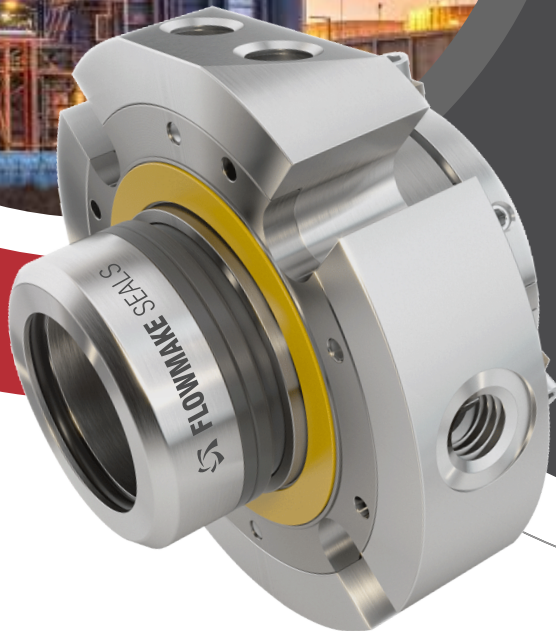




FLOWMAKE SEALS

premium sealing technology



- ↻ Chemical Industries
- ↻ Pulp & Paper Industries
- ↻ Refinery Industries
- ↻ Pharmaceutical Industries
- ↻ Food & Beverage Industries

Organizational success depends on giving customers what they want....





Innovate



Create



Enhance



Sustain



FLOWMAKE SEALS
premium sealing technology

FLOWMAKE SEALS is a registered company for customer's total satisfaction in the field of sealing systems. We have created a place for ourselves in this industry by offering quality range products.

We are always been motivated to give our best .One thing that has never changed and that is our commitment, quality, performance deliver ability and a lot value to our customers.

Today **FLOWMAKE SEALS** is with access to a breadth and depth of advanced skills and superb production facilities

We truly believe in this quote.We believe to work with passion and love and give our best efforts to our work. We believe in trust which doesn't inspires other but it inspires ourselves.

We also believe in being brave,taking risks.Nothing can substitute experience.And only source of knowledge is experience.

SEALS MADE WITH PASSION FOR CUSTOMERS WITH PASSION



SINGLE SPRING SEALS SERIES FMS101

Series FMS101 is unbalanced single acting helical coil spring seals independent of direction of rotation. The drive ring's notch design eliminates over stressing of the elastomers bellows. Slippages are eliminated, protecting the shaft and sleeve from fretting. Seal can be repaired in field with minimum spares, minimizing the downtime cost

Performance Range

- Shaft Diameter : 10mm to 120mm
- Pressure : 0 to 30 bar
- Temperature : -50°C to +160°C
- Velocity : 0 to 15 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic, TC.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 304, SS 316, Special Alloy

Application

- Refineries
- Fertilizers
- High Pressure Pumps
- Petroleum Pipeline



SINGLE SPRING SEALS SERIES FMS102

Series FMS102 is unbalanced single acting helical coil spring seals independent of direction of rotation. The drive ring's notch design eliminates over stressing of the elastomers bellows. Slippages are eliminated, protecting the shaft and sleeve from fretting. Seal can be repaired in field with minimum spares, minimizing the downtime cost.

Performance Range

- Shaft Diameter : 12mm to 120mm
- Pressure : 0 to 10 bar
- Temperature : -50°C to +230°C
- Velocity : 0 to 15 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic, TC.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 304, SS 316, Special Alloy

Application

- Refineries
- Fertilizers
- Nuclear Plant
- Petroleum Pipeline





MULTI SPRING SEALS SERIES FMS201

Series FMS201 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

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.

Performance Range

- Shaft Diameter : 12mm to 120mm
- Pressure : 0 to 25 bar
- Temperature : -50°C to +260°C
- Velocity : 0 to 30 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic, TC.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 304, SS 316, Special Alloy

Application

- Chemical
- Hydrocarbon
- Petrochemical
- Petroleum Refineries



MULTI SPRING SEALS SERIES FMS202

Series FMS202 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

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.

Performance Range

- Shaft Diameter : 12mm to 120mm
- Pressure : 0 to 25 bar
- Temperature : -50°C to +260°C
- Velocity : 0 to 30 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic, TC.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 304, SS 316, Special Alloy

Application

- Chemical
- Hydrocarbon
- Petrochemical
- Petroleum Refineries





MULTI SPRING SEALS SERIES FM203

Series FMS203 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

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.

