

Zakład Maszyn i Łożysk Specjalnych Sp. z o.o.

Special use bearings

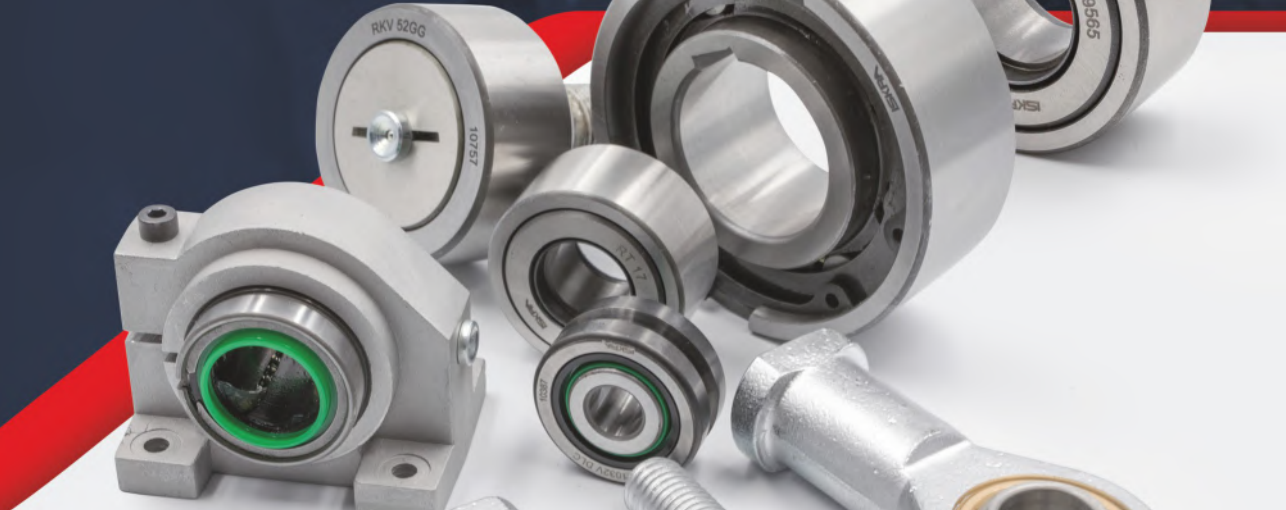










TABLE OF CONTENTS

ABOUT US	3
OFFER	3
	PLB LINEAR BALL GUIDES 5
	LINEAR GUIDES IN PT HOUSING UNITS 7
	LINEAR GUIDES IN PTR HOUSING UNITS 8
	LINEAR GUIDES IN PTO HOUSING UNITS 9
	ROLLERS FOR LINEAR GUIDES 10
	TB BALL BEARINGS WITH TEXTURED CAGE 11
	RPK DLC NEEDLE BALL ROLLERS 13
	SPHERICAL PLAIN BEARINGS 14


ROD ENDS WITH MALE THREAD
16

ROD ENDS WITH FEMALE THREAD
17

NEEDLE ROLLERS
18

ROLLERS CAM FOLLOWER
19

UNIDIRECTIONAL ROLLING ELEMENT COUPLINGS
20

AXIAL CYLINDRICAL ROLLER AND SPHERICAL ROLLER BEARINGS
22

OTHER BEARINGS AND BEARING COMPONENTS
23
CONTACT
24

ABOUT US

ISKRA Zakład Maszyn i Łożysk Specjalnych Sp. z o.o., with its registered office in Kielce, began its activities in 1972 as Ośrodek Badawczo-Rozwojowy Łożysk Tocznych [Research and Development Center for Roller Bearings]. It has been operating under its current name since 1993.

Thorough knowledge of the market, our production facilities, and investment in human potential helped us create a brand recognisable in Poland and worldwide. We use our knowledge and nearly 50 years of experience to provide comprehensive solutions for the design, manufacture, and modernization of machinery and equipment, special bearing products, and machining services. We manufacture and commission equipment for various industries.

Our qualified team of engineers designs machines and plants according to international safety standards taking into account high quality, ergonomics and comfort of use.

We provide comprehensive solutions and customized products. We provide support at every stage of device creation, we have our own design office, technology office, machining department, mechanical, and electrical workshop, and a team of programmers - automation specialists.



OFFER

The activity of our company includes five main areas:

1. Construction, repair, and modernization of machinery.
2. Manufacturing automation and special equipment.
3. Special use bearings.
4. Production of machine parts.
5. Distribution of RK Rose+Krieger products.

There are more than one hundred machines, both conventional and numerically controlled, in our 6,000 m² machine park.

Machining processes we support include rolling, milling, boring, drilling, tapping, chiseling, and grinding, among

others. We also provide laser cutting, CNC bending, welding, sealing, and EDM services.

Our specialization is machine overhauls for precision and finishing operations. We also provide services for the implementation of new technical solutions in existing machines and machine tools. We offer a comprehensive service starting from joint development of the concept of a device, through the selection of technology and commercial elements, preparation of mechanical, electrical, and control design, manufacture of parts, control cabinet, assembly of the device and electrical system, start-up of the control program.

We attach great importance to technical acceptance, operation training, and implementation into production at the target site.

From the very beginning, we have been associated with the bearing industry, and now we also provide our services to the automotive, foundry, chemical, tool, and tire industries.

The solutions we provide meet the customer's technical specifications, technical standards for the technologies used, safety standards, and regulations releasing the equipment on the market. We constantly invest in new machinery and technological solutions to meet the ever-increasing demands of our customers, both in terms of quality and competitiveness of the parts and machines offered.

Distribution of RK Rose+Krieger products

Since 2002 we have been an official representative of the German company RK Rose+Krieger in Poland:

- **BLOCAN® aluminium profiles**
- **Tube connecting system** (made of plastic, aluminum, stainless steel),
- **Linear technology** (including electric actuators and lifting columns).

The industrial BLOCAN® aluminum profile system is the result of years of application experience. It features outstanding flexibility and proven reliability.

The offer includes more than 100 different sizes and cross-sections of profiles, which, depending on the application, are divided into structural, functional, and heavy-duty, and the options for their combination and use are almost unlimited. The special RK joining technology enables the installation of profiles without prior machining, thus saving preparation and installation time.

