



SEALCONIC

Sealing Technologies



PTFE Shaft Seal

PTFE Shaft seals are the perfect choice when it comes to sealing application with demanding operational parameters. Using high performance fillers, our PTFE Shaft seals are able to operate in environments that are too severe for elastomer solutions to be considered.

The shaft seal is a sealing element which seals the rotating shaft, of a centrifugal pump where it passes through the non rotating pump casing reducing fluid leakage to atmosphere or the entry of air from outside to a certain level, and keeps wear of the sealing faces as low as possible.

Among other plastics, polytetrafluoroethylene, or PTFE for short, is the most suitable material for the seal jacket. Also known as Teflon, this polymer has special properties due to its chemical structure.

PTFE has a low friction coefficient, which makes it predestined for use in dynamic applications. In addition to high temperatures up to 300°C, PTFE is also used in cryogenic applications.

PTFE lip seals are specifically used for sealing rotating shafts with a focus on high speed and are an excellent alternative to elastomer rubber lip seals if the conditions are challenging and exceed their capabilities.

PTFE cryogenic seals are used in industries like oil & gas, pharmaceuticals, and aerospace. PTFE seals work well at the other end of the spectrum, too.

Lip seals, also known as radial shaft seals, are used to seal rotary elements, such as a shaft or rotating bore.

Advantages

PTFE shaft seals is found in sealing rotating shafts, in particular those with high speed. They offer an excellent alternative to elastomer rubber lip seal if the condition are challenging and exceed their capabilities.

PTFE shaft seals can offer brilliant sealing capabilities and low frictions in dry or abrasive media. They are often suitable for challenging application where speed is necessary.

Their performance is not adversely affected in hostile environment with extreme temperature, aggressive media, high surface speeds, high pressure, or lack of lubrication.

Teflon lip seals are made in various PTFE blends material use in wide high temperature and high-speed application, mainly in chemical, food & pharma, process industries etc. due to its self-lubricating properties it can subject to work in dry run applications.

Features

- High chemical resistance.
- Withstand dry running.
- Outstanding chemical resistance
- Broad temperature range -60 C to +200 C
- Suitable for low lube and dry running conditions.
- High wear resistance of seal lip.
- Suitable for high peripheral speeds.



Types of PTFE lip seal

Types		Features
Single Lip Seal		Consist of a single, precision-machined or formed PTFE wafer bonded to a casing. Offer the lowest possible friction and heat generation, allowing for maximum shaft speed. Better suited for standard low-pressure or vacuum environment. Best for High-speed, clean environments like high-and electric motors, compressor, and food pump etc.
Double Lip Seal		Double lip used in application where additional protection against contamination is required. Dual lip rotating in same direction for good sealing performance, high operational reliability. Designed for extreme chemical resistance, high speeds, and wide temperature ranges. Lips can face the same direction for fluid separation or opposite directions to keep media in and contamination out.
Back To Back Lip Seal		A back to back PTFE lip seal features two distinct PTFE sealing elements oriented in opposite direction away from each other. The primary lips point in opposite directions to effectively separate two different media or simultaneously contain internal pressure while blocking external pressure. Ideal for applications requiring total isolation between a process fluid (e.g., chemicals or food products).

If your application demand a PTFE shaft seal different from our standard version we will manufacture a PTFE shaft seal appropriate to your needs. We offers an economic way of producing special configurations, as it is based on the standard version. Both the lip material and its configuration can be varied. Even the case can be adjusted within technical limitations.

Installations

- Installation of a PTFE shaft seal needs the attention of both the engineer and the end user. Because PTFE is stiff and lacks the elastic properties of elastomers, damage from sharp edges and burrs on the shaft must be avoided.
- In most cases, installation problems can be surmounted with proper seal design selection. If the application requires an element design with heavy interference, and installation onto the shaft is against the PTFE element, an installation tool should be considered.
- Installation tools properly align seals to shafts, and protect seals from damage caused by splines, keyways or shafts without a lead-in chamfer. They are typically made of materials such as nylon or PVC.





**Unit No 24/25, Basuwala Industrial Welfare Society, Opp Ruby Hospital, Behind
Tashkend Hotel, Jogeshwari West, Mumbai - 400102.**



+91 9967243711



sealconic@gmail.com



www.sealconic.com