

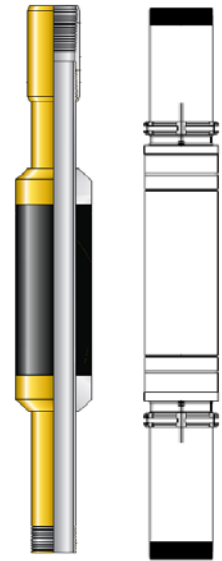
# External Casing Packer

(ECP)



Qteq's ECP-HS is a surface control line set packer that eliminates the need for downhole setting tools and specialised equipment. A simple surface inflate manifold allows operators to inflate, monitor and deflate ECPs. Surface monitoring gauges can be integrated into onsite SCADA system to monitor packer health and re-inflate when well conditions change. Setting pressure can be optimized based on expected differential pressures, whole size, depth and temperature. The packer can be set in both open and cased hole wells. The packer's reinforced elements are ideally suited for challenging open hole profiles with significant irregularities, wash outs and bridges. The packers are also ideal for temporary installation for wellhead exchanges during drilling operations.

Qteq's ECP-SW is a self-energizing water swell packer that eliminates annular flow around tubular assemblies in either open or cased hole. Utilizing a proprietary polymer compound the elements swell by absorbing water to expand the rubber matrix. This results in zonal isolation without the need for cement, running tools or specialized rig-site personnel. Swell rates can be accurately predicted, based on swell element chemistry and well-specific in-situ conditions. Likewise, swell chemistry can be tailored to suite well-specific conditions, desired swell rate and differential pressure rating, as a function of elastomer shear modulus and element length.



## ECP-HS Features and Benefits

- Rugged packer element design is ideal for challenging well environments.
- Inflated from surface through control line.
- Ability to monitor long term packer integrity using surface gauges.
- Easily deflated by bleed-off of control line pressure.
- Incorporates a single TEC feed-through for casing-deployed gauges.

## ECP-SW Features and Benefits

- Can be mounted on any OCTG casing.
- Robust construction with no moving parts.
- No specialist operators required.
- Self-healing, intervention-less operation.
- Industry proven design with long run history
- Element chemistry engineered to suit in-situ conditions and wide ranging operational needs.
- Ability to accommodate one or more TEC feed-throughs for casing deployed gauges.

## Specifications

	ECP-HS	ECP-SW
<b>Casing Sizes</b>	7" 23.0#, other sizes upon request	7" 23.0#, other sizes upon request
<b>Surface Casing Size</b>	Min. 9.625" 47.0#	Min 9.625" 47.0#
<b>Open-hole Size</b>	Min. 8.5"	Min 8.5"
<b>Maximum OD</b>	8.20"	8.25"
<b>ECP ID</b>	6.094"	6.366"
<b>Length</b>	3,005 mm	2,740 mm
<b>Seal Length</b>	915 mm	914 mm
<b>Setting Method</b>	¼" control line from surface	Reactive swelling
<b>Elastomer &amp; Seals</b>	Steel wire reinforced NBR	Water Swell (Rapid)
<b>Differential Pressure</b>	Inflate pressure dependant (min. 3,000 psi)	5,800 psi @ 8.5"
<b>Setting Performance</b>	Seals in ~30 minutes	Swells in ~2 days and seal in ~3 days total
<b>Metallurgy</b>	K55, corrosive services available upon request	K55, corrosive services available upon request
<b>Pass-through</b>	4mm bare TEC or control line	4mm or ¼" bare TEC or control line