

eSleeve Isolation Valve

Optimizes postperforation production by trapping underbalance pressure

APPLICATIONS

- Run combination of applications by stacking valves
- Trap underbalance pressure below a packer for PURE* perforating system for clean perforations
- Combine with other PURE system accessories for closed-tubing operations
- Perforate a previously perforated well or a well with limited casing strength
- Displace a fluid cushion

BENEFITS

- Avoid wireline intervention
- Save rig time

FEATURES

- Capability of running in open or closed position
- Backup shifting profile for emergency slickline activation
- Choice of alloy steel or 13 chrome material
- Various premium threads (available upon request)
- Capability of testing tubing and setting packers with multiple valves

The eSleeve isolation valve allows a precise underbalance pressure to be trapped in the tubing to optimize well productivity following perforating operations. This valve, available in alloy steel or 13 chrome materials, uses externally mounted dual rupture disks for activation. Modular design allows it to be run in single or multiple configurations.

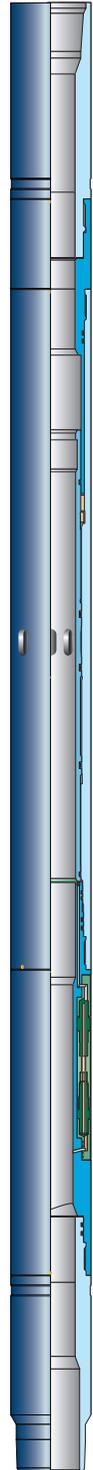
It is activated by the tubing or annulus pressure without wireline intervention, a distinct advantage in highly deviated or horizontal wells where intervention can be difficult.

This versatile valve does not require hydraulic control lines from the surface. A backup mechanism is built into the valve sleeve ID for emergency activation by slickline, if needed.

The eSleeve valve can be run into a well open (fill-up valve) or closed (pressure-operated underbalance valve), depending on tool configuration. After the packer is set, with the valve initially open, a specific pressure can be set in the rat hole, after which the valve is closed to trap this pressure for dynamic underbalance perforating with the PURE system.

When it is run open, the valve allows tubing to be filled automatically, and it can be closed at any time. This feature saves rig time because each stand of pipe does not have to be filled with liquid from the surface.

To displace a fluid cushion, the valve is run down the tubing in the open position. After reaching the target depth, the fluid is displaced by pumping a different type of fluid down the tubing prior to closing the valve.



eSleeve isolation valve.

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Specifications

	Alloy Steel	13 Chrome
Max. OD, in [mm]	5.515 [140.1]	5.515 [140.1]
Tool ID, in [mm]	3.312 [84.1]	3.312 [84.1]
True ID due to offset, in [mm]	3.172 [80.6]	3.172 [80.6]
Pressure ratings		
Max. pressure, psi [MPa]		
Hydrostatic	15,000 [103]	11,000 [76]
Differential	8,000 [55]	8,000 [55]
Min. pressure to activate, psi [MPa]	1,000 [6.9]	1,000 [6.9]
Temperature rating, degF [degC]		
For 120 h	350 [177]	350 [177]
For 360 h	300 [149]	300 [149]
Length, in [cm]		
Overall	101.1 [256.8]	101.1 [256.8]
Makeup	98.5 [250.2]	97.8 [248.4]
Weight, lbm [kg]	382 [173.2]	470 [213.2]
Tensile strength (80% min. yield), lbf [N]	448,626 [1,995,588]	394,000 [1,752,599]
Activation method	Dual rupture discs	Dual rupture discs
Activation path	Internal or external	Internal or external
Threads [†]	4½ EUE	4½-12¼# VAM® TOP

[†] Various premium connections on request.

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