

igubal® Rod End Bearings



Maintenance-free, self-lubricating

High strength under impact loads

High tensile strength

Compensation for alignment errors

Compensation for edge loads

Light weight

igubal®
Rod End Bearings

Phone +49 - 22 03 - 96 49-145
Fax +49 - 22 03 - 96 49-334



mm

Inch



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igus® GmbH
51147 Cologne

Internet www.igus.de
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Special properties of igubal® Rod End Bearings:

- Maintenance-free
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation for alignment errors
- Compensation for edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- High vibration dampening capacity
- Suitable for rotating, oscillating and linear movements
- Light weight
- Dimensional series K and E, dimensions according to standard DIN ISO 12240

loads and high temperatures, the load capacity of igubal® rod end bearings should be tested in an experiment that simulates the application.

Loads

igubal® rod end bearings handle high loads at normal room temperatures, have excellent dampening properties and weigh only a fifth of traditional metallic rod end bearings. In applications with high continuous



Coefficients of Friction and Speed

One important advantage of igubal® spherical bearings is that rapid, rotary movements of a mounted shaft take place directly in the spherical portion, made of iglidur® W300. In metallic rod ends, rotary motion takes place between the race and the spherical bearing. High speeds can be achieved with igubal® bearings.

igubal® bearings are used in such a way that the angular movements of the spherical bearings take place at the spherical outer diameter. By contrast, rotations of the shaft are supported directly in the inner diameter of the spherical portion. The advantage therefore lies in the polymer vs. steel relationship. Polymer produces lower friction and permits high speeds, even when running dry. The maintenance-free igubal® bearing system is also suited for linear and oscillating shaft movements.

Product Range

igubal® rod end bearings are available in the dimensional series K and E for shaft diameters of 2 to 30 mm.

- Form A – with male threads
- Form B – with female threads.

The dimensional series K is available in imperial dimensions, as well as a special version containing a stainless steel sleeve in the inner race. This allows a significantly higher torque than for the standard polymer race. Please contact us for information on quantities, availability and pricing.

Tolerances

igubal® rod end bearings can be used at different tolerances depending on the individual application. In standard form, they are designed with a large amount of bearing clearance, which permits reliable operation even at high rotational speeds. The bore of the inner race is produced to a standard tolerance range. Shafts should also meet recommended tolerances. Please contact us if you have any questions regarding tolerances.



Picture 51.2: igubal® rod end bearings in a confectionery decorating machine



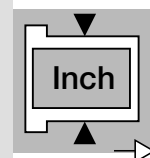
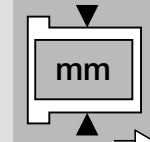
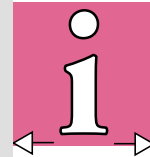
Picture 51.3: igubal® rod end bearings in the rear suspension mechanism of a bicycle



Picture 51.4: igubal® rod end bearings in the closing mechanism of an outdoor security gate

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igubal® Rod End Bearings with Female Thread



KBRM/KBLM
Dimensional Series K
Standard design
Page 51.6



KBRM/KBLM
Dimensional Series K
Standard design with
metal insert (MH)
Page 51.6



KBRI/KBLI
Dimensional Series K
Standard design with
inch dimensions
Page 51.14



EBRM/EBLM
Dimensional Series E
Page 51.12

igubal® Rod End Bearings with Male Thread



KARM/KALM
Dimensional Series K
Standard design
Page 51.8



KARM/KALM
Dimensional Series K
Standard design with
metal sleeve (MH)
Page 51.8



KARI/KALI
Dimensional Series K
Standard design with
inch dimensions
Page 51.16



EARM/EALM
Dimensional Series E
Page 51.10

igubal® Accessories for Rod End Bearings



Adapter bolt
Page 51.18



Clevis joint with
clevis pin and circlip
Page 52.4



Clevis joint with
spring-loaded pins
Page 52.7



AGRM
Page 51.20



WGRM
Page 51.19

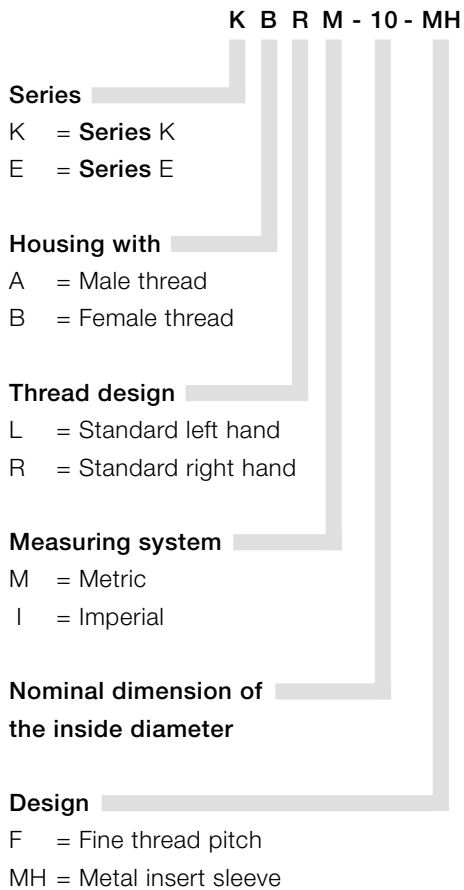


WGRM-LC
Page 51.20



Structure for Part Numbers for igubal® Rod End Bearings

The part numbers of igubal® rod end bearings are designed according to the following system:

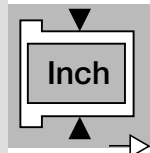
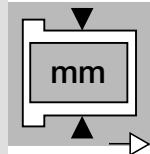


The example given is the number for a rod end bearing of the dimensional series K with metric female right hand thread. The inner diameter of the spherical ball is 10 mm. It is a special design with a metal insert sleeve.

