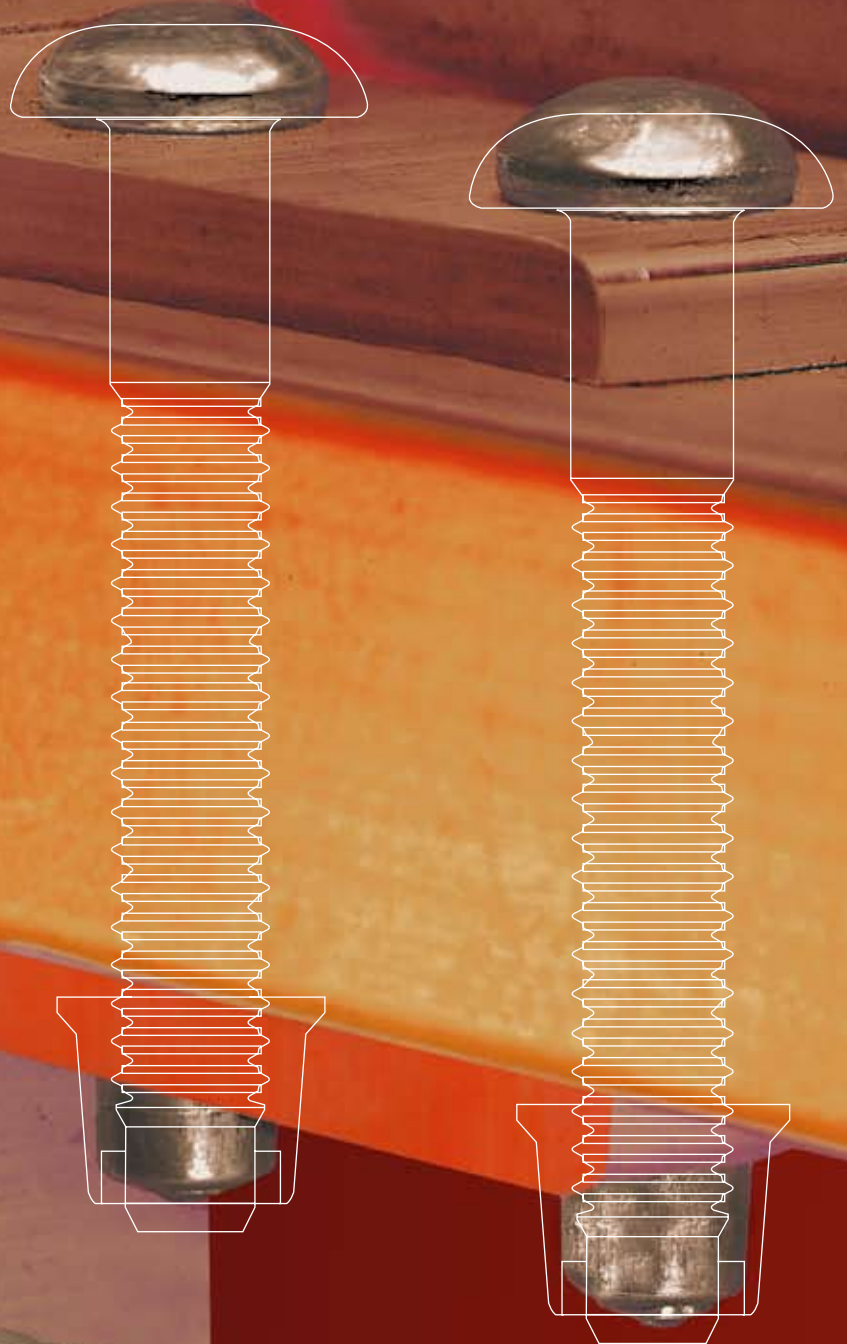
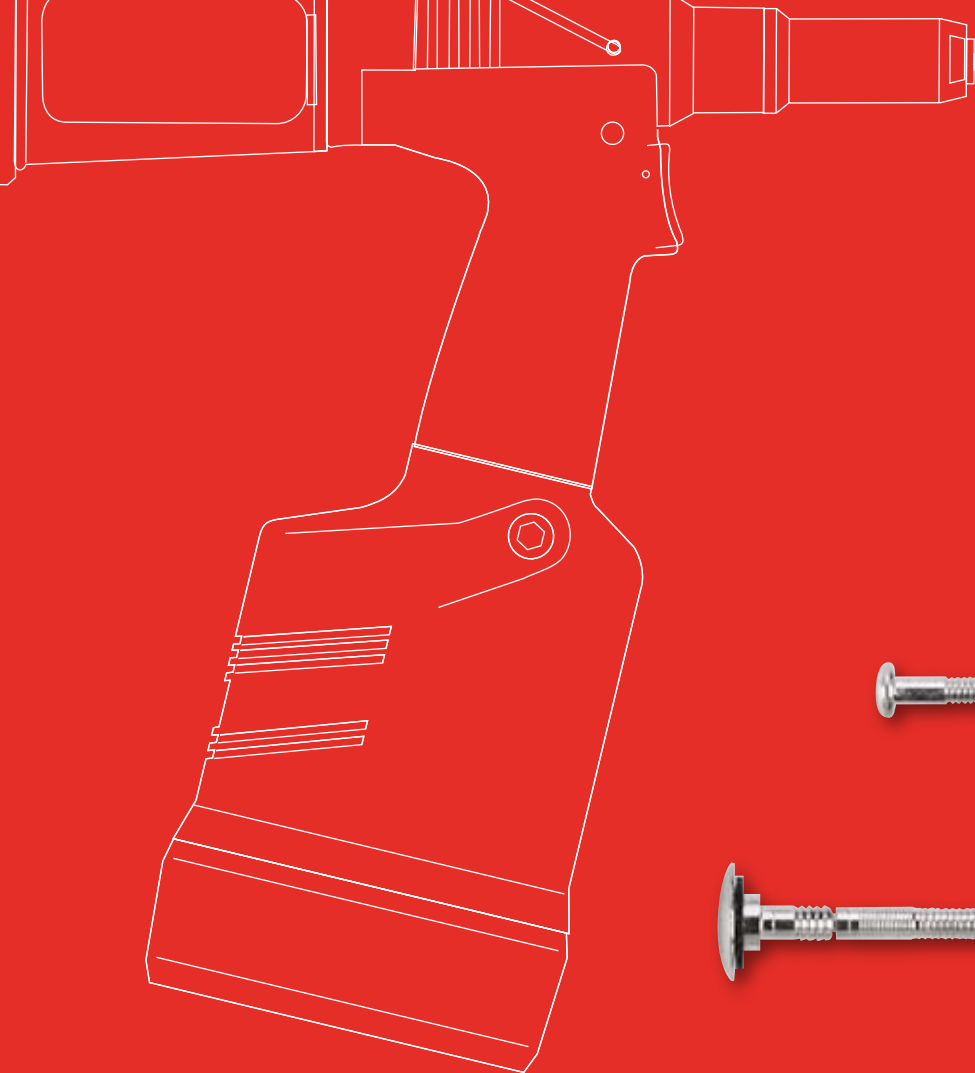


