

Model ERP-1 retrievable casing packer

Expro's ERP-1 is a resettable retrievable compression-set casing packer, which does not require rotation to set. It is applicable for use in a variety of well treating, testing, and TCP operations and can be used where extreme hydrostatic pressures are encountered.

This packer does not require rotation to set, therefore is ideal for applications where rotation of the work string is undesirable or prohibited, (e.g. deepwater landing strings) or where transmitting torque downhole is problematic (highly deviated / horizontal wells). The ERP-1 features an internal bypass that provides a free flow of fluids through the packer during running, retrieving, and circulating. This packer can support high differential pressure from above (drawdown mode) and below (stimulation mode), where the latter utilises hydraulic pressure to act on a balance piston to keep the bypass seal closed and to actuate button-type slips to anchor the packer against upward movement.

Setting the ERP-1 is accomplished by simple reciprocation of the tubing or work string. It has an optional locking mechanism which is sheared out once the packer has entered the wellhead or liner. The shear value can be set to self-activate on reaching a depth below the liner top, or with the application of annulus pressure over hydrostatic when at setting depth. When the lock is deactivated, the packer assumes the safety position. When at the desired depth the packer is set by picking up and slacking off the string; this moves the packer to the setting slot and pipe/drill collar weight acts to set the packer. This one operation sets the slips, energises the packing elements and closes the bypass. Retrieval is accomplished by straight pick-up of the tubing or work string, which opens the bypass to equalise pressure above and below the packer. Continued pick-up will retract the slips and allow the packing elements to relax. The packer will then automatically track to the safety position. The packer may then be repositioned above or lower in the well and reset as necessary in the same manner.



Features and benefits

- Resettable and retrievable.
- Does not require rotation to set.
- Internal fluid bypass.
- Supports high differential pressure from above and below.
- Optional lock feature to avoid premature setting.

Applications

- 'Shoot & Pull' perforating including extreme high pressure wells.
- Drill stem testing
- Injection testing
- Well stimulation
- Subsea wells where rotation of the work string is undesirable or prohibited.
- Highly deviated/ horizontal wells where transmitting torque downhole is problematic.

Drill Stem Testing (DST)



Extreme Pressure Series

Technical specifications		
Casing size	7-3/4 in	7 in
Casing weight range	46.1 ppf	17.0-20.0 ppf
Casing ID setting range	6.456 in – 6.578 in	
Max. OD packer	6.266 in / 159 mm	
Min. ID packer	2.375 in / 60 mm	
Approximate length	12.3 ft / 3.76 m	
Max. differential pressure	10,000 psi / 69 MPa	
Temperature	350°F / 177°C (Std.)	400°F / 204°C (Prem.)
Max. tensile load	179,000 lbf / 79,620 daN	
Max. setting weight	10,000 lbf / 4,448 daN	
Overall setting stroke	49 in	
Top connections (box)	3-1/2" IF or 3-1/2" PH6 available	
Bottom connections (pin)	2-7/8" EU 8RD	
Service	H2S, CO2, acid	

Other top and bottom connections available upon request.

Other ERP packer sizes and weight ranges available upon request.