

xiros®

Polymer ball bearings



...plastics

xiros® polymer ball bearings | Application examples

Other exciting applications ► www.igus.eu/xiros-applications

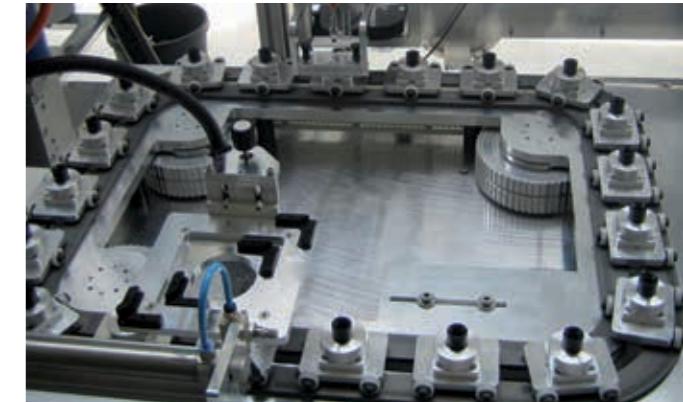
LABELLING MACHINE

Depending on the size of the system, between twelve and 36 guide rolls are used in the Sleevematic of the film storage. Two xiros® ball bearings from igus® are used per guide roller. (Krones AG)



THERMOFORMING MACHINE

In this Thermoforming machine for coffee-cream portion packs, xiros® A500 plastic ball bearings are used for their high chemical resistance. (frischli Milchwerke GmbH)



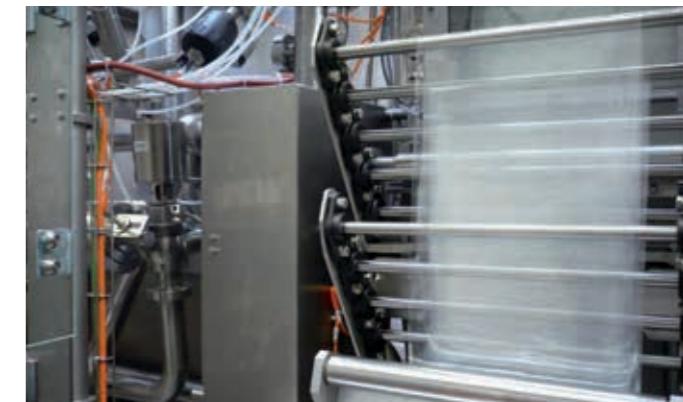
INDEXING TABLE

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 GAUGE

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.



PELLET OVENS

Two lubrication-free polymer ball bearings are used in the mechanical drive unit. These ensure that the pellets are fed into the combustion chamber via the roller. (Erwin Koppe – Keramische Heizgeräte GmbH)



THREE-SIDED TRIMER

The xirodur® B180 radial grooved ball bearing is used in a three sided trimmer made by Perfecta Schneidemaschinenwerk GmbH. xiros® polymer ball bearings are used to transport books, brochures, magazines, or newspapers to subsequently cut these into the proper format.

xiros® polymer ball bearings | Product overview

xiros® radial deep groove ball bearings – standard product range



Standard:
PA-cage
► Page 806



Cost-effective and
FDA-compliant:
B180 cage
► Page 806



FDA-compliant:
PE cage
► Page 806



With shield or labyrinth
seal:
LCC with B180-cage
► Page 812



Low wear:
xirodur® S180,
PA-cage
► Page 814



High resistance
to chemicals:
xirodur® C160, PP cage
► Page 820



For high temperatures
up to +150 °C:
xirodur® A500, PA-cage
► Page 824



For heat and chemicals:
xirodur® A500,
PEEK-cage
► Page 824

xiros® radial deep groove ball bearings – standard product range



Lightweight and non metal:
xirodur® A500,
PAI balls
► Page 824



ESD-compliant:
xirodur® F180,
PA-cage
► Page 828



ESD and
FDA-compliant:
xirodur® F180, PE-cage
► Page 828



High
speeds:
xirodur® D180, PA cage
► Page 830



Detectable:
xirodur® M180,
xirodur® M180 cage
► Page 831



For the tobacco industry:
xirodur® T220,
PP cage
► Page 832



For temperatures
up to +120 °C:
xirodur® G220, PP cage
► Page 833

xiros® flange bearings and combinations



Single flange:
xirodur® B180,
PA cage
► Page 834



With double flange:
xirodur® B180,
PA cage
► Page 834



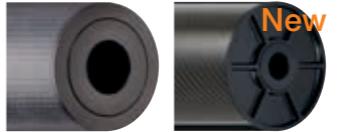
ESD protection:
xirodur® F180,
PA cage
► Page 834



Pulley:
Aluminium tube with flange
bearing
► Page 836



Pulley with
FDA-conform
components
► Page 837



Pulley:
Carbon tube with
flange bearing
► From page 838



Distinguished/
rotation lock:
xirodur® B180
► Page 840



End caps:
xirodur® B180,
PA-cage
► Page 842

xiros® – other designs



Spherical outer-diameter:
xirodur® B180
► Page 843



Spherical outer diameter:
and detectable:
xirodur® M180
► Page 843



Double row for
higher loads:
xirodur® B180
► Page 844



Multi axis:
xirodur® B180,
PP cage
► Page 845



Big roller:
xirodur® B180,
PA cage
► Page 846



With flange:
xirodur® B180,
stainless steel balls
► Page 847



Polymer balls transfer
units:
xirodur® B180, POM balls
► Page 848



Axial polymer-
ball transfer units:
with spherical ball
► Page 849

xiros® axial bearings and slewing ring bearings



Single row:
xirodur® B180
glass or stainless steel balls
► Page 850



Double row:
xirodur® B180
glass or stainless steel balls
► Page 850



Thrust washer:
xirodur® B180
glass or stainless steel balls
► Page 851



Slewing ring bearings:
xirodur® B180,
glass or stainless steel balls
► Page 852



Slewing ring bearing,
with gear teeth or with cage:
stainless steel balls
► Page 852



Pillow block, fixed or
pivoting
► Page 854



4 holes flange bearing,
pivoting
► Page 856



2 holes flange bearing,
pivoting
► Page 857

xiros® combination with igubal®

Lubrication and maintenance-free



Lubrication-free polymer ball bearings

xiros® polymer ball bearings revolutionise the ball bearing market. Where conventional metallic ball bearings are suitable, many applications can be successfully implemented by their maintenance-free dry operation and the use of xirodur® high-performance polymers.

- Lubrication and maintenance-free
- Corrosion resistant
- Non metallic (due to the use of glass and plastic balls), therefore non-magnetic
- For temperatures up to +150 °C (depending on material)
- High chemical resistance, suitable for wash-down
- Lightweight
- Electrically insulating (or ESD-compliant)
- FDA-compliant (depending on material)
- Predictable service life

Typical application areas

- Packaging
- Textile industry
- Test engineering and quality assurance
- Optical industry
- Model making



Available from stock

Detailed information about delivery time online.



Block pricing online

No minimum order value. From batch size 1.



Max. +150 °C

Min. -100 °C



9 xiros® materials

Ø 3-60 mm



Imperial dimensions available

► Page 1455



Service life calculation

► www.igus.eu/xiros-expert

Overview types

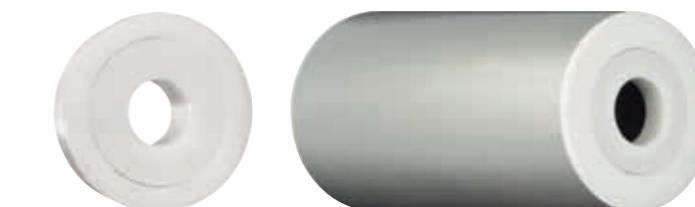


xiros® radial deep-groove ball bearings – Standard product range for 6 materials:

- xirodur® B180 – cost-effective standard
- xirodur® S180 – low wear
- xirodur® C160 – chemical resistant
- xirodur® A500 – for heat and chemicals

- xirodur® F180 – ESD-compliant
- xirodur® D180 – high speeds
- Standard DIN dimensions

► From page 806



xiros® radial deep-groove ball bearings – Materials for special applications

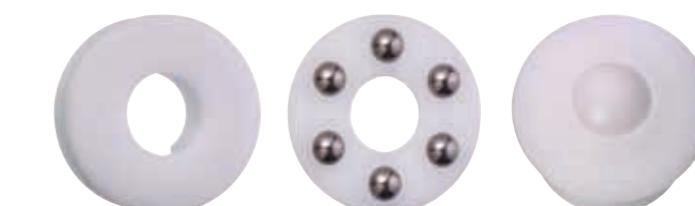
- xirodur® M180 – detectable
- xirodur® T220 – for the tobacco industry
- xirodur® G220 – for temperatures up to +120 °C

► From page 831

xiros® flange bearing

- With flange on one or both sides
- Made from xirodur® B180 or F180
- xiros® System Solution: Aluminium tube with 2 flange bearings

► From page 834



xiros® radial deep-groove ball bearings – further designs

- With spherical outer diameter
- Double row for higher loads
- Multi-bearing for radial and linear movements

► From page 840

xiros® axial bearings

- For absorbing axial loads
- xirodur® B180 with glass or stainless steel balls

► From page 850



xiros® slewing ring bearing

- With glass or stainless steel balls
- Outer toothed profile
- With cage

► From page 852

xiros® combination with igubal®

- Fixed or pivoting versions
- For maintenance-free use in conveyor belts and cam rollers

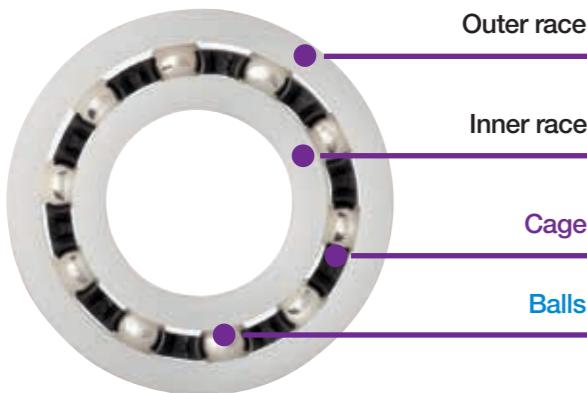
► From page 854

Radial deep groove ball bearings design

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

The outer- and inner races

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 maximise service life and minimise friction. Choice of 5 materials. They allow different values of application temperature, chemical resistance and price. The table with material data (► Page 802) gives exact information.



The cage

The material of the ball bearing cage must fit well to the application. The various material options have quite different chemical and temperature resistance values. The cage materials are compatible with all the different race options within xiros®.

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. Steel balls (stainless steel) are cost-effective, chemical resistant, but with the highest weight. Glass balls are used to give a non-metallic solution. They are also very resistant to chemicals and have an average weight. The igus® polymer ball bearings made from PAI have significant advantages in weight, size and quiet running characteristics. They can have excellent chemical resistance.

Other designs

xiros® radial deep groove ball bearings

The other designs include:

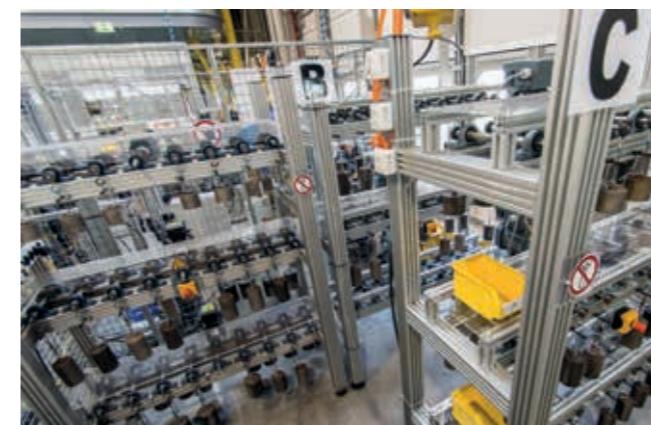
- Convex rollers which can run directly on a profile
- Castors
- Multi-bearings for linear and radial movements
- Flange bearings designed e.g. for installation in tube ends
- Double row bearings for absorbing higher forces

Pillow block and flange bearings

This range is made up by combining xiros® polymer ball bearing with the igubal® pillow block and flanged housings, 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 are available as fixed or as 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. If necessary, the inner bearing can be pivoted in all directions. Possible misalignment of two bearing points lying together can thus be compensated.

