

ROLON SEALS



Company Profile

Regd. Office: 5-9-22/36, Adarsh Nagar, Hyderabad – 500 063.

Phone No. 23230474

Factory Address: Plot # 9, Road No.1, I.D.A., Mallapur, Hyderabad–500076.

Tele fax: 040 – 2717616, 27154690, 27154691 Email ID: info@rolonseals.com

website: www.rolonseals.com

Name of the Organization : *Rolon Seals*

Name of the Managing Partner: *Mr. C. Vishnu Vardhan*

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– 500 063.*

Telefax No. : *040 - 23230474*

Manufacturing Facilities : *Plot # 9, Road No.1, I.D.A., Mallapur,
Hyderabad–500076*

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27154691*

Rolon PAN No. : *AAEFR0879C*

Sales Tax No. : *CST : SAR/06/1/2216/1999-2000
W.E.F 14.05.1999
TIN NO. : 28820163515*

Central Excise : *AAEFR0879 CXM001 Dated 20.11.2004*

Service Tax : *AAEFER 0879 CST001
(MRS/161/2005-S.TAX)
Dated : 09.02.2005*

FORM – G2 : *HYR/06/01/5 – B / 1443 / 99 – 2000
Dated : 11.06.1999*

SSI Registration No. : *2313/B1/2000 Dated 21.03.2000*

Partnership : *667 of 1999 Dated 16.04.1999*

Factory License : *37231*

Factory Registration No. : *65700*

MISSION:

The mission of the ROLON SEALS is to become leader in Mechanical Shaft Seals and Allied Accessories Industry and provide most Optimized Low Cost Solution including Products it Manufacture and the Service rendered.

VISION:

To befit as a most competitive and Optimized Solution; Product and Service Provider and be a most recognized and preferred supplier of Mechanical Shaft Seals and Allied Services.

To accomplish this vision, ROLON SEALS and their associates are guided by Six Core Values:

- **Commitment** - A promise is a promise; execute reliably for our customers,
- **Creativity** - Think beyond boundaries; embrace change and new ways of thinking,
- **Character** - Add value in everything we do; be seen as a trusted advisor,
- **Collaboration** - Live the ROLON SEALS Code of Business Conduct; stand up for what is right,
- **Confidence** - Take productive risks; act with self-confidence and demonstrate managerial courage
- **Competence** - The right people working together; use our portfolio of possibilities.

Our combined Vision and Values create a Customer-Centric Culture, helping deliver a consistent ROLON SEALS customer experience.

QUALITY POLICY:

ROLON SEALS is committed to serve it's customers and meet their needs and expectations in the Design, Engineering, Conceptualizing, Procure, Manufacture Assemble, Test and Supply of Reliable and Innovative Technologies and Products for Mechanical Shaft Seals and Allied Accessories of Highest Quality with High Reliable Factors that can meet the needs, requirements and criterions of various National & International Standards and Codes. ROLON SEALS is committed to continuing improvement of it's Products and Services that can meet present and future varying needs and requirements of various Process Industries and to achieve increased Customer Satisfaction as well as to ensure compliance with the requirements of the Quality Management System and it's continuing improvement..

ROLON SEALS – PRODUCTS & SERVICES

ROLON SEALS founded in 1999 in Hyderabad, India and was one of the First Mechanical Seal Companies to exclusively provide Repair / Retrofitting / Refurbishment / Substitution / Re-Engineering Service for all types of Internationally Reputed Seals. ROLON SEALS then took the Knowledge, Experience and Expertise it gained from Repair / Retrofitting / Refurbishment / Substitution / Re-Engineering Service of Seals to Design, Engineer, & Manufacture their own proprietary products compatible and in-line with Internationally Reputed Seals suppliers.

Today, ROLON SEALS opting most Optimized and Technical Well Advanced Products (in some range Out-Performing the International Suppliers) are operating in some of the most demanding Applications throughout the Process Industry. Customers large and small are utilizing the Quality Products produced by ROLON SEALS, and relying upon the Excellent Service and support provided by our experienced staff. Sealing Pumps, Mixers, Compressors, Centrifuges, and Other Pieces of Rotating Equipment is routine for ROLON SEALS.

ROLON SEALS offers a complete range of Seal Designs including Single and Double Cartridge Seals, Metal Bellows Seals, Split Single and Double Seals, as well as Custom Engineered Seals. Each is available in a broad range of Materials and Sizes.

ROLON SEALS places a significant emphasis on “Service”. Experienced and Highly Trained Personnel are available 24/7. Design, Engineering, Sales, and Distributor Personnel are capable of Supporting, Troubleshooting, and Training on all aspects of Mechanical Seals.

