



AROHAN
SEALS

MECHANICAL SEALS

Mission

To deliver precision-engineered mechanical sealing solutions that ensure reliability, safety, and efficiency across global industries.

Vision

To be a trusted global name in mechanical sealing technology, recognized for innovation, quality, and performance excellence.



Sealing Excellence, Powering Progress.

INTRODUCTION.

Arohan Seals was built on a simple principle: precision engineering creates dependable performance. In industries where leakage is not an option and downtime is costly, sealing reliability becomes critical. Our mechanical seals are designed with this responsibility in mind—combining robust materials, advanced design, and strict quality standards. We serve a wide range of industries including chemical processing, pharmaceuticals, oil & gas, water treatment, pumps, and marine engineering. Each solution is developed to withstand demanding operating conditions while ensuring efficiency and safety. Guided by innovation and driven by purpose, Arohan Seals continues to evolve with industry needs—delivering sealing solutions that don't just perform, but endure. Because for us, sealing is not just a component it is the foundation of uninterrupted progress.

ABOUT US.

Arohan Seals is a precision-focused manufacturer of high-performance mechanical seals designed for critical industrial applications. We deliver sealing solutions that combine engineering accuracy, material strength, and long-term reliability to ensure uninterrupted operation in demanding environments. Our products are widely used across industries such as chemical processing, pharmaceuticals, oil & gas, water treatment, pumps, compressors, and marine engineering. Each seal is engineered to perform under extreme pressure, temperature variations, and challenging operating conditions. Driven by innovation and quality-first manufacturing, we follow strict quality control standards to ensure consistency and durability in every product we deliver. At Arohan Seals, we believe that reliable sealing is the foundation of industrial efficiency. Our commitment is to help industries reduce downtime, improve safety, and enhance operational performance. Sealing Excellence. Powering Progress.

MECHANICAL SEALS

A mechanical seal is a critical component used in various rotating equipment, such as pumps, compressors, and agitators, to prevent the leakage of fluids (liquids or gases) from the system. It is designed to provide a reliable and long-lasting seal between the rotating shaft and the stationary housing, preventing leaks and protecting the system from contaminants.

Key Features of Mechanical Seals



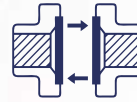
Leak Prevention



Friction Reduction



Pressure Resistance



Dual Sealing Faces



Lubrication

Components of a Mechanical Seal

Rotary Face (Rotating Seal Face)

This is the face attached to the rotating shaft. It rotates with the shaft and is in direct contact with the stationary seal face.

Stationary Face (Stationary Seal Face)

The stationary face is fixed in the housing of the pump or other equipment. It provides the counterpart to the rotating face and forms the primary sealing interface.

Secondary Seals

These seals, such as O-rings or gaskets, are used to seal the interface between the mechanical seal and the equipment's casing, ensuring that no fluid can leak out at the periphery of the sealing faces.

Spring Mechanism

A spring (or springs) is used to apply constant pressure on the sealing faces to ensure they remain in contact throughout operation. The springs help compensate for any wear that might occur over time.

Shaft Sleeve

In some designs, a shaft sleeve is used to protect the shaft from wear and to provide a smooth surface for the mechanical seal to operate against.

Seal Chamber

The area around the sealing faces is often referred to as the seal chamber. This chamber is typically filled with a lubricant or fluid to help prevent excessive heat build-up and reduce friction between the faces.

Types of Mechanical Seals

01. Single Spring Seal



02. Multi Spring Seal



03. Wave Spring Seal



04. Conical Spring Seal



05. Elastomer Bellow Seal



06. Teflon Bellow Seal



07. Metal Bellow Seal



08. Cartridge Seal



09. Agitator Seal



10. Grundfos Seal



Application of Mechanical Seals



PUMP

Used in pumps to prevent leakage and improve efficiency.



COMPRESSORS

Used in compressors to maintain pressure and prevent leakage.