Lockbolt Systems





Structural vibration resistant fasteners with high clamp load performance and multi-grip capabilities

Avdel® lockbolts are specified whenever robust and reliable fastening is desired. Our intelligent fastening systems and durable, ergonomic installation tools create an ideal assembly solution in any manufacturing environment.

Avdel® structural lockbolts consist of a separate pin and collar which are mechanically locked during installation. Our fasteners form joints capable of withstanding the toughest applications and environments that traditional rivet and screw joints often cannot provide. They offer exceptional resistance to vibration and material fatigue due to the swaged lock which forms collar material permanently into the circular grooves of the bolt.

Avdel® structural lockbolts can be installed quickly and easily without the need for special training or the skilled labour that's often required for other fastening methods. This simple installation process eliminates negative manufacturing influences including examples of RSI (Repetitive Strain Injury) – thus ensuring safety & quality from the first to the last installation.

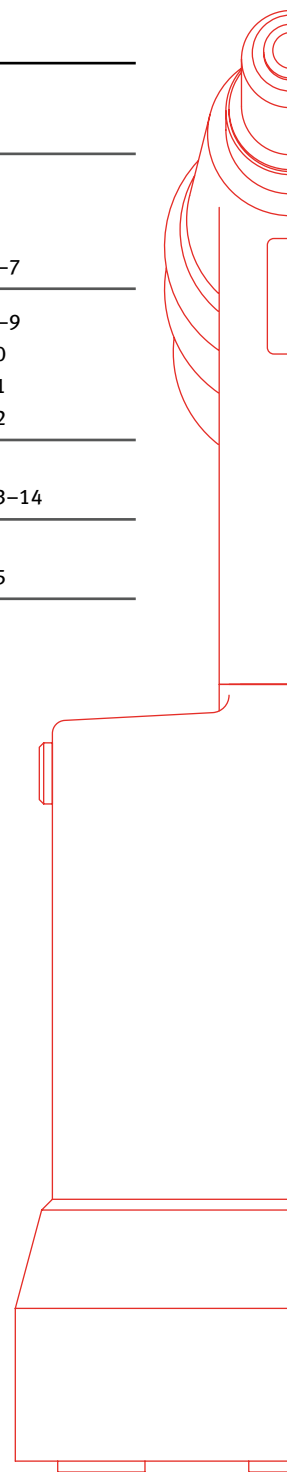
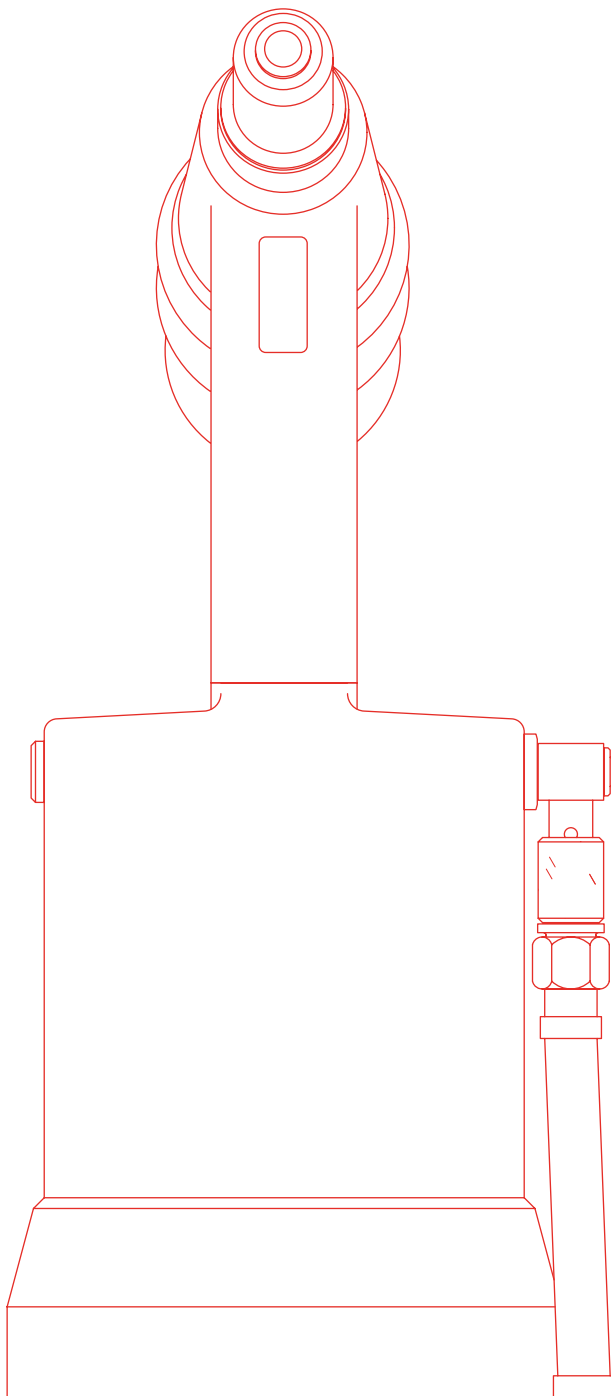
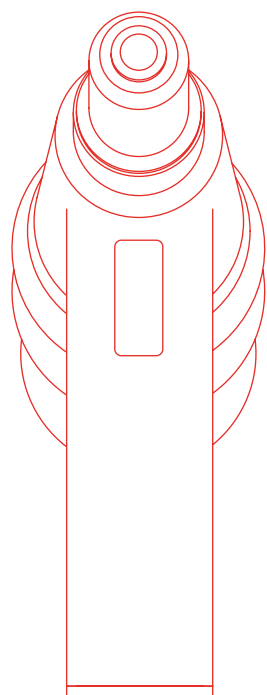
Avdel® structural lockbolts are mostly used in the automotive, HGV & transportation markets as well as machinery and equipment manufacturing, heating and ventilation, and metal fabrication and construction.

