

Upper and Lower Tubing Packoffs

The upper and lower tubing packoffs are designed to be run under pressure with standard slickline methods.

APPLICATIONS

- Completions with tubing leaks
- Mature wells that need a gas lift installation

BENEFITS

- Adaptable for conventional gas lift applications
- Enables tubing isolation without a workover

FEATURES

- External fishing neck on most sizes
- Uses standard packoff tube
- Rugged, field-proven design
- Available in various materials

They are used to straddle and pack off holes in the tubing string, holes caused by erosion opposite upper zone perforations of multiple completions, or holes from corrosion at any point in a tubing string. If the holes in the tubing string were made intentionally with a tubing perforator, packoffs are used to seal immediately above and below the tubing perforations adjacent to a gas lift valve and mandrel.

DESCRIPTION AND OPERATION

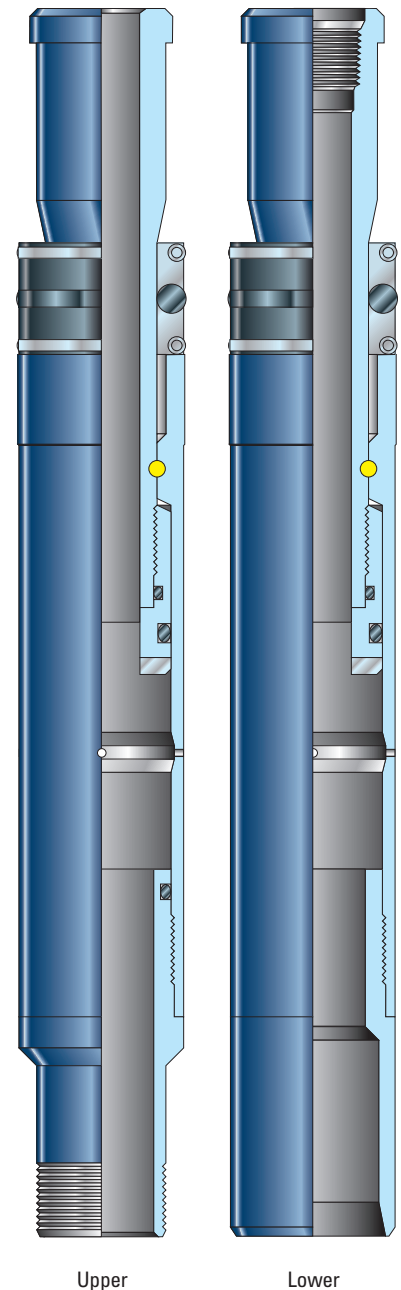
Tubing packoffs are used to seal off a perforated hole or a leak that has occurred due to tubing damage. The tubing packoffs are designed to straddle and pack off holes or other communications in the tubing string so that production can continue without pulling the tubing and performing a costly workover operation.

The packoff assembly consists of two sealing elements and a spacer pipe which extends across the section of tubing with the hole. In situations that require adding gas lift to a well without side pocket mandrels, a tubing perforation gun is used to punch a hole in the tubing string. A conventional gas lift mandrel with valve is then installed between the packoffs.

The packoff elements seal in the tubing above and below the hole to isolate the hole or leak. In the case of damaged tubing, the length of the spacer pipe varies according to the amount of damage. After installation, all production is routed up the tubing, through the center of the packoffs and spacer pipe, or gas lift mandrels.

To run the packoff assembly into position, a Z-5 collar lock is run and set below the damaged area in a tubing coupling recess. If there is no recess available to set the Z-5 lock, a Type-A tubing stop is used and may be set at any point in the tubing.

The packoff assembly, i.e., upper packoff, spacer pipe or gas lift mandrel, and lower pack-off, is then run in the tubing with a PRS running tool. Then a Type-A tubing stop is run on top of the packoff assembly. As the tubing stop is jarred into position, the elements are set and locked in place on both the upper and lower packoffs to isolate the tubing leak.



Upper

Lower

Upper and Lower Tubing Packoffs

Upper and Lower Tubing Packoffs Specifications					
Tubing		Tubing Packoffs			
Size (in. [mm])	Weight (lbm/ft)	Type	Max. Running OD (in. [mm])	Min. ID (in. [mm])	Running and Pulling Tool
1.900 [48.3]	2.9	Upper	1.469 [37.3]	0.500 [12.7]	1½-in. JDC
		Lower			na
2.063 [52.4]	3.3	Upper	1.537 [39.0]	0.500 [12.7]	1½-in. JDC
		Lower			na
2.375 [60.3]	4.7	Upper	1.854 [46.9]	1.047 [26.6]	2-in. PRC-2
		Lower			na
2.875 [70.7]	6.5	Upper	2.307 [58.6]	1.125 [31.8]	2½-in. JDC
		Lower			na
3.500 [88.9]	9.3	Upper	2.703 [68.7]	1.531 [38.9]	2-in. JDS
		Lower			na
4.000 [101.6]	11.0	Upper	3.281 [83.3]	1.531 [38.9]	3-in. JDC
		Lower			na
4.500 [114.3]	12.8	Upper	3.781 [96.0]	1.531 [38.9]	3-in. JDC
		Lower			na

na=not applicable

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