

Information Sheet

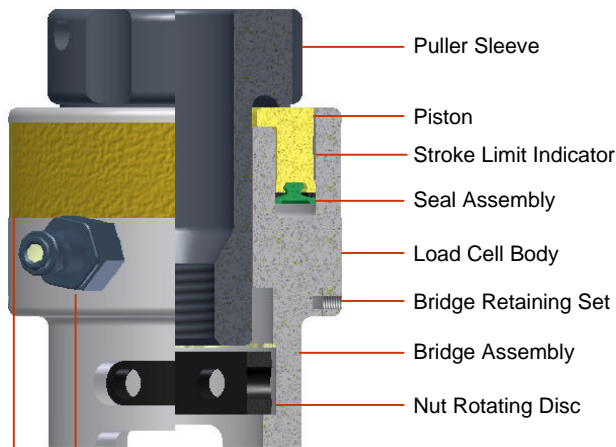


Bolt Tensioning - Introduction

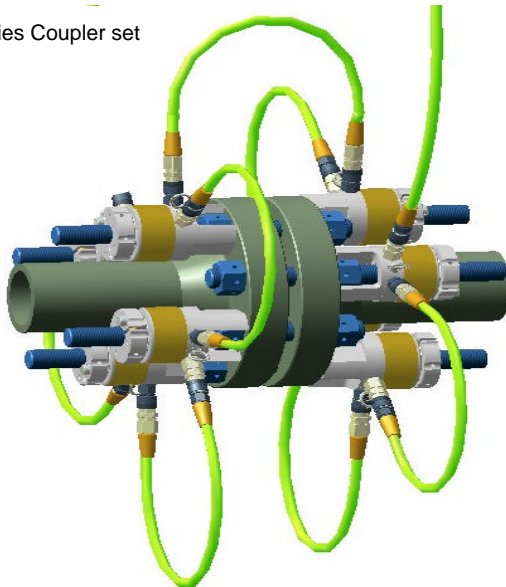
Bolt tensioning is a simple and reliable method of applying a preload to a fastener assembly. Bolt tensioning applies a force directly to the bolt and stretches it axially, eliminating most of the factors which provide control problems using other tightening methods such as torque tightening.

A Tensioner is placed over each stud on the joint. They are then interconnected via a harness assembly to a single pump unit. This allows each tool to be pressurised simultaneously providing even loading around the joint. A stretch is applied directly to the bolt which is then retained by the bolts nuts. This in turn provides the clamping force necessary to seal the joint.

MP Range – Tensioner Components



CEJN 116 Series Coupler set
Anti-Slip Surface



Typical Tensioning application setup

Piston

The piston features a stroke limit indicator and incorporates an operator safe over-stroke feature, where if maximum stroke is exceeded the oil is directed inward of the tool and away from the operator.

Seal Assembly

A simple clip-in self energising seal provides 'high cycle' seal life and eliminates the need for time consuming seal adjustments.

Bridge Assembly

The Bridge Assembly has been designed to offer the maximum coverage of bolt sizes per Load Cell size.

The Nut Rotating Disc is incorporated into the bridge assembly making it easier to use.

The facility to attach the Bridge Assembly (incl. the Nut Rotating Disc) to the load cell allows the tool to be fitted as a single unit, easing installation and removal of the Tensioner.

A 'quick release' bridge design allows for fast change over of bolt sizes.

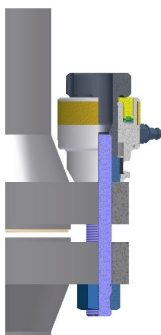
A 360° swivel feature with three pre-set window positions cater for rotation of the bridge on any application.

Coupler Assembly

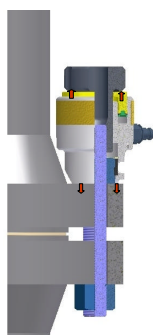
Simple 'quick disconnect' coupler system offers quick connection and removal of the harness assembly.

Anti-Slip Surface

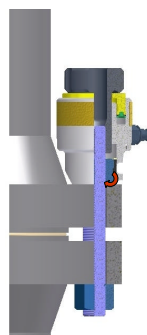
A renewable Anti-Slip grip surface improves tool handling.



Bolt Tensioner is assembled on the stud assembly



Hydraulic pressure is applied developing an axial force, stretching the bolt and compressing the joint.



The hex nut of the stud assembly is tightened against the joint face. The pressure is released from the Tensioner and the load is transferred to the stud assembly, retaining the clamping force across the joint.