved product quality

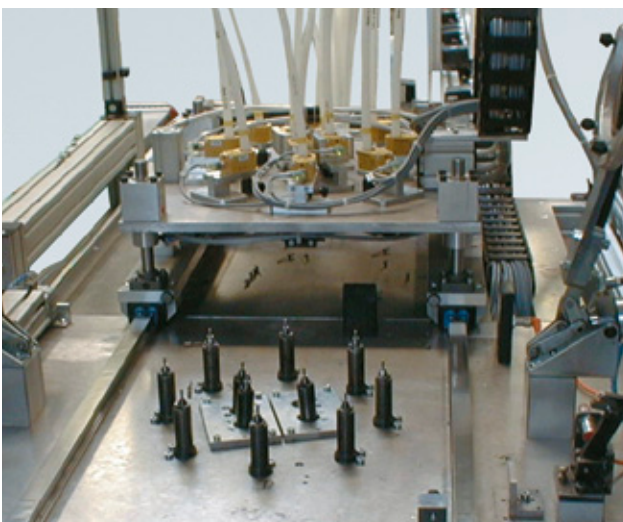
Assembly of any Configurations



Multi-head Assembly Station



Blow Feed Unit



12 rivets placed in one assembly cycle

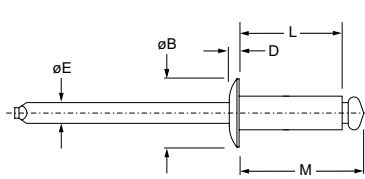


Fasteners are transferred from the bowl feeder to the placing head via the blow feeder

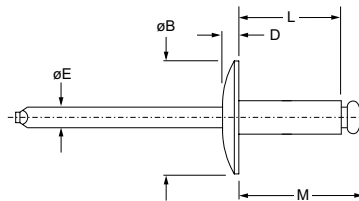


English	Français	Deutsch	Italiano	Español
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Body: Aluminium Natural	Corps: Aluminium Brut	Hülse: Aluminium Unbehandelt	Corpo: Alluminio Nessuna finitura	Cuerpo: Aluminio Natural



*: 5052



AD ■ ABS
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada

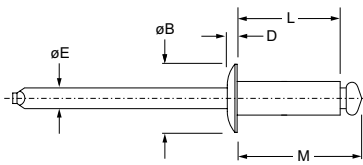


AD ■ ABS LF
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha

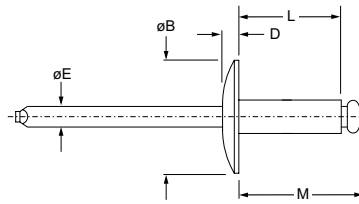
Ø nom.					L ref.	M ref.	ØE ref.	AD ■ ABS			AD ■ ABS LF			
	min.	max.	min.	max.				ØB max.	D max.	Part No. ■	ØB max.	D max.	Part No. ■	
2.4 (3/32")	0.8	3.2	2.46	2.54	5.7	8.3	1.5	5.1	0.9	32				
	3.2	6.4			8.9	11.4				34				
	6.4	9.5			12.1	14.6				36				
3.2 (1/8")	0.8	1.6	3.28	3.38	4.8	7.8	1.9	6.7	1.1	41	10.0	1.2		
	1.6	3.2			6.4	9.4				42				42
	3.2	4.8			8.0	11.0				43				43
	4.8	6.4			9.5	12.6				44				44
	6.4	7.9			11.1	14.2				45				
	7.9	9.5			12.7	15.7				46				46
	9.5	12.7			15.9	18.9				48				
	12.7	15.9			19.1	22.1				410				
4.0 (5/32")	1.6	3.2	4.06	4.17	7.0	10.5	2.4	8.4	1.2	52	12.4	1.9		
	3.2	4.8			8.6	12.1				53				
	4.8	6.4			10.2	13.7				54				54
	6.4	9.5			13.3	16.9				56				56
	9.5	12.7			16.5	20.1				58				58
4.8 (3/16")	1.6	3.2	4.88	4.98	7.6	11.7	2.9	10.0	1.4	62	16.6	2.2		
	3.2	6.4			10.8	14.9				64				64
	6.4	9.5			14.0	18.0				66				66
	9.5	12.7			17.1	21.2				68				68
	12.7	15.9			20.3	24.4				610				610
	15.9	19.1			23.5	27.6				612				612
	19.1	22.2			26.7	30.7				614				
	22.3	25.4			29.8	33.9				616				616

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

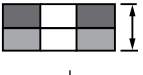
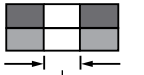
Open End AD ABS Series Aluminium / Aluminium





AD ■ ABS
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



AD ■ ABS LF
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha

ø nom.					L ref.	M ref.	øE ref.	AD ■ ABS			AD ■ ABS LF		
	min.	max.	min.	max.				øB max.	D max.	Part No. ■	øB max.	D max.	Part No. ■
6.4 (1/4")	1.6	3.2	6.53	6.63	8.9	14.9	3.8	13.4	1.85	82			
	3.2	6.4			12.1	18.0				84			
	6.4	9.5			15.2	21.2				86			
	9.5	12.7			18.4	24.4				88			
	12.7	15.9			21.6	27.6				810			
	15.9	19.1			24.8	30.7				812			
	22.3	25.4			31.1	37.1				816			

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

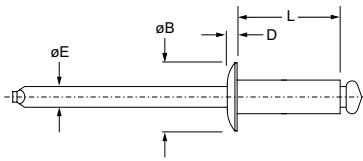
ø nom.		
	kN ¹⁾	kN ¹⁾
2.4 (3/32")	0.38	0.60
3.2 (1/8")	0.69	1.05
4.0 (5/32")	1.00	1.56
4.8 (3/16")	1.40	2.22
6.4 (1/4")	2.67	3.34

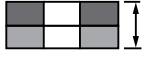
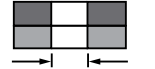


1) typical values / valeurs moyennes / typische Werte /
Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero

*: 3.5 % Magnesium Alloy



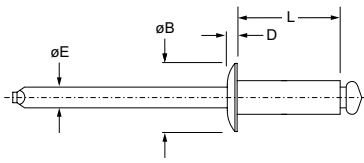
Ø nom.					L ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
2.4 (3/32")		0.8	2.5	2.6	3.5	1.42	5.0	0.9	0.40	0.50	TAPD 31 BS
	0.8	2.4			5.3						TAPD 33 BS
	2.4	4.8			7.6						TAPD 36 BS
3.0		2.0	3.1	3.2	5.2	1.83	6.3	1.1	0.80	1.00	SNAD 3050 BS
	2.0	3.5			6.5						SNAD 3065 BS
	3.5	5.0			8.2						SNAD 3080 BS
	5.0	7.0			10.0						SNAD 3100 BS
	7.0	9.0			12.2						SNAD 3120 BS
	9.0	12.0			15.2						SNAD 3150 BS
3.2 (1/8")		1.6	3.3	3.4	4.4	1.83	6.7	1.1	0.80	1.20	TAPD 42 BS
	1.6	3.2			6.0						TAPD 44 BS
	3.2	4.8			8.0						TAPD 46 BS
	4.8	6.4			9.7						TAPD 48 BS
	6.4	7.9			11.6						TAPD 410 BS
	7.9	9.5			13.4						TAPD 412 BS
	9.5	11.1			15.2						TAPD 414 BS
	11.1	12.7			17.0						TAPD 416 BS
	12.7	14.3			18.7						TAPD 418 BS
	14.3	16.7			20.3						TAPD 421 BS
	16.7	20.7			24.3						TAPD 425 BS

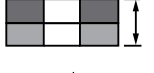



all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Open End TAPD/SNAD BS Series

Aluminium / Steel



ø nom.					L ref.	øE ref.	øB max.	D max.			Part No.								
	min.	max.	min.	max.								kN ¹⁾	kN ¹⁾						
4.0 (5/32")		1.6	4.1	4.2	5.0	2.29	8.3	1.22	1.33	1.91	TAPD 52 BS								
	1.6	3.2			7.0						TAPD 54 BS								
	3.2	4.8			8.5						TAPD 56 BS								
	4.8	6.4			10.5						TAPD 58 BS								
	6.4	7.9			12.2						TAPD 510 BS								
	7.9	9.5			14.0						TAPD 512 BS								
	9.5	11.1			15.7						TAPD 514 BS								
	11.1	12.7			17.5						TAPD 516 BS								
	12.7	13.5			18.5						TAPD 517 BS								
	13.5	15.9			20.3						TAPD 520 BS								
	15.9	17.4			22.5						TAPD 522 BS								
	17.4	19.8			24.7						TAPD 525 BS								
	4.8 (3/16")	2.4			3.2						4.9	5.0	7.5	2.64	9.8	1.60	2.02	2.80	TAPD 64 BS
		3.2			4.8								9.2						TAPD 66 BS
4.8		6.4	11.0	TAPD 68 BS															
6.4		7.9	12.9	TAPD 610 BS															
7.9		9.5	14.7	TAPD 612 BS															
9.5		11.1	16.5	TAPD 614 BS															
11.1		13.5	19.1	TAPD 617 BS															
13.5		15.5	21.0	TAPD 621 BS															
13.5		17.5	23.1	TAPD 623 BS															
13.5		19.8	25.5	TAPD 625 BS															
19.8		26.2	32.0	TAPD 633 BS															
5.0		3.5	4.5	5.1	5.2	8.0	2.64	9.3	1.60	2.20			2.60						SNAD 5080 BS
	4.5	6.0	10.0			SNAD 5100 BS													
	6.0	7.5	12.0			SNAD 5120 BS													
	7.5	9.5	14.0			SNAD 5140 BS													
	9.5	11.5	16.0			SNAD 5160 BS													
	11.5	13.5	18.0			SNAD 5180 BS													
	13.5	15.5	20.0			SNAD 5200 BS													
	16.5	17.5	22.0			SNAD 5220 BS													
	17.5	20.5	25.0			SNAD 5250 BS													
	6.0	3.5	5.5			6.1					6.2	10.0		3.20	12.3	2.10	3.00	3.80	SNAD 6100 BS
5.5		7.5	12.0	SNAD 6120 BS															
6.0		9.5	14.0	SNAD 6140 BS															
9.5		11.5	16.0	SNAD 6160 BS															
11.5		13.5	18.0	SNAD 6180 BS															
6.4 (1/4")	4.8	6.4	6.5	6.6	12.7	3.66	13.0	2.10	3.20	4.525	TAPD 88 BS								
	6.4	9.5			16.2						TAPD 812 BS								
	9.5	12.7			19.5						TAPD 816 BS								
	12.7	19.8			26.2						TAPD 824 BS								

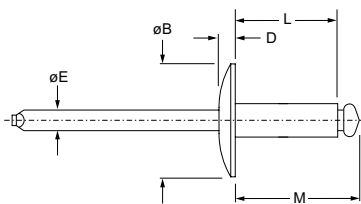
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Large flange	Tête large	Flachrundkopf, extragroß	Testa larga	Cabeza ala ancha
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero

*: 3.5 % Magnesium Alloy



ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")	1.6	3.2	3.3	3.4	6.2	1.83	10.0	1.50	0.80	1.20	TAPD 44 BS LF9.5
	3.2	4.8			8.0						TAPD 46 BS LF9.5
	4.8	6.4			9.8						TAPD 48 BS LF9.5
	6.4	9.0			12.5						TAPD 410 BS LF9.5
	7.9	9.5			13.4						TAPD 412 BS LF9.5
	11.1	12.7			17.0						TAPD 416 BS LF9.5
4.0 (5/32")		4.8	4.1	4.2	8.5	2.29	12.5	1.60	1.33	1.91	TAPD 56 BS LF12
	4.8	6.4			10.5						TAPD 58 BS LF12
	6.4	7.9			12.2						TAPD 510 BS LF12
	7.9	9.5			14.0						TAPD 512 BS LF12
	9.5	11.1			15.7						TAPD 514 BS LF12
	11.1	12.7			17.5						TAPD 516 BS LF12
	12.7	14.3			19.4						TAPD 518 BS LF12
4.8 (3/16")		4.8	4.9	5.0	9.3	2.64	14.3	2.00	2.02	2.80	TAPD 66 BS LF14
	4.8	6.4			11.1						TAPD 68 BS LF14
	6.4	7.9			12.8						TAPD 610 BS LF14
	7.9	9.5			14.7						TAPD 612 BS LF14
	9.5	11.1			16.4						TAPD 614 BS LF14
	11.1	12.7			18.2						TAPD 616 BS LF14
	12.7	13.5			19.2						TAPD 617 BS LF14
	13.5	19.8			25.5						TAPD 625 BS LF14

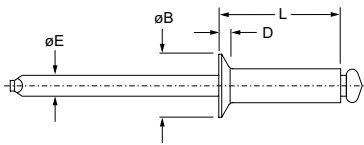
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Countersunk	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero

*: 3.5 % Magnesium Alloy



Ø nom.					L ref.	ØE ref.	ØB max.	D ref.			Part No.
	min.	max.	min.	max.							
2.4 (3/32")		1.6	2.5	2.6	4.5	1.42	5.00	-	0.40	0.50	TAPK 31 BS
	1.6	3.2			6.0						TAPK 33 BS
	3.5	5.6			8.5						TAPK 36 BS
3.2 (1/8")	1.0	2.7	3.3	3.4	5.5	1.83	6.65	-	0.80	1.20	TAPK 42 BS
	2.7	4.3			7.5						TAPK 44 BS
	4.3	5.8			9.0						TAPK 46 BS
	5.8	7.4			11.0						TAPK 48 BS
	7.4	9.0			12.7						TAPK 410 BS
	9.0	10.6			14.5						TAPK 412 BS
	10.6	13.8			18.0						TAPK 416 BS
	13.8	15.4			19.7						TAPK 418 BS
4.0 (5/32")		2.0	4.1	4.2	6.0	2.29	8.05	-	1.33	1.91	TAPK 52 BS
		4.5			8.5						TAPK 54 BS
	4.5	6.1			10.0						TAPK 56 BS
	6.1	7.7			12.0						TAPK 58 BS
	7.7	9.3			13.5						TAPK 510 BS
	9.3	10.9			15.5						TAPK 512 BS
	10.9	12.4			17.0						TAPK 514 BS
	12.4	14.0			19.0						TAPK 516 BS
	14.8	17.2			22.0						TAPK 520 BS
4.8 (3/16")		4.8	4.9	5.0	9.5	2.64	9.83	-	2.02	2.80	TAPK 64 BS
	4.8	6.4			11.0						TAPK 66 BS
	6.4	7.9			13.0						TAPK 68 BS
	7.9	9.5			14.5						TAPK 610 BS
	9.5	11.1			16.5						TAPK 612 BS
	11.1	12.7			18.2						TAPK 614 BS
	14.3	15.1			21.0						TAPK 617 BS
	15.1	21.4			27.5						TAPK 625 BS
	21.4	27.8			34.0						TAPK 633 BS

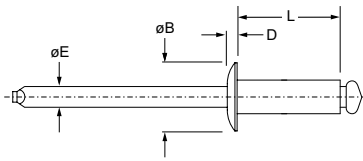
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

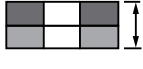
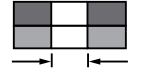


1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Stainless steel Natural	Tige: Inox Brut	Dorn: Edelstahl Unbehandelt	Gambo: Acciaio inox Nessuna finitura	Vástago: Acero inoxidable Natural

*: 3.5 % Magnesium Alloy



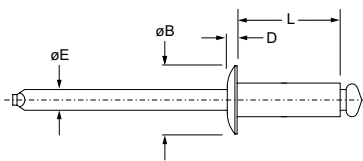
Ø nom.					L ref.	ØE ref.	ØB max.	D max..			Part No.
	min.	max.	min.	max.							
3.2 (1/8")	3.2	4.8	3.3	3.4	8.0	1.83	6.7	1.15	0.80	1.20	TAPD 46 SS
	4.8	6.4			9.7						TAPD 48 SS
	6.4	7.9			11.5						TAPD 410 SS
4.0 (5/32")	4.8	6.4	4.1	4.2	10.5	2.29	8.3	1.35	1.33	1.91	TAPD 58 SS
	6.4	7.9			12.2						TAPD 510 SS
	7.9	9.5			14.0						TAPD 512 SS
4.8 (3/16")	2.4	3.2	4.9	5.0	7.5	2.64	9.8	1.60	2.02	2.80	TAPD 64 SS
	3.2	4.8			9.2						TAPD 66 SS
	4.8	6.4			11.0						TAPD 68 SS
	6.4	7.9			12.9						TAPD 610 SS
	7.9	9.5			14.7						TAPD 612 SS
	9.5	11.1			16.5						TAPD 614 SS
	12.7	13.5			19.0						TAPD 617 SS








all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Steel Zinc plated	Corps: Acier Revêtement zingué	Hülse: Stahl verzinkt	Corpo: Acciaio Zincati	Cuerpo: Acero Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero

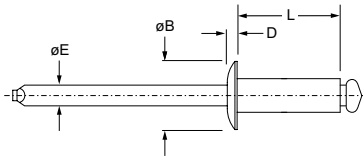


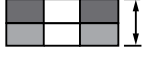
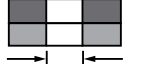


