

Annular Safety Valve System

Helps to prevent unplanned gas releases during gas-lift operations

Applications

- Isolating the lower annulus during gas-lift completions
- Testing wells with unsupported casing

Features and Benefits

- The Optimax™ series annular safety valve (ASV) system is the first ASV to incorporate an API-qualified flapper.
- The flapper-based ASV offers a larger, optimized flow area that eliminates tortuous paths, minimizes the pressure drop through the system, reduces friction, and provides greater erosion resistance compared to poppet valves.
- The ASV packer is released by punching the mandrel and applying pressure to pump the packer into the retracted release position.
- The packer includes a built-in anti-preset feature that enables the packer to remain in the retained release position, where it can be retrieved easily during planned workover operations.
- A communication sub enables setting the ASV packer independently from production packers.
- Setting options include applying direct tubing pressure, applying pressure via a surface control line, actuating a mechanical communication sub, or remotely actuating an RFID communication sub.
- The system is fully assembled and tested before delivery.
- The full-circumference, low-stress, multicone-slip design optimizes load capacity and makes the system well suited for use in applications with unsupported casing.

Tool Description

The Weatherford ASV system incorporates three field-proven technologies: the Weatherford OptiPkr+ production packer, Optimax series ASV, and RFID-enabled hydraulic communication sub. All components are integrated in a single tool body, which enables operators to easily feed multiple lines through the tool.

The system offers multiple setting options and easy packer retrieval. Designed for high-risk operations including offshore wells and jobs with high axial casing loads, the system enables operators to achieve the level of reliable performance traditionally associated with tubing-retrievable safety valves without the need for a tubing intervention.

By reducing the risk of unplanned gas releases at the surface, the ASV system enhances the safety of gas-lift operations.



The ASV system includes an OptiPkr+ production packer, an Optimax series ASV, and an RFID-enabled communication sub.



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Specifications*

Casing size	9.625 in. (244.47 mm)
Casing weight	53.5 lb/ft (73.96 kg/m)
Maximum OD	8.44 in. (214.30 mm)
Minimum OD	4.70 in. (119.30 mm)
Connections	5 1/2-in. premium
Packer seal element	HNBR
Gas flow area	0.31 in. ² (198.06 mm ²)
Differential pressure rating	5,000 psi (34.47 MPa)
Temperature	39° to 167°F (4° to 75°C)

* Specifications for customer-specific variants are available upon request.

Certifications

- The packer is fully tested and qualified to ISO 14310 V0 standards.
- The valve is API qualified.

