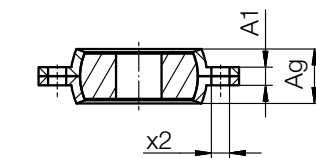
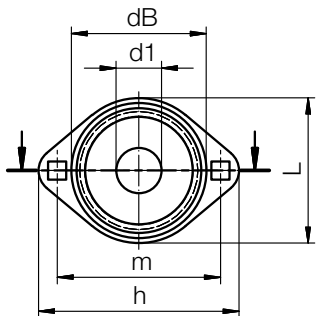


Fixed flange bearings with cost-effective
metallic housing: PFL-JEM-SP



- Cost-effective spherical ball material iglidur® J4
available (order example: PFL204-J4EM-20-14-SP)
- Lubrication and maintenance-free
- Cost-effective
- Resistant to dirt



Order key

Type	Size [mm]	Version
------	-----------	---------

PFL204 - J E M - 20 - 14 - SP

Fixed flange bearing	Spherical ball material	Series	Metric	Spherical ball inner Ø	Spherical ball width	Injection moulding
----------------------	-------------------------	--------	--------	------------------------	----------------------	--------------------



Material:
Housing: Galvanised steel
(stainless steel upon request)
Spherical ball: iglidur® J
(alternative iglidur® J4)



Technical data

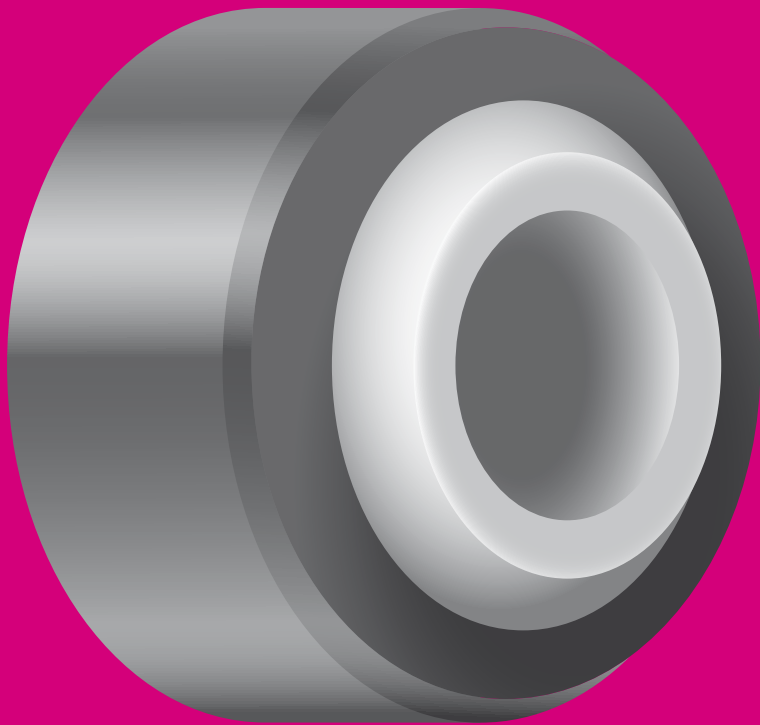
Part No.	Max. permissible axial load		Max. permissible radial load		Weight [g]
	Short-term [N]	Long-term [N]	Short-term [N]	Long-term [N]	
PFL204-JEM-20-14-SP New	2,000	1,000	4,000	2,000	121.0
PFL205-JEM-25-15-SP New	2,000	1,000	5,000	2,500	144.0
PFL206-JEM-30-16-SP New	2,000	1,000	7,000	3,500	216.0

Dimensions [mm]

Part No.	d1 E10	h	L	m	a1 +0.1	Ag	x2
PFL204-JEM-20-14-SP New	20	90	67	71.5	M6	16	9
PFL205-JEM-25-15-SP New	25	95	71	76.0	M8	18	9
PFL206-JEM-30-16-SP New	30	113	82	90.5	M8	19	11

Can be combined with SRM fixing collars, page 858

816 Online tools and more information ► www.igus.eu/igubal-flange



igubal® spherical bearings

Easy to fit

Cost-effective

Resistance to chemicals

Lightweight

Robust



The use of spherical bearings is usually associated with heavy materials, difficult installation, and high costs. Most of the time, maintenance is still necessary long-term, and the bearings are only corrosion-resistant in special designs. igubal® spherical bearings put an end to all of these disadvantages: they are easy to fit, cost-effective, lightweight and robust.



