



# Bearing Isolator

**PERMANENT BEARING PROTECTION**

# INCREASE THE RELIABILITY OF YOUR ROTATING EQUIPMENT

## THE IMPORTANCE OF BEARING PROTECTION

As a leading cause of equipment downtime and lost production, bearing failure affects rotating equipment reliability in almost every industry. While there are many factors that contribute to failed bearings, over half are caused by lubrication loss and contaminants, such as moisture or particulate entering the bearing housing.

Manufacturers and users of rotating equipment continue to place an increased emphasis on bearing protection as a means of improving the overall reliability of their rotating equipment.

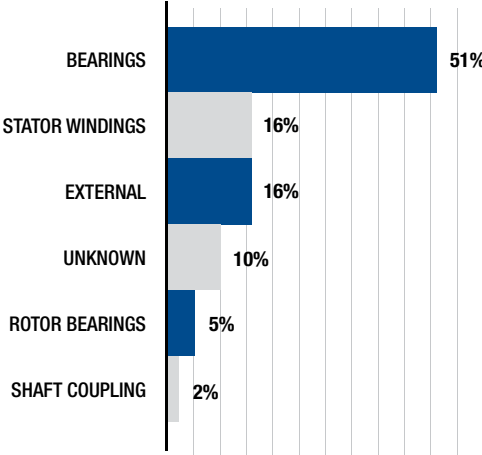
## THE HIGH COST OF CONTACT SEALS

Contact seals, such as commonly used lip seals, rely on mechanical contact as a means of sealing the bearing housing against lubrication loss and contamination.

All contact seals have a finite life expectancy, eventually wearing at the point of contact or grooving the shaft. As a result, they no longer effectively seal the bearing enclosure. This short and unpredictable service life makes contact seals inadequate. Rotating equipment becomes unreliable, and catastrophic failure due to bearing degradation is common.

To eliminate seal failure and increase equipment reliability, contact seals need to be replaced with a permanent solution.

### LEADING CAUSES OF MOTOR FAILURE



EASA: IEEE DATA

BEARING PROTECTION TECHNOLOGIES					
	INPRO/SEAL BEARING ISOLATORS	"OTHER" BEARING ISOLATORS	LABYRINTH SEALS	GAP SEALS	LIP SEALS
CONTACT SEAL					✓
NON-CONTACT SEAL	✓	✓	✓	✓	
PROTECTS AGAINST BOTH LUBRICATION LOSS & CONTAMINATION INGRESS	✓	✓			
PERMANENT NON-WEARING DESIGN	✓			✓	
STANDARD SAME DAY SHIPMENTS	✓				✓
CUSTOM ENGINEERED	✓				
ZERO ENERGY CONSUMPTION	✓		✓	✓	
SPLITS AVAILABLE	✓	✓	✓		



**SAME-DAY  
SHIPMENTS  
AVAILABLE**

## THE INPRO/SEAL SOLUTION

As the inventor of the original Bearing Isolator, Inpro/Seal® has delivered proven permanent bearing protection for rotating equipment for more than 45 years.

The Inpro/Seal Bearing Isolator is a non-contacting, permanent bearing seal consisting of a unitized stator and rotor. Its patented design forms a compound labyrinth seal with no wearing parts – ensuring permanent equipment protection against both lubrication leakage and contamination ingress.

### Lubrication Retention

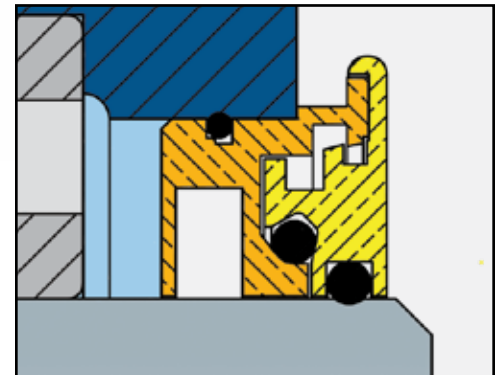
For grease or non-flooded oil applications, lubricant is captured in the inner portion of the labyrinth and flows back to the bearing housing. For flooded oil applications, magnetic designs are used to hold back pressure and return oil to the system.

### Contamination Protection

Inpro/Seal Bearing Isolators are IP66 rated, guaranteeing superior protection against contamination ingress against water and dust.

**The only choice for permanent bearing protection:**

# INPRO/SEAL BEARING ISOLATORS



*The Inpro/Seal VB45-S Bearing Isolator is the standard design for permanent bearing protection.*



## Pumps & Motors

Bearings are one of the most critical components of pumps and motors and are designed to operate for many years, yet they consistently fail prematurely due to lubrication loss and contamination ingress. Inpro/Seal® Bearing Isolators employ multiple designs to provide permanent bearing protection on pumps and motors - increasing reliability and maximizing uptime.

**Grease Lubricated Equipment:** The mini66 Bearing Isolator is the proven solution for grease lubricated applications. Its unique design is IP66 rated at a 0.375" (9.53 mm) overall length, making it the most compact Bearing Isolator available offering permanent protection against bearing failure.

**Oil Lubricated Equipment:** The VB45-S Bearing Isolator is the standard on oil lubricated applications. Utilizing the VBXX® Interface and VBX® Ring for contamination protection and a large D-Groove for oil retention, this exclusive design is IP66 rated at a 0.625" (15.88mm) overall length.

**Oil Mist Lubricated Equipment:** The VB45-U or VBMag™ Bearing Isolators are perfect sealing solutions for oil mist lubricated applications. These innovative designs are IP66 rated, achieving zero leakage in oil mist environments.

For severe environments, multiple robust design options are available to provide permanent bearing protection in the most challenging conditions.



