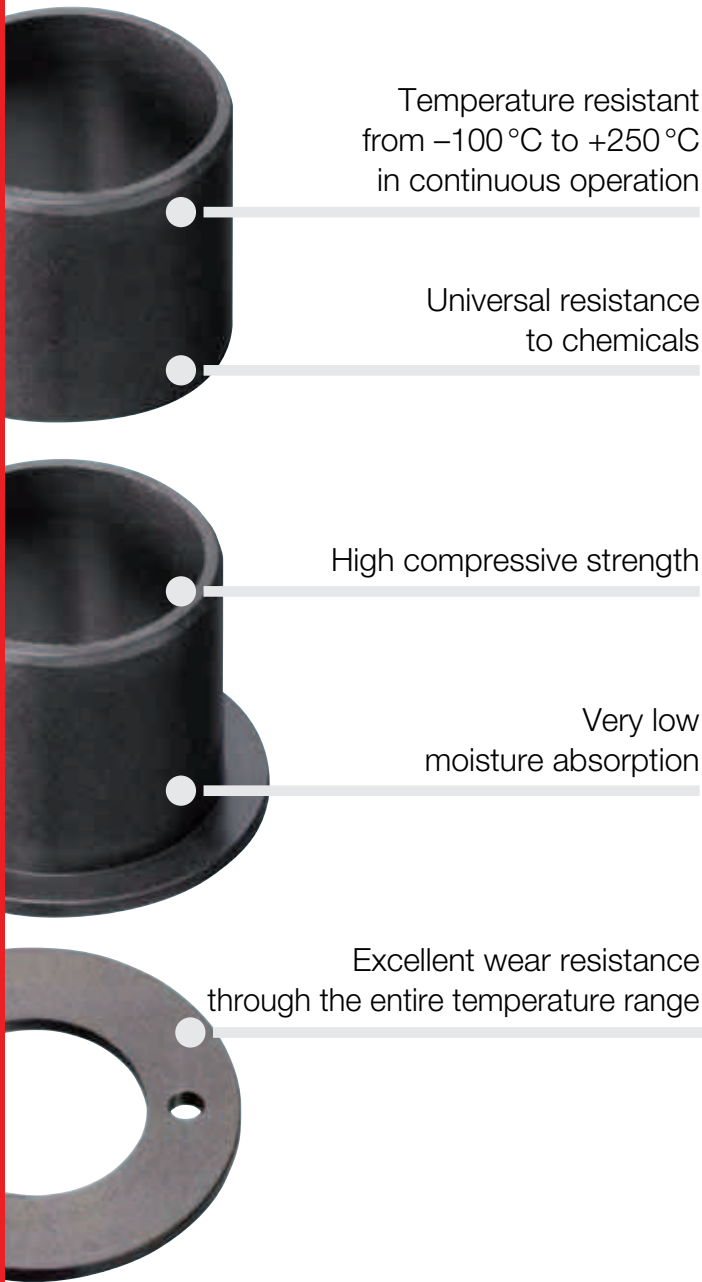


iglidur® X | The High-Tech Problem Solver

Chemical- and temperature resistant up to +250 °C. iglidur® X is defined by its combination of high temperature resistance with compressive strength, along with high resistance to chemicals. iglidur® X is designed for higher speeds than other iglidur® bearings.



When to use it?

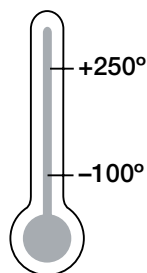
- For pressure loads up to 150 MPa
- For linear movements with stainless steel at high temperatures
- Universal resistance to chemicals
- Temperature resistant from -100 °C to +250 °C in continuous operation (short term to +315 °C)
- Very low moisture absorption
- High wear resistance over the entire temperature range



When not to use it?

- For very low wear at high loads
 - ▶ iglidur® Q, page 461
 - ▶ iglidur® Z, page 299
- For economical underwater applications
 - ▶ iglidur® H, page 325
 - ▶ iglidur® H370, page 347
- For edge pressure
 - ▶ iglidur® Z, page 299

Temperature



Product range

3 types
> 250 dimensions
Ø 2–75 mm



iglidur® X | Application Examples



Typical sectors of industry and application areas

- Beverage technology ● Woodworking
- Plastic processing industry ● Aerospace engineering ● Cleanroom etc.

Improve technology and reduce costs – 310 exciting examples for iglidur® plain bearings online

