

Steel Cages IBF/IBFZ

Radial Steel Cages K/KR



ITM UNITEC
ENGINEERED BEARINGS

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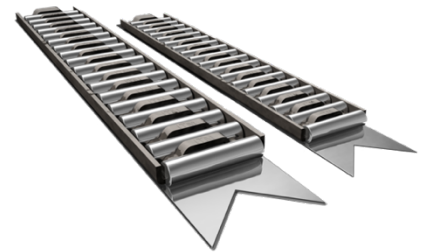
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Radial Steel Cages without needles (IBF) with needles (IBFZ)

Properties

- Made of alloyed steel, with pockets to accommodate precision needles class 2 per DIN 5402-3 specification
- Assembled with hardened and profiled needles (IBFZ)
- Can be bent into radial needle cages (K)
- Available in standard length of 2000 mm with / without precision needles, various lengths on request
- Can be produced in small quantities and short lead times
- Allow very flexible dimensions
- Low friction and easy spin with high load and stiffness



Radial Steel Cages (K), with hardened steel rings (KR)

- Cages enable higher speeds compared to full complement bearings
- Little installation space needed
- Suitable for large shaft diameters
- Available in small quantities and flexible dimensions
- Tailored dimensions available at short notice
- Oil and grease lubrication possible



Design Information

- When using Radial Steel Cage (**K**) shaft and housing surface finish must be hardened and ground to keep best service life
- Steel Cages with Needles **IBFZ** can be delivered as linear Steel Cage in different lengths, bent Radial Steel Cage diameters upon customer´s request (**K**) as well as complete Radial Steel Cage with hardened inner- and outer metal tapes (**KR**)
- Tolerance shaft / housing: f6/H7
- Open joint
- Lateral contact surface ($Ra < 0.8$) must be wear-resistant

Sealing

Sealing is carried out with commercial seals between bearing and matching parts.

Delivery execution / Installation

Flat cages, radial needle rollers are packed in corrosion-protected boxes.

Before installation, parts must be oiled or greased, dependent what lubrication will be applied. Radial needle rollers are provided ready to install and individually packed.

Shipping Sizes

Flat cages are available from stock in standard lengths of 2000 mm.

Customized dimensions for flat cages and radial needle rollers can be also produced on short call.

Order Example and Designation:

- **Flat Cage without needles** – IBF 735 length 1500 mm
 - Order description: IBF 735.1500
- **Flat Cage with needles** – IBFZ 735 length 2000 mm
 - Order description: IBFZ 735.2000
- **Radial Needle Roller IBFZ 735**
Shaft diameter 500 mm housing bore 514 mm width 35 mm
Order description: K 500x514x35 from IBFZ 735
- **Radial Needle Roller with Steel Ring KR**
Flat cage with needles IBFZ 1240
Shaft diameter 800 mm housing bore 828 mm width 40 mm
Order description: KR 800x828x40 from IBFZ 1240



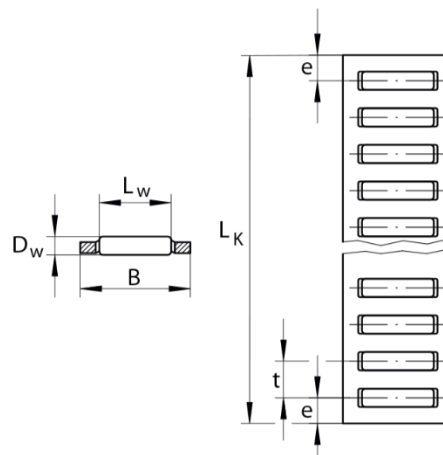
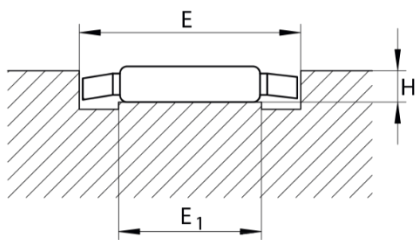
Technical Details

Dimension Scale Dimension in mm

Reference	Weight per 1000 mm kg	Dimensions B	Shaft Diameter		t	e	D _w	L _w	Loads dyn. C N	Mating Dimensions			
			min.	max.						stat. C ₀ N	E	E ₁ min	H
			d _{min}	d _{max}									
IBFZ 3020	0,34	20	120	~1000	6	4,5	3	15,8	3950 · vd	1060 · d	20,4 ^{+0,2}	16	2,7 ^{-0,2}
IBFZ 320-H20	0,37	20	120	~1000	6	4,5	3	13,8	3440 · vd	925 · d	20,4 ^{+0,2}	14	2,7 ^{-0,2}
IBFZ 515	0,37	15	105	~1000	8	5,5	5	11,8	5100 · vd	1050 · d	15,4 ^{+0,2}	12	4,6 ^{-0,2}
IBFZ 523	0,53	23	95	~1000	8	5,5	5	19,8	7300 · vd	1660 · d	23,4 ^{+0,2}	20	4,6 ^{-0,2}
IBFZ 532	0,72	32	180	~1000	8	5,5	5	27,8	9600 · vd	2350 · d	32,5 ^{+0,3}	28	4,6 ^{-0,2}
IBFZ 728	0,87	28	175	~1000	11	7,5	7	24	10400 · vd	2050 · d	28,4 ^{+0,2}	24	6,5 ^{-0,2}
IBFZ 735	1,08	35	220	~1000	11	7,5	7	30	12400 · vd	2600 · d	35,0 ^{+/-0,3}	30	6,5 ^{-0,2}
IBFZ 1240	1,97	40	160	~1000	16	10,0	12	36	21800 · vd	3650 · d	40,5 ^{+0,3}	36	11,0 ^{-0,2}

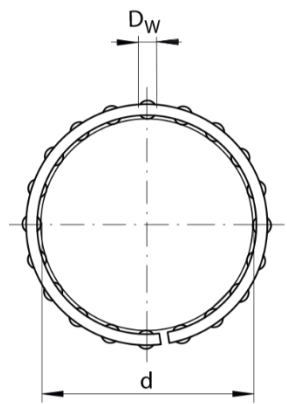
Mating dimensions

Anschlussmaße



$L_k \pi = (d + D_w)$
(gestreckte Länge vor dem Rundbiegen)

Flat length before bending



aus Flachkäfig IBFZ gebogen

Made of steel cage IBFZ

Toleranz für den Innenlaufbahn-Durchmesser: f6
Toleranz für den Außenlaufbahn-Durchmesser: H7
Tolerance inner race diameter f6
Tolerance outer race diameter H7

