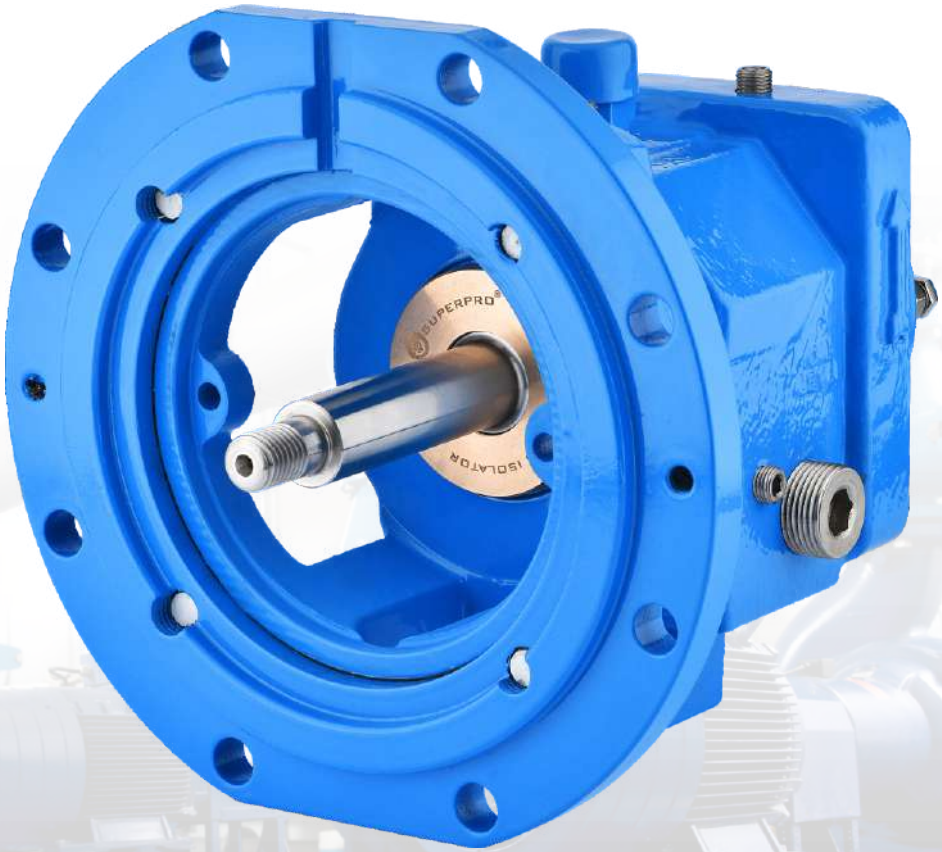
SUPERPROOF®
Innovative Sealing Solutions

SUPERPRO®

ENHANCING BEARING LIFE

Bearing Isolator For

- Pumps
- Motors
- Gear Boxes
- Turbines
- Blowers



Bearing Isolators

SUPERPROOF SEALS ENGINEERING PVT. LTD.

Manufacturer of Mechanical Seals, Seal Support Systems & Bearing Isolators

www.superproofseals.com

Introduction

Superproof ® is manufacturer of Bearing Isolator in India. It is a Supplier and Exporter of Bearing Isolator in India, USA, and all over the world. superproof is one of the leading manufacturer and exporter of bearing isolator by superior quality, compact design, and better technology in India.

Superproof ® offer a range of bearing protection devices suitable for most application. The Innovative **Superpro & SuperMag** product includes patented that deliver the best possible bearing housing sealing solution for your Motors, Pumps, Gearboxes and Turbines.

Superproof ® upgrade your totating equipment with bearing protection is one of the most effective upgrades you can perform that will deliver increase equipment reliability without routing additional maintenance.

Superproof ® bearing protection devices are also certified by **IP66** IP66 **& ATEX** ATEX 2014/34/EU

What is a Bearing Isolator?

Bearing Isolator is advanced sealing solution, that is used to protect bearings and bearing lubrication in rotating equipment, such as electric motors, gearboxes, pumps, and turbines bearings. In simple terms, a bearing isolator consists of a stationary component (stator) and a rotary component (rotor) The assembly of these components creates a narrow labyrinth path through the seal. This design prevents ingress of contaminants into a bearing arrangement.

Benefits of Bearing Isolator

Bearing isolators can provide improved reliability and protection of the bearings and extend the mean time between failure (MTBF) of equipment. In a time when facility managers are focused on maintaining costs and limiting production losses due to downtime or unplanned outages is critical, bearing isolator offer several Improved and reduced benefits.

