

SurGATE™ Safety Valves

Tubing Retrievable SCSSV's with Flapper Recess Chemical Injection



Applications:

- New Completions
- Paraffin or scale issues
- 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:

- Rupture disc-protected, dual check valve Flapper recess chemical injection
- 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 SurGATE™ 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. SurGATE™ valves have been specifically designed for high paraffin and scale producing wells. They incorporate a pressure activated, redundant back-pressure protected chemical injection line ported directly into the flapper recess within the lower body of the valve. The chemical injection will prevent fouling of both the Flow Tube and the Flapper during operation.

SurGATE™ 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.

In the unlikely event that the SurGATE™ 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 SurGATE™ safety valve is ready for the installation of the secondary, wireline retrievable safety valve. The smaller internal SurGARD™ 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.



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Engineering Data

SurGATE™ 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]
4-1/2 [114.3]	3.812 [96.8]	6.542 [166.2]	5,000 [345]	2,000 [609]	300 [149]
		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]		