Performance Range

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

Materials

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



MULTI SPRING SEALS SERIES FM204

Series FMS204 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

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.

Performance Range

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

Materials

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





MULTI SPRING SEALS SERIES FMS205

Series FMS205 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

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.

Performance Range

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

Materials

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



MULTI SPRING REVERSE BALANCE SEALS SERIES FMS301

Series FMS301 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Reverse Balance Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Features

Are general-purpose multi spring reverse balance seals. Designated for the balanced 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.

Performance Range

- Shaft Diameter : 12mm to 100mm
- Pressure : 0 to 25 bar
- Temperature : -50°C to +180°C
- Velocity : 0 to 10 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic, TC.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 304, SS 316, Special Alloy

Application

- Corrosive Chemical
- Hydrocarbon
- General & Light Chemical





REVERSE BALANCED SEALS

SERIES FMS302

Series FMS302 is Multi Spring Reversed Balanced Seal that can be externally mounted and is internally balanced with multi-coil spring seal. These are made from high quality of raw material which ensure durability at its user end.

Features

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.

Performance Range

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

Materials

- Seal Faces : Sic/carbon vs Ceramic/Sic./TC
- Secondary Seals : Viton/PTFE/GFT
- Metal Components : 55-316



DURA TYPE SEALS

SERIES FMS401

Series FMS401 pumps seals are very easy to replace and gives maximum reliability. We are providing an entire array of Multi Spring Unbalanced Seal and keep innovating them based on current market trends and expectations. They are durable and provide high operation reliability.

Are general-purpose multi spring unbalanced seals. Designated as LS23B 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.

Performance Range

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

Materials

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





TEFFLON BELLOW SEALS SERIES FMS501

Series FMS501 Supplier & Distributor of Teflon Bellow Seal. Our product range also comprises of Dry Running Agitator Seal, Multi Spring Unbalanced Seal and Spring Unbalanced Seal.

Performance Range

- Shaft Diameter : 12mm to 120mm
- Pressure : 0 to 25 bar
- Temperature : -20°C to +80°C
- Velocity : 0 to 05 m/sec

Material Of Construction

- Sealing Faces : Carbon, Ceramic, Sic.
- Secondary Seal : Viton, Aflas, PTFE, GFT,
- Metal Part : SS 316, Hast - C

Application

- Acid
- Alkalis
- Extremely Corrosive Service



TEFFLON BELLOW SEALS SERIES FMS502

Series FMS502 Supplier & Distributor of Teflon Bellow Seal. Our product range also comprises of Dry Running Agitator Seal, Multi Spring Unbalanced Seal and Spring Unbalanced Seal.

Applications

- Used in acids, alkalis & extremely corrosive services.

Performance Range

- Shaft Diameter : 18-100mm
- Pressure : 5 bar (max)
- Temperature : -20...180OC
- Velocity : 25 m/sec

Materials

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





TEFLON BELLOW SEALS SERIES FMS503

Series FMS503 Supplier & Distributor of Teflon Bellow Seal. Our product range also comprises of Dry Running Agitator Seal, Multi Spring Unbalanced Seal and Spring Unbalanced Seal.

Applications

- Used in acids, alkalis & extremely corrosive services.

Performance Range

- Shaft Diameter : 18-100mm
- Pressure : 5 bar (max)
- Temperature : -20...180OC
- Velocity : 25 m/sec

Materials

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



CONICAL SPRING SEALS SERIES FMS601

Series FMS601 is single conical spring, unbalanced seal with O-ring provided for secondary sealing. Since the Torque transmission is done by the single coil springs the seals are dependent on the directions of rotation, which is seen from the drive end of the shaft. Right handed spring and left handed springs are provided for clockwise and anticlockwise rotating shafts respectively. These seals can carry a variety of seals faces, serving applications in submersible, sewage, chemical transfer, water pumps etc.

