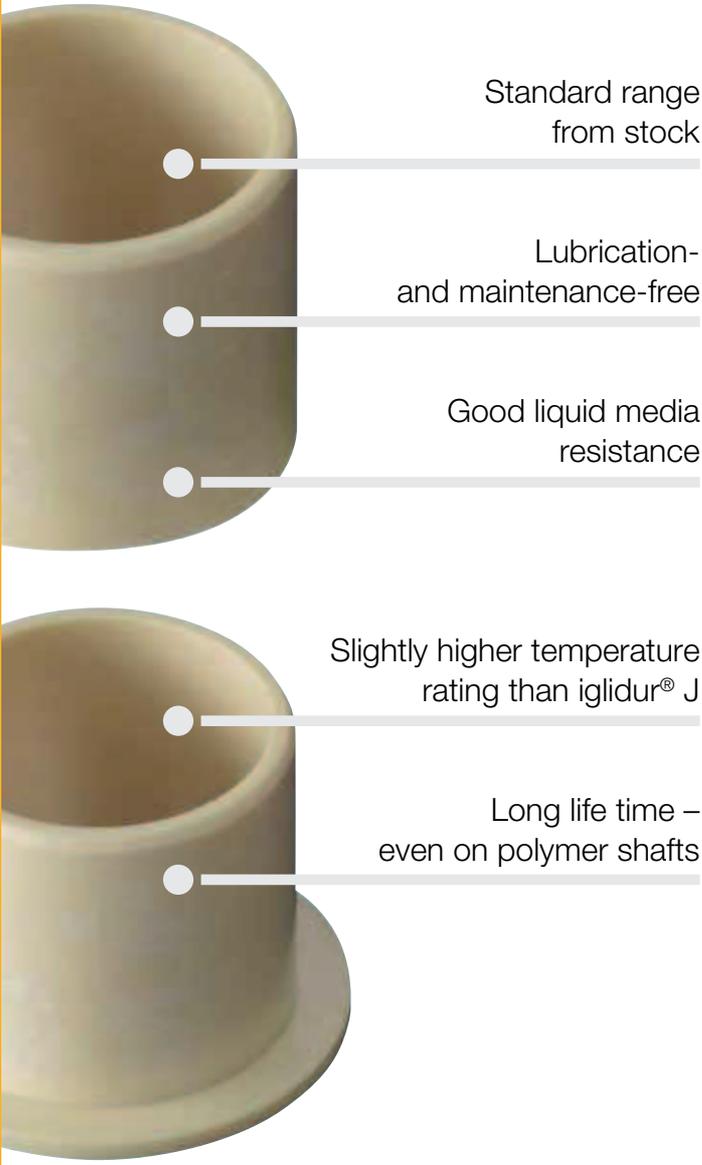


Suitable for plastic shafts. iglidur® J260 is a perfect material for long service life and best coefficient of friction with special operating conditions – first of all in contact with plastic shafts!



Standard range
from stock

Lubrication-
and maintenance-free

Good liquid media
resistance

Slightly higher temperature
rating than iglidur® J

Long life time –
even on polymer shafts



When to use it?

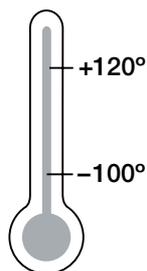
- When polymer shafts are used
- When the temperature rating of iglidur® J is not sufficient
- If bearings with low friction is required
- If good wear resistance is required at medium loads
- If good liquid media resistance is required



When not to use?

- When high pressures occur
▶ **iglidur® Z, page 299**
- When short term temperatures occur that are greater +120°C
▶ **iglidur® J350, page 229**
- When a low-cost bearing for occasional movements is necessary
▶ **iglidur® J, page 89**

