



igubal[®] rod end bearings

Maintenance-free dry operation

Robust

Durable

Compensation of misalignment errors

Resistant to edge loads

Lightweight



igubal® rod ends | Advantages

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 operating temperature is from -40°F to $+392^{\circ}\text{F}$. Rod ends are also resistant to dirt and dust, they are also available as detectable version and food contact materials in certain sizes.



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 $+176^{\circ}\text{F}$
 - ▶ HT version, **Page 870-871**
- When rotation speeds higher than 98 fpm are required
- When really high tensile and axial forces occur
- With a hydraulic cylinder
- When dimensions above 30mm are required



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order value. No minimum order quantity



Max. + 392°F

Min. -40°F

(depending on material: standard from -22°F to $+176^{\circ}\text{F}$; HT from -40°F to $+392^{\circ}\text{F}$)



18 types

Ø 2–30mm



Online product finder

▶ www.igus.com/igubal-finder

igubal® rod ends | Application examples



Typical sectors of industry and application areas

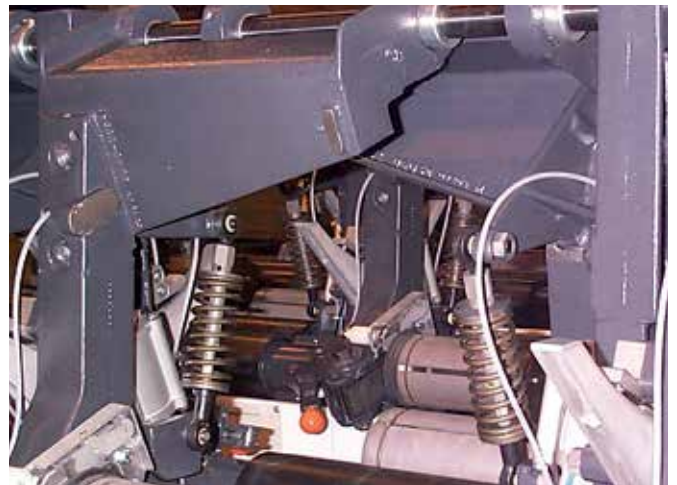
- Bicycle manufacturing
- Plant design
- Packaging
- Offshore
- Agriculture
- Automotive

Improve technology and reduce costs – 110 exciting examples online

► www.igus.com/igubal-applications



► www.igus.com/bicycle



► www.igus.com/textile



► www.igus.com/packaging



► www.igus.com/offshore

Advantages

- Maintenance-free
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation for misalignment
- 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
- Lightweight
- Dimensional K series and E series, dimensions according to standard DIN ISO 12240

Product range

igubal® rod ends are available in the dimensional K series and E series for shaft diameters of 3/16 to 1 inch and 2 to 30 mm.

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

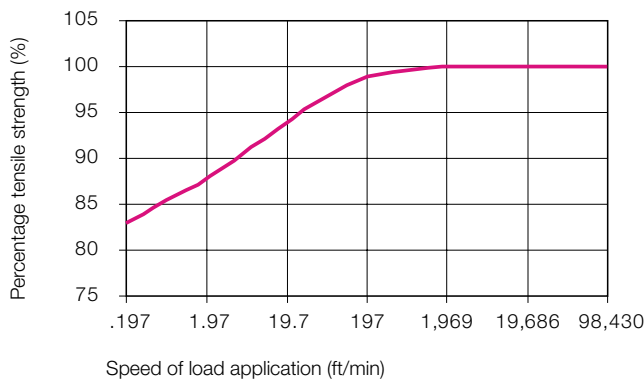
Stainless steel sleeve

The dimensional K series and, to a limited extent, E are available in inch 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 plastic race.

Please ask us about quantities, availability and pricing.

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 loading capacity of igubal® rod end bearings should be tested in an experiment that duplicates the application.

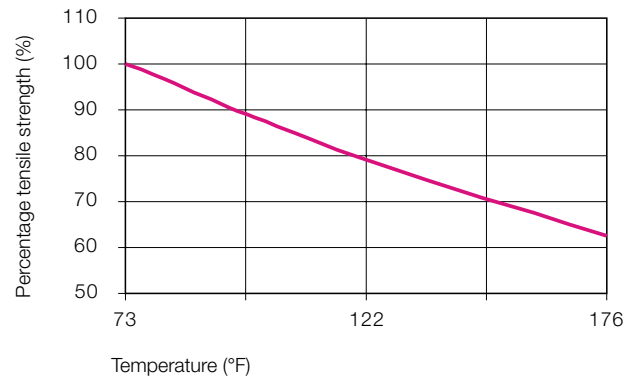


Effect of the speed of load application on the maximum tensile strength of igubal® rod end bearings

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. 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. In contrast, rotations of the shaft are supported directly in the inner diameter of the spherical portion. The advantage, therefore, lies in the plastic vs. steel relationship. Plastic 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.



Effect of the temperature on the maximum tensile strength of igubal® rod end bearings

Temperatures

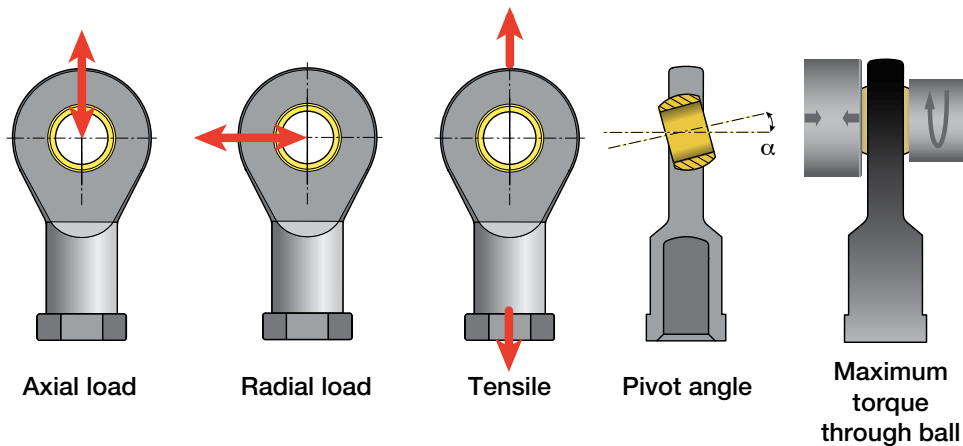
The igubal® rod ends can be used in temperatures from -22 °F up to +176 °F. igubal® rod ends made of HT-Material are suitable for temperatures from -40 °F up to +392 °F (E series, types A and B).

igubal® rod ends | Technical data

Tolerances

igubal® rod end bearings can be used at different tolerances depending on the individual application. As a standard program, they are designed with a large amount of bearing clearance, which permits secure operation even at high rotational speeds. The bore of the inner race is produced within 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 with any questions regarding tolerances.

► Tolerance Table, **Page 58**



Recommended Shaft Tolerances

Inch	Shaft		Metric	Shaft	
	Min.	Max.		Min.	Max.
3/16	0.1888	0.1900	2mm	1.975	2.000
1/4	0.2485	0.2500	3mm	2.975	3.000
5/16	0.3110	0.3125	5mm	4.970	5.000
3/8	0.3735	0.3750	6mm	5.970	6.000
7/16	0.4358	0.4375	8mm	7.964	8.000
1/2	0.4983	0.5000	10mm	9.964	10.000
5/8	0.6235	0.6250	12mm	11.957	12.000
3/4	0.7479	0.7500	16mm	15.957	16.000
1	0.9980	1.0000	20mm	19.948	20.000

