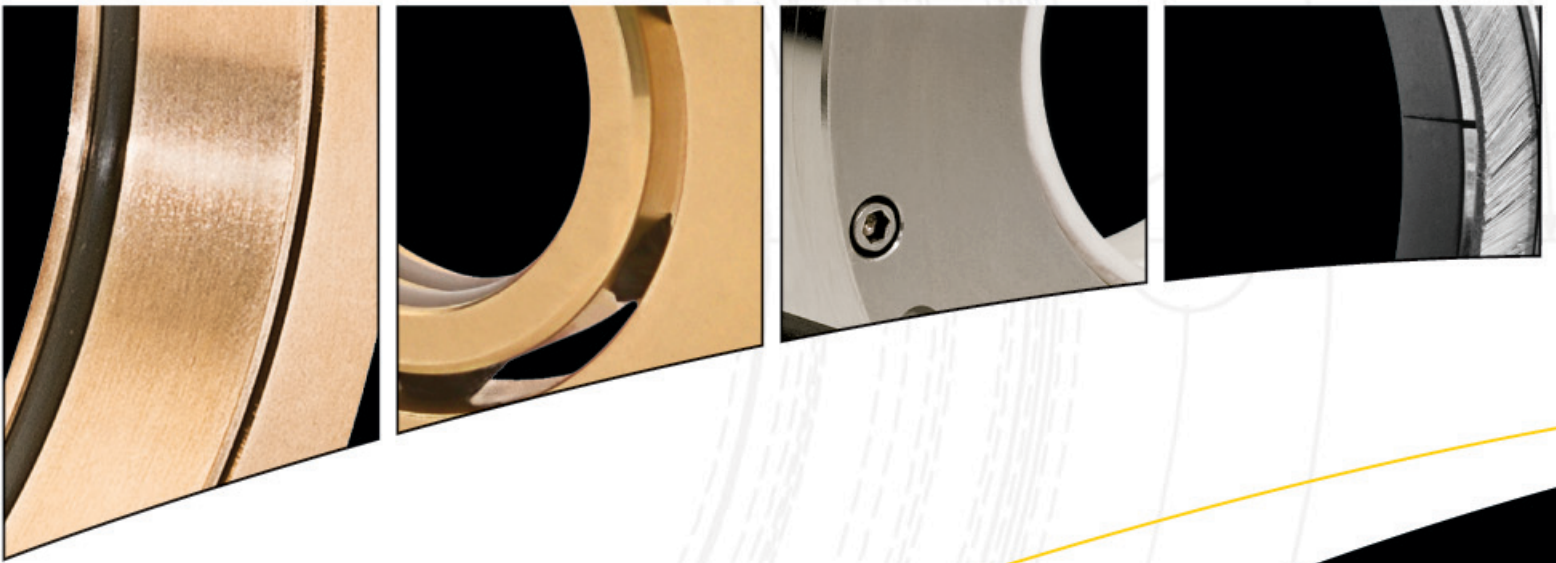


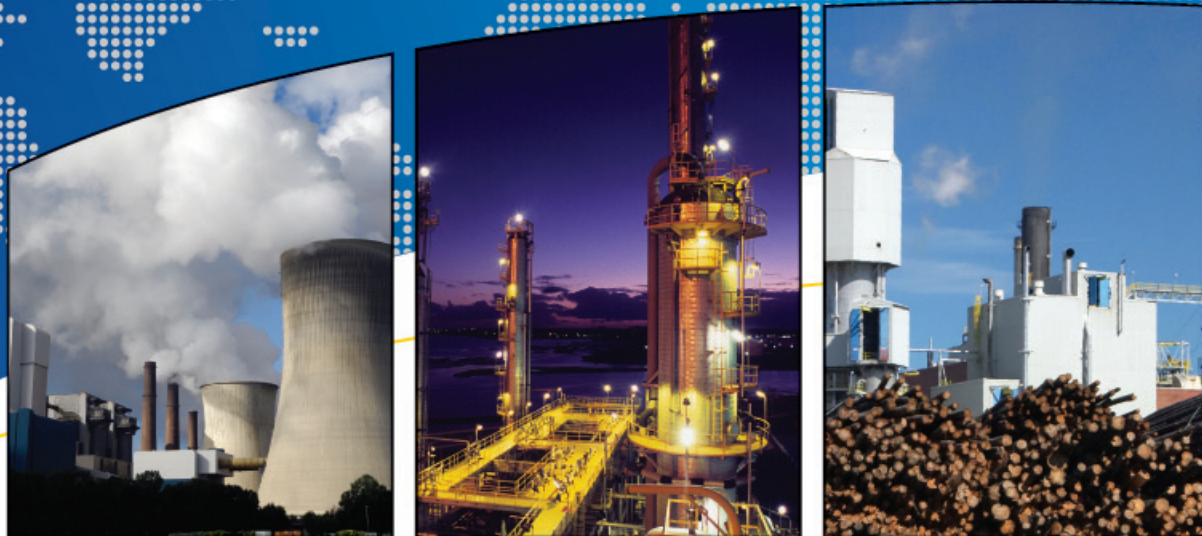
## **CUSTOM ENGINEERED BEARING PROTECTION AND SHAFT SEALS**



**INPRO/SEAL<sup>®</sup>**

A Waukesha Bearings Business





# Increase Reliability; Decrease Total Cost of Operation

*Effective Solutions from Inpro/Seal®*

Inpro/Seal delivers innovative bearing protection and shaft sealing solutions for a variety of rotating equipment in the chemical processing, food & beverage, HVAC, mining, oil & gas, power generation, primary metals, processing, and pulp & paper industries. With manufacturing capabilities in North America, Europe and Asia, and a global sales network, Inpro/Seal provides responsive, localized support to customers worldwide.

Inpro/Seal technology increases the reliability of applications and provides real cost savings by improving mean time between repair (MTBR). Our distinct product line offers permanent solutions to many of the costly maintenance problems that disrupt normal production. Inpro/Seal products are custom engineered to fit your exact requirements for optimized performance in your specific application.