► www.igus.eu/eu/iglidur-applications



► www.igus.eu/bottle-filling



► www.igus.eu/drillrig



► www.igus.eu/ultraviolet-radiation

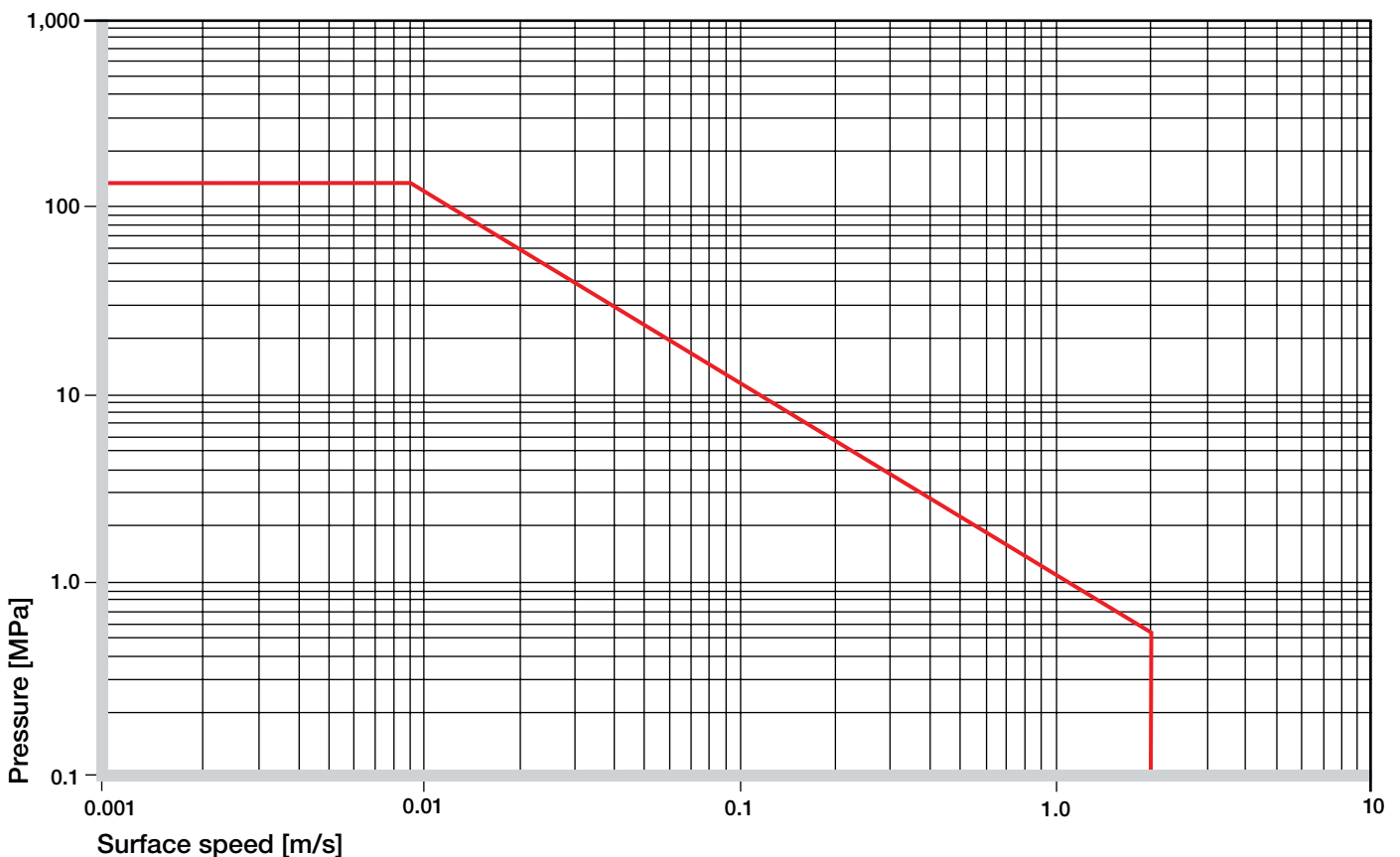


► www.igus.eu/flangedball-valves

Material data

General properties	Unit	iglidur® X	Testing method
Density	g/cm ³	1.44	
Colour		black	
Max. moisture absorption at +23°C/50% r.h.	% weight	0.1	DIN 53495
Max. moisture absorption	% weight	0.5	
Coefficient of sliding friction, dynamic against steel	μ	0.09–0.27	
pv value, max. (dry)	MPa · m/s	1.32	
Mechanical properties			
Modulus of elasticity	MPa	8,100	DIN 53457
Tensile strength at +20°C	MPa	170	DIN 53452
Compressive strength	MPa	100	
Max. static surface pressure (+20°C)	MPa	150	
Shore-D Hardness		85	DIN 53505
Physical and thermal properties			
Max. long term application temperature	°C	+250	
Max. short term application temperature	°C	+315	
Min. application temperature	°C	-100	
Thermal conductivity	W/m · K	0.6	ASTM C 177
Coefficient of thermal expansion (at +23°C)	K ⁻¹ · 10 ⁻⁵	5	DIN 53752
Electrical properties			
Specific volume resistance	Ωcm	< 10 ⁵	DIN IEC 93
Surface resistance	Ω	< 10 ³	DIN 53482

Table 01: Material data

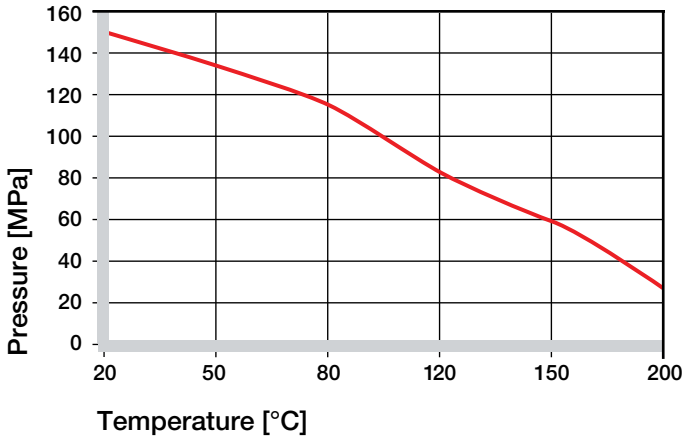


Graph 01: Permissible pv values for iglidur® X with a wall thickness of 1 mm dry running against a steel shaft at +20°C, mounted in a steel housing

iglidur® X | Technical Data

Mechanical Properties

The recommended maximum surface pressure is a mechanical material parameter. No conclusions regarding the tribological properties can be drawn from this. With increasing temperatures, the compressive strength of iglidur® X plain bearings decreases. The Graph 02 shows this inverse relationship. However, at the longterm maximum temperature of +150 °C the permissible surface pressure is almost 60 MPa.

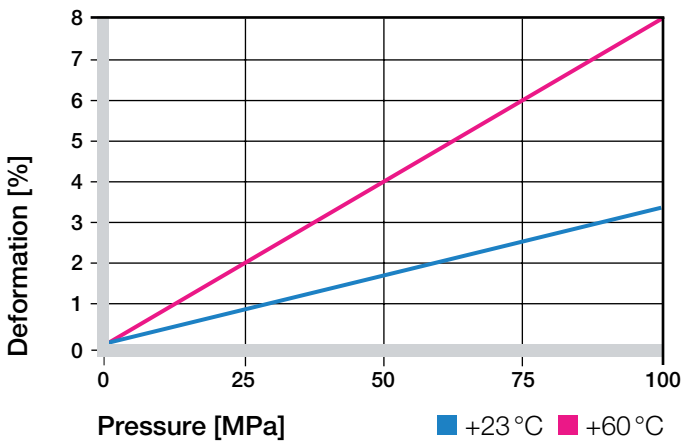


Graph 02: Recommended maximum surface pressure as a function of temperature (150 MPa at +20 °C)

iglidur® X has an excellent combination of high temperature resistance, high compressive strength, and excellent resistance to chemicals. The aspect of temperature resistance and pressure susceptibility is also reflected in the pv diagram.

Graph 03 shows how iglidur® X plain bearings deform elastically under load.

► Surface Pressure, **page 43**



Graph 03: Deformation under pressure and temperature

Permissible Surface Speeds

iglidur® X is designed for higher speeds than other iglidur® bearings. This is due to its high temperature resistance and excellent thermal conductivity. One benefit of this is seen in the maximum pV value of 1.32 MPa · m/s.

However, in this case, only the smallest radial loads may act on the bearings. At the given speeds, friction can cause a temperature increase to maximum permissible levels.

► Surface Speed, **page 45**

m/s	Rotating	Oscillating	Linear
Continuous	1.5	1.1	5
Short term	3.5	2.5	10

Table 02: Maximum running speed

Temperatures

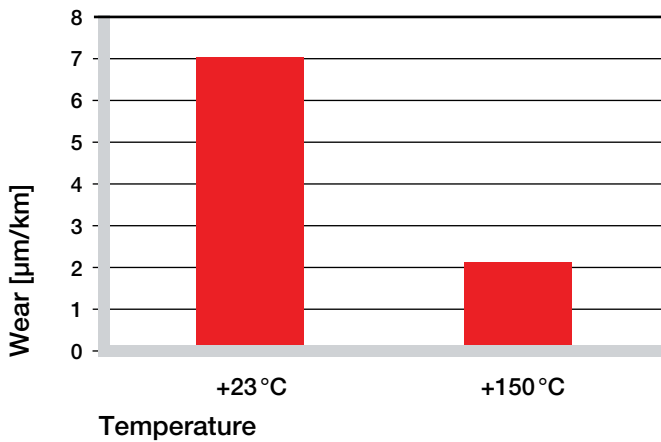
In terms of temperature resistance iglidur® X has also taken on a leading position. Having a permissible long term application, temperature of +250 °C, iglidur® X will even withstand +315 °C short term. As with all thermoplastics, the compression resistance of iglidur® X decreases with increasing temperature. However, the wear drops considerably when used within the observed temperature range of +23 °C to +150 °C.

In certain cases, relaxation of the bearing can even occur at temperatures of more than +170 °C. This leads, after re-cooling, to the bearing moving out of the housing. At temperatures over +170 °C the axial security of the bearing in the housing needs to be tested. If necessary, secondary measures must be taken to mechanically secure the bearing. Please contact us if you have questions on bearing use.

