

IRJ

Integrated riser joint system

APPLICATIONS

- Riser gas handling (RGH)
- Managed pressure drilling (MPD)
- Pressurized mudcap drilling

BENEFITS

- Streamlined operations resulting from a single OEM supplier, control system and user interface, and an umbilical reeler for all integrated riser joint (IRJ) functionality
- Operational flexibility to configure system as a single joint or three joints
- Time and cost savings by running single-joint system in one lift
- Compact and lightweight solution that can be deployed in one piece

FEATURES

- 3,500,000-lbf [15,568,776-N] tensile load
- 2,000-psi [13.8-MPa] rating
- ≥60.5-in [1,536.7-mm] rotary table
- <80,000-lbm [36,287-kg] single-joint system
- Two 6-in [152.4-mm] flowlines with one 2-in [50.8-mm] bleed line
- Goosenecks with breech lock connectors for efficient installation and removal in the moonpool
- Fluid swivels for alignment and connection of flexible hoses while reducing hose torsion load
- Compatibility with all risers
- Optional top and bottom connections
- Optional hands-free gooseneck installation
- Ability to be configured with or without the choke and kill lines integrated

The IRJ* integrated riser joint system enables effective riser gas handling and MPD operations in a modular, flexible design. The IRJ system consists of a flow joint, annular BOP, and below-tension-ring rotating control device (BTR RCD). When equipped with an @balance Speed* sealed rotating system, the BTR RCD provides a closed-loop circulating system of flow from the riser annulus to surface equipment. The flow spool features goosenecks with valves and hoses, enabling circulation of drilling fluid to surface, where returns can be routed appropriately based on desired operation. The annular BOP serves as an alternative, active seal option when the @balance Speed system is not deployed or requires replacement.

Advanced design

As a key component of the complete OEM reservoir-to-flare stack MPD system, the IRJ system provides real-time operational adaptability. The system can be used to handle unwanted gas in the riser by closing the annular device to circulate out gas. Installation of an @balance Speed system enables the annulus to be sealed off while drilling or tripping and fluid to be diverted to surface. When MPD techniques are deployed, drilling returns are managed through a choke manifold, enabling effective change of downhole pressure via surface pressure. Time and costs are saved from eliminating the need to weight up or fight losses before drilling ahead.

The IRJ system and all surface equipment are controlled from one platform, giving operators the flexibility to switch from conventional drilling



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to MPD or RGH operations. This facilitates improved drilling practices and reduced NPT, which is often experienced without such equipment.

Integrated Riser Joint Specifications

Operational pressure rating	2,000 psi [13.8 MPa]
Tensile load rating	3,500,000 lbf [15,568,776 N]
Maximum operating depth	150 ft [45.72 m]
Length	40 ft [12.2 m]
Maximum OD	59 in [1,499 mm]
Minimum ID (passthrough)	18.75 in [476.25 mm]
Weight	76,000 lbm [34,473 kg]
Standard connections (top and bottom)	LoadKing* deepwater riser system

Actual specifications may vary depending on IRJ configuration.