When to use it?

- For high axial and radial loads
- When an easy installation is required
- In case of reduced installation space
- If chemical resistance is required
- If a cost-effective option is requested
- If you need dirt-resistant bearings
- To adjust misalignment



When not to use it?

- When temperatures are higher than +80°C
- For dimensions above 30mm
- When rotation speeds higher than 0.5m/s are required



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order value. No minimum order quantity



Max. +80°C
Min. -30°C



13 types
Ø 2–40mm



Imperial dimensions available
► From page 1610



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

818 Online tools and more information ► www.igus.eu/Press-fit-sphericals



Typical sectors of industry and application areas

- Food industry ● Railway technology
- Automotive ● Plant design etc.

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



► www.igus.eu/food



► www.igus.eu/traffic



► www.igus.eu/automotive



► www.igus.eu/hose-skiving

igus 3D CAD files, prices and delivery time online ► www.igus.eu/Press-fit-sphericals 819

The use of spherical bearings is usually associated with heavy materials, difficult installation, and high costs. Most of the time, maintenance is still necessary long-term, and the bearings are only corrosion-resistant in special designs. Often roller bearings or plain bearings malfunction prematurely due to high edge loads, or because they need to be readjusted, reamed, or refitted in order to compensate for alignment errors.

igubal® spherical bearings put an end to all of these disadvantages and open up many new possibilities for your engineering design:

- Easy to fit
- Extremely cost-effective
- Lightweight
- Robust

Application areas

Ease of installation makes many applications possible for igubal® spherical bearings. They can be used anywhere. The self-aligning feature offers design advantages and helps to simplify assembly.

Tolerances

Maintenance-free igubal® spherical bearings are designed with an inner diameter tolerance of E10. The shaft tolerance should be included between h6 and h9. These recommended tolerances allow for changes in the bearing due to temperature.

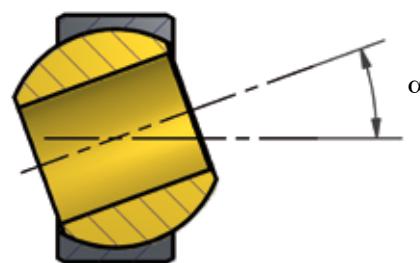
Assembly

igubal® spherical bearings are press-fitted into a recommended H7 housing bore and axially secured. An exact orientation of the bearing housing is not necessary, since the spherical bearing compensates for alignment errors.

Dimensions

igubal® spherical bearings are manufactured according to DIN ISO 12240 for dimensional K and E series. The product range provides standard dimensions from 2 to 40mm. The dimensional K series is available in imperial dimensions. Please contact us if you need other dimensions.

Pivot angle



igubal® spherical bearings



Easy to fit, cost-effective, selectable spherical ball material

K series
► Page 823



Standard, easy to fit

K series
► Page 822



For extremely narrow installation space

K series
► Page 824



Standard, easy to fit, imperial dimensions

K series
► Page 1610

igubal® self-aligning clip bearings



Space-saving

E series
► Page 825



Cost-effective, selectable spherical ball material

Dimensional E series
► Page 826



Simply snap into sheet metal

Dimensional E series
► Page 827



For high axial and radial loads, selectable spherical ball material

Dimensional E series
► Page 828

igubal® self-aligning clip bearings



For tolerance compensation, selectable spherical ball material

Dimensional E series
► Page 829



Clip into sheet metal, can be assembled on both sides

► Page 830



Robust plastic, selectable spherical ball material

Dimensional E series
► Page 831



Selectable materials, individual dimensions and alignment

► Page 833

igubal® double joints and coupling joints



Removable, selectable materials, individual dimensions and alignment

► Page 834



Selectable materials, individual dimensions and alignment

► Page 832

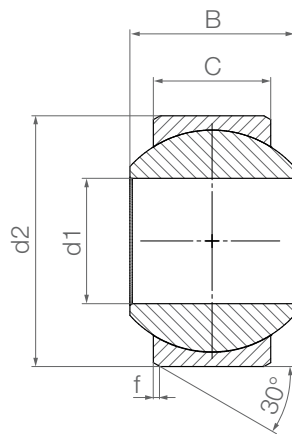


Crimped coupling joints with clevis joints

► Page 835

New

Spherical bearings: KGLM



- Compensation of misalignment and edge loads
- Corrosion-free
- Vibration-dampening
- Excellent vibration dampening
- Suitable for rotating, oscillating and axial movements