AGITATORS AND MIXERS

Prevent leakage in mixing tanks and reactors handling corrosive fluids.



REFINERIES AND CHEMICAL PLANTS

Used in critical processes involving hazardous and high-temperature fluids.



TURBINES

Help in sealing steam, water, and gas in turbine systems to ensure efficiency.



MARINE & AEROSPACE

Ensure reliable sealing in pumps, engines, and other rotating equipment.

Maintenance of Mechanical Seals



INSPECTION

Regularly inspect for leakage, wear, or damage to ensure optimal performance.



LUBRICATION

Maintain proper lubrication of the seal chamber to reduce friction and heat.



REPLACEMENT

Replace worn or damaged seals promptly to prevent equipment failure.



PROPER INSTALLATION

Ensure correct installation to avoid misalignment and uneven wear



SEAL FACE MAINTENANCE

Keep seal faces clean and free from scratches or debris for effective sealing.



WHY CHOOSE AROHAN SEALS?

Precision Engineering | High Quality Materials
Custom Solutions | Reliable Performance

TECHNICAL SPECIFICATIONS

01

SINGLE SPRING MECHANICAL SEAL



OPERATING LIMIT



Seal Size
20mm to 100mm



Pressure
20kg/cm²



Velocity
15m/s



Temperature
-20°C to 180°C



MATERIAL

- **Faces**
Carbon, Silicon
- **Stationary Seals**
Silicon, TC, SS
- **Hardware**
SS304, SS316, SS316L



SECONDARY SEAL MATERIAL

Viton, NBR, EPDM, Silicon, PTFE

02

MULTI SPRING MECHANICAL SEAL



OPERATING LIMIT



Seal Size
12mm to 180mm



Pressure
25kg/cm²



Velocity
20m/s



Temperature
-20°C to 240°C



MATERIAL

- **Faces**
Carbon, Ceramic, Sic, Tungsten Carbide
- **Stationary Seals**
Silicon, TC, SS
- **Hardware**
SS304, SS316, Hast-C, Alloy-20



SECONDARY SEAL MATERIAL

Viton, Aflas, PTEE, FEP, FFKM, Grafoil

03

METAL BELLOW MECHANICAL SEAL



OPERATING LIMIT



Seal Size
18mm to 100mm



Pressure
20kg/cm²



Velocity
25m/s



Temperature
-50°C to 420°C



MATERIAL

- **Faces**
Carbon, Silicon, Tungsten Carbide
- **Bellow Material**
Am350
- **Hardware**
SS304, Carpenter 42



SECONDARY SEAL MATERIAL

Viton, Aflas, PTEE, FEP, FFKM, Grafoil

04

TEFLON BELLOW MECHANICAL SEAL



OPERATING LIMIT



Seal Size
18mm to 100mm



Pressure
6kg/cm²



Velocity
20m/s



Temperature
-50°C to 120°C



MATERIAL

- **Faces**
GFT, CFT, SIFT
- **Hardware**
Ss316, Hast-C



SECONDARY SEAL MATERIAL

Ceramic, Sic

05

DRY RUNNING MECHANICAL SEAL



OPERATING LIMIT



Seal Size
25mm to 100mm



Pressure
Full Vacuum 6kg/cm²



Velocity
5m/s



Temperature
-40°C to 150°C



MATERIAL

- **Faces**
Carbon vs Sic, Tungsten Carbide, Ceramic
- **Stationary Seals**
Silicon, TC, SS
- **Hardware**
SS316, Hast-C, Alloy-20



SECONDARY SEAL MATERIAL

Viton, PTFE, FEP, Nitrile, EPDM

TECHNICAL SPECIFICATIONS

06

AGITATOR MECHANICAL SEAL



OPERATING LIMIT



Seal Size
25mm to 150mm



Pressure
40kg/cm²



Velocity
4m/s



Temperature
-20°C to 250°C



MATERIAL

- **Faces**
Carbon vs Sic, Tungsten Carbide
- **Hardware**
SS316, Hast-C, Alloy-20



