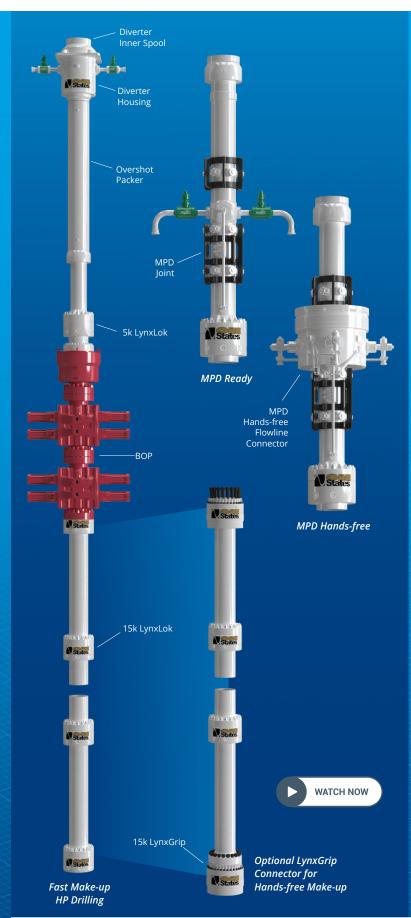
RISER & DRILLING SYSTEMS



MPD High Pressure Riser System



With a growing number of wells moving offshore, more jackups require upgrades to be equipped for these high-pressure environments. Oil States' (OSI) High-Pressure Riser Systems for Jackups are specifically engineered to meet this need. They feature built-in automation capabilities as well as optional managed-pressure drilling (MPD) or hands-free add-on systems. Available for purchase or rental, these riser systems offer operators greater capability, safety and speed.

Each High-Pressure Riser System offers fast make up speeds due to the use of a LynxLok™ connector. The LynxLok connector enables 15-minute make up speeds, compared to the traditional two-hour make up time when connecting to the BOP. This enhances safety and reduces risks on-site by limiting the amount of time personnel spend in the danger zone.

MPD-ready option

The fully integrated MPD system features an 18 3/4" thru-bore MPD joint and dedicated, quick-closing annular packers for unplanned bearing change out — with no need to rely on the BOP annular. By avoiding reliance on the BOP annular, the MPD-Ready System reduces costs, safety risks and NPT.

Hands-free option

This configuration includes the LynxGrip™ connector, which is hydraulically operated and can be made up remotely in less than five minutes — removing personnel from hazardous and challenging environments. For the hands-free configuration, the MPD joint travels through the rotary table from the drill floor to the BOP stack. While running, it locks into a flowline spool ring to provide all the services to the MPD joint completely hands-free. When not in MPD mode, the flowline spool ring locks under the diverter. Once completed, the flowline spool ring remains permanently made up to its hoses, even as the rig transits to other well sites, for lasting safety risk and NPT reductions; an industry-first for a jackup.



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MPD High Pressure Riser System

OSI also manufactures compact Piper Valve Series PB Ball Valves that can be used on the high-pressure riser, topside applications and diverter systems. Using this compact, six-inch ball valve helps reduce both size and weight of the system. With a 20+ year proven track record in valve manufacturing, Oil States Piper Valves provide optimum flow performance under diverse pressure and flow situations while offering the economy of field repairability.

In addition to high-pressure riser systems, we offer current equipment manufacturer (CEM) packages for operators' existing equipment which provide the same level of technical support offered for OSI's technologies. OSI's regional office, workshop, repair shop, testing facility and equipment storehouse enable our offshore inspection team to quickly and efficiently complete inspections and certifications, returning cold-stacked equipment to service within four months.

Design Features

- Fully integrated riser system
- Quick-connect LynxLok Mandrel connector above the BOP
- Industry-first flowline spool ring pre-installed beneath the diverter support housing (hands-free option)
- 18 3/4" thru-bore MPD joint
- · Dedicated, quick-closing annular packers
- Rated for temperatures range from -29°C to 121°C
- Rated for up to 3,000 psi for MPD section above BOP
- Rated for up to 15,000 psi for the BOP and components below

Benefits

 Enables operators to drill challenging narrow-margin wells, making it less likely to lose mud into the formation or for formation fluid to enter the riser

- Quick-closing annular packers allow unplanned bearing change out
- Bearing and annular packers are fully retrievable to surface; run and retrieved on drill pipe
- Overshot is compatible with all major OEM styles of jackup diverter
- Industry-first flowline spool ring reduces rig time in the moonpool area for make up of hoses and services to the MPD joint. Flowline spool ring is permanently installed.
- Choice of LynxLok or LynxGrip connectors enable make up in 15 minutes or less than five minutes, respectively

 compared to two hours with conventional methods
- Surface risers can terminate to standard API flange or hub connection, or to LynxGrip connector for quick, hands-free make up
- OSI'S inventory offers a wide range of crossovers and connectors for all wellhead applications
- Optional gripper-style riser tension clamp sits anywhere along the riser pipe length for stack-up "tally" flexibility and routine integration with a typical rig CTU
- Aftermarket CEM packages return cold-stacked equipment to service within four months, with comprehensive inspections and certification

Testing

 All riser string components have been qualification tested in-house to the relevant code

Standards

- API 16C
- API 16A
- API 16RCD
- DNV GL OS E101
- API 16F
- ABS CDS
- API 6A

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