IMPROVED

- Equipment life
- Process Uptime
- Operational Profit
- Environment

REDUCED

- Bearing Failures
- Maintenance Cost
- Operational Losses
- Clean-up costs

History

Lip seals were first introduced 70 years ago, they were the only kind of sealing device available. Convenient* inexpensive, when it came to sealing industrial rotating equipment. Equipment is doomed to premature failure by lip seals that will fail long before the equipment. Worst, when a lip seals quits sealing, very undersirable things are liable to happen without warning. Chances are the lip seals has soon grooved the shaft or burnt to a crisp at the point of contact. Lubricant is free to exit the bearing enclosure and as the equipment cycles, moisture in the environment is drawn into the enclosure where it condenses & contaminates the lubricant. Lip seals are not as cheap as they are perceived to be. A single pump failure after a lip seals burns out will cost as much as dozens of bearing isolators.

Rotating equipment is designed to operate for at least 5 years. Rolling element bearing have a design life of 150,000 hours (17 years) or more. With a finite life and 100% failure rate, it simply does not make sense to loose time & money trying to make a contacting seal work.

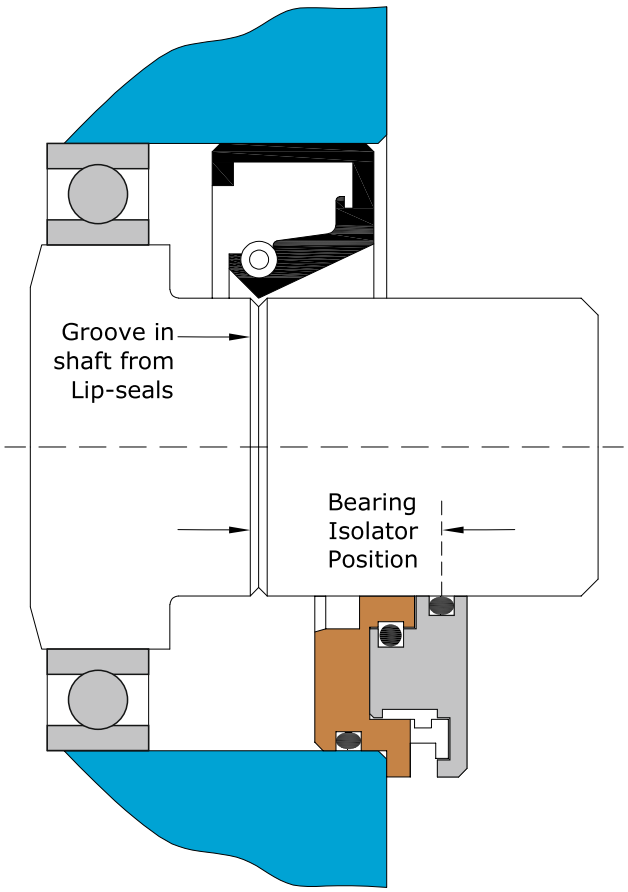
The bearing Isolator, a non contacting labyrinth type seal was invented, giving a choice of permanent bearing protection the eliminated the need for continual maintenance & repair, because they never wear out & can be used over & over for many years.

No Need to Refurbish a Lip-Seal Damaged Shaft

Never refurbish or replace a lip-seal worn shaft: the permanent upgrade could be cheaper.

Lip-seals wear shafts, causing expensive damage. SuperPro® can permanently eliminate this expense.

Why pay for a replacement shaft when upgrading to SuperPro® costs less?



SUPERPRO®

Standard Bearing Isolator

Lock Type Design

Compact Design

Unlock Design

Stainless Steel (Optional)

SuperPro® BEARING ISOLATOR (SPB-01 Series)

Standard Bearing Isolator
Lock Type Design (Rotor & Stator should be Lock with O Ring)

Technical Specification:

Seal Type: Standard Bearing Isolator
Shaft Speed: Up to 3600 rpm
Opp Pressure: 0 bar (psi)
Temperature Range: -40°c to 250°c
Axial Movement: 0.13mm
Radial Movement: 0.25mm
Shaft / Bore Tolerance: +0.05mm

Seal Material:

Standard: Bronze
Optional: SS 316, SS 304, Aluminum, Carbon Steel

O Ring Material:

Standard: FKM (VITON)
Optional: Aflas, Nitrile, EPDM, Silicon

Standard Range:

Shaft Diameter Rang : 15mm - 300mm (0.750" - 11.810")
Overall Width: 18mm (0.709")

Application:

