

Optimax™ Select Tubing-Retrievable Surface-Controlled Subsurface Safety Valve

Incorporates essential features of the Optimax series in a highly reliable, cost-efficient design

Applications

- Fluid and gas environments
- Production and injection applications

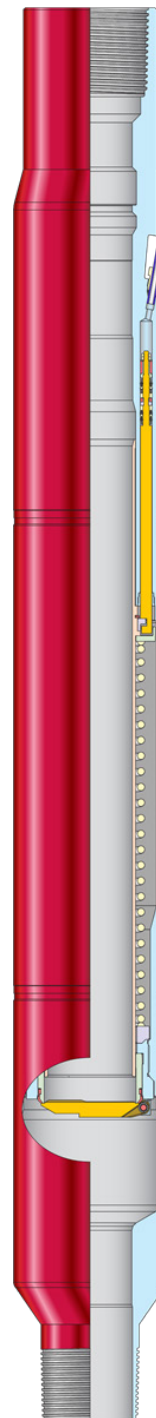
Features and Benefits

- The field-proven nonelastomeric, dynamic seal system avoids fluid-compatibility and explosive decompression issues for enhanced safety.
- Key features of the Optimax Select valve enhance reliability:
 - The hydraulic control systems have only two potential leak paths.
 - Metal-to-metal premium-thread housing connections are standard.
 - A nonelastomeric, soft flapper seat reinforces the primary metal-to-metal seal for low-pressure seal integrity.
- Design, material, manufacturing, assembly, and test documentation retention comply with API 14A validation grade V1 and API Q1.
- The optimized safety-valve design facilitates use of control-line communication and lockout tools to install a wireline-insert safety valve in the event of a malfunction, thus minimizing production disruptions.
- Accessories can be deployed on slickline, which simplifies operations.

Tool Description

The Weatherford Optimax Select tubing-retrievable surface-controlled subsurface safety valve (TRSCSSV) shuts in a well in the event of uncontrolled flow caused by equipment failure or damage. This rod-piston, flapper-type TRSCSSV is part of the Optimax series of safety valves.

As an integral part of the completion string, the Optimax Select valve is controlled by a single hydraulic control line. Applying control-line pressure keeps the valve in the open position; when pressure is bled off, the valve closes to protect personnel, property, and the environment. In the unlikely event of a malfunction, a full range of accessory tools are available, including wireline-insert safety valves.



The Optimax Select valve incorporates a simplified design that lowers cost without compromising reliability.



Optimax™ Select Tubing-Retrievable Surface-Controlled Subsurface Safety Valve

The Optimax Select valve not only retains essential features that drive reliability in the Optimax series, but also includes optimized design features that improve cost effectiveness. Notably, the number of internal premium connections is reduced, the nipple profile is standardized, the thread recuts are limited, and the overall length is shortened. Like all TRSCSSVs in the Optimax series, this valve maximizes operational simplicity and reliability.

Specifications

Tubing size	2-7/8 in. (74.3 mm)	3-1/2 in. (88.9 mm)
Rated working pressure	5,000 psi (34.5 MPa)	
Test pressure	7,500 psi (51.7 MPa)	
Maximum control chamber pressure	15,000 psi (103.4 MPa)	
Maximum valve outside diameter (OD)	4.61 in. (117.1 mm)	5.17 in. (131.3 mm)
Standard sealbore options	2.313 in. (58.8 mm) minimum only	2.813 in. (71.5 mm) minimum only
Nipple profile	WX only	
Rated working temperature	35° to 300°F (2° to 149°C)	
Failsafe setting depth	≤1,000 ft (304.8 m)	
Control-line connection	Industry standard metal-seal compression fitting for 1/4-in. (6.35-mm) control line	
Dynamic seal system	Weatherford proprietary design, nonelastomeric, rod-piston seal stack verified in tests to 10,000 psi (68.9 MPa) gas differential pressure at 300°F (149°C)	
Design and manufacturing compliance	API Q1 and API 14A	
API 14A validation grade	V1 (per API 14A, 12th edition)	
Material	9Cr or 13Cr	