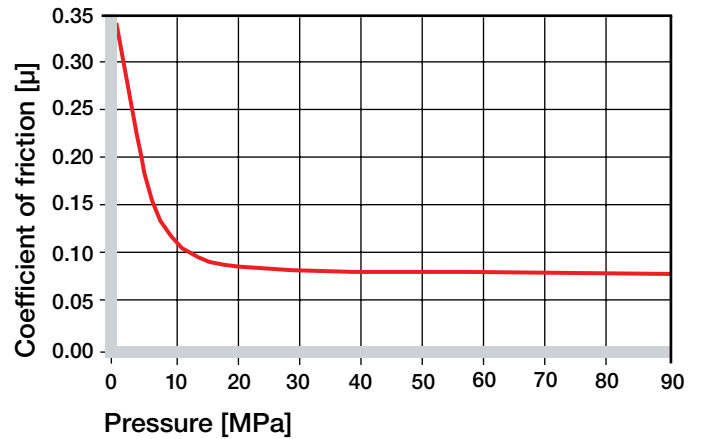
► Application Temperatures, **page 46**

iglidur® X	Application temperature
Minimum	-100 °C
Max. long term	+250 °C
Max. short term	+315 °C
Add. securing is required from	+135 °C

Table 03: Temperature limits



Graph 04: Wear, rotation with $p = 0.75 \text{ MPa}$, $v = 0.5 \text{ m/s}$, Cf53 hardened and ground steel shaft

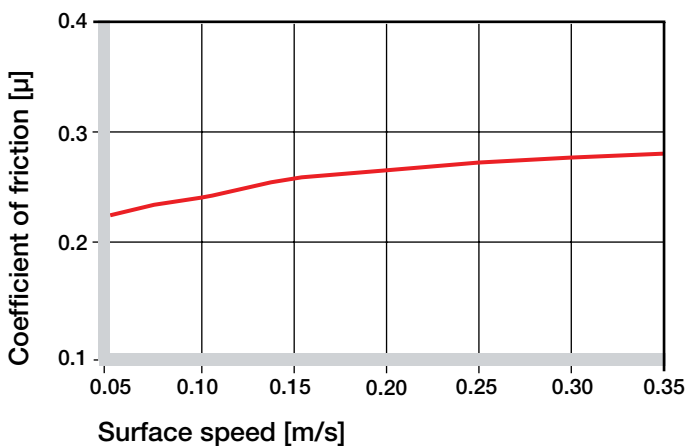


Graph 06: Coefficient of friction as function of the shaft surface (Cf53 hardened and ground steel)

Friction and Wear

Similar to wear resistance, the coefficient of friction also changes with the load. The coefficient of friction increases with an increase in surface speed. On the other hand, an increased load has an inverse effect: the coefficient of friction decreases (see Graphs 05 and 06). This explains the excellent performance of iglidur® X plain bearings for high loads.

- ▶ Coefficients of Friction and Surfaces, **page 48**
- ▶ Wear Resistance, **page 49**

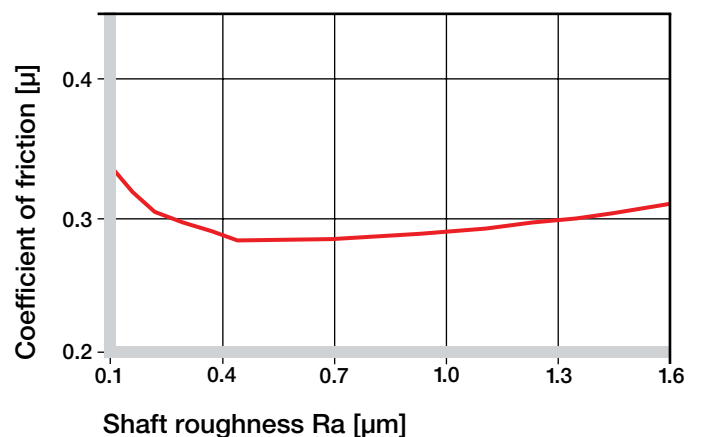


Graph 05: Coefficient of friction as a function of the pressure, $v = 0.01 \text{ m/s}$

Shaft Materials

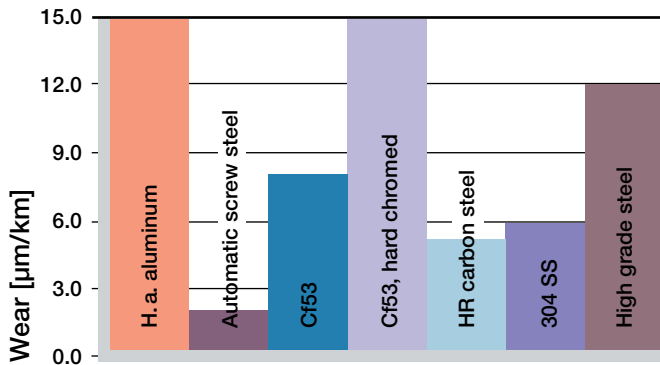
Friction and wear, to a high degree, are also dependent on the shaft material. Shafts that are too smooth increase the coefficient of friction of the bearing. Ground surfaces with an average roughness R_a of 0.6 to $0.8 \mu\text{m}$ are ideal. Graphs 07 to 10 show results of testing different shaft materials with plain bearings made of iglidur® X. For low loads in rotating operation, the best wear values are found with 303 Stainless and HR Carbon Steel shafts. However, above a load of 2 MPa the bearing wear greatly increases with these two shaft materials. For the higher load range, hard chromed shafts or Cf53 shafts give good results. In oscillating operation at low loads, similar wear values for Cf53 and 303 stainless steel shafts occur. The wear is somewhat higher than during rotational movements. If the shaft material you plan to use is not contained in this list, please contact us.

- ▶ Shaft Materials, **page 51**

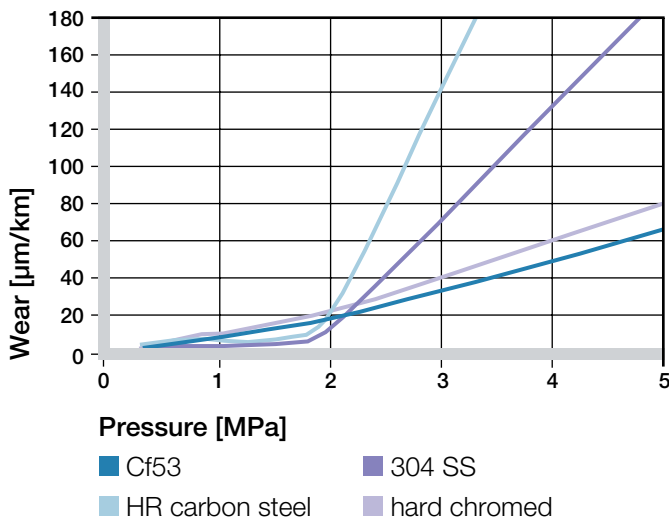


Graph 07: Coefficient of friction as function of the shaft surface (Cf53 hardened and ground steel)