Ø nom.					L ref.	ØE ref.	ØB max.	D max.			kN ¹⁾	Part No.
	min.	max.	min.	max.								
2.8	0.5	2.9	2.9	3.0	5.3	1.83	5.8	1.30		0.715	0.93	TSPD 33 BS
3.0		2.0	3.1	3.2	5.0	1.83	6.3	1.10		1.10	1.40	SNSD 3050 BS
	2.0	3.5			6.5							SNSD 3065 BS
	3.5	5.0			8.0							SNSD 3080 BS
	5.0	7.0			10.0							SNSD 3100 BS
	7.0	9.0			12.0							SNSD 3120 BS
	9.0	12.0			15.0							SNSD 3150 BS
3.2 (1/8")		1.6	3.3	3.4	4.5	1.93	6.7	1.10		1.15	1.55	TSPD 42 BS
	1.6	3.2			6.2							TSPD 44 BS
	3.2	4.8			8.0							TSPD 46 BS
	4.8	6.4			9.5							TSPD 48 BS
	6.4	7.9			11.5							TSPD 410 BS
	7.9	9.5			13.5							TSPD 412 BS
	9.5	11.1			15.0							TSPD 414 BS
	11.1	12.7			17.0							TSPD 416 BS
	12.7	14.3			19.0							TSPD 418 BS
	4.0 (5/32")				1.6							4.1
1.6		3.2	7.0	TSPD 54 BS								
3.2		4.8	8.5	TSPD 56 BS								
4.8		6.4	10.5	TSPD 58 BS								
6.4		7.9	12.2	TSPD 510 BS								
7.9		9.5	14.0	TSPD 512 BS								
9.5		11.1	15.9	TSPD 514 BS								
11.1		12.7	17.6	TSPD 516 BS								

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Open End TSPD/SNSD BS Series
Steel / Steel



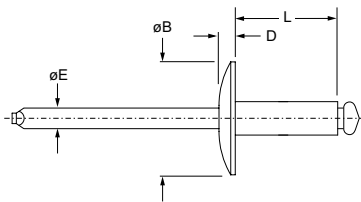
ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
4.8 (3/16")		2.4	4.9	5.0	6.6	2.90	10.0	1.60	2.62	3.50	TSPD 63 BS
	2.4	3.2			7.5						TSPD 64 BS
	3.2	4.8			9.3						TSPD 66 BS
	4.8	6.4			11.0						TSPD 68 BS
	6.4	7.9			12.8						TSPD 610 BS
	7.9	9.5			14.5						TSPD 612 BS
	9.5	11.1			16.4						TSPD 614 BS
	11.1	12.7			18.3						TSPD 616 BS
	12.7	13.5			19.1						TSPD 617 BS
	12.7	15.9			20.3						SD 610 BS
	15.9	19.1			23.5						SD 612 BS
	19.1	22.2			26.7						SD 614 BS
	22.3	25.4			29.8						SD 616 BS
	5.0	2.5			4.0						5.1
4.0		6.0	10.0	SNSD 5100 BS							
8.0		10.0	14.0	SNSD 5140 BS							
10.0		12.0	16.0	SNSD 5160 BS							
12.0		14.0	18.0	SNSD 5180 BS							
6.0	2.0	4.0	6.1	6.2	10.0	3.66	12.3	2.10	4.20	5.50	SNSD 6100 BS
	4.0	6.0			12.0						SNSD 6120 BS
	6.0	8.0			14.0						SNSD 6140 BS
6.4 (1/4")	0.5	3.8	6.53	6.63	9.5	3.86	11.2	1.55	5.00	5.70	TSPD 8095 BS
	3.8	7.6			13.0						TSPD 8130 BS
	7.6	12.7			18.5						TSPD 8185 BS
	12.7	15.9			21.6		13.4	1.85			SD 810 BS
	15.9	19.1			24.8						SD 812 BS
	19.1	22.2			27.9						SD 814 BS
	22.2	25.4			31.1						SD 816 BS

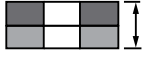
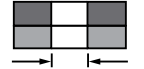


all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Large flange	Tête large	Flachrundkopf, extragroß	Testa larga	Cabeza ala ancha
Body: Steel Zinc plated	Corps: Acier Revêtement zingué	Hülse: Stahl verzinkt	Corpo: Acciaio Zincati	Cuerpo: Acero Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



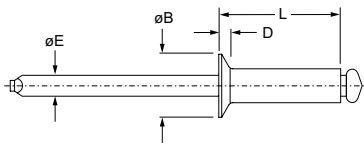
ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")	3.2	4.8	3.3	3.4	8.0	1.93	10.0	1.50	1.15	1.55	TSPD 46 BS LF9.5
	4.8	6.4			9.8						TSPD 48 BS LF9.5
4.0 (5/32")	3.2	4.8	4.1	4.2	8.5	2.29	12.3	1.65	1.73	2.50	TSPD 56 BS LF12
	4.8	6.4			10.5						TSPD 58 BS LF12
	6.4	7.9			12.2						TSPD 510 BS LF12
	7.9	9.5			14.0						TSPD 512 BS LF12
	9.5	11.1			15.9						TSPD 514 BS LF12
4.8 (3/16")	3.2	4.8	4.9	5.0	9.3	2.90	14.3	2.00	2.62	3.50	TSPD 66 BS LF14
	4.8	6.4			11.0						TSPD 68 BS LF14
	6.4	7.9			12.7						TSPD 610 BS LF14
	7.9	9.5			14.5						TSPD 612 BS LF14
	9.5	11.1			16.5						TSPD 614 BS LF14
	11.1	13.5			19.0						TSPD 617 BS LF14

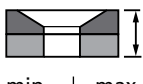
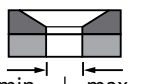


all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Countersunk	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Steel Zinc plated	Corps: Acier Revêtement zingué	Hülse: Stahl verzinkt	Corpo: Acciaio Zincati	Cuerpo: Acero Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



Ø nom.					L ref.	ØE ref.	ØB max.	D ref.			Part No.
	min.	max.	min.	max.							
2.4 (3/32")	0.8	3.2	2.5	2.6	6.1	1.42	5.00	-	0.70	1.00	TSPK 33 BS
	3.2	6.0			8.5						TSPK 36 BS
3.2 (1/8")	0.8	2.7	3.3	3.4	5.4	1.93	6.65	-	1.15	1.55	TSPK 42 BS
	2.7	4.3			7.3						TSPK 44 BS
	4.3	5.8			9.0						TSPK 46 BS
	5.8	7.4			10.8						TSPK 48 BS
	7.4	9.0			12.6						TSPK 410 BS
	9.0	10.6			14.4						TSPK 412 BS
4.0 (5/32")		2.9	4.1	4.2	6.5	2.29	8.20	-	1.73	2.50	TSPK 52 BS
	2.9	4.5			8.5						TSPK 54 BS
	4.5	6.1			10.0						TSPK 56 BS
	6.1	7.7			12.0						TSPK 58 BS
	7.7	9.3			13.5						TSPK 510 BS
	9.3	10.9			15.5						TSPK 512 BS
	10.9	12.4			17.0						TSPK 514 BS
4.8 (3/16")	2.4	4.8	4.9	5.0	9.3	2.90	9.80	-	2.62	3.50	TSPK 64 BS
	4.8	6.4			11.1						TSPK 66 BS
	6.4	7.9			12.8						TSPK 68 BS
	7.9	9.5			14.6						TSPK 610 BS
	9.5	11.1			16.4						TSPK 612 BS
	12.7	14.3			20.0						TSPK 616 BS
	14.3	15.1			21.0						TSPK 617 BS

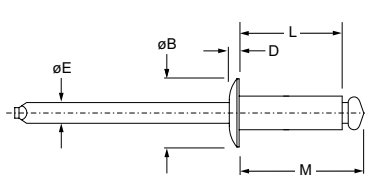
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

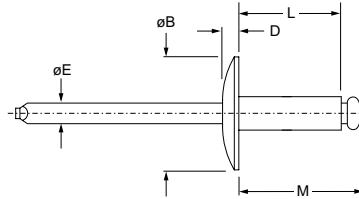


English	Français	Deutsch	Italiano	Español
Body: Stainless steel* Natural	Corps: Inox* Brut	Hülse: Edelstahl* Unbehandelt	Corpo: Acciaio inox* Nessuna finitura	Cuerpo: Acero inoxidable* Natural
Stem: Stainless steel Natural	Tige: Inox Brut	Dorn: Edelstahl Unbehandelt	Gambo: Acciaio inox Nessuna finitura	Vástago: Acero inoxidable Natural

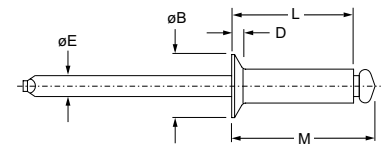
*: 300 Series




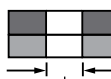
SSD ■ SSBS
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada





SSD ■ SSBS LF
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha



SSK ■ SSBS
Countersunk
Tête fraisée / Senkkopf /
Testa svasata / Cabeza avellanada

Ø nom.					L ref.	M ref.	ØE ref.	SSD ■ SSBS			SSD ■ SSBS LF			SSK ■ SSBS				
	min.	max.	min.	max.				ØB max.	D max.	Part No. ■	ØB max.	D max.	Part No. ■	ØB max.	D max.	Part No. ■		
3.2 (1/8")	0.8	1.6	3.28	3.38	4.8	7.8	1.9	6.7	1.1	41	10.0	1.2	44	6.0	1.3	44		
	1.6	3.2			6.4 ¹⁾	9.4				42							42	43
	3.2	4.8			8.0	11.0				43								
	4.8	6.4			9.5	12.6				44								
	6.4	7.9			11.1	14.2				45								
	7.9	9.5			12.7	15.7				46								
	9.5	12.7			15.9	18.9				48								
4.0 (5/32")	1.6	3.2	4.06	4.17	7.0	10.5	2.4	8.4	1.2	52								
	3.2	4.8			8.6	12.1				53								
	4.8	6.4			10.2	13.7				54								
	6.4	9.5			13.3	16.9				56								
4.8 (3/16")	1.6	3.2	4.88	4.98	7.6	11.7	2.9	10.0	1.4	62	16.6	2.2	68	9.3	1.8	68		
	3.2	6.4			10.8	14.9				64							64	
	6.4	9.5			14.0	18.0				66							66	
	9.5	12.7			17.2	21.2				68							68	
	12.7	15.9			20.3	24.4				610							610	
	22.3	25.4			29.7	33.9				616								

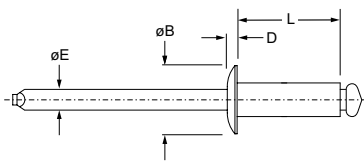
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros
1) SSK 42 SSBS: 7.0



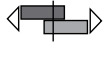

Ø nom.	 kN ²⁾	 kN ²⁾
3.2 (1/8")	2.45	3.12
4.0 (5/32")	4.01	5.03
4.8 (3/16")	4.45	6.12

2) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Copper* Natural	Corps: Cuivre* Brut	Hülse: Kupfer* Blank	Corpo: Rame* Nessuna finitura	Cuerpo: Cobre* Natural
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



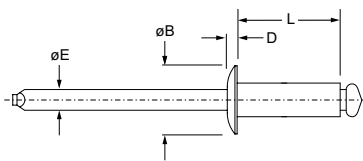
Ø nom.					L ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")		1.3	3.3	3.4	4.5	1.83	6.7	1.1	0.80	1.20	TCPD 42 BS
	2.1	2.9			6.3						TCPD 44 BS
	2.9	4.5			8.0						TCPD 46 BS
4.0 (5/32")		3.2	4.1	4.2	7.0	2.29	8.2	1.3	1.33	1.91	TCPD 54 BS

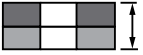
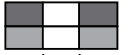


all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Nickel Copper Alloy Zinc plated	Corps: Alliage de nickel cuivre Revêtement zingué	Hülse: Nickel Kupfer Legierung Verzinkt	Corpo: Lega di nickel rame Zincato	Cuerpo: Aleación de níquel cobre Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



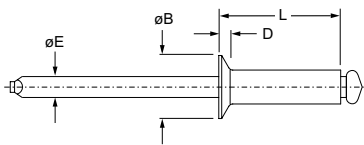
Ø nom.					L ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
2.8 (7/64")		1.8	2.9	3.0	5.0	1.83	5.2	0.7	1.15	1.30	TLPD 319 BS
	1.8	2.3			5.5						TLPD 321 BS
3.2 (1/8")		1.8	3.3	3.4	5.0	1.93	6.3	0.8	1.50	1.90	TLPD 419 BS
	1.8	3.1			6.2						TLPD 424 BS
	3.1	4.3			7.5						TLPD 429 BS
	4.3	5.8			9.0						TLPD 435 BS
	5.8	7.1			10.3						TLPD 440 BS
4.0 (5/32")	1.3	2.5	4.1	4.2	6.2	2.29	7.0	0.9	2.20	3.00	TLPD 524 BS
	2.5	4.1			7.8						TLPD 530 BS
	4.1	5.8			9.5						TLPD 537 BS
	5.8	6.6			10.3						TLPD 540 BS
	6.6	7.9			11.6						TLPD 545 BS
4.8 (3/16")	0.5	3.8	4.9	5.0	7.7	2.90	8.4	1.3	3.30	3.75	TLPD 630 BS
	3.8	5.1			9.3						TLPD 636 BS
	5.1	5.8			10.0						TLPD 639 BS
	5.8	8.6			12.8						TLPD 650 BS
	8.6	12.5			16.5						TLPD 665 BS
	12.5	15.0			19.0						TLPD 675 BS
6.4 (1/4")		7.6	6.6	6.7	12.8	3.86	11.2	1.6	5.40	6.75	TLPD 850 BS
	7.6	12.7			17.9						TLPD 870 BS

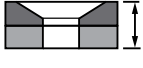
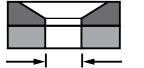


all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Countersunk	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Nickel Copper Alloy Zinc plated	Corps: Alliage de nickel cuivre Revêtement zingué	Hülse: Nickel Kupfer Legierung Verzinkt	Corpo: Lega di nickel rame Zincato	Cuerpo: Aleación de níquel cobre Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



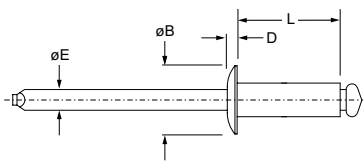
Ø nom.					L ref.	ØE ref.	ØB max.	D max.			Part No.
	min.	max.	min.	max.							
2.8 (7/64")	0.5	2.3	2.9	3.0	5.7	1.83	5.2	1.0	1.15	1.30	TLPK 319 BS
	2.3	2.8			6.2						TLPK 321 BS
3.2 (1/8")	0.8	2.5	3.3	3.4	5.9	1.93	6.3	1.0	1.50	1.90	TLPK 419 BS
	2.5	3.8			7.1						TLPK 424 BS
	3.8	5.1			8.4						TLPK 429 BS
	5.1	6.6			9.9						TLPK 435 BS
	6.6	7.9			11.2						TLPK 440 BS
4.0 (5/32")	2.0	3.3	4.1	4.2	7.7	2.29	7.0	1.2	2.20	3.00	TLPK 524 BS
	3.3	4.8			8.7						TLPK 530 BS
	4.8	6.6			10.5						TLPK 537 BS
	6.6	7.4			11.3						TLPK 540 BS
4.8 (3/16")	3.1	4.6	4.9	5.0	8.9	2.90	8.4	1.4	3.30	3.75	TLPK 630 BS
	4.6	5.8			10.4						TLPK 636 BS
	5.8	6.6			11.2						TLPK 639 BS
	6.6	9.4			14.0						TLPK 650 BS
	9.4	13.2			17.8						TLPK 665 BS
13.2	15.8	20.3	TLPK 675 BS								
6.4 (1/4")	4.6	8.4	6.6	6.7	14.3	3.86	11.2	1.7	5.40	6.75	TLPK 850 BS


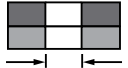


all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Nickel Copper Alloy Zinc plated	Corps: Alliage de nickel cuivre Revêtement zingué	Hülse: Nickel Kupfer Legierung Verzinkt	Corpo: Lega di nickel rame Zincato	Cuerpo: Aleación de níquel cobre Zincado
Stem: Stainless Steel	Tige: Inox	Dorn: Edelstahl	Gambo: Acciaio inox	Vástago: Acero inoxidable



