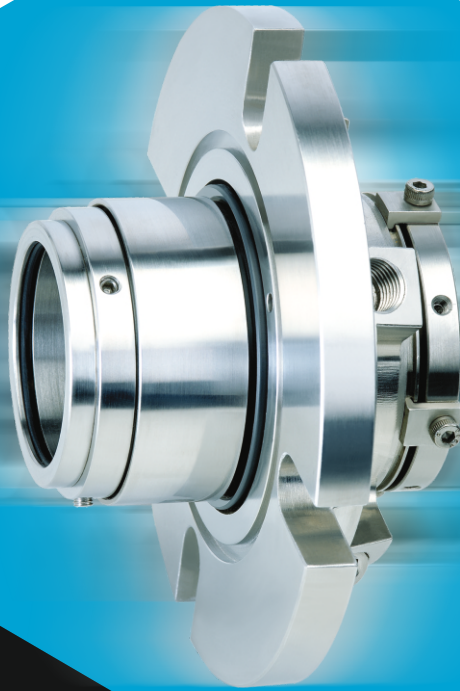




SAM SEALS iNDIA
premium sealing technology

Mfg. of Mechanical Shaft Seal
& Components



- Pumps
- Compressors
- Agitators
- Blowers

- Refineries
- Petrochemicals
- Fertilizers
- Power Generation
- Food & Pharma

www.samseals.in

THE COMPANY

SAM SEALS INDIA manufactures and markets highly engineered mechanical shaft seals used for sealing corrosive, volatile, abrasive, precious and flammable fluids. SAM SEALS mechanical seals are used for pumps, compressors, mixers, steam turbines and other rotary-motion equipment.

Due to Rapid Advancement of Technology in Process industries, rotating equipments are subjected to more & more severe operating conditions, excessive pressure, high Temperature etc. Selection of the proper Mechanical seals therefore assumes critical importance. SAM SEALS Strives to achieve this by offering the best quality Mechanical Seals at competitive prices.

Manufactured with the best raw materials procured from reputed sources worldwide, SAM SEALS comes with the assurance of flawless workmanship due to rigorous quality control checks at every stage of production.

SAM SEALS offers a complete line of seals including cartridge seals, dry-running seals, metal bellows, elastomer bellows Seal for diverse application in a wide range of industries. SAM SEALS also provides compression seals, bearing protection devices and seal chamber auxiliary equipment. SAM SEALS offers innovative seal design and responsiveness, as well as development of new technologies that produce lower maintenance and operating costs.

CARTRIDGE SEAL

TYPE SSI-50 Double Cartridge seals are self-contained units consisting of a shaft sleeve, seal, and gland plate. The unit is fitted onto the pump shaft as a built assembly, and no further fitting is required. Cartridge seals are an attempt to over-come the fitting problems of conventional seals. They are supplied in single and double form, and the gland plate is often fitted with various tappings to provide for flushing, cooling water injection, and disaster control. The cartridge can overcome several limitations of the standard pump gland. Tangential tappings for introducing fluids into the gland cause less disturbance to the seal face than the radial tappings often found on pump units. Look again at the tapping provided for flush water to the packed gland, a tangential tapping would provide a less turbulent water source. For a packing gland this may not be important but to a mechanical seal it can be another adverse condition with which to cope.

The design works to eliminate many of the common causes of seal failure on installation and because the seal is presented on its own shaft sleeve any damage that might be caused by a conventional seal to the pump unit is also eliminated.



Materials

Seal Faces : Ceramic / Sic/Carbon Vs Ceramic /
RB Sic./TC
Secondary Seals : Viton/PTFE/GFT
Metal Components : SS-316

Operating Limits :

Shaft Dia. : 25 to 150mm
Pressure : up to 15 Bars
Temp. : -50 to 180°C
Speed : up to 25 m/s

TYPE SSI-55 Single Cartridge Seal Series is a modular cartridge seal family that includes elastomer o-ring pusher seal designs. Type SSI-55 single seal arrangements incorporate an elastomer o-ring as the secondary sealing member. A common seal head/mating ring set, utilized throughout all versions, is reversible to allow rotating. Seat/mating ring or rotating seal head operation, and is interchangeable with metal bellows seal heads. Seal has an optional quench gland with carbon ring throttle bushing.