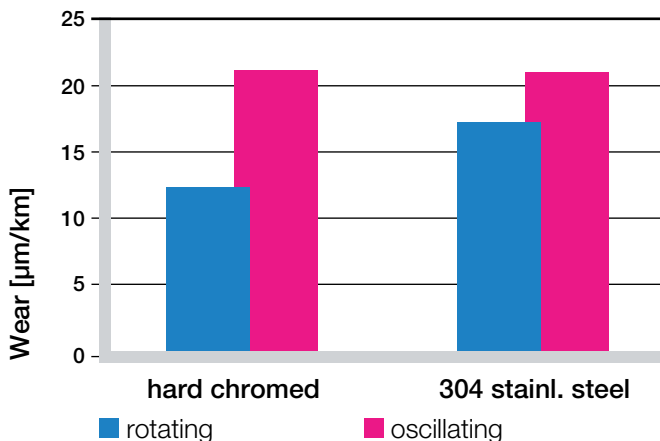
iglidur® X | Technical Data



Graph 08: Wear, rotating with different shaft materials, pressure $p = 0.75 \text{ MPa}$, $v = 0.5 \text{ m/s}$



Graph 09: Wear with different shaft materials in rotational operation, as a function of the pressure



Graph 10: Wear for rotating and oscillating applications with different shaft materials, $p = 2 \text{ MPa}$

iglidur® X	Dry	Greases	Oil	Water
C.o.f. μ	0,09–0,27	0,09	0,04	0,04

Table 04: Coefficient of friction against steel ($R_a = 1 \text{ }\mu\text{m}$, 50 HRC)

Additional Properties

Chemical Resistance

iglidur® X plain bearings have almost universal chemical resistance. The material is only attacked by concentrated acids.

► Chemical Table, page 974

Medium	Resistance
Alcohol	+
Hydrocarbons	+
Greases, oils without additives	+
Fuels	+
Diluted acids	+
Strong acids	–
Diluted alkalines	+
Strong alkalines	+

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

Table 05: Chemical resistance

Radiation Resistance

Plain bearings made from iglidur® X are resistant to radiation up to an intensity of $1 \cdot 10^5 \text{ Gy}$. iglidur® X is the most radioactive resistant material of the iglidur® product range. iglidur® X is extremely resistant to hard gamma radiation and withstands a radiation dose of 1,000 Mrad without detectable change in its properties. The material also withstands an alpha or beta radiation of 10,000 Mrad with practically no damage.

UV Resistance

The excellent material properties of iglidur® X do not change under UV radiation and other weathering effects.

Vacuum

In a vacuum environment iglidur® X plain bearings can be used virtually without restrictions. Outgassing takes place to a very limited extent.

Electrical Properties

iglidur® X plain bearings are electrically conductive.	
Volume resistance	$< 10^5 \text{ }\Omega\text{cm}$
Surface resistance	$< 10^3 \text{ }\Omega\text{cm}$

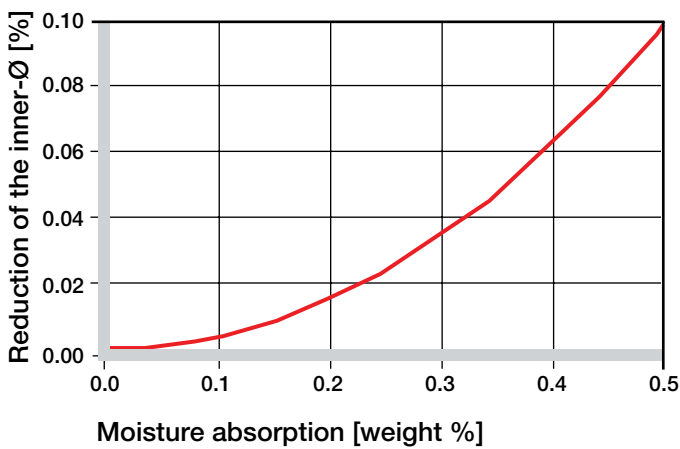
Moisture Absorption

The moisture absorption of iglidur® X plain bearings is very low. It is approximately 0.1% by weight in the standard atmosphere. So even in applications under water, iglidur® X bearings can be used without alterations of the assembly conditions. The maximum moisture absorption is 0.5% by weight.

Maximum moisture absorption

At +23 °C/50 % r.h.	0.1 % weight
Max. moisture absorption	0.5 % weight

Table 06: Moisture absorption



Graph 11: Effect of moisture absorption plain bearings

Installation Tolerances

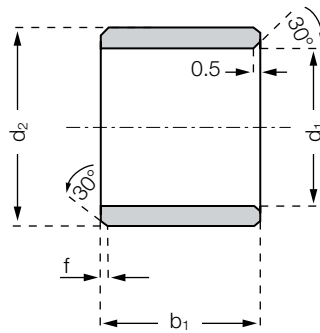
iglidur® X plain bearings are meant to be oversized before pressfit. The bearings are designed for pressfit into a housing machined to a H7 tolerance. After being assembled into a nominal size housing, the inner diameter adjusts to meet our specified tolerances.

► Testing Methods, page 55

Diameter d1 [mm]	Shaft h9 [mm]	iglidur® X F10 [mm]	Housing H7 [mm]
up to 3	0-0.025	+0.006 +0.046	0 +0.010
> 3 to 6	0-0.030	+0.010 +0.058	0 +0.012
> 6 to 10	0-0.036	+0.013 +0.071	0 +0.015
> 10 to 18	0-0.043	+0.016 +0.086	0 +0.018
> 18 to 30	0-0.052	+0.020 +0.104	0 +0.021
> 30 to 50	0-0.062	+0.025 +0.125	0 +0.025
> 50 to 80	0-0.074	+0.030 +0.150	0 +0.030

Table 07: Important tolerances plain bearings according to ISO 3547-1 after pressfit

Sleeve bearing



Order key

XSM-0203-03



- Length b1
- Outer diameter d2
- Inner diameter d1
- Metric
- Type (Form S)
- Material iglidur® X

Dimensions according to ISO 3547-1 and special dimensions

Chamfer in relation to the d1

d1 [mm]:	Ø 1-6	Ø 6-12	Ø 12-30	Ø > 30
f [mm]:	0.3	0.5	0.8	1.2

Dimensions [mm]

Part number	d1	d1-Tolerance*	d2	b1 h13
XSM-0203-03	2.0	+0.006 +0.046	3.5	3.0
XSM-0304-03	3.0	+0.006 +0.046	4.5	3.0
XSM-0304-06	3.0	+0.006 +0.046	4.5	6.0
XSM-0405-04	4.0	+0.010 +0.058	5.5	4.0
XSM-0507-035	5.0	+0.010 +0.058	7.0	3.5
XSM-0507-05	5.0	+0.010 +0.058	7.0	5.0
XSM-0507-08	5.0	+0.010 +0.058	7.0	8.0
XSM-0608-06	6.0	+0.010 +0.058	8.0	6.0
XSM-0608-08	6.0	+0.010 +0.058	8.0	8.0
XSM-0608-10	6.0	+0.010 +0.058	8.0	10.0
XSM-0608-13	6.0	+0.010 +0.058	8.0	13.8
XSM-0709-12	7.0	+0.013 +0.071	9.0	12.0
XSM-0810-06	8.0	+0.013 +0.071	10.0	6.0
XSM-0810-08	8.0	+0.013 +0.071	10.0	8.0
XSM-0810-10	8.0	+0.013 +0.071	10.0	10.0
XSM-0810-12	8.0	+0.013 +0.071	10.0	12.0
XSM-0810-15	8.0	+0.013 +0.071	10.0	15.0
XSM-1012-06	10.0	+0.013 +0.071	12.0	6.0
XSM-1012-08	10.0	+0.013 +0.071	12.0	8.0
XSM-1012-10	10.0	+0.013 +0.071	12.0	10.0
XSM-1012-12	10.0	+0.013 +0.071	12.0	12.0
XSM-1012-20	10.0	+0.013 +0.071	12.0	20.0
XSM-1214-035	12.0	+0.016 +0.086	14.0	3.5
XSM-1214-06	12.0	+0.016 +0.086	14.0	6.0
XSM-1214-08	12.0	+0.016 +0.086	14.0	8.0