Today, ROLON SEALS has been acclaimed as an specialist in Design, Engineering, Conceptualizing, Manufacturing, Assembling, Testing, Installation and Commissioning of High - Engineered Mechanical Seals applicable for any Complex and Critical Environment use for Sealing Corrosive, Volatile, Abrasive, Precious, or Flammable Fluids & Liquids. ROLON SEALS High-End Mechanical Seals are ideally used on 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. ROLON 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, ROLON SEALS comes with the Assurance of Flawless Workmanship due to Rigorous Quality Control Checks at every Stage of Production.

ROLON SEALS offers a complete line of Seals including Cartridge Seals, Dry-Running Seals, Metal Bellow Seals, Elastomer Bellows Seal for diverse Application in a wide range of Industries. ROLON SEALS also provides Compression Seals, Bearing Protection Devices and Seal Chamber Auxiliary

Equipment. ROLON SEALS offers Innovative Seal Design and responsiveness, as well as Development of New Technologies that produce Lower Maintenance and Operating Costs.

Our Range Products Developed and the Services Offered:

Our Design, Engineering, Procurement, Manufacture, Supply & Test and will meet the criterions and comply to various National & International Standards & Codes such as API 610 / 682, DIN, BIS, BS, ANSI, ASTM, ISO, Etc.,

API 610 - prescribes specific Design Features and Materials for Mechanical Seals.

Materials

- Metal parts (except multiple springs): AISI 316 or equivalent
- Multiple springs: Hastelloy C
- Metal bellows: corrosion-proof material (max. corrosion wear 51µm p.a.)
- Seal faces/ stationary seats: solid; no sprayed coating

API 682 - "Sealing Systems for Centrifugal Pumps" refers to Pumps used in Refineries/ Petrochemical Industry (Hydrocarbon-Processing Industries).

API 682 specifies Cartridge (Cartridge Preassembled) Mechanical Seals, as well as Dynamic Test Runs for all types of Mechanical Seals and arrangements with defined conditions.

API 682 requires continuous operation of at least 3 years, increased safety of operation and simplified maintenance.

Arrangement and types of Seals:

- Arrangement 1: single Seal
- Arrangement 2: double Seal without pressurization
- Arrangement 3: double Seal with pressurization
- Type A: O-ring Seal/group springbacking
- Type B: Seal with metal bellows, with O-ring secondary Seals
- Type C: Seal with metal bellows, with graphite secondary Seals
- Type SD: special Sealing design

Partial and Critical API Plans for various Circulation Systems - The most widely used API plans (610/682):

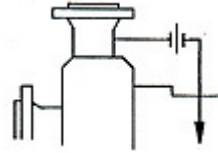
API plan 01:

Inherent product circulation from pump pressure connection to Mechanical Seal

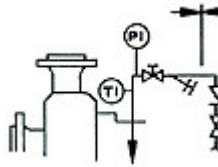


API plan 11:

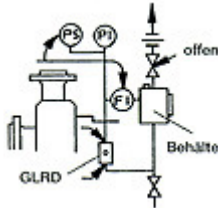
Inherent product circulation from pressure connection via orifice to Mechanical Seal


API plan 32:

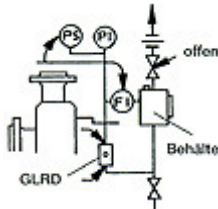
Auxiliary flushing/ auxiliary injection with pure liquid to Mechanical Seal


API plan 52:

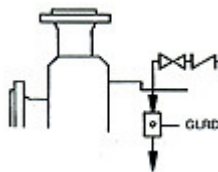
pressureless, circulating quench - external vessel (thermosiphon and/or forced circulation); tandem Mechanical Seal


API plan 53:

pressure superimposed, circulating quench - external vessel (thermosiphon and/ or forced circulation), back-to-back arrangement


API plan 62:

external quench (steam, gas, water)



As Per API Plan Design Standards, we Design, Engineer, Procure, Manufacture, Test and Supply:

1. Unbalanced Seals & Balanced Seals
2. Single Spring Seals & Multiple Spring Seals
3. Pusher Type Seals & Non-Pusher Type Seals
4. Flexible Rotors & Flexible Stators
5. Face on Rotor & Face on Stator

In Pusher Type Seals with O – Ring; V – Ring; Wedge Rings and in Non-Pusher Type Seals – Bellows Seals with Metal; Elastomers; TFE; TTE; Etc.,

OUR RANGE OF SEALS

Pushers

Pusher Seals Incorporate Secondary Seals, called the Dynamic Gasket, which moves axially along a shaft or sleeve to maintain contact at the Seal Faces to compensate for the Seal Face Wear and for any Seal wobble due to misalignment.

