

5. igubal[®] ...

Plastic spherical bearings



...plastics

Application Examples - igubal®

Exciting applications can be viewed online at ► www.igus.com/igubal-applications

LIMELIGHT BV

Stadium paneling igubal® spherical bearings of dimension K series are used in the main bearing assembly of every individual slat due to their freedom from maintenance, corrosion resistance and

atmospheric resistance. Since these slats can be swiveled, this allows the air flow inside the stadium to be regulated. Part number: igubal® spherical bearing KGLM-08





RESEARCH INSTITUTE

Mirror adjustment of the telescope is performed virtually free of backlash with igubal® flange bearings. Magnetic influences can be avoided.



SPECIAL-PURPOSE VEHICLE

Resistant to dirt and maintenance free: The rugged clevises and spherical bearings never give in on the special-purpose municipal vehicles.



PACKAGING MACHINE

Long service life and, at the same time, food-safe design have been implemented in this application with igubal® rod ends.



CARAVAN STEP

Rugged, resistant to dirt and vibration-dampening igubal® rod ends withstand the loads even in worst-case conditions.



TEXTILE INDUSTRY

Concentric errors and jolts are compensated by means of spherical clevises in the support of the thread guide unit more efficiently than the alternative metal product.



CHOCOLATE DECORATION SYSTEM

Decoration without grease by using maintenance free igubal® rod ends turn all the sweets into sheer enjoyment.

igubal® - Product overview

igubal® rod ends – Ideal for pneumatic cylinders and gas struts

Rod ends with female thread

			
Classic design, inch dimensions KBRI/KBLI	For small spaces, variety of ball materials, inch dimensions EBRI/EBLI	Classic design, inch dimensions KBRM/KBLM	Integrated lock nut for easy assembly, ball material options KBRM-CL/KBLM-CL
➤ Page 754	➤ Page 756	➤ Page 758	➤ Page 760

Rod ends with male thread

			
Classic design inch dimensions KARI/KALI	Classic design KARM/KALM	For higher forces, variety of ball materials KARM-CL/KALM-CL	For small space requirement, ball material options EARM/EALM
➤ Page 768	➤ Page 770	➤ Page 772	➤ Page 774

Angled and in-line joints

			
Angled ball and socket joint WGRM/WGLM	Angled ball and socket joint, low-cost WGRM-LC/WGLM-LC	Easy assembly and disassembly WGRM-DE/WGLM-DE	In-line ball and socket joint AGRM/AGLM
➤ Page 779	➤ Page 780	➤ Page 781	➤ Page 782

igubal® clevis joints – Weight reduction, very simple assembly with E series rod ends

Clevis joint combinations

			
Clevis joint, pin and circlip inch dimensions GERIK/GELIK	Clevis joints with clevis pin and circlip GERMK/GELMK	Clevis joints with spring-loaded fixing clip GERMF/GELMF	Combination, easy to fit GERMKE/GELMKE
➤ Page 794	➤ Page 795	➤ Page 797	➤ Page 798

igubal® pillow block bearings – Cost-effective, maintenance free, for high radial loads

For small space envelope

			
Easy to disassemble, split housing and ball KSTM-GT	Easy to fit ESTM	For quick assembly and low moisture absorption ESTM-GT-GT	Split housing with parallel bore ESTM-GT
➤ Page 810	➤ Page 811	➤ Page 812	➤ Page 813



Selectable ball material

KCRM/KCLM

► Page 762



For small spaces
selectable ball material

EBRM/EBLM

► Page 764



For temperatures
up to +392°F

EBRM-HT/EBLM-HT

► Page 766



For temperatures up to
+392°F

EARM-HT/EALM-HT

► Page 776



In-line ball and socket
joint, low-cost

AGRM-LC/AGLM-LC

► Page 783



Adapter bolt

PKRM/PKLM

► Page 778



Combination,
easy to fit

GERMFE/GELMFE

► Page 799

Component parts



Clevis joint
inch dimensions

GERI/GELI

► Page 790



Clevis joint

GERM/GELM

► Page 792



Spring-loaded
fixing clip

GEFM

► Page 796



Clevis pin and
Circlip

GBM/GSR

► Page 800



For diameters
up to 150 mm

ESTM-GT150

► Page 814



Extremely light,
compact design

ESTM-SL

► Page 815

Standard design



Compensation of
misalignment errors

KSTI - inch ►
KSTM - Metric ►

► Page 806



Compensation of
misalignment errors,
inch dimensions

KSTI

► Page 808



Adapter for
dimensional
E series

AD-01-ESTM

► Page 816

igubal® - Product overview

igubal® flange bearings – For the support of both the center and ends of shafts

For temperatures up to +176 °F



Easy to install
EFOI - inch > 822
EFOM - metric > 824
> Page 822



For higher radial load
EFSI - inch > 826
EFSM - metric > 828
> Page 826



Universal and quick assembly
GFSM-IG
> Page 830



Universal and quick assembly
GFSM-AG
> Page 831

igubal® pivoting bearings – Easy to fit, cost-effective, light weight and robust

Pressfit spherical bearings



Standard, easy to fit, inch dimensions
KGLI
> Page 840



Standard, easy to fit
KGLM
> Page 841



For extremely narrow installation space
KGLI-SL
> Page 842



For extremely narrow installation space
KGLM-SL
> Page 843

Self-aligning clip bearing



Simply snapping into sheet metal
ECLM
> Page 847



For high axial and radial loads, selectable ball material
ECLM-HD
> Page 848



For tolerance compensation, selectable ball material
EGFM-T
> Page 849

igubal® spherical thrust bearing – Weight reduction

Easy to fit



To prevent edge loads
SAM
> Page 853

igubal® spherical balls – Different materials for your particular applications ...

Different ball materials



Standard, with low wear
WKI/WEI
WKM/WEM
> Page 861



Low-cost, good wear resistance
RKM/REI/REM
> Page 863



For temperatures up to +482 °F
XKM/XEM
> Page 864



Low moisture absorption
JKM/JEM
> Page 865

igubal® detectable – Quickly to find through metal detectable material

Detectable



Rod ends
> Page 876



Clevis joints
> Page 880



Spherical ball
> Page 870

All other igubal® products as detectable version on request



High static load, split housing
KFSM-GT

► Page 832

For temperatures
up to +392°F



Easy to install
EFOM-HT

► Page 833



For higher radial load
EFSM-HT

► Page 834



Easy to fit, low-cost,
ball material options
KGLM-LC

► Page 844



For small space requirement
EGLM

► Page 845



Cost-effective, selectable
ball material
EGLM-LC

► Page 846

Double joints



Solid polymer,
ball material options
EGZM

► Page 850



Variety of ball and tube materials,
individual dimensions and alignment
KDGM

► Page 851



ball stud and tube,
individual dimensions and alignment
WDGM

► Page 852

... and requirements



Low-cost and low
moisture absorption
J4KM/J4EM

► Page 867



For underwater
applications
UWEM

► Page 868



Clearance free
J4VEM

► Page 869



Detectable
RN248KM/
RN248EM

► Page 870



For metallic bearing
housings

► Page 871

igubal® – self-aligning maintenance free plain bearings made of high performance polymers

igubal® puts a complete system of self-aligning bearings – spherical bearings, pillow block spherical bearings and rod ends – at the developer's fingertips. Self-aligning bearings are easy to fit, adapt to all angular deviations and replace special housings in many cases. With igubal®, the user can take advantage of all the benefits of high performance plastics: vibration dampening, ability to operate in liquids or chemicals, and resistance to dirt and dust, which can impede the performance of greased metal components.

The weight of the igubal® parts is approx. 80% lighter than comparable steel parts. Additional savings are cost-savings at the time of purchasing and during operation and on installation space due to their small dimensions. igubal® bearings are also extremely cost competitive due to the elimination of maintenance and installation costs.

igubal® self-aligning bearings are made of a plastic housing for high strength and a spherical ball made of maintenance free self-lubricating high performance polymers.

igubal® spherical balls:

- Exceptionally cost-effective
- Maintenance free
- Self-lubricating
- Resistant to dust and dirt
- Corrosion-resistant
- Can be used in liquid media
- Vibration-dampening
- Inner race set in housings with very low clearance
- Dirt can become embedded for shaft protection
- Light weight
- Temperature resistance up to +392°F, depending on the material

igubal® spherical

In standard spherical bearings, the spherical ball is made of iglide® L280 (W300)* material, which is known for its low coefficient of friction while running dry and extremely low tendency to stick-slip. This is especially important for low loads and very slow movements.

► More information about iglide® L280 (W300)* ► Page 171

Taking advantage of its long experience in polymers and based on several tests, igus® decided in the last years to respond more precisely to the different applications and customers requests by developing spherical balls in other iglide® materials.

Further to the standard material iglide® L280 (W300)*, spherical balls are now available in 6 other materials presenting particular advantages:

- iglide® T500 (X)* for high temperatures
 - iglide® J for low moisture absorption
 - iglide® J4 for low moisture absorption at lower costs
 - iglide® R as a low-cost alternative
 - iglide® UW for under water applications
 - iglide® RN248 as detectable material
 - iglide® J4 with clearance free spherical balls
- Spherical balls ► Page 857

Do not hesitate to ask for technical support concerning the choice of the material. Please contact igus®.

igubal® housing

There are three housing materials available, each of them offering particular advantages:

- Standard housings made of igumid G, a highly shock-resistant, long-fiber reinforced polymer, suitable for temperatures from -22°F to +248°F
 - High temperature housings made of iguton G, high degree of chemical resistance, suitable for temperatures from -40°F to +392°F
 - Detectable housings made of RN246 material. Temperature range: from -22°F to +176°F
- Material table ► Page 1375

Areas of application:

igubal® bearing elements can be used without problems even in harsh environments. In moist or wet environments, the bearings are corrosion resistant, and resistant to weak acids and alkalines. The application temperatures range is from -22°F to +392°F. Resistance to dirt and dust is outstanding. Seals are not necessary, even in extremely contaminated conditions. This is true for fine dust as well as coarse dirt, which is present in agricultural equipment. The housing is made of an impact-resistant composite material which tolerates high alternating loads.

Detectable

Made of the special materials RN248 for the spherical ball and RN246 for the housing, the parts of metal detectable igubal® polymer bearings can be verified as foreign particles with all common parameters used in the metal detection technology and thus ensure safe food.

- igubal® detectable product range ► Page 873
- Material table ► Page 1375

*W300 is the European material equivalent for iglide® L280 and X is the European material equivalent to iglide® T500

Load

The load capacity of the maintenance free igubal® bearing element parts is very high at normal ambient temperatures. igubal® bearings absorb high forces and weigh only one fifth of traditional, metal bearing housings. The excellent dampening properties are based on the fact that the polymer material of the two part bearing can absorb vibrations differently than steel.

However, plastic specific properties, such as dependence on temperature and behavior under long-term stress, must be taken into consideration when using igubal® bearings. The load capacity of the rod end should therefore be checked in a practical test, particularly if it will be used under continuous high loads and at elevated temperatures.

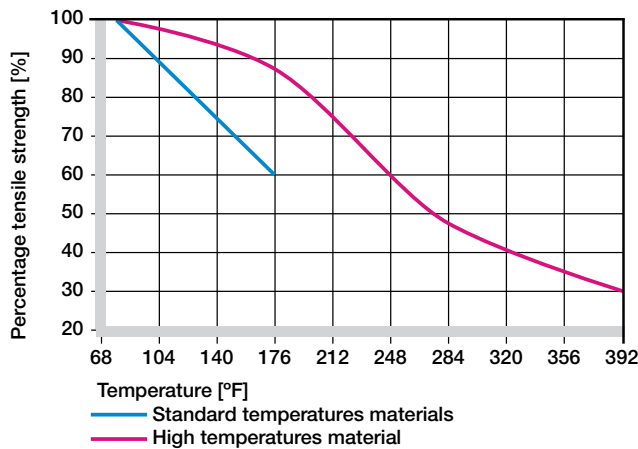


Diagram 01: trends indicate the effect of temperature on the maximum load capacity of igubal® bearings.

Coefficients of sliding friction and speed

One important advantage of igubal® spherical bearings is that rapid, rotary movements of a mounted shaft take place directly in the spherical portion, made of iglide® L280 (W300)*. In metallic rod ends, rotary motion takes place between the race and the spherical bearing. High speeds can be achieved with igubal® bearings.

igubal® bearings are used in such a way that the angular movements of the spherical bearings take place at the outer diameter. By contrast, rotations of the shaft are supported directly in the inner diameter of the spherical portion. The advantage therefore lies in the polymer vs. steel relationship. Plastic produces lower friction and permits high speeds, even when running dry.

*W300 is the European material equivalent for iglide® L280 and X is the European material equivalent to iglide® T500

Application temperatures

igubal® standard bearing elements can be used in temperatures from -22°F to +176°F. The high temperatures (HT) versions can be used at continuous temperatures up to +392°F. Diagram 01 trends indicate the effect of temperature on the load capacity of igubal® bearings with standard and high temperature materials.

igubal®	Application temperatures	
	Standard	HT-Version
Minimum	-22°F	-40°F
Maximum, long term	+176°F	+392°F
Maximum, short term	+248°F	+464°F

Table 01: Application temperatures of igubal® bearings

Thread description	Pitch [mm]
M2	0.40
M3	0.50
M4	0.70
M5	0.80
M6	1.00
M8	1.25
M10	1.50
M10 F	1.25
M12	1.75
M12 F	1.25
M14	2.00
M16	2.00
M16 F	1.50
M18	1.50
M20	1.50
M20 M20	2.50
M22	1.50
M24	2.00
M27	2.00
M30	2.00

Table 02: Thread pitches of igubal® rod ends and clevis joints

Chemical resistance of igubal® bearings

iglide® L280 (W300)* and the housing made of igumid G are resistant to weak alkalines, weak acids and fuels, as well as all types of lubricants. The HT-versions can be used for applications with a higher chemical demand.

The moisture absorption of igubal® depends on the choice of material. The moisture absorption of igubal® is approximately 1.3% of weight in standard atmosphere. The saturation limit in water is 6.5%. This must be taken into evaluation for applications. If a lower moisture absorption is essential, a look on to the different materials is helpful.

► Chemical table ► Page 1364

Medium	Resistance	
	Standard	HT-Version
Alcohol	+ to 0	+
Hydrocarbons	+	+
Greases, oils without additives	+	+
Fuels	+	+
Diluted acids	0 to -	+ to 0
Strong acids	-	+ to -
Diluted alkalines	+	+
Strong alkalines	0	+

Table 03: Chemical resistance of igubal® plain bearings
 + resistant 0 conditionally resistant - not resistant
 All data given at room temperature [+68°F]

Radiation resistance

Self-aligning igubal® plain bearings are resistant to radiation up to an intensity of $3 \cdot 10^2$ Gy.

UV resistance

The corrosion resistance of igubal® bearings gives them special value for outside applications. igubal® bearings are permanently resistant to UV radiation. A small change in color (dark coloration) of the spherical ball due to UV radiation does not affect the mechanical, electrical or thermal properties.

Tolerances

igubal® spherical bearings can be used with different tolerances according to each application. They are designed with a large clearance in the standard product, which enables a secure operation even under high peripheral speeds. The inside diameter of the spherical ball has a tolerance of E10. The shafts should have tolerances between h6 and h9. The tolerances are provided in the table below. Please contact us in case you require lower or other bearing tolerances.

Basic size [mm]	Tolerance	
	Gauge falls	Gauge hangs
to 3	x.01	x.05
> 3 to 6	x.02	x.07
> 6 to 10	x.02	x.08
> 10 to 18	x.03	x.10
> 18 to 30	x.04	x.12
> 30 to 50	x.05	x.15

Table 04: Tolerances of inner diameter (spherical balls)

Check the inner diameter



Inadequate test equipment; plug gauge too short



Wrong test equipment; caliper

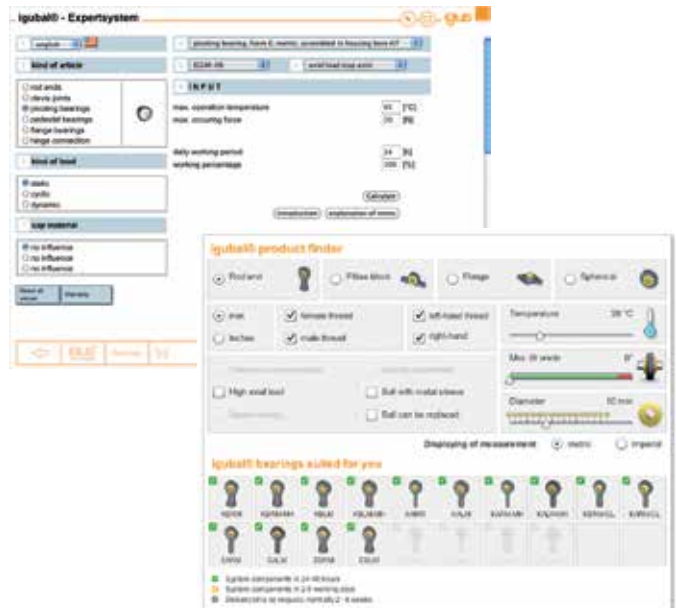


Tolerance test with gauge

Service life calculation

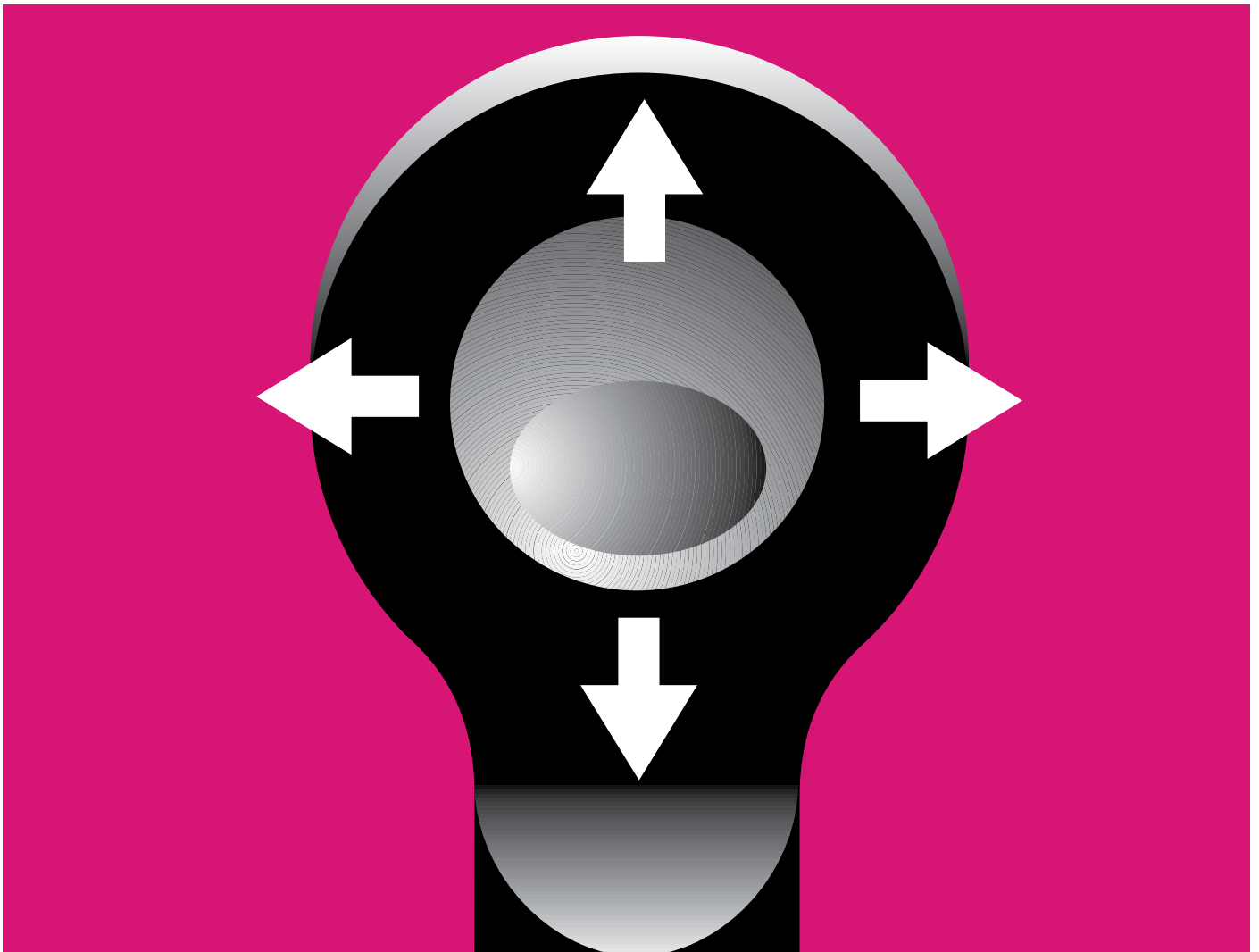
The igubal® expert allows to check the suitability of igubal® bearings for every application. You can choose from different igubal® bearings and specific load (radial, axial or static, cyclic and dynamic). The expert system will calculate from these input data:

- The bearing wear
- The theoretical service life



igubal® expert system

► www.igus.com/igubal-expert



igubal[®] Rod Ends

- Self-lubricating, maintenance-free
- High strength under impact loads
- High tensile strength
- Compensation of misalignment
- Compensation of edge loads
- Very low weight

igubal® Rod Ends

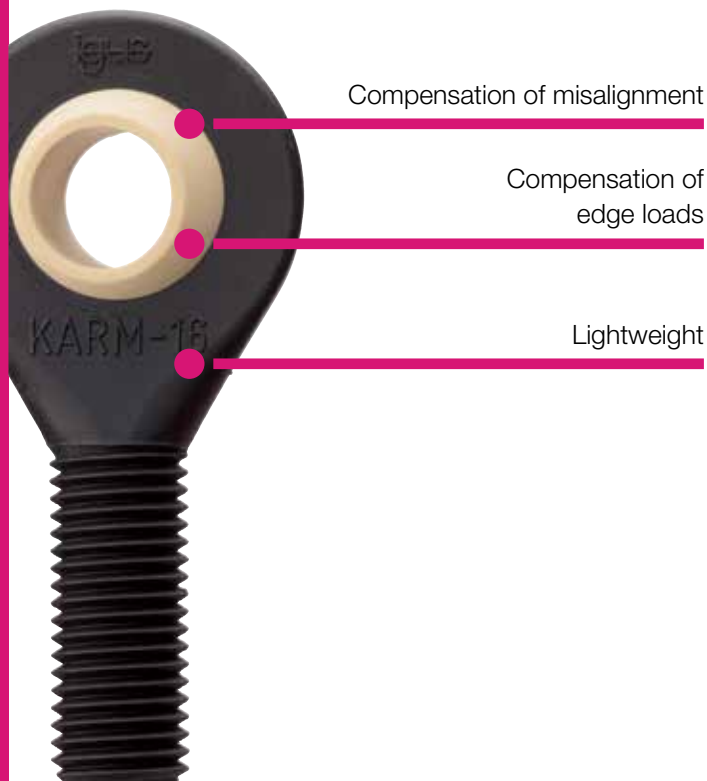
igubal® rod ends can also be used in rough environments. They are corrosion-resistant in humid environments and resistant to weak acids and bases. The operation temperature is from -40°F up to $+176^{\circ}\text{C}$. Rod ends are also resistant to dirt and dust.