The Avdel® structural lockbolt range can provide a cost effective solution for any application, often reducing total assembly cost and time as well as inventory.

Together with our customers we develop fastening systems that simplify your production process and improve the quality and functionality of your products. We are not just a provider of fasteners and equipment but a design and development partner helping you to improve assembly and product performance.

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Avdel® Structural Lockbolt Systems

Avdel® lockbolt systems are designed for high strength, secure assembly. Quick and simple to place, durable and long lasting, they are the ideal solution where spot welding is not practical and other methods are costly, time consuming or not possible. Avdel® lockbolt systems have been widely used for many years in demanding engineering industries throughout the world, including vehicle body building, railways, construction and containers.

Benefits of assembly

High speed assembly

Avdel® lockbolts are placed in seconds, to provide a secure, long-lasting joint.

High shear and tensile strength

Avdel® lockbolts have been designed to deliver the high strength performance required in load-bearing, structural applications.

Consistent, high performance

Designed and manufactured to close tolerances, Avdel® lockbolt systems ensure consistently accurate and secure, high strength assembly. Combined with a special purpose tool, Avdel® lockbolts eliminate installation errors or variability of clamp associated with conventional assembly methods.

Robust and rugged tools

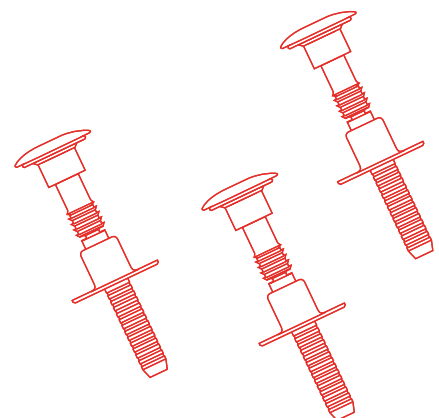
Designed for use in demanding engineering environments, these tools have a long and reliable track record. They provide consistently accurate and secure installation within a few seconds.

Excellent vibration resistance






As permanent as a weld, Avdel® lockbolts resist loosening when all other methods fail.

