

RipTide[®] RFID Drilling Reamer

Provides unlimited actuations to enlarge boreholes below casing restrictions and simultaneously drill and enlarge wellbores

Applications

- Drilling and enlarging simultaneously in a single trip
- Underreaming concentric boreholes below casing restrictions to facilitate running casing strings and to permit a larger intermediate casing diameter
- Expanding existing pilot holes in a wide range of formations
- Reducing annular fluid velocities to effectively manage equivalent circulation density (ECD) and minimize the risk of kicks
- Facilitating solid-expandable installations and openhole, gravel-pack, and oversized-liner completions
- Optimizing cement jobs

Features and Benefits

- Radio-frequency identification (RFID) technology provides on-demand control for nearly unlimited activation and deactivation when tripping and drilling.
- The full-bore ID permits wireline retrieval of radioactive sources, which saves rig time and associated costs.
- The RipTide RFID drilling reamer records downhole events such as vibration, pressure, and temperature to provide the operator with a better understanding of downhole conditions.
- Tandem tools can be run in the same bottomhole assembly (BHA) with fully independent control, which improves operational efficiency.
- The reamer can operate with low flow rates, if necessary, to protect sensitive formations.
- Cutter blocks grip the reamer body at full actuation to reduce vibration, which extends cutter life.
- The retractable cutter blocks facilitate reamer retrieval to save substantial rig time and costs.

Tool Description

The Weatherford RipTide RFID drilling reamer is a concentric mass-balance underreamer capable of enlarging the borehole below casing restrictions. The versatile reamer can simultaneously drill and enlarge when used in conjunction with rotary-steerable systems (RSS) or rotary BHAs. The RipTide reamer can also be used to underream existing boreholes and to open selective zones for solid-expandable installations.



RipTide® RFID Drilling Reamer

The reamer is electronically activated using RFID technology, which provides virtually unlimited activations and deactivations on demand. A small yet durable RFID tag is dropped into the drillpipe ID at surface level and carried downhole in the drilling fluid. The tag transmits instructions to the electronic downhole reader on the reamer controller. Then the controller unlocks, which allows the cutter blocks to fully extend from the reamer body.

Specifications

RipTide Series	Tool Joint Connection	Reamer Body OD	Opening Diameters	Maximum Flow Rate	Equivalent Body Diameter (Body OD Minus Junk Slot)
6000	3-1/2 IF	5-7/8 in. (149.2 mm)	6.25, 7.00, 7.25, 7.50, 7.88, 8.00 and 8.50 in. (158.75, 177.8, 184.15, 190.5, 200.152, 203.2 and 215.9 mm)	413 gal/min (1,563 L/min)	5.622 in. (142.79 mm)
8500	4-1/2 IF	8-1/4 in. (209.5 mm)	8.75, 9.00, 9.50, 9.88, and 10.25 in. (222.25, 228.6, 214.3, 250.9, and 260.3 mm)	830 gal/min (3,141 L/min)	7.940 in. (201.68 mm)
9500	4-1/2 IF	9-1/4 in. (234.9 mm)	10.25, 10.50, 11.00, 11.25, 11.50, 11.75, 12.00 and 12.25 in. (260.3, 266.7, 279.4, 285.75, 292.1, 298.5, 304.8 and 311.2 mm)	830 gal/min (3,141 L/min)	8.900 in. (226.06 mm)
10625	6-5/8 REG	10-1/4 in. (260.3 mm)	11.75, 12.25, 13.00, and 13.50 in. (298.5, 311.2, 330.2, and 342.9 mm)	1,265 gal/min (4,788 L/min)	9.844 in. (250.04 mm)
12000	6-5/8 REG	11-3/4 in. (298.4 mm)	13.00, 13.13, 13.50, 14.00, 14.25, 14.50, 14.75, 15.00 and 16.00 in. (330.2, 335.5, 342.9, 355.6, 361.9, 368.3, 374.6, 381 and 406.4 mm)	2,000 gal/min (7,571 L/min)	11.443 in. (290.65 mm)
14750	7-5/8 REG	14-1/4 in. (361.9 mm)	16.00, 16.50, 17.00 and 17.50 in. (406.4, 419.1, 431.8 and 444.5 mm)	2,000 gal/min (7,571 L/min)	13.659 in. (346.94 mm)
16500	7-5/8 REG	16 in. (406.4 mm)	19.00, 20.00, 21.00, 22.00, 24.00, 26.00, 28.00, 32.00, and 35.00 in. (482.6, 508.0, 533.4, 558.8, 609.6, 660.4, 711.2, 812.8 and 889 mm)	2,000 gal/min (7,571 L/min)	15.051 in. (382.29 mm)

