

# dm

SOLUTIONS



**INPRO/SEAL<sup>®</sup>**

A Waukesha Bearings Business

# THE COMPLETE SEALING SOLUTION

## Losing More than Product

Product handling applications like mixers, blenders, agitators and extruders often suffer from product leakage due to unreliable sealing. In these applications, product migrates down the shaft, through the sealing device to atmosphere. Lost product leads to higher production costs, increased maintenance, environmental concerns and unsafe working conditions.

The bottom line...product loss is more than just lost product.



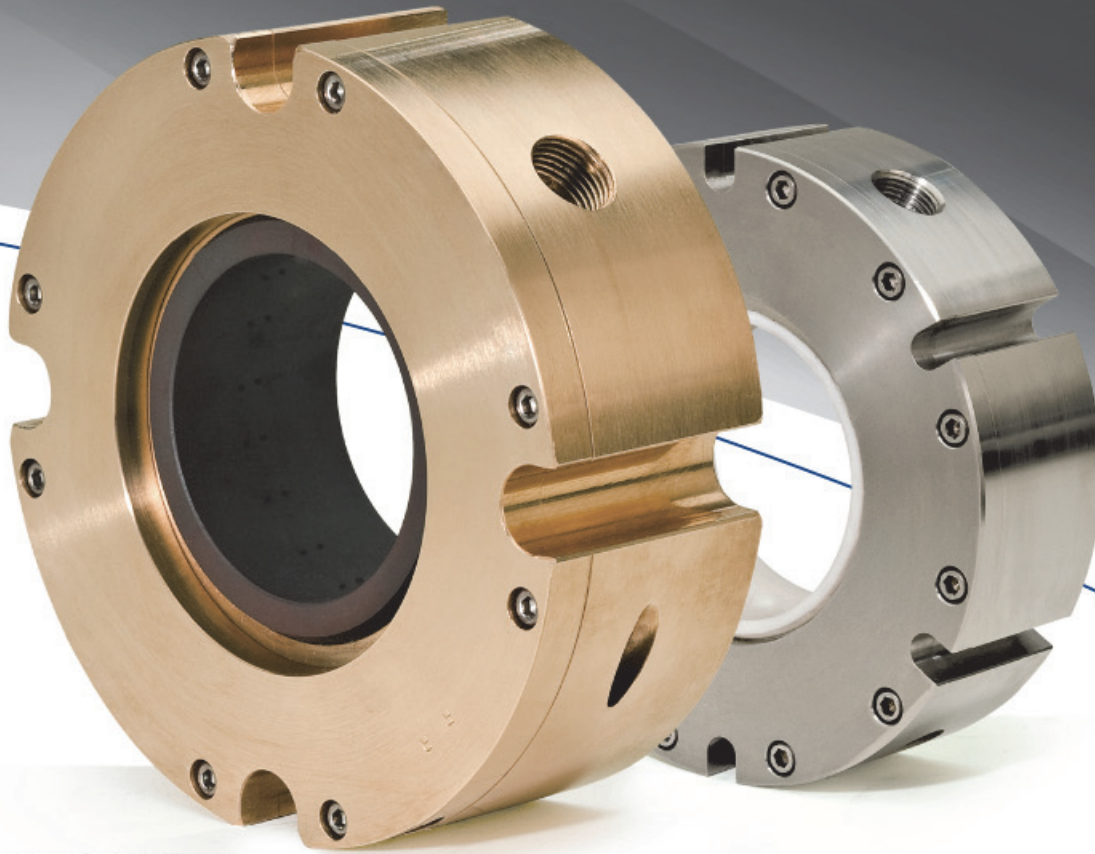
Product loss leads to higher production costs, increased maintenance, downtime, and environmental concerns.

## The High Cost of Contact Seals

Conventional contact sealing methods, such as mechanical packing, mechanical seals, and lip seals, are found in a wide variety of process applications. All of these methods rely on dynamic mechanical contact to create a seal. Shaft movement and misalignment challenge contact sealing methods due to their rigid designs.

While contact seals may work well initially, over time they either wear out or groove the shaft at the point of contact; once this happens, the seal will begin to leak and need to be replaced. The short and unpredictable service life of contact seals makes them inadequate methods of reliably sealing against product loss.

