

Tubing Test Valve

Pressure test tubing while running in hole

APPLICATIONS

- Reservoir testing
- Downhole testing
- Deviated and deepwater wells
- HPHT wells
- Completion operations

BENEFITS

- No activation required before pressure testing
- Automatically filled via an open ID below the valve

FEATURES

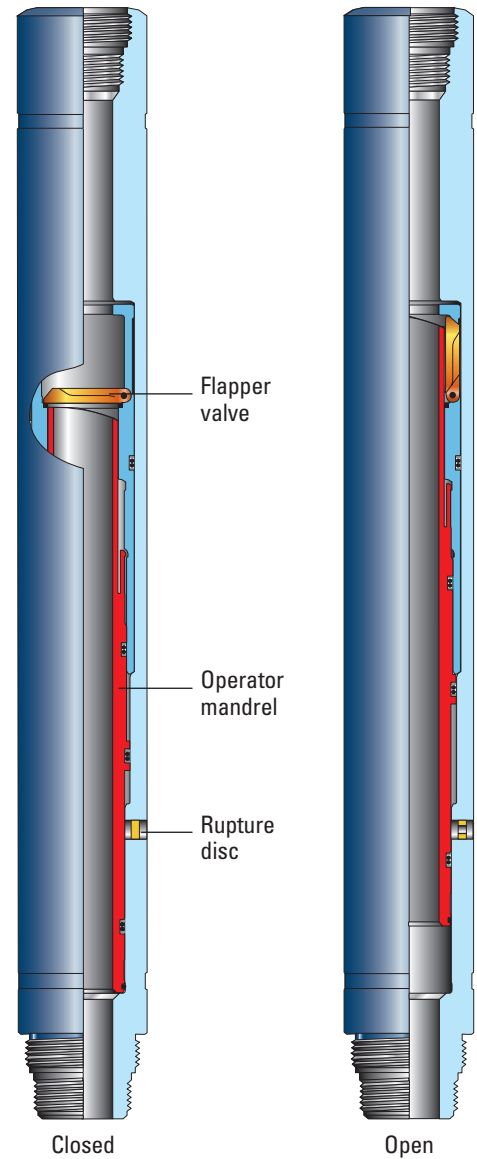
- Reliable flapper valve design
- Flapper permanently locked open by rupturing a disc
- Fullbore access through the flapper when opened

The tubing test valve (TTV) is a pressure test valve for ultra-HPHT testing operations. It serves as a means of pressure testing the tubing while running in the hole. The tubing can be tested at any depth by pressuring up on the tubing string. The TTV differs from the tubing-fill test valve (TFTV) in that it does not have flow ports and fill is via an open ID below the TTV.

When the test string is at depth, the TTV is opened by applying annulus pressure, rupturing a disc. Hydrostatic pressure then moves the operator mandrel up against an atmospheric chamber, fully opening and covering the flapper valve. Once the flapper valve is open, the tool has an unrestricted ID.

The TTV-J is part of the J-string developed for use in ultra-HPHT wells with bottomhole temperatures of more than 425 degF [218 degC]. New seal technology has enabled successful qualification testing to 500 degF [260 degC] at the maximum pressure rating.

The TTV-K is part the new-generation hostile K-string developed for ultrahigh-pressure wells with bottomhole pressures up to 30,000 psi. Seal options used in the tool make it suitable for both standard and ultrahigh-temperature environments as well as hostile drilling and completion fluids.



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Specifications

Model	TTV-J	TTV-K
Max. OD, in [mm]	5 [127]	5 [127]
Tool ID, in [mm]	2.25 [57]	2.25 [57]
Pressure ratings		
Differential across wall and flapper, psi [MPa]	17,500 [121]	17,500 [121]
Max. annular, psi [MPa]	25,000 [172]	30,000 [207]
Max. tubing, psi [MPa]	29,000 [200]	30,000 [207]
Temperature rating, degF [degC]	500 [260]	500 [260]
Length, ft [m]	4.74 [1.44]	5.81 [1.77]
Weight, lbm [kg]	242 [110]	287 [130]
Service (NACE International MR-0175)	H ₂ S, acid	H ₂ S, acid
Tensile strength at min. yield, lbf [kN]	400,000 [1,779]	455,000 [2,024]
Makeup torque, lbf.ft [N.m]	4,000 [5,423]	4,000 [5,423]
Connection	3½ PH-6	3½ PH-6

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