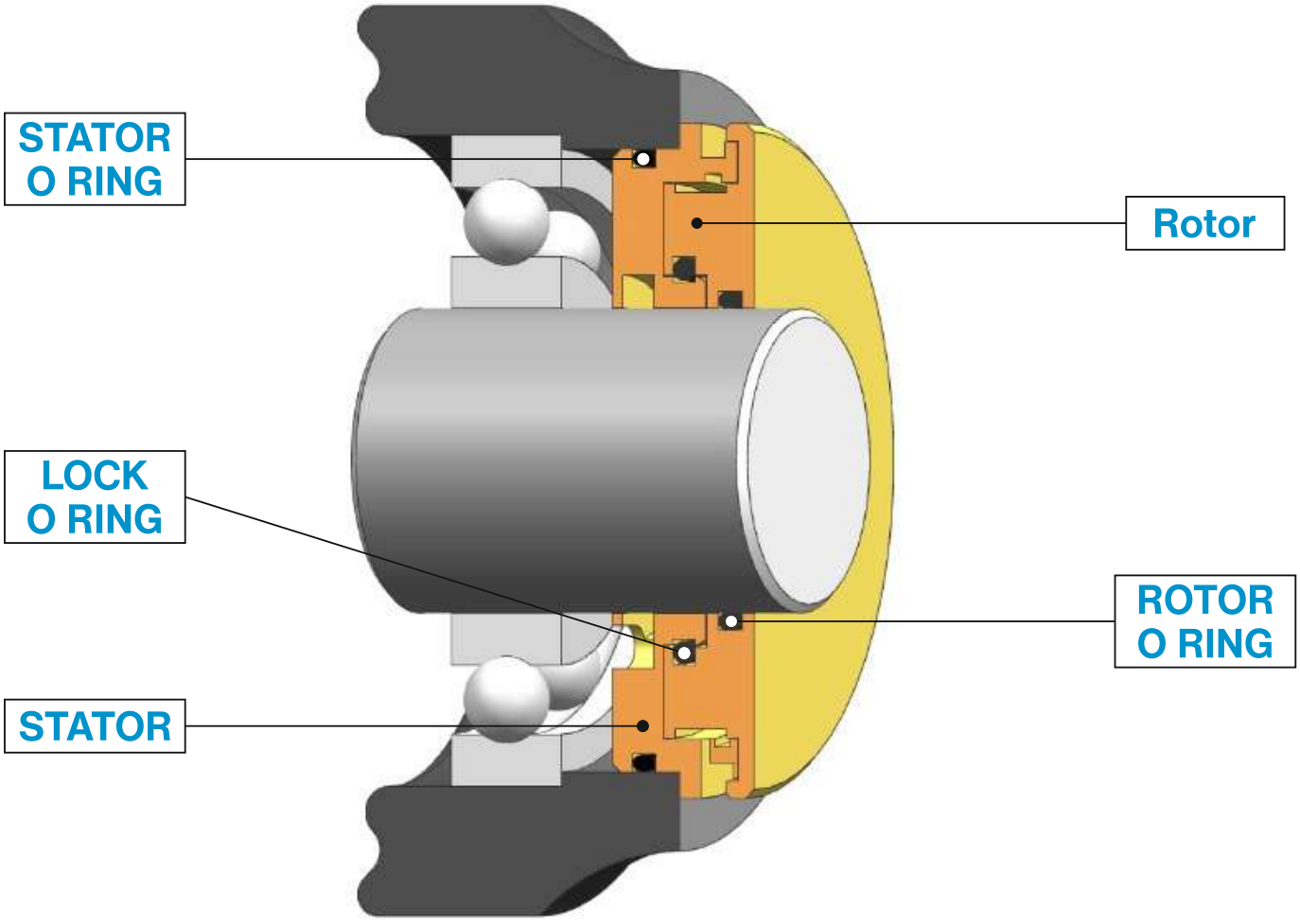
Pumps, Motors, Gear Box, Mixers, Turbines, Blowers and Customize Equipments.

Features & Benefits:

Excellent Labyrinth Style Sealing Technology
Non-contact, Non-wearing design
Maintenance free - No routine maintenance required
Suitable for old or worn shaft
Prevent ingress of water, dust, contaminants and moisture
Extend bearing and lubricant life significantly

Certification:

Superpro SPB-01 model is available with ATEX (ATEX 2014/34/EU) certification, also certified by Ip66



Standard Bearing Isolator Installation Instructions

The Superpro Bearing Isolator Type SPB01 is unitized, any attempt to dissemble the Bearing Isolator will damage it. After making any adjustments to the equipment (pump, gear box, turbine, etc) confirm that the Bearing Isolator is still properly installed.

