

COMPLETIONS SOLUTIONS | SUBSURFACE SAFETY VALVES

FEATURES

- All-electric actuation
- Mechanical failsafe closed, independent of external power source
- Fully independent and redundant actuation and control systems
- Resilient seal flapper/seat technology
- Unique patented flapper closure mechanism
- API 14A V1-R validation

BENEFITS

- Compatible with Halliburton all-electric portfolio sensors and flow controls
- Reduced HSE risk associated with hydraulic fluid systems
- Operates under IWIS medium power standards
- Permanent real-time health monitoring and position sensing capabilities
- Risk of gas and or fluid ingress to actuation system eliminated by complete isolation from tubing flow path
- Depth insensitive
- Same reliable failsafe functionality as hydraulic safety valves
- Life of well reliability in extreme conditions
- Improved low pressure sealing, full metal-to-metal (MTM) high pressure sealing
- No torsion springs on closure mechanism for enhanced debris tolerance
- API 14A 13th edition validated

EcoStar® electric tubing-retrievable safety valve

Safety valve for all-electric systems



HCT1779-035a

Overview

The Halliburton EcoStar® electric tubing-retrievable safety valve (eTRSV) is the world's first eTRSV and was the first installed in 2016. The EcoStar eTRSV solves a 30-year industry challenge to remove hydraulic actuation and its limitations.

The EcoStar eTRSV mechanical architecture builds upon Halliburton's industry leading deep water [DepthStar® TRSV technology](#) by incorporating field proven, patented magnetic coupling technology and replacing the hydraulic actuation system with electric actuation. This design eliminates the risk of electronics exposure to tubing fluid and pressure by completely isolating the actuation system from the completion tubing flow path. This improves actuation reliability with the same trusted mechanical failsafe mechanisms found on a conventional safety valve.

Electrification allows the well to be reopened after valve closure [e.g., during tests or emergency shutdown (ESD) events], which improves operational efficiency. This can shorten production deferral periods by significant amounts. In addition, the sensing capabilities of the safety valve can monitor its operation, position, and condition to provide advanced insights not possible with conventional hydraulic safety valve systems.

By changing from hydraulic to electric, subsea systems are simplified. This reduces costs and increases system reliability. The EcoStar® eTRSV is an enabling technology paving the way to all-electric completions systems. Fully compatible with Halliburton Completion Tools all-electric completion systems the EcoStar provides engineered solutions which maximize asset value.

Technical specifications summary

- Size: 5.5 in.
- Max OD: 8.62 in.
- Pressure rating: up to 10,000 psi
- Temperature rating: 4 to 125°C
- IWIS medium power compatible (API 17F)
- Position sensor
- API V1-R validated



EcoStar® eTRSV

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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