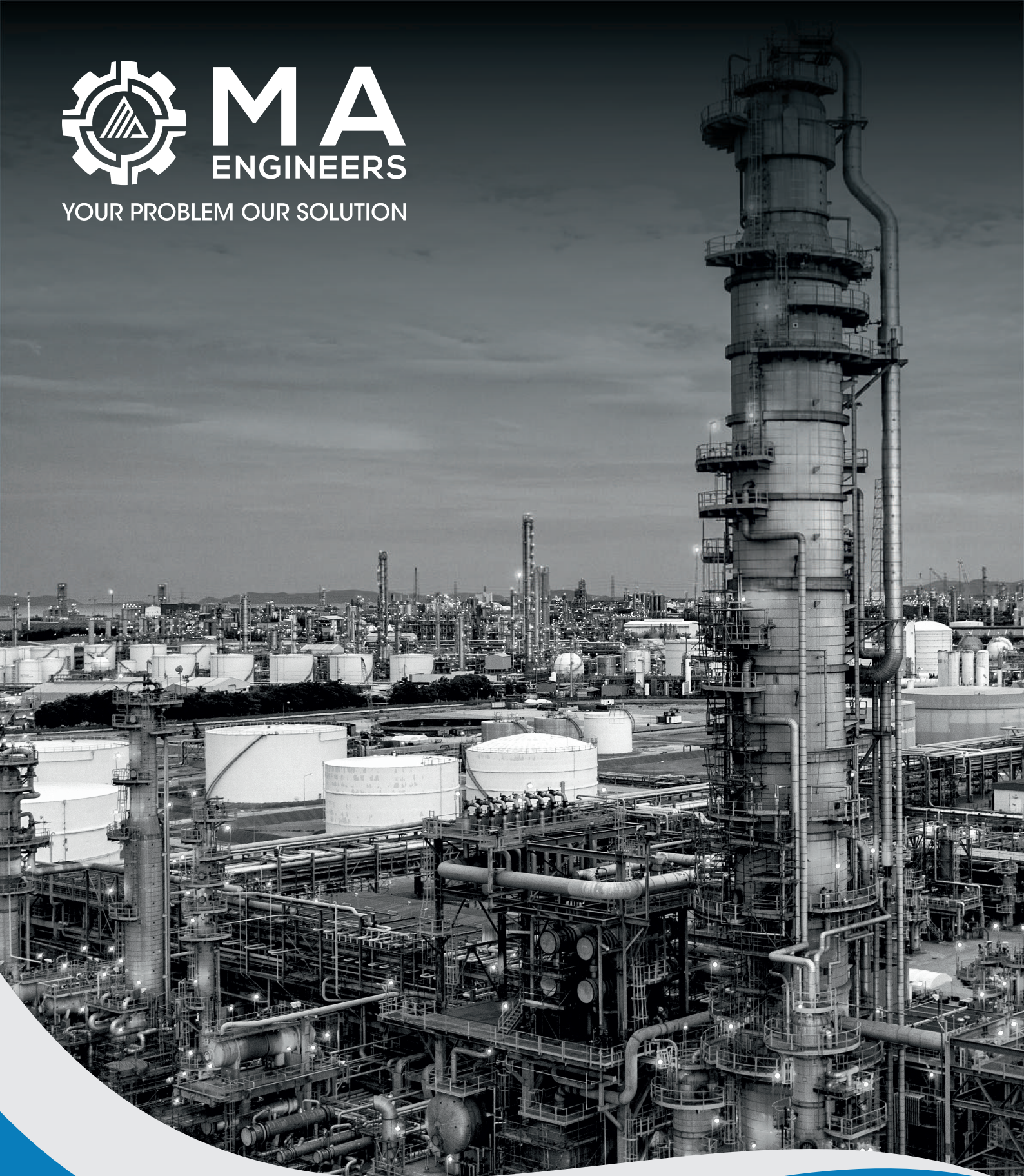




**MA**  
ENGINEERS

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MANUFACTURING ALL TYPES OF MECHANICAL SEAL,  
ROTARY JOINTS & TEFLON PRODUCTS.

TYPE MA101



## RUBBER BELLOW SEAL

### Materials:

**Seal Face:** Sic / carbon vs ceramic / sic.

**Secondary Seals:** Viton / EPDM / Nitrile

**Metal Parts:** SS-304, SS-316, SS-316 L

### Operating Limits:

**Shaft Diameter:** 10mm to 100mm

**Pressure:** 10 Bars (Max)

**Temperature:** (-)20C to (+) 150C

### APPLICATION:

Chemical Process pump, Oil refineries, Sewage applications, Fuel injection pumps, Hot & Cold Water pumps, Waste Water Pumps.