RK tube connections with simple clamping element assembly technology eliminate the need for time-consuming and costly ironwork and welding, yet still provide stable connections that can withstand constant and dynamic loads while still being easy to disconnect. In this way, they allow full adaptation and modification of the design for handling and automation to specific requirements at any time.

A linear technology system is used to move and position all kinds of equipment by using a spindle, toothed belt, or rack-and-pinion drive. RK Rose+Krieger linear technology includes a wide range of linear units: from tubular units for simple manual operation, through highly dynamic units, to precision systems for automated processes and frequent handling.

Linear technology systems are applied to move and position all kinds of devices using a screw, rack and pinion, or toothed belt drive.



RK ROSE+KRIEGER

A Phoenix Mecano Company

PLB LINEAR BALL GUIDES

Linear bearings guarantee accurate and precise operation, perform reciprocating motions, and are used in technical devices, instruments, and machine parts that perform linear motion.

Linear Ball Bearings PLB consist of an outer sleeve, cage, ball circuits, and wiper rings.



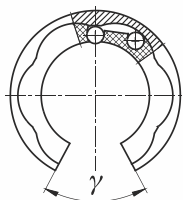
Manufacturing tolerance of housing seat diameter dimension	D H7
Manufacturing tolerance of the shaft diameter dimension	F _k h6
Maximum inequality of shaft and linear guide	±30'
Roughness of roller surface	R _a 0,32
Hardness of the roller surface	min. 58 HRC
Nominal service life $L_{10}=(C/P)^3$	[5 x 10 ⁴ m]

L₁₀ Nominal service life is expressed as a multiple of 5x10⁴ m (50km) of travel distance of a roller or a guide, or of mutual travels. This is durability corresponding to 90% reliability, which is possible achievable with the material and manufacturing quality currently used and under conventional operating conditions.

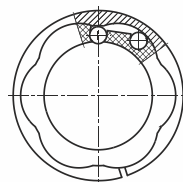
C The running resistance in [N] is the load that can be carried by the slides, with a nominal life of 5x10⁴ m.

P Equivalent motion load of the guide in [N]; it is an average value of the force acting on the guide in real working conditions.

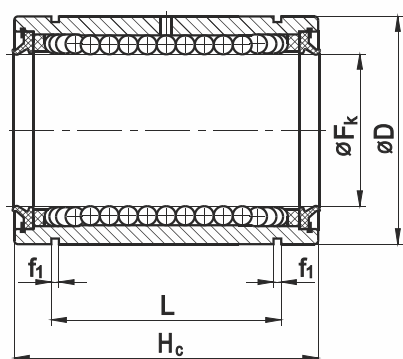
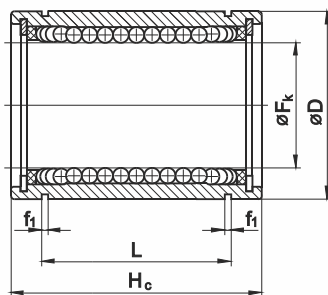
In addition to the full wrap angle closed slides shown, they are also made:



Open guides PLBO, opening angle $\gamma=60^\circ$ and bore diameter $\varnothing F_k= 16; 20; 25; 30; 35$ and 40 mm and other dimensions as in the table.



PLBR linear slides with bore diameter $\varnothing F_k= 16; 20; 25; 30; 35$ and 40 mm and other dimensions as in the table.


Type PLB PP

Type PLB


Designation	Dimensions					Number of ball rows	Load capacity	
	F_k	D	H_c	L	f_1		C movement	C_o resting
	mm	mm	mm	mm	mm		N	N
PLB 10	10	19	29	22	1,3	4	320	240
PLB 13	13	23	32	23	1,3	4	420	280
PLB 16 PP	16	28	37	26,5	1,6	4	580	440
PLB 20 PP	20	32	42	30,5	1,6	5	1170	860
PLB 25 PP	25	40	59	41	1,85	5	2080	1560
PLB 30 PP	30	45	64	44,5	1,85	6	2820	2230
PLB 35 PP	35	52	70	49,5	2,1	6	3950	3100
PLB 40 PP	40	60	80	60,5	2,1	6	5170	3810
PLB 50 PP	50	75	100	77,5	2,65	7	16000	12200
PLB 60 PP	60	90	125	101,5	3,15	7	23500	18700

For F_k diameter from 16mm the guides are sealed (PP).

We manufacture three types of linear guides:

- closed PLB
- segment cut-out PLBO
- slotted PLBR

Characteristics:

Linear ball guides perform reciprocating and sliding movements.

Application:

Technical devices, instruments and machine parts performing linear motion.

Delivery status:

Ready-to-install, filled with operating grease, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.

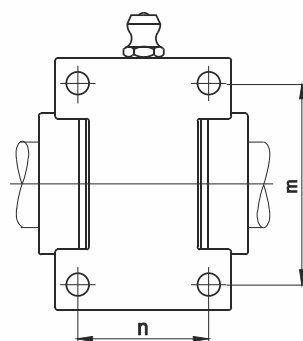
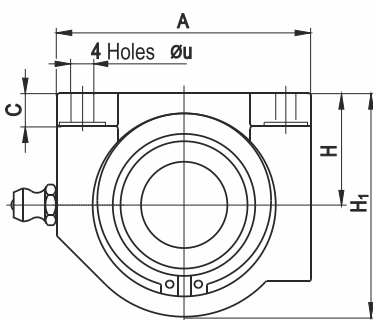
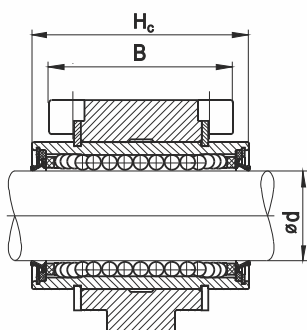
LINEAR BALL GUIDES IN PT HOUSING UNITS