Thread pitches of the igubal® rod end bearings

Thread Name	Pitch (mm)
M 2	0.40
M 3	0.50
M 4	0.70
M 5	0.80
M 6	1.00
M 8	1.25
M 10	1.50
M 10 F	1.25
M 12	1.75
M 12 F	1.25
M 14	2.00
M 16	2.00
M 16 F	1.50
M 18	1.50
M 20	2.50
M 20 M 20	1.50
M 22	1.50
M 24	2.00
M 27	2.00
M 30	2.00

igubal® rod ends | Product overview

igubal® rod end bearings with female thread - inch / metric



Classic design
Inch
KBRI / KBLI
▶ Page 850



Classic design
KBRM / KBLM
▶ Page 852



Integrated lock nut for easy assembly
KBRM-CL / KBLM-CL
▶ Page 854



Selectable spherical ball material
KCRM / KCLM
▶ Page 856

igubal® rod end bearings with male thread - inch / metric



Classic design
Inch
KARI / KALI
▶ Page 862



Classic design
KARM / KALM
▶ Page 864



Higher forces
KARM-CL / KALM-CL
▶ Page 866



Space-saving, selectable spherical ball material
EARM / EALM
▶ Page 868

igubal® angled and in-line ball and socket joints



Angled ball and socket joints
WGRM / WGLM
▶ Page 874



Angled ball and socket joints, low-cost
WGRM-LC / WGLM-LC
▶ Page 875



Easy assembly and disassembly:
WGRM-DE / WGLM-DE
▶ Page 876



In-line ball and socket joint
AGRM / AGLM
▶ Page 877



Space-saving, selectable spherical ball material

EBRI / EBLI

► Page 858



Space-saving, selectable spherical ball material

EBRM / EBLM

► Page 860

High temperature rod ends



For temperatures up to +392°F

EBRM-HT / EBLM-HT

► Page 870



For temperatures up to +392°F

EARM-HT / EALM-HT

► Page 871



Suitable for food contact

EBRM-FC

► Page 872



Suitable for food contact

KCRM-FC

► Page 873



In-line ball and socket joints, low-cost

AGRM-LC / AGLM-LC

► Page 878

igubal® rod ends | Product Range

Rod ends with female thread: KBRI and KBLI



- Maintenance free, self-lubricating
 - High strength under impact loads
 - Very high tensile strength for varying loads
 - Compensation of misalignment errors
 - Compensation of edge loads
 - Resistant to dirt, dust and lint
 - Resistant to corrosion and chemicals
 - High vibration-dampening
 - Suitable for rotating, oscillating and linear movements
 - Lightweight
 - Dimensional K series according to standard DIN ISO 12240
 - Available with a metal sleeve for a higher torque
 - Adapter screw with circlip available
- ▶ Accessories, **Page 989**



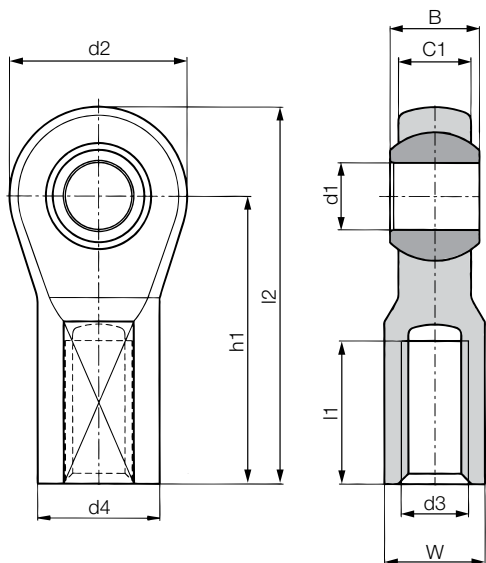
Service life calculation online

▶ www.igus.com/igubal-expert

Dimensions [inch]

Part No.	d1	d2	d3	d4	C1	B	h1	l1	l2	W	Max. pivot angle
	[E10]										
KB□I-03	0.1875	0.625	10-32	0.406	0.246	0.312	1.062	0.500	1.374	0.312	25°
KB□I-04	0.2500	0.750	1/4-28	0.469	0.272	0.365	1.312	0.687	1.687	0.375	25°
KB□I-05	0.3125	0.875	5/16-24	0.500	0.340	0.437	1.375	0.687	1.813	0.437	25°
KB□I-06	0.3750	1.000	3/8-24	0.687	0.394	0.500	1.625	0.812	2.125	0.562	22°
KB□I-07	0.4375	1.125	7/16-20	0.750	0.456	0.562	1.812	0.937	2.374	0.625	22°
KB□I-08	0.5000	1.312	1/2-20	0.875	0.487	0.625	2.125	1.062	2.781	0.750	22°
KB□I-10	0.6250	1.500	5/8-18	1.000	0.545	0.750	2.500	1.375	3.250	0.875	22°
KB□I-12	0.7500	1.750	3/4-16	1.125	0.676	0.875	2.875	1.562	3.750	1.000	22°
KB□I-16	1.0000	2.750	1-12	1.625	1.000	1.375	4.125	2.125	5.500	1.500 ⁽⁸⁾	20°

▶ Tolerance Table, **Page 58**



 Order key

Type	Size	Options
K B <input type="checkbox"/> I - 08		
Dimensional K series		
Housing (female thread)		
Thread		
Inch		
	Inner-Ø [inch] Based on 1/16"	
		Thread L = Left-hand thread R = Right-hand thread



Material:

Housing: igumid G ► Page 1782

Standard spherical ball: iglide® W300 ► Page 211

Technical data

Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Inner thread	Max. torque strength through ball	Weight
	Short term	Long term	Short term	Long term				
	[lbs]	[lbs]	[lbs]	[lbs]				
KB <input type="checkbox"/> I-03	203	102	67	34	0.350	1.48	2.21	3.3
KB <input type="checkbox"/> I-04	248	124	90	45	0.480	3.69	2.95	5.1
KB <input type="checkbox"/> I-05	383	192	112	56	0.480	4.43	7.38	7.1
KB <input type="checkbox"/> I-06	450	225	225	112	0.568	5.16	11.06	12.6
KB <input type="checkbox"/> I-07	518	259	270	135	0.655	13.28	18.44	16.1
KB <input type="checkbox"/> I-08	585	293	337	169	0.743	16.96	25.81	26.5
KB <input type="checkbox"/> I-10	1103	551	382	191	0.962	22.13	36.88	38.7
KB <input type="checkbox"/> I-12	1260	630	517	259	1.093	29.50	51.63	54.4
KB <input type="checkbox"/> I-16	1349	674	584	293	1.488	33.93	62.69	197.5

igubal® rod ends | Product Range

Rod ends with female thread: KBRM and KBLM



Standard design



Stainless steel sleeve
version (MH)

- Maintenance free, self-lubricating
 - High strength under impact loads
 - Very high tensile strength for varying loads
 - Compensation of misalignment errors
 - Compensation of edge loads
 - Resistant to dirt, dust and lint
 - Resistant to corrosion and chemicals
 - High vibration-dampening
 - Suitable for rotating, oscillating and linear movements
 - Lightweight
 - Dimensional K series according to standard DIN ISO 12240
 - Available with a metal sleeve for a higher torque
 - Adapter screw with circlip available
- ▶ Accessories, **Page 989**

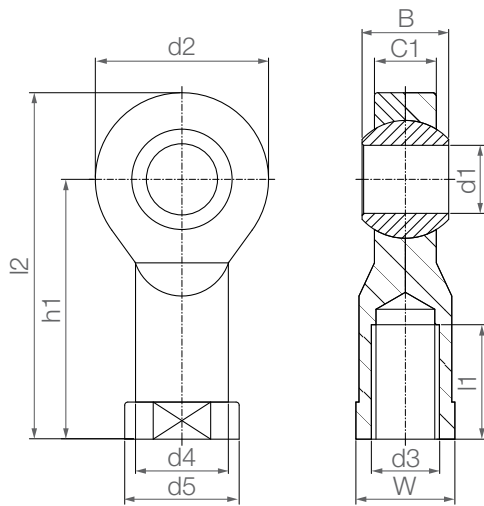


Service life calculation online
▶ www.igus.com/igubal-expert

Dimensions [mm]

Part No.	d1	d2	d3	d4	d5	C1	B		h1	l1	l2	W	Max. pivot angle
							without stainless steel sleeve	with stainless steel sleeve					
	E10												
								+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-12 ¹²⁹⁾	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°

¹²⁹⁾ Integrated lock nut. Drawing as for KCRM, page 857



Order key

Type	Size	Options
K	B	□
M	- 02	- MH
K series	Housing (female thread)	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 1782

