

# iglidur® X – The High-Tech Problem Solver



Temperature resistant from -100°C to +250°C in continuous operation

Universal resistance to chemicals

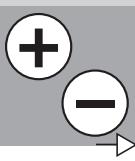
High compressive strength

Very low moisture absorption

Excellent wear resistance through the entire temperature range

iglidur® X

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## iglidur® X | The High-Tech Problem Solver

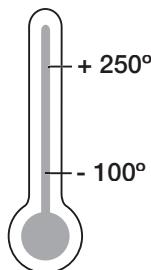
iglidur® X is defined by its combination of high temperature resistance with compressive strength, along with high resistance to chemicals. iglidur® X is designed for higher speeds than other iglidur® bearings.

### iglidur® X

3 styles  
> 250 dimensions  
Ø 2–75 mm



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igus® GmbH  
51147 Cologne

### Price index



## The High-Tech Problem Solver

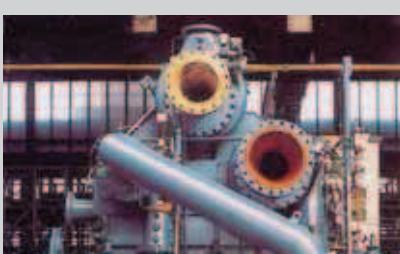


### When to use iglidur® X plain bearings:

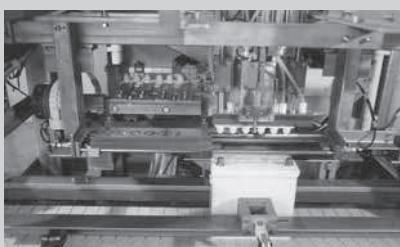
- For pressure loads up to 150 MPa
- For linear movements with stainless steel
- For linear movements, especially at high temperatures
- When universal resistance to chemicals is required
- Temperature resistant from -100°C to +250°C (short term to + 315°C)
- Very low moisture absorption
- High wear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

### When not to use iglidur® X plain bearings:

- For very low wear at high loads
  - ▶ iglidur® Q (chapter 18), iglidur® Z (chapter 22)
- For underwater applications
  - ▶ iglidur® H (chapter 12), iglidur® H370 (chapter 15)
- For edge pressure
  - ▶ iglidur® Z (chapter 22)



Picture 6.1: High temperature resistant and maintenance free



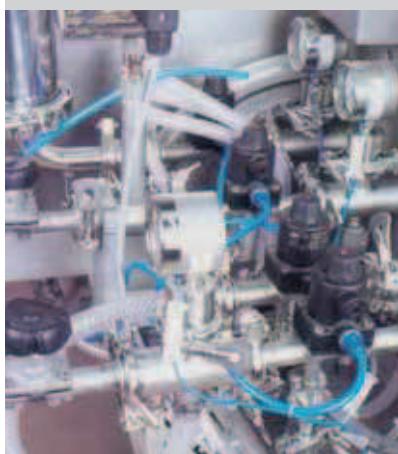
Picture 6.2: Battery filling

## Material Table

| General Properties   | Unit                               | iglidur® X        | Testing Method |
|--|------------------------------------|-------------------|----------------|
| Density  | g/cm3                              | 1,44              |                |
| Colour   |                                    | Black             |                |
| Max. moisture absorption at 23°C / 50% r.F.                  | % weight                           | 0,1               | DIN 53495      |
| Max. moisture absorption                                     | % weight                           | 0,5               |                |
| Coefficient of sliding friction, dynamic against steel $\mu$ |                                    | 0,09 - 0,27       |                |
| p x v value, max. (dry)                                      | MPa x 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. recommended 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 x K                            | 0,6               | ASTM C 177     |
| Coefficient of thermal expansion (to 23°C)                   | K <sup>-1</sup> x 10 <sup>-5</sup> | 5                 | DIN 53752      |
| Electrical Properties <sup>1)</sup>                          |                                    |                   |                |
| Specific volume resistance                                   | $\Omega$ cm                        | < 10 <sup>5</sup> | DIN IEC 93     |
| Surface resistance   | $\Omega$                           | < 10 <sup>3</sup> | DIN 53482      |

<sup>1)</sup> The good conductivity of this plastic material under certain circumstances can favour the generation of corrosion on the metallic contact component

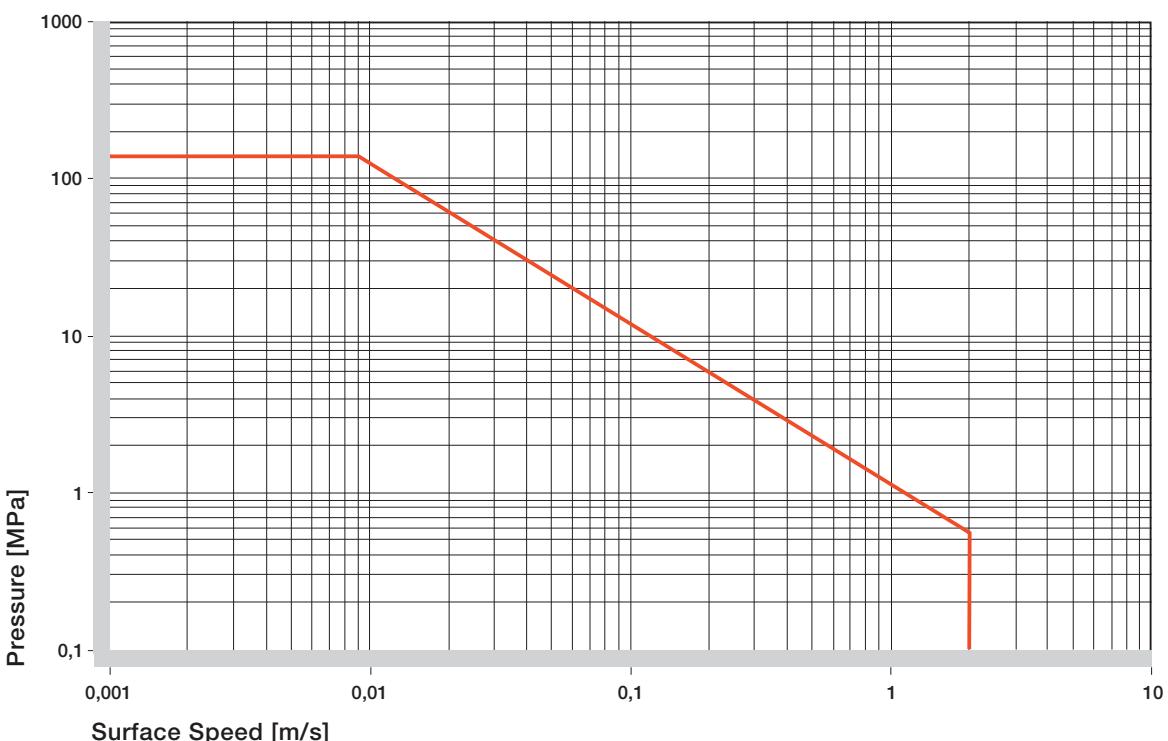
Table 6.1: Material Data



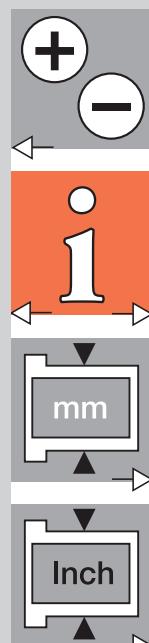
Picture 6.3: Flaps, valves with iglidur® X, high temperatures