Prior to installation

1. Warning! disconnect all systems power and follow all standard safety procedures.

2. Remove all sharp edges from following
   Lead-in chamfers
   Keyway
   Splines
   Snap ring grooves

3. Clean all foreign debris from bore and shaft areas.

Installation

1. Lubricate bore and shaft O rings with system compatible lubricant.

2. Position the Bearing Isolator over the shaft by hand. Bearing Isolator position is correct if the stator O ring is towards the bearing housing.

3. Slide down the Bearing Isolator towards the shaft, stopping just before the bearing housing of the equipment. Use hand pressure only.

4. Rotate the Bearing Isolator so that the drain port is centred at the 6 o'clock position. Press Bearing Isolator into bore using hand pressure only. If necessary, gently tap Bearing Isolator into bore using a soft faces tool.

NOTE: Do Not Use a Metallic Hammer or Punch as this may damage the seal.

SUPERMAG®

Magnetic Bearing Isolator

Magnetically Face Sealed Design

SuperMag® BEARING ISOLATOR (SPB-05 Series)

Magnetic Bearing Isolator
Magnetically Face Sealed Design

Technical Specification:

Seal Type: Magnetic Bearing Isolator
Shaft Speed: Up to 3600 rpm
Opp Pressure: 0 bar (psi)
Temperature Range: -40 to 250 c
Axial Movement: 0.13mm
Radial Movement: 0.25mm
Shaft / Bore Tolerance: + 0.05mm

Seal Material:

Standard: Bronze
Optional: SS 316, SS 304, Carbon Steel

O Ring Material:

Standard: FKM (VITON)
Optional: Aflas, Nitrile, EPDM, Silicon

Standard Range:

Shaft Diameter Rang : 15mm - 200mm
(0.750" - 8.000")
Overall Width: 22mm (0.87")

Application:

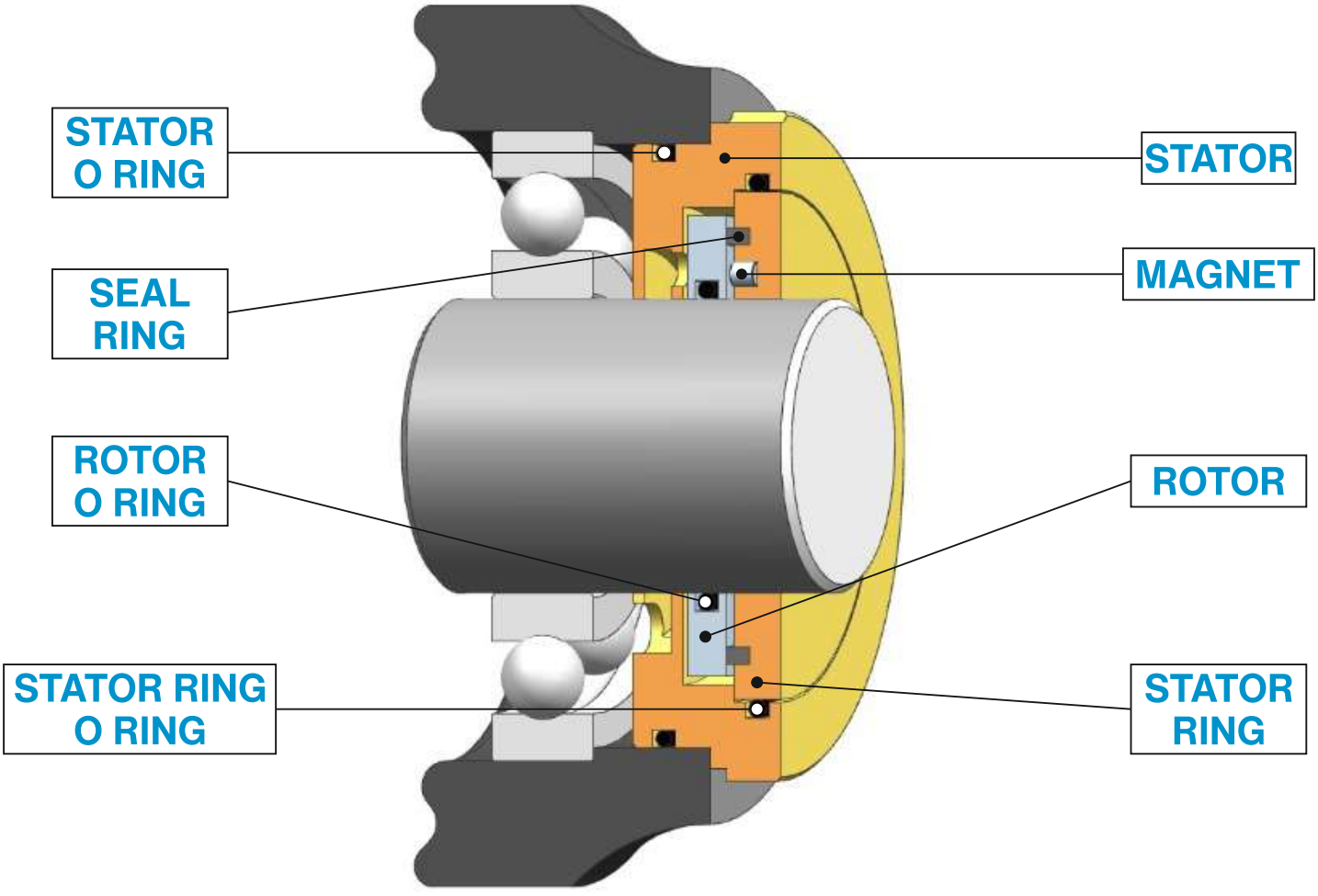
Pumps, Motors, Gear Box, Mixers, Turbines, Blowers and Customize Equipments.