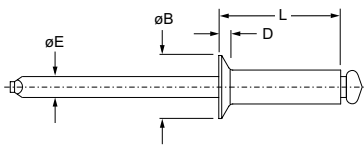
Ø nom.					L ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")		1.8	3.3	3.4	5.0	1.93	6.3	0.8	1.50	1.90	TLPD 419 SS
	1.8	3.1			6.2						TLPD 424 SS
	3.1	4.3			7.5						TLPD 429 SS
	4.3	5.8			9.0						TLPD 435 SS
	5.8	7.1			10.3						TLPD 440 SS
4.0 (5/32")	1.3	2.5	4.1	4.2	6.2	2.29	7.0	0.9	2.20	3.00	TLPD 524 SS
	2.5	4.1			7.8						TLPD 530 SS
	4.1	5.8			9.5						TLPD 537 SS
	5.8	6.6			10.3						TLPD 540 SS
	6.6	7.9			11.6						TLPD 545 SS
4.8 (3/16")	0.5	3.8	4.9	5.0	7.7	2.90	8.4	1.3	3.30	3.75	TLPD 630 SS
	3.8	5.1			9.3						TLPD 636 SS
	5.1	5.8			10.0						TLPD 639 SS
	5.8	8.6			12.8						TLPD 650 SS
	8.6	12.5			16.5						TLPD 665 SS
	12.5	15.0			19.0						TLPD 675 SS





all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Countersunk	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Nickel Copper Alloy Zinc plated	Corps: Alliage de nickel cuivre Revêtement zingué	Hülse: Nickel Kupfer Legierung Verzinkt	Corpo: Lega di nickel rame Zincato	Cuerpo: Aleación de níquel cobre Zincado
Stem: Stainless Steel	Tige: Inox	Dorn: Edelstahl	Gambo: Acciaio inox	Vástago: Acero inoxidable



Ø nom.					L ref.	ØE ref.	ØB max.	D max.			Part No.
	min.	max.	min.	max.							
3.2 (1/8")	0.8	2.5	3.3	3.4	5.9	1.93	6.3	1.0	1.50	1.90	TLPK 419 SS
	2.5	3.8			7.1						TLPK 424 SS
	3.8	5.1			8.4						TLPK 429 SS
	5.1	6.6			9.9						TLPK 435 SS
	6.6	7.9			11.2						TLPK 440 SS
4.0 (5/32")	2.0	3.3	4.1	4.2	7.7	2.29	7.0	1.2	2.20	3.00	TLPK 524 SS
	3.3	4.8			8.7						TLPK 530 SS
	4.8	6.6			10.5						TLPK 537 SS
	6.6	7.4			11.3						TLPK 540 SS
4.8 (3/16")	3.1	4.6	4.9	5.0	8.9	2.90	8.4	1.4	3.30	3.75	TLPK 630 SS
	5.8	6.6			11.2						TLPK 639 SS
	6.6	9.4			14.0						TLPK 650 SS
	9.4	13.2			17.8						TLPK 665 SS
	13.2	15.8			20.3						TLPK 675 SS

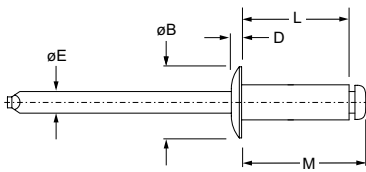
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Aluminium Natural	Tige: Aluminium Brut	Dorn: Aluminium Blank	Gambo: Alluminio Nessuna finitura	Vástago: Aluminio Natural

* 1100



Ø nom.					L ref.	M ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.								
2.5	3.2	4.8	2.60		7.3	10.3	1.5	4.4	0.8	0.27	0.33	PAD 25M3 ABS
	4.8	6.4			8.9	11.9						PAD 25M4 ABS
	6.4	8.0			11.4	14.4						PAD 25M5 ABS
3.0	3.2	4.8	3.10		8.1	12.5	1.8	6.3	1.1	0.31	0.42	PAD 30M3 ABS
	4.8	6.4			9.8	14.2						PAD 30M4 ABS
	6.4	8.0			11.6	16.0						PAD 30M5 ABS
3.2 (1/8")	4.8	6.4	3.3	3.4	9.5	12.6	1.9	6.7	1.1	0.29	0.38	PAD 44 ABS
4.0 (5/32")	4.8	6.4	4.1	4.2	10.2	13.7	2.4	8.4	1.2	0.47	0.65	PAD 54 ABS
	6.4	9.5			13.3	16.9						PAD 56 ABS

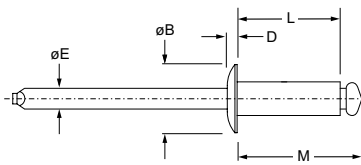
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros


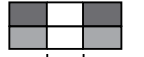
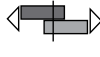

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel Zinc plated	Tige: Acier Revêtement zingué	Dorn: Stahl Verzinkt	Gambo: Acciaio Zincato	Vástago: Acero Zincado

*: 5154



Ø nom.					L ref.	M ref.	ØE ref.	ØB max.	D max.			Part No.
	min.	max.	min.	max.								
2.0	1.0	1.6	2.03	2.13	4.1	7.5	1.1	4.0	0.8	0.37	0.56	TAPD 20M1 BS
	1.6	3.2			5.7	9.1						TAPD 20M2 BS
	3.2	4.8			7.4	10.8						TAPD 20M3 BS
	4.8	6.4			9.0	12.4						TAPD 20M4 BS
	6.4	8.0			10.7	14.1						TAPD 20M5 BS

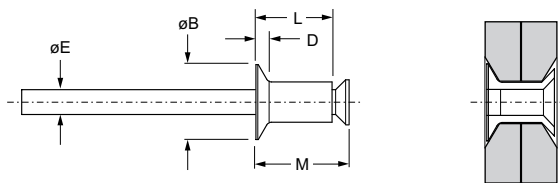
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Countersunk	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Steel* Zinc plated	Corps: Acier* Revêtement zingué	Hülse: Stahl* Verzinkt	Corpo: Acciaio* Zincato	Cuerpo: Acero* Zincado
Stem: Steel Protective coating	Tige: Acier Revêtement de protection	Dorn: Stahl Schutzüberzug	Gambo: Acciaio Rivestimento protettivo	Vástago: Acero Revestimiento preservador

*: C1006-C1010



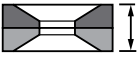
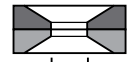
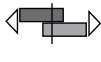

Rear sheet tail protrusion of installed fastener is application dependent - up to 0.4 mm is permissible.

Le dépassement en face arrière après pose dépend de l'application - possible jusqu'à 0,4 mm.

Der Bauteilüberstand des gesetzten Verbinders auf der Blindseite ist applikationsabhängig - bis zu 0,4 mm ist zulässig.

L'entità della sporgenza posteriore del rivetto installato è dipendente dall'applicazione. Fino a 0,4 mm è ammessa.

El remache una vez colocado, sobresale por la parte trasera de la chapa hasta un máximo de 0,4 mm permitidos.

Ø nom.					L ref.	M ref.	ØE ref.	ØB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.								
3.0	1.5	2.0	3.28	3.40	2.5	4.9	1.8	5.5	1.0	0.80	0.70	SKK 3025 PT
	2.0	2.5			2.8	5.2						SKK 3030 PT
	2.5	3.0			3.3	5.7						SKK 3035 PT
	3.0	3.5			3.8	6.2						SKK 3040 PT
	3.5	4.0			4.3	6.7						SKK 3045 PT
	4.0	4.5			4.8	7.2						SKK 3050 PT
	4.5	5.0			5.3	7.7						SKK 3055 PT
	5.0	5.5			5.8	8.2						SKK 3060 PT
5.5	6.0	6.3	8.7	SKK 3065 PT								

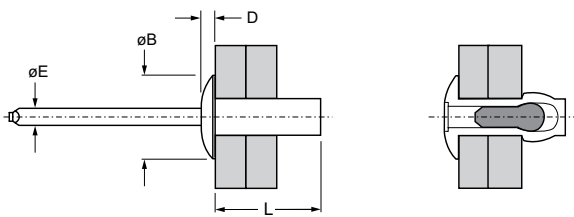
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Unbehandelt	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Body: Aluminium Natural	Corps: Aluminium Brut	Hülse: Aluminium Unbehandelt	Corpo: Alluminio Nessuna finitura	Cuerpo: Aluminio Natural

*: 1100



ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")	0.8	1.6	3.3	3.4	6.0	1.8	6.3	1.3	0.47	0.67	AD 41 AH
	1.6	3.2			7.7						AD 42 AH
	3.2	4.8			9.2						AD 43 AH
	4.8	6.4			10.8						AD 44 AH
4.0 (5/32")	3.2	4.8	4.1	4.2	9.6	2.3	8.4	1.7	0.69	1.07	PD 56 A
	4.8	6.4			11.2						AD 54 AH
	6.4	7.9			12.8						AD 55 AH
4.8 (3/16")	1.6	3.2	4.9	5.0	8.4	2.7	10.0	2.1	0.98	1.38	AD 62 AH
	3.2	6.4			11.6						AD 64 AH
	6.4	9.5			14.7						AD 66 AH
	9.5	12.7			17.9						AD 68 AH

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

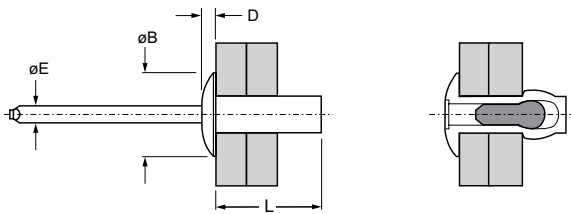
Closed End AD H / AD SB / AK H Series

Aluminium / Steel

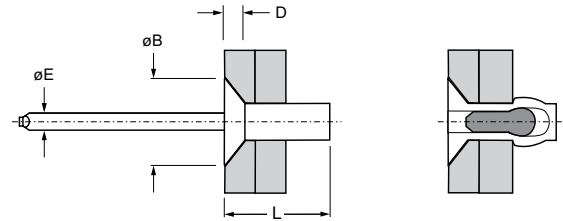


English	Français	Deutsch	Italiano	Español
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



* 5056 / 5% Magnesium Alloy



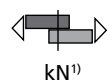

AD H / AD SB
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



AK H
Countersunk
Tête fraisée / Senkkopf /
Testa svasata / Cabeza avellanada

Ø nom.					ØE ref.	AD H / AD SB				AK H				
	min.	max.	min.	max.		L ref.	ØB max.	D max.	Part No.	L ref.	ØB max.	D max.	Part No.	
3.2 (1/8")	0.8	1.6	3.3	3.4	1.6	6.0	6.3	1.3	AD 42 SB	7.0	6.3	1.4	AK 41 H	
	1.6	3.2				7.6			AD 44 SB	8.7			AK 42 H	
	3.2	4.8				9.2			AD 46 SB	10.2			AK 43 H	
	4.8	6.4				10.8			AD 48 SB	11.8			AK 44 H	
	6.4	7.9				12.4			AD 45 H	13.4			AK 45 H	
	7.9	9.5				14.0	AD 46 H							
	9.5	12.7				17.1	AD 48 H							
4.0 (5/32")	1.6	3.2	4.1	4.2	2.2	8.0	8.3	1.7	AD 54 SB	9.4	8.3	1.7	AK 52 H	
	3.2	4.8				9.6			AD 56 SB	11.0			AK 53 H	
	4.8	6.4				11.2			AD 58 SB	12.6			AK 54 H	
	6.4	7.9				12.8			AD 510 SB	14.2			AK 55 H	
4.8 (3/16")	1.6	3.2	4.9	5.0	2.6	8.4	10.0	2.1	AD 64 SB	10.0	10.1	1.9	AK 62 H	
	3.2	4.8				9.9			AD 66 SB					
	3.2	6.4								13.2				AK 64 H
	4.8	6.4												
	6.4	7.9												
	6.4	9.5								16.4				AK 66 H
	7.9	9.5												
	9.5	12.7								17.9				AK 68 H
	12.7	15.9								22.0				
6.4 (1/4")	3.2	6.4	6.5	6.6	3.7	12.3	13.4	2.6	AD 84 H					
	6.4	9.5				15.5			AD 86 H					

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

Ø nom.	 kN ¹⁾	 kN ¹⁾
3.2 (1/8")	1.36	1.71
4.0 (5/32")	1.91	2.69
4.8 (3/16")	2.56	3.74
6.4 (1/4")	4.00	4.89

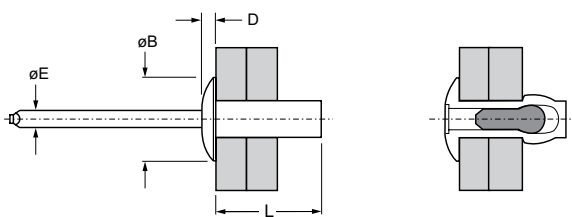
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Closed End AD SS / AD SSH / AK SSH Series
Aluminium / Stainless Steel

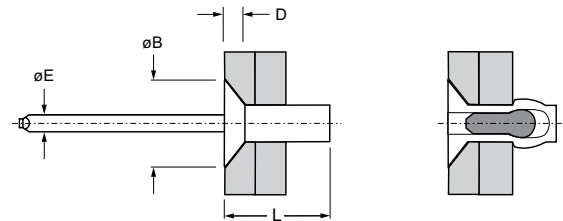


English	Français	Deutsch	Italiano	Español
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Stainless steel Natural	Tige: Inox Brut	Dorn: Edelstahl Unbehandelt	Gambo: Acciaio inox Nessuna finitura	Vástago: Acero inoxidable Natural



* 5056



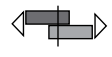

AD SSH
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



AK SSH
Countersunk
Tête fraisée / Senkkopf /
Testa svasata / Cabeza avellanada

ø nom.					øE ref.	AD SSH				AK SSH			
	min.	max.	min.	max.		L ref.	øB max.	D max.	Part No.	L ref.	øB max.	D max.	Part No.
3.2 (1/8")	0.8	1.6	3.3	3.4	1.6	6.0	6.3	1.3	AD 42 SS	10.2	6.3	1.4	AK 43 SSH
	1.6	3.2				7.6			AD 44 SS				
	3.2	4.8				9.2			AD 46 SS				
	4.8	6.4				10.8			AD 48 SS				
	6.4	7.9				12.4	AD 45 SSH						
4.0 (5/32")	1.6	3.2	4.1	4.2	2.2	8.0	8.3	1.7	AD 54 SS	11.0	8.4	1.7	AK 53 SSH
	3.2	4.8				9.6			AD 56 SS				AK 54 SSH
	4.8	6.4				11.2			AD 58 SS				AK 54 SSH
4.8 (3/16")	1.6	3.2	4.9	5.0	2.6	8.4	10.0	2.1	AD 64 SS	10.0	10.1	2.0	AK 62 SSH
	3.2	4.8				9.9			AD 66 SS				
	4.8	6.4				11.6			AD 68 SS				
	6.4	7.9				13.1			AD 610 SS				
	7.9	9.5				14.7			AD 612 SS				
	9.5	12.7				17.9			AD 616 SS				
	12.7	15.9				22.0			AD 620 SS				

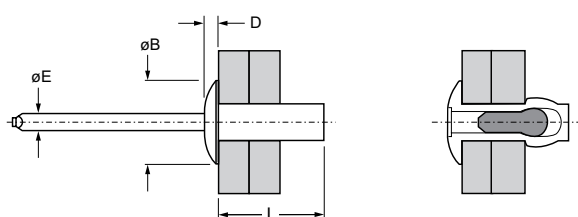
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



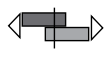

ø nom.	 kN ¹⁾	 kN ¹⁾
3.2 (1/8")	1.07	1.25
4.0 (5/32")	1.56	2.14
4.8 (3/16")	2.56	3.74

1) typical values / valeurs moyennes / typische Werte /
Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Steel Zinc plated	Corps: Acier Revêtement zingué	Hülse: Stahl Verzinkt	Corpo: Acciaio Zincato	Cuerpo: Acero Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")	3.2	4.8	3.3	3.4	9.7	1.9	6.6	1.0	1.15	1.20	SD 46 SB
4.0 (5/32")	1.6	4.8	4.1	4.2	10.2	2.3	8.3	1.2	1.73	1.86	SD 56 SB
4.8 (3/16")		3.2	4.9	5.0	9.2	2.9	9.9	1.3	2.42	2.84	SD 64 SB
	4.8	6.4			12.4						SD 68 SB

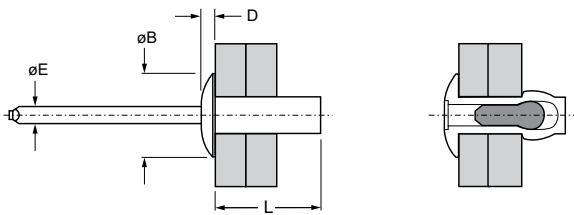
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Stainless steel* Natural	Corps: Inox* Brut	Hülse: Edelstahl* Unbehandelt	Corpo: Acciaio inox* Nessuna finitura	Cuerpo: Acero inoxidable* Natural
Stem: Stainless steel Natural	Tige: Inox Brut	Dorn: Edelstahl Unbehandelt	Gambo: Acciaio inox Nessuna finitura	Vástago: Acero inoxidable Natural