For more than 40 years, Inpro/Seal has combined extensive application experience and field testing with a robust development process to create the right solutions for our customers. As part of Waukesha Bearings Corporation™, an operating company of Dover (NYSE:DOV), we are dedicated to providing customers with proven application solutions through operational excellence, superior technology and unmatched customer support.



Inpro/Seal's outstanding customer service and streamlined production process allow for same-day shipments on most products, including new designs. All of our products are manufactured according to quality standards certified to ISO 9001.





**SAME-DAY  
SHIPMENTS  
AVAILABLE**

## **Bearing Isolator**

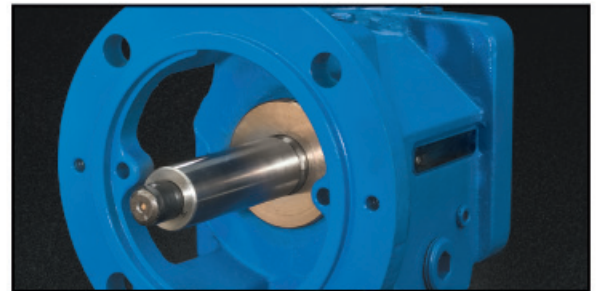
### *Permanent Bearing Protection*

The inventor of the original Bearing Isolator, Inpro/Seal continues to be the leader in Bearing Isolator technology, with unmatched product innovation and field experience.

The Inpro/Seal Bearing Isolator is a compound labyrinth seal that permanently protects against contamination ingress and lubrication loss to extend bearing life. The unique non-contacting design is maintenance free and has no wearing parts, doubling the lifetime of your rotating equipment.

The Inpro/Seal Bearing Isolator can be installed in pumps, motors, gearboxes, pillow blocks, steam turbines, sleeve-bearing motors, paper machine rolls, and many other types of rotating equipment.

