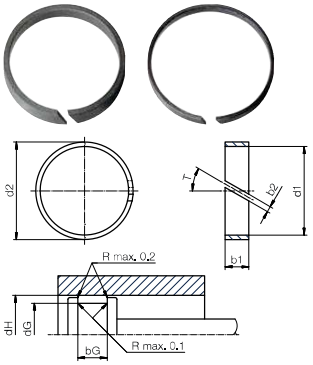
iglidur® guide rings | Product range

Guide rings as desired

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

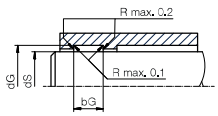


Installation recommendation for piston

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

Order key

Type	Dimensions [mm]				
☐ PRM-	☐☐	-	☐		
iglidur® required material	Guide ring	Metric	Required inner Ø	Required outer Ø	Required length



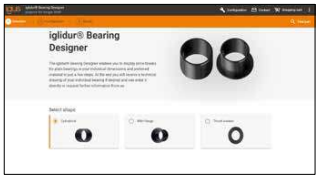
Installation recommendation for housing

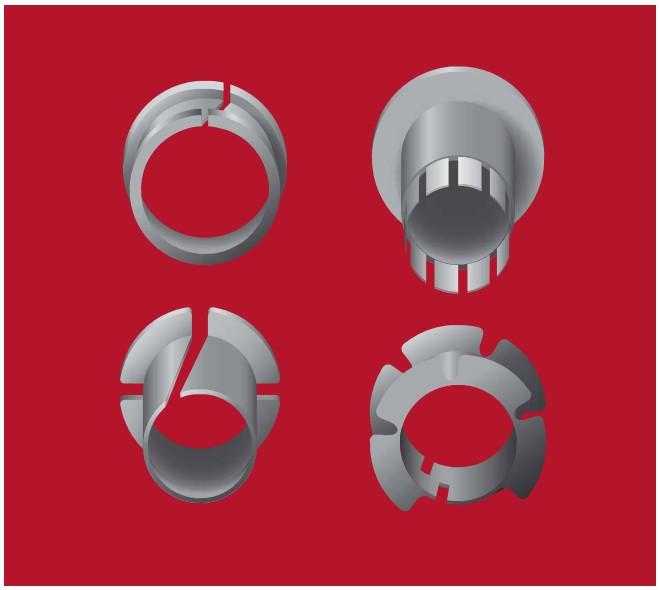
Dimensions [mm]	dS (h tolerance)	dG (H tolerance)	bG
Nominal size	dS = d1	dG = d2	bG = b1 +0.2

Our material recommendations for special requirements:
- iglidur® A181: FDA-compliant ▶ Page 401
- iglidur® J350: > +90°C ▶ Page 203
- iglidur® H1: Temperatures up to +200°C ▶ Page 345

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

iglidur® guide rings product finder
Material selection and individual dimensions made easy. With just a few clicks, the guide ring finder can find the optimum iglidur® material and select the appropriate dimensions from the standard catalogue range in order to define a guide ring in a customised width.
▶ **www.igus.eu/IBD**





iglidur® - clip bearings

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

iglidur® clip bearings | Advantages

Solutions for stamped sheet metal

iglidur® clip bearings:
Captive with double flange
▶ From page 652

iglidur® split bearings:
Easy assembly due to lateral slot, also with anti-rotation feature
▶ From page 656

iglidur® flanged bearings:
Press in and fold down
▶ From page 658

iglidur® double flange bearings:
Press and plug
▶ From page 659

Special solution
iglidur® Clip On:
Join and snap into place
▶ From page 660

iglidur® clip bearings for fitting shafts

iglidur® clip bearings are designed specifically for fitting shafts through sheet metal. For this reason, the bearings have flanges located on both ends. The plain bearings are secured in the sheet metal plate on both sides after fitting.
The clip bearings have an angled slot which allows them to be fitted from one side. After fitting, the bearing expands and forms a lining for the hole in the metal plate. The shaft prevents the clip bearing from falling out the housing. Even during linear movement, the plain bearing cannot slide out.
- Lateral slot for easy installation
- Lubrication and maintenance-free
- Good adaptability to punched holes
- Abrasion-resistant
- Smooth operation
- For rotating and linear movements

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

Available from stock
Detailed information about delivery time online.

