

Product Code Guide	Bolt Type	Diameter	Length	Drive Nut & Accessories	Coating	Packaging
	ATR	4	210	DFP2H	TD	050

## Physical Properties

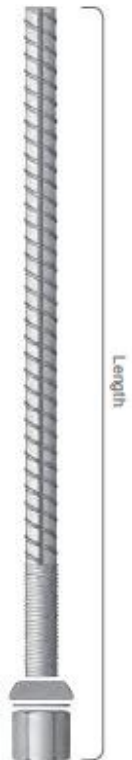
	Minimum		Typical	
Yield Strength	600MPa	220kN	650MPa	240kN
Tensile Strength	840MPa	305kN	890MPa	340kN
Calculated Shear Strength	200kN		225kN	
Elongation (After Fracture)	15%		19%	
Mass per Metre	3.01kg			
Bar Core Diameter	Ø21.6mm			
Major Bar Diameter	Ø24.2mm			
Cross Sectional Area	370mm <sup>2</sup>			
Rolled Thread	M24 x 3.0mm Pitch			
Impact Toughness	19 Joules			

## Key Features

- 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.
- The ATR high deformed rib pattern improves load transfer properties.
- The rolled thread strength nominally equals the column strength of the bar.
- The 24mm chemical anchor bolt is designed to be used with the chemical anchors but can be effectively used with cementitious grouts.
- Corrosion protection may be provided by thermal diffused or Obduro coatings.

## Installation Guidelines

- 28mm hole diameters are preferred.
- Hole depth is critical. Hole depth should be shorter than the bolt to allow for the height of the washer and nut.
- 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	Star Plate	Octo Plate	Butterflies	Resin
Product Imagery				
Product Code Prefix				

## 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