No matter the size or complexity of your application, Inpro/Seal can design a Bearing Isolator to fit your specifications. Our innovative designs include the VB45-S™, VB45-U™, mini66™, Double Runner and many more. Bearing Isolators can be split for ease of installation and shipped same-day. All Inpro/Seal Bearing Isolators come with a performance guarantee.



Inpro/Seal Bearing Isolators are installed on motors, pumps, pillow blocks, gearboxes and many other types of rotating equipment.





**SAME-DAY  
SHIPMENTS  
AVAILABLE**

# Smart Shaft Grounding™

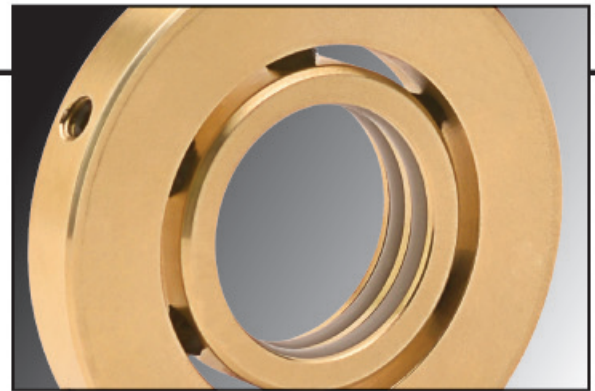
## *The Next Generation of Shaft Grounding*

Stray shaft currents induced by Variable Frequency Drives (VFDs) can discharge through a motor's bearings and the bearings of coupled equipment, resulting in fluting on the bearing race and causing premature bearing failure. Inpro/Seal Smart Shaft Grounding, featuring the Smart™ CDR®, Smart MGS® and Smart Ground Monitor™, combines proven shaft grounding technology with innovative new features to protect the bearings of VFD-driven equipment.

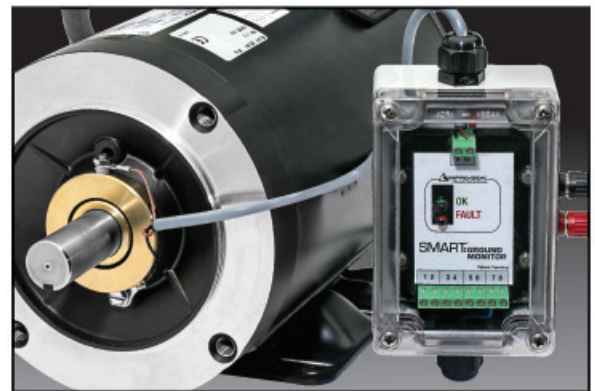
The Smart CDR uses proprietary conductive filaments to draw stray shaft currents safely away from the bearings to ground. It's unique design utilizes a conductive shaft sleeve to maintain effective conductivity between filaments and shaft surface. For severe-duty applications, the Smart MGS combines Smart CDR technology with the patented VBXX® Bearing Isolator to provide complete bearing protection against shaft currents, contamination ingress and lubrication loss.

To ensure maximum protection, the Smart Ground Monitor works with the Smart CDR or Smart MGS to provide instant feedback on shaft grounding performance.

Inpro/Seal Smart Shaft Grounding maximizes equipment reliability, reduces costly maintenance and minimizes unscheduled downtime.



The Inpro/Seal Smart CDR and Smart MGS use proprietary conductive filaments to divert harmful stray shaft currents away from the bearings to ground.



The Smart CDR™ connected to the Smart Ground Monitor™ provides users with instant feedback on shaft grounding performance.

# SMART™

Inpro/Seal Smart Shaft Grounding provides solutions to problems that limit other shaft grounding methods.





# AM Solutions™

## Complete Shaft Seals

Inpro/Seal AM Solutions permanent shaft sealing products eliminate product leakage and contamination – reducing costs, downtime and environmental concerns.

Using small amounts of air, or inert gas, AM Solutions create a positive purge along the shaft forming a barrier to eliminate leakage and keep contaminants out of the process stream.