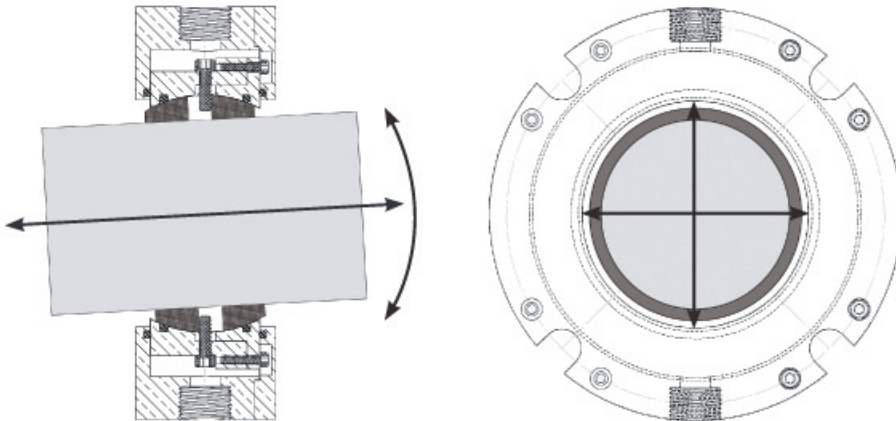
SHAFT SEALING TECHNOLOGIES					
	AM SOLUTIONS	SPRING SEALS	MECHANICAL SEALS	MECHANICAL PACKING	LIP SEALS
NON-CONTACT SEAL	✓	✓			
SEALS POWDERS	✓	✓		✓	
SEALS LIQUIDS	✓	✓	✓	✓	✓
SEALS BULK SOLIDS	✓	✓		✓	
ACCOMMODATES ANGULAR MISALIGNMENT	✓				
ACCOMODATES RADIAL RUN-OUT	✓	✓			
ACCOMODATES AXIAL MOVEMENT	✓				
MAINTENANCE FREE	✓				
CUSTOM ENGINEERED	✓	✓	✓		
PROVEN 5 YEAR+ LIFE EXPECTANCY	✓				



### AM Solutions from Inpro/Seal

Inpro/Seal® AM (Air Mizer®) Solutions™ provide a permanent shaft seal for powders, liquids, slurries, and bulk solids on product applications across a variety of industries. AM Solutions patented technology creates an effective seal by utilizing a positive purge along the shaft— preventing product from escaping into atmosphere and contamination from entering the process.

AM Solutions unique non-wearing designs are maintenance free and constructed to last the lifetime of your equipment. Unlike conventional contact seals, AM Solutions can fully articulate to accommodate radial run-out, axial movement, and angular misalignment simultaneously.



Inpro/Seal AM Solutions are designed to handle extreme conditions including radial run-out, axial movement and angular misalignment.

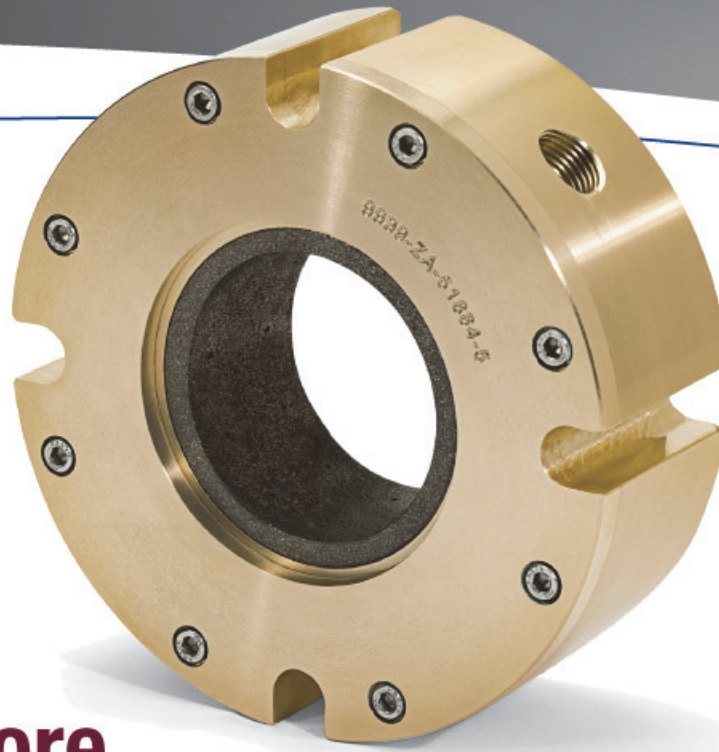


Inpro/Seal AM Solutions provide permanent shaft sealing to product applications.

