X Packer - Swellable Isolation System

The X Packer provides a simple, effective, high integrity solution for cased and open hole zonal isolation.

The swellable nature of the rubber allows it to conform to micro variations in the bore hole which in combination with the long wellbore contact length provides a high integrity seal in open hole without exerting excessive force on the wellbore.

With no moving parts, and no requirement for setting tools, the reliability of these packers is exceptionally high.

The X Packer is energized by the fluid present in the well, whether that be oil or water based. Natural processes of absorption and diffusion assisted by the complex engineering of the rubber matrix draw the fluid inside the packer which then swells to contact the wellbore and provide a seal.

The X Packer is bonded to the base pipe for the full length of the swellable rubber element. This reduces possible leak paths providing a high pressure, high integrity seal. It provides effective isolation with either ball activated sleeves or plug and perf completion designs.

Applications

Swell X Packers are a simple, more reliable means of isolation than alternatives such as inflatable packers, mechanical packers and even cementing in extended horizontal wells. Their robust design and simple operation mean they are a flexible solution in many situations where a pressure seal is required. Specific applications include:

• Isolation for hydraulic fracturing (particularly in horizontal wellbores)
• Wellbore segmentation
• Flow diversion
• Isolation of Sustained Casing Pressure
• Cement integrity (micro-annuli and mud channelling)
• Straddle systems
• Between screen zonal isolation for gravel packing & sand screens
• Thru-tubing isolation of perforations for refracturing

Features

• Single element design providing a high integrity seal
• Proprietary next generation oil and water swellable elastomers
• Anti-extrusion end rings which also protect the rubber element while running in hole
• Standard temperature range 32°F - 392°F (0°C-200°C)
• Pressure range up to 10,000 psi (dependent on packer length)
• Manufactured 100% in the USA specifically using base pipe sourced from US mills
• Packers can be provided for any casing size and length

Benefits

• Effective isolation providing enhanced stimulation and production performance
• Reduced rig time and personnel - reduced cost
• Reduced failure modes - robust design – increased reliability
• Long term, high integrity seal

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Specifications

- Single element design providing a high integrity seal
- Proprietary high performance, next generation oil and water swellable elastomers
- Anti-extrusion end rings which also protect the rubber element while running in hole
- Temperature range 32°F - 392°F (0°C - 200°C)
- Differential pressure rating up to 10,000 psi (dependent on packer length)
- Design contact time 24 to 72 hours
- Design setting time 7 to 14 days
- Standard element lengths of 3, 5, 10 and 20 ft
- Manufactured 100% in the USA specifically using base pipe sourced from US mills
- Chemical resistance to majority of common downhole fluids

Packers can be provided for any casing size and length but standard designs are:

<table>
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<th>Hole Size</th>
<th>Mandrel OD</th>
<th>Element OD</th>
<th>Full pressure rating up to</th>
<th>Reduced pressure rating up to</th>
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All information is indicative and each application must be assessed by the Swell X engineering team.
All dimensions can be designed to suit client specific requirements.