

DynaFORM™

for Gravel Pack

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.

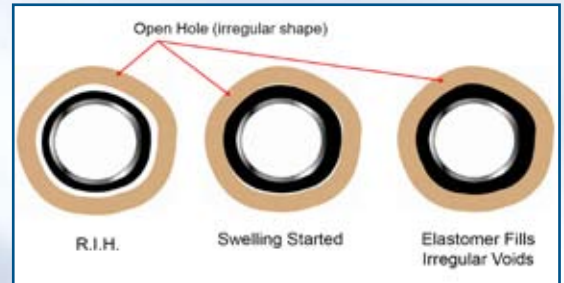
- Swellable rubber bonded to the external of the tubing or casing
- External rubber swells and seals when it comes in contact with the activation fluid (oil or water)
- Swells into out-of-gauge sections ensuring a compliant seal
- Suitable for open-hole and cased-hole applications
- Suitable for through-tubing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

Features and Benefits:

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

Installation Process

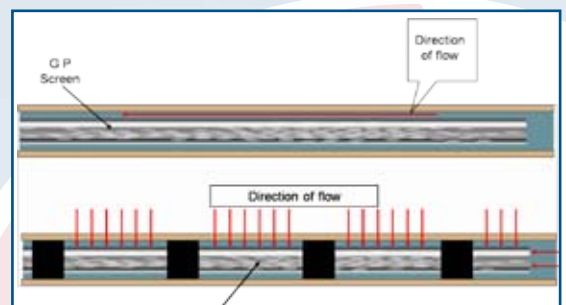
The DynaFORM™ swellable elastomer is vulcanized directly onto the casing to creating a strong and durable packer. The DynaFORM™ is shipped from our manufacturing plant to the well site or customer's warehouse in a ready-to-run condition. All that is required for installation is that the rig crew remove 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 – as it does, it lifts and centralizes the pipe improving the effectiveness of the gravel pack



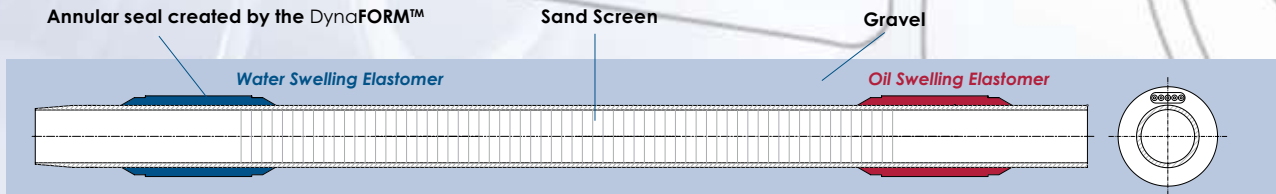
DynaFORM™ uses the unique SWELLFIX multi-element design which provides multiple initial contact points – the better the initial contact, the better the packer seals



DynaFORM™ provides flow diversion ensuring that oil flows efficiently inside the pipe, rather than flowing along the annulus

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	Oil, Water, Combination	Base Pipe Material	Any, including most coatings
Sealing Pressure (psi)	Up to 10,000 psi	Chemically Resistant	Yes

Swell Design Parameters