Standard spherical ball: **iglide® W300** ▶ Page 211

Technical data

Part No.	Max. static tensile strain		Max. static axial load		Min. thread depth	Max. torque strength	Max. torque strength through ball		Weight
	Short-term	Long-term	Short-term	Long-term			without stainless steel sleeve	with stainless steel sleeve	
	[lbs]	[lbs]	[lbs]	[lbs]	Thread	Female thread	[ft•lbs]	[ft•lbs]	[g]
KB□M-02	44	22	11	6	4	0.22	0.74	–	0.4
KB□M-03	179	89	22	11	5	0.37	1.48	2.95	2.7
KB□M-05-M4	224	112	56	28	7	0.55	3.69	8.85	3.5
KB□M-05	224	112	56	28	7	0.74	3.69	8.85	3.4
KB□M-06	314	157	89	44	8	1.11	7.38	11.06	4.7
KB□M-08	472	236	157	78	11	3.69	8.85	29.50	8.6
KB□M-10	696	348	179	89	13	11.06	14.75	36.88	14.6
KB□M-10-F	696	348	179	89	13	4.43	14.75	36.88	14.6
KB□M-12 ⁽²⁹⁾	809	404	202	101	15	14.75	22.13	51.63	22.0
KB□M-12-F	809	404	202	101	15	11.06	22.13	51.63	22.0
KB□M-14	899	449	224	112	17	18.44	25.81	55.32	30.9
KB□M-16	944	472	292	146	19	22.13	29.50	81.13	39.6
KB□M-16-F	944	472	292	146	19	20.28	29.50	81.13	39.6
KB□M-18	1034	517	359	179	21	33.19	33.19	110.63	55.0
KB□M-20	1213	606	472	236	22	44.25	40.57	147.51	73.5
KB□M-20-M20	1213	606	472	236	22	44.25	40.57	147.51	73.5
KB□M-22	1573	786	494	247	25	55.32	44.25	–	94.8
KB□M-25	1910	955	517	258	28	88.51	44.25	–	119.8
KB□M-30	2360	1180	562	281	34	99.57	44.25	–	177.0
KB□M-30-M27x2	2360	1180	562	281	34	99.57	44.25	–	189.6

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 torque strength
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available
 - ▶ Accessories, **Page 989**



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



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

Dimensions [mm]

Part No.	d1	d2	d3	W	B		C1	h3	h1	h2	l1	l2	m	Max. pivot angle
					without stainless steel sleeve	with stainless steel sleeve								
	E10					+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 iglide® W300, please add "**J**" to the part number, for example. Example: KBRM-10 CL **J**.

Alternative spherical ball materials ▶ Page 965



RKM:
Low-cost



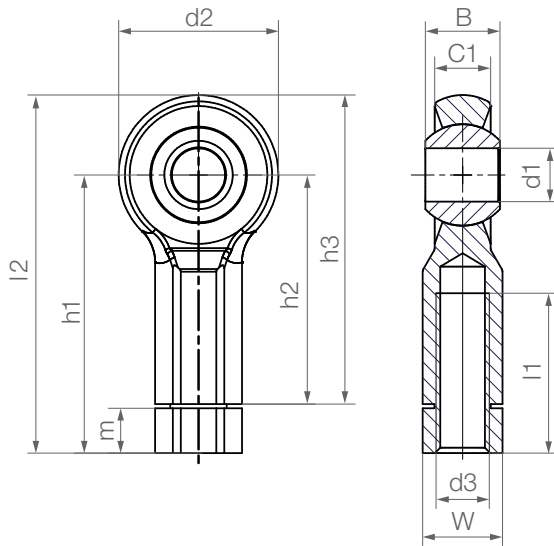
JKM: Low moisture absorption



WKM-MH:
Standard spherical ball with stainless steel sleeve



J4KM:
Low-cost and low moisture absorption



Order key

Type	Size	Version	Option
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 1782

Standard spherical ball: iglide® W300 ► Page 211

Other spherical ball materials upon request ► Page 965

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread	Max. torque strength	Max. torque strength through ball		Weight [g]
	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]	depth Thread [mm]	Female thread [ft•lbs]	without stainless steel sleeve [ft•lbs]	with stainless steel sleeve [ft•lbs]	
KB□M-06-CL	315	158	90	45	8	1.106	7.38	11.06	4.5
KB□M-08-CL	473	236	158	79	11	7.376	8.85	29.50	8.6
KB□M-10-CL	698	349	180	90	13	11.060	14.75	36.88	14.1

igubal® rod ends | Product Range

Rod ends with female thread: KCRM and KCLM



- Smooth design no dirt traps
- Spherical ball is clipped in
- Choice of iglide® spherical ball materials
- Compensation of misalignment errors
- Lightweight
- Absolute corrosion resistance
- Available with stainless steel sleeve for higher torque strength
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available
 - ▶ Accessories, **Page 989**



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

Dimensions [mm]

Part No.	d1 E10	d2	d3	W	B		C1	h1	l1	l2	Max. pivot angle
					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 iglide® W300, please add **"J"** to the part number, for example. Example: KCRM-05 **J**.

Alternative spherical ball materials ▶ Page 965



RKM:
Low-cost



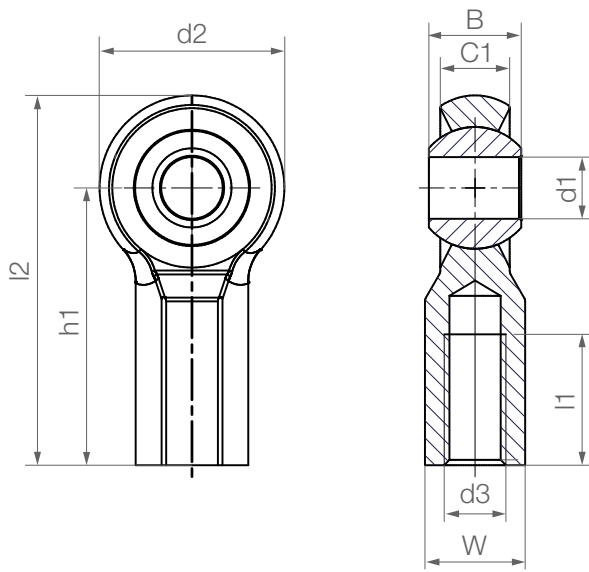
JKM: Low
moisture
absorption



WKM-MH:
Standard spherical ball
with stainless steel sleeve



J4KM:
Low-cost and low
moisture absorption



Order key

Type	Size	Options
K	C	□
M	-06	-MH
K series	Housing (female thread)	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 1782

Standard spherical ball: iglide® W300 ► Page 211

Other spherical ball materials upon request ► Page 965

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball		Weight
	Short-term	Long-term	Short-term	Long-term			without stainless steel sleeve	with stainless steel sleeve	
KC□M-05	270	135	40	20	5.16	0.74	3.69	8.85	4.0
KC□M-06	315	156	67	34	5.90	0.55	7.38	11.06	4.2
KC□M-08	472	236	112	56	8.11	1.48	8.85	29.50	7.6
KC□M-10	697	337	180	90	9.59	2.21	14.75	36.88	12.8
KC□M-10-F	697	76	40	20	9.59	2.21	14.75	36.88	12.8
KC□M-12	800	400	169	84	11.06	11.06	22.13	51.63	19.0
KC□M-12-F	800	400	169	84	11.06	11.06	22.13	51.63	19.0
KC□M-16	854	427	180	90	14.01	11.06	29.50	81.13	34.0
KC□M-16-F	854	427	180	90	14.01	11.06	29.50	81.13	34.0
KC□M-20	1,023	511	90	45	16.23	14.75	40.57	147.51	55.0
KC□M-20-M20	1,023	511	90	45	16.23	14.75	40.57	147.51	55.0

igubal® rod ends | Product Range

Rod ends with female thread: EBRI and EBLI



- 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



Service life calculation online

► www.igus.com/igubal-expert

Dimensions [mm]

Part No.	d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
	E10							E10				
EB□I-03	0.1900	0.748	10-32	0.3543	0.4331	0.1732	0.1900	1.1811	0.4724	1.5551	0.35	30°
EB□I-04	0.2500	0.827	1/4-28	0.4331	0.5118	0.1732	0.2500	1.1811	0.4724	1.5945	0.43	25°
EB□I-05	0.3125	0.945	5/16-24	0.5118	0.6299	0.2362	0.3125	1.4173	0.6299	1.8898	0.55	22°
EB□I-06	0.3750	1.142	3/8-24	0.5906	0.7480	0.2756	0.3750	1.6929	0.7087	2.2638	0.67	22°
EB□I-07	0.4375	1.339	7/16-20	0.7087	0.8661	0.3150	0.4063	1.9685	0.7874	2.6378	0.75	18°
EB□I-08	0.5000	1.339	1/2-20	0.7087	0.8661	0.3150	0.4063	1.9685	0.7874	2.6378	0.75	18°
EB□I-10 ¹⁷⁾	0.6250	1.693	5/8-18	-	-	0.4134	0.5000	2.5394	1.0433	3.3858	0.87	16°
EB□I-12	0.7500	2.087	3/4-16	1.0630	1.3386	0.5118	0.6250	3.0315	1.2205	4.0748	1.18	14°

