

4. xiros[®]...



Deep-Groove Ball Bearings, Axial, Multi-Axis, Shields and More...

...plastics

Exciting applications can be viewed online at ► www.igus.eu/xiros-applications

Typical sectors of industry and application areas

- Packaging ● Textile industry
- Test engineering & Quality assurance
- Optical industry ● Model making
- Medical etc.

GUIDE ROLLERS

The xiros® polymer ball bearings are 50 % lower in price than the bearings previously used here





THERMOFORMING MACHINE

In this Thermofforming machine for coffee-cream portion packs, xiros plastic ball bearings are used for their high chemical resistance. (frischli Milchwerke GmbH, Germany)



INDEXING TABLE

This indexing table is used to test metal balls for cracks and dimensional accuracy. xiros® polymer ball bearings are used here as wheels for the trolleys.



WET FILM THICKNESS GAGE

This precision tester for accurate and rapid measurement of all liquid paint, coatings, oil coatings and adhesives is equipped with a durable and solvent resistant xiros® B180 ball bearing.



FILM GUIDE ROLLERS

There is no contamination of the films through lubricants, due to the use of maintenance-free xiros® flange bearings.



STUTT GART ADLER

The use of a remote-controlled model aircraft is being tested and demonstrated as a remote sensing platform at the Institute of Space Systems (IRS). Due to the extreme weight requirements, the xiros® flange bearings are used here.



SMALL ROBOT

The wheels of this little low cost robot are two xiros B180 plastic ball bearings. These ensure an totally maintenance-free, lubricant-free and easy function.

xirodur® B180 Radial Deep-Groove Ball bearings



Made of xirodur® B180
PA cage,
glass balls
▶ page 686



Made of xirodur® B180
PA cage,
stainless steel balls
▶ page 686



Made of xirodur® B180
with shield
PA cage/glass balls
▶ page 688



Made of xirodur® B180
with shield
PA cage/stainless steel balls
▶ page 688

xirodur® A500 Radial Deep-Groove Ball bearings



Made of xirodur® A500
PEEK cage,
stainless steel balls
▶ page 689



Made of xirodur® A500
PEEK cage,
glass balls
▶ page 690



Made of xirodur® A500
PA cage,
stainless steel balls
▶ page 691



Made of xirodur® A500
PEEK cage,
PAI balls
▶ page 692

xirodur® C160 Radial Deep-Groove Ball bearings

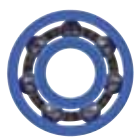


Made of xirodur® C160
PP cage
Glass balls
▶ page 693



Made of xirodur® C160
PP cage
Stainless steel balls
▶ page 693

xirodur® D180 and F180 Radial Deep-Groove Ball Bearings



New!

Made of xirodur® D180,
PA Cage, glass balls
▶ page 694



New!

Made of xirodur® D180,
PA Cage, stainless steel balls
▶ page 694



New!

Made of xirodur® F180,
PA Cage, stainless steel balls
▶ page 695

xiros® Axial Ball Bearing, Polymer Ball Transfer Unit, Multi-Axis Bearing, Slewing Ring Bearing



Axial Ball Bearing
Made of xirodur® B180
glass/stainless steel balls
▶ page 696



Polymer Ball Transfer Unit
Made of xirodur® B180
POM balls
▶ page 697



New!

Clamp Ring
Made of stainless steel, for
xiros® polymer ball transfer
units
▶ page 697



Multi-Axis Plastic Bearing
Made of xirodur® B180
PP balls
▶ page 698



**Slewing Ring
Ball Bearing**
Glass/stainless
steel balls
▶ page 699

xiros® Pillow Block and Flange Bearings



ESTM Pillow Block
Rigid version
glass/stainless steel balls
▶ page 700



ESTM Pillow Block
Pivoting version
glass/stainless steel balls
▶ page 701



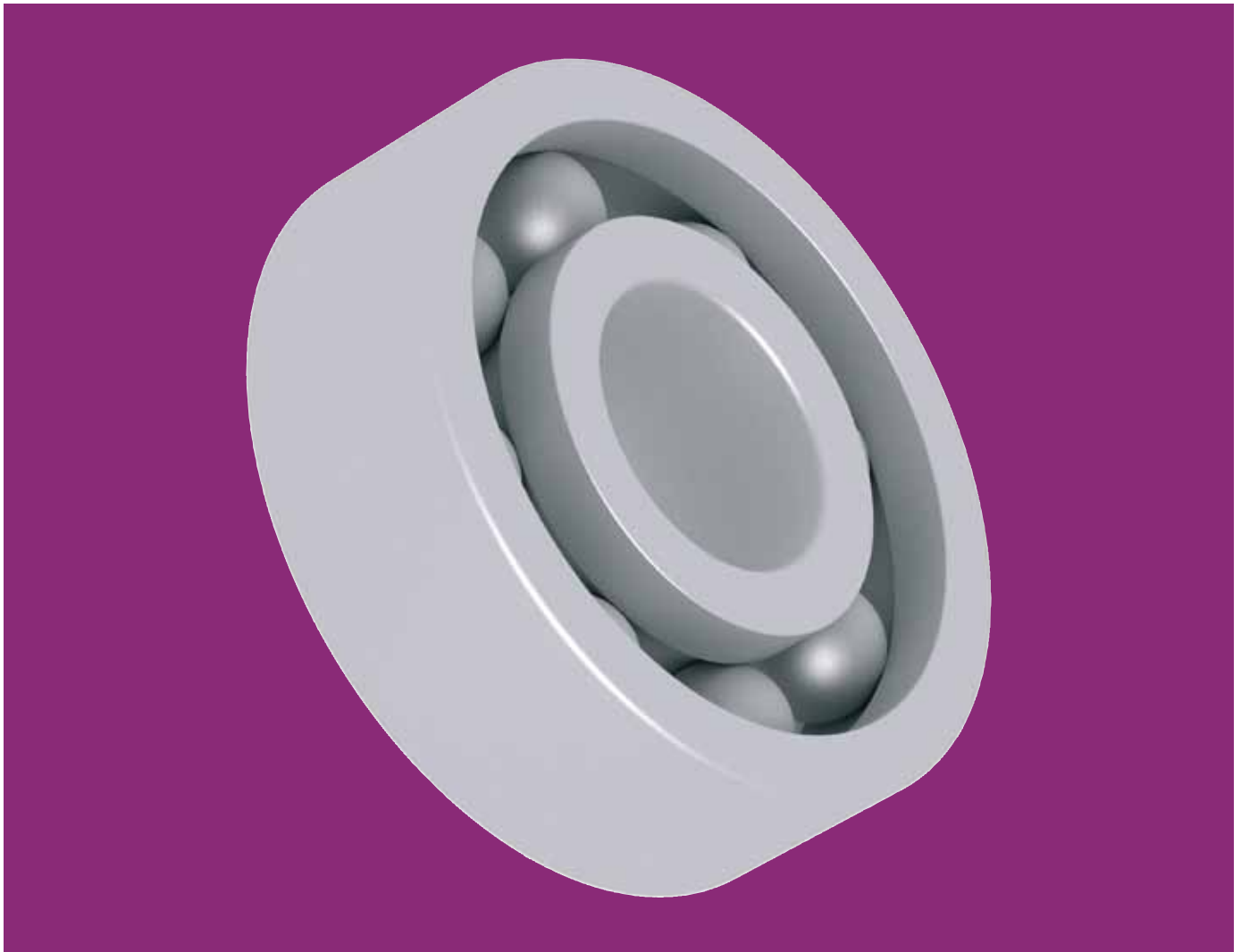
EFSM Flange Bearing
4-holes flange bearing
glass/stainless steel balls
▶ page 702



EFOM Flange Bearing
2-holes flange bearing
glass/stainless steel balls
▶ page 703

Material data, chemical resistant table and tolerance recommendation ▶ page 684

678 Lifetime calculation, 3D-CAD data, PDF downloads ▶ www.igus.eu/eu/xiros



xiros® Polymer Ball Bearings – for extreme applications



Lubrication- and maintenance-free

High corrosion resistance

For temperatures up to +150 °C

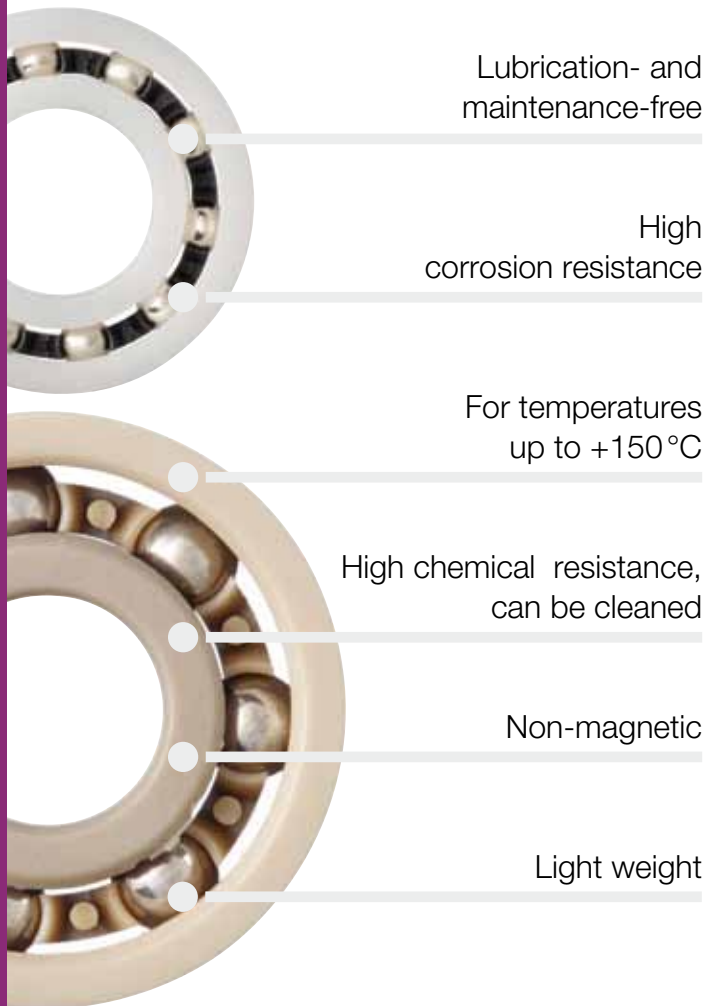
High chemical resistance can be cleaned

Non-magnetic

Low weight

xiros® Polymer Ball Bearings

xiros® polymer ball bearings revolutionize the market. Due to the maintenance-free dry-running and the use of xirodur® high performance polymers successfully solve many applications where conventional metal ball bearings are not effective.



