

Camco Injection-Pressure-Operated Gas Lift Valves

Retrievable valves for tubing for annular flow in continuous or intermittent production

APPLICATIONS

- Tubing or annular flow
- Continuous or intermittent production

BENEFITS

- Uniform operation and extended run life
- Economical with operational versatility
- Increased reliability and efficiency

FEATURES

- Field proven design
- Hydraulic forming process for the bellows
- Premium materials that work in a variety of applications
- Floating seats
- Guided valve-stem for precise alignment with the seat during operation
- Reverse-flow check valves to prevent backflow into the tubing annulus

Camco* injection-pressure-operated gas lift valves use nitrogen-charged, multi-ply MONEL® bellows to provide the force necessary to maintain the valves in the normally closed position. The bellows assembly includes a hydraulic dampening system, which uses silicon fluid to reduce the movement of the valve stem tip. This prevents destructive valve chatter and prolongs run life.

1-in [25.4-mm] OD BK, BK-1, BKT, and BKT-1 valves and 1½-in [38.1-mm] OD R-20-02 valves are available, featuring integral reverse-flow check valves.

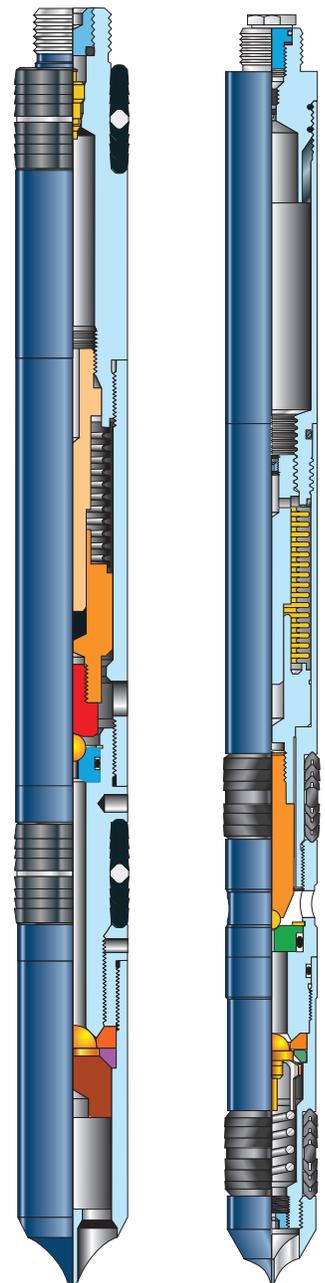
These gas lift valves are installed in standard side-pocket mandrels for tubing flow and in specially ported side-pocket mandrels for annular flow.

Port sizes

- 1-in [25.4-mm] OD valves
 - Port sizes for BK valves are available in 1/16-in [1.6-mm] increments from 1/8 in to 5/16 in [3.2 mm to 7.9 mm].
 - Port sizes for BK-1, BKT, and BKT-1 valves are available in 1/16-in [1.6-mm] increments from 1/8 in to 3/8 in [3.2 mm to 9.5 mm].
- 1½-in [38.1-mm] OD valves
 - Port sizes for R-20-02 valves are available in 1/16-in [1.6-mm] increments from 1/8 in to 1/2 in [3.2 mm to 12.7 mm].

Operation

The injection pressure necessary to compress the bellows of these gas lift valves is determined by the pre-charged nitrogen pressure in the bellows. Injection gas enters the valve and acts on the effective bellows area. As the injection gas pressure overcomes the precharged pressure, the bellows compresses and lifts the stem tip off the seat. Injection gas then flows through the seat, past the reverse-flow check valve, and into the production tubing.



BK series gas lift valve (left) and R-20-02 series gas lift valve (right).

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Engineering Data for Camco Injection-Pressure-Operated Gas Lift Valves

Valve Type	Nominal OD in. [mm]	Latch	Running Tool	Pulling Tool	Mandrel Series
BK	1.000 [25.4]	BK series	JK	JDC	KBM, KBMM, KBMG, KBG
BK-1	1.000 [25.4]	Integral bottom	GA-2	JDC [†]	KBM, KBMM, KBMG, KBG
BKT	1.000 [25.4]	BK series	JK	JDC	KBM, KBMM, KBMG, KBG
BKT-1	1.000 [25.4]	Integral bottom	GA-2	JDC [†]	KBM, KBMM, KBMG, KBG
R-20-02	1.500 [38.1]	RA	JC-3	JDC	MMA
R-20-02	1.500 [38.1]	RK	RK-1	JDS	MMM, MMG, MMRG

[†]Use core extension with this pulling tool for integral bottom latch valves.

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