

Drillpipe Circulation Tool

Reliably manages drilling fluids during casing landing operations in subsea wells for a wide range of pipe sizes with increased safety and efficiency

Applications

- 4-1/2 to 7-5/8 in. drillpipe
- Fill-up, circulation, and flowback operations
- Ability to circulate and reciprocate drillpipe
- 1,500-ton load capacity
- 5,000 psi (345 bar) maximum circulating pressure when seals are engaged over the tool joint
- 10,000 psi (690 bar) maximum circulating pressure when bottom crossover is threaded to the landing string

Features and Benefits

- Mechanical tool controlled by the driller eliminates service loops or control panels on the rig floor
- Simple and robust design increases reliability and ease of operation
- Modular collet lock crossover system allows redressing for any given rig's saver sub size, saving time, cost, and stack-up
- Safety locking mechanisms prevent accidental backing out of threads inside the tool
- Extension and retraction of the tool is accomplished by the rotation of the top drive without risks of damaging the tool by over-rotating the quill in either direction
- Self-actuated mud saver valve manages drilling fluid volumes
- Compact design enables the use of 15-ft (4.5-m) bails, eliminating unnecessary change of bails between operations
- Seals on the tool joint OD reduce the risk of damaging threads in the drillpipe box end
- Capable of sealing in a wide range of drillpipe classes using the same seal
- Solid mandrel and robust crossover designs provide high load capacity and sealing capabilities under different operating conditions
- Able to be threaded to drillpipe during tripping operations, creating a solid connection to support string weight

Tool Description

The Weatherford drillpipe circulating tool (DPCT) is a mechanical drillpipe fill-up, circulation and flowback tool that provides a reliable and efficient drilling fluid management solution to manage drilling fluids during casing landing operations in subsea wells. Capable of handling a wide range of pipe sizes with increased safety and efficiency, the simple design and operability reduces the rig up/down time eliminating the need for external control panels and service loops.



DPCT Extended for flow back or circulating operations



Drillpipe Circulation Tool

Specifications

Drillpipe Size Range	4-1/2 to 7-5/8 in. (114.3 to 193.7 mm)
Maximum Circulating Pressure (seals engaged over tool joint)	5,000 psi (345 bar)
Maximum Circulating Pressure (crossover threaded into landing 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	100 RPM (continuous) ; 120 RPM (intermittent)
Maximum Circulating Flow	20 bbl/min (840 gpm)
Maximum Backflow	10 bbl/min (420 gpm)

* Depending on crossover connections used in the tool.