PT Housing Unit



Linear Ball Guide in PT Housing UNIT



Housing marking	Dimensions in mm										Ring sedimentary resilient	Guide
	ø d	A	B	C	H ±0,02	H ₁	H _c	m ±0,15	n ±0,15	ø u		
PT16	16	50	35	6,5	22	44	37	40	26	4,5	28z	PLB16PP
PT20	20	60	42	8	25	50	42	45	32	4,5	32z	PLB20PP
PT25	25	74	54	9	30	60	59	60	40	5,5	40z	PLB25PP
PT30	30	84	60	10	35	70	64	68	45	6,5	45z	PLB30PP
PT35	35	100	72	12	40	80	70	77	52	8,5	52z	PLB35PP
PT40	40	108	78	12	45	90	80	86	58	8,5	60z	PLB40PP

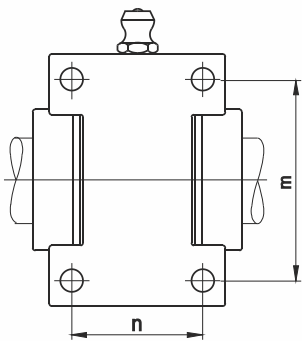
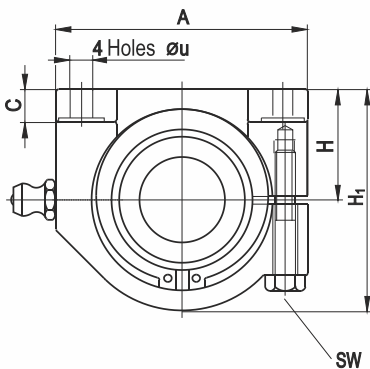
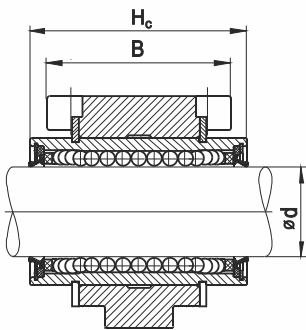
LINEAR BALL GUIDES
IN PTR HOUSING UNITS



PTR Housing Unit



PLBR Linear Ball Guide in PTR Housing Unit



Housing marking	Dimensions in mm											Ring sedimentary resilient	Linear guide
	ø d	A	B	C	H ±0,02	H ₁	H _c	m ±0,15	n ±0,15	ø u	SW		
PTR16	16	50	35	6,5	22	44	37	40	26	4,5	7	28z	PLBR16PP
PTR20	20	60	42	8	25	50	42	45	32	4,5	7	32z	PLBR20PP
PTR25	25	74	54	9	30	60	59	60	40	5,5	8	40z	PLBR25PP
PTR30	30	84	60	10	35	70	64	68	45	6,5	10	45z	PLBR30PP
PTR35	35	100	72	12	40	80	70	77	52	8,5	13	52z	PLBR35PP
PTR40	40	108	78	12	45	90	80	86	58	8,5	13	60z	PLBR40PP

Adjust the guide clearance with the screw (SW).

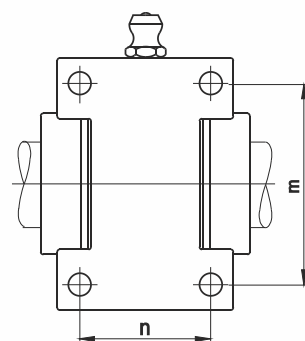
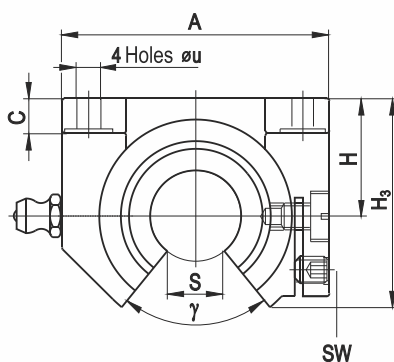
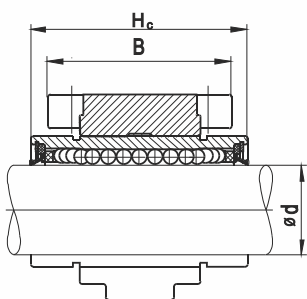
LINEAR BALL GUIDES IN PTO HOUSING UNITS



PTO Housing Unit



PLBO Linear Ball Guide in PTO Housing Unit



Housing marking	Dimensions in mm												Angle in °γ	Linear guide
	ø d	A	B	C	H ±0,02	H ₃	H _c	m ±0,15	n ±0,15	S	SW	ø u		
PTO16	16	50	35	6,5	22	39	37	40	26	10,26	2,5	4,5	78	PLBO16PP
PTO20	20	60	42	8	25	46,5	42	45	32	10,15	2,5	4,5	60	PLBO20PP
PTO25	25	74	54	9	30	56	59	60	40	12,7	3	5,5	60	PLBO25PP
PTO30	30	84	60	10	35	65	64	68	45	15,2	3	6,5	60	PLBO30PP
PTO35	35	100	72	12	40	74,5	70	77	52	17,7	4	8,5	60	PLBO35PP
PTO40	40	108	78	12	45	84	80	86	58	20,2	4	8,5	60	PLBO40PP

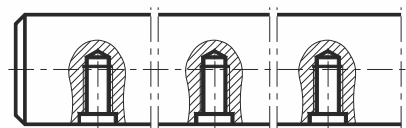
Adjust the guide clearance with the screw (SW).

SHAFTS FOR LINEAR GUIDES

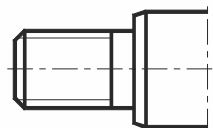
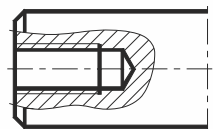
We offer induction hardened and precision ground guide rollers made of Cf53 material or in stainless steel X46Cr13 version in lengths according to customer's request, also with fixing holes, threaded on the ends or the external surface.



Roughness:	Ra 0,32μm
Hardness:	min. 62-64 HRC



d h6	L max	a
10	6000	1
12	6000	1
13	400	1,5
14	6000	1,5
16	6000	1,5
20	6000	2
25	6000	2
30	6000	2,5
35	6000	2,5
40	6000	2,5



TB BALL BEARINGS WITH TEXTILE CAGE

Ball bearings are characterized by very durable construction, their installation is simple, fast, and requires no special tools. The bearings are used for bearing spindles of machines with increased speed.