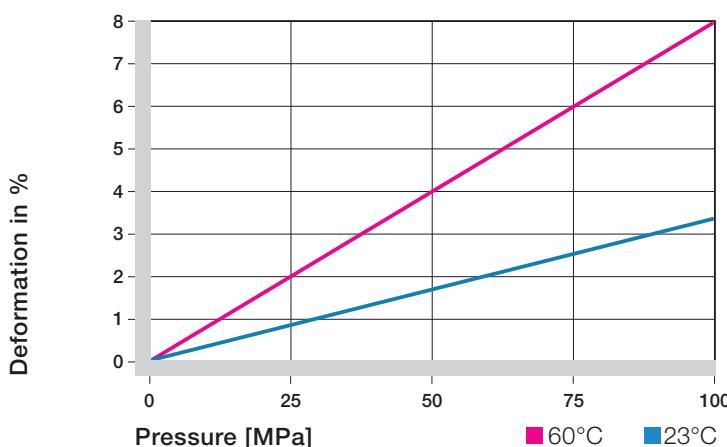


Picture 6.4: Catering equipment

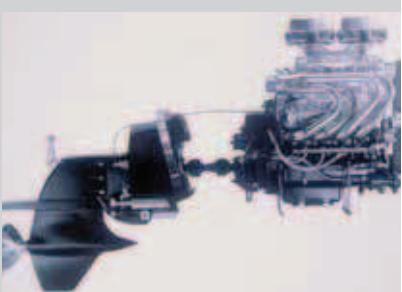


Graph. 6.1: Permissible p x v values for iglidur® X running dry against a steel shaft, at 20°C





Graph 6.2: Deformation under pressure and temperature



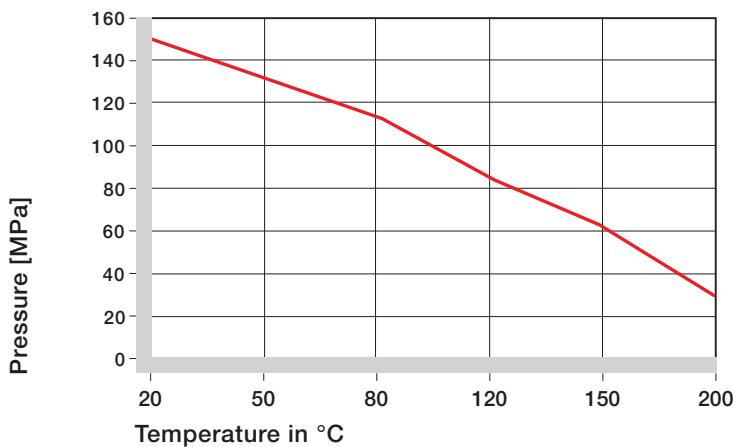
Picture 6.5: Application on an inboard engine

| m/s        | Rotating | Oscillating | Linear |
|------------|----------|-------------|--------|
| Continuous | 1,5      | 1,1         | 5      |
| Short term | 3,5      | 2,5         | 10     |

Table 6.2: Maximum surface speeds

| iglidur® X       | Application Temperature |
|------------------|-------------------------|
| Minimum          | -100 °C                 |
| Max., long term  | +250 °C                 |
| Max., short term | +315 °C                 |

Table 6.3: Temperature limits for iglidur® X



Graph 6.3: Recommended maximum surface pressure of iglidur® X as a function of temperature

iglidur® X has an excellent combination of high temperature resistance, high compressive strength, and excellent resistance to chemicals.

## Surface Pressure

Graph 6.2 shows how iglidur® X plain bearings deform elastically under load. Graph 6.1 on the preceding page shows the maximum p x v values at room temperature. In this case, the compressive strength of iglidur® X even measures up to that of steel.

Graph 6.3 shows the special compression resistance of iglidur® X at very high temperatures. Even at the highest long term application temperature of 250°C iglidur® X plain bearings still withstand a surface pressure of approximately 30 MPa.

Graph 6.2

► Surface Pressure, page 1.18

## 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 x 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 1.20

► p x v value, page 1.22

## Temperature

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.

- Graphs 6.3 and 6.4
- Application Temperatures, page 1.23

## Friction and Wear

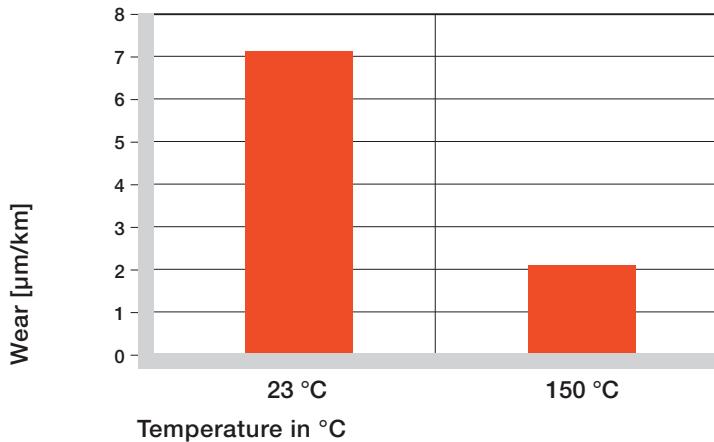
Similar to wear resistance, the coefficient of friction also changes with the load. The coefficient of friction increases with an increase in surface speed. On the other hand, an increased load has an inverse effect: the coefficient of friction decreases (see Graphs 6.5 and 6.6). This explains the excellent performance of iglidur® X plain bearings for high loads.

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 Ra of 0.6 to 0.8 are ideal.