Max. +80°C
min. -40°C

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

Imperial dimensions available
▶ From page 1150

iglidur® clip bearings | Technical data

Material properties

General properties	Unit	iglidur® M250	iglidur® K230	iglidur® K250	iglidur® A230	Testing method
Density	g/cm³	1.14	1.36	1.19	1.20	
Colour		dark grey	dark grey	black	blue	
Max. moisture absorption at +23°C and 50% r.h.	% weight	1.4	0.8	0.3	0.3	DIN 53495
Max. moisture absorption	% weight	7.6	2.9	3.6	2.5	
Coefficient of sliding friction, dynamic against steel	μ	0.18 - 0.40	–	–	–	
pv value, max. (dry)	MPa · m/s	0.12	–	–	–	
Mechanical properties						
Flexural modulus	MPa	2,700	1,600	2,975	1,530	DIN 53457
Flexural strength at +20°C	MPa	112	40	79	53	DIN 53452
Compressive strength	MPa	52	40	–	–	
Max. recommended surface pressure (+20°C)	MPa	20	38	35	18	
Shore D hardness		79	68	70	73	DIN 53505
Physical and thermal properties						
Max. continuous application temperature	°C	+80	+110	+90	+110	
Max. short-term application temperature	°C	+170	+130	+110	+130	
Min. application temperature	°C	-40	-30	-50	-30	
Thermal conductivity	W/m · K	0.24	0.25	0.25	0.25	ASTM C 177
Coefficient of thermal expansion (at +23°C)	$K^{-1} \cdot 10^{-5}$	10	11	–	13	DIN 53752
Electrical properties						
Specific volume resistance	Ωcm	> 10^{13}	> 10^{12}	> 10^{12}	> 10^{12}	DIN IEC 93
Surface resistance	Ω	> 10^{11}	> 10^{12}	> 10^{12}	> 10^{12}	DIN 53482

Table 01: Material properties table

iglidur® clip bearings | Product overview

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

▶ From page 652

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

▶ From page 656

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

▶ From page 658

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

▶ From page 659

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

▶ From page 660

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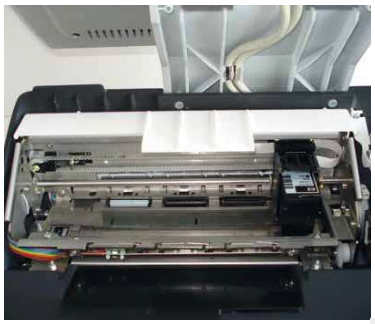
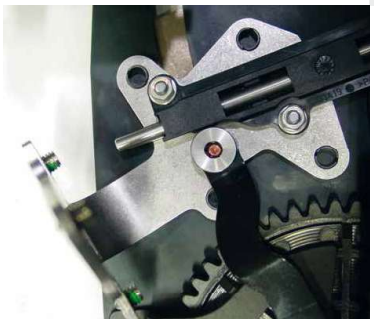
iglidur® clip bearings | Application examples



Prescription printer: precise and effective
This prescription printer for pharmacies fits into the limited space in a cash register. Absolute accuracy is required for a precise typeface. The ink cartridge holder slides on the metal guide rod, using two iglidur® J plain bearings, and two additional guides on the sheet metal edge help keep the application parallel. The guide rod was mounted with igus® MCM clip bearings.

Sweet nectar with clip bearings
The honeycombs are pierced with needles so that the honey can flow out of them when they are spun around. To ensure that the needles hit all the combs, the frame must shift a few millimetres linearly. Easy-to-clean, cost-effective iglidur® clip bearings and iglidur® fixed flange bearings are used for this.



Weatherproof plain bearings for radiator mascot
By using wear-resistant iglidur® clip bearings, the lowering mechanism for radiator mascots on luxury cars could be improved. Their advantages are the consistent flange thickness and the high wear resistance in various environmental conditions such as cold, heat or fine sand.

iglidur® clip bearings | Technical data

General properties

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

Mechanical properties

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

▶ iglidur® M250, Page 111

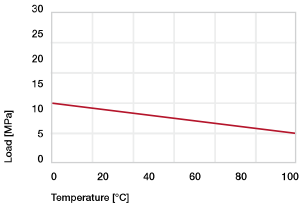


Diagram 01: Maximum recommended surface pressure as a function of temperature (20MPa at +20°C)

Permissible surface speeds

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

▶ Surface speed, page 48

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

Table 01: Maximum surface speeds

Temperatures

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

▶ Application temperatures, page 53

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

Table 02: temperature limits

iglidur® clip bearings | Technical data

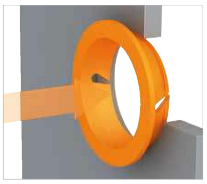
iglidur® MCM

Assembly

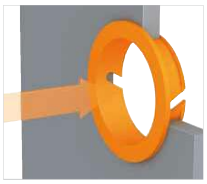
For installation, the plain bearings are pressed together on the side with the large flange. The angled slot makes the bearing spiral shaped so that it can be placed easily into the metal plate. The slot also compensates for expansions of the circumference. In this way, a tight clearance is possible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

Fitting:

