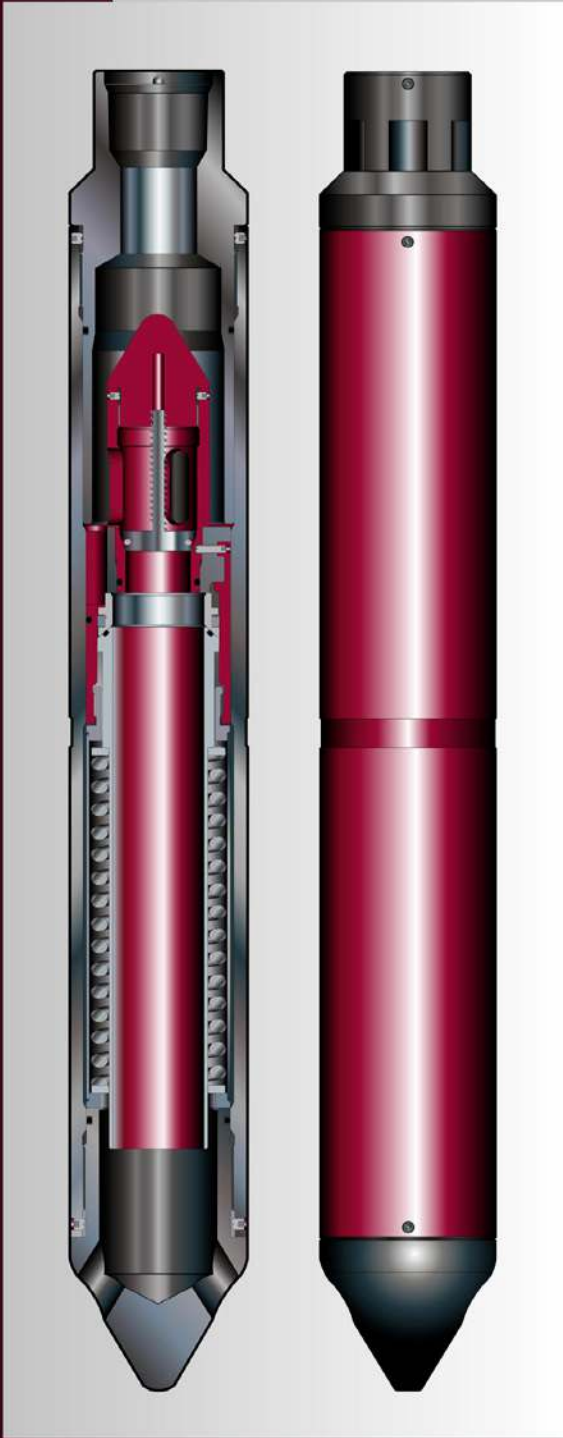


DrawWorks CF-Series™ Mud Saver Valve

The CF-Series™ valve can take flow-back, fill-up the casing and circulate at any time during the running procedures without making any changes for casing size or weight. The CF-Series™ valve is a spring loaded valve with no external parts. The valve opens & closes around 160 psi. A large area flow-back valve is integrated into the CF-Series™ to facilitate equalizing pressure in the casing or taking flow-back while running open ended casing or casing having a convertible float shoe.



The CF-Series™ valve prevents the drilling mud from draining out of the tool onto the rig floor after each joint of casing. As the drilling mud is contained inside the tool, the rig crews no longer have to deal with the drilling mud drenching them and the floor area after each joint of casing. This allows a much cleaner and safer environment for them to perform their duties. Much less effort is required to keep the drill floor clean as there is less mud to be vacuumed up.

The CF-Series™ valve also retains the static head of the mud and prevents mud from dripping onto the rig floor as the tool is being raised into the derrick.

Features and Benefits

- **Self Aligning Seat**
 - Positive seal
 - Large flow area
 - Lower pressure drop
 - Shorter length
- **Seat Materials**
 - Carbide seat provides higher wear resistance*
 - *Longer periods between repair cycles
- **Check Valve**
 - Larger flow-back area
 - Can check pressure on drill pipe
 - Lower surge pressure while running in hole

Specifications

Sizes	Flow Rates	Flow Area	Max PSI
4-1/2" to 5-1/2"	9 bpm	2.49 sq/inch	3000 psi
7" to 20"	26 bpm	7 sq/inch	3000 psi

Patent Pending



*Circulating and flow-back tools
for casing and drill pipe*