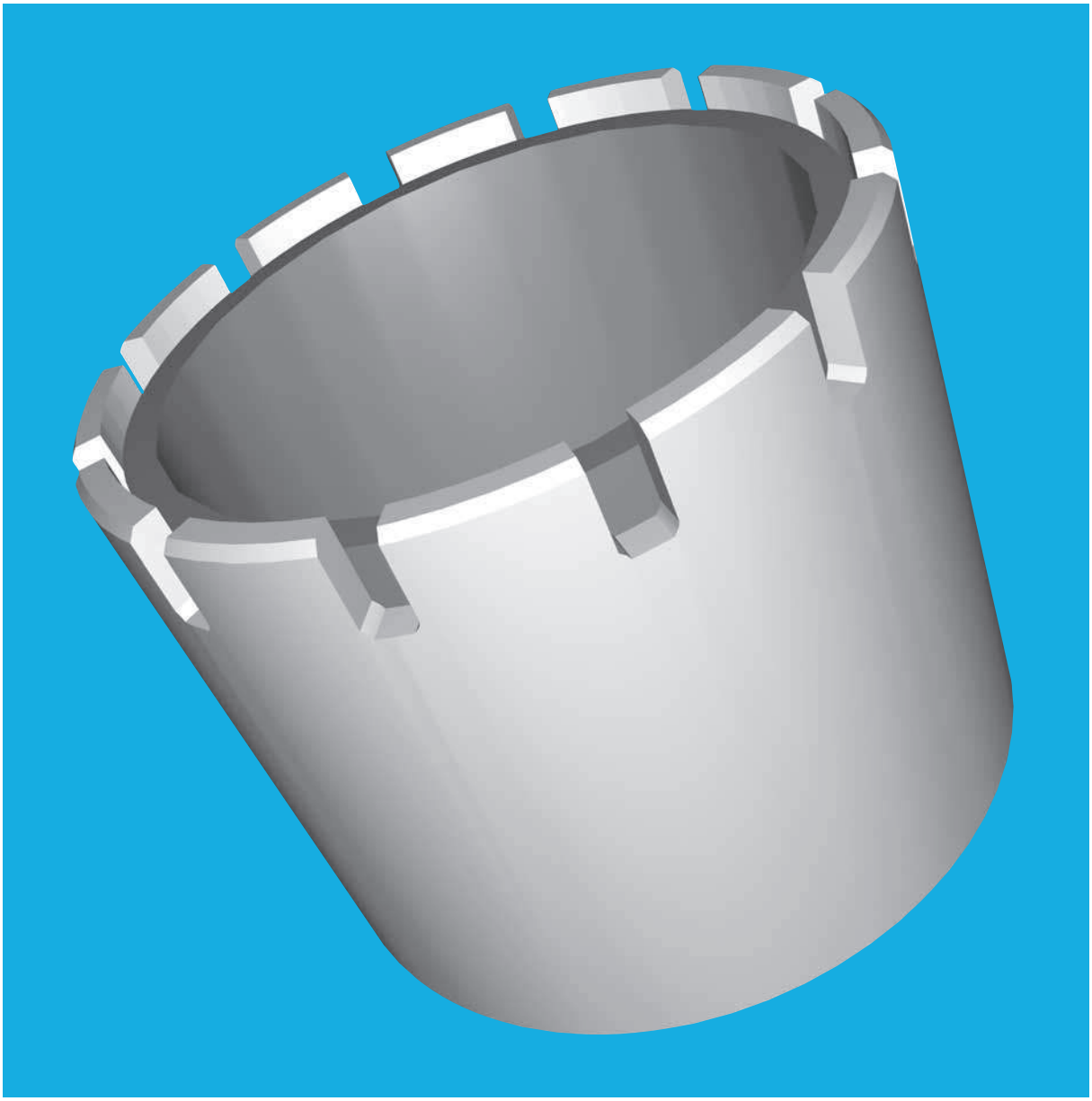

iglidur® PEP (Polymer Encased Polymer)

- Universal performance on all shaft surfaces
- Very cost-effective
- Easy to fit
- Low coefficient of friction

