TENSION FRAMES

ICON Advanced Riser Tension Protector

Tension Lift Frame

Functionality & Safety for Subsea Well **Completions & Interventions**

The ICON ARTP Tension Frames are a step change beyond traditional coiled tubing lift frames (CTLFs). The equipment range combines proven technology with advanced innovative design to provide the ultimate in functionality and safety for subsea well completions and interventions from floating rigs (i.e. "locked-to-bottom" operations).

The base model ICON Tension Lift Frame (TLF) is a simple, practical, tension frame designed to provide a rigid structural link supporting the completions / workover (C/WO) riser while facilitating safe rig up of surface pressure control equipment (PCE).

ICON TLF Overview

| Application | Best suited for low risk operations where there is no risk of exposure to wellbore pressures at the surface |
|------------------------------------|---|
| Primary Benefits & Functions | C/WO riser tension frame |
| | PCE operating window, suitable for both coiled tubing and wireline operations |
| | Robust primary structural load path with no bolted connections |
| | Interfaces directly with the surface flow tree for minimum stack-up height |
| | Quick and easy to install, utilising standard drilling connections for minimum rig-up time |
| | C Lightweight and easily transportable |



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ICON Tension Lift Frame Functional Description



Note: Typical specifications are listed below. The system can be customised to suit project specific requirements. For guidance and advice on specifying the correct ICON ARTP for your project, contact an ICON Engineering specialist. We can guide you through the process and assist in developing the optimum solution for your application.

| Design Codes | ► ISO 13628-7 / API 17G ► API 8C ► DNV 2.22 |
|-------------------------------|---|
| Certification | ► DNV |
| Load Ratings | From 500 to 1500 kips to suit client specification |
| Components (from top down) | Short bales (elevator links) Upper spreader beam Lower spreader beam |
| SFT Adapter | Adapters to suit a variety of surface flow tree handling subs |
| PCE Working Window | ► Width = 6ft ► Height = 48ft typ. (to suit client specifications) |
| PCE Winches | Hydraulic PCE winch with dedicated HPU (if required) or simple air chain hoist Working load limit (WLL) to suit client specification |
| Man-Rider Winch | Dedicated man-rider winch for safe access from drill floor (optional) |
| Work Platform | Working platform fitted to lower spreader beam to allow safe access to the surface pressure control equipment (optional) |
| Working at Heights | ► Full DROPS compliance ► Inertia reels and secondary tie off points for personnel and tools |
| Shipping Skids | Custom offshore rated skids to DNV 2.7-1 / 2.7-3 |



Legendary Innovations. Practical Solutions.