SECONDARY SEAL MATERIAL

Viton, PTFE, FEP, FFKM

07

CARTRIDGE MECHANICAL SEAL



OPERATING LIMIT



Seal Size
25mm to 100mm



Pressure
20kg/cm² to 40kg/cm²



Velocity
20m/s to 30m/s



Temperature
-30°C to 350°C



MATERIAL

- **Faces**
Carbon vs Sic, Sic, Tungsten Carbide
- **Hardware**
SS316, Hast-C, Alloy-20



SECONDARY SEAL MATERIAL

Viton, PTFE, FEP, GFT, FFKM

08

GRUNDFOS MECHANICAL SEAL



OPERATING LIMIT



Seal Size
12mm to 60mm



Pressure
Max 25kg/cm²



Velocity
Max 30m/s



Temperature
-25°C to 150°C



MATERIAL

- **Faces**
Carbon, Silicon Carbide, Tungsten Carbide, Ceramic
- **Hardware**
SS304, SS316



SECONDARY SEAL MATERIAL

EPDM, FKM (Viton), NBR, FXM/FKM-based rubber

09

REACTOR DOUBLE MECHANICAL SEAL



OPERATING LIMIT



Seal Size
25mm to 150mm



Pressure
25kg/cm²



Velocity
20m/s



Temperature
-20°C to 250°C

(Up to 350°C with special materials.)



MATERIAL

- **Faces**
Silicon Carbide, Carbon / Tungsten Carbide
- **Stationary Seals**
Silicon, TC, SS
- **Hardware**
SS316, Duplex SS, Hast-C



SECONDARY SEAL MATERIAL

Viton, EPDM, PTFE

10

SPLIT MECHANICAL SEAL



OPERATING LIMIT



Seal Size
25mm to 150mm



Pressure
25kg/cm²



Velocity
20m/s



Temperature
-20°C to 250°C

(Up to 350°C with special materials.)



MATERIAL

- **Faces**
Silicon Carbide, Carbon / Tungsten Carbide
- **Stationary Seals**
Silicon, TC, SS
- **Hardware**
SS316, Duplex SS, Hast-C



SECONDARY SEAL MATERIAL

Viton, EPDM, PTFE

Single Spring Mechanical Seal

01

Single Spring Mechanical Seal



A Single Spring Mechanical Seal is a sealing device used in rotating equipment such as pumps and mixers to prevent fluid leakage along the shaft. It consists of two primary sealing faces one rotating and one stationary kept in contact by a single coil spring. The spring provides axial force to maintain proper face contact, ensuring effective sealing during operation while compensating for wear and minor shaft movements.

KEY FEATURES

- Simple and compact design
- Easy installation and maintenance
- Cost-effective solution
- Suitable for clean fluids under low to moderate pressure

02

Single Spring Balanced Mechanical Seal



A Single Spring Balanced Mechanical Seal is a type of mechanical seal designed to reduce the hydraulic load acting on the seal faces, making it suitable for higher pressure applications. It uses a single coil spring to maintain face contact, while the balanced design minimizes the closing force created by fluid pressure. This reduces heat generation, wear, and face distortion, resulting in improved performance and longer seal life.

KEY FEATURES

- Single spring construction
- Balanced design for higher pressure service
- Reduced face wear and heat generation
- Suitable for moderate to high pressure applications

03

Single Spring Unbalanced Mechanical Seal



A Single Spring Unbalanced Mechanical Seal is a mechanical seal used in rotating equipment to prevent fluid leakage along the shaft. It features one coil spring that applies axial force to keep the rotating and stationary seal faces in contact. In an unbalanced design, the full system pressure acts directly on the seal faces, increasing the closing force. This makes it suitable for low to moderate pressure applications but can lead to higher face wear at elevated pressures.