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 are 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.



igus® extends the xiros® test stand in the industry's largest test laboratory for plastics in motion

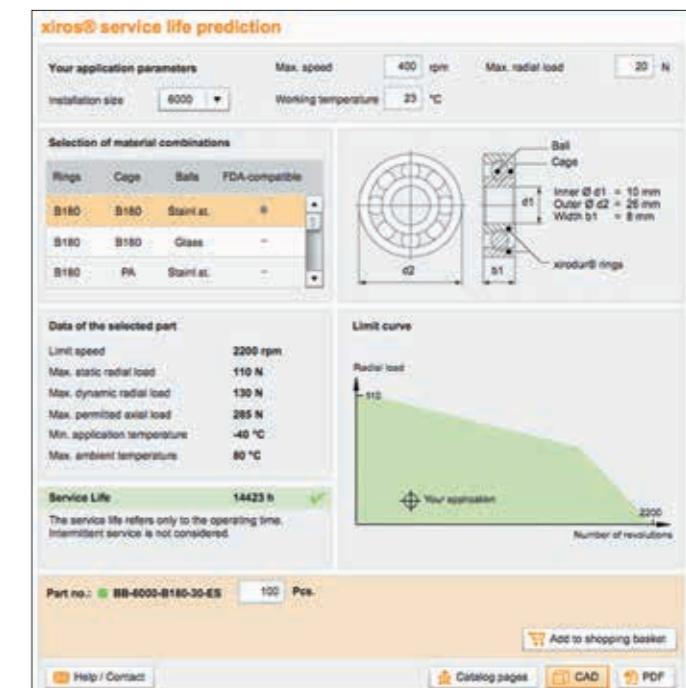
Predictability

As part of the development of xiros® polymer ball bearing tests are carried out continuously. The high number of test results make it very difficult to present this information in tabular form. It is for this reason that igus® has developed the online life calculator, which uses real test results to give an accurate calculation.

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 service life of the xiros® polymer ball bearing reliably and interpret the application.



► www.igus.eu/xiros-expert



Download the
online tools App



xiros® polymer ball bearings | Technical data

Material properties and chemical resistance

xirodur®					
General properties	Unit	B180	S180	C160	A500
Density	g/cm³	1.42	1.40	1.11	1.23
Colour		White	Black	Opaque	Brown
Max. moisture absorption at +23 °C/50% r.h.	% weight	0.2	0.2	0.1	0.1
Max. water absorption	% weight	0.7	0.7	0.2	0.4
Mechanical properties					
Flexural modulus	MPa	2,500	2,700	1,900	4,300
Tensile strength at +20°C	MPa	68	65	35	130
Shore-D hardness		77	78	67	85
Electrical properties					
Specific volume resistance ¹⁾	Ωcm	> 10¹⁴	> 10¹³	> 10¹⁴	> 10¹⁴
Surface resistance ¹⁾	Ω	> 10¹⁴	> 10¹³	> 10¹⁴	> 10¹⁴
Thermal properties of xiros® polymer ball bearings					
Max. long-term application temperature	°C	+80	+80	+60	+150
Min. application temperatures (in combination with cage material)	°C	-40	-45	0	-100 (PEEK) -40 (PA)

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

F180	D180	M180	T220	G220	igumid G
1.36	1.22	1.63	1.28	1.14	1.37
Black	Blue	Blue	Beige	Grey	Black
0.2	0.5	0.2	0.3	2.1	1.4
1.3	1.4	0.6	0.5	8.9	5.6
1,600	135	2,500	1,800	3,000	7,800
70	n. v.	68	65	n. v.	240
79	48	77	76	n. v.	79
< 10¹² ²⁾	> 10¹⁴	> 10⁹	> 10¹⁰	> 10¹³	> 10¹¹
< 10¹² ²⁾	> 10¹⁴	> 10⁹	> 10¹⁰	> 10¹²	> 10¹¹
+80	+80	+80	+100	+100	+120
-40	-50	-40	-40	-40	-40

Medium	B180	S180	C160	A500
Alcohols	+	+	+	+
Greases, oils without additives	+	+	+	+
Hydrocarbons	+	+	+ to 0	+
Fuels	+	+	+ to 0	+
Strong base	+ to 0	+ to 0	+	+
Strong acid	-	-	+ to 0	+
Diluted base	+	+	+	+
Diluted acid	0 to -	0 to -	+	+

+ resistant 0 conditionally resistant - not resistant

Table 02: Chemical resistance of xiros® materials

Detailed chemicals resistance table for xiros® products ► Page 1478

F180	D180	M180	T220	G220	igumid G
+	+ to 0	+	+	+	+
+	+	+	+	+	+
+	+	+	+	+	+
+	+	+	+	+	+
+ to 0	-				
-	0	-	-	-	+ to 0
+	+ to 0	+	+	+	0 to -
0 to -	+ to 0	0 to -	0 to -	0 to -	+

Recommendation of tolerance for hole and shaft

Fitting	Housing bore	Shaft
Standard: transition fit	H7	h6

For further questions about the dimensioning of the bore and the shaft please contact us.

Ball material

Description	Specification
ES: Stainless steel	1.4401
GL: glass	Soda-lime glass or borosilicate glass
PAI: Plastic	Polyamide-imide
PP: Plastic	Polypropylene

xiros® polymer ball bearings | Selection guide

According to material properties

xirodur®	B180				S180	C160		
Cage material	PA		B180		PE	PA	PP	
Ball material	ES	GL	ES	GL	ES	ES	GL	
Descriptive technical specifications								
Lowest wear						●		
Smooth running	●	●	●	●	●	●	●	●
Low humidity absorption	●	●	●	●	●	●	●	●
Chemically resistant		●	●	●	●	●	●	●
Seawater resistant		●	●	●		●	●	
Dirt resistant	●	●	●	●	●	●	●	●
Higher temperatures								
Higher speeds								●
Cost-effective		●	●		●			
Approvals and standards								
Contact with food			●		●			
ESD-compliant								
Non-metallic		●		●		●		
Detectable								●
Availabilities / variants								
Radial deep groove ball bearings	●	●	●	●	●	●	●	●
Flange bearings	●	●	●	●				
End cap	●	●						
Spherical outer diameter	●	●						●
Double row	●	●						
Slewing ring bearing			●					
Axial-thrust bearing			●	●				

	A500					F180		D180	M180	T220	G220
	PA		PEEK			PA	PE	PA	M180	PP	PA
	ES	GL	ES	GL	PAI	ES	ES	ES	ES	ES	ES
Smooth running	●	●	●	●	●	●	●	●	●	●	●
Low humidity absorption	●	●	●	●	●	●	●	●	●	●	●
Chemically resistant		●	●	●	●	●	●	●	●	●	●
Seawater resistant		●	●	●		●	●	●	●	●	●
Dirt resistant	●	●	●	●	●	●	●	●	●	●	●
Higher temperatures	●	●	●	●	●						●
Higher speeds									●		
Cost-effective											
Contact with food						●		●	●	●	●
ESD-compliant								●	●	●	
Non-metallic		●		●		●		●			
Detectable									●		
Radial deep groove ball bearings	●	●	●	●	●	●	●	●	●	●	●
Flange bearings	●	●	●	●							
End cap	●	●									
Spherical outer diameter	●	●									
Double row	●	●									
Slewing ring bearing			●								
Axial-thrust bearing			●	●							

Races made from xirodur® B180 – cost-effective standard

FDA



xirodur® B180 cage,
stainless steel balls



xirodur® B180 cage,
glass balls



PA cage,
stainless steel balls



PA cage,
glass balls

FDA

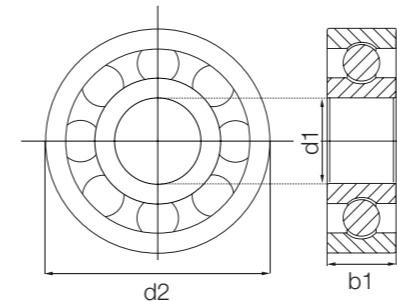


PE cage,
stainless steel balls



Special designs made from xirodur® B180

► From page 843



Order key

Type

Material

BB-623-B180-10-ES

Ball bearing

Dimensions
acc. to DIN 625-1

Race material

Cage material

Ball material

Options

Cage material

10: PA

30: xirodur® B180

50: PE

Ball material

ES: Stainless steel

GL: Glass



Imperial dimensions available

► Page 1455

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight				
	stat. [N]	dyn. [N]		B180/ES	B180/GL	PA/ES	PA/GL	PE/ES
623	25	34	4,500	0.4	0.4	0.4	0.3	–
633	33	45	4,000	–	–	–	–	–
684	10	11	4,600	–	–	–	–	–
694	12	14	4,000	–	–	–	–	–
604	30	32	3,600	–	–	–	–	–
624	33	45	4,000	–	–	1.0	0.9	–
634	40	40	3,700	–	–	–	–	–
685	12	14	4,000	–	–	–	–	–
695	29	30	3,500	–	–	–	–	–
605	32	33	3,500	–	–	–	–	–
625	40	40	3,700	–	–	1.6	1.0	–
635	41	43	3,200	–	–	–	–	–
686	29	30	3,500	–	–	–	–	–
696	29	30	3,500	–	–	–	–	–
606	50	53	3,300	–	–	–	–	–
626	60	62	3,200	2.3	1.8	2.2	1.7	–
636	80	94	2,200	–	–	–	–	–
687	32	34	3,200	–	–	–	–	–
697	39	41	3,000	–	–	–	–	–
607	41	43	3,200	–	–	–	–	–
627	80	94	2,400	–	–	–	–	–
688	39	41	3,000	–	–	3.1	2.1	–
698	60	62	3,200	–	–	–	–	–
608	80	94	2,400	4.0	2.7	3.9	2.6	–



Order example:

BB-623-B180-10-ES = Radial deep groove ball bearing with race material xirodur® B180, PA cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination					Part No.
			B180/ES	B180/GL	PA/ES	PA/GL	PE/ES	
3	10	4	●	●	●	●	●	BB-623-B180-[]-ES
3	13	5	●	●	–	–	–	BB-633-B180-[]-ES
4	9	4	●	●	–	–	–	BB-684-B180-[]-ES
4	11	4	●	●	–	–	–	BB-694-B180-[]-ES
4	12	4	●	●	–	–	–	BB-604-B180-[]-ES
4	13	5	●	●	●	●	●	BB-624-B180-[]-ES
4	16	5	●	●	–	–	–	BB-634-B180-[]-ES
5	11	5	●	●	–	–	–	BB-685-B180-[]-ES
5	13	4	●	●	–	–	–	BB-695-B180-[]-ES
5	14	5	●	●	–	–	–	BB-605-B180-[]-ES
5	16	5	●	●	●	●	●	BB-625-B180-[]-ES
5	19	6	●	●	–	–	–	BB-635-B180-[]-ES
6	13	5	●	●	–	–	–	BB-686-B180-[]-ES
6	15	5	●	●	–	–	–	BB-696-B180-[]-ES
6	17	6	●	●	–	–	–	BB-606-B180-[]-ES
6	19	6	●	●	●	●	●	BB-626-B180-[]-ES
6	22	7	●	●	–	–	–	BB-636-B180-[]-ES
7	14	5	●	●	–	–	–	BB-687-B180-[]-ES
7	17	5	●	●	–	–	–	BB-697-B180-[]-ES
7	19	6	●	●	–	–	–	BB-607-B180-[]-ES
7	22	7	●	●	–	–	–	BB-627-B180-[]-ES
8	16	5	●	●	●	●	–	BB-688-B180-[]-ES
8	19	6	●	●	–	–	–	BB-698-B180-[]-ES
8	22	7	●	●	●	●	●	BB-608-B180-[]-ES



Available from stock
upon request

Races made from xirodur® B180 – cost-effective standard

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight				
	stat. [N]	dyn. [N]		B180/ES	B180/GL	PA/ES	PA/GL	PE/ES
628	100	110	2,300	–	–	–	–	–
638	110	130	2,200	–	–	–	–	–
689	40	42	2,500	–	–	–	–	–
699	43	45	2,250	–	–	–	–	–
609	100	110	2,300	–	–	–	–	–
629	110	128	2,200	–	–	–	–	–
6800	43	45	2,250	–	–	–	–	–
6900	60	64	2,000	–	–	–	–	–
6000	110	130	2,200	6.3	4.1	6.1	4.0	–
6200	130	147	2,000	–	–	7.8	5.2	–
6300	140	150	1,800	–	–	–	–	–
6701	16	18	2,200	–	–	–	–	–
6801	60	64	2,000	–	–	–	–	–
6901	80	83	1,800	–	–	–	–	–
6001	130	147	2,000	7.1	–	6.9	4.5	–
6201	140	150	1,800	–	–	8.8	5.9	–
6301	160	220	1,600	–	–	–	–	–
6702	19	21	1,800	–	–	–	–	–
6802	80	83	1,800	–	–	–	–	–
6902	90	94	1,700	–	–	–	–	–
6002	140	150	1,800	–	–	–	–	–
6202	160	220	1,600	12.8	8.9	11.6	8.2	–
6302	250	320	1,400	–	–	–	–	–
6703	23	25	1,600	–	–	–	–	–
6803	90	94	1,700	–	–	–	–	–
6903	90	94	1,700	–	–	–	–	–
6003	160	220	1,600	11.5	8.4	11.1	7.9	–
6203	250	320	1,400	–	–	14.4	10.2	–
6303	280	360	1,200	–	–	–	–	–
6704	30	36	1,400	–	–	–	–	–
6804	100	120	1,500	–	–	–	–	–
6904	140	144	1,150	–	–	–	–	–
6004	250	320	1,400	20.8	14.2	20.2	13.6	–
6204	280	360	1,200	–	–	26.2	17.7	–
6304	380	400	1,000	–	–	–	–	–
6705	32	38	1,200	–	–	–	–	–
6805	140	144	1,150	–	–	–	–	–
6905	160	162	900	–	–	–	–	–
6005	280	360	1,200	24.7	17.5	23.9	16.7	–
6205	380	400	1,000	–	–	35.2	24.6	–
6305	480	520	850	–	–	–	–	–



