



# FALCON SEALING<sup>®</sup> TECHNOLOGY

Innovative Sealing Solution  
Mfg. Of Mechanical Shaft Seals & Components

- CHEMICALS
- PHARMACEUTICALS
- PETROCHEMICALS
- FERTILIZERS
- POWER PLANTS
- MARINES
- FOODS & BEVERAGES
- REFINERIES
- PULP & PAPERS



**MSME**  
MICRO, SMALL & MEDIUM ENTERPRISES  
सूक्ष्म, लघु एवं मध्यम उद्यम  
OUR STRENGTH • हमारी शक्ति

Ministry of MSME, Govt. of India



9001:2015



## ABOUT Us !

**Falcon Sealing Technology** is a trusted and technocrat name in the Manufacturer, Supplier, and Exporter of Mechanical Seals, Sealing Components & Seal Support Systems in Sidhpur, Gujarat, India, operating since 2018 under the leadership of **Mr. Omair Manasiya**. Falcon provides solutions for **Pumps, Mixers, Reactors, Agitators, Blenders, Blowers, Pharmaceutical Machinery, and all types of rotating equipment as per buyer's requirements, drawings, or samples.**

We offer a diversified range of Mechanical Seal products, including:

**Conical Spring Seals, Single Spring Seals, Multi Spring Seals, Wave Spring Seals, Rubber Bellow Seals, PTFE Bellow Seals, Cartridge Seals, Metal Bellow Seals, Agitator Seals, Reactor Seals, Dry Running Seals, Split Seals, Custom Tailor-Made Seals.**

**We also manufacture Seal Support Systems such as: Thermosyphon Systems, Heat Exchangers, Cyclone Separators, Bearing Isolators,.**

**Falcon Sealing Technology** manufactures and exports a wide range of seal faces and sealing components made from high-grade materials like: **Tungsten Carbide, Silicon Carbide, Ceramic, Carbon, Segmented Carbon Rings, O-Rings, PTFE Components.**

Our Mechanical Seals are equivalent and replaceable with internationally recognized brands like **John Crane, Burgmann, Flowserve, AES, Chesterton, Flex-a-Seal, Vulcan, Roplan, Roten, Uniten, and other reputed manufacturers.**

In addition to seals, we also manufacture and export a complete range of Rotary Unions & Rotary Joints for a wide variety of applications, including: **Water, Hot Water Air, Hydraulic, Vacuum, Coolant, Hot Oil, Thermic Fluid**

Our rotary solutions are also compatible with leading brands such as **Deublin, DSTI, FESTO, Filton, Pearl, Kadant, Maier, Haag-Zeissler, Airflex, Johnson-Flutten, and many others.**

**Falcon Sealing Technology** proudly serves the needs of various industries, including: **Dyes & Chemicals, PVC Film Industries, Fertilizer Plants, Oil & Natural Gases, Solvent Extraction, Paper Industries, Steel Plants, Power Generation, Pharmaceuticals, Petrochemicals, Food Processing Plants, Plastic Molding, Textile Industries, Cement & Sugar Industries, Water Industries, Soap Industries, OEMs, and many more.**





## CONICAL SPRING MECHANICAL SEAL

### FS-CN101

Conical Coil Spring Mechanical Seal FS-CN101 looking from Sliding Face of the Rotating Seal Ring is designed as Right Hand Shaft Rotation which needs Right Hand Spring and Vice Versa. These Seals are Cost Effective Seals for Basic Application Equipment such as Centrifugal Pump and other Equipment with Rotating Shaft, Handling Water, Oils, Fuels, Mild Chemicals and Liquids Containing of Low Quantity of Abrasive. We are the manufacturer of Conical Coil Spring Mechanical Seal, Pusher Mechanical Seals in Mumbai India.



#### • Materials

Seal Ring Faces : Cabon, SiC and TC  
Seat Faces : NiR, Ceramic, SiC and TC  
Elastomer : Viton, Neoprene, EPDM, NBR and Buna-N  
MOC : SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm  
Pressure : Up to 7 bar  
Temperature : -20&degC to 140&degC  
Speed : 3000 r.p.m.

#### • Salient Features

Conical Single Coil Spring Mechanical Seal.  
Inside mounted.  
Unbalanced Pusher Mechanical Seals.  
Spring design depended on Shaft Rotation with Central Tapered Spring.

### FS-SS201 / SS201V

## SINGLE SPRING MECHANICAL SEAL

The Seal FS-SS201 / SS201V with Single Spring design and is depended on the Shaft Rotation. Looking from Sliding Face of the Rotating Seal Ring is designed as right hand Spring for Shaft Rotation and vice-versa. In Seal FS-21 ('O' Ring Type) is designed as Torque Transmission from Drive Collar to Spring and Seal Ring. These Seals is cost effective for Basic Application Equipment such as Centrifugal Pump and other Equipment with Rotating Shaft, Handling Crystallizing Slurry, Suspended Solid Slurry, Saturated Chemical Slurry and General Chemical Slurry.

#### • Materials

Seal Ring Faces : Cabon, SiC and TC  
Seat Faces : Ceramic, SiC and TC  
Elastomer : Viton, PTFE, GFT, TTV, EPDM, NBR, Buna-N  
MOC : SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm  
Pressure : Up to 10 bar  
Temperature : -20°C to 150°C  
Speed : 3000 r.p.m.

#### • Salient Features

- Single Acting Unbalance Pusher type Mechanical Seal.
- Inside Mounted Mechanical Seal.
- Spring Design depended on shaft rotation.