Our bearings are distinguished by the fact that they have an oil-soaked textile cage guided on the inner ring, which ensures the quiet running of the bearing.



Characteristics:

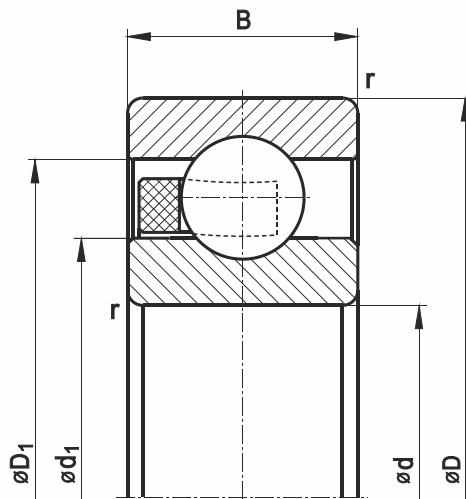
Ball bearings with a textile cage. Cage guided on the inner ring. C3 clearance.

Application:

For bearing the spindles of high-speed machines.

Delivery status:

Not lubricated. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.



Designation	Dimensions					
	d	D	B	d ₁	D ₁	r
	mm	mm	mm	mm	mm	mm
6006 TB	30	55	13	34	50	1
6306 TB		72	19	36	65	1,1
6007 TB	35	62	14	39	57	1
6207 TB		72	17	42	65	1,1
6307 TB		80	21	42	71	1,5
6008 TB	40	68	15	44	63	1
6208 TB		80	18	47	73	1,1
6308 TB		90	23	47	81	1,5
6009 TB	45	75	16	49	70	1
6209 TB		85	19	52	78	1,1
6309 TB		100	25	52	91	1,5
6010 TB	50	80	16	54	75	1
6210 TB		90	20	57	83	1,1
6310 TB		110	27	60	100	1,5
6011 TB	55	90	18	60	84	1,1
6211 TB		100	21	62	91	1,5
6311 TB		120	29	65	110	2
6012 TB	60	95	18	65	88	1,1
6212 TB		110	22	67	101	1,5
6312 TB		130	31	72	118	2,1
6213 TB	65	120	23	82,5	102,5	2,5

RPK DLC NEEDLE BALL ROLLERS

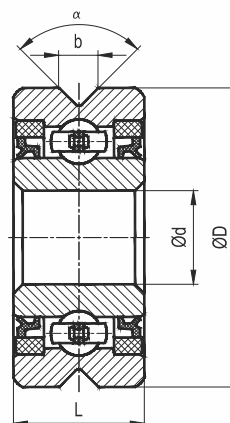
The RPK DLC rolling rollers are specially designed for wire straightening units. The roller is constructed as a single-row ball bearing with a thickened outer ring.

On the external surface, the roller has a V-groove with a new generation of coating with very high abrasion resistance.

The coating is a DLC (diamond-like carbon) layer whose hardness is similar to that of a diamond.

The rollers have an effective seal, suitable for contaminants arising during the wire straightening process. The rollers are filled with sufficient plastic grease for their entire service life.

Significantly enhanced roller durability has been confirmed in operation, in comparison to other solutions applied so far.



Designation	Dimensions					Sealing
	d	D	L	b	α	
	mm	mm	mm	mm	grades	
RPK 1032	10	32	14	4,2	90	SD ¹⁾
RPK 1040	10	40	14	5	90	SD ¹⁾
RPK 1235	12	35	10	4,7	90	ZZ ²⁾
RPK 1540	15	40	11	4,65	100	ZZ ²⁾
RPK 2052	20	52	20,6	8,4	100	ZZ ²⁾

1) SW – double-lip seal 2) ZZ - protective plate

SPHERICAL PLAIN BEARINGS

Spherical plain bearings are slide bearings. These bearing rings have spherical plain surfaces. Due to sliding steam: steel/steel, these bearings are designed to withstand high unit loads on sliding surfaces, low-speed oscillating movements (peripheral or tilting), and variable loads.

These bearings are manufactured to ensure a slight wiping of the mating surfaces, even with very low lubrication. The sliding surfaces of both rings are subject to special finishing treatment, which ensures the lowest possible frictional resistance and high resistance to abrasion and seizure. The raceway of the outer rings features finely crystalline phosphate.

For bearings operating at high permanent loads or in the one-sided load direction, the rings are provided with grooves and holes for periodic re-lubrication. For this purpose, use normal running greases, preferably with the addition of molybdenum disulfide or lithium greases.

The bearing outer rings are made inseparable (divided in one place). It is recommended that the dividing lines are placed in the unloaded zone when the bearing is mounted. When mounting bearings in a housing, pressure can only be exerted on the outer ring using a "soft" sleeve with a suitable diameter, and on the inner ring when mounting bearings on the shaft. The rings should be adjacent to the drive shafts or housings and not to their curves.



DEVELOPMENT CONDITIONS:

Recommended pivot design:

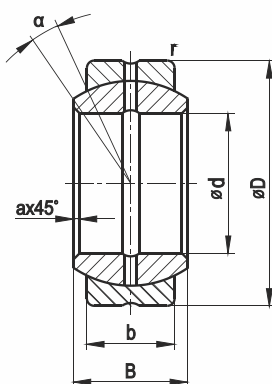
- floating bearing h6
- locating bearing m6

Recommended design of luminaire sockets:

- small load, floating bearing H7
- load capacity large M7

Application:

Machines and technical devices performing fluctuating movements in light industry, food, agriculture, printing, paper, tobacco and transport.



Delivery status:

Not lubricated. Wash before lubrication and installation.

Note:

Bearings with a bore diameter of 60 mm and larger lubricated with operating grease - do not wash.

If there is no contamination, lubrication is sufficient for the entire life cycle of the bearing.

Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.