Maintenance free,
dry-running

High strength
under impact loads

High tensile strength



Compensation of misalignment

Compensation of
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



When not to use it?

- If temperatures are higher than $+176^{\circ}\text{F}$
 - HT version, **Page 766**
- If rotation speeds higher than 98.4 fpm (0.5 m/s) are required
- If really high tensile and shear loads occur
- With a hydraulic cylinder
- If dimensions above 1 inch or 30 mm are required



Online product finder

➤ www.igus.com/igubal-finder



max. $+392^{\circ}\text{F}$
min. -40°F



inch \varnothing 3/16 to 1 inch



mm \varnothing 2 to 30 mm



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order.

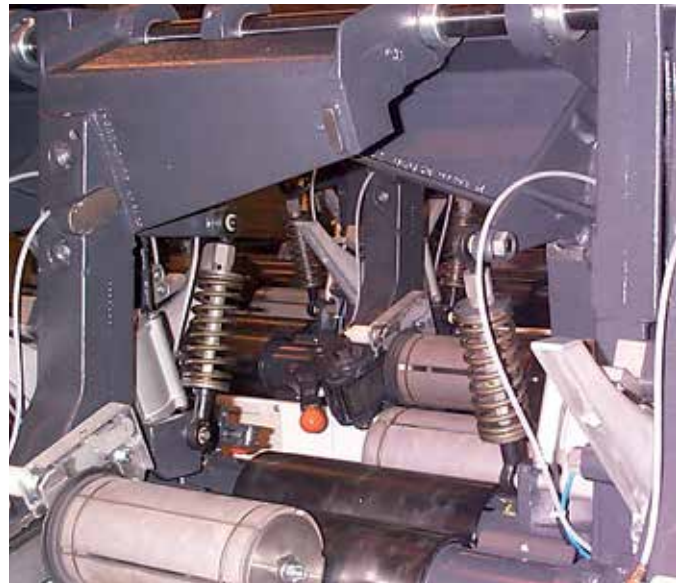


Typical application areas

- Agricultural machines
- Machine building
- Sports and leisure
- Automotive
- Mechatronics
- Construction machinery



Specialty bikes



Textile industry



Packaging industry



Offshore industry

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.

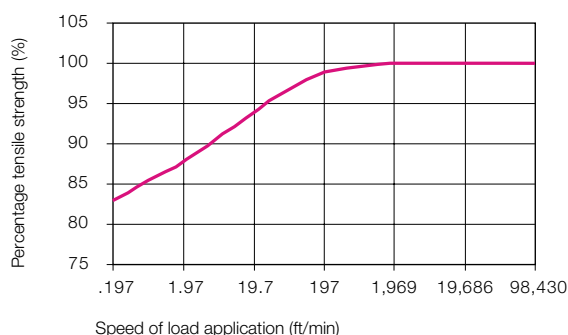
- Form A – with male thread and
- Form B – with female thread

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.



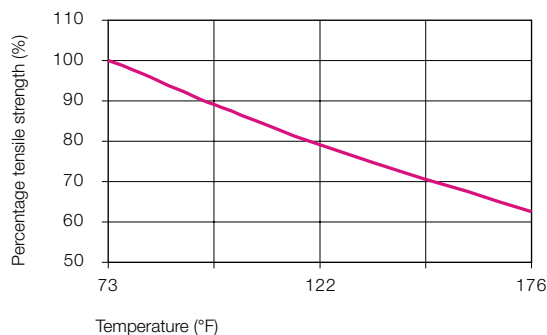
Effect of the speed of load application on the maximum tensile strength of igubal® rod end bearings

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

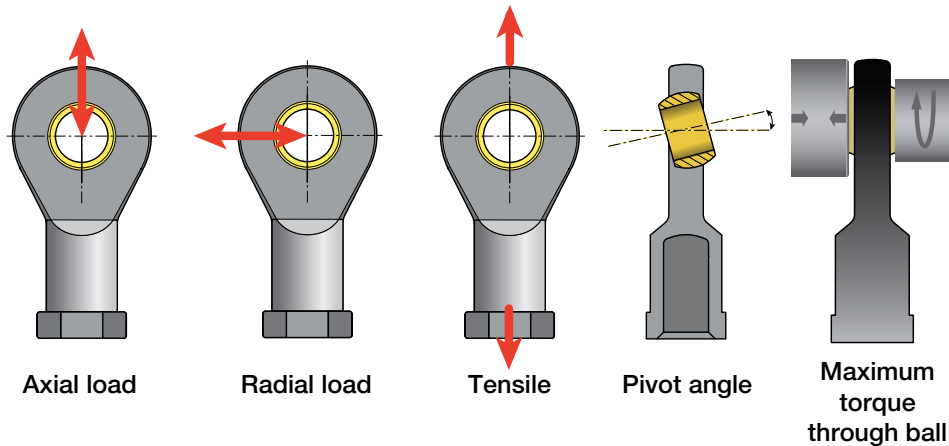
Temperatures

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).

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. Shafts should also meet recommended tolerances. Please contact us with any questions regarding tolerances.

► Tolerance Table, Page 75



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 ends with female thread



Classic design

K series
KBRI
KBLI



For small space requirement, ball material options, inch dimensions

E series
EBRI/EBLI



Classic design

K series
KBRM
KBLM



Integrated lock nut for easy assembly, ball material options

K series
KBRM CL
KBLM CL



Ball material options

K series
KCRM
KCLM

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igubal® rod ends with male thread



Classic design
inch dimensions

K series
KARI
KALI



Classic design

K series
KARM
KALM



For higher forces, ball material options

K series
KARM CL



For small space requirement, ball material options

E series
EARM/EALM



For temperatures up to +392°F

E series
EARM HT
EALM HT

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igubal®- angled and in-line joints



Angled ball and socket joint

WGRM
WGLM



Angled ball and socket joint, low-cost

WGRM-LC
WGLM-LC



Easy assembly and disassembly

WGRM-DE
WGLM-DE



In-line ball and socket joint

AGRM
AGLM



In-line ball and socket joint, low-cost

AGRM-LC
AGLM-LC

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For small space requirement, ball material options

E series
EBRM
EBLM



For temperatures up to +392°F

E series
EBRM HT
EBLM HT

► Page 764

► Page 766

igubal® accessories for rod ends



Adapter bolt

K series
PKRM
PKLM



Clevis joints with clevis pin and circlip
Inch dimensions

E series
GERIK/GELIK



Clevis joints with clevis pin and circlip

E series
GERMK/GELMK



Clevis joints with spring-loaded fixing clip

E series
GERMF/GELMF

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igubal® Rod Ends - Product range

Rod ends with female thread: KBRI and KBLI



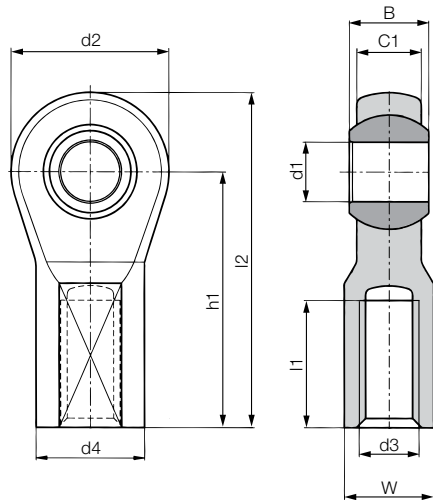
Dimensions [inch]

Part No. Right thread	Part No. Left thread	d1 [E10]	d2	d3	d4	C1	B	h1	l1	l2	W	Max. pivot angle
KBRI-03	KBLI-03	.1875	.625	10-32	.406	.246	.312	1.062	.500	1.374	.312	25°
KBRI-04	KBLI-04	.2500	.750	1/4-28	.469	.272	.365	1.312	.687	1.687	.375	25°
KBRI-05	KBLI-05	.3125	.875	5/16-24	.500	.340	.437	1.375	.687	1.813	.437	25°
KBRI-06	KBLI-06	.3750	1.00	3/8-24	.687	.394	.500	1.625	.812	2.125	.562	22°
KBRI-07	KBLI-07	.4375	1.125	7/16-20	.750	.456	.562	1.812	.937	2.374	.625	22°
KBRI-08	KBLI-08	.5000	1.312	1/2-20	.875	.487	.625	2.125	1.062	2.781	.750	22°
KBRI-10	KBLI-10	.6250	1.50	5/8-18	1.00	.545	.750	2.50	1.375	3.25	.875	22°
KBRI-12	KBLI-12	.7500	1.75	3/4-16	1.125	.676	.875	2.875	1.562	3.75	1.00	22°
KBRI-16	KBLI-16	1.00	2.75	1-12	1.625	1.00	1.375	4.125	2.125	5.50	1.500 ¹⁸⁾	20°

► Tolerance Table, Page 75

igubal® Rod Ends - Product range

Rod ends with female thread: KBRI and KBLI



Order key

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



Material:

Housing - igumid G ▶ Page 1373

Spherical ball - iglide® L280 (W300)*

Technical data

Part No.	Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength	Max. Torque Strength through ball	Weight
		Short term	Long term	Short term	Long term				
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(inch)	(ft•lbs)	(ft•lbs)	[g]
KBRI-03	KBLI-03	203	102	67	34	.350	1.47	2.2	3.3
KBRI-04	KBLI-04	248	124	90	45	.480	3.68	2.9	5.1
KBRI-05	KBLI-05	383	192	112	56	.480	4.42	7.3	7.1
KBRI-06	KBLI-06	450	225	225	112	.568	5.16	11.6	12.6
KBRI-07	KBLI-07	518	259	270	135	.655	13.27	18.4	16.1
KBRI-08	KBLI-08	585	293	337	169	.743	16.96	25.8	26.5
KBRI-10	KBLI-10	1103	551	382	191	.962	22.12	36.8	38.7
KBRI-12	KBLI-12	1260	630	517	259	1.093	29.50	51.6	54.4
KBRI-16	KBLI-16	1349	674	584	293	1.488	33.92	62.6	197.5

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with female thread: EBRI and EBLI



Dimensions [inch]

Part No.	Part No.	d1	d2	d3	d4	d5	C1	B	h1	I3	I4	W	Max. pivot angle
Right thread	Left thread	[E10]											
EBRI-03	EBLI-03	0.1900	0.748	10-32	0.3543	0.4331	0.1732	0.1900	1.1811	0.4724	1.5551	0.35	30°
EBRI-04	EBLI-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°
EBRI-05	EBLI-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°
EBRI-06	EBLI-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°
EBRI-07	EBLI-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°
EBRI-08	EBLI-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°
EBRI-10 ¹⁷⁾	EBLI-10 ¹⁷⁾	0.6250	1.693	5/8-18	0.8270	1.0230	0.4134	0.5000	2.5394	1.0433	3.3858	0.87	16°
EBRI-12	EBLI-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°

For another spherical bearing material please add **J**, **J4**, or **R** to the part number, **Example: EBRI-08R.**

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

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



RKM:
low-cost



JKM: low
moisture
absorption



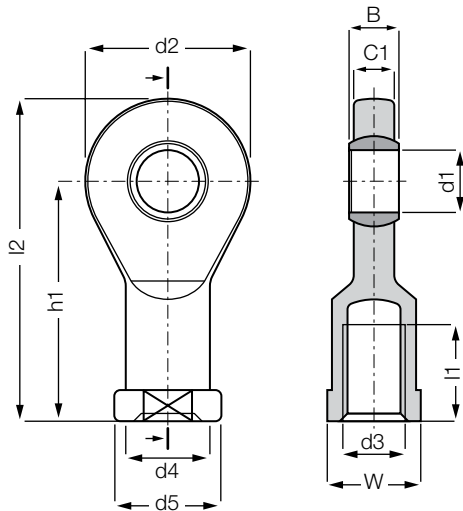
L280 (W300): standard
spherical bearing
with metal sleeve



J4KM: low-cost
and low moisture
absorption

igubal® Rod Ends - Product range

Rod ends with female thread: EBRI and EBLI



Order key

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



Material:

Housing - **igumid G** ▶ Page 1373
 Spherical ball - **iglide® L280 (W300)***
 More spherical ball materials available on request ▶ Page 857

Technical data

Part No.	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				
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(inch)	(ft•lbs)	(ft•lbs)	[g]
EBRI-03	EBLI-03	292	146	34	17	.315	1.48	1.5	3.1
EBRI-04	EBLI-04	337	168	45	22	.315	3.68	1.8	3.8
EBRI-05	EBLI-05	449	224	101	51	.433	4.42	5.2	6.9
EBRI-06	EBLI-06	517	258	112	56	.512	5.17	10.3	11.5
EBRI-07	EBLI-07	741	370	124	62	.551	13.28	18.4	17.6
EBRI-08	EBLI-08	741	370	124	62	.551	16.96	18.4	18.1
EBRI-10 ⁽⁷⁾	EBLI-10 ⁽⁷⁾	1124	539	191	96	.709	22.00	22.1	31.9
EBRI-12	EBLI-12	1618	809	405	202	.866	30.00	29.5	61.5

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with female thread: KBRM and KBLM



Standard design



Design with
metal sleeve (MH)

- Maintenance free, self-lubricating
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation of misalignment
- Compensation of edge loads
- Resistant to dirt, dust and lint
- Corrosion- and chemical-resistant
- High vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Very low weight
- Dimensional K series according to standard DIN ISO 12240
- Available with a metal sleeve for a higher torque

Dimensions [mm]

Part No. Right thread	Part No. Left thread	d1 [E10]	d2	d3	d4	d5	C1	B		h1	L3	L4	W	Max. pivot angle
								without MH	with MH ±0.2					
KBRM-02	KBLM-02	2	9	M02	4.0	4.6	3.0	4	4.1	12.5	6	17	SW04	30°
KBRM-03	KBLM-03	3	13	M03	6.5	8.0	4.5	6	6.1	18.5	8	25	SW07	30°
KBRM-05 M4	KBLM-05 M4	5	18	M04	9.0	12.0	6.0	8	8.1	27	10	36	SW09	30°
KBRM-05	KBLM-05	5	18	M05	9.0	12.0	6.0	8	8.1	27	10	36	SW09	30°
KBRM-06	KBLM-06	6	20	M06	10.0	13.0	7.0	9	9.2	30	12	40	SW11	29°
KBRM-08	KBLM-08	8	24	M08	13.0	16.0	9.0	12	12.2	36	16	48	SW14	25°
KBRM-10	KBLM-10	10	30	M10	15.0	19.0	10.5	14	14.2	43	20	58	SW17	25°
KBRM-10 F	KBLM-10 F	10	30	M10x1.25	15.0	19.0	10.5	14	14.2	43	20	58	SW17	25°
KBRM-12	KBLM-12	12	34	M12	18.0	22.0	12.0	16	16.2	50	22	67	SW19	25°
KBRM-12 F	KBLM-12 F	12	34	M12x1.25	18.0	22.0	12.0	16	16.2	50	22	67	SW19	25°
KBRM-14	KBLM-14	14	38	M14	20.0	25.0	13.5	19	19.2	57	25	76	SW22	23°
KBRM-16	KBLM-16	16	42	M16	22.0	27.0	15.0	21	21.2	64	28	85	SW22	23°
KBRM-16 F	KBLM-16 F	16	42	M16x1.5	22.0	27.0	15.0	21	21.2	64	28	85	SW22	23°
KBRM-18	KBLM-18	18	46	M18x1.5	25.0	31.0	16.5	23	23.2	71	32	94	SW27	23°
KBRM-20	KBLM-20	20	50	M20x2.5	28.0	34.0	18.0	25	25.3	77	33	102	SW30	23°
KBRM-20 M20	KBLM-20 M20	20	50	M20x1.5	28.0	34.0	18.0	25	25.3	77	33	102	SW30	23°
KBRM-22	KBLM-22	22	56	M22x1.5	30.0	37.0	20.0	28	-	84	37	112	SW32	22°
KBRM-25	KBLM-25	25	60	M24x2.0	32.0	41.0	22.0	31	-	94	42	124	SW36	22°
KBRM-30	KBLM-30	30	70	M30x2.0	37.0	50.0	25.0	37	-	110	51	145	SW41	22°
KBRM-30 M27x2	KBLM-30 M27x2	30	70	M27 x 2.0	37.0	50.0	25.0	37	-	110	50	145	SW41	22°

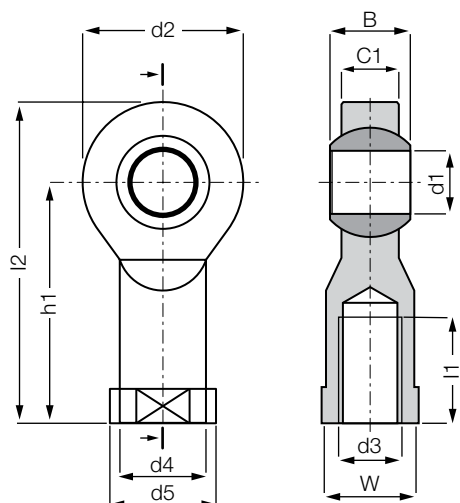
Rod end bearings can be ordered in metric dimensions with metal sleeve with the addition of MH after the part numbers listed here

Example: **KBRM-10 MH**

igubal® Rod Ends - Product range

igubal®
rod ends

Rod ends with female thread: KBRM and KBLM



Order key

Type	Size
K B ... M - 02	
Dimensional K series	
Housing (female thread)	
Thread L = Left hand thread R = Right hand thread	
Metric	
Inner-Ø [mm]	



Material:

Housing - igumid G ► Page 1373
Spherical ball - iglide® L280 (W300)*
Available with metal sleeve

Technical data

Part No. Right thread	Part No. Left thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth (mm)	Max. Torque Strength Inner thread (ft•lbs)	Max. Torque Strength through ball		Weight (g)
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]			without MH (ft•lbs)	with MH (ft•lbs)	
KBRM-02	KBLM-02	134	67	13	6	4	.22	.74	1.5	0.4
KBRM-03	KBLM-03	179	89	22	11	5	.37	1.5	3.0	2.7
KBRM-05 M4	KBLM-05 M4	224	112	56	28	7	.55	3.7	8.9	3.5
KBRM-05	KBLM-05	224	112	56	28	7	.74	3.7	8.9	3.4
KBRM-06	KBLM-06	314	157	89	44	8	1.10	7.4	11.1	4.7
KBRM-08	KBLM-08	472	236	157	78	11	7.4	8.9	29.5	8.6
KBRM-10	KBLM-10	696	348	179	89	13	11.1	14.8	36.9	14.6
KBRM-10 F	KBLM-10 F	696	348	179	89	13	4.4	14.8	36.9	14.6
KBRM-12	KBLM-12	809	404	202	101	15	14.8	22.1	51.6	22.0
KBRM-12 F	KBLM-12 F	809	404	202	101	15	11.1	22.1	51.6	22.0
KBRM-14	KBLM-14	899	449	224	112	17	18.4	25.8	55.3	30.9
KBRM-16	KBLM-16	944	472	292	146	19	22.1	29.5	81.1	39.6
KBRM-16 F	KBLM-16 F	944	472	292	146	19	20.3	29.5	81.1	39.6
KBRM-18	KBLM-18	1034	517	359	179	21	33.2	33.2	110.6	55.0
KBRM-20	KBLM-20	1213	606	472	236	22	59.0	40.6	147.5	73.5
KBRM-20 M20	KBLM-20 M20	1213	606	472	236	22	44.3	40.6	147.5	73.5
KBRM-22	KBLM-22	1573	786	494	247	25	55.3	44.3	166.0	94.8
KBRM-25	KBLM-25	1910	955	517	258	28	88.5	44.3	191.8	119.8
KBRM-30	KBLM-30	2360	1180	562	281	34	99.5	44.3	221.3	177.0
KBRM-30 M27x2	KBLM-30 M27x2	10,500	5,250	2,500	1,250	34	135.00	60	-	189.6

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

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



- Design with metal sleeve for higher torque strength available
- Dimensional K series according to standard DIN ISO 12240



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

Dimensions [mm]

Part No.	d1 [E10]	d2	d3	d4	B	C1	h	h1	h2	L2	L1	Max. pivot angle
KBRM-06 CL	6	20	M06	SW10	9	7	40	5,7	30	20	46.5	40°
KBRM-08 CL	8	24	M08	SW13	12	9	48	7,5	36	25	56.3	35°
KBRM-10 CL	10	30	M10	SW15	14	10.5	58	52.2	43	30	67.2	35°

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



RKM:
low-cost



JKM: low
moisture
absorption



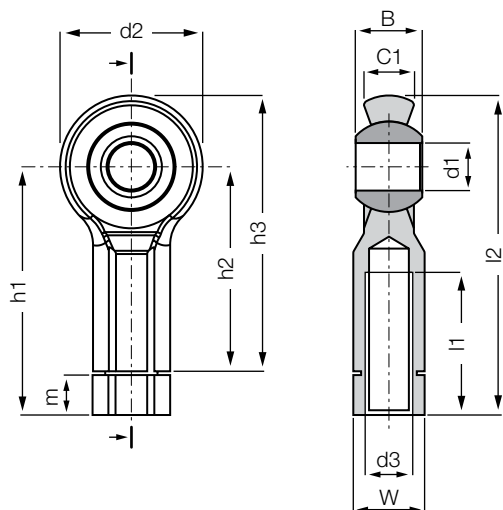
L280 (W300): standard
spherical bearing
with metal sleeve



J4KM: low-cost
and low moisture
absorption

igubal® Rod Ends - Product range

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



Order key

Type	Size	Version
K B R M - 06 CL		
Dimensional K series	Housing (female thread)	Right hand thread
	Metric	Inner-Ø [mm]
		2nd generation



Material:

Housing - **igumid G** ▶ Page 1373
Spherical ball - **iglide® L280 (W300)***
Available with metal sleeve
More spherical ball materials available on request ▶ Page 857

Technical data

Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength	Max. Torque Strength through ball		Weight [g]
	Short term	Long term	Short term	Long term		outer thread	without MH	with MH	
	[lbs]	[lbs]	[lbs]	[lbs]	(mm)	(ft•lbs)	(ft•lbs)	(ft•lbs)	
KBRM-06 CL	315	158	90	45	8	1.106	7.376	11.060	4.5
KBRM-08 CL	473	236	158	79	11	7.376	8.851	29.500	8.6
KBRM-10 CL	698	349	180	90	13	11.060	14.750	36.880	14.1

For rod end bearings with metal sleeve please add **MH** to the part number. Example: KBRM-10 CL **MH** (Inner-Ø: 10 mm).