## MULTI SPRING MECHANICAL SEAL

### FS-MS301 / MS301W

The Falcon Sealing Technology FS-MS301 / MS301W is a multi-spring balanced mechanical seal. This type of seal is a pusher-style mechanical seal, meaning a secondary seal moves along the shaft. It's designed to operate in high-pressure environments by using a balanced design, which reduces the force on the seal faces, thereby minimizing heat generation and wear. The use of multiple springs provides even pressure distribution around the seal face, which enhances its reliability and extends its service life.



#### • Materials

Seal Ring Faces : Carbon, SiC and TC  
Seat Faces : Ceramic, SiC and TC  
Elastomer : Viton, PTFE, GFT, TTV, EPDM, NBR, Buna-N  
MOC : SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm  
Pressure : Up to 25 bar  
Temperature : -20°C to 260°C  
Speed : 3000 r.p.m.

#### • Salient Features

For plain shafts  
Single seal  
Unbalanced  
Multi spring retainer  
Independent of direction of rotation

### FS-MS301DT

## MULTI SPRING DURA TYPE MECHANICAL SEAL

The Falcon Sealing Technology FS-MS301DT is a multi-spring, dura-type, unbalanced mechanical seal. This type of seal is designed to be a reliable and versatile solution for various industrial sealing applications.

#### • Materials

Seal Ring Faces : Carbon, SiC and TC  
Seat Faces : Ceramic, SiC and TC  
Elastomer : Viton, PTFE, GFT, TTV, EPDM, NBR, Buna-N  
MOC : SS 316

#### • Operating Limit

Shaft dia : 19mm to 100mm (0.75" to 3.94")  
Pressure : 10 bar (145 PSI)  
Temperature : -20 °C to +240 °C (-4 °F to +464 °F)  
Speed : 2900 r.p.m.

#### • Salient Features

- For plain shafts
- Single seal
- Unbalanced
- Open rotary multi spring retainer
- Independent of direction of rotation





## MULTI SPRING DOUBLE MECHANICAL SEAL

### FS-DMS301

The Falcon Sealing Technology FS-DMS301 is a multi-spring Double mechanical seal. This type of seal is a pusher-style mechanical seal, meaning a secondary seal moves along the shaft. It's designed to operate in high-pressure environments by using a balanced design, which reduces the force on the seal faces, thereby minimizing heat generation and wear. The use of multiple springs provides even pressure distribution around the seal face, which enhances its reliability and extends its service life



#### • Materials

Seal Ring Faces : Cabon, SiC and TC  
Seat Faces : Ceramic, SiC and TC  
Elastomer : Viton, PTFE, GFT, TTV, EPDM, NBR, Buna-N  
MOC : SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm  
Pressure : Up to 25 bar  
Temperature : -20°C to 260°C  
Speed : 3000 r.p.m.

#### • Salient Features

For plain shafts  
Single seal  
Unbalanced  
Multi spring retainer  
Independent of direction of rotation

### FS-WS401

## WAVE SPRING MECHANICAL SEAL

The FS-WS401 is a wave spring unbalanced seal made by Falcon Sealing Technologies. It's a single, internally mounted seal that's independent of the direction of shaft rotation. The key feature of this type of seal is the use of a single wave spring, which makes it compact and reduces the overall axial length. This design also helps prevent spring clogging, making it suitable for applications with dirty or slurry-containing media



#### • Materials

Hardware : SS 316 / SS 304  
Seal Ring : SiC / Special Caste  
Mating Ring : SiC / Carbon  
Secondary : FKM / Silicon / NBR / EPR / Neoprene / Karlez

#### • Operating Limit

Pressure : Upto 15 kg/cm<sup>2</sup>  
Temperature : Upto 280°C (Depending on elastomer)  
Speed : 4000 RPM

#### • Salient Features

- High performance.
- Low maintenance a.
- Easy to install.





## RUBBER BELLOW ROBIN TYPE

### FS-RBRT-501

The Seal FS-RBRT-501 / RBRT-501 is a Rubber Bellow Robin Type Mechanical Seals for universal general purpose, Water / Water Based solution like Oils, Fuels and Other Fluids even with some Content with Abrasive and for a very wide operating condition designed destined for Centrifugal pump. Rotary Equipment and Industrial application (Food Processing, Water Systems, Waste Water Treatment for Petrochemical Processing, Pulp and Paper.

#### • Materials

Seal Ring Faces : Carbon, SiC and TC

Seat Faces : NiR, Ceramic, SiC and TC

Elastomer. : Viton, Neoprene, EPDM, NBR and Buna-N

MOC : SS 304 / SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm

Pressure. : Up to 8 bar

Temperature : -20°C to 180°C

Speed : 3000 r.p.m.

#### • Salient Features

For plain shafts

Single seal

Unbalanced

Torque transmission by elastomer bellow



### FS-RBRT-501D

## RUBBER BELLOW ROBIN TYPE DOUBLE

The Seal FS-RBRT-501D / RBRT-502D is a Rubber Bellow Robin Type Mechanical Seals for universal general purpose, Water / Water Based solution like Oils, Fuels and Other Fluids even with some Content with Abrasive and for a very wide operating condition designed destined for Centrifugal pump. Rotary Equipment and Industrial application (Food Processing, Water Systems, Waste Water Treatment for Petrochemical Processing, Pulp and Paper.

