



**OMEGA
SEALS**

World Class Mechanical Shaft Seals

Engineered To Perfection



**SPECIAL SEALS FOR SPECIAL NEEDS
TAILOR MADE TO REQUIREMENTS**



OMEGA SEALS

Engineered Mechanical seals

www.omegaseals.com



OMEGA SEALS was founded by a professional Engineer in the year 1985. The company began operations with manufacture of Mechanical Seals, then considered, import-substitute in India. Omega Seals soon became a reliable source for complete range of Mechanical Seals and Systems.

THREE DECADES OF EXISTENCE

With over three decades of existence, Omega Seals offers among the widest range of Mechanical Seals and allied Engineered Solutions to diverse industries including Chemicals, Pharmaceuticals, Refineries & Petrochemicals, Oil & Gas, Minerals & Ore- Processing, Steel & Metals, Automotive, General Engineering, Marine, Nuclear Research and others.

INFRASTRUCTURE

Omega Seals has a well-equipped Design facility with latest Computer hard-wares and Design soft wares, handled by expert Design team. The well-equipped manufacturing facility is manned by skilled Engineers and Technicians, capable of producing the finest quality Mechanical Seals.

SERVICE

Mechanical Seal Industry is Service Oriented Industry. Omega Seals has given special emphasis on this. A team of qualified Engineers and technicians are engaged in assisting

customers right from the beginning by understanding their needs to supply, installation and commissioning of Mechanical seals for Pumps and Rotary Equipments. This is followed by prompt after sales assistance to the best satisfaction of the customers.

TECHNOLOGY

Omega Seals Possesses expertise in the field of Fluid- Sealing. Over the decades of existence, Omega Seals has designed and developed various types of specially Engineered Mechanical Seals and Sealing Solutions. Be it, small and miniature shafts in Lab equipments or Large Dia. Pumps & Reactors Shafts, Rotary Retort Furnaces in Nuclear Installations or Large Dia. Marine Propeller Shafts of Sea- going or Sub-Sea Vessels, Omega Seals has provided sealing solution to all.

ISO 9000 CERTIFIED

Omega Seals, from the beginning, focused on providing the finest quality Mechanical Seals and systems. To achieve and maintain this, Omega Seals has established a well-documented Quality System in



accordance with the requirements of ISO 9000 Quality Standards. The Quality System is continuously reviewed and modified to incorporate the latest trends in the Industry and achieve highest level of Customer-satisfaction. By following the above policy, Omega Seals is ISO 9001:2015 Quality Certified.





WIDE PRODUCT RANGE

Omega Seals Manufactures a wide range of mechanical Seals suitable for diverse range of duties.

The product-range includes simple rubber bellow type and Pusher type Seals for General duty Pumps as well as Metal bellow type, Single and double cartridge type, Pressure balanced Seals for heavy duty Boiler-feed pumps as well as Top-entry, Bottom-entry, Side-entry, and Inclined-entry agitator shafts of rotary equipments including Chemical Reactors, Glass Lined Reactors, Pharma and food processing machines like RCVD, RVPD, DCVD, ANFD and others.

Special seals require special materials for specific Seal components – Seal Faces, Secondary Seals and Metal parts. Omega Seals has kept pace with the latest

developments in Materials technology and utilizes the right variety of Carbons, Ceramics, Carbides, Polymers, Metals and Alloys in its products.

MATERIALS OF CONSTRUCTION

Omega Seals utilizes a wide range of materials in its Mechanical seals so that they withstand the severest of operating conditions, while maintaining cost-effectiveness of its products. Simple seals utilize simple and cheaper materials, compatible with the operating parameters. For severe operating parameters involving organic solvents, corrosive chemicals, crystallizing, polymerizing and slurry-laden media use of appropriate Carbide Faces, FKM / FFKM Elastomers, and Exotic Metal and alloy Components is recommended.

The Materials used include:

Seal Faces	Secondary Seals	Metal Parts
Carbon - Resin impregnated	Viton®	CrNi Steel – SS304
Carbon - Antimony impregnated	Nitrile rubber	CrNiMo Steel – SS316
High Alumina Ceramic	EPDM	CrNi Cast Steel
Tungsten Carbide Co-bonded	Kalrez®	CrNiMo Cast Steel
Tungsten Carbide Ni-bonded	Silicone rubber	Hastelloy C
SiC - Reaction Bonded	PTFE	Hastelloy B
SiC - Sintered	Glass Filled PTFE	Alloy - 20
Stellited Stain-less Steel	Viton® – Double PTFE Wrapped	AM 350
Glass-filled PTFE	EPDM – Double PTFE Wrapped	Titanium
Spl. Cr Cast Steel	Foil-Graphite	Phosphor Bronze

Note: Viton® And Kalrez® are registered trademarks of Dupont USA.