For another spherical bearing material please add **J, J4, or R** to the part number, Example: KBRM-10 CL **J**.

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with female thread: KCRM and KCLM



- Smooth design has no dirt traps
- Spherical ball is clipped in
- Choice of iglide® ball materials
- Compensation of misalignment
- Lightweight
- Excellent corrosion resistance
- Design with metal sleeve for higher torque strength available
- Dimensional K series according to standard DIN ISO 12240

Dimensions [mm]

Part No.	Part No.	d1	d2	d3	W	B		C1	h1	L3	L4	Max. pivot angle
Right thread	Left thread	[E10]				without MH	with MH ±0.2					
KCRM-05	KCLM-05	05	18	M5	SW9	8.0	8.2	6.0	27	12	36	43°
KCRM-06	KCLM-06	6	20	M06	SW10	9.0	9.2	7	30	13.5	40	40°
KCRM-08	KCLM-08	8	24	M08	SW13	12.0	12.2	9	36	17	48	35°
KCRM-10	KCLM-10	10	30	M10	SW15	14.0	14.2	10,5	43	22	58	35°
KCRM-10-F	KCLM-10-F	10	30	M10x1.25	SW15	14.0	14.2	10.5	43	22	58	35°
KCRM-12	KCLM-12	12	34	M12	SW17	16.0	16.2	12.0	50	25	67	35°
KCRM-12-F	KCLM-12-F	12	34	M12x1.25	SW17	16.0	16.2	12.0	50	25	67	35°
KCRM-16	KCLM-16	16	42	M16	SW20	21.0	21.2	15.0	64	30	85	35°
KCRM-16-F	KCLM-16-F	16	42	M16x1.5	SW20	21.0	21.2	15.0	64	30	85	35°
KCRM-20	KCLM-20	20	50	M20x1.5	SW24	25.0	25.2	18.0	77	35	102	35°
KCRM-20-M20	KCLM-20-M20	20	50	M20x2.5	SW24	25.0	25.2	18.0	77	35	102	35°

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



RKM:
low-cost



JKM: low
moisture
absorption



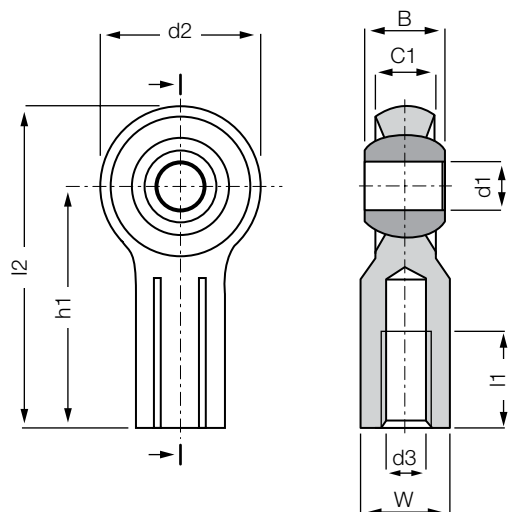
L280 (W300): standard
spherical bearing
with metal sleeve



J4KM: low-cost
and low moisture
absorption

igubal® Rod Ends - Product range

Rod ends with female thread: KCRM and KCLM



Order key

Type	Size
K C ... M - 06	
Dimensional K series	
Hexagonal Housing	
Thread L = Left hand thread R = Right hand thread	
Metric	
Inner-Ø [mm]	



Material:

Housing - **igumid G** ▶ Page 1373
Spherical ball - **iglide® L280 (W300)***
Available with metal sleeve
More spherical ball materials available on request ▶ Page 857

Technical data

Part No.	Part No.	Maximum static tensile strength		Maximum Static radial load		Max. torque strength Inner thread (ft•lbs)	Max. torque through Ball		Weight [g]
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]		without MH (ft•lbs)	with MH (ft•lbs)	
Right thread	Left thread								
KCRM-05	KCLM-05	270	135	40	20	.74	3.688	8.851	4.0
KCRM-06	KCLM-06	315	156	67	34	0.6	7.376	11.060	4.2
KCRM-08	KCLM-08	472	236	112	56	1.5	8.851	29.500	7.6
KBRM-10	KCLM-10	697	337	180	90	2.2	14.750	36.880	12.8
KCRM-10-F	KCLM-10-F	697	76	40	20	2.2	14.752	36.880	12.8
KCRM-12	KCLM-12	800	400	169	84	11.1	22.128	51.632	19.0
KCRM-12-F	KCLM-12-F	800	400	169	84	11.1	22.128	51.632	19.0
KCRM-16	KCLM-16	854	427	180	90	11.1	29.504	81.136	34.0
KCRM-16-F	KCLM-16-F	854	427	180	90	11.1	29.504	81.136	34.0
KCRM-20	KCLM-20	1,023	511	90	45	14.7	40.568	147.520	55.0
KCRM-20-M20	KCLM-20-M20	1,023	511	90	45	14.7	40.568	147.520	55.0

*W300 is the European material equivalent for iglide® L280.

For rod end bearings with metal sleeve please add **MH** to the part number, e.g. KCRM-10 **MH**.

For another spherical bearing material please add **J, J4, or R** to the part number, e.g. KBRM-10 CL **J**.

igubal® Rod Ends - Product range

Rod ends with female thread: EBRM and EBLM



- Maintenance free, self-lubricating
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation of misalignment
- Compensation of edge loads
- Resistant to dirt, dust and lint
- Corrosion- and chemical-resistant
- High vibration-dampening capacity
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to standard DIN ISO 12240
- For temperatures up to +392 °C we recommend EBRM-HT and EBLM-HT ►

Dimensions [mm]

Part No.	Part No.	d1	d2	d3	d4	d5	C1	B	h1	l3	l4	W	Max. pivot angle
Right thread	Left thread	[E10]											
EBRM-04	EBLM-04	4	15	M04	8.0	9.2	3.5	5	22.5	9.5	30.0	SW08	33°
EBRM-05	EBLM-05	5	19	M05	9.0	11	4.4	6	30	12	39.5	SW09	33°
EBRM-06	EBLM-06	6	21	M06	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08	EBLM-08	8	24	M08	13.0	16	6.0	8	36	16	48.0	SW14	24°
EBRM-10	EBLM-10	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-10 F	EBLM-10 F	10	29	M10 x 1.25	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12	EBLM-12	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°
EBRM-12 F	EBLM-12 F	12	34	M12 x 1.25	18.0	22	8.0	10	50	20	67.0	SW19	21°
EBRM-15	EBLM-15	15	40	M14	21.0	26	10.0	12	61	26	81.0	SW22	21°
EBRM-16	EBLM-16	16	43	M16 x 1.5	-	-	10.5	13	64.5	26.5	86.0	SW22	21°
EBRM-16 F	EBLM-16 F	16	46	M20 x 1.5	-	-	10.5	13	64.5	26.5	86.0	SW22	21°
EBRM-17	EBLM-17	17	46	M16	24.0	30	11.0	14	67	27	90.0	SW27	21°
EBRM-17 F	EBLM-17 F	17	46	M16 x 1.5	24.0	30	11.0	14	67	27	90.0	SW27	18°
EBRM-20	EBLM-20	20	53	M20 x 1.5	27.0	34	13.0	16	77	31	103.5	SW30	16°
EBRM-20 M20	EBLM-20 M20	20	53	M20 x 2.5	27.0	34	13.0	16	77	31	103.5	SW30	16°

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



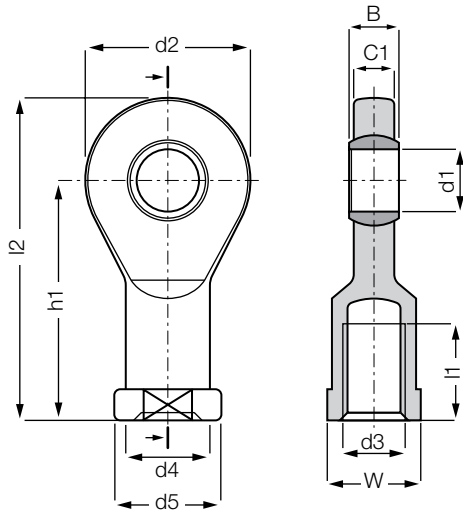
REM:
low-cost



J4EM: low-cost
and low moisture
absorption

igubal® Rod Ends - Product range

Rod ends with female thread: EBRM and EBLM



Order key

Type	Size
E	B ... M - 02
Dimensional E series	
Housing (female thread)	
Thread L = Left hand thread R = Right hand thread	
Metric	
	Inner-Ø [mm]



Material:

Housing - igumid G ► Page 1373
Spherical ball - iglide® L280 (W300)*
More spherical ball materials available on request ► Page 857

Technical data

Part No.	Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth (mm)	Max. Torque Strength Inner thread (ft•lbs)	Max. Torque Strength through ball Standard (ft•lbs)	Weight [g]
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]				
EBRM-04	EBLM-04	180	90	22	11	7	.3	1.5	1.8
EBRM-05	EBLM-05	292	146	34	17	8	.4	1.5	3.2
EBRM-06	EBLM-06	337	168	45	22	8	1.1	1.8	4.0
EBRM-08	EBLM-08	449	224	101	51	11	3.7	5.2	6.9
EBRM-10	EBLM-10	517	258	112	56	13	11.1	10.3	11.2
EBRM-10 F	EBLM-10 F	517	258	112	56	13	4.4	10.3	11.2
EBRM-12	EBLM-12	741	370	124	62	14	14.8	18.4	17.1
EBRM-12 F	EBLM-12 F	741	370	124	62	14	11.1	18.4	17.1
EBRM-15	EBLM-15	1079	539	180	90	18	18.4	22.1	28.9
EBRM-16	EBLM-16	1124	562	191	95	18	14.8	23.6	32.6
EBRM-16 F	EBLM-16 F	1124	562	191	95	18	11.1	23.6	32.6
EBRM-17	EBLM-17	1191	595	247	124	19	22.1	25.8	42.4
EBRM-17 F	EBLM-17 F	1191	595	247	124	19	20.3	25.8	42.4
EBRM-20	EBLM-20	1618	809	405	202	22	44.3	29.5	65.8
EBRM-20 M20	EBLM-20 M20	1618	809	405	202	22	59.0	29.5	65.8
EBRM-25	EBLM-25	2248	1124	584	292	27	84.8	40.6	125.9
EBRM-30	EBLM-30	2360	1180	674	337	33	95.9	51.6	184.1

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

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



- For temperatures up to +392 °F
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation of misalignment and edge loads
- Corrosion- and chemical-resistant
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to standard
DIN ISO 12240

Dimensions [mm]

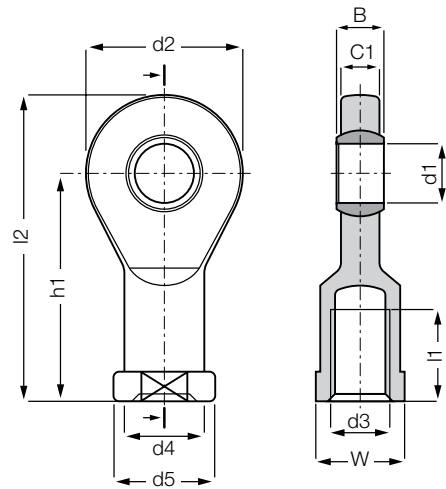
Part No. Right thread	Part No. Left thread	d1 [E10]	d2	d3	d4	d5	C1	B	h1	I3	I4	W	Max. pivot angle
EBRM-05 HT	EBLM-05 HT	5	19	M05	9.0	11	4.4	6	30	12	39.5	SW09	33°
EBRM-06 HT	EBLM-06 HT	6	21	M06	11.0	13	4.4	6	30	12	40.5	SW11	27°
EBRM-08 HT	EBLM-08 HT	8	24	M08	13.0	16	6.0	8	36	16	48.0	SW14	24°
EBRM-10 HT	EBLM-10 HT	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12 HT	EBLM-12 HT	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°

► Tolerance Table, Page 75

Other dimensions available upon request.

igubal® Rod Ends - Product range

Rod ends with female thread: EBRM-HT and EBLM-HT



Order key

Type	Size	Version
E B ... M - 06 HT		
Dimensional E series		
Housing (female thread)		
Thread L = Left hand thread R = Right hand thread		
Metric		
	Inner-Ø [mm]	
		High temperature



Material:

Housing - **iguton G** ▶ Page 1373
Spherical ball - **iglide® T500 (X)***

Technical data

Part No.	Part No.	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth	Max. Torque Strength	Max. Torque Strength through ball	Weight
		Short term	Long term	Short term	Long term				
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(mm)	Inner thread	Standard	[g]
EBRM-05 HT	EBLM-05 HT	141	70	31	16	.55	0.3	1.5	3.8
EBRM-06 HT	EBLM-06 HT	187	94	39	8	.55	0.4	1.8	5.0
EBRM-08 HT	EBLM-08 HT	296	148	39	20	.67	1.5	5.2	8.5
EBRM-10 HT	EBLM-10 HT	330	165	57	28	.75	3.7	10.3	13.7
EBRM-12 HT	EBLM-12 HT	360	180	63	31	.79	4.4	18.4	21.4

*X is the European material equivalent for iglide® T500.

igubal® Rod Ends - Product range

Rod ends with male thread: KARI and KALI

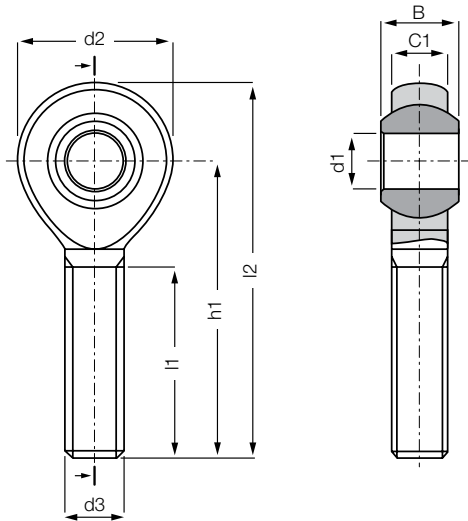


Dimensions [inch]

Part No. Right thread	Part No. Left thread	d1 [E10]	d2	d3	C1	B	h	L1	L2	Max. pivot angle
KARI-03	KALI-03	.1875	.625	10-32	.234	.312	1.250	.750	1.563	25°
KARI-04	KALI-04	.2500	.750	1/4-28	.250	.365	1.562	1.000	1.937	25°
KARI-05	KALI-05	.3125	.875	5/16-24	.312	.437	1.875	1.250	2.313	25°
KARI-06	KALI-06	.3750	1.000	3/8-24	.359	.500	1.938	1.250	2.438	22°
KARI-07	KALI-07	.4375	1.125	7/16-20	.406	.562	2.125	1.375	2.688	22°
KARI-08	KALI-08	.5000	1.312	1/2-20	.453	.625	2.428	1.500	3.094	22°
KARI-10	KALI-10	.6250	1.500	5/8-18	.484	.750	2.625	1.625	3.375	22°
KARI-12	KALI-12	.7500	1.750	3/4-16	.593	.875	2.875	1.750	3.750	22°

igubal® Rod Ends - Product range

Rod ends with male thread: KARI and KALI



Order key

Type	Size
K A ... I - 08	
Dimensional K series	
Housing (male thread)	
Thread L = Left hand thread R = Right hand thread	
Inch	
Inner-Ø [inch] Based on 1/16"	



Material:

Housing - igumid G ▶ Page 1373
Spherical ball - iglide® L280 (W300)*

Technical data

Part No. Right thread	Part No. Left thread	Max. static Tensile Strength		Max. Radial Load		Min. Thread Depth (inch)	Max. Torque Strength Outer thread (ft•lbs)	Max. Torque Strength through ball (ft•lbs)	Weight (g)
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]				
KARI-03	KALI-03	87	45	15	7	.525	.36	.37	2.1
KARI-04	KALI-04	202	101	22	11	.700	.73	.74	3.5
KARI-05	KALI-05	247	123	33	16	.875	1.47	1.48	6.0
KARI-06	KALI-06	337	168	78	39	.875	2.21	2.21	8.8
KARI-07	KALI-07	449	224	89	45	.962	4.42	4.43	12.4
KARI-08	KALI-08	562	281	101	50	1.050	6.63	6.64	18.5
KARI-10	KALI-10	786	393	134	67	1.137	8.85	8.85	27.6
KARI-12	KALI-12	876	438	224	112	1.226	18.43	18.44	42.8

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with male thread: KARM and KALM



Standard design



Design with
metal sleeve (MH)

- Maintenance free, self-lubricating
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation of misalignment
- Compensation of edge loads
- Resistant to dirt, dust and lint
- Corrosion- and chemical-resistant
- High vibration dampening capacity
- Suitable for rotating, oscillating, and linear movements
- Lightweight
- Dimensional K series according to standard DIN ISO 12240
- Available with metal sleeve for higher torque

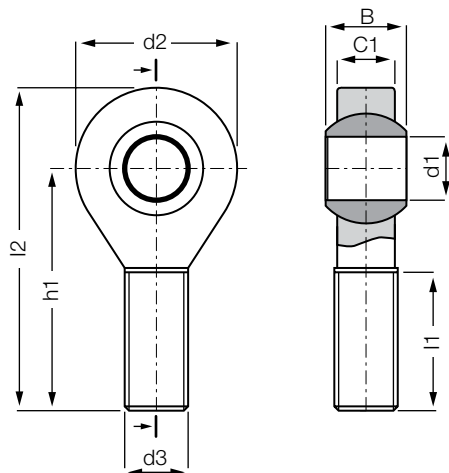
Dimensions [mm]

Part No.	Part No.	d1	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
Right thread	Left thread	[E10]				without MH	with MH ±0.2				
KARM-05	KALM-05	05	18	M05	6.0	8	8.2	33	19	42	30°
KARM-06	KALM-06	06	20	M06	7.0	9	9.2	36	21	46	29°
KARM-08	KALM-08	08	24	M08	9.0	12	12.2	42	25	55	25°
KARM-10	KALM-10	10	30	M10	10.5	14	14.2	48	28	63	25°
KARM-10 F	KALM-10 F	10	30	M10 x 1.25	10.5	14	14.2	48	28	63	25°
KARM-12	KALM-12	12	34	M12	12.0	16	16.2	54	32	71	25°
KARM-12 F	KALM-12 F	12	34	M12 x 1.25	12.0	16	16.2	54	32	71	25°
KARM-14	KALM-14	14	38	M14	13.5	19	19.2	61	36	79	25°
KARM-16	KALM-16	16	42	M16	15.0	21	21.2	66	37	88	23°
KARM-16 F	KALM-16 F	16	42	M16 x 1.5	15.0	21	21.2	66	37	88	23°
KARM-18	KALM-18	18	46	M18 x 1.5	16.5	23	23.2	72	41	96	23°
KARM-20	KALM-20	20	50	M20 x 1.5	18.0	25	25.2	78	45	104	23°
KARM-20 M20	KALM-20 M20	20	50	M20 x 2.5	18.0	25	25.2	78	45	104	23°
KARM-22	KALM-22	22	56	M22 x 1.5	20.0	28	–	84	48	112	22°
KARM-25	KALM-25	25	61	M24 x 2.0	22.0	31	–	95	55	126	22°
KARM-30	KALM-30	30	71	M30 x 2.0	25.0	37	–	112	66	147	22°

► Tolerance Table, Page 75

igubal® Rod Ends - Product range

Rod ends with male thread: KARM and KALM



Order key

Type	Size
K A ... M - 08	
Dimensional K series	
Housing (male thread)	
Thread L = Left hand thread R = Right hand thread	
Metric	
	Inner-Ø [mm]



Material:

Housing - **igumid G** ▶ Page 1373
Spherical ball - **iglide® L280 (W300)***
Available with metal sleeve

Technical data

Part No.	Part No.	Maximum static tensile strength		Maximum Static radial load		Max. torque strength	Max. torque through Ball		Weight
		Short term	Long term	Short term	Long term		without MH	with MH	
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(ft•lbs)	(ft•lbs)	(ft•lbs)	[g]
KARM-05	KALM-05	180	90	18	9	.3	3.7	8.8	2.7
KARM-06	KALM-06	225	112	22	11	.4	7.4	11.1	3.9
KARM-08	KALM-08	382	191	45	22	1.5	8.9	29.5	7.1
KARM-10	KALM-10	562	281	67	33	3.7	14.8	36.9	12.5
KARM-10 F	KALM-10 F	562	281	67	33	2.2	14.8	36.9	12.5
KARM-12	KALM-12	607	303	89	45	4.4	22.1	51.6	18
KARM-12 F	KALM-12 F	607	303	89	45	4.4	22.1	51.6	18
KARM-14	KALM-14	764	382	157	78	8.9	25.8	55.3	25
KARM-16	KALM-16	876	438	179	89	12.5	29.5	81.1	34
KARM-16 F	KALM-16 F	876	438	179	89	12.5	29.5	81.1	34
KARM-18	KALM-18	944	472	224	112	14.8	33.2	110.6	45.9
KARM-20	KALM-20	1348	674	292	146	18.4	40.6	147.5	58
KARM-20 M20	KALM-20 M20	1348	674	292	146	18.4	40.6	147.5	58
KARM-22	KALM-22	1618	809	337	168	18.4	44.3	166.0	86.2
KARM-25	KALM-25	1686	843	427	213	33.2	47.9	191.8	99.1
KARM-30	KALM-30	1978	989	517	258	62.7	51.6	221.3	160.4

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with male thread: KARM CL



- Smooth design has no dirt traps
- Compensation of misalignment
- Lightweight
- Excellent corrosion resistance
- Design with metal sleeve for higher torque strength available
- Left-hand thread version KALM in preparation
- Dimensional K series according to standard DIN ISO 12240

Dimensions [mm]

Part No.	d1	d2	d3	C1	B		h1	l1	l2	Max. pivot angle
					without MH	with MH ±0.2				
Right thread	[E10]									
KARM-06 CL	06	20	M06	7.0	9.0	9.2	36	21	46	40°
KARM-08 CL	08	24	M08	9.0	12.0	12.2	42	25	55	35°
KARM-10 CL	10	30	M10	10.5	14.0	14.2	48	28	63	35°
KARM-12 CL	12	34	M12	12.0	16.0	16.2	54	32	71	35°

For rod end bearings with metal sleeve please add **MH** to the part number, e.g. KARM-10 CL **MH**.

For another spherical bearing material please add **J**, or **R** to the part number, e.g. KARM-10 CL **J**.