Lubrication- and maintenance-free

High corrosion resistance

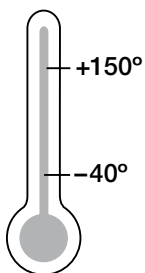
For temperatures up to +150 °C

High chemical resistance, can be cleaned

Non-magnetic

Light weight

Temperature



Product range

5 materials
10 product types



When to use xiros® polymer ball bearings?

- If you need lubrication-free ball bearings
- For maintenance-free dry-running
- At rotational speeds that exceed the limits of a plain bearing
- If corrosion resistance is required
- If temperatures are reached up to +150 °C (depending on type)
- If chemical resistance and cleaning is necessary
- If non-magnetics ball bearings are to be used
- Low weight requirement
- When they need for FDA compliance



When not to use xiros® polymer ball bearings?

- At very high loads or speeds
- Just for a cost down on traditional metal ball bearings
- At very high precision requirements (clearance)



General order key for radial ball bearings

BB-623-A500-10-ES

Ball material

GL = glass
ES = stainless steel
PAI

Cage material

10 = PA
20 = PP
70 = PEEK

Race material

xirodur® A500, xirodur® B180,
xirodur® C160, xirodur® D180, xirodur® F180

Dimensions acc. to DIN 625-1

Ball bearing



xiros® Polymer Ball Bearings

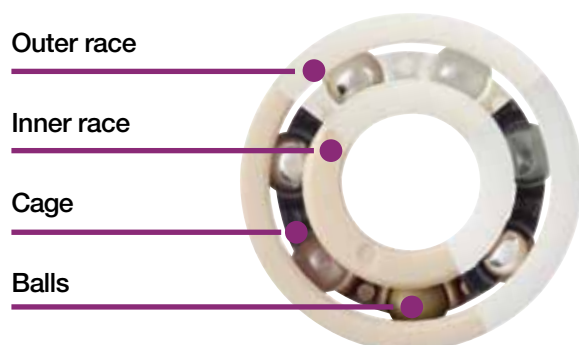
The product range of xiros® polymer ball bearing comprises a variety of different product groups. All have in common that they do not require any additional lubrication. This provides significant advantages in areas where lubricants can be washed out, or could decompose due to the operational environment. Other advantages are (depending on the design):

- Maintenance-free
- Light weight
- Free from metal (due to the use of glass and plastic balls)
- Non-magnetic
- Chemical resistant
- Corrosion resistant
- Electrically insulating
- FDA-compliant (► [page 693](#))
- Predictable lifetime

This last point, the predictability of xiros® polymer ball bearing is one of the most important advantages. Based on the results of many wear tests, the user can calculate the lifetime of the xiros® polymer ball bearing reliably and interpret the application (xiros® expert ► [page 687](#)).

Design

The xiros® polymer ball bearings are single-row grooved ball bearings based on DIN 625. The lubricant-free and maintenance-free ball bearings consist of four components:



The Outer- and Inner Race

The suitability of a xiros® polymer ball bearings is largely determined by the materials of the two races. These are made from igus® tribopolymers to maximize service life and minimize friction. You can choose from five different materials. They allow different values of application

temperature, chemical resistance and price. The table with material data (► [page 684](#)) gives exact information.

The Cage

The material of the ball bearing cage must fit well to the application. These materials are very different regard to chemical resistance and temperature. As part of the delivery program of xiros® polymer ball bearings the cage are already great with the materials of the outer and inner rings.

The Balls

The ball materials differ most significantly. In addition to steel glass or plastics are used. This produces a large difference in mass, which in turn affects smoothness, weight and chemical resistance.

Steelballs (stainless steel) are cost-effective, chemical resistant, but with the highest weight.

Glass balls used to give a metal-free solution. They are also very resistant to chemicals and have an average weight.

Polymer balls have significant advantages in weight, size and in the quiete rinning characteristics. Depending on the polymer plastic balls they can have excellent chemical resistance.

Pillow Block and Flange Bearings

This range is made up by combining xiros® polymer ball bearing with the igubal® pillow block and flange bearings, resulting in a higher flexibility in terms of installation of the bearings. The pre-finished bearing housing make it easy for the user to use these maintenance-free components. Both flanged and pillow block available as fixed or as a pivoting design.

The difference between the two options is that the pivoting type can compensate for shaft and/or bearing misalignment. A spherical outer race is pressed into the bearing housing, ensuring self aligning action.

xiros® Polymer Ball Bearings

Application Areas

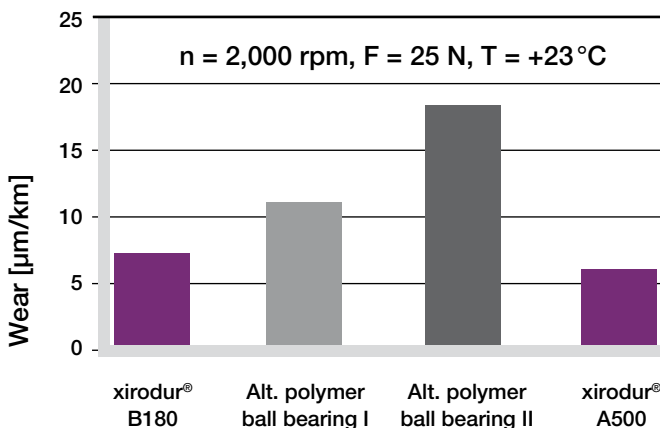
In contrast to metallic ball bearings, xiros® polymer ball bearings run without any lubrication. For this reason they are suitable for many applications which do not have extreme speeds or loads but ones which cannot use traditional greased ball bearings, as the application should run maintenance free. These areas are for example food and medical industries, packaging and textile industries, or the chemical industry and cleanroom applications as well as electronics and office technology.

Development and Tests

Through numerous tests the race materials were optimised. The polymers we have developed for use with ball bearings allow higher speeds, greater loads, and longer service life. But the development continues, we believe that polymer ball bearing technology will continue to advance, especially with our experience and development with tribological polymer materials.

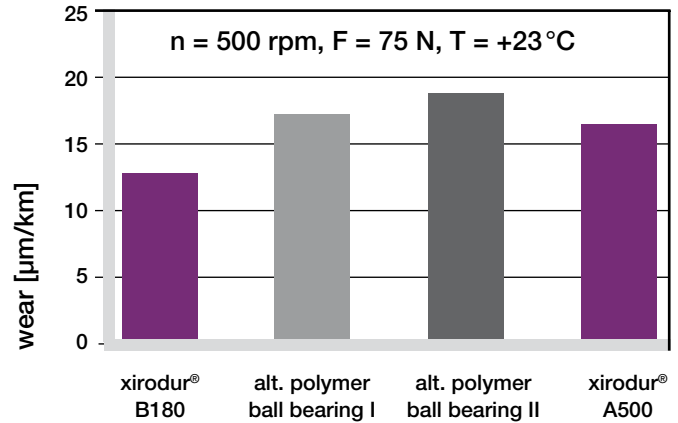
Challenge us, talk to us about your applications, tell us what you need from a plastic ball bearing.

In the igus® test laboratory the life and wear of xiros® polymer ball bearings was tested. In addition to the actual material comparison, tests indicate these experiments also answer questions about the impact of external influences such as temperature, humidity or dust.

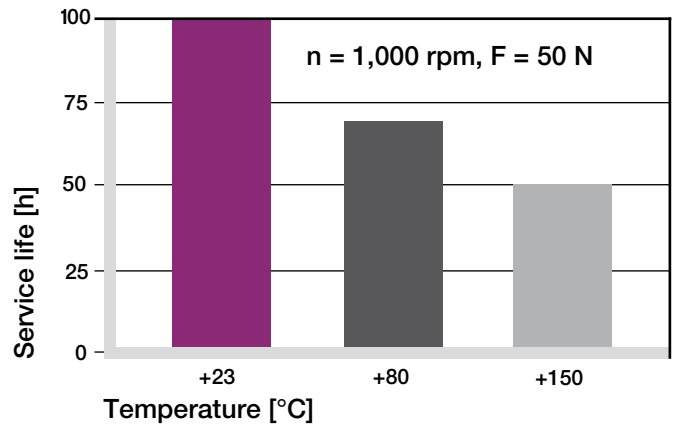


Graph 01: Wear test in igus® laboratory

The material combinations for bearing races, balls and cage are tested in the igus® test laboratory for a variety of load and speed. Thus, the application-specific selection of the suitable bearing and a Lifetime calculation is possible.