Order example:

BB-628-B180-30-ES = Radial deep groove ball bearing with race material xirodur® B180, xirodur® B180 cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination				Part No.
			B180/ES	B180/GL	PA/ES	PA/GL	
8	24	8	●	●	–	–	BB-628-B180-[]-[]
8	28	9	●	●	–	–	BB-638-B180-[]-[]
9	17	5	●	●	–	–	BB-689-B180-[]-[]
9	20	6	●	●	–	–	BB-699-B180-[]-[]
9	24	7	●	●	–	–	BB-609-B180-[]-[]
9	26	8	●	●	●	–	BB-629-B180-[]-[]
10	19	5	●	●	–	–	BB-6800-B180-[]-[]
10	22	6	●	●	–	–	BB-6900-B180-[]-[]
10	26	8	●	●	●	●	BB-6000-B180-[]-[]
10	30	9	●	●	●	●	BB-6200-B180-[]-[]
10	35	11	●	●	●	●	BB-6300-B180-[]-[]
12	18	4	●	●	–	–	BB-6701-B180-[]-[]
12	21	5	●	●	–	–	BB-6801-B180-[]-[]
12	24	6	●	●	–	–	BB-6901-B180-[]-[]
12	28	8	●	●	●	●	BB-6001-B180-[]-[]
12	32	10	●	●	●	●	BB-6201-B180-[]-[]
12	37	12	●	●	–	–	BB-6301-B180-[]-[]
15	21	4	●	●	–	–	BB-6702-B180-[]-[]
15	24	5	●	●	–	–	BB-6802-B180-[]-[]
15	28	7	●	●	–	–	BB-6902-B180-[]-[]
15	32	9	●	●	●	●	BB-6002-B180-[]-[]
15	35	11	●	●	●	●	BB-6202-B180-[]-[]
15	42	13	●	●	●	–	BB-6302-B180-[]-[]
17	23	4	●	●	–	–	BB-6703-B180-[]-[]
17	26	5	●	●	–	–	BB-6803-B180-[]-[]
17	30	7	●	●	–	–	BB-6903-B180-[]-[]
17	35	10	●	●	●	●	BB-6003-B180-[]-[]
17	40	12	●	●	●	●	BB-6203-B180-[]-[]
17	47	14	●	●	–	–	BB-6303-B180-[]-[]
20	27	4	●	●	–	–	BB-6704-B180-[]-[]
20	32	7	●	●	–	–	BB-6804-B180-[]-[]
20	37	9	●	●	–	–	BB-6904-B180-[]-[]
20	42	12	●	●	●	●	BB-6004-B180-[]-[]
20	47	14	●	●	●	●	BB-6204-B180-[]-[]
20	52	15	●	●	–	–	BB-6304-B180-[]-[]
25	32	4	●	●	–	–	BB-6705-B180-[]-[]
25	37	7	●	●	–	–	BB-6805-B180-[]-[]
25	42	9	●	●	–	–	BB-6905-B180-[]-[]
25	47	12	●	●	●	●	BB-6005-B180-[]-[]
25	52	15	●	●	●	●	BB-6205-B180-[]-[]
25	62	17	●	●	–	–	BB-6305-B180-[]-[]

Available from stock
upon request

xiros® radial deep groove ball bearings | Product range

Races made from xirodur® B180 – cost-effective standard

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight				
	stat.	dyn.		B180/ES	B180/GL	PA/ES	PA/GL	
	[N]	[N]		[g]	[g]	[g]	[g]	
6706	34	41	1,000	–	–	–	–	–
6806	160	162	900	–	–	–	–	–
6906	190	193	850	–	–	–	–	–
16006	380	420	900	–	–	18.1	12.5	–
6006	380	400	1,000	–	–	35.0	24.2	–
6206	480	520	850	–	–	–	–	–
6306	520	660	750	–	–	–	–	–
6007	480	520	850	–	–	47.0	31.3	–
6008	520	660	750	–	–	56.3	39.1	–
6009	660	690	650	–	–	71.5	48.6	–
6010	740	780	600	–	–	83.1	56.4	–
6011	930	950	550	–	–	125.2	84.4	–
6012	990	1,050	500	–	–	129.6	85.6	–



Order example:

BB-6706-B180-30-ES = Thin ring bearing with race material xirodur® B180, xirodur® B180 cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination				Part No.
			B180/ES	B180/GL	PA/ES	PA/GL	
30	37	4	●	●	–	–	BB-6706-B180-[]-ES
30	42	7	●	●	–	–	BB-6806-B180-[]-ES
30	47	9	●	●	–	–	BB-6906-B180-[]-ES
30	55	9	–	–	●	●	BB-16006-B180-10-ES
30	55	13	●	●	●	●	BB-6006-B180-[]-ES
30	62	16	●	●	–	–	BB-6206-B180-[]-ES
30	72	19	●	●	–	–	BB-6306-B180-[]-ES
35	62	14	–	–	●	●	BB-6007-B180-[]-ES
40	68	15	–	–	●	●	BB-6008-B180-[]-ES
45	75	16	–	–	●	●	BB-6009-B180-[]-ES
50	80	16	–	–	●	●	BB-6010-B180-[]-ES
55	90	18	–	–	●	●	BB-6011-B180-[]-ES
60	95	18	–	–	●	●	BB-6012-B180-[]-ES



Available from stock
upon request

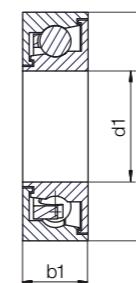
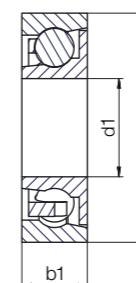
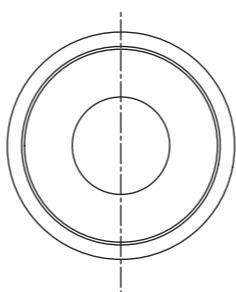
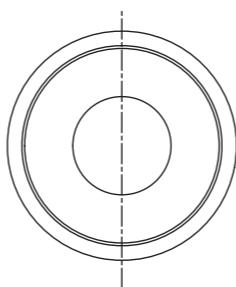
Races made from xirodur® B180 - with cover plate



PA cage, with shield on one side, stainless steel or glass balls



B180 cage, with labyrinth seal, stainless steel balls



Order key

Type	Material
BB-623-B180-10-ES-C	
Ball bearing	
Dimensions acc. to DIN 625-1	
Race material	
Cage material	
Ball material	
With shield	

Cage material

10: PA

30: xirodur® B180

Options

Ball material

ES: Stainless steel

GL: Glass

Shield or labyrinth seal

C: One-sided shield

LCC: Labyrinth seal

Technical data

Size	Radial load capacity		Max. speed	Weight			
	stat.	dyn.		[N]	[N]	[rpm]	ES
				[g]	[g]	[g]	GL
623	10	25	4,500	0.4	0.4	—	—
626	41	43	3,200	2.5	1.8	—	—
608	80	94	2,200	4.0	2.7	—	—
6000	110	130	2,200	6.3	4.1	—	—
6001	138	147	2,000	7.1	—	—	—
6202	142	155	1,700	12.8	8.9	—	—
6003	160	220	1,600	11.5	8.4	—	—
6004	250	320	1,400	20.8	14.2	—	—
6005	280	360	1,200	23.9	16.7	24.7	17.5



Order example:

BB-623-B180-10-ES = Radial deep groove ball bearing with race material xirodur® B180, PA cage, stainless steel balls and shield

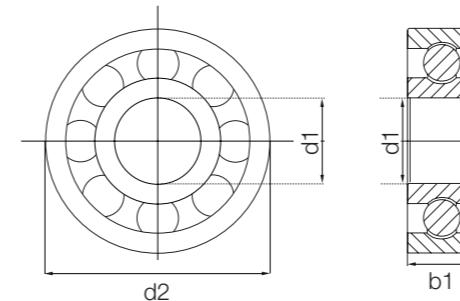
Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination		Part No.
			Shield	Labyrinth seal	
d1	d2	b1	PA/ES/GL	B180/ES/GL	
3	10	4	●	●	BB-623-B180-10-ES-C
6	19	6	●	●	BB-626-B180-10-ES-C
8	22	7	●	●	BB-608-B180-10-ES-C
10	26	8	●	●	BB-6000-B180-10-ES-C
12	28	8	●	●	BB-6001-B180-10-ES-C
15	35	11	●	●	BB-6202-B180-10-ES-C
17	35	10	●	●	BB-6003-B180-ES-C
20	42	12	●	●	BB-6004-B180-10-ES-C
25	47	12	●	●	BB-6005-B180-10-ES-C



Available from stock
upon request

Races made from xirodur® S180 – low wear

PA cage,
stainless steel balls

Order key

Type	Material
BB-608-S180-10-ES	
Ball bearing	
Dimensions acc. to DIN 625-1	
Race material	
Cage material	
Ball material	

Options
Cage material
 10: PA
Ball material
 ES: Stainless steel
 GL: Glass

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight		
	stat. [N]	dyn. [N]		PA/ES [g]	PA/GL [g]	PE/ES [g]
623	25	34	4,500	0.4	0.3	0.4
633	33	45	4,000	–	–	–
684	10	11	4,600	–	–	–
694	12	14	4,000	–	–	–
604	30	32	3,600	–	–	–
624	33	45	4,000	1.0	0.9	–
634	40	40	3,700	–	–	–
685	12	14	4,000	–	–	–
695	29	30	3,500	–	–	–
605	32	33	3,500	–	–	–
625	40	40	3,700	1.6	1.0	–
635	41	43	3,200	–	–	–
686	29	30	3,500	–	–	–
696	29	30	3,500	–	–	–
606	50	53	3,300	–	–	–
626	60	62	3,200	2.2	1.7	2.5
636	80	94	2,200	–	–	–
687	32	34	3,200	–	–	–
697	39	41	3,000	–	–	–
607	41	43	3,200	–	–	–
627	80	94	2,400	–	–	–
688	39	41	3,000	3.1	2.1	–
698	60	62	3,200	–	–	–
608	80	94	2,400	3.9	2.6	4.0



Order example:

BB-623-S180-10-ES = Radial deep groove ball bearing with race material xirodur® S180, PA cage and stainless steel balls

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination		Part No.
			PA/ES	PA/GL	
3	10	4	●	●	BB-623-S180-10-[]
3	13	5	●	●	BB-633-S180-10-[]
4	9	4	●	●	BB-684-S180-10-[]
4	11	4	●	●	BB-694-S180-10-[]
4	12	4	●	●	BB-604-S180-10-[]
4	13	5	●	●	BB-624-S180-10-[]
4	16	5	●	●	BB-634-S180-10-[]
5	11	5	●	●	BB-685-S180-10-[]
5	13	4	●	●	BB-695-S180-10-[]
5	14	5	●	●	BB-605-S180-10-[]
5	16	5	●	●	BB-625-S180-10-[]
5	19	6	●	●	BB-635-S180-10-[]
6	13	5	●	●	BB-686-S180-10-[]
6	15	5	●	●	BB-696-S180-10-[]
6	17	6	●	●	BB-606-S180-10-[]
6	19	6	●	●	BB-626-S180-10-[]
6	22	7	●	●	BB-636-S180-10-[]
7	14	5	●	●	BB-687-S180-10-[]
7	17	5	●	●	BB-697-S180-10-[]
7	19	6	●	●	BB-607-S180-10-[]
7	22	7	●	●	BB-627-S180-10-[]
8	16	5	●	●	BB-688-S180-10-[]
8	19	6	●	●	BB-698-S180-10-[]
8	22	7	●	●	BB-608-S180-10-[]

Available from stock
upon request

Races made from xirodur® S180 – low wear

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight		
	stat. [N]	dyn. [N]		PA/ES [g]	PA/GL [g]	PE/ES [g]
628	100	110	2,300	–	–	–
638	110	130	2,200	–	–	–
689	40	42	2,500	–	–	–
699	43	45	2,250	–	–	–
609	100	110	2,300	–	–	–
629	110	128	2,200	6.1	–	–
6800	43	45	2,250	–	–	–
6900	60	64	2,000	–	–	–
6000	110	130	2,200	6.1	4.0	6.3
6200	130	147	2,000	7.8	5.2	–
6300	140	150	1,800	–	–	–
6701	16	18	2,200	–	–	–
6801	60	64	2,000	–	–	–
6901	80	83	1,800	–	–	–
6001	130	147	2,000	6.9	4.5	7.1
6201	140	150	1,800	8.8	5.9	–
6301	160	220	1,600	–	–	–
6702	19	21	1,800	–	–	–
6802	80	83	1,800	–	–	–
6902	90	94	1,700	–	–	–
6002	140	150	1,800	8.9	6.2	–
6202	160	220	1,600	11.6	8.2	12.8
6302	250	320	1,400	–	–	–
6703	23	25	1,600	–	–	–
6803	90	94	1,700	–	–	–
6903	90	94	1,700	–	–	–
6003	160	220	1,600	11.1	7.9	11.5
6203	250	320	1,400	14.4	10.2	–
6303	280	360	1,200	–	–	–
6704	30	36	1,400	–	–	–
6804	100	120	1,500	–	–	–
6904	140	144	1,150	–	–	–
6004	250	320	1,400	20.2	13.6	20.8
6204	280	360	1,200	26.2	17.7	–
6304	380	400	1,000	–	–	–
6705	32	38	1,200	–	–	–
6805	140	144	1,150	–	–	–
6905	160	162	900	–	–	–
6005	280	360	1,200	23.9	16.7	24.7
6205	380	400	1,000	35.2	24.6	–
6305	480	520	850	–	–	–