AM Solutions offer a variety of designs and features to fit your specific applications and operating environments.

These include:

- AM Smooth Bore
- AM Food Grade
- AM Rotor

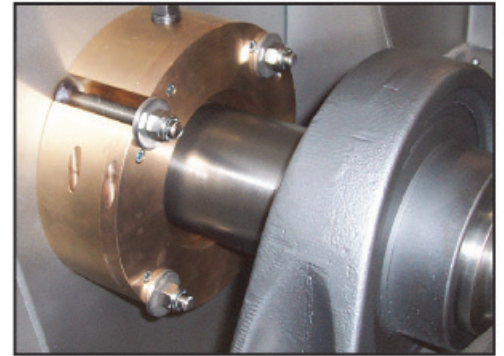


## AM Smooth Bore

The Inpro/Seal AM Smooth Bore is the standard AM Solution design for product applications in general processing industries.

The AM Smooth Bore utilizes the new Opti-Mizer™ throttle to create a positive purge along the shaft that permanently eliminates product loss and contamination. The Opti-Mizer throttle directs small amounts of air, or inert gas, through a precision clearance, pressurizing the area between the throttle and shaft to form a non-contacting seal. The sealing medium is evenly dispersed to maintain concentricity between the shaft and throttle for optimum equipment reliability.

Designed to last the lifetime of your equipment, the unique design of the AM Smooth Bore is maintenance free with no wearing parts. The patented throttle/stator interface fully articulates to accommodate radial run-out, axial movement, and angular misalignment simultaneously.



The AM Smooth Bore permanently eliminates product loss and contamination on processing applications.

