

## TTS - Top Tensioning System (Pull Type)

Drill Floor or BOP Crane Rail Configurations  
Constant Tensioning up to 300Te Capacity

The ICON Top Tensioner System (TTS) can be used to either provide primary support to the conductor or provide auxiliary support to the Blowout Preventer (BOP).

Applied constant tension as the primary support prevents conductor buckling, controls lateral deflection and helps reduce vortex induced vibration under wave and current loading. When used to support the BOP, the ICON TTS also prevents conductor overload below should any off-centre or horizontal loading be experienced.

### Technical Specifications:

Design Codes and Classification	DNVGL/ABS upon request
Ambient Temperature	-0°C to 50°C
Tension Capacity	60-300Te (or as required)
Deck Connections	From 2 to 4 as required
Typical Stroke	1000mm (or as required)
Operating Pressure	215-230 bar
Nominal Weight	Variable based on 2 / 4 point
Hydraulic Fluid	Water Glycol

### Typical Tension Variation Vs Stroke:

25mm	50mm	75mm
3.1%	6.3%	9.7%

Note: Control unit can be customised to suit maximum conductor tension variation allowances

### Key Features and Benefits:

- ICON TTS can be interfaced directly to BOP crown or supplied with ICON 'Pull-up' Gripper Clamp for connection to conductor.
- ICON TTS system is complete with connections to ICON Conductor Tensioner Control Unit (CTCU).
- Standard features of the ICON TTS includes tensioning cylinders, CTCU, interface rigging (i.e. chain, slings, shackles etc.) and underside drill floor padeyes.
- Low maintenance requirements with use of parts, materials and coatings suitable for offshore environment.
- Complete with easy to follow operating and maintenance instructions.
- ICON can also perform underside deck arrangement and strength checks for interface of TTS system.
- Rental and purchase options available.



Top Tensioning Drill Floor Installation



Top Tensioning BOP Crane Installation