

Falcon Hydraulic-Actuated Frac Valve

APPLICATIONS

- Uncemented horizontal, deviated, and vertical wells for
 - zonal isolation during multistage fracturing
 - isolated matrix acidizing treatments
 - casing integrity issues when stimulation is required
 - stimulation of sandstone, carbonate, and shale plays

BENEFITS

- Lowers costs by reducing fracturing pump pressure required, which lowers power consumption
- Initiates fracturing operations by increasing internal pressure, avoiding the need for mechanical intervention

FEATURES

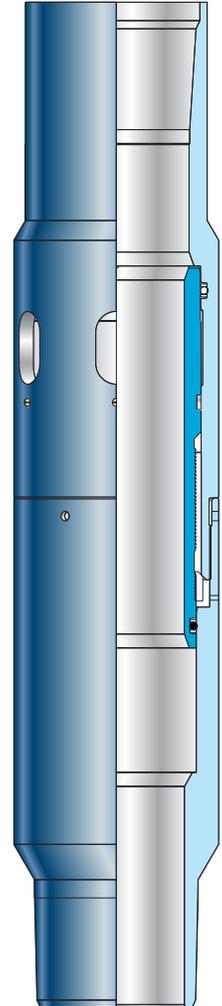
- Only one valve per system, situated above flow-through circulating valve
- Estimated opening pressure of approximately 5,500 psi [37.92 MPa]
- Large exit ports that increase flow area, allowing high flow rates
- Valve ratings to 10,000 psi [68,948 kPa] and 350 degF [177 degC]

The Falcon* hydraulic-actuated frac valve is an integral component of the Falcon uncemented multistage stimulation system, which is run in hole on a liner and is used for selective stage stimulation. It allows communication to be established with the first fracture zone at the toe after the close of the flow-through circulating valve.

The frac valve is positioned above the flow-through circulating valve and is actuated by applying pressure after closing the circulating valve. When the activation pressure is reached, a sleeve shifts down and exposes the exit ports to the formation, establishing communication with the fracture zone.

Falcon Hydraulic-Actuated Frac Valve Specifications

Size, in [mm]	3.5 [88.9]	4.5 [114.3]	5.5 [139.7]
Max. OD, in [mm]	4.60 [116.84]	5.62 [142.75]	7.655 [194.44]
Min. ID, in [mm]	2.992 [75.997]	3.75 [95.25]	4.29 [108.97]
Length, ft [m]	2.283 [0.696]	2.24 [0.683]	2.31 [0.70]
Max. burst pressure rating, psi [kPa]	10,000 [68,948]	10,000 [68,948]	10,000 [68,948]
Max. temperature rating, degF [degC]	325 [162]	350 [177]	350 [177]
Connections	Multiple connections available on request		
Opening pressure, psi [kPa]	4,325–5,050 [29,820–34,820]	4,250–5,750 [29,300–39,640]	4,687–5,384 [32,319–3,122]
Body tensile strength, lbf [kN]	193,250 [860]	285,000 [1,268]	636,175 [2,829]
Body torsional strength, lbf.ft [N.m]	10,000 [13,558]	10,000 [13,558]	10,000 [13,558]
Port flow area, in ² [cm ²]	9.40 [60.65]	11.92 [76.90]	28.28 [182.45]



Falcon hydraulic-actuated frac valve.