Graph 02: Wear test in igus® laboratory



Graph 03: Service life of xirodur® A500 polymer ball bearings at different ambient temperatures, dry

Predictability

As part of the development of xiros® polymer ball bearing tests are carried out continuously. The extreme number of test results make it very difficult to present this information in tabular form, and for it to actually make sense.



Picture 01: Test bench for xiros® polymer ball bearings at igus® laboratory

xiros® Polymer Ball Bearings



Picture 02: Test bench for xiros® polymer ball bearings at igus® laboratory

It is for this reason that igus has developed the online life calculator, which uses real test results to give an accurate calculation.

The lifetime-calculator is online at

► www.igus.eu/xiros-expert

Immediately after entering the data, the lifetime is calculated and displayed. It is important to remember that the result given is based on actual test results in the igus laboratory, and is therefore totally reliable.

xiros® service life prediction

Your application parameters

Installation size: Max. speed: rpm Max. radial load: N
 Working temperature: °C Max. axial load (only if available): N

Selection of material combination:

Rings	Cage	Balls	FDA-compatible
A500	PEEK	Glass	-
A500	PA	Stainl.st.	-
A500	PEEK	Stainl.st.	●

Data of the selected part

Limit speed	1900 rpm
Max. static radial load	85 N
Max. dynamic radial load	119 N
Max. permitted axial load	285 N
Min. application temperature	-40 °C
Max. ambient temperature	80 °C

Service Life **333 h** ✓
 The service life refers only to the operating time. Intermittent service is not considered.

Limit curve

Inner Ø d1 = 10 mm
 Outer Ø d2 = 26 mm
 Width b1 = 8 mm

Ball
 Cage
 xirodur® rings

Part no.: BB-6000-B180-10-ES Pieces Price: 5,42 EUR

Picture 03: xiros® expert for calculation service life online

Material table							
General properties	Unit	xirodur® A500	xirodur® B180	xirodur® C160	xirodur® D180	xirodur® F180	igumid G
Density	g/cm ³	1,28	1,41	1,11	1,24	1,33	1,37
Colour		brown	white	opaque	blue	black	black
Max. moisture absorption at +23°C/50% r.h.	% weight	0,3	0,2	0,1	0,5	0,5	1,4
Max. water absorption	% weight	0,5	0,7	0,2	1,4	1,4	5,6
Mechanical properties							
Module of elasticity	MPa	3.600	2.500	1.900	130	975	7.800
Tensile strength at +20°C	MPa	140	68	35	n.d.	n.d.	240
Compressive strength		83	77	67	51	69	79
Electrical properties							
Specific volume resistance ¹⁾	Ωcm	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴	> 10 ^{5-10⁹2)}	> 10 ¹¹
Surface resistance ¹⁾	Ω	> 10 ¹³	> 10 ¹⁴	> 10 ¹⁴	> 10 ¹⁴	> 10 ^{5-10⁹2)}	> 10 ¹¹
Thermal properties of xiros® polymer ball bearings							
Max. long term application temperatures	°C	+150	+80	+80	+80	+80	+120
Min. application temperatures (in combination with cage material)	°C	-100 (PEEK) -40 (PA)	-40	0	-50	-50	-40

¹⁾ only valid for xirodur® F180: the good conductivity of this material favours, under certain conditions, the corrosion generation on metallic parts

²⁾ depending on the geometry

Table 01: Material data

Medium	Resistance					
	xirodur® A500	xirodur® B180	xirodur® C160	xirodur® D180	xirodur® F180	igumid G
Alcohol	+	+	+	+ to 0	+ to 0	+ to 0
Hydrocarbons	+	+	+ to 0	+	+	+
Greases, oils without additives	+	+	+	+	+	+
Fuels	+	+	+ to 0	+	+	+
Diluted acids	+	0 to -	+	+ to 0	+ to 0	0 to -
Strong acids	+	-	+ to 0	0	0	-
Diluted alkalines	+	+	+	+ to 0	+ to 0	+
Strong alkalines	+	+ to 0	+	+ to 0	+ to 0	0

Table 02: Chemical resistance of xiros® materials

Recommendation of tolerance for bore and shaft at xiros® radial ball bearings

By default we recommend a H7-tolerance of the housing bore of xiros® radial ball bearings and a h6-tolerance of the shaft. For further questions about the dimensioning of the bore and the shaft please contact us.

Which combination of materials is the best for my application?

Races

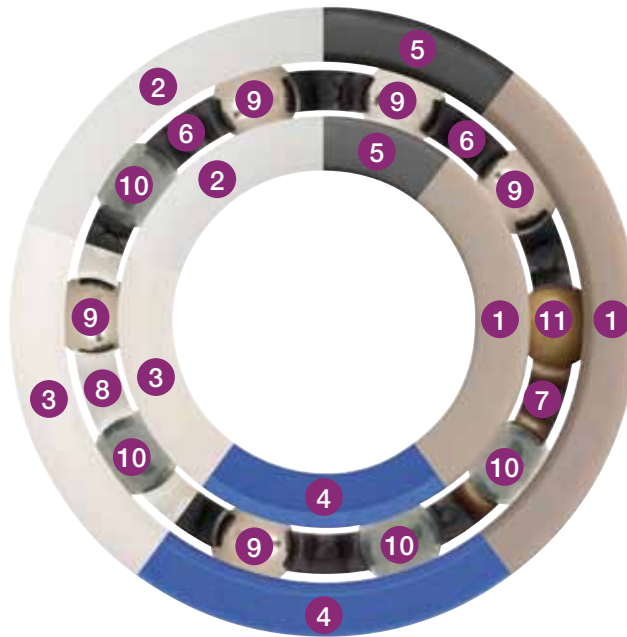
- 1 xirodur® A500
- 2 xirodur® B180
- 3 xirodur® C160
- 4 xirodur® D180
- 5 xirodur® F180

Cages

- 6 PA
- 7 PEEK
- 8 PP

Balls

- 9 Stainless steel (ES)
- 10 Glass (GL)
- 11 PAI



Material of inner-/outer races

Application sectors

Cage material

Ball material

Page

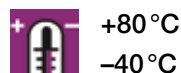
	xirodur® B180	xirodur® A500		xirodur® C160	xirodur® D180	xirodur® F180
Material of inner-/outer races	xirodur® B180	xirodur® A500		xirodur® C160	xirodur® D180	xirodur® F180
Application sectors	For cost-effective use	At high temperatures	With chemicals, FDA and high temperatures	With chemicals, temperatures up to +80 °C and for under water use	High rotation speed	Electrically conductive, ESD protection
Cage material	PA	PA	PEEK	PP	PA	PA
Ball material	ES GL	ES	ES GL PAI	ES GL	ES GL	ES
	Cost-effective No metal	With high temperatures	FDA compliance Chemicals Low loads	Depending on media: cost-effective Depending on media: seawater	Wear resistant Resistant to wear, chemicals and cleaning solutions	Conductive
Page	686 686	691	689 690 692	693 693	694 694	695

xirodur® B180 Polymer Ball Bearings | Product Range

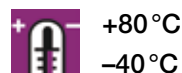
Radial deep-groove ball bearings



Made of xirodur® B180
PA cage, glass balls



Made of xirodur® B180
PA cage, stainless steel balls



xiros® B180 polymer ball bearings are for use with temperatures up to +80 °C. The specially developed material xirodur® B180 provides significantly longer life times at a lower cost.

- Lubrication- and maintenance-free
- Non-magnetic and washable
- Corrosion-resistant
- Predictable lifetime
- Low weight
- For shaft diameters 3–60 mm
- Electrically insulating

Dimensions [mm]

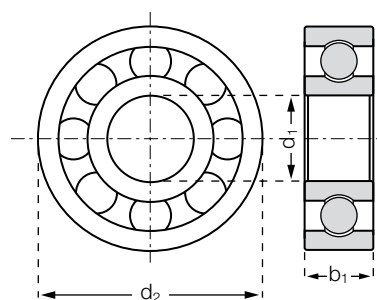
Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-B180-10-ES	B180	PA	1.4401	3	10	4
BB-625-B180-10-ES New!	B180	PA	1.4401	5	16	6
BB-626-B180-10-ES	B180	PA	1.4401	6	19	6
BB-608-B180-10-ES	B180	PA	1.4401	8	22	7
BB-6000-B180-10-ES	B180	PA	1.4401	10	26	8
BB-6001-B180-10-ES	B180	PA	1.4401	12	28	8
BB-6002-B180-10-ES New!	B180	PA	1.4401	15	32	9
BB-6003-B180-10-ES	B180	PA	1.4401	17	35	10
BB-6004-B180-10-ES	B180	PA	1.4401	20	42	12
BB-6005-B180-10-ES	B180	PA	1.4401	25	47	12
BB-6006-B180-10-ES*	B180	PA	1.4401	30	55	13
BB-6007-B180-10-ES*	B180	PA	1.4401	35	62	14
BB-6008-B180-10-ES*	B180	PA	1.4401	40	68	15
BB-6009-B180-10-ES*	B180	PA	1.4401	45	75	16
BB-6010-B180-10-ES*	B180	PA	1.4401	50	80	16
BB-6011-B180-10-ES*	B180	PA	1.4401	55	90	18
BB-6012-B180-10-ES*	B180	PA	1.4401	60	95	18
BB-623-B180-10-GL	B180	PA	Glass	3	10	4
BB-625-B180-10-GL New!	B180	PA	Glass	5	16	6
BB-626-B180-10-GL	B180	PA	Glass	6	19	6
BB-608-B180-10-GL	B180	PA	Glass	8	22	7
BB-6000-B180-10-GL	B180	PA	Glass	10	26	8
BB-6001-B180-10-GL	B180	PA	Glass	12	28	8
BB-6002-B180-10-GL New!	B180	PA	Glass	15	32	9
BB-6003-B180-10-GL	B180	PA	Glass	17	35	10
BB-6004-B180-10-GL	B180	PA	Glass	20	42	12
BB-6005-B180-10-GL	B180	PA	Glass	25	47	12
BB-6006-B180-10-GL*	B180	PA	Glass	30	55	13
BB-6007-B180-10-GL*	B180	PA	Glass	35	62	14
BB-6008-B180-10-GL*	B180	PA	Glass	40	68	15
BB-6009-B180-10-GL*	B180	PA	Glass	45	75	16
BB-6010-B180-10-GL*	B180	PA	Glass	50	80	16
BB-6011-B180-10-GL*	B180	PA	Glass	55	90	18
BB-6012-B180-10-GL*	B180	PA	Glass	60	95	18

