

Dump/Circulation Valve

Applications

- As a circulation valve for injection below hydraulically set and inflatable packers
- As an equalizing valve above treating packers
- Above motors and other flow-driven tools.

Benefits and features

- Allows selective circulation to the annulus
- Large orifices for high-rate circulation and fluid treatments
- Prevents damage to downhole motors when circulating at high rate
- Enables pressure equalization across packer elements before unseating
- Can prevent packer element damage
- Enables injection below hydraulically set and inflatable packers
- Simple and inexpensive tool
- Opening pressure easily adjusted by varying shear pin selection.

The dump/circulation valve enables the operator to establish tubing-to-annulus communication on a selective basis. This feature is often required when utilizing downhole motors, if it is necessary to circulate clean at a high rate after the milling works.

If run below a hydraulic packer or inflatable packer, the ball and seat of the dump valve provide a temporary

method of blanking off the tubing to allow pressuring the tubing to set the packer. Continued pressure then opens the ports in the sub to allow fluid injection below the packer.

If run above a packer, the dump valve can be used to equalize the tubing and hydrostatic pressure above a packer prior to release. This is necessary if the formation takes fluid after the treatment, resulting in an annulus overbalance.

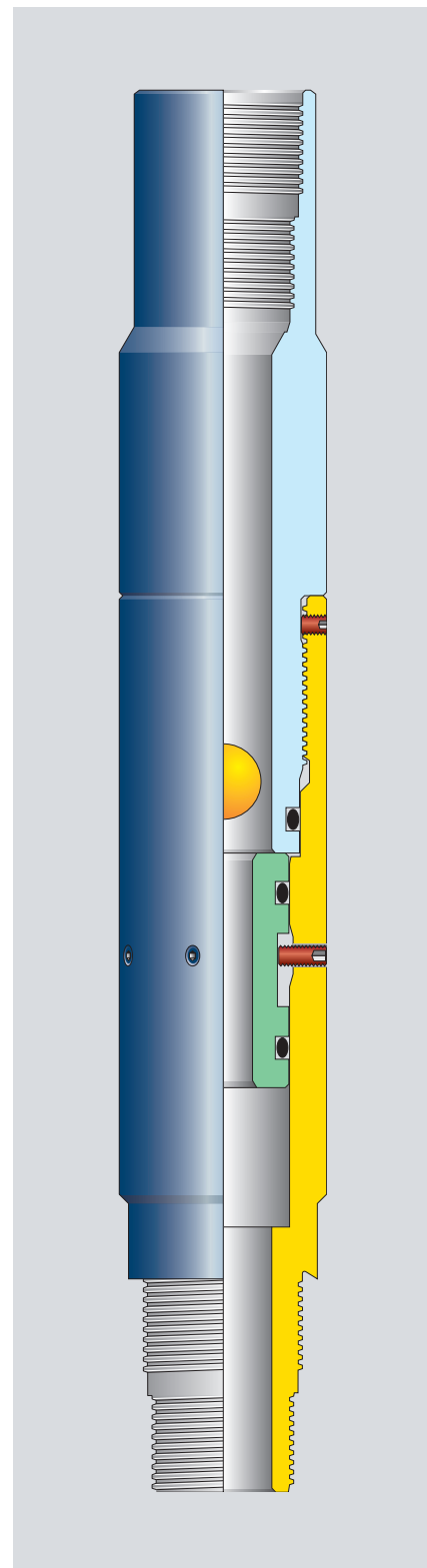
The dump/circulation valve can be used only once per run. If reversible action or repeated opening and closing of a valve is required, the Model A circulation valve should be used.

In the running position, the dump/circulation valve allows circulation down the tubing as needed. To activate the sub, a ball is dropped and circulated to the ball seat. Pressure applied to the coiled tubing sets the packer or actuates any other pressure device.

To open the sub, additional pressure is applied to the CT string. The resulting force shears the shear pins and allows the sleeve to shift down and, uncovering the large circulation ports.

If the dump/circulation valve is run above a downhole motor, it is used to open the tool string above the motor. This allows high-rate circulation for cleanout and protects the motor against excessive wear or burnout.

The pressure to shift the sleeve may be adjusted as required by varying the number and type of shear pins.



Dump/Circulation Valve

OD (in.)	ID (in.)	Length [†] (in.)
1.688	0.438	14.438
2.125	0.688	14.438
2.563	1.000	14.750

[†] Includes CS Hydril thread