

## Retrievable DwC Latch

Connects the bottomhole assembly (BHA) to the casing

### Applications

- Performing retrievable drilling-with-casing (DwC) operations in vertical, inclined, and extended-reach-drilling wells

### Features and Benefits

- The latch can be unlocked and pulled out of the hole by running the workstring release retrieval device (WRRD) on drillpipe to retrieve the BHA and service its components.
- The bypass ports in the latch alleviate the surge and swab effect when tripping the BHA through the casing.
- The packer cups seal the annulus between the casing and the latch to direct fluid from inside the casing to the BHA. They also prevent pressure from encroaching into the casing in the event of a kick.
- The latch can be installed in the first joint of casing either before casing delivery to the rig or after casing delivery at the rigsite using a simple locking process.

### Tool Description

The Weatherford retrievable DwC system enables operators to drill or ream with casing and retrieve the BHA before and after reaching the target depth. The system includes four key components: the WRRD, latch, hydraulic releasing device, and hydraulic locking device (HLD).

The latch locks the BHA into the profile collar and casing using the HLD. The locked latch transmits axial and torsional forces to the BHA. The ability to latch the BHA enables retrieving and replacing the assembly without pulling the entire casing string out of the hole.



A component of the Weatherford retrievable DwC system, the latch transmits axial and torsional forces from the casing to the BHA or vice versa.



# Retrievable DwC Latch

## Specifications

|                                     |  |
|-------------------------------------|--|
| Casing size                         | 9.625 in. (244.5 mm)                                     |
| Casing weight                       | 36 to 53.5 lb/ft (53.5 to 79.6 kg/m)                     |
| Maximum OD                          | 8.375 in. (212.7 mm)                                     |
| Minimum ID                          | 2.25 in. (57.15 mm)                                      |
| Length                              | 144.75 in. (3,676.65 mm)                                 |
| Weight                              | 1,368 lb (620.5 kg)                                      |
| Maximum differential pressure       | 3,000 psi (20.68 MPa)                                    |
| Maximum flow rate                   | 700 gal/min (2,648.8 L/min)                              |
| Tensile capacity (pull with casing) | 250,000 lb (113,398 kg)                                  |
| Tensile capacity (pull with WRRD)   | 148,000 lb (67,132 kg) safe operating tensile load       |
|                                     | 185,000 lb (83,915 kg) yield load                        |
| Maximum set-down load               | 200,000 lb (90,718 kg)                                   |
| Torque load capacity                | 37,800 ft-lb (51,240 N·m)                                |
| Required activation force           | 3,000 lb (1,360 kg)                                      |
| Operating temperature               | 30°F to 300°F (-1°C to 149°C)                            |
| Top connections                     | LH ACME pin (ext.) and 3 7/8-in. stub ACME 2G box (int.) |
| Bottom connections                  | NC50 pin   |



The retrievable DwC latch is always used with the profile collar.