*: 300 Series



ø nom.					L ref.	øE ref.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
3.2 (1/8")		1.6	3.3	3.4	6.6	2.0	6.7	0.9	2.10	2.22	TD 42 GT
	1.6	3.2			8.0						TD 44 GT
	3.2	4.8			9.7						TD 46 GT
	4.8	6.4			11.3						TD 48 GT
	6.4	7.9			12.9						TD 410 GT
4.0 (5/32")		3.2	4.1	4.2	8.6	2.36	8.3	1.0	3.30	4.00	TD 54 GT
	3.2	4.8			10.2						TD 56 GT
	4.8	6.4			11.8						TD 58 GT
	6.4	7.9			13.4						TD 510 GT
4.8 (3/16")		3.2	4.9	5.0	9.2	2.97	10.0	1.25	4.30	4.40	TD 64 GT
	3.2	4.8			10.8						TD 66 GT
	4.8	6.4			12.5						TD 68 GT
	6.4	9.5			15.5						TD 612 GT
	9.5	12.7			18.5						TD 616 GT
6.4 (1/4")		6.4	6.5	6.6	14.2	3.93	13.0	1.35	6.80	8.70	TD 808 GT
	6.4	7.9			15.7						TD 810 GT
	7.9	12.7			20.5						TD 816 GT

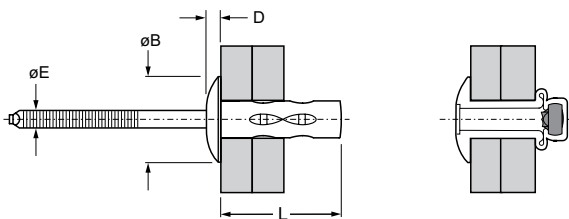
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Stainless steel* Natural	Corps: Inox* Brut	Hülse: Edelstahl* Unbehandelt	Corpo: Acciaio inox* Nessuna finitura	Cuerpo: Acero inoxidable* Natural
Stem: Stainless steel Natural	Tige: Inox Brut	Dorn: Edelstahl Unbehandelt	Gambo: Acciaio inox Nessuna finitura	Vástago: Acero inoxidable Natural

*: AISI 305



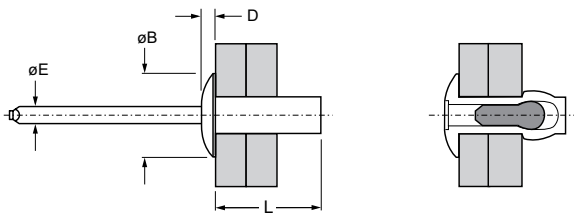
ø nom.					L nom.	øE nom.	øB max.	D max.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.							
4.8 (3/16")	2.0	4.5	5.0	5.1	12.3	3.0	10.0	1.25	4.30	4.80	TVD 603 GT
	3.5	6.0			13.7						TVD 605 GT
	5.0	7.5			15.3						TVD 607 GT
	6.5	9.0			16.8						TVD 609 GT
	9.0	11.5			19.7						TVD 613 GT






all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Nickel Copper Alloy Zinc plated	Corps: Alliage de nickel cuivre Revêtement zingué	Hülse: Nickel Kupfer Legierung Verzinkt	Corpo: Lega di nickel rame Zincato	Cuerpo: Aleación de níquel cobre Zincado
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero



ø nom.					L ref.	øE ref.	øB max.	D max.				Part No.
	min.	max.	min.	max.								
3.2 (1/8")		3.2	3.3	3.4	8.0	1.9	6.6	1.0	1.50	1.90		LD 44 SB
	3.2	4.8			9.7							LD 46 SB
	6.4	7.9			13.0							LD 410 SB
4.0 (5/32")	3.2	4.8	4.1	4.2	10.2	2.3	8.2	1.2	2.20	3.00		LD 56 SB
	4.8	6.4			11.8							LD 58 SB
4.8 (3/16")		3.2	4.9	5.0	9.2	2.9	9.9	1.3	3.30	3.75		LD 64 SB
	4.8	6.4			12.4							LD 68 SB

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

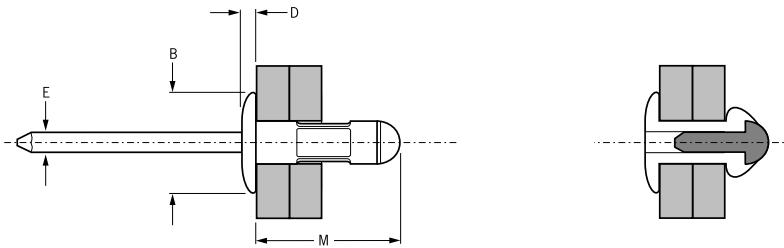
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos







English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* (2.5 % Mg) Natural	Corps: Alliage d'aluminium* (2.5% Mg) Brut	Hülse: Aluminium* (2.5 % Mg) Blank	Corpo: Lega di alluminio* (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio* (2.5% Mg) Natural
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc coated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: AA 5052, DIN 1725, AlMg2.5, Werkstoff 3.3523

** : BS3111 Type 0, SAE 1015/1018/1022, DIN 1654, Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE max.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
3.0	0.8	4.3	3.1	3.3	9.1	6.7	1.3	1.7	0.70	0.98	01661-05307
3.2 (1/8")	0.8	4.8	3.3	3.4	10.4	6.7	1.3	1.8	0.73	1.02	01661-00410
	1.2	6.3			12.0						01661-00412
	4.0	7.9			13.6						01661-00414
	5.5	9.5			16.0						01661-00416
4.0 (5/32")	0.8	4.7	4.1	4.2	10.7	8.2	1.6	2.2	1.13	1.67	01661-00510
	1.2	6.3			12.5				1.04		01661-00512
	4.0	9.5			16.2				1.04		01661-00516
	6.4	12.7			19.6				1.04		01661-00521
4.8 (3/16")	1.6	6.3	4.9	5.0	13.9	10.1	1.8	2.9	1.53	2.33	01661-00613
	4.8	11.1			18.7				1.31		01661-00619
	4.8	12.7			20.2				1.31		01661-00621
	12.7	19.8			28.2				1.42		01661-00631
6.4 (1/4")	1.5	8.3	6.6	6.9	16.8	13.5	2.7	4.0	3.10	2.50	01610-04506 ²⁾

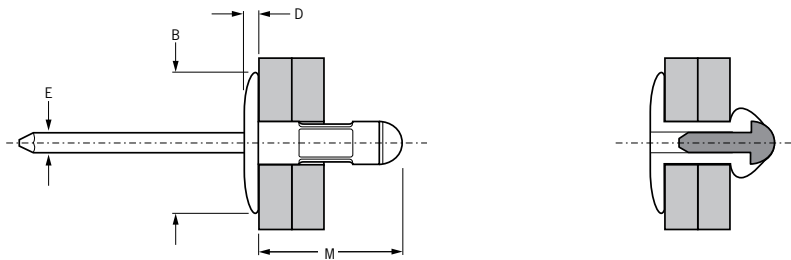
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



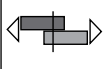

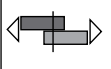

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

2) stem: zinc plated, clear trivalent passivated / tige: revêtement zingué, passivation claire trivalente / Dorn: verzinkt, klar chromatiert Cr6-frei / gambo: zincato, passivazione chiara trivalente / vástago: zincado, pasivado claro trivalente



English	Français	Deutsch	Italiano	Español
Large Flange	Tête large	Flachrundkopf extragroß	Testa larga	Cabeza ala ancha
Body: Aluminium alloy (2.5 % Mg) Natural	Corps: Alliage d'aluminium (2.5% Mg) Brut	Hülse: Aluminium (2.5 % Mg) Blank	Corpo: Lega di alluminio (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio (2.5% Mg) Natural
Stem: Low carbon steel	Tige: Acier bas carbone	Dorn: Stahl	Gambo: Acciaio a basso tenore di carbonio	Vástago: Acero bajo en carbono
Zinc coated	Revêtement zingué	Verzinkt	Zincato	Zincado



ø nom.					M max.	øB max.	D max.	øE max.			Part No/ref	
	min.	max.	min.	max.								kN ¹⁾
4.8 (3/16")	1.6	6.3	4.9	5.0	13.9	16.2	2.2	2.9			1.53	01641-00613
	3.2	9.3			17.0						1.34	01641-00617
	4.8	11.1			18.7						1.34	01641-00619
	6.4	12.7			20.2						1.31	01641-00621
	12.7	19.8			28.2						1.42	01641-00631

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

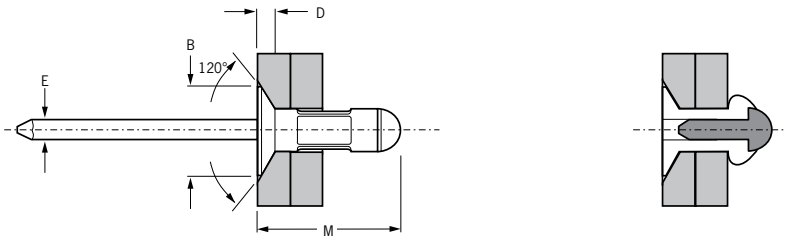
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos


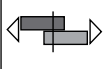



English	Français	Deutsch	Italiano	Español
120° Countersunk head	120° Tête fraisée	120° Senkkopf	120° Testa svasata	120° Cabeza avellanada
Body: Aluminium alloy* (2.5 % Mg) Natural	Corps: Alliage d'aluminium* (2.5% Mg) Brut	Hülse: Aluminium* (2.5 % Mg) Blank	Corpo: Lega di alluminio* (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio* (2.5% Mg) Natural
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc coated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: AA 5052, DIN 1725, AlMg2.5, Werkstoff 3.3523

** : BS3111 Type 0, SAE 1015/1018/1022, DIN 1654, Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE max.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	2.4	6.3	3.3	3.4	12.2	5.6	1.3	1.8	0.69	0.91	01604-00412
	4.0	7.9			13.4						01604-00414
	5.5	9.5			14.8						01604-00416
4.0 (5/32")	2.8	7.9	4.1	4.2	14.3	6.6	1.4	2.2	1.13	1.33	01604-00514
	3.6	8.8			15.1						01604-00515
4.8 (3/16")	3.2	7.9	4.9	5.0	15.5	9.0	1.8	2.9	1.55	2.35	01604-00615
	6.3	12.7			20.4						01604-00621

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

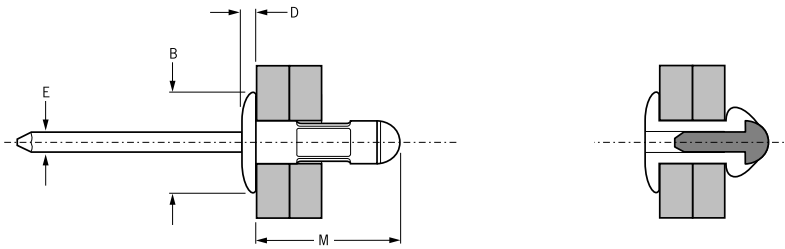
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



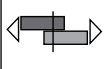



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* (2.5 % Mg) Natural	Corps: Alliage d'aluminium* (2.5% Mg) Brut	Hülse: Aluminium* (2.5 % Mg) Blank	Corpo: Lega di alluminio* (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio* (2.5% Mg) Natural
Stem: Stainless steel** Natural	Tige: Inox** Brut	Dorn: Edelstahl** Blank	Gambo: Acciaio inox** Nessuna finitura	Vástago: Acero inoxidable** Natural

*: AA 5052, DIN 1725, AlMg2.5, Werkstoff 3.3523

** : ø 3.0 - 4.0: X5CrNi 18-10, Werkstoff 1.4301; ø 4.8: X3CrNiCu 18-9-4, Werkstoff 1.4567



ø nom.					M max.	øB max.	D max.	øE max.			Part No/ref
	min.	max.	min.	max.							
3.0	0.8	4.3	3.1	3.3	9.1	6.7	1.3	1.7	0.70	0.98	01663-05307
3.2 (1/8")	0.8	4.8	3.3	3.4	10.4	6.7	1.3	1.8	0.73	1.02	01663-00410
	1.2	6.3			12.0						01663-00412
	4.0	7.9			13.6						01663-00414
	5.5	9.5			16.0						01663-00416
4.0 (5/32")	0.8	4.7	4.1	4.2	10.7	8.2	1.6	2.2	1.13	1.67	01663-00510
	1.2	6.3			12.5				1.04		01663-00512
	4.0	9.5			16.2				1.04		01663-00516
	6.4	12.7			19.6				1.04		01663-00521
4.8 (3/16")	1.6	6.3	4.9	5.0	13.9	10.1	1.8	2.9	1.53	2.33	01663-00613
	4.8	11.1			18.7				1.31		01663-00619
	4.8	12.7			20.2				1.31		01663-00621
	12.7	19.8			28.2				1.42		01663-00631

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

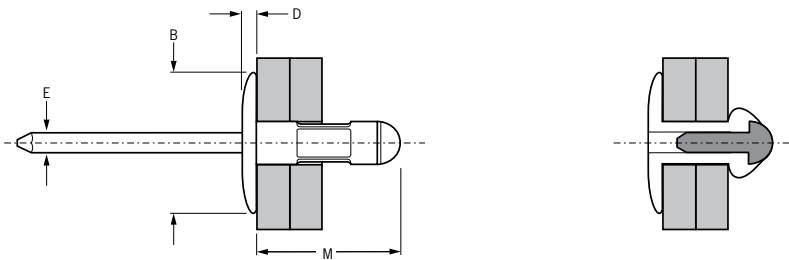
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos







English	Français	Deutsch	Italiano	Español
Large Flange	Tête large	Flachrundkopf extragroß	Testa larga	Cabeza ala ancha
Body: Aluminium alloy* (2.5 % Mg) Natural	Corps: Alliage d'aluminium* (2.5% Mg) Brut	Hülse: Aluminium* (2.5 % Mg) Blank	Corpo: Lega di alluminio* (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio* (2.5% Mg) Natural
Stem: Stainless steel** Natural	Tige: Inox** Brut	Dorn: Edelstahl** Blank	Gambo: Acciaio inox** Nessuna finitura	Vástago: Acero inoxidable** Natural

*: AA 5052, DIN 1725, AlMg2.5, Werkstoff 3.3523

** : BS3111, 321S31, AISI 321, Werkstoff 1.4541



ø nom.					M max.	øB max.	D max.	øE max.			Part No/ref
	min.	max.	min.	max.							
4.8 (3/16")	1.6	6.3	4.9	5.0	13.6	16.2	2.2	2.9	1.40	2.00	01643-00613
	6.4	12.7			19.7				1.20		01643-00621
	12.7	19.8			27.6				1.30		01643-00631

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

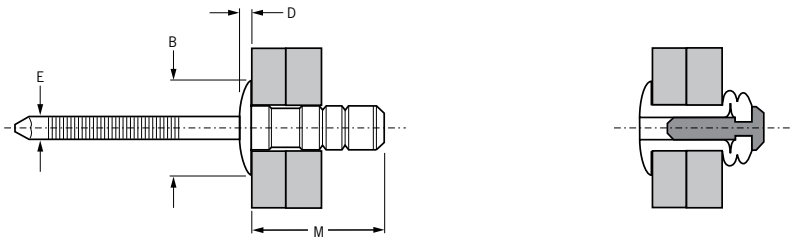
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



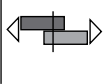



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Low carbon steel*	Corps: Acier bas carbone*	Hülse: Stahl*	Corpo: Acciaio a basso tenore di carbonio*	Cuerpo: Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: BS3111 Type 0, SAE 1008, DIN 1654, QSt 34-3

** : BS3111 Type 0, SAE 1010/1015/1018/1022, DIN 17210, Cq10 / DIN 1654 Cq10/Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE max.	 kN min.	 kN min.	Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	1.0	6.0	3.3	3.4	14.5	7.3	1.0	2.2	0.90	1.17	0BS01-00414
4.0 (5/32")	2.0	8.0	4.1	4.2	16.0	8.2	1.4	2.9	1.53	1.80	0BS01-00516
4.8 (3/16")	1.5	6.3	4.9	5.0	13.8	10.1	1.6	3.1	2.60	2.88	0BS01-00614
	1.5	9.0			17.1						0BS01-00618
	6.3	12.7			20.1						0BS01-00622
6.4 (1/4")	1.5	7.6	6.6	6.9	16.8	13.5	2.7	4.0	3.11	3.56	01610-04844 ¹⁾

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

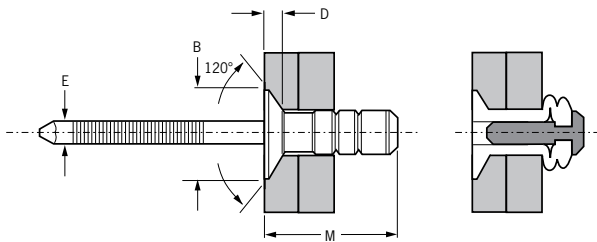
1) stem: zinc plated, clear trivalent passivated / tige: revêtement zingué, passivation claire trivalente / Dorn: verzinkt, klar chromatiert Cr6-frei / gambo: zincato, passivazione chiara trivalente / vástago: zincado, pasivado claro trivalente

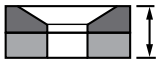

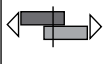



English	Français	Deutsch	Italiano	Español
120° Countersunk head	120° Tête fraisée	120° Senkkopf	120° Testa svasata	120° Cabeza avellanada
Body: Low carbon steel*	Corps: Acier bas carbone*	Hülse: Stahl*	Corpo: Acciaio a basso tenore di carbonio*	Cuerpo: Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: BS3111 Type 0, SAE 1008, DIN 1654, QSt 34-3

