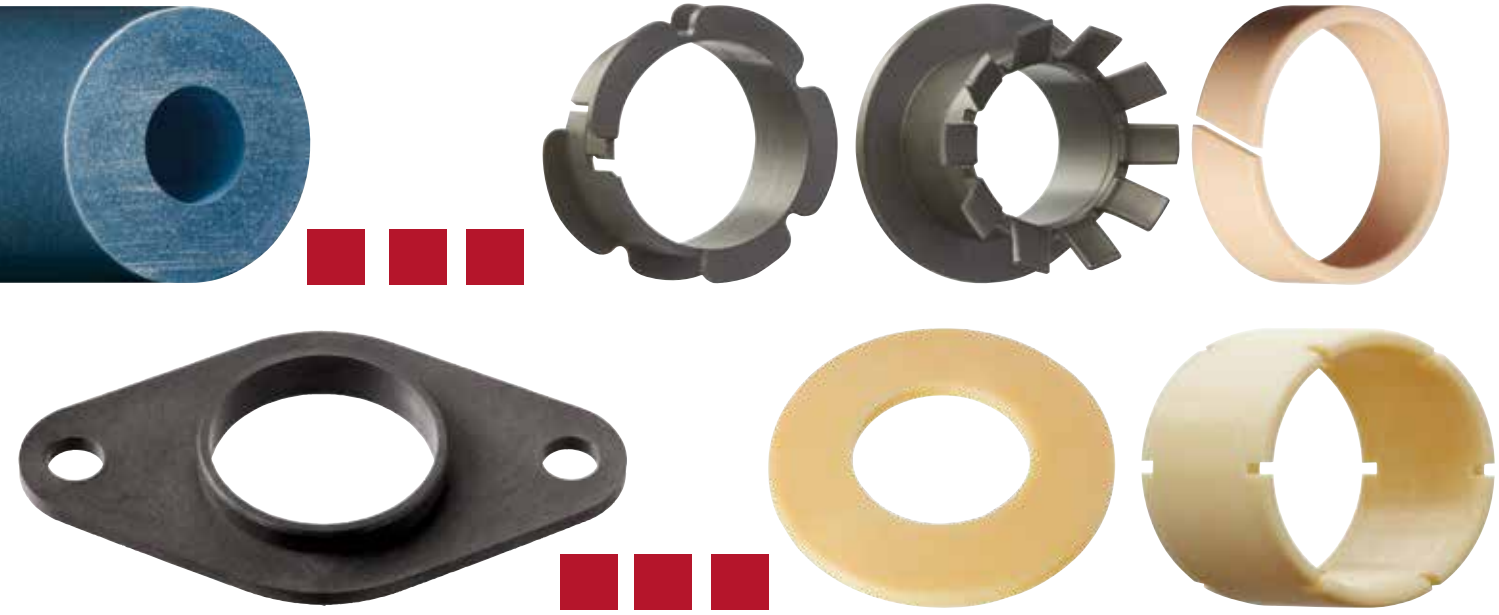
iglidur®

More products



...plastics

iglidur® – other designs | Product overview

iglidur® piston rings and clip bearings

An alternative to PTFE tape:
Piston rings
▶ Page 581

Easy to install, security with the double flange design:
Clip bearings
▶ Page 585

Easy to install due to split design:
Split bearings
▶ Page 592

With anti-rotation feature
▶ Page 593

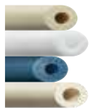
iglidur® piston rings and clip bearings

Press in and fold down:
Flanged bearings
▶ Page 594

Press and plug:
Double flange bearings
▶ Page 595

Join and snap into place:
Special solution
Clip On
▶ Page 596

iglidur® solutions for special applications



For precise conveying:
iglidur®
knife edge rollers
▶ Page 597

Secured by screws:
iglidur® two hole flange bearings
▶ Page 603

New

Two hole flanged bearing with preload: iglidur® two hole flange bearings
▶ Page 606

Zero clearance:
Clearance-free pre-loaded plain bearings
▶ Page 607

iglidur® solutions for special applications

Cushion and dampen:
Disc springs polysorb
▶ Page 611

For all shaft surfaces and materials:
iglidur® PEP
▶ Page 615

Position and seal:
Lip seal bearings
▶ Page 619

igus® Service

Quick and individual:
Customised special parts – speedimold
▶ Page 623

iglidur® piston rings

- Easy installation
- Cost-effective
- More wear-resistant than PTFE strips
- High load capacity
- Standard range from stock

iglidur® piston rings | Advantages

Easy and cost-effective: iglidur® piston rings

Easy installation

Cost-effective

More wear-resistant than PTFE strip

High load capacity

Maintenance-free

iglidur® piston rings

Why complicate things if you do not need to? Some things can actually be very easy: Replace complex stamped PTFE strips with a single clip-on ring, for example in cylinders, control valves and fittings. In addition to the standard iglidur® J range, it is also possible to configure your required piston ring from the entire iglidur® bearing range.

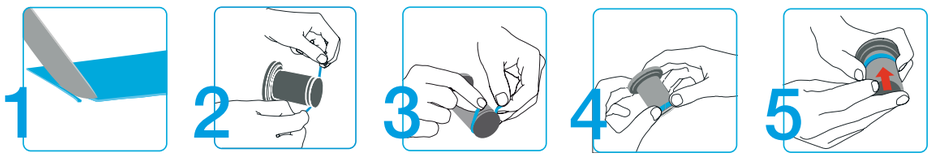
When to use it?

- When piston rings with excellent wear properties are required
- When simple assembly is of great importance
- When high edge loads occur
- When tailor-made solutions based on iglidur® materials are required

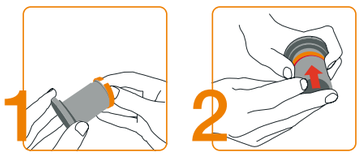
When not to use it?

- When the piston rings should also act as a seal
- When different diameters should be covered by one part

Alternative solutions:



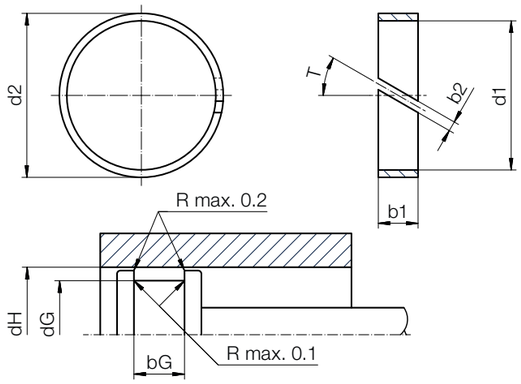
With iglidur®:



iglidur® piston rings | Product range

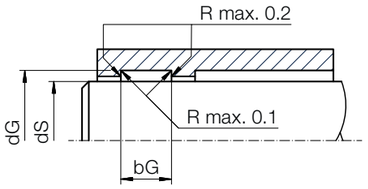
iglidur® J piston rings, from stock

iglidur® J is our all-round material when it comes to an outstanding running performance and low coefficient of friction on the broadest range of shafts. The flexibility of iglidur® J enables the typical assembly expected with piston rings using the push over/clip on method. Good media resistance rounds off the range of properties.



Order key

Type			Dimensions [mm]		
J	PR	M	- 06	08	- 06
iglidur® material	Piston ring	Metric	Inner Ø	Outer Ø	Length



Installation recommendation for piston

Dimensions [mm]	dG (h tolerance)	dH (H tolerance)	bG
Nominal size	dG = d1	dH = d2	bG = b1 +0.2

Installation recommendation for housing

Dimensions [mm]	dS (h tolerance)	dG (H tolerance)	bG
Nominal size	dS = d1	dG = d2	bG = b1 +0.2

Dimensions [mm]

d1	d2	b1 h13	b2 ±0.5	T [°]	Part No.
6	8	6	1.0	0	**JPRM-0608-06**
8	10	10	1.0	0	**JPRM-0810-10**
10	12	5.4	2.5	20	**JPRM-1012-054**[167)]
12	14	5.4	2.5	20	**JPRM-1214-054**
13	15	5.4	2.5	20	**JPRM-1315-054**
14	16	5.4	2.5	20	**JPRM-1416-054**
14	16	10	1.0	20	**JPRM-1416-10**
16	18	5.4	2.5	20	**JPRM-1618-054**[167)]
17	22	5.4	2.5	25	**JPRM-1722-054**
20	23	5.4	2.5	20	**JPRM-2023-054**
25	28	5.4	2.5	20	**JPRM-2528-054**
28	32	10	1.0	20	**JPRM-2832-10**
28	32	20	1.0	20	**JPRM-2832-20**
28	33	5.4	2.5	25	**JPRM-2833-054**
30	34	5.4	2.5	20	**JPRM-3034-054**
35	39	5.4	2.5	20	**JPRM-3539-054**
35	40	5.4	2.5	25	**JPRM-3540-054**

d1	d2	b1 h13	b2 ±0.5	T [°]	Part No.
40	44	5.4	2.5	20	**JPRM-4044-054**
45	50	5.4	2.5	20	**JPRM-4550-054**
45	50	10	2.0	0	**JPRM-4550-10**
50	55	5.4	2.5	20	**JPRM-5055-054**
50	55	10	2.0	0	**JPRM-5055-10**
58	63	9.5 (–0.22)	2.5	25	**JPRM-5863-095**
60	65	5.4	2.5	20	**JPRM-6065-054**
70	75	5.4	2.5	20	**JPRM-7075-054**

[167)] **Straight slot**

More Information about iglidur® material and technical data
iglidur® J ▶ Page 159

Max. +90°C
Min. –50°C

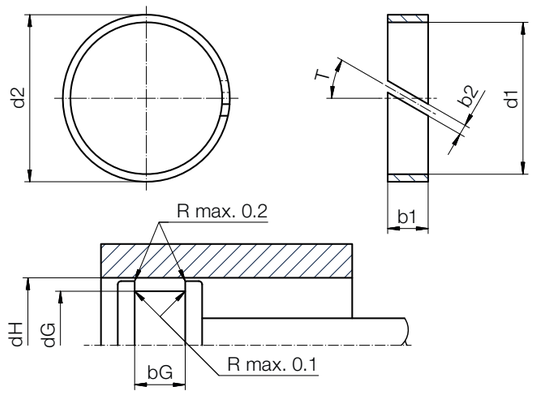
Ø 6–70mm
More dimensions upon request

Available from stock
Detailed information about delivery time online.

iglidur® piston rings | Product range

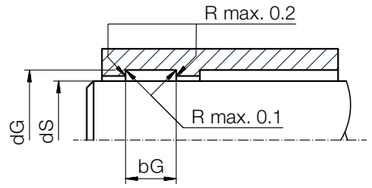
Custom-made piston rings

In addition to the stock range of iglidur® J piston rings, you can also select your required piston ring on the basis of the entire iglidur® bearing range.
Use the entire iglidur® plain bearing range and choose the material best suited to your application. Your piston ring will be delivered within 10 days – to your requirements.



Order key

Type			Dimensions [mm]		
☐ PR	M-	☐	☐	☐	- ☐
iglidur® required material	Piston ring	Metric	Required inner Ø	Required outer Ø	Required length



Installation recommendation for piston

Dimensions [mm]	dG (h tolerance)	dH (H tolerance)	bG
Nominal size	dG = d1	dH = d2	bG = b1 +0.2

Installation recommendation for housing

Dimensions [mm]	dS (h tolerance)	dG (H tolerance)	bG
Nominal size	dS = d1	dG = d2	bG = b1 +0.2

Our material recommendations for special requirements:

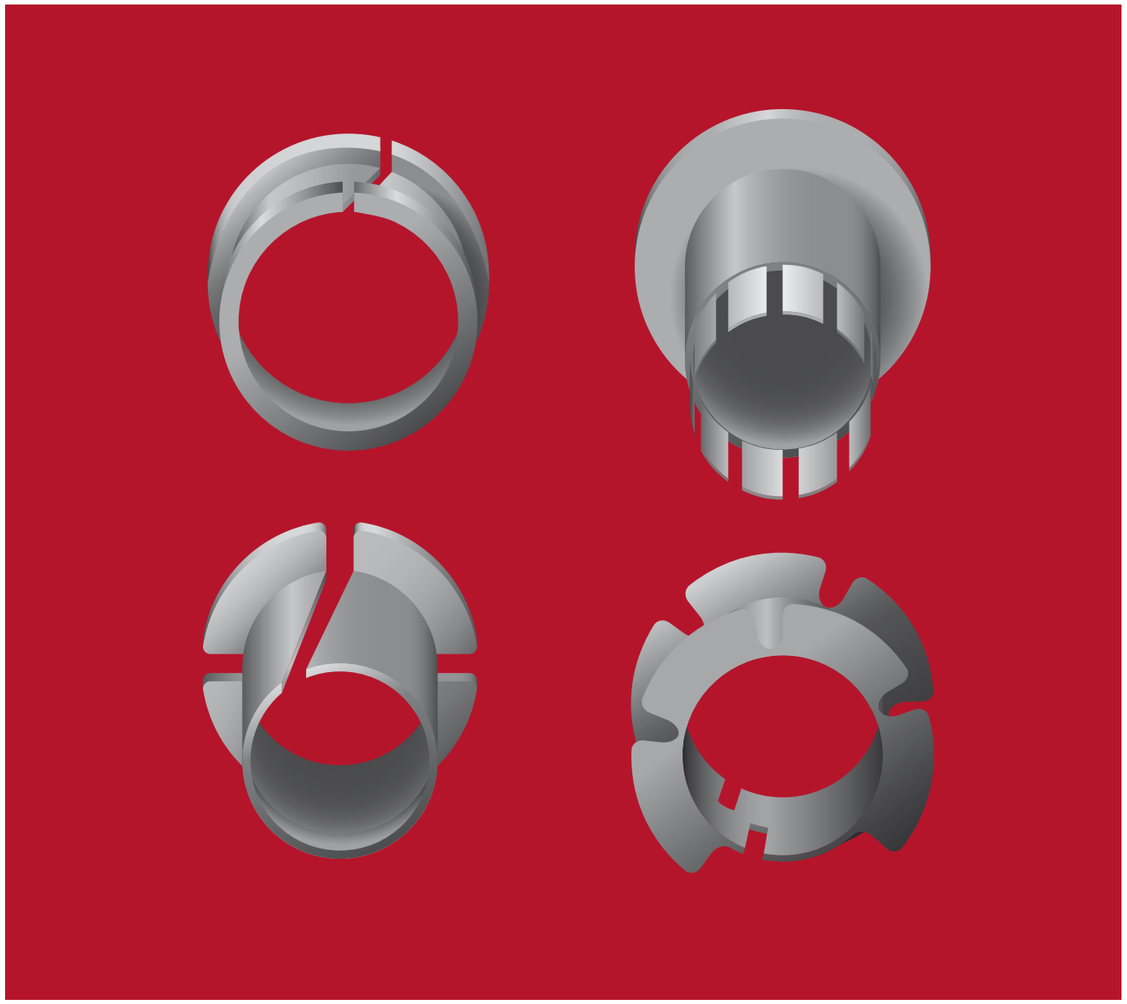
- **iglidur® A181: FDA-compliant ▶ Page 401**
- **iglidur® J350: >+90°C ▶ Page 199**
- **iglidur® H1: Temperatures up to +200°C ▶ Page 333**

In addition to mechanical processing of existing iglidur® plain bearings to piston rings, we also develop custom-made piston ring solutions for your volume requirements. Talk to us! We will support you with your design and create an appropriate proposal.

iglidur® piston rings product finder

Material selection and individual dimensions made easy. With just a few clicks, the piston ring finder can find the optimum iglidur® material and select the appropriate dimensions from the standard catalogue range in order to define a piston ring in a customised width.

▶ www.igus.eu/pistonring-finder



iglidur® – clip bearings

- Easy installation
- Abrasion-resistant
- Predictable service life
- Custom versions possible
- Lubrication and maintenance-free
- Standard range from stock

Solutions for stamped sheet metal

iglidur® clip bearings:
Captive with double flange
▶ From page 590

iglidur® split bearings:
Easy assembly due to lateral slot, also with anti-rotation feature
▶ From page 592

iglidur® flanged bearings:
Press in and fold down
▶ From page 594

iglidur® double flange bearings:
Press and plug
▶ From page 595

Special solution
iglidur® Clip On:
Join and snap into place
▶ From page 596

iglidur® clip bearings for fitting shafts

iglidur® clip bearings are designed specifically for fitting shafts through sheet metal. For this reason, the bearings have flanges located on both ends. The plain bearings are secured in the sheet metal plate on both sides after fitting.
The clip bearings have an angled slot which allows them to be fitted from one side. After fitting, the bearing expands and forms a lining for the hole in the metal plate. The shaft prevents the clip bearing from falling out the housing. Even during linear movement, the plain bearing cannot slide out.

- Lateral slot for easy installation
- Lubrication and maintenance-free
- Good adaptability to punched holes
- Abrasion-resistant
- Quiet
- For rotating and linear movements

Typical application areas
- Automotive industry
- Mechanical engineering
- Jig construction

Available from stock
Detailed information about delivery time online.

Max. +80°C
Min. –40°C

Material: iglidur® M250
6 types
Ø 3–25mm
More dimensions upon request

Imperial dimensions available
▶ From page 1603

iglidur® clip bearings
- Easy to fit due to clip-on feature
- Increased security with the double flange design
- Abrasion-resistant

▶ From page 590

iglidur® split bearings (clips2)
- Easy to fit
- Tolerance compensation with angled slot
- Low bearing clearance, high precision

▶ From page 592

iglidur® flanged bearings
- Easy installation
- Press-fit
- Axial load on both sides
- Compensation of tolerances of the sheet metal

▶ From page 594

iglidur® double flange bearings
- Easy to fit due to clip-on feature
- Large flange surfaces
- Two identical large flange surfaces

▶ From page 595

Special solution **iglidur® Clip On**
- The disc is snapped onto the flanged bearing with undercuts
- Compensation of axial clearance
- Captive pre-assembly possible
- Combination of conductive and non-conductive materials

▶ From page 596

This cutting mechanism is used in the beverage industry. All used components meet the requirement of freedom from lubrication with low weight and low cost.

Easy-to-clean and cost-effective iglidur® flanged bearings and clip bearings are used in a honeycomb.

By using wear-resistant iglidur® clip bearings, the lowering mechanism for radiator mascots on luxury cars could be improved.

The guide rod in this pharmacy printer has been attached using igus® clip bearings.

Rattle-free positioning of seat systems with iglidur® clip bearings, e.g. inner/tilt and seat height adjustment.

General properties

The clip bearings have an angled slot which allows the bearings to be fitted from one side. After fitting, the bearing expands and forms a lining for the hole in the metal plate. The shaft prevents the clip bearing from falling out the housing. Even during linear movement, the bearing cannot slide out. iglidur® clip bearings are made from wear-resistant material iglidur® M250.
iglidur® M250 is a plain bearing material with strong wear resistance at average loads. The plain bearings are self-lubricating and can be used dry. If required the plain bearings can also be lubricated. The material iglidur® M250 is resistant to all common lubricants.

Mechanical properties

The permissible static surface pressure of iglidur® M250 at room temperature is 20MPa. Due to the possibility of high tolerances in the housing hole, the clip bearing has a high compressive strength even for punched holes.
For bearing surfaces that are very small, the vibration dampening properties and the resistance to edge pressure are especially important.

▶ iglidur® M250, **Page 107**

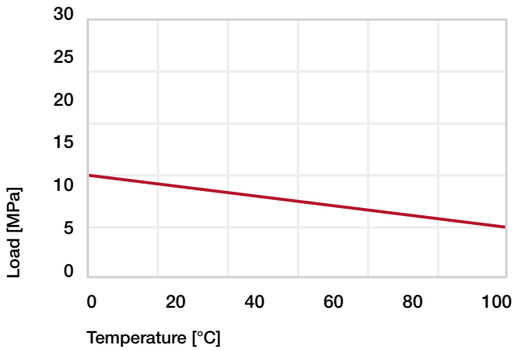


Diagram 01: Maximum recommended surface pressure as a function of temperature (20MPa at +20°C)

Permissible surface speeds

Clip bearings are extremely wear-resistant in slow rotating, oscillating, and linear movements. The maximum surface speeds for the different movements are the same as for the material iglidur® M250 (table 01).
With lubrication the permissible surface speeds can be increased.

▶ Surface speed, **page 44**

m/s	Rotating	Oscillating	Linear
Long-term	0.8	0.6	2.5
Short-term	2	1.4	5

Table 01: Maximum surface speeds

Temperatures

For operating temperatures up to +80°C iglidur® clip bearings display high wear resistance. Even in the cold, the plain bearings remain elastic and abrasion-resistant.

▶ Application temperatures, **page 49**

iglidur® M250	Application temperature
Minimum	–40°C
Max. long-term	+80°C
Maximum, short-term	+170°C

Table 02: Temperature limits

Assembly

For installation, the plain bearings are pressed together on the side with the large flange. The angled slot makes the bearing spiral shaped so that it can be placed easily into the metal plate. The slot also compensates for expansions of the circumference. In this way, a tight clearance is possible with the clip bearings. The bearing clearance is dimensioned in such a way that in a housing hole with a nominal diameter, a shaft made with the same nominal diameter turns easily. The clip bearings should be fitted into a housing with a "H" class tolerance, up to H13. The clip bearing can also rotate within the housing hole.

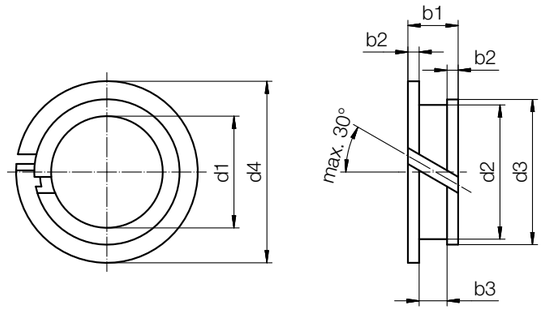
Diameter d1 [mm]	Shaft h9 [mm]	Tolerances D11 [mm]	Housing H7 [mm]
up to 3	0 –0.025	+0.020 +0.080	0 +0.010
> 3 to 6	0 –0.030	+0.030 +0.105	0 +0.012
> 6 to 10	0 –0.036	+0.040 +0.130	0 +0.015
> 10 to 18	0 –0.043	+0.050 +0.160	0 +0.018
> 18 to 30	0 –0.052	+0.065 +0.195	0 +0.021
> 30 to 50	0 –0.062	+0.080 +0.240	0 +0.025
> 50 to 80	0 –0.074	+0.100 +0.290	0 +0.030

Table 03: Important tolerances for plain bearings according to ISO 3547-1 after press-fit

iglidur® clip bearings | Product range

Clip bearings for sheet metals – captive with double flange

Image exemplary



Order key

Type	Dimensions [mm]

M C M - 03 - 02

- M – iglidur® material
- C – Design
- M – Metric
- 03 – Inner Ø d1
- 02 – Metal sheet thickness b3

Material:
iglidur® M250 ▶ Page 107

Imperial dimensions available
▶ From page 1603

Dimensions [mm]

d1 D11[7]	d2	d3	d4	b1 +0.20	b2 –0.10	b3	Part No.
3	4.2	4.8	6.0	3.2	0.6	2.0	**MCM-03-02**
3	4.2	4.8	6.0	4.2	0.6	3.0	**MCM-03-03**
4	5.2	5.9	7.0	3.2	0.6	2.0	**MCM-04-02**
4	5.2	5.9	7.0	4.2	0.6	3.0	**MCM-04-03**
5	6.2	6.8	8.0	3.2	0.6	2.0	**MCM-05-02**
5	6.2	6.8	8.0	4.2	0.6	3.0	**MCM-05-03**
6	7.2	7.8	11.0	2.7	0.6	1.5	**MCM-06-015**
6	7.2	7.8	11.0	3.2	0.6	2.0	**MCM-06-02**
6	7.2	7.8	11.0	4.2	0.6	3.0	**MCM-06-03**
6	7.2	7.8	11.0	5.2	0.6	4.0	**MCM-06-04**
7	9.0	9.8	13.0	4.6	0.8	3.0	**MCM-07-03**
8	9.6	10.4	13.0	3.6	0.8	2.0	**MCM-08-02**
8	9.6	10.4	13.0	4.6	0.8	3.0	**MCM-08-03**
8	9.6	13.0	10.4	5.6	0.8	4.0	**MCM-08-04**
9	10.6	11.4	14.0	3.6	0.8	2.0	**MCM-09-02**
10	11.6	12.4	15.0	3.6	0.8	2.0	**MCM-10-02**
10	11.6	12.4	15.0	4.1	0.8	2.5	**MCM-10-025**
10	11.6	12.4	15.0	4.6	0.8	3.0	**MCM-10-03**

d1 D11[7]	d2	d3	d4	b1 +0.20	b2 –0.10	b3	Part No.
10	11.6	12.4	15	5.6	0.8	4.0	**MCM-10-04**
10	11.6	12.4	15	9.6	0.8	8.0	**MCM-10-08**
12	13.6	14.4	17	3.4	0.8	1.8	**MCM-12-018**
12	13.6	14.4	17	3.6	0.8	2.0	**MCM-12-02**
12	13.6	14.4	17	4.35	0.8	2.75	**MCM-12-025**
12	13.6	14.4	17	4.6	0.8	3.0	**MCM-12-03**
12	13.6	14.4	17	5.1	0.8	3.5	**MCM-12-035**
12	13.6	14.4	17	5.6	0.8	4.0	**MCM-12-04**
12	13.6	14.4	17	6.4	0.8	4.8	**MCM-12-045**
14	15.6	16.4	19	4.6	0.8	3.0	**MCM-14-03**
16	17.6	18.4	21	3.6	0.8	2.0	**MCM-16-02**
16	17.6	18.4	21	4.6	0.8	3.0	**MCM-16-03**
18	20.0	21.0	23	4.0	0.8	2.4	**MCM-18-02**
18	20.0	21.0	23	5.0	1.0	3.0	**MCM-18-03**
20	22.0	23.0	25	5.0	1.0	3.0	**MCM-20-03**
25	27.0	28.0	30	5.0	1.0	3.0	**MCM-25-03**
25	27.0	28.0	30	8.0	1.0	6.0	**MCM-25-06**

[7] d1 value is measured with a plug gauge after fitting into a reference housing d2 (+0.005). Please see D11 tolerances table ▶Page 589

iglidur® clip bearings | Product range New

Low coefficient of friction and wear

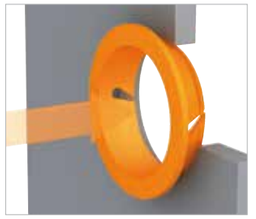
These clip bearings are made of wear-resistant iglidur® high-performance polymers and are designed specifically for fitting shafts through sheet metal. With this specific clip bearing design, a locating spigot is utilised to enable fitting into less precise holes and housings. The new iglidur® K230 material offers a lower moisture absorption and even more flexibility compared to the iglidur® M250 clip bearings.

- Lubrication and maintenance-free
- Low moisture absorption
- Temperature resistance
- Chemical resistance
- Corrosion resistance

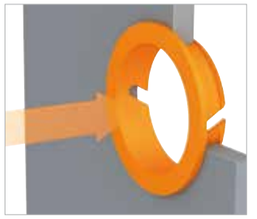
Material:
iglidur® K230 ▶ Page 1653

Fitting:

Simple axial press in



Axial safety through the second flange

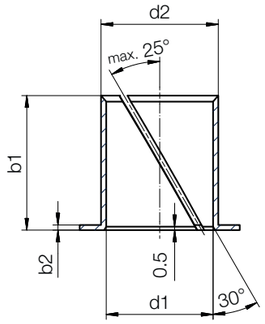


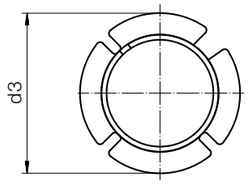
Easy installation via clip on mechanism

iglidur® clip bearings | Product range

Split bearings (clips2) – easy assembly

Image exemplary





r = max. 0.5mm

Order key

Type	Dimensions [mm]
M Y M	-04-04

iglidur® material	Design	Metric	Inner Ø d1	Total length b1

Material:
iglidur® M250 ▶ Page 107
With anti-rotation feature ▶ Page 593

Imperial dimensions available
▶ From page 1604

Dimensions [mm]

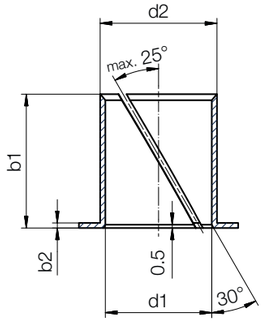
d1	d1 tolerance[7]	d2[9]	d3 ±0.40	b1 –0.40	b2 –0.13	Part No.
4	+0.025 +0.075	5.2	7.0	4.0	0.6	**MYM-04-04**
5	+0.025 +0.075	6.2	8.0	5.0	0.6	**MYM-05-05**
6	+0.025 +0.075	7.2	9.5	6.0	0.6	**MYM-06-06**
8	+0.025 +0.075	9.6	12.0	8.0	0.8	**MYM-08-08**
10	+0.025 +0.075	11.6	15.0	10.0	0.8	**MYM-10-10**
12	+0.025 +0.075	13.6	18.0	12.0	0.8	**MYM-12-12**
14	+0.025 +0.075	15.6	21.0	14.0	0.8	**MYM-14-14**
16	+0.025 +0.075	17.6	24.0	16.0	0.8	**MYM-16-16**
20	+0.025 +0.075	21.6	30.0	16.0	0.8	**MYM-20-16**
20	+0.025 +0.075	21.6	30.0	20.0	0.8	**MYM-20-20**
25	+0.025 +0.075	27.4	37.5	25.0	1.2	**MYM-25-25**

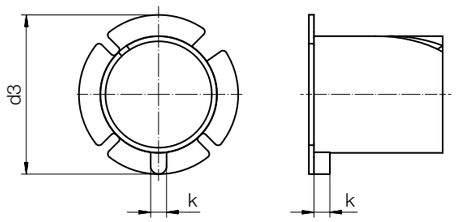
[7] d1 value is measured with a plug gauge after fitting into a reference housing d2 (+0.005)
[9] Recommended housing hole tolerance: H9

iglidur® clip bearings | Product range

Split bearings with anti-rotation feature

Image exemplary





Order key

Type	Dimensions [mm]	Option
M Y M-	04 - 04	-K

iglidur® material	Design	Metric	Inner Ø d1	Total length b1	Anti-rotation feature

Material:
iglidur® M250 ▶ Page 107

Imperial dimensions available
▶ From page 1604

Dimensions [mm]

d1	d1 tolerance[8]	d2[9]	d3 ±0.40	b1 –0.40	b2 –0.13	k	Part No.
4	+0.025 +0.075	5.20	7.00	4.00	0.60	1.0	**MYM-04-04-K**
5	+0.025 +0.075	6.20	8.00	5.00	0.60	1.0	**MYM-05-05-K**
6	+0.025 +0.075	7.20	9.50	6.00	0.60	1.5	**MYM-06-06-K**
10	+0.025 +0.075	11.60	15.00	10.00	0.80	2.0	**MYM-10-10-K**
14	+0.025 +0.075	15.60	21.00	14.00	0.80	3.0	**MYM-14-14-K**

[8] d1 value is measured with a plug gauge after fitting into a reference housing d2 (+0.005)
[9] Recommended housing hole tolerance: H9

iglidur® clip bearings | Product range

Flanged bearings – press in and fold down

Order key

Type	Dimensions [mm]
M K M-1012-10	

iglidur® material | Design | Metric | Inner Ø d1 | Outer Ø d2 | Metal sheet thickness

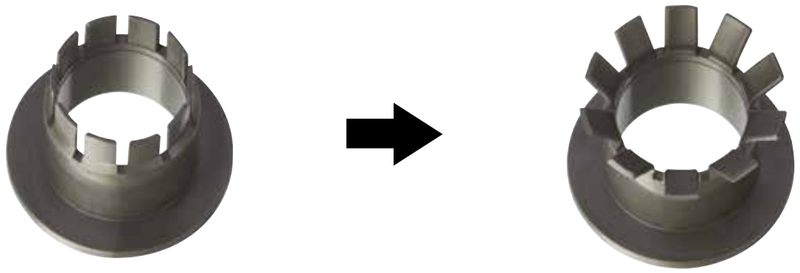
Material:
iglidur® M250 ▶ Page 107

Sample dimension [mm]

d1	d1 tolerance[3]	d2	d3	b1	b2	b3	s	Part No.
	E10		d13	h13	h13	+0.1/+0.7	±0.1	
10	+0.025 +0.083	12	18	14	1	10	0.4	**MKM-1012-10**

[3] After press-fit. Testing methods ▶ Page 57

Fitting:

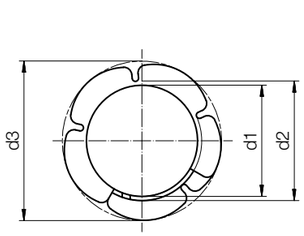


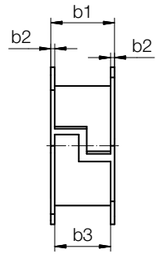
Press in, fold down, ready: captive, axial load on both sides

Please contact us if you need a custom-made double flange bearing for your application. We will help you with your design and create an appropriate proposal, drawing on the experience that we have with a large number of custom bearing solutions.

iglidur® clip bearings | Product range

Double flange bearings – press and plug





Order key

Type	Dimensions [mm]
M D M-1213-06	

iglidur® material | Design | Metric | Inner Ø d1 | Outer Ø d2 | Metal sheet thickness

Material:
iglidur® M250 ▶ Page 107

Sample dimension [mm]

d1	d1 tolerance[8]	d2	d3	b1	b2	b3	Part No.
12	+0.050 +0.160	13	16.5	7	0.5	6.0	**MDM-1213-06**

[8] d1 value is measured with a plug gauge after fitting into a reference housing d2 (+0.005)

Fitting:

Please contact us if you need a custom-made double flange bearing for your application. We will help you with your design and create an appropriate proposal, drawing on the experience that we have with a large number of custom bearing solutions.

iglidur® special solutions | Product range

iglidur® Clip On: Join and snap into place

The solution for all applications in stamped sheet metal retainers

iglidur® Clip On are frequently used in seat and convertible top systems and multi-joint hinges. iglidur® Clip On bearings facilitate captive assembly even in punched sheet metal/ steering arms with limited fine blanking content.

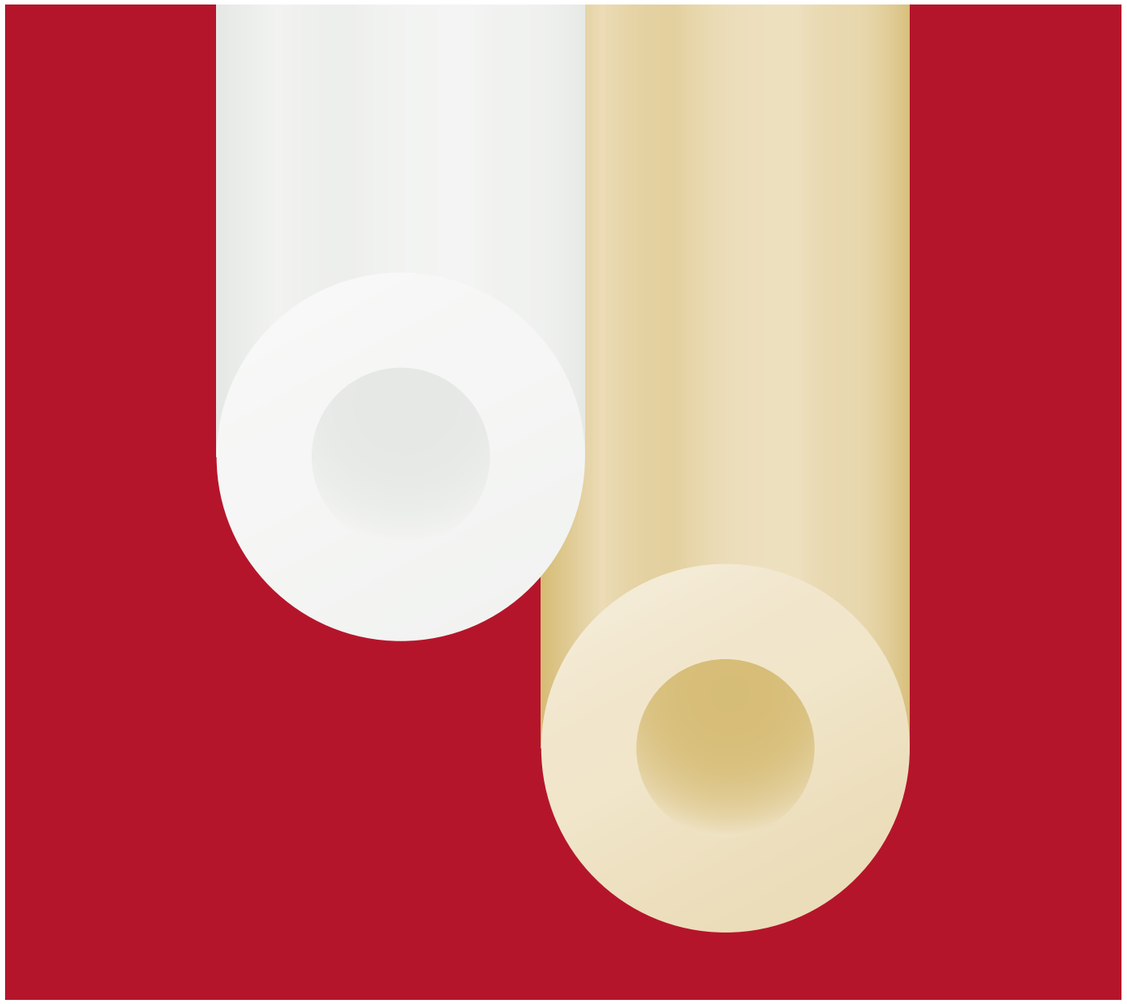
- Compensation of axial clearance
- Captive pre-assembly possible
- Electrically conductive materials are available
- Pressure-resistant materials up to 80MPa

The Clip On bearings can also be produced from electrically conductive iglidur® RN89, thus permitting e-coating.