#### • Materials

Seal Ring Faces : Carbon, SiC and TC

Seat Faces : NiR, Ceramic, SiC and TC

Elastomer. : Viton, Neoprene, EPDM, NBR and Buna-N

MOC : SS 304 / SS 316

#### • Operating Limit

Shaft Dia. : 10mm to 100mm

Pressure. : Up to 8 bar

Temperature : -20°C to 180°C

Speed : 3000 r.p.m.

#### • Salient Features

For plain shafts

Double seal

Unbalanced

Torque transmission by elastomer bellow





## RUBBER BELLOW MECHANICAL SEAL

**FS-RB501-11**

The Seal FS-RB501-11 is a Compact Single Spring Rubber Bellow Mechanical Seals for universal general purpose for Water / Water Based Solution like Oils, Fuels and Other Fluids and even with some Content with Abrasive and for a very wide operating condition designed for Centrifugal Pump. Rotary Equipment and Industrial applications (Food Processing, Water System, Waste Water Treatment for Petrochemical Processing, Pulp and Paper)

### • Materials

Seal Ring Faces : Carbon, SiC and TC  
Seat Faces. : NiR, Ceramic, SiC and TC  
Elastomer : Viton, Neoprene, EPDM, NBR and Buna-N  
MOC : SS 304 / SS 316

### • Operating Limit

Shaft Dia. : 10mm to 100mm  
Pressure : Up to 8 bar  
Temperature : -20°C to 180°C  
Speed. : 3000 r.p.m.

### • Salient Features

For plain shaft  
Single seal  
Unbalanced  
No torsion on bellows  
Torque transmission by elastomer bellow



## FS-MB601-O / MB601-V

## METAL BELLOW MECHANICAL SEAL

FS-MB601-O / MB601-V ring type mechanical seals are destined for petrochemical, chemical, pharmaceutical and food processing industry, for process pumps and other equipment with rotating shaft. Rotating bellows design acts to clear convolutions and prevent accumulation of debris. These bellow seals are constructed by welding a series of diaphragms together at the edges to form a bellows unit. Recommended for high temperature mediums e.g. hot oils, pitch, tar and other hydrocarbons, fuels, liquid gases and other mediums with low content of abrasives.

### • Materials

Seal Ring Faces : Carbon, SiC and TCc  
Seat Faces : TC and SiC  
Elastomer : Viton, PTFE, FEP, EPDM and FFKM  
End fitting MOC : SS 316, Hast- C and Carpenter 42  
Bellow MOC : HAST – C, AM350 and Inconel

### • Operating Limit

Shaft Dia. : 20mm to 100mm  
Pressure : Up to 25 bar  
Temperature : -30°C to 260°C  
Speed : 3000 r.p.m.

### • Salient Features

Single Acting.  
Dual directional.  
Inside mounted.  
Inherently Balanced Mechanical Seal.  
Independent of direction of rotation.





## METAL BELLOW GRAFOIL PACKING BALANCED

### FS-MB601-G

FS-MB601-G ring type mechanical seals are destined for petrochemical, chemical, pharmaceutical and food processing industry, for process pumps and other equipment with rotating shaft. Rotating bellows design acts to clear convolutions and prevent accumulation of debris. These bellow seals are constructed by welding a series of diaphragms together at the edges to form a bellows unit. Recommended for high temperature mediums e.g. hot oils, pitch, tar and other hydrocarbons, fuels, liquid gases and other mediums with low content of abrasives.

#### • Materials

Seal Ring Faces	: Carbon, SiC and TCc
Seat Faces	: TC and SiC
Elastomer	: Viton, PTFE, FEP, EPDM and FFKM
End fitting MOC	: SS 316, Hast- C and Carpenter 42
Bellow MOC	: HAST – C, AM350 and Inconel

#### • Operating Limit

Shaft Dia.	: 20mm to 100mm
Pressure	: Up to 25 bar
Temperature	: -30°C to 260°C
Speed	: 3000 r.p.m.

#### • Salient Features

Single Acting.  
Dual directional.  
Inside mounted.  
Inherently Balanced Mechanical Seal.  
Independent of direction of rotation.

### FS-TB701

## TEFLON (PTFE) BELLOW MECHANICAL SEAL

The Falcon Sealing Technology FS-TB701 is a Teflon bellow mechanical seal designed for use in highly corrosive environments. Its key feature is the Teflon (PTFE) bellow, which isolates all metal parts, including the springs, from the sealed fluid. This ensures that the seal remains chemically inert and provides long-lasting service life, even with aggressive media.

#### • Materials

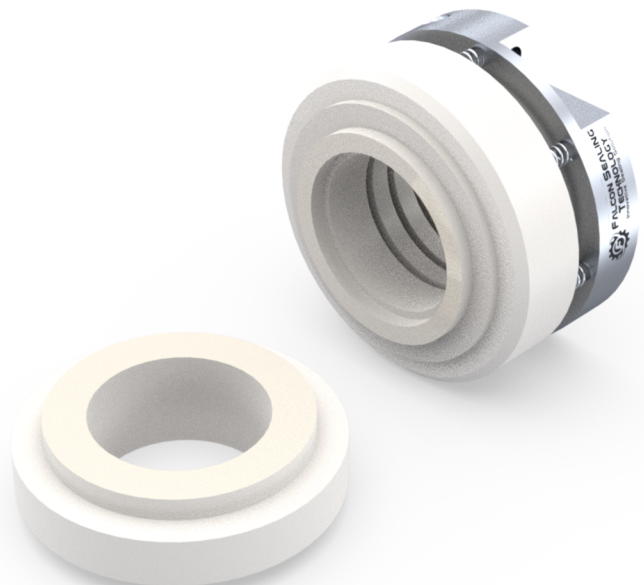
Seal Ring Faces	: Carbon, SiC and TC
Seat Faces	: Ceramic and SiC
Elastomer	: PTFE and GFT
MOC	: SS 316, Hast -C and Alloy 20
Bellow MOC	: PTFE + GFT Composite

#### • Operating Limit

Shaft Dia.	: 25mm to 100mm
Pressure	: Up to 25 bar
Temperature	: -70°C to 350°C
Speed	: 3000 r.p.m.