## TEFLON BELLOW SEAL

### Materials:

**Seal Face:** GFT / Sic. / Carbon Vs Ceramics / Sic

**Secondary Seals:** PTFE / GFT

**Metal Parts:** SS-304, SS-316, SS-316 L / Hastelloy

### Operating Limits:

**Shaft Diameter:** 16mm to 100mm

**Pressure:** 05 Bars (Max)

**Temperature:** (-)20C to (+) 90C

**Speed:** 2900 rpm (Max)

### APPLICATION:

Chemical process pump, Oil refineries, Thermal power plants, Acid pumps, Petroleum, Paper industries, Pulp industries, Marine Industries.

TYPE MA102



## METAL BELLOW SEAL

### Materials:

**Seal Face:** Sic / carbon/ TC vs Sic / TC

**Secondary Seals:** Viton / PTFE / GFT / Graphoil

**Metal Parts:** SS-304, SS-316, SS-316 L, Hastelloy "c"

### Operating Limits:

**Shaft Diameter:** 19mm to 100mm

**Pressure:** 15 Bars (Max)

**Temperature:** (-)50C to (+) 350C

**Speed:** 3200 rpm (Max)

### APPLICATION:

Process industry, Refining technology, Power plant technology, Chemical industry.

TYPE MA104



TYPE MA106



## SINGLE SPRING SEAL

### Materials:

**Seal Face:** Sic / carbon vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / GFT

**Metal Parts:** SS-304, SS-316, SS-316 L

### Operating Limits:

**Shaft Diameter:** 110mm to 150mm

**Pressure:** 10 Bars (Max)

**Temperature:** (-)50C to (+) 180C

**Speed:** 1500 rpm (Max)

### APPLICATION:

Pulp and paper industry, Water and waste water technology, High-viscosity liquids, Pulp suspensions, Process Pumps.

## MULTI SPRING SEAL

### Materials:

**Seal Face:** Sic / carbon / TC vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / GFT / FEP

**Metal Parts:** SS-304, SS-316, SS-316L

### Operating Limits:

**Shaft Diameter:** 18mm to 150mm

**Pressure:** 25 Bars (Max)

**Temperature:** (-)20C to (+) 220C

### APPLICATION:

Chemical Pumps, High Pressure Pumps, Petrochemical Industries, Acid Pumps, Corrosive Chemical Pumps.

TYPE MA107



## CONICAL SPRING SEAL

### Materials:

**Seal Face:** Sic / carbon / TC vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / GFT / FEP

**Metal Parts:** SS-304, SS-316, SS-316 L

### Operating Limits:

**Shaft Diameter:** 10mm to 100mm

**Pressure:** 10 Bars (Max)

**Temperature:** (-)20C to (+) 180C

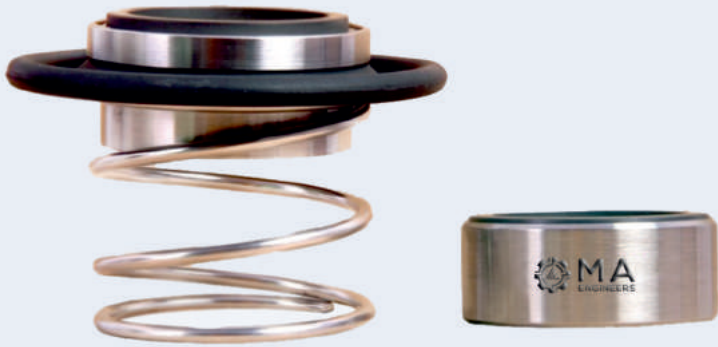
### APPLICATION:

Chemical Process Pump, Oil Refineries, Thermal Power Plants, Dairy Industries, Pharmaceuticals, Marine Industries.

TYPE MA109



TYPE MA114



## TEXTILE SEAL

### Materials:

**Seal Face:** Sic / carbon / TC vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / EPDM

**Metal Parts:** SS-304, SS-316, SS-316 L

### Operating Limits:

**Shaft Diameter:** 14mm to 150mm

**Pressure:** 10 Bars (Max)

**Temperature:** (-)50C to (+) 280C

### APPLICATION:

Textile Industries, Dyeing Machineries,  
Printing Machineries.

