# RISER & DRILLING SYSTEMS Merlin™ HP Drilling Riser System

# **Surface Connector** Merlin™ Riser Pup Joint Merlin™ Riser Stress Joint Merlin™ Riser Merlin™ Riser LynxGrip™

Tension Joint

Intermediate Joint

Wellhead Connector

### A Riser Designed for Extreme Conditions

Oil States Industries is a world-leading manufacturer of advanced connection systems for offshore tubulars. Our connectors offer fast make-up and high-performance connection systems that are ideal for SCRs, TLPs, tethers, conductors, casing, new and replacement caissons, HP risers, pipelines and jacket piles. We're a proven provider of riser components for deepwater, production, drilling and completion risers, and offer comprehensive riser system design services, completion, drilling, subsea and surface equipment to complement our trusted worldwide field-proven connector technologies.

Oil States Industries Merlin™ High Pressure Riser System not only provides fluid and pressure containment, but also structural and global integrity. A high-pressure riser system is used to drill wells from a jack-up drilling unit utilising a dry surface BOP and HP drilling riser, complete with a hydraulic subsea connector to the subsea wellhead.



- Fully integrated riser system
- 5,000, 10,000 and 15,000 PSI rated
- 3,000, 10,000 and 10,000 . 31. atom
- Rated for temperatures -18°C to 121°C
- Large bore ranging from 19" to 21"
- NACE sour service compliant
- Quick-connect LynxLok™ connecting BOP to Riser String
- Non-helical Merlin connector design delivers high strength and fatigue performance
- 18 ¾" Subsea Wellhead connection
- Fast Make-up and break out
- Mature, field proven technology



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#### Merlin HP Riser System Package

- LynxGrip™ Wellhead Connector Assembly
- Stress joint
- · Intermediate joint and pup joints
- · Tension joint
- · LynxLok BOP Quick Connection
- · Wellhead connector guide frame
- · ROV panel for wellhead connector
- Umbilical reeler and sheave, with singular
   Wellhead Connector Controls and Mud Booster
- HPU for Wellhead Connector Umbilical Control and Mud Booster Line
- Test stump for Wellhead and LynxLok BOP Connector
- HPU for Wellhead Connector (offline function testing)
- · Merlin Connector assembly tooling
- · Merlin Riser running, assembly and test tooling
- · Tension joint/LynxLok Riser running tool
- · 10-ft workshop and spares container
- · Torque make-up tooling
- Merlin Riser System integration testing
- · Passive riser fatigue monitoring system
- · Merlin testing history

## The Performance Required for Demanding Jobs

Oil States equipment is engineered to provide the best riser run and pull times possible. The riser is assembled with Oil States' Merlin technology for outstanding performance and operational efficiencies.

Depending on rig handling, a riser can be run in five hours or less once the subsea packages and BOP are precommissioned and tested. Connection make-up is four minutes or less, reducing NPT and costs compared to other systems.

Pressure Rating	5,000 - 15,000 PSI
Temperature Rating	-29°C to 121°C
Max Outside Diameter	45.75" Lynxlok™ BOP Connector 28.30" Merlin™ Joint 51.50" LynxGrip™ Wellhead Connector (based on 15K Riser System)
Min Inside Diameter	18.75"
Joint Length	Circa 12m Running Length various pup joint length available
Service	NACE Compliant
Seals	Metal-metal gas tight seal
Coating	Epoxy or Thermally Spayed Aluminium

Additionally, the connections offer superior performance for critical loading and fatigue levels.

From the Oil States wellhead connection to the BOP connection, crews experience safe and efficient performance. Every aspect of the riser, string and package tooling optimizes operations.

LynxGrip tooling options allow mating the riser to the well-head package for quick and efficient subsea connectivity using topside control or ROV intervention.

LynxLok provides fast and efficient BOP connectivity compared to conventual API flange make-ups. LynxLok not only allows for complete offline pre-qualification of the BOP and annular but also enables fast riser running using the LynxLok Riser Running Tool and LynxLok riser to BOP connection. Each make-up is just 15 to 30 minutes rather than the typical four to five hours required for standard flanges. This process also eliminates manually handling fasteners, reducing PDOs for greater safety.

The Merlin HP Riser package offers unbeatable **cost and time savings,** that positively impact operations.

#### **OIL STATES INDUSTRIES**RISER & DRILLING SYSTEMS

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