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

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

igubal® Rod End Bearings
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Coefficients of Friction and Speed

One important advantage of igubal® spherical bearings is that rapid, rotary movements of a mounted shaft take place directly between the shaft and the iglidur® plain spherical bearing. 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 outside diameter. By contrast, rotations of the shaft are supported directly in the inner diameter of the spherical bearing. 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 suitable 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 or visit our website 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 51.1: igubal® rod end bearings in a confectionery decorating machine

Picture 51.2: igubal® rod end bearings in the a bicycle rear suspension

Picture 51.3: igubal® rod end bearings in the closing mechanism of an outdoor security gate

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Data in mm

Structure – part no.

K A ... M-05

- Dimension
- Metric
- Thread
  - L = L.-hand thread
  - R = R.-hand thread
- Housing (male thread)
- Material

Standard design

Design with metal sleeve (MH)

igubal® – Rod End Bearings:

- Maintenance-free, self-lubricating
- 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 according to standard DIN ISO 12240
- Available with metal sleeve to take a higher torque

Material

Housing: igumid G
▶ Page 70.6
Spherical Bearing: iglidur® W300
▶ chapter 5

Load Data

igubal® – Rod End Bearings KARM / KALM

Part Number		Max. static tensile strength		Max. radial load		Min. thread depth	Max. torque strength outside Thread	Max. torque through ball	
		Short term	Long term	Short term	Long term			Standard	MH
R.-hand thread	L.-hand thread	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[Nm]
KARM-05	KALM-05	800	400	80	40	13	0,4	5	12
KARM-06	KALM-06	1000	500	100	50	15	0,5	10	15
KARM-08	KALM-08	1700	850	200	100	18	2,0	12	40
KARM-10	KALM-10	2500	1250	300	150	20	5,0	20	50
KARM-10 F	KALM-10 F	2500	1250	300	150	20	3,0	20	50
KARM-12	KALM-12	2700	1350	400	200	22	6,0	30	70
KARM-12 F	KALM-12 F	2700	1350	400	200	22	6,0	30	70
KARM-14	KALM-14	3400	1700	700	350	25	12,0	35	75
KARM-16	KALM-16	3900	1950	800	400	26	17,0	40	110
KARM-16 F	KALM-16 F	3900	1950	800	400	26	17,0	40	110
KARM-18	KALM-18	4200	2100	1000	500	29	20,0	45	150
KARM-20	KALM-20	6000	3000	1300	650	32	25,0	55	200
KARM-20 M20	KALM-20 M20	6000	3000	1300	650	32	25,0	55	200
KARM-22	KALM-22	7200	3600	1500	750	34	25,0	60	225
KARM-25	KALM-25	7500	3750	1900	950	39	45,0	65	260
KARM-30	KALM-30	8800	4400	2300	1150	46	85,0	70	300

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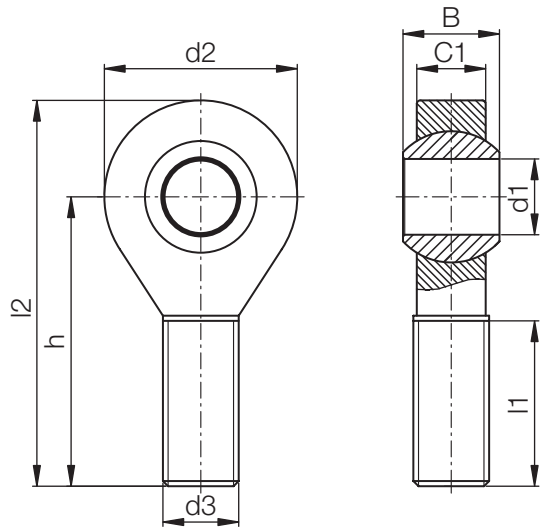
Lifetime calculation, CAD files and much more support ▶ www.igus.co.uk/en/karm



Dimensions [mm]

igubal® – Rod End Bearings KARM / KALM

Part Number R.-hand thread	Part Number L.-hand thread	d1 E10	d2	d3	C1	B	h	l1	l2	Max. pivot angle
KARM-05	KALM-05	5	18	M05	6,0	8,0	33	19	42	30°
KARM-06	KALM-06	6	20	M06	7,0	9,0	36	21	46	29°
KARM-08	KALM-08	8	24	M08	9,0	12,0	42	25	55	25°
KARM-10	KALM-10	10	30	M10	10,5	14,0	48	28	63	25°
KARM-10 F	KALM-10 F	10	30	M10 x 1,25	10,5	14,0	48	28	63	25°
KARM-12	KALM-12	12	34	M12	12,0	16,0	54	32	71	25°
KARM-12 F	KALM-12 F	12	34	M12 x 1,25	12,0	16,0	54	32	71	25°
KARM-14	KALM-14	14	38	M14	13,5	19,0	61	36	79	25°
KARM-16	KALM-16	16	42	M16	15,0	21,0	66	37	88	23°
KARM-16 F	KALM-16 F	16	42	M16 x 1,5	15,0	21,0	66	37	88	23°
KARM-18	KALM-18	18	46	M18 x 1,5	16,5	23,0	72	41	96	23°
KARM-20	KALM-20	20	50	M20 x 1,5	18,0	25,0	78	45	104	23°
KARM-20 M20	KALM-20 M20	20	50	M20 x 2,5	18,0	25,0	78	45	104	23°
KARM-22	KALM-22	22	56	M22 x 1,5	20,0	28,0	84	48	112	22°
KARM-25	KALM-25	25	61	M24 x 2,0	22,0	31,0	95	55	126	22°
KARM-30	KALM-30	30	71	M30 x 2,0	25,0	37,0	112	66	147	22°

Rod end bearings can be ordered in metric dimensions **with metal insert** with the addition of **MH** after the part numbers listed here, for example: KBRM-10 **MH.**

Available for delivery

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