** : BS3111 Type 0, SAE 1010/1015/1018/1022, DIN 17210, Cq10 / DIN 1654 Cq10/Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE max.	 kN min.	 kN min.	Part No/ref	
	min.	max.	min.	max.								
3.2 (1/8")	1.00	6.00	3.3	3.4	14.0	5.9	1.0	2.2	0.90	1.17	0BS04-00414	
	2.36	6.35			13.8							
4.8 (3/16")	2.36	9.52	4.9	5.0	17.1	8.9	1.4	3.0	2.00	2.89	0BS04-00614	
		6.35			12.70						20.1	0BS04-00618
		0BS04-00622										

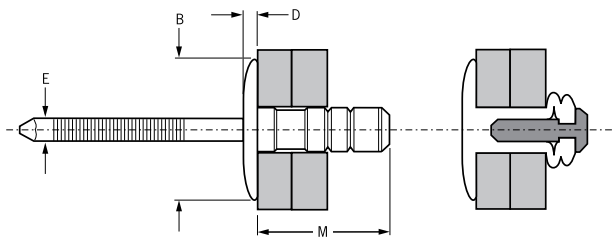
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



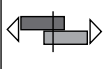



English	Français	Deutsch	Italiano	Español
Large Flange	Tête large	Flachrundkopf extragroß	Testa larga	Cabeza ala ancha
Body: Low carbon steel*	Corps: Acier bas carbone*	Hülse: Stahl*	Corpo: Acciaio a basso tenore di carbonio*	Cuerpo: Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: BS3111 Type 0, SAE 1008, DIN 1654, QSt 34-3

** : BS3111 Type 0, SAE 1010/1015/1018/1022, DIN 17210, Cq10 / DIN 1654 Cq10/Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE	 kN min.	 kN min.	Part No/ref
	min.	max.	min.	max.							
4.8 mm (3/16")	1.50	6.35	4.9	5.0	13.8	16.2	2.1	3.0	2.60	2.88	0BE34-00614
	1.50	9.00			17.1						0BE34-00618
	6.30	12.70			20.1						0BE34-00622

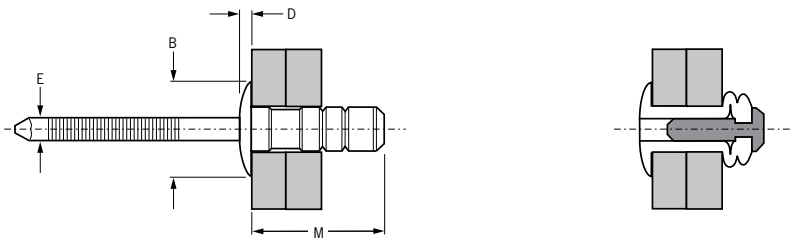
all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros



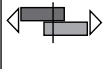



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Stainless steel* Polished	Corps: Inox* Poli	Hülse: Edelstahl* Blank	Corpo: Acciaio inox* Lucido	Cuerpo: Acero inoxidable* Pulido
Stem: Stainless steel** Natural	Tige: Inox** Brut	Dorn: Edelstahl** Unbehandelt	Gambo: Acciaio inox** Nessuna finitura	Vástago: Acero inoxidable** Natural

*: BS3111 394S17, Werkstoff 1.4567

** : BS3111 304S17, AISI 304, Werkstoff 1.4301 / BS3111 321S31, AISI 321, Werkstoff 1.4541

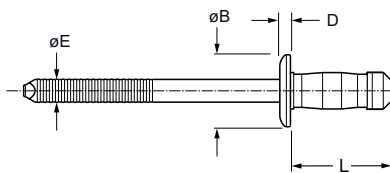


ø nom.					M max.	øB max.	D max.	øE max.	 kN min.	 kN min.	Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	1.0	6.0	3.3	3.4	14.5	7.3	1.0	2.2	1.62	1.98	OBS11-00414
4.0 (5/32")	2.0	8.0	4.1	4.2	16.0	8.2	1.4	2.9	2.43	3.24	OBS11-00516
4.8 (3/16")	1.5	9.0	4.9	5.0	17.1	10.1	1.6	3.1	4.14	4.50	OBS11-00618

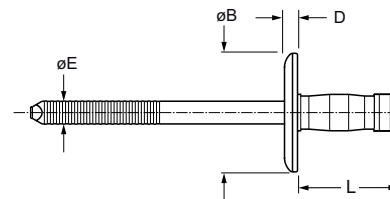
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





English	Français	Deutsch	Italiano	Español
Body: Aluminium*	Corps: Aluminium*	Hülse: Aluminium*	Corpo: Alluminio*	Cuerpo: Aluminio*
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero
*2.5 % Magnesium Alloy				



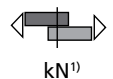

VG11
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



VG12
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha

Ø nom.					L ref.	ØE ref.	VG11 - Dome head			VG12 - Large flange		
	min.	max.	min.	max.			ØB max.	D max.	Part No.	ØB max.	D max.	Part No.
4.8 (3/16")	1.5	6.0	4.9	5.0	13.3	3.1	9.8	1.7	VG11-04810-511	16.4	2.3	VG12-04810-511
	6.0	10.0			18.8				VG11-04816-511			VG12-04816-511

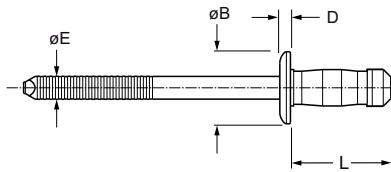
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

Ø nom.	 kN ¹⁾	 kN ¹⁾
4.8 (3/16")	1.20	1.90

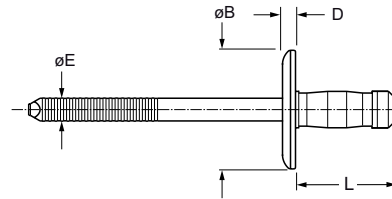
1) typical values / valeurs moyennes / typische Werte /
Valori tipici / valores típicos





English	Français	Deutsch	Italiano	Español
Body: Steel Zinc plated Cr6-free clear thick-film passivation plus sealer	Corps: Acier Revêtement zingué Passivation clair, sans Cr6; avec scellant	Hülse: Stahl Verzinkt Klare Dickschicht- passivierung, Cr6-frei; mit Versiegelung	Corpo: Acciaio Zincato Passivazione chiara, senza Cr6; con sigillante	Cuerpo: Acero Zincado Pasivado claro, libre de Cr6; con sellante
Stem: Steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero





VG21
Dome head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



VG22
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha

ø nom.					L ref.	øE ref.	VG21 - Dome head			VG22 - Large flange		
	min.	max.	min.	max.			øB max.	D max.	Part No.	øB max.	D max.	Part No.
4.8 (3/16")	1.5	6.0	4.9	5.1	13.3	3.0	9.9	1.7	VG21-04810-511	16.4	2.3	VG22-04810-511
	6.0	10.0			18.2				VG21-04815-511			VG22-04816-511

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

ø nom.	 kN ¹⁾	 kN ¹⁾
4.8 (3/16")	2.50	3.40

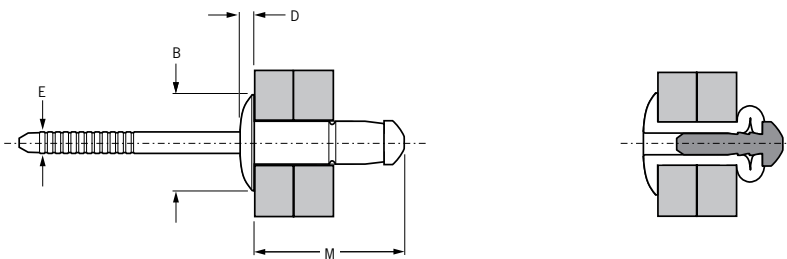
1) typical values / valeurs moyennes / typische Werte /
Valori tipici / valores típicos



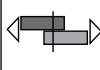



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Low carbon steel* Zinc plated Clear trivalent passivated	Corps: Acier bas carbone* Revêtement zingué Passivation claire trivalente	Hülse: Stahl* Verzinkt Klar chromatiert, Cr6-frei	Corpo: Acciaio a basso tenore di carbonio* Zincato, Passivazione chiara trivalente	Cuerpo: Acero bajo en carbono* Zincado Pasivado claro trivalente
Stem: Medium carbon steel** Zinc plated Clear trivalent passivated	Tige: Acier au carbone** Revêtement zingué Passivation claire trivalente	Dorn: Stahl** Verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio a medio tenore di carbonio** Zincato, Passivazione chiara trivalente	Vástago: Acero medio en carbono** Zincado, Pasivado claro trivalente

*: B53111 Type 0, SAE 1008, DIN 1654, QSt 34-3 / B53111 Type 0, SAE 1015 DIN 1711, RSt 38-2, Werkstoff 1.0401

** : B53111 Type 1, SAE 1030/1037/1040/1045, Werkstoff 1.1178/1.1176/1.1186/1.1191



ø nom.					M max.	øB max.	D max.	øE max.	 kN ⁽²⁾	 kN ⁽¹⁾	Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	1.0	3.0	3.3	3.4	9.1	6.8	1.4	2.0	1.20	1.30	0BN01-00408
	3.0	5.0			11.7				1.75		0BN01-00411
	5.0	7.0			14.0				2.50		0BN01-00414
4.0 (5/32")	1.0	3.0	4.1	4.3	10.4	8.0	1.4	2.6	2.40	2.80	0BN01-00509
	3.0	5.0			12.9				3.50		0BN01-00512
	5.0	7.0			15.7				4.10		0BN01-00516
	7.0	9.0			18.1				3.30		2.50
4.8 (3/16")	1.5	3.5	4.9	5.1	12.1	9.6	1.5	3.2	3.60	3.80	0BN01-00611
	3.5	6.0			14.7				4.20		0BN01-00614
	6.0	8.5			17.6				5.60		0BN01-00618
6.0	1.5	4.0	6.1	6.3	14.0	12.3	2.1	4.0	4.20	5.40	0BN01-06010
	3.0	6.0			17.0				5.40		0BN01-06013
	6.0	9.0			20.0				8.50		0BN01-06016
	9.0	12.0			23.0				8.50		0BN01-06019

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

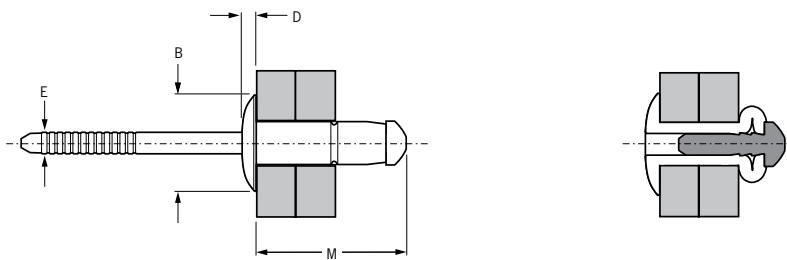
2) through stem / avec tige / bei tragendem Restdorn / attraverso il gambo / con el vástago en la zona de cortadura



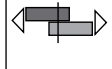



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Stainless steel* Polished	Corps: Inox* Poli	Hülse: Edelstahl* Blank	Corpo: Acciaio inox* Lucido	Cuerpo: Acero inoxidable* Pulido
Stem: Stainless steel** Natural	Tige: Inox** Brut	Dorn: Edelstahl** Unbehandelt	Gambo: Acciaio inox** Nessuna finitura	Vástago: Acero inoxidable** Natural

*: BS 3111 394S17, Werkstoff 1.4567

** : BS 3111 321S31, AISI 321, Werkstoff 1.4541 / AISI 304, Werkstoff 1.4301



ø nom.					M max.	øB max.	D max.	øE max.	 kN ^{1) 2)}	 kN ¹⁾	Part No/ref	
	min.	max.	min.	max.								
3.2 (1/8")	1.0	3.0	3.3	3.4	9.0	6.6	1.1	2.1	1.60	2.00	OBE61-00408	
	3.0	5.0			11.5						1.70	OBE61-00411
	5.0	7.0			14.1						3.20	OBE61-00414
4.0 (5/32")	1.0	3.0	4.1	4.3	10.3	8.0	1.5	2.6	2.80	4.00	OBE61-00509	
	3.0	5.0			12.9						5.20	OBE61-00512
	5.0	7.0			15.6						5.20	OBE61-00516
4.8 (3/16")	1.5	3.5	4.9	5.1	12.8	9.6	1.5	3.2	5.50	5.00	OBE61-00611	
	3.5	6.0			15.4						OBE61-00614	
	6.0	8.5			18.4						OBE61-00618	
	7.0	10.0			19.9						OBE61-00619	

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

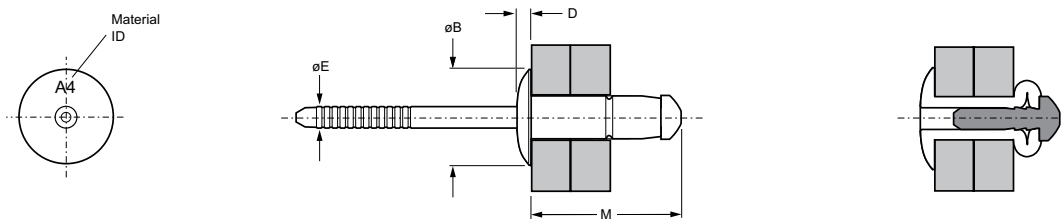
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

2) includes stem in shear plane, where applicable / Avec présence de la tige dans le plan de cisaillement / mit Restdorn in Scherebene, wo zutreffend / Include il gambo nel taglio piano, dove applicabile / Cuando esté incluido el vástago en la zona de cortadura



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: A4 Stainless steel* Natural	Corps: A4 Inox* Brut	Hülse: A4 Edelstahl* Unbehandelt	Corpo: A4 Acciaio inox* Nessuna finitura	Cuerpo: A4 Acero inoxidable* Natural
Stem: A4 Stainless steel* Natural	Tige: A4 Inox* Brut	Dorn: A4 Edelstahl* Unbehandelt	Gambo: A4 Acciaio inox* Nessuna finitura	Vástago: A4 Acero inoxidable* Natural

*: Grade 316



ø nom.					M max.	øB max.	D max.	øE max.			Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	1.0	3.0	3.3	3.4	9.0	6.6	1.1	2.1			0BE16-00408 0BE16-00411
	3.0	5.0			11.5						
4.0 (5/32")	3.0	5.0	4.1	4.3	12.9	8.0	1.5	2.6			0BE16-00512
4.8 (3/16")	3.5	6.0	4.9	5.1	15.4	9.6	1.5	3.2			0BE16-00614

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

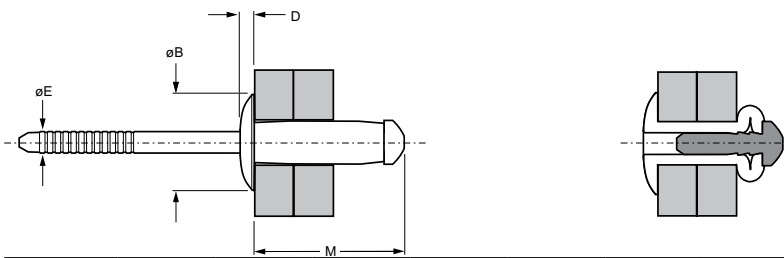
2) includes stem in shear plane, where applicable / Avec présence de la tige dans le plan de cisaillement / mit Restdorn in Scher-ebene, wo zutreffend / Include il gambo nel taglio piano, dove applicabile / Cuando esté incluido el vástago en la zona de cortadura



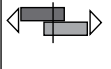



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Low carbon steel* Zinc plated Clear trivalent passivated	Corps: Acier bas carbone* Revêtement zingué Passivation claire trivalente	Hülse: Stahl* Verzinkt Klar chromatiert, Cr6-frei	Corpo: Acciaio a basso tenore di carbonio* Zincato, Passivazione chiara trivalente	Cuerpo: Acero bajo en carbono* Zincado Pasivado claro trivalente
Stem: Medium carbon steel** Zinc plated Clear trivalent passivated	Tige: Acier au carbone** Revêtement zingué Passivation claire trivalente	Dorn: Stahl** Verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio a medio tenore di carbonio** Zincato, Passivazione chiara trivalente	Vástago: Acero medio en carbono** Zincado Pasivado claro trivalente

*: C15C, Werkstoff 1.0234, EN 10263-2

** : C45RC, Werkstoff 1.1061, EN 10263-4



ø nom.					M max.	øB max.	D max.	øE max.	 kN ⁽²⁾	 kN ⁽¹⁾	Part No/ref
	min.	max.	min.	max.							
6.4 (1/4")	1.5	5.5	6.6	7.0	17.3	13.4	3.1	4.87	11.10	6.80	0BN01-00816
	5.0	9.0			21.3						0BN01-00820

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

1) typical values with test method according to ISO 14589 (2000) / Valeurs moyennes obtenues selon la méthode de test de la norme ISO 14589 (2000) / typische Werte ermittelt nach Testmethode ISO 14589 (2000) / valori tipici con il metodo di prova secondo la normativa ISO 14589 (2000) / valores típicos según ensayos ISO 14589 (2000)