Balance Pusher Seals available in Single Configuration used for Sealing Environmentally. Dual Directional. Stationary spring design. Reversible Seal Head. No clogging Wave Spring outside the Product. Components in Cartridge Design are Builds for the Highest Reliability and Simple Installation.

Materials

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

Operating Limits :

Shaft Dia. : 25 to 150mm
Pressure : up to 15 Bars
Temp. : -50 to 180°C
Speed : up to 25 m/s



MULTI SPRING UNBALANCED SEAL

TYPE SSI 41U & 42U : are general-purpose multi spring unbalanced seals. Designated for the unbalanced Versions with 'O' Ring & PTFE wedge respectively. Shaft fretting is minimized due to lower spring loads provided through wedge or 'O' Rings, occupies less stuffing box area due to its narrow cross-section & compact design.



These Seals can be easily assemble or dismantled through circlip provided & cab be change to Balance version of its type merely by changing the carbon face only & an be provided with single, double or tandem arrangement worth external seal support systems & devices.

Applications :

Generally used in Petrochemicals, Light Hydrocarbons & General Industrial Fluids.

Materials

Seal Faces : Carbon vs Ceramic/Sic./TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 14 to 150mm
 Pressure : up to 10 Bars
 Temp. : -50 to 280°C
 Speed : up to 25 m/s

MULTI SPRING BALANCED SEAL

TYPE SSI 41B & 42B : are pushers type balanced multi spring seals generally used where high-pressure sealing is required. Due to its compact radial & axial dimensions these seals required lower stuffing box space for installation. These seals can be provided with single, double or tandem arrangement with external seal support systems & devices.

Applications :

Generally used in Petrochemicals, Petroleum refinery, Light Hydrocarbons & General Industrial fluids.

Materials

Seal Faces : Carbon vs Ceramic/Sic./TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 14 to 150mm
 Pressure : up to 30 Bars
 Temp. : -50 to 280°C
 Speed : up to 25 m/s



MULTI SPRING REVERSED BALANCED SEAL

TYPE SSI-25 : is externally mounted internally balanced multi spring seal. The unique feature of this type of seal is that, it eliminated the shaft step or sleeves for balancing. These seals are externally mounted & hence the metal parts including the springs do not come in contact with the circulating media & therefore can be use for corrosive

or abrasive media sealing. The compact design eliminates the requirement of extra radial & axial space for its installation.

Applications :

Generally used for handling corrosive chemicals, hydrocarbons, general & light chemicals.

Materials

Seal Faces : Sic/carbon vs Ceramic/Sic./TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 10 to 100mm
 Pressure : up to 10 Bars
 Temp. : -50 to 180°C
 Speed : up to 25 m/s



GENERAL PURPOSE RUBBER BELLOW SEAL

TYPE SSI-7 : are most commonly used rubber bellow seal, Due to its compact design it can be easily mounted.

TYPE SSI-7 has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentricity of the shaft & misalignment & wear due to thrust movement of the shaft. The

seal can be use regardless of direction of rotation since the driving torque is not transmitted through the coil spring, The required driving torque is enhanced through the unique rubber bellow which fits on the shaft. There are no bonded Joints and all the face materials are interchangeable without having to modify any dimensions.



Applications :

Generally used in sewage applications, waste water pumps & fuel injection pumps.

Materials

Seal Faces : Carbon Vs Ceramic / Sic./TC
 Secondary Seals : Nitrile / Neoprene / Viton
 Metal Components : SS-304

Operating Limits :

Shaft Dia. : 10 to 100mm
 Pressure : up to 10 Bars
 Temp. : -20 to 150°C
 Speed : up to 25 m/s

SINGLE COIL SPRING ELASTOMER BELLOW SEAL

TYPE SSI-10 has been designed for general sealing purpose which includes easy installation of the seal. SSI10 has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentricity of the shaft & misalignment & wear due to thrust movement of the shaft. The seal can be use regardless of direction of rotation since the driving torque is not transmitted through the coil spring. The required driving torque is enhanced through the unique rubber bellow which fits on the shaft through the interference fit between the collar, rubber bellow & the shaft.