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



RKM:
low-cost



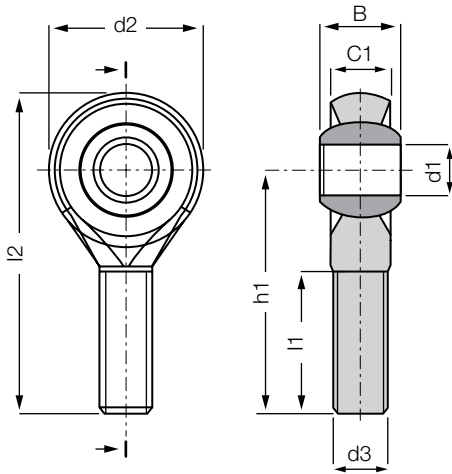
JKM: low
moisture
absorption



L280 (W300): standard
spherical bearing
with metal sleeve

igubal® Rod Ends - Product range

Rod ends with male thread: KARM CL



Order key

Type	Size	Version
K A R M - 06	06	CL
Dimensional K series	Housing (male thread)	Right hand thread
	Metric	Inner-Ø [mm]
		2nd generation



Material:

Housing - **igumid G** ▶ Page 1373
 Spherical ball - **iglide® L280 (W300)***
 Available with metal sleeve
 More spherical ball materials available on request ▶ Page 857

Technical data

Part No.	Maximum static tensile strength		Maximum Static radial load		Min. Thread Depth	Max. torque strength	Max. torque through Ball		Weight
	Short term	Long term	Short term	Long term			without MH	with MH	
Right thread	[lbs]	[lbs]	[lbs]	[lbs]	(mm)	(ft•lbs)	(ft•lbs)	(ft•lbs)	[g]
KARM-06 CL	225	113	22	11	15	.37	7.37	11.06	3.5
KARM-08 CL	382	191	45	22	18	1.48	8.85	29.50	6.2
KARM-10 CL	562	281	68	34	20	3.69	14.75	36.88	11.2
KARM-12 CL	607	304	90	45	22	4.43	22.13	51.63	15.6

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with male thread: EARM and EALM



- Maintenance free, dry-running
- High rigidity
- Very high tensile strength for varying loads
- Compensation of misalignment
- Compensation of edge loads
- Resistant to dirt, dust and lint
- Corrosion- and chemical-resistant
- High vibration-dampening capacity
- Suitable for rotating, oscillating, and linear movements
- Lightweight
- Dimensional E series according to standard DIN ISO 12240
- For temperatures up to +392°F we recommend EARM-HT and EALM-HT ► **Page 766**

Dimensions [mm]

Part No.	Part No.	d1	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
Right thread	Left thread	[E10]								
EARM-05	EALM-05	5	19	M05	4.4	6	36	20	45.5	33°
EARM-06	EALM-06	6	21	M06	4.4	6	36	20	46.5	27°
EARM-08	EALM-08	8	24	M08	6.0	8	41	24	53.0	24°
EARM-10	EALM-10	10	29	M10	7.0	9	47.5	27	62.0	24°
EARM-10 F	EALM-10 F	10	29	M10 x 1.25	7.0	9	47.5	27	62.0	24°
EARM-12	EALM-12	12	34	M12	8.0	10	54	29	71.0	21°
EARM-12 F	EALM-12 F	12	34	M12 x 1.25	8.0	10	54	29	71.0	21°
EARM-15	EALM-15	15	40	M14	10.0	12	63	34	83.0	21°
EARM-17	EALM-17	17	46	M16	11.0	14	69	37	92.0	18°
EARM-17 F	EALM-17 F	17	46	M16 x 1.5	11.0	14	69	37	92.0	18°
EARM-20	EALM-20	20	53	M20 x 1.5	13.0	16	80	43	106.5	16°
EARM-20 M20	EALM-20 M20	20	53	M20 x 2.5	13.0	16	80	43	106.5	16°
EARM-25	EALM-25	25	64	M24 x 2.0	17.0	20	97	53	129.0	16°
EARM-30	EALM-30	30	73	M30 x 2.0	19.0	22	113	65	149.5	13°

► Tolerance Table, Page 75

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



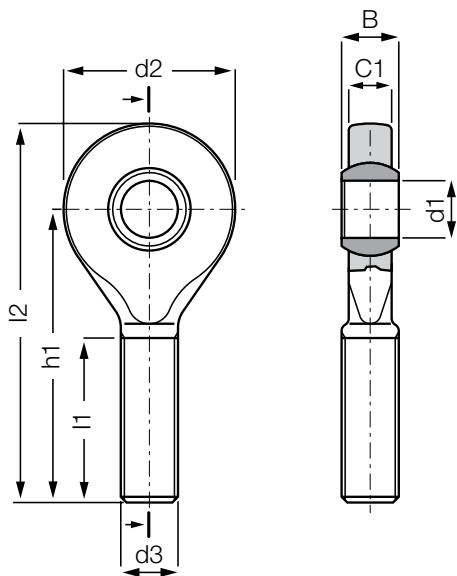
REM:
low-cost



J4EM: low-cost
and low moisture
absorption

igubal® Rod Ends - Product range

Rod ends with male thread: EARM and EALM



Order key

Type	Size
E A R M - 06	
Dimensional E series	
Housing (male thread)	
Right hand thread	
Metric	
	Inner-Ø [mm]



Material:

Housing - igumid G ► Page 1373
Spherical ball - iglide® L280 (W300)*
Available with metal sleeve
More spherical ball materials available on request ► Page 857

Technical data

Part No.	Part No.	Maximum static tensile strength		Maximum Static radial load		Min. Thread Depth	Max. torque strength Outer thread	Max. torque through Ball	Weight
		Short term	Long term	Short term	Long term				
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(mm)	(ft•lbs)	(ft•lbs)	[g]
EARM-05	EALM-05	123	61	11	5	14	.3	1.5	2.2
EARM-06	EALM-06	191	95	18	9	14	.4	1.8	2.7
EARM-08	EALM-08	359	179	33	16	17	1.5	5.2	5.1
EARM-10	EALM-10	584	292	56	28	19	3.7	10.3	8.4
EARM-10 F	EALM-10 F	584	292	56	28	19	2.2	10.3	8.4
EARM-12	EALM-12	674	337	67	33	20	4.4	18.4	14.3
EARM-12 F	EALM-12 F	674	337	67	33	20	4.4	18.4	14.3
EARM-15	EALM-15	1011	505	89	45	24	9.2	22.1	21.1
EARM-17	EALM-17	1124	562	112	56	26	12.9	25.8	30.2
EARM-17 F	EALM-17 F	1124	562	112	56	26	15.5	25.8	30.2
EARM-20	EALM-20	1461	730	134	67	30	22.1	29.5	57.3
EARM-20 M20	EALM-20 M20	1461	730	134	67	30	18.4	29.5	57.3
EARM-25	EALM-25	1910	955	179	89	37	33.2	40.6	94.8
EARM-30	EALM-30	2248	1124	224	112	46	62.7	51.6	156.4

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

Rod ends with male thread: EARM HT and EALM HT



- For temperatures up to +392 °F
- High strength under impact loads
- Very high tensile strength for varying loads
- Compensation of misalignment and edge loads
- Corrosion- and chemical-resistant
Chemical table ► **Page 1364**
- For underwater applications
- Suitable for rotating, oscillating and linear movements
- Lightweight
- Dimensional E series according to standard DIN ISO 12240

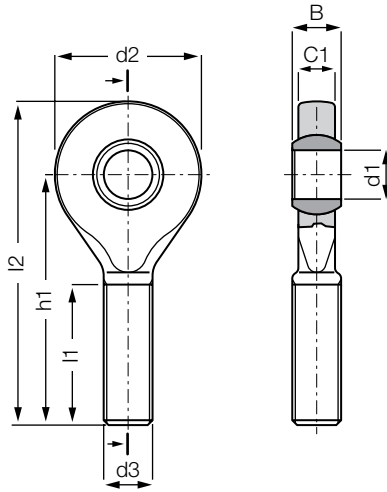
Dimensions [mm]

Part No.	Part No.	d1	d2	d3	C1	B	h1	l1	l2	Max. pivot angle
Right thread	Left thread	[E10]								
EARM-05 HT	EALM-05 HT	5	19	M05	4.4	6	36	20	45.5	33°
EARM-06 HT	EALM-06 HT	6	21	M06	4.4	6	36	20	46.5	27°
EARM-08 HT	EALM-08 HT	8	24	M08	6.0	8	41	24	53.0	24°
EARM-10 HT	EALM-10 HT	10	29	M10	7.0	9	47.5	27	62.0	24°
EARM-12 HT	EALM-12 HT	12	34	M12	8.0	10	54	29	71.0	21°

Other dimensions available upon request.

igubal® Rod Ends - Product range

Rod ends with male thread: EARM HT and EALM HT



Order key

Type	Size	Version
E A R M - 06	HT	
Dimensional K series	Housing (male thread)	Right hand thread
	Metric	Inner-Ø [mm]
		High temperature



Material:

Housing - iguton G ► Page 1373
Spherical ball - iglide® T500 (X)*

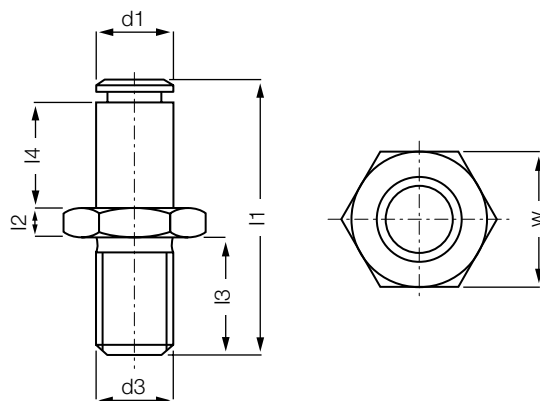
Technical data

Part No.	Part No.	Maximum static tensile strength		Maximum Static radial load		Min. Thread Depth	Max. torque strength Outer thread	Max. torque through Ball	Weight
		Short term	Long term	Short term	Long term				
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	(mm)	(ft•lbs)	(ft•lbs)	[g]
EARM-05-HT	EALM-05-HT	380	190	20	10	14	0.4	2.0	2.8
EARM-06-HT	EALM-06-HT	600	300	30	15	14	0.5	2.5	3.4
EARM-08-HT	EALM-08-HT	931	465	48	24	17	2.0	7.0	6.1
EARM-10-HT	EALM-10-HT	1,125	563	57	28	19	5.0	14.0	10.2
EARM-12-HT	EALM-12-HT	1,200	600	65	33	20	6.0	25.0	15.7

*X is the European material equivalent for iglide® T500.

igubal® Rod Ends - Product range

Rod end accessories: Adapter bolt PKRM and PKLM



Order key

Type	Size
P K ... M - 08	
Adapter bolt	
Dimensional K series	
Thread L = Left hand thread R = Right hand thread	
Metric	
Inner-Ø [mm]	

Solid plastic bolts with a hexagonal head are an accessory to the K series rod ends. The plain shank fits into the inside diameter of the spherical ball and is secured by a circlip. The igubal® adapter bolts consist of highly shock-resistant, long-fiber reinforced polymer **POM**. This component effectively transforms a standard K series rod end into a ball and socket joint.

- Lightweight
- Excellent corrosion resistance
- Designed for use with K series rod ends
- High strength under impact loads
- Vibration-dampening
- Easy to fit

Dimensions [mm]

Part No.	Part No.	d1	d3	l1	l2	l3	l4	SW
		h11	Connection thread	Total Length	Nut Width	Thread Length	Length Adjusting Bolt	Width across Flats
Right thread	Left thread	(mm)		(mm)	(mm)	(mm)	(mm)	
PKRM-05	PKLM-05	5	M05	25.0	2.7	11.3	8.5	SW 8
PKRM-06	PKLM-06	6	M06	28.0	3.2	12.8	9.5	SW 10
PKRM-08	PKLM-08	8	M08	32.0	4.0	12.5	12.5	SW 13
PKRM-10	PKLM-10	10	M10	37.5	5.0	14.5	14.5	SW 16
PKRM-12	PKLM-12	12	M12	42.0	6.0	15.5	16.5	SW 18
PKRM-14	PKLM-14	14	M14	47.0	7.0	15.5	19.5	SW 21
PKRM-16	PKLM-16	16	M16	52.0	8.0	16.5	22.0	SW 24
PKRM-18	PKLM-18	18	M18 x 1.5	59.0	9.0	20.5	24.0	SW 27
PKRM-20	PKLM-20	20	M20 x 1.5	67.0	10.0	25.0	26.0	SW 30

Technical data

Part No.	Part No.	Max. Static Tensile Strength		Max. Static Radial Load		Weight
		Short term	Long term	Short term	Long term	
Right thread	Left thread	[lbs]	[lbs]	[lbs]	[lbs]	[g]
PKRM-05	PKLM-05	22	11	45	22	0.7
PKRM-06	PKLM-06	33	17	56	28	1.2
PKRM-08	PKLM-08	56	28	90	45	2.6
PKRM-10	PKLM-10	112	56	135	67	4.0
PKRM-12	PKLM-12	157	79	202	101	7.5
PKRM-14	PKLM-14	179	90	247	124	11.4
PKRM-16	PKLM-16	202	101	314	157	16.9
PKRM-18	PKLM-18	179	90	382	191	16.9
PKRM-20	PKLM-20	112	56	494	247	34.4

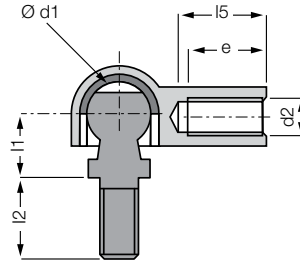
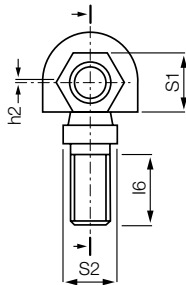
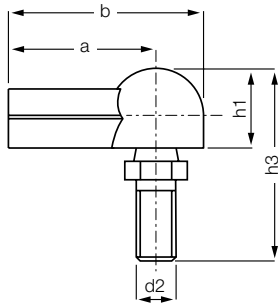
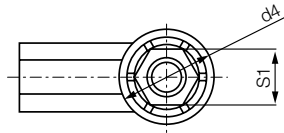
igubal® Rod Ends - Product range

igubal®
rod ends

Angled ball and socket - WGRM and WGLM



- Connection for rotating and pivoting movements
- Lightweight and robust
- Easy and quick assembly
- Vibration-dampening
- Resistant to dirt and dust
- Ball stud made of plastic or metal¹⁹⁾



Order key

Type	Size	Option
WG	M - 05	MS
Dimensional E series	Thread L = Left hand thread R = Right hand thread	Metric
	Inner-Ø [mm]	Metal stud Leave blank for standard plastic stud



Material:

Housing - igumid G ▶ Page 1373
Spherical cap - iglide® L280 (W300)*

Dimensions [mm]

Part No. Right thread	Part No. Left thread	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 ±0.5	S1	Max. pivot angle
WGRM-05	WGLM-05	8.0	M5	12.8	9.0	10.2	14.0	8.2	10.8	0.65	25.6	22.0	28.4	11.0	SW 8	25°
WGRM-06	WGLM-06	10.0	M6	14.8	11.0	12.5	16.0	10.5	12.3	0.70	30.9	25.0	32.4	13.0	SW 9	25°
WGRM-08	WGLM-08	13.0	M8	19.3	13.0	16.5	18.0	13.5	16.2	1.15	38.8	30.0	39.7	16.0	SW 12	25°
WGRM-10	WGLM-10	16.0	M10	24.0	16.0	20.0	20.0	16.0	20.0	1.15	47.0	35.0	47.0	18.0	SW 14	25°

Technical data

Part No. Right thread	Part No. Left thread	Max. axial tensile force ball stud axis		max. axial compressive force ball stud axis		max. axial tensile force housing axis		Max. axial tensile force in housing axis with metal ball stud		Weight [g]
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	
WGRM-05	WGLM-05	7	3	45	22	22	11	135	67	2.6
WGRM-06	WGLM-06	8	4	67	34	31	16	180	90	4.0
WGRM-08	WGLM-08	56	28	112	56	45	22	337	169	8.2
WGRM-10	WGLM-10	56	28	202	101	90	45	427	214	13.8

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

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

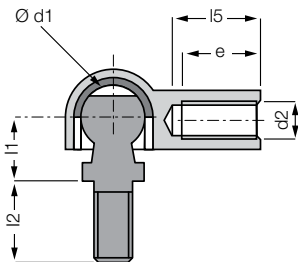
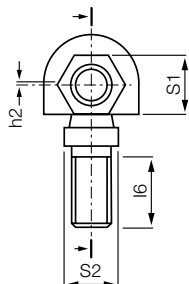
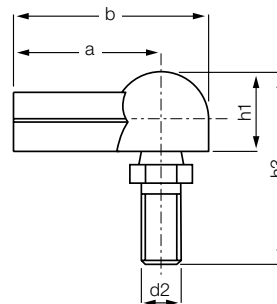
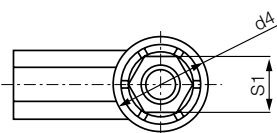


- Housing with ball stud
- Low weight
- Maintenance free
- Ball stud made of plastic or metal¹⁹⁾



Order key

Type	Size	Option
WG	M - 05	LC
Dimensional E series	Thread L = Left hand thread R = Right hand thread	Inner-Ø [mm] Low cost



Material:

Housing - igumid G ▶ Page 1373

Dimensions [mm]

Part No. Right thread	Part No. Left thread	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 ±0.5	S1	Max. pivot angle
WGRM-05 LC	WGLM-05 LC	8.0	M5	12.8	9.0	10.2	14.0	8.2	10.8	0.65	25.6	22.0	28.4	11.0	SW 8	25°
WGRM-06 LC	WGLM-06 LC	10.0	M6	14.8	11.0	12.5	16.0	10.5	12.3	0.70	30.9	25.0	32.4	13.0	SW 9	25°
WGRM-08 LC	WGLM-08 LC	13.0	M8	19.3	13.0	16.5	18.0	13.5	16.2	1.15	38.8	30.0	39.7	16.0	SW 12	25°
WGRM-10 LC	WGLM-10 LC	16.0	M10	24.0	16.0	20.0	20.0	16.0	20.0	1.15	47.0	35.0	47.0	18.0	SW 14	25°

¹⁹⁾ Metal stud option: MS = metal stud, only available with right-hand thread. Example: WGRM-05 LC MS

Technical data

Part No. Right thread	Part No. Left thread	Max. axial tensile force ball stud axis		max. axial compressive force ball stud axis		max. axial tensile force housing axis		Max. axial tensile force in housing axis with metal ball stud		Weight [g]
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	
WGRM-05 LC	WGLM-05 LC	7	3	45	22	22	11	135	67	2.6
WGRM-06 LC	WGLM-06 LC	8	4	67	34	31	16	180	90	4.0
WGRM-08 LC	WGLM-08 LC	56	28	112	56	45	22	337	169	8.2
WGRM-10 LC	WGLM-10 LC	56	28	202	101	90	45	427	214	13.8

igubal® Rod Ends - Product range

Ball joint, removable - WGRM DE and WGLM DE



- Cost-effective
- Very low weight
- Absolute corrosion-resistance
- Easy assembly (16.8 lbs) and disassembly
- High holding forces in the assembled condition (58.4 lbs)
- Ball stud made of plastic on request



Order key

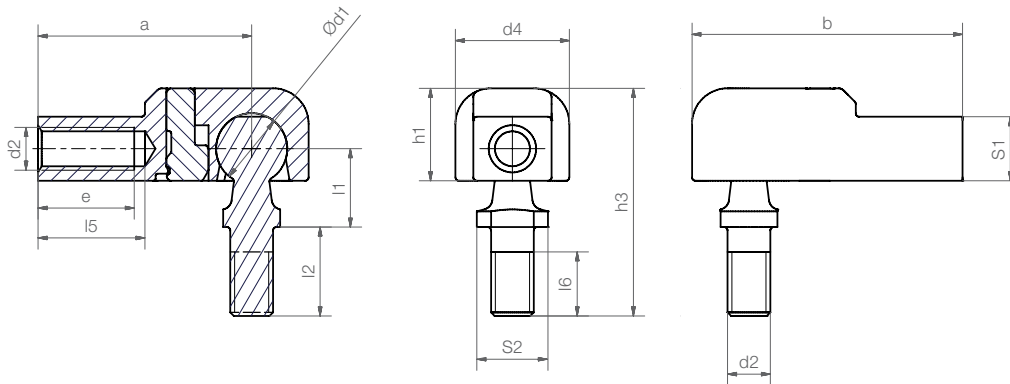
Type	Size	Option
WG	...	M - 05
Dimensional E series	Thread L = Left hand thread R = Right hand thread	LC
	Metric	
	Inner-Ø [mm]	
	Low cost	



Material:

Housing - igumid G ▶ Page 1373

Ball stud - galvanized steel²⁰⁾



Part No.	Assembly	Disassembly	d1	d2	d4	l1	l2	l5	Weight
Right-hand thread	force	force	+0.1	+0.5	+0.5	+0.2	+0.5		
Left-hand thread	[N]	[N]	-0.1	-0.5	-0.5	-0.2	-0.5	Min.	[g]
WGRM-05-DE	7.9	44.9	8.0	M5	12.8	9.0	10.2	13.0	3.4
WGLM-05-DE									
WGRM-06-DE	11.2	61.8	10.0	M6	16.0	11.0	12.5	14.5	5.5
WGLM-06-DE									

²⁰⁾ only available with right-hand thread

Part No.	l6	h1	h3	S1	S2	a	b	e	Pivot angle	
Right-hand thread		+0.4	+0.5			+0.3	+0.5	+0.5		
Left-hand thread	Min.	-0.4	-0.5			-0.3	-0.5	-0.5	Recommended	Maximum
WGRM-05-DE	8.2	10.8	25.6	SW9	SW7	25.0	31.4	11.0	18°	25°
WGLM-05-DE										
WGRM-06-DE	10.5	13.0	32.0	SW11	SW8	30.0	38.0	12.0	18°	25°
WGLM-06-DE										

igubal® Rod Ends - Product range

In-line ball and socket - AGRM and AGLM



- For all mechanical combinations
- Very easy hand assembly
- Maintenance free operation
- Corrosion-and chemical-resistant
- Good vibration-dampening qualities
- Ball stud made of plastic or metal¹⁹⁾



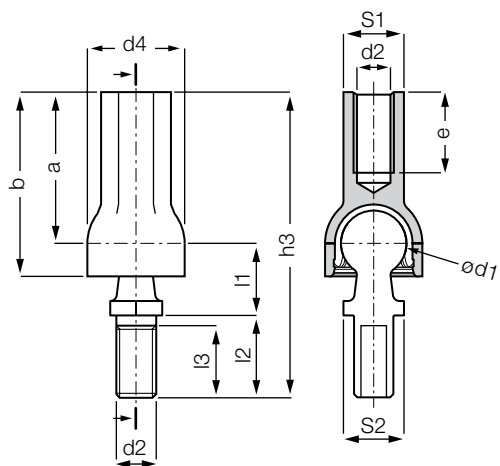
Order key

Type	Size
AG ... M - 08	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Metric	
Inner-Ø [mm]	



Material:

Housing - igumid G ▶ Page 1373
Spherical cap - iglide® L280 (W300)*



Dimensions [mm]