¹⁷⁾ EBRI-10/EBLI-10 special form with hexagonal foot

Alternative spherical ball materials ► Page 965



RKM:
Low-cost



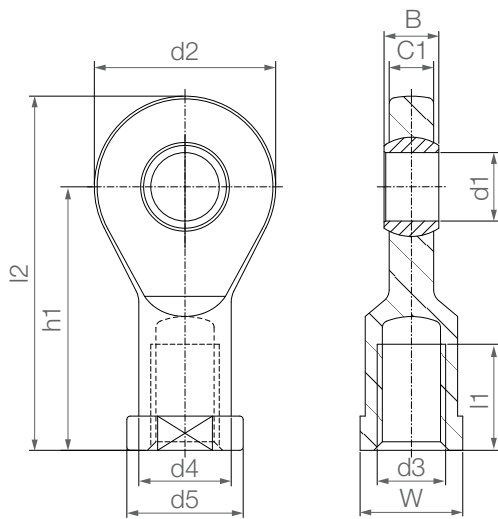
JKM: Low
moisture
absorption



WKM-MH:
Standard spherical ball
with stainless steel sleeve



J4KM:
Low-cost and low
moisture absorption



Order key

Type	Size	Options
E B □ I - 08		
Dimensional E series		
Housing (female thread)		
Thread		
Inch		
		Inner-Ø [inch] Based on 1/16"
		Thread L = Left-hand thread R = Right-hand thread



Material:

Housing - igumid G ► Page 1782

Spherical ball - iglide® W300 ► Page 211

Technical data

Part No.	Max. static tensile strain		Max. axial force		Min. thread depth Thread [inch]	Max. torque strength Female thread [ft•lbs]	Max. tightening torque through ball [ft•lbs]	Weight [g]
	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]				
EB □ I-03	292	146	34	17	0.315	1.48	1.48	3.1
EB □ I-04	337	168	45	22	0.315	3.69	1.84	3.8
EB □ I-05	449	224	101	51	0.433	4.43	5.16	6.9
EB □ I-06	517	258	112	56	0.512	5.16	10.33	11.5
EB □ I-07	741	370	124	62	0.551	13.28	18.44	17.6
EB □ I-08	741	370	124	62	0.551	16.96	18.44	18.1
EB □ I-10	1124	539	191	96	0.709	22.13	23.60	31.9
EB □ I-12	1618	809	405	202	0.866	29.50	29.50	61.5

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 +392°F we recommend **EBRM-HT** and **EBLM-HT** ► Page 870
- Detectable version ► Page 995



Service life calculation online
► www.igus.com/igubal-expert

Dimensions [mm]

Part No.	d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
EB <input type="checkbox"/> M-04 ¹⁷⁾	4	15	M4	–	–	3.5	5	22.5	9.5	30.0	SW8	33°
EB <input type="checkbox"/> M-05	5	19	M5	9.0	11	4.4	6	30	12.0	39.5	SW9	33°
EB <input type="checkbox"/> M-06	6	21	M6	11.0	13	4.4	6	30	12.0	40.5	SW11	27°
EB <input type="checkbox"/> M-08	8	24	M8	13.0	16	6.0	8	36	14.0	48.0	SW14	24°
EB <input type="checkbox"/> M-10	10	29	M10	15.0	19	7.0	9	43	18.0	57.5	SW17	24°
EB <input type="checkbox"/> M-10-F	10	29	M10 x 1.25	15.0	19	7.0	9	43	18.0	57.5	SW17	24°
EB <input type="checkbox"/> M-12	12	34	M12	18.0	22	8.0	10	50	20.0	67.0	SW19	21°
EB <input type="checkbox"/> M-12-F	12	34	M12 x 1.25	18.0	22	8.0	10	50	20.0	67.0	SW19	21°
EB <input type="checkbox"/> M-15	15	40	M14	21.0	26	10.0	12	61	26.0	81.0	SW22	21°
EB <input type="checkbox"/> M-16 ¹⁷⁾	16	43	M16	–	–	10.5	13	64.5	26.5	86.0	SW22	21°
EB <input type="checkbox"/> M-16-F ¹⁷⁾	16	43	M16 x 1.5	–	–	10.5	13	64.5	26.5	86.0	SW22	21°
EB <input type="checkbox"/> M-17	17	46	M16	24.0	30	11.0	14	67	27.0	90.0	SW27	18°
EB <input type="checkbox"/> M-17-F	17	46	M16 x 1.5	24.0	30	11.0	14	67	27.0	90.0	SW27	18°
EB <input type="checkbox"/> M-20	20	53	M20 x 1.5	27.0	34	13.0	16	77	31.0	103.5	SW30	16°
EB <input type="checkbox"/> M-20-M20	20	53	M20 x 2.5	27.0	34	13.0	16	77	31.0	103.5	SW30	16°
EB <input type="checkbox"/> M-25	25	64	M24 x 2.0	34.0	41	17.0	20	94	38.0	126.5	SW36	16°
EB <input type="checkbox"/> 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 iglide® W300, please add "J" to the part number, for example. Example: EBRM-05 J.

Alternative spherical ball materials ► Page 965



J4VEM:
Clearance-free,
preloaded



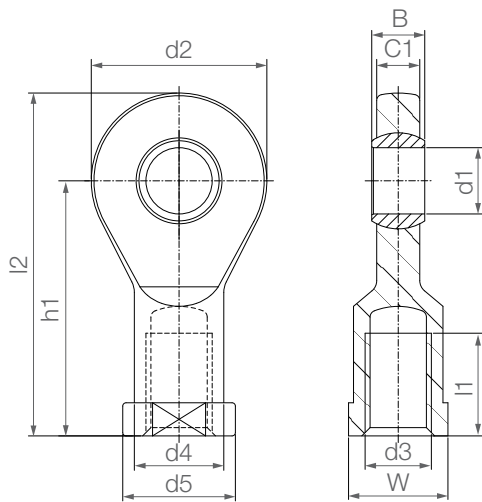
JEM: Low
moisture
absorption



REM:
Low-cost



J4EM:
Low-cost and low
moisture absorption



Order key

Type	Size	Options
E	B	M - 04
E series	Housing (female thread)	Thread
	Thread	Metric
	Inner Ø	
		Thread L = Left-hand thread R = Right-hand thread



Material:

Housing: igumid G ► Page 1782

Standard spherical ball: iglide® W300 ► Page 211

Other spherical ball materials upon request ► Page 965

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread		
	[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft•lbs]	[ft•lbs]	
EB □ M-04	180	90	22	11	7	0.30	1.48	1.8
EB □ M-05	292	146	34	17	8	0.37	1.48	3.2
EB □ M-06	337	168	45	22	8	1.11	1.84	4.0
EB □ M-08	449	224	101	51	11	3.69	5.16	6.9
EB □ M-10	517	258	112	56	13	11.06	10.33	11.2
EB □ M-10-F	517	258	112	56	13	4.43	10.33	11.2
EB □ M-12	741	370	124	62	14	14.75	18.44	17.1
EB □ M-12-F	741	370	124	62	14	11.06	18.44	17.1
EB □ M-15	1079	539	180	90	18	18.44	22.13	28.9
EB □ M-16	1124	562	191	95	18	14.75	23.60	32.6
EB □ M-16-F	1124	562	191	95	18	11.06	23.60	32.6
EB □ M-17	1191	595	247	124	19	22.13	25.81	42.4
EB □ M-17-F	1191	595	247	124	19	20.28	25.81	42.4
EB □ M-20	1618	809	405	202	22	44.25	29.50	65.8
EB □ M-20-M20	1618	809	405	202	22	44.25	29.50	65.8
EB □ M-25	2248	1124	584	292	27	84.82	40.57	125.9
EB □ M-30	2360	1180	674	337	33	95.88	51.63	184.1

igubal® rod ends | Product Range

Rod ends with male thread: KARI and KALI



- 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 torque strength
- Adapter screw with circlip available
 - ▶ Accessories, **Page 989**