## WAVE SPRING SEAL

### Materials:

**Seal Face:** Sic / carbon / Ceramic vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / FEP

**Metal Parts:** SS-304, SS-316, SS-316 L

### Operating Limits:

**Shaft Diameter:** 25mm to 150mm

**Pressure:** 15 Bars (Max)

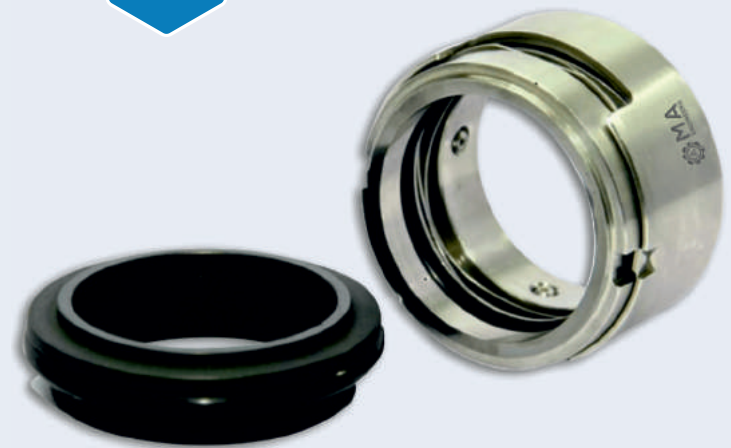
**Temperature:** (-)50C to (+) 180C

**Speed:** 2900 rpm (Max)

### APPLICATION:

Paper & Pulp Industries, Sugar, Waste Water, Dairy Industries,  
Clean Water, Sewage Water.

TYPE MA116



## CARTRIDGE SEAL

### Materials:

**Seal Face:** Sic / TC/ceramic vs ceramic / sic. / TC

**Secondary Seals:** Viton / PTFE / GFT/ Graphoil

**Metal Parts:** SS-304, SS-316, SS-316 L, Hastelloy

### Operating Limits:

**Shaft Diameter:** 25mm to 100mm

**Pressure:** 15 Bars (Max)

**Temperature:** (-)40C to (+) 180C

**Speed:** 2900 rpm(Max)

### APPLICATION:

Chemicals, Solvents, Slurries, Hydrocarbon and  
Petrochemicals.

TYPE MA121



## AGITATOR SEAL

### Materials:

**Seal Face:** Carbon and Sic. Vs Sic. and TC

**Secondary Seals:** Viton / PTFE / TTV/ FEP

**Metal Parts:** SS-304, SS-316

### Operating Limits:

**Shaft Diameter:** 25mm to 200mm

**Pressure:** Vaccum to 10 Bar

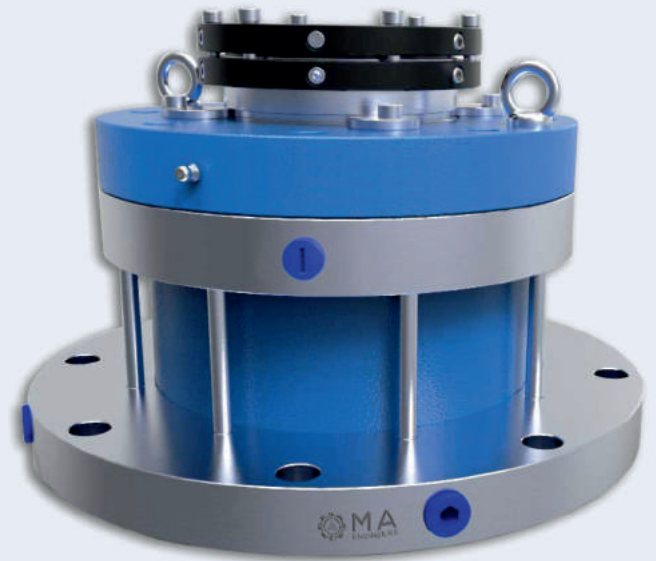
**Temperature:** (-)30C to (+) 200C

**Speed:** 400 rpm(Max)

### APPLICATION:

General chemicals and its vapours, Food products, Pharmaceuticals Products, Light Hydrocarbon and its vapours, Petrochemicals and its vapours.

TYPE MA131



- Agitator Mechanical Seals are designed for handling severe services including products emitting toxic vapours during reaction process.
- Agitator Mechanical Seal design incorporates bearing located very close to the seal. This standard feature effectively arrests the shaft whip for smooth and trouble free operation enabling enhanced seal life. The cooling jacket, also a standard feature, helps to maintain cool environment around the seal. Large clearance between rotating shaft/sleeve and mating ring permits higher deflection of the shaft, invariably associated with Top Entry Agitators.