Applications :

Generally used in hot & cold-water pumps, Oil pumps, refrigeration compressor & fuel injection pumps.

Materials

Seal Faces : Carbon Vs Ceramic/Sic./TC
 Secondary Seals : Nitrile / Neoprene/Viton
 Metal Components : SS-304

Operating Limits :

Shaft Dia. : 10 to 100mm
 Pressure : up to 10 Bars
 Temp. : -20 to 180°C
 Speed : up to 25 m/s



TEFLON BELLOW SEAL

TYPE SSI-11CB : are Teflon Bellow seals designed to handle highly corrosive liquids. These seals are outside mounted with simple installation procedure and hence cost effective for corrosive media sealing. Type SSI11CB designated as Fixed & replaceable bellow face respectively. For replaceable version there is flexibility for selection of face material as per the media to sealed, which can be easily removed & replaced & is highly desirable in severe applications. to sealed, which can be easily removed & replaced & is highly desirable in severe applications.



Applications :

Used in acids, alkalis & extremely corrosive services.

Materials

Seal Faces : GFT/Sic./Carbon vs Ceramic/Sic.
 Secondary Seals : PTFE
 Metal Components : SS-316/Hast-C

Operating Limits :

Shaft Dia. : 18 to 100mm
 Pressure : up to 5 Bars
 Temp. : -20 to 80°C
 Speed : up to 25 m/s

SINGLE COIL SPRING BALANCED SEAL

TYPE SSI-91 & 92 : are single coil balanced mechanical seals, reliable & rugged enough for variety of applications. Designated as **SSI-91 & 92** for 'O' Ring & PTFE wedge type Secondary Seals respectively. The balanced & unbalanced version can just be obtained by simply changing the carbon face assembled through circlip provided.



Non-clogging spring design enables these seals to be reliably used in situations involving abrasive, corrosive and viscous media. generally handled by high-pressure pumps.

Applications :

Used in high pressure pumps, refineries, fertilizers, nuclear plants & petroleum products.

Materials

Seal Faces : Carbon Vs Sic./TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 10 to 150mm
 Pressure : up to 30 Bars
 Temp. : -50 to 180°C
 Speed : up to 15 m/s

STATIONERY MOUNTED SINGLE COIL SPRING SEAL

TYPE SSI-75 : Mechanical seal **SSI-75** series are special purpose single coil spring balanced seals designed for use in media containing abrasive or solid particles.

Salient Features

Spring completely protected from the product.
 Easily handle media containing abrasive particles and solids.
 Axial compensation of movement 1mm.
 Perfect for standardization purpose.

Applications :

Specially used in paper industries, Petrochemicals, Petrochemicals, Petroleum refinery etc.

Materials

Seal Faces : Ceramic/Sic/Cabon Vs Ceramic/RB
 Sic. /TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 25 to 150mm
 Pressure : up to 15 Bars
 Temp. : -50 to 180°C
 Speed : up to 25 m/s



METAL BELLOW CARTRIDGE SEAL

TYPE SSI-16C : Metal Bellow Cartridge Seal is widely used in assembly pumps, clinker grinders, sludge pumps, pulp & syrup pumps, oil pipeline pumps and boiler feed water pumps. Further, our rigidly constructed product range is offered in various specifications to meet the requirements of clients.



Features :

Easy to replace individual seal-wear parts, Single acting, Independent of direction of rotation, Inside mounted, Sturdy drive mechanism design.

Applications :

Light abrasives industry, Petrochemicals industry & Chemical industry

Materials

Seal Faces: TC/TC, Sic/Sic, Sic/Ceramic
 Secondary Seals: Viton/PTFE/GFT/Karlez
 Metal Components: SS-316/Hast-C/Monel

Operating Limits :

Seal range: 1. 125" to 4. 00"
 Pressure rating: 2000 kpa
 Temp.: 400°C
 Velocity: 20m/sec

SINGLE COIL SPRING UNBALANCED SEAL

TYPE SSI-32C: are single coil unbalanced seals, these seals are simple in design & reliable & rugged enough for the most difficult applications. In SSI32 'V' packing used as Secondary seals respectively. Special notches enhance the required driving torque & hence the seal is independent of direction of rotation. Non-clogging spring design enables these seals to be reliably used in situations involving abrasive, corrosive & viscous fluids generally handled by high Temperature pumps.



