

Conventional Reverse-Flow Check Valves

Velocity check valves used for gas lift services

APPLICATIONS

- Gas lift service
- Used with conventional gas lift valves

BENEFITS

- Protects casing from backflow with valves below the working valve
- Prevents commingled production in dual gas lift installations

FEATURES

- Rated to 10,000-psi [68,950-kpa] differential pressure
- Ability to be converted from velocity check to positive-check valves

Conventional reverse-flow check valves are velocity check valves used with conventional Camco* gas lift and subsurface safety systems that do not have integral reverse-flow check valves. These check valves protect the casing from backflow through valves that are below the working valve and allow the application of pressure to the tubing for circulation or acidizing. Reverse-flow check valves also prevent the commingling of production fluids in dual gas lift installations.

This line of valves includes the 1-in [25.4-mm] OD BF and B-1 valves and the 1½-in [38.1-mm] OD CF and J-20 valves. These valves each have an elastomeric soft seat and a stainless steel hard seat. The initial seal is between the stainless steel check dart and the soft seat. These check valves can withstand 10,000-psi differential pressure and can be converted from velocity check valves to positive check valves by adding a spring.

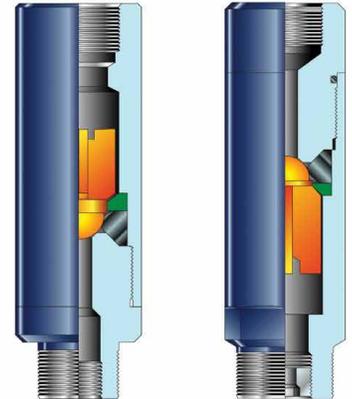
Flow area

The flow area for the 1-in OD BF and B-1 valves is equivalent to a 5/16-in [7.9-mm] port.

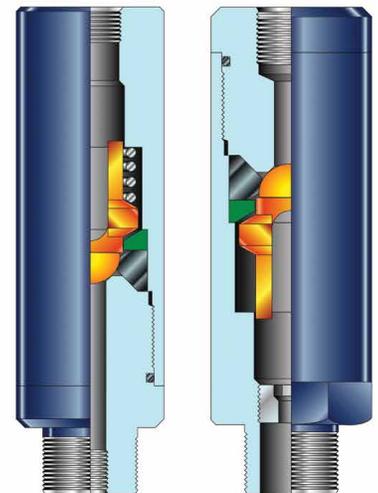
The flow area for the 1½-in OD valves is equivalent to a ½-in [12.7-mm] port for CF valves and a 9/16-in [14.3-mm] port for J-20 valves.

Operation

Reverse-flow check valves require flow to close. As the differential pressure across the check dart of the valve increases, the dart contacts the soft seat and then the hard seat to form a seal and close the check valve.



BF and B-1 valves (left to right).



CF and J-20 valves (left to right).

Engineering Data for Conventional Reverse-Flow Check Valves

Type [†]	OD, in [mm]	Equivalent Port Size, in [mm]	Connecting Thread, in - TPI
BF	1.000 [25.4]	0.313 [7.9]	0.500 - 14 NPT
BP-1	1.000 [25.4]	0.313 [7.9]	0.500 - 14 NPT
CF	1.500 [38.1]	0.500 [12.7]	0.500 - 14 NPT
J-20	1.500 [38.1]	0.563 [14.3]	0.500 - 14 NPT

[†]Optional spring is available.