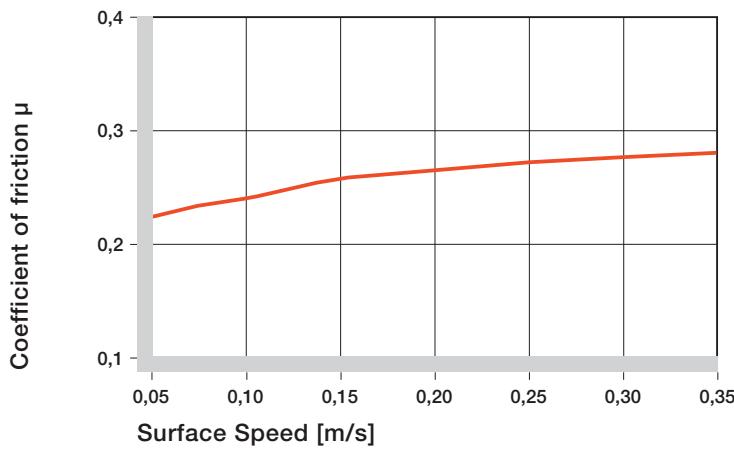
- Graphs 6.5 to 6.7
- Coefficients of Friction and Surfaces, page 1.25
- Wear Resistance, page 1.26

| iglidur® X       | Dry       | Grease | Oil  | Water |
|------------------|-----------|--------|------|-------|
| C.o.f. [ $\mu$ ] | 0,09–0,27 | 0,09   | 0,04 | 0,04  |

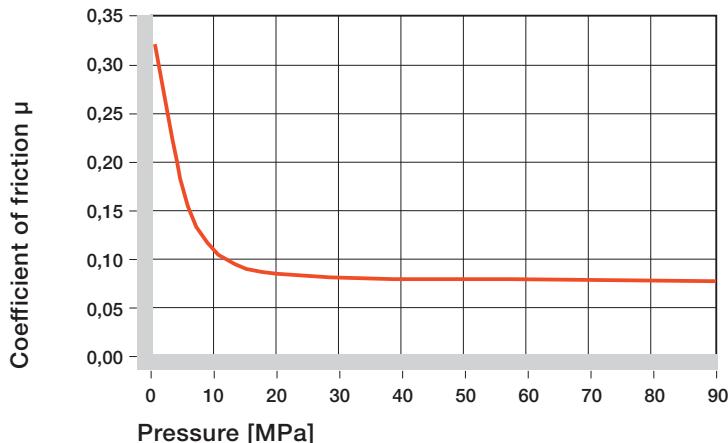
**Table 6.4: Coefficient of friction for iglidur® X against steel ( $R_a = 1 \mu\text{m}$ , 50 HRC)**



**Graph 6.4: Wear of iglidur® X, rotation with  $p = 0.75 \text{ MPa}$ ,  $v = 0.5 \text{ m/s}$ , Cf53 hardened and ground steel shaft**



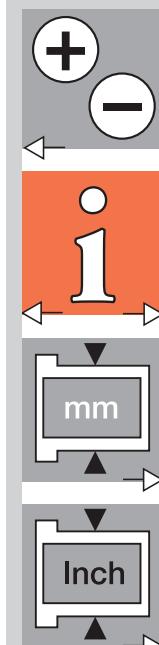
**Graph 6.5: Coefficient of friction for iglidur® X as a function of the surface speed;  $p = 0.75 \text{ MPa}$ , Cf53 hardened and ground steel shaft**

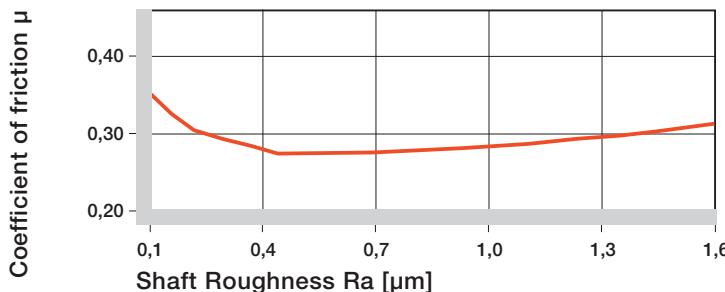


**Graph 6.6: Coefficient of friction for iglidur® X as a function of the pressure,  $v = 0.01 \text{ m/s}$**

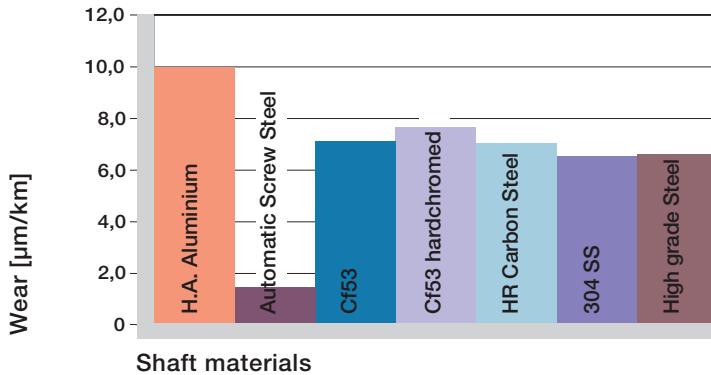
iglidur® X

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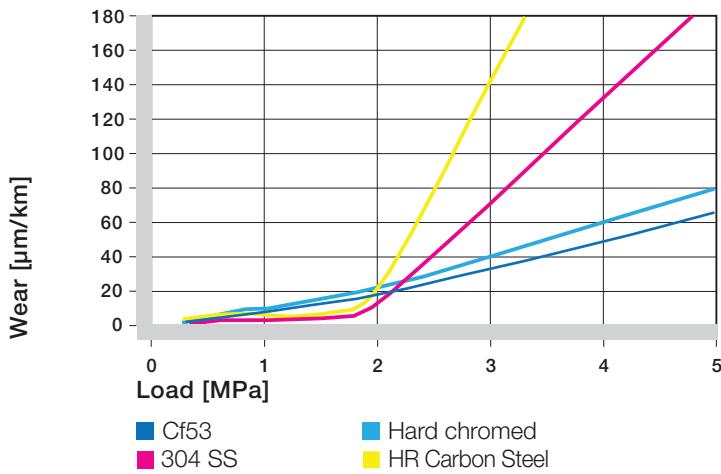




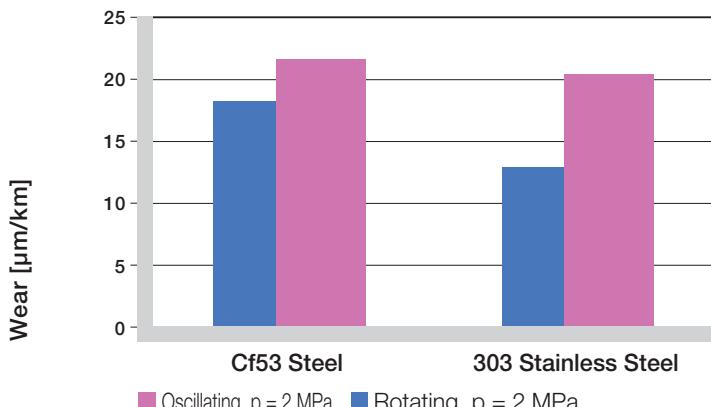
Graph 6.7: Coefficients of friction as a function of the shaft surface (Cf53 hardened and ground steel shaft)



Graph 6.8: Wear of iglidur® X with different shaft materials,  $p = 0.75 \text{ MPa}$ ,  $v = 0.5 \text{ m/s}$



Graph 6.9: Wear of iglidur® X with different shaft materials



Graph 6.10: Wear for oscillating and rotating applications ( $p = 2 \text{ MPa}$ ) with different shaft materials

## Shaft Materials

Graphs 6.7 and 6.8 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 are advantageous. 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.