KEY FEATURES

- Single coil spring design
- Simple and economical construction
- Suitable for low to moderate pressure service
- Best for clean, non-abrasive fluids

04

Conical Spring Mechanical Seal



A Conical Spring Mechanical Seal is a type of mechanical seal that uses a cone-shaped (tapered) spring to maintain contact between the rotating and stationary seal faces in pumps and other rotating equipment. The conical spring provides uniform axial force while also allowing for self-cleaning action, as its shape helps prevent clogging from solids or debris. This makes it suitable for applications where fluids may contain light particles.

KEY FEATURES

- Tapered (conical) spring design
- Compact and simple construction
- Reduced clogging compared to straight springs
- Suitable for light slurry and clean fluid applications

05

Wave Spring Mechanical Seal



A Wave Spring Mechanical Seal is a type of mechanical seal that uses a wave-shaped spring instead of a conventional coil spring to maintain contact between the rotating and stationary seal faces. The wave spring provides uniform axial load while occupying less axial space, making the seal compact and suitable for confined installations. Its design ensures consistent face pressure, reduced vibration, and reliable sealing performance.

KEY FEATURES

- Wave-shaped spring design
- Compact and space-saving construction
- Uniform face loading
- Suitable for low to moderate pressure applications

Multi Spring Mechanical Seal

01 Multi Spring Mechanical Seal



A Multi Spring Mechanical Seal is a mechanical seal that uses multiple small springs arranged around the shaft to maintain uniform pressure between the rotating and stationary seal faces. The multiple springs provide balanced and even axial loading, improving stability and sealing performance. This design helps reduce distortion, enhances heat dissipation, and allows the seal to operate efficiently at higher speeds and pressures compared to single spring types.

KEY FEATURES

- Multiple small springs for uniform load distribution
- Suitable for higher pressure and speed applications
- Compact and well-balanced design
- Improved reliability and longer service life

02 Multi Spring Balanced Mechanical Seal



A Multi Spring Balanced Mechanical Seal is a mechanical seal that uses multiple small springs to provide uniform axial pressure on the seal faces, combined with a balanced design that reduces the hydraulic load acting on the faces. The balanced construction minimizes face pressure caused by system fluid pressure, reducing heat generation, wear, and distortion. This allows the seal to operate efficiently under higher pressures and speeds with improved reliability.

KEY FEATURES

- Multiple springs for even load distribution
- Balanced design for high-pressure applications
- Reduced heat and face wear
- Stable performance at higher speeds

03 Multi Spring Unbalanced Mechanical Seal



A Multi Spring Unbalanced Mechanical Seal is a mechanical seal that uses multiple small springs arranged around the shaft to maintain consistent contact between the rotating and stationary seal faces. In an unbalanced design, the full system pressure acts on the seal faces, increasing the closing force. While this limits its use in very high-pressure applications, the multiple springs provide uniform load distribution, improving sealing stability and performance.

KEY FEATURES

- Multiple springs for even face loading
- Simple and robust construction
- Suitable for low to moderate pressure applications
- Good performance in clean, non-abrasive fluids

04 Multi Spring Reverse Balanced Mechanical Seal



A Multi Spring Reverse Balanced Mechanical Seal is a mechanical seal that uses multiple small springs to maintain contact between the rotating and stationary faces, with a reverse balanced design that counteracts fluid pressure from the opposite side. This reverse balance reduces the effective hydraulic load on the seal faces, minimizing wear, heat generation, and distortion. It is suitable for higher-pressure applications where improved reliability and longer service life are required.

KEY FEATURES

- Multiple springs for even face loading
- Reverse balanced design for high pressure service
- Reduced heat and wear on seal faces
- Stable performance at higher speeds

Bellow Mechanical Seal

01

Bellow Mechanical Seal



A Bellows Mechanical Seal is a type of mechanical seal that uses a flexible metal or elastomer bellows in place of traditional springs to maintain contact between the rotating and stationary faces. The bellows provides axial force, accommodates misalignment, and compensates for shaft movement without the risk of spring fouling. This makes it ideal for handling corrosive, abrasive, or clean fluids.