AM Solutions are custom engineered to provide an effective shaft seal in the most challenging applications, including mixers, blenders, agitators, extruders, screw conveyors and other product-handling equipment. Shaft movement and angular misalignment challenge traditional sealing methods. Only AM Solutions can fully articulate to accommodate radial run-out, axial movement and angular shaft misalignment simultaneously. Designs can also be split for easy installation and reduced downtime.

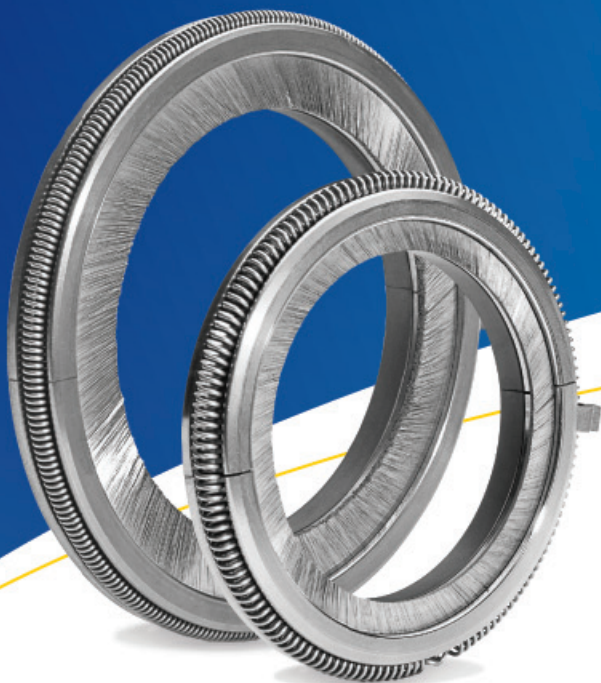
AM Solutions' unique non-contacting designs have no wearing parts and are intended to last the lifetime of your equipment.



A stainless steel Air Mizer seal installed on a side entry agitator eliminates product waste and contamination.



Inpro/Seal AM Solutions eliminate product leakage and contamination on a variety of process equipment.



## Sentinel® FBS

### *Steam Turbine Floating Brush Seal*

The Sentinel Floating Brush Seal (FBS) enhances steam turbine performance by providing an effective seal to stop costly steam leakage.

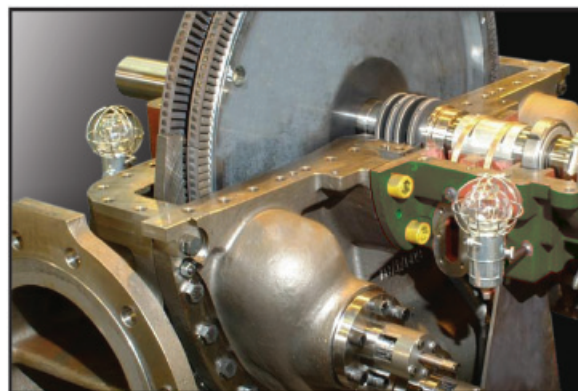
Carbon rings, the traditional sealing method in process steam turbines, are weak, brittle and wear quickly, rendering them ineffective within a short period of time.

Designed as a drop-in replacement for carbon rings, the Sentinel FBS uses a metallic brush as the primary seal while a carbon element delivers face sealing in the casing. This innovative technology delivers a predictable leakage rate over an extended period of time.

Three times more effective than carbon rings, the Inpro/Seal Sentinel FBS reduces maintenance costs, downtime and steam loss with increased performance.