Part No.	Part No.	d1	d2	d4	l1	l2	l3	h3	S1	S2	a	b	e	Pivot angle		
Right thread	Left thread	+0.1 -0.1		+0.5 -0.5	+0.2 -0.2	+0.3 -0.3	Min.	+0.5 -0.5			+0.3 -0.3	+0.5 -0.5	Min.	Recommended	Maximum	
AGRM-08	AGLM-08	13.0	M8	19.3	13.0	16.5	13.5	59.0	SW12	SW11	29.5	36.5	16.0	18°	25°	

¹⁹⁾ Metal stud option: MS = metal stud, only available with right-hand thread. Example: WGRM-05 LC MS

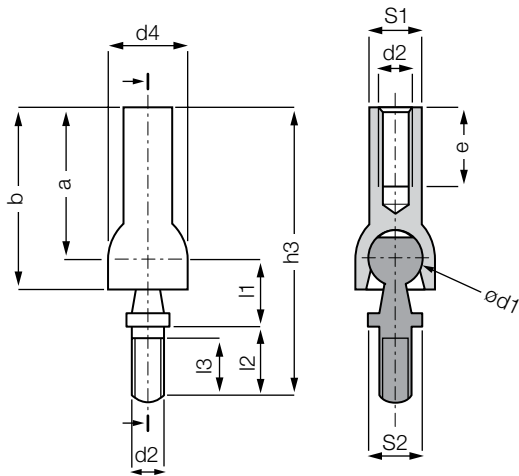
Technical data

Part No.		Max. axial tensile force		max. axial compressive force		Maximum assembling force	Weight
Right thread	Left thread	Short term	Long term	Short term	Long term		
		[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[g]
AGRM-08	AGLM-08	56	28	225	112	25	7.8

*W300 is the European material equivalent for iglide® L280.

igubal® Rod Ends - Product range

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



Order key

Type	Size	Option
AG	M - 06	LC
Dimensional E series	Thread L = Left hand thread R = Right hand thread	Inner-Ø [mm] Low cost



Material:

Housing - igumid G ▶ Page 1373

Dimensions [mm]

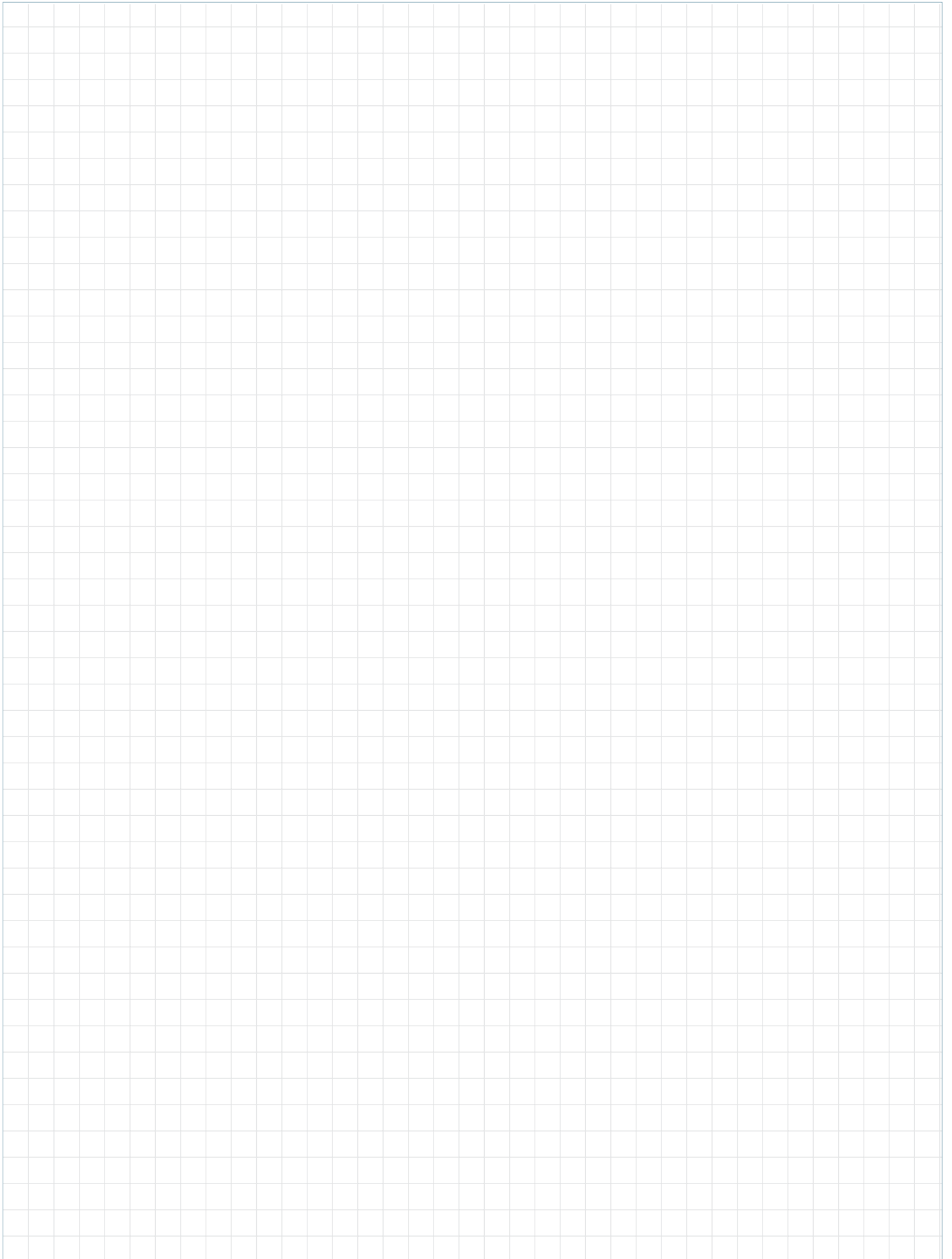
Part No.	Part No.	d1	d2	d4	l1	l2	l6	h3	S1	S2	a	b	e
Right thread	Left thread	± 0.1		± 0.5	± 0.2	± 0.3		± 0.3	± 0.5	Min.			
AGRM-08 LC	AGLM-08 LC	10.0	M6	14.8	11.0	11.3	7.3	47.3	SW9	10.0	25.0	29.9	13.0

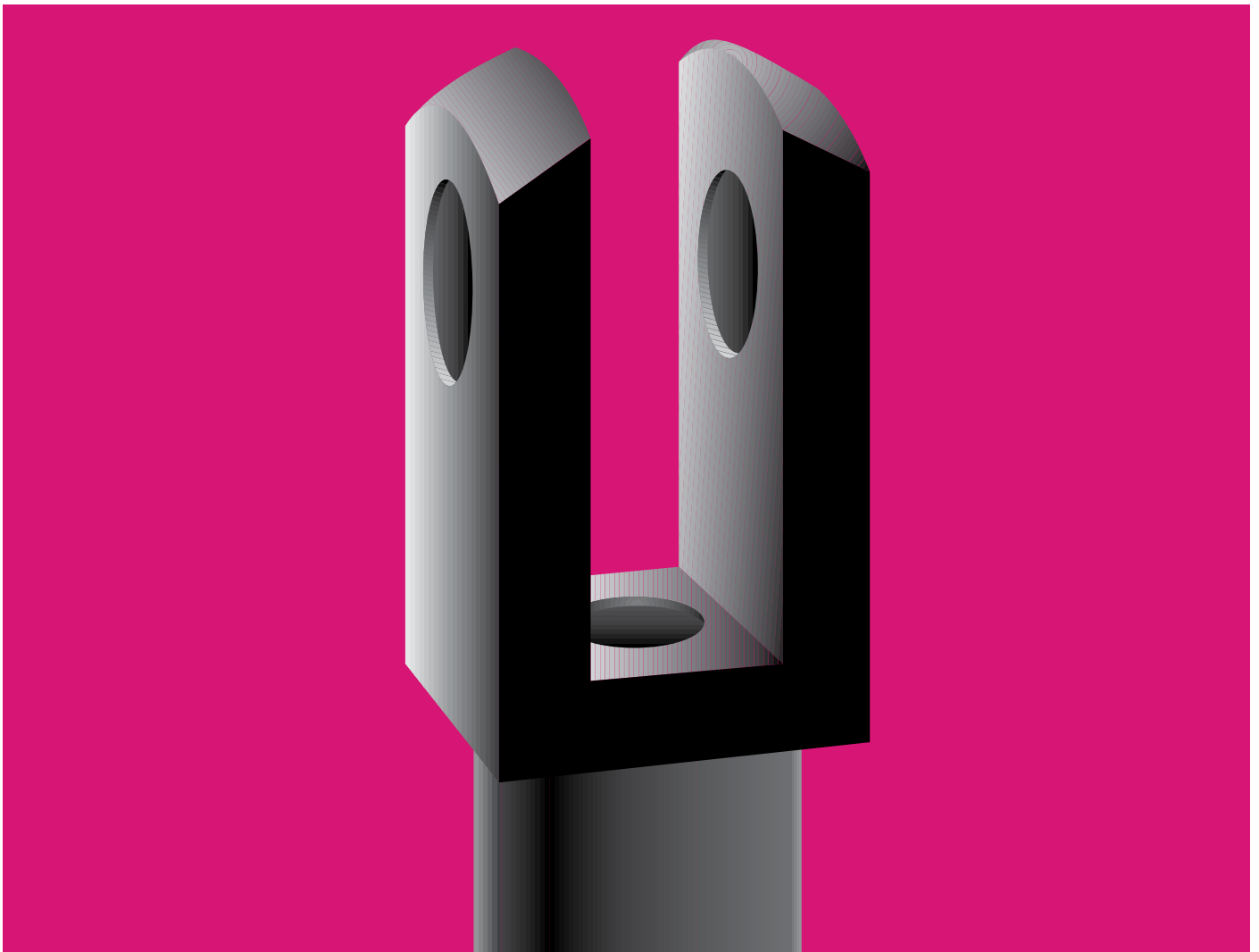
¹⁹⁾ Metal stud option: MS = metal stud, only available with right-hand thread. Example: WGRM-05 LC MS

Technical data

Part No.		Max. static axial tensile strength		max. static axial compressive strength		Weight	Pivot angle	
Right thread	Left thread	Short term	Long term	Short term	Long term	[g]	Recommended	Maximum
		[lbs]	[lbs]	[lbs]	[lbs]			
AGRM-08 LC	AGLM-08 LC	22	11	450	225	10.8	18°	25°

Notes



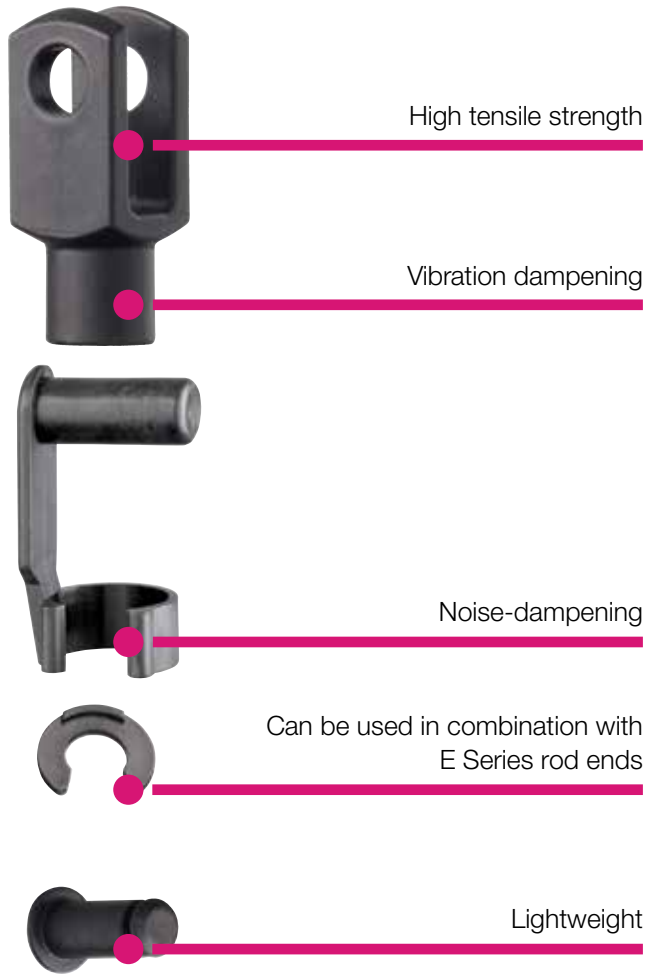


igubal[®] Clevis Joints

- High tensile strength
- Vibration dampening
- Noise dampening
- Can be used in combination with E series rod ends
- Lightweight

igubal® Clevis Joints

igubal® clevis joints are all made of igumid G to DIN 71752, which can be used in combination with E series rod ends. Available components are clevis joint, clevis pin and clip or as an alternative, spring-loaded pin.



When to use it?

- If high rigidity is required
- If corrosion resistance is required
- If no lubrication is to be used
- When lightweight options are required
- If maintenance free, dry-running is required
- If simple assembly is required
- In combination with pneumatic cylinders and gas struts



When not to use it?

- If temperatures are higher than +248°F
- If diameters above 1/2 inch or 20 mm are required



max. +248°F
min. -22°F



Ø 3/16 to 1/2 inch



4 types
Ø 4 to 20 mm



Available from stock

Detailed information about delivery time online.



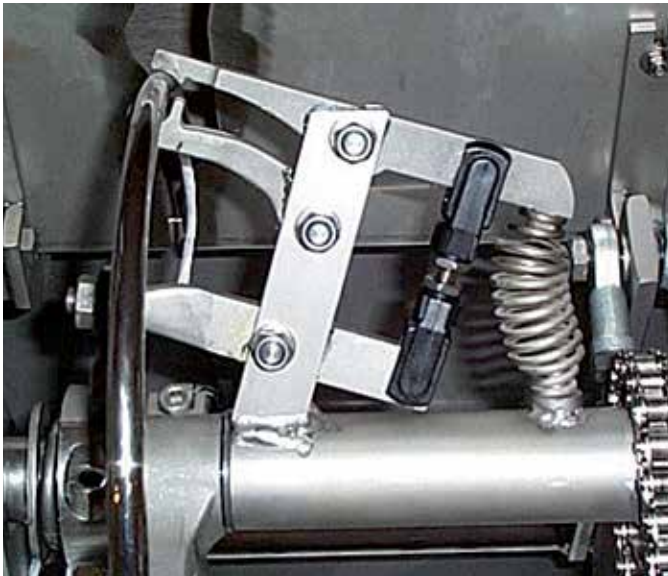
Price breaks online

No minimum order.



Typical application areas

- Food industry
- Packaging
- Heavy Duty
- Automotive
- Renewable energy
- Automation etc.



Food industry



Packaging industry



Traffic equipment



Pneumatic cylinder

General information

igubal® clevis joints are made of igumid G according to DIN 71752. The clevis joints are available in a variety of configurations. igubal® clevis joints can be used in difficult circumstances without any problems. The clevis joints are corrosion resistant in moist or wet environments and the sliding bearings are resistant to weak acids and alkalis. The operating temperatures range from -22°F to +248°F. igubal® clevis joints are made out of a high-wear resistant material which requires no lubrication.

Advantages

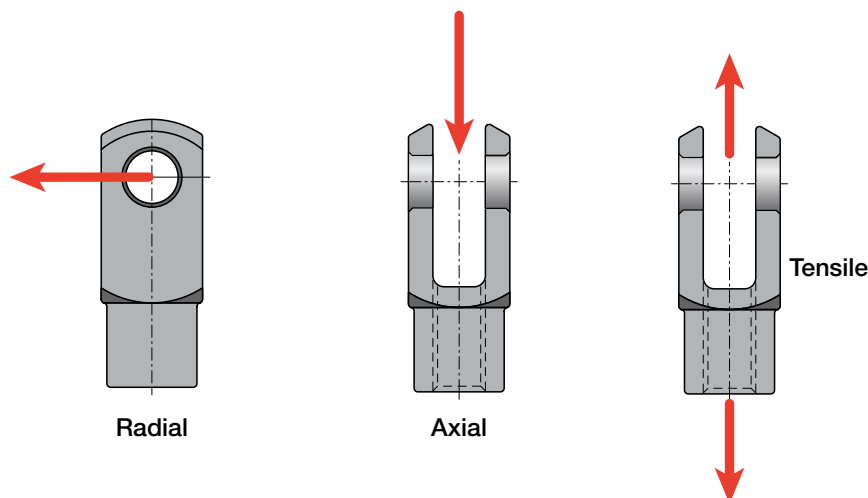
- Maintenance-free
- Self-lubricating
- High strength under impact loads
- Compensation for misalignment
- Compensation for edge loads
- Chemically resistant
- Vibration damping
- Suitable for rotating, oscillating and linear movements
- High radial loads
- Can be used in liquid media
- Space-saving design
- Easy to install
- Predictable lifetime

Chemical resistance

igubal® clevis joints are resistant to weak alkalis and weak acids, as well as to fuels and all types of lubricants. Please contact us if you have any questions about the resistance of our igubal® bearings.

Loads

The load-bearing capacity of the maintenance-free, polymer clevis joints is very high at normal ambient temperatures. They absorb high forces, possess very good vibration dampening properties and yet weigh only a fifth of conventional metallic bearing housings. However, plastic specific properties, such as dependence on temperature and behavior under long term stressing, must be taken into consideration when using the clevis joints. The load-bearing capacity of the clevis joints in individual cases should therefore be checked in a practical test, particularly if they are to be used under continuously high loads and at elevated temperatures.



igubal® – Clevis joint combinations



Clevis joints
with clevis pin
and circlip
E series
GERIK
GELIK

► Page 794



Clevis joints
with clevis pin
and circlip
E series
GERMK
GELMK

► Page 795



Clevis joints
with spring-loaded
fixing clip
E series
GERMF
GELMF

► Page 797



Combination,
easy to fit
E series
GERMKE
GELMKE

► Page 798



Combination,
easy to fit

E series
GERMFE
GELMFE

► Page 799

igubal® – Component parts



Clevis joint
E series
GERI
GELI

► Page 790



Clevis joint
E series
GERM
GELM

► Page 792



Spring-loaded
fixing clip
GEFM

► Page 796



Clevis pin and
Circlip
GBM
GSR

► Page 800

igubal® Clevis Joints - Product range

GERI and GELI - Clevis joint - inch



- Lightweight
- High strength under impact loads
- Corrosion resistance
- High tensile strength
- Can be used in combination with E series rod ends
- Vibration-dampening
- Noise-dampening
- Available in right- (GERI) and left-hand-thread (GELI)

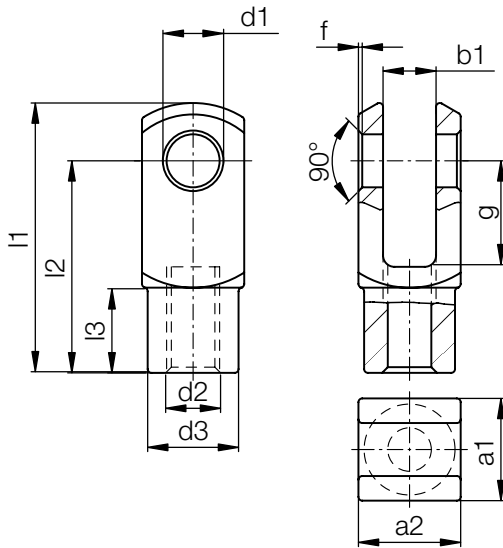
Dimensions [inch]

Part No.	Part No.	d1 H9	g h11	a1	a2 +0.3	b1	d2 Thread- Tolerance 6H	d3 +0.3	f +0.3	l1 +0.5	l2 +0.3	l3 +0.2
Right thread	Left thread				-0.16			-0.3	-0.3	-0.5	-0.3	-0.2
GERI-03	GELI-03	0.1875	0.394	0.394	0.394	0.197	10-32	0.354	.02	1.024	0.787	0.295
GERI-04	GELI-04	0.2500	0.472	0.472	0.472	0.236	1/4-28	0.394	.02	1.205	0.945	0.354
GERI-05	GELI-05	0.3125	0.630	0.630	0.630	0.315	5/16-24	0.551	.02	1.638	1.260	0.472
GERI-06	GELI-06	0.3750	0.787	0.787	0.787	0.394	3/8-24	0.709	.02	2.020	1.575	0.591
GERI-07	GELI-07	0.4375	0.945	0.945	0.945	0.472	7/16-20	0.787	.02	2.413	1.890	0.709
GERI-08	GELI-08	0.5000	1.102	1.063	1.063	0.551	1/2-20	0.945	.02	2.807	2.205	0.886

► Tolerance Table, Page 75

igubal® Clevis Joints - Product range

GERI and GELI - Clevis joint - inch



Order key

Type	Size
G E ... I - 08	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Inch	
	Inner-Ø [inch] Based on 1/16"



Material:
igumid G ▶ Page 1373

Technical data

Part No.	Part No.	Max. static Tensile Strength		Weight
		Short term	Long term	
Right thread	Left thread	[lbs]	[lbs]	[g]
GERI-03	GELI-03	225	112	1.6
GERI-04	GELI-04	270	135	2.9
GERI-05	GELI-05	607	303	6.1
GERI-06	GELI-06	1056	528	13.0
GERI-07	GELI-07	1281	640	16.5
GERI-08	GELI-08	719	360	20.8

▶ Tolerance Table, Page 75

igubal® Clevis Joints - Product range

GERM and GELM - Clevis joint - mm



- Lightweight
- High strength under impact loads
- Corrosion resistance
- High tensile strength
- Can be used in combination with E series rod ends
- Vibration-dampening
- Noise-dampening
- Available in right- (GERM) and left-hand-thread (GELM)

Dimensions [inch]

