

# Strata Tunnel Bolt Product Data



Solutions from Materials Technology





# Strata Tunnel Bolt



The SCS Strata Tunnel Bolt is a mechanical point anchored, pre-tensioned and post groutable rockbolt, incorporating a polyethylene sleeve and grout injection head. Designed for installation into a nominal 45 mm diameter borehole, the Strata Tunnel Bolt is available in various bolt diameters and lengths, in either black or hot dip galvanised steel.

The specifically designed grout injection head enables easy connection to the grouting hose with a camlock fitting. The camlock fitting allows safe grout injection of the bolts using standard grouting equipment. The grout injection head is available in black, galvanised or stainless steel.

The Strata Tunnel Bolt assembly consists of a steel bolt threaded on both ends, with a mechanical anchor fixed on one end, a grout injection head, polyethylene sleeve and 36AF nut attached to the opposite end. Both the steel bolt and polyethylene sleeve have surface deformations to assist with load transfer.

The polyethylene sleeve offers a positive barrier against aggressive corrosive elements to a correctly installed and grouted bolt, making it ideal for long life tunnelling and mining applications. The mechanical anchor enables immediate point anchor support to assist in offering protection for operators and equipment at the development heading. This allows a single pass installation with an automated bolting rig and grout injection system, or manual post grouting at a later time.

## Technical Data

Mechanical Properties	R24 HT Minimum	R24 HT Typical	R24 XHT Minimum	R24 XHT Typical
Core Bolt Diameter – Bar (mm)	21.45	21.7	21.45	21.7
Outside Diameter – Tube (mm)	36.0	36.5	36.0	36.5
Cross Sectional area – Bar (mm <sup>2</sup> )	361	370	361	370
Yield Strength (MPa)	400	445	600	675
*Yield Force Minimum Diameter (MT)	12.6	14.2	19.0	22.2
**Yield Force Typical Diameter (MT)	15.1	16.8	22.6	25.5
Tensile Strength (MPa)	600	730	840	910
*Tensile Force Minimum Diameter (MT)	18.9	23.2	26.6	30.0
** Tensile Force Typical Diameter (MT)	22.7	27.5	31.7	34.3
Elongation (%)	14	22	14	22
Mass per metre – Bar (kg/m)	3.0	–	3.0	–

Note: Metric Tonne (MT)

\* Yield Force Minimum and Tensile Force Minimum values are calculated on the smallest diameter area of the bolt (thread root diameter) as per AS1275-1985 and ASTM F432-04.

\*\*Yield Force Typical and Tensile Force Typical values are calculated on the nominal cross sectional area of the bar, as provided by the steel supplier.

## Testing Standards

	R24 HT	R24 XHT
Galvanising	AS4680	AS4680
Steel Grade	BRBR K1045	HSAC840

## Plates

Minova manufactures a comprehensive range of specially designed plates for use with rock bolts and cable bolts. Extensive product data is available on Minova's full range of plates from Minova's product catalogue and web site, [www.minova.com.au](http://www.minova.com.au). Various Dome Plates with a 50 mm hole can be supplied in either black, galvanised, or stainless steel. Plates most typically used with Strata Bolts are:

<b>Dome Plate</b>	• 150 mm x 150 mm x 7 mm
<b>Combi Plate 36</b>	• 240 x 300 mm • 125 x 125 mm x 4 mm
<b>Combi Plate 36</b>	• 280 x 300mm • 150 x 150 mm x 4 mm

## Drivers

Minova manufactures a full range of drivers for Strata Tunnel Bolts, for use with hand held or mechanise bolting equipment. Extensive product data is available on Minova's full range of drivers from Minova's product catalogue and web site, [www.minova.com.au](http://www.minova.com.au). Drivers typically used with Strata Tunnel Bolts are:

**Driver Socket R32 x 600 Hex 36AF** • generally used on Robolter or Boltec machines

**Driver Socket R38 x 600 Hex 36AF**

**Driver Socket T38 x 600 Hex 36AF**

Note: Driver sockets can be manufactured to any length for each of the different rockdrill thread types.

The table below lists the typical Strata Tunnel Bolts, purchase codes, descriptions, unit weights and pack sizes. Other sizes are available on request, depending on the number required. All bolt codes listed include a left hand thread. Right hand threads are also available on request.

## Codes, Dimensions and Weights

Item Code	Description	Unit Weight	Pack Size
ST241118	Strata Tunnel Bolt R24 x 1800 HT	6.5 kg	100
ST241124	Strata Tunnel Bolt R24 x 2400 HT	8.6 kg	100
ST241130	Strata Tunnel Bolt R24 x 3000 HT	10.6 kg	100
ST241318	Strata Tunnel Bolt R24 x 1800 XHT	6.5 kg	100
ST241324	Strata Tunnel Bolt R24 x 2400 XHT	8.6 kg	100
ST241330	Strata Tunnel Bolt R24 x 3000 XHT	10.6 kg	100





## Product Service Support

Minova provides a full service support package to customers, including underground pull testing, operator awareness training, underground audits and stock control assistance. Each service package is developed to suit the individual customers requirements.

All aspects of Minova's product service support service is provided by experienced trained and qualified personnel.

## Additional Information

For additional information relating to any aspect of this product specification data, including product performance, quality, testing, specification, range, availability etc. please contact your nearest Minova office, or email: [technicalsupport@minovaint.com](mailto:technicalsupport@minovaint.com)

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