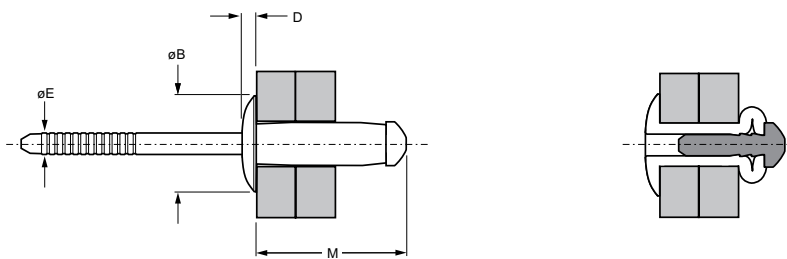
2) through stem / avec tige / bei tragendem Restdorn / attraverso il gambo / con el vástago en la zona de cortadura



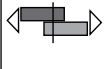



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Stainless steel* Bright	Corps: Inox* Poli	Hülse: Edelstahl* Blank	Corpo: Acciaio inox* Lucido	Cuerpo: Acero inoxidable* Pulido
Stem: Stainless steel** Natural	Tige: Inox** Brut	Dorn: Edelstahl** Unbehandelt	Gambo: Acciaio inox** Nessuna finitura	Vástago: Acero inoxidable** Natural

*: BS 3111 394S17, BS 3111 321S31, Werkstoff 1.4567

** : AISI 321, AISI 304, Werkstoff 1.4541, Werkstoff 1.4301



ø nom.					M max.	øB max.	D max.	øE max.	 kN ^{1) 2)}	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
6.4 (1/4")	1.5	5.5	6.6	7.0	16.8	13.4	3.1	4.93	14.30	8.00	0BE61-00815
	5.0	9.0			20.8						0BE61-00819

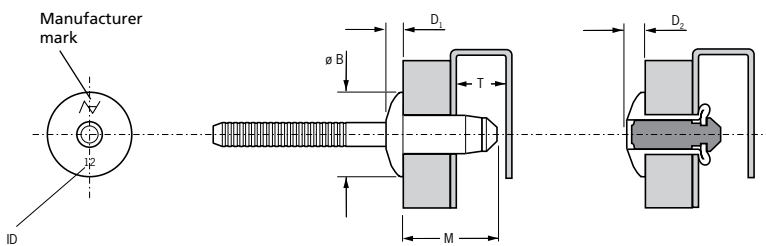
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values with test method according to ISO 14589 (2000) / Valeurs moyennes obtenues selon la méthode de test de la norme ISO 14589 (2000) / typische Werte ermittelt nach Testmethode ISO 14589 (2000) / valori tipici con il metodo di prova secondo la normativa ISO 14589 (2000) / valores típicos según ensayos ISO 14589 (2000)

2) includes stem in shear plane, where applicable / Avec présence de la tige dans le plan de cisaillement / mit Restdorn in Scherebene, wo zutreffend / Include il gambo nel taglio piano, dove applicabile / Cuando esté incluido el vástago en la zona de cortadura



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: medium carbon steel Zinc plated Clear trivalent passivated	Corps: Acier moyen carbone Revêtement zingué Passivation claire trivalente	Hülse: Stahl Verzinkt Klar passiviert, Cr6-frei	Corpo: Acciaio a medio tenore di carbonio Zincato Passivazione chiara trivalente	Cuerpo: Acero medio en carbono Zincado Pasivado claro trivalente
Stem: medium carbon steel Zinc plated Clear trivalent passivated	Tige: Acier moyen carbone Revêtement zingué Passivation claire trivalente	Dorn: Stahl Verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio a medio tenore di carbonio Zincato Passivazione chiara trivalente	Vástago: Acero medio en carbono Zincado Pasivado claro trivalente



ø nom.					ID	M	øB	D ₁	T	D ₂			Part No/ref	
	min.	max.	min.	max.										max.
6.4 (1/4")	1.50	3.50	6.7	6.9	12	13.7	13.4	2.7	12.2	3.4		8.8	02221-00812	
	2.80	4.80			13	15.0							10.5	02221-00813
	3.35	5.35			14	15.6							12.0	02221-00814
	4.80	6.80			15	17.0							12.5	02221-00815
	6.80	8.80			17	19.0							12.5	02221-00817
	7.50	9.50			18	19.7							14.0	02221-00818
	8.80	10.80			19	21.0							15.0	02221-00819
	10.80	12.80			21	23.0							16.0	02221-00821

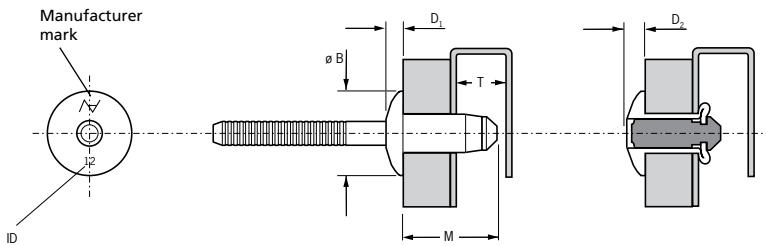
all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros







English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* (2.5 % Mg) Natural	Corps: Alliage d'aluminium* (2.5% Mg) Brut	Hülse: Aluminium* (2.5 % Mg) Blank	Corpo: Lega di alluminio* (2.5% Mg) Nessuna finitura	Cuerpo: Aluminio* (2.5% Mg) Natural
Stem: Aluminium alloy** Natural	Tige: Alliage d'aluminium** Brut	Dorn: Aluminium** Blank	Gambo: Lega di allumi- nio** Nessuna finitura	Vástago: Aluminio** Natural

*: EN AW-5052, AlMg2.5

** : EN AW-7075 AlZn5.5MgCu



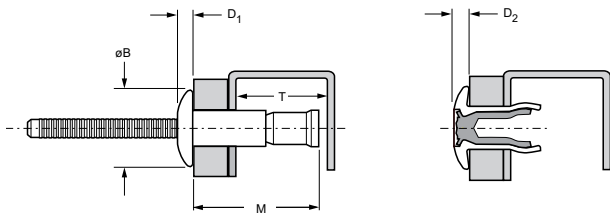
ø nom.					ID	M	øB	D ₁	T	D ₂			Part No/ref
	min.	max.	min.	max.									
6.4 (1/4")	1.50	3.50	6.7	6.9	12	13.7	13.4	2.7	12.2	3.4	5.0	2.67	02241-00812
	2.80	4.80			13	15.0							02241-00813
	3.35	5.35			14	15.6							02241-00814
	4.80	6.80			15	17.0							02241-00815
	6.80	8.80			17	19.0							02241-00817
	8.80	10.80			19	21.0							02241-00819
	10.80	12.80			21	23.0							02241-00821

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* (5 % Mg) Polished	Corps: Alliage d'aluminium* (5% Mg) Poli	Hülse: Aluminium* (5 % Mg) Poliert	Corpo: Lega di alluminio* (5% Mg) Lucido	Cuerpo: Aluminio* (5% Mg) Pulido
Stem: Aluminium alloy** Natural	Tige: Alliage d'aluminium** Brut	Dorn: Aluminium** unbehandelt	Gambo: Lega di alluminio** Nessuna finitura	Vástago: Aluminio** Natural

*: BS 1473 5056A DIN 1725 AlMg5 Werkstoff 3.3555
 **: BS 1473 2014A DIN 1725 AlCuSiMn Werkstoff 3.1255



ø nom.	[Cross-section diagram]		[Cross-section diagram]		M max.	øB max.	D ₁ max.	T min.	D ₂ max.	[Torque diagram]	[Torque diagram]	Part No/ref
	min.	max.	min.	max.								
4.8 (3/16")	1.63	6.86	4.9	5.1	18.4	10.1	2.1	10.5	1.9	3.00	2.22	02774-00613
	1.63	11.10			24.1			13.0				02774-00617
6.4 (1/4")	2.03	9.53	6.6	7.0	24.6	13.4	2.9	13.0	2.7	6.00	4.22	02774-00817
	2.03	15.87			34.7			18.1				02774-00824
10.0 (3/8")	3.04	15.87	9.95	10.4	36.2	20.3	4.1	22.3	4.0	12.63	9.30	02774-01228

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Note:

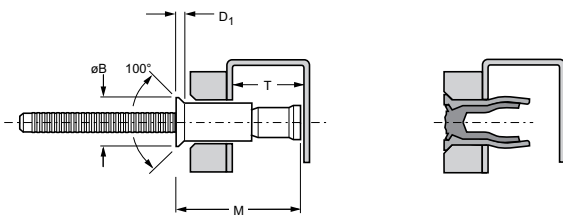
External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Countersunk head	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Aluminium alloy* (5 % Mg) Polished	Corps: Alliage d'aluminium* (5% Mg) Poli	Hülse: Aluminium* (5 % Mg) Poliert	Corpo: Lega di alluminio* (5% Mg) Lucido	Cuerpo: Aluminio* (5% Mg) Pulido
Stem: Aluminium alloy** Natural	Tige: Alliage d'aluminium** Brut	Dorn: Aluminium** Unbehandelt	Gambo: Lega di alluminio** Nessuna finitura	Vástago: Aluminio** Natural

*: BS 1473 5056A DIN 1725 AlMg5 Werkstoff 3.3555

** : BS 1473 2014A DIN 1725 AlCuSiMn Werkstoff 3.1255



ø nom.	Head thickness		Head diameter		M max.	øB min.	D ₁ max.	T min.	Tensile strength kN ¹⁾	Shear strength kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
4.8 (3/16")	3.17	8.41	4.9	5.1	20.0	8.3	2.2	10.5	2.89	2.11	02764-00615
	3.17	12.22			26.3			13.5			02764-00619
6.4 (1/4")	3.17	12.07	6.6	7.0	27.2	10.1	2.4	13.0	6.00	4.22	02764-00821

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

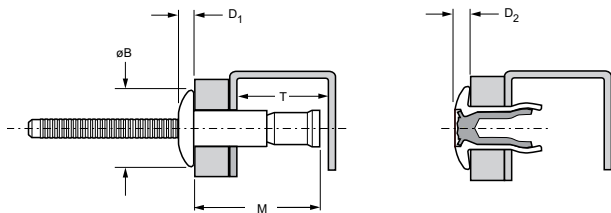
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



Note:

External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: steel Zinc plated Clear trivalent passivated	Corps: Acier Revêtement zingué Passivation claire trivalente	Hülse: Stahl Verzinkt Klar chromatiert, Cr6-frei	Corpo: Acciaio Zincato Passivazione chiara trivalente	Cuerpo: Acero Zincado Pasivado claro trivalente
Stem: carbon boron steel Zinc plated Clear trivalent passivated	Tige: Acier Revêtement zingué Passivation claire trivalente	Dorn: Stahl Verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio Zincato Passivazione chiara trivalente	Vástago: Acero Zincado Pasivado claro trivalente



ø nom.					M max.	øB max.	D ₁ max.	T min.	D ₂ max.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.								
4.8 (3/16")	1.63	6.86	4.9	5.1	18.2	10.1	2.1	10.5	1.9	6.44	5.11	02771-00613
	1.63	11.10			24.5			13.5				02771-00617
6.4 (1/4")	2.03	9.53	6.6	7.0	23.7	13.4	2.9	12.2	2.7	11.78	10.45	02771-00817
	2.03	15.87			33.0			16.4				02771-00824
10.0 (3/8")	3.04	15.87	9.95	10.4	36.2	20.3	4.1	22.3	4.0	26.37	16.50	02771-01228 ²⁾

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

2) Deutsches Institut für Bautechnik (DIBt, German Authority in Civil Engineering) Approval No. Z-14.1-4 Attachment 2-24

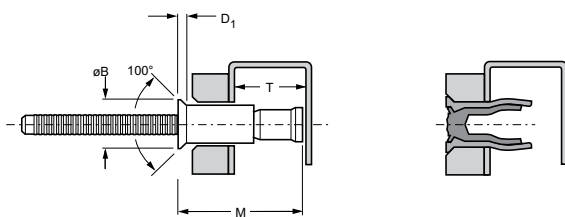
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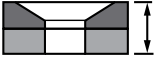

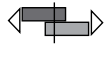

External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. /

Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Countersunk head	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: steel	Corps: Acier	Hülse: Stahl	Corpo: Acciaio	Cuerpo: Acero
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente
Stem: carbon boron steel	Tige: Acier	Dorn: Stahl	Gambo: Acciaio	Vástago: Acero
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente



ø nom.					M max.	øB min.	D ₁ max.	T min.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
4.8 (3/16")	3.17	8.41	4.9	5.1	20.0	8.3	2.2	10.5	6.44	5.11	02761-00615
	3.17	12.22			26.3			13.5			02761-00619
6.4 (1/4")	3.17	12.07	6.6	7.0	26.4	10.1	2.4	12.2	11.78	10.45	02761-00821

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

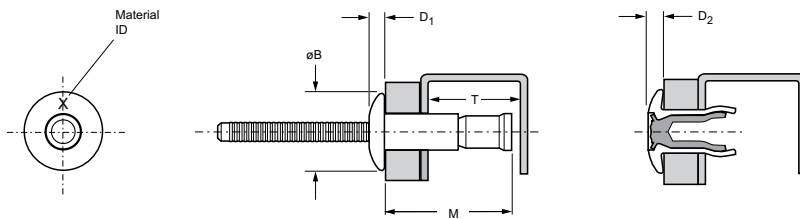
Note:

External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: stainless steel* Natural	Corps: Inox* Brut	Hülse: Edelstahl* Unbehandelt	Corpo: Acciaio inox* Nessuna finitura	Cuerpo: Acero inoxidable* Natural
Stem: stainless steel* Natural	Tige: Inox* Brut	Dorn: Edelstahl* Unbehandelt	Gambo: Acciaio inox* Nessuna finitura	Vástago: Acero inoxidable* Natural

*: AISI 304



ø nom.	Ø		Ø		M max.	øB max.	D ₁ max.	T min.	D ₂ max.	←→ kN ¹⁾	⊞ kN ¹⁾	Part No/ref
	min.	max.	min.	max.								
4.8 (3/16")	1.63	6.86	4.9	5.1	18.2	10.1	2.1	10.5	1.9	6.44	5.11	02711-00613 ²⁾
	1.63	11.10			24.5							13.5
6.4 (1/4")	2.03	9.53	6.6	7.0	23.7	13.4	2.9	12.2	2.7	11.78	10.45	02711-00817 ²⁾
	2.03	15.87			33.0							16.4
10.0 (3/8")	3.04	15.87	9.95	10.4	36.2	20.3	4.1	22.3	4.0	26.08	19.40	02711-01228

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

2) also available in 316 grade/A4 / aussi disponible dans Grade 316/A4 / auch in 316 grade/A4 erhältlich / anche disponibile in 316 grade/A4 / también disponible en 316 grade/A4

Note:

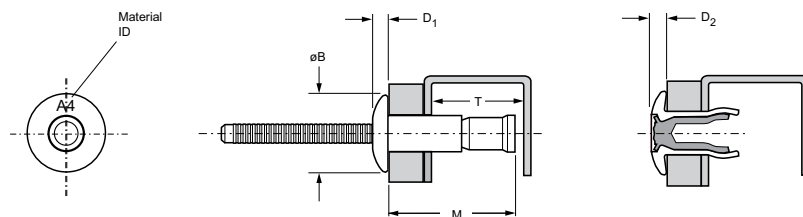
External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. /

Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: A4 stainless steel* Natural	Corps: A4 Inox* Brut	Hülse: A4 Edelstahl* Unbehandelt	Corpo: A4 Acciaio inox* Nessuna finitura	Cuerpo: A4 Acero inoxidable* Natural
Stem: A4 stainless steel* Natural	Tige: A4 Inox* Brut	Dorn: A4 Edelstahl* Unbehandelt	Gambo: A4 Acciaio inox* Nessuna finitura	Vástago: A4 Acero inoxidable* Natural

*: 316 Grade



ø nom.	Head thickness		Head diameter		M max.	øB max.	D ₁ max.	T min.	D ₂ max.	Tensile strength kN ¹⁾	Compression strength kN ¹⁾	Part No/ref
	min.	max.	min.	max.								
4.8 (3/16")	1.63	6.86	4.9	5.1	18.2	10.1	2.1	10.5	1.9	6.45	5.11	02717-00613
	1.63	11.10			24.5			13.5				02717-00617
6.4 (1/4")	2.03	9.53	6.6	7.0	23.7	13.4	2.9	12.2	2.7	13.20	10.45	02717-00817
	2.03	15.87			33.0			16.4				02717-00824

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

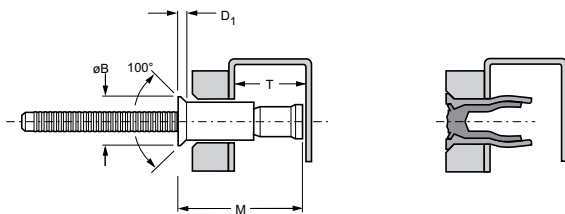
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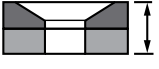

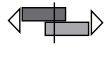

External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



English	Français	Deutsch	Italiano	Español
Countersunk head	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: austenitic stainless steel* Bright	Corps: Inox austénitique* Poli	Hülse: Edelstahl* Blank	Corpo: Acciaio inox austenitico* Lucido	Cuerpo: Acero inoxidable austenítico* Pulido
Stem: austenitic stainless steel* Natural	Tige: Inox austénitique* Brut	Dorn: Edelstahl* Unbehandelt	Gambo: Acciaio inox austenitico* Nessuna finitura	Vástago: Acero inoxidable austenítico* Natural

*: AISI 304, modified by addition of 3 - 4 % copper



ø nom.					M max.	øB min.	D ₁ max.	T min.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
4.8 (3/16")	3.17	8.41	4.9	5.1	20.0	8.25	2.2	10.41	6.44	5.11	02721-00615
6.4 (1/4")	3.17	12.07	6.6	7.0	26.4	10.03	2.4	12.19	11.78	10.45	02721-00821

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Note:

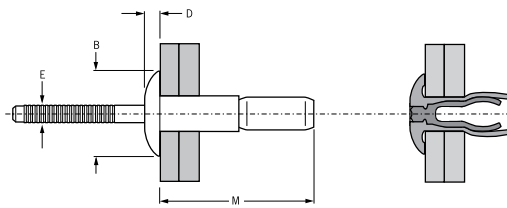
External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.



