



External Casing Packer (ECP)

External Casing Packers (ECP) are inflatable downhole tools installed on the outside diameter of a pup joint of casing or casing mandrel. The ECP includes an inflation control valve mechanism to inflate the element and create a seal between the casing mandrel and open hole or previously set casing string. ECP can inflate to greater than 2.5 times their run-in diameters. An ECP can be inflated by straddling the inflation port with a variety of packer setting tools or by simply applying pressure to the entire casing string.

Common applications:

- For multiple stage cementing in vertical wells External Casing Packers are placed below the stage tool to support the cement column while it cures.
- To prevent annular gas migration, External Casing Packers above the gas source stop the migration and ensure the integrity of the cement job.
- To separate horizontal wells into segments, slotted liner, screens and blank casing are selectively placed between ECP.

Advantages

- External Casing Packers can be easily installed on the outside of the casing, eliminating the need for additional casing strings or complex installations.
- ECPs can be inflated to a large diameter, providing a strong seal with the surrounding formation or previously set casing.
- ECPs can be used for multiple stage cementing, ensuring the integrity of each stage and preventing unwanted fluid movement between stages.
- By selectively placing ECPs, horizontal wells can be segmented and different zones can be selectively treated or produced, increasing well productivity.
- Larger, longer packer lengths are suitable for running through severe doglegs and high hole inclinations, providing application flexibility.
- The packer includes a field-proven element system, providing consistent reliability.
- Shear pins in the valve system are easily accessible for field dressing and do not require special tools, contributing to efficiency and time savings.
- The valve sleeve contains a shoulder, protecting the valve from damage during run-in.

Specification Guides

Casing Size	ECP OD	Seal Length	Tool Length
in.	in.	ft	ft
4.5	5.75	3, 5, 10 or 20	Seal Length + 5
5.0	6.25	3, 5, 10 or 20	Seal Length + 5
7.0	8.25	3, 5, 10 or 20	Seal Length + 5
9.625	11.25	3, 5, 10 or 20	Seal Length + 5
13.375	15.75	3, 5, 10 or 20	Seal Length + 5

Stage Cementing Tools

TOMEX provides a range of stage cementing tools and accessories that can be used together with ECP for efficient cementing of a casing string or liner in multiple stages. These tools are typically run above the ECP to prevent cement from flowing downhole and leaving a lower section uncemented. Using compatible systems can significantly improve efficiency, reduce rig time, minimize risk exposure, enhance safety, and improve wellbore integrity.

	Multistage Cementing Tools	
	Stage Tools	Port Collars
Opening Method	Hydraulic Pressure	Shifting of Inner Sleeve
Closing Method	Closing Plug	Shifting of Inner Sleeve
Max. # of Stages	2	No limit
Well Deviation	<90°	<90°
Casing Applications	Yes	Yes