xirodur® B180 Polymer Ball Bearings | Product Range

Radial deep-groove ball bearings



Order key



BB-623-B180-10-GL



Ball material
GL = glass
ES = stainless steel

Cage material
10 = PA

Race material
xirodur® B180

Dimensions acc. to
DIN 625-1

Ball bearing



**delivery
time**

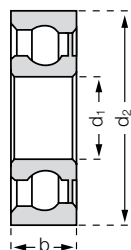
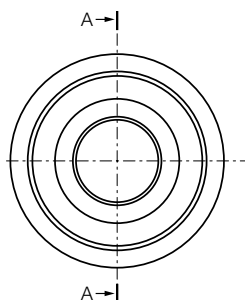
available from stock

* on request

Technical Data

Part number	Max. stat. bearing load axial [N]	Stat. bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-623-B180-10-ES	30	25	35	4,500	0.4
BB-625-B180-10-ES New!	75	40	58	3,100	1.6
BB-626-B180-10-ES	95	50	70	2,600	2.2
BB-608-B180-10-ES	165	60	84	2,200	3.9
BB-6000-B180-10-ES	285	85	119	1,900	6.1
BB-6001-B180-10-ES	315	105	147	1,750	6.9
BB-6002-B180-10-ES New!	338	146	196	1,600	8.9
BB-6003-B180-10-ES	360	180	250	1,400	11.1
BB-6004-B180-10-ES	400	210	294	1,150	20.2
BB-6005-B180-10-ES	520	240	360	1,050	23.9
BB-6006-B180-10-ES*	640	280	420	900	35.0
BB-6007-B180-10-ES*	720	320	480	800	47.0
BB-6008-B180-10-ES*	800	350	520	750	56.3
BB-6009-B180-10-ES*	900	380	560	650	71.5
BB-6010-B180-10-ES*	950	390	580	600	83.1
BB-6011-B180-10-ES*	1,000	400	600	550	125.2
BB-6012-B180-10-ES*	1,100	420	640	500	129.6
BB-623-B180-10-GL	30	25	35	4,500	0.3
BB-625-B180-10-GL New!	75	40	58	3,100	1.0
BB-626-B180-10-GL	95	50	70	2,600	1.7
BB-608-B180-10-GL	165	60	84	2,200	2.6
BB-6000-B180-10-GL	285	85	119	1,900	4.0
BB-6001-B180-10-GL	315	105	147	1,750	4.5
BB-6002-B180-10-GL New!	338	146	196	1,600	6.2
BB-6003-B180-10-GL	360	180	250	1,400	7.9
BB-6004-B180-10-GL	400	210	294	1,150	13.6
BB-6005-B180-10-GL	520	240	360	1,050	16.7
BB-6006-B180-10-GL*	640	280	420	900	24.2
BB-6007-B180-10-GL*	720	320	480	800	31.3
BB-6008-B180-10-GL*	800	350	520	750	39.1
BB-6009-B180-10-GL*	900	380	560	650	48.6
BB-6010-B180-10-GL*	950	390	580	600	56.4
BB-6011-B180-10-GL*	1,000	400	600	550	84.4
BB-6012-B180-10-GL*	1,100	420	640	500	85.6

Radial deep-groove ball bearings with shield



Made of xirodur® B180

PA cage, stainless steel or glass balls



+80 °C

-40 °C

xiros® polymer ball bearings made of xirodur® B180 now with shield to prevent the penetration of dirt and other abrasive particles. The one-sided shield is fixed to the inner race. The other side is protected by the enclosed ball cage.

- Lubrication- and maintenance-free
- Dirt-repellant
- Corrosion-resistant
- Low weight
- For shaft diameter 3–20 mm
- Electrically insulating

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø	Outer-Ø	Width
				d1	d2	b1
BB-623-B180-10-ES-C	B180	PA	1.4401	3	10	4
BB-626-B180-10-ES-C	B180	PA	1.4401	6	19	6
BB-608-B180-10-ES-C	B180	PA	1.4401	8	22	7
BB-6000-B180-10-ES-C	B180	PA	1.4401	10	26	8
BB-6001-B180-10-ES-C	B180	PA	1.4401	12	28	8
BB-6003-B180-10-ES-C	B180	PA	1.4401	17	35	10
BB-6004-B180-10-ES-C	B180	PA	1.4401	20	42	12
BB-623-B180-10-GL-C	B180	PA	Glass	3	10	4
BB-626-B180-10-GL-C	B180	PA	Glass	6	19	6
BB-608-B180-10-GL-C	B180	PA	Glass	8	22	7
BB-6000-B180-10-GL-C	B180	PA	Glass	10	26	8
BB-6001-B180-10-GL-C	B180	PA	Glass	12	28	8
BB-6003-B180-10-GL-C	B180	PA	Glass	17	35	10
BB-6004-B180-10-GL-C	B180	PA	Glass	20	42	12

Technical Data

Part number	Max. static bearing load	Static bearing load	Dynamic bearing load	Max. speed	Weight
	axial [N]	[N]	[N]	[rpm]	[g]
BB-623-B180-10-ES-C	30	25	35	4,500	0.4
BB-626-B180-10-ES-C	95	50	70	2,600	2.5
BB-608-B180-10-ES-C	165	60	84	2,200	4.0
BB-6000-B180-10-ES-C	285	85	119	1,900	6.3
BB-6001-B180-10-ES-C	315	105	147	1,750	7.1
BB-6003-B180-10-ES-C	360	180	250	1,400	11.5
BB-6004-B180-10-ES-C	400	210	294	1,150	19.7
BB-623-B180-10-GL-C	30	25	35	4,500	0.4
BB-626-B180-10-GL-C	95	50	70	2,600	1.8
BB-608-B180-10-GL-C	165	60	84	2,200	2.7
BB-6000-B180-10-GL-C	285	85	119	1,900	4.1
BB-6001-B180-10-GL-C	315	105	147	1,750	4.7
BB-6003-B180-10-GL-C	360	180	250	1,400	8.4
BB-6004-B180-10-GL-C	400	210	294	1,150	14.2

xirodur® A500 Polymer Ball Bearings | Product Range

Radial deep-groove ball bearings



Made of xirodur® A500

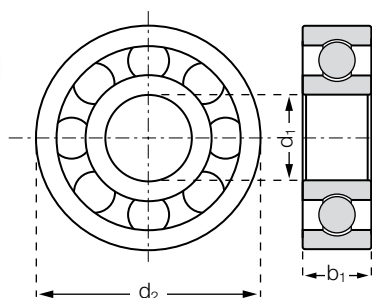
PEEK cage

stainless steel balls



+150 °C

-100 °C



Order key

BB-623-A500-70-ES



Ball material

ES = stainless steel

Cage material

70 = PEEK

Race material

A500 = xirodur® A500

Dimensions acc. to

DIN 625-1

Ball bearing

xiros® polymer ball bearings open up new application areas for plastic roller bearings. After the 2007 market launch, the life-time of the high-temperature option with xirodur® A500 inner and outer rings could be clearly raised by up to factor 5.