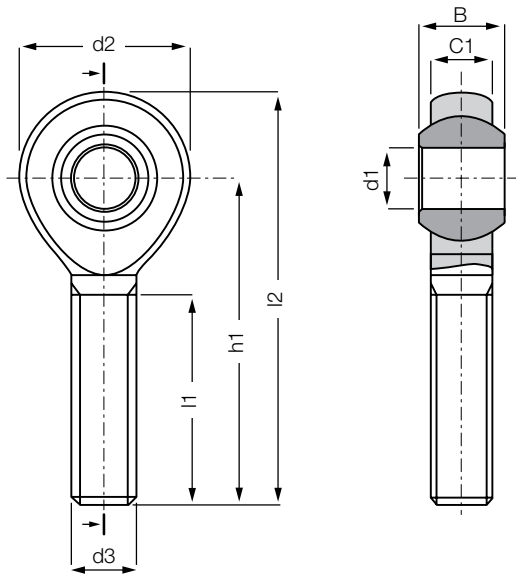


Service life calculation online

▶ www.igus.com/igubal-expert

Dimensions [inch]

Part No.	d1 [E10]	d2	d3	C1	B	h	L1	L2	Max. pivot angle
KA□I-03	0.1875	0.625	10-32	0.234	0.312	1.250	0.750	1.563	25°
KA□I-04	0.2500	0.750	1/4-28	0.250	0.365	1.562	1.000	1.937	25°
KA□I-05	0.3125	0.875	5/16-24	0.312	0.437	1.875	1.250	2.313	25°
KA□I-06	0.3750	1.000	3/8-24	0.359	0.500	1.938	1.250	2.438	22°
KA□I-07	0.4375	1.125	7/16-20	0.406	0.562	2.125	1.375	2.688	22°
KA□I-08	0.5000	1.312	1/2-20	0.453	0.625	2.428	1.500	3.094	22°
KA□I-10	0.6250	1.500	5/8-18	0.484	0.750	2.625	1.625	3.375	22°
KA□I-12	0.7500	1.750	3/4-16	0.593	0.875	2.875	1.750	3.750	22°
KA□I-16	1.0000	2.750	1-16	1.000	1.375	4.125	2.350	5.500	20°



Order key

Type Size Options

K A □ **I - 08**

Dimensional K series

Housing (male thread)

Thread

Inch

Inner-Ø [inch]
Based on 1/16"

Thread

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



Material:

Housing: igumid G ► Page 1782

Standard spherical ball: iglide® W300 ► Page 211

Technical data

Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength Outer thread	Max. Torque Strength through ball	Weight
	Short term	Long term	Short term	Long term				
	[lbs]	[lbs]	[lbs]	[lbs]	(inch)	[ft•lbs]	[ft•lbs]	[g]
KA□I-03	87.67	44.96	15.74	7.87	0.525	0.37	2.21	2.1
KA□I-04	202.32	101.16	22.48	11.24	0.700	0.74	2.95	3.5
KA□I-05	247.28	123.64	33.72	16.86	0.875	1.48	7.38	6.0
KA□I-06	337.20	168.60	78.68	39.34	0.875	2.21	11.06	8.8
KA□I-07	449.60	224.80	89.92	44.96	0.962	4.43	18.44	12.4
KA□I-08	562.00	281.00	101.16	50.58	1.050	6.64	25.81	18.5
KA□I-10	786.80	393.40	134.88	67.44	1.137	8.85	36.88	27.6
KA□I-12	876.72	438.36	224.80	112.40	1.226	18.44	51.63	42.8
KA□I-16	989.12	494.56	292.24	146.12	1.488	33.19	62.69	143.3

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 torque strength
- Adapter screw with circlip available
 - ▶ Accessories, **Page 989**

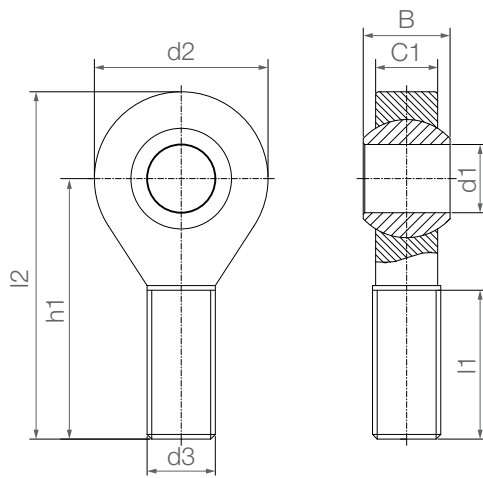


Service life calculation online
▶ www.igus.com/igubal-expert

Dimensions [mm]

Part No.	d1	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
					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).



Order key

Type	Size [mm]	Options
K A □ M -	05	-MH
K series	Housing (male thread)	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 1782

Standard spherical ball: iglide® W300 ► Page 211

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball		Weight
	Short-term	Long-term	Short-term	Long-term			Without stainless steel sleeve	With stainless steel sleeve	
	[lbs]	[lbs]	[lbs]	[lbs]	Thread	Male thread	[ft•lbs]	[ft•lbs]	[g]
KA □ M-05	180	90	18	9	13	0.30	3.69	8.85	2.7
KA □ M-06	225	112	22	11	15	0.37	7.38	11.06	3.9
KA □ M-08	382	191	45	22	18	1.48	8.85	29.50	7.1
KA □ M-10	562	281	67	33	20	3.69	14.75	36.88	12.5
KA □ M-10-F	562	281	67	33	20	2.21	14.75	36.88	12.5
KA □ M-12	607	303	89	45	22	4.43	22.13	51.63	18.0
KA □ M-12-F	607	303	89	45	22	4.43	22.13	51.63	18.0
KA □ M-14	764	382	157	78	25	8.85	25.81	55.32	25.0
KA □ M-16	876	438	179	89	26	12.54	29.50	81.13	34.0
KA □ M-16-F	876	438	179	89	26	12.54	29.50	81.13	34.0
KA □ M-18	944	472	224	112	29	14.75	33.19	110.63	45.9
KA □ M-20	1348	674	292	146	32	18.44	40.57	147.51	58.0
KA □ M-20-M20	1348	674	292	146	32	18.44	40.57	147.51	58.0
KA □ M-22	1618	809	337	168	34	18.44	44.25	–	86.2
KA □ M-25	1686	843	427	213	39	33.19	47.94	–	99.1
KA □ M-30	1978	989	517	258	46	62.69	51.63	–	160.4

igubal® rod ends | Product Range

Rod ends with male thread: KARM-CL and KALM-CL



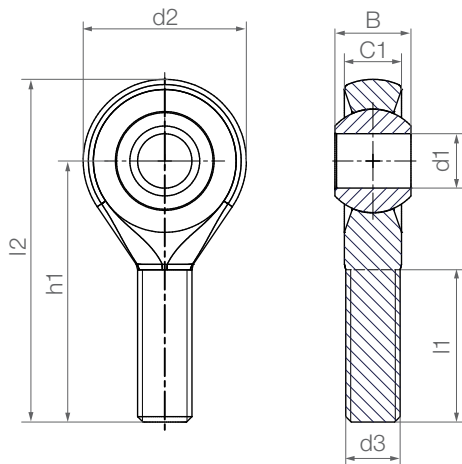
- Smooth design no dirt traps
- Compensation of misalignment errors
- Lightweight
- Absolute corrosion resistance
- Available with stainless steel sleeve for higher torque strength
- Dimensional K series according to DIN ISO 12240
- Adapter screw with circlip available
 - ▶ Accessories, **Page 989**

Dimensions [mm]

Part No.	d1 E10	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
					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 iglide® W300, please add "J" to the part number, for example. Example: KARM-10 CL **J**.



Order key

Type	Size	Version
K	A	M - 06 - CL - MH
K series	Housing (male thread)	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 1782

Standard spherical ball: **iglide® W300** ▶ Page 211

Other spherical ball materials upon request ▶ Page 965

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball		Weight		
	Short-term	Long-term	Short-term	Long-term			Thread	Male thread		without stainless steel sleeve	with stainless steel sleeve
										[ft•lbs]	[ft•lbs]
KA□M-06-CL	225	113	22	11	15	.37	7.37	11.06	3.5		
KA□M-08-CL	382	191	45	22	18	1.48	8.85	29.50	6.2		
KA□M-10-CL	562	281	68	34	20	3.69	14.75	36.88	11.2		
KA□M-12-CL	607	304	90	45	22	4.43	22.13	51.63	15.6		

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 +392°F we recommend **EARM-HT** and **EALM-HT** ► Page 871



Service life calculation online
► www.igus.com/igubal-expert

Dimensions [mm]

Part No.	d1 E10	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
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 iglide® W300, please add "J" to the part number, for example. Example: EARM-05 J.

