CoilFLATE
Coiled tubing through-tubing inflatable packer

APPLICATIONS
- Lower-zone abandonment
- Water shutoff
- Wellhead, pressure, and tubing integrity testing
- Cement squeeze and acidizing operations
- Chemical and water-control treatments

ADVANTAGES
- Elimination of cost and time associated with workover rig
- Reduction in downtime by achieving success on first attempt
- Economical production optimization in harsh-environment wells
- Significant safety margin over conventional systems at similar injection pressures
- Applicability at temperatures up to 375 degF [190 degC]
- No-kill well intervention
- Reliable high-pressure seal at large inflation ratios
- Chemical resistance against aggressive chemicals
- Accurate depth control and real-time pressure monitoring using the ACTive* family of live downhole coiled tubing services
- No ball drop required for inflation and release
- Computer-aided job design with Inflate Advisor software

Permanent zone abandonment, temporary isolation
Overcoming conventional operating restrictions of inflatable packers under extreme conditions, the CoilFLATE® coiled tubing through-tubing inflatable packer extends critical zonal isolation capability to previously inaccessible, chemically harsh, and high-temperature environments. The CoilFLATE packer is run on either CT or jointed pipe into vertical, deviated, or horizontal wells, in both cased hole and openhole sections, eliminating the need for a workover rig.

The system enables permanent abandonment of zones and temporary isolation of wellbore areas for tubing integrity testing, wellhead testing, and general pressure testing applications. Its chemical resistance makes it ideal for selective placement of treating fluids required for acid stimulation, water control, and chemical treatment.

Robust design for severe conditions
Tapered heavy-duty slats, a high-strength carcass restraint system, a composite bladder, and a chemically resistant seal compound keep the CoilFLATE packer anchored in place, providing a high-pressure seal even at large inflation ratios (>5,000 psi at 2:1, >2,000 psi at 3:1). The CoilFLATE packer design allows extended exposure of the assembly to temperatures up to 375 degF [190 degC], under harsh wellbore conditions, and in almost any chemical environment.

The carcass restraint system ensures uniform inflation of the bladder to maximize anchoring and sealing of the element.
## CoilFLATE Through-Tubing Packer Specifications

### Max. packer element differential
- 2:1 expansion: 5,000 psi [34.47 MPa]
- 3:1 expansion: 2,000 psi [13.79 MPa]

### Max. temperature at setting depth
- 2:1 expansion: 375 degF [191 degC]
- 3:1 expansion: 325 degF [163 degC]
- Open hole: 300 degF [149 degC]

### Wellbore geometry
- Open hole or cased hole, vertical, deviated, or horizontal

### Max. dogleg severity
- 30°/100 ft [30°/30.48 m]

### Max. H₂S levels
- 150 psi [1.03 MPa] partial pressure (Set time <30 days at 300 degF [149 degC])
- 50 psi [0.34 MPa] partial pressure (Set time >30 days at 250 degF [121 degC])

### Connections
- 1.812 in [4.603 cm] 10 SA, box top and pin bottom
- 2.75 in [5.3975 cm] [7.3025 cm XN nipple]
- 4 in OD, 3.34 in ID; 13.2 Ibm/ft [11.8 kgm/m]

### Min. tubing requirements for packer setting
- 2.32 in OD, 7.9 Ibm/ft [5.8928 cm OD, 11.8 kgm/m]
- 4 in OD, 3.34 in ID, 13.2 Ibm/ft [10.16 cm OD, 8.4836 cm ID, 19.6 kgm/m]

### Max. OD of element before expansion
- 3 in [7.62 cm]

### Max. OD of packer after expansion
- 7 in [17.4625 cm (19.3675 cm OD, 44.2 kgm/m casing)]
- 9 in [22.86 cm (24.4475 cm OD, 48.2 kgm/m casing)]
- Open hole [16.51 cm (open hole)]

### ID of flow passage through CoilFLATE packer
- 3/4 in [1.905 cm]
- 1 in [2.54 cm]
- 1/2 in [1.27 cm]

### ID of flow passage through running assembly
- 3/4 in [1.905 cm]
- 1 in [2.54 cm]

### Packer element length (shoulder to shoulder)
- 72 in [182.88 cm]
- 91.2 in [231.648 cm]

### Packer chassis assembly length
- 138 in [350.52 cm]
- 162 in [411.48 cm]
- 117.6 in [298.704 cm]

### Min. nipple size for retrieval
- 2.205 in (2-7/8-in XN nipple)
- 3.135 in (4.0-in XN nipple)

### Max. retrieval load
- <3,000 Ibf [<13,345 N]
- <3,000 Ibf [<13,345 N]

### Max. tensile load for fishing
- 20,000 Ibf [88,964 N]
- 44,000 Ibf [195,722 N]
- 44,000 Ibf [195,722 N]

### Element shipping weight and storage
- 70 Ibm [31.75 kgm] in shipping tube, −40 to 140 degF
- 100 Ibm [45.36 kgm] in shipping tube, −40 to 60 degC
- 60 Ibm [27.22 kgm] in shipping tube, −40 to 60 degC

### Additional Information

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¹ H₂S concentration in parts per million is a function of downhole pressure. Not all materials meet NACE MR0175.

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The engineered slat design allows higher differential pressures at varying inflation ratios.

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