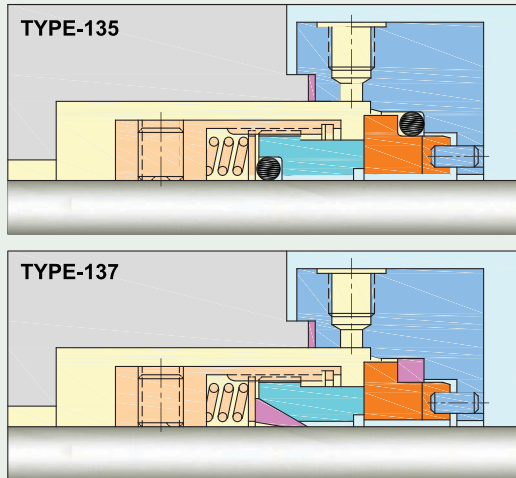
OMEGA SEALS

Engineered Mechanical seals

www.omegaseals.com

TYPE 135 & 137

Multi-spring, Unbalanced



Chemicals



Pharma



Oil & Gas



Marine

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy

Sec. Seals : **TYPE 135:** Viton, EPDM, FFKM
TYPE 137: PTFE, GFT

Metal Parts : SS 304, SS 316, Alloy-20, Hastelloy-C, Monel

Operating Parameters

Pressure : 10 Bar

Temperature : -50 to 180° C
(270° C with FFKM seals)

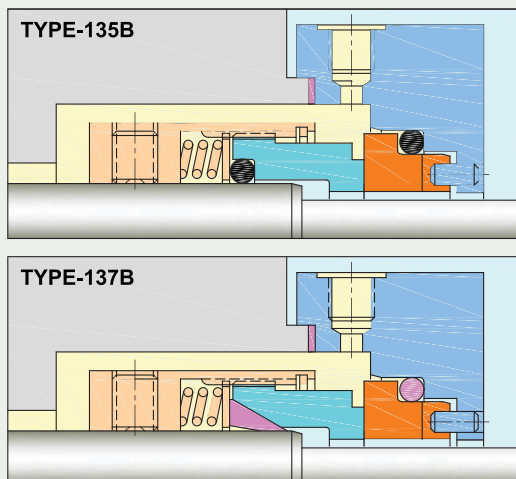
Speed : 20 M/Sec

Size : 0.375" to 4.500" / 10 to 115 mm
(higher sizes available on request)

Applications : Chemicals, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food, Fertilizers, Marine & Others

TYPE 135B & 137B

Multi-spring, Balanced



Chemicals



Pharma



Oil & Gas



Marine

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC

Sec. Seals : **TYPE 135B:** Viton, EPDM, FFKM
TYPE 137B: PTFE, GFT

Metal Parts : SS 304, SS 316, Alloy-20, Hastelloy-C, Monel

Operating Parameters

Pressure : 35 Bar

Temperature : -50 to 180° C
(270° C with FFKM seals)

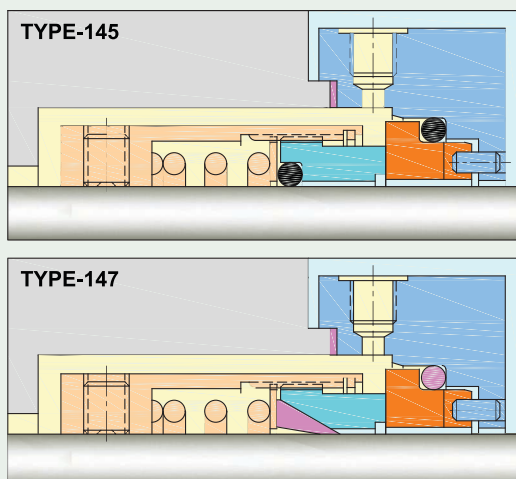
Speed : 20 M/Sec

Size : 0.375" to 4.500" / 10 to 115 mm
(higher sizes available on request)

Applications : Chemicals, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food, Fertilizers, Marine & Others

TYPE 145 & 147

Single-spring, Unbalanced



Chemicals



Food



Oil & Gas



Paper

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy

Sec. Seals : **TYPE 145:** Viton, EPDM, FFKM
TYPE 147: PTFE, GFT

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : 10 Bar

Temperature : -50 to 180° C
(270° C with FFKM seals)

Speed : 20 M/Sec

Size : 0.625" to 4.000" / 16 to 100 mm
(higher sizes available on request)

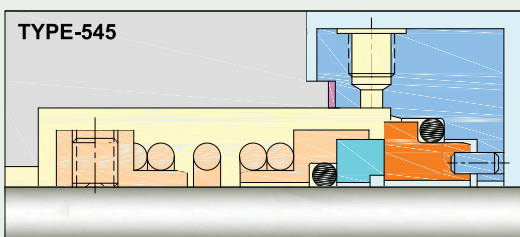
Applications : Chemicals, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food, Fertilizers, Marine & Others

TYPE 545 & 548

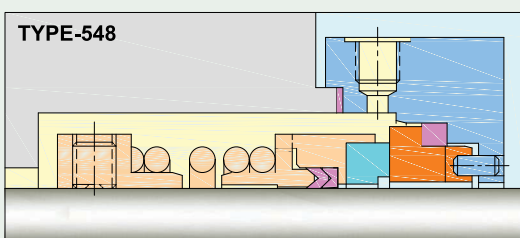
Single-spring, Unbalanced



TYPE-545



TYPE-548



Organic



Power



Oil & Gas



Marine

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy

Sec. Seals : **TYPE 545:** Viton, EPDM, FFKM
TYPE 547: PTFE, GFT

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : 10 Bar

Temperature : -20 to 180° C
(270° C with FFKM seals)

Speed : 20 M/Sec

Size : 0.750" to 3.500" / 20 to 90 mm
(higher sizes available on request)

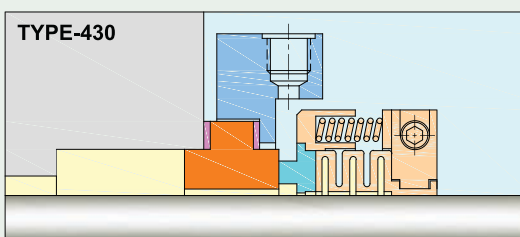
Applications : Chemical & Oil slurry
Crystallizing Chemicals,
Solvents, Marine, Fertilizers,
others.