#### • Salient Features

PTFE Bellow Mechanical Seal.  
Dual Directional Seal.  
Outside Mounted Seal.  
Hydraulically Balanced PTFE Bellow Mechanical Seal.  
Multi-Spring Design Seal.







## METAL BELLOW CARTRIDGE SEAL

### FS-CTMB62

FS-CTMB62 Grafoil Packing Cartridge mechanical seals are destined for petrochemical, chemical, pharmaceutical and food processing industry, for process pumps and other equipment with rotating shaft. Rotating bellows design acts to clear convolutions and prevent accumulation of debris. These bellow seals are constructed by welding a series of diaphragms together at the edges to form a bellows unit. Recommended for high temperature mediums e.g. hot oils, pitch, tar and other hydrocarbons, fuels, liquid gases and other mediums with low content of abrasives.



#### • Materials

Seal Ring Faces	: Carbon, SiC and TC
Seat Faces	: TC and SiC
Elastomer	: Flexible Graphite
End fitting MOC	: SS 316, HAST-C and Carpenter 42
Bellow MOC	: HAST -C, AM350 and Inconel

#### • Operating Limit

Shaft Dia.	: 10mm to 100mm
Pressure	: Up to 25 bar
Temperature	: -70°C to 350°C
Speed	: 3000 r.p.m.

#### • Salient Features

Single Acting.  
Dual directional.  
Inside mounted.  
Inherently Balanced Mechanical Seals.  
Independent of direction of rotation.  
Unitized, Easy-to-Fit Design.

### FS-CT178

## SINGLE CARTRIDGE MECHANICAL SEAL

The FS-CT178 Single cartridge mechanical seal meaning it comes as a complete, self-contained unit. This design eliminates the need for technicians to manually set the seal's working length, a common source of installation errors. The "double" in its name signifies that it contains two sets of sealing faces: a primary seal and a secondary seal. These two seals are pre-mounted on a single sleeve, and the entire assembly is bolted to the pump or other rotating equipment.

#### • Materials

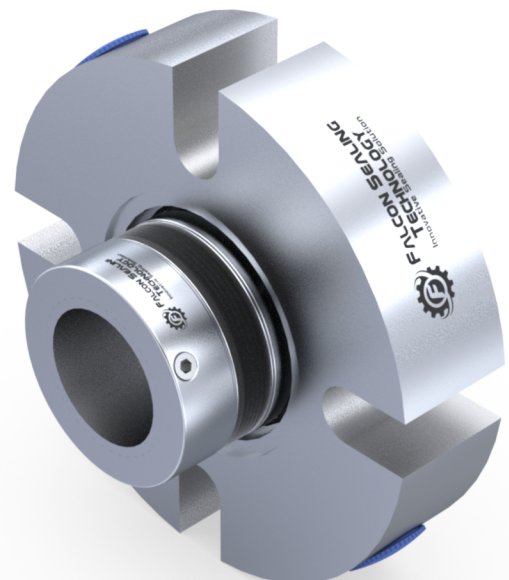
Seal Ring Faces	: Carbon, TC and SiC
Seat Faces	: SiC and TC
Elastomer	: Viton, PTFE, and FFKM
End fitting MOC	: SS 316, HAST-C and Carpenter 42
MOC	: SS 316 – CHANGE OF MOC ON REQUEST

#### • Operating Limit

Shaft Dia.	: 20mm to 100mm
Pressure	: Up to 15 bar
Temperature	: -30°C to 260°C
Speed	: 3000 r.p.m.

#### • Salient Features

Double seal  
Balanced  
Cartridge unit  
Independent of direction of rotation

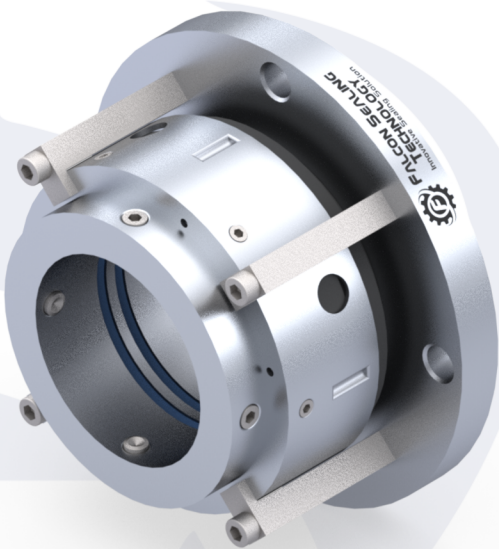




## DRY RUNNING MECHANICAL SEAL

### FS-AG001

FS-AG001 Dry-running mechanical seals are used for mixers, agitators and reactors for cleanability. These seals were developed for sanitary applications where product contamination from barrier fluids is unacceptable. The seals feature sloped internal surfaces to facilitate drainage and enhance cleanability, including the debris well flush ports. Internal metallic parts exposed with optional electro- polishing and all components.