Material:
iglidur® M250 ▶ Page 107
iglidur® RN89 ▶ Page 1657

Fitting:
The disc is clipped onto the flange bushing with undercuts.

Please contact us if you need this special solution for your application. We will help you with your design and create an appropriate proposal, drawing on the experience that we have with a large number of custom bearing solutions.



iglidur® knife edge rollers

100% lubrication-free

Low drive power

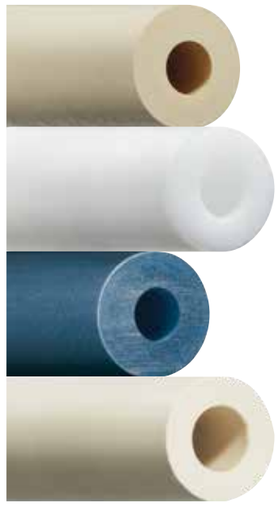
Tight deflection radii

Long service life of the belt

Cost-effective

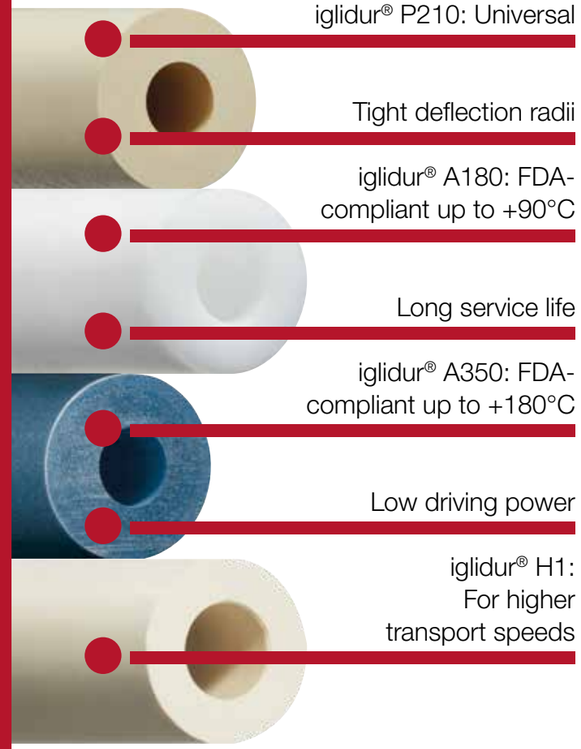
Long service life

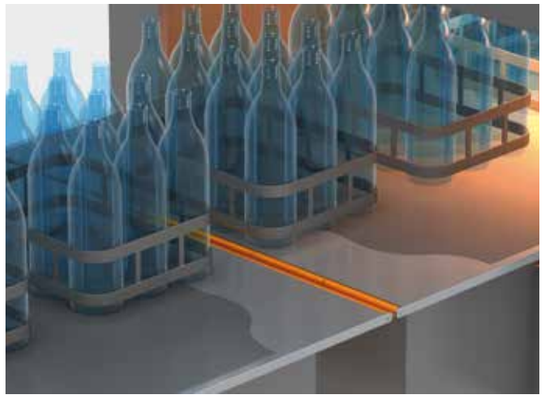
Standard range from stock

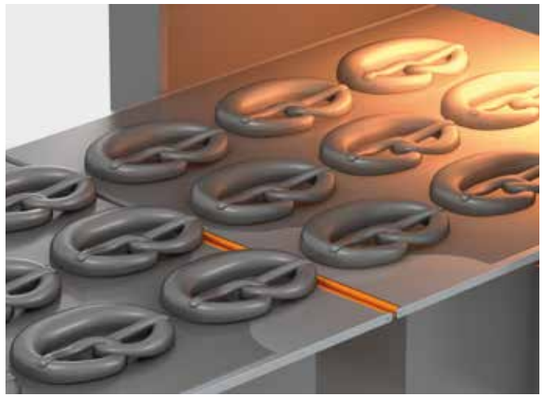


iglidur® knife edge rollers | Advantages

Lubrication-free and precise deflection of conveyor belts







iglidur® knife edge rollers

igus® has developed its own knife-edge rollers to deflect conveyor belts in materials handling applications. The iglidur® solution is characterised by tight deflection radii and a low level of required drive power.

When to use it?

- When a lubrication-free conveyor belt is required
- When a precise guiding is required
- When a cost-effective and lightweight solution is required

When not to use it?

- When high speeds occur
- When high forces are applied on the belts
- When a static knife edge is required

Available from stock

Detailed information about delivery time online.

Depending on material:

iglidur® P210: –40°C up to +100°C
iglidur® A180: –50°C up to +90°C
iglidur® A350: –100°C up to +180°C
iglidur® H1: –40°C up to +200°C

4 materials
Ø 9–20mm

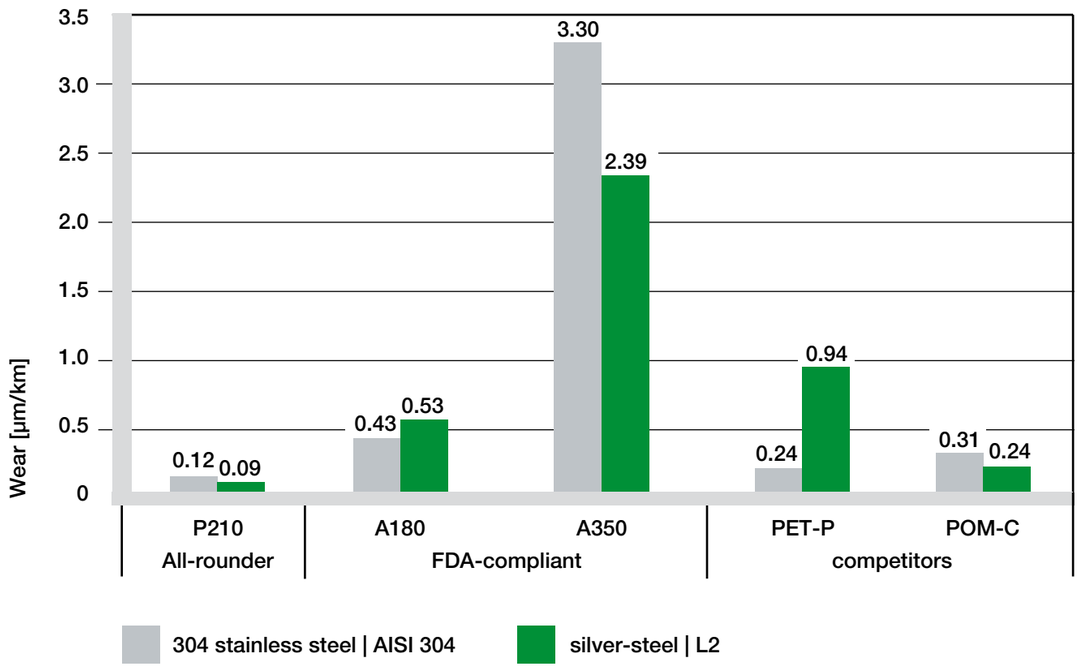
More dimensions upon request

iglidur® knife edge rollers | Technical data

Material properties

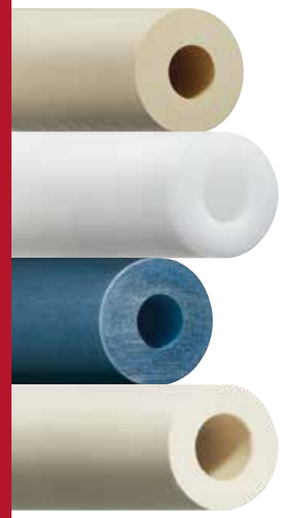
General properties	Unit	iglidur® P210	iglidur® A180	iglidur® A350	iglidur® H1	Testing method
Density	g/cm³	1.40	1.46	1.42	1.53	
Colour		yellow	white	blue	cream	
Max. moisture absorption at +23°C/50% r. h.	% weight	0.3	0.2	0.6	0.1	DIN 53495
Max. total moisture absorption	% weight	0.5	1.3	1.9	0.3	
Coefficient of sliding friction, dynamic, against steel	µ	0.07 – 0.19	0.05 – 0.23	0.1 – 0.2	0.06 – 0.20	
pv value, max. (dry)	MPa · m/s	0.4	0.31	0.4	0.8	
Mechanical properties						
Flexural modulus	MPa	2,500	2,300	2,000	2,800	DIN 53457
Flexural strength at +20°C	MPa	70	88	110	55	DIN 53452
Compressive strength	MPa	50	78	78	78	
Max. recommended surface pressure (+20°C)	MPa	50	28	60	80	
Shore D hardness		75	76	76	77	DIN 53505
Physical and thermal properties						
Max. continuous application temperature	°C	+100	+90	+180	+200	
Max. short-term application temperature	°C	+160	+110	+210	+240	
Min. continuous application temperature	°C	–40	–50	–100	–40	
Thermal conductivity	W/m · K	0.25	0.25	0.24	0.24	ASTM C 177
Coefficient of thermal expansion (at +23°C)	$K^{-1} \cdot 10^{-5}$	8	11	8	6	DIN 53752
Electrical properties						
Specific contact resistance	Ωcm	$> 10^{12}$	$> 10^{12}$	$> 10^{11}$	$> 10^{12}$	DIN IEC 93
Surface resistance	Ω	$> 10^{11}$	$> 10^{11}$	$> 10^{11}$	$> 10^{11}$	DIN 53482

Table 01: Material properties table



iglidur® knife edge rollers | Product range

iglidur® knife edge rollers



Order key

Type						Dimensions [mm]		
P210	RL	M	-	03	09	-	50
iglidur® material	Roller	Metric		Inner Ø d1	Outer Ø d2		Total length b1	

Options:
iglidur® material
P210: iglidur® P210
A180: iglidur® A180
A350: iglidur® A350
H1: iglidur® H1

Knife edge rollers made from iglidur® P210 – universal, up to +100°C

d1 +0.1 [mm]	d2[147] ±0.1 [mm]	b1 –0.3 [mm]	Part No.
3.1	9.0	50.0	**P210RLM-0309-50**
4.1	9.0	50.0	**P210RLM-0409-50**
5.1	11.0	70.0	**P210RLM-0511-70**
5.1	14.0	70.0	**P210RLM-0514-70**
6.1	12.0	70.0	**P210RLM-0612-70**
6.1	14.0	70.0	**P210RLM-0614-70**
8.1	12.0	70.0	**P210RLM-0812-70**
8.1	14.0	70.0	**P210RLM-0814-70**
8.1	16.0	77.0	**P210RLM-0816-77**
8.1	18.0	70.0	**P210RLM-0818-70**
10.1	20.0	70.0	**P210RLM-1020-70**

Knife edge rollers made from iglidur® A180 – FDA-compliant, up to +90°C

d1 +0.1 [mm]	d2[147] ±0.1 [mm]	b1 –0.3 [mm]	Part No.
3.1	9.0	50.0	**A180RLM-0309-50**
4.1	9.0	50.0	**A180RLM-0409-50**
5.1	11.0	70.0	**A180RLM-0511-70**
5.1	14.0	70.0	**A180RLM-0514-70**
6.1	12.0	70.0	**A180RLM-0612-70**
6.1	14.0	70.0	**A180RLM-0614-70**
8.1	12.0	70.0	**A180RLM-0812-70**
8.1	14.0	70.0	**A180RLM-0814-70**
8.1	18.0	70.0	**A180RLM-0818-70**
10.1	20.0	70.0	**A180RLM-1020-70**

[147] Measured with gauge

Knife edge rollers made from iglidur® A350 – FDA-compliant, up to +180°C

d1 +0.1 [mm]	d2[147] ±0.1 [mm]	b1 –0.3 [mm]	Part No.
3.1	9.0	50.0	**A350RLM-0309-50**
6.1	12.0	70.0	**A350RLM-0612-70**
6.1	14.0	70.0	**A350RLM-0614-70**
8.1	18.0	70.0	**A350RLM-0818-70**

Knife edge rollers made from iglidur® H1 for higher transport speeds, up to +200°C

d1 +0.1 [mm]	d2[147] ±0.1 [mm]	b1 –0.3 [mm]	Part No.
3.1	9.0	50.0	**H1RLM-0309-50**
4.1	9.0	50.0	**H1RLM-0409-50**
5.1	11.0	70.0	**H1RLM-0511-70**
6.1	12.0	70.0	**H1RLM-0612-70**
6.1	14.0	70.0	**H1RLM-0614-70**
8.1	12.0	70.0	**H1RLM-0812-70**
8.1	14.0	70.0	**H1RLM-0814-70**

[147] Measured with gauge

My sketches

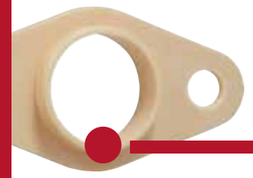
iglidur® two hole flange bearings

- Very good wear resistance
- Maintenance-free dry operation
- Lightweight
- Standard range from stock

iglidur® two hole flange bearings | Advantages

Maintenance-free dry operation

iglidur® G:
Standard material for all-round applications



iglidur® J:
Material for low wear

iglidur® X:
Material for high temperature applications

iglidur® A180:
Material for use in the food sector

iglidur® J:
Two hole flanged bearing with preload

iglidur® – maintenance-free two hole flange bearings

With this design it is possible to use iglidur® high performance plain bearings in locations where recommended housing hole tolerances are not possible. Due to the design of the bearing, high loads are possible although there is a minimal precision requirement of the housing.

- Very good wear resistance
- Lightweight
- Lubrication-free

Assembly

For low radial loads, it is sufficient to mount iglidur® two hole flange bearings on one surface simply with two bolts. For higher radial loads, it advisable to support the iglidur® two hole flange bearing in a housing or boss. For this hole, large tolerances are permitted, since it serves only as additional support for the iglidur® two hole flange bearing. In order to achieve higher radial loads in the bearings, the iglidur® two hole flange bearing can be press-fit into a recommended housing hole with H7 tolerances. The additional bolts ensure the fit of the bearing in the housing.

Available from stock
Detailed information about delivery time online.

Depending on material:

iglidur® G:	–40°C up to +130°C
iglidur® J:	–50°C up to +90°C
iglidur® X:	–100°C up to +250°C
iglidur® A180:	–50°C up to +90°C

Material properties:

iglidur® G	▶ Page 81
iglidur® J	▶ Page 159
iglidur® X	▶ Page 279
iglidur® A180	▶ Page 401

Ø 10–35mm
More dimensions upon request

iglidur® two hole flange bearings | Product range

Two hole flange bearings

Order key

Type	Size [mm]
G FL	-10

iglidur® material | Two hole flange bearings | Inner Ø

Options:
iglidur® material
G: iglidur® G
J: iglidur® J
X: iglidur® X
A180: iglidur® A180

Dimensions [mm]

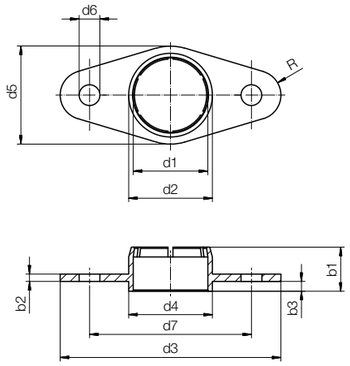
d1	d1 tolerance[3]	d2[13]	d3	d4	d5	d6	d7	b1	b2	b3	R (±0.2)	Part No.
10	+0.025 +0.083	12	30	14	15	4.5	22	6	2	1	4	**GFL-10**
12	+0.032 +0.102	14	36	16	18	4.5	26	6	2	1	4.5	**GFL-12**
14	+0.032 +0.102	16	42	18	21	5.5	30	6	2	1	5	**GFL-14**
16	+0.032 +0.102	18	48	20	24	5.5	34	6	2	1	5.5	**GFL-16**
18	+0.032 +0.102	20	54	22	27	6.5	39	6	2	1	7	**GFL-18**
20	+0.040 +0.124	23	60	26	30	6.5	44	10	3	2	7	**GFL-20**
25	+0.040 +0.124	28	75	30	35	6.5	55	10	3	2	8.5	**GFL-25**
30	+0.040 +0.124	34	90	36	40	8.5	66	10	3	2	10	**GFL-30**
35	+0.050 +0.150	39	95	41	55	8.5	77	10	3	2	12	**GFL-35**
10	+0.025 +0.083	12	30	14	15	4.5	22	6	2	1	4	**JFL-10**
12	+0.032 +0.102	14	36	16	18	4.5	26	6	2	1	4.5	**JFL-12**
14	+0.032 +0.102	16	42	18	21	5.5	30	6	2	1	5	**JFL-14**
16	+0.032 +0.102	18	48	20	24	5.5	34	6	2	1	5.5	**JFL-16**
20	+0.040 +0.124	23	60	26	30	6.5	44	10	3	2	7	**JFL-20**
25	+0.040 +0.124	28	75	30	35	6.5	55	10	3	2	8.5	**JFL-25**
30	+0.040 +0.124	34	90	36	40	8.5	66	10	3	2	10	**JFL-30**
35	+0.050 +0.150	39	95	41	55	8.5	77	10	3	2	12	**JFL-35**
10	+0.013 +0.071	12	30	14	15	4.5	22	6	2	1	4	**XFL-10**
12	+0.016 +0.086	14	36	16	18	4.5	26	6	2	1	4.5	**XFL-12**
14	+0.016 +0.086	16	42	18	21	5.5	30	6	2	1	5	**XFL-14**
16	+0.016 +0.086	18	48	20	24	5.5	34	6	2	1	5.5	**XFL-16**
20	+0.020 +0.104	23	60	26	30	6.5	44	10	3	2	7	**XFL-20**
25	+0.020 +0.104	28	75	30	35	6.5	55	10	3	2	8.5	**XFL-25**
30	+0.020 +0.104	34	90	36	40	8.5	66	10	3	2	10	**XFL-30**
35	+0.025 +0.125	39	95	41	55	8.5	77	10	3	2	12	**XFL-35**
10	+0.025 +0.083	12	30	14	15	4.5	22	6	2	1	4	**A180FL-10**
12	+0.032 +0.102	14	36	16	18	4.5	26	6	2	1	4.5	**A180FL-12**
16	+0.032 +0.102	18	48	20	24	5.5	34	6	2	1	5.5	**A180FL-16**
20	+0.040 +0.124	23	60	26	30	6.5	44	10	3	2	7	**A180FL-20**
25	+0.040 +0.124	28	75	30	35	6.5	55	10	3	2	8.5	**A180FL-25**
30	+0.040 +0.124	34	90	36	40	8.5	66	10	3	2	10	**A180FL-30**
35	+0.050 +0.150	39	95	41	55	8.5	77	10	3	2	12	**A180FL-35**

[3] After press-fit. Testing methods ▶ Page 57 [13] Press-fit in H7 tolerance housing hole

iglidur® two hole flange bearings | Advantages New

Two hole flanged bearing with preload

- Corrosion resistance
- Self-lubricating due to incorporated solid lubricants
- Long service life thanks to high-performance polymers



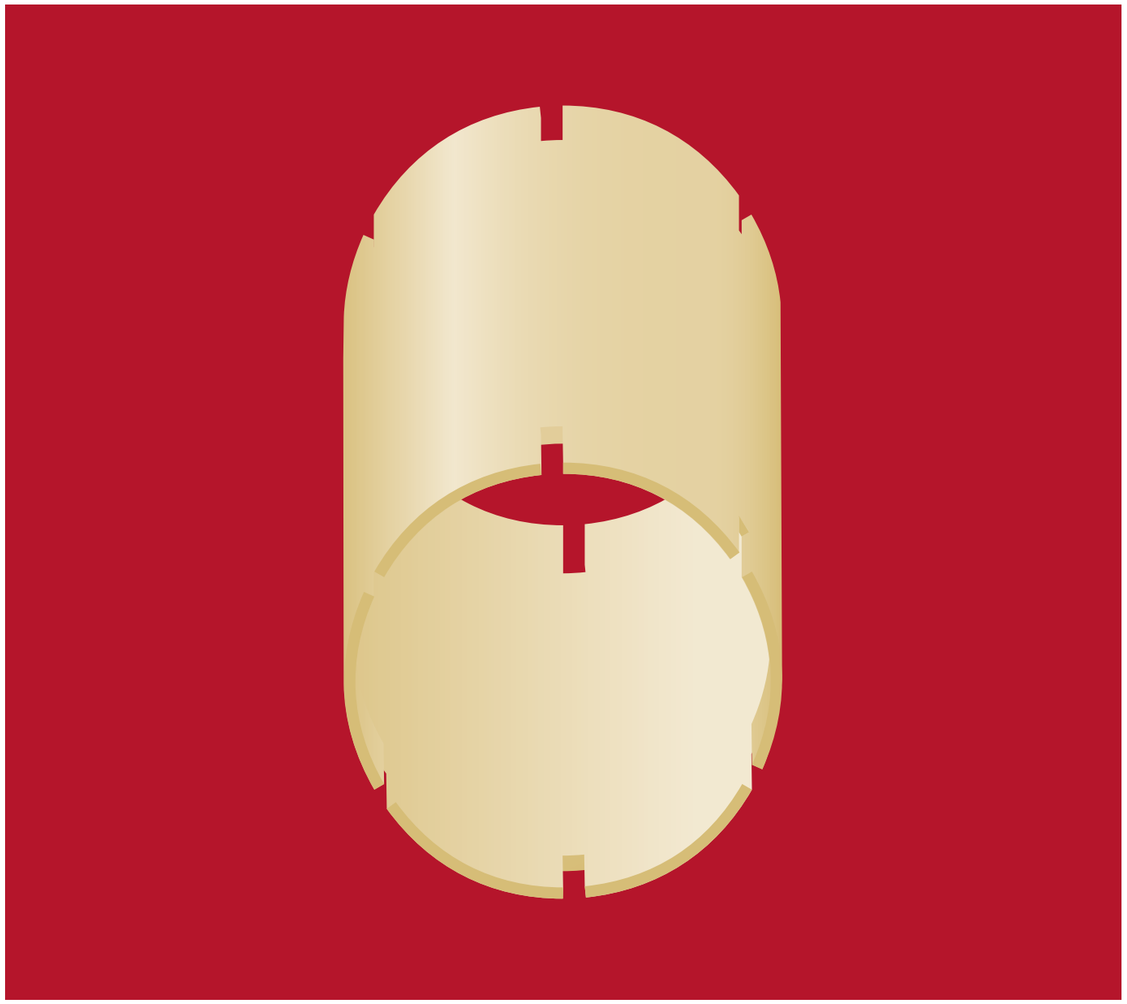
Order key

Type				Size [mm]
J	V	FL	-	10
iglidur® material	Pre-loaded	Two hole flange bearings		Inner Ø

iglidur® material
iglidur® J

Dimensions [mm]

d1	d1 tolerance	d2	d3	d4	d5	d6	d7	b1	b2	b3	R (±0.2)	Part No.
10	+0.025 +0.083	12	30	14	15	4.5	22	6	2	1	4.0	**JVFL-10**
12	+0.032 +0.102	14	36	16	18	4.5	26	6	2	1	4.5	**JVFL-12**
16	+0.032 +0.102	18	48	20	24	5.5	34	6	2	1	5.5	**JVFL-16**
20	+0.040 +0.124	23	60	26	30	6.5	44	10	3	2	7.0	**JVFL-20**



iglidur® clearance-free pre-loaded plain bearings

Radial and axial pre-load

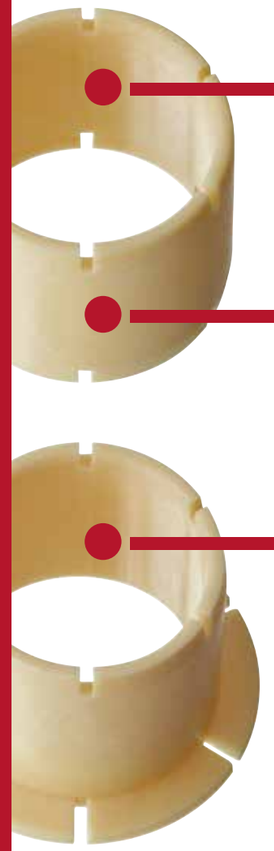
Clearance-free in unloaded condition

Material: iglidur® J

Maintenance-free and predictable service life

iglidur® JVSM/JVFM | Advantages

Zero-clearance and rattle-free – pre-loaded iglidur® J plain bearing



Clearance-free and pre-loaded bearings

Clearance-free in unloaded condition

Maintenance-free and predictable service life

iglidur® clearance-free pre-loaded plain bearings

iglidur® JVSM and JVFM plain bearings are clearance-free in unloaded condition due to the axial and/or radial pre-load. The iglidur® J material possesses extremely low coefficient of friction in dry operation and a very low stick-slip effect. Ideal for "antivibration mounting" of pedal box bearings, etc.

When to use it?

- When a radial and/or axial pre-load of plain bearings is required
- When a rattle-free bearing in the unloaded state is required
- When you need a clearance-free feel

When not to use it?

- When a plain bearing solution with reduced clearance is needed
  ▶ Please contact us
- When the pre-load has to withstand high radial forces
- When total zero clearance feature is required at high loads

Available from stock
Detailed information about delivery time online.

Material:
iglidur® J ▶ Page 159

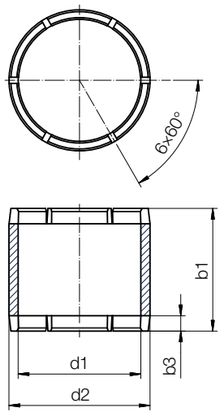
Max. +90°C
Min. –50°C

2 types
Ø 6–20mm
More dimensions upon request

Imperial dimensions available
▶ From page 1605

iglidur® JVSM/JVFM | Product range

Clearance-free, pre-loaded sleeve plain bearings



Order key

Type				Dimensions			
J	V	S	M	-06	08	-06	
iglidur® material	Pre-loaded	Form S	Metric	Inner Ø d1 [mm]	Outer Ø d2 [mm]	Length b1 [mm]	

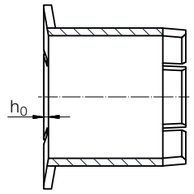
Options:
Form:
S: sleeve
F: with flange

Dimensions [mm]

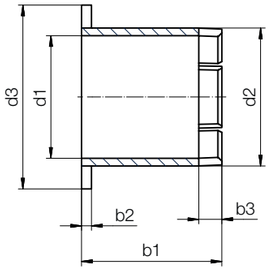
d1	d1 tolerance[14] E10	d2	b1 h13	b3	Part No.
6.0	+0.020 +0.068	8.0	6.0	2.0	**JVSM-0608-06**
8.0	+0.025 +0.083	10.0	8.0	2.0	**JVSM-0810-08**
10.0	+0.025 +0.083	12.0	10.0	2.0	**JVSM-1012-10**
12.0	+0.032 +0.102	14.0	12.0	2.0	**JVSM-1214-12**
14.0	+0.032 +0.102	16.0	14.0	2.0	**JVSM-1416-14**
15.0	+0.032 +0.102	17.0	15.0	2.5	**JVSM-1517-15**
18.0	+0.032 +0.102	20.0	18.0	2.5	**JVSM-1820-18**
20.0	+0.040 +0.124	23.0	20.0	2.5	**JVSM-2023-20**

[14] d1 measured after press-fit in housing hole. d2 H7 within the measurement plane

Clearance-free, pre-loaded flanged bearings



r = max. 0.5mm

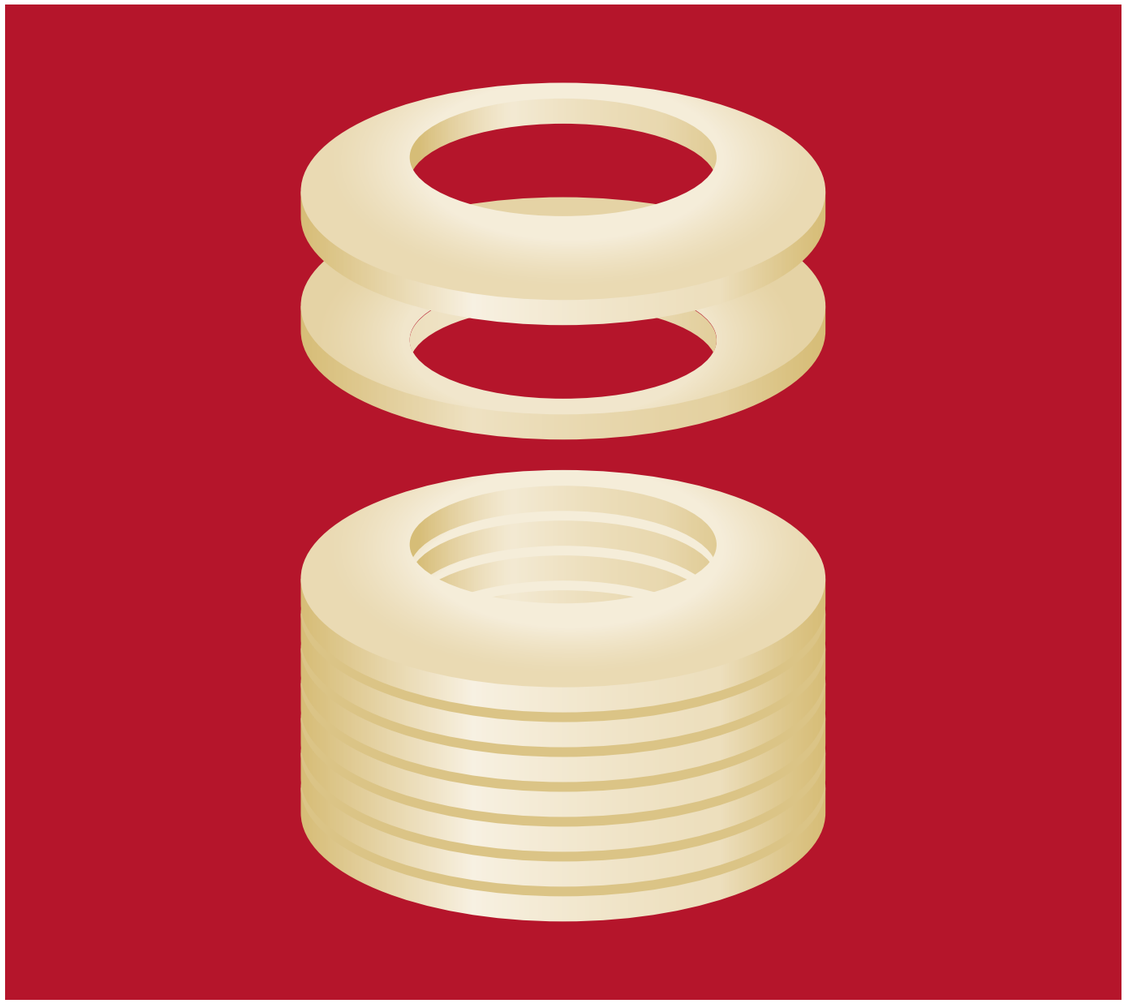


Dimensions [mm]

d1	d1 tolerance[14] E10	d2	d3	b1 h13	b2	b3	h_0 ±0.1	Part No.
8	+0.025 +0.083	10	15	10	1.0	2.0	0.44	**JVFM-0810-10**
10	+0.025 +0.083	12	18	10	1.0	2.0	0.53	**JVFM-1012-10**
12	+0.032 +0.102	14	20	12	1.0	2.0	0.53	**JVFM-1214-12**
14	+0.032 +0.102	16	22	12	1.0	2.0	0.53	**JVFM-1416-12**
15	+0.032 +0.102	17	23	15	1.0	2.5	0.53	**JVFM-1517-15**
18	+0.032 +0.102	20	26	11	1.0	2.5	0.53	**JVFM-1820-11**
18	+0.032 +0.102	20	26	18	1.0	2.5	0.53	**JVFM-1820-18**
20	+0.040 +0.124	23	30	20	1.5	2.5	0.62	**JVFM-2023-20**

[14] d1 measured after press-fit in housing hole. d2 H7 within the measurement plane

My sketches

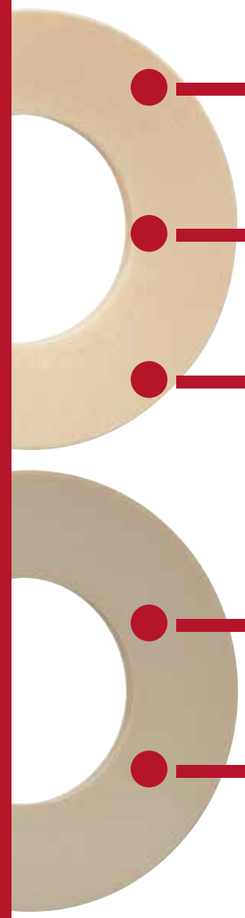


polysorb disc springs

- Compensation for axial clearances and manufacturing tolerances
- Vibration dampening
- Noise dampening
- Corrosion-free
- Lightweight
- Electrical and thermal insulation
- Standard range from stock

polysorb | Advantages

Cushion and dampen: plastic disc springs



iglidur® J: Standard material for many applications

Compensation of axial clearance and manufacturing tolerances

Vibration dampening

iglidur® A500: High temperature material

Lightweight

polysorb disc springs

Disc springs are discs that can be axially loaded, which are concave in the axial direction. Disc springs require less space than other spring types and are especially suitable for designs that do not require a high spring length.

When to use it?

- When an application requires disc spring characteristics which are only possible in metal at a considerable expense (slot design)
- For compensation of axial clearances and manufacturing tolerances
- For vibration dampening
- For noise reduction
- When a non-magnetic material is required
- For electrical and thermal insulation

When not to use it?

- When constant spring forces are necessary over a wide temperature range
- When high spring forces are required

Available upon request
Detailed information about delivery time online.

Material properties:
iglidur® J **▶ Page 159**
iglidur® A500 **▶ Page 393**

Depending on material:
iglidur® J: –50°C up to +90°C
iglidur® A500: –100°C up to +250°C

1 type, 2 materials
Ø 5–20mm
More dimensions upon request

General properties

The spring deflection of the disc spring is relatively small. Therefore a number of disc springs are combined in practice. Disc springs that are alternately stacked increase the spring length proportionally to the amount of springs. In order to increase the force, the disc springs can be parallel stacked to form a spring packet.

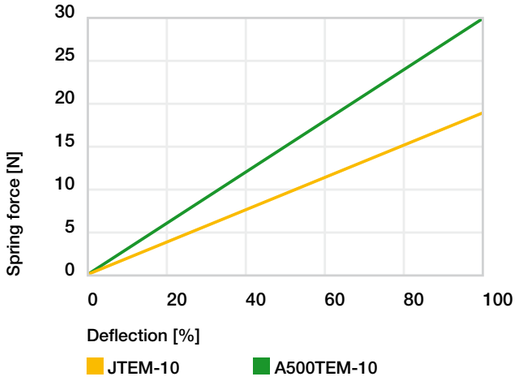


Diagram 01: Spring force [N] as a function of percental deflection measured with size 10

The force deformation curves of polysorb disc springs are approximately linear.

Additional properties

Chemical resistance
polysorb disc springs are resistant to a variety of chemicals. iglidur® A500 has a higher resistance than iglidur® J.

Chemicals	Resistance	
	iglidur® J	iglidur® A500
Alcohols	+	+
Hydrocarbons	+	+
Greases, oils without additives	+	+
Fuels	+	+
Diluted acids	0 to –	+
Strong acids	–	+
Diluted alkalines	+	+
Strong alkalines	+ up to 0	+

+ resistant 0 conditionally resistant – not resistant
All data given at room temperature [+20°C]
Table 01: Chemical resistance

Moisture absorption
The low moisture absorption permits the use in wet or moist environments.
polysorb disc springs absorb moisture and in the process the mechanical properties change. However, in the worst application case – a long-term use in water – polysorb disc springs still have a high spring force.

iglidur®	Standard environment 20°C/50% r. h.	Saturated in water
J	18	15
A500	24	23

Table 02: Spring force [N] as a function of the absorbed moisture

Increased temperatures
Increased temperatures reduce the rigidity of polymers. polysorb disc springs made from iglidur® J (JTEM-10) still have a maximum spring force of 8N at the maximum permissible temperature of +90°C. The spring force against ambient temperature is shown in diagram 02.