Part number	d1	d1-Tolerance*	d2	b1 h13
XSM-1214-10	12.0	+0.016 +0.086	14.0	10.0
XSM-1214-12	12.0	+0.016 +0.086	14.0	12.0
XSM-1214-15	12.0	+0.016 +0.086	14.0	15.0
XSM-1214-20	12.0	+0.016 +0.086	14.0	20.0
XSM-1416-12	14.0	+0.016 +0.086	16.0	12.0
XSM-1416-15	14.0	+0.016 +0.086	16.0	15.0
XSM-1416-20	14.0	+0.016 +0.086	16.0	20.0
XSM-1517-10	15.0	+0.016 +0.086	17.0	10.0
XSM-1517-15	15.0	+0.016 +0.086	17.0	15.0
XSM-1517-20	15.0	+0.016 +0.086	17.0	20.0
XSM-1618-10	16.0	+0.016 +0.086	18.0	10.0
XSM-1618-12	16.0	+0.016 +0.086	18.0	12.0
XSM-1618-15	16.0	+0.016 +0.086	18.0	15.0
XSM-1618-20	16.0	+0.016 +0.086	18.0	20.0
XSM-1618-35	16.0	+0.016 +0.086	18.0	35.0
XSM-1719-20	17.0	+0.016 +0.086	19.0	20.0
XSM-1820-15	18.0	+0.016 +0.086	20.0	15.0
XSM-1820-20	18.0	+0.016 +0.086	20.0	20.0
XSM-2022-140	20.0	+0.020 +0.104	22.0	14.0
XSM-2022-145	20.0	+0.020 +0.104	22.0	14.5
XSM-2022-18	20.0	+0.020 +0.104	22.0	18.0
XSM-2022-20	20.0	+0.020 +0.104	22.0	20.0
XSM-2023-07	20.0	+0.020 +0.104	23.0	7.0
XSM-2023-10	20.0	+0.020 +0.104	23.0	10.0
XSM-2023-15	20.0	+0.020 +0.104	23.0	15.0

* after pressfit. Testing methods ► page 55



delivery available
time from stock



prices price list online
www.igus.eu/eu/x



order part number
example XSM-0203-03



Sleeve bearing

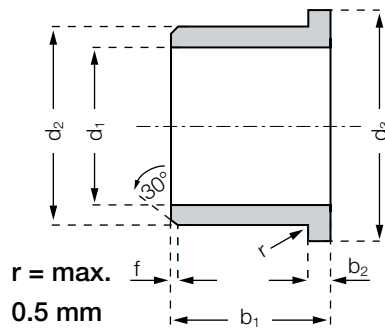
Dimensions [mm]

Part number	d1	d1-Tolerance*	d2	b1 h13
XSM-2023-20	20.0	+0.020 +0.104	23.0	20.0
XSM-2023-25	20.0	+0.020 +0.104	23.0	25.0
XSM-2023-30	20.0	+0.020 +0.104	23.0	30.0
XSM-2225-15	22.0	+0.020 +0.104	25.0	15.0
XSM-2225-20	22.0	+0.020 +0.104	25.0	20.0
XSM-2426-20	24.0	+0.020 +0.104	26.0	20.0
XSM-2427-20	24.0	+0.020 +0.104	27.0	20.0
XSM-2528-077	25.0	+0.020 +0.104	28.0	7.7
XSM-2528-09	25.0	+0.020 +0.104	28.0	9.0
XSM-2528-12	25.0	+0.020 +0.104	28.0	12.0
XSM-2528-13	25.0	+0.020 +0.104	28.0	13.0
XSM-2528-15	25.0	+0.020 +0.104	28.0	15.0
XSM-2528-20	25.0	+0.020 +0.104	28.0	20.0
XSM-2528-30	25.0	+0.020 +0.104	28.0	30.0
XSM-2730-05	27.0	+0.020 +0.104	30.0	5.7
XSM-2832-20	28.0	+0.020 +0.104	32.0	20.0
XSM-2832-30	28.0	+0.020 +0.104	32.0	30.0
XSM-3034-20	30.0	+0.020 +0.104	34.0	20.0
XSM-3034-25	30.0	+0.020 +0.104	34.0	25.0
XSM-3034-30	30.0	+0.020 +0.104	34.0	30.0

Part number	d1	d1-Tolerance*	d2	b1 h13
XSM-3034-40	30.0	+0.020 +0.104	34.0	40.0
XSM-3236-25	32.0	+0.025 +0.125	36.0	25.0
XSM-3236-30	32.0	+0.025 +0.125	36.0	30.0
XSM-3539-20	35.0	+0.025 +0.125	39.0	20.0
XSM-3539-30	35.0	+0.025 +0.125	39.0	30.0
XSM-3539-40	35.0	+0.025 +0.125	39.0	40.0
XSM-3539-50	35.0	+0.025 +0.125	39.0	50.0
XSM-4044-30	40.0	+0.025 +0.125	44.0	30.0
XSM-4044-40	40.0	+0.025 +0.125	44.0	40.0
XSM-4044-50	40.0	+0.025 +0.125	44.0	50.0
XSM-4550-50	45.0	+0.025 +0.125	50.0	50.0
XSM-5055-30	50.0	+0.025 +0.125	55.0	30.0
XSM-5055-40	50.0	+0.025 +0.125	55.0	40.0
XSM-5055-60	50.0	+0.025 +0.125	55.0	60.0
XSM-5560-50	55.0	+0.030 +0.150	60.0	50.0
XSM-6065-45	60.0	+0.030 +0.150	65.0	45.0
XSM-6065-60	60.0	+0.030 +0.150	65.0	60.0
XSM-6570-50	65.0	+0.030 +0.150	70.0	50.0
XSM-7075-70	70.0	+0.030 +0.150	75.0	70.0

* after pressfit. Testing methods ► page 55

Flange bearing



Order key

XFM-0304-05



- Length b1
- Outer diameter d2
- Inner diameter d1
- Metric
- Type (Form F)
- Material iglidur® X

Dimensions according to ISO 3547-1 and special dimensions

Chamfer in relation to the d1

d1 [mm]:	Ø 1-6	Ø 6-12	Ø 12-30	Ø > 30
f [mm]:	0.3	0.5	0.8	1.2

Dimensions [mm]