#### • Materials

Seal Ring Faces : Spl. Carbon  
Seat Faces : SiC  
Elastomer : Viton, TTV, FEP and FFKM  
MOC : SS 316 – CHANGE OF MOC ON REQUEST

#### • Operating Limit

Shaft Dia. : 20mm to 150mm  
Pressure : Full Vacuum to 8 bar  
Temperature : -30°C to 140°C  
Speed : 300 r.p.m.

#### • Salient Features

Single seal  
Dry running  
Outboard mounted  
Heat trap arrangement (AG100H)  
Independent of direction of rotation

### FS-AG011

## AGITATOR MECHANICAL SEAL

The FS-AG011 Double Agitator Seal Mechanical Seals are designed for Top, Bottom and Side Entry Drives in Agitators, Mixers OR Blenders and where Non-Aggressive and Non-Hazardous Media are Sealed with the use of Cooling Liquid preventing against Dry Running. Construction of MOC designed of these Seals purpose of holding whole Rotary Parts together with the help of Snap Rings which eases while Installation and Removal of Seals.

#### • Materials

Seal Ring Faces : Carbon and SiC  
Seat Faces : SiC and TC  
Elastomer : Viton, TTV, FEP and FFKM  
MOC : SS 316 – CHANGE OF MOC ON REQUEST

#### • Operating Limit

Shaft Dia. : 20mm to 150mm  
Pressure : Full Vacuum to 8 bar  
Temperature : -30°C to 150°C  
Speed : 300 r.p.m

#### • Salient Features

Single seal  
Cartridge unit  
Bearing arrangement (Optional)  
Heat trap arrangement (Optional)  
Independent of direction of rotation





## GRUNDFOS PUMP CARTRIDGE SEAL

**FS-95**

The FS-95 Grundfos Pump cartridge Seal We are instrumental in offering superior quality Grundfos Pump Cartridge Seals. These Grundfos Seals have sophisticated design for tough slurries. Grundfos pump seal used for stainless steel vertical multistage centrifugal pump. It is suitable to Grundfos pump CR(N) 32, 45, 64, 90, 150 Multi spring Seal for Grundfos pumps.



### • Materials

Hardware	: SS 304 / SS 316
Seal Ring	: Carbon / SiC
Mating Ring	: TC / SiC / Carbon / Special Cast
Secondary	: PTFE / EPDM / Nitrile / Neoprene / Silicon / FKM

### • Operating Limit

Pressure	: Upto 35 Kg/cm <sup>2</sup>
Temperature	: -40 ° to 280° C
Speed	: 4500 RPM

### • Salient Features

No shaft fretting.  
None clogging.  
Uniform face loading.  
Easy to replace individual seal-wear parts.

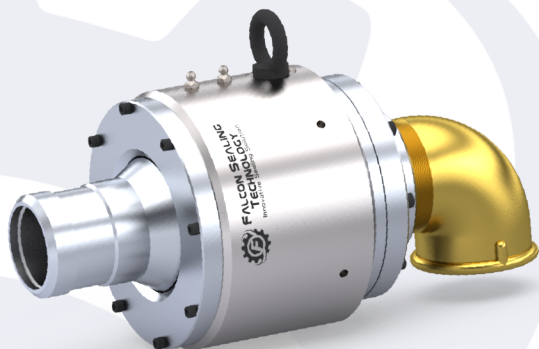




## ROTARY UNION

### FS-RU601

The series are features with carbon graphite to bronze. sp.chrom with elastomer "o" ring, PTFE Sealing, The precision ball bearing's for higher pressure and speed, which keep the seal face in perfect alignment The shielded bearing require no relubrication during operation. Both the series have stainless steel nipple Sizes are available with 2 seal face combination' sinter change eability for both mono-duo low service



#### • Materials

Body	: CI / MS / SS / Brass
Nipple	: SS 410 / SS 316 / SS 304 / CI / MS
Seal ring	: Carbon Tungsten Carbide
Metal components	: SS 316 / SS 304 / Hestelloy C / Alloy 20 & etc.
Spring	: S.S, Spring Steel
Mating ring	: Sp. Chorme Cast, Bronze

#### • Operating Limit

Water Pressure	: 15 Bar
Water Temperature	: 150°C
Hot Oil Pressure	: 8 Bar
Hot Oil Temperature	: 150°C

### FS-BI7001

A bearing isolator is a seal installed in a bearing housing that protects against contamination Ingress and lubrication loss significantly increasing the reliability of your rotating equipment.

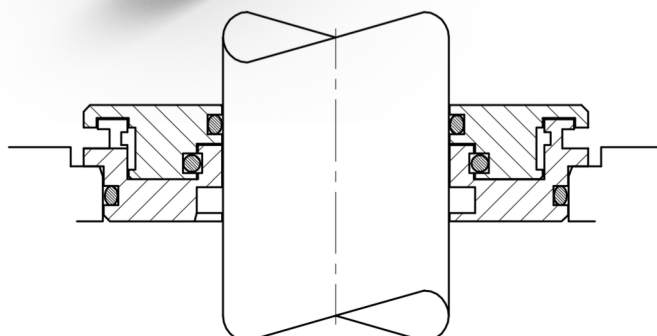
#### • Features

Close tolerance bearing Isolator design locks out moisture, grit and dust, which extending bearing life. No more shaft wearing as compare to conventional oil seal.

#### • Features

Installs on bearing frames used in oil and gas, chemical, mining, pulp and paper, power and general industries.