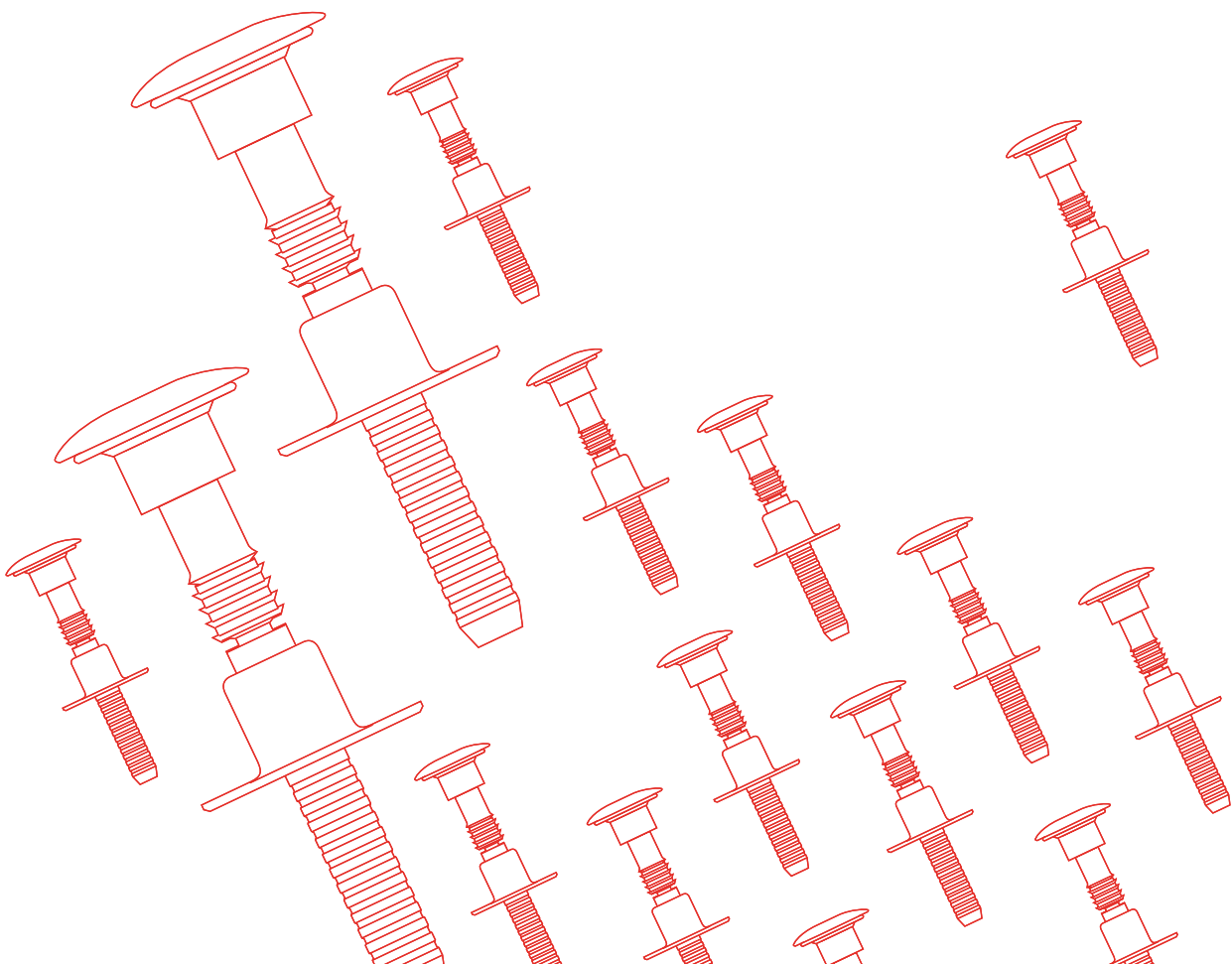
Ease of inspection

A quick and simple visual inspection is sufficient to check that an Avdel® lockbolt has been correctly installed and tampering is immediately obvious. Avdelok®, Maxlok® and Avtainer® lockbolts are TIR approved.



Range overview

Brand	Material	Key features
Avdelok® 	Aluminium Alloy Steel Stainless Steel	High shear strength High controlled clamp
Large diameter Avdelok® LD 	Steel	Exceptional shear and tensile strength Sizes from 12.7 mm (1/2") to 25.4 mm (1")
Maxlok® 	Aluminium Alloy Steel	Wide grip range High shear strength
Avtainer® 	Steel	High shear strength Joins composite panels to metal Leak resistant High speed installation
Avbolt® 	Steel	Use on blind sided applications High tensile and shear strength High grip capability



Selecting a Lockbolt Fastener

Selecting an Avdel® structural lockbolt fastener is a simple process. The factors detailed below are designed to help you identify a fastener suitable for your application:

Fastener selection

Accessibility

If there is only access from one side the Avbolt® structural blind fastener is the only choice. Avdelok®, Maxlok® and Avtainer® lockbolts require access from both sides of the component.

Grip range

The fastener should be selected to ensure that the thicknesses of the parent materials fall within the grip range.

Hole size

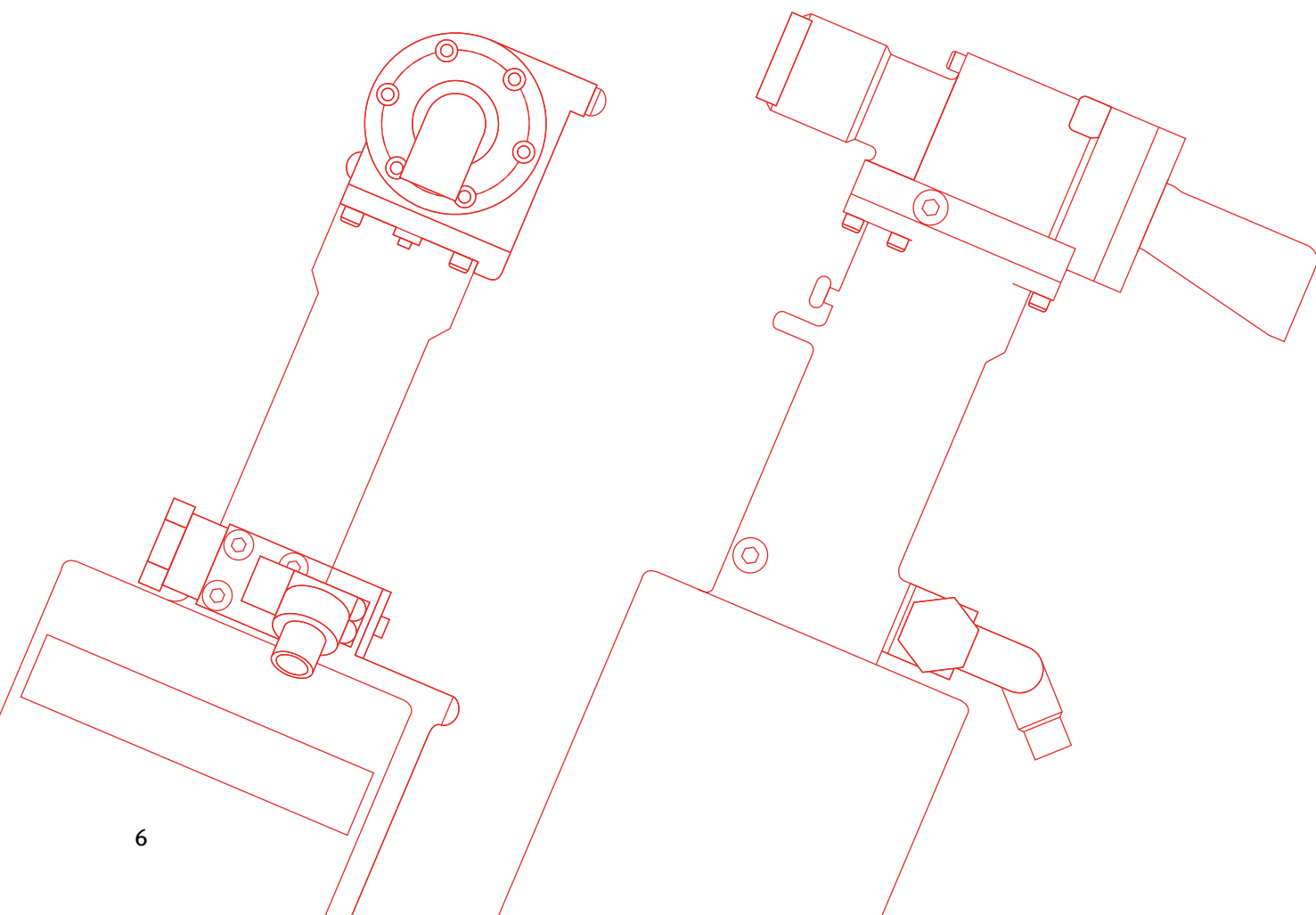
This is specified on the relevant technical data sheet for the structural fastener. It is important to control the hole size accurately in order to ensure the performance of the fastener.