Applications

- Water pumps

Performance Range

- Shaft Diameter : 10-100mm
- Pressure : 10 bar (max)
- Temperature : -20...180OC
- Velocity : 10 m/sec

Materials

- Seal Faces : Carbon, Ceramic, SiC, Tung. Carbide
- Metal Parts : SS304, SS316
- O-rings : Elastomers, TTV





GRUNDFOS PUMP SEALS SERIES FMS701

Series FMS701 Grundfos pumps seals are very easy to replace and gives maximum reliability. It is durable and made from hard wearing material which prevent the downtime and prolong the lifetime of the seal. All axial movement has been eliminated, preventing wear of the shaft and the rubber parts. There is a special tool required to replace the seal or dismantling the pump.

Features

It gives long and reliable seal life. Easy to install without any tool

Performance Range

- Pressure : Upto 20 kg/cm²C
- Temperature : -200...180°C
- Speed : 3000 RPM

Materials

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



RUBBER BELLOW SEALS SERIES FMS801

Our product range also comprises of Dry Running Agitator Seal, Multi Spring Unbalanced Seal and Spring Unbalanced Seal.

Features

These are most commonly used rubber bellow seal. Due to its compact design it can be easily mounted. SERIES FMS801 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 used 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.

Performance Range

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

Materials

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





RUBBER BELLOW SEALS SERIES FMS802

Our product range also comprises of Dry Running Agitator Seal, Multi Spring Unbalanced Seal and Spring Unbalanced Seal.

Features

These are most commonly used rubber bellow seal, Due to its compact design it can be easily mounted. TYPE FMS802 has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentric 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.



Performance Range

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

Materials

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



RUBBER BELLOW SEALS SERIES FMS803

Features

These are most commonly used rubber bellow seal, Due to its compact design it can be easily mounted. TYPE FMS803 has a unique rubber bellow secondary seal, which provides a high degree of axial flexibility to compensate for lack of concentric 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.

Performance Range

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

Materials

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





LIP SEALS SERIES FMS901

Series FMS901 Rotary applications involve a very specific set of requirements that must be addressed in order to ensure a proper seal. Foremost of these concerns is the ability of the seal to stay stationary in the gland, resisting the rotational forces created from the seal /shaft interface. For this reason, rotary lip seals always employ some sort of anti-rotation feature. This can be in the form of a metal case that gets press-fit at installation, or as an O-Ring that applies gripping friction to the bore. Another consideration in rotary service involves the issue of heat build-up due to friction. In order to make a positive seal, the seal lip must contact the shaft in some fashion. This contact creates friction, which can generate enough heat at high pressures and speeds, that both the seal and the hardware become compromised. Eclipse PTFE based ET materials are utilized for rotary lip seals providing an optimized solution that offers low-friction and long seal life.

Performance Range

- Shaft Diameter : 10...100mm
- Pressure : 18 bar (max)
- Temperature : -20...140OC
- Velocity : 15 m/sec

Application

- Water pumps
- Mixers and Agitators
- Sewage pump
- Pulp and papers



ROTARY JOINTS SERIES FMS1001

The Series FMS1001 rotary joint can be used in a wide variety of settings, from low speed to high speed and from low pressure to high pressure. Using a special seal, this rotary joint is manufactured to be suitable for use in a wide range of industries



Performance Range

- RPM : Up to 21000 RPM
- Pressure : Up to 275 bars
- Flow : Up to 200 lpm
- Temperature : Up to 350 °C
- Size : 3/8" to 5" in All Connection (As Per Industries Requirements)

Applications

- Hot and cold water applications
- Thermal oil and Air applications in special execution
- High running speed (for example in the printing industry)
- Temporary "Dry Run" applications



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CARTRIDGE SEAL SERIES FMS2001

The Serice FMS2001 type is a simple-to-install, unitized cartridge mounted, balanced, multiple spring mechanical seal which requires no measuring for installation. The seal faces are protected from damage and contamination from dirt and foreign particles.

Simply slide the seal onto the shaft, bolt down the gland, tighten the set screws, and remove the location plate. The seal faces are positioned in the gland for maximum protection. The flush position maximizes face cooling.

Performance Range

- Shaft Diameter : 20...100mm
- Pressure : 5 to 25 Bar
- Temperature : -20°C to + 200°C

Application

- Sludge & Syrup pump
- Petroleum Refinery
- Chemical
- Refineries

Materials

- Seal body : AISI 304, AISI 316, Hast'C', Alloy-20
Face Material: Carbon, Silicon Carbide,
Tungsten Carbide, Ceramic (99.5%)
Elastomers: Viton, EPDM, Nitrile, Neuprene,
Aflas, Kalrez, PTFE, GFT



DRY SEAL SERIES FMS3001

Type Series FMS3001 design are basically used as dry running seals and can be used for corrosive services. The Advantage of these Seals are that it does not require any lubricant or Quenching for cooling.

