My sketches

igubal® rod end bearings

- Maintenance-free dry operation
- Robust
- Durable
- Compensation of misalignment errors
- Resistant to edge loads
- Lightweight

igubal® rod ends

igubal® rod ends can also be used in rough environments. They are corrosion-resistant in humid environments and resistant to weak acids and media. Depending on the version (HT) the operation temperature is from –40°C to +200°C. Rod ends are also resistant to dirt and dust, they are also available as detectable version.

Maintenance-free dry operation

Robust

Durable

Compensation of misalignment errors

Resistant to edge loads

Lightweight

When to use it?

- If you want to save weight
- For rotating, oscillating and linear movements
- If high-frequency oscillations/vibrations occur
- If silent operation is required
- If you need an electrically insulating part
- If corrosion resistance is required
- In combination with pneumatic cylinders and gas struts
- If chemical resistance is required
- If high rigidity is required
- If they should be detectable

When not to use it?

- When temperatures are higher than +80°C
  ▶ HT version, page 760–761
- When rotation speeds higher than 0.5m/s are required
- When really high tensile and axial forces occur
- With a hydraulic cylinder
- When dimensions above 30mm are required

Max. + 200°C
Min. –40°C
(depending on material: standard from –30°C to +80°C; HT from –40°C to +200°C)

18 types
Ø 2–30mm

Imperial dimensions available
▶ From page 1606

Online product finder
▶ www.igus.eu/igubal-finder

Available from stock
Detailed information about delivery time online.

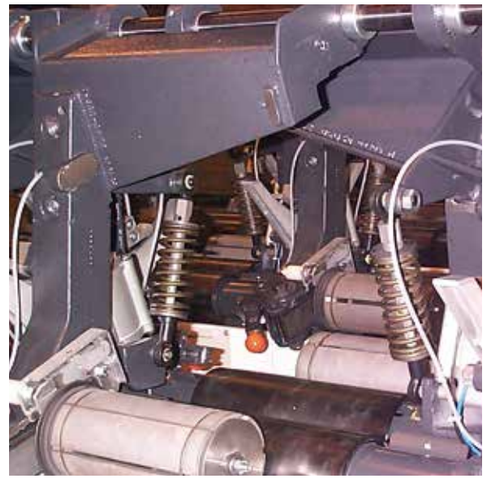
Price breaks online
No minimum order value. No minimum order quantity

igubal® rod ends | Application examples

Typical sectors of industry and application areas
● Bicycle manufacturing ● Plant design
● Packaging ● Offshore etc.

Improve technology and reduce costs – 110 exciting examples online
▶ www.igus.eu/igubal-applications

▶ www.igus.eu/special-bikes



▶ www.igus.eu/textile

▶ www.igus.eu/packaging

▶ www.igus.eu/offshore

igubal® rod ends | Technical data

Advantages

- Maintenance-free dry operation
- Robust
- Durable in varying loads
- Compensation of misalignment errors
- Resistant to edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- Vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional K and E series, according to standard DIN ISO 12240
- Available with stainless steel sleeve for higher tightening torque

Product range

igubal® rod ends are available in the dimensional K and E series for shaft diameters of 2 to 30mm according to standard DIN ISO 12240

- Form A – with male thread and
- Form B – with female thread

Stainless steel sleeve

The dimensional K and partially E series are available in imperial dimensions, as well as a special version containing a stainless steel sleeve in the spherical ball. This allows a significantly higher tightening torque than for the standard polymer race. Please ask us for more dimensions.

Loads

igubal® rod ends handle high loads at ambient temperatures, have excellent dampening properties and weigh only a fifth of traditional metallic bearing housings. In applications with high continuous loads and high temperatures, the load capacity of igubal® rod ends should be tested in an experiment that simulates the application.

▶ **www.igus.eu/igubal-finder**

Coefficient of sliding friction and speed

Rotary movements of a mounted shaft take place directly in the spherical portion, made from iglidur® W300. The advantage therefore lies in the polymer vs. steel relationship. Polymer produces lower friction and permits high speeds, even in dry operation. Taking the radial loads into account, maximum surface speeds up to 0.5m/s rotating can be attained.

The maintenance-free igubal® rod end bearings permit linear and oscillating movements of the shaft.

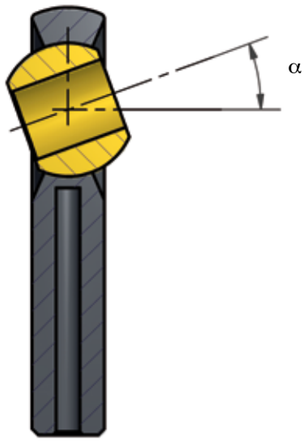
Temperatures

The igubal® rod ends can be used in temperatures from –30°C up to +80°C. The igubal® rod ends made from HT material are suitable for temperatures up to +200°C (E series, female and male threads).

Tolerances

igubal® rod ends can be used at different tolerances depending on the individual application. They are designed with a large clearance in the standard product, which enables a secure operation even under high peripheral speeds. The hole of the spherical ball is produced to a standard tolerance range E10. Shafts should also meet recommended tolerances h6 and h9. All values and tolerances according to ISO 2768-m. Please contact us in case you require lower or other bearing tolerances.