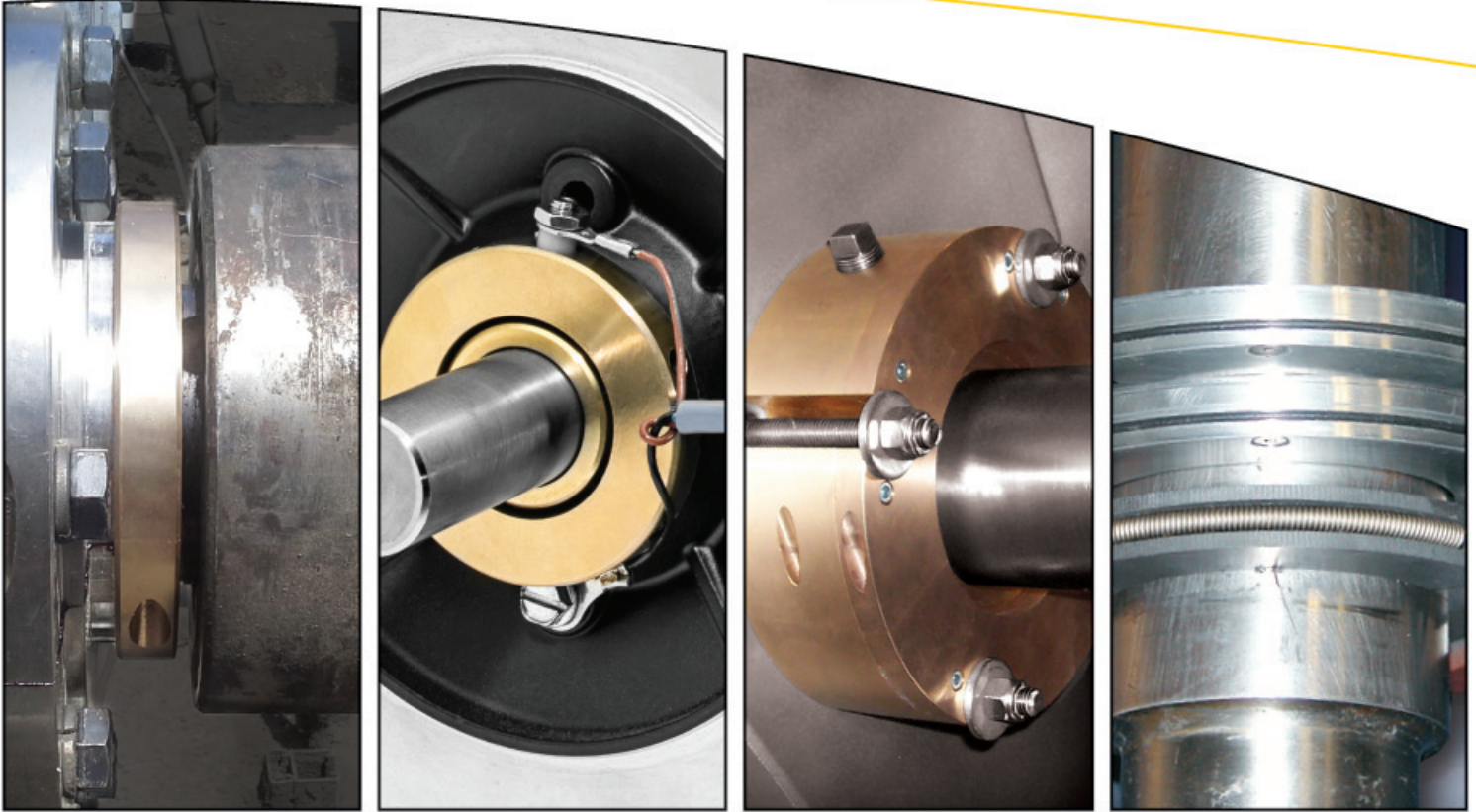


Steam leakage on process steam turbines increases steam costs and leads to lower efficiency and steam turbine performance.



Typically, two Sentinel FBSs are installed in each gland box to provide superior sealing while protecting downstream carbon rings from contamination and high pressure.





**Inpro/Seal is a world leader in the design and manufacture of permanent bearing protection and shaft seals for rotating equipment.**



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EXPERT ENGINEERING. PROVEN RESULTS.<sup>®</sup>

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