KEY FEATURES

- Spring-less design using flexible bellows
- Compensates for misalignment and axial movement
- Suitable for corrosive and clean fluids
- Compact, reliable, and low-maintenance

02

Rubber Bellow Mechanical Seal



A Rubber Bellows Mechanical Seal is a type of mechanical seal that uses a flexible rubber bellows instead of metal springs to maintain contact between the rotating and stationary faces. The rubber bellows provides axial force, accommodates misalignment, and compensates for axial shaft movements. It is especially suitable for clean, corrosive, or low pressure fluids and eliminates spring fouling issues.

KEY FEATURES

- Spring-less design with flexible rubber bellows
- Compensates for misalignment and shaft movement
- Ideal for corrosive or clean fluids
- Compact, reliable, and low-maintenance

03

PTFE Bellow Mechanical Seal



A PTFE Bellows Mechanical Seal is a type of mechanical seal that uses a flexible PTFE bellows instead of springs to maintain contact between the rotating and stationary faces. The PTFE bellows provides axial force, compensates for shaft misalignment and axial movement, and offers excellent chemical resistance. This makes it ideal for handling highly corrosive or abrasive fluids.

KEY FEATURES

- Spring-less design with PTFE bellows
- Excellent chemical resistance
- Compensates for misalignment and axial movement
- Reliable, leak-free, and low-maintenance

04

Metal Bellow Mechanical Seal



A Metal Bellows Mechanical Seal is a spring less mechanical seal that uses a flexible metal bellows to maintain contact between the rotating and stationary faces. The metal bellows provides axial force, compensates for shaft misalignment and axial movement, and can withstand high temperatures, pressures, and corrosive fluids.

KEY FEATURES

- Flexible metal bellows instead of springs
- High temperature and pressure resistance
- Compensates for misalignment and axial movement
- Durable, reliable, and low-maintenance

05

Teflon Bellow Mechanical Seal



A Teflon Bellows Mechanical Seal is a spring less mechanical seal that uses a flexible Teflon (PTFE) bellows to maintain contact between the rotating and stationary faces. The Teflon bellows provides axial force, compensates for shaft misalignment and axial movement, and offers excellent chemical resistance, making it ideal for handling corrosive or aggressive fluids.

KEY FEATURES

- Flexible Teflon bellows instead of springs
- Excellent chemical resistance
- Compensates for misalignment and axial movement
- Reliable, leak-free, and low-maintenance

05

Elastomer Bellow Mechanical Seal



An Elastomer Bellows Mechanical Seal is a spring-less mechanical seal that uses a flexible elastomer bellows to maintain contact between the rotating and stationary faces. The elastomer bellows provides axial force, compensates for shaft misalignment and axial movement, and is resistant to many chemicals. Its design prevents spring fouling and ensures reliable sealing in low to moderate pressure applications.

KEY FEATURES

- Flexible elastomer bellows instead of springs
- Compensates for misalignment and shaft movement
- Resistant to various chemicals
- Compact, reliable, and low-maintenance

Cartridge Mechanical Seal

01 Cartridge Mechanical Seal



A cartridge mechanical seal is a pre-assembled sealing unit used in pumps and rotating equipment to prevent leakage of liquids or gases along a rotating shaft. Unlike conventional component seals, it comes as a complete, factory-set assembly that includes the seal faces, gland plate, sleeve, and hardware.

KEY FEATURES

- Pre-assembled & pre-set – No need for precise measurement during installation
- Easy installation – Reduces human error
- Improved reliability – Factory alignment ensures correct seal face loading
- Available in single or double configurations – For different pressure and fluid conditions

ADVANTAGES

- Faster installation
- Reduced maintenance time
- Lower risk of incorrect assembly
- Better performance in high-pressure or hazardous applications

02 Cartridge Single Mechanical Seal



A Cartridge Single Mechanical Seal is a factory-assembled sealing unit designed to prevent leakage of fluids along a rotating shaft in pumps and other rotating equipment. It consists of a single set of sealing faces mounted within a pre-set cartridge that includes the sleeve and gland plate.