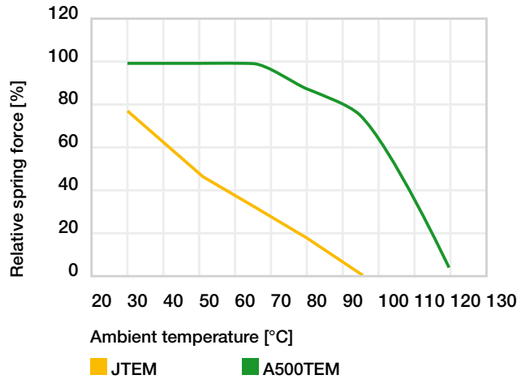


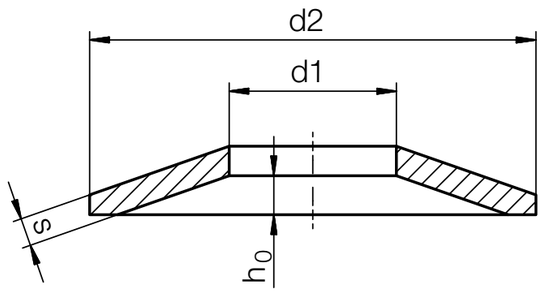
Diagram 02: Effect of ambient temperature on the spring force

polysorb | Product range

Plastic disc springs

iglidur® J

iglidur® A500



Dimensions based on DIN 2093

Order key

Type	Dimensions [mm]
☐ T E M	-05

iglidur® material	Thrust washer style	"Elastic spring"	Metric	Inner Ø d1

Options:
iglidur® J
for low wear
iglidur® A500
for high temperature applications requiring FDA-compliance

Material:
iglidur® J ▶ Page 159
iglidur® A500 ▶ Page 393

Dimensions [mm]

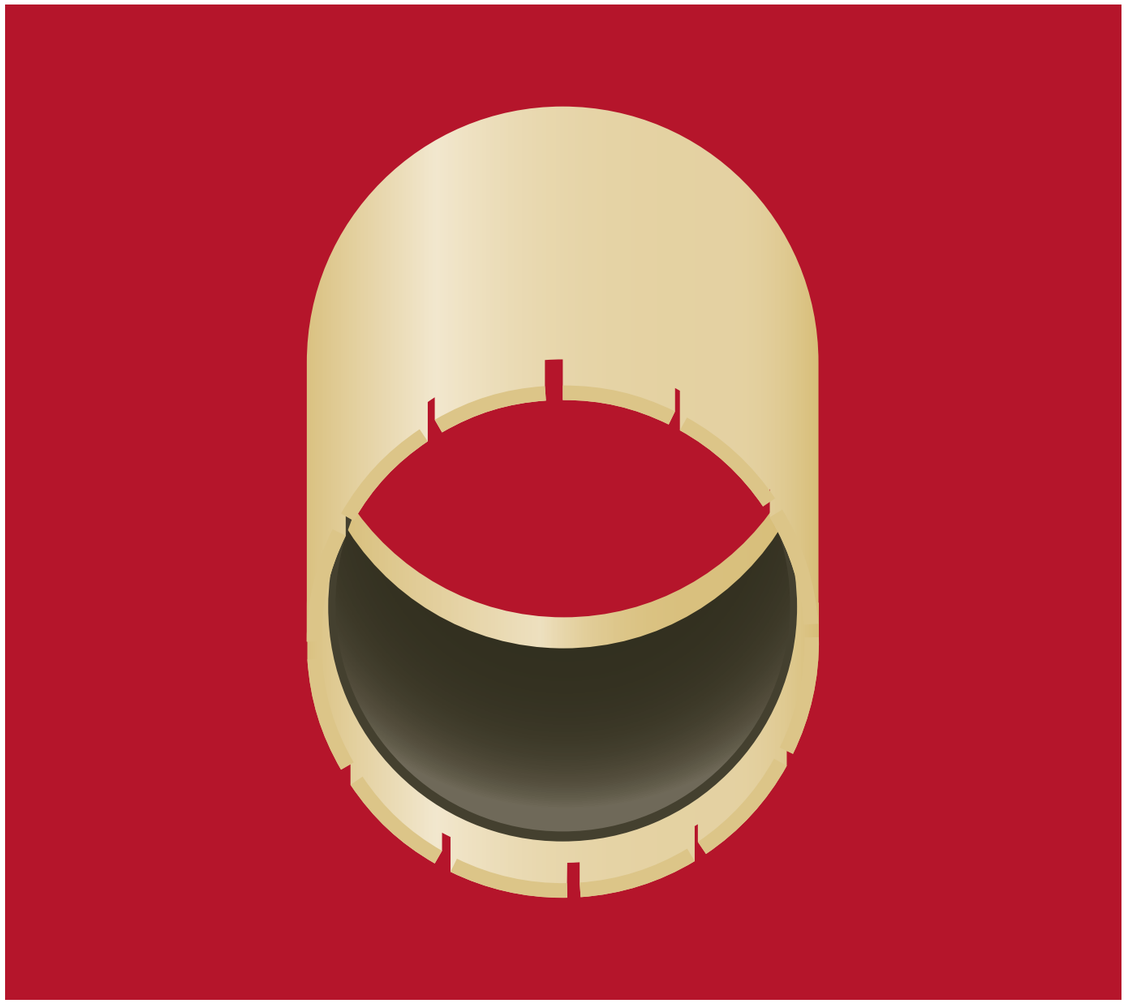
d1	d2	s	h_0	Standard values: Spring lengths and forces $F_{1.0}$ iglidur® J [N]	$F_{1.0}$ iglidur® A500 [N]	Weight [g]	Part No.[15]
5.2	10.0	0.5	0.25	5	8	0.04	☐ TEM-05
6.2	12.5	0.7	0.30	10	15	0.11	☐ TEM-06
8.2	16.0	0.9	0.35	16	24	0.20	☐ TEM-08
10.2	20.0	1.1	0.45	24	35	0.33	☐ TEM-10
12.2	25.0	1.5	0.55	45	70	0.85	☐ TEM-12
16.3	31.5	1.75	0.70	65	85	1.44	☐ TEM-16
20.4	40.0	2.25	0.90	130	150	3.10	☐ TEM-20

The standard values for the spring lengths and forces are rounded mean values.

[15] Material: iglidur® J: JTEM, standard
iglidur® A500: A500TEM, high temperature and chemical resistance

Symbols and units:

F	=	Force [N]
h_0	=	Maximum spring displacement [mm]
$F_{1.0}$	=	Spring force 100% displacement [N]

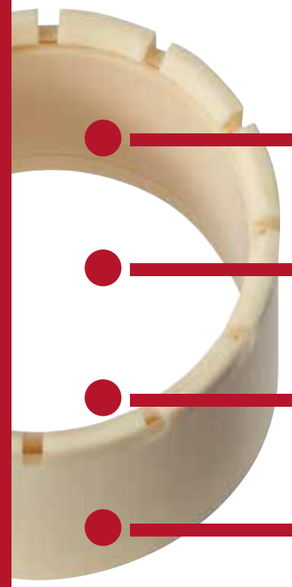


iglidur® PEP multi-component bearings

- Can be used with any shaft material
- Cost-effective
- Easy installation
- Low coefficient of friction
- Standard range from stock

iglidur® PEP | Advantages

For all shaft surfaces and materials



Can be used with any shaft material

Cost-effective

Easy installation

Low coefficient of friction

iglidur® PEP multi-component bearings

In standard plain bearing solutions, the shaft has a critical part to play, as important as the bearing itself. With the iglidur® PEP bearings, igus® is forging new trail with this enclosed and maintenance-free plain bearing design.

When to use it?

- When a cost-effective plastic plain bearing system is required
- When independence from the shaft material and shaft surface is required
- For the protection of expensive and sensitive shafts

When not to use it?

- For high surface speeds
  - ▶ iglidur® J, page 159
- At high loads
  - ▶ iglidur® G, page 81
  - ▶ iglidur® Q, page 459
- At high temperatures
  - ▶ iglidur® V400, page 307
  - ▶ iglidur® X, page 279
  - ▶ iglidur® Z, page 289
- When low clearance bearings are required
  - ▶ iglidur® P, page 131
  - ▶ iglidur® X, page279

Available from stock
Detailed information about delivery time online.

Material:
iglidur® J ▶ Page 159

Max. +90°C
Min. –50°C

1 type
Ø 6–20mm
More dimensions upon request

Imperial dimensions available
▶ From page 1605

iglidur® PEP | Technical data

General properties

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 plain 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 lubrication-free plastic 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 plastic 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 polymer plain bearing. Due to the bearing materials used, the PEP plastic bearing is totally corrosion-free.

Wear resistance

For loads up to 5N/mm² the wear test results are compelling. Here PEP plastic 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 shaft surface finish which is demanded by traditional bearings. The consistently low coefficient of friction is also an advantage to the user. Since the running surfaces are fixed, the tribological data can be calculated. The coefficient of friction of the lubrication-free PEP bearings is no longer based on the shaft materials or surface properties. If necessary, the coefficient of friction can be reduced further with a small amount of lubricant.

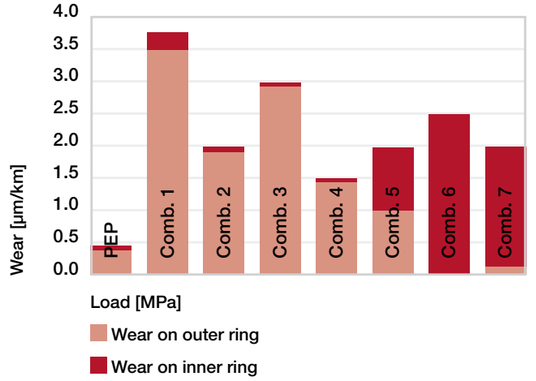


Diagram 01: Wear experiments of different material combinations, p = 0.75MPa, v = 0.3m/s

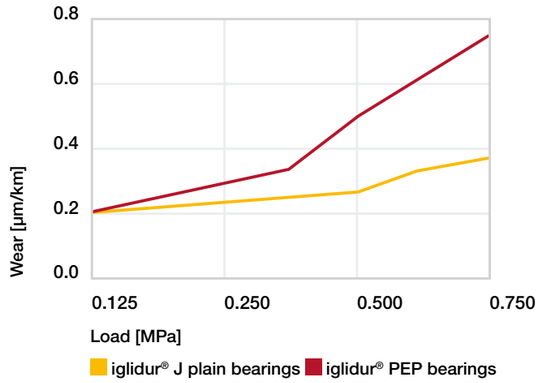


Diagram 02: Wear of iglidur® PEP bearings as a function of the load, v = 0.3m/s

Assembly

The installation of the PEP plain bearing could not be easier or faster. The bearings are manufactured to be press-fitted into a recommended housing hole 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.

iglidur® PEP | Product range

Sleeve bearings (form S)

Order key

Type	Dimensions [mm]

PEP S M -0610-10

iglidur® type	Form S	Metric	Inner Ø d1	Outer Ø d2	Total length b1

Material:
iglidur® J ▶ Page 159

Imperial dimensions available
▶ From page 1605

Dimensions [mm]

d1	d2	b1	Part No.
6	10	10	PEPSM-0610-10
8	12	12	PEPSM-0812-12
10	14	12	PEPSM-1014-12
12	16	15	PEPSM-1216-15
16	20	20	PEPSM-1620-20
20	23	20	PEPSM-2023-20

iglidur® lip seal bearings

- Polymer bearing with integrated radial shaft seal
- Seals against the shaft
- Reduced space requirement and easy, fast installation
- Can be manufactured with different types of seal
- High temperature option available (VDSM)

iglidur® lip seal bearings | Advantages

Position and seal: plastic bearing with clip-on shaft seal

Seals against the rotating shaft

Reduced space requirement

Easy and fast installation

Can be manufactured with different types of seal

High temperature option available (made of iglidur® V400)

iglidur® lip seal bearings

Easy and quick to fit polymer plain bearing made of iglidur® J (JDSM) or iglidur® V400 (VDSM) with an integrated rotary lip seal, which protects against dust, dirt, and all depressurised liquids.

When to use it?

- When the penetration of dirt and water spray should be prevented
- When only a small installation space is available in the axial direction
- When an existing seal should be integrated in a plain bearing

When not to use it?

- When pressurised media should be sealed
- When a permanent tensioned seal is required

Available upon request
Detailed information about delivery time online.

Material properties:
iglidur® J ▶ Page 159
iglidur® V400 ▶ Page 307

Depending on material:
iglidur® J: –50°C up to +90°C
iglidur® V400: –50°C up to +200°C

1 type, 2 materials
Ø 10mm
More dimensions upon request

iglidur® lip seal bearings | Product range

Lip seal sleeve bearings (form S)

JDSM

VDSM

Order key

Type				Dimensions [mm]		
□ D	S	M	-1015	-14		
iglidur® material	Seal	Form S	Metric	Inner Ø d1	Outer Ø d2	Total length b1

Material:
iglidur® J ▶ Page 159
iglidur® V400 ▶ Page 307

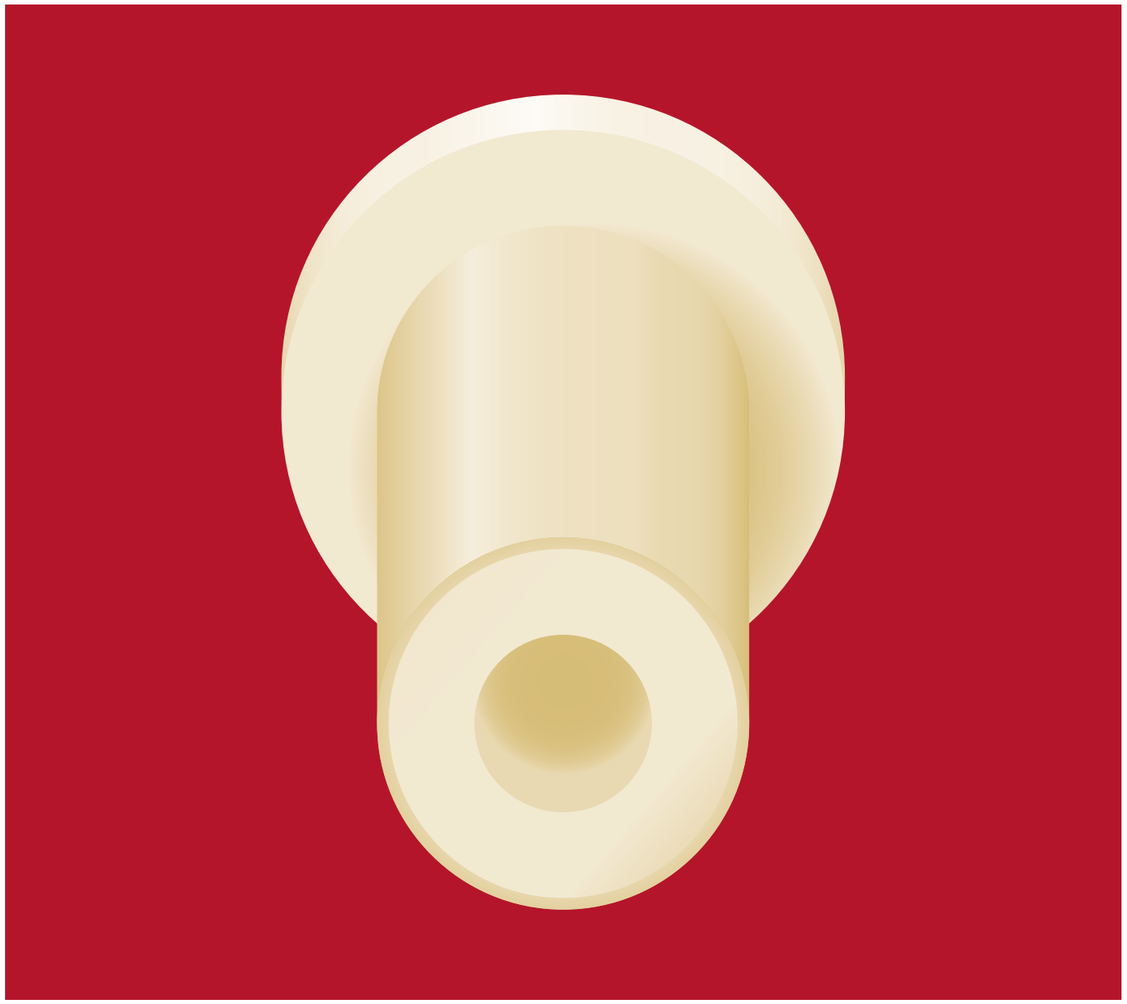
Dimensions [mm]

d1 E11	d1 tolerance[3]	d2 Ø	b1 h13	b3	f	Part No.
10	+0.025 +0.135	15	14	10	1	**JDSM-1015-14**
10	+0.025 +0.135	15	14	10	1	**VDSM-1015-14**

[3] **After press-fit. Testing methods ▶ Page 57**

Please contact us if you want to combine your seal with an iglidur® plain bearing.
We will support you with the design, will check the integration and create an appropriate proposal.

My sketches



speedimold – custom-made parts manufactured by injection moulding

- Cost-effective prototypes and series production
- Original iglidur® tribo materials
- Tailored to your application
- Delivery time from 3 days
- For quantities ranging from a few hundred to several million

Customised & cost-effective: Your plastic plain bearing in the required design, material and quantity

"Show me the plastic part that gives you a problem. I'll provide you with a solution!"

With this idea, Günter Blase founded igus® over 50 years ago, and it still holds true today: hence, customer-specific series solutions are part of our daily work just like catalogue parts.

Your igus® plastic plain bearings:

- Lubrication and maintenance-free
- Cost-effective
- Customised parts from 3 days delivery time
- Service life predictable in advance
- From 1 piece to several million pieces: Always the appropriate manufacturing process
- All iglidur® materials possible
- New development of specific materials possible
- Joint dimensioning and design coordination

▶ **www.igus.eu/specialbearings**

Custom manufactured

With speedimold, there are two different methods: first, custom-made plastic parts can be produced with 3D-printed injection moulds and second, with the aid of machined aluminium tools.

In the 3D printing process, users can choose their custom-made part from over 50 different iglidur® tribological materials optimised for friction and wear. The material of the 3D-printed mould is tailored to withstand the high temperatures and pressure prevailing in injection moulding.

You can produce from just one piece up to 500 parts, prototypes or small batches from a 3D-printed injection mould.

For batches between 200 and 2,000 pieces, the injection moulded part can also be produced with an aluminium tool. This lean manufacturing method also saves the user time and money here: aluminium tools are also lower cost and faster to produce than steel moulds, as no lengthy hardening is required.

In 3 steps to your individual plain bearing

1. Submit an enquiry
Fill in the form with some basic information: quantity and requirement, such as food contact, dirt resistance, low wear etc. and upload the CAD files, for example.

After one of our specialists has contacted you for a consultation, you will receive a quotation.

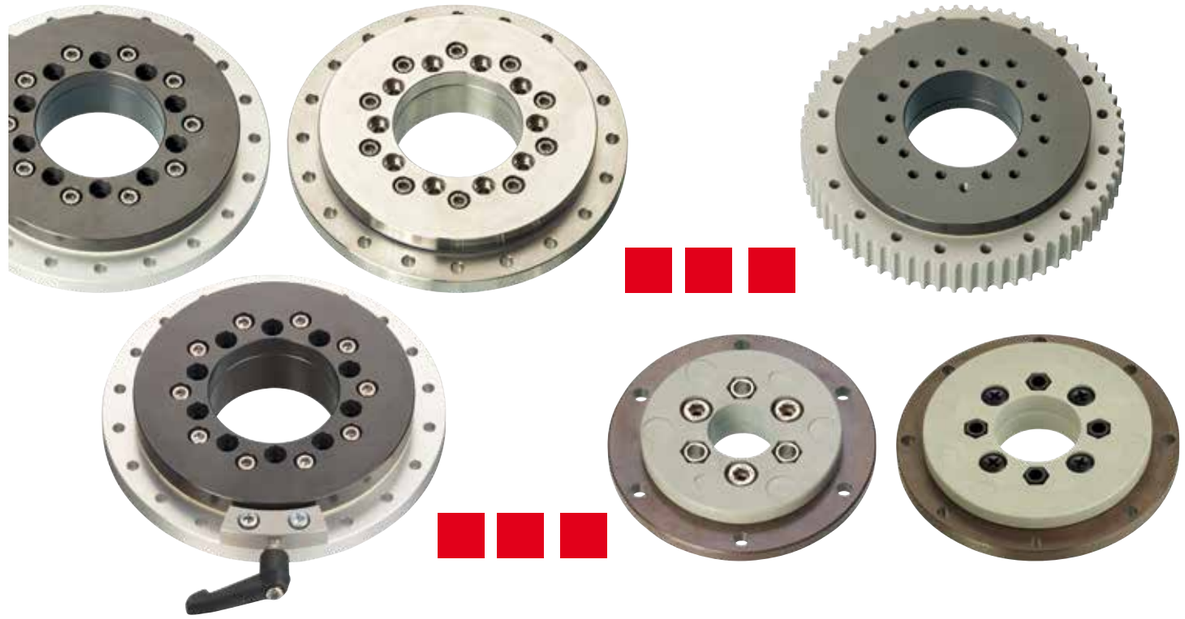
2. We produce your required component
Upon order, igus® starts with the production process.

3. Your receive your product
Your required component is ready to ship and delivered quickly.

Submit an enquiry:
▶ **www.igus.eu/specialbearings-enquiry**

iglidur®

Slewing rings



...plastics

iglidur® PRT | Product overview

iglidur® PRT – polymer slewing rings

High torsional stability:
Type 01
▶ Page 638

With outer drive ring:
Type 01
▶ Page 639

Lightweight:
Type 02
▶ Page 640

Low-cost:
Type 03
▶ Page 641

iglidur® PRT – polymer slewing rings

New

Compact, lightweight and cost-effective:
Type 04
▶ Page 642

New

Installation solutions:
Type 04
▶ Page 643

New

With assembled drive pin:
Type 04
▶ Page 644

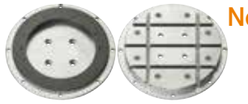
New

Slewing rings with gear teeth:
Type 04
▶ Page 645

iglidur® PRT – polymer slewing rings

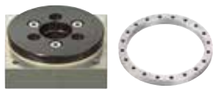
New

Stainless steel slewing rings:
Type 04
▶ Page 646



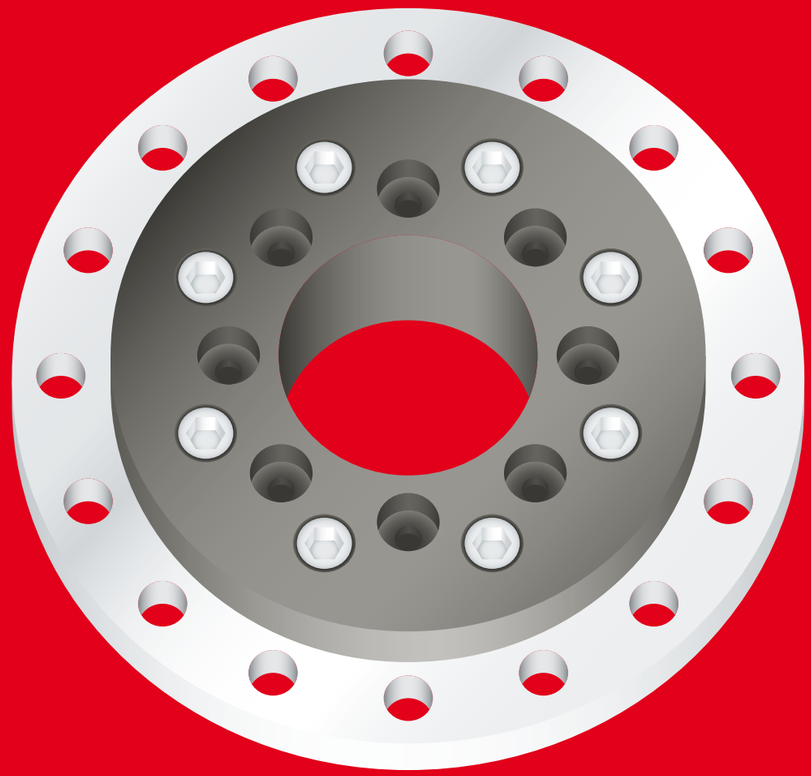
New

Slot nut profile:
Type 04
▶ Page 647



Special geometries and accessories
▶ Page 648

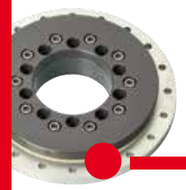
Universal sliding elements
▶ Page 654



iglidur® PRT – polymer slewing rings

- Completely maintenance-free
- Easy to install and replaceable sliding elements
- High wear resistance
- For high loads and high rigidity
- Stainless steel versions available
- Extensive accessories
- Standard range from stock

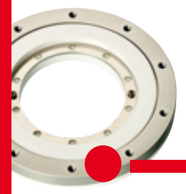
Maintenance-free slewing rings



Type 01:
High torsional rigidity
▶ From page 638

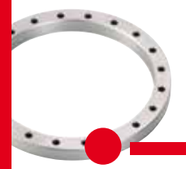
Type 01 with gear teeth:
With outer drive ring
▶ From page 639

Type 02:
Lightweight
▶ From page 640

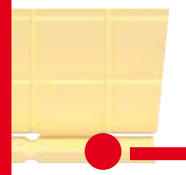


Type 03:
Cost-effective
▶ From page 641

Type 04:
Compact, lightweight
and cost-effective
▶ From page 642



Extensive accessories:
Special geometries
and accessories
▶ From page 648



Universal sliding elements:
Customise your own
slewing ring systems
▶ From page 654

Polymer slewing ring bearings

iglidur® PRT slewing rings are ready-to-install rotary joints for lubrication-free dry operation. The design is not based on metallic rollers or balls, but on maintenance-free sliding elements made of the proven tribologically optimised iglidur® materials in combination with rings made of lightweight anodised aluminium or stainless steel. These iglidur® materials are universally applicable. They can be used in applications with high temperatures, moisture or chemical contact, for example.

- Completely maintenance-free
- Easy to install and replaceable sliding elements
- High wear resistance
- For high loads and high rigidity
- Stainless steel versions available
- Extensive accessories

Typical application areas

- Conveyors and automation
- Stage and lighting technology
- Assembly stations

Available from stock
Stainless steel version upon request
Detailed information about delivery time online.

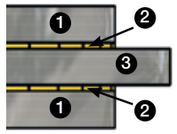
Price breaks online
No minimum order value. No minimum order quantity

Max. +180°C
Min. –50°C

4 types
Ø 20–300mm

Service life calculation
▶ www.igus.eu/prt-expert

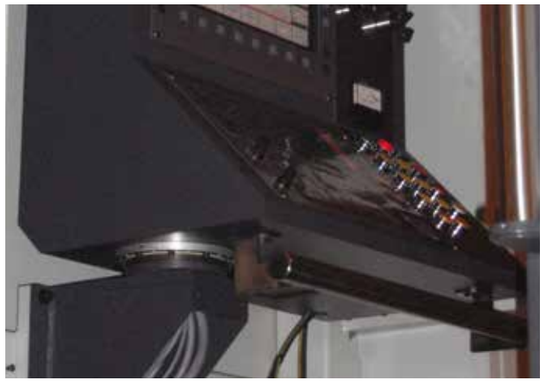
Design slewing ring



1. **Type 01 and 04:** Hard anodised aluminium, or 316 stainless steel
   Type 02: iglidur® J4 or A180
2. **Type 01** and 04: iglidur® J or H1
3. **Type 01, 02 and 04:** Anodised aluminium or 316 stainless steel

iglidur® PRT-01-60 is used here in a handling/transport system for semiconductor carriers. Through a cylinder control, the PRT polymer slewing ring bearing provides a deflection at the end of the system's track.

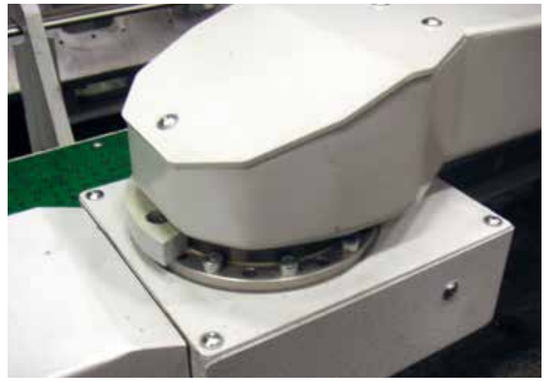
A good example of the light weight and lubrication-free slewing ring being used in a-rotating light, for discos.



In this machine tool control panel, an iglidur® polymer slewing ring bearing is used due to its freedom from lubrication and maintenance.

The iglidur® PRT-01-100 slewing ring is used in an automatic welding plant in this application. It enables pivoting in the horizontal plane of the clamping device.

The lubrication-free iglidur® PRT slewing ring masters this job brilliantly, is lighter and in terms of purchasing is more affordable than a comparable metal rotary connector.



Lubrication and maintenance-free polymer slewing ring for moving the control panel. The low coefficient of friction ensures low actuating force during pivoting.

Slewing ring general properties

Type 01

Properties	Unit	-20	-30	-50	-60	-100	-150	-200	-300
Weight	kg	0.2	0.4	1.0	1.1	1.3	2.2	3.2	7.6
Axial load, static	N	15,000	27,000	40,000	50,000	55,000	80,000	100,000	150,000
Axial load, dynamic	N	4,000	7,000	10,000	15,000	16,000	25,000	30,000	90,000
Radial load, static	N	2,300	5,000	8,000	10,000	16,000	25,000	35,000	45,000
Radial load, dynamic	N	600	1,500	2,500	3,000	5,000	8,000	10,000	27,000
Rotating speed, dry operation	rpm	300	250	200	200	150	100	80	50
Max. perm. tilting moment	Nm	100	200	600	800	1,500	2,000	3,800	5,000

Type 02

Properties	Unit	-20-AL	-20-LC	-20-P	-30-AL	-30-LC	-30-P	-50-AL	-50-LC	-50-P	-60-AL
Weight	g	105	87	72	200	165	140	440	380	320	700
Axial load, static	N	13,000	13,000	13,000	25,000	25,000	25,000	35,000	35,000	35,000	45,000
Axial load, dynamic	N	4,000	4,000	4,000	7,000	7,000	7,000	9,000	9,000	9,000	12,000
Radial load, static	N	2,000	2,000	2,000	2,500	2,500	2,500	5,000	5,000	5,000	10,000
Radial load, dynamic	N	500	500	500	700	700	700	1,200	1,200	1,200	2,800
Rotating speed, dry operation	rpm	250	250	250	200	180	180	120	120	120	120
Max. permissible tilting moment	Nm	60	40	40	100	50	50	120	100	100	200

Type 03

Properties	Unit	-80
Weight	kg	0.47
Axial load, static (compressive force direction)	N	45,000
Axial load, static (tensile force direction) [154)]	N	5,000
Axial load, dynamic (compressive force direction)	N	12,000
Axial load, dynamic (tensile force direction) [154)]	N	1,200
Radial load, static	N	4,000
Radial load, dynamic	N	1,000
Rotating speed, dry operation	rpm	120
Max. permissible tilting moment [154)]	Nm	120

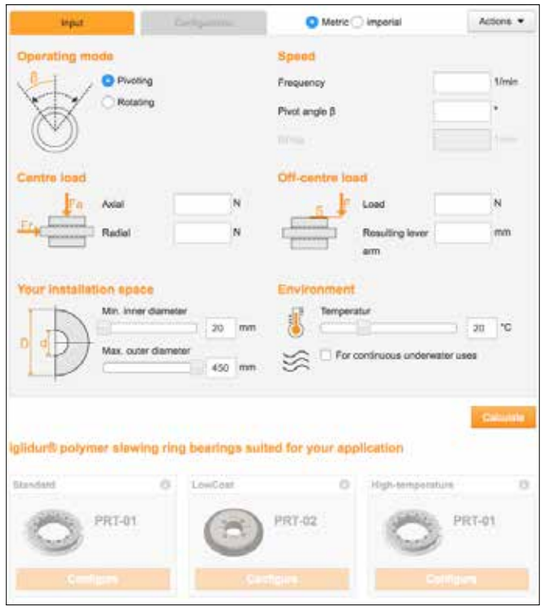
Axial clearance 0.7mm, radial clearance 0.9mm

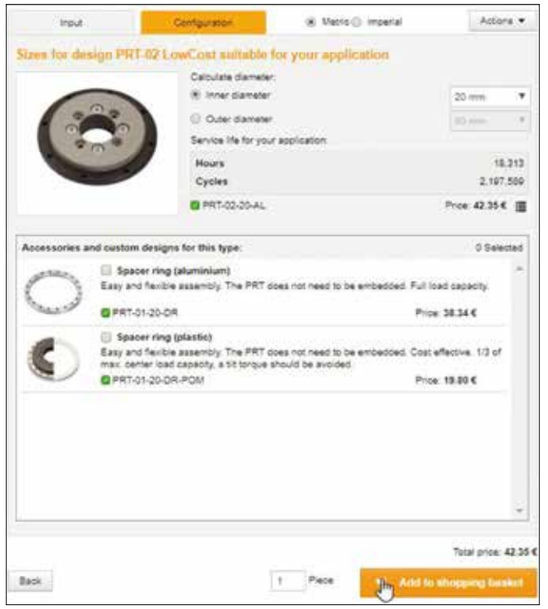
[154)] Only when the PRT is fitted onto a flat, stable surface

Type 04

Properties	Unit	-50	-60	-100	-150	-200	-300
Weight	g	225	250	370	530	680	990
Axial load, static	N	12,000	14,000	20,000	27,000	35,000	48,000
Axial load, dynamic	N	3,000	4,000	5,000	7,500	9,000	12,000
Radial load, static	N	2,500	3,000	5,500	6,500	8,000	10,000
Radial load, dynamic	N	750	900	1,500	1,900	2,500	3,500
Rotating speed, dry operation	rpm	200	190	135	100	80	50
Max. perm. tilting moment	Nm	200	250	450	650	875	1,200

iglidur® PRT | Technical data





Configurator for slewing rings

The most common criteria for selecting an iglidur® PRT slewing ring bearing are firstly the loads and torques to be supported and secondly the installation space available and the minimum central implementation distance required. The suitable sizes and types are selected on the basis of this data and the speed and their service life is calculated.

▶ **www.igus.eu/prt-expert**

Type 01

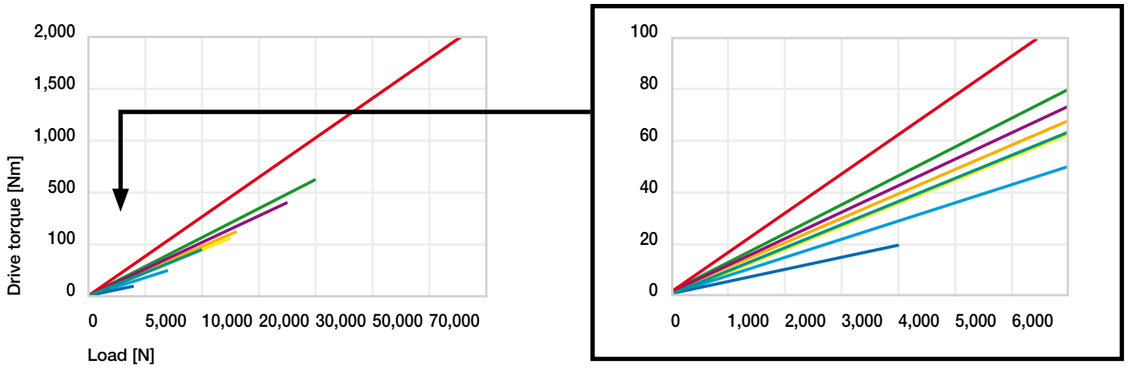


Diagram 01: Required drive torque versus applied load

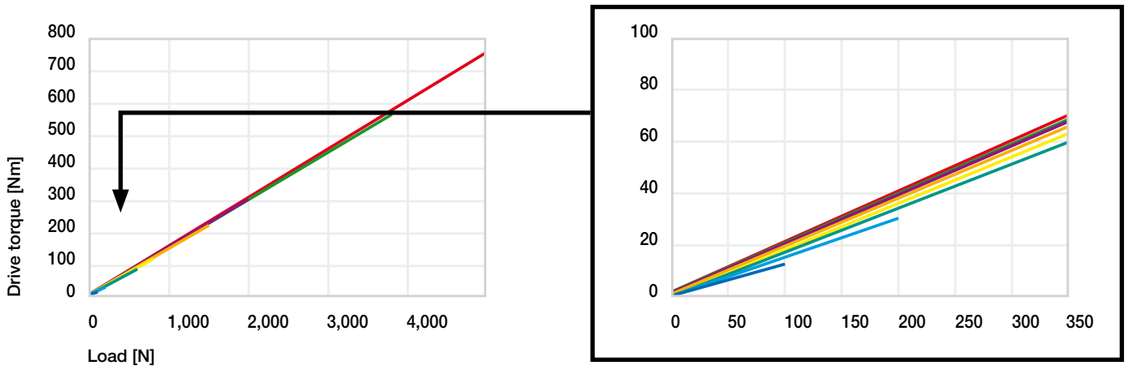


Diagram 02: Required drive torque versus applied moment

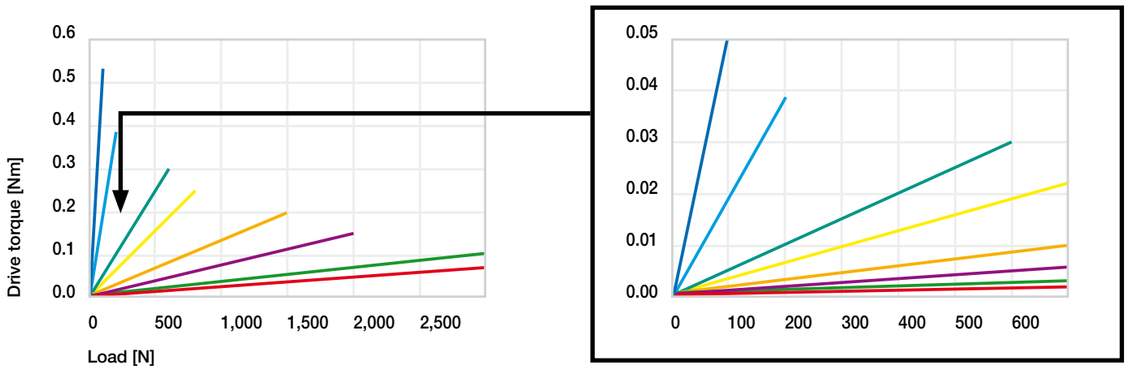


Diagram 03: Deflection versus applied tilting moment

PRT-01-20 M4, min. 6 screws
PRT-01-30 M4, min. 8 screws
PRT-01-50 M6, min. 12 screws
PRT-01-60 M5, min. 10 screws
PRT-01-100 M5, min. 12 screws
PRT-01-150 M5, min. 12 screws
PRT-01-200 M6, min. 12 screws
PRT-01-300 M8, min. 12 screws

All load values assume the PRT is assembled with cap head screws (strength class 8.8) on the outer PCD of the collar clamp. For the assembly (using strength class 8.8 screws) of the PRT, the screws have to be inserted to a minimum thread depth of 2xd in every hole location in the outer ring. All data can be used for both lateral and horizontal assembly (including overhead installation).

