AESSEAL®
ENVIRONMENTAL TECHNOLOGY

LabTecta®TP

Engineered Bearing Protection for use with tilting pad bearings

Improved
- Equipment life
- Process uptime
- Operational profit
- Environment

Reduced
- Bearing failures
- Maintenance cost
- Operational losses
- Clean-up costs

www.aesseal.com

Improving Rotating Equipment Reliability by Preventing Bearing Failure

LabTecta®TP — for use with tilting pad bearings

The LabTecta®TP is specifically designed for use with tilting pad bearings allowing up to 0.025” axial movement.

Through its dynamic lift technology, the equipment is allowed to breath while running, while oil loss is prevented using the internal zenith barrier. The multi-tiered labyrinth keeps water, dust and contamination from entering the bearing chamber.
The LabTecta®TP is non shaft wearing and maintenance free.

Reducing Bearing Failure

52% of bearing failures are due to contamination of the bearing oil*. This represents 20.8% of all rotating equipment failures.

A major study into equipment reliability has shown 48% of all bearing failures are due to particle contamination of the bearing oil, with an additional 4% due to corrosion caused by contamination of the bearing oil.

Reducing Water Contamination

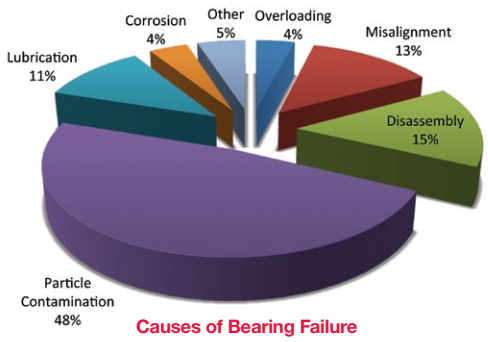
Research conducted by a major academic institution has shown that water contamination as low as 0.002% (20ppm) in some oils can reduce bearing life by as much as 48%.LabTecta®TP reduces bearing failure by:

- Preventing water ingress
- Preventing dust ingress
- Eliminating shaft damage due to rubbing
- Non-contacting design, thus no wearing of O’ring

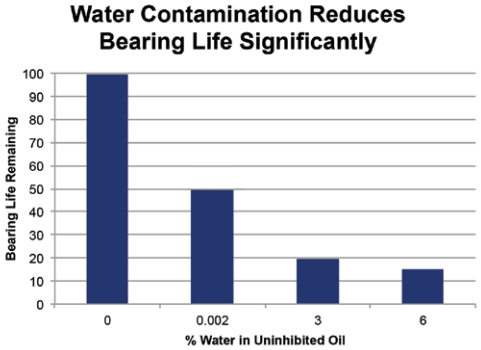
ATEX Certified

Complying with ATEX directive 2014/34/EU, the LabTecta®TP is available certified for use in Group I M2 (Mining) and Group II Cat 2 & 3 (Zone 1/21 & 2/22) equipment.

* Bloch, Heinz; “Pump Users Handbook: Life Extension” 2011.

