

# Z-5 Collar Lock

The Z-5 collar lock is used as a tubing stop in wells that have tubing collar recesses to set the lock.

## APPLICATION

- Completions with API coupled tubing joints

## BENEFIT

- Provides a locking device for wells without a landing nipple

## FEATURES

- Locks in collar recess
- External fishing neck
- Rugged field-proven design
- Available in various materials

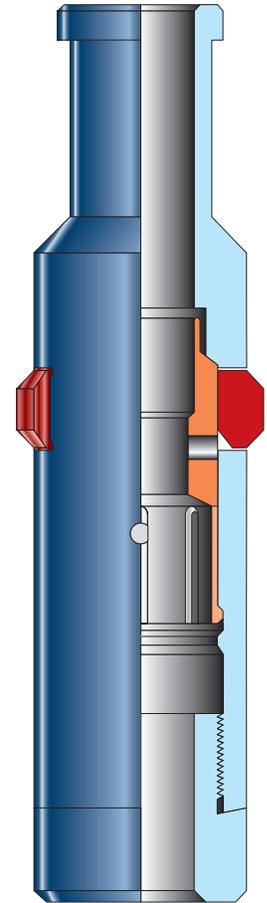
It has a straight-through bore and cannot be unset by high-velocity fluid or gas flow. Z-5 locks are ideal for use in packoff installations and as anchors for the bottom hole bumper spring in plunger lift installations.

## DESCRIPTION AND OPERATION

The Z-5 collar lock was designed to provide both a collar lock and stop that locks positively from both directions in a tubing collar recess. The Z-5 lock is run in the well using a Z-5 running tool composed of a prong fastened with a shear pin to the lock inner sleeve. The locking dogs are free to be depressed inward as the tool is moved downward through the tubing. After passing below the coupling selected for the position of the Z-5 lock, the slickline tools are pulled upward to force the locking dogs outward against the tubing wall by the upward pull on the inner sleeve. The lock is automatically stopped at the next collar recess as the locking dogs begin to engage the recess. Light upward jarring moves the inner sleeve behind the locking dogs, where it is retained by a collet on the end of the inner sleeve. A continued upward jarring motion removes the running prong, leaving the Z-5 securely locked in the coupling recess.

To retrieve the Z-5 collar lock, a Z-5 running prong on a standard JUC pulling tool is used. The prong is driven down onto the lock until the locking dogs release from the recess. As this occurs, the pulling tool simultaneously engages the fishing neck and the lock can be retrieved by jarring upward.

If desired, a packing section using standard choke cups may be added to the lower end of the lock with any standard subsurface control attached. In this application, the same running and pulling procedure described above is used.



## Z-5 Collar Lock Specifications

Tubing		Max. OD <sup>†</sup>		Min. ID (in. [mm])	Running Tool
OD (in. [mm])	Weight (lbm/ft)	Dogs Retracted (in. [mm])	Dogs Extended (in. [mm])		
1.900 [48.3]	2.9	1.453 [36.9]	1.770 [45.0]	0.562 [14.3]	Z-5
2.375 [60.3]	4.7	1.843 [46.8]	2.156 [54.8]	0.828 [21.0]	
2.875 [73.0]	6.5	2.281 [57.9]	2.562 [65.1]	1.062 [27.0]	
3.500 [88.9]	9.3	2.719 [69.1]	3.188 [81.0]	1.515 [38.5]	
4.000 [101.6]	11.0	3.281 [83.3]	3.688 [93.7]		
4.500 [114.3]	12.8	3.800 [96.5]	4.250 [108.0]		

<sup>†</sup> Other sizes are available on request. Contact your local Schlumberger representative.