

# Falcon Hydraulic-Set Openhole Packer

## 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

- Lower risk of accidental setting because of integral safety mechanism
- Increased production rate with fullbore access through packer

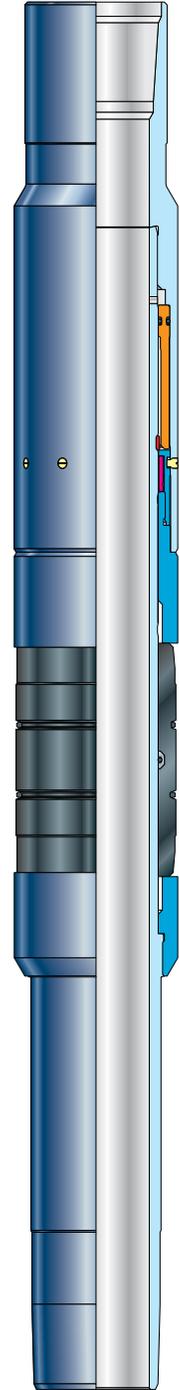
## FEATURES

- Pressure-set element for instant isolation and pressure integrity
- Proven antiswab design
- Short assembly length to facilitate passage through doglegs
- Full gauge protection
- Anti-extrusion rings on both sides of element
- Internal lock ring that permanently retains setting force in element after packer is set, permitting multiple pressure reversals
- Design that allows multiple packers to be set simultaneously

The Falcon\* hydraulic-set openhole packer is an integral component of the Falcon uncemented multistage stimulation system. It is positioned between two zones that are to be stimulated to isolate one from the other. The number of packers used in the string is determined by the number of zones to be treated.

After the liner has been run in the hole and hydraulically sealed, pressure is applied to set all the packers simultaneously. With maximum ODs of 5.625 in (4½-in version) and 8.00 in (5½-in version), the packers have full gauge protection. In addition, they are equipped with anti-extrusion barriers on both sides of the element. The barriers are composed of foldable rings and expandable lugs that expand with the element and conform to the open hole. Working together, the anti-extrusion barriers and the element provide an exceptional expansion ratio and the ability to withstand elevated pressures and temperatures. After the packer is set, an internal lock ring maintains the setting force on the element, enabling the packer to handle multiple pressure reversals.

The packers are tested to 10,000 psi [69 MPa] with pressure reversals at working temperatures up to 350 degF [177 degC] in openhole sizes ranging from 5.875 to 6.375 in (4½-in version) and 8.25 to 9.00 in (5½-in version). The 4½-in version can expand to 6.600 in and withstand 6,500 psi. The high expansion ratio of the packers ensures zonal isolation and successful stimulation even in the event of washouts.



*Falcon hydraulic-set openhole packer.*

### Falcon Hydraulic-Set Openhole Packer Specifications

Size, in	3.5	4.5	5.5
OD, in [mm]	5.75 [156.05]	5.63–5.75 [142.88–156.05]	8.00 [203.2]
Min. ID, in [mm]	2.832 [25.4]	3.75 [95.25]	4.79 [121.67]
Length, <sup>†</sup> ft [m]	4.28 [1.3]	4.28 [1.3]	4.87 [1.48]
Max. burst and collapse pressure rating, psi [kPa]	10,000 [68,948]	10,000 [68,948]	10,000 [68,948]
Max. temperature rating, <sup>‡</sup> degF [degC]	325 [162]	325–350 [162–176]	350 [176]
Max. differential across element, psi [kPa]	10,000 [68,948]	10,000 [68,948]	10,000 [68,948]
Connections	Multiple connections available on request		
Openhole size range, in [mm]	5.875–6.375 [149.23–161.93]	5.875–6.375 [149.23–161.93]	8.25–9.00 [209.55–222.25]
Min. setting pressure, psi [kPa]	2,287 [15,768]	2,287 [15,768]	2,453 [16,916]
Max. setting pressure, psi [kPa]	2,687 [18,526]	2,687 [18,526]	2,998 [20,670]
Body tensile strength, lbf [kN]	320,000 [1,423]	320,000 [1,423]	625,000 [2,780]
Body torsional strength, lbf.ft [N.m]	10,000 [13,558]	10,000 [13,558]	10,000 [13,558]

<sup>†</sup>Varies depending on connection type.

<sup>‡</sup>Value depends on elastomer selection.