Corrosion Resistance

Material and plating selection should be based on the level of 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.

Important Information

The information on this page should be used in conjunction with the technical data available on our website www.avdel-global.com where you can also find additional information about corrosion, safety and RoHS.



Selection Guide

This table is designed as a guide to help you select the most suitable Avdel® lockbolt for your particular application. Full technical and performance data for each fastener can be found on our website www.avdel-global.com or contact your local Avdel representative.

Product Range	Material Pin & Collar			Headform Pin							Collar			Fastener Size (nom)											
	Aluminium	Steel	Stainless Steel	Brazier head	90° Countersunk	Truss head	Large head	Round head	Mushroom head	Low profile	Full	Half	Flanged	4.8 mm (3/16")	6.4 mm (1/4")	8.0 mm (5/16")	9.6 mm (3/8")	10.0 mm (3/8")	12.7 mm (1/2")	15.9/16 mm (5/8")	19.1 mm (3/4")	22.2 mm (7/8")	25.4 mm (1")	Series No.	Page No.
Avdelok®		•		•							•	•	•	•	•	•	•							2621	8-9
		•			•						•	•	•	•	•	•	•							2622	
		•				•					•	•	•	•	•	•	•							2624	
			•	•							•		•	•	•	•	•							2691	
	•			•							•	•	•	•	•	•	•							2801	
	•				•						•	•	•	•	•	•	•							2802	
	•					•					•	•	•	•	•	•	•							2803	
	•						•				•	•	•				•							2804	
Avdelok® LD		•						•			•		•						•	•	•	•	•	2861	8-9
Maxlok®		•		•							•			•	•									1901	10
		•			•						•			•										1902	
		•							•		•			•	•									1903	
		•				•					•			•	•									1905	
	•			•							•			•	•									1921	
Avtainer®		•								•								•						2311	11
Avbolt®		•																•		•				21001	12

Our policy is one of continuous product development and improvement and we reserve the right to change the specification of any product without prior notice.

Avdelok[®]

High strength, vibration resistant lockbolts with high, controlled clamp.



Key features and benefits

- High shear strength for high strength assembly
- High, controlled clamp provides excellent vibration resistance
- Quick to install across a wide range of applications
- Comprehensive range of special purpose installation tools
- Wide choice of materials, sizes, head forms and collar options to suit a wide variety of applications
- Easy to inspect for tampering
- TIR approved
- Large diameter option from 12.7 mm (1/2") to 25.4 mm (1") for heavy engineering applications

Specifications

Avdelok[®]

Sizes:

4.8 mm to 9.6 mm
(3/16" to 3/8")

Materials:

Aluminium alloy, steel,
stainless steel

Headforms:

Brazier, countersunk, truss,
large

Collar options:

Full, half, flanged

Avdelok[®] LD

Sizes:

12.7 mm to 25.4 mm
(1/2" to 1")

Materials:

Steel

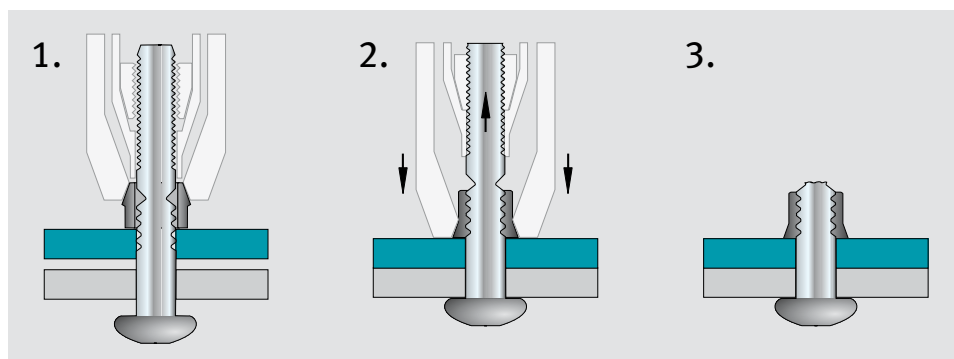
Headforms:

Round, countersunk

Collar options:

Full, flanged

Typical placing sequence

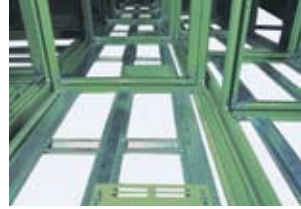


Please visit our website www.avdel-global.com for fastener placing animations and technical data.

