

## SPHC 400 X2 - SUBSEA PASSIVE HEAVE COMPENSATOR

The TENSA in Line Subsea Passive Heave Compensator (SPHC) is used to provide compliant support to a load suspended from a crane or winch on a heaving vessel. This capability is used in the following situations:

- supporting a load which is held stationary on the seabed from a heaving vessel
- limiting the motion and landing velocity of a load lowered onto a stationary support (e.g. 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 e.g. guidewire or umbilical line

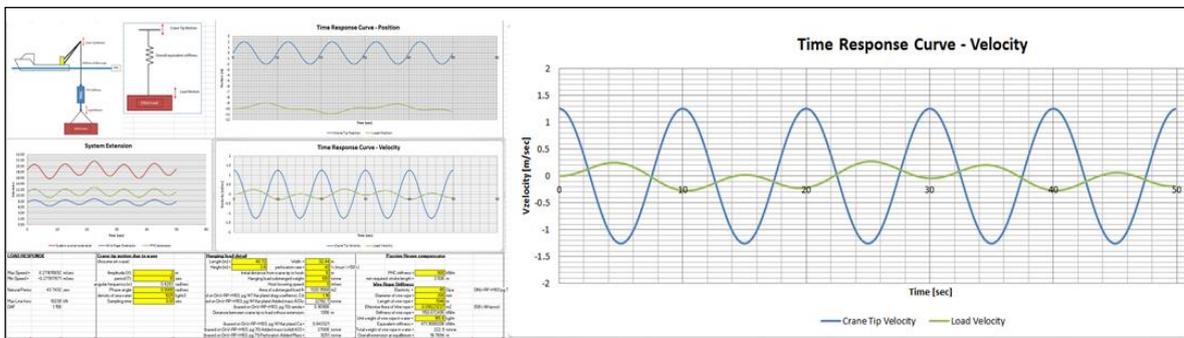
The SPHC 400 X2 is a fluid damped air spring with a low spring rate. This is achieved using gas - fluid accumulators. The unit is suitable for subsea operation.

Design is in accordance with API spec 2C Specification for Offshore Cranes and other relevant API and AS codes covering the mechanical construction. Purchasers may request design and fabrication approval from DnV, ABS or other recognized certification organisation.

The TENSA SPHC 400 X2 is rugged and simple to set up and use.

The TENSA SPHC series are modular and can be adapted quickly to different strokes and operating conditions. 2 units 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.

TENSA has developed simulation software to model the performance of our Passive Heave Compensators. The software simulates the vertical motion of the load under any given excitation displacement of the crane tip. This gives immediate insight into the performance of the unit and the acceleration, velocity and displacement of the load as well as the loads experienced by the system and the dynamic amplification factor. Minimal training is needed to run the software.



### SPECIFICATIONS:

**Operation SWL:** 400 metric tonnes (882 Kips)

**Test load:** 575 metric tonnes (1267.7 Kips)

**Operating Stroke:** 5000mm

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

**Overall Dimensions:** 7600(L)x2600(W)x800(H) mm

**Weight:** 23800 kg

**Surface Treatment:** Marine coating

**Operating Temperature:** 0° C to +50° C (-10° C opt)

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