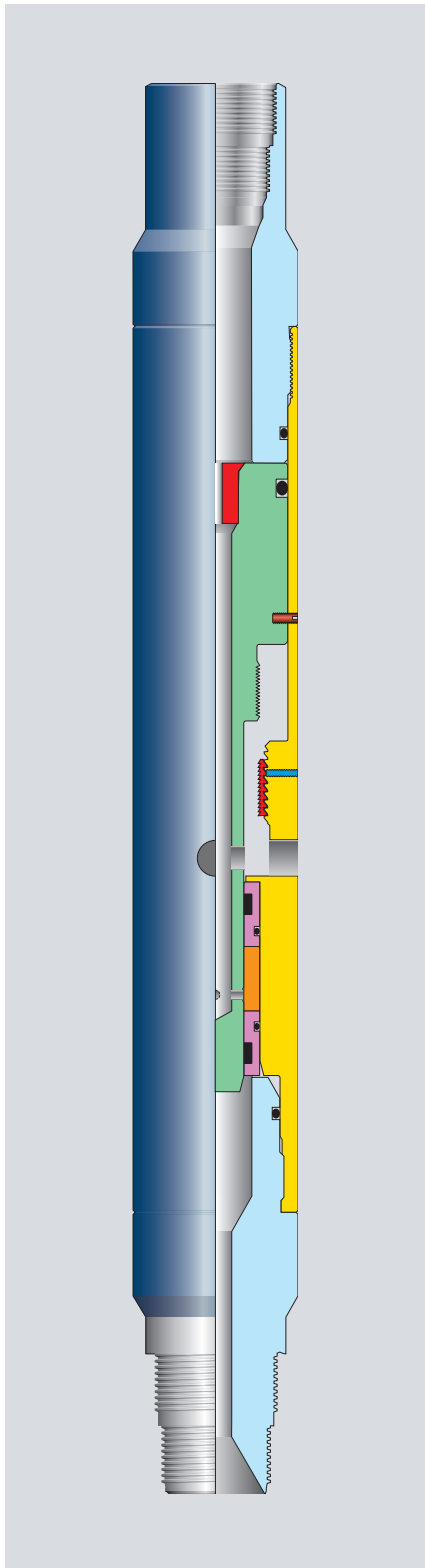


Flow-Actuated Circulation Valve



Applications

- Operations involving flow-actuated tools
- When the job objective requires circulation

Benefits and features

- Enables circulation into the annulus without driving flow-actuated tools below
- Reduces wear on flow-actuated tools
- Adjustable for different flow rates by changing shear screws, orifices, or both
- Bonded seals for reliable operation

The flow-actuated circulation valve directs flow either to the annulus or down through the valve to the lower tool string. It is normally installed as the uppermost tool in the BHA. When a certain threshold flow rate is reached, the internal mechanism of the circulation valve diverts all flow.

The flow-actuated circulation valve is set up at surface for the specific well conditions and operational requirements. Different actuation rates are achieved by utilizing different orifices and shear screws.

While running into the well, the well can be circulated through large orifices. All pumped fluids are flowing through the circulation valve directly into the annulus; no fluid is pumped through the tools below the circulation valve. Increasing the pump rate beyond the previously selected threshold rate shifts a piston down, which diverts all flow from the annulus down to the lower tool string. The annulus is sealed off with a bonded seal in this tool position.

Flow-Actuated Circulation Valve

OD (in.)	ID [†] (in.)	Length [‡] (in.)
1.688	na [§]	19.500
2.125	na	21.906
2.563	na	21.906

[†] Smallest ID of tool body—tool cannot be drifted.

[‡] Includes CS Hydril thread

[§] Not applicable (na)