Assembly applications

- Commercial vehicles
- Heating systems
- Steel construction
- Bridge building
- Solar panels
- Railway
- Mining

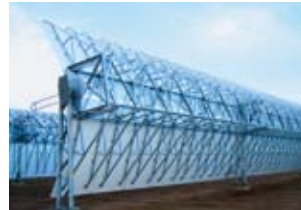
Heating systems



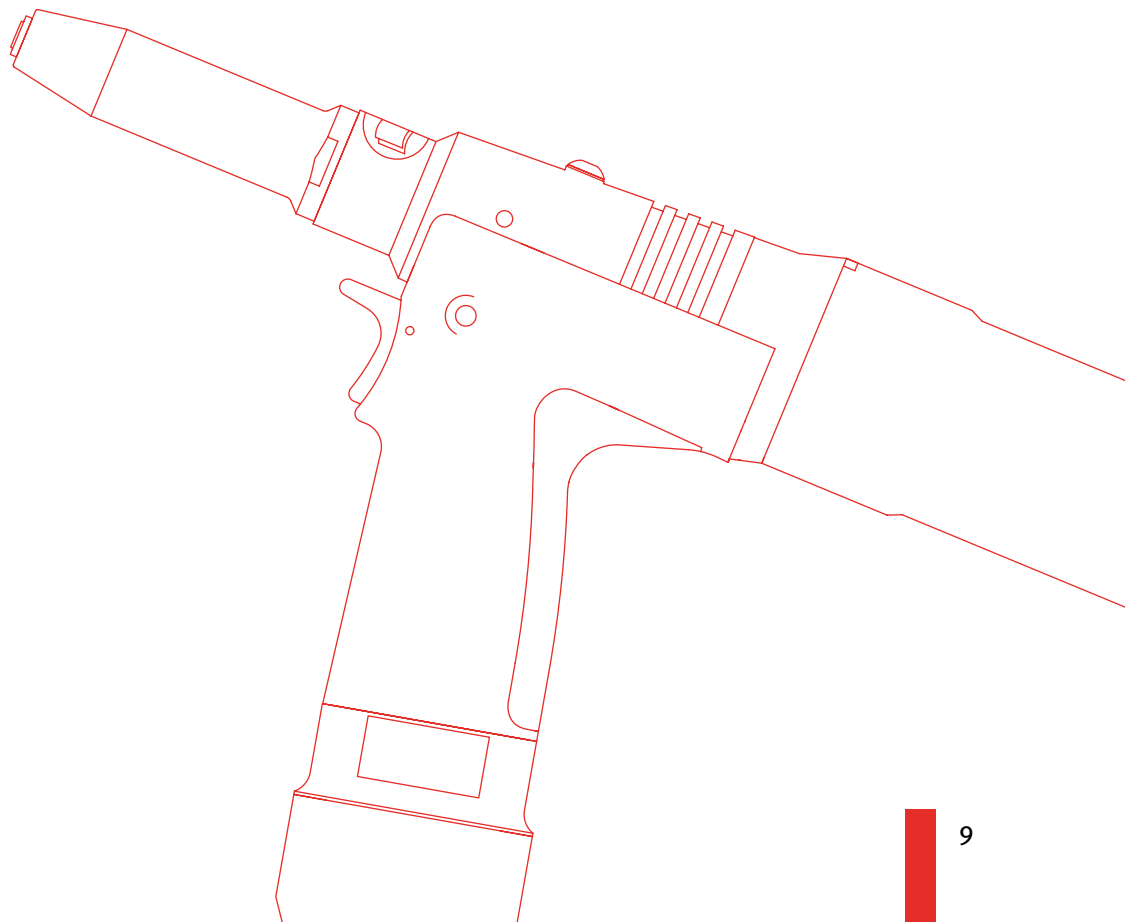
Commercial vehicles



Solar power plants



Solar power plants (detail)



Maxlok®

High strength, vibration resistant lockbolts with multi-grip capability.



Key features and benefits

- Wide grip range reduces inventory, simplifies stock control, and accommodates wide variations in material thickness
- High shear strength for high strength assembly
- High, controlled clamp provides excellent vibration resistance
- Wide range of special purpose installation tools
- Quick to install across a wide range of applications
- Brazier, countersunk, mushroom and truss head forms suit a wide variety of applications
- Easy to inspect tampering
- TIR approved

Specifications

Sizes:

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

Material:

Aluminium alloy, steel

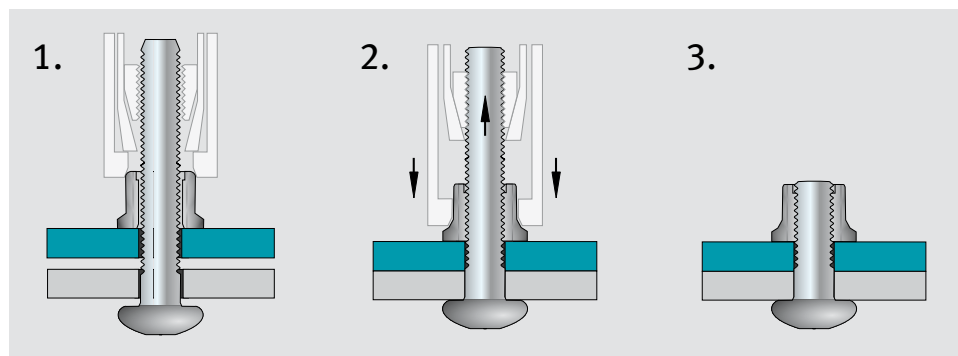
Headforms:

Brazier, countersunk,
mushroom and truss

Collar option:

Flanged

Typical placing sequence



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

Assembly applications

- Commercial vehicles
- Heating and ventilation
- Frame building

Commercial vehicles



Fan bearing arm



Avtainer[®]

High strength, steel fastener and shell designed for joining composite panels to metal.