*Inpro/Seal Bearing Isolators provide permanent bearing protection for a majority of pumps and motors.*

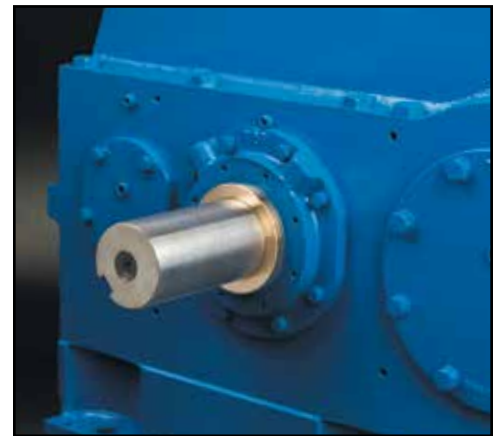


# Gearboxes

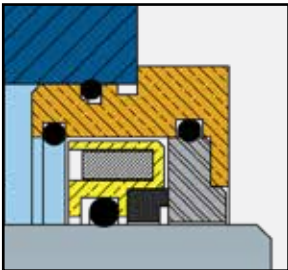
Gearboxes are challenging to seal due to their unique design configurations and lubrication environments, causing them to commonly suffer from lubrication leakage. Inpro/Seal® Bearing Isolators are custom engineered to increase gearbox reliability and decrease maintenance costs by permanently protecting against lubrication loss and contamination ingress.

**For oil levels above the shaft (flooded):** The VBMag™ Bearing Isolators utilize magnetic force to provide maximum bearing protection in flooded bearing conditions. Its proprietary design consists of magnetically loaded faces that eliminate lubrication leakage and contamination ingress and close-tolerance lapping to extend seal life.

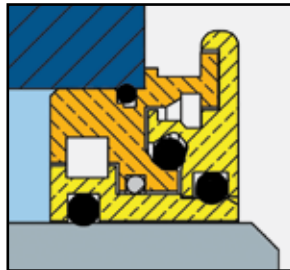
**For oil levels below the shaft (non-flooded):** The robust VB45-U Bearing Isolator provides permanent protection against both oil and grease lubrication loss and delivers premium contamination protection. With a unitized construction, the VB45-U Bearing Isolator accommodates extreme amounts of axial movement.



There are multiple Inpro/Seal Bearing Isolator designs available to accommodate the large variety of gearbox designs.



VBMag



VB45-U



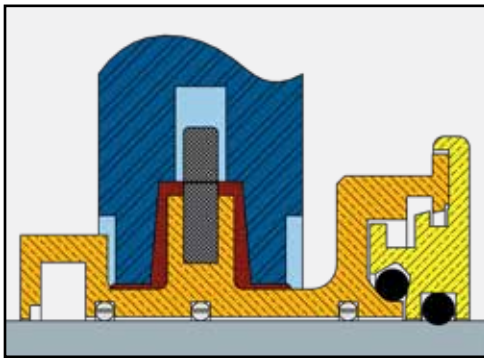
# Pillow Blocks

Pillow block bearings are an important component to the rotating equipment process, supporting shafts in multiple applications throughout a manufacturing facility. Designed to operate for many years, pillow block bearings typically fail from contamination entering the bearing housing or lubrication escaping – leading to reduced equipment life and increased maintenance costs.

The unique Inpro/Seal® VB45-PB Bearing Isolator fits directly into the LER groove of the pillow block, utilizing an anti-rotation pin to keep the stator from spinning with the shaft. To accommodate for misalignment, integral skates are used to align the seal precisely to the shaft and not the housing.



*Inpro/Seal Pillow Block Bearing Isolators fit directly in the pillow block, providing permanent bearing protection with no hassles.*



*The VB45-PB Bearing Isolator is specifically designed to fit pillow block applications.*



## Specialty Designs

With more than 40 years of Bearing Isolator design experience, Inpro/Seal® has developed a product portfolio that includes many specialty designs for specific applications and operating environments. Some common specialty designs include:

**Sleeve Bearing Motor-** The Sleeve Bearing Motor Bearing Isolator permanently protects the motor windings from oil contamination due to windage as well as protect the bearings from external contamination.

**Paper Machine Roll (PMR)-** PMR Bearing Isolators are designed for wet and dry end paper machine rolls to prevent catastrophic bearing failure and minimize unscheduled downtime.

**Steam Turbine-** The Hi-Temp Steam Turbine Bearing Isolator will easily accommodate temperatures up to 1000°F (537°C) and utilizes a deflector rotor and VBXX® interface to permanently protect the bearings from steam leakage.

**And many more...**



*Inpro/Seal Hi-Temp Bearing Isolators permanently protect against steam ingress and lubrication loss.*



# THE INPRO/SEAL ADVANTAGE

## GUARANTEED PERFORMANCE

Inpro/Seal® is committed to delivering innovative technology and superior customer support...standard with every solution.

Inpro/Seal Bearing Isolators are backed by a performance guarantee. See our website for complete details.



## UNMATCHED CUSTOMER SERVICE

Inpro/Seal's responsive global sales network is committed to making sure you have the right technology, right when you need it. We know that time is money. That's why we offer same-day shipments on most products, even new and custom designs. No matter the application or operating environment, we can deliver a solution designed to protect your equipment.

## EXPERIENCE YOU CAN TRUST

Inpro/Seal, the leader in permanent bearing protection, has been maximizing uptime on rotating equipment for 40 years. Known as the trusted source of Bearing Isolator technology, we have installed millions of Bearing Isolators on applications worldwide.

## READY TO GET STARTED?

Visit [www.inpro-seal.com](http://www.inpro-seal.com) to contact your local Inpro/Seal representative or submit an inquiry.



**INPRO/SEAL®**



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