- Graphs 6.8 to 6.10
- Shaft Materials, pages 1.28

## 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. Please adhere to the catalogue specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglidur® plain bearings. Please contact an iglidur® technical expert if you have any question.

- Testing Methods, page 1.35

## Chemical Resistance

iglidur® X plain bearings have almost universal chemical resistance.

The material is only attacked by concentrated nitric acid and by sulphuric acid with acidity levels over 65%. The list at the end of this catalogue provides more comprehensive detailed information.

- Graph 6.11
- Chemical Table, pages 70.1

## Radiation Resistance

Plain bearings made from iglidur® X are resistant to radiation up to an intensity of  $1 \times 10^5$  Gy. iglidur® X is the most radioactive resistant material of the iglidur® product line. iglidur® X is extremely resistant to hard gamma radiation and withstands a radiation dose of 1000 Mrad without detectable change in its properties. The material also withstands an alpha or beta radiation of 10,000 Mrad with practically no damage.

| Diameter<br>d1 [mm] | Shaft h9<br>[mm] | iglidur® X<br>F10 [mm] |
|---------------------|------------------|------------------------|
| up to 3             | 0–0,025          | +0,006 +0,046          |
| > 3 to 6            | 0–0,030          | +0,010 +0,058          |
| > 6 to 10           | 0–0,036          | +0,013 +0,071          |
| > 10 to 18          | 0–0,043          | +0,016 +0,086          |
| > 18 to 30          | 0–0,052          | +0,020 +0,104          |
| > 30 to 50          | 0–0,062          | +0,025 +0,125          |
| > 50 to 80          | 0–0,074          | +0,030 +0,150          |

**Table 6.5: Essential tolerances for iglidur® X plain bearings according to ISO 3547-1 after pressfit**

## 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.

## Application Example



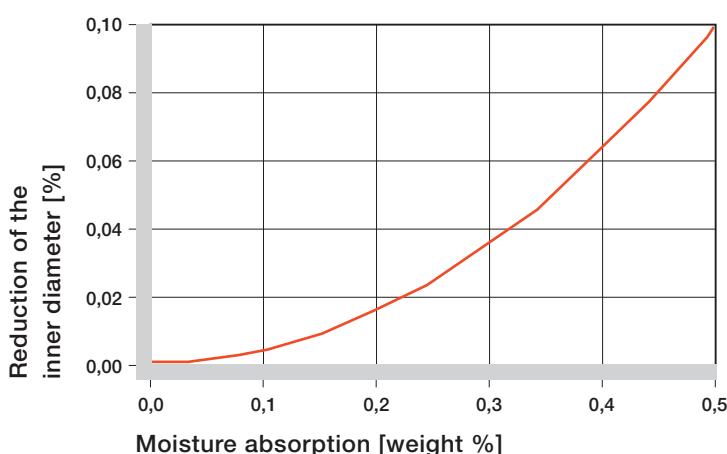
**Picture 6.6:** iglidur® X plain bearing in a valve

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

**Table 6.6: Chemical resistance of iglidur® X – detailed list, page 70.1**

+ resistant 0 conditionally resistant – not resistant

All data given at room temperature [20°C]



**Graph 6.11: Effect of moisture absorption on iglidur® X plain bearings**

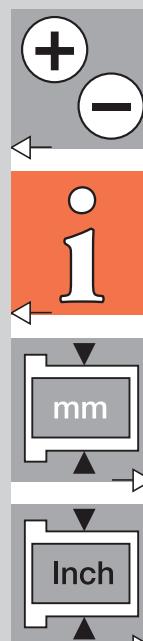
## iglidur® X

|                            |                            |
|----------------------------|----------------------------|
| Specific volume resistance | > $10^5$ $\Omega\text{cm}$ |
| Surface resistance         | > $10^3$ $\Omega$          |

**Table 6.7: Electrical properties of iglidur® X**

iglidur® X

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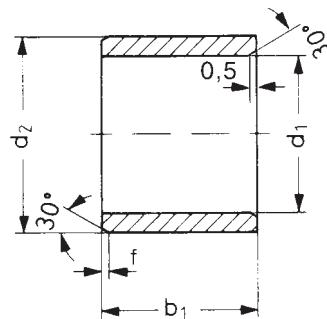




igus®

## iglidur® X | Sleeve Bearing | mm

mm  
iglidur® X - Type S



Data in mm

Structure – part no.

X S M-0203-03



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

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    |

| 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  |     |

| Part Number  | d1   | d1 Tolerance* | d2   | b1   | h13 |
|--------------|------|---------------|------|------|-----|
| 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  |     |
| 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 |     |

\*after pressfit. Testing methods ► page 1.35

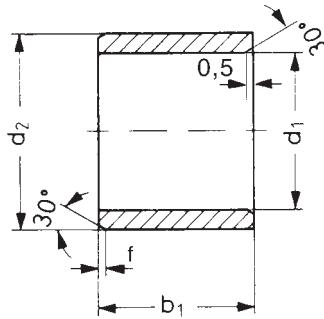
## Order example

Our price breaks are defined by the order quantity.

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



For the current prices please visit the igus®-Homepage [www.igus.de/en](http://www.igus.de/en)  
No minimum order quantities, no surcharges.



Data in mm

Structure – part no.