Alternative spherical ball materials ► Page 965



J4VEM:
Clearance-free,
preloaded



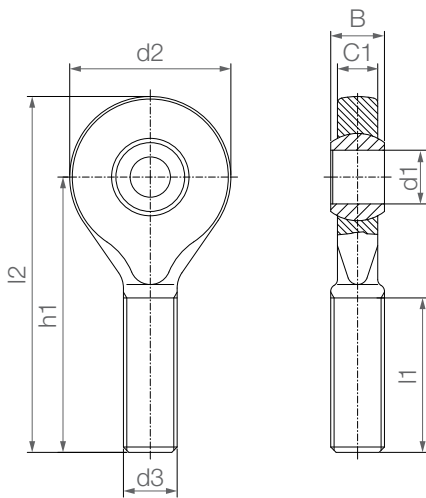
JEM: Low
moisture
absorption



REM:
Low-cost



J4EM:
Low-cost and low
moisture absorption



Order key

Type	Size	Options
E	A	<input type="checkbox"/>
M - 05		
E series	Housing (male thread)	Thread
	Thread	Metric
	Inner Ø	
		Thread L = Left-hand thread R = Right-hand thread



Material:

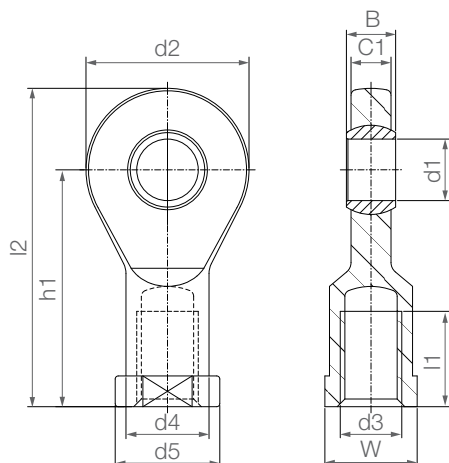
Housing: igumid G ► Page 1782

Standard spherical ball: iglide® W300 ► Page 211

Other spherical ball materials upon request ► Page 965

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball	Weight [g]
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread		
	[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft•lbs]	[ft•lbs]	
EA <input type="checkbox"/> M-05	123	61	11	5	14	0.30	1.48	2.2
EA <input type="checkbox"/> M-06	191	95	18	9	14	0.37	1.84	2.7
EA <input type="checkbox"/> M-08	359	179	33	16	17	1.48	5.16	5.1
EA <input type="checkbox"/> M-10	584	292	56	28	19	3.69	10.33	8.4
EA <input type="checkbox"/> M-10-F	584	292	56	28	19	2.21	10.33	8.4
EA <input type="checkbox"/> M-12	674	337	67	33	20	4.43	18.44	14.3
EA <input type="checkbox"/> M-12-F	674	337	67	33	20	4.43	18.44	14.3
EA <input type="checkbox"/> M-15	1011	505	89	45	24	9.22	22.13	21.1
EA <input type="checkbox"/> M-17	1124	562	112	56	26	12.91	25.81	30.2
EA <input type="checkbox"/> M-17-F	1124	562	112	56	26	15.49	25.81	30.2
EA <input type="checkbox"/> M-20	1461	730	134	67	30	18.44	29.50	57.3
EA <input type="checkbox"/> M-20-M20	1461	730	134	67	30	18.44	29.50	57.3
EA <input type="checkbox"/> M-25	1910	955	179	89	37	33.19	40.57	94.8
EA <input type="checkbox"/> M-30	2248	1124	224	112	46	62.69	51.63	156.4



Order key

Type	Size	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

- Applicable up to +392°F
- Robust
- Durable in varying loads
- Compensation of misalignment and edge loads
- Resistant to corrosion and chemicals
(chemical table ► **Page 1762**)
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240



Material:

Housing: iguton G ► **Page 1782**

Standard spherical ball: iglide® X ► **Page 339**

Dimensions [mm]

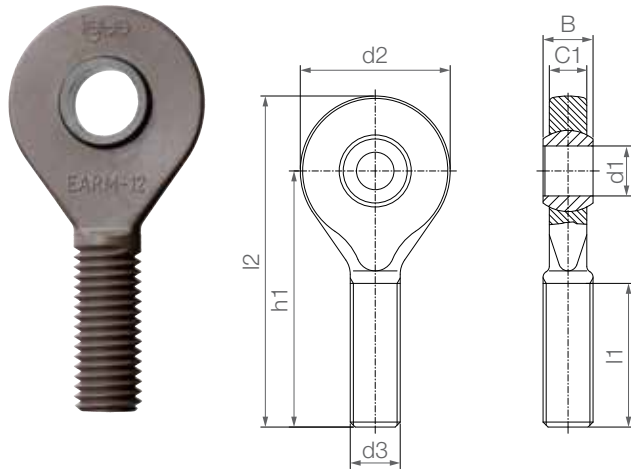
Part No.	d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
	E10											
EB □ M-05-HT	5	19	M5	9.0	11	4.4	6	30	12	39.5	SW9	33°
EB □ M-06-HT	6	21	M6	11.0	13	4.4	6	30	12	40.5	SW11	27°
EB □ M-08-HT	8	24	M8	13.0	16	6.0	8	36	16	48.0	SW14	24°
EB □ M-10-HT	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EB □ M-12-HT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

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth Thread	Max. torque strength Female thread	Max. torque strength through ball	Weight
	Short-term	Long-term	Short-term	Long-term				
	[lbs]	[lbs]	[lbs]	[lbs]				
EB □ M-05-HT	140	70	31	15	14	0.30	1.48	3.8
EB □ M-06-HT	187	93	38	19	14	0.37	1.84	5.0
EB □ M-08-HT	296	147	39	20	17	1.48	5.16	8.5
EB □ M-10-HT	330	165	56	28	19	3.69	10.33	13.7
EB □ M-12-HT	359	179	62	31	20	4.43	18.44	21.4

Other dimensions available upon request

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



- Applicable up to +392°F
- Robust
- Durable in varying loads
- Compensation of misalignment and edge loads
- Resistant to corrosion and chemicals
(chemical table ► [Page 1762](#))
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to DIN ISO 12240



Order key

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

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



Material:

Housing: [iguton G ► Page 1782](#)

Standard spherical ball: [iglide® X ► Page 339](#)

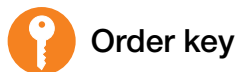
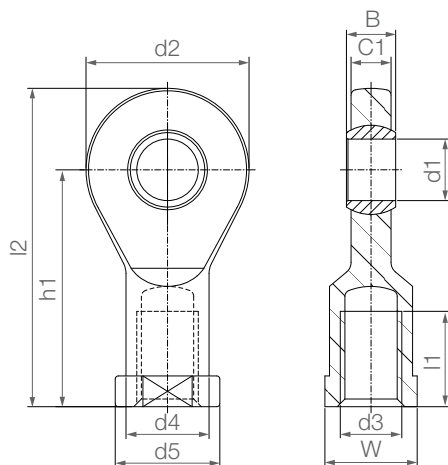
Dimensions [mm]

Part No.	d1	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
	E10								
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°

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball	Weight
	Short-term	Long-term	Short-term	Long-term	Thread	Male thread		
						[lbs]	[lbs]	
	[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft•lbs]	[ft•lbs]	[g]
EA□M-05-HT	85	42	4.4	2.2	14	0.30	1.48	2.8
EA□M-06-HT	134	67	6.7	3.3	14	0.37	1.84	3.4
EA□M-08-HT	209	104	10.7	5.3	17	1.48	5.16	6.1
EA□M-10-HT	252	126	12.8	6.2	19	3.69	10.33	10.2
EA□M-12-HT	269	134	14.6	7.4	20	4.43	18.44	15.7

Other dimensions available upon request



Order key

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

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



Material:

Housing: igumid FC ▶ Page 1783

Standard spherical ball: iglide® FC180 ▶ Page 1780

Dimensions [mm]