## BEARING ISOLATER





## FS-701

# Thermosyphon System

A thermosiphon is a passively driven thermal management device that utilizes the motive forces of natural convection and conduction.

- **Features**

The Thermosyphon provides lubrication, dissipate heat and maintain the temperature and required pressure gradient across the seal faces in case of double back to back and tandem seal arrangement for pumps and agitators. Plan 52 and 53A configurations. Economical light and heavy duty reservoir for general service applications. Instrumentation on each reservoir is according to local standards and can be adapted to suit application and customer requirements. 304 and 316 stainless steel construction. Cooling coil is optional.

- **Material**

MOC : SS 316, SS 304 and MS

- **Operating Limit**

TS 20 Pressure Limit : 20 bar

TS 40 Pressure Limit : 40 bar

Temperature : Up to 200oC





## Chemical Processes Pump

Chemical pumps are used in the petrochemical, food processing and chemical industries as well as in off-site applications of refineries and in high-temperature heating systems. They pump hot, cold, aggressive, volatile, explosive, toxic, contaminated and especially valuable liquids.

### • Materials

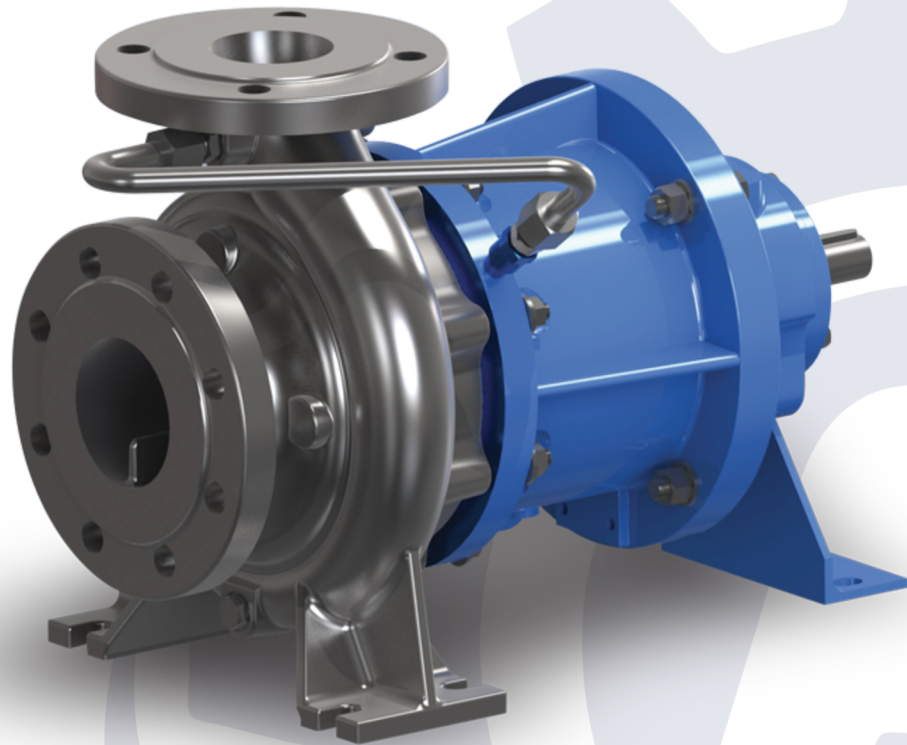
Casing : PP / GFPP / PVDF  
Shaft : SS 410 / SS 316 / SS 304  
Impeller : PP / GFPP / PVDF

### • Operating Limit

Pressure : Upto 5 kg/cm<sup>2</sup>  
Capacity : Upto 110 CU MT / HR  
Head : Upto 55 Meters  
Temperature : 0° to 150°C  
Speed : Upto 3500 RPM

### • Salient Features

- Cooling jacket help for maintaining temperature as per requirement.
- Available with / without bearing.
- Easy to install.
- It has a high performance.



### Seal face

carbon - R  
carbon - M  
Tungsten Carbide  
Nickel bonded  
Cobalt bonded  
Silicon carbide  
Special chrome casting  
glass filled PTFE  
Chrome oxide coating  
Phosphorus Bronze  
Stellite  
Ni-resist  
Lecrolloy  
Ceramic  
Carpentar-42  
CFT

### Secondary Seal

Vitobn  
Grafoil  
Karlez (PFE)  
Silicon rubber  
PTFE  
Glass filled PTFE (GFT)  
Nitriel  
EPR  
TCV (Teflon Coated  
Viton)  
Chemraz  
Fluorosilicone





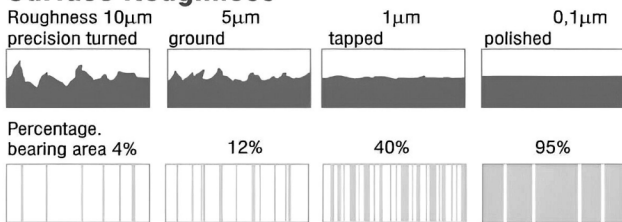
## MATERIALS

Most of the seal designs have stood the test of time and are still in regular usage. The improvements, however, have been tremendous in the seal face materials. The development of superior and highly reliable resin impregnated carbon as also antimony impregnated carbon has enabled successful seal operation even in marginal lubrication conditions particularly in light hydrocarbon and high temperature water applications.

For corrosive liquids resin impregnated carbon and sintered silicon carbide grades have proved the ideal solutions. The hardness and thermal conductivity of silicon carbide is extremely high as shown in the table below.

