

## COMPENSATED TENSION LIFT FRAME

### Passive Heave Compensation

#### Fully Customised Unit

The Compensated Tension Lift Frame (CTLF) System is designed to be installed as part of the travelling block assembly on a semi-submersible drilling rig. It is similar in operation to a standard MODU drill string compensator, mounting to the top drive unit and therefore can be rapidly deployed as required.

**The fully customised CTLF's function is to minimise hook load variations due to vessel heave better than any other product available.**

This fully optioned model is fitted with the Icon "Safe Link" feature, so this Compensated Tension Lift Frame can be utilised as Back up to the Rig String Compensator system. The "safe link" feature constantly monitors drill string tension and triggers the CTLF to begin compensation in event of accidental lock up of the rigs drill string compensator.



**View showing the Compensator Assembly.**

The fully customised CTLF installs directly to the top drive using either ICON supplied Bale Arms or a Saver Sub connection ensuring quick and easy installation.

This Compensator accommodates a single amplitude 3m heave range and is rated Dynamic load 250 short ton and Static load rating of 350 short tons using ICON **Static load lock** feature. The unit's movement caused by vessel pitch / roll is also eliminated by ICONs **Dolly Track Guide** feature.

The Compensator is designed, engineered and certified for offshore lifts. Its supplied rigging enables lifts direct from supply boat for ease of handling.

The Compensator connects to ICONs **Tension Frame Assembly**, consisting of spreader beams and bale arms, enabling wire line or coil tubing activities to be performed within the frame. Coupled with Hydraulic Winches and **Customised Access Platforms** ensure a safe and independent working environment for your rig crew.

**Anti-recoil valves** are a key safety feature, which sense sudden load release and safely arrest the motion of the compensator in the event of drill string failure.

Programmable Logic Controllers and data from the Linear / Pressure transducers are monitored by a Touch Screen Control Panel to adjust and operate the entire compensator system. An Electrical power supply is required and all electrical equipment supplied is Ex Rated.

Key features include a **Lock Off facility** which can hydraulically lock the Compensator unit during operations. An extra **Fluid Supply Upgrade Skid** plus a choice of Electric or Diesel driven **H.P. Air Compressors**. Compressors are required when the Rig cannot provide a H.P. (300bar) air supply. It can also be used to provide redundancy to the Rig utility air system.

ICONS entire range of Compensated Tension Lift Frame assemblies' are constructed using materials sized and suited to the harsh marine environment, ensuring long reliable life and low maintenance. The materials within the CTLF are safe and can be certified and compliant to any current offshore codes (eg API8c) at your request.

ICON understands the challenges Our clients face. Please feel free to discuss with our staff any queries you have regarding Heave Compensation issues.