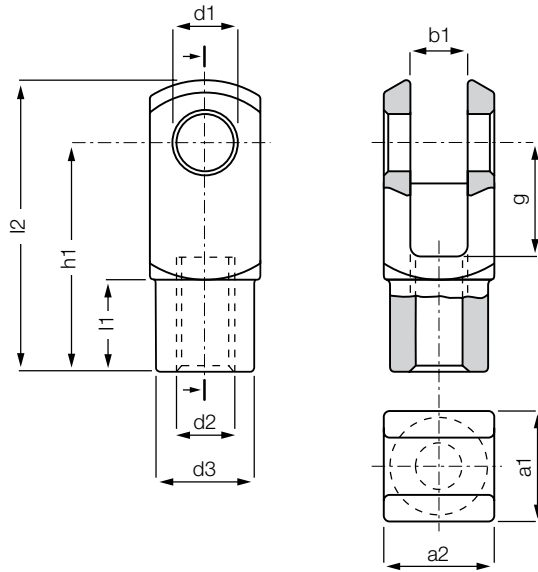
Part No. Right thread	Part No. Left thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1	d2 Thread- Tolerance 6H	d3 +0.3 -0.3	l2 +0.5 -0.5	h1 +0.3 -0.3	l1 +0.2 -0.
GERM-04 M3.5	GELM-04 M3.5	4	8	8	8	4	M3.5	8.0	21.0	16.0	6.0
GERM-04	GELM-04	4	8	8	8	4	M04	8.0	21.0	16.0	6.0
GERM-05 DIN M4	GELM-05 DIN M4	5	10	10	10	5	M04	9.0	24.5	20.0	7.5
GERM-05 DIN M5	GELM-05 DIN M5	5	10	10	10	5	M05	9.0	24.5	20.0	7.5
GERM-05	GELM-05	5	12	12	12	6	M05	10.0	31.0	24.0	9.0
GERM-05 DIN M5 LS ²²⁾	GELM-05 DIN M5 LS ²²⁾	5	20	10	10	5	M05	9.0	36.0	30.0	7.5
GERM-06	GELM-06	6	12	12	12	6	M06	10.0	31.0	24.0	9.0
GERM-06 LS ²²⁾	GELM-06 LS ²²⁾	6	24	12	12	6	M06	10.0	43.0	36.0	9.0
GERM-08	GELM-08	8	16	16	16	8	M08	14.0	42.0	32.0	12.0
GERM-10	GELM-10	10	20	20	20	10	M10	18.0	52.0	40.0	15.0
GERM-10 F	GELM-10 F	10	20	20	20	10	M10 x 1.25	18.0	51.3	40.0	15.0
GERM-12	GELM-12	12	24	24	24	12	M12	20.0	61.3	48.0	18.0
GERM-12 F	GELM-12 F	12	24	24	24	12	M12 x 1.25	20.0	61.3	48.0	18.0
GERM-14	GELM-14	14	28	27	27	14	M14	24.0	71.3	56.0	22.5
GERM-14 F	GELM-14 F	14	28	27	27	14	M14 x 1.5	24.0	71.3	56.0	22.5
GERM-15	GELM-15	15	28	27	27	14	M14	24.0	71.3	56.0	22.5
GERM-16	GELM-16	16	32	32	32	16	M16	26.0	81.9	64.0	24.0
GERM-16 F	GELM-16 F	16	32	32	32	16	M16 x 1.5	26.0	81.9	64.0	24.0
GERM-17	GELM-17	17	32	32	32	16	M16	26.0	83.0	64.0	24.0
GERM-17 F	GELM-17 F	17	32	32	32	16	M16 x 1.5	26.0	83.0	64.0	24.0
GERM-20	GELM-20	20	40	40	40	20	M20 x 1.5	34.0	105.0	80.0	30.0
GERM-20 M20	GELM-20 M20	20	40	40	40	20	M20 x 2.5	34.0	105.0	80.0	30.0

²²⁾ LS = longer shank

► Tolerance Table, Page 75

igubal® Clevis Joints - Product range

GERM and GELM - Clevis joint - mm



Order key

Type	Size
G E ... M - 08	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Metric	
	Inner-Ø [mm]



Material:
igumid G ► Page 1373

Technical data

Part No.	Part No.	Max. static Tensile Strength		Max. static Radial Load		Max. torque strength [ft•lbs]	Weight [g]
		Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]		
Right thread	Left thread						
GERM-04 M3.5	GELM-04 M3.5	146	73	56	28	0.3	0.9
GERM-04	GELM-04	179	90	56	28	0.3	0.9
GERM-05 DIN M4	GELM-05 DIN M4	225	112	56	28	0.3	1.5
GERM-05 DIN M5	GELM-05 DIN M5	225	112	56	28	0.4	1.5
GERM-05	GELM-05	270	135	56	28	0.4	2.7
GERM-05 DIN M5 LS ²²⁾	GELM-05 DIN M5 LS ²²⁾	225	112	29	15	0.4	2.3
GERM-06	GELM-06	315	157	67	34	1.1	2.5
GERM-06 LS ²²⁾	GELM-06 LS ²²⁾	315	157	29	15	1.1	3.6
GERM-08	GELM-08	607	303	146	73	3.7	6.3
GERM-10	GELM-10	1057	528	180	90	11.1	13.2
GERM-10 F	GELM-10 F	1057	528	180	90	4.4	13.2
GERM-12	GELM-12	1281	640	202	101	14.8	20.2
GERM-12 F	GELM-12 F	1281	640	202	101	11.1	20.2
GERM-14	GELM-14	1484	741	225	112	18.4	29.9
GERM-14 F	GELM-14 F	1484	742	225	112	14.8	29.9
GERM-15	GELM-15	719	360	225	112	18.4	30
GERM-16	GELM-16	1686	843	270	135	22.1	49.9
GERM-16 F	GELM-16 F	1686	843	270	135	20.3	49.9
GERM-17	GELM-17	809	405	270	135	22.1	50
GERM-17 F	GELM-17 F	809	405	270	135	20.3	50
GERM-20	GELM-20	2136	1068	674	337	44.3	105
GERM-20 M20	GELM-20 M20	2136	1068	674	337	59.0	105

²²⁾ LS = longer shank

► Tolerance Table, Page 75

igubal® Clevis Joints - Product range

GERIK and GELIK - Clevis joint with pin and circlip - inch



- Lightweight
- Corrosion resistance
- High tensile strength
- Can be used in combination with E series rod ends



Order key

Type	Size
G E ... I K - 04	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
inch	
Clevis pin and circlip	
Inner-Ø [inch] Based on 1/16"	



Material:
igumid G ► Page 1373

Technical data

Part No.	Part No.	Max. static Tensile Strength		Weight
		Short term	Long term	
Right thread	Left thread	[lbs]	[lbs]	[g]
GERIK-03	GELIK-03	180	90	2.0
GERIK-04	GELIK-04	202	101	3.5
GERIK-05	GELIK-05	472	236	7.7
GERIK-06	GELIK-06	674	404	16.0
GERIK-07	GELIK-07	787	393	21.4
GERIK-08	GELIK-08	629	315	26.3

► Tolerance Table, Page 75



Single components: clevis pin
GBI and Circlip GSR
► Page 800

igubal® Clevis Joints - Product range

GERMK and GELMK - Clevis joint with pin and circlip - mm



- Lightweight
- Corrosion resistance
- High tensile strength
- Can be used in combination with E series rod ends



Order key

Type	Size
G E ... M K - 04	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Metric	
Clevis pin and circlip	
	Inner-Ø [mm]



Material:
igumid G ► Page 1373

Technical data

Part No. Right thread	Part No. Left thread	Max. static Tensile Strength		Max. static Radial Load		Weight [g]
		Short term	Long term	Short term	Long term	
		[lbs]	[lbs]	[lbs]	[lbs]	
GERMK-04 M3.5	GELMK-04 M3.5	112	56	56	28	1.3
GERMK-04	GELMK-04	112	56	56	28	1.3
GERMK-05 DIN M4	GELMK-05 DIN M4	180	90	56	28	2.1
GERMK-05 DIN M5	GELMK-05 DIN M5	180	90	56	28	2.1
GERMK-05	GELMK-05	202	101	56	28	3.3
GERMK-05 DIN M5 LS ²²⁾	GELMK-05 DIN M5 LS ²²⁾	180	90	29	15	2.9
GERMK-06	GELMK-06	292	146	67	33	3.3
GERMK-06 LS ²²⁾	GELMK-06 LS ²²⁾	292	146	29	15	4.4
GERMK-08	GELMK-08	472	236	146	73	7.9
GERMK-10	GELMK-10	674	337	180	90	16.4
GERMK-10 F	GELMK-10 F	674	337	180	90	16.4
GERMK-12	GELMK-12	787	393	202	101	25.3
GERMK-12 F	GELMK-12 F	787	393	202	101	25.3
GERMK-14	GELMK-14	1371	685	224	112	31.2
GERMK-15	GELMK-15	629	315	224	112	38.9
GERMK-16	GELMK-16	1573	786	270	135	60.8
GERMK-16 F	GELMK-16 F	1573	786	270	135	60.8
GERMK-17	GELMK-17	809	405	270	135	62.3
GERMK-17 F	GELMK-17 F	809	405	270	135	62.3
GERMK-20	GELMK-20	2023	1012	674	337	125.2
GERMK-20 M20	GELMK-20 M20	2023	1012	674	337	125.2

► Tolerance Table, Page 75

²²⁾ LS = longer shank



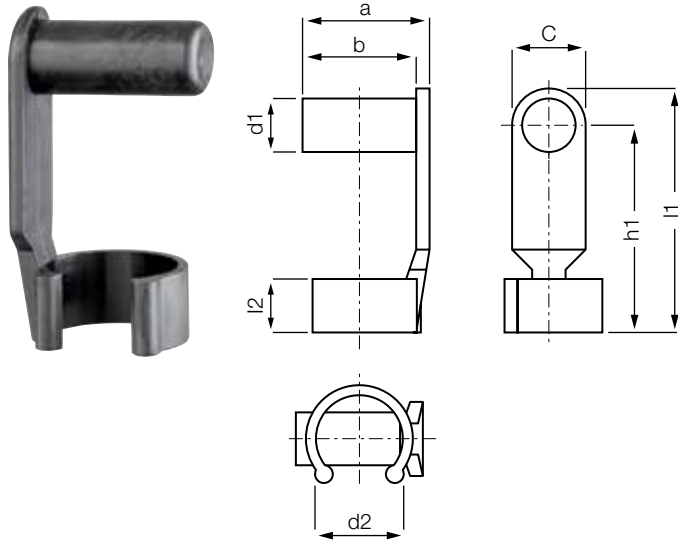
Single components: clevis pin

GBM and Circlip GSR

► Page 800

igubal® Clevis Joints - Product range

GEFM - Spring loaded pin



Material:
igumid G ► Page 1373

Dimensions [mm]

Part No.	d1 h11	d2	a	b	C	l1 ±0.5	h1	l2	Weight [g]
GEFM-04	4	8	9.5	10.5	8	19	15	4.5	0.5
GEFM-05 DIN	5	9	12	13.5	8	23	19	5.5	0.8
GEFM-05 DIN M5 LS ²²⁾	5	9	12	13.5	8	33	29	5.5	1.0
GEFM-05	5	10	14	15.5	8	27	23	6.5	1.1
GEFM-06 LS ²²⁾	6	10	14	15.5	8	39	35	6.5	1.0
GEFM-06	6	10	14	15.5	8	27	23	6.5	1.2
GEFM-08	8	14	19	21.0	11	35.5	30	8.0	2.8
GEFM-10	10	18	23	25.5	14	45	38	10.0	5.0
GEFM-12	12	20	28	31.0	16	53	45	12.0	8.3
GEFM-16	16	26	36	40.0	22	73	62	16.0	18.3

²²⁾ LS = longer shank

igubal® Clevis Joints - Product range

GERMF AND GELMF - Clevis joint with spring loaded pin



Order key

Type	Size
G E ... M F - 04	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Metric	
Spring loaded pin	
	Inner-Ø [mm]



Material:

igumid G ► Page 1373

- Single piece design
- Easy to assemble
- Easy assembly also in hard to reach locations
- Can be used in combination with E series rod ends
- Corrosion-resistant and lightweight

Technical data

Part No.	Right thread	Left thread	Max. static tensile strength		Max. static radial load		Weight
			Short term	Long term	Short term	Long term	
			[lbs]	[lbs]	[lbs]	[lbs]	[g]
GERMF-04 M3.5		GELMF-04 M3.5	112	56	56	28	1.3
GERMF-04		GELMF-04	112	56	56	28	1.3
GERMF-05 DIN M4		GELMF-05 DIN M4	180	90	56	28	2.3
GERMF-05 DIN M5		GELMF-05 DIN M5	180	90	56	28	2.3
GERMF-05 DIN M5 LS ²²⁾		GELMF-05 DIN M5 LS ²²⁾	180	90	56	28	2.3
GERMF-05		GELMF-05	202	101	56	28	3.8
GERMF-06		GELMF-06	292	146	67	34	3.9
GERMF-06 LS ²²⁾		GELMF-06 LS ²²⁾	292	146	29	15	3.9
GERMF-08		GELMF-08	472	236	146	73	9.1
GERMF-10		GELMF-10	674	337	180	90	18.2
GERMF-10 F		GELMF-10 F	674	337	180	90	18.2
GERMF-12		GELMF-12	787	393	202	101	28.6
GERMF-12 F		GELMF-12 F	787	393	202	101	28.6
GERMF-16		GELMF-16	1574	787	270	135	61.8
GERMF-16 F		GELMF-16 F	1574	787	270	135	61.8

²²⁾ LS = longer shank

igubal® Clevis Joints - Product range

GERMKE and GELMKE - Clevis joint with rod end and spring loaded pin



- Lightweight
- Corrosion resistance
- High tensile strength
- Can be used in combination with E series rod ends



Order key

Type Size

G E ... M K E - 05

Clevis joint	Dimensional E series	Thread L = Left hand thread R = Right hand thread	Metric	Clevis pin, circlip and rod end	Inner-Ø [mm]
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Material:
igumid G ► Page 1373

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Weight		
		Right thread	Left thread	Short term	Long term		Short term	Long term
				[lbs]	[lbs]	[lbs]	[lbs]	[g]
GERMKE-05	GELMKE-05			202	101	34	17	6.4
GERMKE-06	GELMKE-06			292	146	45	22	7.3
GERMKE-08	GELMKE-08			450	225	101	51	14.6
GERMKE-10	GELMKE-10			517	259	112	56	27.1
GERMKE-10 F	GELMKE-10 F			517	259	112	56	27.1
GERMKE-12	GELMKE-12			742	371	124	62	42.7
GERMKE-12 F	GELMKE-12 F			742	371	124	62	42.7
GERMKE-15	GELMKE-15			630	315	180	90	68.4
GERMKE-16	GELMKE-16			1124	562	191	96	86.9
GERMKE-16 F	GELMKE-16 F			1124	562	191	96	86.9
GERMKE-17	GELMKE-17			809	405	247	124	98.3
GERMKE-17 F	GELMKE-17 F			809	405	247	124	98.3
GERMKE-20	GELMKE-20			1619	809	405	202	175.2
GERMKE-20 M20	GELMKE-20 M20			1619	809	405	202	175.2

Clevis joints with spring-loaded fixing clip can be used in combination with E series rod ends
EBRM and EARM ► Page 764

igubal® Clevis Joints - Product range

GERMFE and GELMFE - Clevis joint with rod end and spring loaded pin



Order key

Type	Size
G E ... M F E - 05	
Clevis joint	
Dimensional E series	
Thread L = Left hand thread R = Right hand thread	
Metric	
Spring loaded pin and rod end	
	Inner-Ø [mm]



Material:
igumid G ► Page 1373

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Weight
Right thread	Left thread	Short term	Long term	Short term	Long term	
		[lbs]	[lbs]	[lbs]	[lbs]	[g]
GERMFE-05	GELMFE-05	202	101	34	17	7.0
GERMFE-06	GELMFE-06	292	146	45	22	7.9
GERMFE-08	GELMFE-08	450	225	101	51	15.9
GERMFE-10	GELMFE-10	517	259	112	56	29.2
GERMFE-10 F	GELMFE-10 F	517	259	112	56	29.2
GERMFE-12	GELMFE-12	742	371	124	62	46.0
GERMFE-12 F	GELMFE-12 F	742	371	124	62	46.0
GERMFE-16	GELMFE-16	1124	562	191	96	94.4
GERMFE-16 F	GELMFE-16 F	1124	562	191	96	94.4

Clevis joints with spring-loaded fixing clip can be used in combination with E series rod ends
EBRM and EARM ► Page 764

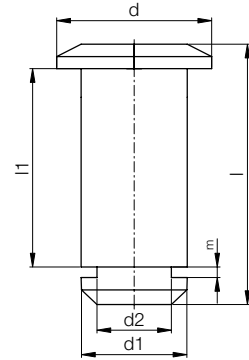
igubal® Clevis Joints - Product range

GBI and GBM - Clevis pin inch and mm



Dimensions (inch)

Part Number Pin	d1	d2	d	l	l1	m	Clip	Weight
GBI-03	.1875	.1260	.3125	.55	.3975	.0472	GSR-04	0.4
GBI-04	.2500	.1969	.3750	.65	.4764	.0512	GSR-08	0.5
GBI-05	.3125	.1969	.4375	.85	.6339	.0512	GSR-08	1.5
GBI-06	.3750	.2756	.5000	1.05	.7953	.0591	GSR-10	2.8
GBI-07	.4375	.3543	.6250	1.25	.9528	.0669	GSR-12	4.6
GBI-08	.5000	.3543	.7500	1.40	1.0709	.0669	GSR-12	5.2

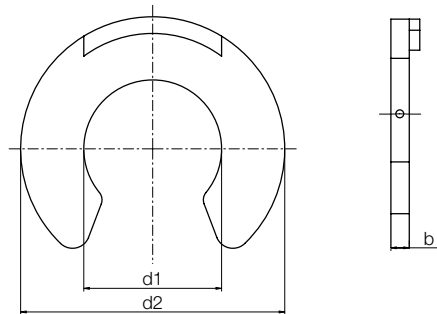


Material:
igumid G ▶ Page 1373

Dimensions (mm)

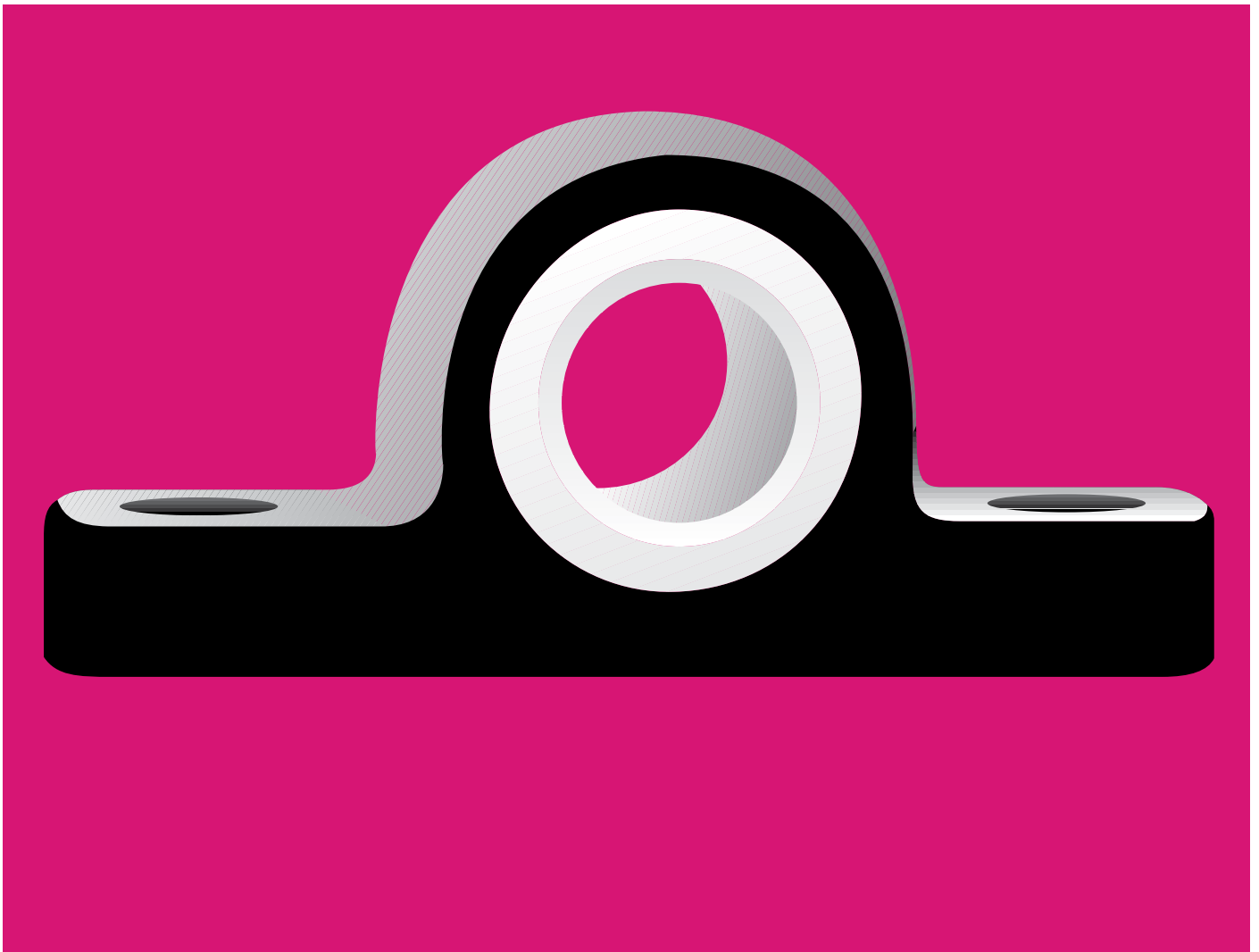
Part Number Pin	d1	d2	d	l	l1	m	Clip	Weight
GBM-04	4	3.2	7	12.50	8	1.05	GSR-04	0.3
GBM-05	5	4.0	8	16.50	12	1.15	GSR-06	0.5
GBM-05 DIN	5	4.0	8	14.50	10	1.15	GSR-06	0.5
GBM-06	6	4.0	9	16.50	12	1.15	GSR-06	0.7
GBM-08	8	5.0	12	21.50	16	1.15	GSR-08	1.5
GBM-10	10	7.0	15	27.00	20	1.35	GSR-10	3.0
GBM-12	12	9.0	18	31.50	24	1.50	GSR-12	4.8
GBM-14	14	12.0	22	36.00	27	1.70	GSR-16	5.7
GBM-15	15	12.0	23	36.00	27	1.70	GSR-16	8.3
GBM-16	16	12.0	24	42.00	32	1.70	GSR-16	10.4
GBM-17	17	12.0	25	42.00	32	1.70	GSR-16	12.3
GBM-20	20	15.0	30	51.00	40	2.00	GSR-20	19.2

GSR - Circlip - mm



Dimensions (mm)

Part Number	d1	d2	b	Weight
GSR-04	3.20	7.0	1.00	0.05
GSR-06	4.00	9.0	1.10	0.06
GSR-08	5.00	11.0	1.10	0.12
GSR-10	7.00	14.0	1.30	0.16
GSR-12	9.00	18.5	1.40	0.31
GSR-16	12.00	23.0	1.60	0.58
GSR-20	15.00	28.0	1.90	0.96

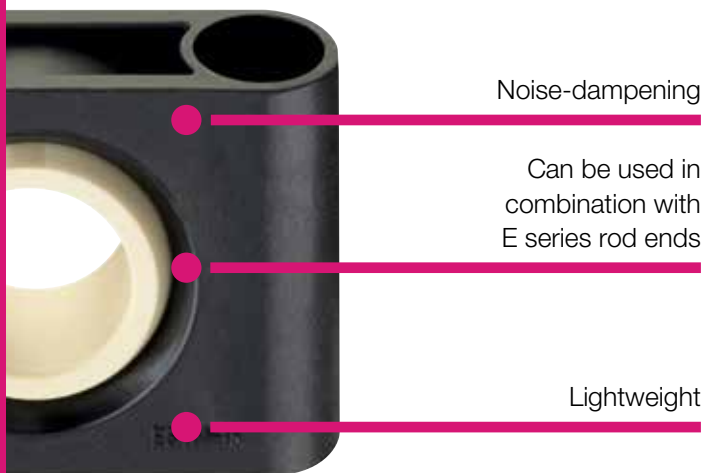
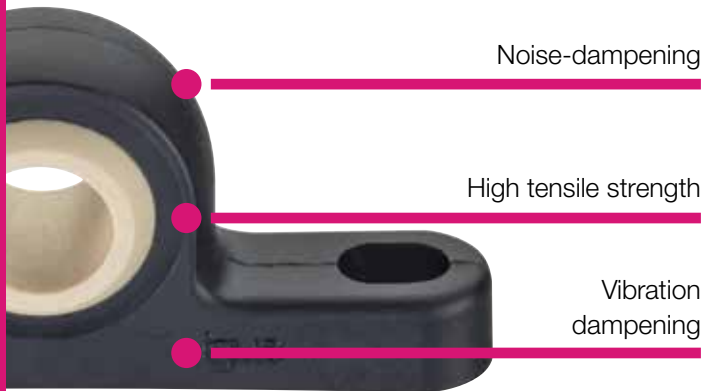


igubal[®] Pillow Block

- Maintenance-free, dry running
- High tensile strength
- High endurance strength
- Can be used in combination with E series rod ends
- Lightweight

igubal® Pillow Block

The igubal® pillow block bearings consist of a housing with a bearing insert. igubal® pillow block bearings are especially easy to install, able to compensate for misalignment and prevent edge loads.