Features & Benefits:

Excellent Labyrinth Style Sealing Technology
Non-contact, Non-wearing design
Maintenance free - No routine maintenance required
Suitable for old or worn shaft
Prevent ingress of water, dust, contaminants and moisture
Extend bearing and lubricant life significantly

Certification:

Supermag SPB-05 model is available with ATEX (ATEX 2014/34/EU) certification, also certified by Ip66



Magnetic Bearing Isolator Installation Instructions

The Supermag Bearing Isolator Type SPB05 is unitized, any attempt to dissemble the Bearing Isolator will damage it. After making any adjustments to the equipment (pump, gear box, turbine, etc) confirm that the Bearing Isolator is still properly installed.

Prior to installation

1. Warning! disconnect all systems power and follow all standard safety procedures.
2. Remove all sharp edges from following:
   - Lead-in chamfers
   - Keyway
   - Splines
   - Snap ring grooves
3. Clean all foreign debris from bore and shaft areas.

Installation

Step 1: Check Host Equipment Mechanical Condition

1. Shaft Diameter +/-.002" tolerance
2. Shaft run out .002" per inch of diameter @1800rpm
3. Shaft surface finish 32 rms or better, smooth & defect free
4. Housing bore diameter +.002" tolerance
5. Housing bore roundness .002" tolerance
6. Housing bore concentric with shaft less than .020"
7. Housing face square to shaft .001" per inch of diameter
8. Housing bore surface condition smooth & defect free

Step 2: Prepare Host Equipment

1. Clean, inspect & measure shaft and housing
2. Break or smooth all sharp edges
3. Remove all old oil, lubricants and contaminants

Step 3: Assembly Lubricant

1. Do not lubricate rotor O-ring
2. Lubricate host equipment seal housing bore
3. Do not use anti-seize products near seal

NOTE: Do Not Use a Metallic Hammer or Punch as this may damage the seal.

SUPERSPLIT®

Split Bearing Isolator

Split Type Design

SuperSplit® BEARING ISOLATOR (SPB-06 Series)

Split Bearing Isolator
Split Type Design

Technical Specification:

Seal Type: Split Bearing Isolator
Shaft Speed: Up to 3600 rpm
Opp Pressure: 0 bar (psi)
Temperature Range: -40 to 250 c
Axial Movement: 0.13mm
Radial Movement: 0.25mm
Shaft / Bore Tolerance: + 0.05mm

Seal Material:

Standard: Bronze
Optional: SS 316, SS 304, Carbon Steel

O Ring Material:

Standard: FKM (VITON)
Optional: Aflas, Nitrile, EPDM, Silicon

Standard Range:

Shaft Diameter Rang : 15mm - 200mm
(0.750" - 8.000")
Overall Width: 22mm (0.87")

Application:

