

## Bearing Isolator Family

Garlock KLOZURE®

The best alternative to Radial Lip Seals



# Bearing Isolator Family

## Garlock KLOZURE® Bearing Isolators

### COMMON INDUSTRY CHALLENGES

- » **Premature bearing damage** – Bearing damage shorten Mean Time Between Failure (MTBF). Traditional lip seal could not offer the performance and service life that is required to protect bearings
- » **Lubrication contamination and leakage** – moisture, dust, dirt are just example of contaminants that could enter the bearing houses and contaminate lubrication while leaking seal is a safety hazard to employees and the environment.
- » **Different lubrication system** – Lubrication system has evolved; splash, submerged, force feed, oil mist, air-oil and etc. Each has special seal requirement
- » **Costly shaft repair** – Shaft grooving from using lip seal are costly to repair and increase Mean Time to Repair (MTTR)
- » **Installation issues** – Lip seal for example is a unidirectional seal. Training is required for installation as well as selecting the right material/styles to use

### FEATURES

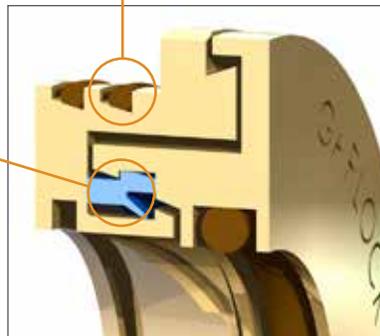
- » Labyrinth based technology - Non-contacting seals with no wear components for long lasting service life and reduce drag on shaft to reduce power consumption
- » Unitized design – Bidirectional sealing designed to both exclude contaminant and retain lubrication
- » Fluoroelastomer o-ring fit – Allow easy installation without an arbor press or other tools while providing static secondary seal that do not score the shaft
- » Metallic and non-metallic design – different material for compliance with industry standard. API-610, IEEE841, NEMA MG-1, FDA, MSHA
- » Wide variety of sizes, configuration and customizable – Machined part with no tooling requirement for custom fit on equipment

### TYPICAL APPLICATIONS

- » Pump bearing frames
- » Electric motors
- » Gear boxes
- » Split pillow block bearings
- » Fans
- » Turbines (steam)

### GARLOCK PATENTED UNITIZING RING

The patented unitizing ring is a machined component with tight tolerance to maintain the labyrinth; eliminating internal metal-to-metal contact that generate metal shavings that could damage the bearing.



### GARLOCK PATENTED CAM-LOCK DESIGN

The patented Cam-Lock design provides superior retaining force compared to standard bearing isolator designs. This design also allows easy installation by hand, without the need for an arbor press or other tools.

# Bearing Isolator Family

## Bearing Isolator Family

We offer a complete line of high-performance bearing isolators specifically designed and engineered to give you the maximum performance on your rotating equipment.

METALLIC	 <p><b>GUARDIAN®</b></p> <p><b>Key Benefits:</b> Multi-purpose general service seal reduce downtime from equipment failure Bi-directional sealing both ingress and egress protection</p> <p><b>Target Application:</b> Ancillary equipment in dirty, dusty and wet environment. Electric-motor, pump, gearboxes, pillow-block</p> <ul style="list-style-type: none"> <li>» Size ranges from 0.875" (20mm) to 40" (1000mm)</li> <li>» Temperature limit -22°F(-30°C) to 400°F(204°C)</li> <li>» Speed up to 12,000 fpm (60.9m/s)</li> <li>» Meet NEMA MG-1</li> <li>» Surpasses IEEE 841 test standard</li> <li>» Conforms to API 610</li> </ul>
	 <p><b>Micro-Tec® II</b></p> <p><b>Key Benefits:</b> Ability to filter dust and small particulates from entering the bearing chamber by adding a microcellular foam into the labyrinth pathway</p> <p><b>Target Application:</b> Application in/near a heavy airborne contaminant area. Ancillary equipment in mining industry with dusty environment or bakeries with air borne raw material</p> <ul style="list-style-type: none"> <li>» Size ranges from 0.875" (20mm) to 40" (1000mm)</li> <li>» Temperature limit -22°F(-30°C) to 400°F(204°C)</li> <li>» Speed up to 4,500 fpm (22.9m/s)</li> <li>» Meet NEMA MG-1</li> <li>» Surpasses IEEE 841 test standard</li> <li>» Conforms to API 610</li> </ul>
	 <p><b>SGi®</b></p> <p><b>Key Benefits:</b> Integrated Aegis® Shaft Grounding Ring to divert stray shaft current on electric motor driven by VFD. Aegis® Shaft Grounding Ring provides continuous 360° constant connection to the shaft</p> <p><b>Target Application:</b> Electric motor driven by VFD (Variable Frequency Drive) that could introduce electric discharge to the bearing</p> <ul style="list-style-type: none"> <li>» Size ranges from 0.875" (20mm) to 6" (150mm)</li> <li>» Temperature limit -22°F(-30°C) to 400°F(204°C)</li> <li>» Speed up to 12,000 fpm (60.9m/s)</li> </ul>
COMPOSITE	 <p><b>ISO-GARD®</b></p> <p><b>Key Benefits:</b> Glass filled PTFE construction provides great chemical compatibility. Meets FDA requirement</p> <p><b>Target Application:</b> Rotating equipment with chemical wash-down. Example, food and beverage industry</p> <ul style="list-style-type: none"> <li>» Size ranges from 0.875" (20mm) to 6" (150mm)</li> <li>» Temperature limit -22°F(-30°C) to 400°F(204°C)</li> <li>» Speed up to 4,500 fpm (22.9m/s)</li> <li>» Meet NEMA MG-1</li> <li>» Surpasses IEEE 841 test standard</li> <li>» FDA compliant</li> </ul>