When to use it?


- If chemical resistance is required
- If a cost-effective option is requested
- If you need dirt-resistant bearings
- To account for misalignment
- If you need split components





When not to use it?


- If temperatures are higher than +176°F
- If an integrated fixing collar is required
- If diameters above 1 inch or 50 mm are required
- If rotation speeds higher than 98.4 fpm (0.5 m/s) are required

 max. +176°F
min. -22°F

 inch Ø 3/16 to 1 inch

 mm 4 types
Ø 5 to 50 mm

 Available from stock
Detailed information about delivery time online.

 Price breaks online
No minimum order.



Typical application areas

- Plant design
- Machine building
- Packaging etc.



Stone processing



Solar technology



Paper industry



Packaging industry

General information

igubal® pillow blocks are made of igumid G according to DIN 71752. The pillow blocks are available in a variety of configurations. igubal® pillow blocks can be used in difficult circumstances without any problems. The pillow blocks are corrosion resistant in moist or wet environments and the sliding bearings are resistant to weak acids and alkalis. The operating temperatures range from -22°F to +176°F. igubal® pillow blocks are made out of a high-wear resistant material which requires no external lubrication.

Advantages

- Maintenance-free, self-lubricating
- High rigidity
- High strength under impact loads
- Compensation for misalignment
- Compensation for edge loads
- Corrosion-free
- Chemically resistant
- Vibration damping
- Suitable for rotating, oscillating and linear movements
- Lightweight
- High radial loads
- Can be used in liquid media
- Space-saving design
- Easy to install
- Predictable lifetime

Chemical resistance

The ability to pivot allows igubal® pillow block bearings to compensate for misalignment and possible shaft deflection. Applications where these effects cannot be prevented are suited for igubal pillow block bearings.

Tolerances

Maintenance-free igubal® pillow block bearings are designed with inside diameter tolerance of E10. The shaft should be made to tolerance class h6 to h9. These recommended tolerances allow for changes in the bearing due to temperature and moisture absorption.

► Tolerance Table, Page 75

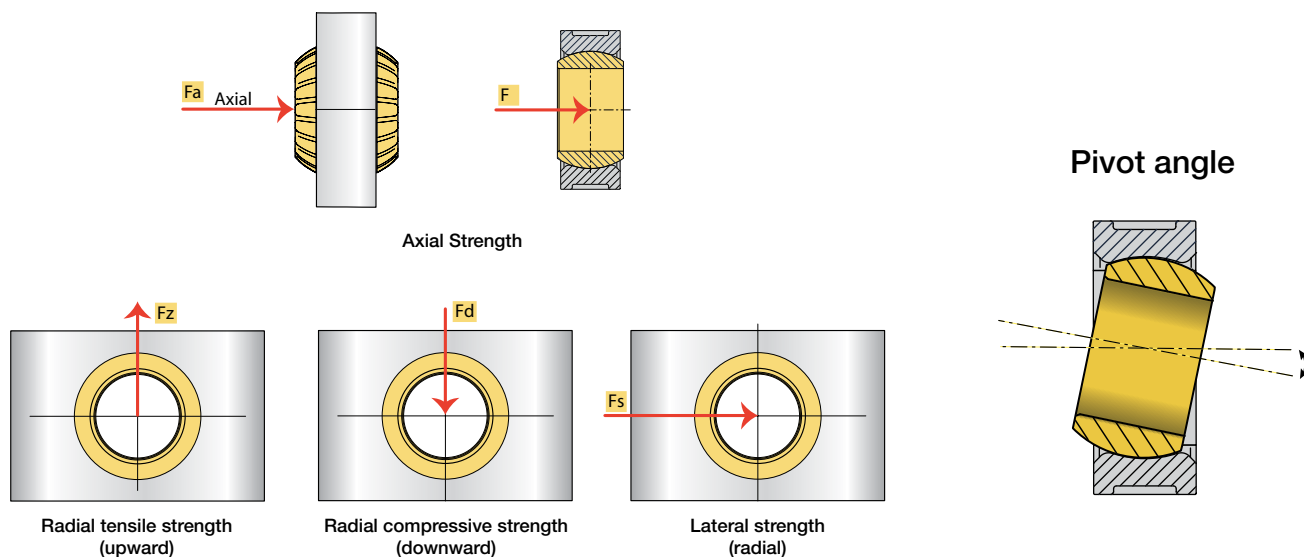
Mounting

igubal® pillow block bearings are designed for mounting with 2 bolts. Precision mounting of the bearing is not necessary, since the spherical ball compensates for misalignment.

Loads

The load capacity of the maintenance-free igubal® bearing elements is very high at normal ambient temperatures. igubal® bearings absorb high forces and weigh only one fifth of traditional, metal bearing housings. The excellent dampening properties are based on the fact that the polymer material of the two part bearing can absorb vibrations differently than steel.

However, plastic specific properties, such as dependence on temperature and behavior under long-term stress, must be taken into consideration when using igubal® bearings. The load capacity of the pillow block should therefore be checked in a practical test, particularly if it will be used under continuous high loads and at elevated temperatures.



igubal® pillow block bearings – Standard design



Compensation of misalignment errors

Inch dimensions
K series
KSTI

► Page 806



Compensation of misalignment errors,

K series
KSTM

► Page 808

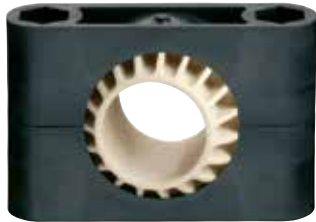


Adapter for dimensional E series

AD-01-ESTM

► Page 816

igubal® pillow block bearings – For small spaces



Easy to disassemble, split housing and ball

K series
KSTM-GT

► Page 810



Easy to fit

E series
ESTM

► Page 811



For quick assembly and low moisture absorption

E series
ESTM-GT...-GT

► Page 812



Split housing with parallel bore

E series
ESTM-GT

► Page 813



For diameters up to 150 mm

E series
ESTM-GT150

► Page 814



Extremely light, compact design

E series
ESTM-SL

► Page 815

igubal® Pillow Block - Product range

KSTI - Pillow block bearing - inch



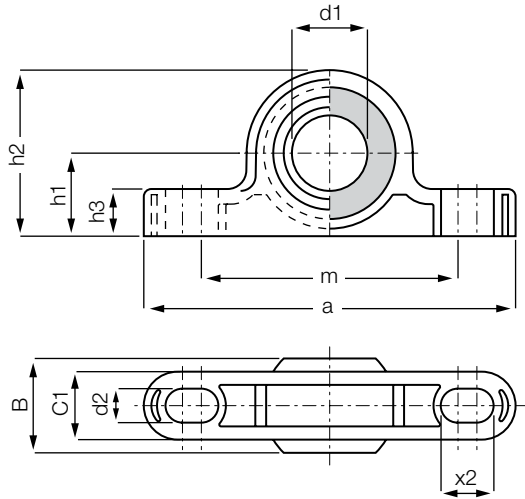
- Maintenance free, dry-running
- High rigidity
- High strength under impact loads
- Compensation of misalignment and edge loads
- Corrosion- and chemical-resistant
- High vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight

Dimensions [mm]

Part No.	d1 [E10]	B	C1	h1	h2	m	a	h3	d2	X2	Max. pivot angle
KSTI-03	.1875	.312	.234	.290	.566	1.00	1.40	.165	.137	.200	25°
KSTI-04	.2500	.375	.250	.390	.705	1.25	1.75	.205	.137	.250	25°
KSTI-05	.3125	.437	.312	.430	.824	1.35	1.95	.236	.150	.280	25°
KSTI-06	.3750	.500	.359	.550	1.022	1.80	2.40	.376	.180	.300	22°
KSTI-07	.4375	.562	.406	.570	1.082	1.85	2.50	.315	.205	.330	22°
KSTI-08	.5000	.625	.453	.600	1.191	2.00	2.80	.354	.205	.380	22°
KSTI-10	.6250	.750	.484	.700	1.409	2.30	3.35	.413	.205	.470	22°
KSTI-12	.7500	.875	.593	.860	1.687	2.70	3.75	.472	.270	.530	22°
KSTI-16	1.00	1.375	1.005	1.10	2.163	3.50	5.00	.630	.520	.680	20°

igubal® Pillow Block - Product range

KSTI - Pillow block bearing - inch



Order key

Type Size

K ST I - 05

Dimensional K series	Pillow block bearing	Inch	Inner-Ø [inch] Based on 1/16"
----------------------	----------------------	------	----------------------------------



Material:

Housing: igumid G ► Page 1373
Spherical ball: iglide® L280 (W300)*

Technical data

Part No.	Max. static tensile strength		Max. axial static compressive strength	Max. torque for longitudinal holes	Weight
	Short term	Long term			
	[lbs]	[lbs]	[lbs]	[ft lbs]	[g]
KSTI-03	124	62	68	0.4	1.7
KSTI-04	135	67	68	0.4	2.8
KSTI-05	180	90	90	0.6	4.5
KSTI-06	225	112	112	1.0	7.5
KSTI-07	247	124	135	1.8	9.7
KSTI-08	270	135	135	1.8	13.5
KSTI-10	472	236	180	1.8	21.5
KSTI-12	697	348	270	3.3	33.4
KSTI-16	1214	607	360	7.7	85.8

The maximum torques for longitudinal holes correspond to the permissible torque of the fixing screws (fixing category 5.8).

*W300 is the European material equivalent for iglide® L280.

igubal® Pillow Block - Product range

KSTM - Pillow block bearing - mm



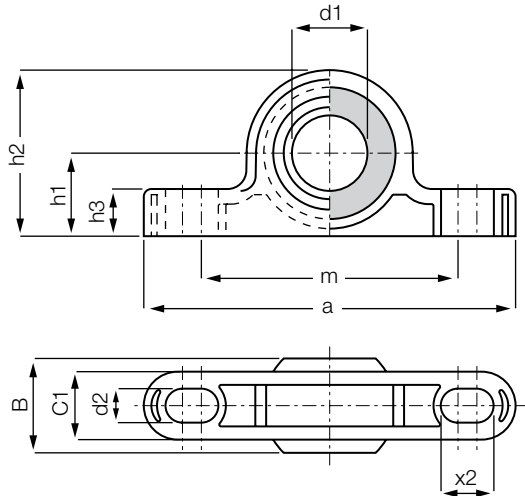
- Maintenance free, dry-running
- High rigidity
- High strength under impact loads
- Compensation of misalignment and edge loads
- Corrosion- and chemical-resistant
- High vibration-dampening
- Suitable for rotating, oscillating and linear movements
- Lightweight

Dimensions [mm]

Part No.	d1 [E10]	B	C1	h1	h2	m	a	h3	d2	X2	Max. pivot angle
KSTM-05	5	8	6.0	7	14	25	34	4	3.3	4.6	30°
KSTM-06	6	9	7.0	10	18	33	43	5.5	4.5	6	29°
KSTM-08	8	12	9.0	10	20	33	47	6	4.5	7	25°
KSTM-10	10	14	10.5	14	26	46	62	7.5	5.5	8	25°
KSTM-12	12	16	12.0	14	28	46	65	8.5	5.5	9	25°
KSTM-14	14	19	13.5	18	34	60	82	9.5	6.6	11	23°
KSTM-16	16	21	15.0	18	36	60	86	10.5	6.6	12	23°
KSTM-18	18	23	16.5	22	42	68	93	11.5	9.0	13	23°
KSTM-20	20	25	18.0	22	44	68	98	13	9.0	14	23°
KSTM-22	22	28	20.0	24	48	74	108	14	9.0	16	22°
KSTM-25	25	31	22.0	27	54	86	124	16	9.0	17	22°
KSTM-30	30	37	25.0	32	64	96	139	17	11.0	20	22°

igubal® Pillow Block - Product range

KSTM - Pillow block bearing - mm



Order key

Type Size

K ST M - 05

Dimensional K series	Pillow block bearing	Metric	Inner-Ø [inch] Based on 1/16"
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Material:

Housing: **igumid G** ▶ Page 1373

Spherical ball: **iglide® L280 (W300)***

Technical data

Part No.	Max. static tensile strength		Max. axial static compressive strength	Max. torque for longitudinal holes	Weight
	Short term	Long term			
	[lbs]	[lbs]	[lbs]	[ft lbs]	[g]
KSTM-05	157	78	67	0.4	1.7
KSTM-06	247	123	67	1.0	2.9
KSTM-08	292	146	89	1.0	4.6
KSTM-10	337	168	112	1.8	8.6
KSTM-12	494	247	134	1.8	11.8
KSTM-14	539	269	134	3.3	18.4
KSTM-16	674	337	224	3.3	23.7
KSTM-18	786	393	269	7.7	32.2
KSTM-20	1056	528	292	7.7	40.0
KSTM-22	1371	685	314	7.7	54.0
KSTM-25	1483	741	359	7.7	75.3
KSTM-30	1820	910	472	15.9	116.8

The maximum torques for longitudinal holes correspond to the permissible torque of the fixing screws (fixing category 5.8).

*W300 is the European material equivalent for iglide® L280.

igubal® Pillow Block - Product range

KSTM-GT - Pillow block bearing with split housing



- Fitting is easy and does not require shaft removal
- Maintenance free, dry-running
- For high static loads
- Space- and weight-saving design
- Mounting: M12
- High rigidity and fatigue strength
- Predictable lifetime
- Dimensional K series according to standard DIN ISO 12240



Order key

Type Size Version

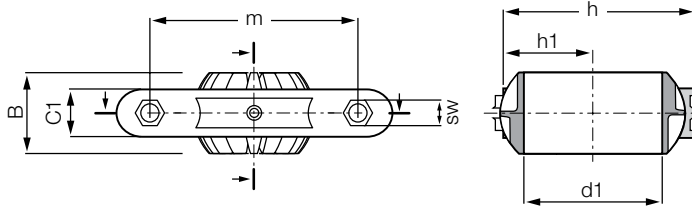
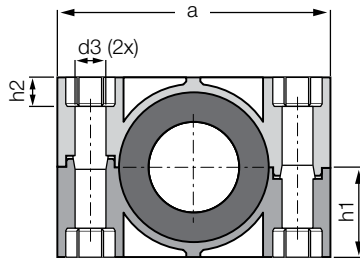
K **ST** **M-GT** - **40** - **GT**

Dimensional K series	Pillow block bearing	Metric	Split pillow block	Inner-Ø [mm]	Split ball option
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Material:

Housing: **RN33**
Spherical ball: **iglide® J**



Dimensions [mm]

Part No.	d1 [E10]	d3	h	h1	h2	SW	a	m	C1	B	Max. pivot angle
KSTM-GT35 ²³⁾	35.0	13.5	79.0	39.5	12.6	19.0	120.5	91.0	29.5	48.5	24°
KSTM-GT40	40.0	13.5	79.0	39.5	12.6	19.0	120.5	91.0	29.5	48.5	24°
KSTM-GT40-GT ²⁴⁾	40.0	13.5	79.0	39.5	12.6	19.0	120.5	91.0	29.5	48.5	24°
KSTM-GT45 ²³⁾	45.0	13.5	100.0	50.0	12.6	19.0	149.0	114.0	35.0	60.0	24°
KSTM-GT50	50.0	13.5	100.0	50.0	12.6	19.0	149.0	114.0	35.0	60.0	24°
KSTM-GT50-GT ²⁴⁾	50.0	13.5	100.0	50.0	12.6	19.0	149.0	114.0	35.0	60.0	24°

Technical data

Part No.	Max. radial tensile strength		Max. axial tensile strength		Max. torque		Weight [g]
	Short term	Long term	Short term	Long term	through ball	fixing holes	
	[lbs]	[lbs]	[lbs]	[lbs]	[ft lbs]	[ft lbs]	
KSTM-GT35 ²³⁾	2,473	1,236	562	281	14.8	11.1	250.3
KSTM-GT40	2,473	1,236	562	281	14.8	11.1	235.0
KSTM-GT40-GT ²⁴⁾	2,473	1,236	562	281	14.8	11.1	235.0
KSTM-GT45 ²³⁾	3,372	1,686	674	337	14.8	14.8	405.2
KSTM-GT50	3,372	1,686	674	337	14.8	14.8	389.2
KSTM-GT50-GT ²⁴⁾	3,372	1,686	674	337	14.8	14.8	389.2

*Inside diameter achieved with plain iglide® J bearing pressed into ID of spherical ball

**Spherical balls are also available with split design

igubal® Pillow Block - Product range

ESTM - Pillow block bearing



- High radial loads
- Can be used in liquid media
- Space-saving design, easy to fit
- Predictable lifetime
- Maintenance free, self-lubricating
- Dimensional E series acc. to standard DIN ISO 12240
- Adapter available

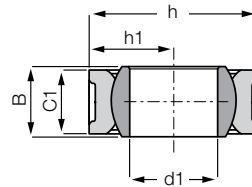
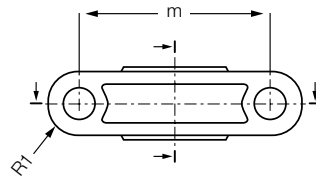
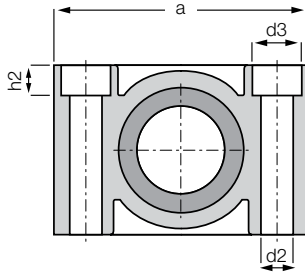


Order key

Type E Size ST M-05

E **ST** **M-05**

Dimensional E series	Pillow block bearing	Metric	Inner-Ø [mm]
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Dimensions [mm]

Part No.	d1 [E10]	d2	d3	h	h1	h2	a	m	C1	B	R1	Max. pivot angle
ESTM-08	8.0	4.5	-	19	9.5	-	31.0	22.0	9.0	8.0	4.5	22°
ESTM-10	10.0	5.5	-	22	11	-	36.0	26.0	10.0	9.0	5.0	22°
ESTM-12	12.0	5.5	-	26	13	-	38.0	28.0	10.0	10.0	5.0	22°
ESTM-16	16.0	6.6	10.6	34.0	17.0	6.4	50.0	37.0	13.0	13.0	6.5	22°
ESTM-20	20.0	9.0	14.0	40.0	20.0	8.6	62.0	46.0	16.0	16.0	8.0	22°
ESTM-25	25.0	9.0	14.0	48.0	24.0	8.6	72.0	54.0	18.0	20.0	9.0	20°
ESTM-30	30.0	11.0	17.0	56.0	28.0	10.6	86.0	64.0	22.0	22.0	11.0	20°

Technical data

Part No.	Max. static radial tensile strength		Max. static radial compressive strength		Max. axial strength		Max. torque fixing holes	Weight
	Short term	Long term	Short term	Long term	Short term	Long term		
	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[ft lbs]	[g]
ESTM-08	560	280	965	480	135	65	.95	5.0
ESTM-10	765	380	1190	595	155	80	1.84	7.1
ESTM-12	1010	505	1460	730	165	85	1.84	9.0
ESTM-16	1505	750	1910	955	250	125	3.30	17.5
ESTM-20	1910	955	2470	1290	315	155	3.30	27.4
ESTM-25	3035	1515	4150	2080	515	255	7.75	50.8
ESTM-30 ²⁵⁾	2250	1125	3710	1855	560	280	7.75	79.7

* Due to the different manufacturing method, the load values of the ESTM-30 are lower than ESTM-25

▶ Tolerance Table, Page 75

igubal® Pillow Block - Product range

ESTM-GT...-GT - Pillow block bearing with split housing and split ball



- Save time during assembly and disassembly of shafts
- Low installation space and low weight
- High rigidity and fatigue strength
- Spherical ball material iglide® J for low moisture absorption
- Ideal for outdoor use
- Dimensional E series according to standard
DIN ISO 12240
- Adapter available



Order key

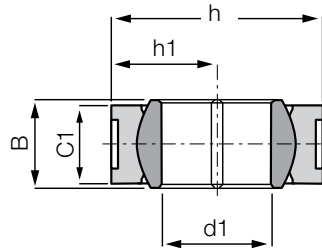
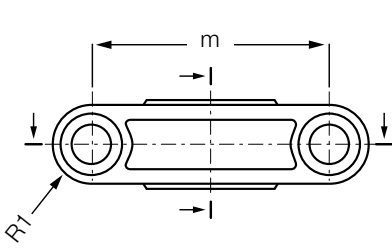
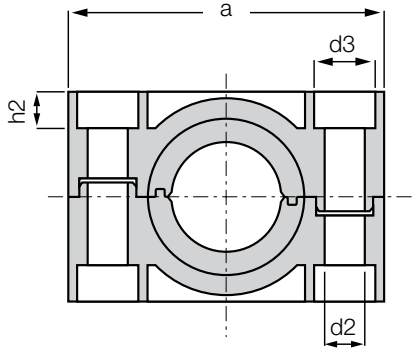
Type Size Version

E **ST M-GT - 40 - GT**

Dimensional E series	Pillow block bearing	Metric	Split pillow block	Inner-Ø [mm]	Split ball option
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Material:
Housing: **RN33**
Spherical ball: **iglide® J**



Dimensions [mm]

Part No.	d1	d2	d3	h	h1	h2	a	m	C1	B	R1	Max. pivot angle
	[E10]											
ESTM-GT16-GT	16.0	6,6	10.6	34.0	17.0	6.4	50.0	37.0	13.0	13.0	6.5	22°
ESTM-GT20-GT	20.0	9,0	14.0	40.0	20.0	8.6	62.0	46.0	16.0	16.0	8.0	22°
ESTM-GT25-GT	25.0	9,0	14.0	48.0	24.0	8.6	72.0	54.0	18.0	20.0	9.0	22°
ESTM-GT30-GT	30.0	11.0	17.0	56.0	28.0	10.6	86.0	64.0	22.0	22.0	11.0	22°