Part number	d1	d1-Tolerance*	d2	d3 d13	b1 h13	b2 -0.14
XFM-020406-03	2.0	+0.006 +0.046	4.0	6.0	3.0	1.0
XFM-0304-05	3.0	+0.006 +0.046	4.5	7.5	5.0	0.75
XFM-0405-04	4.0	+0.010 +0.058	5.5	9.5	4.0	0.75
XFM-0405-06	4.0	+0.010 +0.058	5.5	9.5	6.0	0.75
XFM-040508-06	4.0	+0.010 +0.058	5.5	8.0	6.0	0.75
XFM-0507-05	5.0	+0.010 +0.058	7.0	11.0	5.0	1.0
XFM-0608-08	6.0	+0.010 +0.058	8.0	12.0	8.0	1.0
XFM-0608-10	6.0	+0.010 +0.058	8.0	12.0	10.0	1.0
XFM-0810-05	8.0	+0.013 +0.071	10.0	15.0	5.5	1.0
XFM-0810-075	8.0	+0.013 +0.071	10.0	15.0	7.5	1.0
XFM-0810-08	8.0	+0.013 +0.071	10.0	15.0	8.0	1.0
XFM-0810-09	8.0	+0.013 +0.071	10.0	15.0	9.0	1.0
XFM-081012-04	8.0	+0.013 +0.071	10.0	12.0	4.0	1.0
XFM-081014-31	8.0	+0.013 +0.071	10.0	14.0	31.5	1.0
XFM-1012-06	10.0	+0.013 +0.071	12.0	18.0	6.0	1.0
XFM-1012-08	10.0	+0.013 +0.071	12.0	15.0	8.0	1.0
XFM-1012-09	10.0	+0.013 +0.071	12.0	18.0	9.0	1.0
XFM-1012-15	10.0	+0.013 +0.071	12.0	18.0	15.0	1.0
XFM-1012-18	10.0	+0.013 +0.071	12.0	18.0	18.0	1.0
XFM-1012-22	10.0	+0.013 +0.071	12.0	18.0	22.0	1.0
XFM-1214-055	12.0	+0.016 +0.086	14.0	20.0	5.5	1.0
XFM-121418-059	12.0	+0.016 +0.086	14.0	18.0	5.9	1.0
XFM-1214-09	12.0	+0.016 +0.086	14.0	20.0	9.0	1.0
XFM-1214-12	12.0	+0.016 +0.086	14.0	20.0	12.0	1.0
XFM-1214-15	12.0	+0.016 +0.086	14.0	20.0	15.0	1.0

* after pressfit. Testing methods ► page 55



delivery available
time from stock



prices price list online
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order part number
example XFM-0304-05



Flange bearing

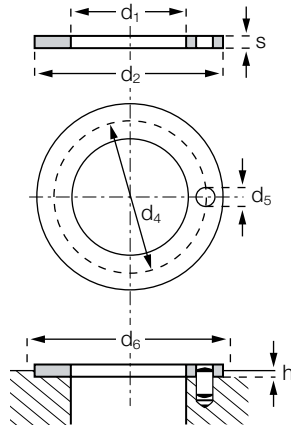
Dimensions [mm]

Part number	d1	d1-Tolerance*	d2	d3 d13	b1 h13	b2 -0.14
XFM-121418-039	12.0	+0.016 +0.086	14.0	18.0	3.9	1.0
XFM-1416-10	14.0	+0.016 +0.086	16.0	22.0	10.0	1.0
XFM-1416-12	14.0	+0.016 +0.086	16.0	22.0	12.0	1.0
XFM-1416-17	14.0	+0.016 +0.086	16.0	22.0	17.0	1.0
XFM-1517-06	15.0	+0.015 +0.086	17.0	23.0	6.0	1.0
XFM-1517-12	15.0	+0.016 +0.086	17.0	23.0	12.0	1.0
XFM-1517-17	15.0	+0.016 +0.086	17.0	23.0	17.0	1.0
XFM-1618-12	16.0	+0.016 +0.086	18.0	24.0	12.0	1.0
XFM-1618-17	16.0	+0.016 +0.086	18.0	24.0	17.0	1.0
XFM-1820-12	18.0	+0.016 +0.086	20.0	26.0	12.0	1.0
XFM-1820-17	18.0	+0.016 +0.086	20.0	26.0	17.0	1.0
XFM-2023-075	20.0	+0.020 +0.104	23.0	30.0	7.5	1.5
XFM-2023-11	20.0	+0.020 +0.104	23.0	30.0	11.0	1.5
XFM-2023-16	20.0	+0.020 +0.104	23.0	30.0	16.5	1.5
XFM-2023-21	20.0	+0.020 +0.104	23.0	30.0	21.0	1.5
XFM-2528-13	25.0	+0.020 +0.104	28.0	35.0	13.5	1.5
XFM-2528-21	25.0	+0.020 +0.104	28.0	35.0	21.0	1.5
XFM-252833-08	25.0	+0.020 +0.104	28.0	33.0	8.0	1.0
XFM-2730-20	27.0	+0.020 +0.104	30.0	38.0	20.0	1.5
XFM-3034-16	30.0	+0.020 +0.104	34.0	42.0	16.0	2.0
XFM-3034-26	30.0	+0.020 +0.104	34.0	42.0	26.0	2.0
XFM-3034-40	30.0	+0.020 +0.104	34.0	42.0	40.0	2.0
XFM-3236-15	32.0	+0.025 +0.125	36.0	45.0	15.0	2.0
XFM-3236-26	32.0	+0.025 +0.125	36.0	45.0	26.0	2.0
XFM-3539-26	35.0	+0.025 +0.125	39.0	47.0	26.0	2.0
XFM-4044-30	40.0	+0.025 +0.125	44.0	52.0	30.0	2.0
XFM-4044-40	40.0	+0.025 +0.125	44.0	52.0	40.0	2.0
XFM-4550-50	45.0	+0.025 +0.125	50.0	58.0	50.0	2.0
XFM-5055-40	50.0	+0.025 +0.125	55.0	63.0	40.0	2.0
XFM-6065-40	60.0	+0.030 +0.150	65.0	73.0	40.0	2.0
XFM-7075-40	70.0	+0.030 +0.150	75.0	83.0	40.0	2.0
XFM-7580-50	75.0	+0.030 +0.150	80.0	88.0	50.0	2.0

* after pressfit. Testing methods ► page 55

iglidur® X | Product Range

Thrust washer



Order key

XTM-0620-015



- Thickness s
- Outer diameter d2
- Inner diameter d1
- Metric
- Type (Form T)
- Material iglidur® X

Dimensions according to ISO 3547-1 and special dimensions

Dimensions [mm]

Part number	d1	d2	s	d4	d5	h	d6
	+0.25	-0.25	-0.05	-0.12 +0.12	+0.375 +0.125	+0.2 -0.2	+0.12
XTM-0620-015	6.0	20.0	1.5	13.0	1.5	1.0	20.0
XTM-0818-015	8.0	18.0	1.5	13.0	1.5	1.0	18.0
XTM-1018-010	10.0	18.0	1.0	**	**	0.7	18.0
XTM-1224-015	12.0	24.0	1.5	18.0	1.5	1.0	24.0
XTM-1426-015	14.0	26.0	1.5	20.0	2.0	1.0	26.0
XTM-1524-015	15.0	24.0	1.5	19.5	1.5	1.0	24.0
XTM-1630-015	16.0	30.0	1.5	22.0	2.0	1.0	30.0
XTM-1832-015	18.0	32.0	1.5	25.0	2.0	1.0	32.0
XTM-2036-015	20.0	36.0	1.5	28.0	3.0	1.0	36.0
XTM-2238-015	22.0	38.0	1.5	30.0	3.0	1.0	38.0
XTM-2442-015	24.0	42.0	1.5	33.0	3.0	1.0	42.0
XTM-2644-015	26.0	44.0	1.5	35.0	3.0	1.0	44.0
XTM-3254-015	32.0	54.0	1.5	43.0	4.0	1.0	54.0
XTM-3862-015	38.0	62.0	1.5	50.0	4.0	1.0	62.0
XTM-4266-015	42.0	66.0	1.5	54.0	4.0	1.0	66.0
XTM-4874-020	48.0	74.0	2.0	61.0	4.0	1.5	74.0
XTM-5278-020	52.0	78.0	2.0	65.0	4.0	1.5	78.0
XTM-6290-020	62.0	90.0	2.0	76.0	4.0	1.5	90.0