**X S M-2022-30**

|           |  |
|-----------|--|
| <b>b1</b> |  |
| <b>d2</b> |  |
| <b>d1</b> |  |
| Metric    |  |
| Type      |  |
| Material  |  |

Dimensions according to ISO 3547-1  
and special dimensions

Chamfer in relation to the d1

|                 |              |               |                |                  |
|-----------------|--------------|---------------|----------------|------------------|
| <b>d1 [mm]:</b> | <b>Ø 1–6</b> | <b>Ø 6–12</b> | <b>Ø 12–30</b> | <b>Ø &gt; 30</b> |
| <b>f [mm]:</b>  | 0,3          | 0,5           | 0,8            | 1,2              |

| Part Number         | d1   | d1 Tolerance* | d2   | b1   | h13 |
|---------------------|------|---------------|------|------|-----|
| <b>XSM-2022-20</b>  | 20,0 | +0,020 +0,104 | 22,0 | 20,0 |     |
| <b>XSM-2023-07</b>  | 20,0 | +0,020 +0,104 | 23,0 | 7,0  |     |
| <b>XSM-2023-10</b>  | 20,0 | +0,020 +0,104 | 23,0 | 10,0 |     |
| <b>XSM-2023-15</b>  | 20,0 | +0,020 +0,104 | 23,0 | 15,0 |     |
| <b>XSM-2023-20</b>  | 20,0 | +0,020 +0,104 | 23,0 | 20,0 |     |
| <b>XSM-2023-25</b>  | 20,0 | +0,020 +0,104 | 23,0 | 25,0 |     |
| <b>XSM-2023-30</b>  | 20,0 | +0,020 +0,104 | 23,0 | 30,0 |     |
| <b>XSM-2225-15</b>  | 22,0 | +0,020 +0,104 | 25,0 | 15,0 |     |
| <b>XSM-2225-20</b>  | 22,0 | +0,020 +0,104 | 25,0 | 20,0 |     |
| <b>XSM-2426-20</b>  | 24,0 | +0,020 +0,104 | 26,0 | 20,0 |     |
| <b>XSM-2427-20</b>  | 24,0 | +0,020 +0,104 | 27,0 | 20,0 |     |
| <b>XSM-2528-077</b> | 25,0 | +0,020 +0,104 | 28,0 | 7,7  |     |
| <b>XSM-2528-09</b>  | 25,0 | +0,020 +0,104 | 28,0 | 9,0  |     |
| <b>XSM-2528-12</b>  | 25,0 | +0,020 +0,104 | 28,0 | 12,0 |     |
| <b>XSM-2528-13</b>  | 25,0 | +0,020 +0,104 | 28,0 | 13,0 |     |
| <b>XSM-2528-15</b>  | 25,0 | +0,020 +0,104 | 28,0 | 15,0 |     |
| <b>XSM-2528-20</b>  | 25,0 | +0,020 +0,104 | 28,0 | 20,0 |     |
| <b>XSM-2528-30</b>  | 25,0 | +0,020 +0,104 | 28,0 | 30,0 |     |
| <b>XSM-2730-05</b>  | 27,0 | +0,020 +0,104 | 30,0 | 5,7  |     |
| <b>XSM-2832-20</b>  | 28,0 | +0,020 +0,104 | 32,0 | 20,0 |     |
| <b>XSM-2832-30</b>  | 28,0 | +0,020 +0,104 | 32,0 | 30,0 |     |

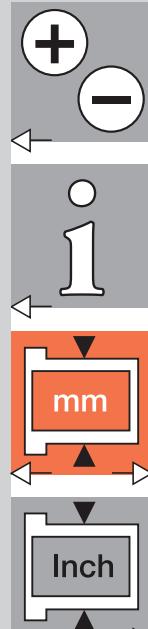
| Part Number        | d1   | d1 Tolerance* | d2   | b1   | h13 |
|--------------------|------|---------------|------|------|-----|
| <b>XSM-3034-20</b> | 30,0 | +0,020 +0,104 | 34,0 | 20,0 |     |
| <b>XSM-3034-25</b> | 30,0 | +0,020 +0,104 | 34,0 | 25,0 |     |
| <b>XSM-3034-30</b> | 30,0 | +0,020 +0,104 | 34,0 | 30,0 |     |
| <b>XSM-3034-40</b> | 30,0 | +0,020 +0,104 | 34,0 | 40,0 |     |
| <b>XSM-3236-25</b> | 32,0 | +0,025 +0,125 | 36,0 | 25,0 |     |
| <b>XSM-3236-30</b> | 32,0 | +0,025 +0,125 | 36,0 | 30,0 |     |
| <b>XSM-3539-20</b> | 35,0 | +0,025 +0,125 | 39,0 | 20,0 |     |
| <b>XSM-3539-30</b> | 35,0 | +0,025 +0,125 | 39,0 | 30,0 |     |
| <b>XSM-3539-40</b> | 35,0 | +0,025 +0,125 | 39,0 | 40,0 |     |
| <b>XSM-3539-50</b> | 35,0 | +0,025 +0,125 | 39,0 | 50,0 |     |
| <b>XSM-4044-30</b> | 40,0 | +0,025 +0,125 | 44,0 | 30,0 |     |
| <b>XSM-4044-40</b> | 40,0 | +0,025 +0,125 | 44,0 | 40,0 |     |
| <b>XSM-4044-50</b> | 40,0 | +0,025 +0,125 | 44,0 | 50,0 |     |
| <b>XSM-4550-50</b> | 45,0 | +0,025 +0,125 | 50,0 | 50,0 |     |
| <b>XSM-5055-30</b> | 50,0 | +0,025 +0,125 | 55,0 | 30,0 |     |
| <b>XSM-5055-40</b> | 50,0 | +0,025 +0,125 | 55,0 | 40,0 |     |
| <b>XSM-5055-60</b> | 50,0 | +0,025 +0,125 | 55,0 | 60,0 |     |
| <b>XSM-5560-50</b> | 55,0 | +0,030 +0,150 | 60,0 | 50,0 |     |
| <b>XSM-6065-45</b> | 60,0 | +0,030 +0,150 | 65,0 | 45,0 |     |
| <b>XSM-6065-60</b> | 60,0 | +0,030 +0,150 | 65,0 | 60,0 |     |
| <b>XSM-6570-50</b> | 65,0 | +0,030 +0,150 | 70,0 | 50,0 |     |
| <b>XSM-7075-70</b> | 70,0 | +0,030 +0,150 | 75,0 | 70,0 |     |

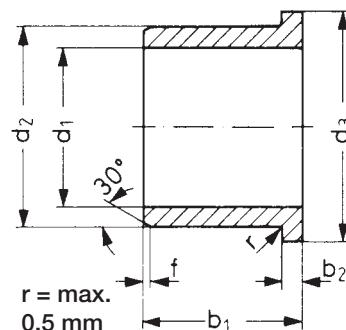
\*after pressfit. Testing methods ► page 1.35



The extreme resistance to chemicals was decisive for the application of iglidur® X bearings in flange ball valves.

Lifetime calculation, CAD files and much more support ► [www.igus.de/en/x](http://www.igus.de/en/x)





Data in mm

Structure – part no.