Designation	Dimensions						
	d	D	B	b	r	a	α
	mm	mm	mm	mm	mm	mm	grades
PGE 6 ¹⁾	6	14	6	4	0,5	0,5	13
PGE 6X ¹⁾	6	16	9	5	0,5	0,5	21
PGE 8 ²⁾	8	16	8	5	0,5	0,5	15
PGE 8X ¹⁾		19	12	9	0,5	0,5	14
PGE 10 ¹⁾	10	19	9	6	0,8	0,8	12
PGE 10X ¹⁾		22	14	10,5	0,8	0,8	13
PGE 12 ¹⁾	12	22	10	7	0,8	0,4	11
PGE 12X ¹⁾		26	16	12	0,8	0,5	13
PGE 15	15	26	12	9	0,8	0,4	8
PGE 16	16	30	14	10	1,0	0,5	10
PGE 16X		32	21	15	0,8	0,3	15
PGE 17/30	17	30	14	10	1,0	0,5	10
PGE 17		32	14	10	1,0	0,5	10
PGE 18/32 XG ²⁾	18	32	19	15	0,5	0,5	10
PGE 20	20	35	16	12	1,0	0,5	9
PGE 25	25	42	20	16	1,0	0,8	7
PGE 30	30	47	22	18	2,0	0,5	6
PGE 30/48	30	48	22	18	1,0	0,8	6
PGE 32/50 XG ²⁾	32	50	22	18	1,0	0,8	6
PGE 32/62 XG	32	62	30	22	1,2	1,4	10
PGE 35	35	55	25	20	1,4	1,0	7
PGE 40/60	40	60	28	22	1,2	1,0	7
PGE 40	40	62	28	22	1,2	1,2	7
PGE 45	45	68	32	25	1,2	1,0	7
PGE 50	50	75	35	28	1,2	1,2	6
PGE 50/80	50	80	40	32	2,0	0,5	8
PGE 60	60	90	44	36	1,2	1,2	6
PGE 60/100 2RS	60	100	50	40	1,5	1,2	8
PGE 60/105		105	63	40	1,0	1,0	17
PGE 70 2RS	70	105	49	40	1,0	1,0	6
PGE 70s	74	105	47	40	2,5	0,5	6
PGE 80 2RS	80	120	55	45	1,0	1,0	6
PGE 80/130	80	130	75	50	1,5	1,2	14
PGE 90	90	130	60	50	1,5	1,2	5

1) - Standard version: without lubrication grooves.

2) - Standard design: with holes and lubrication groove in the inner ring only.

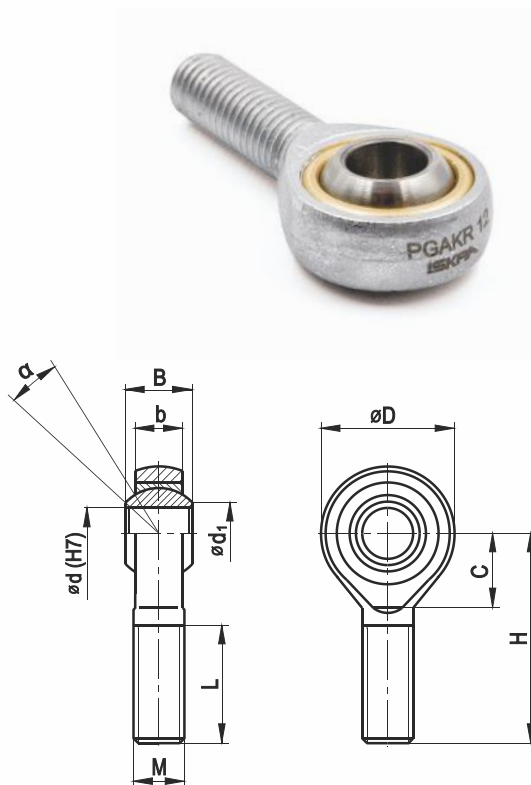
2RS - Version with two seals.

ROD ENDS WITH MALE THREAD

A standard draw-rod head consists of a cast steel L600 body and self-lubricating spherical plain bearings - sliding steam steel/bronze sintered with the addition of graphite, saturated with service oil. Operating temperature up to 120°C. The rod ends are used in machines and technical equipment with fluctuating movements in the light, food, printing, paper, tobacco, and transport industries. We also offer a stainless steel version.

Delivery status:

Ready to install. Outer ring made of sintered bronze saturated with operating oil, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.

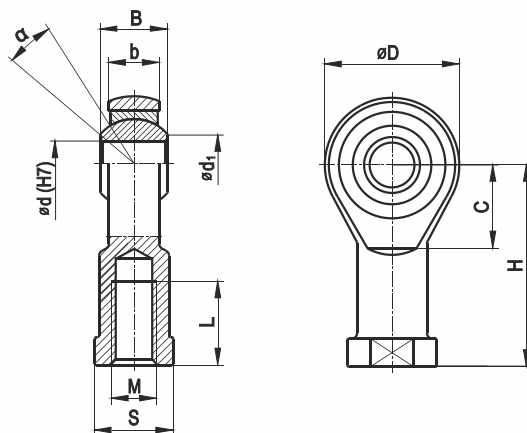


Dimensions										Designation ¹⁾	
d	D	B	b	H	C	M ¹⁾	L	d ₁	α		
mm	mm	mm	mm	mm	mm	mm	mm	mm	grades		
5	21	9	6,8	33	-	M5	18	9,4	13	PGAKR 5	PGAKL 5
6	21	9	6,8	36	-	M6	21	9,4	13	PGAKR 6	PGAKL 6
6	21,5	9	6,8	50	-	M8	33	9,4	13	PGAKR 6/M8	PGAKL 6/M8
8	24	12	9	42	-	M8	22	10,6	14	PGAKR 8	PGAKL 8
10	29	14	10,5	48	-	M10	26	12,8	13	PGAKR 10	PGAKL 10
12	32	16	12	54	-	M12	28	15	13	PGAKR 12	PGAKL 12
14	42	21	15	60	23,5	M14	34	19,2	15	PGAKR 14	PGAKL 14
16	42	21	15	66	23,5	M16	37	19,2	15	PGAKR 16	PGAKL 16
18	50	25	18	72	27	M18x1,5	41	24,3	15	PGAKR 18	PGAKL 18
20	50	25	18	78	27	M20x1,5	45	24,3	15	PGAKR 20	PGAKL 20
25	60	31	22	94	32	M24x2	55	29,5	15	PGAKR 25	PGAKL 25
30	70	37	25	110	37	M30x2	66	34,8	17	PGAKR 30	PGAKL 30

1) For heads with right-hand thread marking R, e.g. PGAKR 10. For heads with left-hand thread marking L, e.g. PGAKL 10

ROD ENDS WITH FEMALE THREAD

A standard draw-rod head consists of a cast steel L600 body and self-lubricating spherical plain bearings - sliding steam steel/bronze sintered with the addition of graphite, saturated with service oil. Operating temperature up to 120°C. The rod ends are used in machines and technical equipment with fluctuating movements in the light, food, printing, paper, tobacco, and transport industries. We also offer a stainless steel version.



