

TCBV

Tubing-to-casing barrier valve

APPLICATIONS

- Continuous-flow gas lift production
- Safety-critical applications with stringent pressure integrity requirements

BENEFITS

- Enhances safety by ensuring wellbore integrity during shut-in periods
- Extends capabilities of existing gas lift systems by using a dual-pocket, side pocket configuration with a dual-inline, redundant, leak-tight seal
- Saves costs and downtime by eliminating the need for annulus fluid unloading following typical slickline operations

FEATURES

- Qualification to API Specification 19G2 V1, ISO 17078-2 V1, and barrier standards
- Corrosion-resistant nickel alloy construction
- Barrier-qualified reverse-flow check valve system that provides positive seal between tubing and casing annulus
- Compatibility with existing field-proven Camco* gas lift and subsurface safety systems' orienting-type slickline installation and pulling tools

The tubing-to-casing barrier valve (TCBV) is specifically designed for installation into the barrier pocket of MMRG-2V-B Barrier Series side pocket mandrels. Used for continuous-flow gas lift applications, the valve extends the capabilities of existing gas lift systems by providing dual-inline, redundant back-check seals. When the operating valve is removed from the primary pocket, the TCBV prevents flow from tubing to casing and thus maintains tubing integrity.

Based on field-proven Camco systems gas lift technology, these valves also contain a Barrier-qualified, positive-sealing, integral reverse-flow check valve.

Operation

Injection gas enters the TCBV through the external ports between the packing sets and travels down through the valve, past the reverse-flow barrier check valve, through the pocket interstitial space, and into the inlet ports of the inline, primary, active gas lift valve.

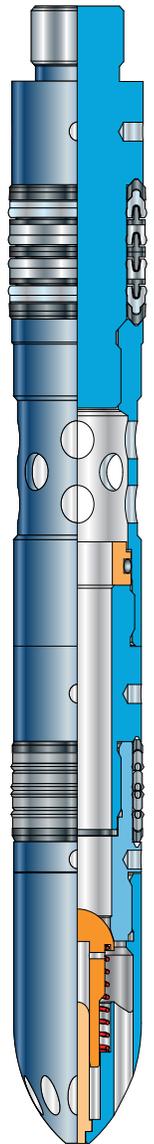
TCBV Specifications

OD (not including latch), in [mm]	1.500 [38.1]
Length with latch, in [mm]	28.524 [724.510]
Operating pressure (max. unloading differential), psi [kPa]	10,000 [68,947.6]
Max. gas injection pressure in annulus (at valve location), psi [kPa]	na [†]
Max. differential pressures across check section, psi [kPa]	10,000 [68,947.6]
Max. temperature, degF [degC]	350 [177]
Min. temperature, degF [degC]	50 [10]

Materials

Body parts	MONEL® 400 and K-500
O-rings and seals	Viton®
Seat	MONEL K-500
Packing	Modified Campac carbon and moly-filled Teflon® with PTFE/carbon fiber/graphite filled PEEK® backup and MONEL K-500 retainer ring

[†]Not applicable.



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