Temperature



Product range

2 types
Ø 6–20 mm
more dimensions
on request



iglidur® J260 | Application Examples

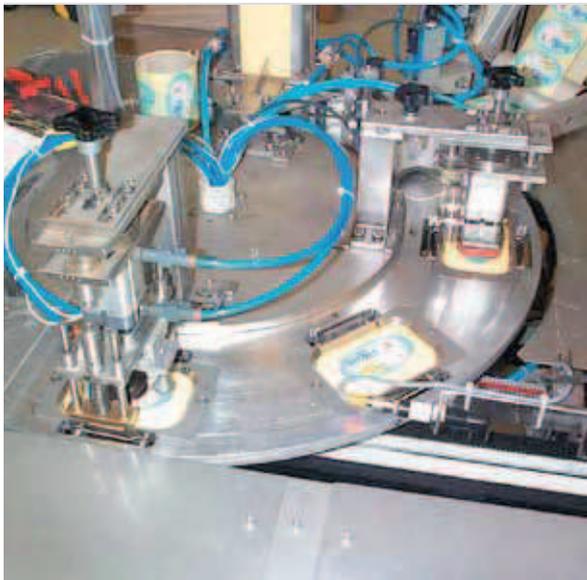


Typical sectors of industry and application areas

- Automation ● Machine design
- Test engineering and quality assurance
- Robotics ● Eletronics industry etc.