Delivery status:

Ready to install. Outer ring made of sintered bronze saturated with operating oil, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.

Dimensions											Bearing designation ¹⁾	
d	D	B	b	H	C	S	M ¹⁾	L	d ₁	α		
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	grades		
5	21	9	6,8	30	13	11	M5	12	9,4	13	PGIKR 5	PGIKL 5
6	21	9	6,8	30	13	11	M6	12	9,4	13	PGIKR 6	PGIKL 6
8	24	12	9	36	14,9	14	M8	15	10,6	14	PGIKR 8	PGIKL 8
10	29	14	10,5	43	16	17	M10	20	12,8	13	PGIKR 10	PGIKL 10
							x1,25				PGIKR 10/X1,25	PGIKL 10/X1,25
12	32	16	12	50	19,2	19	M12	23	15	13	PGIKR 12	PGIKL 12
							x1,25				PGIKR 12/X1,25	PGIKL 12/X1,25
14	42	21	15	64	25	22	M14	28	19,2	15	PGIKR 14	PGIKL 14
16	42	21	15	64	25	22	M16	28	19,2	15	PGIKR 16	PGIKL 16
							x1,5				PGIKR 16/X1,5	PGIKL 16/X1,5
18	50	25	18	77	26	30	M18x1,5	33	24,9	15	PGIKR 18	PGIKL 18
20	50	25	18	77	26	30	M20x1,5	33	24,9	15	PGIKR 20	PGIKL 20
25	60	31	22	94	32	36	M24x2	42	29,5	15	PGIKR 25	PGIKL 25
30	70	37	25	110	37	41	M27x2	51	34,8	17	PGIKR 30	PGIKL 30
35	80	43	28	125	41	50	M36x2	56	40,3	17	PGIKR 35 ²⁾	PGIKL 35

1) For heads with right-hand thread, marking R, e.g. PGIKR 10. For heads with left-hand thread, marking L, e.g. PGIKL 10.

2) PGIKR (L) 35 steel/steel with re-lubrication.

NEEDLE ROLLERS

Rollers are needle roller bearings with a reinforced outer ring. They are made with a convex outer surface, R500, to eliminate edging caused by inaccurate roll alignment. Rollers have a gap seal (labyrinth seal), without flexible seals. The working temperature of the rollers is from -20°C to +140°C. Recommended tolerance of shaft manufacturing for mounting of rolling rollers -g6. These bearings are machine parts ready for assembly and can be used in all types of cam mechanisms, transport systems, etc.

Characteristics:

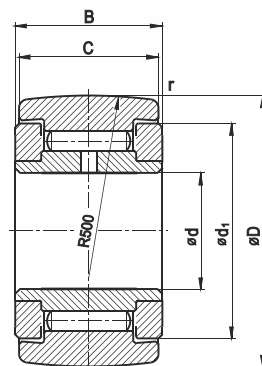
Rollers are needle roller bearings with a reinforced outer ring.

Application:

These bearings are machine parts ready for assembly and can be used in all types of cam mechanisms, transport systems, etc.

Delivery status:

Ready to install filled with operating grease, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.



Dimensions						Load capacity		Limit speed	Bearing designation
d	D	B	C	r	d ₁	C Movement	C ₀ Resting		
mm	mm	mm	mm	mm	mm	N	N	min.-1	
6	19	12	11	0,3	15	5500	7900	7000	RT 6
8	24	15	14	0,5	19	7800	11400	5500	RT 8
10	30	15	14	1	23	9500	14600	4500	RT 10
12	32	15	14	1	25	9700	15400	3900	RT 12
15	35	19	18	1	27	12800	23000	3400	RT 15
17	40	21	20	1,5	32	14800	26500	2900	RT 17
20	47	25	24	1,5	37	20600	42000	2600	RT 20
25	52	25	24	1,5	42	20500	44000	2100	RT 25
30	62	29	28	1,5	51	30500	63000	1700	RT 30
35	72	29	28	2	58	33000	73000	1400	RT 35
40	80	32	30	2	66	41000	90000	1300	RT 40
50	90	32	30	2	76	40500	93000	1000	RT 50

ROLLERS CAM FOLLOWER

These are needle roller bearings that consist of a shank that forms the inner raceway and a thick-walled outer ring.

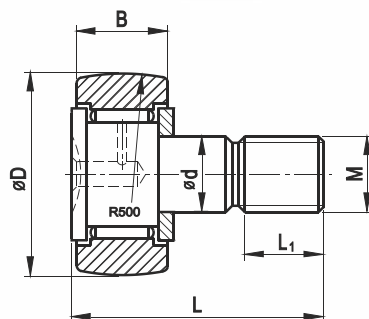
Cam rollers are used for eccentrics, cams, guides, tappets, etc.

As standard, the rollers are lubricated from the front (as shown in the picture). Only in this version are the rollers RKV 16, RKV 19, RKV 22 and RKV 26 manufactured.

Rollers lubricated on the thread side are marked with the letter “G”, added at the end of the standard product (e.g. RKV 52G). The cam roller pin should be seated in a hole made in H7 tolerance.

Delivery status:

Ready-to-install, filled with operating grease, do not wash. Protected by maintenance oil, packed in corrosion inhibited anti-corrosion paper.