KEY FEATURES

- Pre-assembled and factory-set for easy installation
- Single sealing interface (one pair of seal faces)
- Designed for moderate pressure and non hazardous fluids
- Reduces installation errors

ADVANTAGES

- Quick and simple installation
- Lower maintenance time
- Cost-effective sealing solution
- Reliable performance in general industrial applications

03 Cartridge Double Mechanical Seal



A Cartridge Double Mechanical Seal is a factory-assembled dual seal system designed for hazardous, high-pressure, and high-temperature applications. It uses barrier or buffer fluid between the seal faces to prevent leakage and ensure reliable sealing performance.

KEY FEATURES

- Two sealing interfaces (inner and outer seals)
- Pre-assembled and factory-set for easy installation
- Uses barrier/buffer fluid system for added safety
- Suitable for severe operating conditions

ADVANTAGES

- Enhanced leakage control
- Increased reliability and safety
- Ideal for hazardous or environmentally sensitive fluids
- Longer service life under demanding applications

04 Grundfos Cartridge Mechanical Seal



A Grundfos cartridge mechanical seal is a pre-assembled, factory-set sealing unit designed specifically for Grundfos pumps to prevent leakage along the pump shaft. The seal comes as a complete cartridge, including seal faces, sleeve, and gland plate, ensuring precise alignment and easy installation.

KEY FEATURES

- Factory-assembled and pre-adjusted
- Designed for direct fit in Grundfos pumps
- Available in single or double seal configurations
- Suitable for water, chemicals, and light industrial fluids

ADVANTAGES

- Quick replacement with minimal downtime
- Reduced installation errors
- Reliable sealing performance
- Long service life under standard operating conditions

05 Metal Bellow Cartridge Mechanical Seal



A Metal Bellow Cartridge Mechanical Seal is a pre-assembled sealing unit that uses a welded metal bellows instead of springs to provide sealing force between the seal faces. The metal bellows act as both the spring element and dynamic sealing component, eliminating the need for conventional coil springs.

KEY FEATURES

- Welded metal bellows design (no dynamic O-rings)
- Factory-set cartridge for easy installation
- Suitable for high temperature and high-pressure applications
- Resistant to corrosion and clogging

ADVANTAGES

- Excellent performance in extreme temperatures
- No spring clogging in dirty or viscous fluids
- Reduced shaft wear
- High reliability in demanding services

Agitator Mechanical Seal

01 Agitator Mechanical Seal



An Agitator Mechanical Seal is a specialized sealing device designed to prevent leakage in mixing vessels and reactors where a rotating agitator shaft enters the tank. These seals are built to handle low speeds, high torque, axial movement, and shaft deflection common in agitator applications.

KEY FEATURES

- Designed for vertical or top-entry agitators
- Available in single or double seal configurations
- Can operate with barrier or buffer fluid systems
- Handles misalignment and shaft movement

ADVANTAGES

- Prevents product contamination
- Ensures safe sealing of hazardous or viscous fluids
- Suitable for high-pressure and high-temperature processes
- Long service life in demanding mixing operations

02 Agitator Single Mechanical Seal



An Agitator Single Mechanical Seal is a sealing device designed for mixers and reactors with a rotating agitator shaft. It uses one set of sealing faces to prevent process fluid from leaking out of the vessel.

KEY FEATURES

- Single seal face arrangement
- Designed for low-speed, high-torque shafts
- Suitable for moderate pressure and temperature
- Can handle slight shaft movement and misalignment

ADVANTAGES

- Simple and cost-effective design
- Easy installation and maintenance
- Ideal for non-hazardous and general-duty applications
- Reliable sealing in standard mixing operations

03 Agitator Double Mechanical Seal



An Agitator Double Mechanical Seal is a heavy-duty sealing system for mixers and reactors operating under demanding conditions. It uses dual seal faces with barrier or buffer fluid to provide superior leakage protection and protect the seal faces.