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

► www.igus.eu/eu/iglidur-applications



► www.igus.eu/packaging-machines



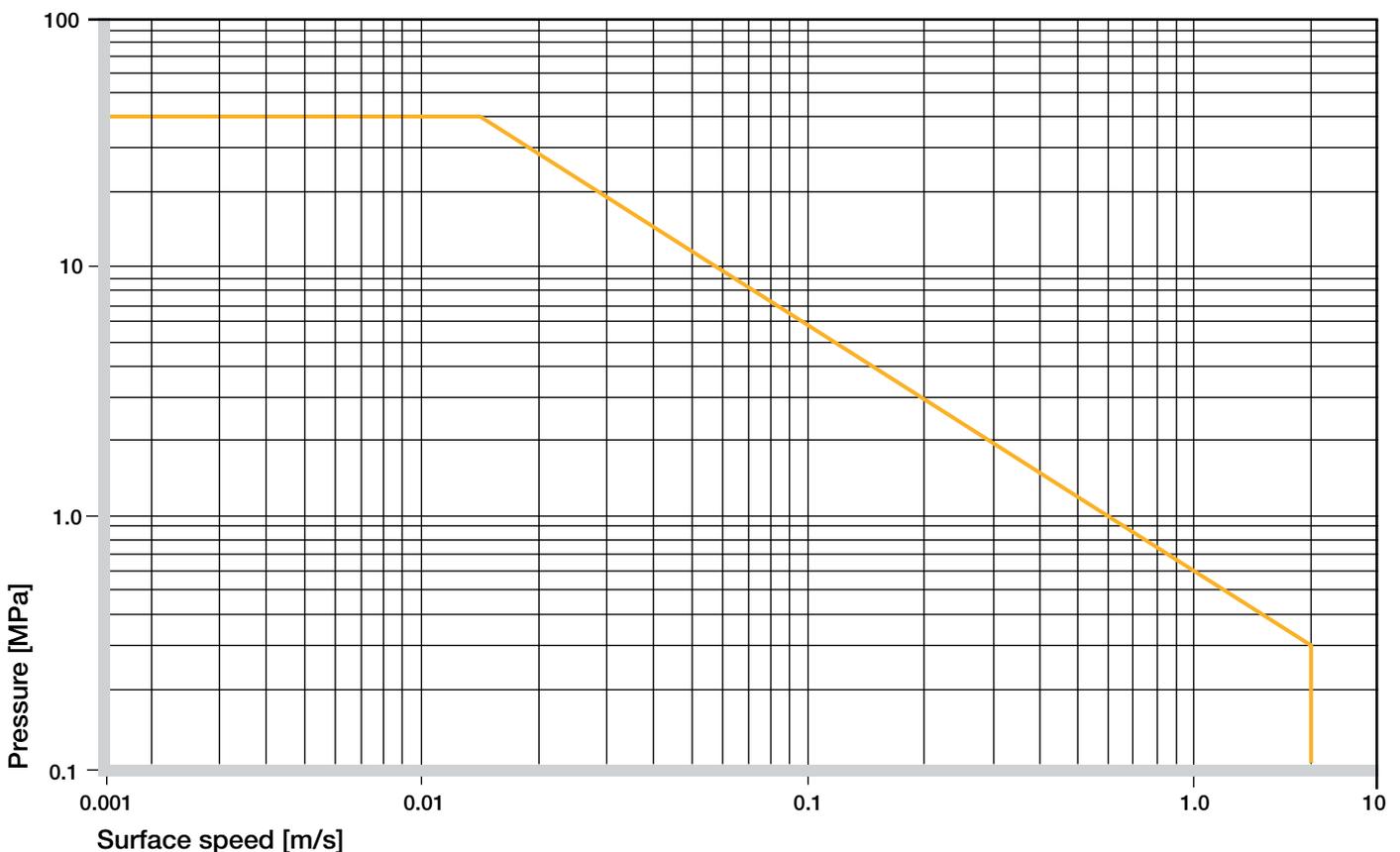
► www.igus.eu/printing-machines



► www.igus.eu/steering-systems

Material data			
General properties	Unit	iglidur® J260	Testing method
Density	g/cm ³	1.35	
Colour		yellow	
Max. moisture absorption at +23°C/50% r.h.	% weight	0.2	DIN 53495
Max. moisture absorption	% weight	0.4	
Coefficient of sliding friction, dynamic against steel	μ	0.06–0.20	
pv value, max. (dry)	MPa · m/s	0.35	
Mechanical properties			
Modulus of elasticity	MPa	2,200	DIN 53457
Tensile strength at +20°C	MPa	60	DIN 53452
Compressive strength	MPa	50	
Max. recommended surface pressure (+20°C)	MPa	40	
Shore D hardness		77	DIN 53505
Physical and thermal properties			
Max. long term application temperature	°C	+120	
Max. short term application temperature	°C	+140	
Min. application temperature	°C	-100	
Thermal conductivity	W/m · K	n.a.	ASTM C 177
Coefficient of thermal expansion (at +23°C)	K ⁻¹ · 10 ⁻⁵	13	DIN 53752
Electrical properties			
Specific volume resistance	Ωcm	> 10 ¹²	DIN IEC 93
Surface resistance	Ω	> 10 ¹⁰	DIN 53482

Table 01: Material data

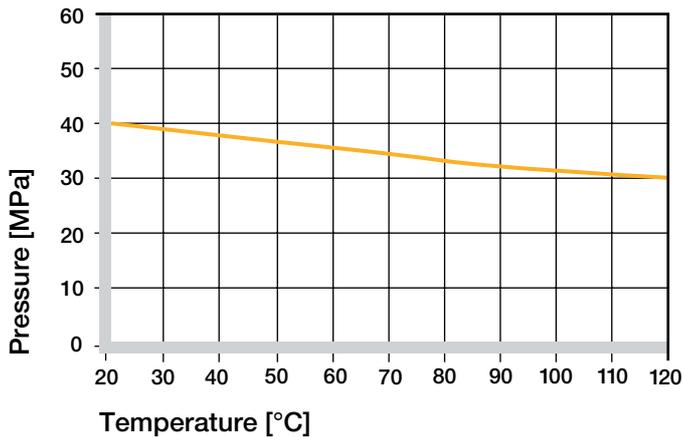


Graph 01: Permissible pv values for iglidur® J260 with a wall thickness of 1 mm dry running against a steel shaft at +20°C, mounted in a steel housing

iglidur® J260 | Technical Data

Mechanical Properties

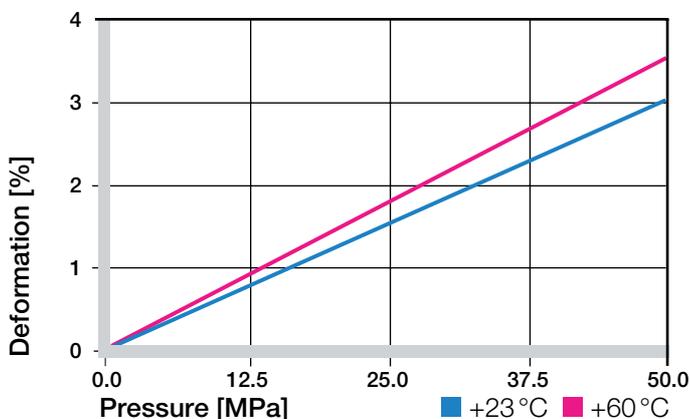
The recommended maximum surface pressure is a mechanical material parameter. No conclusions regarding the tribological properties can be drawn from this. With increasing temperatures, the compressive strength of iglidur® J260 plain bearings decreases. The Graph 02 shows this inverse relationship. However, at the longterm maximum temperature of +120°C the permissible surface pressure is almost 30 MPa.