Type 04

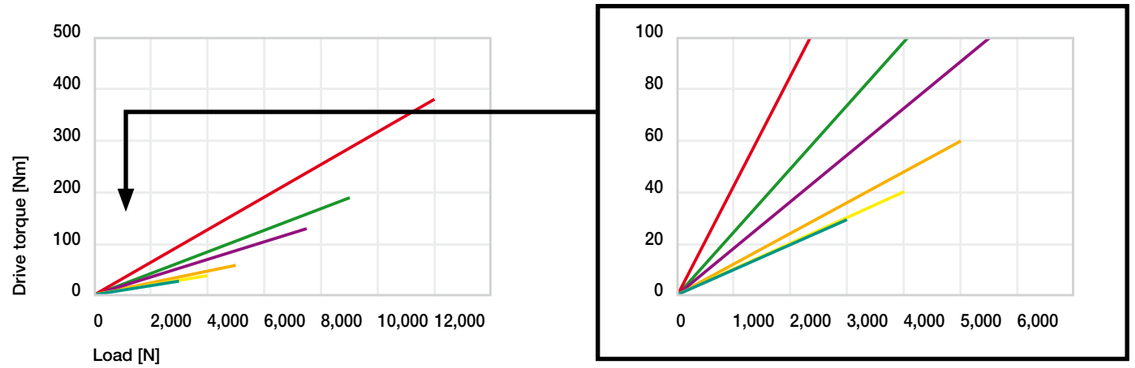


Diagram 01: Required drive torque versus applied load

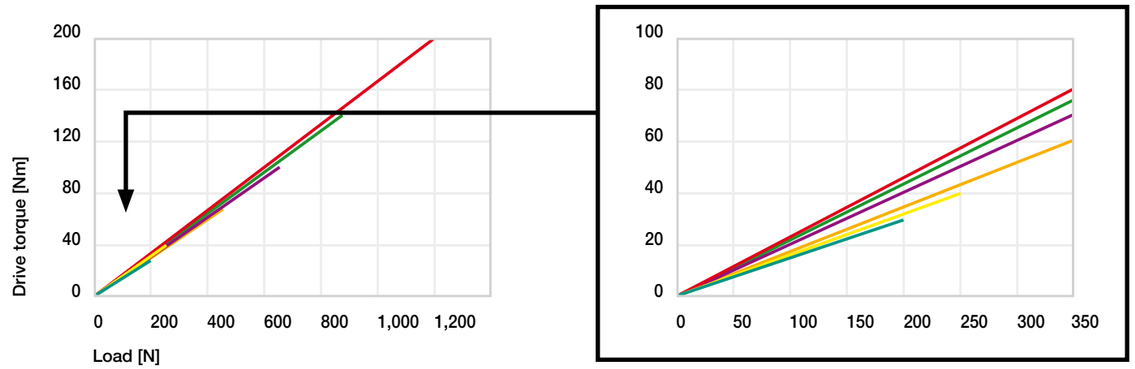


Diagram 02: Required drive torque versus applied moment

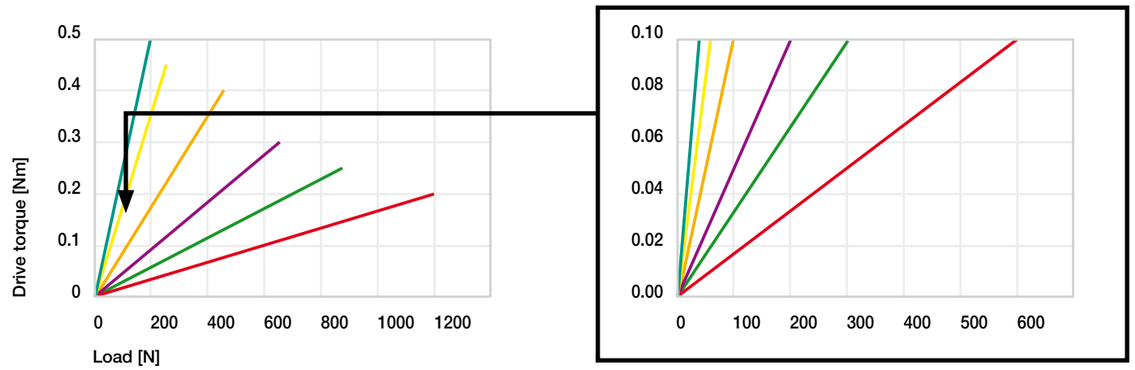


Diagram 03: Deflection versus applied tilting moment

PRT-04-50 M6, min. 12 screws
PRT-04-60 M5, min. 10 screws
PRT-04-100 M5, min. 12 screws
PRT-04-150 M5, min. 12 screws
PRT-04-200 M6, min. 12 screws
PRT-04-300 M8, min. 12 screws

iglidur® PRT | Product range

Slewing rings, high rigidity – type 01

Standard

High temperature up to +180°C

Stainless steel version

ESD-compliant

- Aluminium or stainless steel body (upon request)
- Replaceable maintenance-free sliding elements made of iglidur® J (Standard) ▶ **Page 159**, iglidur® H1 (for temperatures up to +180°C) ▶ **Page 333**, iglidur® F2 (ESD-compliant) ▶ **Page 493** or iglidur® A180 (FDA-compliant) ▶ **Page 401**

Order key

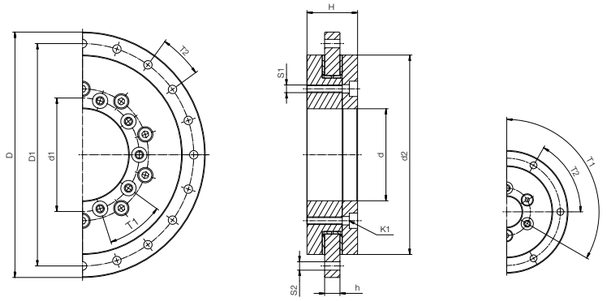
Type	Size [mm]	Options		
PRT - 01 -	30	- ES	- H1	
Slewing ring	Design	Inner Ø	Body material	Sliding elements

Options:

Body material
Blank: Aluminium
ES: 316 stainless steel

Sliding elements
Blank: iglidur® J
H1: iglidur® H1, high temperature
F2: iglidur® F2, ESD-compliant (only in conjunction with stainless steel)
A180: iglidur® A180, FDA-compliant

Accessories
▶ From page 652



Dimensions [mm]

D[10]	D1	d1	d	d2 ±0.2	H	h	T1	T2	S1	S2	K1 for screw	R1	R2	B	Part No.
80	70	31	20	60	24	8	3 x 120°	6 x 60°	M4	4.5	DIN 7984 M4	30	20	3.5	**PRT-01-20-...**
100	91	42.5	30	82	29	10	4 x 90°	8 x 45°	M4	4.5	DIN 7984 M4	41	29	4.5	**PRT-01-30-...**
150	135	65	50	120	33	10	8 x 45°	16 x 22.5°	M6	6.6	ISO 4762 M6	60	46.5	4.5	**PRT-01-50-...**
160	145	74	60	130	33	10	10 x 36°	20 x 18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	**PRT-01-60-...**
185	170	112	100	160	34	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	80	69	5.5	**PRT-01-100-...**
250	235	165	150	220	35	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	110	96.5	5.5	**PRT-01-150-...**
300	285	215	200	274	38	15	12 x 30°	16 x 22.5°	M6	6.6	ISO 4762 M6	137	124	7.0	**PRT-01-200-...**
450	430	320	300	410	42	15	12 x 30°	16 x 22.5°	M8	9.0	DIN 7984 M8	205	186.6	7.0	**PRT-01-300-...**

[10] Tolerance according to DIN ISO 2768 mK

All stainless steel versions upon request

iglidur® PRT | Product range

Slewing rings with gear teeth

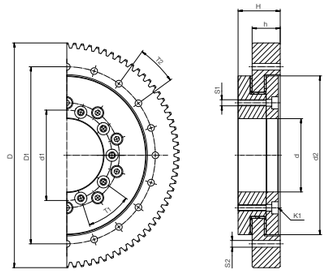
Standard

Stainless steel version

- 4 standards for outer rings are available
  – A classic spur gear according to DIN3967
  – Commercially available belt profiles: T10, AT10, HTD8M
- The inner ring is fixed and the outer ring driven
- The outer ring carries the item to be moved
- Outer ring available in stainless steel as an option (suffix "-ES")

Order key

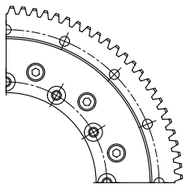
Type	Size [mm]	Options			
PRT - 01 -	30	- TO -	...	- ES	
Slewing ring	Design	Inner Ø	Outer drive ring	Tooth profile type	Stainless steel version



Dimensions [mm]

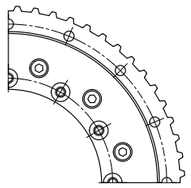
D1	d1	d	d2	h	T1	T2	S1	S2	K1 for screw	R1	R2	B	H	Part No.
70	31.0	20	60	18	6x60°	6x60°	M4	4.5	DIN 7984 M4	30	20.0	3.5	(26.0)	**PRT-01-20-TO-...**
91	42.5	30	82	21	8x45°	8x45°	M4	4.5	DIN 7984 M4	41	29.0	4.5	(30.5)	**PRT-01-30-TO-...**
135	65.0	50	120	10	8x45°	16x22.5°	M6	6.6	ISO 4762 M6	60	46.5	4.5	(33.0)	**PRT-01-50-TO-...**
145	74.0	60	130	23	10x36°	20x18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	(34.5)	**PRT-01-60-TO-...**
170	112.0	100	160	25	12x30°	16x22.5°	M5	5.5	ISO 4762 M5	80	69.0	5.5	(36.0)	**PRT-01-100-TO-...**
235	165.0	150	220	25	12x30°	16x22.5°	M5	5.5	ISO 4762 M5	110	96.5	5.5	(36.5)	**PRT-01-150-TO-...**
285	215.0	200	274	30	12x30°	16x22.5°	M6	7.0	ISO 4762 M6	137	124.0	7.0	(41.5)	**PRT-01-200-TO-...**
430	320.0	300	410	30	12x30°	16x22.5°	M8	9.0	DIN 7984 M8	205	186.5	8.5	(43.5)	**PRT-01-300-TO-...**

Spur gearing DIN3967



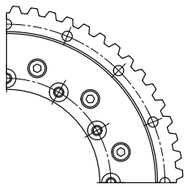
D	m	z	Part No. add-on
(88)	–	42	**...-ST**
(112)	2	54	**...-ST**
(160)	2	78	**...-ST**
(184)	2	90	**...-ST**
(196)	2	96	**...-ST**
(256)	2	126	**...-ST**
(308)	2	152	**...-ST**
(462)	3	152	**...-ST**

Toothed belt profile AT10



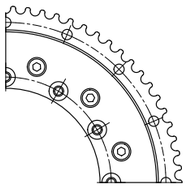
D	z	Part No. add-on
(87.25)	28	**...-AT10**
(106.4)	34	**...-AT10**
(157.3)	50	**...-AT10**
(163.8)	52	**...-AT10**
(189.2)	60	**...-AT10**
(252.9)	80	**...-AT10**
(303.9)	96	**...-AT10**
(456.7)	144	**...-AT10**

Toothed belt profile T10



D	z	Part No. add-on
(87.25)	28	**...-T10**
(106.4)	34	**...-T10**
(157.3)	50	**...-T10**
(163.8)	52	**...-T10**
(189.2)	60	**...-T10**
(252.9)	80	**...-T10**
(303.9)	96	**...-T10**
(456.7)	144	**...-T10**

Toothed belt profile HTD5M (-20)/HTD8M



D	z	Part No. add-on
(81.25)	52	**...-HTD5M**
(110.7)	44	**...-HTD8M**
(161.6)	64	**...-HTD8M**
(166.7)	66	**...-HTD8M**
(187.1)	74	**...-HTD8M**
(253.3)	100	**...-HTD8M**
(304.3)	120	**...-HTD8M**
(457.1)	180	**...-HTD8M**

iglidur® PRT | Product range

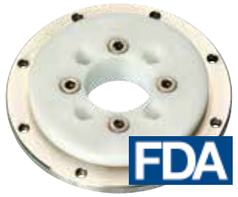
Slewing rings, lightweight – type 02

Standard

Stainless steel version

Low-cost version

All plastic version



FDA-compliant

- Slewing rings with extremely light weight
- Outer ring made from anodised aluminium, 316 stainless steel (upon request) or iguton G
- Collar clamps made from iglidur® J4 or FDA-compliant iglidur® A180
- 30% lighter with plastic screws

Order key

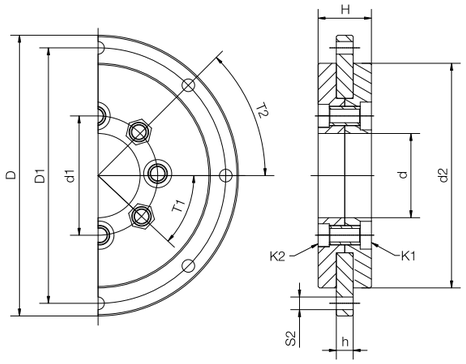
Type	Size [mm]	Options
PRT-02-	20	-AL-A180

Slewing ring | Design | Inner Ø | Body material | Collar clamps

Options:

Body material
AL: Aluminium
ES: 316 stainless steel
LC: Low-cost
P: Solid plastic

Collar clamps
Blank: iglidur® J4
A180: iglidur® A180, FDA-compliant



Dimensions [mm]

D	D1	d1	d	d2	H	h	T1	T2	S2	K1 for screw	K2 for screw nut	Part No.	
80	70	31	20	60	16	5	3 x 120°	6 x 60°	4.5	DIN 6912 M5	ISO 4035 M5	**PRT-02-20-**	
100	91	42.5	30	80	19	6	4 x 90°	8 x 45°	4.5	DIN 7984 M5	ISO 4035 M5	**PRT-02-30-**	
150	135	65	50	120	20	6	16 x 22.5°	8 x 45°	6.6	Through-hole 6.5mm		**PRT-02-50-**	
160	145	86.0	60	130	30	10	12 x 30°	20 x 18°	5.5	Counterbore Ø16 and 6.5 deep		**PRT-02-60-**	116)

116) **Only available with body made from aluminium and stainless steel**

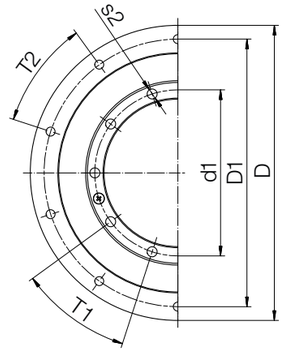
Please add suffix "-A180" for FDA-compliant version

All stainless steel versions upon request

iglidur®
PRT

iglidur® PRT | Product range

Slewing rings, low-cost – type 03



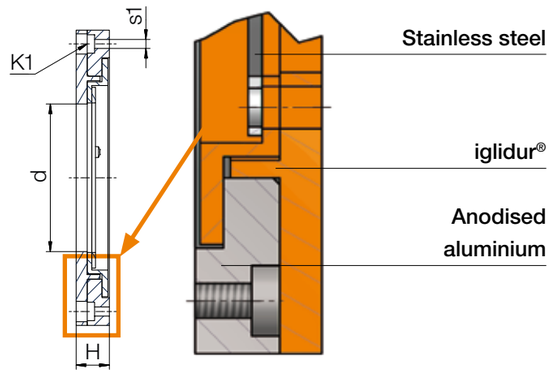
Order key

Type	Size [mm]
PRT-03-	80

Slewing ring | Design | Inner Ø

iglidur® PRT slewing rings in a low-cost design. Through consistent downsizing, an additional design has been created that relies even more on plastic.

- Maintenance and lubrication-free
- Cost-effective and lightweight
- Reduced space requirement
- Ready-to-fit
- For temperatures from 0 to +60°C



Dimension [mm]

D	D1	d1	d	H	T1	T2	s1	s2	K1 for screw	Part No.
160	145	90	80	18	10 x 36°	10 x 36°	M6	5.5	DIN 7984 M6	**PRT-03-80**

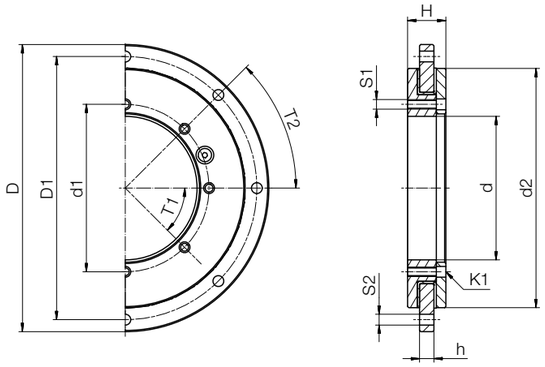
iglidur® PRT | Product range New

Slewing rings, compact, lightweight and cost-effective – type 04

Order key

Type	Size [mm]
PRT - 04 - 50	
Slewing ring	Design / Inner Ø

- Available with diameters from 50mm to 300mm
- 60% lighter and 50% more compact compared to PRT-01
- 20% more cost-effective compared to PRT-01
- Wear-resistant, lubrication-free and maintenance-free iglidur® sliding elements



Dimension [mm]

D	D1	d1	d	d2	H	h	T1	T2	S1	S2	K1 for screw	Part No.
110	100	60	50	90	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-50**
120	110	70	60	100	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-60**
160	150	110	100	140	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-100**
210	200	160	150	190	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150**
260	250	210	200	240	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-200**
360	350	310	300	340	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-300**

iglidur® PRT

iglidur® PRT | Product range New

Installation solutions – type 04

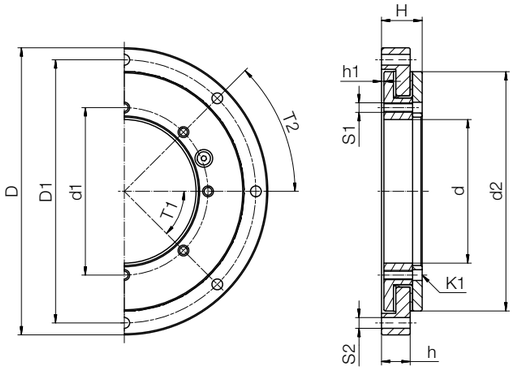
With outer spacing ring

With large outer support ring

Order key

Type	Size [mm]	Options
PRT - 04 -	50	- M4
Slewing ring	Design / Inner Ø	Thread

- Available for PRT-01 and PRT-04
- Maintenance-free and wear-resistant
- Easy to fit
- Replaceable sliding elements



Dimension [mm]

D	D1	d1	d	d2	H	h1	h	T1	T2	S1	S2	K1 for screw	Part No.
With M4 thread in outer ring													
110	100	60	50	90	16	–	6	8 × 45°	8 × 45°	M4	M4	Ø 4.5	**PRT-04-50-M4**
120	110	70	60	100	16	–	6	8 × 45°	8 × 45°	M4	M4	Ø 4.5	**PRT-04-60-M4**
160	150	110	100	140	16	–	6	8 × 45°	8 × 45°	M4	M4	Ø 4.5	**PRT-04-100-M4**
210	200	160	150	190	16	–	6	16 × 22.5°	16 × 22.5°	M4	M4	Ø 4.5	**PRT-04-150-M4**
260	250	210	200	240	16	–	6	16 × 22.5°	16 × 22.5°	M4	M4	Ø 4.5	**PRT-04-200-M4**
360	350	310	300	340	16	–	6	16 × 22.5°	16 × 22.5°	M4	M4	Ø 4.5	**PRT-04-300-M4**
With enlarged outer ring													
150	135	60	50	90	16	–	6	8 × 45°	16 × 22.5°	M4	Ø 6.6	Ø 4.5	**PRT-04-50-G**
160	160	70	60	100	16	–	6	8 × 45°	20 × 18°	M4	Ø 5.5	Ø 4.5	**PRT-04-60-G**
185	185	110	100	140	16	–	6	8 × 45°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-100-G**
250	250	160	150	190	16	–	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150-G**
300	300	210	200	240	16	–	6	16 × 22.5°	16 × 22.5°	M4	Ø 5.5	Ø 4.5	**PRT-04-200-G**
450	450	310	300	340	16	–	6	16 × 22.5°	16 × 22.5°	M4	Ø 9.0	Ø 4.5	**PRT-04-300-G**
With outer spacing ring													
110	100	60	50	90	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-50-DRI**
120	110	70	60	100	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-60-DRI**
160	150	110	100	140	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-100-DRI**
210	200	160	150	190	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150-DRI**
260	250	210	200	240	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-200-DRI**
360	350	310	300	340	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-300-DRI**

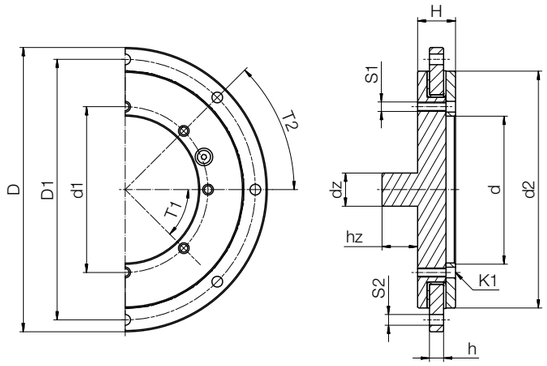
iglidur® PRT | Product range New

PRT with assembled drive pin – type 04

Order key

Type	Size [mm]	Options
PRT - 04 -	50	- DP
Slewing ring	Design	Inner Ø	Drive pin

- Easy replacement and extension: modular construction kit design
- Easy drive pin for couplings
- Adjustable with manual clamps



Dimension [mm]

D	D1	d1	d	d2	dz	hz	H	h	T1	T2	S1	S2	K1 for screw	Part No.
With DrivePin														
110	100	60	52	90	14 h6	15	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-50-DP**
120	110	70	62	100	14 h6	15	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-60-DP**
160	150	110	102	140	14 h6	15	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-100-DP**
210	200	160	152	190	14 h6	15	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150-DP**
260	250	210	202	240	14 h6	15	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-200-DP**
360	350	310	302	340	14 h6	15	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-300-DP**

iglidur® PRT | Product range New

Slewing rings with gear teeth – type 04

AT10

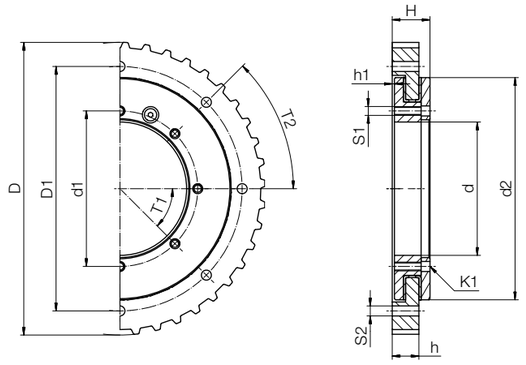
T10

HTD5M

Order key

Type	Size [mm]	Options
PRT - 04 -	50	- TO - ...
Slewing ring	Design	Inner Ø	Outer drive ring	Tooth profile type

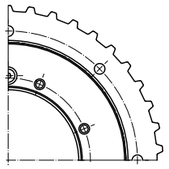
- Easy replacement and extension: modular construction kit design
- Driving the easy way with gear profiles
- Adjustable with manual clamps



Dimension [mm]

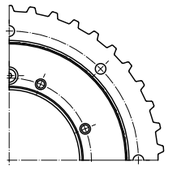
D1	d1	d	d2	H	h1	h	T1	T2	S1	S2	K1 for screw	Part No.
With gear profile												
100	60	50	90	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-50-TO-...**
110	70	60	100	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-60-TO-...**
150	110	100	140	17	1	12	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-100-TO-...**
200	160	150	190	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150-TO-...**
250	210	200	240	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-200-TO-...**
350	310	300	340	17	1	12	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-300-TO-...**

Toothed belt profile AT10



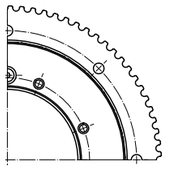
D	z	Part No. add-on
118.9	38	**...-AT10**
131.7	42	**...-AT10**
169.9	54	**...-AT10**
220.8	70	**...-AT10**
271.7	86	**...-AT10**
370.4	117	**...-AT10**

Toothed belt profile T10



D	z	Part No. add-on
118.9	38	**...-T10**
131.7	42	**...-T10**
169.9	54	**...-T10**
220.8	70	**...-T10**
271.7	86	**...-T10**
370.4	117	**...-T10**

Toothed belt profile HTD5M



D	z	Part No. add-on
120	76	**...-HTD5M**
131	83	**...-HTD5M**
170.9	108	**...-HTD5M**
221.8	140	**...-HTD5M**
271.2	171	**...-HTD5M**
371.4	234	**...-HTD5M**

iglidur® PRT | Product range New

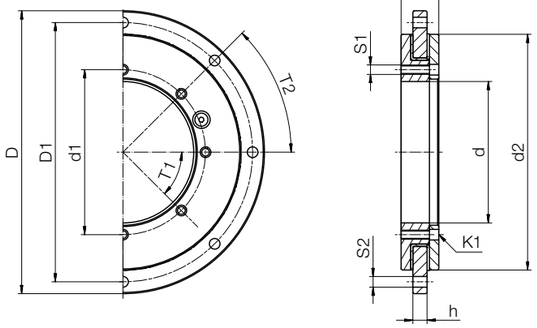
Stainless steel slewing rings – type 04

- High wear resistance
- Replaceable sliding elements
- For high loads and high rigidity

Order key

Type	Size [mm]	Options
PRT-04-	50	-ES-H1

Slewing ring | Design | Inner Ø | Body material | Sliding elements



Options:

Body material
Blank: Aluminium
ES: 316 stainless steel

Sliding elements
Blank: iglidur® J
H1: iglidur® H1, high temperature
F2: iglidur® F2, ESD-compliant (only in conjunction with stainless steel)
A180: iglidur® A180, FDA-compliant

Dimension [mm]

D	D1	d1	d	d2	H	h	T1	T2	S1	S2	K1 for screw	Part No.
110	100	60	50	90	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-50-ES**
120	110	70	60	100	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-60-ES**
160	150	110	100	140	16	6	8 × 45°	8 × 45°	M4	Ø 4.5	Ø 4.5	**PRT-04-100-ES**
210	200	160	150	190	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-150-ES**
260	250	210	200	240	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-200-ES**
360	350	310	300	340	16	6	16 × 22.5°	16 × 22.5°	M4	Ø 4.5	Ø 4.5	**PRT-04-300-ES**

iglidur® PRT | Product range New

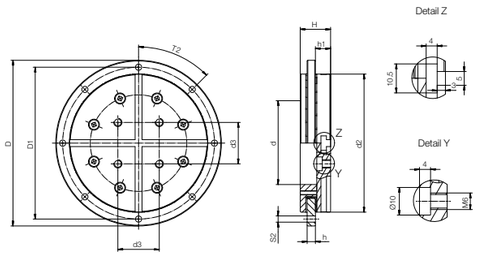
Slot nut profile – type 04

- Available for PRT-01 and PRT-04
- Fast assembly
- Easy positioning with no additional holes

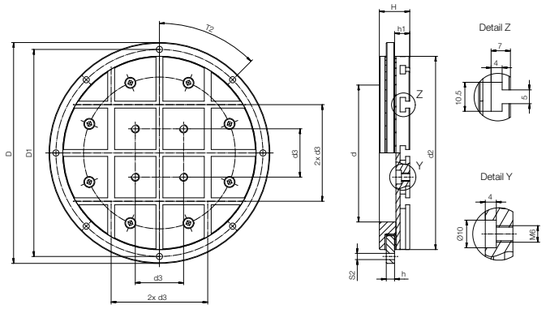
Order key

Type	Size [mm]	Options
PRT-04-	50	- T

Slewing ring | Design | Inner Ø | Slot nuts



Slot nut profile up to size 60



Slot nut profile from size 100

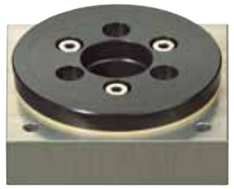
Dimension [mm]

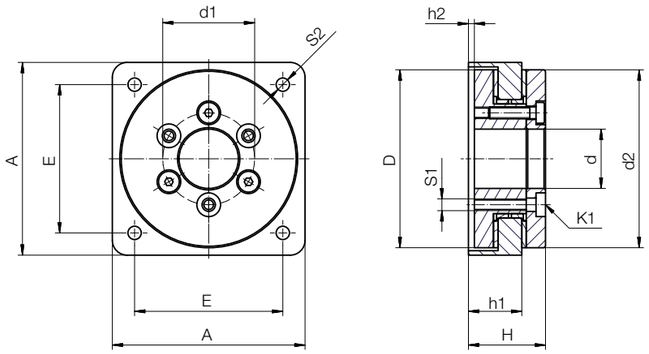
D	D1	d1	d	d2	H	h	h1	T2	S2	Part No.
110	100	60	50	90	22	6	11	8 × 45°	Ø 4.5	**PRT-04-50-T**
120	110	70	60	100	22	6	11	8 × 45°	Ø 4.5	**PRT-04-60-T**
160	150	110	100	140	22	6	11	8 × 45°	Ø 4.5	**PRT-04-100-T**
210	200	160	150	190	22	6	11	16 × 22.5°	Ø 4.5	**PRT-04-150-T**
260	250	210	200	240	22	6	11	16 × 22.5°	Ø 4.5	**PRT-04-200-T**
360	350	310	300	340	22	6	11	16 × 22.5°	Ø 4.5	**PRT-04-300-T**

iglidur® PRT | Product range | Special geometries

Type 01

Slewing rings with square flange for direct mounting on flat surfaces



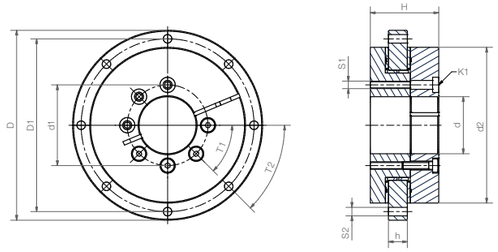


- No through-hole necessary
- No separate spacing ring
- Fix with only 4 screws

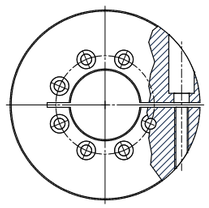
Dimensions [mm]

d	d1	d2	D	A	E	H	h1	h2	T1	S1	S2	K1 for screw	Part No.
20	31.0	60	62	65	50	26.0	18	2.0	6 x 60°	M4	4.5	DIN 7984 M4	**PRT-01-20-SQ**
30	42.5	82	84	85	65	30.5	21	1.5	8 x 45°	M4	4.5	DIN 7984 M4	**PRT-01-30-SQ**
50	65.0	120	122	125	100	34.5	23	1.5	8 x 45°	M6	6.6	ISO 4762 M6	**PRT-01-50-SQ**

Slewing rings with collar clamp



Slewing ring with PRT-01-30-C collar clamp



Collar clamp for PRT-01-30-C

Slewing ring PRT-01-30 with collar clamp for 30h7 tolerance shafts.

- For simple handling designs
- Quick and easy assembly
- Max. tightening torque: 5Nm

Dimensions [mm]

D	D1	d1	d	d2	H	h	T1	T2	S1	S2	K1 for screw	Part No.
80	70	31	20	60	33	8	4 x 60°	6 x 60°	M4	4.5	DIN 7984 M4	**PRT-01-20-C** New
100	91	42.5	30	82	36	10	6 x 45°	8 x 45°	M4	4.5	DIN 7984 M4	**PRT-01-30-C**

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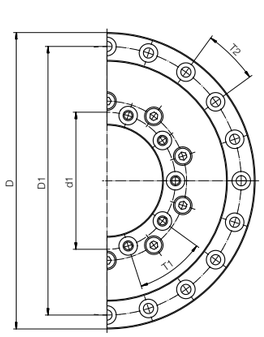
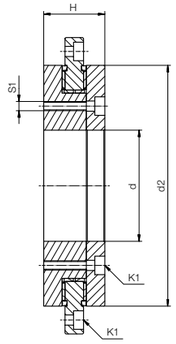
iglidur® PRT | Product range | Special geometries

Type 01

Slewing rings with seal (-D: one-sided, -DD: both-sided)



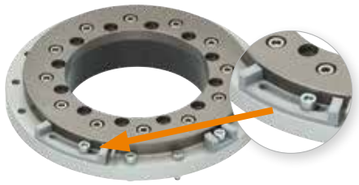


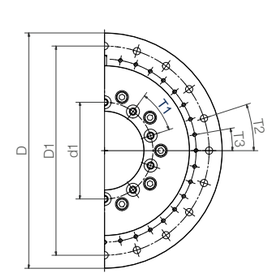
Dimensions [mm]

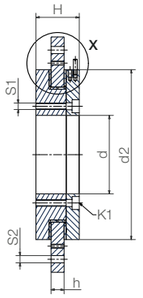
D[10]	D1	d1	d	d2 ±0.2	H	h	T1	T2	S1	S2	K1 for screw	R1	R2	B	Part No.
160	145	74	60	130	33	10	10 x 36°	20 x 18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	**PRT-01-60-D/DD**
185	170	112	100	160	34	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	80	69	5.5	**PRT-01-100-D/DD**

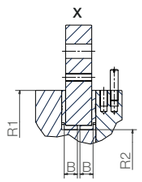
[10] Tolerance according to DIN ISO 2768 mK

Slewing rings with angle stop – easily adjustable









- Quick adjustment of the stop
- Load ratings identical to standard type 01

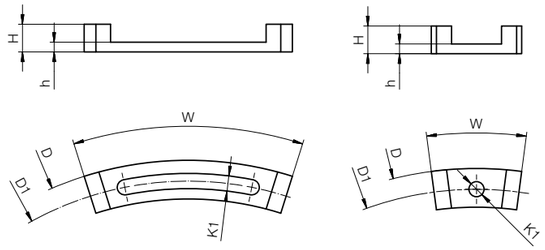
Dimensions [mm]

D[10]	D1	d1	d	d2 ±0.2	H	h	T1	T2	S1	S2	K1 for screw	R1	R2	B	Part No.
80	70	31.0	20	60	24	8	6 x 60°	6 x 60°	M4	4.5	DIN 7984 M4	30	20	3.5	**PRT-01-20-AA**
100	91	42.5	30	82	29	10	8 x 45°	8 x 45°	M4	4.5	DIN 7984 M4	41	29	4.5	**PRT-01-30-AA**
150	135	65.0	50	120	33	10	8 x 45°	16 x 22.5°	M6	6.6	ISO 4762 M6	60	46.5	4.5	**PRT-01-50-AA**
160	145	74.0	60	130	33	10	10 x 36°	20 x 18°	M5	5.5	ISO 4762 M5	65	51.5	4.5	**PRT-01-60-AA**
185	170	112.0	100	160	34	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	80	69	5.5	**PRT-01-100-AA**
250	235	165.0	150	220	35	12	12 x 30°	16 x 22.5°	M5	5.5	ISO 4762 M5	110	96.5	5.5	**PRT-01-150-AA**
300	285	215.0	200	274	38	15	12 x 30°	16 x 22.5°	M6	6.6	ISO 4762 M6	137	124	7.0	**PRT-01-200-AA**
450	430	320.0	300	410	42	15	12 x 30°	16 x 22.5°	M8	9.0	DIN 7984 M8	205	186.6	7.0	**PRT-01-300-AA**

[10] Tolerance according to DIN ISO 2768 mK

Type 01

Angle limit kit



AA-A

AA-B

- Quick adjustment of the stop
- A kit of PRT-01-□-AA-A and PRT-01-□-AA-B

Dimensions [mm]

D Ø	D1 Ø	H	h	K1 Ø	W [°]	Part No.	Part No. kit
80	70	6.5	2.8	4.5	90.0	PRT-01-20-AA-A	PRT-01-20-AA-KIT
80	70	6.5	2.8	4.5	30.0	PRT-01-20-AA-B	
100	91	8.0	2.8	4.5	70.0	PRT-01-30-AA-A	PRT-01-30-AA-KIT
100	91	8.0	2.8	4.5	25.0	PRT-01-30-AA-B	
150	135	10.0	4.0	6.6	45.0	PRT-01-50-AA-A	PRT-01-50-AA-KIT
150	135	10.0	4.0	6.6	25.0	PRT-01-50-AA-B	
160	145	10.0	3.5	5.5	35.0	PRT-01-60-AA-A	PRT-01-60-AA-KIT
160	145	10.0	3.5	5.5	20.0	PRT-01-60-AA-B	
185	170	9.5	3.5	5.5	37.5	PRT-01-100-AA-A	PRT-01-100-AA-KIT
185	170	9.5	3.5	5.5	15.0	PRT-01-100-AA-B	
250	235	10.0	3.5	5.5	35.0	PRT-01-150-AA-A	PRT-01-150-AA-KIT
250	235	10.0	3.5	5.5	15.0	PRT-01-150-AA-B	
300	285	10.0	4.0	6.6	35.0	PRT-01-200-AA-A	PRT-01-200-AA-KIT
300	285	10.0	4.0	6.6	15.0	PRT-01-200-AA-B	
450	430	12.0	5.0	6.6	35.0	PRT-01-300-AA-A	PRT-01-300-AA-KIT
450	430	12.0	5.0	6.6	15.0	PRT-01-300-AA-B	