Order key

Type	Size [mm]
------	-----------

K GL M -02

K series	Spherical bearing	Metric	Inner Ø
----------	-------------------	--------	---------



Material:

Housing: **igumid G** ► Page 1654

Spherical ball: **iglidur® W300** ► Page 171



Imperial dimensions available

► Page 1610



Service life calculation online

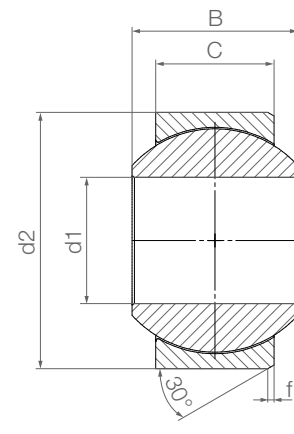
► www.igus.eu/igubal-expert

Technical data and dimensions [mm]

Part No.	Max. static load on the housing		Max. tightening torque through ball	d1 E10	d2	B	C	f	Weight	Max. pivot angle
	radial	axial ²⁹⁾								
	[N]	[N]	[Nm]						[g]	
KGLM-02	300	60	1	2	8	4	3.0	0.8	0.1	32°
KGLM-03	550	200	2	3	10	6	4.5	0.8	0.5	32°
KGLM-05	1,300	500	5	5	13	8	6.0	0.8	1.0	30°
KGLM-06	1,800	650	10	6	16	9	6.5	0.8	1.6	29°
KGLM-08	2,700	1,200	12	8	19	12	9.0	0.8	2.9	25°
KGLM-10	4,000	1,400	20	10	22	14	10.5	0.8	4.4	25°
KGLM-12	5,400	1,500	30	12	26	16	12.0	0.8	7.0	25°
KGLM-14	6,000	2,500	35	14	28	19	13.5	0.8	9.1	23°
KGLM-16	8,000	3,000	40	16	32	21	15.0	0.8	12.8	23°
KGLM-18	9,000	4,000	45	18	35	23	16.5	0.8	16.6	23°
KGLM-20	10,000	5,000	55	20	40	25	18.0	0.8	24.4	23°
KGLM-22	11,700	6,500	60	22	42	28	20.0	0.8	28.5	22°
KGLM-25	13,600	7,500	65	25	47	31	22.0	0.8	39.3	22°
KGLM-30	20,000	9,000	70	30	55	37	25.0	1.0	62.6	22°

²⁹⁾ The maximum static axial load is determined when fitted into a blind housing

Spherical bearings: KGLM low-cost



- Variety of ball materials
- Easy to fit
- Cost-effective
- Split housing



Order key

Type	Size [mm]	Version
------	-----------	---------

K GL M - 05 - LC

K series	Spherical bearing	Metric	Inner Ø	Low-cost
----------	-------------------	--------	---------	----------



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 load on the housing		Max. tightening torque through ball	Weight
	radial	axial ²⁹⁾		
	[N]	[N]	[Nm]	[g]
KGLM-05 LC	1,300	500	5	1.0
KGLM-08 LC	2,700	1,200	12	2.9
KGLM-10 LC	4,000	1,400	20	4.3
KGLM-12 LC	5,400	1,500	30	6.9
KGLM-14 LC	6,000	2,500	35	9.0
KGLM-16 LC	8,000	3,000	40	12.7
KGLM-18 LC	9,000	4,000	45	16.6
KGLM-20 LC	10,000	5,000	55	23.6
KGLM-25 LC	13,600	7,500	65	38.9
KGLM-30 LC	20,000	9,000	70	61.0