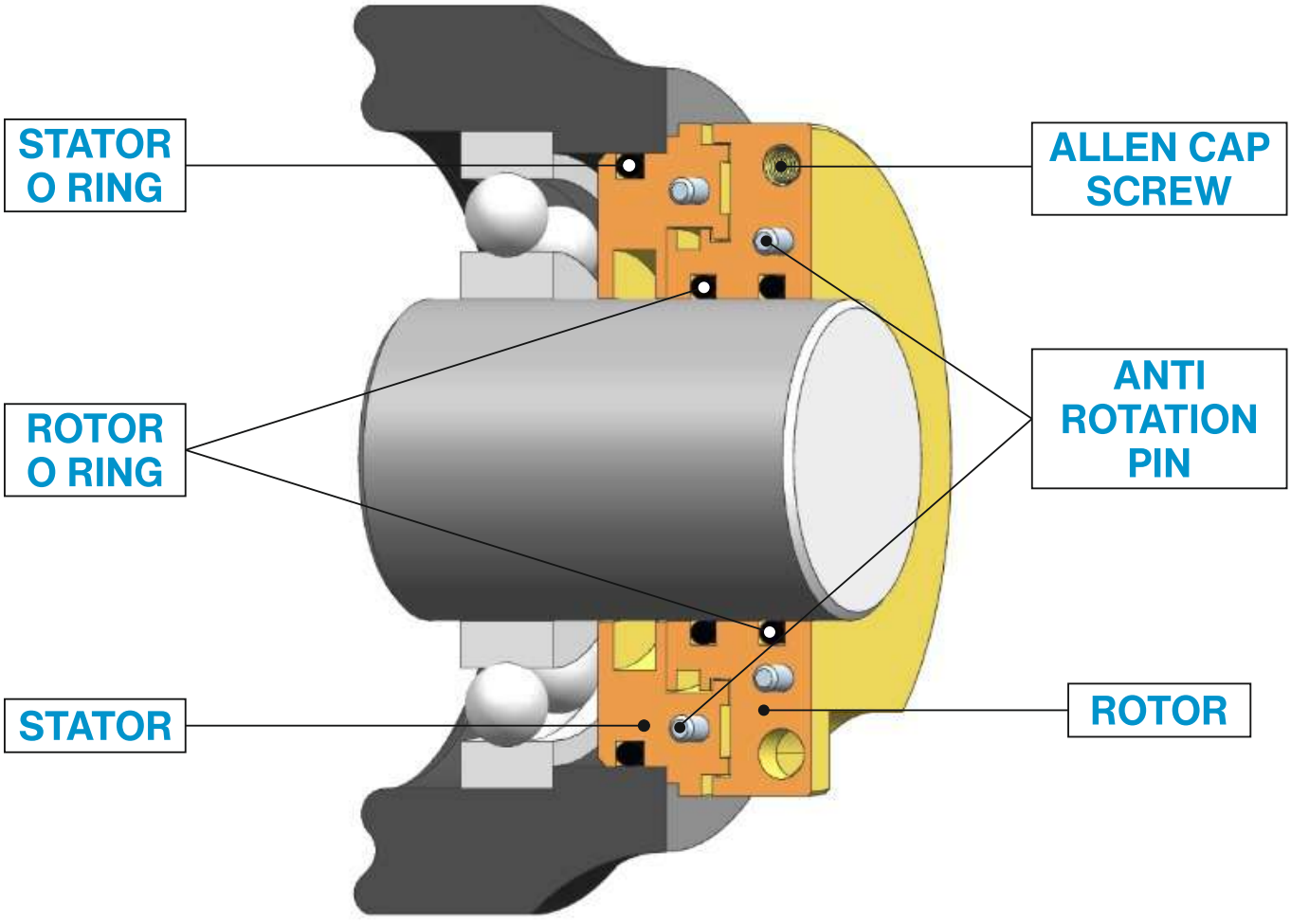
Pumps, Motors, Gear Box, Mixers, Turbines, Blowers and Customize Equipments.

Features & Benefits:

Excellent Labyrinth Style Sealing Technology
Non-contact, Non-wearing design
Maintenance free - No routine maintenance required
Suitable for old or worn shaft
Prevent ingress of water, dust, contaminants and moisture
Extend bearing and lubricant life significantly

Certification:

SuperSplit SPB-06 model is available with ATEX (ATEX 2014/34/EU) certification, also certified by Ip66



Split Bearing Isolator Installation Instructions

The Supersplit Bearing Isolator Type SPB06 is unitized, any attempt to dissemble the Bearing Isolator will damage it. After making any adjustments to the equipment (pump, gear box, turbine, etc) confirm that the Bearing Isolator is still properly installed.

Prior to installation

1. Warning! Disconnect all system power and follow all standard safety procedures.
2. Remove sharp edges on the shaft and bore where the seal will be installed. Make sure there are proper lead-in edges.
3. Clean all foreign debris from the bore and shaft area.

