



FracGuard® Pumpdown Composite Plug

Weatherford's *FracGuard* pumpdown composite plug is run on standard wireline into highly deviated or horizontal wells where e-coil or standard coiled tubing would typically be required. The ability to run this plug on wireline, assisted by pump pressure, significantly accelerates operations, reduces costly rig time, and eliminates the need for expensive wireline tractors. In addition, the pumpdown assembly can be configured with perforating guns above the setting tool so that the plug can be set and one or more zones perforated in one trip, reducing rig time.

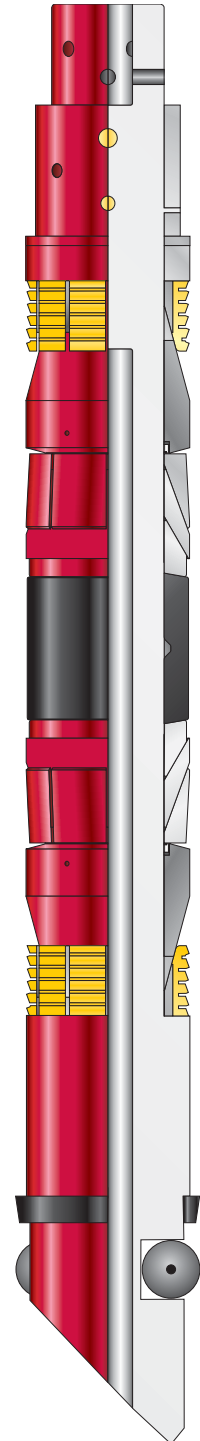
The system pushes the plug into horizontal sections using pump pressure on wireline. Pump rates of 6 to 12 bbl/min carry the plug and setting tools to target before setting. The plug runs at conventional wireline speeds in straight-hole sections and the patent-pending roller system reduces run-in friction on wireline in both straight and horizontal sections. The wiper system creates a pressure drop across the front of the plug, which carries the assembly into horizontal sections with low-pump rate.

Applications

- Multiple-zone fracture-stimulation completions, especially in extended-reach horizontal and highly deviated wells
- Medium- to high-pressure clear-water fracturing applications

Features, Advantages and Benefits

- Drag-reducing design allows the plug to be run on wireline, accelerating operations, reducing rig time, and eliminating the need for expensive wireline tractors.
- The wiper system creates a pressure differential across the top of the plug, which carries the assembly into horizontal sections with low-pump rate. This capability removes the time and costs associated with e-coil, coiled tubing, and wireline tractors.





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Features, Advantages and Benefits (continued)

- Jet ports above and below the wiper ring wash away debris ahead of the plug and create fluid bypass to accelerate tripping in the hole. The jet ports aid in running the plug past sand bridges and debris in horizontal sections, reducing the likelihood of premature plug setting and sticking.
- The roller/wiper system makes single-trip plugging and perforating possible by conveying perforating guns above the plug, enhancing operational efficiency.
- The roller system also allows for standoff for the composite plug when running on coiled tubing in horizontal applications. This capability allows for a reduction in friction forces and limits damage to the plug. A hydraulic setting tool can be used to initiate setting of the plug, eliminating the need for e-coil.
- The pumpdown composite plug is rapidly milled out with conventional milling or drilling tools on coiled tubing or jointed pipe.

Specifications

FracGuard Pumpdown Frac Plug

Casing				Frac Plug						
Size (in./mm)	Weight Range (lb/ft)	Minimum ID (in./mm)	Maximum ID (in./mm)	Plug OD (in./mm)	Pump Down Ring OD (in./mm)	Roller OD (in./mm)	Pressure Rating (psi/MPa)	Temperature Rating (°F/°C)	Product Number	
									Internal Ball	Top Ball
4-1/2 114.3	11.6	4.00 101.6	4.00 101.6	3.66 92.96	3.845 97.66	3.875 98.43	10,000 69	300 149	826756	875234
							10,000 69	300 149	1240465	1132690
	13.5	3.92 99.57	3.92 99.57	3.66 92.96	3.765 95.63	3.795 96.39	12,000 83	350 177	—	1218820
							10,000 69	300 149	—	1154726
	15.1	3.826 97.18	3.826 97.18	3.594 91.29	3.701 94.01	3.701 94.01	12,000 83	350 177	—	1205269
							10,000 69	300 149	—	1162279
5 127	18	4.276 108.61	4.276 108.61	3.94 100.01	4.121 104.67	4.151 105.44	10,000 69	300 149	—	1231400
5-1/2 140	17	4.892 124.26	4.892 124.26	4.375 111.13	4.625 117.48	4.767 121.08	10,000 69	300 149	803465	802865
	23	4.67 118.62	4.67 118.62		4.41 112.01	4.545 115.44			914310	—



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Specifications (continued)

FracGuard Pumpdown Bridge Plug

Casing				Bridge Plug					
Size (in./mm)	Weight Range (lb/ft)	Minimum ID (in./mm)	Maximum ID (in./mm)	Plug OD (in./mm)	Pump Down Ring OD (in./mm)	Roller OD (in./mm)	Pressure Rating (psi/MPa)	Temperature Rating (°F/°C)	Product Number
4-1/2 114.3	11.6	4.00 101.6	4.00 101.6	3.66 92.96	3.845 97.66	3.875 98.43	10000 ^a 69	300 149	826712
							12,000 ^b 83	350 177	1226465
	13.5	3.92 99.57	3.92 99.57	3.66 92.96	3.765 95.63	3.795 96.39	10,000 ^a 69	300 149	884441
							12,000 ^b 83	350 177	1235933
	15.1	3.826 97.18	3.826 97.18	3.594 91.29	3.701 94.01	3.701 94.01	10,000 ^a 69	300 149	1155143
				3.44 87.38	3.671 93.24				1217145
5 127	18	4.276 108.61	4.276 108.61	3.94 100.01	4.121 104.67	4.151 105.44	10,000 ^a 69	300 149	1124264
5-1/2 140	17	4.892 124.26	4.892 124.26	4.375 111.13	4.625 117.48	4.767 121.08	10,000 ^a 69	300 149	800900
	20	4.778 121.36	4.778 121.36	4.375 111.13	4.528 115.01	4.653 118.19	12,000 ^b 83	350 177	1227008
	23	4.67 118.62	4.67 118.62	4.375 111.13	4.41 112.01	4.545 115.44	10,000 ^a 69	300 149	876917
							12,000 ^b 83	350 177	1224130

^a10,000 psi (69 MPa) from above and 8,000 psi (55 MPa) rating from below.

^b12,000 psi (83 MPa) from above and 10,000 psi (69 MPa) rating from below.