Advantages

Pusher Seals are relatively cheaper and techno-commercially more viable and wide range of Sizes ideally suitable for most popular Rotary Equipments.

Designs are available for High Pressure Applications and for Low Quantity, High Technological Applications.

Types of Pusher Seals for Various Applications

- Balanced Rotating Single Spring Seal For The Power Industry Or Other High Pressure Applications.
- High Balanced, Low Emission, Light Hydrocarbon, Same Operating Limits As QB, Specific Gravity Down To 0.45 With Multi-Port
- Lube-Groove Pusher Design For Hot Water Services Without Extra Cooling
- For ANSI Chemical Pumps
- Single, Balanced, Multi-Spring, Cartridge, Pusher Seal
- For Viscous Or Dirty Product, Unique Slurry
- For Corrosive/Non-Corrosive High Pressure Services
- Single Balanced Seal, Mounts To Outside Seal Chamber
- Balanced General Service Pusher Seal
- Dual Pusher Cartridge Seal
- Single Pusher Cartridge Seal
- Unbalanced Single Pusher
- Double, Friction Drive, Single Spring, Pusher Seal
- Single, Double, Tandem, Cartridge

Bellows

- Elastomers
 - ❖ Elastomer Bellows Cartridge Seal
 - ❖ PTFE Bellows, For Corrosive Liquids
- Welded Metal
 - ❖ Alloy C-276 Bellows For API 682
 - ❖ Stationary Bellow
 - ❖ Stationary Alloy 718 Bellow
 - ❖ General Purpose Single Bellows
 - ❖ A Self Contained Single Cartridge Multiple Chemical Seal
 - ❖ Internal Or External Steam Turbine Seal
 - ❖ Single Bellows Cartridge Seal
 - ❖ Dual Bellows Cartridge Seal
 - ❖ Single Bellows Cartridge Seal
 - ❖ Dual Bellows Cartridge Seal

Slurry

- ❖ Single balanced conical washer spring cartridge Seal
- ❖ Medium Duty Slurry Seals
- ❖ Slurry Seals
- ❖ Single, Double, Tandem, Cartridge
- ❖ For Viscous Or Dirty Product, Unique Slurry
- ❖ Dual balanced cartridge multi-spring pusher Seal

Lift-Off & Dry Running

Gas Seal Technology and Gas Seal Operation depend on Aerostatic and Aerodynamic Forces. Careful design keeps the Two Faces separated by a Gas Film. Aerodynamic Forces are created by the presence of a 'pattern' on one of the faces.

- ❖ Dual Pusher Lift-Off
- ❖ Back-Up Contacting Dry Running
- ❖ Back-Up Wavy Face
- ❖ Dual Pressurized Gas Barrier Seal

Mixers

In Chemical, Pharmaceutical, Food and Oil Refinery Process Plants diverse Systems are employed for Agitating, Blending and Mixing Products. The units require low maintenance operation and safety, both to protect the environment and the workplace.

- ❖ Standard DIN Sterile Double (With/Without Bearing)
- ❖ For Special Equipment
- ❖ Split Seals
- ❖ Platform Liquid Seals
- ❖ Outside Balanced Seal Designed to operate under relatively High Pressures and Low Speeds
- ❖ Platform Non-Contacting Type.

Compressors

Centrifugal Compressors and other Turbo-machinery are critical to the operation of a Process Plant. Selecting a manufacturer with well proven State-Of-The-Art Low Friction Dry Gas Seals who can offer full field maintenance support is very important.

- ❖ Floating Ring Nitrogen Barrier Seal
- ❖ High Performance Circumferential Seal
- ❖ Double Cartridge Compressor Seal
- ❖ Tandem with Inter-stage Labyrinth
- ❖ Single Cartridge Compressor Seal
- ❖ Tandem Cartridge Compressor Seal
- ❖ Bi-Directional Balanced Double Mechanical Seal
- ❖ Oil Lubricated Seal For Screw Compressors

❖ Oil Lubricated Liquid Seal

OEM & Special Duty

Original Equipment Manufacturers (OEM's) are very important for us. Therefore ROLON is committed to develop and supply designs for special equipment and for special duty requirements.

- ❖ Boiler Feed Water
- ❖ High Duty Pusher For Integrally Geared API Pumps And Compressors
- ❖ For High Pressure, High Speed Rotating Equipment
- ❖ Cartridge Multiple Dynamic Lip Seal For Highly Viscous Applications
- ❖ Split, Single Semi-Cartridge Pusher Seal For Pumps And Mixers In Non-Hazardous Applications

Outside

Outside Mounted Seals are used in Strongly Corrosive Applications. This arrangement allows Seal Designs that have no metal parts in contact with the Process Liquid.

