HydroGARD™ Hydrostatic Safety Valve

Subsurface Controlled Wireline Retrievable Insert Safety Valve

Applications:

- Oil & Gas Wells
- Expanded pressure range
- Ultra-low closing pressure for low flowing wells
- Capable of operating in high production wells
- Sub-surface controlled
- Shut-In pressures up to 10,000 psi [690 bar]
- Temperatures from 40°F to 300°F [4°C - 149°C]

Benefits:

- Predictable operation
- Anti-Slugging feature
- Autonomous function
- High Reliability
- Easy to install / operate
- API-14A Grade V3 validation

Features:

- **GARD**™ sealing system
- Anti-slugging feature
- Erosion resistant materials

Description

The Tejas HydroGARD™ is an 'ambient' or 'hydrostatic' Subsurface Controlled Safety Valve (SSCSV). The valve remains open when the tubing & flowing pressures are above a preset closing pressure threshold. Once the flowing pressure drops below the threshold (i.e. loss of well control), the valve will autonomously close, preventing the loss of wellbore fluid or gas. To facilitate deeper operating pressure settings or higher production pressures, a gas-charged chamber is used to offset the ambient hydrostatic tubing pressure.

The HydroGARD™ uses the unique GARD™ ball-and-seat design as the primary closure mechanism which provides large flow areas to handle high production rates with minimal production pressure losses through the valve.

The HydroGARD™ is deployed utilizing standard slickline operations and is adaptable to all OEM lock mandrels. When a landing nipple is not available or washed out, the HydroGARD™ can be RIH on Tejas' "nippleless" FlexLOK™ which is designed to anchor and pack-off anywhere in the tubing string without the need for a landing nipple.

The HydroGARD™ is designed withstand differential working pressures up to 10,000 psi [690 bar] and can operate at temperatures up to 300°F [149°C]. Low threshold trigger pressures down to 100 psi [6.9 bar] or lower are available upon request.

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Tubing Size in [mm]	Max OD in [mm]	Flow Area in² [mm²]	Connecting Thread in-tpi	Working Pressure psi [bar]	Max Dome Pressure psi [bar]
2.375 [60.32]	1.715 [43.56]	0.601 [387.74]	1.375-14 UNF	5,000 [345]	2,800 [193]
2.875 [73.02]	2.218 [56.34]	0.994 [641.29]	1.562-12 UN	5,000 [345]	2,800 [193]
3.500 [88.90]	2.718 [69.04]	2.080 [1,341.93]	2.000-12 UN	5,000 [345]	2,800 [193]
4.500 [114.30]	3.715 [94.36]	3.547 [2,288.38]	2.938-12 UN	10,000 [690]	2,800 [193]

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

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