Pivot angle



igubal® rod ends | Product overview

igubal® rod end bearings with female thread

Classic design

K series

▶ **From page 746**

Easy assembly

K series

▶ **Page 748**

Selectable spherical ball material

K series

▶ **Page 750**

Space-saving

E series

▶ **Page 756**

For temperatures up to +200°C

E series

▶ **Page 760**

New

Suitable for food contact

E series

▶ **Page 762**

igubal® rod end bearings with male thread

Classic design, imperial dimensions

K series

▶ **Page1608**

Space-saving, imperial dimensions

E series

▶ **Page 1606**

Classic design

K series

▶ **From page 752**

Higher forces

K series

▶ **Page 754**

Space-saving

E series

▶ **From page 758**

For temperatures up to +200°C

E series

▶ **Page 761**

Classic design, imperial dimensions

K series

▶ **From page 1607**

igubal® angled and in-line ball and socket joints

Angled ball and socket joints

▶ **Page 764**

Angled ball and socket joints, low-cost

▶ **Page 765**

Easy assembly and disassembly

▶ **Page 766**

In-line ball and socket joints

▶ **Page 767**

In-line ball and socket joints, low-cost

▶ **Page 768**

igubal® accessories for rod ends

Clevis joints with clevis pin and circlip

E series

▶ **Page 778**

Clevis joints with spring-loaded fixing clip

E series

▶ **Page 779**

Detectable rod ends and clevis joints

▶ **From page 863**

igubal® rod ends | Product range

Rod ends with female thread: KBRM and KBLM

Standard design

Stainless steel sleeve version (MH)

- Maintenance-free dry operation
- Robust
- Durable in varying loads
- Compensation of misalignment errors
- Resistant to edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- Vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional K series according to DIN ISO 12240
- Available with stainless steel sleeve for higher tightening torque
- Adapter screw with circlip available

▶ Accessories, **page 861**

Service life calculation online
▶ www.igus.eu/igubal-expert

Technical data

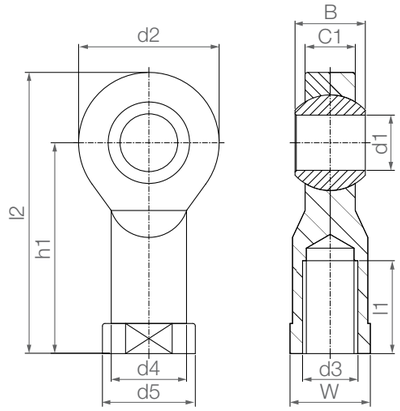
Part No.	Max. static tensile strain		Max. static axial load		Min. thread depth	Max. tightening torque	Max. tightening torque through ball		Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread	without stainless steel sleeve	with stainless steel sleeve	
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[Nm]	[g]
KB□M-02	200	100	50	25	4	0.30	1	–	0.4
KB□M-03	800	400	100	50	5	0.50	2	4	2.7
KB□M-05 M4	1,000	500	250	125	7	0.75	5	12	3.5
KB□M-05	1,000	500	250	125	7	1.00	5	12	3.4
KB□M-06	1,400	700	400	200	8	1.50	10	15	4.7
KB□M-08	2,100	1,050	700	350	11	5.00	12	40	8.6
KB□M-10	3,100	1,550	800	400	13	15.00	20	50	14.6
KB□M-10 F	3,100	1,550	800	400	13	6.00	20	50	14.6
KB□M-12[129)]	3,600	1,800	900	450	15	20.00	30	70	22.0
KB□M-12 F	3,600	1,800	900	450	15	15.00	30	70	22.0
KB□M-14	4,000	2,000	1,000	500	17	25.00	35	75	30.9
KB□M-16	4,200	2,100	1,300	650	19	30.00	40	110	39.6
KB□M-16 F	4,200	2,100	1,300	650	19	27.50	40	110	39.6
KB□M-18	4,600	2,300	1,600	800	21	45.00	45	150	55.0
KB□M-20	5,400	2,700	2,100	1,050	22	60.00	55	200	73.5
KB□M-20 M20	5,400	2,700	2,100	1,050	22	60.00	55	200	73.5
KB□M-22	7,000	3,500	2,200	1,100	25	75.00	60	–	94.8
KB□M-25	8,500	4,250	2,300	1,150	28	120.00	60	–	119.8
KB□M-30	10,500	5,250	2,500	1,250	34	135.00	60	–	177.0
KB□M-30 M27x2	10,500	5,250	2,500	1,250	34	135.00	60	–	189.6

[129)] **Integrated lock nut. Drawing as for KCRM, page 751**

igubal® rod ends

igubal® rod ends | Product range

Rod ends with female thread: KBRM and KBLM



Order key

Type				Size [mm]	Options
K	B	□	M-	02	MH
K series	Housing (female thread)	Thread	Metric	Inner Ø	

Thread
L = Left-hand thread
R = Right-hand thread

Add-on:
MH = With stainless steel sleeve

Material:
Housing: **igumid G ▶ Page 1654**
Spherical ball: **iglidur® W300 ▶ Page 171**

Imperial dimensions available
▶ Page 1608

Dimensions [mm]

Part No.	d1	d2	d3	d4	d5	C1	B		h1	l1	l2	W	Max. pivot angle
	E10						without stainless steel sleeve	with stainless steel sleeve					
								+0.2					
KB□M-02	2	9	M2	4.0	4.6	3.0	4	–	12.5	6	17	SW4	30°
KB□M-03	3	13	M3	6.5	8.0	4.5	6	6.2	18.5	8	25	SW6	30°
KB□M-05 M4	5	18	M4	9.0	12.0	6.0	8	8.2	27	10	36	SW9	30°
KB□M-05	5	18	M5	9.0	12.0	6.0	8	8.2	27	10	36	SW9	30°
KB□M-06	6	20	M6	10.0	13.0	7.0	9	9.2	30	12	40	SW11	29°
KB□M-08	8	24	M8	13.0	16.0	9.0	12	12.2	36	16	48	SW14	25°
KB□M-10	10	30	M10	15.0	19.0	10.5	14	14.2	43	20	58	SW17	25°
KB□M-10 F	10	30	M10 x 1.25	15.0	19.0	10.5	14	14.2	43	20	58	SW17	25°
KB□M-12	12	34	M12	–	–	12.0	16	16.2	50	25	67	SW17	25°
KB□M-12 F	12	34	M12 x 1.25	18.0	22.0	12.0	16	16.2	50	22	67	SW19	25°
KB□M-14	14	38	M14	20.0	25.0	13.5	19	19.2	57	25	76	SW22	25°
KB□M-16	16	42	M16	22.0	27.0	15.0	21	21.2	64	28	85	SW22	23°
KB□M-16 F	16	42	M16 x 1.5	22.0	27.0	15.0	21	21.2	64	28	85	SW22	23°
KB□M-18	18	46	M18 x 1.5	25.0	31.0	16.5	23	23.2	71	32	94	SW27	23°
KB□M-20	20	50	M20 x 1.5	28.0	34.0	18.0	25	25.2	77	33	102	SW30	23°
KB□M-20 M20	20	50	M20 x 2.5	28.0	34.0	18.0	25	25.2	77	33	102	SW30	23°
KB□M-22	22	56	M22 x 1.5	30.0	37.0	20.0	28	–	84	37	112	SW32	22°
KB□M-25	25	60	M24 x 2.0	32.0	41.0	22.0	31	–	94	42	124	SW36	22°
KB□M-30	30	70	M30 x 2.0	37.0	50.0	25.0	37	–	110	50	145	SW41	22°
KB□M-30 M27x2	30	70	M27 x 2.0	37.0	50.0	25.0	37	–	110	50	145	SW41	22°