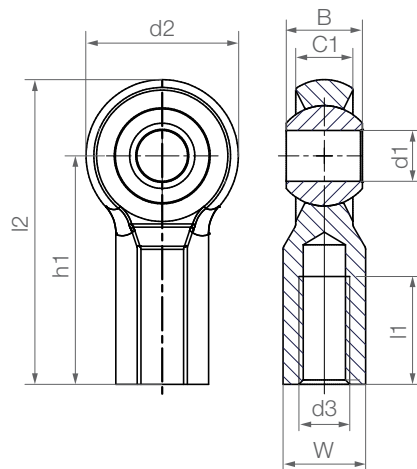
Part No.	d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Max. pivot angle
	E10											
EBRM-06-FC	6	21	M6	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08-FC	8	24	M8	13.0	16	6.0	8	36	14	48.0	SW14	24°
EBRM-10-FC	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-10-FC-F	10	29	M10 x 1.25	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12-FC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

Technical data

Part No.	Max. static tensile strain		Max. static axial force		Min. thread depth	Max. torque strength	Max. torque strength through ball	Weight [g]
	Short-term	Long-term	Short-term	Long-term	Thread	Female thread		
	[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft•lbs]	[ft•lbs]	
EBRM-06-FC	292	146	67	33	8.0	1.11	1.48	4.0
EBRM-08-FC	427	213	112	56	11.0	3.69	2.95	7.0
EBRM-10-FC	499	247	112	56	13.0	7.38	4.43	11.4
EBRM-10-FC-F	499	247	112	56	13.0	7.38	4.43	11.4
EBRM-12-FC	674	337	179	89	14.0	11.06	4.43	17.4

igubal® rod ends | Product Range

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



Order key

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

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



Material:
Housing: igumid FC ► Page 1783
Standard spherical ball: iglide® FC180 ► Page 1780

Dimensions [mm]

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

Technical data

Part No.	Max. static tensile strain		Max. static axial force	Min. thread depth	Max. torque strength	Max. torque strength through ball	Weight [g]
	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Thread [mm]	Male thread [ft•lbs]	[ft•lbs]	
KCRM-06-FC	292	146	89	8.0	0.74	1.48	4.3

Left-hand thread and other dimensions available upon request

igubal® angled ball and socket joints | Product Range

Angled ball and socket joints: WGRM and WGLM



- Connection for rotating and pivoting movements
 - Lightweight
 - Easy and quick assembly
 - Vibration-dampening
 - Resistance to dust and dirt
 - Ball studs made of plastic, galvanized steel and stainless steel¹⁹⁾
- Accessories, **Page 985**



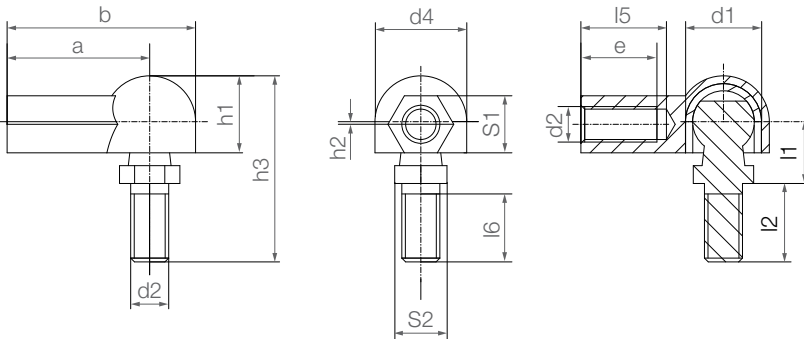
Service life calculation online
► www.igus.com/igubal-expert



Order key

Type	Size	Options
WG □ M -	05	- MS
Angled ball and socket joint	Thread (housing)	Metric
	Thread size M...	

Options:
Thread (housing)
 L = Left-hand thread
 R = Right-hand thread
Ball stud¹⁹⁾
 Blank = Made of plastic
 MS = Made of galvanized steel
 ES = Made of stainless steel²⁸⁾



Material:
Housing: igumid G ► **Page 1782**
Spherical cap: iglide® W300 ► **Page 211**

Dimensions [mm]

Part No.	d1 ±0.1	d2	d4 ±0.5	l1 ±0.2	l2 ±0.3	l5	l6 Min.	h1 ±0.4	h2 ±0.5	h3 ±0.5	a ±0.3	b ±0.5	e ±1.0	S1	S2	Max. pivot angle
WG □ M-05	8	M5	12.8	9	10.2	14	8.2	10.8	0.65	25.6	22	28.4	11	SW8	SW7	25°
WG □ M-06	10	M6	14.8	11	12.5	16	10.5	12.3	0.70	30.9	25	32.4	13	SW9	SW8	25°
WG □ M-08	13	M8	19.3	13	16.5	18	13.5	16.2	1.15	38.8	30	39.7	16	SW12	SW11	25°
WG □ M-10	16	M10	24.0	16	20.0	20	16.0	20.0	1.15	47.0	35	47.0	18	SW14	SW13	25°

Technical data

Part No.	Max. static tensile force		Max. static compressive strength		Max. axial tensile force		Max. axial tensile force steel stud (Housing axis)		Weight [g]
	(Ball stud axis)		(Ball stud axis)		(Housing axis)				
	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	
	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	
WG □ M-05	7	3	45	22	22	11	135	67	2.6
WG □ M-06	8	4	67	34	31	16	180	90	3.8
WG □ M-08	56	28	112	56	45	22	337	169	8.0
WG □ M-10	56	28	202	101	90	45	427	214	13.7

¹⁹⁾ Ball stud with right-hand thread; left-hand thread upon request

²⁸⁾ Stainless steel ball stud upon request

igubal® angled ball and socket joints | Product Range

Angled ball and socket joint (low-cost): WGRM LC and WGLM LC



- Housing with ball stud
- Lightweight
- Maintenance-free
- Ball studs made of plastic, galvanized steel and stainless steel¹⁹⁾

► Accessories, [Page 985](#)



Service life calculation online
► www.igus.com/igubal-expert



Order key

Type	Size	Version	Options
WG □ M - 05 - LC - MS			
Angled ball and socket joint	Thread (housing) Metric	Thread size M...	Low-cost

Options:
Thread (housing)
 L = Left-hand thread
 R = Right-hand thread
Ball stud¹⁹⁾
 Blank = Made of plastic
 MS = Made of galvanized steel
 ES = Made of stainless steel²⁸⁾



Material:
Housing: igumid G ► [Page 1782](#)

Dimensions [mm] – technical drawing ► [Page 874](#)

Part No.	d1 ±0.1	d2	d4 ±0.5	l1 ±0.2	l2 ±0.3	l5	l6 Min.	h1 ±0.4	h2 ±0.5	h3 ±0.5	a ±0.3	b ±0.5	e ±1.0	S1	S2	Max. pivot angle
WG □ M-04 LC-MS ²⁰⁾	6	M4	10.6	8.5	8.0	12.5	6.8	9.0	0.20	21.8	18	23.3	10.5	SW7	SW7	20°
WG □ M-05 LC	8	M5	12.8	9.0	10.2	14.0	8.2	10.8	0.65	25.6	22	28.4	11.0	SW8	SW7	25°
WG □ M-06 LC	10	M6	14.8	11.0	12.5	16.0	10.5	12.3	0.70	30.9	25	32.4	13.0	SW9	SW8	25°
WG □ M-08 LC	13	M8	19.3	13.0	16.5	18.0	13.5	16.2	1.15	38.8	30	39.7	16.0	SW12	SW11	25°
WG □ M-10 LC	16	M10	24.0	16.0	20.0	20.0	16.0	20.0	1.15	47.0	35	47.0	18.0	SW14	SW13	25°

Technical data

Part No.	Max. static tensile force		Max. static compressive strength		Max. axial tensile force		Max. axial tensile force steel stud		Weight [g]
	(Ball stud axis)		(Ball stud axis)		(Housing axis)		(Housing axis)		
	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]	
WG □ M-04 LC-MS ²⁰⁾	22	11	33	16	–	–	112	56	2.4
WG □ M-05 LC	7	3	45	22	22	11	135	67	2.6
WG □ M-06 LC	8	4	67	34	31	16	180	90	4.0
WG □ M-08 LC	56	28	112	56	45	22	337	169	8.2
WG □ M-10 LC	56	28	202	101	90	45	427	214	13.8

¹⁹⁾ Ball stud with right-hand thread; left-hand thread upon request

²⁰⁾ Only available with galvanized steel stud

²⁸⁾ Stainless steel ball stud upon request

igubal® angled ball and socket joints | Product Range

Ball joint, removable: WGRM-DE and WGLM-DE



- Cost-effective ball joint
 - Lightweight
 - Absolute corrosion resistance
 - Easy assembly and disassembly
 - High holding strength when assembled (260N)
 - Ball studs made of plastic, galvanized steel and stainless steel¹⁹⁾
- Accessories, **Page 985**