Key features and benefits

- Prevents cracking and pull through of composite materials
- Ideal for the assembly of GRP vehicle panels
- High shear strength for high strength assembly
- Underhead Santoprene[®] seal for a water/air tight joint
- Internally locked stem provides a secure, vibration resistant joint
- Smaller shell size available for use against metal surfaces
- Low profile head and shell give a neat appearance
- Optional encapsulated heads to match the surrounding colour
- Quick to install with Genesis[®] power tools
- Easy to inspect for tampering
- TIR approved

Specifications

Sizes:

10.0 mm (3/8")

Material:

Steel

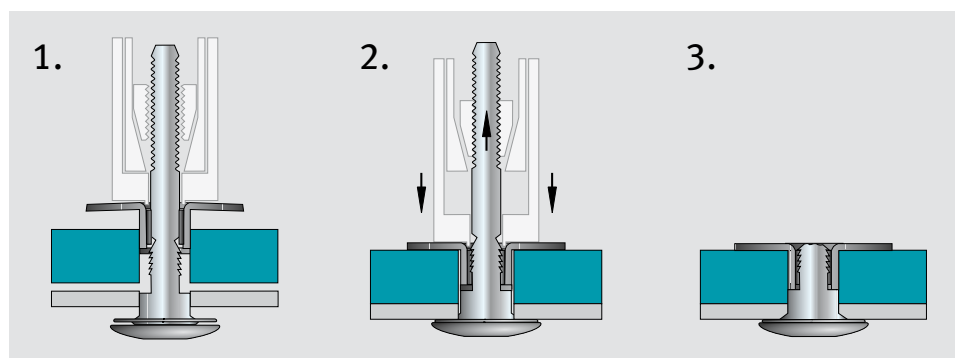
Headforms:

Low profile

Option:

Encapsulated heads

Typical placing sequence



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

Assembly applications

- Commercial vehicles
- Container



Avbolt® Structural Blind Fastener

The Avbolt® structural fastener is a high strength, tamper resistant, blind steel fastener designed for use in heavy-duty structural applications. It offers a high tensile and shear strength normally only possible with non blind lock-bolts and combines it with the installation speed of blind products.



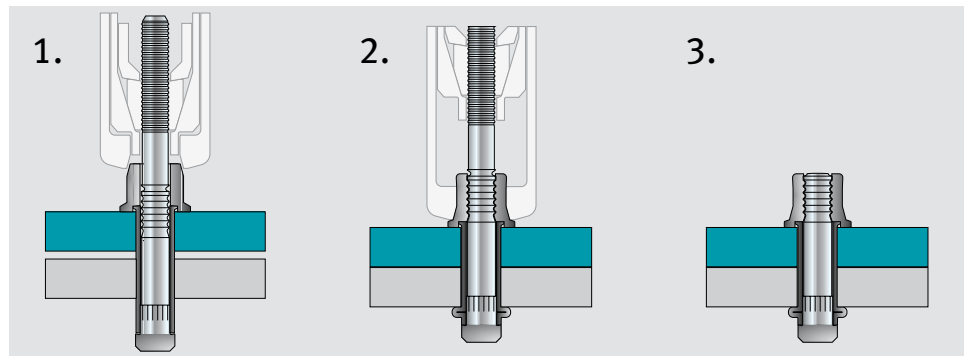
Key features and benefits

- Use on blind sided application
- High tensile and shear strength for heavy-duty applications
- High grip capability suits a wide variety of material thicknesses
- Locking feature creates a vibration resistant joint and prevents loose stems
- Ideal for areas with restricted access
- Speed of installation
- Ease of use requires only minimum skill
- Tamper resistant
- Collar can be easily removed
- Optimised heat treatment

Specifications

Sizes:
10.0 and 16.0 mm
(3/8" and 5/8")
Extended range:
6.4 mm (1/4")*
Material:
Steel

Typical placing sequence



Please visit our website www.avdel-global.com for fastener placing animations and technical data.

Assembly applications

- Automotive
- Construction
- Container
- Railway
- Mining

* Design characteristics may differ from images shown.

Installation Tools

Genesis® G2 LB (71255 Model)

Lightweight tool for placing Avdelok® lockbolts 4.8 mm and 6.4 mm (3/16" and 1/4") at high speed making it ideal for batch or flow-line assembly.

- Ergonomic and lightweight design reduces operator fatigue
- Reduced setting time and high speed placement increases productivity
- Integral cycle counter helps establish accurate service intervals
- Toughened plastic body and heavy duty rubber base resists cracking when accidentally dropped
- Can be suspended

Genesis® nG3

Lightweight tool for placing Avtainer® lockbolts at high speed.

- Ergonomic and lightweight design reduces operator fatigue
- High placement speed increases productivity
- Integral cycle counter helps establish accurate service intervals
- Toughened plastic body and heavy duty rubber base make it a robust tool and enhance tool life
- Vacuum air supply cut-off on trigger minimizes air consumption
- Fixed stem collector bottle
- Optional quick release stem collector reduces time for emptying
- Can be suspended

Genesis® nG4

Lightweight tool for placing Avdelok® and Maxlok® lockbolts ø 4.8 mm and 6.4 mm (3/16" and 1/4") as well as Avtainer® lockbolts.