Rod ends can be ordered in metric dimensions with stainless steel sleeve with the addition of MH after the part numbers listed here. Example: KRBM-10 **MH (Inner Ø: 10mm).**

igubal® rod ends | Product range

Rod ends, female thread; 2nd generation: KBRM CL and KBLM CL

- Available with stainless steel sleeve for higher tightening torque
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available
  ▶ Accessories, **page 861**

Simple assembly due to the hexagonal body and the integrated lock nut

Service life calculation online
▶ **www.igus.eu/igubal-expert**

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread	Max. tightening torque	Max. tightening torque through ball		Weight
	Short-term [N]	Long-term [N]	Short-term [N]	Long-term [N]	depth Thread [mm]	Female thread [Nm]	without stainless steel sleeve [Nm]	with stainless steel sleeve [Nm]	[g]
KB□M-06 CL	1,400	700	300	150	8	0.75	10	15	4.5
KB□M-08 CL	2,100	1,050	500	250	11	2	12	40	8.6
KB□M-10 CL	3,100	1,550	800	400	13	3	20	50	14.1

Alternative spherical ball materials ▶ Page 841

RKM: Low-cost

JKM: Low moisture absorption

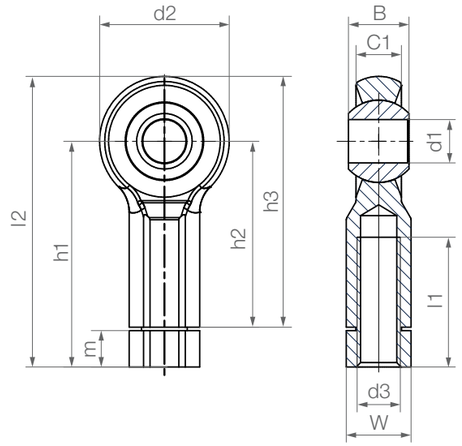
WKM-MH: Standard spherical ball with stainless steel sleeve

J4KM: Low-cost and low moisture absorption

igubal®
rod ends

igubal® rod ends | Product range

Rod ends, female thread; 2nd generation: KBRM CL and KBLM CL



Order key

Type				Size [mm]	Version	
K	B	□	M-	06	CL	MH
K series	Housing (female thread)	Thread	Metric	Inner Ø	2nd generation	

Options:
Thread
L = Left-hand thread
R = Right-hand thread

Add-on:
MH =
With stainless steel sleeve

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**
Other spherical ball materials upon request
▶ **Page 841**

Dimensions [mm]

Part No.	d1	d2	d3	W	B		C1	h3	h1	h2	l1	l2	m	Max. pivot angle
	E10				without stainless steel sleeve	with stainless steel sleeve +0.2								
KB□M-06 CL	6	20	M6	SW10	9	9.2	7	40	36.5	30	20	46.5	5.7	40°
KB□M-08 CL	8	24	M8	SW13	12	12.2	9	48	44.3	36	25	56.3	7.5	35°
KB□M-10 CL	10	30	M10	SW15	14	14.2	10.5	58	52.2	43	30	67.2	8.4	35°

Rod ends can be ordered in metric dimensions with stainless steel sleeve with the addition of **MH** after the part numbers listed here. Example: KBRM-10 CL **MH (Inner Ø: 10mm).**
For another spherical bearing material than iglidur® W300, please add "**J**" to the part number, for example. Example: KBRM-10 CL **J**.

Rod ends with female thread: KCRM and KCLM

- Smooth design no dirt traps
- Spherical ball is clipped in
- Choice of iglidur® spherical ball materials
- Compensation of misalignment errors
- Lightweight
- Absolute corrosion resistance
- Available with stainless steel sleeve for higher tightening torque
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available

▶ Accessories, **page 861**

Service life calculation online
▶ www.igus.eu/igubal-expert

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tigh-tening torque	Max. tightening torque through ball		Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread	without stainless steel sleeve	with stainless steel sleeve	
	[N]	[N]	[N]	[N]	[Nm]	[Nm]	[Nm]	[Nm]	[g]
KC□M-05	1,200	600	180	90	7	1.00	5	12	4.0
KC□M-06	1,400	700	300	150	8	0.75	10	15	4.2
KC□M-08	2,100	1,050	500	250	11	2.00	12	40	7.6
KC□M-10	3,100	1,550	800	400	13	3.00	20	50	12.8
KC□M-10-F	3,100	1,550	800	400	13	3.00	20	50	12.8
KC□M-12	3,560	1,780	750	375	15	15.0	30	70	19.0
KC□M-12-F	3,560	1,780	750	375	15	15.0	30	70	19.0
KC□M-16	3,800	1,900	800	400	19	15.0	40	110	34.0
KC□M-16-F	3,800	1,900	800	400	19	15.0	40	110	34.0
KC□M-20	4,550	2,275	400	200	22	20.0	55	200	55.0
KC□M-20-M20	4,550	2,275	400	200	22	20.0	55	200	55.0