Installation

1. Pre-lubricate the O-rings with a system compatible lubricant.

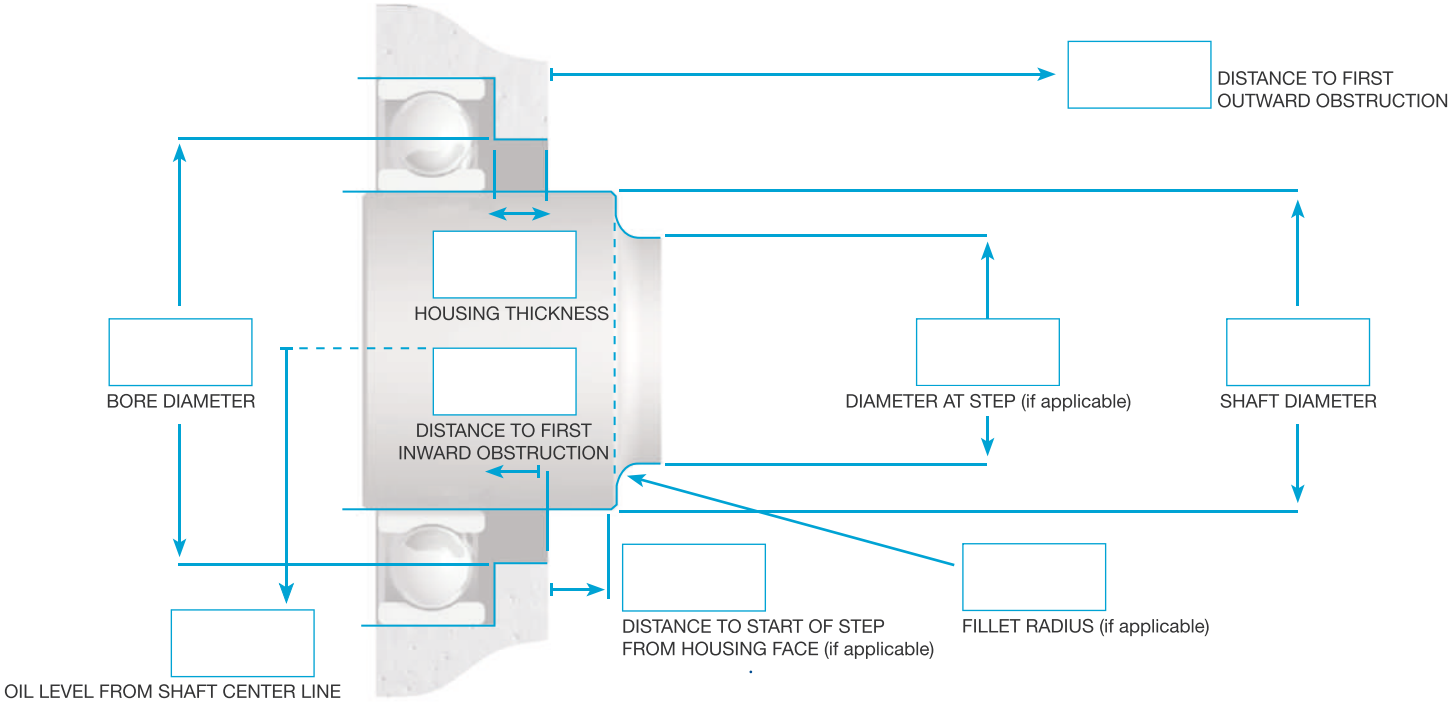
2. Position the shorter O-ring on the shaft and place the two halves of the rotor, with the flange sides facing away from the bore, over the O-ring so the O-ring fits into the groove (It might help to first paste the O-ring to the shaft with alight coat of grease). Then place the screws in the rotor halves and screw the two halves together loosely. Do not tighten the screws.

3. Place the two halves of the stator over the rotor at the bore side so they interlock with the rotor. Rotate the stator until the drain port is at the six o'clock position. While holding the parts together by hand, wrap the long O-ring into the stator O-ring groove with the ends of the O-ring meeting at the 12 o'clock position. Gently slide the seal into the bore while keeping the O ring in the groove.

4. Gently tighten the screws; stopping a few times to make sure that the shaft can turn freely. Tighten the screws so the halves of the rotor meet. Do not turn the screws more than one eighth turn beyond where the halves meet. DO NOT OVER-TIGHTEN THE SCREWS. After making any adjustments to the equipment, confirm that the seal is still properly installed.