Applications :

Generally used in refineries, fertilizers, nuclear plants & petroleum pipelines.

Materials

Seal Faces : Carbon/TC/Sic. Vs
 Ceramic/RB Sic./Tc
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 25 to 150mm
 Pressure : up to 10 Bars
 Temp. : -50 to 280°C
 Speed : up to 15 m/s

CONICAL SPRING UNBALANCED SEAL

TYPE SSI-21 is Single-coil conical spring unbalanced seal. The SSI21 series seal are extremely rugged & reliable & therefore used in wide range of sealing applications. These Seals have very few parts & hence can be easily assembled or dismantled. The seals arrangement does not warrant any modification even in case of conversion from gland packing. The compact design eliminates the requirement of extra radial & axial space for its installation.

Applications :

Generally used for handling corrosive chemicals, hydrocarbons, general & light chemicals

Materials

Seal Faces : Sic/carbon/TC Vs Ceramic/Sic./TC
 Secondary Seals : Viton/PTFE/GFT
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 10 to 100mm
 Pressure : up to 10 Bars
 Temp. : -50 to 180°C
 Speed : up to 25 m/s



WELDED ENDS METAL BELLOW SEAL

TYPE SSI-16 : is Inherently unbalanced metal bellow seal. This seals are independent of direction of rotation. The unique feature of this type of seal is that, there is no dynamic 'O' rings and therefore it will never hangup or damage the shaft and sleeve, it also has an ability to handle corrosive as well as abrasive & viscous media. These seals have self-cleaning & non-clogging construction. With selection of special bellow material it can be used in highly corrosive media.

Applications :

Generally used in for handling highly corrosive chemicals, high Temperature applications, petroleum refinery etc.



Materials

Seal Faces : Carbon/TC/ Vs Sic./Tc
 Secondary Seals : Viton/PTFE/GFT/Graphite
 Metal Components : SS-316

Bellow Material

- Hast-alloy-C
- Alloy 20
- AM305
- Inconel 625
- Alloy C 276

Operating Limits :

Shaft Dia. : 19 to 100mm
 Pressure : up to 15 Bars
 Temp. : -50 to 350°C
 Speed : up to 25 m/s

DRY RUNNING AGITATOR SEAL

TYPE SSI-105 : seals are outside mounted balanced seal, which require no shaft or sleeve step for balancing SSI-105 seal shows good performance in high vacuum conditions. Since no auxiliary equipments are needed for installation, it is very cost effective & economical. These seal can be easily installed & repaired on the field to minimized replacements costs & downtime.



Main features of the SSI-105 dry running seals are :

- Simple, rugged drive design that withstands shaft movement vibration & deflection
 - Seal design eliminates the need of auxiliary equipments for cooling & lubricants for mixer application
 - It eliminates the possibility of product contamination, since there is no use of barrier fluid
 - Can be used in high vacuum applications
 - These seals are very cost effective.
- Seals with bearing can be provided for vessels having greater misalignments with special arrangement.

Applications :

Used in top entry mixer vessels in pharmaceuticals & chemical industries.

Materials

Seal Faces : Carbon Vs Ceramic/Sic/TC
 Secondary Seals : Nitrile/Neoprene/Viton/PTFE
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 25 to 100mm
 Pressure : up to 1.40 MPa
 Temp. : -10 to 150°C
 Speed : up to 1 m/s

TOP ENTRY AGITATOR DOUBLE SEAL

TYPE SSI-108B : is a top entry agitator double mechanical seal designed for medium to high-pressure applications. These seal are successfully used for many years in all kinds of mixers, reactors, driers & mills in the Pharmaceuticals, Paints, Pulp & Plastic industries. These seals are factory assembled with cartridge unit & therefore can be easily installed without disturbing the delicate mating faces. For larger shaft deflection special version with integrated floating bearing is provided