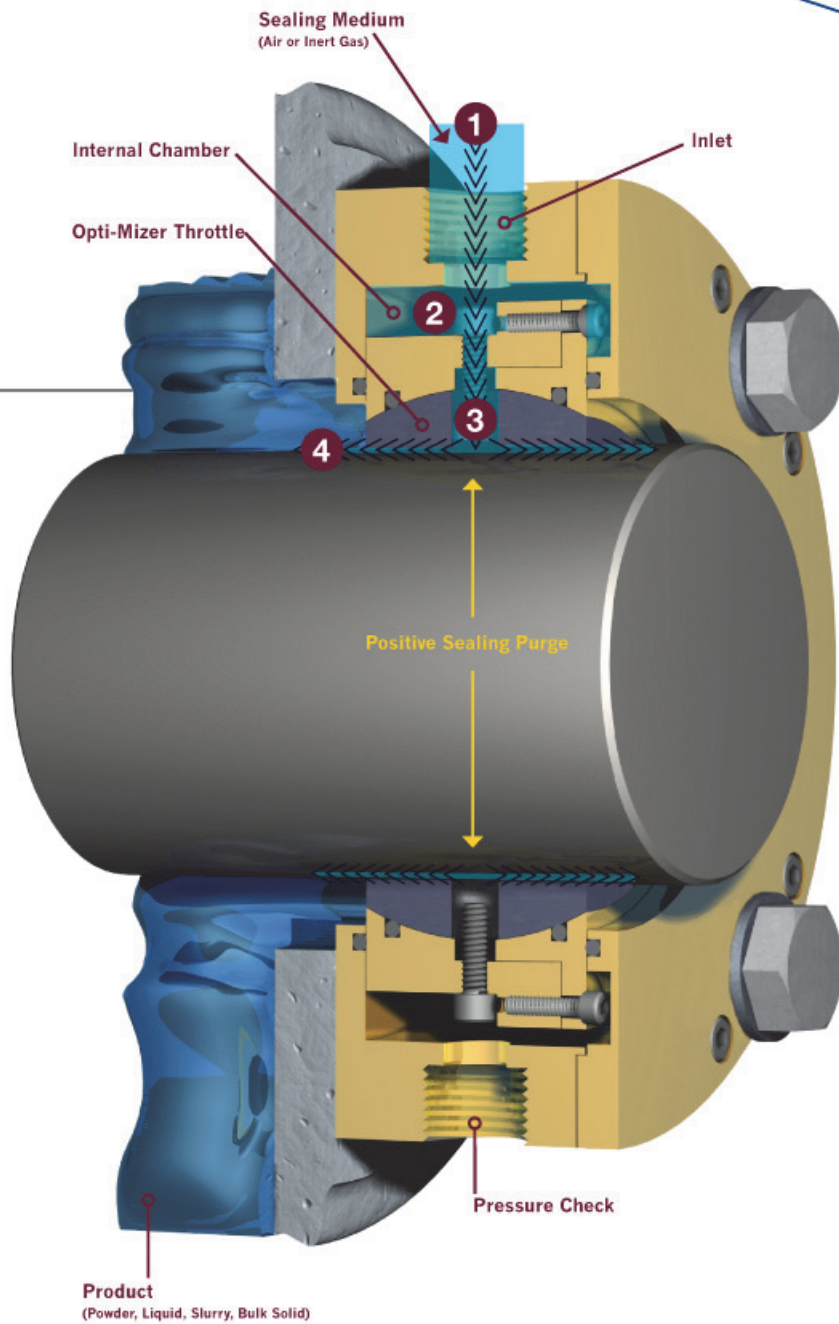
### AM Smooth Bore Designs

**AM Smooth Bore**- standard design for general processing applications and environments

**AM Smooth Bore DS**- installed on applications with a tight clearance between multiple shafts

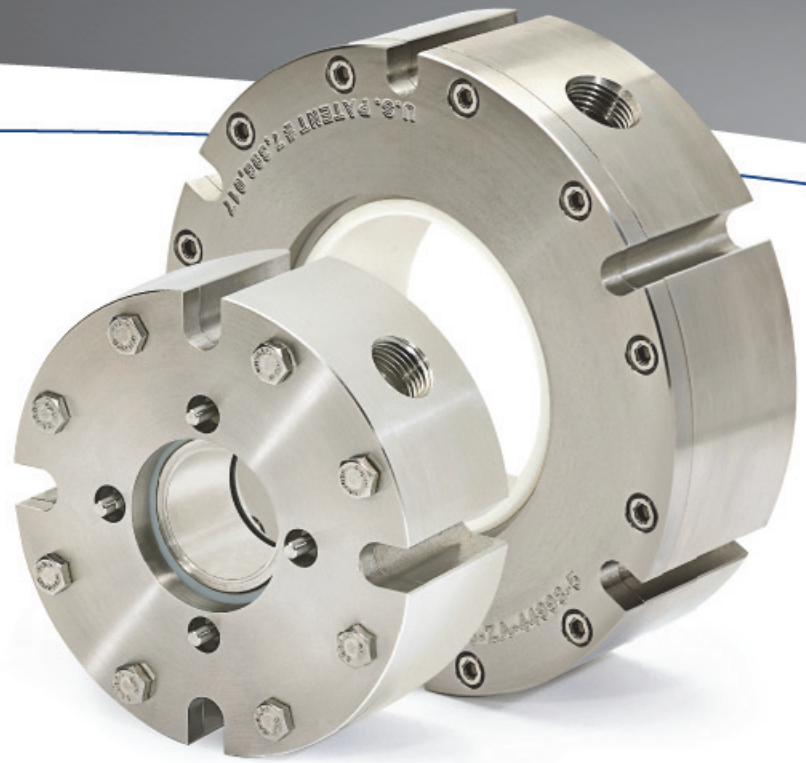
**AM Smooth Bore ATEX**- ATEX certified design for applications in explosive environments

**AM Smooth Bore HT**- utilizes special materials to accommodate temperatures exceeding 232°C [450°F]



### AM Smooth Bore: How It Works

- 1-** Air, or inert gas, enters the AM Smooth Bore through the inlet and into the Internal Chamber.
- 2-** Air is pressurized in the Internal Chamber and directed towards the Opti-Mizer throttle.
- 3-** The Opti-Mizer throttle's unique design efficiently distributes the air evenly around the circumference of the shaft, creating a positive purge.
- 4-** The tight clearance between the Opti-Mizer throttle and shaft achieves a high pressure barrier that prevents product from escaping into atmosphere and keeps contaminants out of the process.



# AM Food Grade

The AM Food Grade is a permanent shaft seal constructed of FDA approved materials installed on product applications within the food processing industry.

The AM Food Grade seals against product loss and contamination by directing small amounts of air, or inert gas, through a precision clearance between the Opti-Mizer™ throttle and the shaft, pressurizing the clearance. The sealing medium is evenly dispersed to maintain concentricity between the shaft and throttle for optimum equipment reliability. Its unique design is maintenance free with no wearing parts and the patented throttle design fully articulates to accommodate radial run-out, axial movement, and angular misalignment simultaneously.



The AM Food Grade is a permanent shaft seal made of food grade materials for applications in the food processing industry.

