Seals for Pump Motor & Gear Boxes















Introduction

Seals & Sealing elements for Pump, Motor & Gear Boxes in various industries

Max Spare, is India's leading seal manufacturer providing standard & customized sealing solutions to clients across industries. Having more than five decades of experience and expertise in serving the industrial clients, Max Spare established its products range in OEM & Replacement market.

Thus serving in various industries, our seals are widely use in pumps, motors & gearboxes. Max Spare is involved with many OEM manufacturer of this segment for process industries.

While selecting seals and elastomers many factors to be accounted such as,

- High Speed
- High Pressure
- Temperature resistance
- Media resistance
- Operating reliability
- · Economy and long life
- · Customised solutions

Max Spare thus understand these needs which comes across during selecting appropriate seals & elasotmers for OEM and also in field at end users. Max Spare, full fledge R & D team is involved developing seals starts from rubber compound, design & upto endurance testing, which is conducted in-house.

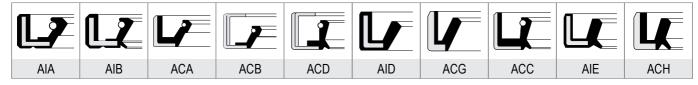
Hence you can place your trust on Max Spare for any kind of seals required for pump, motor & gearbox. Our team is ready to cater your needs on time.



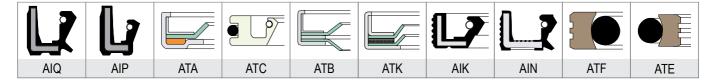
Product Line

Max Spare Product Line for Pump, Motor & Gear Boxes -

Rotary Seals



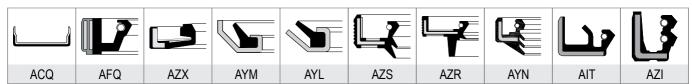
High Speed Oil Seals



High Pressure Oil Seals



Special Seals



Different types of Motors -

- Standard Motors
- Textile Motors
- Torque Motors
- Brake Motors
- Vibratory Motors
- Crane Duty Motors
- Dual Voltage / Dual frequency Motors
- Multi Speed Motors Single winding / Separate Winding
- High Torque Motors
- High Slip Motors
- Low Vibration Motors
- Motor for Corrosive Atmospheres
- Flange Mounting Motors

Different types of Gear Boxes -

- Helical & Bevel Helical Gear Boxes
- Extruder Gear Boxes
- Cooling Tower Gear Boxes
- Marine Gear Boxes
- High Speed Gear Boxes
- Slew Drive Gear Boxes
- Planetary Gear Boxes
- Sugar Mill Drive
- Bucket Wheel Drive
- Tube Mill Worm Reduction Gear Boxes

Pumps

Pumps are used for a wide range applications to move fluids such as liquids, gases, slurries etc. These are different types of pumps such as water pump, hydraulic pump, vaccum pump and many other pump for high pressure, quiet operation, long life and many more features whenever the customer encounters with their critical operating conditions. Max Spare with its experience and expertise in sealing technology are able to offer appropriate recommendations and sealing solutions.

Max Spare also provides customised dimensions and designs in various materials such as NBR, Viton, Silicon, EPDM, HNBR, PTFE etc. for different temperature, applications media, pressure, speed, etc.



Impellers for Displacement Pumps -

Max Spare had developed impellers with the design of friction optimised fins and a special elastomers compound offers a longer service life of impeller in the pump.



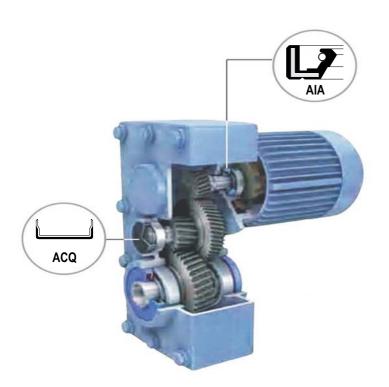
Submersible Pumps -

Max Spare supply various seals to Submersible pumps & are associates with many OEM of this industries, providing standard Rotary Seal & also special items like, Neck Ring, Split Bush, O Rings in different elastomer compound.

Motors & Gearbox

Max Spare sealing solutions for industrial gearboxes includes rotary seal, end caps and other sealing rubber elements.

A general gearbox application are with two rotary seals i.e. input seal and output seal usually input seals are subjected to high speeds. Single lip and dual lip are common designs used for this application.



Other applications like high speed, high pressure, low speed, dry run, abrassive conditions are catered by offering special elastomeric compounds and PTFE material.

Sparage had developed special elastomeric compound with PTFE fillers which offers optimum service life in dry running conditions and having high wearing resistance.

Max Spare have more than decades of experience working with OEM customers in this segment. We provide seals for various gearboxes used in many areas like power, transmission, transportation, construction, material handling, process industries and many more.