TYPE 430 & 431

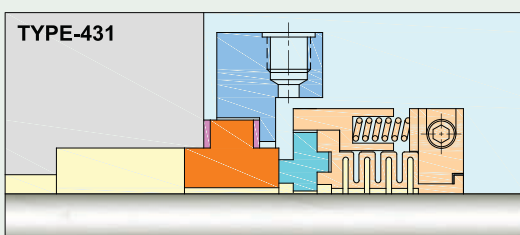
PTFE Bellow Seals



TYPE-430



TYPE-431



Chemicals



Acid



Oil & Gas



Steel

Materials of Construction

Seal faces : **TYPE 430:** GFT / Ceramic
TYPE 431: GFT/Ceramic, SiC/
Ceramic, SiC / SiC

Sec. Seals : PTFE Bellow

Metal Parts : SS 316, Alloy-20, Hastelloy-C

Operating Parameters

Pressure : 6 Bar

Temperature : -40 to 120° C

Speed : 20 M/Sec

Size : 0.500" to 4.500" / 12 to 115 mm
(higher sizes available on request)

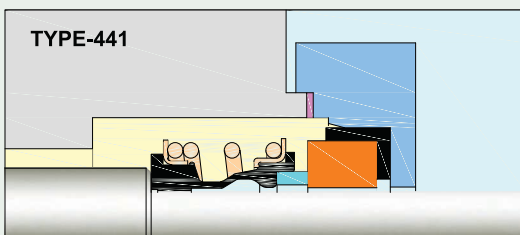
Applications : Acids, Alkalis, Highly Corrosive
Chemicals

TYPE 441 & 443

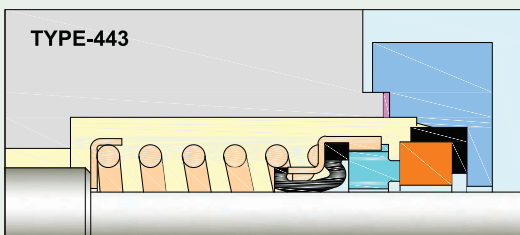
Elastomer Bellow Seals



TYPE-441



TYPE-443



Power



Automobile



Marine



Steel

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy

Sec. Seals : Nitrile, Viton

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : 10 Bar

Temperature : -20 to 180° C

Speed : 20 M/Sec

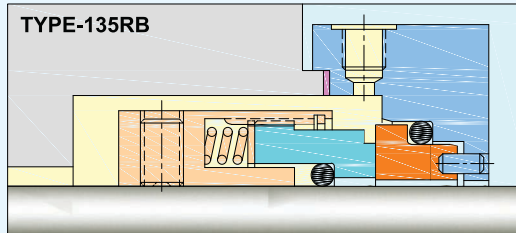
Size : 0.500" to 4.000" / 12 to 100 mm

Applications : Water Pumps, Submersible
Pumps De-watering Pumps,
Marine Pumps



TYPE 135RB

Multi-spring, Reverse Balanced



Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy
Sec. Seals : Viton, EPDM, TTV, FFKM



Chemicals



Pharma



Food



Textile

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : High Vacuum to 10 Bar

Temperature : -50 to 180°C
(270° C with FFKM seals)

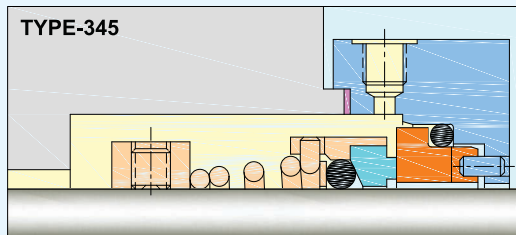
Speed : 20 M/Sec

Size : 0.625" to 4.500" / 16 to 110 mm
(higher sizes available on request)

Applications : Internal & External Mounting
Corrosive Chemicals,
Hydrocarbons, Vacuum duty.

TYPE 345

Conical-spring, Unbalanced



Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy
Sec. Seals : Viton, EPDM, TTV, FFKM
Metal Parts : SS 304, SS 316



Paper



Tyre



Steel



Marine

Operating Parameters

Pressure : 10 Bar

Temperature : -20 to 180°C
(270° C with FFKM seals)

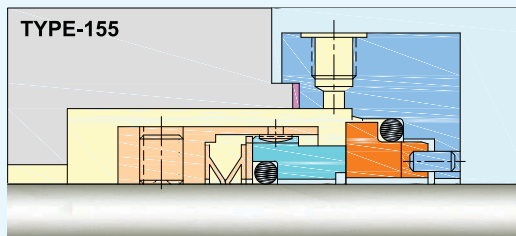
Speed : 20 M/Sec

Size : 0.500" to 4.000" / 12 to 100 mm

Applications : Chemicals, Hydrocarbons
Water Pumps, Sewage,
Submersible, De-watering &
Sea-water Pumps

TYPE 155

Wave-spring, Unbalanced



Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy
Sec. Seals : Viton, EPDM, TTV, PTFE
Metal Parts : SS 304, SS 316