\* Specification is based on standard Flanged design

## CAPABILITY, SERVICE & SUPPORT

### Same day and 24hours Turnaround Service Available

We support our customers' needs for emergency by shipping our bearing isolator same day\* or next day.\*

### Plant and Mill Surveys

Understanding how to gain greater productivity while lowering overall costs is a KLOZURE® specialization. On-going assessments are also available to determine the best sealing strategy for each unique plant/facility.

### Customer Training

We partner with our customers to be sure that their on-site knowledge is as comprehensive as possible. Training sessions are available on all key KLOZURE® products, and specialized or custom training sessions can be implemented on an as-needed basis.

### Applications Support

Garlock application engineers are available to ensure customer requirements are translated into the appropriate KLOZURE® product recommendation, maximizing service life.

### Seals & Application Failure Analysis

Forensic analysis of seal failure is critical to our customers. This service is available upon request.

### Engineering Expertise

KLOZURE® innovation extends to the customer's facility with our custom engineering capability. We have successfully re-engineered or customized seals to meet unique industry requirement.

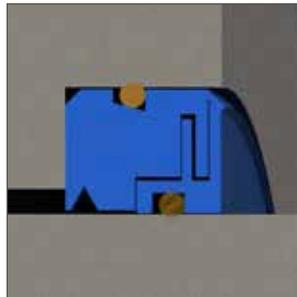
## CONFIGURATIONS

Garlock KLOZURE bearing isolator are offered in various configuration for a perfect fit to your equipment

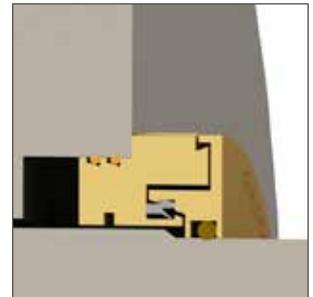
- » Flanged
- » Flangeless
- » Split
- » Surface Mounted
- » Flange Mounted (Bolt-on)
- » Narrow Width
- » Pillow Block (replacing LER)
- » Grease Purge
- » Vertical Mount
- » Step Shaft
- » Custom/Special design



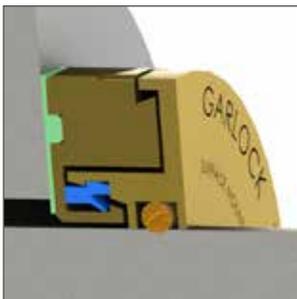
**FLANGED**



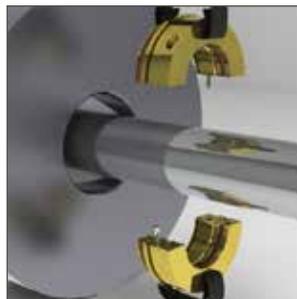
**FLANGELESS**



**STEP-SHAFT**



**SURFACE MOUNT**



**SPLIT**



**PILLOW BLOCK**

\* Order must be placed by 11am EST for same day turnaround and 4pm EST for 24 hours turnaround. Max. of 5 pc with OD of 6" below. Limited to Flange (29602), Flangeless (29619), Narrow Width (29609), Small cross-section (29607) configuration only.

KLZ 2:74 -06\_2015

## GARLOCK

an *EnPro* Industries family of companies

Tel: 1-877-GARLOCK / 315.597.4811

Fax: 800.543.0598 / 315.597.3216

www.garlock.com

Garlock Sealing Technologies

Garlock Rubber Technologies

GPT

Garlock PTY

Garlock do Brasil

Garlock de Canada, LTD

Garlock China

Garlock Singapore

Garlock Germany

Garlock India Private Limited

Garlock de Mexico, S.A. De C.V.

Garlock New Zealand

Garlock Great Britain Limited

Garlock Middle East