



Shallow-Angle QuickCut™

Casing Exit System

RHS-Type Anchor*

Weatherford’s shallow-angle *QuickCut* casing exit system with RHS-type anchor is a single-trip, retrievable, 2° whipstock system with a hydraulically actuated, sealing packer anchor. The premium anchor is used for the temporary zonal isolation of a parent wellbore or for a required, second abandonment barrier. The anchor with the shallow-angle *QuickCut* milling system provides improved milling, gauge retention, and formation drilling in a single trip. The innovative anchor design is field proven to ensure retrieval.

Applications

- Wells requiring a full bore after the lateral is drilled
- Extended-reach wells to minimize doglegs
- Abandonment plug without the need for multiple plugs
- Wells requiring exits to accommodate long, rotary-steerable drilling systems
- Wells running complex completion strings and expandables
- Exits through multiple strings of casing

*Anchor		
Retrievable or permanent	Hydraulic or mechanical	Sealing or nonsealing
Retrievable	Hydraulic	Sealing

Features, Advantages and Benefits

- Weatherford’s patented AccuSet™ hydraulic actuation device inside the lead mill provides a reliable packer actuation, ensuring consistent functioning in the field regardless of depth, inclination, wellbore fluid loss, or solids contamination.
- The milling bottomhole assembly (BHA) and whipstock are designed for safe, quick rig-floor makeup, improving rig-floor efficiency and reducing installation costs.
- BHA is open ended, enabling continuous flow for well control and for logging and measurement while drilling before activating the packer.





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Features, Advantages and Benefits (continued)

- The aggressive lead-mill geometry improves the rates of penetration and gauge retention, minimizing additional trips related to mill gauge loss.
- Shear value for the mill attachment bolt can be adjusted for varying well profiles, enabling greater operational flexibility in the field.
- The unique lug technology protects the whipstock during cut-out, enabling accurate direction of the mill into the casing wall.
- The window can be oriented, anchored, and milled in one efficient trip, reducing overall rig costs.
- The 2° single angle concave creates a smooth transition from the parent bore into the lateral section.
- The system includes a QuickChange™ shear disconnection, providing debris management as well as the capability to change from one anchor type to another.
- The 7-in. packer has been qualified up to 5,000 psi (34,474 kPa) at 275°F (135°C) to meet API 11D1, ISO 14310 V3 specifications, ensuring that validation testing and quality assurance are met with the same minimum standards.
- The system can be retrieved in multiple ways, providing flexibility in the field.
- Simple design with off-the-shelf components ensures maximum tool reliability, delivering high-quality retrieval records.



Shallow-Angle QuickCut™ Casing Exit System *RHS*-Type Anchor*

Specifications

Mill Assemblies

Casing		Concave OD (in./mm)	Lead Mill			Secondary Mill		Flex Mandrel Connection Box × Pin	Steering Mill		
OD (in./mm)	Weight (lb/ft, kg/m)		OD (in./mm)	Pilot OD (in./mm)	Box Connection (in.)	OD (in./mm)	Connection Box × Pin		OD (in./mm)	Connection Box × Pin	
7 177.80	20.0 to 23.0 SD 29.8 to 34.2	5-1/2 139.7	6-1/4 158.8	5 127.0	3-1/2 Reg	6-1/4 158.8	3-1/2 Reg	N/A	6-1/4 158.8	3-1/2 IF × 3-1/2 Reg	
	23.0 to 26.0 to 29.0 SD 34.2 to 38.7 to 43.2		6-1/8 155.6			6-1/8 155.6			6-1/8 155.6		
	29.0 43.2		6 152.4	4-1/2 114.3		6 152.4			6 152.4		
	32.0 SD 47.6		5-7/8 149.2			5-7/8 149.2			5-7/8 149.2		
	32.0 to 35.0 47.6 to 52.1										
9-5/8 244.48	43.5 64.7	8 203.2	8-1/2 215.9	6-3/8 161.9	4-1/2 Reg	8-1/2 215.9	4-1/2 IF × 4-1/2 Reg	4-1/2 IF	8-1/2 215.9	4-1/2 IF	
	47.0 69.9										8-3/8 212.7
	53.5 79.6 SD		8-1/4 209.5						8-1/4 209.5		8-1/4 209.5
	53.5 79.6										
	58.4 86.9										

The 7-in. shallow-angle QuickCut system requires no flex mandrel as it is incorporated into the steering mill.



Shallow-Angle QuickCut™ Casing Exit System RHS*-Type Anchor

Specifications (continued)

Packers

Casing				RHS*-Type Packer Anchor			
OD (in./mm)	Weight (lb/ft, kg/m)	ID (in./mm)		Maximum OD (in./mm)	Temp (°F/°C)	Torque (lb/ft, N•m)	Differential Pressure Rating ^a (psi/kPa)
		Minimum	Maximum				
7 177.80	20.0 29.8	6.276 159.40	6.456 163.90	6.000 152.40	275° 135°	8,800 11,931	5,000 34,474
	23.0 34.2						
	26.0 38.7						
	29.0 ^b 43.2						
	32.0 ^b 47.6						
	35.0 ^b 52.1						
9-5/8 244.48	43.5 ^b 64.7	8.435 214.25	8.835 224.40	8.000 203.20	20,000 27,116	3,500 24,132	
	47.0 ^b 69.9						
	53.5 ^b 79.6 SD						
	53.5 ^b 79.6						
	58.4 ^b 86.9						

^aAt 275°F (135°C)

^bHeavy-weight concave. The pilot OD determines the concave size. Light- and heavy-weight lead mills and concaves are not interchangeable.

Options

- QuickCut system can be run in a permanent application.
- Standard hook-and-die-collar retrieval methods are available.

