



Unique Solutions for Extended Bearing Life



ProTech™

The Full Range of Bearing Isolators

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ProTech™ Technology

The unique ProTech technology has been developed over a number of years to provide total bearing protection by ensuring zero leakage of lubricant to atmosphere and total exclusion of contaminants from the bearing housing. Lip seals are primarily designed to keep lubricants in, and are not always effective at keeping contaminants out. Surveys have shown that even a tiny amount of water or dirt in the lubricant can drastically reduce bearing operating life.



Unique Design

The ProTech bearing isolator is based on a simple, unitized, two-piece design manufactured in chemically resistant PTFE. The ProTech range consists of a complete family of complementary designs that provides outstanding performance for virtually any application. Applications with pressurized, flooded, or sealed bearing housings can now benefit from ProTech Types FS and FN, which feature an internal lip seal, again offering benefits of zero leakage and zero entry of contaminants.

Applications

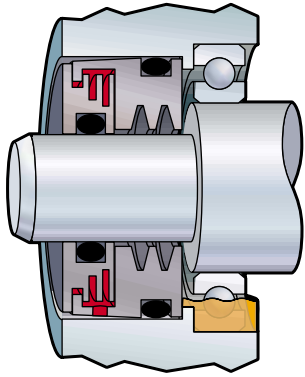
High-grade PTFE composites in the construction of the standard ProTech range ensure a wide range of operating capabilities, including high and low temperature and extreme chemical environments. The use of alternative PTFE fillers extends the physical properties and capabilities into such areas as food production and pharmaceuticals.

ProTech bearing isolators can normally replace existing sealing devices, without modification to the equipment. ProTech will extend equipment operating life across these industries:

- Chemical Processing
- Pulp and Paper
- Oil and Gas
- Mining
- Food and Beverage
- Pharmaceuticals
- Power Generation
- Steel and Aluminum Manufacturing
- Utilities

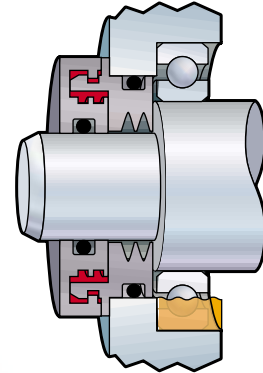


ProTech High-Performance Bearing Isolators for Standard Oil and Grease-Lubricated Applications



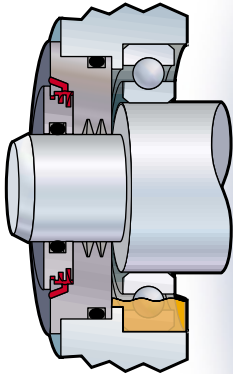
Flush-Mounted Design-Type LN

- Used where space is restricted



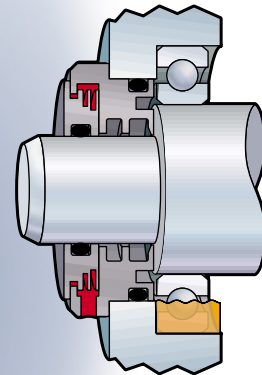
Wrap-Around Design-Type LX

- Used with top-mounted bearings on vertical or angled shafts
- For severe wash-down applications



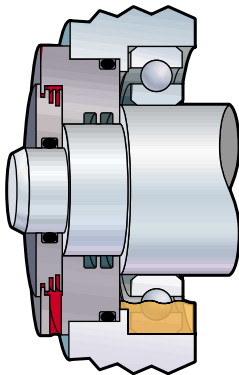
Multiport Design-Type LD

- Used where the orientation of the isolator cannot be guaranteed
- For contrarotating and rotating housing applications