Alternative spherical ball materials ▶ Page 841

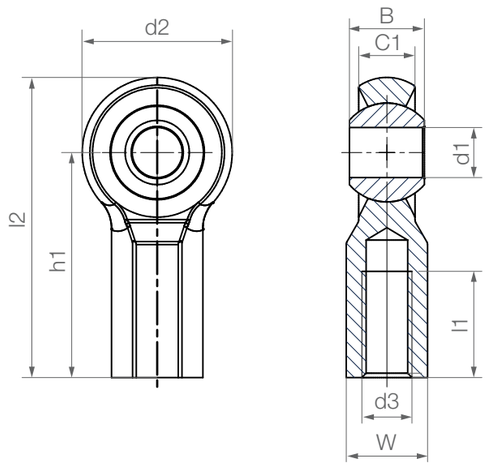
RKM: Low-cost

JKM: Low moisture absorption

WKM-MH: Standard spherical ball with stainless steel sleeve

J4KM: Low-cost and low moisture absorption

Rod ends with female thread: KCRM and KCLM



Order key

Type				Size [mm]	Options
K	C	□	M-	06	MH
K series	Housing (female thread)	Thread	Metric	Inner Ø	

Thread
L = Left-hand thread
R = Right-hand thread

Add-on:
MH = With stainless steel sleeve

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**
Other spherical ball materials upon request
▶ **Page 841**

Dimensions [mm]

Part No.	d1	d2	d3	W	B		C1	h1	l1	l2	Max. pivot angle
	E10				without stainless steel sleeve	with stainless steel sleeve +0.2					
KC□M-05	5	18	M5	SW9	8	8.2	6.0	27	12.0	36	43°
KC□M-06	6	20	M6	SW10	9	9.2	7.0	30	13.5	40	40°
KC□M-08	8	24	M8	SW13	12	12.2	9.0	36	17.0	48	35°
KC□M-10	10	30	M10	SW15	14	14.2	10.5	43	22.0	58	35°
KC□M-10-F	10	30	M10 x 1.25	SW15	14	14.2	10.5	43	22.0	58	35°
KC□M-12	12	34	M12	SW17	16	16.2	12.0	50	25.0	67	35°
KC□M-12-F	12	34	M12 x 1.25	SW17	16	16.2	12.0	50	25.0	67	35°
KC□M-16	16	42	M16	SW20	21	21.2	15.0	64	30.0	85	35°
KC□M-16-F	16	42	M16 x 1.5	SW20	21	21.2	15.0	64	30.0	85	35°
KC□M-20	20	50	M20 x 1.5	SW24	25	25.2	18.0	77	35.0	102	35°
KC□M-20-M20	20	50	M20 x 2.5	SW24	25	25.2	18.0	77	35.0	102	35°

Rod ends can be ordered in metric dimensions **with stainless steel** sleeve with the addition of **MH** after the part numbers listed here. Example: KCRM-10 **MH (Inner Ø: 10mm).**
For another spherical bearing material than iglidur® W300, please add "**J**" to the part number, for example. Example: KCRM-05 **J**.

igubal® rod ends | Product range

Rod ends with male thread: KARM and KALM

Standard design

Stainless steel sleeve version (MH)

- Maintenance-free dry operation
- Robust
- Durable in varying loads
- Compensation of misalignment errors
- Resistant to edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- Vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional K series according to DIN ISO 12240
- Available with stainless steel sleeve for higher tightening torque
- Adapter screw with circlip available

▶ Accessories, **page 861**

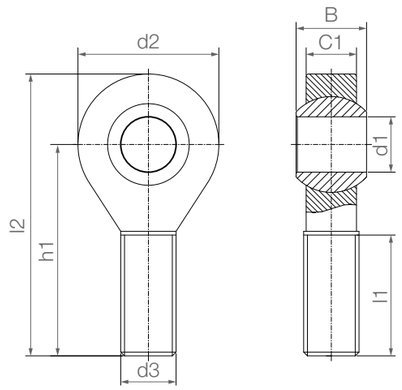
Service life calculation online
▶ www.igus.eu/igubal-expert

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball		Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread	Without stainless steel sleeve	With stainless steel sleeve	
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[Nm]	[g]
KA□M-05	800	400	80	40	13	0.4	5	12	2.7
KA□M-06	1,000	500	100	50	15	0.5	10	15	3.9
KA□M-08	1,700	850	200	100	18	2.0	12	40	7.1
KA□M-10	2,500	1,250	300	150	20	5.0	20	50	12.5
KA□M-10 F	2,500	1,250	300	150	20	3.0	20	50	12.5
KA□M-12	2,700	1,350	400	200	22	6.0	30	70	18.0
KA□M-12 F	2,700	1,350	400	200	22	6.0	30	70	18.0
KA□M-14	3,400	1,700	700	350	25	12.0	35	75	25.0
KA□M-16	3,900	1,950	800	400	26	17.0	40	110	34.0
KA□M-16 F	3,900	1,950	800	400	26	17.0	40	110	34.0
KA□M-18	4,200	2,100	1,000	500	29	20.0	45	150	45.9
KA□M-20	6,000	3,000	1,300	650	32	25.0	55	200	58.0
KA□M-20 M20	6,000	3,000	1,300	650	32	25.0	55	200	58.0
KA□M-22	7,200	3,600	1,500	750	34	25.0	60	–	86.2
KA□M-25	7,500	3,750	1,900	950	39	45.0	65	–	99.1
KA□M-30	8,800	4,400	2,300	1,150	46	85.0	70	–	160.4

igubal® rod ends | Product range

Rod ends with male thread: KARM and KALM



Order key

Type				Size [mm]	Options
K	A	□	M-	05	MH
K series	Housing (male thread)	Thread	Metric	Inner Ø	