Simple axial press in



Axial safety through the second flange



Easy installation via clip on mechanism

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

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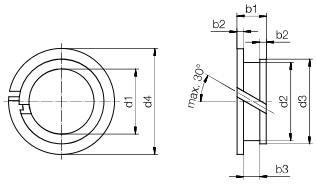
iglidur® clip bearings | Product range

Clip bearings for sheet metals - captive with double flange

Image exemplary



Order key

Type	Dimensions [mm]
M C	M-03-02

iglidur® material | Form | Metric | Inner Ø | Metal sheet thickness

Material:
iglidur® M250 ▶ Page 111

Imperial dimensions available
▶ From page 1149

Dimensions [mm]

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

d1 D11[7]	d2	d3	d4	b1 +0.20	b2 -0.10	b3	Part No.
10	11.6	12.4	15.0	4.6	0.8	3.0	MCM-10-03
10	11.6	12.4	15	5.6	0.8	4.0	MCM-10-04
10	11.6	12.4	15	9.6	0.8	8.0	MCM-10-08
12	13.6	14.4	17	3.6	0.8	2.0	MCM-12-02
12	13.6	14.4	17	4.35	0.8	2.75	MCM-12-025
12	13.6	14.4	17	4.6	0.8	3.0	MCM-12-03
12	13.6	14.4	17	5.1	0.8	3.5	MCM-12-035
12	13.6	14.4	17	5.6	0.8	4.0	MCM-12-04
12	13.6	14.4	17	6.4	0.8	4.8	MCM-12-045
14	15.6	16.4	19	4.6	0.8	3.0	MCM-14-03
16	17.6	18.4	21	3.6	0.8	2.0	MCM-16-02
16	17.6	18.4	21	4.6	0.8	3.0	MCM-16-03
18	20.0	21.0	23	4.0	1.0	2.4	MCM-18-02
18	20.0	21.0	23	5.0	1.0	3.0	MCM-18-03
20	22.0	23.0	25	5.0	1.0	3.0	MCM-20-03
25	27.0	28.0	30	5.0	1.0	3.0	MCM-25-03
25	27.0	28.0	30	8.0	1.0	6.0	MCM-25-06

[7] d1 value is measured with a plug gauge after fitting into a reference housing d2 (+0.005). Please see D11 tolerances table ▶ Page 62

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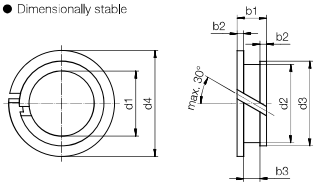
iglidur® clip bearings | Product range New

Clip bearings for e-coating processes

- High temperature resistance
- e-coating
- Dimensionally stable



Order key

Type	Dimensions [mm]
K250 C	M-05-02

iglidur® material | Form | Metric | Inner Ø | Metal sheet thickness

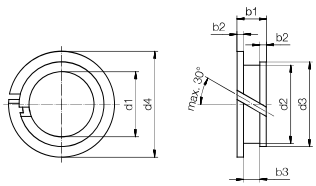
Material:
iglidur® K250 ▶ Page 1188

Dimensions [mm]

d1	d2 D11	d3	d4	b2	b1	Part No.
5	6.2	6.8	8.0	0.6	3.2	K250CM-05-02 New
6	7.2	7.8	11.0	0.6	4.2	K250CM-06-03 New
8	9.6	10.4	13.0	0.8	4.6	K250CM-08-03 New
10	11.6	12.4	15.0	0.8	4.6	K250CM-10-03 New
12	13.6	14.4	17.0	0.8	4.6	K250CM-12-03 New

iglidur® clip bearings | Product range New

Clip bearings for sheet metal in the food industry



Order key

Type	Dimensions [mm]
A230 C	M-05-02

iglidur® material | Form | Metric | Inner Ø | Metal sheet thickness

Material:
iglidur® A230 ▶ Page 1188

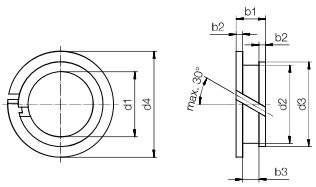
- FDA and EU10/2011 compliant
- Visually detectable
- Low moisture absorption
- Suitable for use in the food industry and medical technology

Dimensions [mm]

d1	d2 D11	d3	d4	b2	b1	Part No.
5	6.2	6.8	8.0	0.6	3.2	A230CM-05-02 New
6	7.2	7.8	11.0	0.6	4.2	A230CM-06-03 New
8	9.6	10.4	13.0	0.8	4.6	A230CM-08-03 New
10	11.6	12.4	15.0	0.8	4.6	A230CM-10-03 New
12	13.6	14.4	17.0	0.8	4.6	A230CM-12-03 New

iglidur® clip bearings | Product range

Clip bearing with low coefficient of friction and wear



Order key

Type	Dimensions [mm]
K230 C	M-05-02

iglidur® material | Form | Metric | Inner Ø | Metal sheet thickness

Material:
iglidur® K230 ▶ Page 1187

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

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

Dimensions [mm]

d1	d2 D11	d3	d4	b2	b1	Part No.
5	6.2	6.8	8.0	0.6	3.2	K230CM-05-02 New
6	7.2	7.8	11.0	0.6	4.2	K230CM-06-03 New
8	9.6	10.4	13.0	0.8	4.6	K230CM-08-03 New
10	11.6	12.4	15.0	0.8	4.6	K230CM-10-03 New
12	13.6	14.4	17.0	0.8	4.6	K230CM-12-03 New