KEY FEATURES

- Dual sealing faces for maximum leakage control
- Suitable for high pressure, temperature, and vacuum conditions
- Handles shaft deflection and axial movement
- Compatible with barrier/buffer fluid systems

ADVANTAGES

- Prevents product contamination
- Ensures safe sealing of hazardous or viscous fluids
- Suitable for high-pressure and high-temperature processes
- Long service life in demanding mixing operations

04 Agitator Dry Running Mechanical Seal



An Agitator Dry Running Mechanical Seal is a specially designed seal that can operate without liquid lubrication between the seal faces. Unlike conventional seals that rely on process fluid for cooling and lubrication, dry running seals use engineered face materials or gas lubrication to minimize friction and wear.

KEY FEATURES

- Operates without liquid lubrication
- Suitable for dry powders, vacuum, or gas applications
- Non-contacting or low-friction seal face design
- Designed for low-speed, high-torque agitators

ADVANTAGES

- Prevents overheating during dry operation
- Ideal for powder mixing and batch processes
- Reduced maintenance in intermittent or empty vessel operation
- Reliable sealing under vacuum or gas conditions

05 Reactor Double Mechanical Seal



A Reactor Double Mechanical Seal is a heavy-duty sealing system designed for reactors and mixing vessels where a rotating shaft enters the pressure vessel. It consists of two sets of seal faces (inner and outer seals) arranged to provide maximum leakage protection in critical processes.

KEY FEATURES

- Dual seal face arrangement for enhanced safety
- Suitable for high pressure, high temperature, and vacuum conditions
- Compatible with barrier/buffer fluid support systems
- Designed to handle shaft deflection and axial movement

ADVANTAGES

- Superior leakage control for hazardous chemicals
- Prevents product contamination
- Increased operational safety and reliability
- Extended service life in demanding reactor applications

Split Mechanical Seal

01

Split Mechanical Seal



A Split Mechanical Seal is a type of seal designed in two halves, allowing it to be installed or removed around a rotating shaft without disassembling the equipment. This design is especially useful for large pumps, mixers, or reactors where conventional seal installation would require extensive downtime.

KEY FEATURES

- Two-piece design for easy on-site installation
- Eliminates the need to dismantle equipment for seal replacement
- Suitable for large-diameter shafts and heavy duty applications
- Can be single or double seal configuration

ADVANTAGES

- Reduces maintenance time and operational downtime
- Ideal for retrofitting existing equipment
- Reliable sealing in high-pressure, high-temperature, or corrosive environments
- Simplifies servicing in challenging industrial applications



**RESIN CARBON
SEAL FACE**



**ANTIMONY CARBON
SEAL FACE**



**SILICON CARBON
SEAL FACE**



**TUNGSTEN CARBIDE
SEAL FACE**

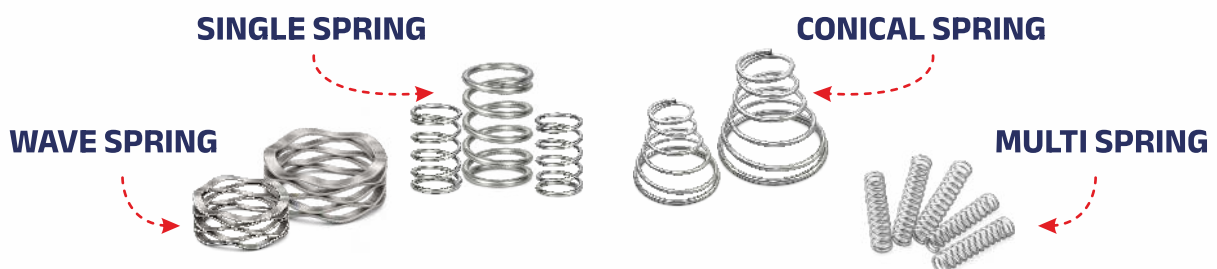


**STAINLESS STEEL
SHAFT**



**CERAMIC
SEAL FACE**

STAINLESS STEEL SPRING



Rotary and Stationary

Rotary Face (Rotating Seal Face)