Graph 02: Recommended maximum surface pressure as a function of temperature (40 MPa at +20 °C)

Graph 03 shows the elastic deformation of iglidur® J260 during radial loading. At the recommended maximum surface pressure of 40 MPa the deformation is less than 2,5%. The plastic deformation is minimal up to a pressure of approximately 100 MPa. However, it is also dependant on the cycle time.

► Surface Pressure, page 43



Graph 03: Deformation under pressure and temperature

Permissible Surface Speeds

iglidur® J260 has been developed for low to medium surface speeds.

The maximum values shown in table 02 can only be achieved at low pressures. At the given speeds, friction can cause a temperature increase to maximum permissible levels. In practice, though, this temperature level is rarely reached, due to varying application conditions.

► Surface Speed, page 45

m/s	Rotating	Oscillating	Linear
Continuous	1	0.7	3
Short term	2	1.4	4

Table 02: Maximum running speed

Temperatures

iglidur® J260 plain bearings can be used at temperatures from -100 °C up to +120 °C. The short term maximum temperature is +140 °C. The temperature in an application also has an effect on the bearing wear. With increasing temperatures, the wear increases and this effect is significant when temperatures rise over +80 °C.

► Application Temperatures, page 46

iglidur® J260	Application temperature
Minimum	-100 °C
Max. long term	+120 °C
Max. short term	+140 °C
Add. securing is required from	+80 °C

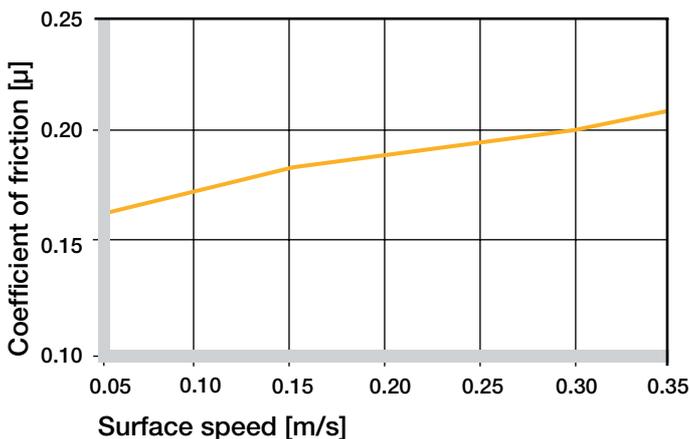
Table 03: Temperature limits

Friction and Wear

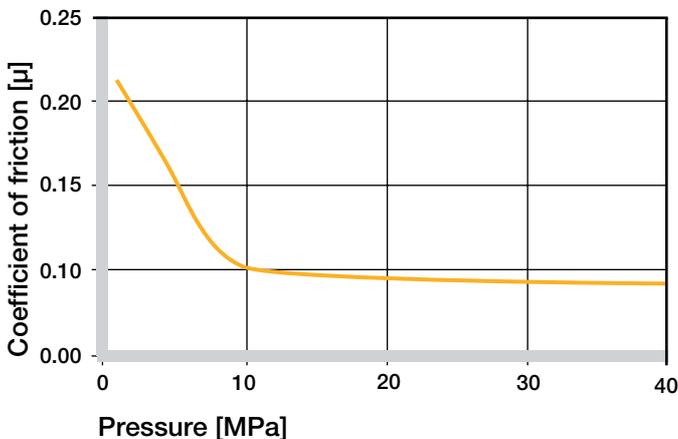
Similar to wear resistance, the coefficient of friction μ also changes with the load. The coefficient of friction decreases with increasing loads, whereas an increase in surface speed causes an increase of the coefficient of friction.