Chemicals



Pharma



Automobile



Marine

Operating Parameters

Pressure : 10 Bar

Temperature : -40 to 180°C
(270° C with FFKM seals)

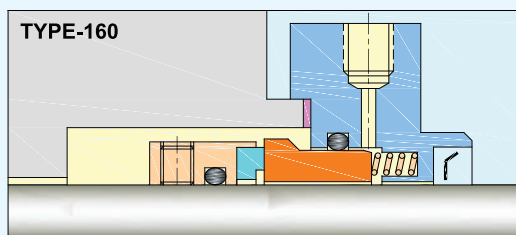
Speed : 20 M/Sec

Size : 0.750" to 4.000" / 20 to 100 mm
(higher sizes available on request)

Applications : Polymerizing, Crystallizing
Chemical slurries Petrochemicals,
Oil & Gas, Pharmaceuticals,
Food & Fertilizers

TYPE 160

Floating-seat, Balanced



Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC, Cr-Alloy
Sec. Seals : Viton, EPDM, TTV, FFKM
Metal Parts : SS 304, SS 316



Chemicals



Pharma



Oil & Gas



Paper

Operating Parameters

Pressure : 18 Bar

Temperature : -20 to 180°C
(270° C with FFKM seals)

Speed : 20 M/Sec

Size : 0.750" to 4.5000" / 20 to 115mm
(higher sizes available on request)

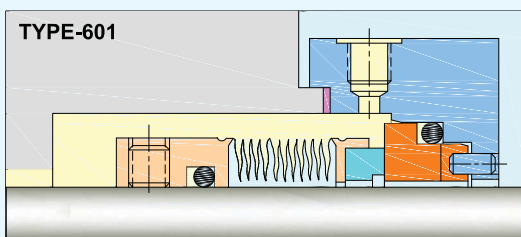
Applications : Polymerizing, Crystallizing
chemical slurries Petrochemicals,
Oil & Gas, Pharmaceuticals,
Food & Fertilizers.

TYPE 601

Metal Bellow Seal



TYPE-601



Materials of Construction

Seal faces : Carbon, SiC, TC

Sec. Seals : Viton, FFKM

Metal Parts : SS 304, SS 316, AM-350, Hastelloy-C



Temperature



Pharma



Food



Oil & Gas

Operating Parameters

Pressure : 18 Bar

Temperature : -20 to 200°C
(270° C with FFKM seals)

Speed : 20 M/Sec

Size : 0.750" to 4.500" / 20 to 115 mm
(higher sizes available on request)

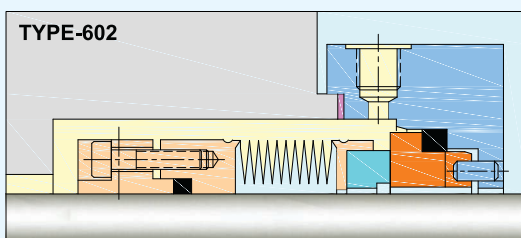
Applications : Hot Oil, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food & Fertilizers

TYPE 602

Metal Bellow Seal, High Temp Duty



TYPE-602



Materials of Construction

Seal faces : Carbon, SiC, TC

Sec. Seals : Graphoil

Metal Parts : SS 316, SS 304, AM-350, Hastelloy-C



Temperature



Pharma



Food



Oil & Gas

Operating Parameters

Pressure : 18 Bar

Temperature : -20 to 350°C

Speed : 20 M/Sec

Size : 0.750" to 4.000" / 20 to 115 mm
(higher sizes available on request)

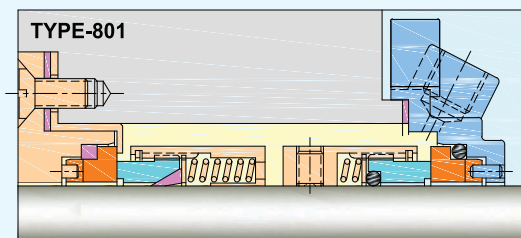
Applications : Hot Oil, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food & Fertilizers

TYPE 801

Double Back to Back Seal



TYPE-801



Materials of Construction

Seal faces : Carbon, SiC, Ceramic

Sec. Seals : Viton, EPDM, PTFE, FFKM

Metal Parts : SS 316, SS 304, Hastelloy-C



Chemicals



Pharma



Food



Oil & Gas

Operating Parameters

Pressure : 10 Bar

Temperature : -30 to 180°C
(270° C with FFKM seals)

Speed : 20 M/Sec

Size : 0.750" to 4.500" / 20 to 115 mm
(higher sizes available on request)

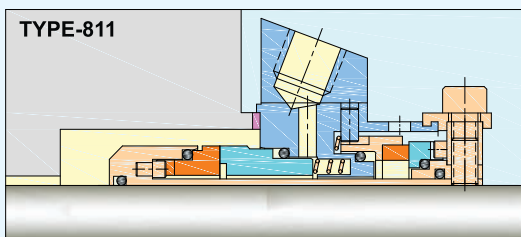
Applications : Chemicals, Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food & Fertilizers.