Thread
L = Left-hand thread
R = Right-hand thread

Add-on:
MH = With stainless steel sleeve

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**

Imperial dimensions available
▶ Page 1607

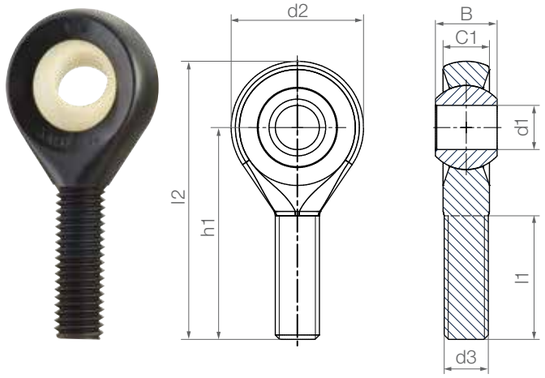
Dimensions [mm]

Part No.	d1	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
	E10				without stainless steel sleeve	with stainless steel sleeve +0.2				
KA□M-05	5	18	M5	6.0	8	8.2	33	19	42	30°
KA□M-06	6	20	M6	7.0	9	9.2	36	21	46	29°
KA□M-08	8	24	M8	9.0	12	12.2	42	25	55	25°
KA□M-10	10	30	M10	10.5	14	14.2	48	28	63	25°
KA□M-10 F	10	30	M10 x 1.25	10.5	14	14.2	48	28	63	25°
KA□M-12	12	34	M12	12.0	16	16.2	54	32	71	25°
KA□M-12 F	12	34	M12 x 1.25	12.0	16	16.2	54	32	71	25°
KA□M-14	14	38	M14	13.5	19	19.2	61	36	79	25°
KA□M-16	16	42	M16	15.0	21	21.2	66	37	88	23°
KA□M-16 F	16	42	M16 x 1.5	15.0	21	21.2	66	37	88	23°
KA□M-18	18	46	M18 x 1.5	16.5	23	23.2	72	41	96	23°
KA□M-20	20	50	M20 x 1.5	18.0	25	25.2	78	45	104	23°
KA□M-20 M20	20	50	M20 x 2.5	18.0	25	25.2	78	45	104	23°
KA□M-22	22	56	M22 x 1.5	20.0	28	–	84	48	112	22°
KA□M-25	25	61	M24 x 2.0	22.0	31	–	95	55	126	22°
KA□M-30	30	71	M30 x 2.0	25.0	37	–	112	66	147	22°

Rod ends can be ordered in metric dimensions **with stainless steel** sleeve with the addition of **MH** after the part numbers listed here. Example: KARM-10 **MH (Inner Ø: 10mm).**

igubal® rod ends | Product range

Rod ends, male thread; 2nd generation: KARM CL



- Smooth design no dirt traps
- Compensation of misalignment errors
- Lightweight
- Absolute corrosion resistance
- Available with stainless steel sleeve for higher tightening torque
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available
  ▶ Accessories, **page 861**

Order key

Type				Size [mm]	Version	
K	A	□	M-	06	CL	MH
K series	Housing (male thread)	Thread	Metric	Inner Ø	2nd generation	

Thread
L =
Left-hand thread
R =
Right-hand thread

Add-on:
MH =
With stainless steel sleeve

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**
Other spherical ball materials upon request
▶ **Page 841**

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball		Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread	without stainless steel sleeve	with stainless steel sleeve	
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[Nm]	[g]
KA□M-06 CL	1,000	500	100	50	15	0.5	10	15	3.5
KA□M-08 CL	1,700	850	200	100	18	2.0	12	40	6.2
KA□M-10 CL	2,500	1,250	300	150	20	5.0	20	50	11.2
KA□M-12 CL	2,700	1,350	400	200	22	6.0	30	70	15.6

Dimensions [mm]

Part No.	d1	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
	E10				without stainless steel sleeve	with stainless steel sleeve +0.2				
KA□M-06 CL	6	20	M6	7.0	9	9.2	36	21	46	40°
KA□M-08 CL	8	24	M8	9.0	12	12.2	42	25	55	35°
KA□M-10 CL	10	30	M10	10.5	14	14.2	48	28	63	35°
KA□M-12 CL	12	34	M12	12.0	16	16.2	54	32	71	35°

Rod ends can be ordered in metric dimensions with stainless steel sleeve with the addition of **MH** after the part numbers listed here. Example: KARM-10 CL **MH (Inner Ø: 10mm).**
For another spherical bearing material than iglidur® W300, please add "**J**" to the part number, for example. Example: KARM-10 CL **J**.

My sketches

igubal® rod ends | Product range

Rod ends with female thread: EBRM and EBLM

- Maintenance-free dry operation
- Robust
- Durable in varying loads
- Compensation of misalignment errors
- Resistant to edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- Vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240
- For temperatures up to +200°C we recommend EBRM-HT and EBLM-HT ▶ **Page 760**
- Detectable version ▶ **Page 867**

