

DynaFORM™

Expandable Pipe

Overview

DynaFORM™ is designed to provide an effective seal between the pipe and the formation. The packer provides control of fluid cross-flow between zones to increase oil production by reducing the volume of produced water.

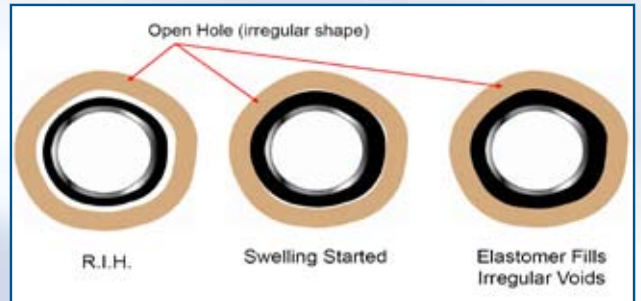
- Swellable rubber bonded to the external of the tubing or casing
- External rubber swells and seals when it comes in contact with the activation fluid (oil or water)
- Swells into out-of-gauge sections ensuring a compliant seal
- Suitable for open-hole and cased-hole applications
- Engineered specifically for expandable pipe 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
- Available for water or oil activation
- High performance multi-element packers
- Stronger initial setting than single-element packers
- Holds higher pressure than single-element packers

Installation Process

The DynaFORM™ swellable elastomer is vulcanized directly onto the casing to create a strong and durable packer. It is shipped from our manufacturing plant 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™ swells to the irregular open-hole shape ensuring that the expandable pipe achieves a good seal against the formation



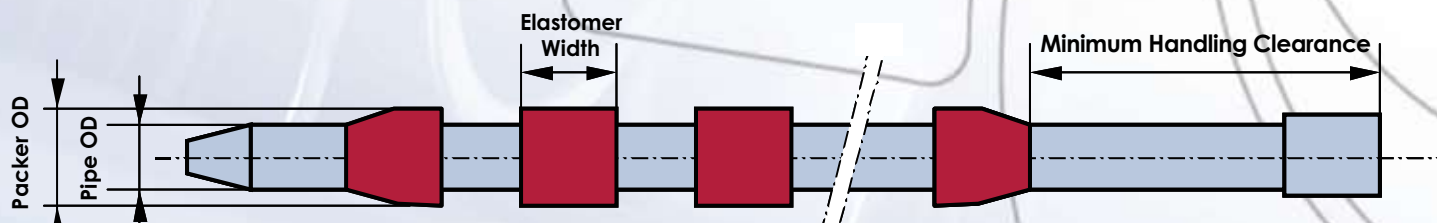
DynaFORM™ uses the unique SWELLFIX multi-element design which provides multiple initial contact points – the better the initial contact, the better the packer seals



DynaFORM™ for Expandable Pipe was the first swelling elastomer product to be developed by the engineering team, and as such has been subject to many years of extensive testing

SIMPLE. EFFICIENT. RELIABLE.

Typical Installation Layout

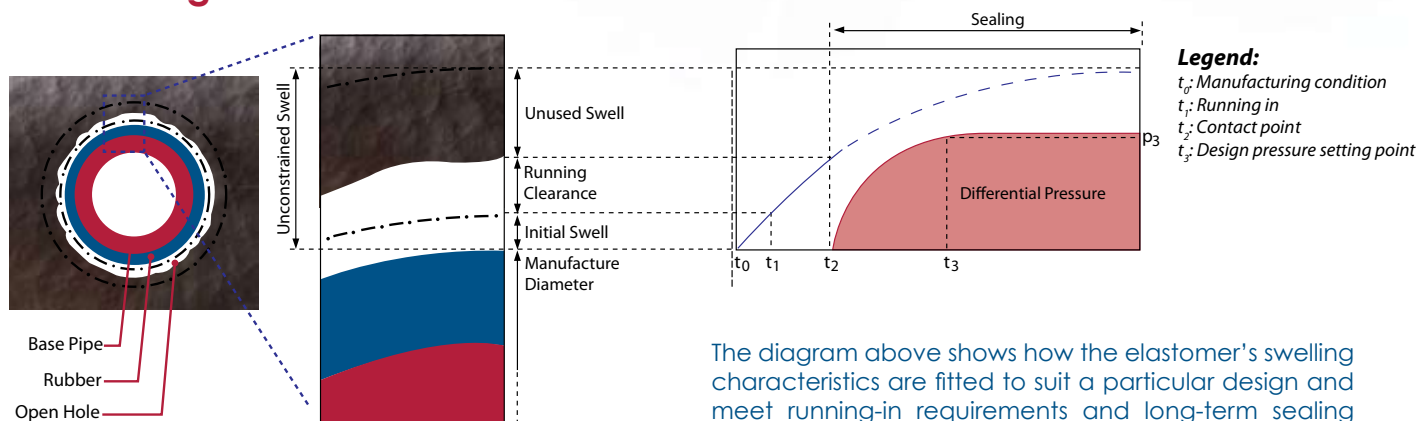


DynaFORM™ packers are custom designed using our own modeling software and integrated into the casing. Well size and fluid conditions are taken into account when the swelling characteristics of the packer are engineered to meet the clients pressure retaining requirements. Depending on the packer length, 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. With the DynaFORM™ multi-element design, both oil and water swelling elements can be on the same packer.

Typical Sleeve Specifications

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