** design without fixing bore



delivery available
time from stock

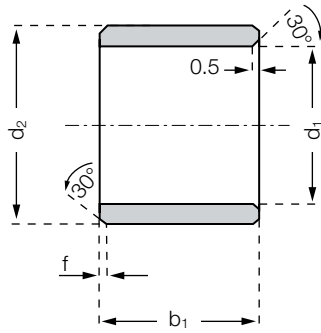


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order part number
example XTM-0620-015

Sleeve bearing



Order key

XSI-0203-03



- Length b1
- Outer diameter d2
- Inner diameter d1
- Inch
- Type (Form S)
- Material iglidur® X

Chamfer in relation to the d1

d1 [Inch]:	Ø 0,040–0,236	Ø 0,236–0,472	Ø 0,472–1,18	Ø > 1,18
f [Inch]:	0.012	0.019	0.031	0.047

Dimensions [Inch]

Part number	d1	d2	b1	d1*		Housing bore		Shaft size	
				max.	min.	max.	min.	max.	min.
XSI-0203-03	1/8	3/16	3/16	.1269	.1251	.1878	.1873	.1243	.1236
XSI-0203-05	1/8	3/16	5/16	.1269	.1251	.1878	.1873	.1243	.1236
XSI-0203-06	1/8	3/16	3/8	.1269	.1251	.1878	.1873	.1243	.1236
XSI-0304-03	3/16	1/4	3/16	.1892	.1873	.2503	.2497	.1865	.1858
XSI-0304-04	3/16	1/4	1/4	.1892	.1873	.2503	.2497	.1865	.1858
XSI-0304-06	3/16	1/4	3/8	.1892	.1873	.2503	.2497	.1865	.1858
XSI-0304-08	3/16	1/4	1/2	.1892	.1873	.2503	.2497	.1865	.1858
XSI-0405-04	1/4	5/16	1/4	.2521	.2498	.3128	.3122	.2490	.2481
XSI-0405-06	1/4	5/16	3/8	.2521	.2498	.3128	.3122	.2490	.2481
XSI-0405-08	1/4	5/16	1/2	.2521	.2498	.3128	.3122	.2490	.2481
XSI-0506-04	5/16	3/8	1/4	.3148	.3125	.3753	.3747	.3115	.3106
XSI-0506-06	5/16	3/8	3/8	.3148	.3125	.3753	.3747	.3115	.3106
XSI-0506-08	5/16	3/8	1/2	.3148	.3125	.3753	.3747	.3115	.3106
XSI-0607-04	3/8	15/32	1/4	.3773	.3750	.4691	.4684	.3740	.3731
XSI-0607-05	3/8	15/32	5/16	.3773	.3750	.4691	.4684	.3740	.3731
XSI-0607-06	3/8	15/32	3/8	.3773	.3750	.4691	.4684	.3740	.3731
XSI-0607-08	3/8	15/32	1/2	.3773	.3750	.4691	.4684	.3740	.3731
XSI-0607-10	3/8	15/32	5/8	.3773	.3750	.4691	.4684	.3740	.3731
XSI-0708-04	7/16	17/32	1/4	.4406	.4379	.5316	.5309	.4365	.4355
XSI-0708-08	7/16	17/32	1/2	.4406	.4379	.5316	.5309	.4365	.4355
XSI-0708-10	7/16	17/32	5/8	.4406	.4379	.5316	.5309	.4365	.4355
XSI-0708-12	7/16	17/32	3/4	.4406	.4379	.5316	.5309	.4365	.4355
XSI-0809-04	1/2	19/32	1/4	.5030	.5003	.5941	.5934	.4990	.4980
XSI-0809-06	1/2	19/32	3/8	.5030	.5003	.5941	.5934	.4990	.4980
XSI-0809-08	1/2	19/32	1/2	.5030	.5003	.5941	.5934	.4990	.4980

* after pressfit. Testing methods ► page 55



delivery available
time from stock



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order part number
example XSI-0203-03



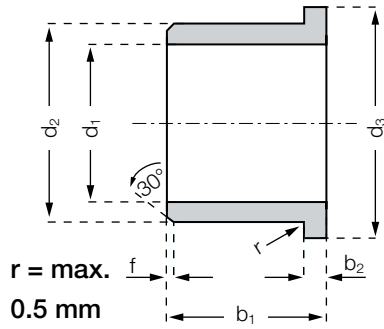
Sleeve bearing

Dimensions [Inch]

Part number	d1	d2	b1	d1*		Housing bore		Shaft size	
				max.	min.	max.	min.	max.	min.
XSI-0809-10	1/2	19/32	5/8	.5030	.5003	.5941	.5934	.4990	.4980
XSI-0809-12	1/2	19/32	3/4	.5030	.5003	.5941	.5934	.4990	.4980
XSI-0809-16	1/2	19/32	1	.5030	.5003	.5941	.5934	.4990	.4980
XSI-0910-08	9/16	21/32	1/2	.5655	.5627	.6566	.6559	.5615	.5605
XSI-0910-12	9/16	21/32	3/4	.5655	.5627	.6566	.6559	.5615	.5605
XSI-1011-04	5/8	23/32	1/4	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1011-06	5/8	23/32	3/8	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1011-08	5/8	23/32	1/2	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1011-10	5/8	23/32	5/8	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1011-12	5/8	23/32	3/4	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1011-16	5/8	23/32	1	.6280	.6253	.7192	.7184	.6240	.6230
XSI-1112-14	11/16	25/32	7/8	.6906	.6879	.7817	.7809	.6865	.6855
XSI-1214-06	3/4	7/8	3/8	.7541	.7507	.8755	.8747	.7491	.7479
XSI-1214-08	3/4	7/8	1/2	.7541	.7507	.8755	.8747	.7491	.7479
XSI-1214-12	3/4	7/8	3/4	.7541	.7507	.8755	.8747	.7491	.7479
XSI-1214-16	3/4	7/8	1	.7541	.7507	.8755	.8747	.7491	.7479
XSI-1416-12	7/8	1	3/4	.8791	.8757	1.0005	.9997	.8741	.8729
XSI-1416-16	7/8	1	1	.8791	.8757	1.0005	.9997	.8741	.8729
XSI-1618-08	1	1 1/8	1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XSI-1618-12	1	1 1/8	3/4	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XSI-1618-16	1	1 1/8	1	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XSI-1618-24	1	1 1/8	1 1/2	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XSI-1820-12	1 1/8	1 9/32	3/4	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
XSI-2022-10	1 1/4	1 13/32	5/8	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
XSI-2022-20	1 1/4	1 13/32	1 1/4	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
XSI-2426-12	1 1/2	1 21/32	3/4	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XSI-2426-16	1 1/2	1 21/32	1	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XSI-2426-24	1 1/2	1 21/32	1 1/2	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XSI-2629-20	1 5/8	1 25/32	1 1/4	1.6297	1.6258	1.7818	1.7808	1.6238	1.6222
XSI-2831-16	1 3/4	1 15/16	1	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
XSI-3235-24	2	2 3/16	1 1/2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
XSI-3235-32	2	2 3/16	2	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
XSI-3639-32	2 1/4	2 7/16	2	2.2577	2.2531	2.4377	2.4365	2.2507	2.2489
XSI-4447-32	2 3/4	2 15/16	2	2.7570	2.7523	2.9370	2.9358	2.7500	2.7490