TYPE 811

Double Cartridge Seal



TYPE-811



Materials of Construction

Seal faces : Carbon, SiC, Ceramic

Sec. Seals : Viton, EPDM, FFKM

Metal Parts : SS 304, SS 316, Hastelloy-C



Chemicals



Pharma



Food



Oil & Gas

Operating Parameters

Pressure : 10 Bar

Temperature : -30 to 180°C
(270° C with FFKM seals)

Speed : 20 M/Sec

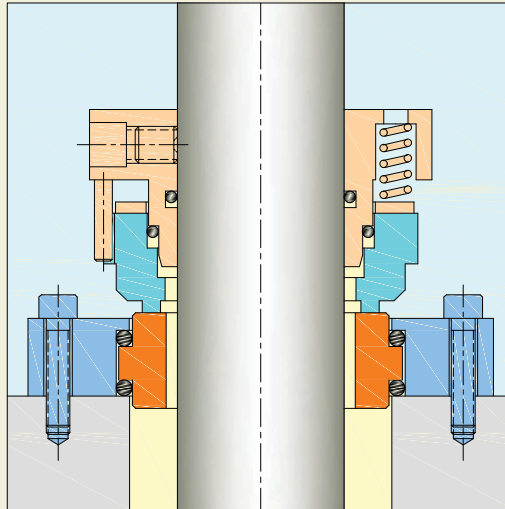
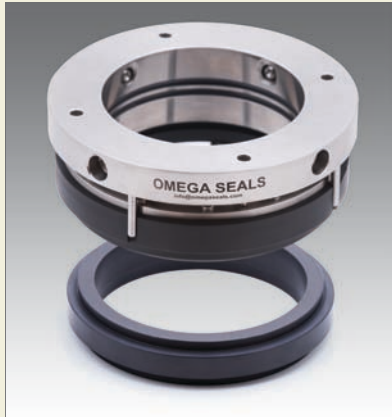
Size : 0.750" to 4.500" / 20 to 115 mm
(higher sizes available on request)

Applications : Chemicals, Organic Solvents Refineries & Petrochemicals, Oil & Gas, Pharmaceuticals, Food & Fertilizers,



TYPE 902

Single Dry Mechanical Seal For Top-entry Agitator
Available with Heat-trap for Higher temperature duties.



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC,

Sec. Seals : Viton, TTV, FFKM

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 120°C

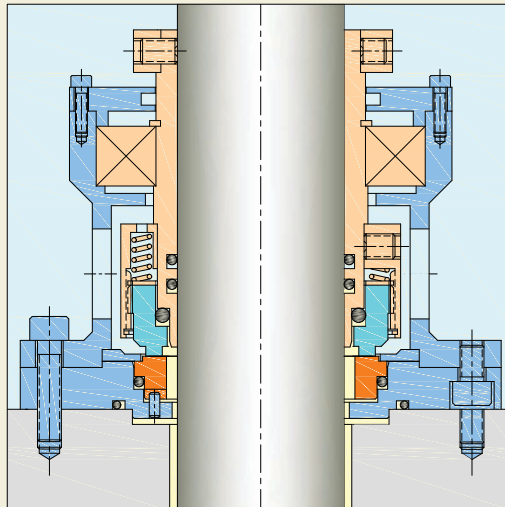
Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Top Entry Reactors & Mixers of
Chemicals, Pharmaceuticals
Food & Fertilizers plants.

TYPE 905

Single Cartridge Dry Mechanical Seal For Top-entry Agitator
Bearing provided to absorb higher Shaft run-out.
Available with Heat-trap for High temperature duties.



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC

Sec. Seals : Viton, TTV, FFKM

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 120°C

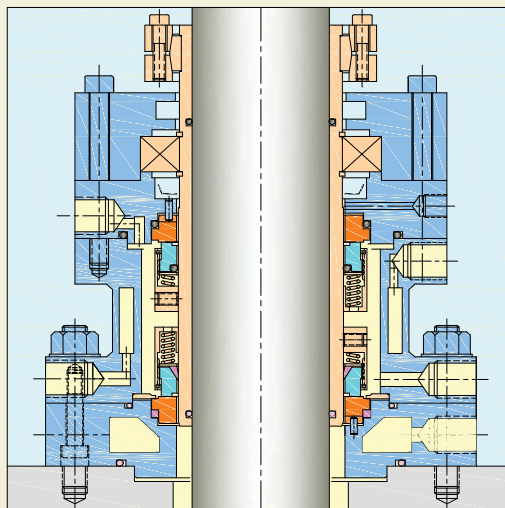
Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Top Entry & Side Entry Reactors &
Mixers of Chemicals,
Pharmaceuticals Food &
Fertilizers plants.

TYPE 921

Double Cartridge Mechanical Seal For Top-entry Agitator. Rigid Bearing to absorb Shaft run-out.
Provided with Jacket & Heat-trap to withstand High-temperature duties.
Thermosiphon for Barrier liquid circulation.



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC,

Sec. Seals : Viton, PTFE, FFKM

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 120°C Up-to 350°C
with Jacket & Heat-trap

Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Heavy Duty High temperature,
High Pressure, Top Entry Reactors
& Mixers of Chemicals,
Petrochemicals, Pharmaceuticals,
Food & Fertilizers plants.



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Engineered Mechanical seals

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TYPE 931

Single Cartridge Dry Mechanical Seal For Glass lined Reactor

Rigid Bearing to absorb Shaft run-out. Special Bottom-plate design to Mount on Glass Lined Reactors.