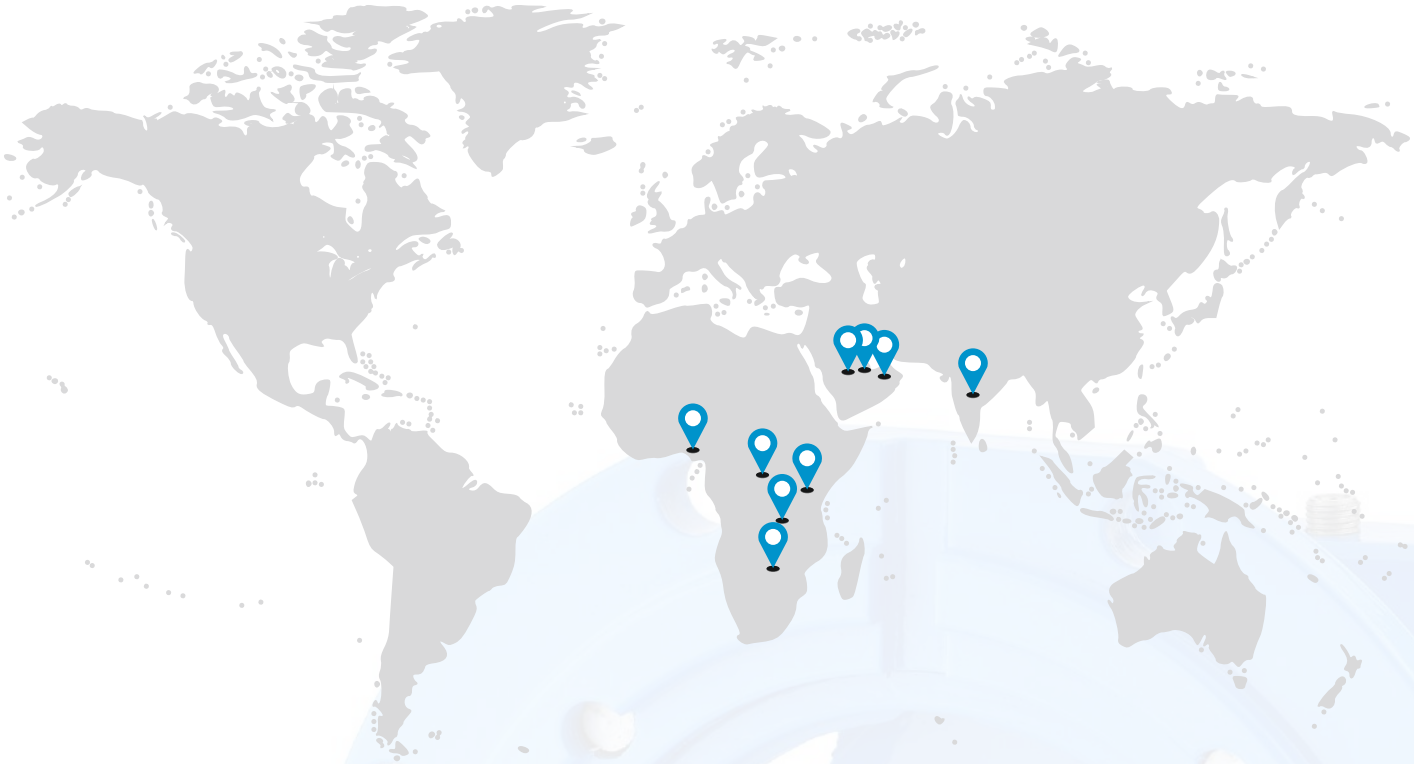
   NOTE: Do Not Use a Metallic Hammer or Punch as this may damage the seal.

BEARING ISOLATOR REQUEST FOR QUOTE



Data needed for quote:

Application:	Pump ○ Motor ○ Other ○
Current Sealing Solution:	lip ○ labyrinth ○ Other ○
Lube:	oil ○ grease ○ oil mist ○ Force oil systems ○
Shaft Position:	Horizontal ○ Vertical up ○ Vertical down ○
Bearing Type:	Ball ○ Sleeve ○ Roller ○
Mounting:	Standard Press-fit ○ Flange ○ Other ○
First Obstruction:	Step on Shaft ○ Keyway ○ Other ○
Axial Movement:	
Shaft Speed: (RPM)	
Temperature at Seal Location:	
Housing Type:	Solid ○ Split ○
Seal Type:	Solid ○ Split ○
Seal Material:	Bronze ○ Stainless ○ Other ○



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SUPERPROOF™

Innovative Sealing Solutions

SUPERPROOF SEALS ENGINEERING PVT. LTD.

Manufacturer of Mechanical Seals, Seal Support Systems & Bearing Isolators

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ATEX 2014/34/EU

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ISO 45001 20116203009425