X F M-020406-03



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

Dimensions according to ISO 3547-1  
and special dimensions

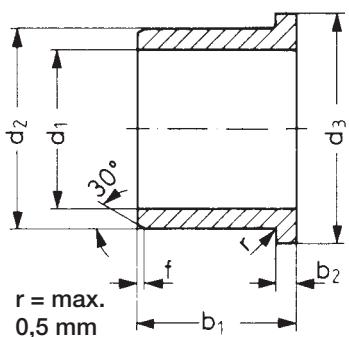
Chamfer in relation to the d1

| d1 [mm]: | Ø 1-6 | Ø 6-12 | Ø 12-30 | Ø > 30 |
|----------|-------|--------|---------|--------|
| f [mm]:  | 0,3   | 0,5    | 0,8     | 1,2    |

| Part Number    | d1   | d1 Tolerance* | d2   | d3   | b1   | b2   |
|----------------|------|---------------|------|------|------|------|
| 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  |
| 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  |

\*after pressfit. Testing methods ► page 1.35

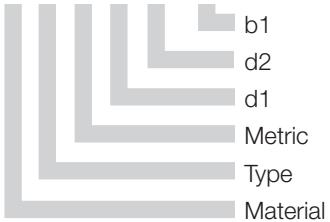
# iglidur® X | Flange Bearing | mm



Data in mm

Structure – part no.

**X F M-2023-16**



Dimensions according to ISO 3547-1  
and special dimensions

Chamfer in relation to the d1

|          |                 |                  |                   |                  |
|----------|-----------------|------------------|-------------------|------------------|
| d1 [mm]: | $\emptyset$ 1-6 | $\emptyset$ 6-12 | $\emptyset$ 12-30 | $\emptyset$ > 30 |
| f [mm]:  | 0,3             | 0,5              | 0,8               | 1,2              |

| Part Number          | d1   | d1 Tolerance* | d2   | d3   | b1   | b2  |
|----------------------|------|---------------|------|------|------|-----|
| <b>XFM-2023-16</b>   | 20,0 | +0,020 +0,104 | 23,0 | 30,0 | 16,5 | 1,5 |
| <b>XFM-2023-21</b>   | 20,0 | +0,020 +0,104 | 23,0 | 30,0 | 21,0 | 1,5 |
| <b>XFM-2528-13</b>   | 25,0 | +0,020 +0,104 | 28,0 | 35,0 | 13,5 | 1,5 |
| <b>XFM-2528-21</b>   | 25,0 | +0,020 +0,104 | 28,0 | 35,0 | 21,0 | 1,5 |
| <b>XFM-252833-08</b> | 25,0 | +0,020 +0,104 | 28,0 | 33,0 | 8,0  | 1,0 |
| <b>XFM-2730-20</b>   | 27,0 | +0,020 +0,104 | 30,0 | 38,0 | 20,0 | 1,5 |
| <b>XFM-3034-16</b>   | 30,0 | +0,020 +0,104 | 34,0 | 42,0 | 16,0 | 2,0 |
| <b>XFM-3034-26</b>   | 30,0 | +0,020 +0,104 | 34,0 | 42,0 | 26,0 | 2,0 |
| <b>XFM-3034-40</b>   | 30,0 | +0,020 +0,104 | 34,0 | 42,0 | 40,0 | 2,0 |
| <b>XFM-3236-15</b>   | 32,0 | +0,025 +0,125 | 36,0 | 45,0 | 15,0 | 2,0 |
| <b>XFM-3236-26</b>   | 32,0 | +0,025 +0,125 | 36,0 | 45,0 | 26,0 | 2,0 |
| <b>XFM-3539-26</b>   | 35,0 | +0,025 +0,125 | 39,0 | 47,0 | 26,0 | 2,0 |
| <b>XFM-4044-30</b>   | 40,0 | +0,025 +0,125 | 44,0 | 52,0 | 30,0 | 2,0 |
| <b>XFM-4044-40</b>   | 40,0 | +0,025 +0,125 | 44,0 | 52,0 | 40,0 | 2,0 |
| <b>XFM-4550-50</b>   | 45,0 | +0,025 +0,125 | 50,0 | 58,0 | 50,0 | 2,0 |
| <b>XFM-5055-40</b>   | 50,0 | +0,025 +0,125 | 55,0 | 63,0 | 40,0 | 2,0 |
| <b>XFM-6065-40</b>   | 60,0 | +0,030 +0,150 | 65,0 | 73,0 | 40,0 | 2,0 |
| <b>XFM-7075-40</b>   | 70,0 | +0,030 +0,150 | 75,0 | 83,0 | 40,0 | 2,0 |
| <b>XFM-7580-50</b>   | 75,0 | +0,030 +0,150 | 80,0 | 88,0 | 50,0 | 2,0 |

\*after pressfit. Testing methods ► page 1.35

iglidur® X - Type F

mm

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Fax +49 - 22 03 - 96 49-334

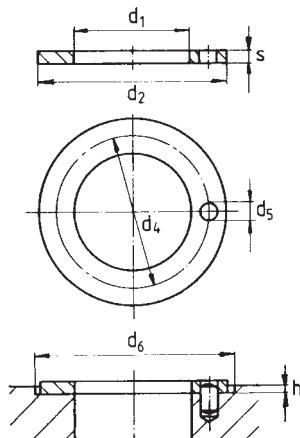




igus®

## iglidur® X | Thrust Washer | mm

mm  
iglidur® X - Type T



Data in mm

Structure – part no.

X T M-0620-015



|          |        |
|----------|--------|
| s        | d2     |
| d1       | Metrik |
| Type     |        |
| Material |        |

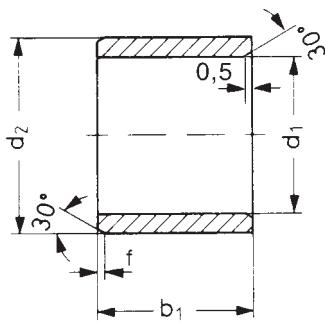
Dimensions according to ISO 3547-1  
and special dimensions

| Part Number  | d1    | d2    | s     | d4    | d5     | h    | d6    |
|--------------|-------|-------|-------|-------|--------|------|-------|
|              | +0,25 | -0,25 | -0,05 | -0,12 | +0,375 | +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

igus® GmbH  
51147 Cologne

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Data in inches

Structure – part no.

X S I -0203-03

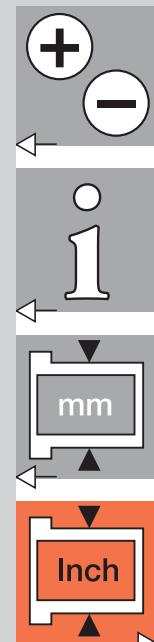


|    |    |    |          |
|----|----|----|----------|
| b1 | d2 | d1 | Inch     |
|    |    |    | Type     |
|    |    |    | Material |
|    |    |    |          |

iglidur® X – Type S

inch

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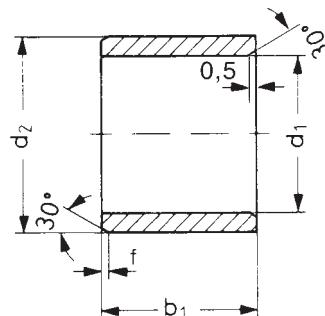
| Part Number | d1    | d2    | b1   | d1*   |       | Housing Bore |       | Shaft Size |       |
|-------------|-------|-------|------|-------|-------|--------------|-------|------------|-------|
|             |       |       |      | max.  | min.  | max.         | min.  | max.       | min.  |
| XSI-0203-03 | 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 |
| 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 |

\*after pressfit. Testing methods ► page 1.35



igus®

## iglidur® X | Sleeve Bearing | inch

inch  
iglidur® X - Type S

Data in inches

Structure – part no.