Severe Duty Design-Type SS

- Ideal for high-speed double-row bearings and severe oil-splash applications

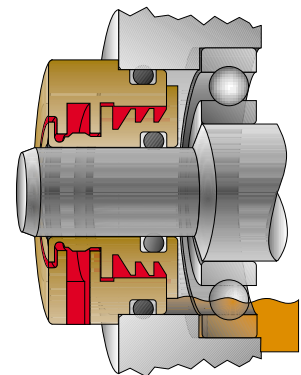


Stepped Shaft Design-Type LM

- Designed for electric motors and stepped shaft applications

General Purpose Design-Type LS

- Flanged design
- Suitable for the majority of applications

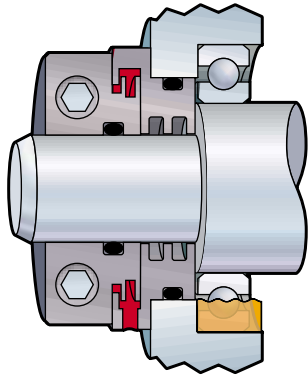


Metal Construction-Type Millennium

- Designed for higher speeds and temperatures

ProTech Specialty Isolators

Fully Split Isolator

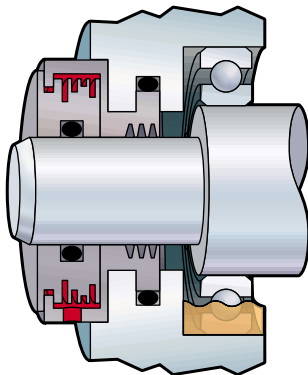


Split Design–Type SL

- Easy to install without dismantling equipment
- Direct replacement for sealing devices in plummer/pillow blocks
- Minimal external space needed for installation



Plummer/Pillow Block Bearing Isolator

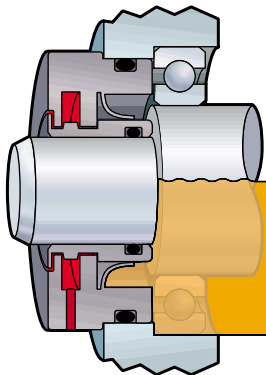


Split Pillow Block Design–Type LB

- Direct upgrade for conventional bearing seals
- Ideal for taconite applications
- Suitable for grease and oil lubrication



Advanced Design Isolator



Flooded Design–Type FS

(Type FN flush-mounted design also available)

Used for:

- Hermetically sealed bearing housings
- Flooded or forced lubrication
- Lower bearings on vertical/angled shafts
- Oil mist lubrication systems
- Fan-cooled bearing housings

Features

Total Exclusion of Contaminants from Bearing Housings

Zero Lubricant Leakage

Unitized Two-Piece Design with Positive Locking Mechanism

High Initial Axial Movement Capability

Manufactured from Engineered PTFE Composites

Manufactured to Suit Applications

Easy to Install

Benefits

Ensures longer bearing life.

Greatly reduces required maintenance and environmental pollution.

Unique locking mechanism ensures components cannot separate during installation or operation.

Eliminates internal contact, a major cause of isolator problems.

Accepted in all major industries. PTFE is a low-friction, nonsparking material, which produces minimal heat generation in the unlikely event of contact (a claim not possible with metallic designs). High chemical resistance.

No modifications required to rotating equipment even when retrofitted.

No press or tools required, reducing the possibility of damage.

Performance Capabilities

Applies to all ProTech™ Bearing Isolators except where stated.

Pressure	0 bar / 0 psi (Atmospheric Pressure) 0.7 bar / 10 psi (for Types FS and FN)
Speed	0 to 25 m/s / 0 to 5000 fpm Modified designs are available at higher speeds
Temperature	-40 to 120°C / -40 to 250°F -40 to 200°C / -40 to 400°F (for Type Millennium)
Initial Axial Movement	± 0.8mm / ± 0.032 inches
Allowable TIR	± 0.5mm / ± 0.020 inches
Shaft Diameter	12 to 500mm / 0.5 to 20 inches
International Specifications	<ul style="list-style-type: none">• Meets and exceeds Severe Duty Electric Motor specifications IEEE 841 for IP55 and IP56• Complies with API 610 8th edition

Please contact John Crane for applications outside these limits.

Materials of Construction

Component	Standard	Optional (for Food and Drug Applications)
Stator*	Graphite-Filled PTFE	Mineral-Filled PTFE
Rotor*	Graphite-Filled PTFE	Mineral-Filled PTFE
O-Rings	Fluoroelastomer	Silicone Elastomer

**Types FS and FN are supplied with a stainless-steel rotor. Type Millennium is supplied with a bronze stator and rotor.*



John Crane

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For the nearest John Crane location, please contact one of the locations above.

If the products featured will be used in a potentially dangerous and/or hazardous process, your John Crane representative should be consulted prior to their selection and use. In the interest of continuous development, John Crane Companies reserve the right to alter designs and specifications without prior notice. It is dangerous to smoke while handling products made from PTFE. Old and new PTFE products must not be incinerated.