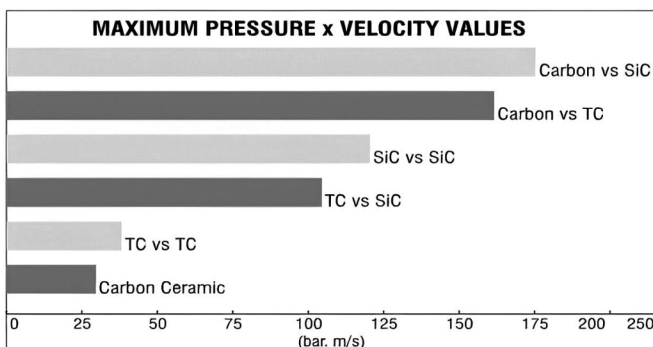
Material	Compressive Strength N/mm <sup>2</sup>	Density g/cm <sup>3</sup>	Modulus elasticity of kN/mm <sup>2</sup>	Coeff. of Thermal Expansion x10 <sup>-6</sup> /°C	Thermal Conductivity W/m <sup>2</sup> °C	Hardness
Carbon, resin impregnated	250	1.83	234	2.88	6	100*
Carbon, antimony impregnated	350	2.15	262	3.96	8	115*
Tungsten Carbide	4750	15	635	5	100	1500*
Silicon Carbide	2750	3.1	365	4.5	145	2400*
Alumina Oxide	2620	3.9	385	4.32	25	1800**

## Surface Roughness



Lapped sliding face made out of different materials having the following average, arithmetic mean roughness values (Ra)

Tungsten carbide	0.01µmm
Silicon carbide	0.04µmm
Carbon graphite	0.10µmm
Aluminium oxide	0.15µmm



## ELASTOMERS

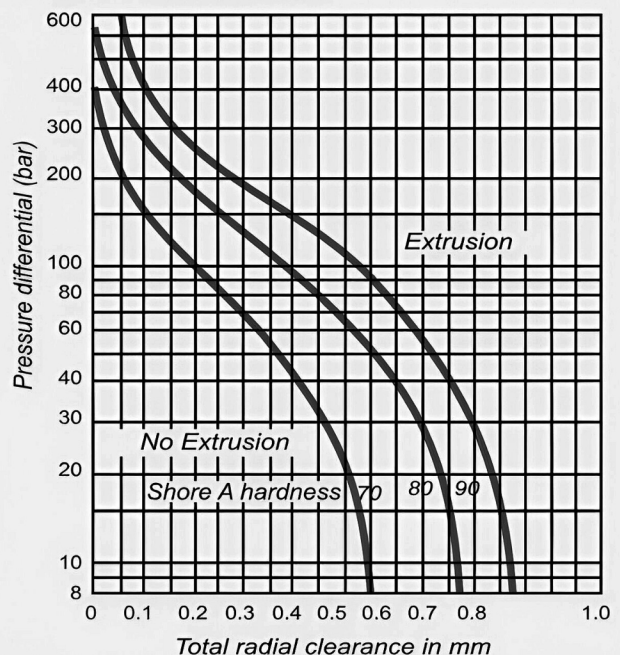
Generally seal face materials easily withstand high temperatures, typically 330°C. However temperature limitations on the part of secondary elastomers decide the seal temperature capability.

So while selecting the seal these limits are to be taken into account.

Material description	min	Temperature limits	max
Fluoroelastomer	0°F/-18°C		400°F/204°C
Ethylene Propylene (EPDM)	-40°F/-40°C		300°F/149°C
Neoprene	-40°F/-40°C		300°F/140°C
Nitrile Butadiene (Buna N)	-40°F/-40°C		300°F/125°C
Kalrez® 1050LF	240°F/-7°C		550°F/288°C
PTFE	-100°F/-73°C		450°F/232°C
Flexible graphite	-320°F/-196°C		800°F/427°C
Chemraz®	-20°F/-29°C		450°F/310°C

## Extrusion characteristics of elastomeric O-rings

The extrusion resistance of elastomeric O-rings can be greatly enhanced by use of support rings.





## FACES

Seal faces in a mechanical seal are the primary sealing surfaces—usually a rotating face and a stationary face—that prevent fluid leakage by maintaining close contact.

These faces are made from materials like carbon, silicon carbide, tungsten carbide, or ceramic, chosen for wear resistance, chemical compatibility, and operating conditions.

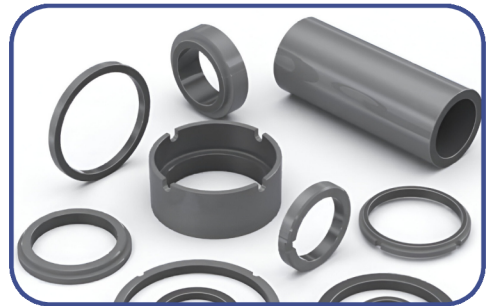


### Carbon Graphite

Falcon Sealing Technology's carbon graphite seal faces are self-lubricating and provide excellent wear resistance, ensuring long life and reliable performance in mechanical seals. They are also chemically inert and have a low coefficient of friction, which minimizes heat generation.

### Silicon carbide

Silicon carbide is an excellent material for mechanical seal faces due to its exceptional hardness, providing superior wear resistance. Its high thermal conductivity allows it to dissipate heat efficiently, preventing damage from friction. It also has great corrosion resistance, making it suitable for a wide range of chemical applications.