X S I -1214-08



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

Chamfer in relation to the d1

|          |                         |                          |                           |                  |
|----------|-------------------------|--------------------------|---------------------------|------------------|
| d1 [mm]: | $\emptyset 1\text{--}6$ | $\emptyset 6\text{--}12$ | $\emptyset 12\text{--}30$ | $\emptyset > 30$ |
| f [mm]:  | 0,3                     | 0,5                      | 0,8                       | 1,2              |

| Part Number | d1    | d2      | b1    | d1*    |        | Housing Bore |        | Shaft Size |        |
|-------------|-------|---------|-------|--------|--------|--------------|--------|------------|--------|
|             |       |         |       | max.   | min.   | max.         | min.   | max.       | min.   |
| 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 1.35

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51147 CologneInternet [www.igus.de](http://www.igus.de)  
E-mail [info@igus.de](mailto:info@igus.de)

## Order example

Our price breaks are defined by the order quantity.

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



Type S

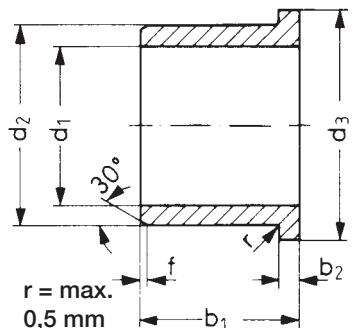


Type F



Type T

For the current prices please visit the igus®-Homepage [www.igus.de/en](http://www.igus.de/en)  
No minimum order quantities, no surcharges.



Data in inches

Structure – part no.

X F I -0203-03

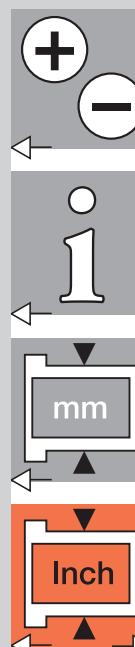


|          |
|----------|
| b1       |
| d2       |
| d1       |
| Inch     |
| Type     |
| Material |

iglidur® X – Type F

inch

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 Fax +49 - 22 03 - 96 49-334



| 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  |
| 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 |

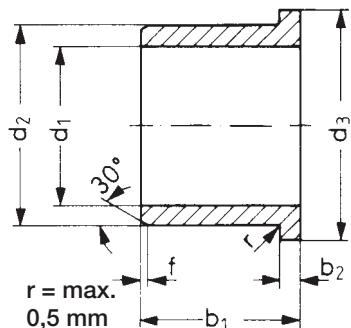
\*after pressfit. Testing methods ► page 1.35



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## iglidur® X | Flange Bearing | inch

inch  
iglidur® X - Type F



Data in inches

Structure – part no.

X F I -2022-20



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

Chamfer in relation to the d1

|          |                         |                          |                           |                  |
|----------|-------------------------|--------------------------|---------------------------|------------------|
| d1 [mm]: | $\emptyset 1\text{--}6$ | $\emptyset 6\text{--}12$ | $\emptyset 12\text{--}30$ | $\emptyset > 30$ |
| f [mm]:  | 0,3                     | 0,5                      | 0,8                       | 1,2              |

| Part Number | d1    | d2      | b1    | d3    | b2   | d1*    |        | Housing Bore |        | Shaft Size |        |
|-------------|-------|---------|-------|-------|------|--------|--------|--------------|--------|------------|--------|
|             |       |         |       |       |      | max.   | min.   | max.         | min.   | max.       | min.   |
| 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 |

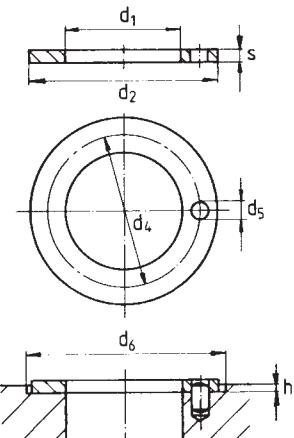
\*after pressfit. Testing methods ► page 1.35

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6.16

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Data in inches

Structure – part no.

X T I -0814-01



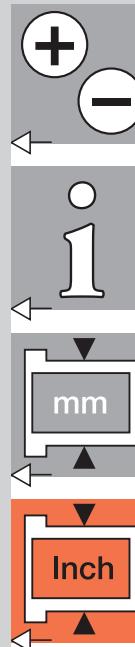
|  |          |
|--|----------|
|  | s        |
|  | d2       |
|  | d1       |
|  | Inch     |
|  | Type     |
|  | Material |

iglidur® X – Type T

inch

| Part Number | d1     | d2    | s      | d4     | d5          | h     | d6    |
|-------------|--------|-------|--------|--------|-------------|-------|-------|
|             | +,.010 | -.010 | -.0020 | ±,.005 | .015 +,.005 | +.008 | +.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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Fax +49 - 22 03 - 96 49-334





Dimensions sleeve Abmessungen zylindrisch [mm]