► Coefficients of Friction and Surfaces, **page 48**

► Wear Resistance, **page 49**



Graph 04: Coefficient of friction as a function of the running speed, $p = 0.75 \text{ MPa}$

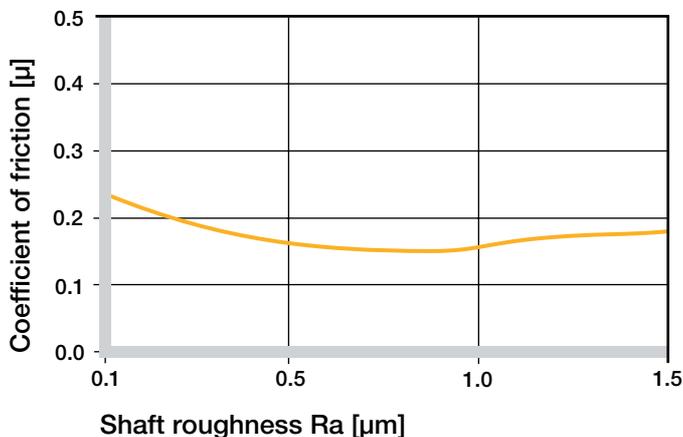


Graph 05: Coefficient of friction as a function of the pressure, $v = 0.01 \text{ m/s}$

Shaft Materials

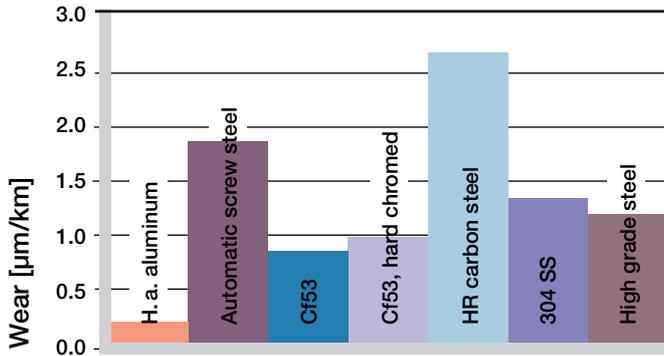
The friction and wear are also dependent, to a large degree, on the shaft material. Shafts that are too smooth, increase both the coefficient of friction and the wear of the bearing. For iglidur® J260 a ground surface with an average roughness $R_a = 0.8 \mu\text{m}$ is recommended (Graph 06). Graphs 07 to 09 shows results of testing different shaft materials with plain bearings made of iglidur® J260. In Graph 07 it shows that iglidur® J260 can be combined with various shaft materials. The hard anodized aluminum shafts came out best at low loads, but iglidur® J260 bearings show good service life even on simple Cf53, stainless steel and hard-chromed shafts. In this connection it is important to note that with increasing loads, the recommended hardness of the shaft increases. The “soft” shafts tend to wear more easily and thus increase the wear of the overall system, if the loads exceed 2 MPa. Graph 08 shows that with increasing load the wear on hard-chromed shafts and V2A shafts rises less strongly than on Cf53 and St37 shafts. The comparison of rotation and oscillating in Graph 09 makes it very clear where iglidur® J260 bearings are best used, especially in rotary operations.

► Shaft Materials, **page 51**

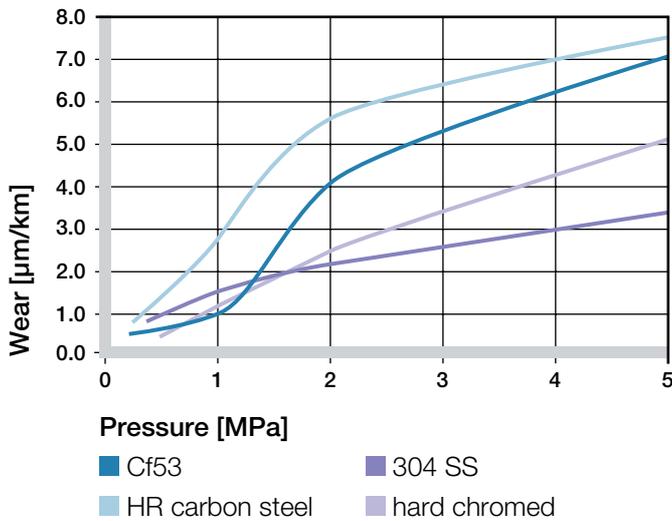


Graph 06: Coefficient of friction as function of the shaft surface (Cf53 hardened and ground steel)

