

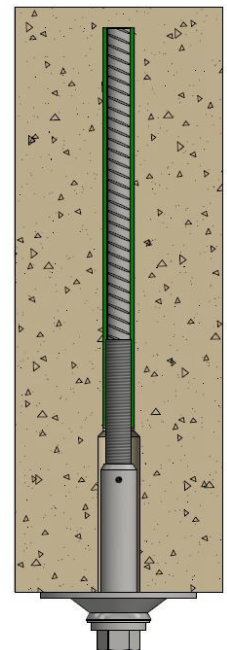
Product Code Guide	Bolt Type	Diameter	Length	Drive Nut & Accessories	Coating	Packaging
	AT	4	150	MXH	TD	050

## Physical Properties

	Minimum		Typical	
Yield Strength	600MPa	200kN	650MPa	240kN
Tensile Strength	840MPa	305kN	890MPa	340kN
Calculated Shear Strength	200kN		225kN	
Elongation (After Fracture)	15%		19%	
Mass per Metre	2.97kg			
Bar Core Diameter	Ø21.7mm			
Major Bar Diameter	Ø23.6mm			
Cross Sectional Area	370mm <sup>2</sup>			
Rolled Thread	M24 x 3.0mm Pitch			
Impact Toughness	19 Joules			

## Key Features

- The MANX bolt system eliminates threaded bar protruding beyond the tensioning nut of the rock bolt. This system can be utilised where clearance is an issue in low seam heights.
- Eliminates potential damage and injury from protruding bolt threads.
- Tensioning applied through Male Bolt and Female Coupling Connection System.
- Internal M24 thread on nut end to allow hanging of accessories.
- Manufactured from a special hot rolled deformed bar designed by DSI Underground.
- This bolt features a rib pattern which actively assists with mixing the chemical anchors during installation.
- The AT bolt typically provides marginally higher fracture toughness results over standard AX bar when measured by Charpy Impact Test.
- Shear Pin Break Out System.
- The deformed rib pattern improves load transfer properties.
- The rolled thread strength nominally equals the column strength of the bar.
- Corrosion protection may be provided by thermal diffused Obduro coatings.



## Installation Guidelines

- 28mm hole diameters are preferred with a 38-42mm reamer.
- Hole depth is critical. Hole depth should be the length of the bolt being installed.
- It is important to follow the resin anchor recommended mixing and hold times as printed on the resin anchor cartons. Do not over mix.




## Standard Lengths & Packaging

- Standard bolt lengths range from 600mm to 3000mm in 300mm increments.
- Non-standard requirements are available by negotiation.
- Bolts are packaged in bundles of 50 with sub bundles available on request.
- Bolt fittings, such as nuts, anti-friction washers and domed balls, are supplied fitted to rock bolts in the configuration requested.

## Notes

- Only DSI Underground rock bolt components should be used to enable the optimum performance of the bolt system to be obtained
- DSI Underground is Quality Assured to ISO 9001:2015

Typically used products with these items are:

	Products			
Product Group	Round Plate	Octo Plate	Butterflies	Resin
Product Imagery				
Product Code Prefix	RD	OCP	BUTT	RO



Rock Bolts – Solid Bar

Product Code Prefix

# AT-MANX BOLT

**AT/MX**

Product – MANX Bolt-AT Bar

## Phone APP

- Want to know more; our full product range, knowledge centre, and other details are available via the App; available on iOS and Android devices by searching “DSI Underground”.



iOS



Android

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*All dimensions, weights, quantities and specifications are those applicable at the time of this publication and may be amended from time to time. Please contact your local DSI Underground representative for final confirmation of any key specifications.*