# RipTide® Ball-Drop Drilling Reamer 10625

Enlarges boreholes below casing restrictions
and simultaneously drills and enlarges 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 and minimize the risk of kicks
- Facilitating solid-expandable installations and openhole, gravel-pack, and oversized-liner completions
- Optimizing cement jobs

## Features and Benefits

- 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 tool retrieval.
- The balanced, concentric design of the cutter blocks minimizes vibration while drilling.

## Tool Description

The Weatherford RipTide ball-drop drilling reamer 10625 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 a rotary-steerable system, motor, or rotary bottomhole assembly. The RipTide reamer can also be used to underream existing boreholes and to open selective zones for solid-expandable installations.

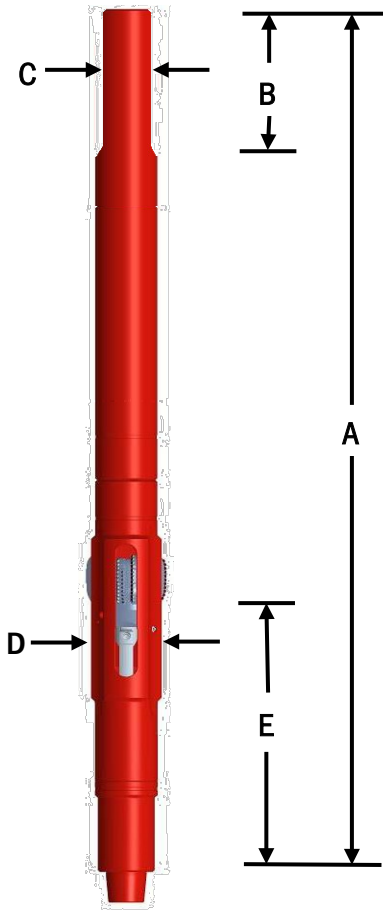
The reamer is hydraulically activated using the proven Weatherford mechanical ball-drop system. After the ball is seated, pumps are turned on to increase standpipe pressure. Precise flow rates shear locking pins and permit the cutter blocks to extend fully from the reamer body. When pumps are turned off, the cutter blocks retract into the body.

The Weatherford RipTide ball-drop drilling reamer 10625 has retractable and concentric cutter blocks that minimize vibration while drilling and facilitate tool retrieval.

# RipTide® Ball-Drop Drilling Reamer 10625

## Specifications

| | | |
|---|---|---|
| Overall length | A | 13.55 ft (4.13 m) |
| Length with booster sub | | 17.29 ft (5.27 m) |
| Fishing neck length | B | 2.00 ft (0.61 m) |
| Fishing neck OD | C | 8.25 in. (210 mm) |
| Reamer body OD | D | 10.25 in. (260 mm) |
| Distance from bottom sub pin to cutter blocks (open position) | E | 5.20 ft (1.58 m) |




## Additional Specifications

| | |
|---|---|
| Maximum flow rate | 1,265 gal/min (4,788 L/min) |
| Tensile yield | 1,368,000 lbf (620,514 kgf) |
| Torsional yield | 79,100 ft-lb (107,245 N·m) |
| Inside diameter | 2.63 in. (66.68 mm) |
| Nozzle size in reamer, minimum and maximum | 7/32 to 24/32 in. (5.56 to 19.05 mm) |
| Maximum flow rate through each nozzle[a] | 140 gal/min (530 L/min) |
| Maximum flow rate through all nozzles[a] | 420 gal/min (1,590 L/min) |
| Top sub length | 3.00 ft (0.91 m) |
| Top sub box up connection | 6-5/8 Reg |
| Ball-drop controller OD | 9.0 in. (228.6 mm) |
| Ball-drop controller length | 3.74 ft (1.14 m) |
| Booster sub length (optional) | 3.74 ft (1.14 m) |
| Reamer body length | 4.08 ft (1.24 m) |
| Equivalent body diameter[b] | 9.84 in. (250.04 mm) |
| Bottom sub OD | 8.25 in. (209.55 mm) |
| Bottom sub length | 2.75 ft (0.84 m) |
| Bottom sub pin down connection | 6-5/8 Reg |
| Reamer assembly weight[c] | 1,200 lb (544 kg) |
| Controller assembly with top sub | 1,135 lb (515 kg) |
| Activation ball size | 1.75 in. (44.45 mm) |

[a] The flow rate is 75 ft/sec (22.9 m/sec).
[b] The measurement indicates the body OD minus the junk slot.
[c] The reamer assembly weight does not include cutter blocks.

## Available Cutter Block Sizes

| PDC | Pilot Hole | Opening Diameter |
|---|---|---|
| 13 × 13 mm | 10.50 in. | 11.75 in. (298.50 mm) |
| | | 12.25 in. (311.20 mm) |
| | | 13.00 in. (330.20 mm) |
| | | 13.50 in. (342.90 mm) |
| 16 ×13 mm | | 12.25 in. (311.20 mm) |

## Recommended Drilling Parameters

| | |
|---|---|
| Maximum rotation | 150 rpm |
| Weight on reamer | 25,000 lbf (111,210 N) |
| Torque | 38,000 ft-lb (51,520 N·m) |
| Dogleg severity | 15°/100 ft (30 m) |
| Lost-circulation material | 65 lb/bbl (0.19 g/cm$^3$) |
| Maximum temperature | 300°F (150°C) |

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