These seals are use for mixers, agitators and reactors for clean ability. These seals were developed for sanitary applications where product contamination from barrier fluids is unacceptable. Hence this Seals are used.

Performance Range

- Shaft Diameter : 20...150mm
- Pressure : Upto 10bar
- Temperature : Upto 120°C

Applications

- Corrosive Applications
- Pharma Reactors
- Petroleum Refinery
- General Chemicals

Material

- Seal body : AISI 304, AISI 316, Hast'C', Alloy-20
Face Material: Carbon, Silicon Carbide,
Tungsten Carbide,
Ceramic (99.5%),
Elastomers: Viton, Aflas, FEP, Kalrez,,
TTV, PTFE, GFT

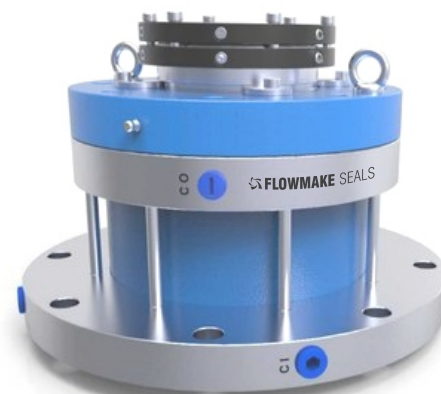




AGITATOR SEAL SERIES FMS4001

The Series FMS4001 Agitator seals are design for handling severe services including products emitting highly toxic vapours during Reaction process. Packed in one compact, unitized cartridge assembly design which is easy for installation..These Seals are independent in the Direction of Rotation used in various type of Equipment like Agitator, Reactors, Mixers & Glass line vessel.

These Seals require Cooling & quenching for better performance.The Jacketed Cooling also helps to maintain the cool environment around the seal.This seal are also supported by the Thermosyfan system to maintain the temperature & pressure inside the Seal Housing.



Performance Range

- Shaft Dia. : 30mm to 150mm
- Pressure : Full Vacuum to 25 Bar
- Temp. : 60°C to 200°C

Applications

- Petrochemicals
- Light hydrocarbon
- General chemical etc.

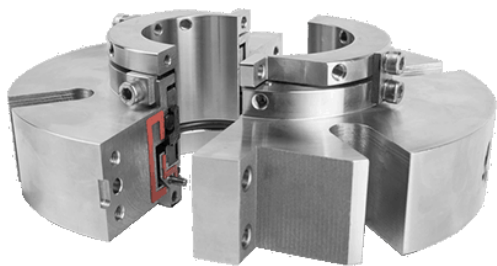
Materials

- Seal body : AISI 304, AISI 316, Hast'C', Alloy-20
Face Material: Carbon/ Silicon Carbide /
Ceramic (99.5%),Tungsten Carbide
Elastomers: Viton, Aflas, FEP, Kalrez,, TTV, PTFE, GFT



SPLIT SEALS SERIES FMS5001

Series FMS5001 is split Mechanical Seal developed with minimum components used on large diameter shaft for various type equipments such as Mixtures, Agitators, and Reactors & Blenders. Users can easily install without disassembling the equipment. The split seal faces is balanced covered with split O-rings as a sealing member, slots provided in the housing facilitates so fitting the seal on various type equipments with different PCD's, this seal is comfortable to use in wide range of application as below:



Performance Range

- Shaft Diameter : 50 mm to 125 mm
- Pressure : Up to 20 bar (kg/cm²)
- Temperature : -20°C to 150°C

Application

- Utility pumps
- Transfer pumps
- Agitator and vessels

Materials

- Seal Ring Faces : Carbon, Silicon, TC
Mating Ring Faces : Silicon, TC
Secondary Seals : Viton/PTFE/GFT
Metal Parts : SS 316, Alloy 20, 904L



THERMOSIPHON SYSTEM SERIES FMS6001

The Thermosiphon 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.

Operating Range

- TS 20 Pressure Limit : 20 bar
- TS 40 Pressure Limit : 40 bar
- Temperature : Up to 200°C

Materials Of Construction

- SS 316, SS 304 and MS



NOTES



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