- Lubrication- and maintenance-free
- For high temperatures up to +150 °C
- Corrosion-resistant

- Non-magnetic and washable
- Chemical resistant
- Low weight
- Inner-, outer races and cages made from FDA-compliant polymers
- Predictable lifetime
- For shaft diameter 3–20 mm
- Electrically insulating



PEEK cages, inner- and outer races made from FDA-compliant polymers

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-A500-70-ES	A500	PEEK	1.4401	3	10	4
BB-626-A500-70-ES	A500	PEEK	1.4401	6	19	6
BB-608-A500-70-ES	A500	PEEK	1.4401	8	22	7
BB-6000-A500-70-ES	A500	PEEK	1.4401	10	26	8
BB-6004-A500-70-ES	A500	PEEK	1.4401	20	42	12

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-623-A500-70-ES	40	30	40	5,000	0.4
BB-626-A500-70-ES	125	60	81	3,200	2.3
BB-608-A500-70-ES	220	72	97	2,700	3.7
BB-6000-A500-70-ES	380	102	137	2,100	6.0
BB-6004-A500-70-ES	650	250	350	1,300	19.7

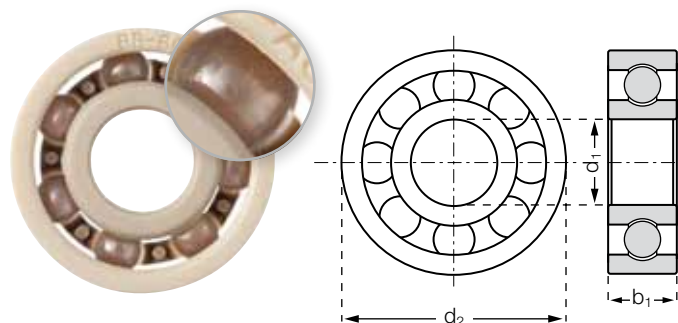


delivery from stock
time



prices price list online
www.igus.eu/eu/xirodur-A500

Radial deep-groove ball bearings



Made of xirodur® A500

PEEK cage

glass balls



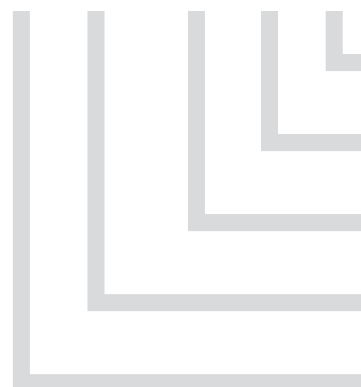
+150 °C

-100 °C



Order key

BB-623-A500-70-GL



Ball material

GL = glass

Cage material

70 = PEEK

Race material

A500 = xirodur® A500

Dimensions acc. to

DIN 625-1

Ball bearing

xirodur® A500 polymer ball bearings with combination of PEEK cage and Glass balls are often used in environments, where high chemical resistance is necessary and it should be dispense entirely of stainless steel components.

- Lubrication- and maintenance-free
- For high temperatures up to +150 °C
- Corrosion-resistant
- Non-magnetic and washable
- Chemical resistant
- Predictable lifetime

- Low weight
- For shaft diameter 3–20 mm
- Electrically insulating

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-A500-70-GL	A500	PEEK	Glass	3	10	4
BB-626-A500-70-GL	A500	PEEK	Glass	6	19	6
BB-608-A500-70-GL	A500	PEEK	Glass	8	22	7
BB-6000-A500-70-GL	A500	PEEK	Glass	10	26	8
BB-6004-A500-70-GL	A500	PEEK	Glass	20	42	12

Technical Data

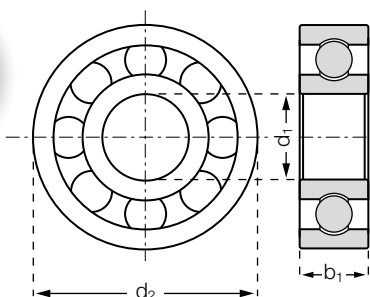
Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-623-A500-70-GL	40	30	40	5,000	0.3
BB-626-A500-70-GL	125	60	81	3,200	1.6
BB-608-A500-70-GL	220	72	97	2,700	2.4
BB-6000-A500-70-GL	380	102	137	2,100	3.8
BB-6004-A500-70-GL	650	250	350	1,300	13.2

 **delivery** from stock
time

 **prices** price list online
www.igus.eu/eu/xirodur-A500

xirodur® A500 Polymer Ball Bearings | Product Range

Radial deep-groove ball bearings



Made of xirodur® A500

PA cage

stainless steel balls



+150 °C

-40 °C



Order key

BB-623-A500-10-ES



Ball material

ES = stainless steel

Cage material

10 = PA

Race material

A500 = xirodur® A500

Dimensions acc. to

DIN 625-1

Ball bearing

xirodur® A500 polymer ball bearings with combination of PA cage and stainless steel balls are the economic alternative of xirodur® A500 product range, when temperature is merely up to +150 °C and no chemicals are in use.

- Lubrication- and maintenance-free
- For high temperatures +150 °C
- Corrosion-resistant
- Non-magnetic and washable
- Electrically insulating

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-A500-10-ES	A500	PA	1.4401	3	10	4
BB-626-A500-10-ES	A500	PA	1.4401	6	19	6
BB-608-A500-10-ES	A500	PA	1.4401	8	22	7
BB-6000-A500-10-ES	A500	PA	1.4401	10	26	8
BB-6004-A500-10-ES	A500	PA	1.4401	20	42	12

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-623-A500-10-ES	40	30	40	5,000	0.4
BB-626-A500-10-ES	125	60	81	3,200	2.3
BB-608-A500-10-ES	220	72	97	2,700	3.7
BB-6000-A500-10-ES	380	102	137	2,100	6.0
BB-6004-A500-10-ES	650	250	350	1,300	19.4



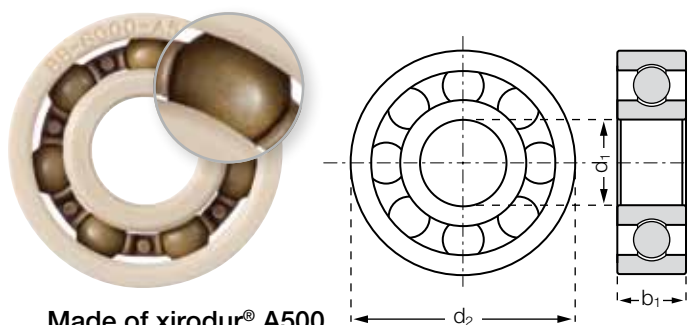
delivery from stock
time



prices price list online

www.igus.eu/eu/xirodur-A500

Radial deep-groove ball bearings



Made of xirodur® A500

PEEK cage

PAI balls



+150 °C

-100 °C



Order key

BB-626-A500-70-PAI



Ball material

PAI = plastic

Cage material

70 = PEEK

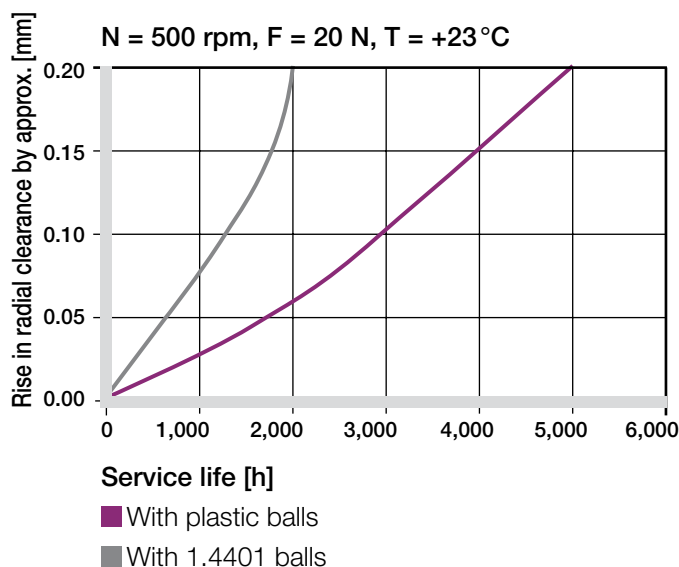
Race material

A500 = xirodur® A500

Dimensions acc. to

DIN 625-1

Ball bearing



xirodur® A500 polymer ball bearings are also available with plastic balls. At low loads the wear resistance can be improved by a factor of 3.

- Lubrication- and maintenance-free
- Corrosion and chemical resistant
- For temperatures up to +150 °C
- Non-magnetic and washable
- Predictable lifetime
- Low weight
- Electrically insulating

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-626-A500-70-PAI	A500	PEEK	PAI	6	19	6
BB-608-A500-70-PAI	A500	PEEK	PAI	8	22	7
BB-6000-A500-70-PAI	A500	PEEK	PAI	10	26	8
BB-6004-A500-70-PAI	A500	PEEK	PAI	20	42	12

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-626-A500-70-PAI	30	15	20	3,200	1.4
BB-608-A500-70-PAI	55	18	25	2,700	2.2
BB-6000-A500-70-PAI	95	25	34	2,100	3.4
BB-6004-A500-70-PAI	160	62	88	1,300	11.7



delivery from stock
time



prices price list online

www.igus.eu/eu/xirodur-A500

xirodur® C160 Polymer Ball Bearings | Product Range

Radial deep-groove ball bearings



Made of xirodur® C160

PP-Cage

glass-/stainless steel balls



+80 °C

0 °C



Order key

BB-623-C160-20-GL



Ball material

GL = glass

ES = stainless steel

Cage material

20 = PP

Race material

C160 = xirodur® C160

Dimensions acc. to

DIN 625-1

Ball bearing

The ball bearing material xirodur® C160 is cost-effective and very resistant to chemicals. xirodur® C160 can be used with temperatures up to +80°C.