Order example:

BB-628-S180-10-ES = Radial deep groove ball bearing with race material xirodur® S180, PA cage and stainless steel balls

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination		Part No.
			PA/ES	PA/GL	
8	24	8	●	●	BB-628-S180-10-ES
8	28	9	●	●	BB-638-S180-10-ES
9	17	5	●	●	BB-689-S180-10-ES
9	20	6	●	●	BB-699-S180-10-ES
9	24	7	●	●	BB-609-S180-10-ES
9	26	8	●	●	BB-629-S180-10-ES
10	19	5	●	●	BB-6800-S180-10-ES
10	22	6	●	●	BB-6900-S180-10-ES
10	26	8	●	●	BB-6000-S180-10-ES
10	30	9	●	●	BB-6200-S180-10-ES
10	35	11	●	●	BB-6300-S180-10-ES
12	18	4	●	●	BB-6701-S180-10-ES
12	21	5	●	●	BB-6801-S180-10-ES
12	24	6	●	●	BB-6901-S180-10-ES
12	28	8	●	●	BB-6001-S180-10-ES
12	32	10	●	●	BB-6201-S180-10-ES
12	37	12	●	●	BB-6301-S180-10-ES
15	21	4	●	●	BB-6702-S180-10-ES
15	24	5	●	●	BB-6802-S180-10-ES
15	28	7	●	●	BB-6902-S180-10-ES
15	32	9	●	●	BB-6002-S180-10-ES
15	35	11	●	●	BB-6202-S180-10-ES
15	42	13	●	●	BB-6302-S180-10-ES
17	23	4	●	●	BB-6703-S180-10-ES
17	26	5	●	●	BB-6803-S180-10-ES
17	30	7	●	●	BB-6903-S180-10-ES
17	35	10	●	●	BB-6003-S180-10-ES
17	40	12	●	●	BB-6203-S180-10-ES
17	47	14	●	●	BB-6303-S180-10-ES
20	27	4	●	●	BB-6704-S180-10-ES
20	32	7	●	●	BB-6804-S180-10-ES
20	37	9	●	●	BB-6904-S180-10-ES
20	42	12	●	●	BB-6004-S180-10-ES
20	47	14	●	●	BB-6204-S180-10-ES
20	52	15	●	●	BB-6304-S180-10-ES
25	32	4	●	●	BB-6705-S180-10-ES
25	37	7	●	●	BB-6805-S180-10-ES
25	42	9	●	●	BB-6905-S180-10-ES
25	47	12	●	●	BB-6005-S180-10-ES
25	52	15	●	●	BB-6205-S180-10-ES
25	62	17	●	●	BB-6305-S180-10-ES



Available from stock

upon request

Races made from xirodur® S180 – low wear

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight		
	stat. [N]	dyn. [N]		PA/ES [g]	PA/GL [g]	PE/ES [g]
6706	34	41	1,000	–	–	–
6806	160	162	900	–	–	–
6906	190	193	850	–	–	–
6006	380	400	1,000	35.0	24.2	–
6206	480	520	850	–	–	–
6306	520	660	750	–	–	–
6007	480	520	850	47.0	31.3	–
6008	520	660	750	56.3	39.1	–
6009	660	690	650	71.5	48.6	–
6010	740	780	600	83.1	56.4	–
6011	930	950	550	125.2	84.4	–
6012	990	1,050	500	129.6	85.6	–



Order example:

BB-6706-S180-10-ES = Radial deep groove ball bearing with race material xirodur® S180, PA cage and stainless steel balls

Dimensions [mm]

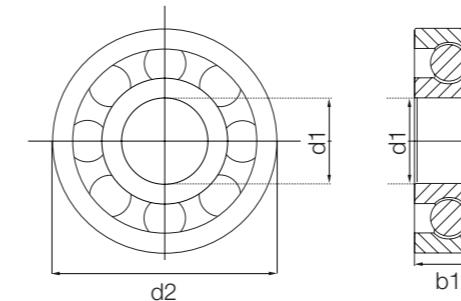
Inner Ø	Outer Ø	Width	Cage/ball material combination		Part No.
			PA/ES	PA/GL	
30	37	4	●	●	BB-6706-S180-10-[]
30	42	7	●	●	BB-6806-S180-10-[]
30	47	9	●	●	BB-6906-S180-10-[]
30	55	13	●	●	BB-6006-S180-10-[]
30	62	16	●	●	BB-6206-S180-10-[]
30	72	19	●	●	BB-6306-S180-10-[]
35	62	14	●	●	BB-6007-S180-10-[]
40	68	15	●	●	BB-6008-S180-10-[]
45	75	16	●	●	BB-6009-S180-10-[]
50	80	16	●	●	BB-6010-S180-10-[]
55	90	18	●	●	BB-6011-S180-10-[]
60	95	18	●	●	BB-6012-S180-10-[]



Available from stock

upon request

Races made from xirodur® C160 – resistant to chemicals

PP cage,
stainless steel ballsPP cage,
glass balls

Order key

Type	Material
------	----------

BB-623-C160-20-ES

Ball bearing	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
--------------	------------------------------	---------------	---------------	---------------

Cage material

20: PP

Options

Ball material

ES: Stainless steel

GL: Glass

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		PP/ES [g]	PP/GL [g]
623	10	11	4,000	0.4	0.3
624	12	13	3,650	–	–
625	20	22	3,100	–	–
635	30	31	2,900	–	–
626	30	34	2,600	2.1	1.4
636	40	42	2,050	–	–
627	40	43	2,000	–	–
688	20	21	2,750	–	–
608	40	46	2,200	3.4	2.2
628	57	61	1,800	–	–
638	60	62	1,670	–	–
629	60	63	1,680	–	–
6800	20	24	2,100	–	–
6000	60	65	1,700	5.6	3.5
6200	78	81	1,540	–	–
6801	30	32	1,920	–	–
6001	70	74	1,580	–	–
6201	80	83	1,260	–	–
6802	40	43	1,700	–	–
6002	80	85	1,500	8.1	4.2
6202	80	85	1,130	–	–
6803	50	51	1,650	–	–
6003	90	96	1,300	9.3	5.1
6203	140	142	1,010	–	–
6804	50	54	1,480	–	–



Order example:

BB-623-C160-20-ES = Radial deep groove ball bearing with race material xirodur® C160, PP cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination		Part No.
			PP/ES	PP/GL	
3	10	4	●	●	BB-623-C160-20-[]
4	13	5	●	●	BB-624-C160-20-[]
5	16	5	●	●	BB-625-C160-20-[]
5	19	6	●	●	BB-635-C160-20-[]
6	19	6	●	●	BB-626-C160-20-[]
6	22	7	●	●	BB-636-C160-20-[]
7	22	7	●	●	BB-627-C160-20-[]
8	16	5	●	●	BB-688-C160-20-[]
8	22	7	●	●	BB-608-C160-20-[]
8	24	8	●	●	BB-628-C160-20-[]
8	28	9	●	●	BB-638-C160-20-[]
9	26	8	●	●	BB-629-C160-20-[]
10	19	5	●	●	BB-6800-C160-20-[]
10	26	8	●	●	BB-6000-C160-20-[]
10	30	9	●	●	BB-6200-C160-20-[]
12	21	5	●	●	BB-6801-C160-20-[]
12	28	8	●	●	BB-6001-C160-20-[]
12	32	10	●	●	BB-6201-C160-20-[]
15	24	5	●	●	BB-6802-C160-20-[]
15	32	9	●	●	BB-6002-C160-20-[]
15	35	11	●	●	BB-6202-C160-20-[]
17	26	5	●	●	BB-6803-C160-20-[]
17	35	10	●	●	BB-6003-C160-20-[]
17	40	12	●	●	BB-6203-C160-20-[]
20	32	7	●	●	BB-6804-C160-20-[]

Available from stock
upon request

Races made from xirodur® C160 – resistant to chemicals

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		PP/ES [g]	PP/GL [g]
6004	140	142	1,000	–	–
6204	140	145	950	–	–
6805	80	82	1,075	–	–
6005	140	151	960	–	–
6205	200	203	810	–	–



Order example:

BB-6004-C160-20-ES = Radial deep groove ball bearing with race material xirodur® C160, PP cage and stainless steel balls

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination		Part No.
			PP/ES	PP/GL	
20	42	12	●	●	BB-6004-C160-20-[]
20	47	14	●	●	BB-6204-C160-20-[]
25	37	7	●	●	BB-6805-C160-20-[]
25	47	12	●	●	BB-6005-C160-20-[]
25	52	15	●	●	BB-6205-C160-20-[]



Available from stock

upon request

Races made from xirodur® A500 – for chemical and temperature stable up to +150°C



PA cage,
stainless steel balls



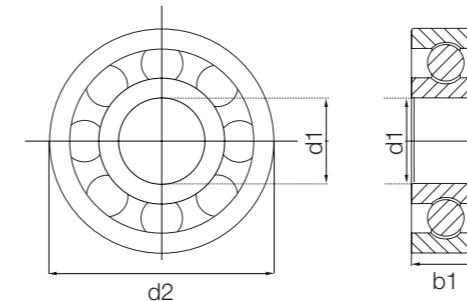
PEEK cage,
stainless steel balls



PEEK cage,
glass balls



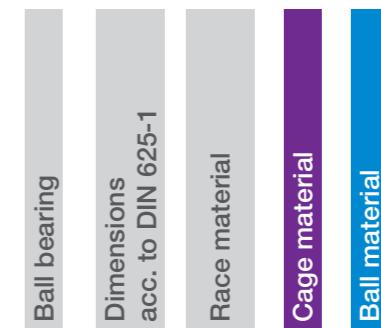
PEEK cage,
PAI balls



Order key

Type Material

BB-623-A500-10-ES



Options
Cage material
10: PA
70: PEEK
Ball material
ES: Stainless steel
GL: Glass
PAI: Polyamide-imide

Technical data

Size	Radial load capacity				Max. speed	Weight				
	stat.	dyn.	stat.	dyn.		PA/PEEK/PAI	PA/ES	PEEK/ES	PEEK/GL	
	[N]	[N]	[N]	[N]	[rpm]	[g]	[g]	[g]	[g]	
623	27	30	—	—	5,000	0.4	0.4	0.3	—	
624	30	40	—	—	4,500	1.9	1.0	0.9	—	
625	36	43	—	—	3,700	—	—	—	—	
635	48	52	—	—	3,400	—	—	—	—	
626	54	60	15	20	3,400	2.3	2.3	1.6	1.4	
636	72	76	—	—	2,450	—	—	—	—	
627	72	74	—	—	2,600	—	—	—	—	
688	36	38	—	—	3,150	—	—	—	—	
608	72	78	18	25	2,700	3.7	3.7	2.4	2.2	
628	98	104	—	—	2,500	—	—	—	—	
638	102	108	—	—	2,300	—	—	—	—	
629	102	112	—	—	2,350	—	—	—	—	
6800	42	46	—	—	2,300	—	—	—	—	
6000	102	107	25	34	2,100	6.0	6.0	3.8	3.4	
6200	126	132	—	—	2,100	—	—	—	—	
6801	54	57	—	—	2,150	—	—	—	—	
6001	105	124	—	—	2,040	—	—	—	—	
6201	132	141	—	—	1,820	—	—	—	—	
6802	72	76	—	—	1,920	—	—	—	—	
6002	132	145	32	41	1,900	9.1	9.1	5.2	5.6	
6202	135	146	—	—	1,600	—	—	—	—	
6803	84	84	—	—	1,760	—	—	—	—	
6003	138	152	—	—	1,790	—	—	—	—	
6203	228	232	—	—	1,450	—	—	—	—	



Order example:

