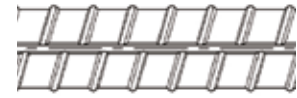


ROCK BOLTS

M24 TORQUE TENSION**Features**

- The "X" grade steel used by Jennmar has superior toughness and ductility through the use of grain refining alloys. The Jennmar "X" grade bolts should provide better performance in mines where Stress Corrosion Cracking is evident and also in areas of high localised horizontal stresses.
- The JX rock bolt profile provides superior load transfer characteristics using the unique "J" bar pattern.
- Recommended for drill hole sizes 27 – 28mm diameter without mixing devices or 35-40mm with resin mixing devices
- M24 couplers, 35mm diameter are available for use with torque tension bolts
- Various roll pin break-out torque ranges available
- Available as galvanised
- *Left hand thread required for hard rock installation*



JB rib profile



J rib profile



| HSAC840 Grade Description | X Grade M24 Bar Properties Minimum | | X Grade M24 Bar Properties Typical | |
|----------------------------|------------------------------------|-----|------------------------------------|-----|
| | MPa | kN | MPa | kN |
| Yield Strength of Steel | 600 | 228 | 650 | 240 |
| Tensile Strength of Steel | 840 | 306 | 920 | 335 |
| Standard Elongation | Min | 15% | Typ | 19% |
| Shear Strength (0.7 x UTS) | | 223 | | 245 |

| 300 Grade Description | JBS Grade M24 Bar Properties Minimum | | JBS Grade M24 Bar Properties Typical | |
|----------------------------|--------------------------------------|-----|--------------------------------------|-----|
| | MPa | kN | MPa | kN |
| Yield Strength of Steel | 300 | 110 | 340 | 126 |
| Tensile Strength of Steel | 440 | 161 | 490 | 182 |
| Standard Elongation | Min | 22% | Typ | 27% |
| Shear Strength (0.7 x UTS) | | 113 | | 127 |

| | | | | |
|----------------------------------|------|--------|-------|--------|
| Bar Diameter (mm) | Core | 21.7mm | Major | 23.5mm |
| Bar Straightness to AS 1442-1991 | | | | |

| | |
|---|-------|
| Cross Sectional Area (mm ²) | 380 |
| Mass Per Metre (kg/m) | 3.0 |
| Drill Hole Size Plain (mm) | 27-28 |

Various torque rated shear pin break-out nuts available for use on M24 bolts