- Lubrication- and maintenance-free
- Corrosion and chemical resistant

- Non-magnetic and washable
- Predictable lifetime
- Low weight
- Low friction
- Electrically insulating

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-C160-20-ES	C160	PP	1.4401	3	10	4
BB-626-C160-20-ES	C160	PP	1.4401	6	19	6
BB-608-C160-20-ES	C160	PP	1.4401	8	22	7
BB-6000-C160-20-ES	C160	PP	1.4401	10	26	8
BB-623-C160-20-GL	C160	PP	Glass	3	10	4
BB-626-C160-20-GL	C160	PP	Glass	6	19	6
BB-608-C160-20-GL	C160	PP	Glass	8	22	7
BB-6000-C160-20-GL	C160	PP	Glass	10	26	8

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
BB-623-C160-20-ES	9	20	28	4,500	0.3
BB-626-C160-20-ES	30	40	56	2,600	2.1
BB-608-C160-20-ES	50	48	67	2,200	3.4
BB-6000-C160-20-ES	85	68	95	1,900	5.6
BB-623-C160-20-GL	9	20	28	4,500	0.3
BB-626-C160-20-GL	30	40	56	2,600	1.4
BB-608-C160-20-GL	50	48	67	2,200	2.2
BB-6000-C160-20-GL	85	68	95	1,900	3.5



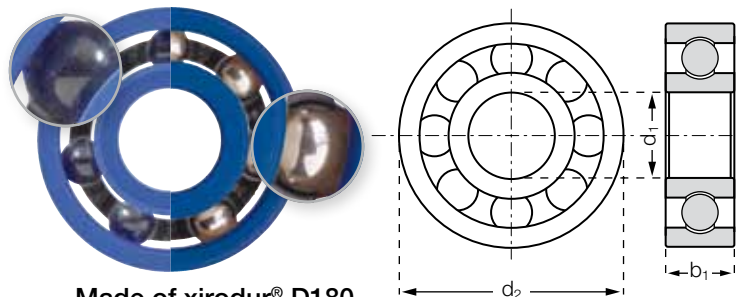
delivery from stock
time



prices price list online

www.igus.eu/eu/xirodur-C160

Radial deep-groove ball bearings



Made of xirodur® D180

PA cage

glass-/stainless steel balls



+80 °C

-50 °C



Order key

BB-623-D180-10-ES



Ball material

GL = glass

ES = stainless steel

Cage material

10 = PA

Race material

D180 = xirodur® D180

Dimensions acc. to

DIN 625-1

Ball bearing

xiros® D180 polymer ball bearings made of the newly developed material xirodur® D180 are specially suitable for high rotating speeds. They are extremely wear resistant and achieve a very high lifetime.

- Lubrication- and maintenance-free
- For high rotation speeds
- Long service-life – up to 4 times better than xirodur® B180
- Low weight
- Temperature range up to +80 °C

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-D180-10-ES New!	D180	PA	1.4401	3	10	4
BB-626-D180-10-ES* New!	D180	PA	1.4401	6	19	6
BB-608-D180-10-ES* New!	D180	PA	1.4401	8	22	7
BB-6000-D180-10-ES New!	D180	PA	1.4401	10	26	8
BB-623-D180-10-GL New!	D180	PA	Glas	3	10	4
BB-626-D180-10-GL* New!	D180	PA	Glas	6	19	6
BB-608-D180-10-GL* New!	D180	PA	Glas	8	22	7
BB-6000-D180-10-GL New!	D180	PA	Glas	10	26	8

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [U/min]	Weight [g]
BB-623-D180-10-ES New!	0	2	12	5,000	0.4
BB-626-D180-10-ES* New!	0	13	30	4,500	2.0
BB-608-D180-10-ES* New!	0	20	42	4,300	3.7
BB-6000-D180-10-ES New!	0	26	55	4,200	6.1
BB-623-D180-10-GL New!	0	2	12	5,000	0.3
BB-626-D180-10-GL* New!	0	13	30	4,500	1.6
BB-608-D180-10-GL* New!	0	20	42	4,300	2.4
BB-6000-D180-10-GL New!	0	26	55	4,200	3.9



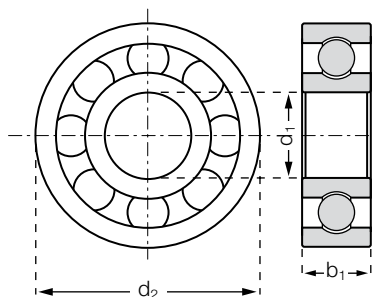
delivery available from stock
time * on request



prices price list online
www.igus.eu/eu/xirodur-D180

xirodur® F180 Polymer Ball Bearing | Product Range

Radial deep-groove ball bearings



Made of xirodur® F180

PA cage

stainless steel balls



+80 °C

-50 °C



Order key

BB-623-F180-10-ES



Ball material

GL = glass

ES = stainless steel

Cage material

10 = PA

Race material

F180 = xirodur® F180

Dimensions acc. to

DIN 625-1

Ball bearing

xiros® F180 polymer ball bearings offer protection against electrostatic discharge. In this type with ESD protection (Electro Static Discharge), the new ball bearing material xirodur® F180 is used. It resists to temperatures up to +80 °C and offers a high lifetime.

- Lubrication- and maintenance-free
- Electrically conductive (ESD Protection)
- Cost-effective
- Low weight

Dimensions [mm]

Part number	Race	Cage	Ball	Inner-Ø d1	Outer-Ø d2	Width b1
BB-623-F180-10-ES New!	F180	PA	1.4401	3	10	4
BB-626-F180-10-ES* New!	F180	PA	1.4401	6	19	6
BB-608-F180-10-ES* New!	F180	PA	1.4401	8	22	7
BB-6000-F180-10-ES New!	F180	PA	1.4401	10	26	8

Technical Data

Part number	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [U/min]	Weight [g]
BB-623-F180-10-ES New!	10	18	22	4,600	0.4
BB-626-F180-10-ES* New!	50	43	65	2,500	2.1
BB-608-F180-10-ES* New!	69	58	82	2,300	3.8
BB-6000-F180-10-ES New!	80	71	105	2,000	5.9



delivery available from stock
time * on request



prices price list online
www.igus.eu/eu/xirodur-F180

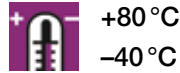
xirodur® B180 Axial Ball Bearings | Product Range



Made of xirodur® B180
stainless steel balls



Made of xirodur® B180
glass balls



Order key

BB-51100-B180-ES



Ball material

GL = glass

ES = stainless steel

Material

xirodur® B180

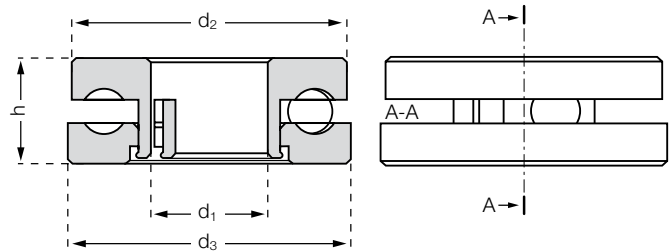
Dimensions acc. to

DIN 711

Ball bearing

xiros® axial ball bearings made of plastics for absorbing thrust loads. xirodur® B180 is combined with stainless steel or glass balls.

- Lubrication- and maintenance-free
- Corrosion-resistant
- Non-magnetic and washable
- Low weight
- Temperature resistant up to +80 °C
- Low weight
- Electrically insulating



Dimensions [mm]

Part number	Housing	Ball	d1	d2	d3	h
BB-51100-B180-ES	B180	1.4401	10	23.5	24	9
BB-51100-B180-GL	B180	Glass	10	23.5	24	9

Technical Data

Part number	Stat. bearing	Dyn. bearing	Max. speed	Weight
	load	load		
	[N]	[N]	[rpm]	[g]
BB-51100-B180-ES	200	250	600	6.9
BB-51100-B180-GL	200	250	600	4.4



delivery from stock
time



prices price list online
www.igus.eu/eu/xiros-axial

xirodur® B180 Polymer Ball Transfer Unit | Product Range



BB-515-B180-POM



New! BB-522-B180-POM



Order key

BB-515-B180-POM



Made of xirodur® B180

POM balls



+80 °C

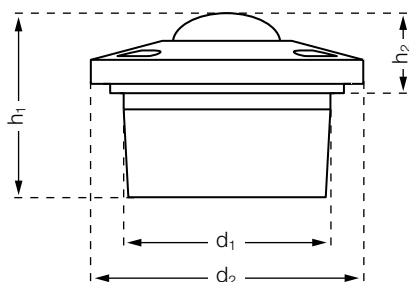
-40 °C

xiros® polymer ball transfer unit made of xirodur® B180 for the lubricant-free transport of sensitive product.

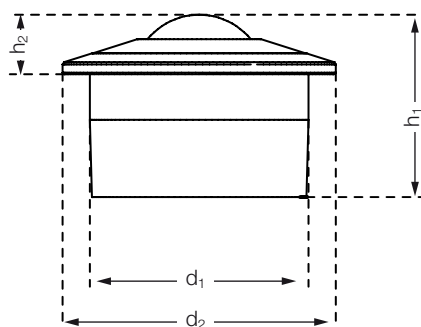
The support ball is mounted inside the housing on many smaller balls, in order to optimize the running behavior.

The entire structure of the polymer ball caster consists of plastic components.

- Lubrication- and maintenance-free
- Low coefficient of friction
- Corrosion-resistant and non-magnetic
- Temperature resistant up to +80 °C
- Electrically insulating



BB-515-B180-POM



BB-522-B180-POM

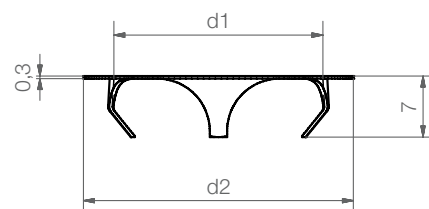
Dimensions [mm]

Part number	Ball	d1	d2	h1	h2	Max. stat. bearing load axial [N]	Weight [g]
		-0,30			±0.20		
BB-515-B180-POM	POM	24	31	21	9.8	80	8.7
BB-522-B180-POM New!	POM	36	45	30	9.8	110	28.8

New! Clamp rings for xiros®-polymer ball transfer units



xiros® clamp rings offer the possibility to install the xiros® ball transfer unit in another orientation than the standard horizontal position. Both assembly and disassembly are very easy.