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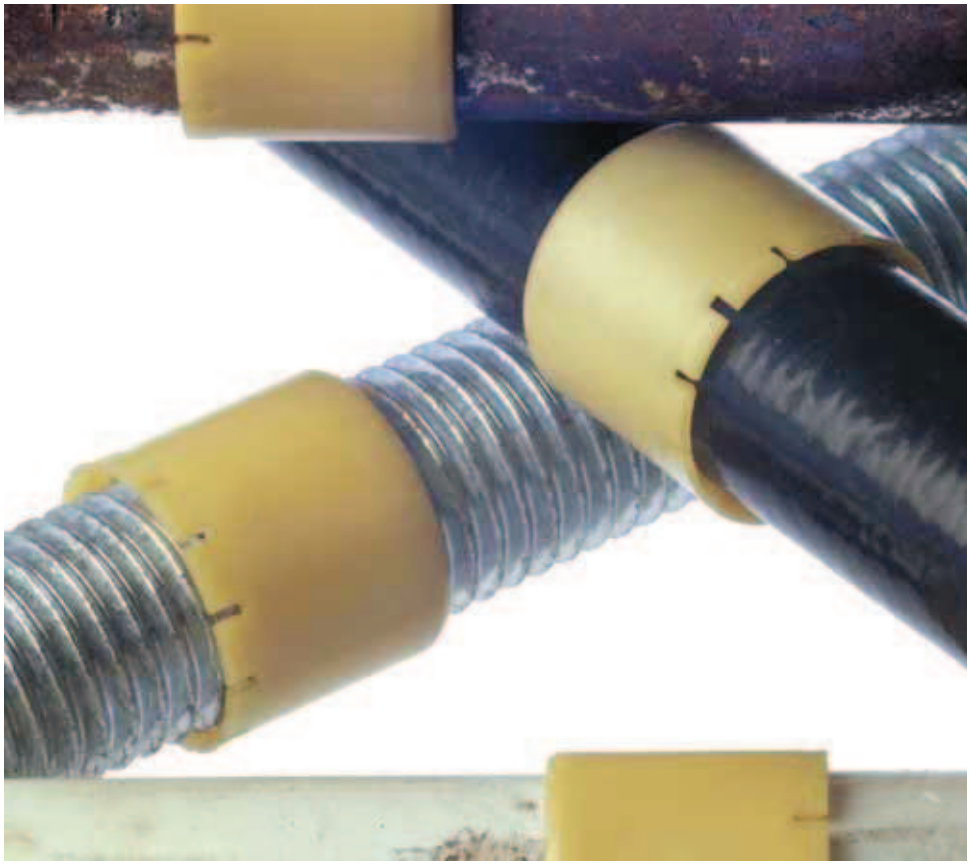
iglidur® PEP

Maintenance-free plain bearings are generally able to slide on the shaft without any additional coating and/or lubrication. It is apparent that shaft materials are equally as important as the bearing itself. igus® is forging a new path with a plain bearing, which operates totally independantly from the shaft.



1 material
> 10 dimensions
Ø 6–20 mm

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51147 Cologne

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Material:
iglidur® J
▶ Chapter 3

When to use iglidur® PEP plain bearings:

- Cost-effective polymer bearing system
- Independent of the shaft material
- Independent of the shaft surface
- Protection of expensive and sensitive shafts
- Excellent wear resistance for average loads
- Coefficients of friction remain constant
- Easy to fit
- Absolutely corrosion-free

When not to use:

- For high surface speeds
  ▶ iglidur® J (chapter 3)
- For high loads
  ▶ iglidur® G (chapter 2),
  iglidur® Q (chapter 18)
- For high temperatures
  ▶ iglidur® V400 (chapter 21),
  iglidur® X (chapter 6),
  iglidur® Z (chapter 22)
- when low clearance bearings are required
  ▶ iglidur® P (chapter 17),
  iglidur® X (chapter 6)

Picture 35.1: iglidur® bearings are independent of the shaft material

Lifetime calculation, CAD files and much more support ▶ www.igus.de/en/pep

Maintenance-free plain bearings are generally described as being able to slide on the shaft without any additional coating and/or lubrication. It is evident that shaft materials are as important as the bearing itself. igus® is forging a new path with a plain bearing that is self-contained and maintenance-free.

iglidur® PEP is an innovative design for lubricant-free polymer plain bearing systems with an inner and outer ring. The special feature; the sliding surface is the inner ring, and for the first, time shaft materials and shaft surfaces are not a concern. Even threads, rust and scratches do not affect the performance or reliability. With the control over the sliding surface and through considerable testing, the long term behaviour of the bearing system can be predicted precisely. Similar to ball bearings, the inner ring turns with the shaft in the polymer PEP plain bearing. Relative movements of the shaft with respect to the bearing are eliminated. This protects the shaft surface from wear and saves costs. An additional benefit; even the most sensitive or unusual materials can be used as the rotating shaft with this new polymer plain bearing. Due to the bearing materials used, the PEP polymer bearing is absolutely corrosion-free.

