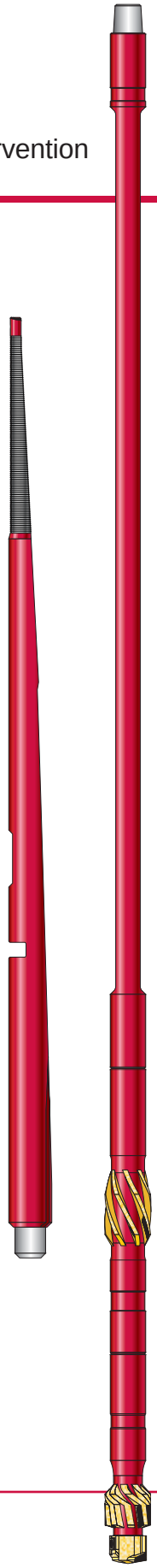
Weatherford®

Coiled-Tubing (CT) QuickCut™ Casing Exit System



Weatherford's CT *QuickCut* casing exit system is designed to create casing exits with maximum efficiency, thereby reducing the time and associated cost of drilling out from the main wellbore. Quickly and easily made up on the rig floor, it can mill a long window and deep rathole in a single trip, which can save a day or more of rig time compared to more conventional systems. The *QuickCut* system's unique lead-mill geometry significantly improves rates of penetration (ROP) and gauge retention, further enhancing operational efficiency.

The CT *QuickCut* casing exit system's whipstock is equipped with a lug system that accurately guides the lead mill into the casing wall and protects the whipstock from damage. The system uses a 3° whipstock to create a smooth transition from the parent to the lateral bore, which facilitates the passage of bottomhole assemblies (BHAs).

Highly versatile, Weatherford's CT *QuickCut* casing exit system can create high- and low-side casing exits through casing strings. It is ideally suited for use in a wide range of drilling procedures, such as accessing bypassed or behind-pipe reserves in mature wells, horizontal installations on wells with high dogleg severity (DLS), and multilateral installations in which whipstock retrieval is critical.

Applications

- Creating high- and low-side casing exits through casing strings in a single trip
- Creating windows that accommodate complex completion strings and expandables
- Enabling a wide range of drilling procedures, such as sidetracking, accessing bypassed or behind-pipe reserves in mature wells, horizontal installations on wells with high DLS, multilateral installations in which whipstock retrieval is critical, and short-radius entry into narrow coal seams on coalbed methane projects

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Features, Advantages and Benefits

- The lead mill's unique geometry offers several benefits:
  - improves ROP, which reduces the time and associated cost of casing exit procedures;
  - enhances gauge retention, minimizing the need to make time-consuming adjustments when the casing exits are not sized appropriately;
  - facilitates milling of full-gauge windows in a single trip, thereby reducing rig time.
- Designed to accurately guide the mill into the casing wall, the whipstock's innovative lug system also protects the whipstock from damage during cut-out, reducing the risk of premature whipstock failure and associated nonproductive time.
- The 3° single-angle concave creates a smooth path from the parent bore into the lateral section; as such, it minimizes the risk of BHAs sticking and the resulting nonproductive time.
- Wireline- or hydraulically set, the anchor packer enables 360° whipstock orientation (adjustable in 4° increments), optimizing placement of the lead mill, minimizing the time required to reach the target, and ultimately reducing operational costs.
- Positioned below the motor, the system's dual-flapper check valve enables the milling and whipstock assembly to be pressure deployed, enhancing wellsite safety.
- The CT blowout preventer (BOP) can be closed on the specified string member (SSM) to form a pressure-sealing barrier, likewise enhancing wellsite safety.
- The highly versatile, optional MultiCatch™ whipstock anchor is compatible with multiple casing sizes and weights, thereby eliminating hazards posed by unknown or varied casing weights in a wellbore, or by casing IDs that have changed as a result of wall loss from wear and tear.

Specifications

Milling Assemblies

Casing OD (in./*mm*)	Casing Weight (lb/ft, *kg/m*)	Concave OD (in./*mm*)	Lead-Mill OD (in./*mm*)	Lead-Mill Pilot OD (in./*mm*)	Secondary Mill OD (in./*mm*)	Lead-Mill Connection (in.)	Flex-Mill Connection (in.)
4-1/2 *114.3*	9.5 to 11.6 *14.1 to 17.3* or 13.5 *20.1*	3-1/2 *88.9*	3-7/8 *98.4* or 3-3/4 *95.3*	3 *76.2*	3-7/8 *98.4* or 3-3/4 *95.3*	2-3/8 PAC box	2-3/8 PAC box 2-3/8 PAC pin

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