Slewing rings for manual adjustment New

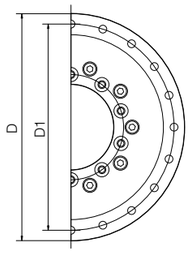
- With hand wheel for easy adjustment
- Optional manual clamp and position indicator available
- Ideal for fast and secure positioning

Dimensions [mm]

ØT	ØS	ØP	ØF	L1	L2	B1	B2	B3	H1	S1	S2	G1	G2	Part No.
30	10	82	42.5	100.5	12	45	19.5	6	110.5	55	20	M4	8 x M4	PRT-01-50 HK-PA-HR

Type 01

Slewing rings with enlarged outer ring

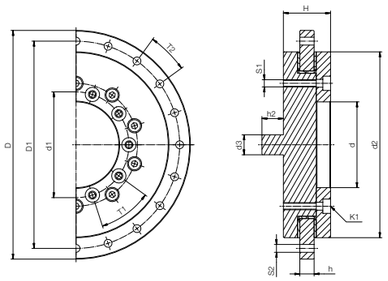


Dimensions [mm] – other dimensions similar to standard type PRT-01 ▶ Page 638

D	D1	S2	Part No.[11)]
205	185	5.5	PRT-01-100-M-ARG
205	185	M6	PRT-01-100-M-ARGG
205	185	5.5	PRT-01-100-M-ARGS
320	300	7.0	PRT-01-200-M-ARG
320	300	M8	PRT-01-200-M-ARGG
320	300	7.0	PRT-01-200-M-ARGS

[11)] Ending: -G standard hole, -GG threaded hole or -GS counterbore

PRT with assembled drive pin



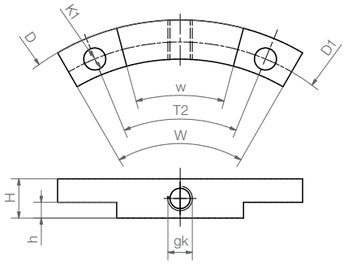
Dimensions [mm]

D	D1	d1	d	d2	d2-tolerance	H	h	T1	T2	S1	S2	K1	R1	R2	B	h2	Part No.
160	145	74	60	130	±0,2	33	10	10 x 36°	20 x 18°	M5	5,5	M5	65	51,5	4,5	15	PRT-01-60-DP

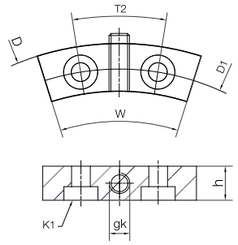
iglidur® PRT | Product range | Accessories

For type 01

Manual clamp



PRT-HK-30



PRT-HK-50/60/100/200

PRT with fitted manual clamp

- With 1Nm screw torque, a holding torque up to 10Nm is possible
- Easy to screw onto outer ring

Dimensions [mm]

D	D1	T2	K1 for screw	H	h	gk	W	Part No.
100	91	45°	Ø 4.5	8	3.2	M5	60°	**PRT-HK-30**
150	135	22.5°	ISO 4762 M6	–	10	M6	40°	**PRT-HK-50**
160	145	18°	DIN 7984 M5	–	10	M6	35°	**PRT-HK-60**
205	185	22.5°	DIN 7984 M5	–	10	M6	40°	**PRT-HK-100**[12)]
320	300	22.5°	DIN 7984 M6	–	10	M6	40°	**PRT-HK-200**[12)]

[12)] To be connected only with enlarged outer ring

Manual clamp

- For type 01, size 60

Part No.
PRT-HK-60-K

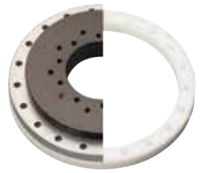
iglidur® PRT

iglidur® PRT | Product range | Accessories

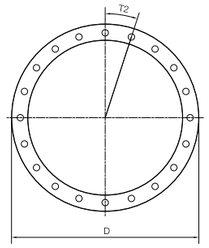
For type 01

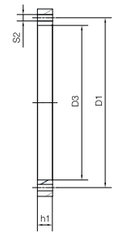
Spacing rings made from anodised aluminium or polymer (POM)

Aluminium



Plastic





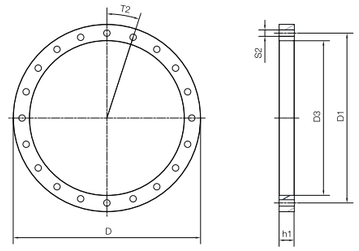
PRT with mounted spacing ring

Dimensions [mm]

D	D1	T2	S2	D3	h1	Part No.[39)]
80	70	6 x 60°	4.5	62	10	**PRT-01-20-DR**
100	91	8 x 45°	4.5	84	11	**PRT-01-30-DR**
150	135	16 x 22.5°	6.6	122	13	**PRT-01-50-DR**
160	145	20 x 18°	5.5	132	13	**PRT-01-60-DR**
185	170	16 x 22.5°	5.5	162	13	**PRT-01-100-DR**
250	235	16 x 22.5°	5.5	222	13	**PRT-01-150-DR**
300	285	16 x 22.5°	7.0	276	13	**PRT-01-200-DR**
450	430	16 x 22.5°	9.0	412	15	**PRT-01-300-DR**

[39)] Please add suffix "-POM" for plastic version (not available for sizes 150 and 300)

Spacing ring for heavy duty applications New



- Steel version to avoid distortion during installation
- Dimensional range of 20mm to 300mm inner diameters
- iglidur® PRT modular system: can be combined with all sizes
- High corrosion resistance
- Lubrication and maintenance-free

Dimensions [mm]

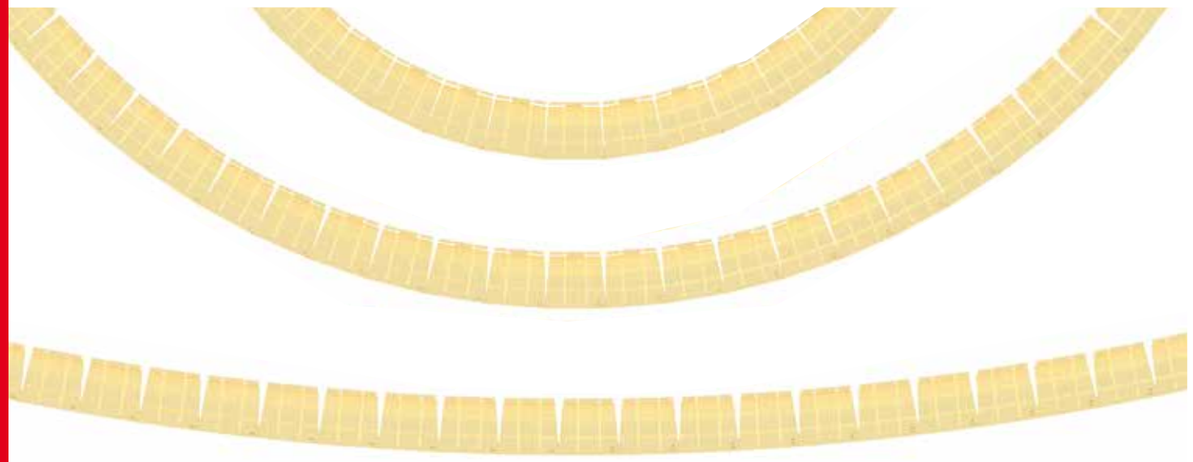
D	D1	T2	S2	D3 ±0.2	h1	Part No.
80	70	6 × 60°	4.5	62	20	**PRT-01-20-DR-HD**
100	91	8 × 45°	4.5	84	22	**PRT-01-30-DR-HD**
150	135	16 x 22.5°	6.6	122	26	**PRT-01-50-DR-HD**
160	145	20 × 18°	5.5	132	26	**PRT-01-60-DR-HD**
185	170	16 × 22.5°	5.5	162	26	**PRT-01-100-DR-HD**
250	235	16 × 22.5°	5.5	222	26	**PRT-01-150-DR-HD**
300	285	16 × 22.5°	7.0	276	26	**PRT-01-200-DR-HD**
450	430	16 × 22.5°	9.0	412	30	**PRT-01-300-DR-HD**

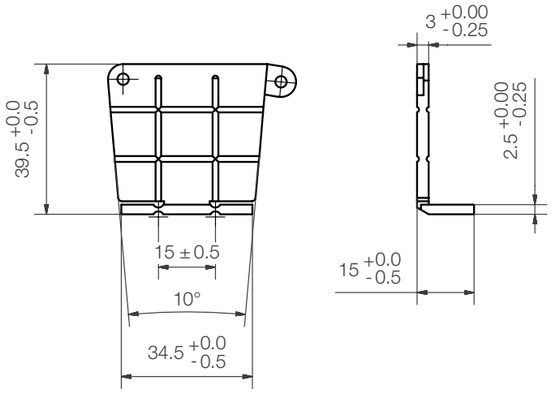
iglidur® PRT | Product range | Accessories

Universal sliding elements

Customise your own slewing ring systems

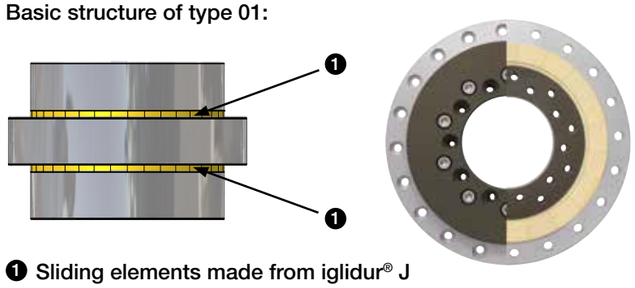
Using the versatile iglidur® PRT universal sliding elements, large slewing ring systems can be tailored to the type 01. Depending on the number of elements, slewing ring systems are possible with inner diameters from 0.5 to 5m. We will happily support you with the design and detailed layout.





- Made from the proven iglidur® J ▶ **Page 159**
- Slewing ring systems possible from 0.5 up to 5m
- Low wear
- Robust, resistant to dirt
- Corrosion-free and resistant to liquids
- Lubrication and maintenance-free

Basic structure of type 01:



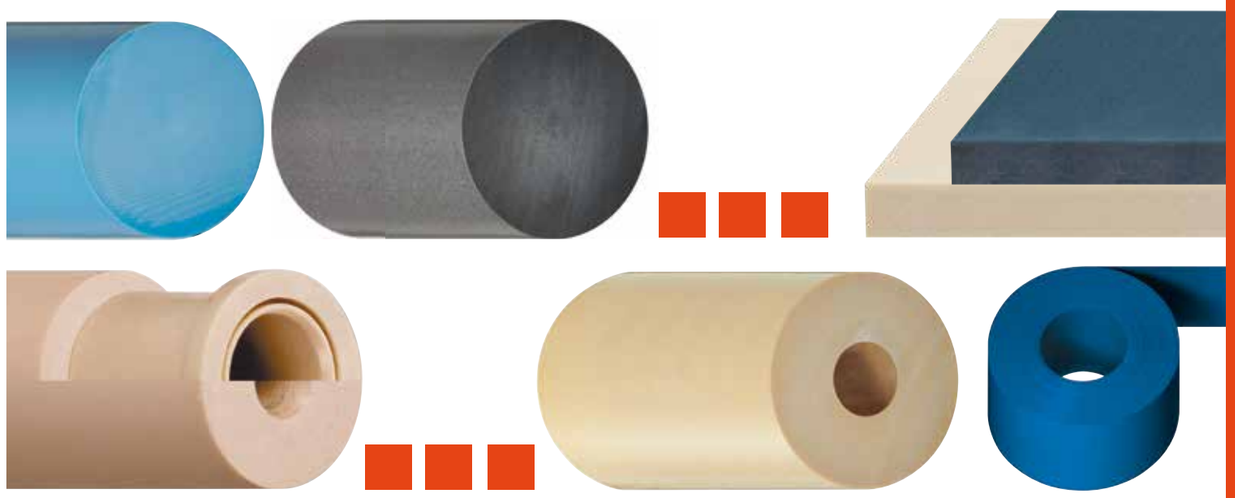
1 Sliding elements made from iglidur® J

Part No.
JRS-500S/45S

My sketches

iglidur®

Round bars, tubes, plates and liners



...plastics

iglidur® bar stock | Product overview

iglidur® round bars – all-rounder

iglidur® M250:
Excellent vibration dampening
▶ Page 668

iglidur® P210: Good coefficient of friction and wear: on almost every shaft
▶ Page 668

iglidur® J4:
Cost-effective and wear-resistant
▶ Page 669

iglidur® GLW:
Low-cost material for high volumes
▶ Page 669

Endurance runner

iglidur® J:
The versatile endurance runner
▶ Page 670

iglidur® W300:
The classic endurance runner up to 30MPa
▶ Page 670

iglidur® J3:
Specialist for pivoting and pulsating loads
▶ Page 671

iglidur® J350: Endurance runner with high dimensional stability at high temperature
▶ Page 671

Endurance runner

iglidur® J260:
ideal for plastic shafts
▶ Page 672

iglidur® R:
Low-cost material
▶ page 672

iglidur® J200:
Specially for aluminium shafts
▶ Page 673

iglidur® E7:
Ideal for pivoting movement
▶ Page 673

iglidur® JB:
Extremely wear-resistant in black
▶ Page 674

High temperatures

iglidur® X:
The chemical and temperature specialist
▶ Page 674

iglidur® HSD350:
All-rounder for steam sterilisation
▶ Page 675

High media resistance

iglidur® H1:
Endurance runner with high media resistance
▶ Page 675

iglidur® C500:
For extreme ambient conditions
▶ Page 676

Contact with food

iglidur® A181: The all-rounder for food, FDA and EU 10/2011-compliant
▶ Page 676

iglidur® A350: The FDA-compliant endurance runner at high temperatures
▶ Page 677

iglidur® A500:
The media and temperature specialist in the food sector
▶ Page 677

iglidur® A180:
The all-rounder for food
▶ Page 678

iglidur® A160: "Food" material with high media resistance up to +90°C
▶ Page 678

iglidur® UW160:
For contact with drinking water
▶ Page 679

Special application areas

iglidur® T220:
For the tobacco industry
▶ Page 679

iglidur® F2:
Used to prevent electro-static charges
▶ Page 680

iglidur® J2:
Versatile and cost-effective
▶ Page 680

iglidur® RW370: For the rail industry, flame-retardant, complies with DIN EN 45545 HL3, R22/R23
▶ Page 681

iglidur® tubes

iglidur® Q2:
For long service life under extreme loads
▶ Page 681

iglidur® J:
The versatile endurance runner
▶ Page 682

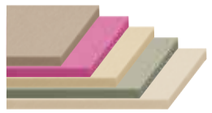
Mechanical processing

speedicut:
Special parts fast, machined to drawing
▶ Page 689

iglidur® plates

iglidur® J and JB (in black)
from 2 to 40mm
▶ Page 684

iglidur® A350/A160/A180:
For applications with food contact; 10–30mm
▶ Page 685



iglidur® plate strips
in 15mm, 30mm, 50mm
▶ Page 683

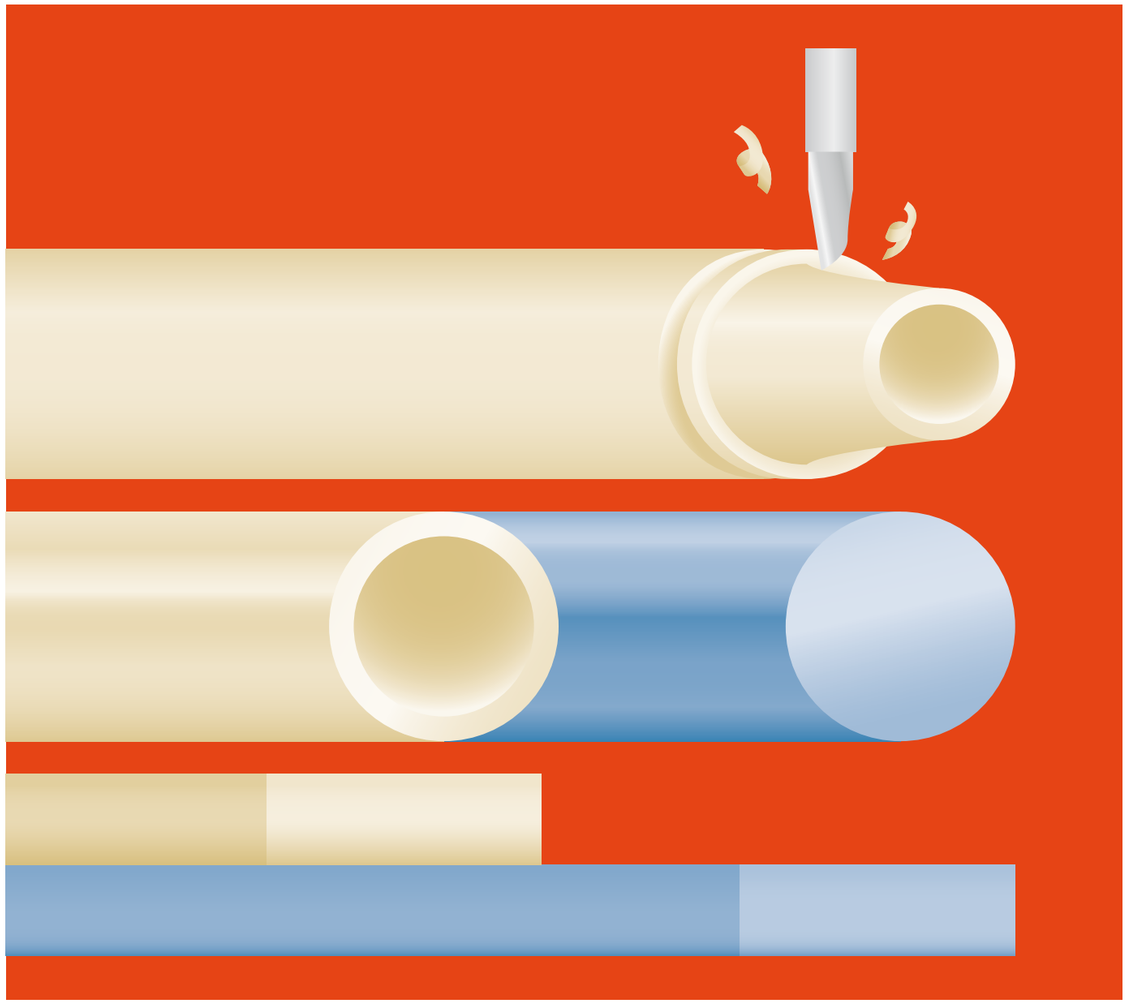
iglidur® tribo-tape

Material iglidur® A160:
FDA-compliant
▶ Page 696

Material iglidur® B160:
For use in visible areas
▶ Page 697

Material iglidur® W160:
Lubrication-free tribo-tape in white – hardly any wear
▶ Page 698

Material iglidur® V400:
Extremely high wear resistance
▶ Page 699



iglidur® bar stock

iglidur® materials as round bars, tubes and plates

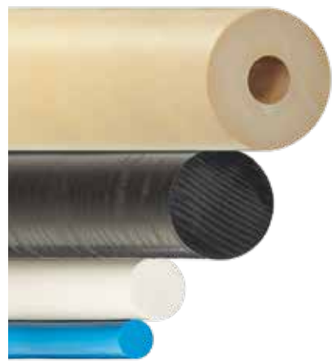
Fast and cost-effective

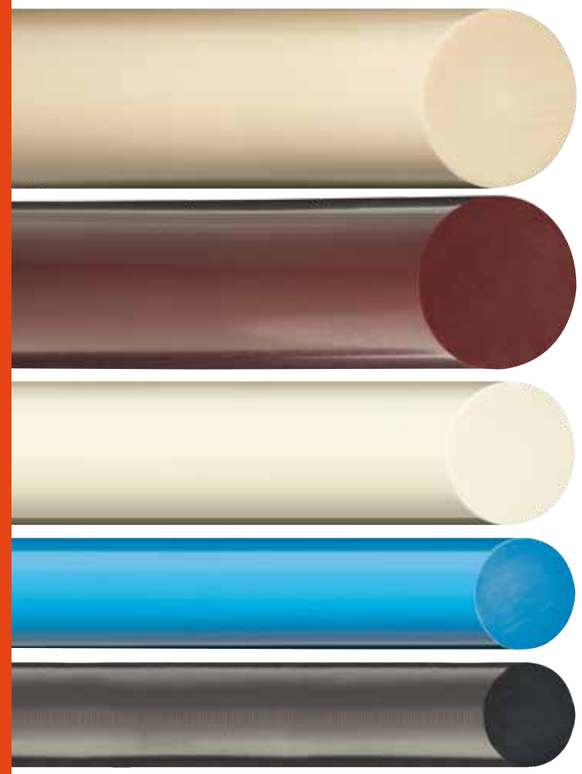
Cut to required size

Machining with no minimum order quantity

Maintenance-free and predictable

Standard range from stock





Bar stock made from technical plastic: iglidur® in one piece

iglidur® plastic bar stock enables the cost-effective production of components for moving applications and are ideal for the production of prototypes and small to medium-volume production requirements. Plates, round and hollow bars made of a wider range of different iglidur® high-performance polymers are available from stock. Due to its properties, every material becomes suitable for a specific application. For example, there is suitable iglidur® bar stock for almost every application from high-temperature to seawater, from food to automotive. All iglidur® materials have been specially developed for dynamic applications, and have low coefficient of friction and wear.

- iglidur® plastic bar stock from stock or ready-machined components and special sizes in 3 to 5 days
- Lubrication and maintenance-free
- Easy to machine – ask for tips
- Tribologically optimised plastic bar stock as round bars, tubes and plates
- Service life can now also be calculated for machined plain bearings made from iglidur® plastic bar stock
- No minimum order value
- No minimum order quantity

Available from stock
Detailed information about delivery time online. Further materials and dimensions upon request.

Operation temperatures:
–50°C up to +90°C (standard iglidur® J)
–100°C up to +250°C (depending on material)

30 materials
Round bars: Ø 10–100mm
Plate thickness: ↕ 2–50mm
Tubes: up to 150mm outer Ø

igus® constantly expands its range of available materials and dimensions. Check the current stock online ▶ **www.igus.eu/barstock**

In addition to bar stock, we will also gladly offer you mechanical processing in line with a drawing.

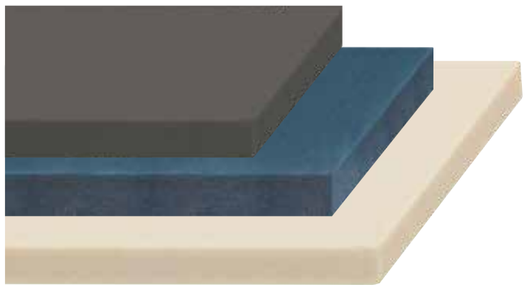
Service life calculation
▶ www.igus.eu/barstock-expert

iglidur® round bars
- Currently 28 iglidur® materials to choose from
- Outer diameter 10–100mm
- Excellent wear rates and coefficient of friction

▶ **From page 668**

iglidur® tubes
- Large outer diameters 110–150mm
- Low wear against different shaft materials

▶ **From page 682**



iglidur® plates
- Versatile application options
- Plate thickness 2–40mm

▶ **From page 683**

speedicut: Machined parts and cutting
- Special parts according to customer request
- Prototypes available in a matter of days

▶ **From page 689**

Find & compare bar stock
This material finder helps you find the right iglidur® material for your project with a few clicks!
▶ www.igus.eu/barstock-finder

iglidur® materials | Technical properties – quick selection

iglidur®	M250	P210	J4	GLW	J	W300	J3	J350	J260	R	J200	JB	E7	X	HSD350	H1	C500	A181	A350	A500	A180	A160	UW160	T220	Q2	F2	J2	RW370
Technical specifications																												
Wear resistance at +23°C	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Wear resistance at +90°C	■	■	■	■	■	■	■	■	■	□	■	■	■	■	■	■	■	■	■	■	□	□	□	□	■	■	■	■
Wear resistance at +150°C	■	■	□	■	□	□	□	■	□	□	□	□	□	■	□	■	■	□	■	■	□	□	□	□	■	□	□	■
Low coefficient of friction	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Low moisture absorption	■	■	■	■	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Wear resistance under water	■	■	■	■	■	□	■	■	□	□	□	■	■	■	■	■	■	■	■	■	□	■	■	■	□	■	■	■
High media resistance	■	■	■	■	■	□	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Resistant to edge loads	■	■	■	■	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	■	■
Suitable for shock and impact loads	■	■	■	■	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	■	■
Resistant to dirt	■	■	■	■	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■	■	■	■	■	■	■	■	■
Price index[141)]	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	□	□	□	■	■	■	□	■
For high loads (>60MPa)				●				●						●		●	●		●	●					●	●		●
Electrically conductive														●												●		
Approvals and standards																												
FDA-compliant																		●	●	●	●	●		●				
EU 10/2011-compliant																		●	●	●	●	●						
Fire class in accordance with UL-94	V-2	HB	F	HB	HB	HB	HB	V-0	V-2	HB	HB	HB	HB	V-0	V-0	V-0	V-0	HB	V-0	V-1	HB	HB	HB	HB	HB	HB	HB	V-0
Mould test DIN EN ISO 846				●				●						●		●												
Fogging DIN 75201-B	●			●																								
Availabilities / variants																												
Bar stock, round bar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bar stock, tube					●																							
Bar stock, plate					●							●	●					●										
tribo-tape liner																					●							

[141)] **Price index** — low price category; medium price category; highest price category

iglidur® bar stock | Material properties

iglidur®	Unit	M250	P210	J4	GLW	J	W300	J3	J350	J260	R	J200
General properties												
Density	[g/cm³]	1.14	1.40	1.48	1.36	1.49	1.24	1.42	1.44	1.35	1.39	1.72
Colour												
Max. moisture absorption at +23°C/50% r. h.	[% weight]	1.4	0.3	0.3	1.3	0.3	1.3	0.3	0.3	0.2	0.2	0.2
Max. total moisture absorption	[% weight]	7.6	0.5	1.3	5.5	1.3	6.5	1.3	1.6	0.4	1.1	0.7
Coefficient of sliding friction, dynamic against steel	[µ]	0.18 – 0.40	0.07 – 0.19	0.06 – 0.20	0.10 – 0.24	0.06 – 0.18	0.08 – 0.23	0.06 – 0.20	0.10 – 0.20	0.06 – 0.20	0.09 – 0.25	0.11 – 0.17
pv value, max. (dry)	[MPa·m/s]	0.12	0.4	0.30	0.30	0.34	0.23	0.5	0.45	0.35	0.27	0.3
Mechanical properties												
Flexural modulus	[MPa]	2,700	2,500	2,350	7,700	2,400	3,500	2,700	2,000	2,200	1,950	2,800
Flexural strength at +20°C	[MPa]	112	70	70	235	73	125	70	55	60	70	58
Compressive strength	[MPa]	52	50	55	74	60	61	60	60	50	68	43
Max. permissible surface pressure at +20°C	[MPa]	20	50	35	80	35	60	45	60	40	23	23
Shore D hardness		79	75	74	78	74	77	73	80	77	77	70
Physical and thermal properties												
Max. continuous operating temperature	[°C]	+80	+100	+90	+100	+90	+90	+90	+180	+120	+90	+90
Max. short-term operating temperature	[°C]	+170	+160	+120	+160	+120	+180	+120	+220	+140	+110	+120
Min. continuous operating temperature	[°C]	–40	–40	–50	–40	–50	–40	–50	–100	–100	–50	–50
Thermal conductivity	[W/m · K]	0.24	0.25	0.25	0.24	0.25	0.24	0.25	0.24	0.24	0.25	0.24
Coefficient of thermal expansion at +23°C	[$K^{-1} \cdot 10^{-5}$]	10	8	10	17	10	9	13	7	13	11	8
Electrical properties												
Specific contact resistance	[Ωcm]	> 10^{13}	> 10^{12}	> 10^{13}	> 10^{11}	> 10^{13}	> 10^{13}	> 10^{12}	> 10^{13}	> 10^{12}	> 10^{12}	> 10^{8}
Surface resistance	[Ω]	> 10^{11}	> 10^{11}	> 10^{13}	> 10^{11}	> 10^{12}	> 10^{12}	> 10^{12}	> 10^{10}	> 10^{10}	> 10^{12}	> 10^{8}
Page		**668**	**668**	**669**	**669**	**670**	**670**	**671**	**671**	**672**	**672**	**673**

iglidur®	E7	JB	X	HSD 350	H1	C500	A181	A350	A500	A180	A160	UW 160	T220	Q2	F2	J2	RW 370
General properties																	
Density	1.05	1.49	1.44	1.39	1.53	1.37	1.38	1.42	1.28	1.46	1.00	1.04	1.28	1.46	1.52	1.44	1.34
Colour																	
Max. moisture absorption at +23°C/50% r. h.	0.1	0.3	0.1	0.6	0.1	0.3	0.2	0.6	0.3	0.2	0.1	0.1	0.3	1.1	0.2	0.2	0.25
Max. total moisture absorption	0.1	1.3	0.5	1.2	0.3	0.5	1.3	1.9	0.5	1.3	0.1	0.1	0.5	1.1	0.4	1.3	1.2
Coefficient of sliding friction, dynamic against steel	0.08 – 0.17	0.06 – 0.18	0.09 – 0.27	0.07 – 0.23	0.06 – 0.20	0.07 – 0.19	0.10 – 0.21	0.10 – 0.20	0.26 – 0.41	0.05 – 0.23	0.09 – 0.19	0.17 – 0.31	0.20 – 0.32	0.22 – 0.42	0.16 – 0.22	0.11 – 0.27	0.13 – 0.17
pv value, max. (dry)	0.22	0.34	1.32	0.3	0.80	0.7	0.31	0.40	0.28	0.31	0.25	0.22	0.28	0.7	0.31	0.23	1.2
Mechanical properties																	
Flexural modulus	1,477	2,400	8,100	2,150	2,800	3,000	1,913	2,000	3,600	2,300	1,151	1,349	1,800	8,370	7,418	3,605	2,997
Flexural strength at +20°C	22	73	170	67	55	100	48	110	140	88	19	22	65	240	93	101	100
Compressive strength	18	60	100	44	78	110	60	78	118	78	37	32	55	130	61	77	129
Max. permissible surface pressure at +20°C	18	35	150	30	80	110	31	60	120	28	15	15	40	120	47	46	75
Shore D hardness	61	74	85	77	77	81	76	76	83	76	60	60	76	80	72	n.s.	80
Physical and thermal properties																	
Max. continuous operating temperature	+70	+90	+250	+180	+200	+250	+90	+180	+250	+90	+90	+90	+100	+130	+120	+90	+170
Max. short-term operating temperature	+90	+120	+315	+210	+240	+300	+110	+210	+300	+110	+100	+100	+160	+200	+165	+110	+190
Min. continuous operating temperature	–50	–50	–100	–40	–40	–100	–50	–100	–100	–50	–50	–50	–40	–40	–40	–50	–50
Thermal conductivity	0.24	0.25	0.60	0.24	0.24	0.24	0.25	0.24	0.24	0.25	0.30	0.50	0.24	0.24	0.61	0.25	0.22
Coefficient of thermal expansion at +23°C	25	10	5	7	6	9	11	8	9	11	11	18	11	8	5	7	5
Electrical properties																	
Specific contact resistance	> 10^{9}	> 10^{13}	< 10^{5}	> 10^{13}	> 10^{12}	> 10^{14}	> 10^{12}	> 10^{11}	> 10^{14}	> 10^{12}	> 10^{12}	> 10^{12}	> 10^{10}	> 10^{13}	< 10^{9}	> 10^{13}	> 10^{12}
Surface resistance	> 10^{9}	> 10^{12}	< 10^{3}	> 10^{14}	> 10^{11}	> 10^{13}	> 10^{12}	> 10^{11}	> 10^{13}	> 10^{11}	> 10^{12}	> 10^{12}	> 10^{10}	> 10^{11}	< 10^{9}	> 10^{12}	> 10^{12}
Page	**673**	**674**	**674**	**675**	**675**	**676**	**676**	**677**	**677**	**678**	**678**	**679**	**679**	**681**	**680**	**680**	**681**

iglidur® round bars | Product range

Excellent vibration dampening – iglidur® M250

Order key for round bars

Type			Dimensions [mm]		
SF	R	M250	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRM250-1000-☐
15	50–1,000	SFRM250-1500-☐
20	50–1,000	SFRM250-2000-☐
25	50–1,000	SFRM250-2500-☐
30	50–1,000	SFRM250-3000-☐
35	50–1,000	SFRM250-3500-☐
40	50–1,000	SFRM250-4000-☐
45	50–1,000	SFRM250-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRM250-5000-☐
55	50–1,000	SFRM250-5500-☐
60	50–1,000	SFRM250-6000-☐
65	50–1,000	SFRM250-6500-☐
70	50–1,000	SFRM250-7000-☐
80	50–1,000	SFRM250-8000-☐
90	50–1,000	SFRM250-9000-☐
100	50–1,000	SFRM250-10000-☐

Good coefficient of friction and wear on almost every shaft – iglidur® P210

Order key for round bars

Type			Dimensions [mm]		
SF	R	P210	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRP210-1000-☐
15	50–1,000	SFRP210-1500-☐
20	50–1,000	SFRP210-2000-☐
25	50–1,000	SFRP210-2500-☐
30	50–1,000	SFRP210-3000-☐
35	50–1,000	SFRP210-3500-☐
40	50–1,000	SFRP210-4000-☐
45	50–1,000	SFRP210-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRP210-5000-☐
55	50–1,000	SFRP210-5500-☐
60	50–1,000	SFRP210-6000-☐
65	50–1,000	SFRP210-6500-☐
70	50–1,000	SFRP210-7000-☐
80	50–1,000	SFRP210-8000-☐
90	50–1,000	SFRP210-9000-☐
100	50–1,000	SFRP210-10000-☐

Available from stock

Upon request/check availability

iglidur® round bars | Product range

Cost-effective and wear-resistant – iglidur® J4

Order key for round bars

Type			Dimensions [mm]		
SF	R	J4	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRJ4-1000-☐
15	50–1,000	SFRJ4-1500-☐
20	50–1,000	SFRJ4-2000-☐
25	50–1,000	SFRJ4-2500-☐
30	50–1,000	SFRJ4-3000-☐
35	50–1,000	SFRJ4-3500-☐
40	50–1,000	SFRJ4-4000-☐
45	50–1,000	SFRJ4-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRJ4-5000-☐
55	50–1,000	SFRJ4-5500-☐
60	50–1,000	SFRJ4-6000-☐
65	50–1,000	SFRJ4-6500-☐
70	50–1,000	SFRJ4-7000-☐
80	50–1,000	SFRJ4-8000-☐
90	50–1,000	SFRJ4-9000-☐
100	50–1,000	SFRJ4-10000-☐

Low-cost material for high volumes – iglidur® GLW

Order key for round bars

Type			Dimensions [mm]		
SF	R	GLW	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRGLW-1000-☐
15	50–1,000	SFRGLW-1500-☐
20	50–1,000	SFRGLW-2000-☐
25	50–1,000	SFRGLW-2500-☐
30	50–1,000	SFRGLW-3000-☐
35	50–1,000	SFRGLW-3500-☐
40	50–1,000	SFRGLW-4000-☐
45	50–1,000	SFRGLW-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRGLW-5000-☐
55	50–1,000	SFRGLW-5500-☐
60	50–1,000	SFRGLW-6000-☐
65	50–1,000	SFRGLW-6500-☐
70	50–1,000	SFRGLW-7000-☐
80	50–1,000	SFRGLW-8000-☐
90	50–1,000	SFRGLW-9000-☐
100	50–1,000	SFRGLW-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® round bars | Product range

The versatile endurance runner – iglidur® J

Order key for round bars

Type			Dimensions [mm]		
SF R	J	-	30 00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRJ-1000-☐
15	50 – 1,000	SFRJ-1500-☐
20	50 – 1,000	SFRJ-2000-☐
25	50 – 1,000	SFRJ-2500-☐
30	50 – 1,000	SFRJ-3000-☐
35	50 – 1,000	SFRJ-3500-☐
40	50 – 1,000	SFRJ-4000-☐
45	50 – 1,000	SFRJ-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRJ-5000-☐
55	50 – 1,000	SFRJ-5500-☐
60	50 – 1,000	SFRJ-6000-☐
65	50 – 1,000	SFRJ-6500-☐
70	50 – 1,000	SFRJ-7000-☐
80	50 – 1,000	SFRJ-8000-☐
90	50 – 1,000	SFRJ-9000-☐
100	50 – 1,000	SFRJ-10000-☐

The classic endurance runner up to 30MPa – iglidur® W300

Order key for round bars

Type			Dimensions [mm]		
SF R	W300	-	30 00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRW-1000-☐
15	50 – 1,000	SFRW-1500-☐
20	50 – 1,000	SFRW-2000-☐
25	50 – 1,000	SFRW-2500-☐
30	50 – 1,000	SFRW-3000-☐
35	50 – 1,000	SFRW-3500-☐
40	50 – 1,000	SFRW-4000-☐
45	50 – 1,000	SFRW-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRW-5000-☐
55	50 – 1,000	SFRW-5500-☐
60	50 – 1,000	SFRW-6000-☐
65	50 – 1,000	SFRW-6500-☐
70	50 – 1,000	SFRW-7000-☐
80	50 – 1,000	SFRW-8000-☐
90	50 – 1,000	SFRW-9000-☐
100	50 – 1,000	SFRW-10000-☐