TYPE MA141



## DRY RUNNING SEAL

### Materials:

**Seal Face:** Carbon and Sic. Vs Sic. and TC

**Secondary Seals:** Viton / PTFE / TTV/ FKM

**Metal Parts:** SS-304, SS-316

### Operating Limits:

**Shaft Diameter:** 25mm to 150mm

**Pressure:** Vaccum to 10 Bar

**Temperature:** (-)30C to (+) 150C

**Speed:** 300 rpm(Max)

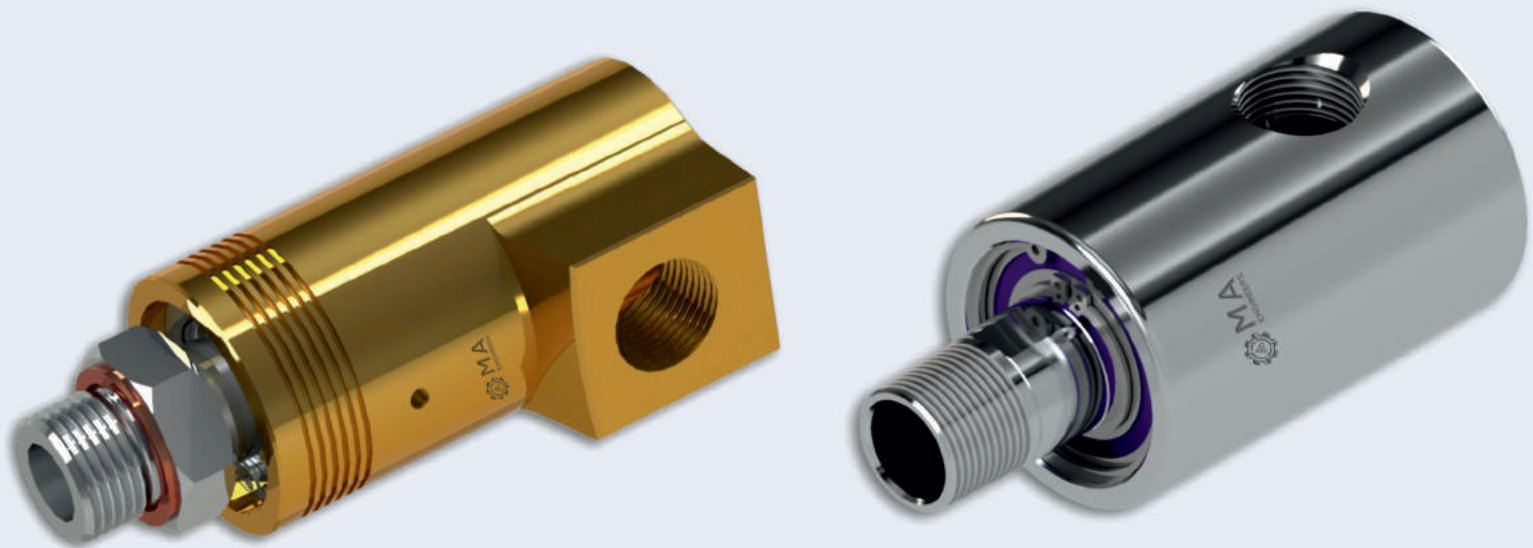
### APPLICATION:

Food Products, Pharmaceutical Products and General light chemicals.

- Dry Running Seals is a multiple spring externally mounted, Reverse Balanced Seal with O-ring as secondary sealing member.
- Dry Running Seals are available with cartridge, non-cartridge & with bearing assembly. Dry Running Seals design eliminates the need of auxiliary equipment for cooling & lubrication that is required for application. Since there is no use of barrier fluid, thus eliminates the possibility of product contamination.
- Dry Running Seals don't require any external media for lubricating the faces, that is why they are known as dry running seals.

# ROTORY JOINTS

The rotary unions and joints are created so as to prevent water from spilling or to prevent its usage without wasting it. So basically, it was to reduce the wastage of water when one shifts from hot to cold. In simple words, it was created to save water but eventually it was evolved to take of other fluids too and now these rotary unions and joints are being used in every field of life.