BB-515-CR

Dimensions [mm]

Part number	For ball transfer unit	d1	d2	Housing bore
BB-515-CR New!	BB-515-B180-POM	24	31	25 -0.2
BB-522-CR New!	BB-522-B180-POM	36	41	37.3 -0.3



Made of xirodur® B180

PP balls



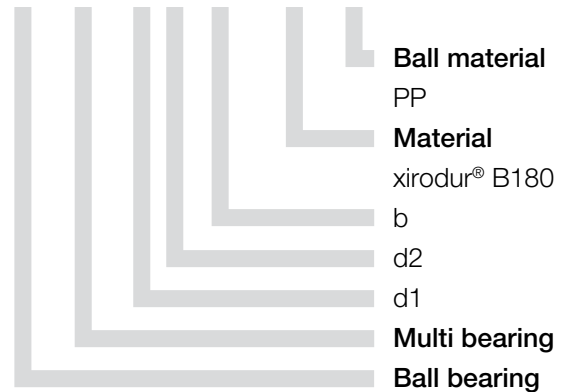
+80 °C

-40 °C



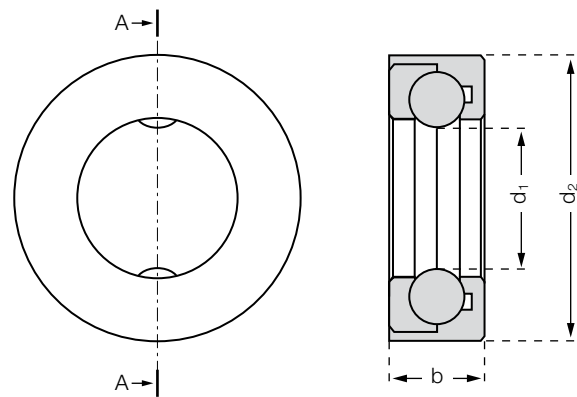
Order key

BB-MB-1633-11-B180-PP



This xirodur® B180 multi-axis plastic bearing made of triboplastic uses balls running directly on the shaft. By not using a cage, both rotary movements as well linear strokes are possible.

- Lubrication- and maintenance-free
- Corrosion-resistant
- Low weight
- Temperature resistant up to +80 °C
- Non-magnetic
- Electrically insulating



Dimensions [mm]

Part number	Ring	Ball	d1	d2	b
BB-MB-1633-11-B180-PP	B180	PP	16.3	33	11

Technical Data

Part number	Stat. bearing load [N]	Dyn. bearing load [N]	Max. speed [rpm]	Weight [g]
BB-MB-1633-11-B180-PP	55	70	500	6.9



delivery from stock
time

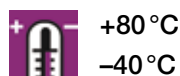


prices price list online
www.igus.eu/eu/xiros-multi

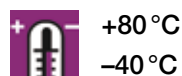
xirodur® B180 Slewing Ring Bearings | Product Range



Made of xirodur® B180
stainless steel balls

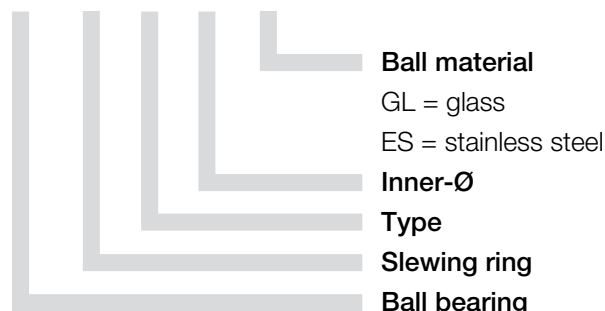


Made of xirodur® B180
glass balls



Order key

BB-RT-01-60-ES



Ball material

GL = glass

ES = stainless steel

Inner-Ø

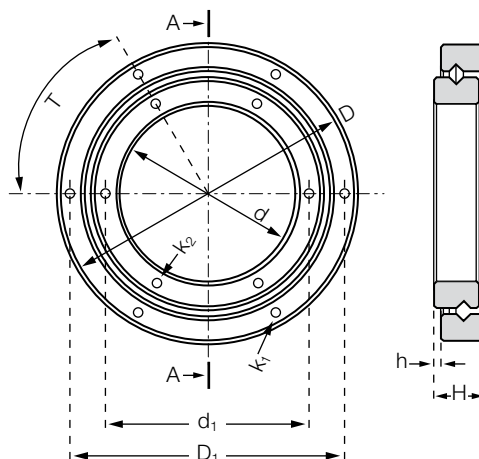
Type

Slewing ring

Ball bearing

The combination of stainless steel balls with polymer inner and outer races results in maintenance-free dry operation with low coefficients of friction. The xiros® slewing ring bearing can be used in temperatures up to +80 °C.

- Lubrication- and maintenance-free
- Low weight
- Corrosion-resistant
- Washable
- Cost-effective
- Electrically insulating



Dimensions [mm]

Part number	Ball	D	D1	d	d1	H	h	T	K1 Ø	K2 Ø
BB-RT-01-60-ES	1.4401	100	90	60	68	17.5	2.5	60	3.3	3.3
BB-RT-01-100-ES	New! 1.4401	160	150	100	110	20	5	60	6.4	6.4
BB-RT-01-60-GL	Glass	100	90	60	68	17.5	2.5	60	3.3	3.3
BB-RT-01-100-GL	New! Glass	160	150	100	110	20	5	60	6.4	6.4

Technical Data

Part number	Stat. bearing	Dyn. bearing	Max. speed	Weight
	load	load		
	[N]	[N]	[rpm]	[g]
BB-RT-01-60-ES	800	250	250	111.9
BB-RT-01-100-ES	New! 1,100	420	250	250.8
BB-RT-01-60-GL	800	250	250	98.3
BB-RT-01-100-GL	New! 1,100	420	250	231.1



delivery from stock
time



prices price list online
www.igus.eu/eu/xiros-rt

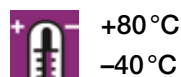
xiros® ESTM-pillow block bearing – rigid



Made of xirodur® B180
and igumid G

PA cage

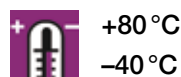
glass balls



Made of xirodur® B180
and igumid G

PA cage

stainless steel balls



xiros® pillow block bearings with glass or stainless steel balls are a combination of xiros® polymer ball bearings and igubal® housings.

- Low weight
- Totally corrosion-resistant
- Lubrication- and maintenance-free
- Washable and non-magnetic
- Service life prediction on request
- Compact design
- Electrically insulating



Order key

ESTM-BB1-F06-B180-ES



Ball material

ES = stainless steel

GL = glass

Temperature resistance

xirodur® B180 = up to +80 °C

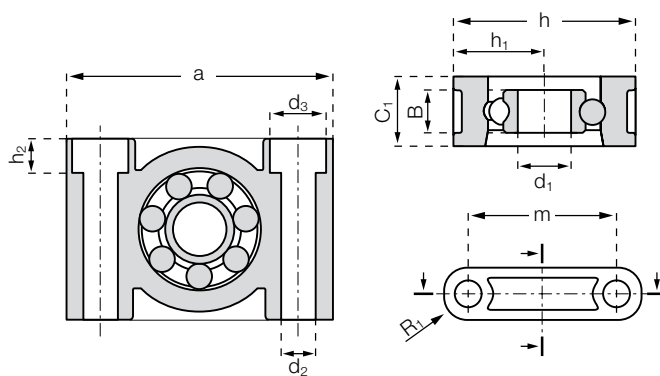
xirodur® A500 = up to +120 °C

Inner-Ø

Rigid

Ball bearing, single-row

Pillow block bearing



Dimensions [mm]

Part number*	Inner-Ø d1	Bore-Ø d2	d3	h	h1	h2	a	m	C1	B	R1
ESTM-BB1-F06-B180-ES*	6	5.5	–	22	11	–	36	26	10	6	5.0
ESTM-BB1-F10-B180-ES*	10	6.6	10.6	34	17	6.4	50	37	13	8	6.5
ESTM-BB1-F20-B180-ES*	20	9.0	14.0	48	24	8.06	72	54	18	12	9.0
ESTM-BB1-F06-B180-GL*	6	5.5	–	22	11	–	36	26	10	6	5.0
ESTM-BB1-F10-B180-GL*	10	6.6	10.6	34	17	6.4	50	37	13	8	6.5
ESTM-BB1-F20-B180-GL*	20	9.0	14.0	48	24	8.06	72	54	18	12	9.0

Technical Data

Part number*	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
ESTM-BB1-F06-B180-ES*	95	50	70	2,600	7.7
ESTM-BB1-F10-B180-ES*	285	85	119	1,900	20.2
ESTM-BB1-F20-B180-ES*	400	210	294	1,150	54.1
ESTM-BB1-F06-B180-GL*	95	50	70	2,600	6.7
ESTM-BB1-F10-B180-GL*	285	85	119	1,900	18.2
ESTM-BB1-F20-B180-GL*	400	210	294	1,150	47.7

* Temperatures up to +120 °C: ESTM-BB1-...-A500-... on request

delivery from stock
time

prices price list online
www.igus.eu/eu/ESTM-BB1-F

xiros® Pillow Block Bearings | Product Range

xiros® ESTM-pillow block bearing – pivoting



Made of xirodur® B180
and igumid G
RN56, PA cage
glass balls



+80 °C
-40 °C



Made of xirodur® B180
and igumid G
RN56, PA cage
stainless steel balls



+80 °C
-40 °C

Besides the rigid option, the pivoting option enables the compensation of misalignments.



