

HOLD ROTATING CONTROL DEVICE

FEATURES

- Independent high pressure seal system isolates bearings from contamination, optimizing performance
- Secondary mechanical lock not required
- Dual sealing elements available for enhanced seal integrity and extended rig time between sealing element changes
- Sealing elements available in natural rubber, nitrile, butyl, and urethane to meet application requirements
- Riser Containment Kit allows connection from the RCD to the rig bell nipple

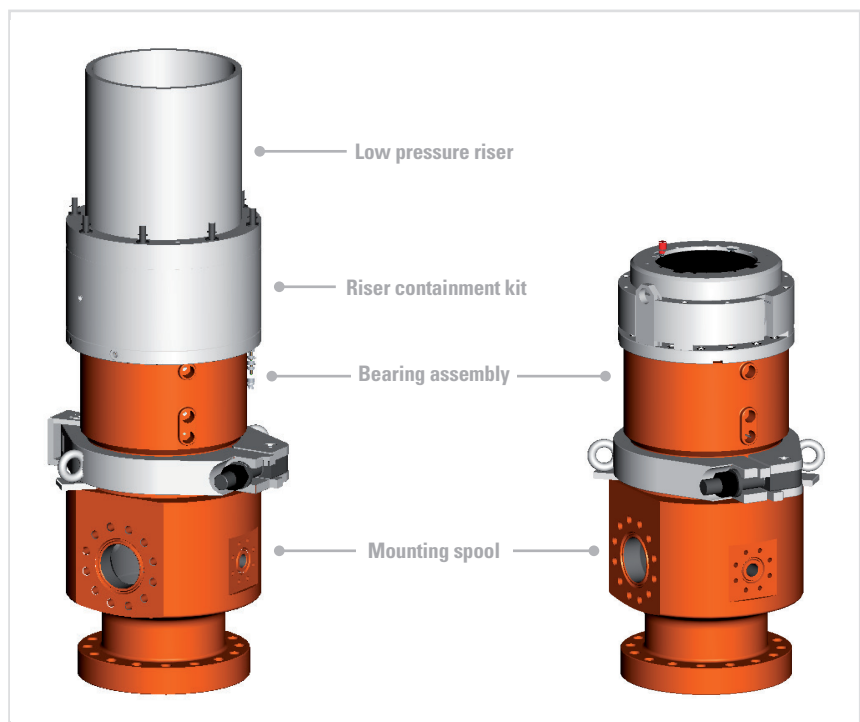
BENEFITS

- Remote hydraulic clamp saves time during installation and removal of sealing elements and eliminates need for personnel below rig floor
- Allows drilling operations to continue while isolating potentially harmful wellbore fluids
- Bearing removal not required to change sealing elements
- Fail-safe lock does not require constant hydraulic pressure to remain locked
- Safety interlock system prevents release of sealing element in presence of wellbore pressure
- Complete hydraulic lockdown and release of sealing elements

APPLICATIONS

- Annular containment of wellbore fluids
- Managed pressure drilling (MPD)
- Underbalanced drilling (UBD)
- Pressurized mudcap drilling (PMCD)

The HOLD ROTATING CONTROL DEVICE[†] (HOLD RCD[†]) was the first RCD in the industry to include a remotely operated clamping system.



HOLD RCD with riser containment kit (left) and HOLD RCD (right).

Hydraulic Operated Lockdown - A Solution for Improved Safety

The hydraulic clamp mechanism and wellbore relief valve are operated remotely through a multifunctional control console conveniently positioned on the rig floor. The console incorporates dual safety features that keep the clamp locked down and prevent it from opening in the presence of wellbore pressure. For Riser Containment Kit applications, a flow meter is included with the console and proximity sensor utilized in the clamping mechanism to provide direct indication of clamp travel. A visual indicator pin atop the bearing assembly is available when the Containment Kit is not installed. Remote operation eliminates the need of personnel below the rig floor, contributing to a safer working environment and reduction of time required to change out seal elements.

The HOLD RCD system is comprised of five major components: bearing assembly, mounting spool, control console, lubricator, and hose reel skid. The bearing assembly is offered in two standard pass-through sizes: 12¼-in and 13½-in.

Sealing Element Selection

Sealing elements are available in four different elastomer compounds: natural rubber, nitrile, butyl, and urethane, each of which has performance characteristics to meet application requirements. Single and dual sealing configurations are available and sealing elements can be installed and removed from the rig floor without removing the bearing assembly.

Riser Containment Kit

Installation of this kit along with a low pressure riser (LPR) allows the RCD to tie in to the rig bell nipple. This eliminates incidental mud spillage during drillpipe connections, sealing element replacements, and standard pipe-handling activities. Conventional drilling operations can proceed when the sealing element is removed. The package is utilized when 100% fluid containment must be achieved.

HOLD Bearing Specifications	
Maximum pass through bearing assembly	12-1/4 in or 13-5/8 in
Static Pressure Rating	5,000 psi
Maximum Dynamic Pressure Rating	2,500 psi
Maximum RPM	200
Bearing assembly OD	27-1/2 in
Bearing assembly OD with containment kit	30 in

Sealing Element Drive Bushing	Maximum OD
Single sealing element	16½ in
Dual sealing element	18½ in

HOLD Mounting Spool Specifications		
Inlet Flange	Outlet Flange	Assembly Height with Bearing
11 in 3,000 psi or 5,000 psi	One 7-1/16-in, 3,000psi or 5,000psi and two 2-1/16 in, 5,000psi, or two 2-in npt	52 in - 72 in
13½ in 3,000 psi or 5,000 psi		50 in - 72 in
16¼ in 5,000 psi	One 7/16-in, 5,000 psi and two 2 1/16-in, 5,000 psi	66 in - 72 in
18¼ in 5,000 psi		66 in - 72 in

Pressure ratings for the bearing and internal seals have been determined through in-house lab testing with a test plug installed. Due to the uncontrolled environment of well drilling operations, M-I SWACO, its operating units, agents, and affiliates make no warranty, either expressed or implied, on the pressure ratings contained herein. M-I SWACO does not, under any circumstances, recommend that its RCDs be used as primary blowout prevention equipment. Pressure ratings vary by sealing elements material and drill pipe size. Contact M-I SWACO for application needs.



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