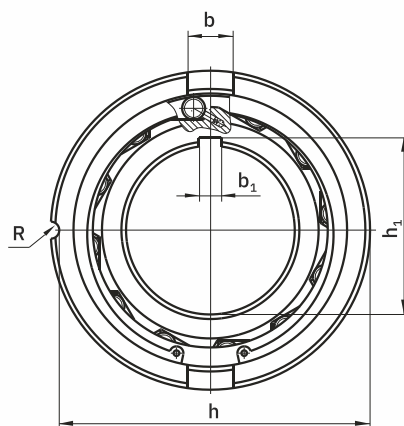
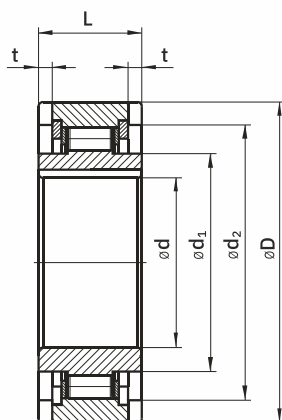


Dimensions						Load capacity		Limit speed	Bearing designation
D	d	B	L	L ₁	M	C Movement	C ₀ Resting		
mm	mm	mm	mm	mm	mm	N	N	min.-1	
16	6	11	28	8	M6	4850	6500	8500	RKV 16
19	8		32	10	M8	5500	7900	7000	RKV 19
22	10	12	36	12	M10x1	6300	9100	6000	RKV 22
26						7300	11300		RKV 26
28,575	11,112	15,875	43	16	M10	8400	11000	3000	RKV 28,575
30	12	14	40	13	M12x1,5	9500	14600	4500	RKV 30
32						10000	15800		RKV 32
35	16	18	52	17	M16x1,5	12800	23000	3400	RKV 35
40	18	20	58	19	M18x1,5	14800	26500	2900	RKV 40
47	20	24	66	21	M20x1,5	20600	42000	2600	RKV 47
52						22500	48000		RKV 52
62	24	29	80	25	M24x1,5	34000	76000	2200	RKV 62
72						37000	85000		RKV 72
80	30	35	100	32	M30x1,5	49500	120000	1700	RKV 80
90	30	35	100	32	M30x1,5	53000	130000	1700	RKV 90

UNIDIRECTIONAL ROLLING ELEMENT COUPLINGS

Unidirectional rolling clutches are used to transmit torque in one direction while allowing free relative motion in the other direction and are used in such applications as motor vehicles, agricultural machinery, assemblies, and mechanisms (e.g., packaging machines).

They work by wedging the rollers between the outer ring and the appropriately shaped inner ring. The working surfaces of these two rings form a self-locking angle. The rollers are individually pressed against the ring raceways using springs and tappets, which allows for immediate action, and the “dead angle” resulting only from the elastic deformation of the clutch components is practically zero.



Basic parameters:

- basic operating frequency: up to 60 cycles/min,
- operating temperature of couplings: max. 120°C,
- installation conditions: housing H7, shaft h6,
- service life: average of 10^7 triggering cycles,
- lubrication with low-viscosity oils.

The use of operating frequencies higher than those given above is determined by several factors such as inertia of rotating masses, lubrication conditions, etc. They are not designed to transmit any axial (longitudinal) forces, either in operation or during assembly.

The service life of the couplings is dependent on the operating conditions, the nature of the operation (e.g. shock load nature), and the free-running duration.

In conditions of prolonged free running, at peripheral speeds not exceeding 6 m/s, it is recommended to use lubrication of couplings with low viscosity oils in

the range from 8.33 cSt to 59.34 cSt at 40°C. At low speeds, low viscosity plastic greases can be used to fill up to 30% of the free space.

To ensure proper operating conditions for the coupling, it is required that it be fixed with radial ball bearings, as the couplings themselves are not bearings.

Application:

In motor vehicles, agricultural machinery, assemblies, and mechanisms, e.g. seeders, packaging machines, etc.

Delivery status:

Not lubricated, protected by maintenance oil, and packed in corrosion inhibited anti-corrosion paper.

Designation	Dimensions											Torque Mo
	d H7	D	L	d ₁	d ₂	b	h	b ₁	h ₁	t	R	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
O&T 023.1	8	24r6	8	11	20	-	-	2	9	-	-	2
O&T 023.2	12	35n6	13	18,5	30	4	-	4	13,8	1,5	-	6
O&T 023.11	15	35r6	11	21	30	-	-	5	16,2	-	-	8
O&T 023.3	15	42n6	18	24	36	5	-	5	16,2	1,5	-	20
O&T 023.4	20	47r6	14	28	42	-	-	6	21,6	-	-	23
O&T 023.5	20	52n6	21	30	45	6	-	6	21,6	1,8	-	50
O&T 029.25/55A	25	55+0,015	17	34	47	-	53,5	5	27,3	-	1,5	80
O&T 023.6	25	62n6	24	36,5	52	8	-	8	27	2,3	-	80
O&T 023.9	30	62r6	16	40,4	55	-	-	8	32	-	-	55
O&T 023.7	30	72n6	27	40	62	10	-	8	32	2,6	-	120
O&T 023.10	35	72r6	17	47,4	63	-	-	10	37,4	-	-	90
O&T 023.8	35	80n6	31	48	70	12	-	10	37,4	3,6	-	150
SPS 40	40	80r6	18	53,5	70	-	-	12	42,3	-	-	120
SP 40	40	90n6	33	54,5	78	12	-	12	42,3	3,6	-	230

AXIAL CYLINDRICAL ROLLER AND SPHERICAL ROLLER BEARINGS

These bearings run longitudinally without clearance and with pre-load. They carry bi-directional axial and longitudinal loads and a swinging moment.

The individual components of the bearing are matched to each other and the components of different bearings must not be changed during mounting.

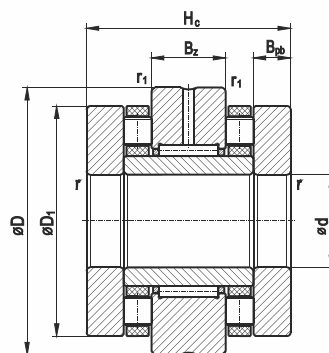
Characteristics:

Bearings consist of an outer ring with a rolling and radial raceway, an inner ring, spacers, and thrust and radial bearing units.

The accuracy class of the thrust bearing is P4, while that of the radial bearing is P6.

Application:

For bearing supports, e.g. thrust screws in numerically controlled precision machine tools.