Service life calculation online
▶ **www.igus.eu/igubal-expert**

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread		
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
EB□M-04	800	400	100	50	7	0.4	2.0	1.8
EB□M-05	1,300	650	150	75	8	0.5	2.0	3.2
EB□M-06	1,500	750	200	100	8	1.5	2.5	4.0
EB□M-08	2,000	1,000	450	225	11	5.0	7.0	6.9
EB□M-10	2,300	1,150	500	250	13	15.0	14.0	11.2
EB□M-10 F	2,300	1,150	500	250	13	6.0	14.0	11.2
EB□M-12	3,300	1,650	550	275	14	20.0	25.0	17.1
EB□M-12 F	3,300	1,650	550	275	14	15.0	25.0	17.1
EB□M-15	4,800	2,400	800	400	18	25.0	30.0	28.9
EB□M-16	5,000	2,500	850	425	18	20.0	32.0	32.6
EB□M-16 F	5,000	2,500	850	425	18	15.0	32.0	32.6
EB□M-17	5,300	2,650	1,100	550	19	30.0	35.0	42.4
EB□M-17 F	5,300	2,650	1,100	550	19	27.5	35.0	42.4
EB□M-20	7,200	3,600	1,800	900	22	60.0	40.0	65.8
EB□M-20 M20	7,200	3,600	1,800	900	22	60.0	40.0	65.8
EB□M-25	10,000	5,000	2,600	1,300	27	115.0	55.0	125.9
EB□M-30	10,500	5,250	3,000	1,500	33	130.0	70.0	184.1

Alternative spherical ball materials ▶ Page 841

J4VEM: Clearance-free, pre-loaded

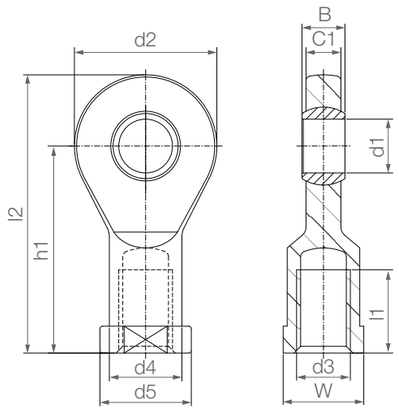
JEM: Low moisture absorption

REM: Low-cost

J4EM: Low-cost and low moisture absorption

igubal® rod ends | Product range

Rod ends with female thread: EBRM and EBLM



Order key

Type				Size [mm]	Options
E	B	□	M-	04	

E series	Housing (female thread)	Thread	Metric	Inner Ø

Thread
L = Left-hand thread
R = Right-hand thread

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**
Other spherical ball materials upon request
▶ **Page 841**

Dimensions [mm]

Part No.	d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
	E10											
EB□M-04[17]	4	15	M4	–	–	3.5	5	22.5	9.5	30.0	SW8	33°
EB□M-05	5	19	M5	9.0	11	4.4	6	30	12.0	39.5	SW9	33°
EB□M-06	6	21	M6	11.0	13	4.4	6	30	12.0	40.5	SW11	27°
EB□M-08	8	24	M8	13.0	16	6.0	8	36	14.0	48.0	SW14	24°
EB□M-10	10	29	M10	15.0	19	7.0	9	43	18.0	57.5	SW17	24°
EB□M-10 F	10	29	M10 x 1.25	15.0	19	7.0	9	43	18.0	57.5	SW17	24°
EB□M-12	12	34	M12	18.0	22	8.0	10	50	20.0	67.0	SW19	21°
EB□M-12 F	12	34	M12 x 1.25	18.0	22	8.0	10	50	20.0	67.0	SW19	21°
EB□M-15	15	40	M14	21.0	26	10.0	12	61	26.0	81.0	SW22	21°
EB□M-16[17]	16	43	M16	–	–	10.5	13	64.5	26.5	86.0	SW22	21°
EB□M-16 F[17]	16	43	M16 x 1.5	–	–	10.5	13	64.5	26.5	86.0	SW22	21°
EB□M-17	17	46	M16	24.0	30	11.0	14	67	27.0	90.0	SW27	18°
EB□M-17 F	17	46	M16 x 1.5	24.0	30	11.0	14	67	27.0	90.0	SW27	18°
EB□M-20	20	53	M20 x 1.5	27.0	34	13.0	16	77	31.0	103.5	SW30	16°
EB□M-20 M20	20	53	M20 x 2.5	27.0	34	13.0	16	77	31.0	103.5	SW30	16°
EB□M-25	25	64	M24 x 2.0	34.0	41	17.0	20	94	38.0	126.5	SW36	16°
EB□M-30	30	73	M30 x 2.0	41.0	48	19.0	22	110	47.0	146.5	SW41	13°

[17] **Special design with hexagonal foot**
For another spherical bearing material than iglidur® W300, please add "**J**" to the part number, for example. Example: EBRM-05 **J**.

Imperial dimensions available
▶ **Page 1606**

igubal® rod ends | Product range

Rod ends with male thread: EARM and EALM

- Maintenance-free dry operation
- Robust
- Durable in varying loads
- Compensation of misalignment errors
- Resistant to edge loads
- Resistant to dirt, dust and lint
- Resistant to corrosion and chemicals
- Vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240
- For temperatures up to +200°C we recommend EARM-HT and EALM-HT ▶ **Page 761**

Service life calculation online
▶ www.igus.eu/igubal-expert

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread		
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
EA□M-05	550	275	50	25	14	0.4	2.0	2.2
EA□M-06	850	425	80	40	14	0.5	2.5	2.7
EA□M-08	1,600	800	160	80	17	2.0	7.0	5.1
EA□M-10	2,600	1,300	250	125	19	5.0	14.0	8.4
EA□M-10 F	2,600	1,300	250	125	19	3.0	14.0	8.4
EA□M-12	3,100	1,550	300	150	20	6.0	25.0	14.3
EA□M-12 F	3,100	1,550	300	150	20	6.0	25.0	14.3
EA□M-15	3,400	1,700	600	300	24	12.5	30.0	21.1
EA□M-17	3,600	1,800	900	450	26	17.5	35.0	30.2
EA□M-17 F	3,600	1,800	900	450	26	21.0	35.0	30.2
EA□M-20	6,800	3,400	1,700	850	30	25.0	40.0	57.3
EA□M-20 M20	6,800	3,400	1,700	850	30	25.0	40.0	57.3
EA□M-25	7,000	3,500	1,000	500	37	45.0	55.0	94.8
EA□M-30	7,000	3,500	2,000	1,000	46	85.0	70.0	156.4