Chemicals



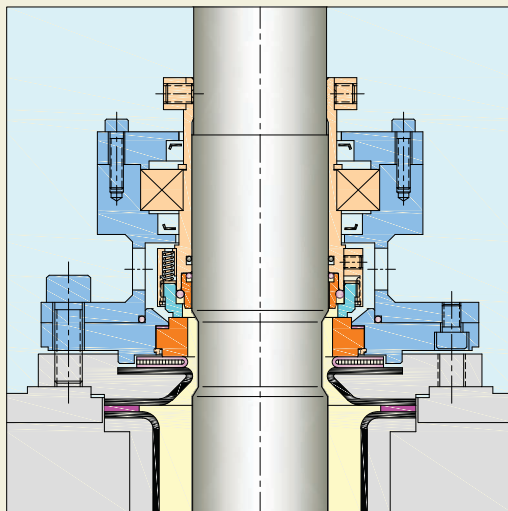
Pharma



Food



Oil & Gas



Materials of Construction

Seal faces : Carbon, SiC, Ceramic,

Sec. Seals : PTFE, Viton, TTV, FFKM

Metal Parts : SS 304, SS 316, Hastelloy-C

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 120°C

Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Top Entry Glass Lined Reactors of
Chemicals, Petrochemicals,
Pharmaceuticals, Food &
Fertilizers plants.

TYPE 935

Double Cartridge Mechanical Seal For Glass lined Reactor. Utilizes Equipment-bearing to maintain Alignment. Special Bottom-plate design to mount on Glass Lined Reactors.

Thermosiphon for Barrier liquid circulation.



Chemicals



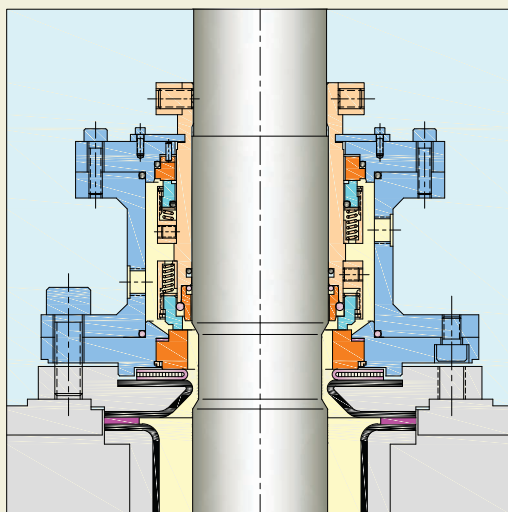
Pharma



Food



Oil & Gas



Materials of Construction

Seal faces : Carbon, SiC, Ceramic,

Sec. Seals : PTFE, Viton, FFKM

Metal Parts : SS 304, SS 316, Hastelloy-C

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 180°C

Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Top Entry Glass Lined Reactors of
Chemicals, Petrochemicals,
Pharmaceuticals, Food &
Fertilizers plants.

TYPE 941

Double Cartridge Mechanical Seal For Glass lined Reactor.

Rigid Bearing to absorb Shaft run-out.

Special Bottom-plate design to mount on Glass Lined Reactors. Thermosiphon for Barrier liquid circulation.



Chemicals



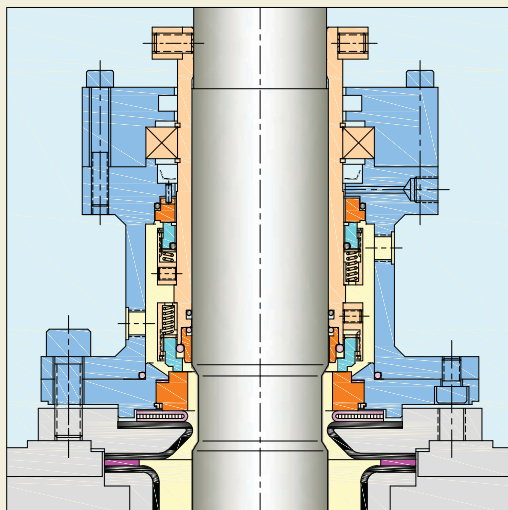
Pharma



Food



Oil & Gas



Materials of Construction

Seal faces : Carbon, SiC, Ceramic,

Sec. Seals : PTFE, Viton, FFKM

Metal Parts : SS 304, SS 316, Hastelloy-C

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 250°C

Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Heavy Duty Top Entry Glass Lined
Reactors of Chemicals,
Petrochemicals, Pharmaceuticals,
Food & Fertilizers plants



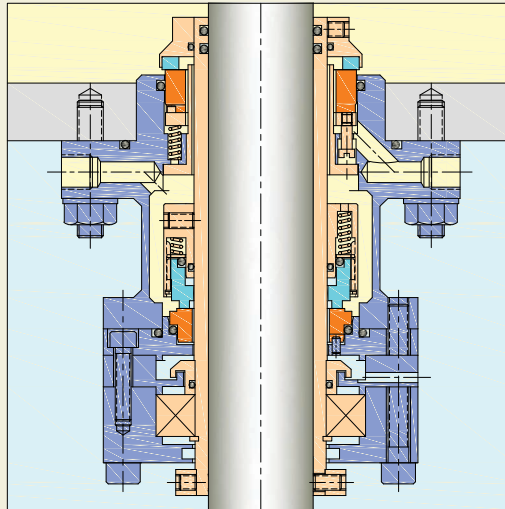
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TYPE 951

Double Cartridge Mechanical Seal for Bottom-entry Equipments.
Rigid Bearing to absorb Shaft run-out. Deflector to channelize barrier liquid to seal Area.
Thermosiphon for Barrier liquid circulation.