* after pressfit. Testing methods ► page 55

Flange bearing



Order key

XFI-0203-03



- Length b1
- Outer diameter d2
- Inner diameter d1
- Inch
- Type (Form F)
- Material iglidur® X

Chamfer in relation to the d1

d1 [Inch]:	Ø 0,040–0,236	Ø 0,236–0,472	Ø 0,472–1,18	Ø > 1,18
f [Inch]:	0.012	0.019	0.031	0.047

Dimensions [Inch]

Part number	d1	d2	b1	d3	b2	d1*		Housing bore		Shaft size	
						max.	min.	max.	min.	max.	min.
XFI-0203-03	1/8	3/16	3/16	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
XFI-0203-06	1/8	3/16	3/8	.312	.032	.1269	.1251	.1878	.1873	.1243	.1236
XFI-0304-04	3/16	1/4	1/4	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
XFI-0304-06	3/16	1/4	3/8	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
XFI-0304-08	3/16	1/4	1/2	.375	.032	.1892	.1873	.2503	.2497	.1865	.1858
XFI-0405-03	1/4	5/16	3/16	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
XFI-0405-04	1/4	5/16	1/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
XFI-0405-06	1/4	5/16	3/8	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
XFI-0405-08	1/4	5/16	1/2	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
XFI-0405-12	1/4	5/16	3/4	.500	.032	.2521	.2498	.3128	.3122	.2490	.2481
XFI-0506-04	5/16	3/8	1/4	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
XFI-0506-06	5/16	3/8	3/8	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
XFI-0506-08	5/16	3/8	1/2	.562	.032	.3148	.3125	.3753	.3747	.3115	.3106
XFI-0607-04	3/8	15/32	1/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
XFI-0607-06	3/8	15/32	3/8	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
XFI-0607-08	3/8	15/32	1/2	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
XFI-0607-12	3/8	15/32	3/4	.687	.046	.3773	.3750	.4691	.4684	.3740	.3731
XFI-0708-08	7/16	17/32	1/2	.750	.046	.4406	.4379	.5316	.5309	.4365	.4355
XFI-0809-04	1/2	19/32	1/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
XFI-0809-06	1/2	19/32	3/8	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
XFI-0809-08	1/2	19/32	1/2	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
XFI-0809-12	1/2	19/32	3/4	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
XFI-0809-16	1/2	19/32	1	.875	.046	.5030	.5003	.5941	.5934	.4990	.4980
XFI-1011-08	5/8	23/32	1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
XFI-1011-12	5/8	23/32	3/4	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230

* after pressfit. Testing methods ► page 55



delivery available
time from stock



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order part number
example XFI-0203-03



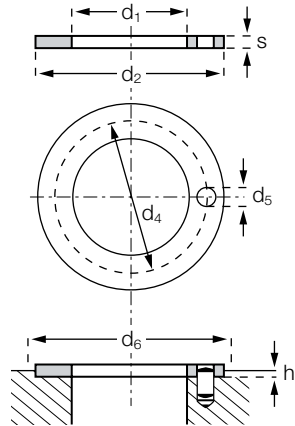
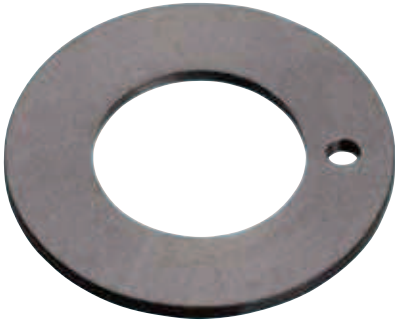
Flange bearing

Dimensions [Inch]

Part number	d1	d2	b1	d3	b2	d1*		Housing bore		Shaft size	
						max.	min.	max.	min.	max.	min.
XFI-1011-16	5/8	23/32	1	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
XFI-1011-24	5/8	23/32	1 1/2	.937	.046	.6280	.6253	.7192	.7184	.6240	.6230
XFI-1214-08	3/4	7/8	1/2	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
XFI-1214-12	3/4	7/8	3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
XFI-1214-16	3/4	7/8	1	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
XFI-1214-28	3/4	7/8	1 3/4	1.125	.062	.7541	.7507	.8755	.8747	.7491	.7479
XFI-1416-12	7/8	1	3/4	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
XFI-1416-16	7/8	1	1	1.250	.062	.8791	.8757	1.0005	.9997	.8741	.8729
XFI-1618-08	1	1 1/8	1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XFI-1618-12	1	1 1/8	3/4	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XFI-1618-16	1	1 1/8	1	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XFI-1618-24	1	1 1/8	1 1/2	1.375	.062	1.0041	1.0007	1.1255	1.1247	.9991	.9979
XFI-1820-12	1 1/8	1 9/32	3/4	1.562	.078	1.1288	1.1254	1.2818	1.2808	1.1238	1.1226
XFI-2022-20	1 1/4	1 13/32	1 1/4	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
XFI-2022-32	1 1/4	1 13/32	2	1.687	.078	1.2548	1.2508	1.4068	1.4058	1.2488	1.2472
XFI-2426-12	1 1/2	1 21/32	3/4	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XFI-2426-16	1 1/2	1 21/32	1	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XFI-2426-24	1 1/2	1 21/32	1 1/2	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XFI-2426-26	1 1/2	1 21/32	1 5/8	2.000	.078	1.5048	1.5008	1.6568	1.6558	1.4988	1.4972
XFI-2831-16	1 3/4	1 15/16	1	2.375	.093	1.7547	1.7507	1.9381	1.9371	1.7487	1.7471
XFI-3235-32	2	2 3/16	2	2.625	.093	2.0057	2.0011	2.1883	2.1871	1.9981	1.9969
XFI-4447-32	2 3/4	2 15/16	2	3.375	.093	2.7570	2.7523	2.9370	2.9358	2.7500	2.7490

* after pressfit. Testing methods ► page 55

Thrust washer



Order key

XTI-0814-01



Thickness s
Outer diameter d2
Inner diameter d1
Inch
Type (Form T)
Material iglidur® X

Dimensions according to ISO 3547-1 and special dimensions

Dimensions [Inch]

Part number	d1 +.010	d2 -.010	s -.0020	d4 ±.005	d5 .015 + .005	h +.008	d6 +.005
XTI-0814-01	.500	.875	.0585	.692	.067	.040	.875
XTI-1018-01	.625	1.125	.0585	.880	.099	.040	1.125
XTI-1220-01	.750	1.250	.0585	1.005	.099	.040	1.250
XTI-1424-01	.875	1.500	.0585	1.192	.130	.040	1.500
XTI-1628-01	1.000	1.750	.0585	1.380	.130	.040	1.750
XTI-1826-01	1.125	1.625	.0585	–	–	.040	1.625
XTI-2034-01	1.250	2.125	.0585	1.692	.161	.040	2.125
XTI-2440-01	1.500	2.500	.0585	2.005	.192	.040	2.500
XTI-2844-01	1.750	2.750	.0585	2.255	.192	.040	2.750
XTI-3248-01	2.000	3.000	.0895	2.505	.192	.070	3.000



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order part number
example XTI-0814-01