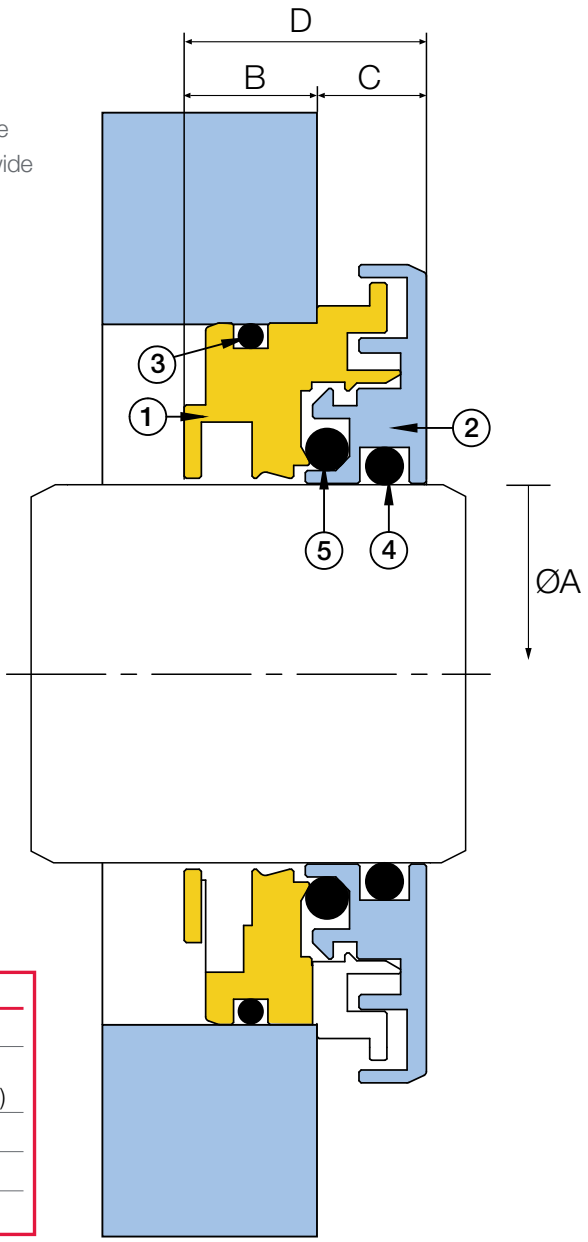


Causes of Bearing Failure



Tilting Pad Bearings

Tilting pad bearings have sectional pads on pivots which accomodate high axial load of the equipment shaft. They are typically fed by forced oil lubrication which creates a fluid film between the moving parts allowing the shaft to rotate with reduced drag. Tilting pad fluid bearings are used in a wide variety of heavy-duty rotating equipment, including centrifugal pumps and turbines.



LabTecta®TP Features & Benefits

- **Zenith Barrier -** Prevents loss of oil from the bearing chamber
- **Multi-tiered labyrinth -** Keeps water, dust & contaminants out, improving bearing life
- **Water Expulsion Port -** Further protects against water ingress
- **Non-wearing -** Eliminates shaft wear in operation
- **Maintenance free -** No routine maintenance required

ØA	B	C	D
16mm - 99mm	7.0mm	7.3mm	14.3mm
100mm - 145mm	7.0mm	9.1mm	16.1mm
0.750” - 3.937”	0.277”	0.286”	0.563”
4.000” - 5.875”	0.277”	0.358”	0.635”

max dimensions shown

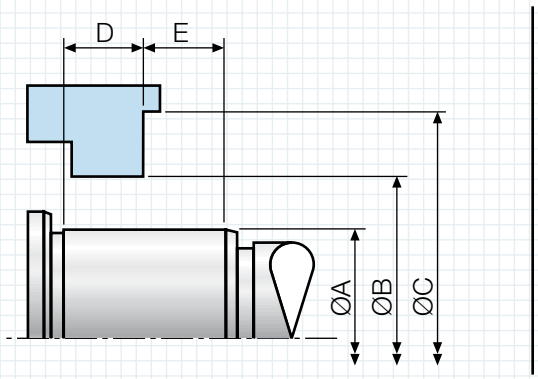
Item	Description	Material
1	LabTecta®TP Stationary	Phosphor Bronze
2	LabTecta®TP Rotary	Stainless Steel (std) / Phosphor Bronze (optional)
3	Stator Housing O-Ring	FKM
4	Rotor O-Ring	FKM
5	Dynamic O-Ring	FKM

“52% of Bearing failures are due to contamination of the bearing oil*”

LabTecta®TP — Designed for Your Equipment

Sketch Housing Dimensions:

Either use the “standard” diagram provided or sketch your own below.



Dimensions:

ØA (Shaft Ø): .....

ØB (Housing bore Ø): .....

ØC (First obstruction on face): .....

D (Max. insertion): .....

E (First obstruction): .....

Application Data:

Equipment type: .....

Speed: .....

Lubrication type / system: .....

Shaft horizontal or vertical: .....

Bearing type: .....

Max. axial movement: .....

Complete the information above and send to:

UK Fax: **+44 (0) 1709 720788** USA Fax: **+1 865 531 0571** E-mail: **sales@labtecta.com**

Further information about the AESSEAL® LabTecta®66 range is available in the standard LabTecta®66 brochure.

E-mail: **sales@labtecta.com** to request a copy or download it from our website: **www.labtecta.com**

This brochure is fully recyclable. When laminated, a sustainable, biodegradable and recyclable lamination is used.

For further information and safe operating limits contact our technical specialists at the locations below.

THE QUEEN'S AWARDS FOR ENTERPRISE: SUSTAINABLE DEVELOPMENT 2022

THE KING'S AWARDS FOR ENTERPRISE 2025

AESSEAL plc is certified to:

ISO 9001, ISO 14001, ISO/IEC 20000,
ISO/IEC 27001,ISO/TS 29001, ISO 37001,
ISO 45001 & ISO 50001

Use double mechanical seals with hazardous products. Always take safety precautions:

- Guard your equipment
- Wear protective clothing

SAFETY NOTICE

Containment Seals (2CW-CS or 2NC-CS)

Monitoring the containment seal's (CS) integrity is important. Review the guidance to understand risks, apply best practices & ensure safe, reliable operation.

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