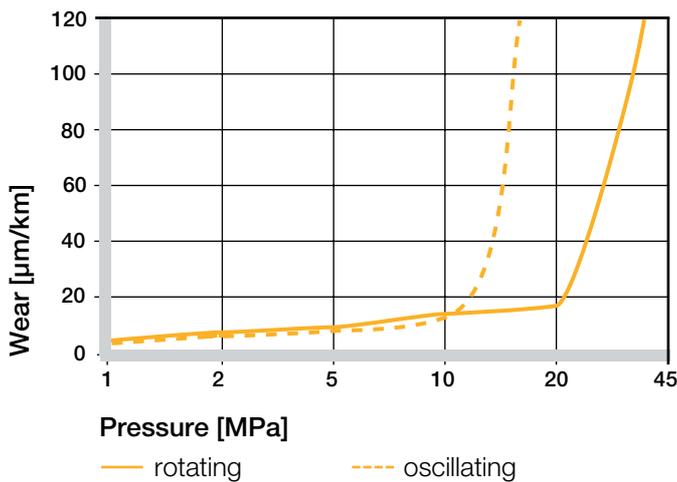
iglidur® J260 | Technical Data



Graph 07: Wear, rotating with different shaft materials, pressure $p = 1 \text{ MPa}$, $v = 0.3 \text{ m/s}$



Graph 08: Wear with different shaft materials in rotational operation, as a function of the pressure



Graph 09: Wear for oscillating and rotating applications with shaft material Cf53 hardened and ground steel, as a function of the pressure

iglidur® J260	Dry	Greases	Oil	Water
C. o. f. μ	0.08–0.15	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® J260 plain bearings are resistant to diluted alkalis, hydrocarbons and alcohols. The very low moisture absorption also permits use in wet or damp environments.

► Chemical Table, page 974

Medium	Resistance
Alcohol	+ to 0
Hydrocarbons	+
Greases, oils without additives	0 to –
Fuels	–
Diluted acids	–
Strong acids	–
Diluted alkalines	+ to 0
Strong alkalines	+ to 0

+ resistant 0 conditionally resistant – not resistant
All data given at room temperature [$+20 \text{ }^\circ\text{C}$]

Table 05: Chemical resistance

Radiation Resistance

Resistant to radiation up to an intensity of $3 \cdot 10^2 \text{ Gy}$.

UV Resistance

Partially resistant against UV rays.

Vacuum

In a vacuum, any moisture absorbed in the material would be outgassed. For this reason only dehumidified iglidur® J260 bearings are suitable for vacuum.

Electrical Properties

iglidur® J260 plain bearings are electrically insulating.

Volume resistance $> 10^{12} \Omega\text{cm}$

Surface resistance $> 10^{10} \Omega$

Moisture Absorption

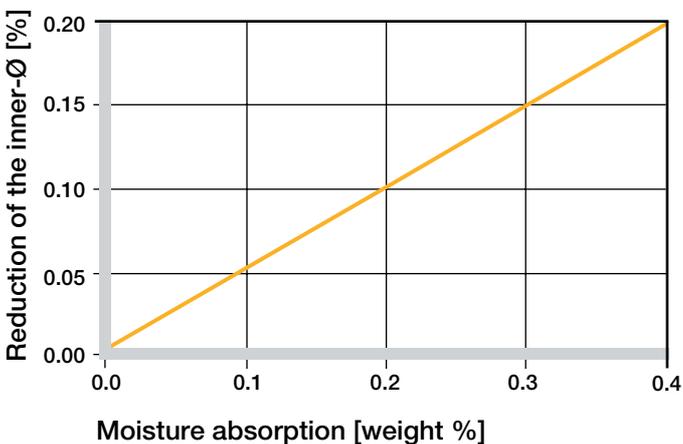
The moisture absorption of iglidur® J260 plain bearings is approximately 0.2 % in standard atmosphere. The saturation limit submerged in water is 0.4 %. These values are so low that design changes due to absorption can be ignored in most cases.