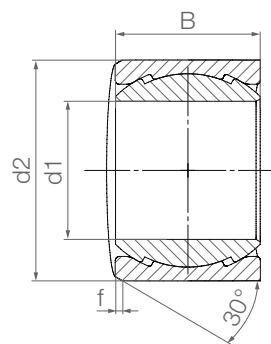
²⁹⁾ The maximum static axial load is determined when fitted into a blind housing

Dimensions [mm]

Part No.	d1 E10	d2 ³⁰⁾	B	C	f	Max. pivot angle
KGLM-05 LC	5	13	8	6.0	0.8	30°
KGLM-08 LC	8	19	12	9.0	0.8	29°
KGLM-10 LC	10	22	14	10.5	0.8	25°
KGLM-12 LC	12	26	16	12.0	0.8	25°
KGLM-14 LC	14	28	19	13.5	0.8	23°
KGLM-16 LC	16	32	21	15.0	0.8	23°
KGLM-18 LC	18	35	23	16.5	0.8	23°
KGLM-20 LC	20	40	25	18.0	0.8	23°
KGLM-25 LC	25	47	31	22.0	0.8	22°
KGLM-30 LC	30	55	37	25.0	1.0	22°

³⁰⁾ In press-fitted condition

Spherical bearings: KGLM Slim Line



- Very small installation space
- Wall thickness 50% thinner than KGLM
- Angular compensation up to 5°
- Lightweight
- Dimensions according to DIN 1850

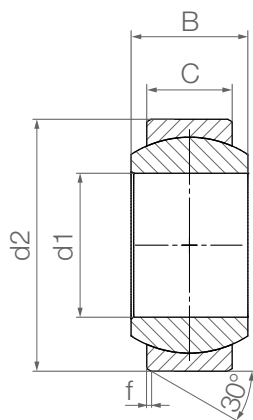
Technical data and dimensions [mm]

Part No.	Max. static load (short-term)		Max. static load (long-term)		d1 E10	d2	B	f	Weight [g]	Max. pivot angle
	radial [N]	axial [N]	radial [N]	axial [N]						
KGLM-08 SL	2,700	450	1,350	225	8	14	9.0	0.5	1.1	5°
KGLM-10 SL	4,000	750	2,000	375	10	16	10.5	0.5	1.5	5°
KGLM-12 SL	4,500	750	2,250	375	12	18	12.0	0.5	2.0	5°
KGLM-16 SL	6,500	500	3,250	250	16	22	15.0	0.5	3.1	5°

824 Online tools and more information ► www.igus.eu/pressfit-sphericals



Spherical bearings: EGLM



- Compensation of misalignment and edge loads
- Corrosion-free
- Vibration-dampening
- Excellent vibration dampening
- Suitable for rotating, oscillating and linear movements

Technical data and dimensions [mm]

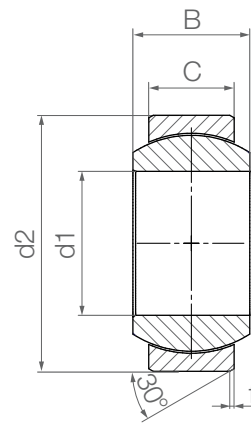
Part No.	Max. static load on the housing		Max. tightening torque through ball [Nm]	d1 E10	d2	B	C	f	Weight [g]	Max. pivot angle
	radial [N]	axial ²⁹⁾ [N]								
EGLM-04	600	50	1.0	4	12	5	3.0	0.5	0.4	37°
EGLM-05	1,000	130	2.0	5	14	6	4.0	0.5	0.8	33°
EGLM-06	1,200	150	2.5	6	14	6	4.0	0.5	0.9	27°
EGLM-08	1,800	175	7.0	8	16	8	5.0	0.5	1.2	24°
EGLM-10	2,500	400	14.0	10	19	9	6.0	0.5	1.9	24°
EGLM-12	3,800	650	25.0	12	22	10	7.0	0.5	2.8	21°
EGLM-15	5,500	1,000	30.0	15	26	12	9.0	0.5	6.9	21°
EGLM-16	6,000	1,150	32.0	16	28	13	9.5	0.5	9.0	21°
EGLM-17	6,300	1,200	35.0	17	30	14	10.0	1.0	10.6	21°
EGLM-20	9,000	1,400	40.0	20	35	16	12.0	1.0	16.3	18°
EGLM-25	14,000	2,900	55.0	25	42	20	16.0	1.0	29.0	16°
EGLM-30	17,000	4,000	70.0	30	47	22	18.0	1.0	37.4	13°
EGLM-40-J	22,500	2,500	80.0	40	62	28	22.0	1.0	57.0	15°
EGLM-80-J New	50,000	11,300	–	80	120	55	45	2.0	400.0	18°