Alternative spherical ball materials ▶ Page 841

J4VEM: Clearance-free, pre-loaded

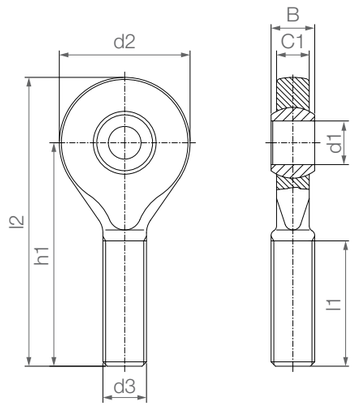
JEM: Low moisture absorption

REM: Low-cost

J4EM: Low-cost and low moisture absorption

igubal® rod ends | Product range

Rod ends with male thread: EARM and EALM



Order key

Type				Size [mm]	Options
E	A	□	M-	05	
E series	Housing (male thread)	Thread	Metric	Inner Ø	

Thread
L = Left-hand thread
R = Right-hand thread

Material:
Housing: **igumid G** ▶ **Page 1654**
Spherical ball: **iglidur® W300** ▶ **Page 171**
Other spherical ball materials upon request
▶ **Page 841**

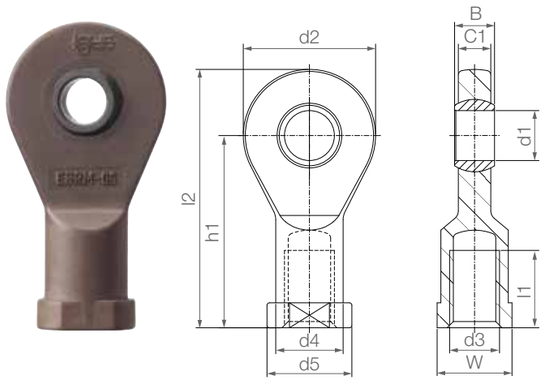
Dimensions [mm]

Part No.	d1	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
	E10								
EA□M-05	5	19	M5	4.4	6	36.0	20	45.5	33°
EA□M-06	6	21	M6	4.4	6	36.0	20	46.5	27°
EA□M-08	8	24	M8	6.0	8	41.0	24	53.0	24°
EA□M-10	10	29	M10	7.0	9	47.5	27	62.0	24°
EA□M-10 F	10	29	M10 x 1.25	7.0	9	47.5	27	62.0	24°
EA□M-12	12	34	M12	8.0	10	54.0	29	71.0	21°
EA□M-12 F	12	34	M12 x 1.25	8.0	10	54.0	29	71.0	21°
EA□M-15	15	40	M14	10.0	12	63.0	34	83.0	21°
EA□M-17	17	46	M16	11.0	14	69.0	37	92.0	18°
EA□M-17 F	17	46	M16 x 1.5	11.0	14	69.0	37	92.0	18°
EA□M-20	20	53	M20 x 1.5	13.0	16	80.0	43	106.5	16°
EA□M-20 M20	20	53	M20 x 2.5	13.0	16	80.0	43	106.5	16°
EA□M-25	25	64	M24 x 2.0	17.0	20	97.0	53	129.0	16°
EA□M-30	30	73	M30 x 2.0	19.0	22	113.0	65	149.5	13°

For another spherical bearing material than iglidur® W300, please add "**J**" to the part number, for example. Example: EARM-05 **J**.

igubal® rod ends | Product range

High temperature rod ends with female thread: EBRM-HT and EBLM-HT



- Applicable up to +200°C
- Robust
- Durable in varying loads
- Compensation of misalignment and edge loads
- Resistant to corrosion and chemicals (chemical table ▶ **Page 1636**)
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240

Order key

Type				Size [mm]	Version
E	B	□	M-	05	HT
E series	Housing (female thread)	Thread	Metric	Inner Ø	High temperature

Options:

Thread

L = Left-hand thread

R = Right-hand thread

Material:

Housing: **iguton G** ▶ **Page 1655**

Spherical ball: **iglidur® X** ▶ **Page 279**

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread		
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
EB□M-05-HT	625	313	140	70	14	0.4	2.0	3.8
EB□M-06-HT	832	416	172	86	14	0.5	2.5	5.0
EB□M-08-HT	1,317	658	175	88	17	2.0	7.0	8.5
EB□M-10-HT	1,470	735	253	126	19	5.0	14.0	13.7
EB□M-12-HT	1,600	800	279	139	20	6.0	25.0	21.4

Dimensions [mm]

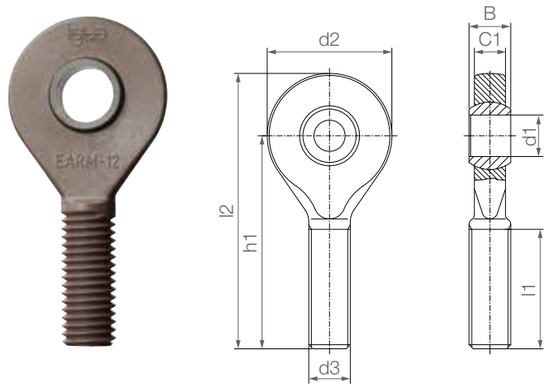
Part No.	d1 E10	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
EB□M-05-HT	5	19	M5	9.0	11	4.4	6	30	12	39.5	SW9	33°
EB□M-06-HT	6	21	M6	11.0	13	4.4	6	30	12	40.5	SW11	27°
EB□M-08-HT	8	24	M8	13.0	16	6.0	8	36	16	48.0	SW14	24°
EB□M-10-HT	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EB□M-12-HT	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°

Other dimensions available upon request

igubal® rod ends

igubal® rod ends | Product range

High temperature rod ends with male thread: EARM-HT and EALM-HT



- Applicable up to +200°C
- Robust
- Durable in varying loads
- Compensation of misalignment and edge loads
- Resistant to corrosion and chemicals (chemical table ▶ **Page 1636**)
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240