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC

Sec. Seals : Viton, EPDM, PTFE, FFKM

Metal Parts : SS 316, SS 304

Operating Parameters

Pressure : Vacuum to 6 Bar

Temperature : Ambient to 120°C
(270° C with FFKM seals)

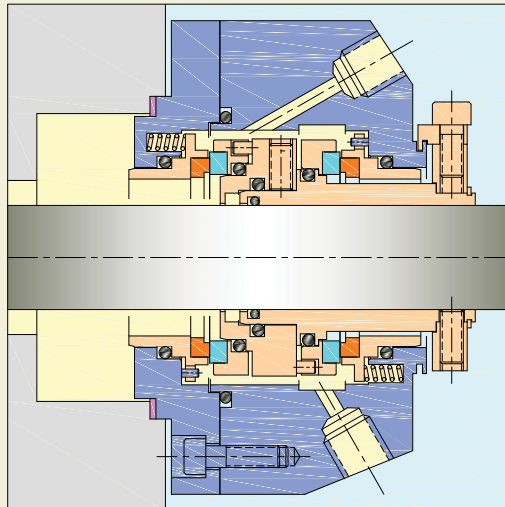
Speed : 20 M/Sec

Size : 20 to 150 mm
(higher sizes available on request)

Applications : Heavy Duty, High Speed shafts
of Bottom Entry, Side Entry,
Inclined Entry Agitators.
Special Mixers, Powder blenders,
Pigment Grinders.

TYPE 821

Double Cartridge Mechanical Seal For Axial Flow Pumps



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

Seal faces : Carbon, SiC, Ceramic, TC

Sec. Seals : Viton, EPDM, PTFE, FFKM

Metal Parts : SS 304, SS 316

Operating Parameters

Pressure : 10 Bar

Temperature : Ambient to 180°C
(270o C with FFKM seals)

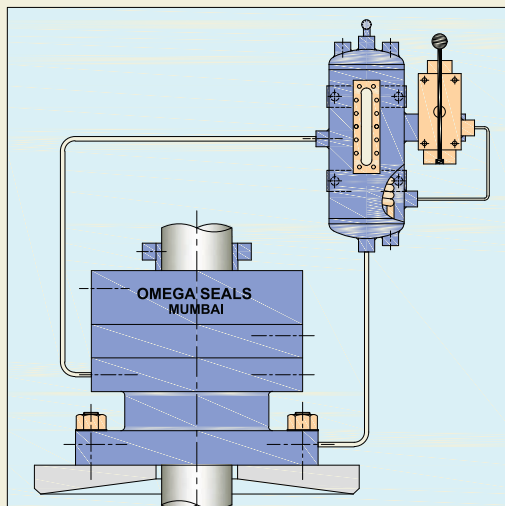
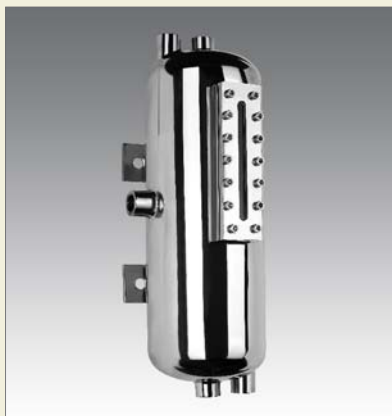
Speed : 20 M/Sec

Size : 0.750" to 4.00" / 20 to 100 mm
(higher sizes available on request)

Applications : Axial flow Pumps in Reverse
-Osmosis plants Salt Refineries,
ETPs, Solid waste Processing.

TS-11

Thermo-Siphon System For Barrier-liquid Circulation.
Available with cooling coil, Hand pump Level Indicator, Pressure Gauges and accessories.
Provision for Nitrogen port for back-up pressure



Chemicals



Pharma



Food



Oil & Gas

Materials of Construction

: SS 304, SS 316, Hastelloy-C

Operating Parameters

Pressure : 10 Bar

Temperature : -20 to 180°C

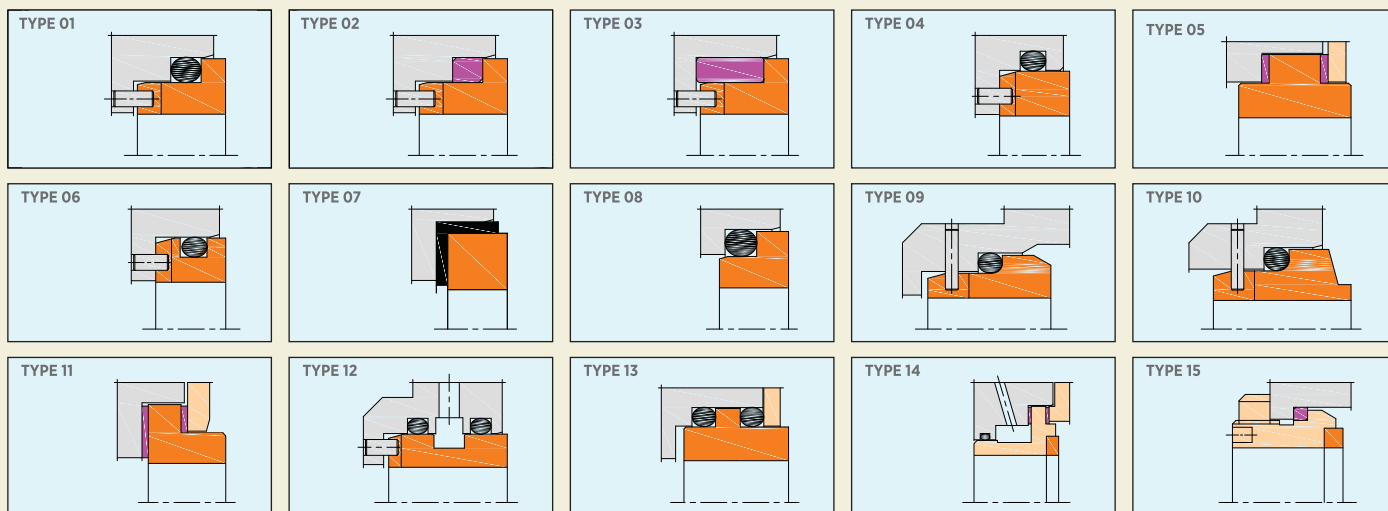
Size : Available in 3 L, 5 L, 10 L.
capacities Higher volume tanks
available on request.

