

# Retrievable DwC Hydraulic Releasing Device

Enables releasing the latch from the profile collar

## Applications

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

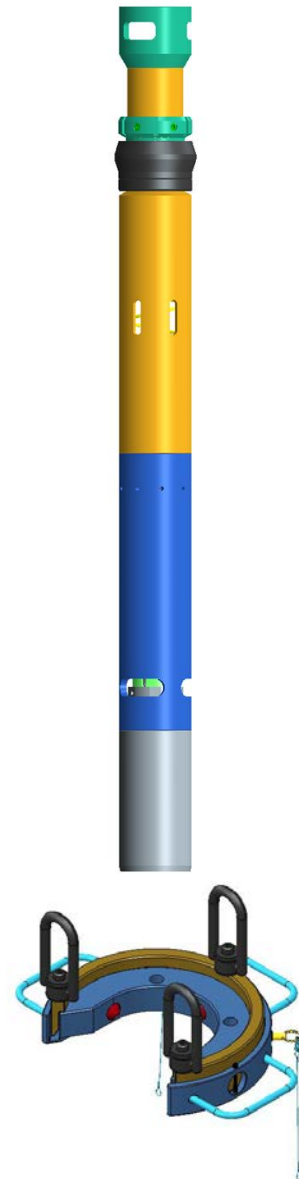
## Features and Benefits

- The hydraulic releasing device (HRD) gives operators the ability to lower casing and cover the rathole left by the bottomhole assembly (BHA) stickout.
- The GS spear nose on the bottom of the HRD is field proven in many fishing applications and provides a reliable catch to pull tools out of the hole.
- The HRD top sub accepts the GS spear nose of the workstring release-retrieval device (WRRD). This capability enables recovering all components of the retrievable DwC system, including the HRD and latch, and the BHA in a single trip.
- The jetting ports in the HRD bullnose enable effective cleaning of the latch top sub to remove any stuck debris that may impede stabbing and engagement of the GS spear.
- Once the latch is fully disengaged and the HRD activation pressure is bled off, the top and bottom bypass ports in the HRD open to allow unrestricted flow through the inside diameter of the latch for reduced surge and swab pressures during BHA retrieval.
- The rupture disc on the HRD mandrel provides a contingency flow path if HRD activation is unsuccessful.

## 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, HRD, and hydraulic locking device.

The HRD is pumped down the casing string to release the latch and BHA from the profile collar, which enables lowering the casing string to cover the rathole. After drilling or reaming to the target depth, the HRD is released from the rotary table using a launching device above the casing stump. Continued pumping and pressure buildup initiates the release of the latch from the profile collar. An abrupt drop in standpipe pressure indicates the release of the BHA from the casing string, and the string can then be worked down to the bottom.



A launcher (bottom) launches the HRD (top) inside the casing in a safe, controlled manner.



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## 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)
Length	102 in. (2,590.8 mm)
Weight	800 lb (362.9 kg)
Spear tensile yield strength	150,000 lbf (667,233 N)
Spear required engaging force	1,500 lbf (6,672.3 N)
Required activation pressure	1,000 psi (6.89 MPa)
Operating temperature	30°F to 300°F (-1°C to 149°C)
Top and bottom connections	3 7/8-in. stub ACME 2G box
Bottom connections	GS spear



The retrievable DwC HRD enables releasing the latch and the drilling assembly from the casing string and also lowering the casing string to cover the rathole.

