

Self Contained Tensioner (SCT) with QD or QD-H Latching Designs



The next generation RPV stud tensioning system
Hydratight's Self-Contained Tensioner (SCT) brings new levels of speed and accuracy to the performance of RPV stud tensioning.

A single person operated stud tensioner; it reduces time and crew costs while lowering the risk of potential exposure to operators.

It's clear, easy-to-use LCD control panel provides real time data on system status, while a remote control panel can operate the full set of tensioners for additional safety and convenience.

Features and Benefits:

- Safe, hose free operation - no rigging or hose management issues and no hose leakage
- On-board high flow pumping system for improved floor space management
- One person operation – hoist control handles for easier, quicker up/down and left/right movement
- Turn-of-the-switch stud engagement through QD or QD-H latching designs
- Eliminates trim passes with Elongation Monitoring System (EMS)
- Safety interlocks - built-in limit switches monitor piston travel and latching
- Clearer user information using LCD text style status and instructional screens
- Less maintenance and downtime with modular design, interchangeable components and spring energised hydraulic seals with 10 year replacement cycle
- Clear, multi-channel voice communication between operators raises safety and situational awareness levels
- LCD lighting facilitates lowering SCT over stud and nut, improving personnel safety

Technical details:

- Power: 460-480VAC at 10 amps
- High speed industrial network communication protocol

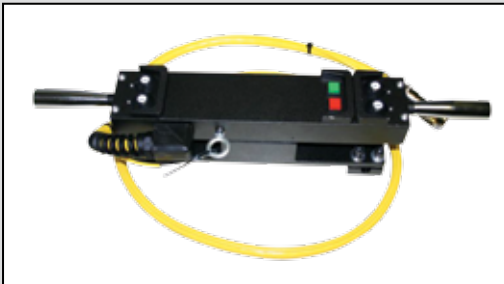
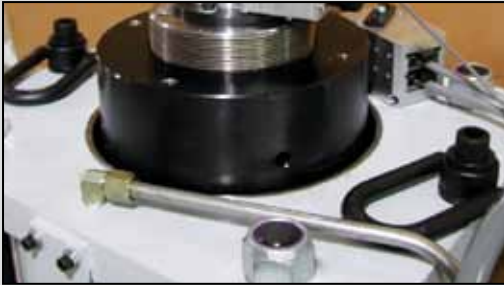


Valve manifold & electronic controls



A two stage SCT. Note: swivel eyebolts are included in each model on the top plate assembly.





Technical details continued:

- Communications via Cat 5 Ethernet cable bundled with power distribution cable
- Pressurisation time: 20 – 30 seconds depending on single or two stage model
- Accuracy: +/- 15 psi at 10,000 psi maximum pressure
- Optional remote control panel for operating the full set of SCT tensioners from the refuel floor

The new SCT includes all of the current features of the widely successful QD-H:

QD Latching

A simple turn of the switch latches the split puller bar to the RPV stud through hydraulic action and a cam driven sleeve. The stud tensioner is fully hydraulic through the latching, pressurisation, piston return and unlatching phases.

Elongation Monitoring System (EMS)

The EMS verifies accurate and consistent nut seating to ensure proper load retention in the stud and nut. This eliminates the potential need to perform a trim pass.

Electronic Limit Switches

Monitor piston travel (for overstroke and piston return) and pull system latching.

Hoist and Tractor Control Handles

Allow a single operator to move the stud tensioner left or right around the bolt circle and lower or raise it over the studs.

Control Panel with LCD Screen

Provides clear text instructions to operators and depicts the status of other stud tensioners and EMS readings to allow coordinated lifting and moving once readings are verified.

Panel also includes “latch/unlatch” switch, nut signal button (to signify to other stud tensioner operators that a nut has been seated or unthreaded) and emergency stop button.