Applications : Barrier liquid Circulation for
Mechanical seals of Pumps,
Reactors, Special equipments.



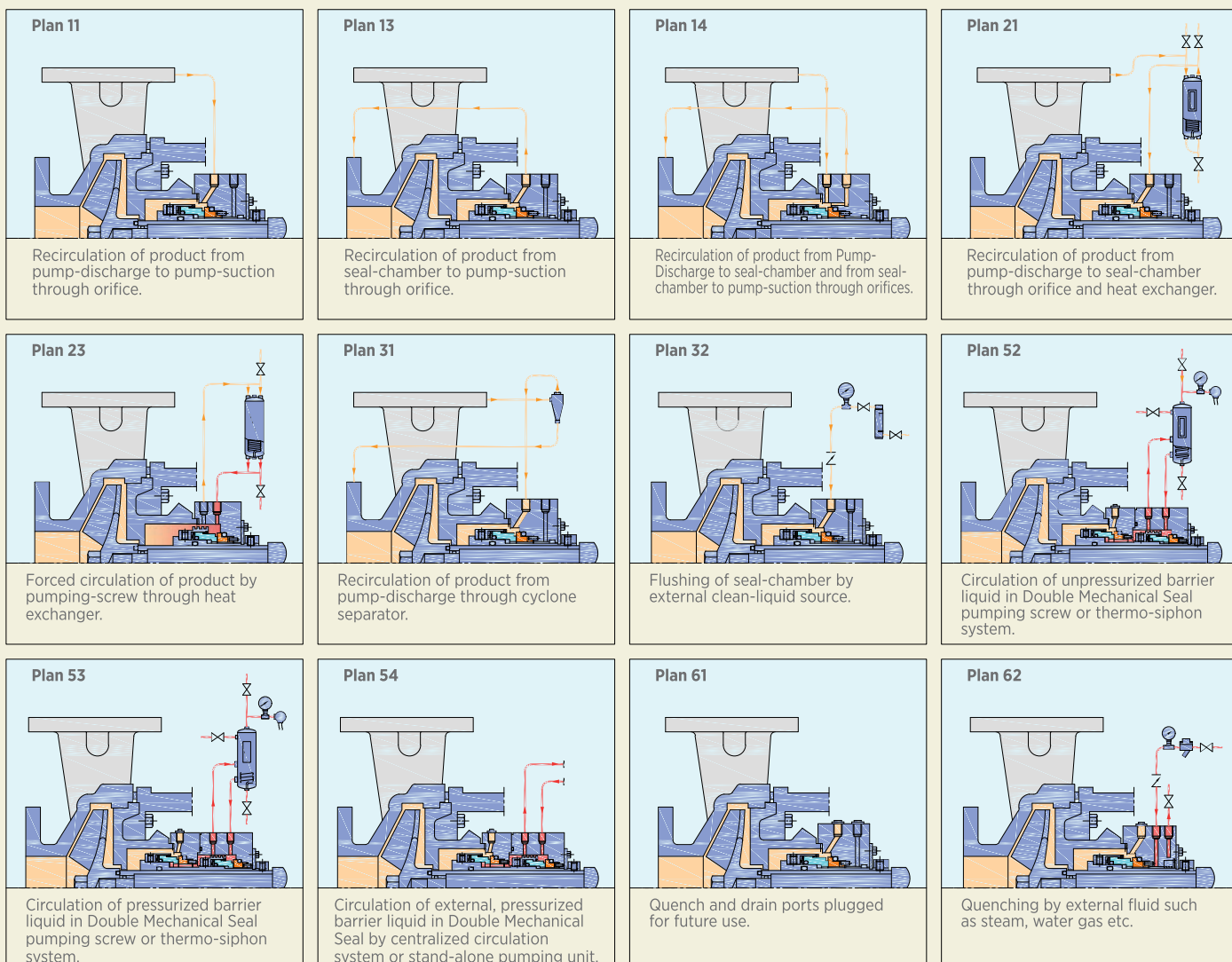
Standard Stationary Seats

Different types of Stationary Seat-designs in different Materials of construction are available for use with various Pusher types Single and Double Seal Rotary assemblies.



Seal Flushing Plans

For optimum performance of Mechanical Seals, additional Systems and accessories supplied along with the Mechanical Seals play a very important role. Seal Flushing Plans in accordance with guidelines established by API 682, offered with Mechanical Seals, supply sufficient lubricant at appropriate temperature and maintain clean environment in the seal-chamber. API flushing plans improve Seal Performance and ensure Equipment reliability and safety. API flushing plans can be customized to customer-needs.





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