Maximum moisture absorption

At +23 °C/50 % r.h. 0.2 % weight

Max. moisture absorption 0.4 % weight

Table 06: Moisture absorption



Graph 10: Effect of moisture absorption on plain bearings

Installation Tolerances

iglidur® J260 plain bearings are standard bearings for shafts with h-tolerance (recommended minimum h9). 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 the specified tolerances.

► Testing Methods, **page 55**

Diameter d1 [mm]	Shaft h9 [mm]	iglidur® J260 E10 [mm]	Housing H7 [mm]
up to 3	0-0.025	+0.014 +0.054	0 +0.010
> 3 to 6	0-0.030	+0.020 +0.068	0 +0.012
> 6 to 10	0-0.036	+0.025 +0.083	0 +0.015
> 10 to 18	0-0.043	+0.032 +0.102	0 +0.018
> 18 to 30	0-0.052	+0.040 +0.124	0 +0.021
> 30 to 50	0-0.062	+0.050 +0.150	0 +0.025
> 50 to 80	0-0.074	+0.060 +0.180	0 +0.030
> 80 to 120	0-0.087	+0.072 +0.212	0 +0.035
> 120 to 180	0-0.100	+0.085 +0.245	0 +0.040

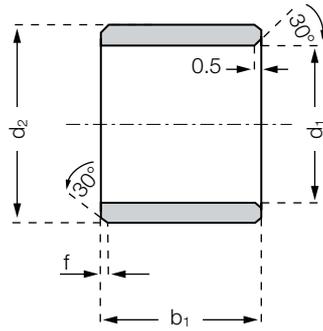
Table 07: Important tolerances for plain bearings according to ISO 3547-1 after pressfit

NEW in this catalog!

iglidur® J260 | Product Range

iglidur®
J260

Sleeve bearing



Order key

J260SM-0608-06



Length b1
Outer diameter d2
Inner diameter d1
Metric
Type (Form S)
Material iglidur® J260

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	Tolerance pressfitted in H7	d2	b1
J260SM-0608-06	6	+0.020 +0.068	8	6
J260SM-0810-10	8	+0.025 +0.083	10	10
J260SM-1012-10	10	+0.025 +0.083	12	10
J260SM-1214-12	12	+0.032 +0.102	14	12
J260SM-1214-15	12	+0.032 +0.102	14	15
J260SM-1618-15	16	+0.032 +0.102	18	15
J260SM-1820-12	18	+0.032 +0.102	20	12
J260SM-2023-20	20	+0.040 +0.124	23	20



delivery available
time from stock

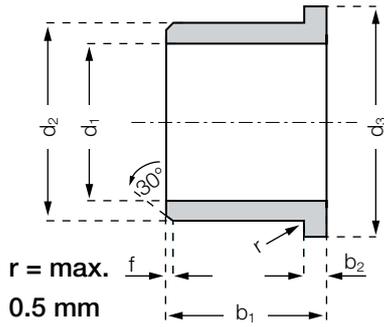


prices price list online
www.igus.eu/eu/j260



order part number
example J260SM-0608-06

Flange bearing



Order key

J260FM-0608-06



- Length b1
- Outer diameter d2
- Inner diameter d1
- Metric
- Type (Form F)
- Material iglidur® J260

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	Tolerance pressfitted in H7	d2	d3	b1	b2
J260FM-0608-06	6	+0.020 +0.068	8	12	6	1
J260FM-0810-10	8	+0.025 +0.083	10	15	10	1
J260FM-1012-10	10	+0.025 +0.083	12	18	10	1
J260FM-1214-12	12	+0.032 +0.102	14	20	12	1
J260FM-1618-17	16	+0.032 +0.102	18	24	17	1
J260FM-2023-21	20	+0.040 +0.124	23	30	21.5	1.5

delivery available from stock

prices price list online www.igus.eu/eu/j260

order part number example J260FM-0608-06