Order key

Type	Size	Version	Options
------	------	---------	---------

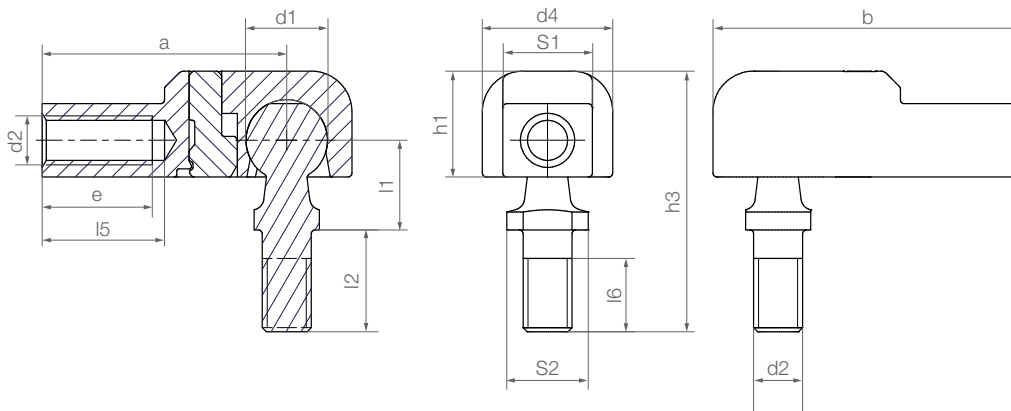
WG □ M - 05 - DE - MS

Angled ball and socket joint	Thread (housing)	Metric	Thread size M...	Disassembly
------------------------------	------------------	--------	------------------	-------------

Options:
Thread (housing)
 L = Left-hand thread
 R = Right-hand thread
Ball stud¹⁹⁾
 Blank = Made of plastic
 MS = Made of galvanized steel
 ES = Made of stainless steel²⁰⁾



Material:
Housing: igumid G ► Page 1782



Dimensions [mm]

Part No.	l6	h1	h3	S1	S2	a	b	e	Pivot angle	
									Recom.	Max.
WG □ M-05-DE	8.2	±0.4	±0.5	SW9	SW7	±0.3	±0.5	±1.0	18°	25°
WG □ M-06-DE	10.5	±0.4	±0.5	SW11	SW8	±0.3	±0.5	±1.0	18°	25°

Technical data and dimensions [mm]

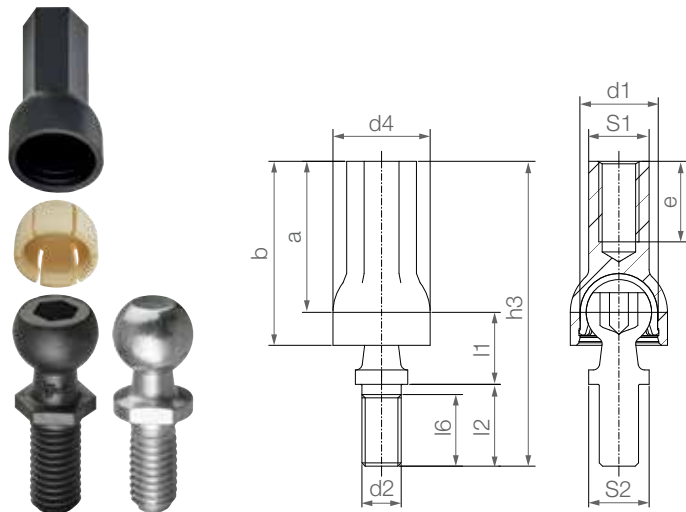
Part No.	Assembly force	Disassembly force	d1	d2	d4	l1	l2	l5	Weight
WG □ M-05-DE	[lbs]	[lbs]	8	M5	12.8	9	10.2	13.0	3.4
WG □ M-06-DE	7.9	44.9	10	M6	16.0	11	12.5	14.5	5.5

¹⁹⁾ Ball stud with right-hand thread; left-hand thread upon request

²⁰⁾ Stainless steel ball stud upon request

igubal® in-line ball and socket joints | Product Range

In-line ball and socket joints: AGRM and AGLM



- For all mechanical combinations
 - Very easy to assemble
 - Maintenance-free, predictable service life
 - Resistant to corrosion and chemicals
 - Vibration-dampening
 - Ball studs made of plastic, galvanized steel and stainless steel¹⁹⁾
- Accessories, [Page 985](#)

Order key

Type	Size	Options
AG	□ M - 08	MS
In-line ball and socket joint	Thread (housing)	Metric
	Thread size M...	Options: Thread (housing) L = Left-hand thread R = Right-hand thread Ball stud ¹⁹⁾ Blank = Made of plastic MS = Made of galvanized steel ES = Made of stainless steel ²⁸⁾

- Material:**
 Housing: igumid G ► [Page 1782](#)
 Spherical cap: iglide® W300 ► [Page 2121](#)

Dimensions [mm]

Part No.	d1	d2	d4	l1	l2	l6	h3	S1	S2	a	b	e	Pivot angle	
	±0.1		±0.5	±0.2	±0.3	Min.	±0.5			±0.3	±0.5	Min.	Recom.	Max.
AG□M-08	13	M8	19.3	13	16.5	13.5	59	SW12	SW11	29.5	36.5	16	18°	25°

Technical data

Part No.	Max. static axial tensile force		Max. static axial compressive strength		Max. assembly force	Weight
	Short-term	Long-term	Short-term	Long-term		
	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[g]
AG□M-08	56	28	225	112	25	7.8

¹⁹⁾ Ball stud with right-hand thread; left-hand thread upon request

²⁸⁾ Stainless steel ball stud upon request

igubal® in-line ball and socket joints | Product Range

In-line ball and socket joints (low-cost): AGRM LC and AGLM LC



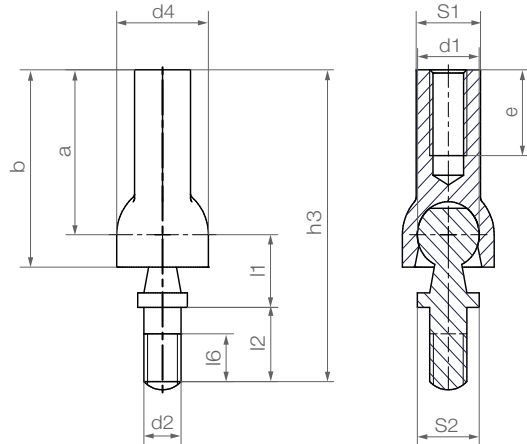
- Housing with ball stud
 - Lightweight
 - Maintenance-free
 - Ball studs made of plastic, galvanized steel and stainless steel¹⁹⁾
- ▶ Accessories, **Page 985**



Order key

Type	Size	Version	Options
AG □ M -	06	- LC -	MS
In-line ball and socket joint	Thread (housing)	Metric	Inner Ø
			Low-cost

Options:
 Thread (housing)
 L = Left-hand thread
 R = Right-hand thread
 Ball stud¹⁹⁾
 Blank = Made of plastic
 MS = Made of galvanized steel
 ES = Made of stainless steel²⁸⁾



Material:
 Housing: igumid G ▶ **Page 1782**

Dimensions [mm]

Part No.	d1 ±0.1	d2	d4 ±0.5	l1 ±0.2	l2 ±0.3	l6 Min.	h3 ±0.5	S1	S2	a ±0.3	b ±0.5	e Min.	Max. pivot angle	
													Recom.	Max.
AG □ M-06-LC	10	M6	14.8	11	11.25	7.25	47.25	SW9	SW10	25	29.9	13	18°	25°
AG □ M-08-LC	13	M8	19.3	13	16.5	13.5	57.5	SW12	SW11	29.5	35.0	16	18°	25°

Technical data

Part No.	max. static tensile strain		Max. static compressive force (with steel stud)		Max. static compressive force (with plastic stud)		Max. assembly force [lbs]	Weight [g]
	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]	Short-term [lbs]	Long-term [lbs]		
AG □ M-06-LC	22	11	449	224	179	89	71	10.8
AG □ M-08-LC	33	16	629	314	314	157	96	23.1

¹⁹⁾ Ball stud with right-hand thread; left-hand thread upon request

²⁸⁾ Stainless steel ball stud upon request