

## SFIV-II

### Surface-controlled bidirectional isolation valve

#### APPLICATIONS

- Two-way well control barrier
- Replacement for lubricator valve
- Multizone completions
- Intelligent completions
- Well suspension operations
- Workover operations
- Underbalanced perforating
- Single- or multiple-trip completions
- Postproduction and postinjection use

#### BENEFITS

- Prevents fluid loss
- Improves well productivity by providing a fullbore ID
- Enables multiple perforating runs without killing the well
- Minimizes interventions with remote opening and closing of the valve
- Reduces rig time by eliminating the need to run a plug
- Improves safety when perforating

#### FEATURES

- Insensitive to setting depth
- Interventionless remote actuation to open or close as many times as required
- Fail-as-is feature to prevent accidental closing and opening in case of line failure
- Gas-tight, bidirectional type-CC sealing across the barrier valve
- Metal-to-metal sealing body joint threads
- Optional single-line switch to actuate the valve with a single hydraulic control line
- API 19V/ISO 28781 V1 and Q1, CC barrier valve qualified; API 19V monogram available<sup>†</sup>
- Debris-tolerant

The SFIV-II\* surface-controlled bidirectional isolation valve protects formations from damage due to fluid loss during completions and workover operations and serves as a reliable barrier to isolate fluids between the reservoir and surface. By isolating the formation, this valve simplifies completion operations while increasing wellbore safety. The fit-for-purpose SFIV-II valve has developed a reputation for robust and reliable service; it is qualified for postproduction and postinjection use.

#### Dual control lines

The SFIV-II valve is actuated through dual hydraulic control lines from the surface. Dual control lines allow the valve to be opened and closed remotely as many times as required. The valve's fail-as-is feature prevents accidental closing and opening in case of a hydraulic system failure. The SFIV-II valve is designed and tested to API 19V/ISO 28781 V1 standards and is available in a range of materials, sizes, and tubing connections.

#### Insensitive to depth

Replacement of the interference collet with a displacement-type design has resulted in a valve that is insensitive to setting depth. Consequently, the SFIV-II valve can be run as deep and close to the formation as required, minimizing storage effects when the well is shut in for production buildup tests.

#### Optional single-line switch

When required, the valve can be controlled via a single control line by using an optional feature called the single-line switch. This single line is particularly useful when the tubing hanger can only accommodate a limited number of penetrations.

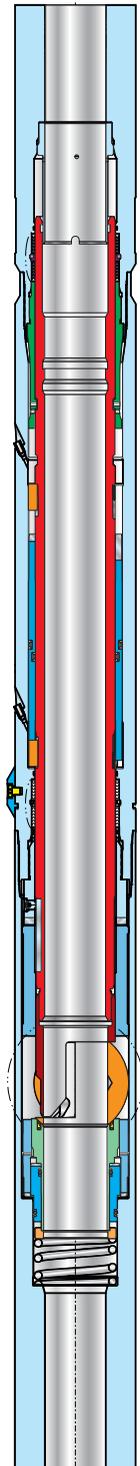
#### Cable protector

Both hydraulic control lines and bypass lines and cables are usually protected by standard cross coupling cable protectors. Lasalle\* cable protectors have been proven in numerous oil and gas producing regions around the world. One design is used for the valve's upper section, across the valve body and anchor nipple, and a second design is used for the lower section of the valve body and pup joint below.

#### Contingency shifting tools

For SFIV-II valves with an anchor profile, an optional hydraulically actuated contingency open-only shifting tool (COOST) can be deployed via slickline, braided line, or coiled tubing. The anchor profile ensures precise location and actuation of the COOST. Proprietary technology provides confirmation of tool actuation.

In addition, the ReSOLVE\* instrumented wireline intervention service features shifting tools that can be used to open the SFIV-II valve. The service provides real-time monitoring, dynamic tool control, and verified downhole actuation.



SFIV-II surface-controlled bidirectional isolation valve.

# SFIV-II

## SFIV-II Valve Specifications

Casing Size, in [mm]	Body OD, in [mm]	ID, in [mm]	Differential Pressure Rating (Body), psi [kPa]	Differential Pressure Rating (Ball), psi [kPa]	Hydraulic Chamber Pressure Rating, psi [kPa]	Max. Temperature Rating, degF [degC]
7.00 [177.8]	5.505 [139.8]	2.945[74.80]	5,000 [34,474]	5,000 [34,474]	10,000 [68.948]	300 [148.8]
	7.75 [196.9]	3.895 [98.93]	5,000 [34,474]	5,000 [34,474]	10,000 [68.948]	300 [148.8]
9.625 [244.4]	7.75 [196.9]	3.895 [98.93]	8,500 [58,605]	5,000 [34,474]	10,000 [68.948]	300 [148.8]
	7.75 [196.9]	3.705 [94.11]	7,500 [51,711]	7,500 [51,711]	10,000 [68.948]	250 [121.1]
10.75 [273.1]	7.78 [197.6]	3.505 [89.03]	15,000 [103,421]	15,000 [103,421]	15,000 [103,421]	300 [148.8]
	8.75 [222.3]	4.700 [119.38]	5,000 [34,474]	5,000 [34,474]	10,000 [68.948]	300 [148.8]
	8.75 [222.3]	4.700 [119.38]	6,500[44,816]	5,000 [34,474]	10,000 [68.948]	300 [148.8]
	8.75 [222.3]	4.505 [114.43]	7,500 [51,711]	7,500 [51,711]	10,000 [68.948]	250 [121.1]
13.625 [346.1]	9.75 [247.7]	4.505 [114.43]	11,000 [75,842]	5,000 [34,474]	10,000 [68.948]	200 [93.3]

Other sizes and temperature and pressure ratings available on request. Contact your local Schlumberger representative.

## SFIV-II Valve Cable Protector Selection Table

Part Number	Description	Recommended Casing Size, in	Recommended Casing Weight, lbm/ft
101717278	4½-in SFIV-II valve cable protector, upper	9.625	53.5
101717279	4½-in SFIV-II valve cable protector, lower	9.625	53.5
101717044	5½-in SFIV-II valve cable protector, upper	10.75	65.7
101714449	5½-in SFIV-II valve cable protector, lower	10.75	65.7

Other sizes available on request. Contact your local Schlumberger representative

## COOST Specifications

Size, in [mm]	Max. Collapsed OD, in [mm]	Completion Drift ID, in [mm]
2.940 [74.7]	2.580 [65.5]	2.640 [67.1]
3.895 [98.9]	3.515 [89.3]	3.575 [90.8]
4.700 [119.4]	4.320 [109.7]	4.380 [111.3]

[slb.com/fiv](http://slb.com/fiv)

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Other company, product, and service names are the properties of their respective owners.  
\*A small fraction of valves are pending qualification. Contact your local Schlumberger representative for details.  
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