Dimensions						Transverse load capacity		Longitudinal load capacity		Limit speed	Designation
d	D	D ₁	H _c	B _z	B _{pb}	C Movement	C _o Resting	C _a Movement	C _{oa} Resting		
mm	mm	mm	mm	mm	mm	kN	kN	kN	kN	min.-1	
20	52	42	46	16	10	14,6	22,1	33,0	75,0	7000	OŁT 2052TN
25	57	47	50	20	10	22,5	35,0	35,0	85,0	6000	OŁT 2557TN
30	62	52	50	20	10	24,0	41,0	38,5	100,0	5500	OŁT 3062TN
30	80	68	66	20	14	24,0	41,0	100,0	200,0	4400	OŁT 3080TN
35	70	60	54	20	11	25,7	46,8	49,0	120,0	4800	OŁT 3570TN
40	75	65	54	20	11	27,2	52,5	53,0	135,0	4400	OŁT 4075TN
40	90	78	75	25	16	38,0	74,0	117,0	315,0	4900	OŁT 4090TN
50	110	95	82	25	17,5	42,0	80,0	173,0	480,0	3100	OŁT 50110TN
60	120	105	82	25	17,5	44,0	92,0	187,0	550,0	2700	OŁT 60120TN

OTHER BEARINGS AND BEARING COMPONENTS

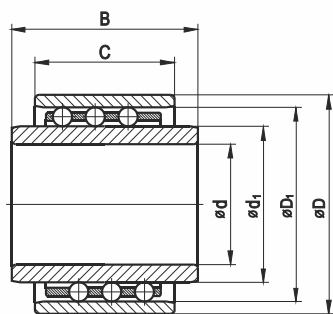


Fig. 1
Special ball bearings

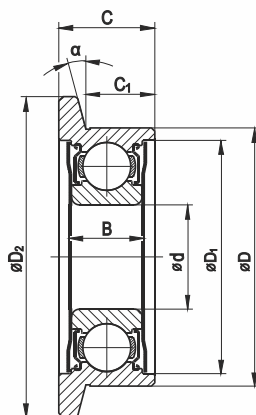


Fig. 2
Rollerblades for temperatures
up to 200°C



Fig.	Bearing designation	Dimensions								
		d	D	d ₁	D ₁	D ₂	B	C	C ₁	α
		mm	mm	mm	mm	mm	mm	mm	mm	grades
1	PT 40/80	40	80	52,95	67	-	68	50	-	-
	PT 70/120	70	120	85	105	-	78	59	-	-
	PT 75/130	75	130	92,95	112	-	120	100	-	-
	PT 45/80	45	80	58	68	-	80	50	-	-
2	OLT 121	25	80	-	59,5	100	29,6	35	25	15
	OLT 146	25	62	-	56	77	18	23	16	15

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Special use bearings:



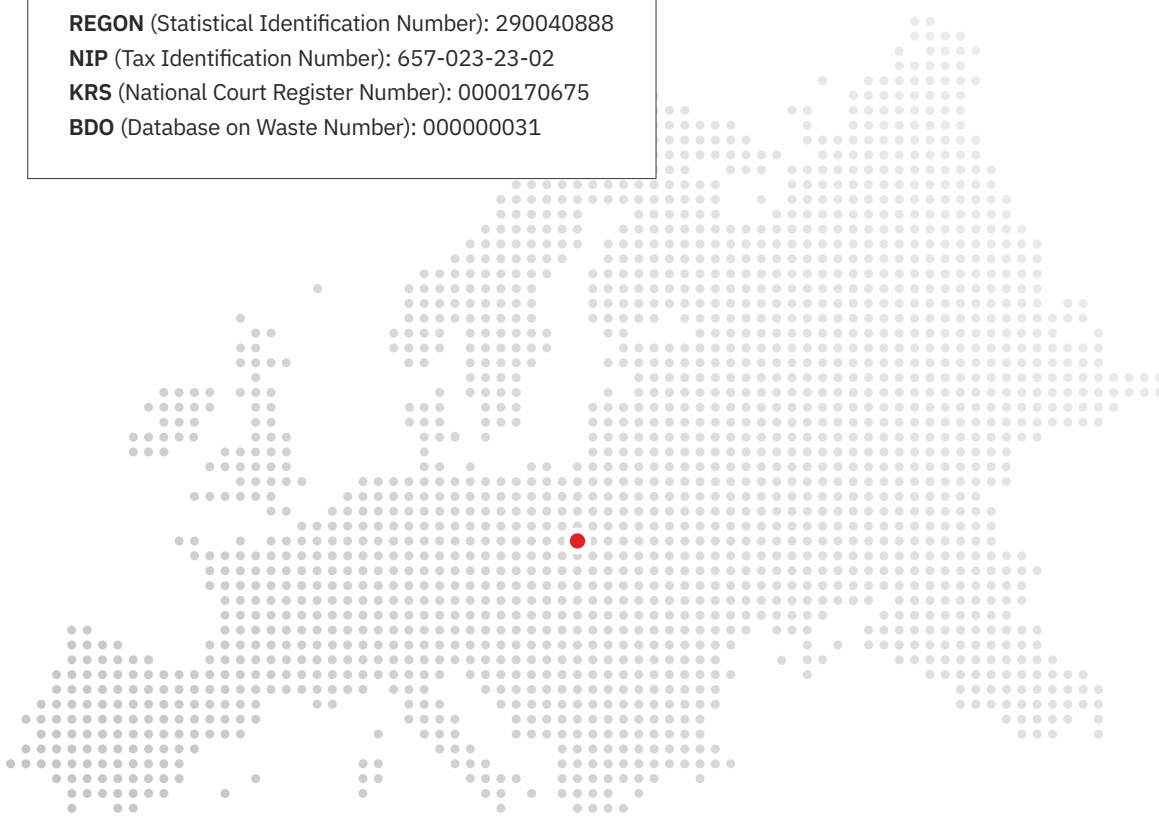
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REGON (Statistical Identification Number): 290040888

NIP (Tax Identification Number): 657-023-23-02

KRS (National Court Register Number): 0000170675

BDO (Database on Waste Number): 000000031





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