In most cases, the thread diameter of the bolt corresponds to the inner diameter – here it is M10. However, please pay attention to the following tables.

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EB..M

mm

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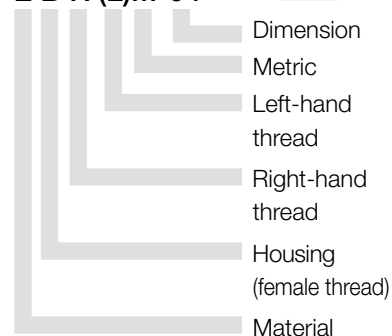
51.12



Data in mm

Structure – part no.

E B R (L)M-04



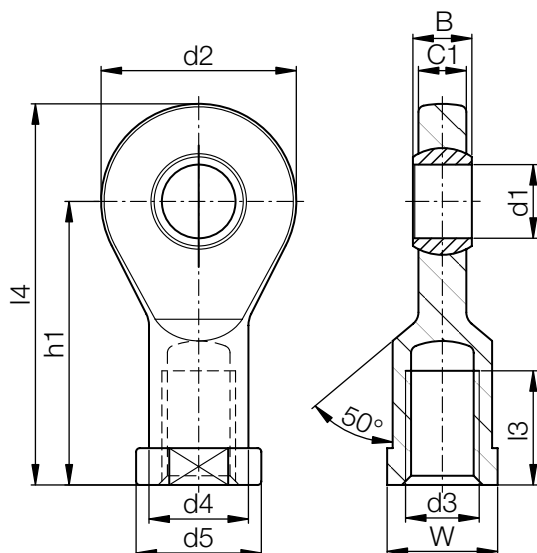
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Load Data

igubal® - Rod End Bearings EBRM / EBLM

Part Number	Max. Static Tensile Strength		Max. Radial Load		Min. Thread Depth [mm]	Max. Torque Strength inner Threading [Nm]	Max. Torque Strength Through Ball [Nm]
	Short term	Long term	Short term	Long term			
	[N]	[N]	[N]	[N]			
EBR(L)M-04	800	400	100	50	7	0,4	2,0
EBR(L)M-05	1300	650	150	75	8	0,5	2,0
EBR(L)M-06	1500	750	200	100	8	1,5	2,5
EBR(L)M-08	2000	1000	450	225	11	5,0	7,0
EBR(L)M-10	2300	1150	500	250	13	15,0	14,0
EBR(L)M-10 F	2300	1150	500	250	13	6,0	14,0
EBR(L)M-12	3300	1650	550	275	14	20,0	25,0
EBR(L)M-12 F	3300	1650	550	275	14	15,0	25,0
EBR(L)M-15	4800	2400	800	400	18	25,0	30,0
EBR(L)M-17	5300	2650	1100	550	19	30,0	35,0
EBR(L)M-17 F	5300	2650	1100	550	19	27,5	35,0
EBR(L)M-20	7200	3600	1800	900	22	60,0	40,0
EBR(L)M-20 M20	7200	3600	1800	900	22	60,0	40,0
EBR(L)M-25	10000	5000	2600	1300	27	115,0	55,0
EBR(L)M-30	10500	5250	3000	1500	33	130,0	70,0



Dimensions [mm]

igubal® - Rod End Bearings EBRM / EBLM

Part Number	d1 E10	d2	d3	d4	d5	C1	B	h1	l3	l4	W	Maximum Angle of Pivot
EBR(L)M-04	4	15	M04	8,0	9,2	3,5	5	22,5	9,5	30,0	SW08	33°
EBR(L)M-05	5	19	M05	9,0	11	4,4	6	30	12	39,5	SW09	33°
EBR(L)M-06	6	21	M06	11,0	13	4,4	6	30	12	40,5	SW11	27°
EBR(L)M-08	8	24	M08	13,0	16	6,0	8	36	16	48,0	SW14	24°
EBR(L)M-10	10	29	M10	15,0	19	7,0	9	43	18	57,5	SW17	24°
EBR(L)M-10 F	10	29	M10x1,25	15,0	19	7,0	9	43	18	57,5	SW17	24°
EBR(L)M-12	12	34	M12	18,0	22	8,0	10	50	20	67,0	SW19	21°
EBR(L)M-12 F	12	34	M12x1,25	18,0	22	8,0	10	50	20	67,0	SW19	21°
EBR(L)M-15	15	40	M14	21,0	26	10,0	12	61	26	81,0	SW22	21°
EBR(L)M-17	17	46	M16	24,0	30	11,0	14	67	27	90,0	SW27	18°
EBR(L)M-17 F	17	46	M16x1,5	24,0	30	11,0	14	67	27	90,0	SW27	18°
EBR(L)M-20	20	53	M20x1,5	27,0	34	13,0	16	77	31	103,5	SW30	16°
EBR(L)M-20 M20	20	53	M20x2,5	27,0	34	13,0	16	77	31	103,5	SW30	16°
EBR(L)M-25	25	64	M24x2,0	34,0	41	17,0	20	94	38	126,5	SW36	16°
EBR(L)M-30	30	73	M30x2,0	41,0	48	19,0	22	110	47	146,5	SW41	13°

Available from stock



Option: Clearance-free spherical ball

► P. 57.4

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EB..M

mm

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