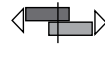



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* (5 % Mg) Natural	Corps: Alliage d'aluminium* (5% Mg) Brut	Hülse: Aluminium* (5 % Mg) Blank	Corpo: Lega di alluminio* (5% Mg) Nessuna finitura	Cuerpo: Aluminio* (5% Mg) Natural
Stem: Aluminium alloy** Natural	Tige: Alliage d'aluminium** Brut	Dorn: Aluminium** Blank	Gambo: Lega di alluminio** Nessuna finitura	Vástago: Aluminio** Natural

*: BS 1473 5056 DIN 1725 AlMg5 Werkstoff 3.3555

** : 7178



ø					M	øB	D	øE					Part No/ref
	nom.	min.	max.	min.					max.	max.	max.	max.	
4.8 (3/16")	1.57	6.86	4.93	5.18	21.39	10.16	2.29	3.10	2.66	3.34	2.00	2.22	BAPI-06-04
	5.44	11.10			22.23								BAPI-06-07
	1.57	11.10			24.77								BAPI-E06-07
	9.53	15.88			27.69								BAPI-06-10
6.4 (1/4")	2.03	9.53	6.63	7.01	30.00	13.46	2.97	4.11	5.78	6.23	3.69	4.00	BAPI-08-06
	8.89	15.88			33.02								BAPI-08-10
	2.03	15.88			35.56								BAPI-E08-10

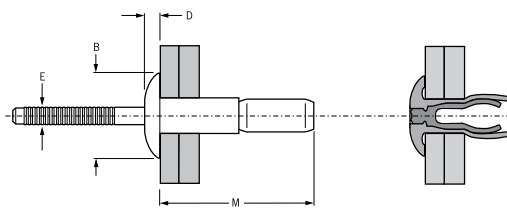
all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros



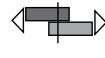

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Steel* Zinc plated	Corps: Acier* Revêtement zingué	Hülse: Stahl* verzinkt	Corpo: Acciaio* Zincati	Cuerpo: Acero* Zincado
Stem: Steel* Zinc plated Clear trivalent chromated	Tige: Acier* Revêtement zingué Passivation claire trivalente	Dorn: Stahl* verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio* Zincati Passivazione chiara trivalente	Vástago: Acero* Zincado Passivado claro trivalente

*: BS 3111 Type 1 SAE 1038



ø					M	øB	D	øE					Part No/ref
	nom.	min.	max.	min.					max.	max.	max.	max.	
4.8 (3/16")	1.57	6.86	4.93	5.18	18.19	10.16	2.29	3.10	5.78	8.23	4.44	4.67	SSPI-06-04
	5.44	11.10			22.94								SSPI-06-07
	1.57	11.10			25.48								SSPI-E06-07
	9.53	15.88			27.69								SSPI-06-10
6.4 (1/4")	2.03	9.53	6.63	7.01	30.00	13.46	2.97	4.11	11.12	13.34	8.22	8.90	SSPI-08-06 ²⁾
	8.89	15.88			33.66								SSPI-08-10
	2.03	15.88			36.20								SSPI-E08-10
10.0 (3/8")	3.05	15.88	9.96	10.39	39.37	19.56	4.37	6.12	26.68	27.58	17.79	18.24	SSPI-12-10

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

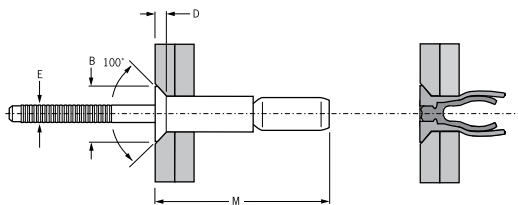
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

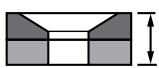
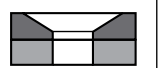


2) Deutsches Institut für Bautechnik (DIBt, German Authority in Civil Engineering) Approval No. Z-14.1-4 Attachment 2-23 / Aprobación DIBt (Autoridad Alemana de Ingeniería Civil) N° Z-14.1-4 Anexo 2-23 del Deutsches Institut für Bautechnik (DIBt)



English	Français	Deutsch	Italiano	Español
Countersunk head	Tête fraisée	Senkkopf	Testa svasata	Cabeza avellanada
Body: Steel* Zinc plated Clear trivalent chromated	Corps: Acier* Revêtement zingué Passivation claire trivalente	Hülse: Stahl* verzinkt Klar chromatiert, Cr6-frei	Corpo: Acciaio* Zincati Passivazione chiara trivalente	Cuerpo: Acero* Zincado Pasivado claro trivalente
Stem: Steel* Zinc plated Clear trivalent chromated	Tige: Acier* Revêtement zingué Passivation claire trivalente	Dorn: Stahl* verzinkt Klar chromatiert, Cr6-frei	Gambo: Acciaio* Zincati Passivazione chiara trivalente	Vástago: Acero* Zincado Pasivado claro trivalente

*: BS 3111 Type 1 SAE 1038



ø					M	øB	D	øE					Part No/ref
	min.	max.	min.	max.					min.	typ. ¹⁾	min.	typ. ¹⁾	
4.8 (3/16")	3.18	8.41	4.85	5.10	20.14	8.76	1.78	3.10	5.78	7.34	4.00	4.45	SSCI-06-06
6.4 (1/4")	4.32	12.07	6.63	7.01	28.32	10.54	2.01	4.11	10.67	12.45	8.22	9.56	SSCI-08-08

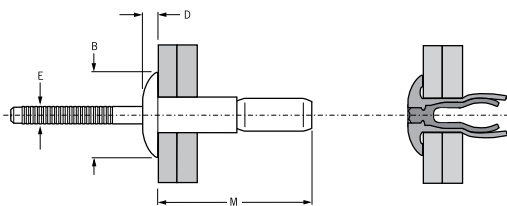
all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros


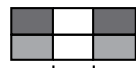


1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Stainless steel*	Corps: Inox*	Hülse: Edelstahl*	Corpo: Acciaio inox*	Cuerpo: Acero inoxidable*
Stem: Stainless steel**	Tige: Inox**	Dorn: Edelstahl**	Gambo: Acciaio inox**	Vástago: Acero inoxidable**

*: 302 Series
**: 316 Series



Ø nom.					M max.	øB max.	D max.	øE max.					Part No/ref
	min.	max.	min.	max.					min.	typ. ¹⁾	min.	typ. ¹⁾	
4.8 (3/16")	1.57	6.86	4.93	5.18	21.39	10.16	2.29	3.10	5.78	6.89	4.44	4.67	CCPI-06-04
	5.44	11.10			22.94								CCPI-06-07
	1.57	11.10			25.48								CCPI-E06-07
6.4 (1/4")	2.03	9.53	6.63	7.01	28.42	13.46	2.97	4.11	10.67	11.79	8.22	9.12	CCPI-08-06
	2.03	11.10			30.00								CCPI-08-07
	8.89	15.88			33.66								CCPI-08-10
	2.03	15.88			36.35								CCPI-E08-10

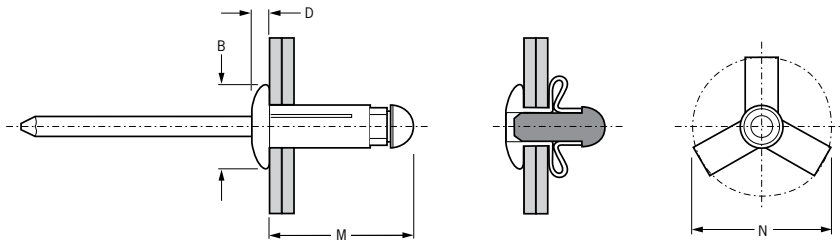
all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros



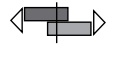

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy* Natural	Corps: Alliage d'aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Lega di alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Aluminium alloy Natural	Tige: Alliage d'aluminium Brut	Dorn: Aluminium Blank	Gambo: Lega di alluminio Nessuna finitura	Vástago: Aluminio Natural

*: AlMg3.5



ø nom.					M ref.	øB max.	D max.	N max.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
3.2 (1/8")	1.0	6.35	3.4	3.5	19.6	6.6	1.00	16.0	0.40	0.50	ACD408ASM
4.0 (5/32")		6.35	4.2	4.3	19.8	8.2	1.34	16.0	0.70	0.90	ACD508ASM
	3.0	9.5			23.2			18.0			ACD512ASM
	5.0	12.0			26.8			19.0			ACD516ASM
4.8 (3/16")	1.0	6.35	5.0	5.2	20.3	9.8	1.60	17.0	1.00	1.40	ACD608ASM
	3.0	9.5			22.6			17.0			ACD612ASM
	5.0	12.0			26.3			19.0			0.95

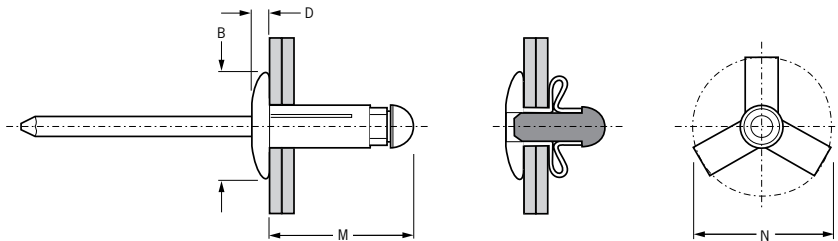
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros





1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Large flange	Tête large	Flachrundkopf extragroß	Testa larga	Cabeza ala ancha
Body: Aluminium alloy* Natural	Corps: Alliage d'aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Lega di alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Aluminium alloy Natural	Tige: Alliage d'aluminium Brut	Dorn: Aluminium Blank	Gambo: Lega di alluminio Nessuna finitura	Vástago: Aluminio Natural

* ACD series: AlMg3.5; BF41 series: 5052



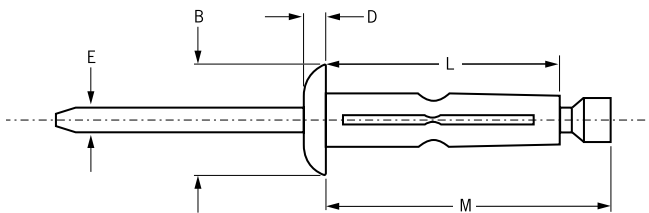
ø nom.					M ref.	øB max.	D max.	N max.	 kN ¹⁾	 kN ¹⁾	Part No/ref	
	min.	max.	min.	max.								
4.8 (3/16")	0.5	6.35	5.00	5.20	20.3	12.3	1.9	17.0	1.00	1.40	ACD608ASM LF12	
	3.0	9.5			22.6						17.0	ACD612ASM LF12
	5.0	12.0			26.4						19.0	ACD616ASM LF12
4.8 (3/16")	0.5	6.35	5.00	5.20	20.3	14.3	1.9	17.0	1.00	1.40	ACD608ASM LF14	
	3.0	9.5			22.6		2.0				17.0	ACD612ASM LF14
	5.0	12.0			26.4		2.0				19.0	ACD616ASM LF14
4.8 (3/16")	1.0	4.0	5.00	5.25	18.3	16.0	2.0	13.6	0.78	1.07	0BF41-00619	
	1.0	9.0			23.3			18.2			0BF41-00625	





all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Protruding head	Tête bombée	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Aluminium alloy*	Corps: Alliage d'aluminium*	Hülse: Aluminium*	Corpo: Lega di alluminio*	Cuerpo: Aluminio*
Wax lubricated	Lubrifié	Gewachst	Lubrificato	Lubricado
Stem: Aluminium alloy**	Tige: Alliage d'aluminium**	Dorn: Aluminium**	Gambo: Lega di alluminio**	Vástago: Aluminio**
Wax lubricated	Lubrifié	Gewachst	Lubrificato	Lubricado

*: 5056 **: 7075



ø					M	øB	D	L	øE			Part No/ref
	min.	max.	min.	max.								
4.8 (3/16")	1.27	6.35	5.18	5.31	26.42	11.30	2.24	22.61	2.62	3.11	2.00	BAPKTR-06-04
	4.75	9.53			28.70			25.02				
	9.53	14.27			31.75			28.45				
	14.27	19.05			36.57			33.02				
6.4 (1/4")	1.52	6.35	6.40	6.65	33.02	14.22	2.87	23.50	3.45	5.56	3.11	BAPKTR-08-04
	4.75	9.53			36.07			26.67				BAPKTR-08-06

all dimensions in mm / en millimètres / alle Maße in mm / in millimetri / en milímetros

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Note:

External stem locking feature requires special nose piece. / Le verrouillage extérieur de la tige nécessite d'un nez spécial. / Die Restdornverriegelung erfordert ein spezielles Mundstück. / Funzione di bloccaggio esterno del gambo richiede particolare nasello. / El bloqueo mecánico del vástago requiere de una sufridera especial.

Option:

A synthetic rubber washer can be ordered to fit under protruding head fasteners e.g.: BAPKTR-06W-06

Une rondelle en caoutchouc disposée sous la tête peut être commandée ex : BAPKTR-06W-06

Flachrundkopf mit Unterkopf-Gummidichtung ist ebenfalls verfügbar, z.B. BAPKTR-06W-06

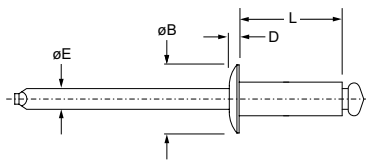
Testa tonda con una guarnizione di gomma e disponibile, p. e. BAPKTR-06W-06

Para el sellado de la cabeza hay una version con junta de goma sintética, p.ej: BAPKTR-06W-06

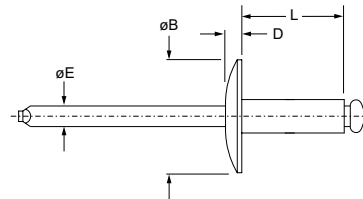


English	Français	Deutsch	Italiano	Español
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel Zinc plated	Tige: Acier Revêtement zingué	Dorn: Stahl Verzinkt	Gambo: Acciaio Zincati	Vástago: Acero Zincado


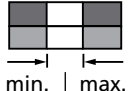
*: 3.5 % Magnesium Alloy



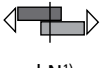

TAPD SO
Protruding head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



TAPD SOLF14
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha

Ø nom.					ØE ref.	TAPD SO				TAPD SOLF14			
	min.	max.	min.	max.		L ref.	ØB max.	D max.	Part No.	L ref.	ØB max.	D max.	Part No.
3.2 (1/8")	1.0	5.0	3.6	3.7	1.8	10.0	6.7	1.20	TAPD 408 SO				
	3.0	9.0				13.5			TAPD 412 SO				
	7.0	14.0				18.7			TAPD 418 SO				
4.0 (5/32")	1.0	5.5	4.4	4.5	2.45	10.5	8.3	1.35	TAPD 508 SO				
	6.5	8.0				14.0			TAPD 512 SO				
	11.0	12.5				19.5			TAPD 518 SO				
4.8 (3/16")	4.8	6.4	5.2	5.3	2.6	11.1	9.8	1.60	TAPD 608 SO	11.0	14.3	2.0	TAPD 608 SOLF14
	7.9	9.5				14.7			TAPD 612 SO	TAPD 612 SOLF14			
	11.1	13.5				19.1			TAPD 617 SO	TAPD 617 SOLF14			
	13.5	19.8				25.6			TAPD 625 SO	TAPD 625 SOLF14			

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

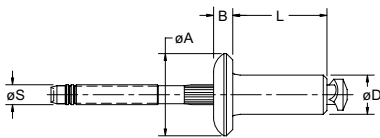
Ø nom.	 kN ¹⁾	 kN ¹⁾
3.2 (1/8")	0.80	0.80
4.0 (5/32")	1.00	1.00
4.8 (3/16")	2.00	2.00

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

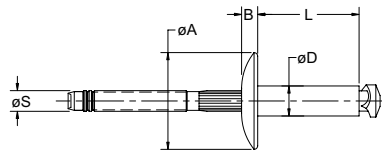


English	Français	Deutsch	Italiano	Español
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel Zinc plated	Tige: Acier Revêtement zingué	Dorn: Stahl Verzinkt	Gambo: Acciaio Zincati	Vástago: Acero Zincado

