

# InjectGATE™ Safety Valves

High Reliability Tubing Retrievable SCSSV's for Injection Operations



## Applications:

- New Completions
- Production or Injection Operations
- Water/Gas (WAG) applications
- Sweet to severely sour environments
- Formations requiring injection rates to 65,000 bpd [10,334 m<sup>3</sup>pd]
- Wells requiring injection pressure up to 10,000 psi [690 bar]
- Subsurface controlled safety valve operations

## Benefits:

- Dual barrier protection
- Autonomous control
- No surface equipment control lines required
- Eliminates flapper chatter and throttling
- Unlimited setting depth
- No orifice size change-outs over time
- Active surge protection
- Minimized pressure drop
- Unlimited setting depth
- 28-year design life with conditioned fluid
- Simple installation and recovery

## Features:

- Tubing retrievable
- API-14A Grade V3 Validated
- Erosion resistant
- Metal-to-Metal Body Joints
- Non-Elastomeric Seals
- Cryogenic options available for CO<sub>2</sub> storage wells

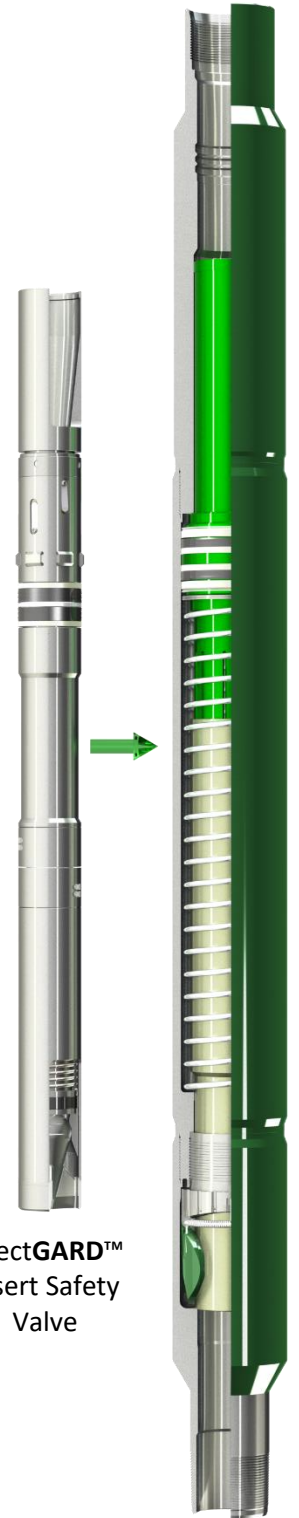
## Description

The Tejas InjectGATE™ tubing retrievable injection valve (formerly TRIV™), is a subsurface controlled, injection safety valve that features the Patented Tejas InjectGARD™ variable orifice insert safety valve as the prime actuator. It is designed to prevent injection fluid from flowing back out of the well once injection stops, or if the surface equipment becomes damaged or malfunctions.

The InjectGATE™ injection safety valve provides a reliable, extremely versatile system that is virtually maintenance free. Together with the InjectGARD™ and HiFLO™ Lock, the InjectGATE™ system provides complete well integrity without the necessity of running control line(s) to depth. The InjectGATE™ features metal-to-metal body joints and incorporates our proven curved flapper and hard/soft seat primary seal designs.

The InjectGATE™ provides a dual-barrier safety system designed to provide a 28-year service life. The tubing retrievable valve and wireline insert valve have unlimited setting depths and are available in a wide variety of material combinations that are suitable for high surge potential, severely corrosive, highly erosive, and cryogenic environments associated with water and gas (WAG) injection applications.

The InjectGARD™ installed within the InjectGATE™ acts to open the flapper with pressure before any flow proceeds downhole. This eliminates troublesome 'flapper chatter' and further allows the system to act as an autonomous surge protection valve during operation. The InjectGATE™ can be installed with the flapper held open for self-filling or any potential through-tubing operations before injection. Also, the InjectGATE™ can also be temporarily locked open when the The InjectGARD™ is removed. Once the InjectGATE™ is re-installed, the InjectGATE™ will reset to normal injection condition upon the first flow cycle.



InjectGARD™  
Insert Safety  
Valve

InjectGATE™  
Tubing Retrievable  
Safety Valve

# InjectGATE™ Safety Valves

High Reliability Tubing Retrievable SCSSV's for Injection Operations



## Engineering Data

InjectGATE™ Tubing Retrievable Safety Valve Specifications†								
Tubing Size in [mm]	Maximum OD in [mm]	Flow Tube Polished Bore Min ID in [mm]	Upper Housing Polished Bore in [mm]	Tensile Strength lbf [kN]	Overall Length in [cm]	Working Pressure psi [bar]	Maximum Allowable Injection Range** bbl/day	Operational Temperature Range °F [°C]
4-1/2 [114.3]	7.450 [171.8]	3.625 [92.0]	3.688 [93.7]	475,000 [2,113]	106 [269]	10,000 [690]	32,000	27°F – 300°F [-2.7°C – 149°C]
5-1/2 [139.7]	8.250 [209.5]	4.438 [112.7]	4.562 [115.9]	832,000 [3,243]	90 [229]		56,000	

† Alternative OD's are available upon request, based on the material selection

\*\* Maximum Injection Rate depends on the anticipated solids expected during operation

'Slimline' versions are also available but depend on your specific needs, please contact Tejas Engineering at [www.tejasre.com](http://www.tejasre.com) with assistance.

™ The Tejas logo is a trademark of Tejas Research & Engineering LLC.

Direct request for quotations to: [product.sales@tejasre.com](mailto:product.sales@tejasre.com)



InjectGATE™ Tubing Retrievable Safety Valve with InjectGARD™ Insert Safety Valve