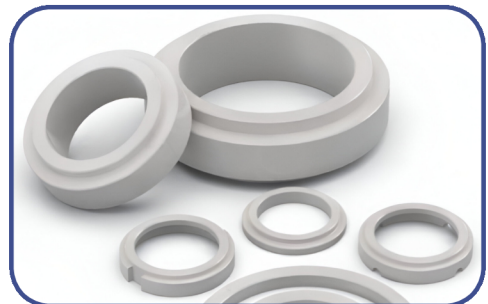


### Tungsten carbide

Tungsten carbide is an excellent material for mechanical seal faces due to its exceptional hardness and high wear resistance. It provides superior performance in demanding applications involving abrasive media and high pressures, offering a long service life and reliable sealing. Additionally, it has a high modulus of elasticity and is resistant to corrosion.

### Ceramic

Ceramic materials for mechanical seal faces are favored due to their exceptional hardness and corrosion resistance, which provides great wear life and stability in harsh environments. Their low thermal expansion also helps to maintain seal integrity under varying temperature conditions.





## COMPONENTS

We are Dealing in following Brands of Pump Spares I.E. Kirloskar, KSB, Beacon, Johnson & Mather & Platt Pumps.

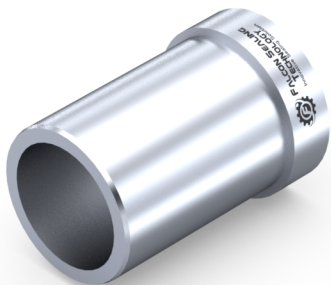
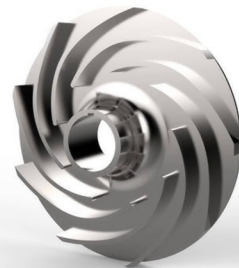


### Shaft

Pump shafts are rotating mechanical components of a pump that transmit power from the motor to the impeller. They are typically made of precision machined steel and can be subjected to high stress and vibration levels.

### Impeller

An impeller is a rotating component of a centrifugal pump that accelerates fluid outward from the center of rotation, thus transferring energy from the motor that drives the pump to the fluid being pumped.

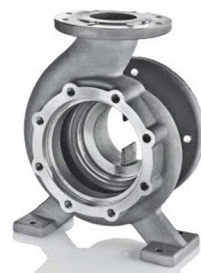


### Shaft Sleeve

A shaft sleeve refers to a hollow metal tube that has a cylinder-like shape. It is mounted over a shaft and shaft assembly. Such mounting is done so that it can be protected against any erosion or corrosion that is likely to occur in the due course of action.

### Casing

The pump casing refers to the outside shell of the pump. It has to seal off the inside of the unit to the outside with respect to pressure and fluids. The structure of the casing differs depending on the type of pump.

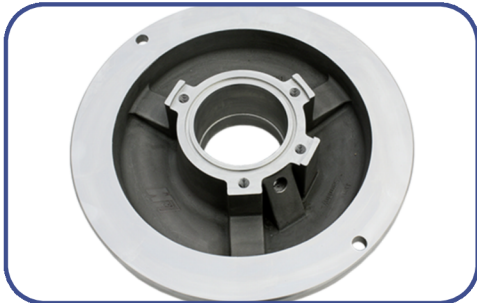






## COMPONENTS

We are Dealing in following Brands of Pump Spares I.E. Kirloskar, KSB, Beacon, Johnson & Mather & Platt Pumps.

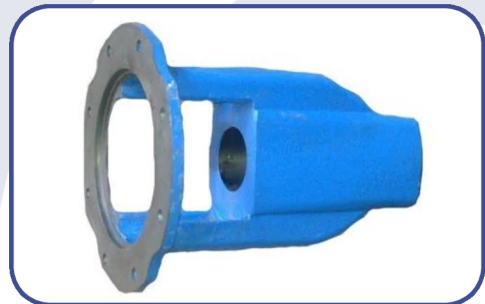


### Stuffing Box

A stuffing box of a pump houses a gland that compresses the packing used to seal the pumped fluid. It prevents leakage along the shaft that passes through a hole in the pump. Stuffing box reliability is critical to the condition and performance of the whole fluid sealing program.

### Bearing Housing

A bearing housing is a pump component into which the bearings are mounted.



### Bearing Cover

The pump bearings support the hydraulic loads imposed on the impeller, the mass of impeller and shaft, and the loads due to the shaft coupling or belt drive.

### Wear Ring

Pump wear rings are the contact zone between rotating and stationary parts. During start-up, shut down, and off-design operation, the rotating and stationary rings come into contact.





## Rubber Products



**Silicone Sponges Strips**



**Rubber Expansion Bellows**



**Rubber Diaphragms**



**FBD Gasket**



**All types of O'ring**



**Tri Clamp Gasket (T.C Gasket)**



**Silicone Bellows**



**FBD Gasket**



# FALCON SEALING TECHNOLOGY

Innovative Sealing Solution

**Website:** [www.falconsealing.in](http://www.falconsealing.in)

**GSTIN:** 24EFWPM5562N1ZH

**Tel:** +91 97678 80358

**Email:** [sales@felconsealingtech.in](mailto:sales@felconsealingtech.in)

**Head Office & Mfg. Plant:**

Survey No.50/ Property No. 5/145,  
F/13, DJ Arcade Complex ,Khali Char  
Rasta, Sidhpur Road, Ta. Sidhpur, Dist.  
Patan, Gujarat - 384151

## Industries We Serve

- Chemicals
- Pharmaceuticals
- Petrochemicals
- Fertilizers
- Power Plants
- Marines
- Foods & Beverages
- Refineries
- Pulp & Papers