BB-623-A500-10-ES = Radial deep groove ball bearing with race material xirodur® A500, PA cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination			Part No.
			PA/ES	PEEK/ES	PEEK/GL	
3	10	4	●	●	●	BB-623-A500-[]-ES
4	13	5	●	●	●	BB-624-A500-[]-ES
5	16	5	●	●	●	BB-625-A500-[]-ES
5	19	6	●	●	●	BB-635-A500-[]-ES
6	19	6	●	●	●	BB-626-A500-[]-ES
6	22	7	●	●	●	BB-636-A500-[]-ES
7	22	7	●	●	●	BB-627-A500-[]-ES
8	16	5	●	●	●	BB-688-A500-[]-ES
8	22	7	●	●	●	BB-608-A500-[]-ES
8	24	8	●	●	●	BB-628-A500-[]-ES
8	28	9	●	●	●	BB-638-A500-[]-ES
9	26	8	●	●	●	BB-629-A500-[]-ES
10	19	5	●	●	●	BB-6800-A500-[]-ES
10	26	8	●	●	●	BB-6000-A500-[]-ES
10	30	9	●	●	●	BB-6200-A500-[]-ES
12	21	5	●	●	●	BB-6801-A500-[]-ES
12	28	8	●	●	●	BB-6001-A500-[]-ES
12	32	10	●	●	●	BB-6201-A500-[]-ES
15	24	5	●	●	●	BB-6802-A500-[]-ES
15	32	9	●	●	●	BB-6002-A500-[]-ES
15	35	11	●	●	●	BB-6202-A500-[]-ES
17	26	5	●	●	●	BB-6803-A500-[]-ES
17	35	10	●	●	●	BB-6003-A500-[]-ES
17	40	12	●	●	●	BB-6203-A500-[]-ES



Available from stock
upon request

Races made from xirodur® A500 – for chemical and temperature
stable up to +150°C

Technical data

Size	Radial load capacity				Max. speed [rpm]	Weight			
	stat.	dyn.	stat.	dyn.		PA/ PEEK/PAI	PEEK/ ES	PEEK/ ES	PEEK/ GL
	[N]	[N]	[N]	[N]		[g]	[g]	[g]	[g]
6804	90	93	–	–	1,560	–	–	–	–
6004	234	250	62	88	1,700	19.7	19.7	13.2	11.7
6204	234	238	–	–	1,270	–	–	–	–
6805	132	135	–	–	980	–	–	–	–
6005	405	420	–	–	1,500	–	–	–	–
6205	348	356	–	–	1,100	–	–	–	–



Order example:

BB-623-A500-10-ES = Radial deep groove ball bearing with race material xirodur® A500, PA cage and stainless steel balls

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination				Part No.
			PA/ES	PEEK/ES	PEEK/GL	PEEK/PAI	
20	32	7	●	●	●	–	BB-6804-A500-[]-ES
20	42	12	●	●	●	●	BB-6004-A500-[]-ES
20	47	14	●	●	●	–	BB-6204-A500-[]-ES
25	37	7	●	●	●	–	BB-6805-A500-[]-ES
25	47	12	●	●	●	●	BB-6005-A500-[]-ES
25	52	15	●	●	●	–	BB-6205-A500-[]-ES



Available from stock

upon request

Races made from xirodur® F180 – ESD-compliant



PA cage,
stainless steel balls



PE cage,
stainless steel balls

FDA



Special designs
made from xirodur® F180
► Page 834

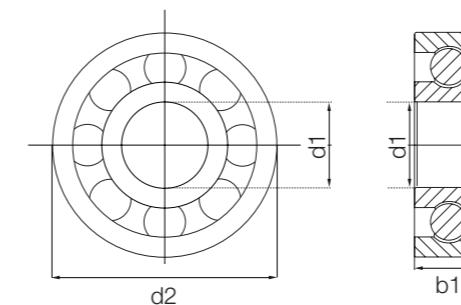
Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		PA/ES [g]	PE/ES [g]
623	10	25	4,500	0.4	0.4
624	20	33	4,000	1.0	1.0
625	40	40	3,700	1.6	1.6
626	41	43	3,200	2.1	2.1
608	80	94	2,200	3.8	3.8
6000	110	130	2,200	5.9	5.9
6001	138	147	2,000	6.9	6.9
6002	140	150	1,800	8.9	8.9
6003	160	220	1,600	10.7	10.7
6004	250	320	1,400	13.4	13.4
6005	280	360	1,200	–	–



Order example:

BB-623-F180-10-ES = Radial deep groove ball bearing with race material xirodur® F180, PA cage and stainless steel balls



Order key

Type Material

BB-623-F180-10-ES

Ball bearing Dimensions acc. to DIN 625-1 Race material Cage material Ball material

Options
Cage material
10: PA
50: PE
Ball material
ES: Stainless steel

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination		Part No.
			PA/ES	PE/ES	
3	10	4	●	●	BB-623-F180-[]-ES
4	13	5	●	●	BB-624-F180-[]-ES
5	16	5	●	●	BB-625-F180-[]-ES
6	19	6	●	●	BB-626-F180-[]-ES
8	22	7	●	●	BB-608-F180-[]-ES
10	26	8	●	●	BB-6000-F180-[]-ES
12	28	8	●	●	BB-6001-F180-[]-ES
15	32	9	●	●	BB-6002-F180-[]-ES
17	35	10	●	●	BB-6003-F180-[]-ES
20	42	12	●	●	BB-6004-F180-[]-ES
25	47	12	●	●	BB-6005-F180-[]-ES



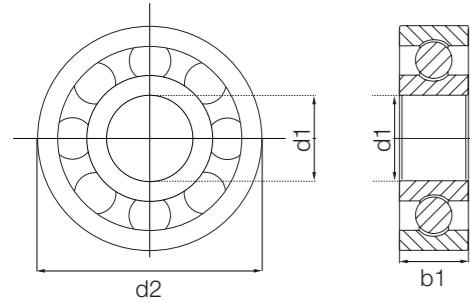
Available
from stock

xiros® radial deep groove ball bearings | Product range

Races made of xirodur® D180 Rings – for high speeds



PA cage,
stainless steel balls



Order key

Type	Material
------	----------

BB-623-D180-10-ES

Ball bearing	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
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Cage material
10: PA
Ball material
ES: Stainless steel

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight PA/ES [g]
	stat. [N]	dyn. [N]		
623	7	12	5,500	1.2
626	13	18	4,500	2.0
608	20	32	4,300	3.7
6000	28	36	4,200	5.7
6001	32	49	4,000	6.6
6002	44	50	3,870	8.5

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination PA/ES	Part No.
3	10	4	●	BB-623-D180-10-ES
6	19	6	●	BB-626-D180-10-ES
8	22	7	●	BB-608-D180-10-ES
10	26	8	●	BB-6000-D180-10-ES
12	28	8	●	BB-6001-D180-10-ES
15	32	9	●	BB-6002-D180-10-ES



Order example:

[BB-623-D180-10-ES](#) = Radial deep groove ball bearing with race material xirodur® D180, PA cage and stainless steel balls



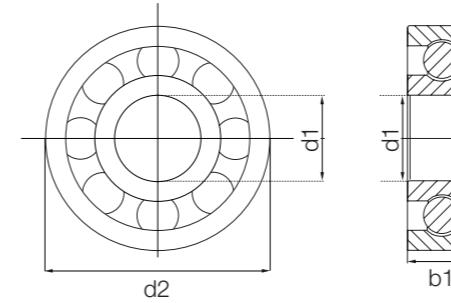
Available
from stock

xiros® radial deep groove ball bearings | Product range

Races made from xirodur® M180 – detectable



xirodur® M180 cage,
stainless steel balls



Order key

Type	Material
------	----------

BB-6000-M180-40-ES

Ball bearing	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
--------------	------------------------------	---------------	---------------	---------------

Cage material
40: xirodur® M180
Ball material
ES: Stainless steel



Special designs made
from xirodur® M180

► Page 843

Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight M180/ES [g]
	stat. [N]	dyn. [N]		
6000	85	119	1,900	6.1
6003	180	250	1,400	11.1

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Part No.
10	26	8	BB-6000-M180-40-ES
17	35	10	BB-6003-M180-40-ES



Order example:

[BB-6000-M180-40-ES](#) = Radial deep groove ball bearing with race material xirodur® M180, M180 cage and stainless steel balls



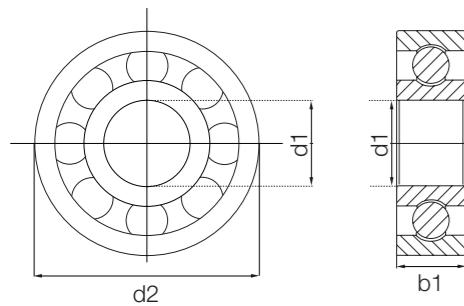
Available
from stock

xiros® radial deep groove ball bearings | Product range

Races made from xirodur® T220 – for the tobacco industry



PP cage,
stainless steel balls



Order key

Type	Material
------	----------

BB-6002-T220-20-ES

Ball bearing	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
--------------	------------------------------	---------------	---------------	---------------

Cage material
20: PP
Ball material
ES: Stainless steel

Technical data

Size	Radial load capacity		Max. speed	Weight
	stat.	dyn.		
6002	130	160	1,200	8.9

Dimensions [mm]

Inner Ø	Outer Ø	Width	Part No.
d1	d2	b1	
15	32	9	BB-6002-T220-20-ES



Order example:

BB-6002-T220-20-ES = Radial deep groove ball bearing with race material xirodur® T220, PP cage and stainless steel balls



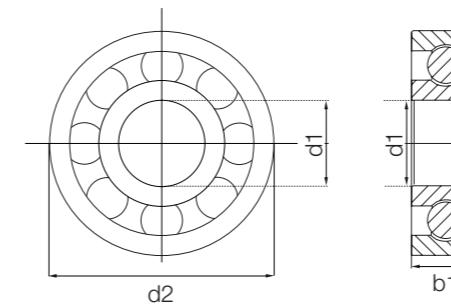
Available
from stock

xiros® radial deep groove ball bearings | Product range

Races made from xirodur® G220 – for temperatures up to +120°C



PA cage,
stainless steel balls



Order key

Type	Material
------	----------

BB-6000-G220-10-ES

Ball bearing	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
--------------	------------------------------	---------------	---------------	---------------

Cage material
10: PA
Ball material
ES: Stainless steel

Technical data

Size	Radial load capacity		Max. speed	Weight
	stat.	dyn.		
6000	95	110	2,000	6.1

Dimensions [mm]

Inner Ø	Outer Ø	Width	Part No.
d1	d2	b1	
10	26	8	BB-6000-G220-10-ES



Order example:

BB-6000-G220-10-ES = Radial deep groove ball bearing with race material xirodur® G220, PA cage and stainless steel balls



Available
from stock

Races made from xirodur® B180 or xirodur® F180

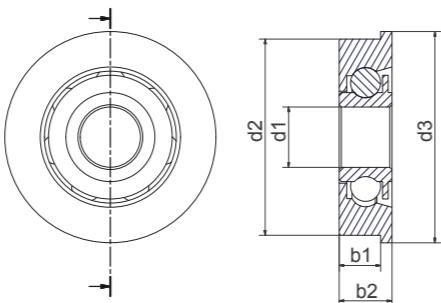
Single flange with shield



Races made from
xirodur® B180, PA cage,
stainless steel balls
Flange size 30



Races made from
xirodur® B180, PA cage,
stainless steel balls
Flange size 38



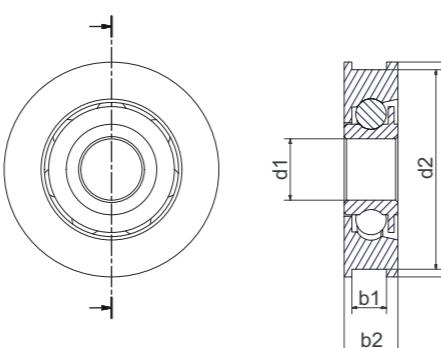
Flange on both sides with shield



xirodur® B180 races
PA cage, stainless steel
or glass balls



xirodur® F180 races
PA cage, stainless
steel balls



Technical data

Size	Flange on both sides	Radial load capacity		Max. speed	Weight		
		stat.	dyn.		B180	PA/ES	F180
Flange ball bearings with flange on one or both sides and shields							
608	-	80	94	2,200	5.9	4.6	5.9
608	●	80	94	2,200	6.1	4.8	6.1
Flange ball bearings with single flange for guide rollers							
608	-	80	94	2,200	9.3	-	-
6000	-	110	130	1,900	9.2	-	-
6000	-	110	130	1,900	9.8	-	-
6001	-	130	147	1,750	9.1	-	-
6001	-	130	147	1,750	9.6	-	-
6002	-	140	150	1,600	9.4	-	-
6003	-	160	220	1,550	9.0	-	-



Order example:

BB-6000F2830-B180-10-ES = Radial deep groove ball bearing with single flange for system-solution BBT
(guide roller), race material xirodur® B180 with PA cage and stainless steel balls

Order key
With single flange

Type	Material
BB-6000 F 2830 B180-10-ES	
Ball bearing	
Dimensions acc. to DIN 625-1	
Single flange	
Outer-Ø [mm]	
Race material	
Cage material	
Ball material	

Also available as complete system-solution
► Page 836

Order key
With double flange

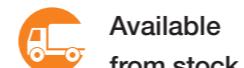
Type	Material	Design
BB-608 FF B180-10-ES-CC		
Ball bearing		
Dimensions acc. to DIN 625-1		
Flange on both sides		
Race material		
Cage material		
Ball material		
Double shield		

Flange
F: Flange on one side
FF: Flange on both sides
Race material
F180: xirodur® F180
B180: xirodur® B180