Available from stock

Upon request/check availability

iglidur® bar stock

iglidur® round bars | Product range

Specialist for pivoting and pulsating loads – iglidur® J3

Order key for round bars

Type			Dimensions [mm]		
SF R	J3	-	30 00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRJ3-1000-☐
15	50 – 1,000	SFRJ3-1500-☐
20	50 – 1,000	SFRJ3-2000-☐
25	50 – 1,000	SFRJ3-2500-☐
30	50 – 1,000	SFRJ3-3000-☐
35	50 – 1,000	SFRJ3-3500-☐
40	50 – 1,000	SFRJ3-4000-☐
45	50 – 1,000	SFRJ3-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRJ3-5000-☐
55	50 – 1,000	SFRJ3-5500-☐
60	50 – 1,000	SFRJ3-6000-☐
65	50 – 1,000	SFRJ3-6500-☐
70	50 – 1,000	SFRJ3-7000-☐
80	50 – 1,000	SFRJ3-8000-☐
90	50 – 1,000	SFRJ3-9000-☐
100	50 – 1,000	SFRJ3-10000-☐

Endurance runner with high dimensional stability at high temperature – iglidur® J350

Order key for round bars

Type			Dimensions [mm]		
SF R	J350	-	30 00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRJ350-1000-☐
15	50 – 1,000	SFRJ350-1500-☐
20	50 – 1,000	SFRJ350-2000-☐
25	50 – 1,000	SFRJ350-2500-☐
30	50 – 1,000	SFRJ350-3000-☐
35	50 – 1,000	SFRJ350-3500-☐
40	50 – 1,000	SFRJ350-4000-☐
45	50 – 1,000	SFRJ350-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRJ350-5000-☐
55	50 – 1,000	SFRJ350-5500-☐
60	50 – 1,000	SFRJ350-6000-☐
65	50 – 1,000	SFRJ350-6500-☐
70	50 – 1,000	SFRJ350-7000-☐
80	50 – 1,000	SFRJ350-8000-☐
90	50 – 1,000	SFRJ350-9000-☐
100	50 – 1,000	SFRJ350-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® round bars | Product range

Ideal for plastic shafts – iglidur® J260

Order key for round bars

Type			Dimensions [mm]		
SF R	J260	-	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRJ260-1000-☐
15	50–1,000	SFRJ260-1500-☐
20	50–1,000	SFRJ260-2000-☐
25	50–1,000	SFRJ260-2500-☐
30	50–1,000	SFRJ260-3000-☐
35	50–1,000	SFRJ260-3500-☐
40	50–1,000	SFRJ260-4000-☐
45	50–1,000	SFRJ260-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRJ260-5000-☐
55	50–1,000	SFRJ260-5500-☐
60	50–1,000	SFRJ260-6000-☐
65	50–1,000	SFRJ260-6500-☐
70	50–1,000	SFRJ260-7000-☐
80	50–1,000	SFRJ260-8000-☐
90	50–1,000	SFRJ260-9000-☐
100	50–1,000	SFRJ260-10000-☐

Low-cost – iglidur® R

Order key for round bars

Type			Dimensions [mm]		
SF R	R	-	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRR-1000-☐
15	50–1,000	SFRR-1500-☐
20	50–1,000	SFRR-2000-☐
25	50–1,000	SFRR-2500-☐
30	50–1,000	SFRR-3000-☐
35	50–1,000	SFRR-3500-☐
40	50–1,000	SFRR-4000-☐
45	50–1,000	SFRR-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRR-5000-☐
55	50–1,000	SFRR-5500-☐
60	50–1,000	SFRR-6000-☐
65	50–1,000	SFRR-6500-☐
70	50–1,000	SFRR-7000-☐
80	50–1,000	SFRR-8000-☐
90	50–1,000	SFRR-9000-☐
100	50–1,000	SFRR-10000-☐

Available from stock

Upon request/check availability

iglidur® round bars | Product range

Specially for aluminium shafts – iglidur® J200

Order key for round bars

Type			Dimensions [mm]		
SF R	J200	-	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRJ200-1000-☐
15	50–1,000	SFRJ200-1500-☐
20	50–1,000	SFRJ200-2000-☐
25	50–1,000	SFRJ200-2500-☐
30	50–1,000	SFRJ200-3000-☐
35	50–1,000	SFRJ200-3500-☐
40	50–1,000	SFRJ200-4000-☐
45	50–1,000	SFRJ200-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRJ200-5000-☐
55	50–1,000	SFRJ200-5500-☐
60	50–1,000	SFRJ200-6000-☐
65	50–1,000	SFRJ200-6500-☐
70	50–1,000	SFRJ200-7000-☐
80	50–1,000	SFRJ200-8000-☐
90	50–1,000	SFRJ200-9000-☐
100	50–1,000	SFRJ200-10000-☐

Ideal for pivoting movement – iglidur® E7

Order key for round bars

Type			Dimensions [mm]		
SF R	E7	-	30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRE7-1000-☐
15	50–1,000	SFRE7-1500-☐
20	50–1,000	SFRE7-2000-☐
25	50–1,000	SFRE7-2500-☐
30	50–1,000	SFRE7-3000-☐
35	50–1,000	SFRE7-3500-☐
40	50–1,000	SFRE7-4000-☐
45	50–1,000	SFRE7-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRE7-5000-☐
55	50–1,000	SFRE7-5500-☐
60	50–1,000	SFRE7-6000-☐
65	50–1,000	SFRE7-6500-☐
70	50–1,000	SFRE7-7000-☐
80	50–1,000	SFRE7-8000-☐
90	50–1,000	SFRE7-9000-☐
100	50–1,000	SFRE7-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® round bars | Product range

Extremely wear-resistant in black – iglidur® JB

Order key for round bars

Type	Dimensions [mm]					
SF R JB-	30	00-	☐			
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length	

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRJB-1000-☐
15	50–1,000	SFRJB-1500-☐
20	50–1,000	SFRJB-2000-☐
25	50–1,000	SFRJB-2500-☐
30	50–1,000	SFRJB-3000-☐
35	50–1,000	SFRJB-3500-☐
40	50–1,000	SFRJB-4000-☐
45	50–1,000	SFRJB-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRJB-5000-☐
55	50–1,000	SFRJB-5500-☐
60	50–1,000	SFRJB-6000-☐
65	50–1,000	SFRJB-6500-☐
70	50–1,000	SFRJB-7000-☐
80	50–1,000	SFRJB-8000-☐
90	50–1,000	SFRJB-9000-☐
100	50–1,000	SFRJB-10000-☐

The chemical and temperature specialist – iglidur® X

Order key for round bars

Type	Dimensions [mm]					
SF R X-	30	00-	☐			
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length	

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRX-1000-☐
15	50–1,000	SFRX-1500-☐
20	50–1,000	SFRX-2000-☐
25	50–1,000	SFRX-2500-☐
30	50–1,000	SFRX-3000-☐
35	50–1,000	SFRX-3500-☐
40	50–1,000	SFRX-4000-☐
45	50–1,000	SFRX-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRX-5000-☐
55	50–1,000	SFRX-5500-☐
60	50–1,000	SFRX-6000-☐
65	50–1,000	SFRX-6500-☐
70	50–1,000	SFRX-7000-☐
80	50–1,000	SFRX-8000-☐
90	50–1,000	SFRX-9000-☐
100	50–1,000	SFRX-10000-☐

Available from stock

Upon request/check availability

iglidur® round bars | Product range

All-rounder for steam sterilisation – iglidur® HSD350

Order key for round bars

Type	Dimensions [mm]					
SF R HSD350-	30	00-	☐			
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length	

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRHSD350-1000-☐
15	50–1,000	SFRHSD350-1500-☐
20	50–1,000	SFRHSD350-2000-☐
25	50–1,000	SFRHSD350-2500-☐
30	50–1,000	SFRHSD350-3000-☐
35	50–1,000	SFRHSD350-3500-☐
40	50–1,000	SFRHSD350-4000-☐
45	50–1,000	SFRHSD350-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRHSD350-5000-☐
55	50–1,000	SFRHSD350-5500-☐
60	50–1,000	SFRHSD350-6000-☐
65	50–1,000	SFRHSD350-6500-☐
70	50–1,000	SFRHSD350-7000-☐
80	50–1,000	SFRHSD350-8000-☐
90	50–1,000	SFRHSD350-9000-☐
100	50–1,000	SFRHSD350-10000-☐

Endurance runner with high media resistance – iglidur® H1

Order key for round bars

Type	Dimensions [mm]					
SF R H1-	30	00-	☐			
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length	

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50–1,000	SFRH1-1000-☐
15	50–1,000	SFRH1-1500-☐
20	50–1,000	SFRH1-2000-☐
25	50–1,000	SFRH1-2500-☐
30	50–1,000	SFRH1-3000-☐
35	50–1,000	SFRH1-3500-☐
40	50–1,000	SFRH1-4000-☐
45	50–1,000	SFRH1-4500-☐

Ø	Lengths	Part No.
50	50–1,000	SFRH1-5000-☐
55	50–1,000	SFRH1-5500-☐
60	50–1,000	SFRH1-6000-☐
65	50–1,000	SFRH1-6500-☐
70	50–1,000	SFRH1-7000-☐
80	50–1,000	SFRH1-8000-☐
90	50–1,000	SFRH1-9000-☐
100	50–1,000	SFRH1-10000-☐

iglidur® round bars | Product range

For extreme ambient conditions – iglidur® C500

Order key for round bars

Type			Dimensions [mm]		
SF	R	C500	- 30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRC500-1000-☐
15	50 – 1,000	SFRC500-1500-☐
20	50 – 1,000	SFRC500-2000-☐
25	50 – 1,000	SFRC500-2500-☐
30	50 – 1,000	SFRC500-3000-☐
35	50 – 1,000	SFRC500-3500-☐
40	50 – 1,000	SFRC500-4000-☐
45	50 – 1,000	SFRC500-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRC500-5000-☐
55	50 – 1,000	SFRC500-5500-☐
60	50 – 1,000	SFRC500-6000-☐
65	50 – 1,000	SFRC500-6500-☐
70	50 – 1,000	SFRC500-7000-☐
80	50 – 1,000	SFRC500-8000-☐
90	50 – 1,000	SFRC500-9000-☐
100	50 – 1,000	SFRC500-10000-☐

The all-rounder for food, FDA and EU 10/2011-compliant – iglidur® A181

Order key for round bars

Type			Dimensions [mm]		
SF	R	A181	- 30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRA181-1000-☐
15	50 – 1,000	SFRA181-1500-☐
20	50 – 1,000	SFRA181-2000-☐
25	50 – 1,000	SFRA181-2500-☐
30	50 – 1,000	SFRA181-3000-☐
35	50 – 1,000	SFRA181-3500-☐
40	50 – 1,000	SFRA181-4000-☐
45	50 – 1,000	SFRA181-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRA181-5000-☐
55	50 – 1,000	SFRA181-5500-☐
60	50 – 1,000	SFRA181-6000-☐
65	50 – 1,000	SFRA181-6500-☐
70	50 – 1,000	SFRA181-7000-☐
80	50 – 1,000	SFRA181-8000-☐
90	50 – 1,000	SFRA181-9000-☐
100	50 – 1,000	SFRA181-10000-☐

Available from stock

Upon request/check availability

iglidur® bar stock

iglidur® round bars | Product range

The FDA-compliant endurance runner at higher temperatures – iglidur® A350

Order key for round bars

Type			Dimensions [mm]		
SF	R	A350	- 30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRA350-1000-☐
15	50 – 1,000	SFRA350-1500-☐
20	50 – 1,000	SFRA350-2000-☐
25	50 – 1,000	SFRA350-2500-☐
30	50 – 1,000	SFRA350-3000-☐
35	50 – 1,000	SFRA350-3500-☐
40	50 – 1,000	SFRA350-4000-☐
45	50 – 1,000	SFRA350-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRA350-5000-☐
55	50 – 1,000	SFRA350-5500-☐
60	50 – 1,000	SFRA350-6000-☐
65	50 – 1,000	SFRA350-6500-☐
70	50 – 1,000	SFRA350-7000-☐
80	50 – 1,000	SFRA350-8000-☐
90	50 – 1,000	SFRA350-9000-☐
100	50 – 1,000	SFRA350-10000-☐

The media and temperature specialist in the food sector – iglidur® A500

Order key for round bars

Type			Dimensions [mm]		
SF	R	A500	- 30	00	- ☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRA500-1000-☐
15	50 – 1,000	SFRA500-1500-☐
20	50 – 1,000	SFRA500-2000-☐
25	50 – 1,000	SFRA500-2500-☐
30	50 – 1,000	SFRA500-3000-☐
35	50 – 1,000	SFRA500-3500-☐
40	50 – 1,000	SFRA500-4000-☐
45	50 – 1,000	SFRA500-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRA500-5000-☐
55	50 – 1,000	SFRA500-5500-☐
60	50 – 1,000	SFRA500-6000-☐
65	50 – 1,000	SFRA500-6500-☐
70	50 – 1,000	SFRA500-7000-☐
80	50 – 1,000	SFRA500-8000-☐
90	50 – 1,000	SFRA500-9000-☐
100	50 – 1,000	SFRA500-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® round bars | Product range

The all-rounder for food – iglidur® A180

Order key for round bars

Type			Dimensions [mm]		
SF R	A180	- 30	00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRA180-1000-☐
15	50 – 1,000	SFRA180-1500-☐
20	50 – 1,000	SFRA180-2000-☐
25	50 – 1,000	SFRA180-2500-☐
30	50 – 1,000	SFRA180-3000-☐
35	50 – 1,000	SFRA180-3500-☐
40	50 – 1,000	SFRA180-4000-☐
45	50 – 1,000	SFRA180-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRA180-5000-☐
55	50 – 1,000	SFRA180-5500-☐
60	50 – 1,000	SFRA180-6000-☐
65	50 – 1,000	SFRA180-6500-☐
70	50 – 1,000	SFRA180-7000-☐
80	50 – 1,000	SFRA180-8000-☐
90	50 – 1,000	SFRA180-9000-☐
100	50 – 1,000	SFRA180-10000-☐

"Food" material with high media resistance up to +90°C – iglidur® A160

Order key for round bars

Type			Dimensions [mm]		
SF R	A160	- 30	00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRA160-1000-☐
15	50 – 1,000	SFRA160-1500-☐
20	50 – 1,000	SFRA160-2000-☐
25	50 – 1,000	SFRA160-2500-☐
30	50 – 1,000	SFRA160-3000-☐
35	50 – 1,000	SFRA160-3500-☐
40	50 – 1,000	SFRA160-4000-☐
45	50 – 1,000	SFRA160-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRA160-5000-☐
55	50 – 1,000	SFRA160-5500-☐
60	50 – 1,000	SFRA160-6000-☐
65	50 – 1,000	SFRA160-6500-☐
70	50 – 1,000	SFRA160-7000-☐
80	50 – 1,000	SFRA160-8000-☐
90	50 – 1,000	SFRA160-9000-☐
100	50 – 1,000	SFRA160-10000-☐

Available from stock

Upon request/check availability

iglidur® round bars | Product range

For contact with drinking water – iglidur® UW160

Order key for round bars

Type			Dimensions [mm]		
SF R	UW160	- 30	00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRUW160-1000-☐
15	50 – 1,000	SFRUW160-1500-☐
20	50 – 1,000	SFRUW160-2000-☐
25	50 – 1,000	SFRUW160-2500-☐
30	50 – 1,000	SFRUW160-3000-☐
35	50 – 1,000	SFRUW160-3500-☐
40	50 – 1,000	SFRUW160-4000-☐
45	50 – 1,000	SFRUW160-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRUW160-5000-☐
55	50 – 1,000	SFRUW160-5500-☐
60	50 – 1,000	SFRUW160-6000-☐
65	50 – 1,000	SFRUW160-6500-☐
70	50 – 1,000	SFRUW160-7000-☐
80	50 – 1,000	SFRUW160-8000-☐
90	50 – 1,000	SFRUW160-9000-☐
100	50 – 1,000	SFRUW160-10000-☐

For the tobacco industry – iglidur® T220

Order key for round bars

Type			Dimensions [mm]		
SF R	T220	- 30	00	-	☐
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRT220-1000-☐
15	50 – 1,000	SFRT220-1500-☐
20	50 – 1,000	SFRT220-2000-☐
25	50 – 1,000	SFRT220-2500-☐
30	50 – 1,000	SFRT220-3000-☐
35	50 – 1,000	SFRT220-3500-☐
40	50 – 1,000	SFRT220-4000-☐
45	50 – 1,000	SFRT220-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRT220-5000-☐
55	50 – 1,000	SFRT220-5500-☐
60	50 – 1,000	SFRT220-6000-☐
65	50 – 1,000	SFRT220-6500-☐
70	50 – 1,000	SFRT220-7000-☐
80	50 – 1,000	SFRT220-8000-☐
90	50 – 1,000	SFRT220-9000-☐
100	50 – 1,000	SFRT220-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® round bars | Product range

Used to prevent electro-static charges – iglidur® F2

Order key for round bars

Type	Dimensions [mm]				
SF R F2	- 30	00	- ☐		
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRF2-1000-☐
15	50 – 1,000	SFRF2-1500-☐
20	50 – 1,000	SFRF2-2000-☐
25	50 – 1,000	SFRF2-2500-☐
30	50 – 1,000	**SFRF2-3000-☐**
35	50 – 1,000	**SFRF2-3500-☐**
40	50 – 1,000	SFRF2-4000-☐
45	50 – 1,000	SFRF2-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRF2-5000-☐
55	50 – 1,000	SFRF2-5500-☐
60	50 – 1,000	SFRF2-6000-☐
65	50 – 1,000	SFRF2-6500-☐
70	50 – 1,000	SFRF2-7000-☐
80	50 – 1,000	SFRF2-8000-☐
90	50 – 1,000	SFRF2-9000-☐
100	50 – 1,000	SFRF2-10000-☐

Versatile and cost-effective – iglidur® J2

Order key for round bars

Type	Dimensions [mm]				
SF R J2	- 30	00	- ☐		
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRJ2-1000-☐
15	50 – 1,000	SFRJ2-1500-☐
20	50 – 1,000	SFRJ2-2000-☐
25	50 – 1,000	SFRJ2-2500-☐
30	50 – 1,000	**SFRJ2-3000-☐**
35	50 – 1,000	SFRJ2-3500-☐
40	50 – 1,000	SFRJ2-4000-☐
45	50 – 1,000	SFRJ2-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRJ2-5000-☐
55	50 – 1,000	SFRJ2-5500-☐
60	50 – 1,000	SFRJ2-6000-☐
65	50 – 1,000	SFRJ2-6500-☐
70	50 – 1,000	SFRJ2-7000-☐
80	50 – 1,000	SFRJ2-8000-☐
90	50 – 1,000	SFRJ2-9000-☐
100	50 – 1,000	SFRJ2-10000-☐

Available from stock
Upon request/check availability

iglidur® round bars | Product range

For the rail industry, flame-retardant, complies with DIN EN 45545 HL3, R22/R23 – iglidur® RW370

Order key for round bars

Type	Dimensions [mm]				
SF R RW370	- 30	00	- ☐		
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRRW370-1000-☐
15	50 – 1,000	SFRRW370-1500-☐
20	50 – 1,000	SFRRW370-2000-☐
25	50 – 1,000	SFRRW370-2500-☐
30	50 – 1,000	**SFRRW370-3000-☐**
35	50 – 1,000	SFRRW370-3500-☐
40	50 – 1,000	SFRRW370-4000-☐
45	50 – 1,000	**SFRRW370-4500-☐**

Ø	Lengths	Part No.
50	50 – 1,000	SFRRW370-5000-☐
55	50 – 1,000	SFRRW370-5500-☐
60	50 – 1,000	SFRRW370-6000-☐
65	50 – 1,000	SFRRW370-6500-☐
70	50 – 1,000	SFRRW370-7000-☐
80	50 – 1,000	**SFRRW370-8000-☐**
90	50 – 1,000	SFRRW370-9000-☐
100	50 – 1,000	SFRRW370-10000-☐

For long service life under extreme loads – iglidur® Q2

Order key for round bars

Type	Dimensions [mm]				
SF R Q2	- 30	00	- ☐		
Bar stock	Round bar	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

Ø	Lengths	Part No.
10	50 – 1,000	SFRQ2-1000-☐
15	50 – 1,000	SFRQ2-1500-☐
20	50 – 1,000	SFRQ2-2000-☐
25	50 – 1,000	**SFRQ2-2500-☐**
30	50 – 1,000	**SFRQ2-3000-☐**
35	50 – 1,000	SFRQ2-3500-☐
40	50 – 1,000	SFRQ2-4000-☐
45	50 – 1,000	SFRQ2-4500-☐

Ø	Lengths	Part No.
50	50 – 1,000	SFRQ2-5000-☐
55	50 – 1,000	SFRQ2-5500-☐
60	50 – 1,000	SFRQ2-6000-☐
65	50 – 1,000	SFRQ2-6500-☐
70	50 – 1,000	SFRQ2-7000-☐
80	50 – 1,000	SFRQ2-8000-☐
90	50 – 1,000	SFRQ2-9000-☐
100	50 – 1,000	SFRQ2-10000-☐

igus® constantly expands its range of available materials and dimensions. Please contact us in case the required diameter is not available.

iglidur® tubes | Product range

The versatile endurance runner – iglidur® J

Order key for tubes

Type			Dimensions [mm]		
SF	T	J	-110	70	- ☐
Bar stock	Tube	iglidur® material	Outer Ø	Inner Ø	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

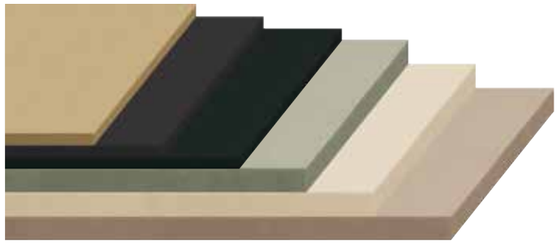
Inner Ø	Inner diameter tolerance	Outer Ø	Outer diameter tolerance	Length	Part No.
70	–2.0 / –6.5	110	+1.5 / +4.5	50 – 1,000	**SFTJ-11070**
70	–2.0 / –6.5	125	+1.5 / +4.5	50 – 1,000	**SFTJ-12570**
100	–2.0 / –6.5	150	+1.5 / +4.5	50 – 1,000	**SFTJ-150100**

Available from stock

Upon request/check availability

iglidur® plates | Product range

Solve wear problems quickly with iglidur® plate strips



Order key for plate strips

Type			Dimensions [mm]		
SF	P	☐	-15	-160	- ☐
Bar stock	Plate	iglidur® material	Material thickness	Width	Length

In your required length, freely selectable between 50 and 1,000mm. Cut-to-size parts are delivered oversized.

Dimensions [mm]

iglidur® material	Material thickness s	Material thickness Tolerance	Width	Part No.
A500	15	+0.300 +1.500	160	**SFPA500-15-160-☐**
A500	30	+0.500 +2.500	160	**SFPA500-30-160-☐**
A500	50	+0.500 +3.500	160	**SFPA500-50-160-☐**
C500	15	+0.300 +1.500	160	**SFPC500-15-160-☐**
C500	30	+0.500 +2.500	160	**SFPC500-30-160-☐**
E7	50	+0.500 +3.500	160	**SFPE7-50-160-☐**
HSD350	15	+0.300 +1.500	160	**SFPHSD350-15-160-☐**
J350	30	+0.500 +2.500	160	**SFPJ350-30-160-☐**
J4	50	+0.500 +3.500	160	**SFPJ4-50-160-☐**
K230	15	+0.300 +1.500	160	**SFPK230-15-160-☐**
RW370	15	+0.300 +1.500	160	**SFPRW370-15-160-☐**
W300	15	+0.300 +1.500	160	**SFPW300-15-160-☐**
X	15	+0.300 +1.500	160	**SFPX-15-160-☐**

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iglidur® plates | Product range

The versatile endurance runner – iglidur® J

Plastic plates made from iglidur® can be supplied cut to size, with thickness ranging from 2mm to 40mm and available in up to 7 standard sizes.

Order key for plates

Type				Dimensions [mm]	
SF	P	J	- □	- 500	- 240
Bar stock	Plate	iglidur® material	Material thickness	Length	Width

Dimensions (L x B)	Material thickness s	Part No.
500x240	2 / 3 / 4 / 5 / 6	**SFPJ-□-500-240**
500x300	10 / 15 / 20 / 25 / 30 / 40	**SFPJ-□-500-300**
500x500	2 / 3 / 4 / 5 / 6	**SFPJ-□-500-500**
500x610	10 / 15 / 20 / 25 / 30 / 40	**SFPJ-□-500-610**
1,000x500	2 / 3 / 4 / 5 / 6	**SFPJ-□-1000-500**
1,000x610	10 / 15 / 20 / 25 / 30 / 40	**SFPJ-□-1000-610**
1,000x1,000	2 / 3 / 4 / 5 / 6	**SFPJ-□-1000-1000**

Tolerances	
Material thickness	Tolerance
2	+0.000 +0.200
3	+0.000 +0.200
4	+0.000 +0.250
5	+0.000 +0.250
6	+0.000 +0.300
10	+0.200 +0.900
15	+0.300 +1.500
20	+0.300 +1.500
25	+0.300 +1.500
30	+0.500 +2.500
40	+0.500 +2.500

Extremely wear-resistant in black – iglidur® JB

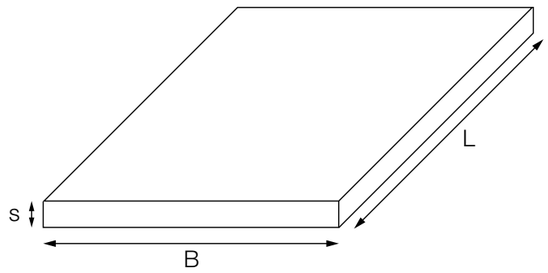
Dimensions (L x B)	Material thickness s	Part No.
500x300	10 / 25	**SFPJB-□-500-300**
500x610	10 / 25	**SFPJB-□-500-610**
1,000x610	10 / 25	**SFPJB-□-1000-610**

Tolerances	
Material thickness	Tolerance
10	+0.200 +0.900
25	+0.300 +1.500

iglidur® bar stock

iglidur® plates | Product range

The FDA-compliant endurance runner at higher temperatures – iglidur® A350



Dimensions (L x B)	Material thickness s	Part No.
500x300	15 / 20 / 25 / 30	**SFPA350-□-500-300**
500x610	15 / 20 / 25 / 30	**SFPA350-□-500-610**
1,000x610	15 / 20 / 25 / 30	**SFPA350-□-1000-610**

Tolerances	
Material thickness	Tolerance
15	+0.300 +1.500
20	+0.300 +1.500
25	+0.300 +1.500
30	+0.500 +2.500

FDA and EU 10/2011-compliant – iglidur® A160

Dimensions (L x B)	Material thickness s	Part No.
500x300	10 / 20	**SFPA160-□-500-300**
500x610	10 / 20	**SFPA160-□-500-610**
1,000x610	10 / 20	**SFPA160-□-1000-610**

Tolerances	
Material thickness	Tolerance
10	+0.200 +0.900
20	+0.300 +1.500

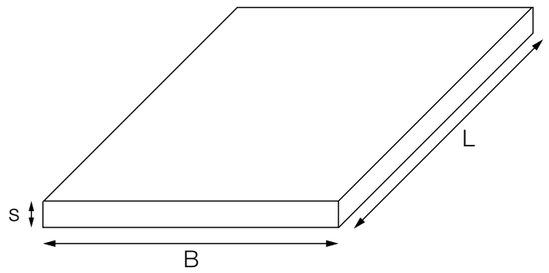
FDA-compliant – iglidur® A180

Dimensions (L x B)	Material thickness s	Part No.
500x300	10 / 20	**SFPA180-□-500-300**
500x610	10 / 20	**SFPA180-□-500-610**
1,000x610	10 / 20	**SFPA180-□-1000-610**

Tolerances	
Material thickness	Tolerance
10	+0.200 +0.900
20	+0.300 +1.500

iglidur® plates | Product range

Impact-resistant, strong and media-resistant – RN326



Dimensions (L x B)	Material thickness s	Part No.
500x300	15	**SFPRN326-☐-500-300**
500x610	15	**SFPRN326-☐-500-610**
1,000x610	15	**SFPRN326-☐-1000-610**

Tolerances	
Material thickness	Tolerance
15	+0.300 +1.500

iglidur® bar stock | Processing information

Processing information for iglidur® bar stock

General information for achieving good results when processing iglidur® bar stock:

- Use tools made from high-speed steels (HSS) and hard metal (HM)
- Always ensure the tools are extremely sharp and in perfect condition
- In view of the far greater thermal expansion compared to metals and the dimensional changes caused by absorbed water, larger production tolerances are required for plastics than for metal parts
- To reduce any retrospective warping as a result of machining stresses, if large material volumes are to be machined, interim tempering should be used before the refined finishing stage

	Sawing	Turning	Milling	Drilling
Tool material	HM with alternate teeth or trapezoidal flat teeth	HSS	HSS	HSS
Clearance angle	5–30°	2–10°	2–30°	3–16°
Rake angle	0–15°	0–8°	0–15°	5–30°
Tooth pitch	2–14mm	–	–	–
Setting angle	–	45–60°	–	–
Tip angle	–	–	–	90–130°
Cutting speed	max. 300m/min.	100–500m/min.	80–500m/min.	20–200m/min.
Feed rate	–	0.05–0.5mm/rpm	0.02–0.3mm/rpm	

Table: General processing information

Machining guidelines

	Unit	iglidur® material							
		A160, B160, W160, E7, RN326, K230	J, J2, J4, JB, A180, A181, J200, R	J260	W300 M250 GLW	P210 F2 T220	A350 J350	H1 H2 H4	X A500 C500
Turning									
Clearance angle	[°]	6–10	6–8	5–10	6–10	5–10	6	6	6
Rake angle	[°]	0–5	0–5	6–8	0–5	0–5	0	0–5	0–5
Setting angle	[°]	45–60	45–60	45–60	45–60	45–60	45–60	45–60	45–60
Cutting speed	[m/min]	250–500	300–600	300	250–500	300–400	350–400	250–500	250–500
Feed rate	[mm/rpm]	0.1–0.5	0.1–0.4	0.1–0.5	0.1–0.5	0.2–0.4	0.1–0.3	0.1–0.5	0.1–0.5
Milling									
Number of teeth		Z1–Z2	Z1–Z2	Z1–Z2	Z1–Z2	Z1–Z2	Z1–Z2	Z1–Z2	Z1–Z2
Cutting speed	[m/min]	250–500	300	300	250–500	300	250–500	250–500	250–500
Feed rate	[mm/rpm]	0.1–0.45	0.15–0.5	0.15–0.4	0.1–0.45	0.15–0.5	0.1–0.45	0.1–0.45	0.1–0.45
Drilling									
Number of teeth		Z2	Z2	Z2	Z2	Z2	Z2	Z2	Z2
Angle of twist	[°]	25	25	25	25	25	25	25	25
Acute angle	[°]	90	90	90	90	90	90	90	90
Cutting speed	[m/min]	50–150	50–150	50–100	50–150	50–100	20–80	50–200	50–200
Feed rate	[mm/rpm]	0.1–0.3	0.1–0.3	0.2–0.3	0.1–0.3	0.2–0.3	0.1–0.3	0.1–0.3	0.1–0.3

iglidur® bar stock | Processing information

Processing information for iglidur® bar stock

igus® subjects its bar stock to a material-specific tempering process so that they remain dimensionally stable during and after machining. All bar stock from 25mm thickness are tempered, regardless of the respective iglidur® material. For materials that are suitable for use at high temperatures such as iglidur® X, C500 or A500, all bar stock are basically tempered.

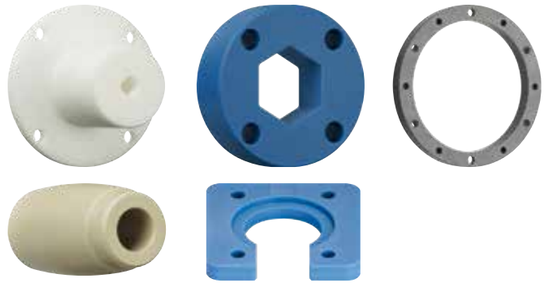
What is tempering and how does it work?
During tempering, a material is subjected to a heat treatment for a prolonged period, during which the melting temperature is not exceeded. The selected temperature and the duration of the treatment vary depending on the material, material thickness and shape. It is crucial that the material is completely heated up and cooled slowly and evenly to room temperature after the holding time of the temperature.
Tempering is particularly effective only with a slow cooling.

Tempering specifications for iglidur® materials

	iglidur® material					
	E7, RN326, K230, A160, B160	**J, J2, J3, J4, J200, JB, A180, A181, B180**	**J260**	**W300, M250, GLW, P210, F2, T220**	**A350, J350, H1, H2, H4**	**X A500 C500**
Heat up	1 hour per cm diameter to					
	+80°C	+120°C	+130°C	+180°C	+200°C	+220°C
Maximum temperature/ holding time	1 hour per cm diameter at					
	+80°C	+120°C	+130°C	+180°C	+200°C	+220°C
Cooling down	Cool down to maximum +20°C per hour until room temperature					

iglidur® bar stock | Small quantities and prototypes

Individual manufacture



Free igus® online services

- Online tools, e.g., for service life prediction
- Order or request bar stock quickly and easily
- Get special parts made from bar stock
- Order sample box
- Application examples

igus® manufactures your component in the desired form, desired quantity and required material
If you do not want to machine yourself, we will manufacture precise special parts for you quickly and cost-effectively according to drawings. This service has been made very easy for you: send a PDF drawing or a 3D model online along with your material requirements and the quantity. Then you will receive a non-binding offer. Your components are manufactured and shipped within a few days, and within ten days at the latest for up to 100 parts.

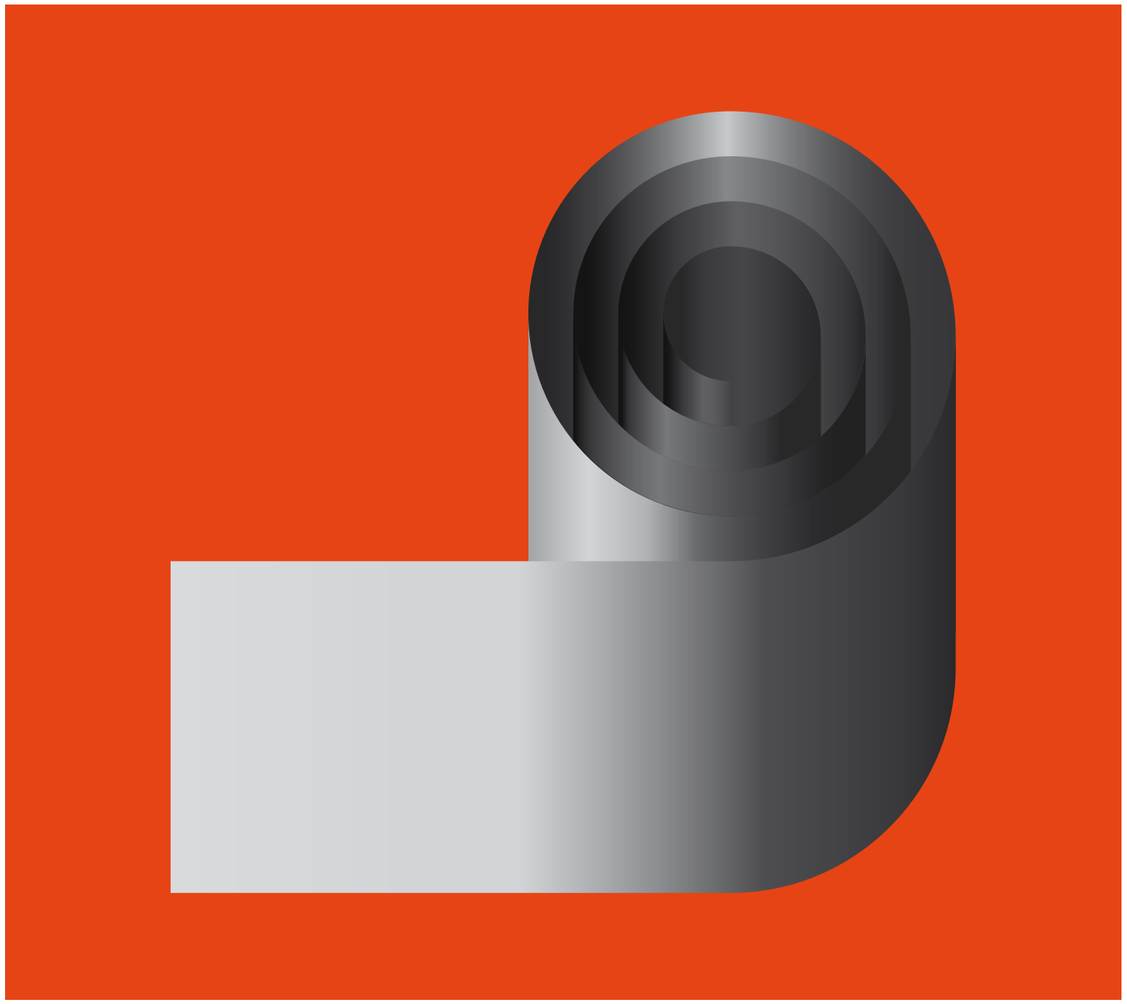
1. Submit an enquiry
Complete the online form with some basic information.

