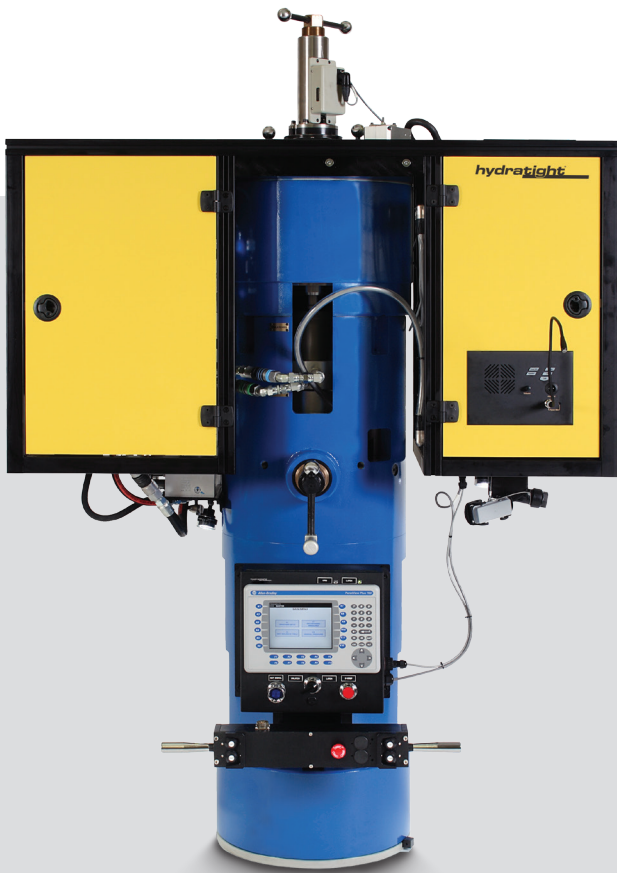


## Self Contained Tensioner (SCT)



### Introducing the second generation Self Contained Tensioner (SCT)

#### Stud engagement interface:

Quick connect/disconnect design for fast performance based on more than 30 years of field proven use. Can engage annular groove design or helical thread form RPV studs.

#### Safety features:

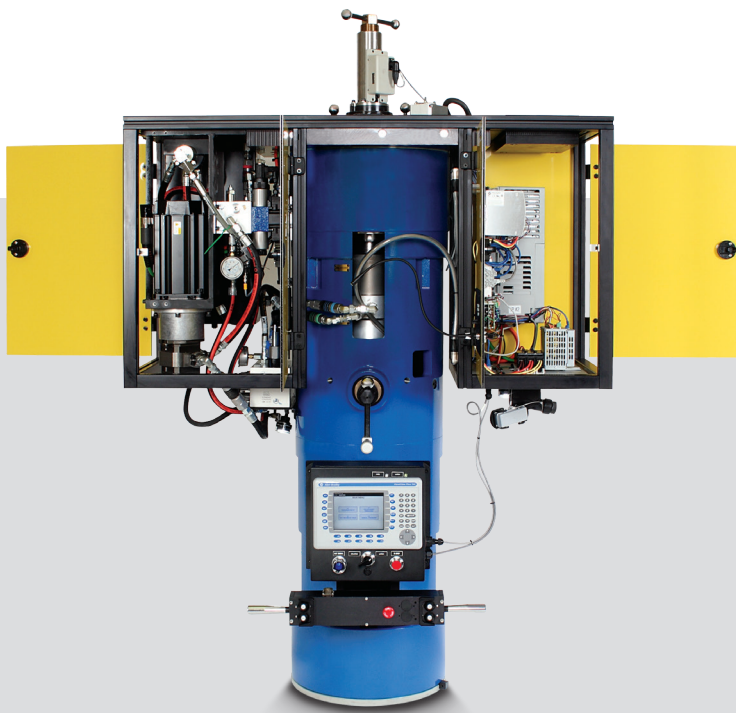
- Electronic limit switches for verifying latching, piston return and piston overstroke conditions
- Secondary seals to route fluid bypass to reservoir and prevent external leakage
- Text style instructions via an LCD screen to coordinate sequence and integrate operation
- Emergency stop button on each control panel to cease all operation

#### Integrated built-on pumping system:

- Hose free operation saves valuable refuel floor space
- Eliminates rigging of and potential leakage from interconnecting hoses
- Reduces storage requirements

#### Performance enhancements:

- Built in Elongation Monitoring System (EMS) provides instant elongation reading feedback, allowing for immediate re-tensioning if reading is out-of-spec and eliminates trim adjusting passes on completion (optional)
- Complete hydraulic operation from pull system latching to pressurisation and piston return; does not require any air supply or create any air born contamination through air exhaust systems
- Ram actuators for piston return process eliminate potential for hydraulic leakage at tensioner top plate during piston return phase due to flange rotation conditions
- System set up for one parent driver; other units may be selected as parent



## Self Contained Tensioner (SCT)

### Performance enhancements continued:

- Voice communication system includes speaker and microphone on each SCT for dedicated system communication (optional)
- LED lighting to facilitate lowering and positioning of the tensioner (optional)

### Design integrity:

- Life of plant for major components
- Forged steel (vs. casting) housing component which faces repeated compression stresses
- Modular design for quick change out or for future technology replacement or upgrade
- Allen Bradley PLC controls for industry wide acceptance and reliability

### Low maintenance costs:

- 10 year hydraulic seals

### Reduced crew requirements

(one operator per tensioner):

- Fatigue eliminated through turn-of-the-switch stud engagement
- Simple movement left or right and hoist operation up or down with built-in controls (optional)
- Integrated communication system coordinates operation

### Technical details:

- Power requirement: 460–480VAC at 20 amps
- High speed industrial network communication protocol
- Communications via Cat-5 ethernet cable bundled with power distribution cable
- Pressurisation time: 30–40 seconds
- Accuracy: +/- 15 psi at 17,000 psi maximum pressure
- Weight: 3,000 to 3,400 lbs (depending on stud diameter—152.4mm to 177.8mm)
- Height: 1,778.0mm–1828.8mm depending on stud project; comparable to existing QD or QD-H style stud tensioners
- Hydraulic hand pump for manual unlatching in case of power loss
- Lightweight aluminium integrated top plate frame assembly for ease of access to hydraulic and electrical systems