FlowMaster[™] Drillpipe Flowback and Circulating Tool

Provides dependable management of drilling fluids during downhole operations

Applications

- Circulating while tripping to condition hole or prevent string from becoming stuck
- Recover fluid (flowback) while running self-filling type float equipment for casing, liner, or a tight bottomhole assembly
- Apply pressure to expandable casing during expansion process to reduce expansion times
- Circulate a liner to bottom (circulating on demand)
- Pumping the drillstring out of the hole when barely balanced or underbalanced hole conditions exist to reduce tripping times

Features and Benefits

- Extension and retraction of the tool is accomplished hydraulically via remote control panel
- Provides a safe, non-restricted method of recovering flowback fluids as well as circulating on demand by sealing on the outer diameter of the drillpipe tool joints
- Capable of sealing in a wide range of drillpipe classes using the same seal
- Self-actuated, two-way mud saver valve limits mud spillage on the rig floor
- Option to create a solid connection to support string weight by making up lower crossover to drillpipe during tripping operations
- Stub acme on internal tool side of top and bottom connections facilitate efficient on-site changes to various connection types
- Eliminates the need to make up drillpipe connections on each stand, reducing wear on the saver sub and drillpipe connections
- Compact design enables the use of 15-ft (4.5-m) bails to eliminate unnecessary change of bails between operations
- Eliminates the need for additional downhole equipment

Tool Description

The Weatherford FlowMaster drillpipe flowback and circulating tool can manage a wide range of pipe sizes with increased safety and efficiency while reliably facilitating the management of drilling fluids during circulation, flowback, and/or fill-up operations while running drillpipe, and landing casing or liner strings.



Fully retracted position



Fully extend position



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Specifications

Drillpipe size range	4 1/2 to 7 5/8-in. (114.3 to 193.7 mm)
Drillpipe connection (top of tool)	6 5/8 in FH
Maximum circulating pressure (seals engaged over tool joint)	5,000 psi (345 bar)
Maximum circulating pressure (crossover threaded into drillpipe string)	10,000 psi (690 bar)
Load rating*	Up to 1,500 tons (1,360,777 kg)
Maximum bi-directional torque*	150,000 lb-ft (203,372 N-m)
Maximum rotational speed	125 RPM
Maximum circulating flow	20 bbl/min (840 gpm)
Maximum backflow	10 bbl/min (420 gpm)
Maximum torque	150,000 ft-lb
Maximum tensile capacity	1,500 tons
Total tool length	59.5 in. (1,511.3 mm)
Total stroke length	24.5 in. (622.3 mm)
Weight	Tool: 2,888 lb (1,310 kg) Tool and transport frame: 4,246 lb (1,916 kg)

*Depending on crossover connections used in the tool.



Top view

Drillpipe flowback and circulating tool in transport frame



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