²⁹⁾ The maximum static axial load is determined when fitted into a blind housing

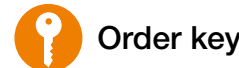
825 3D CAD files, prices and delivery time online ► www.igus.eu/pressfit-sphericals



Spherical bearings: EGLM Low-cost



- Easy to fit
- Cost-effective
- Chemical- and corrosion-resistant
- Robust
- Compensation of misalignment errors



Order key

Type	Size [mm]	Version
E GL M -	15	- LC
Dimensional E series		
Spherical bearing		
Metric		
Inner Ø		
Low-cost		



Material:

Housing: igumid G ► Page 1654

Spherical ball: iglidur® W300 ► Page 171

Other spherical ball materials upon request
► Page 841



Online service life calculation

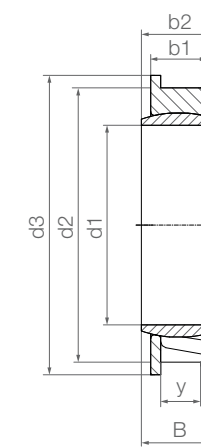
► www.igus.eu/igubal-expert

Technical data and dimensions [mm]

Part No.	Max. static load on the housing		Max. tightening torque through ball	d1 E10	d2	B	C	f	Weight	Max. pivot angle
	radial	axial ²⁹⁾								
	[N]	[N]	[Nm]						[g]	
EGLM-15-LC	5,500	1,000	30	15	26	12	9.0	0.5	4.5	21°
EGLM-16-LC	6,000	1,150	32	16	28	13	9.5	0.5	6.0	21°
EGLM-20-LC	9,000	1,400	40	20	35	16	12.0	1.0	11.0	18°
EGLM-25-LC	14,000	2,900	55	25	42	20	16.0	1.0	20.0	16°
EGLM-30-LC	17,000	4,000	70	30	47	22	18.0	1.0	26.0	13°

²⁹⁾ The maximum static axial load is determined when fitted into a blind housing

Clip bearings: ECLM



- Very easy installation by clipping into sheet metal
- No additional locating spigot necessary
- Extremely small installation space: space-saving, thin-walled design



Order key

Type	Size [mm]
E CL M -	05-02
Dimensional E series	
Clip bearing	
Metric	
Inner Ø	
Metal sheet thickness	



Material:

Housing: igumid G ► Page 1654

Spherical ball: iglidur® J ► Page 159



Online service life calculation

► www.igus.eu/igubal-expert

Technical data

Part No.	Max. static compressive force (short-term)		Max. static compressive force (long-term)		Weight
	radial	axial	radial	axial	
	[N]	[N]	[N]	[N]	[g]
ECLM-05-02	700	25	350	12.5	0.5
ECLM-06-02	700	25	350	12.5	0.5
ECLM-08-02	1,000	25	500	12.5	0.5
ECLM-10-03	1,400	30	700	15.0	0.8
ECLM-12-03	1,800	35	900	17.5	0.8
ECLM-16-03	2,800	40	1,400	20.0	1.1

Dimensions [mm]

Part No.	d1 E10	B	d2 ±0.2	d3	y Sheet metal thickness	b1 ±0.1	b2	Max. pivot angle
ECLM-05-02	5	6	12	13	2	3.9	6.0	25°
ECLM-06-02	6	6	12	13	2	3.9	6.0	18°
ECLM-08-02	8	6	14	15	2	3.9	6.0	16°
ECLM-10-03	10	6	16	17	3	4.5	6.7	12°
ECLM-12-03	12	6	18	19	3	4.5	6.7	12°
ECLM-16-03	16	6	22	24	3	4.5	6.7	12°