Order key

Type				Size [mm]	Version
E	A	□	M-	05	HT
E series	Housing (male thread)	Thread	Metric	Inner Ø	High temperature

Options:

Thread

L = Left-hand thread

R = Right-hand thread

Material:

Housing: **iguton G** ▶ **Page 1655**

Spherical ball: **iglidur® X** ▶ **Page 279**

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread		
	[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
EA□M-05-HT	380	190	20	10	14	0.4	2.0	2.8
EA□M-06-HT	600	300	30	15	14	0.5	2.5	3.4
EA□M-08-HT	931	465	48	24	17	2.0	7.0	6.1
EA□M-10-HT	1,125	563	57	28	19	5.0	14.0	10.2
EA□M-12-HT	1,200	600	65	33	20	6.0	25.0	15.7

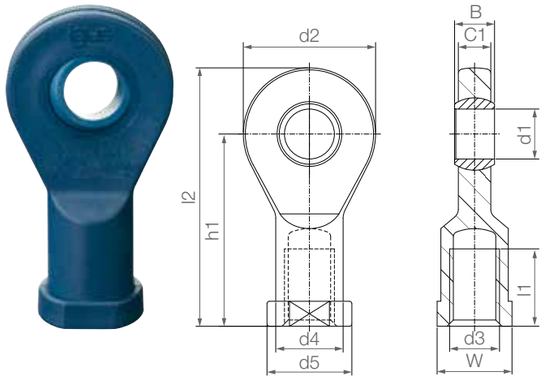
Dimensions [mm]

Part No.	d1 E10	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
EA□M-05-HT	5	19	M5	4.4	6	36.0	20	45.5	33°
EA□M-06-HT	6	21	M6	4.4	6	36.0	20	46.5	27°
EA□M-08-HT	8	24	M8	6.0	8	41.0	24	53.0	24°
EA□M-10-HT	10	29	M10	7.0	9	47.5	27	62.0	24°
EA□M-12-HT	12	34	M12	8.0	10	54.0	29	71.0	21°

Other dimensions available upon request

igubal® rod ends | Product range New

Rod ends with female thread, suitable for food contact: EBRM-FC



- Made from FDA and EU10/2011-compliant materials
- Lubrication and maintenance-free
- Optically and magnetically detectable
- In industry standard blue
- Corrosion and media-resistant
- Vibration-dampening
- Cost-effective

Order key

Type				Size [mm]	Version
E	B	R	M-	06	FC
E series	Housing (female thread)	Thread	Metric	Inner Ø	Suitable for food contact

Material:
Housing: **igumid FC** ▶ **Page1655**
Spherical ball: **iglidur® FC180** ▶ **Page 1652**

Technical data

Part No.		Max. static tensile strain		Max. static axial force		Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
		Short-term	Long-term	Short-term	Long-term	Thread	Female thread		
		[N]	[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
EBRM-06-FC	New	1,300	650	300	150	8.0	1.5	2.0	4.0
EBRM-08-FC	New	1,900	950	500	250	11.0	5.0	4.0	7.0
EBRM-10-FC	New	2,220	1,100	500	250	13.0	10.0	6.0	11.4
EBRM-10-FC-F	New	2,220	1,100	500	250	13.0	10.0	6.0	11.4
EBRM-12-FC	New	3,000	1,500	800	400	14.0	15.0	6.0	17.4

Dimensions [mm]

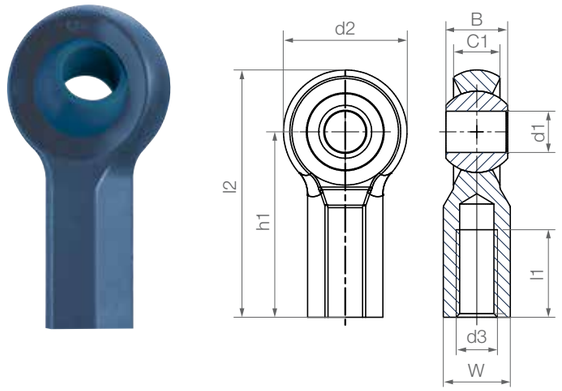
Part No.		d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
		E10											
EBRM-06-FC	New	6	21	M6	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08-FC	New	8	24	M8	13.0	16	6.0	8	36	14	48.0	SW14	24°
EBRM-10-FC	New	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-10-FC-F	New	10	29	M10 x 1.25	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12-FC	New	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°

Left-hand thread and other dimensions available upon request

igubal®
rod ends

igubal® rod ends | Product range New

Rod ends with female thread, suitable for food contact: KCRM-FC



- Made from FDA and EU10/2011-compliant materials
- Lubrication and maintenance-free
- Optically and magnetically detectable
- In industry standard blue
- Corrosion and media-resistant
- Vibration-dampening
- Cost-effective

Order key

Type				Size [mm]	Version
K	C	R	M-	06	FC
K series	Housing (female thread)	Thread	Metric	Inner Ø	Suitable for food contact

Material:
Housing: **igumid FC** ▶ **Page1655**
Spherical ball: **iglidur® FC180** ▶ **Page 1652**

Technical data

Part No.		Max. static tensile strain		Max. static axial force	Min. thread depth	Max. tightening torque	Max. tightening torque through ball	Weight
		Short-term	Long-term	Short-term	Thread	Male thread		
		[N]	[N]	[N]	[mm]	[Nm]	[Nm]	[g]
KCRM-06-FC	New	1,300	650	400	8.0	1.0	2.0	4.3

Dimensions [mm]

Part No.		d1	d2	d3	C1	B	h1	l1	l2	W	Max. pivot angle
		E10				Without stainless steel sleeve					
KCRM-06-FC	New	6	20	M6	7.0	9.0	30	13.5	40.0	SW10	40°

Left-hand thread and other dimensions available upon request