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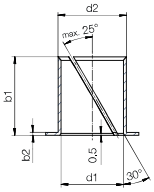
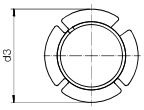
iglidur® clip bearings | Product range

Split bearings (clips2) - easy assembly

Image exemplary





r = max. 0.5mm

Order key

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

iglidur® material | Form | Metric | Inner Ø | Total length

Material:
iglidur® M250 ▶ Page 111
With anti-rotation feature ▶ Page 657

Imperial dimensions available
▶ From page 1150

Dimensions [mm]

d1	d1 tolerance[7]	d2[9]	d3 ±0,40	b1 -0,40	b2 -0,13	Part No.
4	+0.025 +0.075	5.2	7.0	4.0	0.6	MYM-04-04
5	+0.025 +0.075	6.2	8.0	5.0	0.6	MYM-05-05
6	+0.025 +0.075	7.2	9.5	6.0	0.6	MYM-06-06
8	+0.025 +0.075	9.6	12.0	8.0	0.8	MYM-08-08
10	+0.025 +0.075	11.6	15.0	10.0	0.8	MYM-10-10
12	+0.025 +0.075	13.6	18.0	12.0	0.8	MYM-12-12
14	+0.025 +0.075	15.6	21.0	14.0	0.8	MYM-14-14
16	+0.025 +0.075	17.6	24.0	16.0	0.8	MYM-16-16
20	+0.025 +0.075	21.6	30.0	16.0	0.8	MYM-20-16
20	+0.025 +0.075	21.6	30.0	20.0	0.8	MYM-20-20
25	+0.025 +0.075	27.4	37.5	25.0	1.2	MYM-25-25

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

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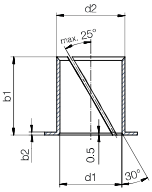
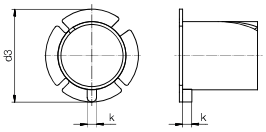
iglidur® clip bearings | Product range

Split bearings with anti-rotation feature

Image exemplary





Order key

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

iglidur® material | Form | Metric | Inner Ø | Total length | Anti-rotation feature

Material:
iglidur® M250 ▶ Page 111

Imperial dimensions available
▶ From page 1150

Dimensions [mm]

d1	d1 tolerance[8]	d2[9]	d3 ±0,40	b1 -0,40	b2 -0,13	k	Part No.
4	+0.025 +0.075	5.20	7.00	4.00	0.60	1.0	MYM-04-04-K
5	+0.025 +0.075	6.20	8.00	5.00	0.60	1.0	MYM-05-05-K
6	+0.025 +0.075	7.20	9.50	6.00	0.60	1.5	MYM-06-06-K
10	+0.025 +0.075	11.60	15.00	10.00	0.80	2.0	MYM-10-10-K
14	+0.025 +0.075	15.60	21.00	14.00	0.80	3.0	MYM-14-14-K

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

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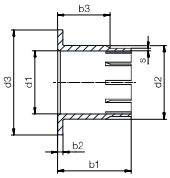
Flanged bearings - press in and fold down



Order key

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

iglidur® material | Form | Metric | Inner Ø | Outer Ø | Metal sheet thickness

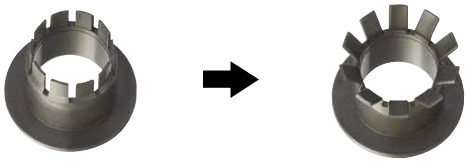
Material:
iglidur® M250 ▶ Page 111

Sample dimension [mm]

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

[3] After press-fit; testing methods ▶ Page 61

Fitting:



Press-fit, fold down, ready: axial load on both sides

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

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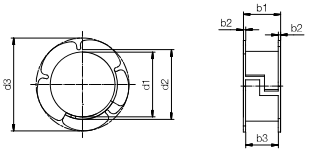
Double flange bearings - press and plug



Order key

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

iglidur® material | Form | Metric | Inner Ø | Outer Ø | Metal sheet thickness

Material:
iglidur® M250 ▶ Page 111

Sample dimension [mm]

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

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

Fitting:

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

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