

Multiport Packer and PT Gauge

IntelliZone Compact II system components

MULTIPORT PACKER



Rated to 5,000 psi
[34 MPa]



Rated to 250 degF
[121 degC]

ADVANTAGES

- Hydraulic setting mechanism that eliminates pipe movement
- Retrievability to eliminate risks associated with milling
- Cut-to-release (CTR), straight pull-to-release (SPR), and slipsless packer versions
- Ability to feed through 1/4-in control lines
- Wellsite-adjustable setting pressure and shear release values
- Compliance with ISO 14310 V3 standard (V6 standard for slipsless packer)

PT GAUGE



Rated to 10,000 psi
[69 MPa]



Rated to 302 degF
[150 degC]

ADVANTAGES

- Up to eight dual (tubing and annulus) gauges on a single cable
- Immunity to ESP noise
- Rig-time savings with no requirement for a gauge mandrel

IntelliZone Compact II* modular multizonal management system includes a multiport packer and an ESP-noise-immune pressure and temperature (PT) gauge.

Flexible packer options

The multiport packer provides annular zonal isolation in multizone completions. This tubing-conveyed packer features 1/4-in bypass ports for control line feedthrough. Hydraulic setting makes it ideal for single-trip, multizone completions. The packer is manufactured in a choice of materials to suit a wide range of production applications.

For cased holes the packer is provided as an integral part of the IntelliZone Compact II system. For open holes the system is delivered without a packer and a swellable packer can be run with it instead.

The multiport packer is conveyed to depth on the completion tubing. It is set by creating differential pressure between the tubing and annulus. Tubing pressure is increased and directed through ports in the mandrel and shell to energize the setting pistons. Setting pressure can be adjusted at the wellsite before installation.

Depending on the configuration chosen, there are two methods for retrieving the packer. For the CTR version of the packer, its internal mandrel is cut with an explosive or mechanical cutter. For the SPR version, the tubing string tension is increased until the shear rating of the release pins is exceeded.

The CTR and SPR versions feature a sealing element and slips. A slipsless version of the packer is also available. It is used when the packer is simply required to provide zonal isolation without withstanding any loads.

Advanced ESP-noise-immune gauges

Schlumberger enhanced silicon-on-insulator (eSOI) permanent downhole PT gauges used with the IntelliZone Compact II system were engineered in-house to provide accurate metrology for the life of the well. Up to eight dual (tubing and annulus) gauges can be multidropped on a single cable.

The upgraded gauge telemetry is immune to ESP noise, facilitating deployment of the IntelliZone Compact II system in a completion that includes an ESP.



Multiport packer used with the IntelliZone Compact II modular multizonal management system.

Multiport packer and PT gauge

Multiport Packer Specifications

	7 × 3½-in Packer (Premium)			7 × 3½-in Packer (Nonpremium)		5½ × 2⅞-in Packer (Premium)	
Casing weight, lbm/ft [kg/m]	23–26 [34.2–38.7]	26–29 [38.7–43.2]	29–32 [43.2–6]	23–26 [34.2–38.7]	26–29 [38.7–43.2]	17 [25.3]	20 [29.8]
Max. OD, in [mm]	6.090 [154.7]	6.000 [152.4]	5.910 [150.1]	6.090 [154.7]	6.000 [152.4]	4.710 [119.6]	4.595 [116.7]
Casing size, in [mm]	7 [177.8]	7 [177.8]	7 [177.8]	7 [177.8]	7 [177.8]	5½ [139.7]	5½ [139.7]
Tubing size, in [mm]	3½ [88.9]	3½ [88.9]	3½ [88.9]	3½ [88.9]	3½ [88.9]	2⅞ [73]	2⅞ [73]
Min. ID, in [mm]	2.900 [73.66]	2.900 [73.66]	2.900 [73.66]	2.942 [74.73]	2.942 [74.73]	2.399 [60.9]	2.399 [60.9]
Feedthrough port size, in [mm]	0.25 [6.35]	0.25 [6.35]	0.25 [6.35]	0.25 [6.35]	0.25 [6.35]	0.25 [6.35]	0.25 [6.35]
Differential pressure rating, psi [kPa]	5,000 [34,474]	5,000 [34,474]	5,000 [34,474]	5,000 [34,474]	5,000 [34,474]	5,000 [34,474]	5,000 [34,474]
Retrieval method	SPR	SPR	SPR	CTR or SPR	CTR or SPR	SPR	SPR
Operating temperature range, degF [degC]	68–250 [20–121]	68–250 [20–121]	68–250 [20–121]	68–250 [20–121]	68–250 [20–121]	68–250 [20–121]	68–250 [20–121]
Materials							
Flow-wetted material	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175	4130 or 13Cr steel compliant with NACE MR0175

PT Gauge Specifications

Pressure accuracy, psi [kPa]	±3 [±20.7]
Pressure resolution, psi [kPa]	0.05 [0.34]
Temperature accuracy, degF [degC]	±0.27 [±0.15]
Temperature resolution, degF [degC]	0.007 [0.004]
Working pressure, psi [kPa]	10,000 [68,948]
Max. gauges per cable	8 dual gauges

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