

iRCD

Vertechs iRCD is an all-electric intelligent rotating control device for MPD and UBD applications. As conventional hydraulic and manually operated RCDs face increasing challenges in deployment, operation and maintenance, Vertechs iRCD is designed for demanding deep-formation, high-pressure, high-rotation-speed and unconventional drilling environments. It combines an all-electric annular latching system, a self-lubricating bearing assembly and real-time status monitoring to simplify deployment, improve operational control and completely eliminate hydraulic actuation and external cooling equipment.



FEATURES

- All-electric annular latching system with dual-actuator redundancy, no additional HPU required
- Synchronized all-electric annular latching to prevent bearing misalignment-related wear
- Self-lubricating bearing assembly, no external circulating cooling system required
- Multiple sensors for iRCD real-time status monitoring

- Switchable single/dual element configuration
- Self-positioning deployment with dedicated running tools
- Ø8 1/4 (210 mm) big bore for up to 5-7/8 in drill pipe (for 13 5/8 in type iRCD)
- Smaller Housing OD, installation through rotary table
- Housing upper flange available for tying back to rig diverter, avoiding fluid spillage

BENEFITS

- Simplify system configuration, rig-up/down and operations by eliminating hydraulic and cooling auxiliaries and improving surface equipment integration
- Extend sealing/bearing service life and lower maintenance cost through synchronized electric locking and self-lubricating architecture
- Reduce personnel exposure around rotating and high-pressure equipment through monitored electric latching and local/remote HMI control
- Reduce manpower requirements by simplified equipment, reduced maintenance and improved control

APPLICATION

- Managed Pressure Drilling (MPD), Underbalanced Drilling (UBD) and Pressurized Mud-cap Drilling (PMCD)
- Onshore land rigs, modular rigs, jack-up rigs and offshore drilling applications

SPECIFICATIONS (FOR 13 5/8 IN TYPE)

API Monogrammed	API 16RCD	Latching System Actuator	All-electric annular latching system with dual-actuator redundancy
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Static Pressure Rating	5,000 psi [35 MPa]	Dynamic Pressure Rating	2,500 psi [17 MPa] @ 0-10 rpm 1,500 psi [10 MPa] @ 11-100 rpm 1,250 psi [8.6 MPa] @ 101-150 rpm 1,000 psi [6.9 MPa] @ 151-200 rpm (See note)
Bearing Assembly Through-Bore	8 1/4 in [210 mm] (For up to 5-7/8 in drill pipe)	RPM	0-200 rpm
Housing Outlet	7 1/16 in, 4 1/16 in, 2 1/16 in (Customizable)	Bottom Flange	13 5/8 in
Housing Height	53 in [1,345 mm]	Weight	8,400 lbs [3.8 MT]
Packing Elements	Single / Dual	Lubricating & Cooling	Self-lubricating
Explosion-Proof Rating	Zone 1	IP Rating	IP65, Dust-tight & Water jet-proof
Ambient Temperature	-45 °C to 80 °C [-49 °F to 176 °F]	Communication Protocol	WITS

Status Monitoring	Temperature, pressure, rotation speed, landing position and latching status	Control Modes	Local panel, wired / wireless remote control
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NOTE: Dynamic pressure performance is indicative only and may vary with sealing element compound, drill pipe size, mud properties, temperature, wear condition and field operating practices. Published ratings are based on in-house laboratory testing and should not be interpreted as guaranteed field operating limits.

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