Standard Cartridge

Standard Cartridge Seals are designed for General Purpose Applications on ANSI and DIN Process Pumps Serving Chemical Processing, Pulp & Paper, Oil & Refining, Food & Beverage, Water and Wastewater, and Other Process Industries.

- ❖ Single Bellows Cartridge Seal
- ❖ Elastomer Bellows Cartridge Seal
- ❖ Single Pusher Cartridge Seal
- ❖ Dual Bellows Cartridge Seal
- ❖ Dual Pusher Cartridge Seal

Accessories

For Optimum Performance of Mechanical Seals, Control Over the Sealing Environment is very important. If the Seal is kept clean and well lubricated by the product or barrier it will deliver years of reliable service.

- ❖ Seal Cooler For Various Support Systems for Various Refinery & Process Industry Services

ROLON SEALS – REFURBISHMENT, RETROFITTING AND ALTERNATIVE / SUBSTITUTION SOLUTION SERVICES

ROLON SEALS – Engineering and Technical Services gives new life to any Mechanical Seal that is no longer performing in the field. For several years ROLON SEALS has been a pioneer of the concept that customers can have *all* of their Mechanical Seals repaired in one location *regardless* of the original manufacturer. During all these years ROLON SEALS have refurbished hundreds of Mechanical Seals originally produced by other manufactures to their original specifications. Because we maintain an extensive library of manufacturers' design specifications we are the best at what we do, and do more of it than anyone else in the business. Utilizing the latest and up-to-date Seal design and engineering developments for our own line of Seals, we are often called upon by customers to evaluate other manufacturer's Seal designs to develop design modifications and enhancements that provide performance that is superior to the original.

ROLON SEALS Mechanical Shaft Seal's Quality Control Process produces a precision Mechanical Seal that which is tested and will provide safe and reliable performance. If you depend on Seals to deliver your products, you can depend on ROLON SEALS to deliver your Seals. Our experienced, skilled technicians use only premium materials and operate within a strict set of manufacturing procedures. The end result is a high quality product that meets or exceeds the specifications of the original manufacturer.

ROLON SEALS initiated in 1999 with an aim to specialize in Refurbishment, Retrofitting and Alternative / Substitution Solutions Service Provider of World Renowned Mechanical Seals Manufacturers like Eagle, Burgmann, Flowserve, Etc., and continuing to be an optimized refurbishment and alternative / substitution solution provider with a motive to be a customer orientated corporation. During initial stages the complexity of refurbishment services and the optimized alternative / substitution solution providing has made us to receive, evaluate, and repair Mechanical Seals in a timely and economical fashion. Once completed and the Seal is back in our customers hands it will perform just like it was new. Today, our services are extended and our technical expertise & experiences has made us to provide on-site solutions to the greater extent.

Mechanical Seals are often perceived as very simple pieces of Equipment. Though individually the parts of a Mechanical Seal are Simple; Springs, O-Rings, Set Screws, Rotary Faces, and Stationary Faces, Collectively Each Piece is carefully dimensioned and Engineered to work perfectly together. There are many facilities throughout the India that repair Mechanical Seals based solely on the principal that the individual parts are simple. The companies who realize the engineering behind these parts have only the confidence to replace broken parts with identical new parts. If the Seal is badly damaged they must call the original manufacturer for new parts or try and haphazardly duplicate the damaged pieces. This takes time and costs money, the two things that will limit any company in this industry.

The companies that do not realize the engineering behind the Mechanical Seal have very little success in repairing the Seal properly and eventually very little success in this business. The staff at ROLON SEALS has the education and a combined more than 9 years experience in Mechanical Seal design and application. ROLON SEALS has the ability to recognize or even change existing Seal dimension so that they may be repaired properly, quickly and economically. Our ability to dimension and tolerance exact replacement parts will allow us to buy these parts from a material vendor at a lower cost than others would have to pay the original Seal manufacturer. If the Seals

need to be replaced ROLON SEALS can replace the Seal with an exact refurbished duplicate or one of many new Seals that will work equally as well in the customer's application

ROLON SEALS utilizes a wealth of engineering knowledge coupled with a complete understanding of the multitude of Seal designs on the market today to give our customers the confidence of knowing that their Seals are repaired properly every time. We can handle the smallest single rubber bellows component Seals, to the very complex double dry running mixer Seals with bearings. ROLON SEALS has all of the tools to handle any Mechanical Seal repair requirement. ROLON SEALS will be one of, if not they only, Seal repair company which has the technology to design and manufacture new Seals but has its focus only on repairing them.