Cage material
10: PA
Ball material
ES: Stainless steel
GL: Glass
Shield
CC: Double shield

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination			Part No.	
			B180				
			PA/ES	PA/GL	PA/ES		
8	26	28	5.5	7	●	● BB-608F-□-10-□-CC	
8	26	28	4.0	7	●	● BB-608FF-□-10-□-CC	
8	28	30	5.5	7	●	- BB-608F2830-B180-10-ES	
10	28	30	7.0	9	●	- BB-6000F2830-B180-10-ES	
10	35	38	7.0	9	●	- BB-6000F3538-B180-10-ES	
12	28	30	7.0	9	●	- BB-6001F2830-B180-10-ES	
12	35	38	7.0	9	●	- BB-6001F3538-B180-10-ES	
15	35	38	7.0	9	●	- BB-6002F3538-B180-10-ES	
17	35	38	8.0	10	●	- BB-6003F3538-B180-10-ES	



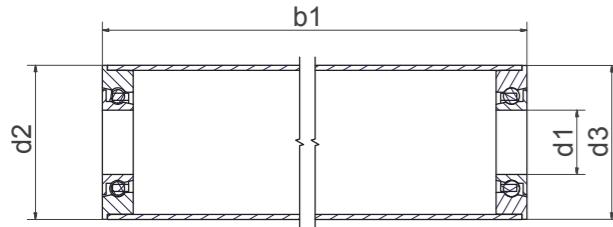
Available
from stock

xiros® guide roller | Product range

xiros® system solution – aluminium tube with flange ball bearing



xirodur® B180 flange ball bearing with aluminium tube



Order key

Type Material

BBT-AC 38-6000-B180-10-ES

Ball bearing-guide roller	Aluminium tube	Outer Ø	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
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Flange ball bearing
also available
separately
► Page 834

Cage material
10: PA
30: xirodur® B180
Ball material
ES: Stainless steel

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Flange Ø d3	Length b1	Part No.
8	30	29.9	25 – 1,500	BBT-AC30-608-B180-10-ES
10	30	29.9	25 – 1,500	BBT-AC30-6000-B180-10-ES
12	30	29.9	25 – 1,500	BBT-AC30-6001-B180-10-ES
10	38	37.9	25 – 1,500	BBT-AC38-6000-B180-10-ES
12	38	37.9	25 – 1,500	BBT-AC38-6001-B180-10-ES
15	38	37.9	25 – 1,500	BBT-AC38-6002-B180-10-ES
17	38	37.9	25 – 1,500	BBT-AC38-6003-B180-10-ES
20	50	49.9	25 – 1,500	BBT-AC50-6004-B180-30-ES
20	60	59.9	25 – 1,500	BBT-AC60-6004-B180-30-ES



Order example:

BBT-AC38-6000-B180-10-ES, L=500 mm = aluminium tube with 2 flange ball bearings with race material xirodur® B180, PA cage and stainless steel balls, total length 500 mm

Available
from stock

Online configurator for xiros® system-solutions

► www.igus.eu/xirosAlu

xiros® guide roller | Product range

Pre-assembled xiros® guide roller with FDA-compliant components

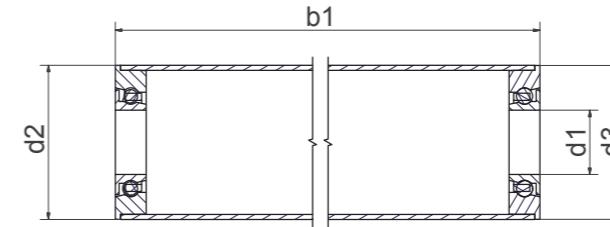


Order key

Type Material

BBT-PVC 50-6004-B180-30-ES

Ball bearing-guide roller	Carbon tube	Outer Ø	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
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Cage material
30: xirodur® B180
Ball material
ES: Stainless steel

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Flange Ø d3	Length b1	Part No.
20	50	50	100 – 1,000	BBT-PVC50-6004-B180-30-ES
20	63	63	100 – 1,000	BBT-PVC63-6004-B180-30-ES



Order example:

BBT-PVC50-6004-B180-30-ES, L=200 mm = PVC tube with 2 flange ball bearings with race material xirodur® B180, xirodur® B180 cage and stainless steel balls, total length 200 mm

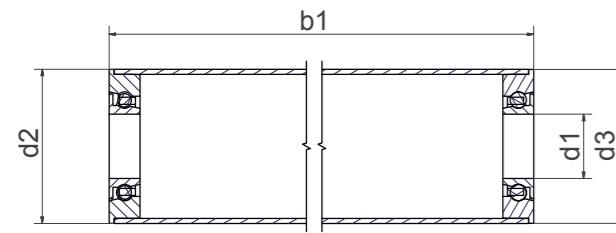
Available
from stock

xiros® guide roller | Product range

xiros® system solution – carbon tube with flange bearing



Carbon tube with xirodur® S180 flange ball bearings as ESD version optional (with xirodur® F180 flange ball bearing)



Order key

Type	Material
------	----------

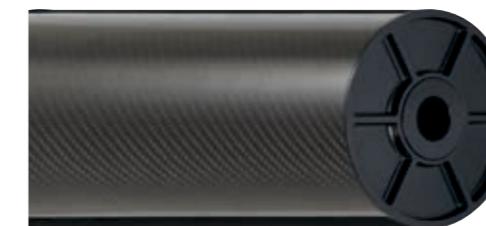
BBT-CF 50-6004-S180-30-ES

Ball bearing-guide roller	Carbon tube	Outer Ø	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
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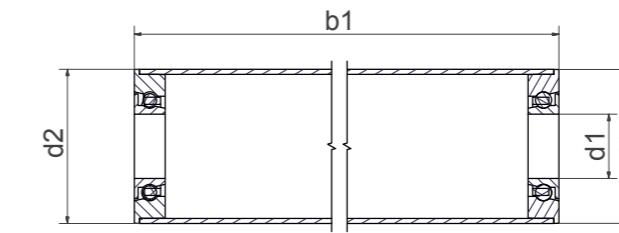
Cage material
30: xirodur® B180
Ball material
ES: Stainless steel

xiros® guide roller | Product range

xiros® system solution – carbon tube with flange bearing



Carbon tube with xirodur® F180 flange ball bearings



Order key

Type	Material
------	----------

BBT-CF 100-6004-F180-30-ES

Ball bearing-guide roller	Carbon tube	Outer Ø	Dimensions acc. to DIN 625-1	Race material	Cage material	Ball material
---------------------------	-------------	---------	------------------------------	---------------	---------------	---------------

Cage material
30: xirodur® B180
Ball material
ES: Stainless steel

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Flange Ø d3	Length b1	Part No.
20	50	49.9	25 – 1,500	BBT-CF50-6004-S180-10-ES



Order example:

BBT-CF50-6004-S180-30-ES, L=200 mm = Carbon tube with 2 flange ball bearings with race material xirodur® S180, xirodur® B180 cage and stainless steel balls, total length 200 mm



Delivery time: approx. 3 weeks

With xirodur® F180 as ESD version available upon request

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Flange Ø d3	Length b1	Part No.
20	100	100	100 – 1,000	BBT-CF100-6004-F180-10-ES



Order example:

BBT-CF100-6004-S180-30-ES, L=200 mm = Carbon tube with 2 flange ball bearings with race material xirodur® S180, xirodur® B180 cage and stainless steel balls, total length 200 mm



Available
upon request

xiros® profiled | Product range

Races made from xirodur® B180

xirodur® B180 cage,
stainless steel balls,
Type 6000PP3xirodur® B180 cage,
stainless steel balls,
Type 608P6

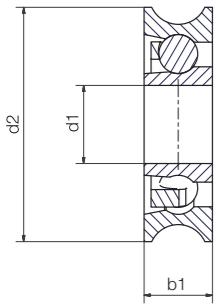
Order key

Type	Material	Design				
Ball bearing	Dimensions acc. to DIN 625-1	Profile P6	Race material	Cage material	Ball material	With shield
BB-608 P6-B180-30-ES-C						

Cage material
30: xirodur® B180
Ball material
ES: Stainless steel
Shielded
C: One-sided cover plate

- One-piece design
- Replaces several components

Example "Profile P8"



Technical data

Size	Radial load capacity stat. [N]	Max. speed [rpm]	Weight B180/ES [g]
608P6	80	80	4.0
608P8	140	140	23
6000P8	110	110	7.0
6000PP3	110	110	8.0
6201P9	160	160	26

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Part No.
8	24	7	BB-608P6-B180-30-ES-C
8	48	14	BB-608P8-B180-30-ES
10	30	8	BB-6000P8-B180-30-ES-C
10	30	8	BB-6000PP3-B180-30-ES-C
12	60	12	BB-6201P9-B180-30-ES



Order example:

BB-608P6-B180-30-ES = Radial deep groove ball bearing, profile P8 with race material xirodur® B180, xirodur® B180 cage and stainless steel balls

Available
from stock

xiros® torque resistant | Product range

Races made from xirodur® B180

xirodur® B180 cage,
stainless steel ballsxirodur® B180-Käfig,
stainless steel balls,
with one-sided cover
plate

- For profiled shafts
- With anti-rotation feature

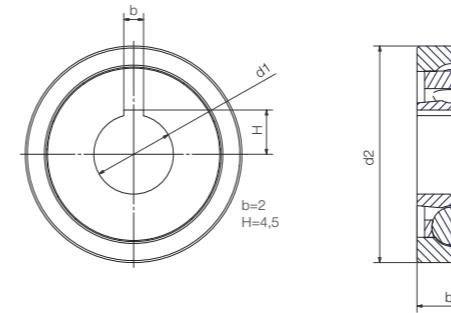


Order key

Type	Material	Design				
Ball bearing	Dimensions acc. to DIN 625-1	Profile KA	Race material	Cage material	Ball material	With shield
BB-608 KA-B180-30-ES-C						

Cage material
30: xirodur® B180
Ball material
ES: Stainless steel
Shielded
C: One-sided cover plate

Example "Profile KA (Key Area)"



Technical data

Size	Radial load capacity stat. [N]	Max. speed [rpm]	Weight B180/ES [g]
626DS	41	3,200	2.2
626KA	41	3,200	2.2
608KA	80	2,200	4.0

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Part No.
6	19	6	BB-626DS-B180-30-ES-C
6	19	6	BB-626KA-B180-30-ES-C
8	22	7	BB-608KA-B180-30-ES-C



Order example:

BB-626DS-B180-30-ES-C = Radial deep groove ball bearing, profile DS with race material xirodur® B180, xirodur® B180 cage and stainless steel balls

Available
from stock

xiros® end caps | Product range

Races made from xirodur® B180



Order key

Type	Material				
BB-6204EC44.5-B180-10-ES					
Ball bearing type	End cap	Outer-Ø (d2)	Race material	Cage material	Ball material

Cage material

10: PA

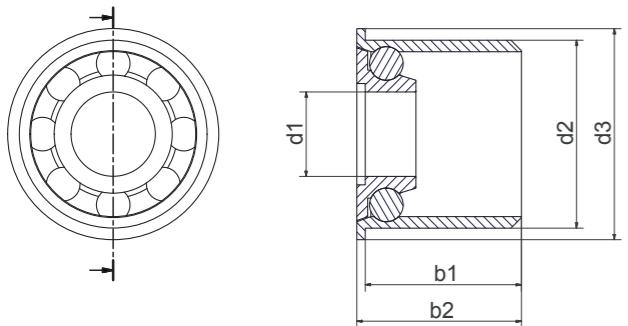
Options

Ball material

ES: Stainless steel

GL: Glass

- Fast and easy retrofits in many standard tubes
- Good axial stability



Technical data

Size	Radial load capacity			Max. speed	Weight	
	stat.	dyn.	[N]		PA/ES	PA/GL
6204	245	294	1,800	32.5	25.9	
6204	245	294	1,800	33.0	–	

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination		Part No.		
d1	d2	d3	b1	b2	PA/ES	PA/GL	
20	44.5	50	35.81	38.50	●	●	BB-6204EC44.5-B180-10-ES
M8	44.5	50	35.81	38.50	●		BB-6204ECM8-B180-10-ES



Order example:

BB-6204EC44.5-B180-10-ES = end cap with race material xirodur® B180, with PA cage and stainless steel balls



Available
from stock

xiros® spherical outer diameter | Product range

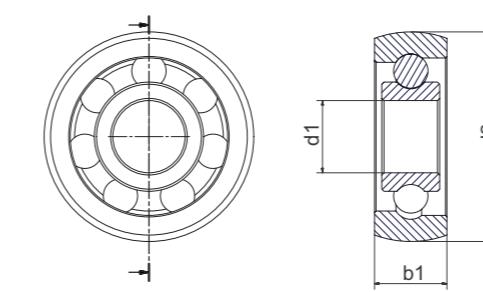
Races made from xirodur® B180 or xirodur® M180



Order key

Type	Material				
Ball bearing	Dimensions acc. to DIN 625-1	Spherical outer Ø	Race material	Cage material	Ball material
BB-608SO-B180-10-ES					
Ball bearing	Dimensions acc. to DIN 625-1	Spherical outer Ø	Race material	Cage material	Ball material