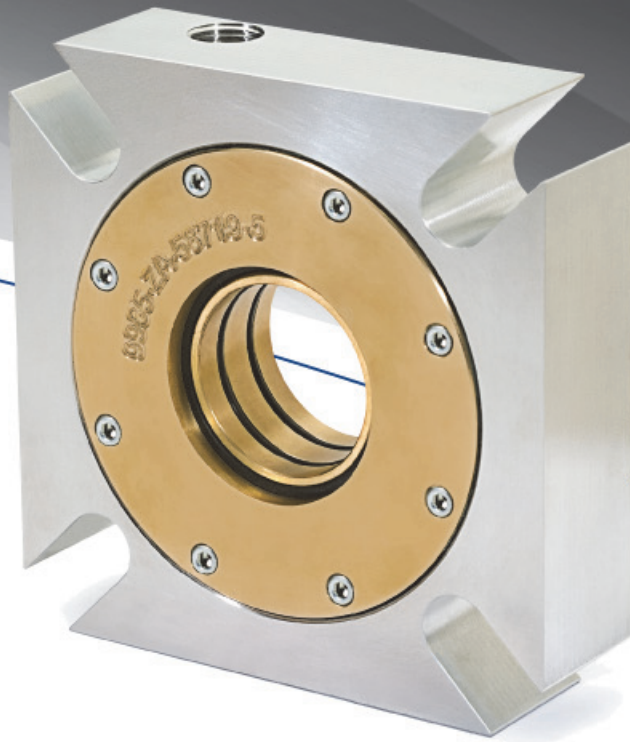
## AM Food Grade Designs

**AM Food Grade-** standard design constructed of food grade materials for food processing applications and environments

**AM Food Grade USDA-** constructed of 3A certified materials, meeting USDA construction standards for use specifically in meat, milk, and dairy industries

**AM Food Grade DS-** installed on applications with a tight clearance between multiple shafts

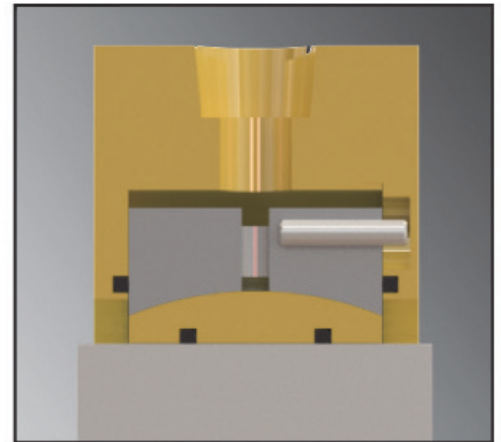
**AM Food Grade ATEX-** ATEX certified design for applications in explosive environments like sugar and flour



# AM Rotor

The AM Rotor is the original AM Solution design for use on applications with no axial movement.

The AM Rotor is a non-contacting shaft seal that permanently protects against product loss and contamination. It's unique design utilizes a throttle that grips the shaft and rotates within the seal. Air, or inert gas, is used to create a positive purge that flows between the throttle and stator, pressurizing the clearance and directing the sealing medium towards the product and atmosphere. The throttle fully articulates to accommodate radial run-out and angular misalignment simultaneously. This design is commonly used on multiple applications including screw conveyors and rotary feed valves.



AM Rotor uses a throttle that grips the shaft and rotates within the seal.

## AM Rotor Designs

**AM Rotor**- design for applications with no axial movement

**AM Rotor CEMA**- designed for use on CEMA screw conveyors with six standard options that correspond to CEMA size specifications

# THE INPRO/SEAL ADVANTAGE

## Guaranteed Performance

Inpro/Seal® is committed to delivering innovative technology and superior customer support... standard with every solution. Inpro/Seal AM Solutions 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 for your product applications, right when you need it. No matter the application or operating environment, we can deliver a custom engineered solution designed to meet your specific needs.

## Experience You Can Trust

Inpro/Seal, the leader in permanent bearing protection and process seals, has been maximizing uptime on rotating equipment for more than 30 years. Our knowledgeable team will help you determine the best AM Solutions shaft seals for your product applications. We've been the trusted source for sealing technology on rotating equipment for more than 30 years and have installed countless complete shaft seals in industries worldwide.

## READY TO GET STARTED?

Visit [www.inpro-seal.com](http://www.inpro-seal.com) to contact your local Inpro/Seal representative or request a quote.



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