DISTINCT COMPETITIVE ADVANTAGE

- We carry with us a reputation for honesty, accuracy, and customer satisfaction within the Seal industry.
- We have an extensive knowledge of the Mechanical Seal industry both nationally and internationally.
- We bring strong Mechanical engineering skills to the Sealing industry.
- We fill the voids in the Sealing industry that our competitors are either not capable or not willing to fill.

COMPETITIVE STRATEGY

Our main focus will be to take advantage of the inability of many large Seal companies to provide the superior service demanded in today's Sealing marketplace. This includes but is not limited to; speed, price, service, quality, troubleshooting, and expertise.

We will strive to be the "complete" Seal refurbishment and alternative / substitution solution providing company by offering:

- The refurbishment and alternative / substitution solution of all manufacturers Seals
- Detailed failure analysis to increase mean time between failures, to increase customer profitability.
- Appropriate inventory for "off the shelf" deliveries in order to decrease the customer downtime and high value stock rooms.
- Satisfaction guaranteed service

ROLON SEALS - MECHANICAL SEAL REPAIR SERVICES.

- Mechanical Seal repair is available on most Seals from all Seal manufacturers including but not limited to John Crane, Flowserve, Chesterton, ROLON SEALS, AES, Delta, Flex-A-Seal, Burgmann, Robco, Sepco, ROLON SEALS and many more.
- A failure analysis is performed on every Seal to determine why the Seal failed. We will always make any necessary suggestions that will lead to increased Seal life. All Seal repairs are given serial numbers and can be tracked on our database for determining Mean Time between Failure, and Seal cost evaluation.

- All Seal components are completely cleaned, measured, pressure tested, and inspected by the engineering department to determine which parts can be re-used, or require replacement.
- Seal faces are lapped to within industry standards (2 light bands) on one of several large floor model lapping machines within our controlled lapping room.
- Seal design and or materials can be upgraded as needed depending upon an engineered review of the Seal application or by customer request.
- Upon final assembly all Seals are again inspected by the engineering staff.
- All Mechanical Seals, including single cartridges that are repaired in our facility are pressure tested and provided with a certificate stating such before they are returned to the customer.

MIXER / AGITATOR / REACTOR AND SPECIALTY EQUIPMENT REPAIR

- Our engineering expertise affords us the ability to repair complex Mechanical Seals used on ALL types of equipment, including mixers, agitators, reactors, centrifuges, compressors and virtually any piece of equipment using a Mechanical Seal. These designs often include bearings and various other support systems that make the other Seal repair shops turn them away. Don't send these Seals to the OEM's and pay too much, ROLON SEALS can handle ALL of your Seal repair needs.
- Our facility is designed to handle even the largest Seals repairs. We have experience with Seals for shaft sizes of 9 inches or more, and weighing in excess of 300 Kgs. No repair is too large for us to handle.
- We also have the expertise to evaluate and switch your double Seal from its originally configured barrier fluid system to a nitrogen barrier or a complete dry running design.
- Some of the most common manufacturers of equipment requiring specialty Seal repair.

SPECIALTY LAPPING SERVICES

- ROLON SEALS can lap individual Seal components of all shapes and sizes for your own in house Seal refurbishments.
- We provide lapping services for pump parts including thrust washers, wear rings, thrust pads, and shoes in all materials.
- Let us know your lapping needs; we are willing to work with you on any new applications.

OEM SEAL REPLACEMENT

Our design, engineering and technical staff can re-engineer any kind of most OEM Seals and provide you with a replacement Seal design at a fraction of the cost, and with the properly selected materials to give you the best possible Seal life.

Simply provide us with a working OEM Seal sample along with all of the application data, and ROLON SEALS will give you a quote to replace it.

ROLON SEALS can make suggestions on how to modify the Seal design to make it easier to install, clean, repair, or even make it less expensive.

ENGINEERING SERVICES

With all of our Mechanical Seal engineering experience in design, applications, troubleshooting, failure analysis, and installation, we are ready and willing to help you through any of your Sealing needs.

ROLON SEALS can assist you with new Seal design and material selection

ROLON SEALS can work with you to help you solve that tough application where Seal failure is a common occurrence.

Having trouble finding a Seal to fit a tight stuffing box or Sealing area? Call ROLON SEALS, and put our many years of Seal service to work for you.

ROLON SEALS SUPPORT

We are available for any Sealing questions you may have. Many of your questions can be very simply answered and may help you in any complex and critical environment with your Sealing problems.