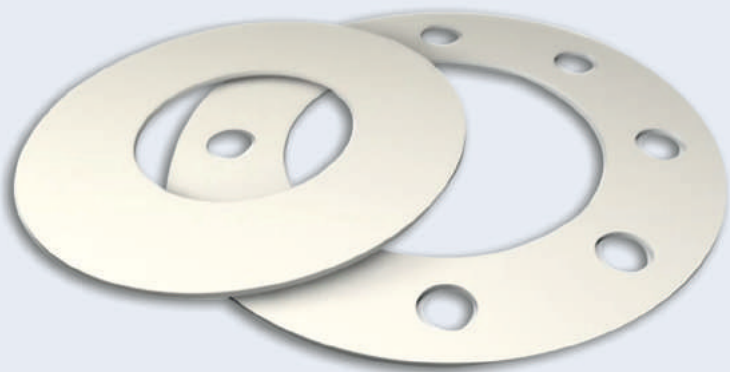
# SHAFT



# SLEEVE



# PTFE GASKET

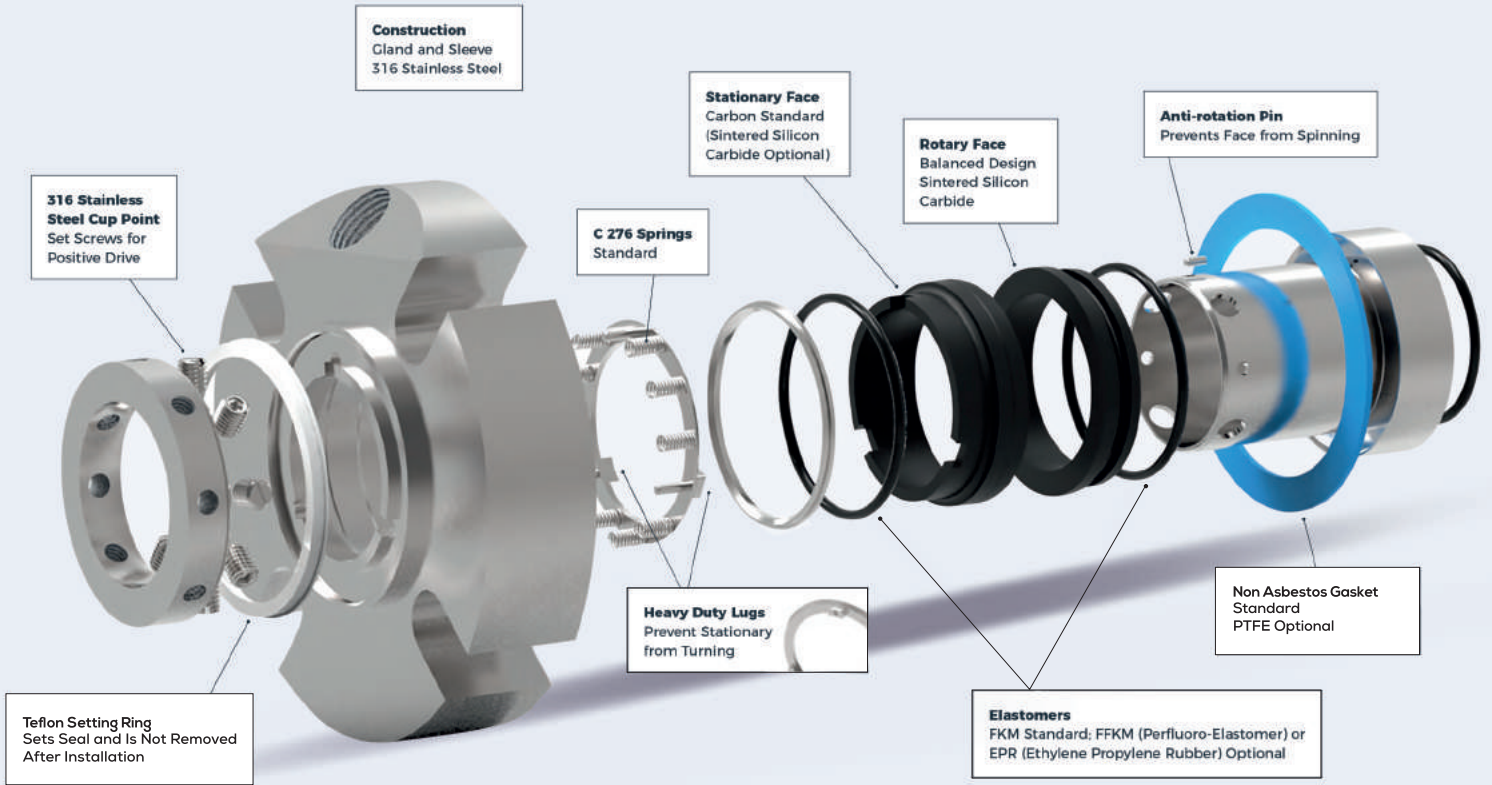


# PTFE BUSH



# PTFE PRODUCTS





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