

..... DynaFORM™

Overview

DynaFORM™ is designed to safeguard production, providing control of fluid cross-flow between zones to increase oil production by reducing the volume of produced water.

- Swellable rubber bonded to the external of the tubing or casing
- External rubber swells and seals when it comes in contact with the activation fluid (oil or water)
- Swells into out-of-gauge sections ensuring a compliant seal
- Suitable for open-hole and cased-hole applications
- Suitable for through-tubing and straddle applications

Features and Benefits:

- Provides significant cost savings
- Strong and durable packer
- Simple – there are no moving parts
- No additional running tools or site crew
- Long life span
- Enables planning of zonal isolation
- Prevents annular flow
- Self healing
- Available for water or oil activation
- High-performance, multi-element packers
- Holds higher pressure than single-element packers
- Strong initial setting than single-element packers

Installation Process

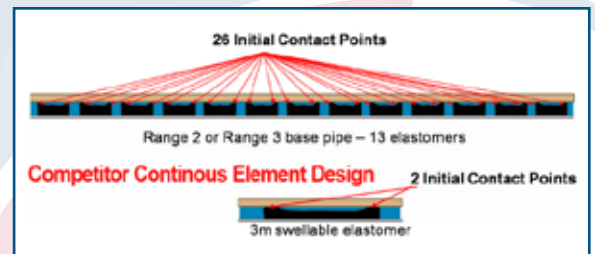
The DynaFORM™ swellable elastomer is vulcanized directly onto the casing creating a strong and durable packer. The DynaFORM™ is shipped from our manufacturing plants to the well site or customer's warehouse in a ready-to-run condition. All that is required for installation is that the rig crew remove the protective covering prior to the DynaFORM™ being made up to the casing string. No additional assembly, running tools, or personnel are required.



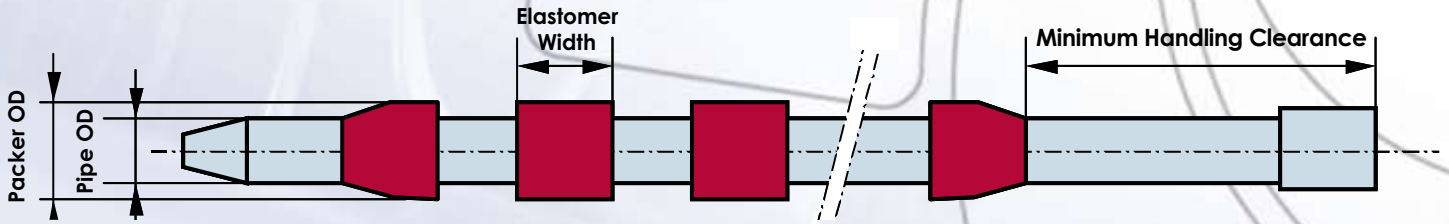
DynaFORM™ is suitable for both open-hole and cased-hole applications; the amount of rubber applied can be varied to suit well conditions



DynaFORM™ uses the unique SWELLFIX multi-element design, providing multiple initial contact points – the better the initial contact, the better the packer seals



Typical Installation Layout

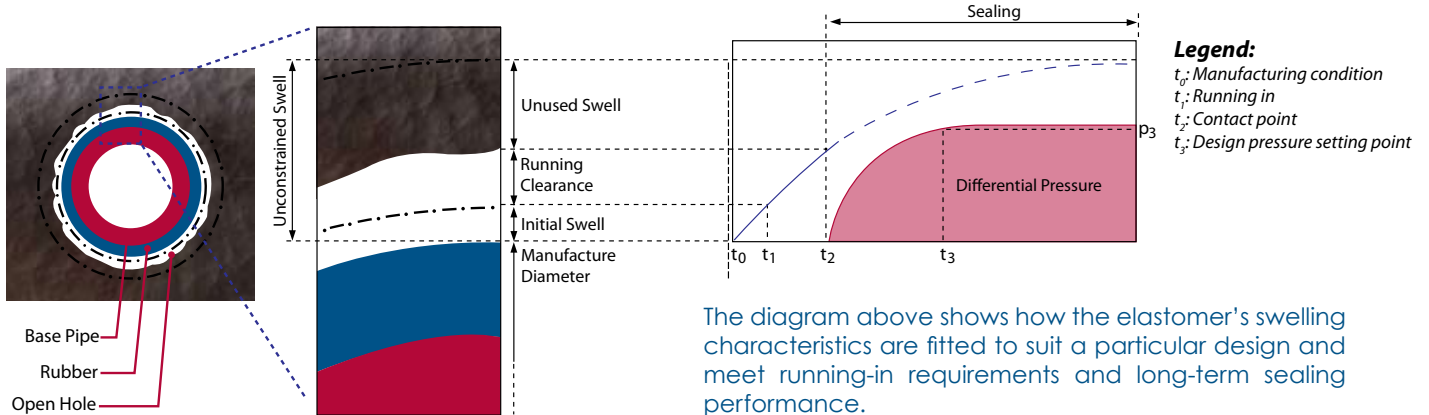


DynaFORM™ packers are custom designed using our own modeling software and integrated into the casing. Well size and fluid conditions are taken into account when the swelling characteristics of the packer are engineered to meet the clients pressure retaining requirements. Depending on the packer length, they are typically designed to have between six and 13 elements on each. Where the packer is used within casing or tubing, the thickness of the rubber is largely reduced when compared to one designed for open-hole applications.

Typical Packer Specifications

Base Pipe OD (in)	2 3/8" to 20"	Time to Set	1 to 20 days
Temperature (°C)	20 to 200	Oil Swelling	Yes
Salinity (ppm)	Up to 200,000	Water Swelling	Yes
Elastomer Selection	Oil, Water, Combination	Base Pipe	Any, including most coatings
Sealing Pressure	Up to 10,000 psi	Chemical Resistant	Yes

Swell Design Parameters



The diagram above shows how the elastomer's swelling characteristics are fitted to suit a particular design and meet running-in requirements and long-term sealing performance.