

DeepGARD™ ‘Deep-Set’ Wireline Retrievable Safety Valve



Surface Controlled Insert Safety Valve Solution for Ultra-Deep Well Protection

Applications:

- Deep Subsea Completions
- Ultra-Deep Safety Valve Remediation Option
- Hydraulically Actuated Safety Systems
- Temperature ranges from 40°F to 300°F [4°C to 149°C]
- Pressure ranges up to 15,000 psi [1,034 bar]
- API-14A Annex-H as required

Benefits:

- Option to replace potential ‘tubing-swap’
- Low surface operating pressures
- Long-term performance
- High reliability
- **No Nitrogen-charge**
- Better production flow
- Easy to install and operate
- 20-year design life
- Bubble tight seal

Features:

- API and ISO compliant
- Novel “flapperless” design for better well protection
- Centralized axial piston
- Tubing pressure insensitive
- Pump-through capability
- Erosion resistant materials

Description

The Tejas DeepGARD™ Deep-Set Wireline Insert Safety Valve is designed specifically for deep and ultra-deep production operations in compliance with API-14A, 12th Ed. Grade V1 specifications. The DeepGARD™ Safety Valve can be deployed either within a ‘communicated’ Tubing Retrievable Safety Valve (TRSV), or within a suitable hydraulic landing nipple (i.e. DeepGARD™ Nipple).

The DeepGARD™ Safety Valve is used to control production flow in deep oil and gas wells. The DeepGARD™ is self-equalizing and uses a Tungsten Carbide (TC) **GARD Power Check™** with a novel equalizing system that is more robust than alternative ‘flapper-style’ dart equalizing systems and provides more than 300X more closure force than conventional wireline valves. Component materials are NACE Approved and may be specified to any customer requirements. The DeepGARD™ features dual-redundant seals with ‘fail-safe’ closure in the unlikely event of hydraulic system seal failure.

The ‘tubing-pressure insensitive DeepGARD™ allows the valve to operate at extreme depths with significantly lower surface hydraulic pressures without a charged Nitrogen chamber. The patented closure mechanism and piston configuration provide greater longevity and reliability over traditional flapper-style safety valves.

10,000 psi DeepGARD™ Wireline Retrievable Safety Valve†			
Tubing Size in [mm]	Polished Bore in [mm]	Max OD In [mm]	Max Production Rate bbl/day
4.500 [114.30]	3.688 [93.68]	3.595 [91.31]	23,000
	3.813 [96.85]	3.720 [94.49]	25,000
5.500 [139.70]	4.437 [112.70]	4.344 [113.54]	40,000
15,000 psi DeepGARD™ Wireline Retrievable Safety Valve†			
4.500 [114.30]	3.375 [85.73]	3.337 [84.75]	18,000
	3.437 [87.30]	3.347 [85.01]	19,000

† The engineering data provided illustrate the scope of this product offering and are not all inclusive. Additional sizes and functionality available upon request.



DeepGARD™
Safety Valve