## **STANLEY**Engineered Fastening



Avdelok® XT Large Diameter Lockbolt



### Avdelok® XT

Avdelok® XT lockbolt is a heavy duty, two piece fastener designed to provide a high strength and secure assembly. It is quick and simple to place, yet provides a long lasting, vibration proof joint. Avdelok® XT lockbolt is the ideal solution where welding, threaded fasteners or solid rivets are not suitable or practical to use.

With a tensile strength of over 300 kN, the Avdelok® XT lockbolt is widely used in demanding industries for new construction or for repair. Engineered applications throughout the world include railways, mining, solar power plants, lattice towers, bridges and cranes.

Designed and manufactured to the highest standards, Avdelok® XT fasteners ensure a consistently accurate and high strength assembly. Installing the Avdelok® XT lockbolt in seconds, our "AV" placing tool systems eliminate installation errors and performance variability in



Avdelok® XT lockbolts consist of a bolt and a collar

joints, that is often experienced with conventional threaded fastening methods. These placing tool systems are designed for use in demanding environments, backed up by a long and reliable track record.

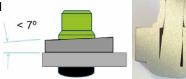
Fast and easy visual inspection is sufficient to prove correct installation of the fastener and tampering is immediately obvious.



#### Key features and benefits

- Exceptional shear and tensile strength provides consistent, high performance required in loadbearing, structural applications
- Excellent vibration resistance
- Quick and easy to install across a wide range of applications
- Tamper resistant
- Tolerates variation in joint allows angled installation up to 7°

- Robust tools designed for extreme conditions
- Ease of use requires only minimum skill
- Simple installation tooling eliminates the cost of calibration and reduces maintenance
- Consistent installation prevents rework and associated costs
- Visual joint control



#### Typical placing sequence

# 2. Longer pin tail accomodates large gaps before sheet take-up (clamp)

Please visit our website for fastener placing animations.

- 1. The Avdelok® XT pin is located in the hole and the collar placed over the stem. The tool is then located onto the stem.
- 2. Tool activation pulls the materials together and swages the collar into the grooves of the pin.
- 3. At a pre-determined load, the stem breaks and the joint is secure.

#### Security

Avdelok® XT fasteners are designed to create a permanent fixing. This provides security benefits and enables the fastener to be TIR approved.

#### Large Diameter Lockbolt for Heavy Engineering Applications

#### Range

#### Sizes and Grip ranges

Ø	No. diff. lengths	Grip range	
12.7 mm (¹/₂")	20	6.35 - 133.35 mm	
15.9 mm ( <sup>5</sup> / <sub>8</sub> ")	19	6.35 - 127.00 mm	
19.1 mm (³/ <sub>4</sub> ")	19	6.35 - 127.00 mm	
22.2 mm <sup>(7</sup> / <sub>8</sub> ")	17	12.70 - 120.65 mm	
25.4 mm (1")	22	12.70 - 152.40 mm	
28.6mm (1 <sup>1/8</sup> ")	22	12.70 - 152.40 mm	

Materials Pin: carbon steel

Collar: low carbon steel, zinc plated

Headform / 2851 series: Round / black self-colour
Finish 2852 series: Round / 10µm zinc plated

2853 series: Round / 15µm zinc plated 2854 series: Large truss / 15µm zinc plated 2852/53/54: clear trivalent passivated

Collar options Full, flanged



#### Performance Data

		1
kN	kN	kN
min.	min.	min.
64.0	75.8	53.6
100.0	120.5	85.4
144.4	178.3	126.3
193.0	246.6	174.6
251.3	323.3	229.1
309.1	368.9	259.0
	min. 64.0 100.0 144.4 193.0 251.3	min.         min.           64.0         75.8           100.0         120.5           144.4         178.3           193.0         246.6           251.3         323.3

Installed Avdelok® XT fasteners provide a minimum shear, tensile and pre-load strength, which is equivalent to or exceeds ISO898-1 property class 8.8 or ASTM A-325 standards. Made to British Standard B7805: Part 2:1997, the Avdelok® XT fastener can be the perfect alternative to conventional property class 8.8 threaded fasteners, providing a permanent, high tensile friction grip joint but without the risk of loosening.

#### Assembly applications

- Commercial vehicles
- Steel construction
- Bridge building/repair
- Renewable energy
- Railway/rail track
- Mining equipment













All Avdelok® XT lockbolts can be placed securely in seconds with the 734 series of AV installation tools, as well as our Avbolt® blind structural fasteners, Avdelok® lockbolts and Avseal® II sealing plugs.

#### **Placing Tools**

Different AV hand tools suit the fastener size ranges and there is one nose equipment for each fastener size.

- Robust and highly durable installation tools
- High performance hydraulic seal & wiper technology
- Piston bearing rings
- Ergonomic and compact design for optimised operator comfort
- High-speed operation
- Low maintenance
- Manoeuvrable in limited access applications



#### **Pump Units**

- Extended working life in harsh industrial environments
- High-performance custom Enerpac® pump unit with high-efficiency 2-stage pump design requires 18% less current draw than comparable pumps
- Powerful universal industrial electric motors fully enclosed and fan cooled
- Set pressure feature turns off motor at user defined pressure
- Reservoir heat exchanger provides cooler operation, stabilizes oil viscosity, increasing oil life and reducing wear on pump and tool components
- Full sight oil level glass
- Durable steel reservoirs
- Choice of hand tools and nose equipment to suit the entire range of large diameter Avdelok® XT lockbolts
- Available in voltages from 115V to 480V

For detailed information on installation tools and equipment please refer to the tool manuals or contact your local STANLEY Engineered Fastening representative.





Avdel UK Limited Stanley House, Works Road Letchworth Garden City, Hertfordshire SG6 1JY Tel. +44 (0)1582 900-000 · Fax -001 enquiries2@sbdinc.com

www.StanleyEngineeredFastening.com

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