Applications :

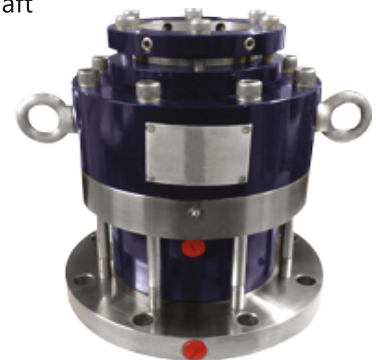
Used in Pulper, Plastics & Pharmaceuticals industries

Materials

Seal Faces : Carbon/Sic./TC Vs Ceramic/Sic/TC
 Secondary Seals : Nitrile/Neoprene/Viton/PTFE
 Metal Components : SS-316

Operating Limits :

Shaft Dia. : 40 to 200mm
 Pressure : up to 60 Bars
 Temp. : -20 to 200°C
 Speed : up to 25 m/s



THERMOSYPHON POT

Thermosyphon Pot offered find application in pressurizing of double and tandem mechanical seals and comes equipped with necessary connections as well as fittings to match up with the end application demands post installation stage. Here, our expertise lies in also supplying these with provision of refill unit that assists in maintaining buffer fluid level during involved operations without bringing any noticeable disturbance in the involved ongoing process.

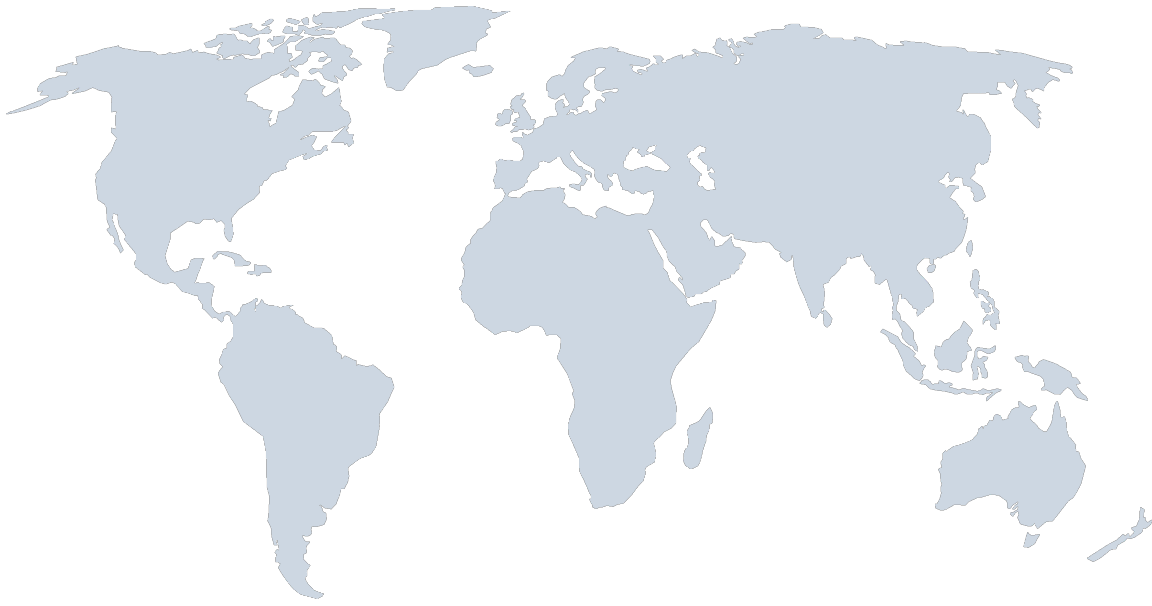


Applications :

- Thermosyphon seal pots can be supplied as per API 610 specifications
- Designs based on permissible working values (depending upon actual conditions of services)
- Guide lines with buffer fluid water of 60°C and cooling water of 20°C
- Comes with limit values as per ASME Section VIII calculation
- Provides for high pressure sealing support

Product Specifications:

Capacity: 7 & 9 litres
 Material: SS
 Empty Weight: 32 (kg/cm)



SAM SEALS iNDIA
premium sealing technology

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