

FlowGATE™ Safety Valves

High Reliability Tubing Retrievable SCSSV's



Applications:

- New Completions
- Production or Injection Operations
- Sweet to severely sour environments
- Up to 2,000 ft [610 m] setting depth
- Working Pressure up to 10,000 psi [690 bar]
- Temperatures up to 300°F [149°C]

Benefits:

- Best-in-Class Reliability
- Simple, proven, and robust design with the fewest components
- Lowest number of potential control line leakage points available on the market
- Easy to run in any well configuration
- Choice of metallurgy, NACE MR0175 materials

Features:

- Non-Elastomeric Seals
- All Metal-to-Metal Seal Body Joint Connections
- Validated to API-14A, Validation Grade V1
- CRA Materials
- Premium Threads
- Optional Thread Configurations
- Polished Bore Size Flexibility

Description

The Tejas FlowGATE™ tubing retrievable safety valves are rated for up to 10,000 psi [690 bar] working pressure and setting depths up to 2,000 ft [610 m]. They are available with premium piston hydraulic control line isolation and through-flapper, self-equalizing features. FlowGATE™ valves are also available in 'slimline' and curved flapper configurations for your most space-challenging completion strategies.

FlowGATE™ surface controlled sub-surface safety valves (SCSSV's) are rod piston actuated, normally spring closed, fail safe, safety valves. During either production or injection, they are held open with control pressure supplied from the surface by a hydraulic control line that extends through the wellhead to an Emergency Shut-Down (ESD) system at the surface. Removing the control line pressure will return the valve to its normally closed position.

The design approach for the FlowGATE™ safety valves was to remove as many hydraulic control system and flapper bypass leakage paths as possible to increase the operational reliability of the valves. The resulting FlowGATE™ design has set the benchmark for the fewest hydraulic system and shut-in bypass leakage paths as well as total number of valve components in the industry. We have used our +100 years of combined experience to provide the best safety valve design ever executed.

In the unlikely event that the FlowGATE™ requires remediation, the Tejas Lock Open Tool (LOT) will permanently lock the flow tube in the 'open' position allowing for 'full-bore' thru-tubing operations. Once the novel Tejas Communication Tool (COM) has been used to perforate the hydraulic piston bore, the FlowGATE™ safety valve is ready for the installation of the secondary, wireline retrievable safety valve. The smaller internal FlowGARD™ safety valve can then be landed in the locked out and communicated tubing safety valve to meet regulatory safety valve compliance requirements and get the well producing again.



FlowGATE™
Safety Valve

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Engineering Data

FlowGATE™ Tubing Retrievable Safety Valve Specifications†					
Tubing Size in [mm]	Maximum Polished Bore in [mm]	Maximum OD in [mm]	Working Pressure psi [bar]	Fail Safe Setting Depth ft [m]	Maximum Temperature Rating °F [°C]
2-3/8 [60.3]	1.875 [47.6]	3.625 [92.0]	10,000 [690]	1,000 / 2,000 [305 / 610]	300°F [149°C]
2-7/8 [73.0]	2.312 [58.7]	4.600 [116.8]	5,000 [345]		
		5.070 [128.8]	10,000 [690]		
3-1/2 [88.9]	2.812 [71.4]	5.170 [131.3]	5,000 [345]		
		5.810 [147.6]	10,000 [690]		
4-1/2 [114.3]	3.812 [96.8]	6.542 [166.2]	5,000 [345]		
		7.332 [186.2]	10,000 [690]		
5-1/2 [139.7]	4.562 [115.8]	7.700 [195.6]	5,000 [345]		
		8.500 [215.9]	10,000 [690]		
7 [177.8]	6.000 [152.4]	9.200 [233.7]	5,000 [345]		
		9.718 [246.8]	10,000 [690]		

† All FlowGATE™ Safety Valves are available with Premium Hydraulic Features and Equalization as required. The engineering data provided illustrate the scope of this product offering and are not all inclusive. Additional size and pressure ratings are available upon request.

All FlowGATE™ Safety Valves are rated above the maximum Tubing / Casing Tensile Rating.

'Slimline' versions are also available but depend on your specific needs, please contact Tejas Engineering at www.tejasre.com with assistance.

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'High-Capacity' FlowGATE™