Picture 35.2: iglidur® PEP bearings consist of an inner and outer bearing

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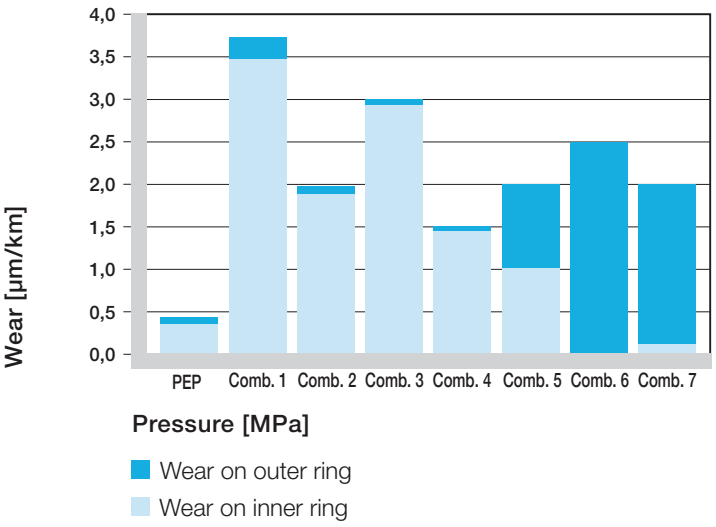
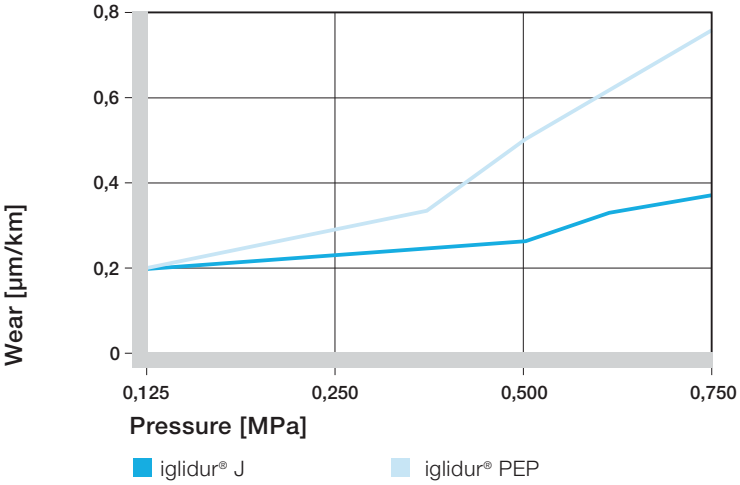


Graph 35.1: Wear experiments of different material combinations, p = 0.75 MPa, v = 0.3 m/s



Graph 35.2: Wear of iglidur® PEP bearings as a function of the pressure, v = 0.3 m/s

Wear Resistance

The wear resistance of PEP is of significant interest. For loads up to 5N/mm² the test results are compelling. Here PEP polymer bearings obtain values that are comparable to most wear resistant metal-backed bearing systems. This is a very positive result, when you consider the reduced costs compared with the required surface treatment of the shaft which would traditionally be necessary.The consistently low coefficient of friction is also an advantage to the user. Since the running surfaces are fixed, their tribological data can be calculated. The coefficients of friction of the PEP bearings are no longer based on the shaft materials or surface properties. If necessary, the coefficients of friction can be reduced further with a small amount of lubricant. Detailed test information is available with different lubricants and can be requested from igus®.

Installation

The installation of the PEP plain bearing could not be any easier and faster. The bearings are manufactured to be press fitted into a recommended housing bore of H7 tolerance. Then, the shaft is inserted and fits tightly onto the inner ring. The inner bearing is clipped into the outer ring. This design makes it possible to pull the shaft out without removing the inner ring.

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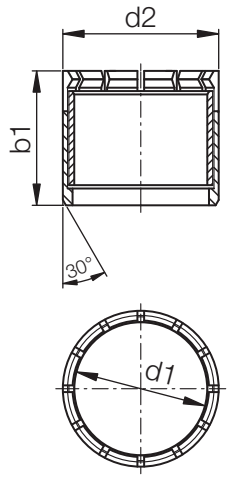
iglidur® PEP | **mm**



Data in mm

Structure – part no.

P E P S M-0610-10

- b1
- d2
- d1
- Metric
- Type
- Material

Dimensions according to ISO 3547-1 and special dimensions

Dimensions [mm]

iglidur® PEP

Part Number	d1	d2	b1
PEPSM-0610-10	6	10	10
PEPSM-0812-12	8	12	12
PEPSM-1014-12	10	14	12
PEPSM-1216-15	12	16	15
PEPSM-1620-20	16	20	20
PEPSM-2023-20	20	23	20

Order example

Our price breaks are defined by the order quantity.

1– 9 10–24	25–49 50–99	100–199 200–499	500– 999 1000–2499	2500–4999

For the current prices please visit the igus®-Homepage www.igus.de/en

No minimum order quantities, no surcharges.

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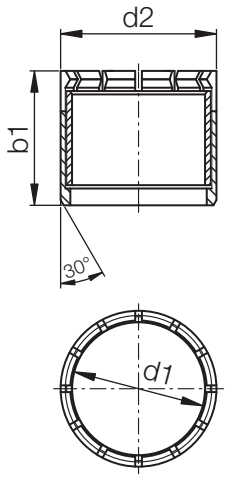

Data in inches

Structure – part no.

P E PS I - 0406-06

- b1
- d2
- d1
- Inch
- Type
- Material

Dimensions according to ISO 3547-1 and special dimensions

Dimensions [inches]

iglidur® PEP

Part Number	d1	d2	b1
PEPSI-0406-06	1/4	3/8	3/8
PEPSI-0608-08	3/8	1/2	1/2
PEPSI-0810-08	1/2	5/8	1/2
PEPSI-1012-12	5/8	3/4	3/4
PEPSI-1214-12	3/4	7/8	3/4
PEPSI-1618-16	1	1 1/8	1

inch
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