



Plunger Pump



Case Study

OEM saved over 200 hrs annually by eliminating the precise cutting of braided sealing rings

Number of sealing components reduced and packaged in the correct order to simplify assembly

Advantages of an optimised plunger pump include:

- Longer service life than conventional packings and chevron seals.
- Cost savings possible as a result of self-lubricating properties.
- Reduced low pressure leakage.
- Low friction, for low power loss.
- Dry running capabilities.
- Live loading allows for controlled wear loss.
- Packing materials suitable for use in abrasive media.

The Client

A leading triplex and quintex, plunger pump OEM in the UK, supplying pumping systems for water jetting and industrial applications around the world.



Braided packing cut into rings with frayed ends

Custom kitting of pump sealing spares in client branded packaging

The Challenge

The client faced a series of challenges with the existing sealing arrangements for their plunger pumps.

While effective, the existing solution presented the following limiting factors.

- Excessive number of components within the sealing setup
- Time and energy spent cutting and forming sealing packing rings
- Unprofessional appearance of spares sent out in a plastic bag to customers

The Solution

Using our 5D consultancy process, FTL application engineers, backed up by data from our sealing Centre of Excellence, proposed our trusted high pressure LLPS solution.

This solution served to both reduce the number of components in the sealing setup, but also significantly improve the lifetime of the seal as a result of a continuous ring of rope packing with no scarf cuts.

FTL also offered support in the presentation and delivery of spare parts, by packing the spares kit in the order of component assembly, in a box with client-specific branding.

Client branding of FTL's LLPS helps protect and secure aftermarket business

The Benefit

The client now enjoys a better performing seal arrangement on their plunger pumps, with reduced labour time on the cutting and formation of sealing rings, and further time saved with fewer components to assemble.

With no frayed ends on the rope rings, the final result looks much more polished and professional.

The custom kitting service provided by FTL has also improved the efficiency of pump maintenance, with correct parts all in the correct box in the correct order of assembly.

Customised kits with specific box size, packaging, logo and part numbering has saved the client assembly time when added to their full overhaul spares offerings to aftermarket clients

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