

## PULL- TYPE (PT) TENSIONER COMBINED PUSH TYPE + PULL TYPE TENSIONER SYSTEM

The pull type (PT) top tensioner system is generally used to support the weight of the BOP by attaching to support padeyes or a support clamp on top of the BOP. The BOP weight is supported from above and kept stable without relying on the diverter and bell nipple. This is particularly important when the BOP is on 13 3/8" or smaller casing. The PT system can also be used as a stand alone conductor tensioning system by attaching to a support ring on the conductor below the BOP.

Most commonly, the PT system is used in conjunction with a push type (RS) system. The RS system tensions the primary conductor (eg 20") whilst the PT system is connected to the BOP which might be attached to the 13 3/8" casing. This allows the initial conductor to be tensioned whilst drilling for the next casing and whilst the BOP is being installed.

The top tensioner system is also used when drilling through platform conductors which cannot support the weight of a HP BOP (often >90t). In this case the PT system can be used alone.

The top tensioner system can be supplied with a totally independent control unit or we can supply a combined control unit for both the PT and RS systems. One control unit is for the push type RS unit and the other control unit is for the pull type PT system. Any of our current push type units can be used with this control system. Refer to our separate brochure for the RS push type conductor tensioners.

PT systems are typically specified to have a capacity of 100-160t when designed to support the BOP weight and up to 400t when designed as a conductor tensioner. The top tensioner system can use 2 or 4 pull cylinders depending on customer preference. A 4 cylinder system can be configured as 2 pairs of cylinders to allow the system to operate at reduced capacity if there is a hose failure in one pair. Stroke is typically 1 metre to allow sufficient slack in rigging for connection to the BOP or load ring. Tensioners can be made with customer specific load capacity or stroke if required.



### KEY FEATURES:

Standard control unit is air powered using rig air  
Operates on glycol-water based fluid or mineral oil  
Optional pressure interface with rig's control systems  
PT control unit uses same components as RS control unit

### SPECIFICATIONS:

**Operating Stroke:** typically 1.0m (39")  
**Tension Variation vs Stroke** less than 25% over 150mm stroke  
**Hydraulic Cylinders:** 2 or 4 off with SS rods  
**Operating Temperature:** 0° C to +50° C ambient (-10 deg C option available)

pt ver01