Motors:

Max Spare is working with many OEM of motors use in various industries. Typical rotary seals use in motors. Motors should not generate high torque which results to the energy loss. To make motors more energy efficient seals play an vital role in designing the seal interference & tolerance. Many of the customers are widely uses Max Spare seals in different motors.













Research & **Development**

Max Spare offers many customised sealing solutions which are developed in-house with help of its State-of-Art Laboratory and advanced technologies to meet the international standards.

Max Spare had a dedicated R & D team that offers support to technical consultation which helps to give the assurance to the customers about the offered sealing solutions.

Max Spare conducts in-house testing on the rotary seals to confirm theorotical analysis for operating conditions, decrease the failure rates during trial runs and improve the efficiency on new seal developments. The conclusion of these testings strongly support us to recommend the seal design and material for the required end use application.



Rotary Seal Gyration Testing Machine -

Specifications:

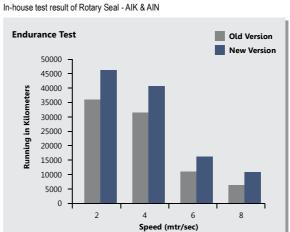
	Low Pressure	High Pressure
Testing Range	5 - 100 dia.	5 - 80 dia.
Speed	200 - 6000 RPM	200 - 6000 RPM
Temperature	RT - 120°C	TR - 120°C
Pressure	0 - 3 kg/cm ²	5 - 30 kg/cm ²

This machine is for Rotary Seal pressure conditions & abrasion testing.

Automated Optical Inspection Machine -

Specifications:

- Repeatability less than 0.01m
- Capacity 1 2 nos. / sec.
- The machine measures the inner and outer diameter of oil seal roundness.
- Measuring the cross section, inner/outer flash and concentricity of the Seal.



This graph shows the extended service life of the AIK & AIN seals made in new design & enhanced NBR compound in comparitvely with old version.

Sealing Material:

Max Spare thus offers seals in wide range of elastomers & thermoplastics. Thanks to its state-of-art laboratory where new compound are developed and tested according to the international standards & parameters.

Rubbers like HNBR with PTFE fillers compound developed especially for working condition like dry run, high speed, low friction and high abrasion resistance.

Max Spare, style AIK & AIN rotary seals with enhanced NBR compounds offers extended service life compared to the general purpose rotary seal.

Endurance Test Specimen:

Seal Size - 50 x 70 x 8 Temperature - 60° C ± 2°

Material - NT-57 (High Performance NBR Compound)

Win with Max Spare ...



STEEL MILL



- » HAGC Cylinder » Bending & Balance cylinder » Work Roll & Backup Roll chock

OIL & GAS



- » Extreme Pressure
- » Robust working conditions » Long service life

POWER PLANT



- » Boilers » Coal Pulveriser

PULP & PAPER



- · Pneumatic Valves
- Pneumatic Actuators
- Hydraulic Cylinders Pneumatic Cylinders Calendar Roll Seals

FOOD & PHARMA

- » Food Compliant Material » Aggressive Fluids CIP & SIP
- High Temperature Solutions in Bakery products

TYRE INDUSTRY



- » Tyre Curing Presses
- » Bladder Machine

EARTH MOVING INDUSTRY



- » Steering Cylinder » Boom Lifting Cylinder
- Bucket Cylind Telescopic Cylinder
- » Axial Grease Seals

PRESS FORMING INDUSTRY



- » Heavy Duty Presses
- » Hydraulic Presses
- » Mechanical Stamping » Presses
- » Forming Presses

ALUMINIUM INDUSTRY



- » Crust Breaker Cylinder
- » Point Feeder cylinder
- » Tapping Breaker cylinder
 » Vacuum seals
- » Pneumatic Breaker

CHEMICAL & FERTILIZER



- » Sealing of a coolant compressor with multiple
- mechanical seals
 PTFE gaskets and tapes
- » Metal expansion joints

SUGAR INDUSTRY



» There are numerous rotating equipment which require sealing in sugar industry

AUTOMOBILE INDUSTRY



- » Transmission Gear Box
- » Axels
- » Shock Absobers

VALVE INDUSTRY



- » Petroleum Line Valves
- » Gas Line Valves
- » Butterfly Valve Seat



- » Gear Box » Pitch Cylinder
- » Pulse Encoder Seals
- » Main Bearing Rotary Seals

HYD. & PNEU. CYLINDERS



» All types of Piston single and double acting seals for pressure range start from 0 to 2500 bar.

ENGG. & FABRICATION



» Various types solutions available in this segment. From machine tools to maintenance & overhauling work.

HYDRO POWER



- Keplan Turbine Blades
- Wicket Gates
- Servomotors & Navlock Cylinders

CEMENT



» All types of Piston single and double acting seals for pressure range start from 0 to 2500 bar.

TEXTILE INDUSTRY



- » Motors
- » Spinning

PUMP MOTOR & GEAR BOX



- » High Speed » High Pressure
- » Temperature resistance » Media resistance
- » Operating reliability

Max Spare Limited

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