Order key

ESTM-BB1-P08-B180-ES



Ball material

ES = stainless steel

GL = glass

Temperature resistance

xirodur® B180 = up to +80 °C

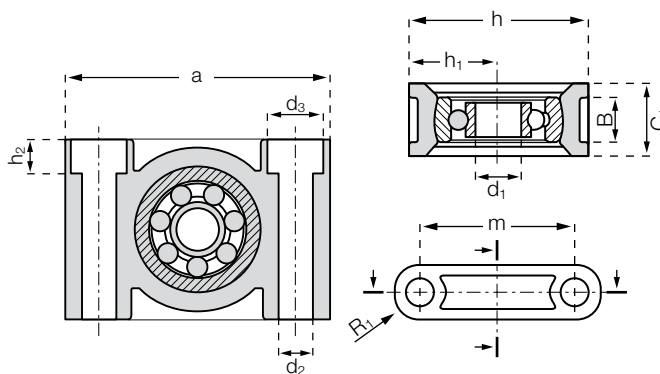
xirodur® A500 = up to +120 °C

Inner-Ø

Pivoting

Ball bearing, single-row

Pillow block bearing



Dimensions [mm]

Part number*	Inner-Ø d1	Bore-Ø d2	d3	h	h1	h2	a	m	C1	B	R1	Max. pivoting angle
ESTM-BB1-P08-B180-ES*	8	6.6	10.6	34	17	6.4	50	37	13	7	6.5	±5°
ESTM-BB1-P10-B180-ES*	10	9.0	14.0	40	20	8.6	62	46	16	8	8	±5°
ESTM-BB1-P12-B180-ES*	12	9.0	14.0	48	24	8.6	72	54	18	10	9	±5°
ESTM-BB1-P08-B180-GL*	8	6.6	10.6	34	17	6.4	50	37	13	7	6.5	±5°
ESTM-BB1-P10-B180-GL*	10	9.0	14.0	40	20	8.6	62	46	16	8	8	±5°
ESTM-BB1-P12-B180-GL*	12	9.0	14.0	48	24	8.6	72	54	18	10	9	±5°

Technical Data

Part number*	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
ESTM-BB1-P08-B180-ES*	165	60	84	2,200	19.6
ESTM-BB1-P10-B180-ES*	285	85	119	1,900	32.9
ESTM-BB1-P12-B180-ES*	315	105	147	1,750	54.8
ESTM-BB1-P08-B180-GL*	165	60	84	2,200	18.2
ESTM-BB1-P10-B180-GL*	285	85	119	1,900	30.3
ESTM-BB1-P12-B180-GL*	315	105	147	1,750	52.8

* Temperatures up to +120 °C: ESTM-BB1-...-A500-... on request



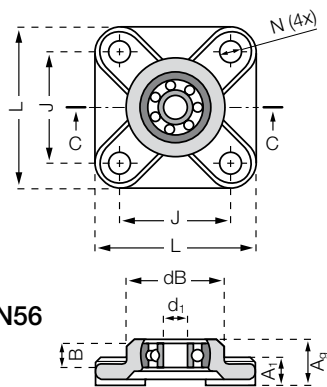
delivery from stock
time



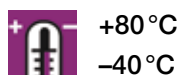
prices price list online

www.igus.eu/eu/ESTM-BB1-P

4-hole flange bearing



Made of xirodur® B180, RN56
and igumid G
PA cage
glass/stainless steel balls



+80 °C

-40 °C



Order key

EFSM-BB1-P08-B180-ES



Ball material

ES = stainless steel

GL = glass

Temperature resistance

xirodur® B180 = up to +80 °C

xirodur® A500 = up to +120 °C

Inner-Ø

Pivoting

Ball bearing, single-row

4-holes flange bearing

xiros® flange bearings with glass or stainless steel balls are also a combination of xiros® polymer ball bearings and igubal® housings.

The new angle-compensating xiros® polymer ball bearing was developed for the maintenance-free application in conveyor belts, cam rollers and support housings. The light, corrosion-free and anti-magnetic bearing needs no oil or grease and compensates for misalignments caused by tiltings and/or tolerances.

- Compensation of misalignments
- Very low weight
- Totally corrosion-resistant
- Lubrication- and maintenance-free
- Washable and non-magnetic
- Service life prediction on request
- Compact design
- Electrically insulating

Dimensions [mm]

Part number*	Inner-Ø d1	dB	L	J	A1	Ag	B	N	Max. pivoting angle
EFSM-BB1-P08-B180-ES*	8	32.5	52	36	9	15.5	8	6.4	±5°
EFSM-BB1-P10-B180-ES*	10	40.0	65	45	11	18.8	10	8.4	±5°
EFSM-BB1-P12-B180-ES*	12	48.0	74	52	14	23.5	12	8.4	±5°
EFSM-BB1-P08-B180-GL*	8	32.5	52	36	9	15.5	8	6.4	±5°
EFSM-BB1-P10-B180-GL*	10	40.0	65	45	11	18.8	10	8.4	±5°
EFSM-BB1-P12-B180-GL*	12	48.0	74	52	14	23.5	12	8.4	±5°

Technical Data

Part number*	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
EFSM-BB1-P08-B180-ES*	165	60	84	2,200	25.2
EFSM-BB1-P10-B180-ES*	285	85	119	1,900	48.8
EFSM-BB1-P12-B180-ES*	315	105	147	1,750	80.0
EFSM-BB1-P08-B180-GL*	165	60	84	2,200	24.0
EFSM-BB1-P10-B180-GL*	285	85	119	1,900	46.2
EFSM-BB1-P12-B180-GL*	315	105	147	1,750	77.7

* Temperatures up to +120 °C: EFSM-BB1-...-A500-... on request



delivery from stock
time



prices price list online

www.igus.eu/eu/EFSM-BB1

xiros® Flange Bearing | Product Range

2-hole flange bearing



Made of xirodur® B180, RN56
and igumid G

PA cage

glass/stainless steel balls



+80 °C

-40 °C

In comparison to the four-hole flange bearing, the 2-hole design offers another possibility of adjustment due to the elongated holes. Alignment errors are compensated by the pivoting ball so that a tedious precise alignment of the bearings is usually not necessary.



Order key

EFOM-BB1-P08-B180-ES



Ball material

ES = stainless steel

GL = glass

Temperature resistance

xirodur® B180 = up to +80°C

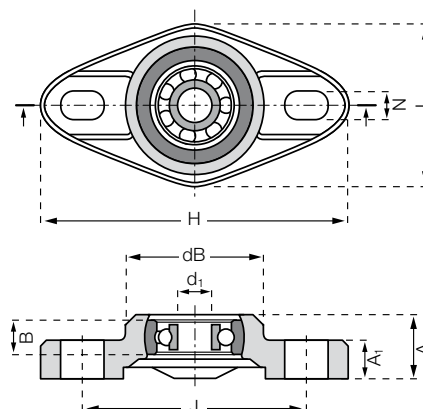
xirodur® A500 = up to +120°C

Inner-Ø

Pivoting

Ball bearing, single-row

2-holes flange bearing



Dimensions [mm]

Part number*	Inner-Ø d1	dB	H	L	J	A1	Ag	B	N	Max. pivoting angle
EFOM-BB1-P08-B180-ES*	8	32.5	72.6	38	53	10	15.5	8	6.4x10.1	±5°
EFOM-BB1-P10-B180-ES*	10	40.0	89.0	47	65	11	18.8	10	8.4x12.5	±5°
EFOM-BB1-P12-B180-ES*	12	48.5	101.0	58.5	75	14	23.5	12	8.4x12.5	±5°
EFOM-BB1-P08-B180-GL*	8	32.5	72.6	38	53	10	15.5	8	6.4x10.1	±5°
EFOM-BB1-P10-B180-GL*	10	40.0	89.0	47	65	11	18.8	10	8.4x12.5	±5°
EFOM-BB1-P12-B180-GL*	12	48.5	101.0	58.5	75	14	23.5	12	8.4x12.5	±5°

Technical Data

Part number*	Max. static bearing load axial [N]	Static bearing load [N]	Dynamic bearing load [N]	Max. speed [rpm]	Weight [g]
EFOM-BB1-P08-B180-ES*	165	60	84	2,200	19.5
EFOM-BB1-P10-B180-ES*	285	85	119	1,900	36.3
EFOM-BB1-P12-B180-ES*	315	105	147	1,750	61.7
EFOM-BB1-P08-B180-GL*	165	60	84	2,200	18.1
EFOM-BB1-P10-B180-GL*	285	85	119	1,900	33.6
EFOM-BB1-P12-B180-GL*	315	105	147	1,750	59.4

* Temperatures up to +120°C: EFOM-BB1-...-A500-... on request



delivery from stock
time



prices price list online

www.igus.eu/eu/EFOM-BB1