- Ergonomic and lightweight design reduces operator fatigue
- Quick cycle time increases productivity
- Integral cycle counter helps establish accurate service intervals
- Toughened plastic body and heavy duty rubber base make it a robust tool for a long working life
- Vacuum air supply cut-off on trigger minimizes air consumption
- Fixed stem collector bottle
- Optional quick release stem collector reduces time for emptying
- Can be suspended
- Collar cropper attachment available to remove collars from installed Avdelok® and Maxlok® lockbolts

G2 LB (71255 Model)



nG3



nG4



Installation Tools

722 Model

The hydro-pneumatic 722 tool is designed to place all sizes of Avdelok® lockbolts ø 4.8 mm to 9.6 mm (3/16" to 3/8").

- Cast aluminium body designed for heavy duty use over long periods of time, even in the most demanding environments
- Quick and simple operation minimizes operator fatigue and reduces assembly time to a minimum
- Wide choice of nose assemblies to suit access restrictions of the application
- Collar cropper attachment available to remove collars from installed Avdelok® lockbolts

734 Model

All Avdelok® LD lockbolts from ø 12.7 mm to 25.4 mm (1/2" to 1") can be placed securely in seconds with this range of installation tools. Avdelok® lockbolts ø 9.6 mm (3/8") and Avbolt® ø 10 mm and 16 mm (3/8" and 5/8") can also be installed.

- Robust and rugged installation tools designed for a long working life in extreme conditions
- Range of hydraulic power units deliver the extreme high pull pressure required for secure, long lasting assembly at high speed
- Choice of placing heads and nose equipment to suit the entire range of large diameter Avdelok® lockbolts as well as other lockbolt brands
- Easy-to-change nose equipment and range of hydraulic hoses in different lengths enable the tool to be adapted to suit local assembly requirements
- Mounted on castors for easy movability
- Available in voltages from 220/1Ph to 525/3Ph (110V optional)
- Switches to 'sleep' mode after a pre-selected time

722



734



The Range of Avdel® Blind Fastening Systems



Speed Fastening® Systems

Extra fast and reliable fastening from one side.
Rivets are fed automatically.



Breakstem Systems

Blind fastening systems with 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.



Blind Threaded Inserts

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



Installation Equipment

From manually operated handtools to customised assembly workstations.

Lockbolt Systems

AUSTRALIA

Acument Australia Pty Ltd.

891 Wellington Road
Rowville
Victoria 3178
Tel: +61 3 9765 6400
Fax: +61 3 9765 6445
E-mail: info@acument.com.au

CANADA

Avdel Canada, a Division of Acument Canada Limited

87 Disco Road
Rexdale
Ontario M9W 1M3
Tel: +1 416 679 0622
Fax: +1 416 679 0678
E-mail: infoAvdel-Canada@acument.com

CHINA

Acument China Ltd.

RM 1708, 17/F., Nanyang Plaza,
57 Hung To Rd., Kwun Tong
Hong Kong
Tel: +852 2950 0631
Fax: +852 2950 0022
E-mail: infochina@acument.com

FRANCE

Avdel France S.A.S.

33 bis, rue des Ardennes
BP4
75921 Paris Cedex 19
Tel: +33 (0) 1 4040 8000
Fax: +33 (0) 1 4208 2450
E-mail: AvdelFrance@acument.com

GERMANY

Avdel Deutschland GmbH

Klusriede 24
30851 Langenhagen
Tel: +49 (0) 511 7288 0
Fax: +49 (0) 511 7288 133
E-mail: AvdelDeutschland@acument.com

ITALY

Avdel Italia S.r.l.

Viale Lombardia 51/53
20047 Brugherio (MI)
Tel: +39 039 289911
Fax: +39 039 2873079
E-mail: vendite@acument.com

JAPAN

Acument Japan Kabushiki Kaisha

Center Minami SKY,
3-1 Chigasaki-Chuo, Tsuzuki-ku,
Yokohama-city, Kanagawa Prefecture
Japan 224-0032
Tel: +81 45 947 1200
Fax: +81 45 947 1205
E-mail: info@acument.co.jp

SINGAPORE

Acument Asia Pacific (Pte) Ltd.

#05-03/06 Techlink
31 Kaki Bukit Road 3
Singapore, 417818
Tel: +65 6840 7431
Fax: +65 6840 7409
E-mail: Tlim@acument.com

SOUTH KOREA

Acument Korea Ltd.

212-4, Suyang-Ri,
Silchon-Eup, Kwangju-City,
Kyunggi-Do, Korea, 464-874
Tel: +82 31 798 6340
Fax: +82 31 798 6342
E-mail: info@acumentkorea.com

SPAIN

Avdel Spain S.A.

C/ Puerto de la Morcuera, 14
Poligono Industrial Prado Overa
Ctra. de Toledo, km 7,8
28919 Leganés (Madrid)
Tel: +34 (0) 91 3416767
Fax: +34 (0) 91 3416740
E-mail: ventas@acument.com

UNITED KINGDOM

Avdel UK Limited

Pacific House
2 Swiftfields
Watchmead Industrial Estate
Welwyn Garden City
Hertfordshire
AL7 1LY
Tel: +44 (0) 1707 292000
Fax: +44 (0) 1707 292199
E-mail: enquiries@acument.com

USA

Avdel USA LLC

614 NC Highway 200 South
Stanfield, North Carolina 28163
Tel: +1 704 888-7100
Fax: +1 704 888-0258
E-mail: infoAvdel-USA@acument.com

www.avdel-global.com

Your local distributor for Avdel® Lockbolt Systems is:



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