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.

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

<table>
<thead>
<tr>
<th>Systems Range Overview</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Avdel® Structural Lockbolt Systems</td>
<td>4</td>
</tr>
<tr>
<td>Range Overview</td>
<td>5</td>
</tr>
<tr>
<td>Selection Guide</td>
<td>6–7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Avdel® Lockbolt Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Avdelok®</td>
<td>8–9</td>
</tr>
<tr>
<td>Maxlok®</td>
<td>10</td>
</tr>
<tr>
<td>Avtainer®</td>
<td>11</td>
</tr>
<tr>
<td>Avbolt®</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Installation Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Tools</td>
<td>13–14</td>
</tr>
</tbody>
</table>

| The Range of Avdel® Blind Fastening Systems          | 15|
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

<table>
<thead>
<tr>
<th>Brand</th>
<th>Material</th>
<th>Key features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avdelok®</td>
<td>Aluminium Alloy Steel Stainless Steel</td>
<td>High shear strength High controlled clamp</td>
</tr>
</tbody>
</table>
| 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.
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.

<table>
<thead>
<tr>
<th>Product Range</th>
<th>Material</th>
<th>Headform Pin</th>
<th>Collar</th>
<th>Fastener Size (nom)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Steel</td>
<td>Stainless Steel</td>
<td>Pin &amp; Collar</td>
<td>Full</td>
</tr>
<tr>
<td>Avdelok®</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Avdelok® LD</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
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<tr>
<td>Maxlok®</td>
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<td>•</td>
<td>•</td>
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<td>Avtain®</td>
<td>•</td>
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<td>•</td>
<td>•</td>
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<tr>
<td>Avbolt®</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>
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

1.  
2.  
3.  

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

1. Fan bearing arm
2. Commercial vehicles
3. Heating and ventilation

Assembly applications

- Commercial vehicles
- Heating and ventilation
- Frame building

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

1. 
2. 
3. 

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 lockbolts 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

1. 
2. 
3.

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
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
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

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