PHC IL400 SURFACE PASSIVE HEAVE COMPENSATOR

The TENSA in-Line Surface Passive Heave Compensator (PHC) is used to provide compliant support to a load suspended from a crane, winch or blocks on a heaving vessel/ semisubmersible rig. This capability is used in the following situations:

- supporting a load which is held stationary on the seabed from a heaving vessel (locked-to-bottom operation)
- limiting the motion and landing velocity of a load lowered onto a stationary support (eg seabed or fixed platform) ..
- to minimize load variations (reduce DAF) when lowering an object through the wave zone
- to maintain tension in a fixed line from a vessel to seabed eg guidewire or umbilical

The PHC IL400 is a fluid damped air spring with a low spring rate. This is achieved using gas - fluid accumulators. Composite accumulators are used to reduce the overall weight and require minimal maintenance. The PHC IL400 is for operation above water only. TENSA can provide a Subsea Passive Heave Compensator (SPHC) which can be operated subsea to 2000m water. Please consult TENSA for the detail of SPHC.

Design is in accordance with API spec 2C - Specification for Offshore Cranes, API 8C - Specification for Drilling and Production Hoisting Equipment, DnV -OS-E101 Drilling Plant and other relevant API and AS codes covering the mechanical construction. Purchasers may request certification from DnV, ABS or other recognized certification organisation.

The TENSA PHC IL400 is rugged and simple to set up and use. Accumulator pressure can be preset or controlled remotely using a small hose to a pressure control panel connected to a 207 bar (3000 psi) air supply.

The TENSA PHC series can be used in parallel to double the capacity or in series to double the stroke. Additional accumulators can be added to further improve the operating performance for extreme conditions.

The PHC IL400 is designed to fit in a 40ft container. The compact and simplified design of PHC IL400 greatly minimizes the risk to personnel.

**SPECIFICATIONS:**

- **Design Pressure:** 207 bar (3000 PSI)
- **Load at design pressure:** 395 metric tonnes (870.8 Kips)
- **Design static load (lifting):** 550 metric tonnes (1212.5 Kips)
- **Operating Stroke:** 4500mm (IL400-45)
- Longer stroke by special order. Alternatively 2 x units can be used in series to double stroke.
- **Hydraulic Fluid:** Mineral oil or glycol/water based
- **Accumulators:** 4 x composite. 207 bar WP, 1000 l each. 4 x steel gas /fluid accumulators.
- **Overall Dimensions:** 7930(L)x2200(W)x2269(H) mm
- **Weight:** 26,500 kg
- **Surface Treatment:** Marine coating
- **Operating Temperature:** 0°C to +50°C (-10°C opt)