2. We machine your component according to your specifications
Upon order, igus® starts the production process.

3. You receive your product
Your required component is ready to ship and delivered quickly.

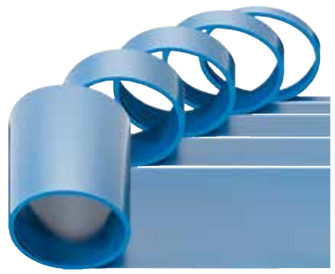
Submit an enquiry:
▶ **www.igus.eu/individual-component-barstock**

My sketches



iglidur® low-friction tribo-tape

- Choice of 4 materials
- Lubrication and maintenance-free
- Wear-resistant
- Easy to cut
- Available with/without adhesive surface
- Standard widths from stock



Versatile: iglidur® tribo-tape

Material: iglidur® A160

- Low coefficient of friction
- Wear resistance: ++
- Up to +90°C

▶ Page 696

Material: iglidur® B160

- For use in visible areas
- Wear resistance: ++++
- Up to +90°C

▶ Page 697

Material: iglidur® W160

- White and UV-stabilised
- Wear resistance: +++
- Up to +90°C

▶ Page 698

Material: iglidur® V400

- High media resistance
- Wear resistance: +++++
- Up to +200°C (with adhesive back, see product page)

▶ Page 699

Easy-to-fit protection for all surfaces: iglidur® tribo-tape

igus® tribo-tape is designed for lining areas of wear and where frequent maintenance is required, an example is for machine beds etc. At just 0.5mm thick (0.71mm including the adhesive back), the space requirement is extremely low. The ease of use (the tape can simply be cut using scissors) and optional self-adhesive back open up almost endless possibilities for the product's use.

- Lubrication and maintenance-free
- Easy to cut
- For compact areas
- With or without self-adhesive back
- Standard widths from stock
- Individual required widths in continuous range from 10–500mm

Available from stock

Detailed information about delivery time online.

Operation temperatures:

iglidur® A160: –50°C up to +90°C
iglidur® B160: –50°C up to +90°C
iglidur® W160: –50°C up to +90°C
iglidur® V400: –50°C up to +200°C

Differing temperatures with adhesive back (see product page)

Product film

▶ www.igus.eu/tape-film

Cutting service

Whether as a specially tailored by-the-metre product or freely designed pre-cut parts: We produce your required product in required width from our iglidur® tribo-tape. Please contact us!

▶ www.igus.eu/tape-cut-to-size

Material properties

General properties	Unit	iglidur® A160	iglidur® B160	iglidur® W160	iglidur® V400	Testing method
Density	g/cm³	1.00	1.00	0.95	1.51	
Colour		blue	black	white	cream-white	
Max. moisture absorption at +23°C/50% r. h.	% weight	0.1	0.1	0.1	0.1	DIN 53495
Max. total moisture absorption	% weight	0.1	0.1	0.1	0.2	
Coefficient of sliding friction, dynamic, against steel	µ	0.09–0.19	0.13–0.20	0.12–0.20	0.15–0.20	
Mechanical properties						
Flexural modulus	MPa	1,151	852	799	4,500	DIN 53457
Flexural strength at +20°C	MPa	19	14	14	95	DIN 53452
Shore D hardness		60	59	58	74	DIN 53505
Physical and thermal properties						
Max. long-term application temperature	°C	+90	+90	+90	+200	
Max. short-term application temperature	°C	+100	+100	+100	+240	
Min. continuous application temperature	°C	–50	–50	–50	–50	
Thermal conductivity	W/m · K	0.30	0.32	0.30	0.24	ASTM C 177
Coefficient of thermal expansion (at +23°C)	$K^{-1} \cdot 10^{-5}$	111	111	111	3	DIN 53752
Electrical properties						
Specific contact resistance	Ωcm	$> 10^{12}$	$> 10^{12}$	$> 10^{12}$	$> 10^{12}$	DIN IEC 93
Surface resistance	Ω	$> 10^{12}$	$> 10^{12}$	$> 10^{12}$	$> 10^{12}$	DIN 53482

Table 01: Material properties table

Chemical resistance (at +20°C)

Chemical resistance	iglidur® A160	iglidur® B160	iglidur® W160	iglidur® V400
Alcohols	+	+	+	+
Hydrocarbons	+	+	+	+
Greases, oils without additives	+	+	+	+
Fuels	+ up to 0	+ up to 0	+ up to 0	+
Diluted acids	+	+	+	+
Strong acids	+	+	+	+
Diluted alkalines	+	+	+	+
Strong alkalines	+	+	+	–
Radiation Resistance [Gy] up to	$1 \cdot 10^5$	$1 \cdot 10^5$	$1 \cdot 10^5$	$2 \cdot 10^4$

+ resistant 0 conditionally resistant – not resistant
All data given at room temperature [+20°C]

Unknown factors, temperatures, wet weather and many other ambient conditions impair the adhesion. It is therefore essential that the use of iglidur® tribo-tape be tested under realistic conditions. We are happy to provide you with samples for tests. All recommendations, as well as suggestions regarding use that are made, are based on experience gained in practice and tests where the basic conditions cannot be applied to other conditions of use. They are therefore not binding and do not release the buyer from the obligation to carry out his/her own tests. We always recommend application-specific tests under real conditions of use.

iglidur® liners | Selection according to main criteria

iglidur®	A160	B160	W160	V400
Technical specifications				
Wear resistance at +23°C	●●●○○	●●●●○	●●●○○	●●●○○
Wear resistance at +90°C	●○○○○	●●○○○	●○○○○	●●●●○
Wear resistance at +150°C	●○○○○	●○○○○	●○○○○	●●●●●
Low coefficient of friction	●●●●○	●●●●●	●●●●○	●●○○○
Low moisture absorption	●●●●●	●●●●●	●●●●●	●●●●●
Wear resistance under water	●●●○○	●●●●○	●●●○○	●●●●○
High media resistance	●●●●○	●●●●○	●●●●○	●●●●●
Resistant to edge loads	●●●○○	●●●○○	●●●○○	●●○○○
Suitable for shock and impact loads	●●●●○	●●●●○	●●●●○	●●○○○
Resistant to dirt	●●●●○	●●●●○	●●●●○	●○○○○
Price index[141)]	●○○○○	●○○○○	●○○○○	●●●●●
For high loads (> 60MPa)				
Electrically conductive				
Approvals and standards				
FDA-compliant	●			
EU 10/2011-compliant	●			
Fire class in accordance with UL-94	HB	HB	HB	V-0
Mould test DIN EN ISO 846				
Fogging DIN 75201-B				
Availabilities / variants				
Bar stock, round material	●			
Bar stock, tube				
Bar stock, plate				
Machined made from bar stock	●			
tribo-tape liner	●	●	●	●

[141)] **Price index** ●○○○○ **low price category** ●●●○○ **medium price category** ●●●●● **highest price category**

iglidur® liners | Material properties table

iglidur®	Unit	A160	B160	W160	V400
General properties					
Density	**[g/cm³]**	1.00	1.00	0.95	1.51
Colour					
Max. moisture absorption at +23°C/50% r. h.	**[% weight]**	0.1	0.1	0.1	0.1
Max. total moisture absorption	**[% weight]**	0.1	0.1	0.1	0.2
Coefficient of sliding friction, dynamic, against steel	**[µ]**	0.09–0.19	0.13–0.20	0.12–0.20	0.15–0.20
Mechanical properties					
Flexural modulus	**[MPa]**	1,151	852	799	4,500
Flexural strength at +20°C	**[MPa]**	19	14	14	95
Compressive strength	**[MPa]**	37	37	37	47
Max. permissible surface pressure at +20°C	**[MPa]**	15	11	11	45
Shore D hardness		60	59	58	74
Physical and thermal properties					
Max. continuous operating temperature	**[°C]**	+90	+90	+90	+200
Max. short-term operating temperature	**[°C]**	+100	+100	+100	+240
Min. continuous operating temperature	**[°C]**	–50	–50	–50	–50
Thermal conductivity	**[W/m · K]**	0.30	0.32	0.30	0.24
Coefficient of thermal expansion at +23°C	**[$K^{-1} \cdot 10^{-5}$]**	111	111	111	3
Electrical properties					
Specific contact resistance	**[Ωcm]**	> 10^{12}	> 10^{12}	> 10^{12}	> 10^{12}
Surface resistance	**[Ω]**	> 10^{12}	> 10^{12}	> 10^{12}	> 10^{12}
Page		**696**	**697**	**698**	**699**

iglidur® tribo-tape | Product range

FDA-compliant – iglidur® A160

Order key

Type	Dimensions [mm]	Options
A160 - T - 005 - 0020 - G		

iglidur® material | Tape | Thickness | Width | Adhesive back

G = Optional self-adhesive back

The low-cost iglidur® A160 tribo-tape has high wear resistance compared to similar, thin plastic products.

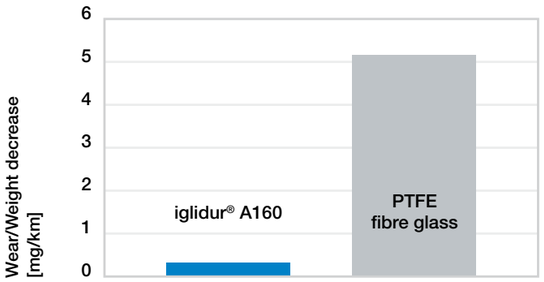
tribo-tape from iglidur® A160 with adhesive back
Temperature –40°C up to +90°C

Dimensions [mm]

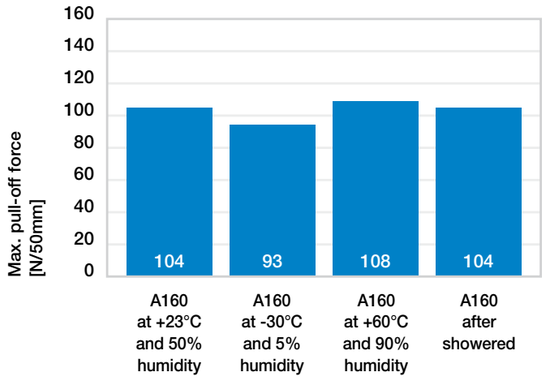
Material thickness without adhesive back ±0.1	Material thickness with adhesive back ±0.121	Width ±1.0	Part No. without adhesive back	Part No. with adhesive back
0.5	0.71	20	A160-T-005-0020	A160-T-005-0020-G
0.5	0.71	50	A160-T-005-0050	A160-T-005-0050-G
0.5	0.71	100	A160-T-005-0100	A160-T-005-0100-G
0.5	0.71	500	A160-T-005-0500	A160-T-005-0500-G
1.0	1.21	500	A160-T-010-0500	A160-T-010-0500-G

Individual widths upon request
Continuously from 10–500mm

Cutting service
Design tribo-tape flexibly
▶ **www.igus.eu/tape-cut-to-size**



Linear wear against stainless steel pin (AISI 303)
F = 10N, v = 9,600mm/min



180° pull-off test after various exposure conditions

This material complies with EU directive 10/2011 and also with FDA (Food and Drug Administration) specifications for repeated contact with food.

iglidur® tribo-tape | Product range

For use in visible areas – iglidur® B160

Order key

Type	Dimensions [mm]	Options
B160 - T - 005 - 0020 - G		

iglidur® material | Tape | Thickness | Width | Adhesive back

G = Optional self-adhesive back

Especially where the iglidur® tribo-tape is a visible part, the new black option now offers even more creative freedom. In addition the wear resistance has been improved once again compared to iglidur® A160.

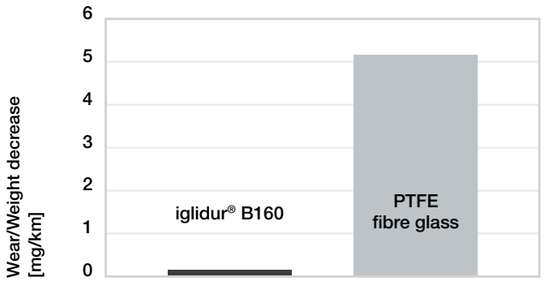
tribo-tape from iglidur® B160 with adhesive back
Temperature –40°C up to +90°C

Dimensions [mm]

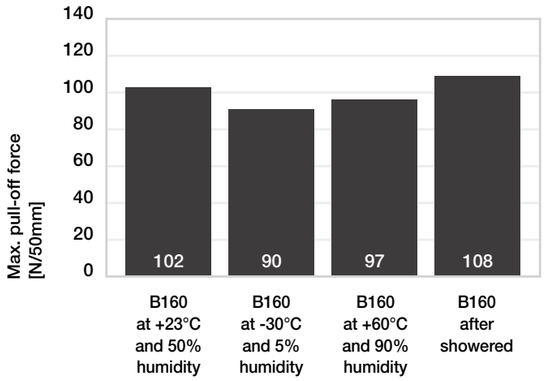
Material thickness without adhesive back ±0.1	Material thickness with adhesive back ±0.121	Width ±1.0	Part No. without adhesive back	Part No. with adhesive back
0.5	0.71	20	B160-T-005-0020	B160-T-005-0020-G
0.5	0.71	50	B160-T-005-0050	B160-T-005-0050-G
0.5	0.71	100	B160-T-005-0100	B160-T-005-0100-G
0.5	0.71	500	B160-T-005-0500	B160-T-005-0500-G
1.0	1.21	500	B160-T-010-0500	B160-T-010-0500-G

Individual widths upon request
Continuously from 10–500mm

Cutting service
Design tribo-tape flexibly
▶ **www.igus.eu/tape-cut-to-size**



Linear wear against stainless steel pin (AISI 303)
F = 10N, v = 9,600mm/min



180° pull-off test after various exposure conditions

iglidur® tribo-tape | Product range

White and UV-stabilised – iglidur® W160

Order key

Type	Dimensions [mm]	Options
W160 - T - 005 - 0020 - G		

iglidur® material | Tape | Thickness | Width | Adhesive back

G = Optional self-adhesive back

With its white colour and UV-stabilised additives, iglidur® W160 tribo-tape offers even more design freedom.148)

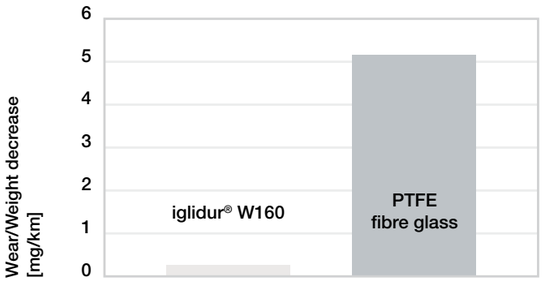
tribo-tape from iglidur® W160 with adhesive back
Temperature –40°C up to +90°C

Dimensions [mm]

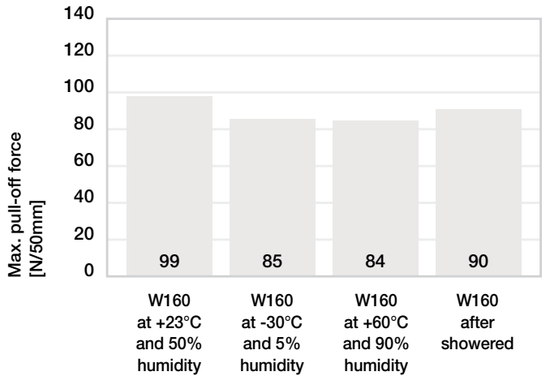
Material thickness without adhesive back ±0.1	Material thickness with adhesive back ±0.121	Width ±1.0	Part No. without adhesive back	Part No. with adhesive back
0.5	0.71	20	W160-T-005-0020	W160-T-005-0020-G
0.5	0.71	50	W160-T-005-0050	W160-T-005-0050-G
0.5	0.71	100	W160-T-005-0100	W160-T-005-0100-G
0.5	0.71	500	W160-T-005-0500	W160-T-005-0500-G
1.0	1.21	500	W160-T-010-0500	W160-T-010-0500-G

Individual widths upon request
Continuously from 10 – 500mm

Cutting service
Design tribo-tape flexibly
▶ **www.igus.eu/tape-cut-to-size**



Linear wear against stainless steel pin (AISI 303)
F = 10N, v = 9600mm/min



180° pull-off test after various exposure conditions

148) The original antibacterial version of the iglidur® W160 material is no longer available due to a change in the Biocides Regulation. A new antibacterial version is being developed.

iglidur® tribo-tape | Product range

High media resistance – iglidur® V400

Order key

Type	Dimensions [mm]	Options
V400 - T - 005 - 0120 - G		

iglidur® material | Tape | Thickness | Width | Adhesive back

G = Optional self-adhesive back

iglidur® V400 tribo-tape is not only extremely wear-resistant but also extremely media and temperature-resistant. In fact, it has been proven in tests to be up to 10 times more wear-resistant than special products for machine beds.

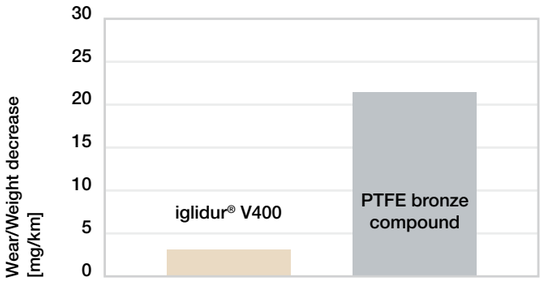
tribo-tape from iglidur® V400 with adhesive back
Temperature –40°C up to +160°C

Dimensions [mm]

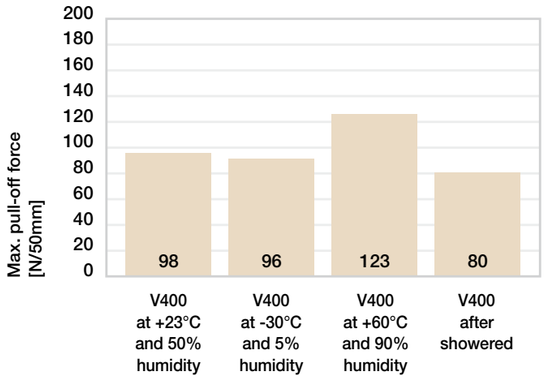
Material thickness without adhesive back ±0.1	Material thickness with adhesive back ±0.121	Width ±1.0	Part No. without adhesive back	Part No. with adhesive back
0.5	0.71	120	V400-T-005-0120	V400-T-005-0120-G

Individual widths upon request

Cutting service
Design tribo-tape flexibly
▶ **www.igus.eu/tape-cut-to-size**



Linear wear against stainless steel pin (AISI 303)
F = 35N, v = 0.5m/min



180° pull-off test after various exposure conditions

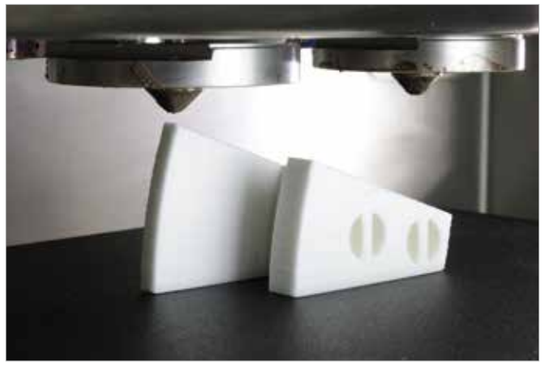
iglidur®

Tribo 3D printing

...plastics

iglidur® tribo 3D printing | Advantages

Parts as required – everything a question of quantity

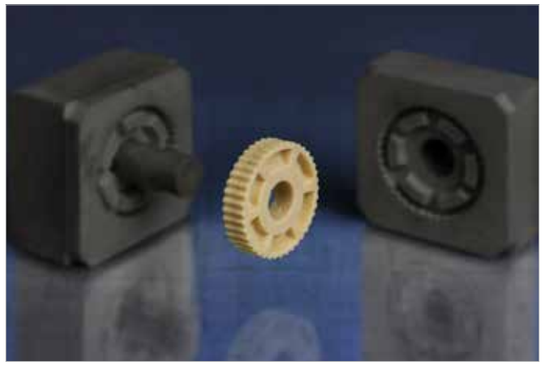


3D printing/SLS

For prototypes or small quantities made from tribo-filaments with the laser sintering method

Wear-resistant materials for 3D printing and the laser sintering method – print parts yourself or have igus® print them for you.

- Up to 50-times more abrasion-resistant than normal 3D printing materials
- Various iglidur® materials available for FDM/FFF (filament) and SLS (powder)
- No tool costs; cost-effective, no minimum order quantity



Printed tools

For small quantities made from iglidur® granules

3D printed mould tools to produce Wear-resistant injection-moulded parts made in all available iglidur® materials.

- Customised parts delivered from 4 business days
- Up to 80% more cost-effective than conventional injection mould tools
- For prototypes and small volumes
- Check price and manufacturability online ▶ **www.igus.eu/idd**

Lubrication-free printing

Extremely abrasion and wear-resistant tribo-plastics for additive manufacturing via selective laser sintering (SLS) or with filament (FDM/FFF) allow you to use the printed component or to test the function of the part reliably and completely from the prototype or production batch onward.

- Abrasion-resistant
- Lubrication and maintenance-free
- No tooling costs
- Design freedom
- 3D printing of parts on site
- Can be processed by commercially available 3D printers
- Predictable service life
- Surfaces smoothed or coloured in one of 12 standard colours
- 3D printing service 24–72hrs

Typical application areas

- Special wear-resistant parts
- Jig construction
- Single pieces and small volumes

Available from stock
Detailed information about delivery time online.

More information about 3D printing
▶ **www.igus.eu/3d**

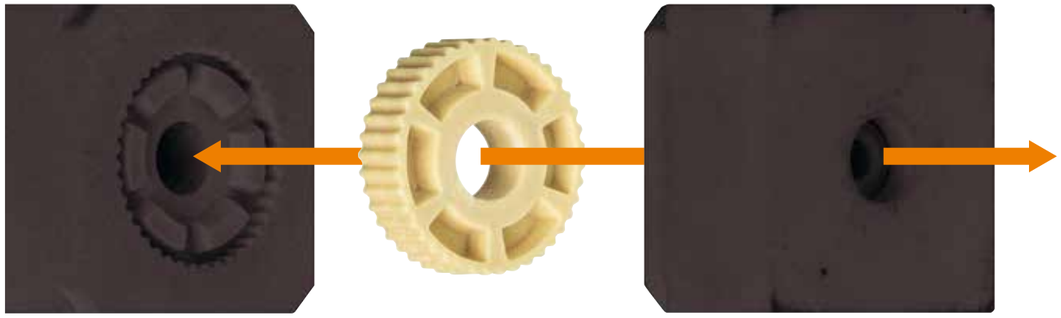
Calculate service life of 3D printed plain bearings online
▶ **www.igus.eu/iglidur-expert**

Calculate service life for 3D printed gears online
▶ **www.igus.eu/gear-expert**

Create a 3D model of the gear, roller, and much more within one minute
▶ **www.igus.eu/cad-configurators**

iglidur® | Injection moulding tools

Making tools quickly and at low cost



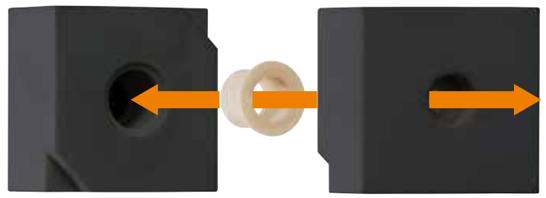
Tools for injection moulding from the 3D printers

Due to 3D printing, igus® is able to make customised injection moulds in a short time with up to 80% lower costs. Maintenance-free plastic plain bearings in the required shape can be made quickly and, above all, cost-effectively from all iglidur® materials.

- High variety of materials: all iglidur® plain bearing materials can be requested as samples
- Cost-efficient and delivered quickly
- No minimum order quantity
- For simple geometries
- For large quantities and recurring projects, metal 3D-printed moulds can also be provided.
- **Prices online ▶ www.igus.eu/idd**

The manufacture of maintenance-free plastic plain bearings from 3D printed injection moulds is worthwhile compared to direct 3D printing of the iglidur® materials especially if:

- Special material characteristics are needed, such as conductivity, high temperature, underwater use, KTW compliance
- Small volumes in the same iglidur® material are to be sampled as is a later high volume from a classic injection moulding tool



Delivery time
from 5 business days

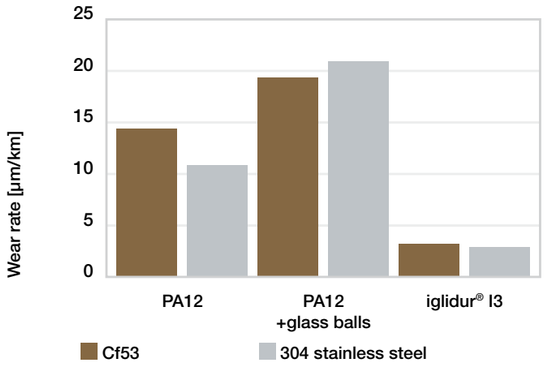
▶ **www.igus.eu/3d-tools**

Information
▶ **www.igus.eu/print2mold**

Prices
▶ **www.igus.eu/idd**

iglidur® SLS | Laser sintering

iglidur® I3 for 3D printing via SLS



Rotating wear: p = 1MPa; v = 0.3m/s

Delivery time
72hrs

At least 3 times more wear-resistant: iglidur® I3 for 3D printing via SLS

The material iglidur® I3, specially developed for laser sintering, proved to have an abrasion resistance 3 to 30 times higher than conventional materials for laser sintering during tribological tests in the igus® test laboratory. This means the degree of design freedom for wear-resistant parts has been further increased. iglidur® I3 is also suitable for regular gears such as spur gears, bevel gears, and planetary gears.

- Lubrication and maintenance-free
- Wear-resistant
- Good mechanical properties
- Detail accuracy with exact surfaces
- Can be processed using the standard parameter set
- Refresh rate: 75%
- Automotive-compliant according to FMV SS 302
- Gear service life calculation ▶ **www.igus.eu/gear-expert**
- igus 3D printing service ▶ **www.igus.eu/idd**
- Most-popular igus® 3D-printing material (more than 100,000 parts per year)

Material properties

General properties	Unit	iglidur® I3	Testing method
Density	**g/cm³**	1.05	
Colour		Yellow	
Max. moisture absorption at +23°C/50% r. h.	**% weight**	0.8	DIN 53495
Max. total moisture absorption	**% weight**	1.9	
Mechanical properties			
Flexural modulus	**MPa**	1,400	DIN 53457
Flexural strength at +20°C	**MPa**	68/61[130)]	DIN 53452
Shore D hardness		70	DIN 53505
Physical and thermal properties			
Max. long-term application temperature	**°C**	+80	
Max. short-term application temperature	**°C**	+140	
Min. continuous application temperature	**°C**	–40	
Electrical properties			
Specific contact resistance	**Ωcm**	> 10^{12}	DIN IEC 93
Surface resistance	**Ω**	> 10^{11}	DIN 53482

[130)] **Printed flat/upright**

▶ Chemical table, **page 1636**

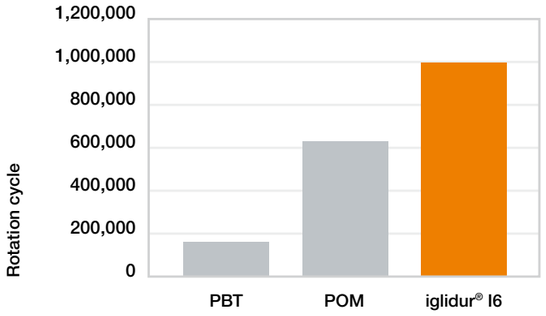
Part No. raw material (10kg)
I3-PL-10000

Part No. component
I3-PS-02

iglidur®
tribo
3D printing

iglidur® SLS | Laser sintering

iglidur® I6 for 3D printing via SLS



Service life test worm wheel. 12rpm; 4.9Nm

Delivery time
72hrs

Durable worm wheels made of iglidur® I6 via laser sintering

The material iglidur® I6 was specifically developed for laser sintering and is expecially suited for worm wheels. The tests in the igus® test laboratory showed a longer service life than conventional machined POM worm wheels. This greatly increases the flexibility in the design of gears, since no tools are necessary due to the laser sintering process and worm wheels can be produced efficiently without minimum order quantity.

- Abrasion-resistant
- Extremely long operating times
- Lubrication and maintenance-free
- Cost-efficient from batch size 1
- No tooling costs
- Delivery time 24-72hrs
- Detail accuracy with exact surfaces
- igus 3D printing service ▶ **www.igus.eu/idd**
- Also suitable for medium-sized series, e.g. 5,000 pieces

▶ **www.igus.eu/gear**

Material properties

General properties	Unit	iglidur® I6	Testing method
Density	**g/cm³**	1.06	
Colour		white	
Max. moisture absorption at +23°C/50% r. h.	**% weight**	0.8	DIN 53495
Max. total moisture absorption	**% weight**	1.9	
Mechanical properties			
Flexural modulus	**MPa**	1,100	DIN 53457
Flexural strength at +20°C	**MPa**	49/38[130)]	DIN 53452
Shore D hardness		67	DIN 53505
Physical and thermal properties			
Max. long-term application temperature	**°C**	+80	
Max. short-term application temperature	**°C**	+140	
Min. continuous application temperature	**°C**	–40	
Electrical properties			
Specific contact resistance	**Ωcm**	> 10^{12}	DIN IEC 93
Surface resistance	**Ω**	> 10^{11}	DIN 53482

[130)] **Printed flat/upright**

▶ Chemical table, **page 1636**

Part No. raw material (10kg)
I6-PL-10000

Part No. component
I6-PS-02

iglidur® tribo 3D printing | 3D printing service

Individual wear-resistant parts in 3 days – order online

Wear-resistant parts from the 3D printing service

Online and extremely fast

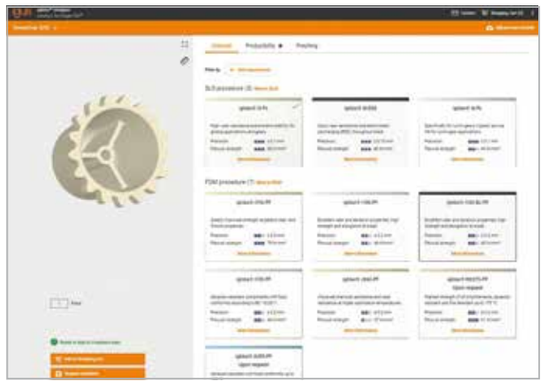
Printed parts extremely wear-resistant- as prototype or in small series. Simply upload your required part, determine the price and order online (or ask for a quotation). Thanks to the iglidur® 3D printing service, from now on 2 quick and easy steps will complete your customised component made of lubrication-free and abrasion-resistant iglidur® plastics. The service life of the 3D printed components is comparable to igus® injection moulded parts. In the online 3D printing calculation, you can not only receive 3D printing, but also analyse feasibility and prices of injection-moulded parts made with 3D-printed moulds (print2mold).

1. Go to **www.igus.eu/idd** and upload the 3D model in the STEP format. The manufacturability (wall thickness and component size) is analysed automatically
2. Select material and quantity and order the component or ask for a quotation.

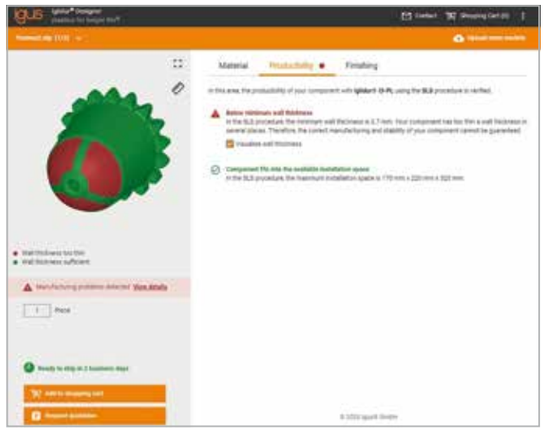
▶ **Your individual wear-resistant part will be shipped in 24–72 hours**

Delivery time
24–72hrs

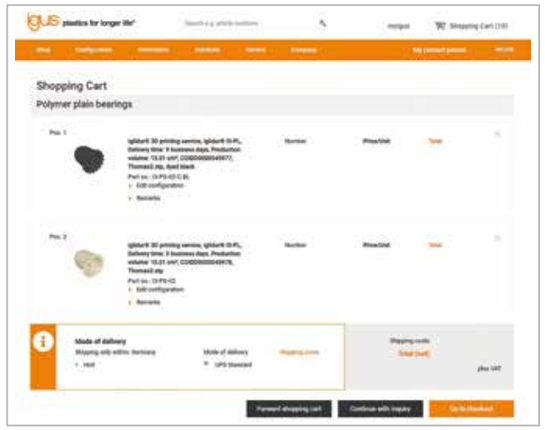
Try it out now:
▶ www.igus.eu/idd



Material selection



Wall thickness analyses



Shopping cart

iglidur® tribo 3D printing

iglidur® tribo 3D printing | 3D printing service

SLS can also be used to make wear-resistant parts

The 3D printing service is being extended with the materials iglidur® I3 and iglidur® I6. Laser sintering (SLS) is used to make parts of these materials. With this method even more plain bearing applications are therefore possible with 3D-printed parts, strength and precision are considerably greater and the price per component is lower.

New: additional laser sintering services

In the 3D printing service, more services for laser sintering materials can now be selected and their prices easily defined.

- Black colouring for visible parts
- Polish surfaces using vibratory finishing or chemical polishing

Two-component 3D printing (FDM/FFF)

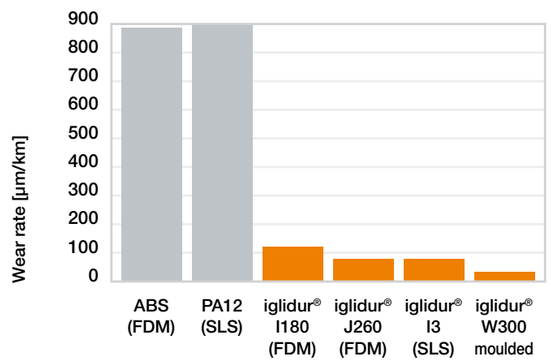
Two-component parts made of proven tribo-filaments and fibre-reinforced plastics for stability and rigidity, can be ordered upon request.

Dimensional stability and size of installation space

The precision of the printed parts in the case of the iglidur® tribo-filaments is ±0.2mm (up to an edge length of 50mm, above this ±0.4%). In the case of parts made using the laser sintering process the precision is ±0.1mm (up to an edge length of 50mm, above this ±0.2%).
The space used for processing the iglidur® tribo-filaments measures 135x145x200mm. In the case of laser sintering the space used measures 170x220x300mm. The following applies to both processes: larger parts may have to be made of several pieces.

In order to ensure that the 3D-printed components function correctly, the following should be included in the 3D model:

- The 3D model should be at the centre of tolerance; e.g. for a tolerance of 16 –0.2mm, the 3D model should correspond to 15.9mm
- In the case of clearance fits, a play of approx. 0.1mm should be planned
- Minimum wall thickness: SLS 0.7mm, FDM/FFF 1mm



Wear, rotating p = 20 MPa; v = 0.01m/s, 304 stainless steel

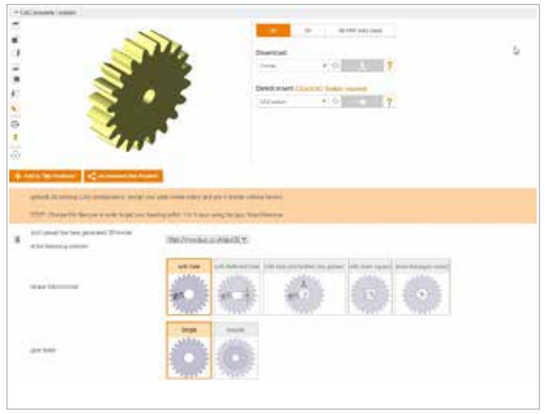
iglidur® tribo 3D printing | Gear configurator

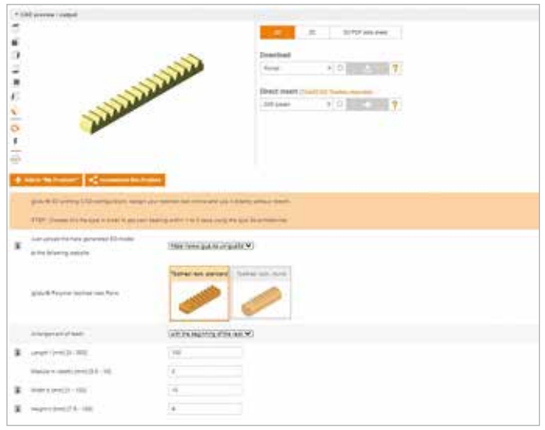
Wear-resistant gears in 60 seconds using the new igus® gear configurator

Configure individual gears and racks in 60 seconds and they will be ready for shipment within 3 days

In order to facilitate the work of designers, igus® has now developed simple and practical configurators for gears and racks. This allows each customer to configure their own component even in special dimensions. In a few steps, the user only needs to enter the specifications of the required gear; such as the tooth module, number of teeth, width and inner diameter, or select a suitable rack profile. This automatically displays a 3D model that can be exported as a STEP file. If the file is uploaded in the framework of the igus® 3D printing service ▶**www.igus.eu/3dprintservice**, the configured gear made of the new durable SLS material iglidur® I3 for gears can be ordered immediately from igus®. With one click, the user can order his/her wear-resistant gear with no minimum order quantity or request a quotation. Within 3 days the custom-made gear is ready for shipment. iglidur® I3 is well suited for straight and helical spur gears, racks, and bevel gears.

Gear service life calculator
▶ www.igus.eu/gear-expert





iglidur® I6 for worm gears: double the service life

In the test, iglidur® I6 showed itself to be considerably better than machined worm wheels.
Worm wheels made of POM had total wear after 621,000 cycles, whereas worm wheels made of iglidur® I6 continued to be functional after more than 1 million cycles.