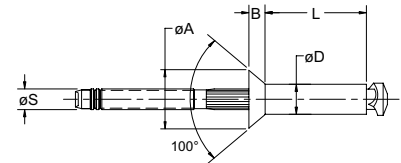
*5056



BSPTS
Protruding head
Tête bombée / Flachrundkopf /
Testa tonda / Cabeza alomada



BSLTS
Large flange
Tête large / Flachrundkopf, extragroß /
Testa larga / Cabeza ala ancha



BSCTS
Countersunk
Tête fraisée / Senkkopf /
Testa svasata / Cabeza avellanada

Ø	■		■		ØD	L	ØS	kN ¹⁾	kN ¹⁾	BSPTS ■			BSLTS ■			BSCTS ■					
	min.	max.	min.	max.						max.	max.	Part No.	max.	max.	Part No.	ref.	max.	Part No.			
4.8 (3/16")	1.17	5.16	4.9	5.0	4.8	11.7	2.9	4.45	2.67	10.3	2.6	06-03	14.6	2.6	06-03	9.4	2.1	06-06			
	5.16	9.91				16.4													06-06	06-06	06-06
	9.91	14.68				21.2													06-09	06-09	06-09
	14.68	19.43				26.0													06-12	06-12	06-12

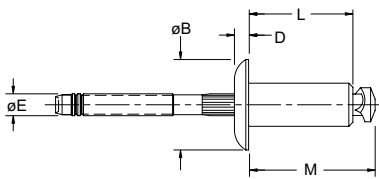
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



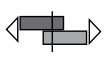

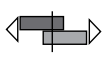

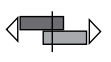

1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa Tonda	Cabeza alomada
Body: Aluminium* Natural	Corps: Aluminium* Brut	Hülse: Aluminium* Blank	Corpo: Alluminio* Nessuna finitura	Cuerpo: Aluminio* Natural
Stem: Steel Zinc plated	Tige: Acier Revêtement zingué	Dorn: Stahl Verzinkt	Gambo: Acciaio Zincati	Vástago: Acero Zincado

*5056



ø nom.					L ref.	M ref.	øE ref.	øB max.	D max.			Part No/ref		
	min.	max.	min.	max.									kN ¹⁾	kN ¹⁾
4.8 (3/16")	0.8	3.6	4.88	4.98	11.4	14.4	3.0	10.3	2.7			2.67	AD 6140 TFBS	
	3.6	4.8			13.0	16.0							4.56	AD 6187 TFBS
	4.8	6.4			14.5	17.5							4.67	AD 6250 TFBS
	6.4	7.9			16.1	19.2							5.01	AD 6312 TFBS
	8.0	9.5			17.7	20.8							5.34	AD 6375 TFBS
6.4 (1/4")	0.8	3.6	6.53	6.63	12.7	15.9	3.84	13.6	3.2			4.94	AD 8140 TFBS	
	3.6	4.8			14.0	18.0							7.01	AD 8187 TFBS
	4.8	6.4			15.6	19.7							7.34	AD 8250 TFBS
	6.4	7.9			17.2	21.3							7.90	AD 8312 TFBS
	8.0	9.5			18.8	22.9							9.12	AD 8375 TFBS
	9.5	11.1			20.4	24.4							9.57	AD 8437 TFBS
	11.1	13.2			22.0	26.0							10.35	AD 8519 TFBS
	13.2	15.8			23.8	27.8							10.68	AD 8620 TFBS

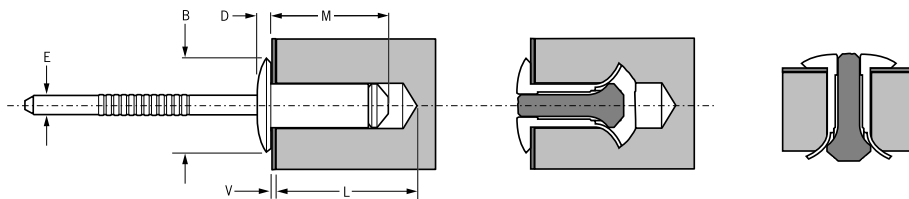
all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos



English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: medium carbon steel*	Corps: Acier au carbone*	Hülse: Stahl*	Corpo: Acciaio carbonio*	Cuerpo: Acero medio en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc coated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: BS970 Type 0, SAE 1015, DIN 17111, RSt 38-2, Werkstoff 1.0401
 **: BS3111 Type 0, SAE 1015/1018/1022, DIN 1654, Cq15/Cq22



Ø nom.			M max.	ØB max.	D max.	ØE max.	V		L min.		 kN ¹⁾	Part No/ref
	min.	max.					max.	min.	for max. V	for min. V		
4.3	4.3	4.4	10.9	8.2	1.3	2.6	1.27	0.25	11.2	12.2	0.5	OBM01-00510
			12.4				13.0		13.7	OBM01-00512		
			18.7				12.7		20.1	0.7		OBM01-00520
			20.4				12.7		21.6			OBM01-00522
4.8 (3/16")	4.8	4.9	14.3	10.2	2.1	2.9	3.05	0.25	10.4	15.7	1.0	OBM01-00614
			18.9				13.0		20.3	OBM01-00620		

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

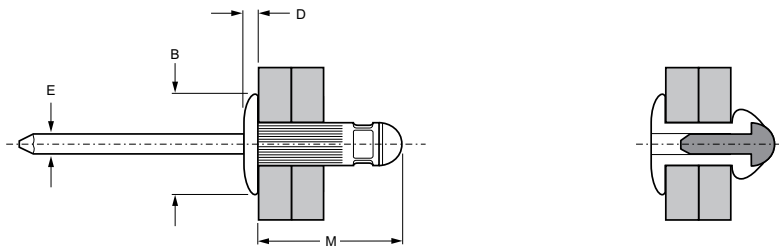
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos







English	Français	Deutsch	Italiano	Español
Dome head	Tête plate	Flachrundkopf	Testa tonda	Cabeza alomada
Body: Low carbon steel*	Corps: Acier bas carbone*	Hülse: Stahl*	Corpo: Acciaio a basso tenore di carbonio*	Cuerpo: Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Stem: Low carbon steel**	Tige: Acier bas carbone**	Dorn: Stahl**	Gambo: Acciaio a basso tenore di carbonio**	Vástago: Acero bajo en carbono**
Zinc coated	Revêtement zingué	Verzinkt	Zincato	Zincado

*: BS3111 Type 0, SAE 1008, DIN 1654, QSt 34-3

** : BS3111 Type 0, SAE 1010/1015/1018/1022, DIN 17210, Cq10 / DIN 1654 Cq15/Cq22



ø nom.					M max.	øB max.	D max.	øE max.	 kN ¹⁾	 kN ¹⁾	Part No/ref
	min.	max.	min.	max.							
4.0 (5/32")	1.4	5.0	4.1	4.2	13.7	8.5	1.6	2.8	1.96	2.36	01610-06196
4.8 (3/16")	1.2	4.0	5.05	5.2	13.45	10.1	2.1	3.4	3.60	3.30	01610-06197

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros

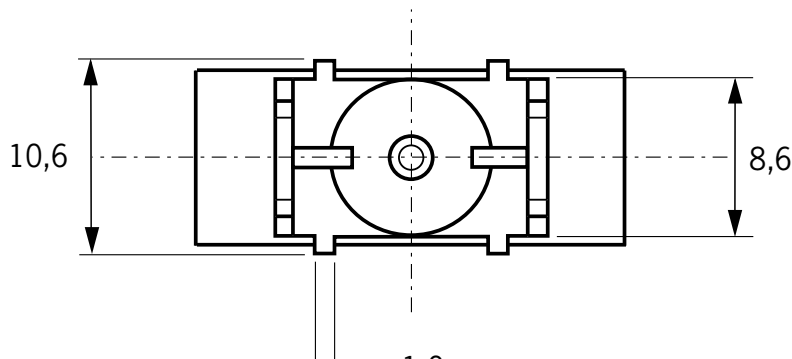
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos


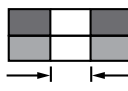


English	Français	Deutsch	Italiano	Español
Earthing/grounding point	Rivet masse	Erdungsniet	Punto di messa a terra	Toma de tierra
Body: Low carbon steel*	Corps: Acier bas carbone*	Hülse: Stahl*	Corpo: Acciaio a basso tenore di carbonio*	Cuerpo: Acero bajo en carbono*
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente
Stem: medium carbon high tensile steel**	Tige: Acier au carbone**	Dorn: Stahl**	Gambo: Acciaio a medio tenore di carbonio**	Vástago: Acero medio en carbono**
Zinc plated	Revêtement zingué	Verzinkt	Zincato	Zincado
Clear trivalent passivated	Passivation claire trivalente	Klar chromatiert, Cr6-frei	Passivazione chiara trivalente	Pasivado claro trivalente
Tab: Brass***	Languette: Laiton***	Fahne: Messing***	Linguette: Ottone***	Lengüeta: Latón***

*: SAE 1008 **: SAE 1045 ***: CuZn 30, DIN 17660
Note: conforms to EN-60335-1

0, / 2

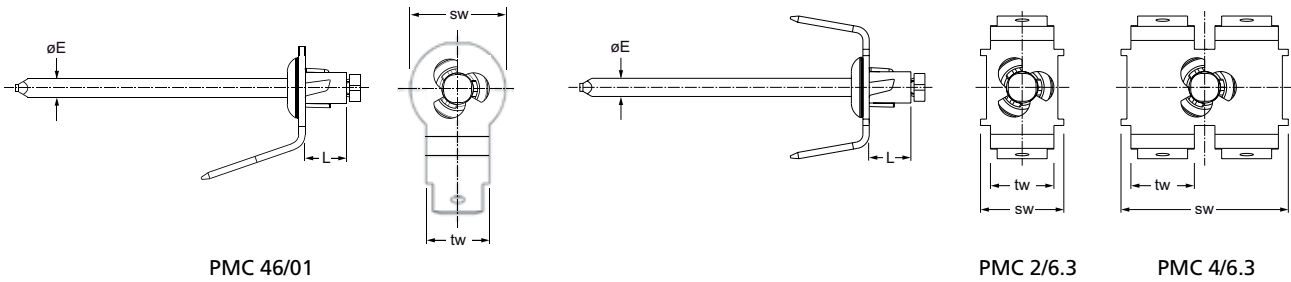




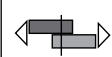

ø nom.				Part No/ref
	min.	max.		
4.0 (5/32")	0.6	1.5	± 0.05	0BN11-00509

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros



English	Français	Deutsch	Italiano	Español
Earthing/grounding point	Rivet masse	Erdungsniet	Punto di messa a terra	Toma de tierra
Body: Copper	Corps: Cuivre	Hülse: Kupfer	Corpo: Rame	Cuerpo: Cobre
Stem: Carbon steel Copper finish	Tige: Acier au carbone Finition cuivre	Dorn: Stahl Oberfläche Kupfer	Gambo: Acciaio carbonio Finitura rame	Vástago: Acero carbono Acabado de cobre
Tab: Brass	Languette: Laiton	Fahne: Messing	Linguette: Ottone	Lengüeta: Latón



ø nom.					L ref.	øE ref.	No. of tags nombre de languettes / Anz. Fahnen / numero di languette / número de lengüetas	sw ref.	tw ref.	 kN ¹⁾	 kN ¹⁾	Part No.
	min.	max.	min.	max.								
4.0 (5/32")		2.0	5.15	5.20	5.2	2.3	1	12.0	8.0	1.33	1.91	PMC 46/01
							2	10.5				PMC 2/6.3
							4	21.0				PMC 4/6.3

all dimensions in mm / en millimètre / alle Maße in mm / in millimetri / en milímetros
1) typical values / valeurs moyennes / typische Werte / Valori tipici / valores típicos

Notes

POP® & Avdel® have been producing assembly systems since the 1930s and offer comprehensive ranges of innovative fasteners and installation systems to all market segments and applications. STANLEY Engineered Fastening offers POP Avdel products through Sales, Distribution and Manufacturing facilities in over 150 countries. Covered by the portfolio are:



Breakstem Riveting Systems
Various features from multi-grip capability to high strength stainless steel rivets.



Lockbolt Systems
High clamp force and vibration resistance for the highest strength joints.



Speed Fastening® Systems
Extra fast and reliable fastening from one side. Rivets are fed automatically.



Sealing Plugs
Engineered for both low-pressure and high-pressure hole sealing applications.



Blind Rivet Nuts
Fast system for sustainable threads with high torque-to-turn.



Customized Fastener Designs
Bespoke designs and finishes to meet your unique assembly requirements.



Installation Equipment
From manually operated power tools to customized semi and fully automated assembly workstations and repair tools.

We can also provide you with:



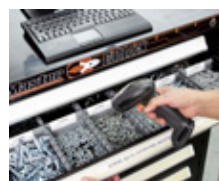
One-stop shopping for the blind riveting distributor market. MasterFix® owes its excellent reputation to the successful distribution of the broadest range of blind rivets and blind rivet nuts in the business.



CribMaster® is the global leader in inventory & asset management solutions for industrial environments.



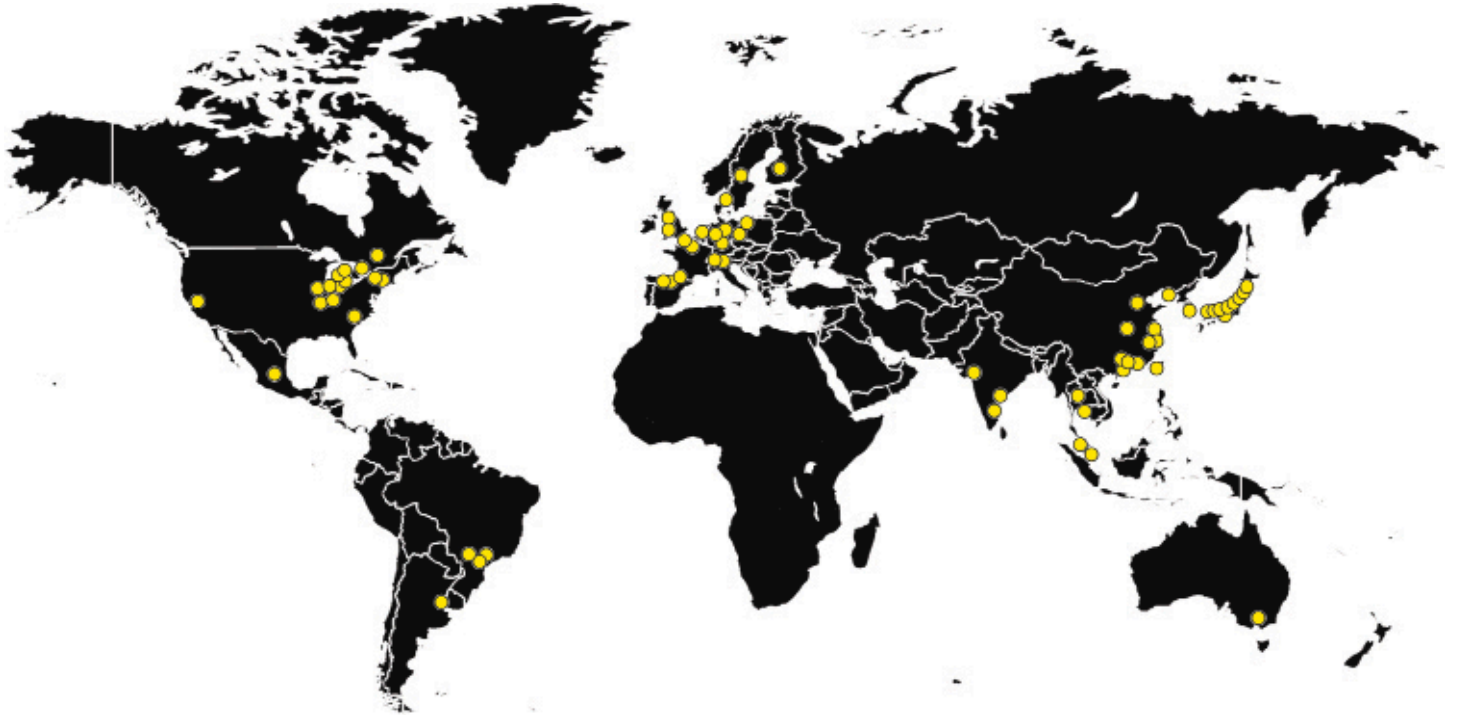
Spirallock® is a technologically superior fastening system ideally suited for threaded joint applications subjected to heavy shock and vibration.



CribMaster's comprehensive portfolio of vending machines & tool control solutions driven by a powerful software platform helps customers save 25% - 40% of costs associated with indirect material management, essential in the unrelenting drive towards efficiency & lower costs at manufacturing facilities today.

STANLEY®

Engineered Fastening



STANLEY Engineered Fastening, a Stanley Black & Decker Inc. Company has been revolutionizing fastening and assembly technologies for a variety of industries for more than 40 years.

For more information, please visit our website

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