- Use in skewed/curved/twisted profiles
- Prevents edge stress



Technical data

Size	Radial load capacity			Max. speed	Weight	
	stat.	dyn.	[N]		PA/ES	PA/GL
608	80	94	2,200	4.8	3.5	–
6000	110	130	1,900	7.9	5.8	6.1
6001	138	147	1,750	13.5	11.1	–

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination		Part No.	
d1	d2	b1	PA/ES	PA/GL	M180/ES	
8	24.00	8	●	●	BB-608SO-[]-10-ES	
10	28.96	10	●	●	BB-6000SO-[]-10-ES	
12	35.56	12	●	●	BB-6001SO-[]-10-ES	



Order example:

BB-608SO-B180-10-ES = ball bearing with spherical outer diameter, race material xirodur® B180, PA cage and stainless steel balls



Available
from stock

xiros® double row ball bearing | Product range

Races made from xirodur® B180



PA cage,
stainless steel or
glass balls

- Higher loads
- Less expensive than two comparable bearings



Order key

Type	Material	Design
BB-6000-B180-10-ES-D		
Ball bearing	Dimensions acc. to DIN 625-1	Race material
		Cage material
		Ball material
		Double row

Cage material

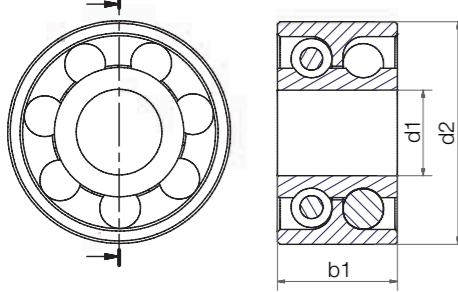
10: PA

Options

Ball material

ES: Stainless steel

GL: Glass



Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		PA/ES [g]	PA/GL [g]
6000	200	240	1,000	11.0	7.0
6004	420	470	650	36.0	29.0

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Cage/ball material combination	Part No.
PA/ES	PA/GL			
10	26	14	● PA cage and stainless steel balls	BB-6000-B180-10-ES-D
20	42	20	● PA cage and stainless steel balls	BB-6004-B180-10-ES-D



Order example:

BB-6000-B180-10-ES-D = double row ball bearing with race material xirodur® B180, PA cage and stainless steel balls
BB-6004-B180-10-ES-D = double row ball bearing with race material xirodur® B180, PA cage and stainless steel balls



Available
from stock

xiros® multi-axis plastic bearing | Product range

Races made from xirodur® B180



PP balls

- For rotary and linear motions



Order key

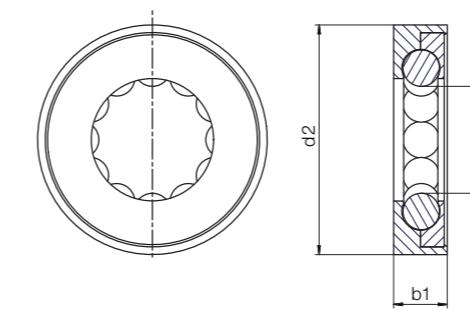
Type	Material
BB-MB-1633-11-B180-PP	
Ball bearing	Multi axis
	Inner-Ø (d1)
	Outer-Ø (d2)
	Width (b)
Housing material	Housing material
	Ball material

Housing material

B180: xirodur® B180

Ball material

PP: Polypropylene



Technical data

Type	Radial load capacity		Max. speed [rpm]	Weight B180/PP [g]
	stat. [N]	dyn. [N]		
BB-MB	55	70	500	6,9

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Part No.
16.3	33	11	BB-MB-1633-11-B180-PP



Order example:

BB-MB-1633-11-B180-PP = multi-axis ball bearing with race material xirodur® B180, B180 cage and PP balls



Available
from stock

xiros® skate wheel | Product range

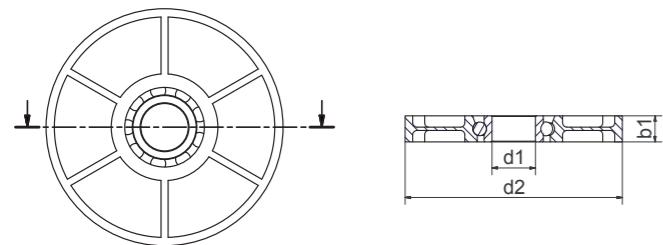
Races made from xirodur® B180



Order key

Type	Material
BB-6004SW100-B180-10-ES	
Ball bearing	Dimensions acc. to DIN 625-1
PA cage	Skate wheel
stainless steel balls	Outer Ø
PA cage	Race material
glass balls	Cage material
	Ball material

- Larger outer diameter for smaller shafts
- Also used as roller in profiles



Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight	
	stat.	dyn.		PA/ES	PA/GL
	[N]	[N]		[g]	[g]
6004	245	294	1,400	60.5	55.7

Dimensions [mm]

Inner Ø d1	Outer Ø d2	Width b1	Part No.
20	100	12	BB-6004SW100-B180-10-ES



Order example:

BB-6004SW100-B180-10-ES = xiros® skate wheel with race material xirodur® B180.BB-6004SW100-B180-10-ES
= xiros® skate wheel with race material xirodur® B180. 100 mm outer diameter, PA cage and stainless steel balls



Available
from stock

xiros® flange bearings | Product range

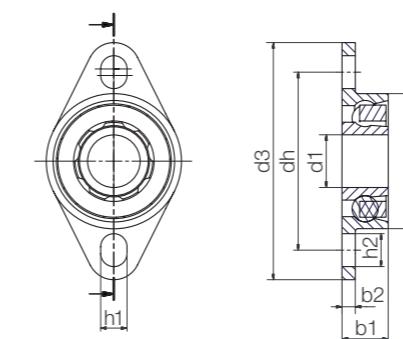
Housing made from xirodur® B180



Order key

Type	Material
BB-FL-608-B180-30-ES	
Ball bearing	Flange bearings
Dimensions acc. to DIN 625-1	Dimensions acc. to DIN 625-1
Housing material	Housing material
Cage material	Cage material
Ball material	Ball material

- For loosely toleranced holding fixtures



Technical data

Size	Radial load capacity		Max. speed [rpm]	Weight B180/ES
	stat.	dyn.		
	[N]	[N]		
608	80	92	2,200	3.6

Dimensions [mm]

d1	d2	dh	d3	h1	h2	b1	b2	Part No.
8	22	26.8	35.8	4	5	7	2	BB-FL-608-B180-30-ES

Order example:

BB-FL-608-B180-30-ES = Flange bearing with xirodur® B180 housing, xirodur® B180 cage and stainless steel balls



Available
from stock

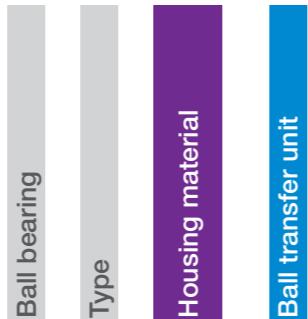
xiros® polymer ball transfer units | Product range

Polymer ball transfer unit made from xirodur® B180

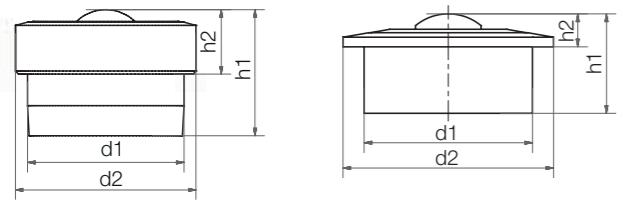


Order key

Type	Material
------	----------

BB-522-B180-POM

POM: POM (ball transfer unit)



BB-505-B180-POM

BB-515-B180-POM

BB-522-B180-POM

xiros® polymer ball transfer units | Product range

Axial polymer ball transfer unit made from xirodur® B180

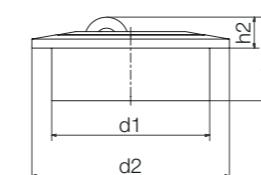


Order key

Type	Material
------	----------

BB-522A-B180-HS

For high loads (HH)

With soft roller made
from xirodur® D180
(HS)

BB-515A-B180-HH / HS

BB-522A-B180-HH/HS

Options
Ball transfer unit
HH (Hard roller):
 xirodur® B180
HS (Soft roller):
 xirodur® D180

Technical data and dimensions [mm]

Size	Max. stat. load capacity	Inner Ø		Height		Weight	Part No.
		axial [N]	d1	d2	h1	h2	
505	35	10.4	12.0	8.4	4.3	0.9	BB-505-B180-POM
515	80	24.0	31.0	21.0	9.8	8.7	BB-515-B180-POM
522	110	36.0	45.0	30.0	9.8	28.8	BB-522-B180-POM



Order example:

BB-505-B180-POM = Polymer ball transfer unit with housing material xirodur® B180 and POM ball transfer unit

Available
from stock

Technical data and dimensions [mm]

Size	Max. stat. load capacity	Inner Ø		Height		Weight	Part No.
		axial [N]	d1	d2	h1	h2	
515A	150	24.0	31.0	14.3	5.3	15.6	BB-515A-B180- □
522A	300	36.0	45.0	21.25	7.05	21.7	BB-522A-B180- □

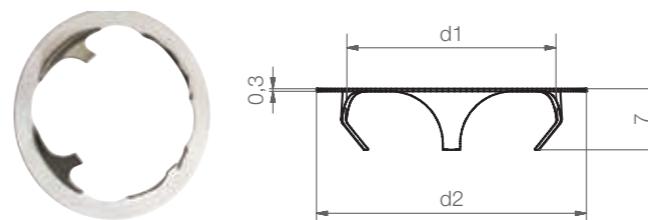


Order example:

BB-515A-B180-HS = Axial polymer ball transfer unit with housing material xirodur® B180 and soft roller made from xirodur® D180

Available
from stock

Accessories: Clamp rings for xiros® polymer ball transfer units



xiros® clamp rings made from stainless steel offer the possibility to install xiros® ball transfer units in another orientation than the standard horizontal position. Easy assembly and disassembly.

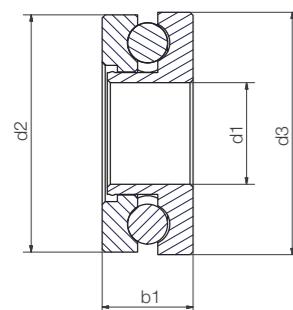
Dimensions [mm]

For ball transfer unit	d1	d2	Housing bore	Part No.
BB-515-B180-POM/BB-515A-B180-□	24	31	25.0 -0.2	BB-515-CR
BB-522-B180-POM/BB-522A-B180-□	36	41	37.3 -0.3	BB-522-CR

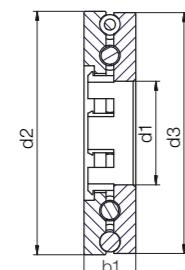
Available
from stock

xiros® axial ball bearings | Product range

Races made from xirodur® B180

Single row,
stainless steel
or glass ballsDouble row,
stainless steel balls-
or glass balls

Single row bearing



Double row bearing



Order key

Type	Material
BB-51100-B180-ES-D	
Ball bearing	Dimensions acc. to DIN 711
Race/cage material	Ball material
	Double row

Options

Ball material

ES: Stainless steel

GL: Glass

Suffix

Without: Single row

D: Double row

xiros® thrust washer | Product range

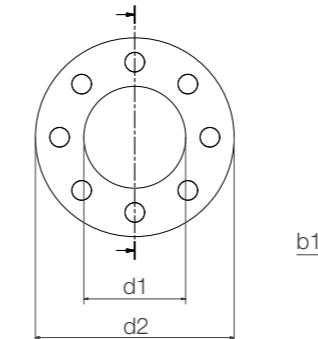
Races made from xirodur® B180



Stainless steel balls



Glass balls



Order key

Type	Material
BB-6004TW-B180-ES-SL	
Ball bearings	Dimensions acc. to DIN 625-1
Thrust washer	Blank
Race material	Ball material
	Slim line

Options

Ball material

ES: Stainless steel

GL: Glass

Suffix

blank: Standard

SL: Slim line

Technical data

Size	Single	Double	Load capacity		Max. speed	Weight	
	row	row	stat.	dyn.		B180/ES	B180/GL
51100	●	–	200	250	600	6.9	4.4
51104	●	–	650	810	460	14.0	8.0
51104	–	●	975	1,215	460	28.0	17.0

Technical data (related to metallic shafts)

Size	Slim line	Recommended load capacity		Max. speed	Weight	
		stat. [N]	dyn. [N]		B180/ES [g]	B180/GL [g]
626	–	341	425	2,000	1.2	0.9
608	–	482	600	1,700	1.3	1.0
6000	–	610	782	1,500	2.4	1.5
6000	●	405	500	1,500	2.2	1.3
6004	–	975	1,215	700	7.7	4.9
6006	–	925	1,540	600	7.5	4.7
6006	●	520	680	600	7.2	4.4

Dimensions [mm]