| Part No.       | d1    | d1 tolerance<br>d1-Toleranz | d2    | b1    |
|----------------|-------|-----------------------------|-------|-------|
| Art.-Nr.       |       |                             |       | h13   |
| A180SM-0810-15 | 8.0   | +0.025 +0.083               | 10.0  | 15.0  |
| A350SM-1416-12 | 14.0  | +0.016 +0.068               | 16.0  | 12.0  |
| C500SM-3034-30 | 30.0  | +0.020 +0.104               | 34.0  | 30.0  |
| F2SM-1214-15   | 12.0  | +0.032 +0.102               | 14.0  | 15.0  |
| F2SM-1618-20   | 16.0  | +0.032 +0.102               | 18.0  | 20.0  |
| GSM-0406-06    | 4.0   | +0.020 +0.068               | 6.0   | 6.0   |
| GSM-0810-36    | 8.0   | +0.025 +0.083               | 10.0  | 36.0  |
| GSM-120125-78  | 120.0 | +0.072 +0.212               | 125.0 | 78.0  |
| GSM-1214-45    | 12.0  | +0.032 +0.102               | 14.0  | 45.0  |
| GSM-1820-30    | 18.0  | +0.032 +0.102               | 20.0  | 30.0  |
| GSM-1822-15    | 18.0  | +0.032 +0.102               | 22.0  | 15.0  |
| GSM-2021-095   | 20.0  | +0.020 +0.072               | 21.0  | 9.5   |
| JSM-0814-08    | 8.0   | +0.040 +0.130               | 14.0  | 8.0   |
| JSM-1216-06    | 12.0  | +0.050 +0.0160              | 16.0  | 6.0   |
| JSM-1218-10    | 12.0  | +0.050 +0.0160              | 18.0  | 10.0  |
| JSM-1315-06    | 13.0  | +0.050 +0.0160              | 15.0  | 6.0   |
| JSM-1620-20    | 16.0  | +0.050 +0.0160              | 20.0  | 20.0  |
| JSM-6065-100   | 60.0  | +0.060 +0.180               | 65.0  | 100.0 |
| MSM-1620-10    | 16.0  | +0.050 +0.0160              | 20.0  | 10.0  |
| P210SM-1214-04 | 12.0  | +0.032 +0.102               | 14.0  | 4.0   |
| PSM-0608-05    | 6.0   | +0.020 +0.068               | 8.0   | 5.0   |
| PSM-0812-10    | 8.0   | +0.040 +0.130               | 12.0  | 10.0  |
| PSM-3236-15    | 32.0  | +0.050 +0.150               | 36.0  | 15.0  |
| Q2SM-1012-04   | 10.0  | +0.025 +0.083               | 12.0  | 4.0   |
| Q2SM-4246-52   | 42.0  | +0.050 +0.150               | 46.0  | 52.0  |
| X6SM-1416-22   | 14.0  | +0.016 +0.086               | 16.0  | 22.0  |
| X6SM-1618-12   | 16.0  | +0.016 +0.086               | 18.0  | 12.0  |
| X6SM-2023-15   | 20.0  | +0.020 +0.104               | 23.0  | 15.0  |
| ZSM-2225-35    | 22.0  | +0.020 +0.104               | 25.0  | 35.0  |
| ZSM-6065-25    | 60.0  | +0.030 +0.150               | 65.0  | 25.0  |
| ZSM-9095-100   | 90.0  | +0.036 +0.176               | 95.0  | 100.0 |

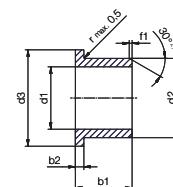
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Dimensions with flange Abmessungen mit Bund [mm]

| Part No.        | d1   | d1 tolerance<br>d1-Toleranz | d2   | d3   | b1    | b2  |
|-----------------|------|-----------------------------|------|------|-------|-----|
| Art.-Nr.        |      |                             |      |      | h13   |     |
| GFM-060710-06   | 6.0  | +0.010 +0.040               | 7.0  | 10.0 | 6.0   | 0.5 |
| GFM-0812-16     | 8.0  | +0.040 +0.130               | 12.0 | 16.0 | 16.0  | 2.0 |
| GFM-101115-03   | 10.0 | +0.013 +0.046               | 11.0 | 15.0 | 3.0   | 1.0 |
| GFM-1012-11     | 10.0 | +0.025 +0.083               | 12.0 | 18.0 | 11.0  | 1.0 |
| GFM-1012-25     | 10.0 | +0.025 +0.083               | 12.0 | 18.0 | 25.0  | 1.0 |
| GFM-1719-07     | 17.0 | +0.032 +0.102               | 19.0 | 25.0 | 7.0   | 1.0 |
| GFM-2527-12     | 25.0 | +0.040 +0.124               | 27.0 | 32.0 | 12.0  | 1.0 |
| GFM-2527-15     | 25.0 | +0.040 +0.124               | 27.0 | 32.0 | 15.0  | 1.0 |
| GFM-3034-12     | 30.0 | +0.040 +0.124               | 34.0 | 42.0 | 12.0  | 2.0 |
| GFM-303440-07   | 30.0 | +0.040 +0.124               | 34.0 | 40.0 | 7.0   | 2.0 |
| H1FM-0405-06    | 4.0  | +0.010 +0.058               | 5.5  | 9.5  | 6.0   | 0.8 |
| J350FM-6065-50  | 60.0 | +0.030 +0.150               | 65.0 | 73.0 | 50.0  | 2.0 |
| J3FM-081418-15  | 8.0  | +0.025 +0.083               | 14.0 | 18.0 | 15.0  | 2.0 |
| JFM-040810-15   | 4.0  | +0.020 +0.068               | 8.0  | 10.0 | 15.0  | 2.0 |
| JFM-0810-03     | 8.0  | +0.025 +0.083               | 10.0 | 15.0 | 3.0   | 1.0 |
| JFM-121419-06   | 12.0 | +0.032 +0.102               | 14.0 | 19.0 | 6.0   | 1.0 |
| JFM-121622-20   | 12.0 | +0.050 +0.0160              | 16.0 | 22.0 | 20.0  | 2.0 |
| JFM-2023-07     | 20.0 | +0.040 +0.124               | 23.0 | 30.0 | 7.0   | 1.5 |
| PFM-1214-08     | 12.0 | +0.032 +0.102               | 14.0 | 8.0  | 20.0  | 1.0 |
| PFM-1618-08     | 16.0 | +0.032 +0.102               | 18.0 | 8.0  | 24.0  | 1.0 |
| P210FM-0405-06  | 4.0  | +0.020 +0.068               | 5.5  | 9.5  | 6.0   | 0.8 |
| Q290FM-8085-100 | 80.0 | +0.060 +0.180               | 85.0 | 93.0 | 100.0 | 2.5 |
| Q2FM-101219-13  | 10.0 | +0.025 +0.083               | 12.0 | 19.0 | 13.0  | 1.0 |
| Q2FM-1013-05    | 10.0 | +0.025 +0.083               | 13.0 | 20.0 | 5.0   | 1.0 |
| Q2FM-2023-07    | 20.0 | +0.040 +0.124               | 23.0 | 30.0 | 7.0   | 1.5 |
| QFM-101215-04   | 10.0 | +0.025 +0.083               | 12.0 | 15.0 | 4.0   | 1.0 |
| QFM-121418-06   | 12.0 | +0.032 +0.102               | 14.0 | 18.0 | 6.0   | 1.0 |
| WFM-2023-08     | 20.0 | +0.040 +0.124               | 23.0 | 30.0 | 8.0   | 1.5 |
| XFM-1214-50     | 12.0 | +0.016 +0.086               | 14.0 | 50.0 | 20.0  | 1.0 |
| X6FM-0608-04    | 6.0  | +0.010 +0.058               | 8.0  | 12.0 | 4.0   | 1.0 |
| ZFM-1012-25     | 10.0 | +0.013 +0.071               | 12.0 | 18.0 | 25.0  | 1.0 |
| ZFM-2023-075    | 20.0 | +0.020 +0.104               | 23.0 | 30.0 | 7.5   | 1.5 |

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