POM
321,000 cycles
High wear

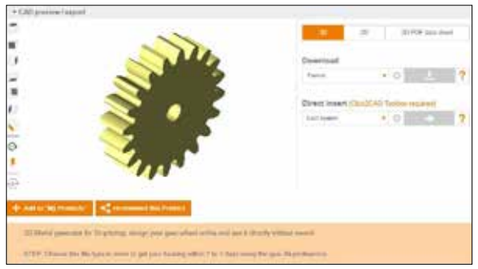
POM
621,000 cycles
Failed

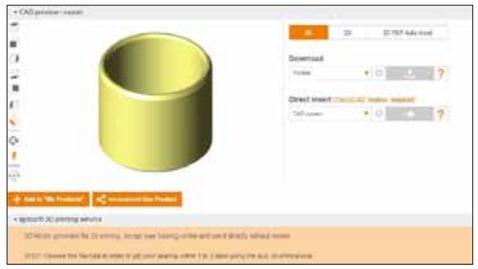
iglidur® I6
1 million cycles
Low wear

Delivery time
24 – 72hrs

Online CAD configurator for gears
▶ www.igus.eu/gear-configurator

Online CAD configurator for plain bearings
▶ www.igus.eu/3d-model



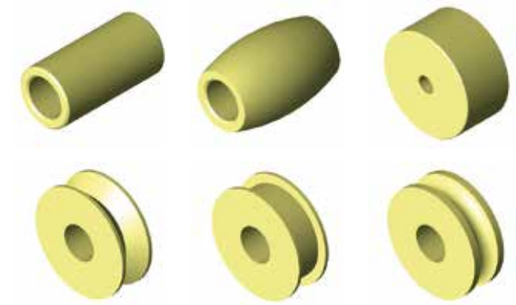


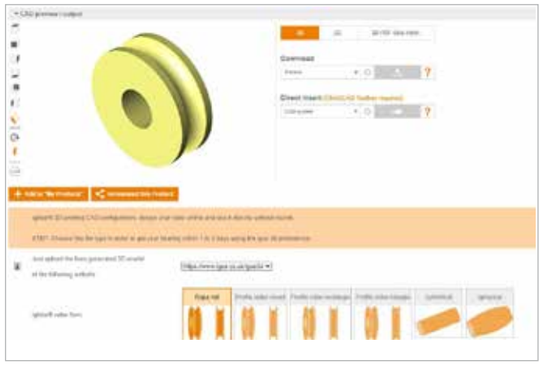
iglidur® tribo 3D printing | Configurators

Individual rollers, lead screw nuts, and sliding plates

Configure rollers in the required shape online, delivered after a minimum of only 24hrs

Create and download your individual 3D model with the roller configurator. Then order it from the 3D printing service (shipped in one to three days). Rollers with different shapes and with any dimensions between 1 and 170mm are possible. The rollers can be used immediately without any further machining.



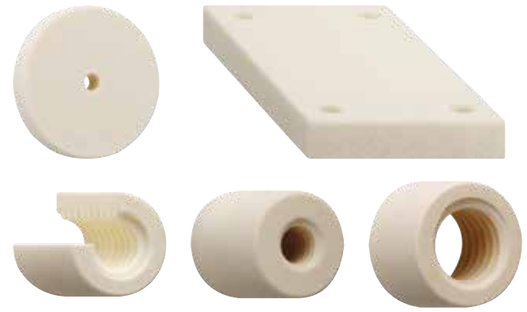


Delivery time
24 – 72hrs

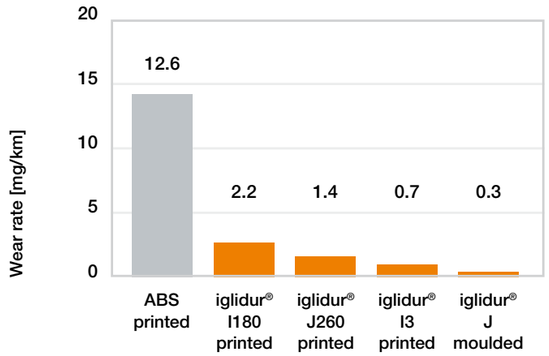
Configure rollers
▶ www.igus.eu/roller-configurator

Configure custom lead screw nuts, plain bearings and sliding plates in 60 seconds and they will be ready for shipment within 3 days

In addition to individually configurable sliding plates and plain bearings, lead screw nuts with trapezoidal threads can be manufactured from a 3D model. Eliminates costly, time-consuming design and rework. Lead screw nuts, plain bearing, and sliding plates are manufactured from iglidur® I3 (laser sintering).



Lead screw nut wear test



F = 129N; l = 370mm; n = 290rpm

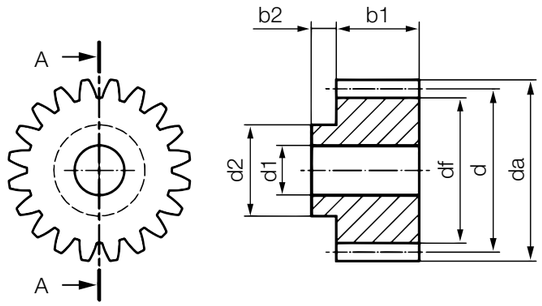
Delivery time
24 – 72hrs

All configurators
▶ www.igus.eu/cad-configurators

iglidur® tribo 3D printing | Gears

Configure gear with and without keyway

Image exemplary



Configuration key

Part type	Options

OC-GEAR-01-1.00-18-10.0-6.1-20.0-8.0

Configurator | Gear type | Tooth module | Number of teeth | Width b1 | Inner diameter d1 | Diameter outlet b2 | Width outlet b2

Configuration limits:

Gear type 01: gear with hole, keyway optional
Tooth module: 0.50 to 10.0mm
Number of teeth: 17 to 100
Width: 1.0 to 200mm

Dimensions [mm] – example gear configuration with and without keyway

Part No.	Configuration number	Tooth module	Number of teeth	Width b1	Inner Ø d1	Keyway Ø b2	Width outlet b2
I3-PS-02	OC-GEAR-01-1.00-☐-10-6-15	1.00	17–100	10	6	15	8
I3-PS-02	OC-GEAR-01-1.50-☐-10-10-25	1.50	17–100	10	10	25	10
I3-PS-02	OC-GEAR-01-2.00-☐-12-10	2.00	17–100	12	10	–	–
I3-PS-02	OC-GEAR-01-2.50-☐-14-12	2.50	17–100	14	12	–	–

Many other gear types, including double gears, can be configured online: download the STEP model and determine the price online ▶ www.igus.eu/gear-configurator

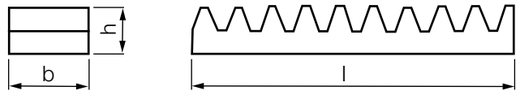
Delivery time
72hrs

iglidur® tribo 3D printing | Racks

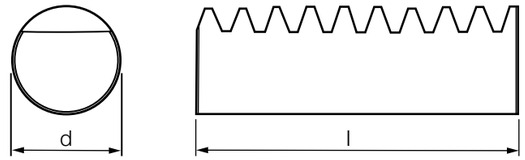
Configure round and flat racks

Rack, flat

Image exemplary



Rack, round



Configuration key rack, flat

Part type	Options

OC-GEAR-RACK-01-1.00-10.0-4.5-60.0- S

Configurator | Rack type | Tooth module | Width b | Height h | Length l | Arrangement

Configuration limits:

Rack type 01: flat rack
Tooth module: 0.50 to 10.0mm
Width: 1.0 to 100mm
Height: up to 100mm
Length: 3 to 300mm[173]
Arrangement S: Symmetrical end separation

Configuration key rack, round

Part type	Options

OC-GEAR-RACK-02-1.00-10.0-60.0- S

Configurator | Rack type | Tooth module | Diameter d | Length l | Arrangement

Configuration limits:

Rack type 02: round rack
Tooth module: 0.50 to 10.0mm
Diameters: 3.0mm up to 100mm
Length: 3 to 300mm[173]
Arrangement S: Symmetrical end separation

Dimensions [mm] – example configuration of flat rack

Part No.	Configuration number	Tooth module	Width b	Height h	Length l	Arrangement
I3-PS-02	OC-GEAR-RACK-01-1.00-10.0-10.0-☐-S	1.00	10.0	10.0	3–300	S
I3-PS-02	OC-GEAR-RACK-01-1.50-15.0-15.0-☐-S	1.50	15.0	15.0	3–300	S
I3-PS-02	OC-GEAR-RACK-01-2.00-20.0-20.0-☐-S	2.00	20.0	20.0	3–300	S
I3-PS-02	OC-GEAR-RACK-01-2.50-20.0-20.0-☐-S	2.50	20.0	20.0	3–300	S

[173] Also has multiple parts

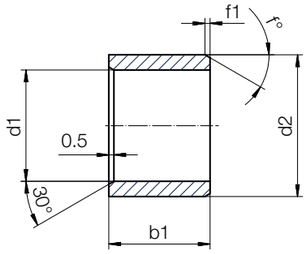
Configure an individual rack, download the STEP model, and determine the price online ▶ www.igus.eu/rack-configurator

Delivery time
72hrs

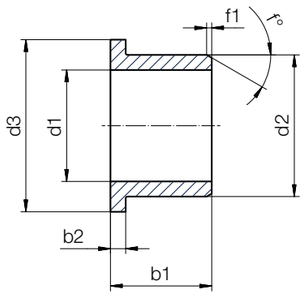
iglidur® tribo 3D printing | Plain bearings

Configure plain bearings with and without flange

Sleeve bearing



Flanged bearings



Configuration key Sleeve bearing

Part type	Options
OC-BRG- S	-10.0-12.0-10.0

Configurator	Plain bearing type	Inner Ø d1	Outer Ø d2	Total length b1

Configuration limits:

Plain bearing type S:	sleeve bearing
Inner diameter:	up to 195mm
Outer diameter:	up to 200mm
Bearing length:	up to 300mm

Configuration key Flanged bearings

Part type	Options
OC-BRG- F	-10.0-12.0-10.0-16.0-1.0

Configurator	Plain bearing type	Inner Ø d1	Outer Ø d2	Total length b1	Flange Ø	Flange thickness

Configuration limits:

Plain bearing type F:	flanged bearing
Inner diameter:	up to 195mm
Outer diameter:	up to 200mm
Bearing length:	up to 300mm
Flange diameter:	up to 200mm
Flange thickness:	up to 20mm

Dimensions [mm] – example plain bearing configuration with and without flange

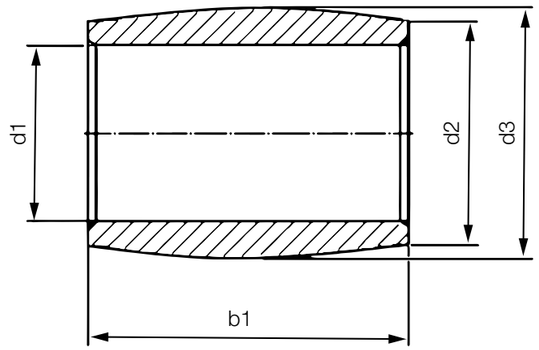
Part No.	Configuration number	Inner Ø d1	Outer Ø d2	Total length b1	Flange Ø d3	Flange thickness b2
I3-PS-02	OC-BRG-S-50.0-60.0-30.0	50.0	60.0	30.0	–	–
I3-PS-02	OC-BRG-S-18.0-20.0-16.0	18.0	20.0	16.0	–	–
I3-PS-02	OC-BRG-F-18.0-22.0-18.0-30.0-1.0	18.0	22.0	18.0	30.0	1.0
I3-PS-02	OC-BRG-F-50.0-60.0-31.0-66.0-1.0	50.0	60.0	31.0	66.0	1.0

Configure an individual plain bearing, download the STEP model, and determine the price online, including special shapes with slot ▶ www.igus.eu/3d-model

Delivery time
72hrs

iglidur® tribo 3D printing | Rollers

Configure convex rollers



Configuration key

Part type	Options
OC-ROLLER- 02	-10.0-15.0-30.0-20.0

Configurator	Roller type	Inner Ø d1	Outer Ø d2	Spherical outer Ø d3	Roller length

Configuration limits:

Roller type 02:	convex roller
Inner diameter:	1 up to 190mm
Outer diameter:	up to 195mm
Roller length:	up to 300mm

Dimensions [mm] – example configuration of convex rollers

Part No.	Configuration number	Inner Ø d1	Outer Ø d2	Spherical Outer Ø d3	Max. Roller length b1
I3-PS-02	OC-ROLLER-02-4.0-8.0-8.2-☐	4.0	8.0	8.2	300
I3-PS-02	OC-ROLLER-02-10.0-15.0-20-☐	10.0	15.0	20	300
I3-PS-02	OC-ROLLER-02-10.0-50.0-55.0-☐	10.0	50.0	55.0	300
I3-PS-02	OC-ROLLER-02-14.0-60.0-61.0-☐	14.0	60.0	61.0	300
I3-PS-02	OC-ROLLER-02-20.0-100.0-120.0-☐	20.0	100.0	120.0	300

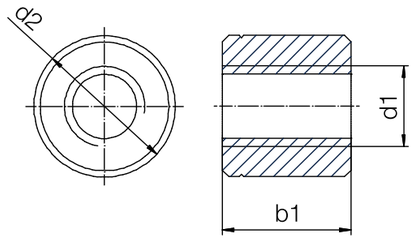
Many other roller types can be configured online: download the STEP model and determine the price online ▶ www.igus.eu/roller-configurator

Delivery time
72hrs

iglidur® tribo 3D printing | Lead screw nuts

Configure lead screw nuts

Image exemplary



Configuration key

Part type	Options
OC-NUT-	S -18.0-12.0-TR10X2- R

Configurator | Lead screw nut type | Outer Ø d2 | Width b1 | Thread | Thread direction

Configuration limits:

Lead screw nut type S:	cylindrical
Outer diameter:	up to 150mm
Width:	3 to 200mm
Thread:	32 types to select from
Thread direction:	R = Right hand L = Left

Dimensions [mm] – example configuration of cylindrical lead screw nut

Part No.	Configuration number	Outer Ø d2	Width b1	Thread	Thread direction right	Thread direction left
I3-PS-02	OC-NUT-S-15.0-☐-TR8X1.5-R	15.0	3–200	TR8X1.5	●	–
I3-PS-02	OC-NUT-S-16.0-☐-TR10X2-L	16.0	3–200	TR10X2	–	●
I3-PS-02	OC-NUT-S-18.0-☐-TR11X5-R	18.0	3–200	TR11X5	●	–
I3-PS-02	OC-NUT-S-22.0-☐-TR16X2-R	22.0	3–200	TR16X2	●	–
I3-PS-02	OC-NUT-S-26.0-☐-TR20X2-L	26.0	3–200	TR20X2	–	●
I3-PS-02	OC-NUT-S-50,0-☐-TR30X3-R	50.0	3–200	TR30X3	●	–

Configure individual trapezoidal lead screw nuts, download the STEP model and determine the price online ▶ www.igus.eu/lead-screw-nut-configurator

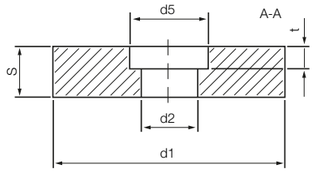
Delivery time
72hrs

iglidur® tribo 3D printing | Sliding elements

Configure sliding elements

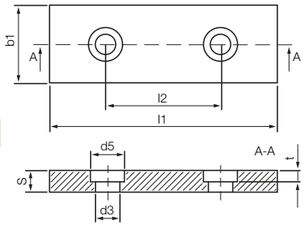
Round sliding element with central hole

Image exemplary



Rectangular sliding element with 2 holes

Image exemplary



Configuration key
Round sliding element with central hole

Part type	Options
OC-SLIDER-	01 -6.4 -30.0 -10.0 -13.0 -5.0

Configurator | Glider type | Inner Ø d1 | Outer Ø d2 | Thickness s | Flat sink d5 | Flat sink depth t

Configuration limits:

Glider Type 01:	Round with central hole
Inner diameter:	up to 195mm
Outer diameter:	up to 200mm
Height 2:	up to 100mm
Flat sink:	optional

Configuration key
Rectangular sliding element with 2 holes

Part type	Options
OC-SLIDER-	04 -20.0-40.0-20.0-10.0-6.4-13.0-5.0

Configurator | Glider type | Width b1 | Length l1 | Pitch l2 | Thickness s | Hole d3 | Flat sink d5 | Flat sink depth t

Configuration limits:

Glider Type 04:	Rectangle with two holes
Width:	10 to 200mm
Length:	10 to 200mm
Flat sink:	optional

Glider type:

01 Round with central hole
02 Round with 4 holes
03 Round with 5 holes
04 Rectangle with 2 holes
05 Rectangle with 4 holes

Dimensions [mm] – example plain bearing configuration with and without flange

Part No.	Configuration number	Width b1	Length l1	Pitch l2	Height s	Hole d3	Flat sink d5	Flat sink depth t
I3-PS-02	OC-SLIDER-04-20.0-40.0-20.0-10.0-6.4-13.0-5.0	20.0	40.0	20.0	10.0	6.4	13.0	5.0
I3-PS-02	OC-SLIDER-04-30.0-60.0-40.0-8.0-4.3-9.0-4.4	30.0	60.0	40.0	8.0	4.3	9.0	4.4
I3-PS-02	OC-SLIDER-04-50.0-100.0-60.0-11.0-8.2	50.0	100.0	60.0	11.0	8.2	–	–

Many other glider types can be configured online: download the STEP model and determine the price online ▶ www.igus.eu/glider-configurator

Delivery time
72hrs

iglidur® tribo-filament | Advantages

3D printing with tribo-filaments

50 times more abrasion-resistant than standard materials for maximum service life
Components made of igus® tribo-filament are up to 50 times more wear-resistant than standard materials for 3D printing and therefore have an extremely long service life. Due to their excellent tribological properties, they are suited for 3D printing of replacement and wear-resistant parts for e.g. plain bearings, drive nuts, gears and other wear-resistant parts.
The igus® tribo-filaments can be processed on 3D printers that are based on the fused-deposition-modelling method (FDM/FFF) and that allow the nozzle temperature to be set as required.

Find and order the appropriate tribo-filament online
▶ www.igus.eu/tribofilament

"How do I assess myself and my 3D printer?"

Ambient temperature of application	Beginner "Nothing can go wrong"	Advanced "Everything is usually ok"	Expert "I know what I am doing"
–30°C to +65°C	iglidur® I150	iglidur® I150 iglidur® I180	iglidur® I180 / iglidur® J260 iglidur® I170
–40°C to +80°C	iglidur® I180	iglidur® I180	iglidur® I180 / iglidur® J260 iglidur® I170
–30°C to +100°C			iglidur® J260 iglidur® C210
–100°C to +120°C			iglidur® J260
–100°C to +180°C			iglidur® A350 / iglidur® J350 iglidur® RW370[172)]

[172)] –50°C to +170°C for iglidur® RW370

iglidur® tribo-filament | Product overview

Material: iglidur® I150

Wear-resistant parts printed the easy way
- High abrasion resistance at low speeds
- Good mechanical properties
- The easiest to process tribo-filament (even without a heated print bed)
- Food-compatible according to EU10/2011 regulation
- Nozzle temperature: +240°C up to +250°C

▶ Page 720

Material: iglidur® I180

Best combination of ability to be processed and service life
- Abrasion-resistant
- Good mechanical properties
- Nozzle temperature: +250°C up to +260°C
- Also in black (iglidur® I180-BL)

▶ Page 721

Material: iglidur® J260

Extremely long service life and excellent coefficient of friction
- Outstanding abrasion resistance of tribo-filaments
- Application temperature from –100°C to +120°C
- High-quality processing
- Nozzle temperature: +260°C up to +270°C

▶ Page 722

Material: iglidur® J350

For high temperature applications
- Excellent coefficient of friction against steel
- Application temperature from –100°C to +180°C
- High temperature necessary of at least +160°C installation space temperature
- Nozzle temperature: +360°C up to +370°C

▶ Page 723

Material: iglidur® I170

Longer service life
- Improved abrasion resistance
- High-quality processing
- Nozzle temperature: +240°C up to +260°C

▶ Page 724

Material: iglidur® C210

Resistant to chemicals and highly abrasion-resistant during printing
- High chemical resistance
- Abrasion-resistant
- High-quality processing
- Nozzle temperature: +260°C up to +270°C

▶ Page 725

Material: iglidur® RW370

Ideal for rail technology
- Flame-retardant and high strength
- Application temperature from –50°C to +170°C
- High temperature printer necessary
- Nozzle temperature: +350°C up to +360°C

▶ Page 726

Material: iglidur® A350

For the food industry
- Compliant with Regulation (EU) No. 10/2011 and FDA guidelines
- Application temperature from –100°C to +180°C
- High temperature printer necessary
- Nozzle temperature: +360°C up to +370°C

▶ Page 727

iglidur® tribo-filament | Tested

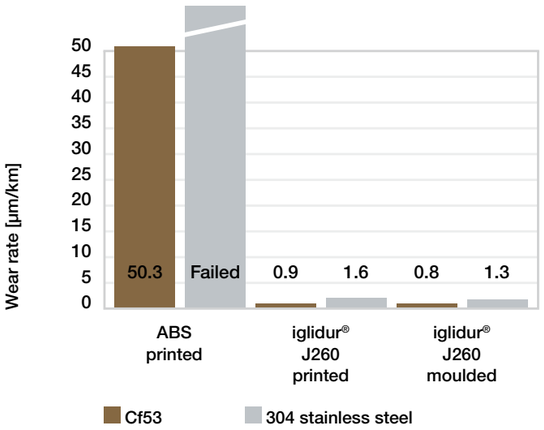
Printed as good as injection-moulded

3D print filament impresses during tests with injection moulding quality

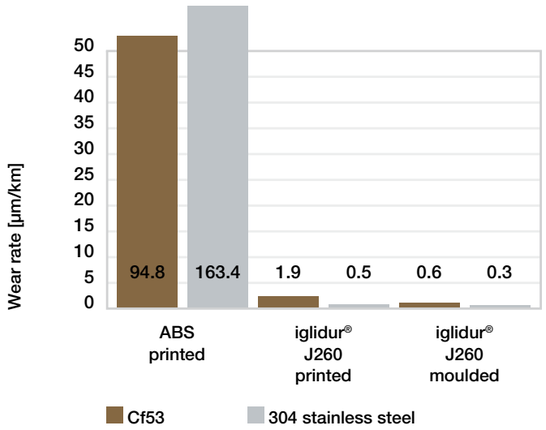
Our iglidur® J260 tribo-filament is more wear-resistant than standard 3D printing materials. A series of igus® tests show: 3D printed plain bearings made from the filament iglidur® J260 are equally as wear-resistant as our injection-moulded parts from the same material. The tests have also proven that iglidur® 3D print filaments and SLS materials have a considerably lower coefficient of friction and are up to 50 times more abrasion-resistant than conventional 3D printing materials.

This makes iglidur® tribo-filaments and SLS materials the only 3D printing materials to also offer impressive performance in moving applications. You can therefore directly install printed parts such as plain bearings, drive nuts or worm gears and use them as wear-resistant parts – from the prototype phase to series production.

- Outstanding abrasion resistance of tribo-filaments
- Application temperature from –100°C to +120°C
- High-quality processing
- Available as filament, bar stock or injection-moulded part – **from prototype to series production**



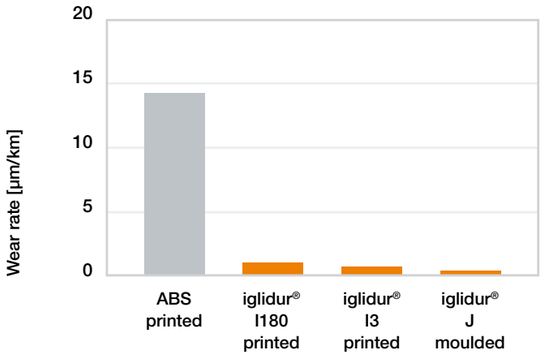
Rotating wear: p = 1MPa; v = 0.3m/s



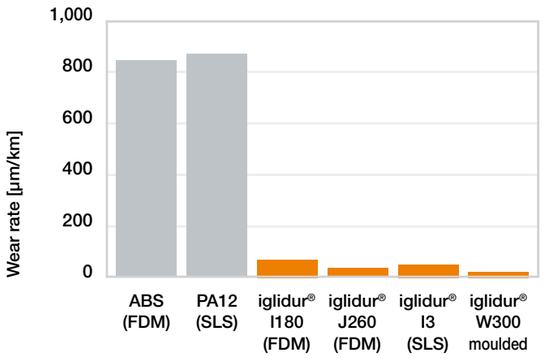
Linear wear: p = 1MPa; v = 0.3m/s; l = 5mm

iglidur® tribo-filament | Test results

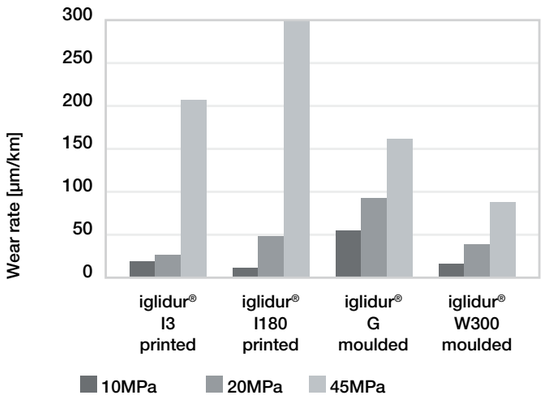
Wear-resistant parts made of iglidur® tribo-filament with the 3D printing method or parts made of iglidur® I3 with the SLS method are much more wear-resistant than standard 3D printing materials.



Linear wear: p = 0.11MPa; v = 0.34m/s; l = 370mm



Wear, rotating p = 20 MPa; v = 0.01m/s, 304 stainless steel



Wear, pivoting shaft: 304 stainless steel, v = 0.01m/s; ß = 60°

The following tests also show "printed as good as injection-moulded": the 3D-printed iglidur® plain bearings are comparable to conventionally made plain bearings with respect to wear resistance.

ABS printed

iglidur® I180 printed

ABS

PA12

iglidur® I3

iglidur® I180

iglidur® I3

iglidur® I180

iglidur® G

iglidur® W300

iglidur® tribo-filament | Product range

iglidur® I150

Order key

tribo-filament	Diameter	Weight
I150-PF-	0175	-0250

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® I150 – makes printing even easier

- High abrasion resistance at low speeds
- Good mechanical properties
- The tribo-filament that is easiest to process
- Compliant with food requirements according to (EU) No 10/2011
- Recommended printing surface: igus® adhesive film or glue-stick on glass
- Also to be processed without a heated print bed (prerequisite: igus® adhesive film ▶ **Page 728**)

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**I150-PF-0175-0250**
1.75	205	55	67	750	**I150-PF-0175-0750**
3.00	205	55	55	250	**I150-PF-0300-0250**
3.00	205	55	67	750	**I150-PF-0300-0750**

Material properties

General properties	Unit	iglidur® I150	iglidur® I180	iglidur® I180-BL
Density	g/cm³	1.30	1.21	1.21
Colour		white	white	black
Max. moisture absorption at +23°C/50% r. h.	% weight	0.3	0.3	0.3
Max. total moisture absorption	% weight	0.7	0.9	0.9
Mechanical properties				
Flexural modulus	MPa	1,700	1,700	1,700
Flexural strength at +20°C	MPa	54/37[130)]	46/33[130)]	46/33[130)]
Shore D hardness		62	66	66
Physical and thermal properties				
Max. long-term application temperature	°C	+65	+80	+80
Max. short-term application temperature	°C	+75	+90	+90
Min. continuous application temperature	°C	–30	–40	–40
Electrical properties				
Specific contact resistance	Ωcm	> 10^{13}	> 10^{12}	> 10^{12}
Surface resistance	Ω	> 10^{12}	> 10^{11}	> 10^{11}

Table 01: Material properties table

[130)] Printed flat/upright

iglidur® tribo-filament | Product range

iglidur® tribo 3D printing

iglidur® I180

iglidur® I180-BL

Order key

tribo-filament	Diameter	Weight
I180-PF-	0175	-0250

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® I180 – flexible

- High degree of abrasion resistance, even in the case of dynamic applications
- Good mechanical properties
- Max. application temperature: +80°C
- Recommended printing surface: igus® adhesive film ▶ **Page 728**

iglidur® I180-BL – for visible parts

- In black for visible parts
- Same mechanical and tribological properties as iglidur® I180 in white

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**I180-PF-0175-0250**
1.75	205	55	67	750	**I180-PF-0175-0750**
3.00	205	55	55	250	**I180-PF-0300-0250**
3.00	205	55	67	750	**I180-PF-0300-0750**
1.75	205	55	55	250	**I180-BL-PF-0175-0250**
1.75	205	55	67	750	**I180-BL-PF-0175-0750**
3.00	205	55	55	250	**I180-BL-PF-0300-0250**
3.00	205	55	67	750	**I180-BL-PF-0300-0750**

Processing and accessories
▶ **Page 728**

Part No. adhesive film for print bed
PF-01-0203-0203 (203 x 203mm)
PF-01-0254-0228 (254 x 228mm)

Complete processing instructions online (in the download area of the respective material)
▶ **www.igus.eu/tribofilament**

iglidur® tribo-filament | Product range

iglidur® J260

Order key

tribo-filament	Diameter	Weight
J260 - PF -	0175	- 0250
iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® J260 – extremely long service life

- Outstanding abrasion resistance of tribo-filaments
- Application temperature from –100°C to +120°C
- For experts: high-quality processing
- Recommended printing surface: igus® adhesive film ▶ Page 728

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**J260-PF-0175-0250**
1.75	205	55	67	750	**J260-PF-0175-0750**
3.00	205	55	55	250	**J260-PF-0300-0250**
3.00	205	55	67	750	**J260-PF-0300-0750**

Material properties

General properties	Unit	iglidur® J260	iglidur® J350
Density	g/cm³	1.35	1.44
Colour		Yellow	Yellow
Max. moisture absorption at +23°C/50% r. h.	% weight	0.2	0.3
Max. total moisture absorption	% weight	0.4	1.6
Mechanical properties			
Flexural modulus	MPa	1,000	1,400
Flexural strength at +20°C	MPa	41/13[130)]	45/–
Shore D hardness		66	80
Physical and thermal properties			
Max. long-term application temperature	°C	+120	+180
Max. short-term application temperature	°C	+140	+220
Min. continuous application temperature	°C	–100	–100
Electrical properties			
Specific contact resistance	Ωcm	> 10^{12}	> 10^{13}
Surface resistance	Ω	> 10^{10}	> 10^{10}

Table 01: Material properties table

[130)] Printed flat/upright

iglidur® tribo 3D printing

iglidur® tribo-filament | Product range

iglidur® J350

Order key

tribo-filament	Diameter	Weight
J350 - PF -	0175	- 0250
iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® J350 – for high temperature applications

- Max application temperature: +180°C
- Can be processed with high-temperature 3D printer
- Nozzle temperature: +360°C up to +370°C
- Installation area temperature: from +160°C to +200°C
- Recommended printing surface: PET film

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**J350-PF-0175-0250**

Processing and accessories
▶ Page 728

Part No. adhesive film for print bed
PF-01-0203-0203 (203 x 203mm)
PF-01-0254-0228 (254 x 228mm)

Complete processing instructions online (in the download area of the respective material)
▶ www.igus.eu/tribofilament

iglidur® tribo-filament | Product range

iglidur® I170

Order key

tribo-filament	Diameter	Weight
I170-PF-	0175	-0250

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® I170 – optimised service life

- Improved abrasion resistance
- Application temperature: +80°C
- For experts: high-quality processing
- Recommended printing surface: igus® adhesive film ▶ **Page 728**

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**I170-PF-0175-0250**
1.75	205	55	67	750	**I170-PF-0175-0750**
3.00	205	55	55	250	**I170-PF-0300-0250**
3.00	205	55	67	750	**I170-PF-0300-0750**

Material properties

General properties	Unit	iglidur® I170	iglidur® C210
Density	**g/cm³**	1.21	1.40
Colour		Yellow	white
Max. moisture absorption at +23°C/50% r. h.	**% weight**	0.5	0.3
Max. total moisture absorption	**% weight**	1.6	0.7
Mechanical properties			
Flexural modulus	**MPa**	1,000	1,600
Flexural strength at +20°C	**MPa**	33/17[130)]	38/30[130)]
Shore D hardness		64	70
Physical and thermal properties			
Max. long-term application temperature	**°C**	+75	+100
Max. short-term application temperature	**°C**	+85	+180
Min. continuous application temperature	**°C**	–40	–30
Electrical properties			
Specific contact resistance	**Ωcm**	> 10^{12}	> 10^{13}
Surface resistance	**Ω**	> 10^{11}	> 10^{12}

Table 01: Material properties table

[130)] **Printed flat/upright**

iglidur® tribo 3D printing

iglidur® tribo-filament | Product range

iglidur® C210

Order key

tribo-filament	Diameter	Weight
C210-PF-	0175	-0250

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® C210 – chemicals and high abrasions resistance

- Resistance to many acids, solvents and hydrogen
- Abrasion-resistant
- Max application temperature: +100°C
- For experts: high-quality processing
- Recommended printing surface: igus® adhesive film ▶ **Page 728**

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	205	55	55	250	**C210-PF-0175-0250**
3.00	205	55	55	250	**C210-PF-0300-0250**

Processing and accessories ▶ Page 728

Part No. adhesive film for print bed
PF-01-0203-0203 (203 x 203mm)
PF-01-0254-0228 (254 x 228mm)

Complete processing instructions online (in the download area of the respective material) ▶ www.igus.eu/tribofilament

iglidur® tribo-filament | Product range

iglidur® RW370

Order key

tribo-filament	Diameter	Weight
RW370-PF-	0175	-0750

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® RW370 – ideal for the rail industry

- Flame-retardant, according to UL94-V0 and DIN EN 45545
- Flexural strength 91MPa
- High wear resistance
- Can be processed with high-temperature 3D printer
- Max application temperature: +170°C
- Available for 3D printing (Ø 1.75mm), as bar stock and as injection-moulding material
- Lubrication and maintenance-free
- Recommended printing surface: PET film

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	215	38	82	1,055	**RW370-PF-0175-0750**

Material properties

General properties	Unit	iglidur® RW370	iglidur® A350
Density	g/cm³	1.34	1.42
Colour		beige	blue
Max. moisture absorption at +23°C/50% r. h.	% weight	0.25	0.6
Max. total moisture absorption	% weight	1.2	1.9
Mechanical properties			
Flexural modulus	MPa	2,100	1.250/1.390[130)]
Flexural strength at +20°C	MPa	91/30[130)]	50/46[130)]
Shore D hardness		80	76
Physical and thermal properties			
Max. long-term application temperature	°C	+170	+180
Max. short-term application temperature	°C	+190	+210
Min. continuous application temperature	°C	–50	–100
Electrical properties			
Specific contact resistance	Ωcm	> 10^{12}	> 10^{11}
Surface resistance	Ω	> 10^{12}	> 10^{11}

Table 01: Material properties table

[130)] Printed flat/upright

iglidur® tribo-filament | Product range

iglidur®
tribo
3D printing

iglidur® A350

Order key

tribo-filament	Diameter	Weight
A350-PF-	0175	-0750

iglidur® material	tribo-filament	Ø [mm · 100]	Spool weight [g]

iglidur® A350 – for the food industry

- Compliant with Regulation (EU) No. 10/2011 and FDA guidelines
- Available as 3D printing filament, bar stock and for injection moulding
- In industry standard blue
- Max. application temperature: +180°C
- Complies with the fire prevention requirements of the Federal Aviation Administration of the USA (FAA) for aircraft interiors
- Suitable for autoclave
- Recommended bonding surface: PET film

Dimensions [mm]

Filament diameter	Outer Ø spool	Inner Ø spool	Spool width	Weight [g]	Part No.
1.75	215	38	82	1,055	**A350-PF-0175-0750**

Processing and accessories
▶ Page 728

Complete processing instructions online (in the download area of the respective material)
▶ www.igus.eu/tribofilament

iglidur® tribo-filament | Processing and accessories

Processing instructions

iglidur® tribo-filaments can be processed on any 3D printer that is equipped with a heated print bed on which temperatures are adjustable. The igus® adhesive film allows a good adhesion between the iglidur® tribo-filament and the print bed.

- Good ventilation should be provided during processing
- When heated above +300°C, hazardous fumes are produced
- For iglidur® J350, iglidur® A350, and iglidur® RW370, a high-temperature printer is necessary

Example: Part No. tribo-filaments
I150-PF-0175-0250
for 250g spool with a diameter of 1.75mm made of the iglidur® material I150

Complete processing instructions online (in the download area of the respective material)
▶ **www.igus.eu/tribofilament**

igus® print bed film for your print bed

Thanks to the film available from igus® for the print bed, there is very good adhesion between the iglidur® tribo-filament and the print bed.

- Useable up to approximately 20 times
- "Set" the degree of adhesion by means of print bed temperature
- 3D printer without heating bed? The combination of iglidur® I150 with this print bed film also makes it possible to make wear-resistant parts oneself with such 3D printers

Part No. adhesive film for print bed
PF-01-0203-0203 (203 x 203mm)
PF-01-0254-0228 (254 x 228mm)

Spool

iglidur® tribo-filaments weighing 250g or 750g are wound onto a spool. Larger dimensions available upon request.

Filament thickness

The iglidur® tribo-filaments are available with 1.75mm and 3mm thickness. The 3mm filaments can be used without problems in 3D printers that need a 2.85mm filament.

Test kits
for 25g of filament, loose with 1.75mm diameter made of the iglidur® material I150