Inner Ø	Outer Ø	Width	Cage/ball material combination	Part No.
d1	d2	d3	b1	B180/ES B180/GL
10	24	23.5	9	● ● BB-51100-B180-[]
20	35	34.5	10	● ● BB-51104-B180-[]
20	47	46.5	10	● ● BB-51104-B180-[]-D



Order example:

BB-51100-B180-ES = axial ball bearing with race material xirodur® B180, B180 cage and stainless steel balls

Available
from stock

Dimensions [mm]

Inner Ø	Outer Ø	Width	Race/ball material combination	Part No.
d1	d2	b1	b2	B180/ES B180/GL
6.2	18.8	2.0	3.18	● ● BB-626TW-B180-[]
8.2	21.8	2.0	3.97	● ● BB-608TW-B180-[]
10.2	25.8	2.0	4.76	● ● BB-6000TW-B180-[]
10.2	25.8	2.0	3.97	● ● BB-6000TW-B180-[]-SL
21.0	41.0	3.0	4.76	● ● BB-6004TW-B180-[]
29.9	45.5	2.5	4.76	● ● BB-6006TW-B180-[]
29.9	45.5	2.5	3.97	● ● BB-6006TW-B180-[]-SL



Order example:

BB-6000TW-B180-ES-SL = thrust washer with race material xirodur® B180, stainless steel balls, slim line version

Available
from stock

xiros® slewing ring bearings | Product range

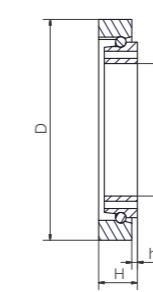
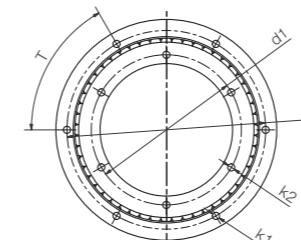
Races made from xirodur® B180 – for absorbing higher axial loads



Stainless steel balls



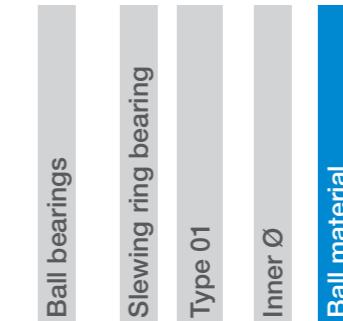
Glass balls

Stainless steel balls,
with cage made from xirodur® B180Stainless steel balls,
with outer drive ring (HDT5)

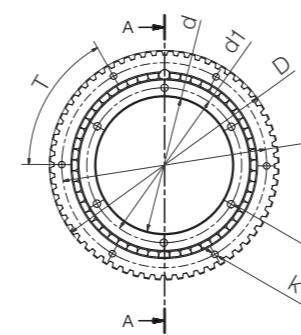
Order key

Type Design Material

BB-RT-01-60-ES



Options
Ball material
ES: Stainless steel
GL: Glass

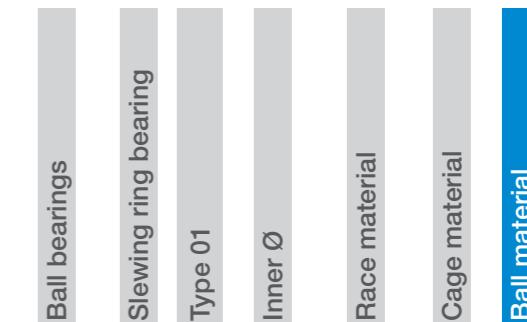


xiros_BB-RT-01-60-GL_SA_CMYK.tif

Order key with cage

Type Design Material

BB-RT-01-60-B180-30-ES



Technical data

Type	Load capacity		Max. speed [rpm]	Weight	
	Axial [N]	Radial [N]		stainless steel [g]	GL [g]
Standard with stainless steel or glass balls					
RT-01-60	800	720	350	111.9	98.3
RT-01-100	1,600	1,250	250	250.8	231.1
RT-01-400	5,800	2,900	500	–	–
Slewing ring bearing with xirodur® B180 cage					
RT-01-60-B180-30	600	300	800	–	–
Slewing ring bearing with toothed outer ring					
RT-01-60HDT5-B180-30	800	720	320	110.0	–



Order example:

BB-RT-01-60-ES = Standard slewing ring bearing with race material xirodur® B180 and stainless steel balls

BB-RT-01-60-B180-30-ES = Slewing ring bearing with race material xirodur® B180, cage and stainless steel balls

BB-RT-01-60-HDT5-B180-30-ES = Slewing ring bearing with race material xirodur® B180, race material and outer drive ring and stainless steel balls

BB-RT-01-60-HDT5-B180-30-ES = Slewing ring bearing with race material xirodur® B180, cage and stainless steel balls

Dimensions [mm]

d	d1	D	D1	h	H	T	k1	k2	Part No.
Standard with stainless steel or glass balls									
60	68	100	90	2.5	17.5	60	3.3	3.3	BB-RT-01-60-ES
100	110	160	150	5.0	20.0	60	5.2	5.2	BB-RT-01-100-ES
400	–	600	–	–	40	–	–	–	BB-RT-01-400-ES
Slewing ring bearing with xirodur® B180 cage									
60	68	100	90	2.5	17.5	60	3.3	3.3	BB-RT-01-60-B180-30-ES
Slewing ring bearing with toothed outer ring									
60	68	100	90	2.5	17.5	60	3.3	3.3	BB-RT-01-60HDT5-B180-30-ES



Available
from stock

xiros® pillow block bearings | Product range

Fixed version – races made from xirodur® B180



igumid G housing,
PA cage, stainless
steel balls

igumid G housing,
PA cage, glass balls

Order key

Type	Material
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ESTM-BB1-F06-B180-ES

Pillow block bearing	Ball bearing, single row	Fixed version	Inner Ø	Race material	Ball material
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Race material

B180: xirodur® B180

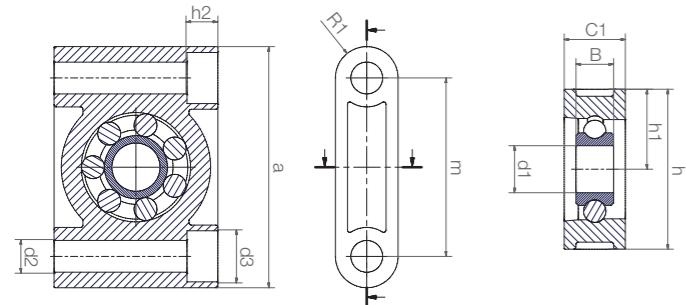
Options

Ball material

ES: Stainless steel

GL: Glass

- Assembly-friendly



Technical data

Type	Radial load capacity		Max. speed	Weight	
	stat. [N]	dyn. [N]		B180/ES [g]	B180/GL [g]
ESTM-F06	41	43	2,600	7.7	6.7
ESTM-F10	110	130	1,900	20.2	18.2
ESTM-F20	250	320	1,150	54.1	47.7

Dimensions [mm]

Inner Ø	Holes Ø	d3	h	h1	h2	a	m	C1	B	R1	Part No.
d1	d2										
6	5.5	–	22	11	–	36	26	10	6	5.0	ESTM-BB1-F06-B180-[]
10	6.6	10.6	34	17	6.6	50	37	13	8	6.5	ESTM-BB1-F10-B180-[]
20	9.0	14.0	48	24	8.6	72	54	18	12	9.0	ESTM-BB1-F20-B180-[]



Order example:

ESTM-BB1-F06-B180-ES = pillow block bearing, fixed version, made from xirodur® B180 with stainless steel balls



Available
from stock

xiros® pillow block bearings | Product range

Pivoting version – races made from xirodur® B180



igumid G housing,
PA cage, stainless
steel balls

igumid G housing,
PA cage, glass balls

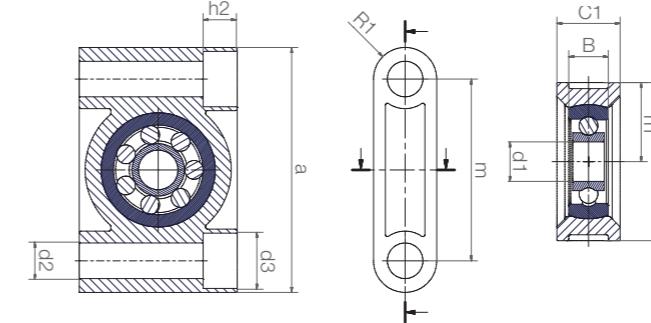
Order key

Type	Material
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ESTM-BB1-P 08-B180-ES

Pillow block bearing	Ball bearing, single row	Pivoting version	Inner Ø	Race material	Ball material
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- Compensation of misalignment errors



Technical data

Type	Radial load capacity		Max. speed	Weight	
	stat. [N]	dyn. [N]		B180/ES [g]	B180/GL [g]
ESTM-P08	80	94	2,200	19.6	18.2
ESTM-P10	110	130	1,900	32.9	30.3
ESTM-P12	130	147	1,750	54.8	52.8

Dimensions [mm]

Inner Ø	Holes Ø	d3	h	h1	h2	a	m	C1	B	R1	Max. pivot angle	Part No.
d1	d2											
8	6.6	10.6	34	17	6.4	50	37	13	8	6.5	±5°	ESTM-BB1-P08-B180-[]
10	9.0	14.0	40	20	8.6	62	46	16	10	8	±5°	ESTM-BB1-P10-B180-[]
12	9.0	14.0	48	24	8.6	72	54	18	12	9	±5°	ESTM-BB1-P12-B180-[]



Order example:

ESTM-BB1-P08-B180-ES = pillow block bearing, pivoting version, made from xirodur® B180 with stainless steel balls



Available
from stock

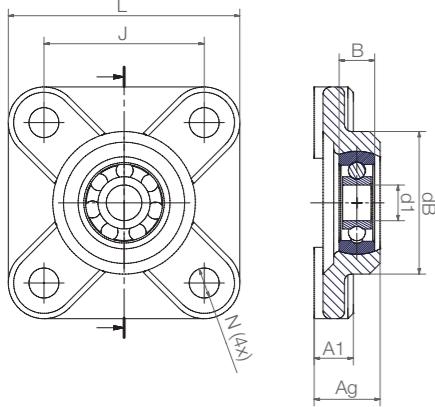
xiros® 4-hole flange bearings | Product range

Pivoting version – races made from xirodur® B180



igumid G housing,
PA cage,
stainless steel balls or
glass balls

- Compensation of misalignment errors



Technical data

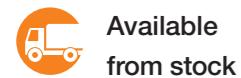
Type	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		B180/ES [g]	B180/GL [g]
EFSM-P08	80	94	2,200	25.2	24.0
EFSM-P10	110	130	1,900	48.8	46.2
EFSM-P12	130	147	1,750	80.0	77.7

Dimensions [mm]

Inner Ø d1	dB d2	L	J	A1	Ag	B	N	Max. pivot angle	Part No.
8	32.5	52	36	9	15.5	8	6.4	±5°	EFSM-BB1-P08-B180-[]
10	40.0	65	45	11	18.8	10	8.4	±5°	EFSM-BB1-P10-B180-[]
12	48.0	74	52	14	23.5	12	8.4	±5°	EFSM-BB1-P12-B180-[]

Order example:

EFSM-BB1-P08-B180-ES = 4-hole flange bearing with race material xirodur® B180 and stainless steel balls



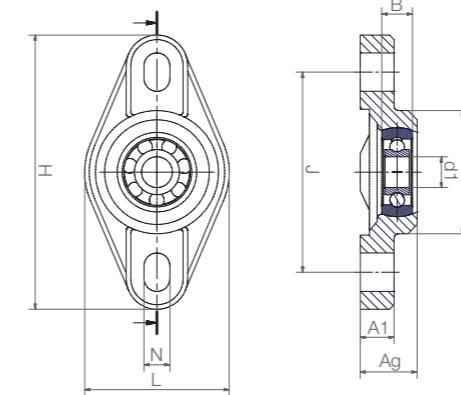
xiros® 2-hole flange bearings | Product range

Pivoting version – races made from xirodur® B180



igumid G housing,
PA cage,
stainless steel balls or
glass balls

- Trouble-free readjustment thanks to extended holes
- Precise alignment of the bearings not necessary



Technical data

Type	Radial load capacity		Max. speed [rpm]	Weight	
	stat. [N]	dyn. [N]		B180/ES [g]	B180/GL [g]
EFOM-P08	80	94	2,200	19.5	18.1
EFOM-P10	110	130	1,900	36.3	33.6
EFOM-P12	130	147	1,750	61.7	59.4

Dimensions [mm]

Inner Ø d1	dB d2	H	L	J	A1	Ag	B	N	Max. pivot angle	Part No.
8	32.5	72.6	38	53	10	15.5	8	6.4x10.1	±5°	EFOM-BB1-P08-B180-[]
10	40.0	89.0	47	65	11	18.8	10	8.4x12.5	±5°	EFOM-BB1-P10-B180-[]
12	48.5	101.0	58.5	75	14	23.5	12	8.4x12.5	±5°	EFOM-BB1-P12-B180-[]

Order example:

EFOM-BB1-P08-B180-ES = 2-hole flange bearing with race material xirodur® B180 with stainless steel balls