The rotary part of a mechanical seal is the component that rotates together with the pump shaft. It is mounted directly on the shaft and moves whenever the shaft rotates. The main function of the rotary part is to create one of the sealing faces that prevents fluid leakage from the pump.

The rotary part usually consists of components such as the rotary seal ring (primary ring), spring, retainer, and O-ring or secondary seal. The spring pushes the rotary seal ring against the stationary seal face to maintain constant contact. This contact forms a tight sealing interface between the rotating and stationary parts.

During operation, the rotary seal face rotates while pressing against the stationary seal face, creating a thin lubricating film of liquid between them. This film helps reduce friction, wear, and leakage while maintaining effective sealing.

Stationary Face (Stationary Seal Face)

The stationary part of a mechanical seal is the component that remains fixed inside the pump casing or seal housing and does not rotate with the shaft. Its main function is to provide a stable sealing surface that works together with the rotating seal face to prevent leakage of fluid.

The stationary part usually includes the stationary seal ring (seat), gasket or O-ring, and sometimes a housing or gland plate. The O-ring or gasket helps seal the gap between the stationary ring and the pump casing so that fluid cannot leak around it.

During operation, the stationary seal face stays fixed while the rotary seal face rotates against it. The contact between these two faces forms a very thin fluid film that reduces friction and helps maintain an effective seal.

Working Principle

The rotary face and stationary face press against each other, creating a very thin fluid film between them. This film reduces friction while preventing leakage of the pumped fluid.

Resin Carbon Seal Face

A resin carbon seal face is a type of mechanical seal face made from carbon material bonded with resin. It is commonly used in mechanical seals because it has good self-lubricating properties, low friction, and good wear resistance.

The resin carbon material helps the seal face run smoothly against the mating surface, reducing heat and damage during operation. It is also suitable for water, oil, and light chemical applications.

Antimony Carbon Seal Face

An antimony carbon seal face is a type of mechanical seal face made from carbon material impregnated with antimony metal. The antimony increases the strength, density, and wear resistance of the carbon.

This type of seal face is suitable for high temperature, high pressure, and demanding applications because it has better mechanical strength and improved thermal conductivity compared to standard resin carbon.

Silicon Carbon Seal Face

A silicon carbide (SiC) seal face is a mechanical seal face made from silicon carbide ceramic material. It is known for its very high hardness, excellent wear resistance, and strong chemical resistance.

Silicon carbide seal faces are commonly used in high-temperature, high-pressure, and abrasive fluid applications because they can operate with very low friction and long service life.

Tungsten Carbide Seal Face

A tungsten carbide seal face is a mechanical seal face made from tungsten carbide material, which is known for its very high hardness and excellent wear resistance. It is commonly used in mechanical seals where strong durability and resistance to abrasion are required.

Tungsten carbide seal faces perform well in high-pressure, high-speed, and abrasive fluid applications, making them suitable for heavy-duty pumps and industrial equipment.

Ceramic Seal Face

A ceramic seal face is a mechanical seal face made from ceramic materials such as alumina. It is known for its high hardness, good wear resistance, and excellent corrosion resistance.

Ceramic seal faces are commonly used in water pumps and light chemical applications because they provide smooth operation and reliable sealing at a relatively low cost.



AROHAN SEALS

ENGINEERED FOR

RELIABILITY.

BUILT FOR

PERFORMANCE.

Complete mechanical sealing solutions
that ensure reliability, safety,
and efficiency across
global industries.



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Sealing Excellence, Powering Progress.