Technical data

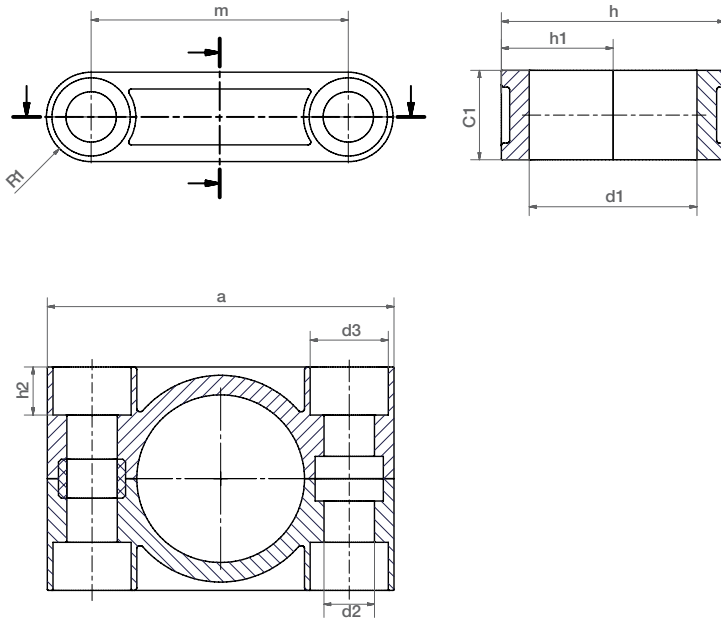
Part No.	max. static radial load		max. static radial compressive force		Weight
	Short term	Long term	Short term	Long term	
	[lbs]	[lbs]	[lbs]	[lbs]	[g]
ESTM-GT16-GT	562	281	900	450	18
ESTM-GT20-GT	787	393	1349	674	28
ESTM-GT25-GT	1124	562	1575	787	52
ESTM-GT30-GT	1237	618	2250	1124	84

igubal® Pillow Block - Product range

ESTM-GT - Pillow block bearing with parallel bore



- Easy to assemble/disassemble
- Ideal for outdoor applications
- High loads
- Dimensional E series according to standard
DIN ISO 12240



Order key

Type	Size	Version
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E **ST M-GT-16-25**

Dimensional E series	Pillow block bearing	Metric	Split pillow block	Dimension	Inner-Ø [mm]
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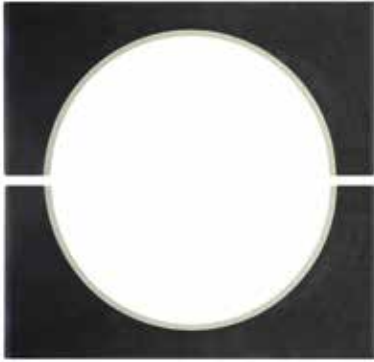
Material:
igumid G ▶ Page 1373

Dimensions [mm]

Part No.	d1 [E10]	d2	d3	h	h1	h2	a	m	C1	R1	Weight [g]
ESTM-GT16-25	25.0	6.6	10.6	34.0	14.0	6.4	50.0	37.0	13.0	6.5	12.6
ESTM-GT20-30	30.0	9.0	14.0	40.0	20.0	8.6	62.0	46.0	16.0	8.0	21.1
ESTM-GT25-35	35.0	9.0	14.0	48.0	24.0	8.6	72.0	54.0	20.0	9.0	39.9
ESTM-GT30-40	40.0	11.0	17.0	56.0	28.0	10.6	86.0	64.0	22.0	11.0	66.5

igubal® Pillow Block - Product range

ESTM-GT 150 - Split pillow block bearing for diameters up to 150 mm



- Individual diameters in 6–8 weeks
- Static loads up to 4 tons
- Reduce assembly time up to 50 %
- Resistant to corrosion and chemicals
- Dimensional E series according to standard DIN ISO 12240



Order key

Type Size Version

E **ST M - GT - 40 - GT**

Dimensional E series

Pillow block bearing

Metric

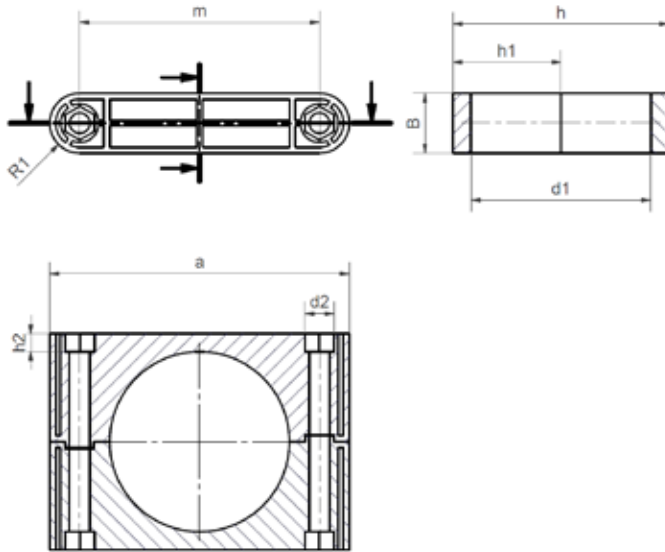
Split pillow block

Inner-Ø [mm]

Split ball option



Material:
iglide® GLW



Dimensions [mm]

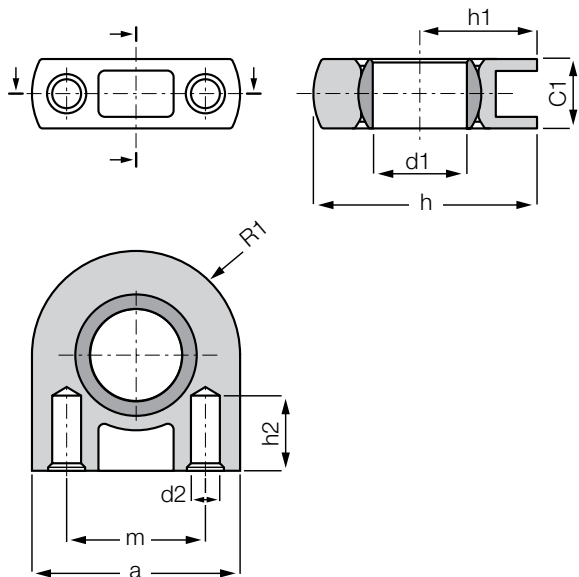
Part No.	d1 [E10]	d2	h	h1	h2	a	m	B	R1	Weight [g]
ESTM-GT 150	150	24	180	90	15	250	200	50	25	980

igubal® Pillow Block - Product range

ESTM SL - Pillow block bearing, slimline



- Lightweight
- Space saving
- Low-cost
- Predictable lifetime
- Maintenance- and lubrication free
- With M3 thread, e.g. ESTM-10-SL-M3
- For self tapping screw with outer diameter 3.5 mm
- Dimensional E series according to standard DIN ISO 12240



Order key

Type Size Version

E **ST M - 05 - SL**

Dimensional E series	Pillow block bearing	Metric	Inner-Ø [mm]	Slimline
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Material:

Housing: igumid G ▶ Page 1373
Spherical ball: iglide® J

Dimensions [mm]

Part No.	d1 [E10]	d2	h	h1	h2	a	m	C1	R1	Max. pivot angle
ESTM-05 SL	5.0	2.5	18.0	10.0	6.5	16.0	10.0	6.0	8.0	17°
ESTM-06 SL	6.0	2.5	18.0	10.0	6.5	16.0	10.0	6.0	8.0	17°
ESTM-08 SL	8.0	2.5	19.0	10.0	6.5	18.0	12.0	6.0	9.0	17°
ESTM-10 SL	10.0	2.5	20.0	10.0	6.5	20.0	14.0	6.0	10.0	17°

Technical data

Part No.	Max. radial tensile strength		Max. radial compressive strength		Max. lateral strength		Max. axial strength		Weight [g]
	Short term	Long term	Short term	Long term	Short term	Long term	Short term	Long term	
	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	[lbs]	
ESTM-05 SL	337	169	315	157	202	101	34	17	1.6
ESTM-06 SL	337	169	315	157	202	101	34	17	1.7
ESTM-08 SL	360	180	315	157	214	107	22	11	1.7
ESTM-10 SL	360	180	315	157	214	107	22	11	1.9

igubal® Pillow Block - Product range

E series pillow block adapter

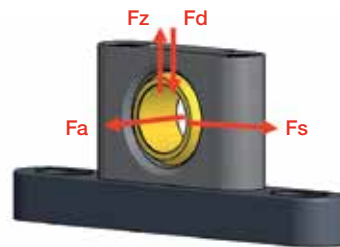
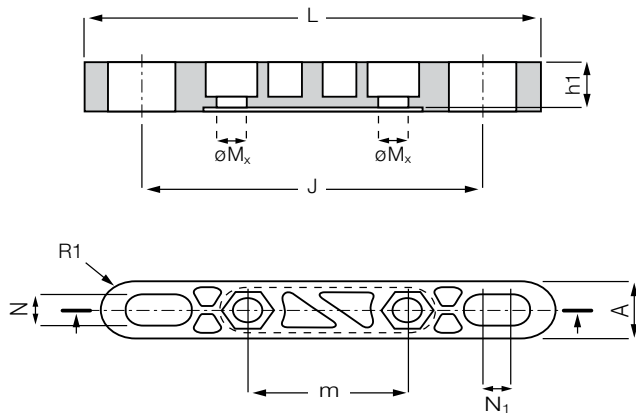


- Same dimensions as metal pillow blocks
- Lightweight
- For pillow block bearings of E series (ESTM, ESTM-GT)
- Corrosion- and chemical-resistant
- Fits directly
- Space-saving
- Same screws as traditional metallic versions



Order key

	Type	Size
	AD - E ST M - 40	
Adapter	Dimensional E series	Pillow block bearing
	Metric	Inner-Ø [mm]



Dimensions [mm]

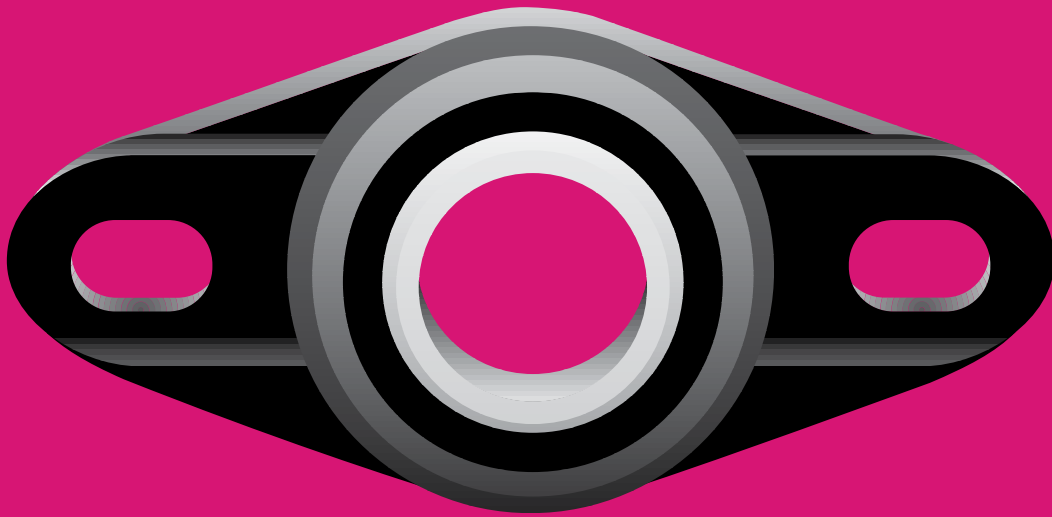
Part No.	for ESTM-...	d1	L	A	R1	J	h1	N	N1	m	Mx
AD-01-ESTM-20 ²⁶⁾	ESTM-20	20	130	20	10.0	97	14.0	11	8	46	M8
AD-01-ESTM-25 ²⁷⁾	ESTM-25	25	130	20	10.0	102	12.5	11	9	54	M8
AD-01-ESTM-30 ²⁷⁾	ESTM-30	30	158	25	12.5	118	14.9	14	10	64	M10

Technical data

Part No.	Max. radial tensile strength		Max. radial compressive strength		Maximum axial strength		Maximum lateral strength		Weight [g]
	[Fz]		[Fd]		[Fa]		[Fs]		
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	
AD-01-ESTM-20 ²⁶⁾	540	270	2,250	1,125	675	335	270	135	29.8
AD-01-ESTM-25 ²⁷⁾	540	270	2,250	1,125	675	335	270	135	74.0
AD-01-ESTM-30 ²⁷⁾	540	270	2,250	1,125	675	335	270	135	124.0

²⁶⁾ Material: plastic

²⁷⁾ Material: aluminum

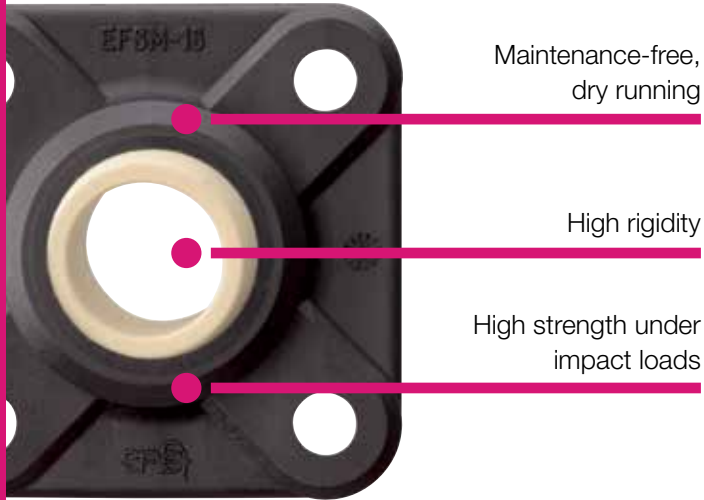


igubal® Flange Bearing

- Maintenance-free, dry running
- High tensile strength
- High endurance strength
- Compensation for alignment errors
- Compensation for edge loads
- Lightweight

igubal® Flange Bearing

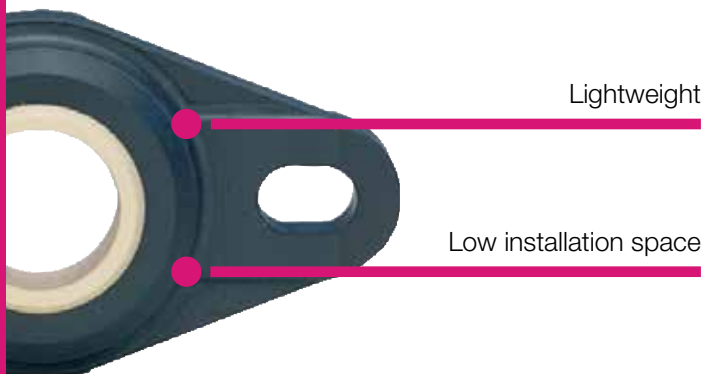
igubal® Flange bearings have been developed for the support of shaft ends or for shafts lead-through. Like all igubal® products, these bearings consist of an igumid G housing and an iglide® L280 spherical ball (with other options available). igubal® Flange bearings are made to the dimensional E series and are offered with two or four mounting holes.



Maintenance-free,
dry running

High rigidity

High strength under
impact loads



Lightweight

Low installation space



When to use it?

- If chemical resistance is required
- If a cost-effective option is requested
- If you need dirt-resistant bearings
- To adjust misalignment
- If you need split components



When not to use it?

- If temperatures are higher than +176°F
 - HT version, **Page 833**
- If an integrated fixing collar is required
- If diameters above 1 inch or 50 mm are required
- If rotation speeds higher than 98.4 fpm (0.5 m/s) are required



Online product finder

➤ www.igus.com/igubal-finder



max. +176°F

min. -40°F



Ø 3/8 to 1 inch



4 types

Ø 4 to 50 mm



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order.



Typical application areas

- Plant design
- Automation
- Agricultural machines
- Machine building
- Food industry etc.



Conveyor technique



Solar industry



Rotary sorter



Food industry

General Properties

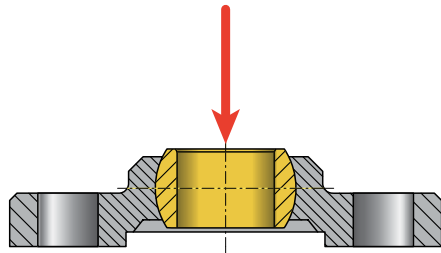
igubal® Flange bearings have been developed for the support of shaft ends or for shafts lead-through. Like all igubal® products, these bearings consist of an igumid G housing and an iglide® L280 spherical ball (with other options available). igubal® Flange bearings are made to the dimensional E series and are offered with two or four mounting holes.

Areas of Application

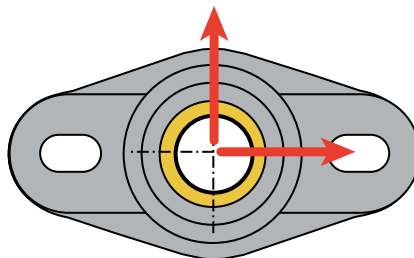
Since igubal® flange bearings are made for maintenance-free use, they are especially suited for applications in which access to the bearing is limited, in moist or wet environments or clean-room environments. Thus, igubal® flange bearings are also found in electric toothbrushes, awnings, conveyor technology, bakery machines and agriculture to name a few.

Installation

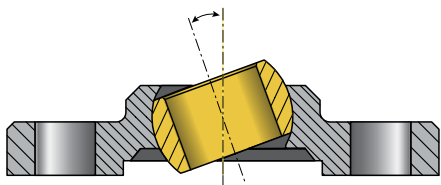
igubal® flange bearings are designed for mounting with 2 or 4 bolts, depending on the design. The 2-hole types are provided with elongated holes, which allow a problem-free adjustment. An exact positioning of the bearing housing is not necessary, since the spherical ball compensates for misalignment.



Static axial load



Static radial load



Pivot Angle

igubal® flange bearings – For temperatures up to 176°F



Easy to install
Inch dimensions

E series
EFOI

► Page 822



Easy to install
Metric dimensions

E series
EFOM

► Page 824



For higher radial load
Inch dimensions

E series
EFSI

► Page 826



For higher radial load
Metric dimensions

E series
EFSM

► Page 828



Universal and quick assembly
Female thread

GFSM-IG

► Page 830



Universal and quick assembly
Male thread

GFSM-AG

► Page 831



High static load, split housing

K series
KFSM-GT

► Page 832

igubal® flange bearings – For temperatures up to 392°F



Easy to install
High temperature

E series
EFOM-HT

► Page 833



For higher radial loads
High temperature

E series
EFSM-HT

► Page 834

igubal® Flange Bearing - Product range

EFOI - Flange bearing - 2 holes - inch



- iglide® L280 (W300) highly wear resistant spherical ball
- Easy to install
- Compensation of misalignment errors
- Corrosion-resistance
- Lightweight
- Maintenance-free, self-lubricating

Dimensions [mm]

Part No.	d1 [E10]	dB	H	L	J Hole pitch	A1 Height of housing	Ag Total height	N Bore diameter d x 1
EFOI-03	0.1875	0.551	1.331	0.630	0.945	0.177	0.312	0.126 x 0.197
EFOI-04	0.2500	0.551	1.331	0.630	0.945	0.177	0.342	0.126 x 0.197
EFOI-05	0.3125	0.709	1.740	0.866	1.220	0.217	0.412	0.169 x 0.256
EFOI-06	0.3750	0.866	2.047	1.024	1.417	0.256	0.483	0.210 x 0.315
EFOI-07	0.4375	0.984	2.232	1.220	1.614	0.276	0.518	0.210 x 0.315
EFOI-08	0.5000	0.984	2.232	1.220	1.614	0.276	0.518	0.210 x 0.315
EFOI-10	0.6250	1.260	2.858	1.496	2.087	0.394	0.683	0.212 x 0.315
EFOI-12	0.7500	1.575	3.504	1.850	2.559	0.433	0.785	0.331 x 0.492
EFOI-16	1.0000	1.909	3.976	2.303	2.953	0.551	0.966	0.331 x 0.492

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



REM:
low-cost

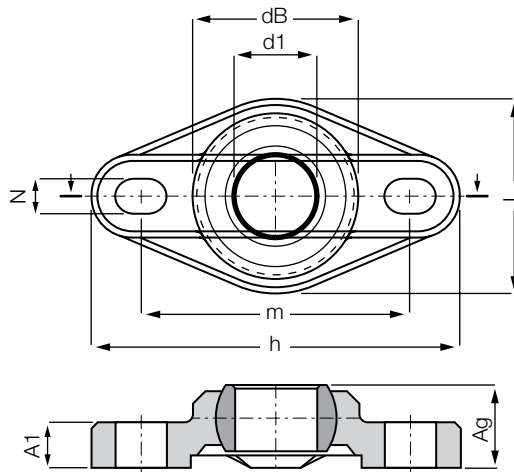


J4EM: low-cost
and low moisture
absorption

igubal® Flange Bearing - Product range

EFOI - Flange bearing - 2 holes - inch

igubal®
flange
bearing



Order key

Type EFOI Size 04

E F O I - 04

Dimensional E series	Flange bearing	2 holes	Inch	Inner-Ø [inch] Based on 1/16"
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque holes [ft lbs]	Maximum pivot angle	Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [ft lbs]			
EFOI-03	56	28	168	84	0.44	33°	2.3
EFOI-04	56	28	180	90	0.96	27°	2.0
EFOI-05	156	78	248	124	1.84	24°	4.0
EFOI-06	192	96	450	225	1.84	24°	6.5
EFOI-07	248	124	494	247	1.84	21°	7.5
EFOI-08	248	124	494	247	3.32	21°	12.0
EFOI-10	314	157	630	315	3.32	24°	17.2
EFOI-12	404	202	1236	618	3.32	17°	33.7
EFOI-16	674	337	1348	674	7.74	14°	59.0

▶ Tolerance Table, Page 75

*W300 is the European material equivalent for iglide® L280.

igubal® Flange Bearing - Product range

EFOM - Flange bearing - 2 holes - mm



- iglide® L280 (W300) highly wear resistant spherical ball
- Easy to install
- Compensation of misalignment errors
- Corrosion-resistance
- Lightweight
- Maintenance-free, self-lubricating

Dimensions [mm]

Part No.	d1 [E10]	dB	H	L	J Hole pitch	A1 Height of housing	Ag Total height	N Bore diameter d x 1
EFOM-04	4	14.0	33.8	16.0	24.0	4.5	8.0	3.2 x 5.0
EFOM-05	5	14.0	33.8	16.0	24.0	4.5	8.5	3.2 x 5.0
EFOM-06	6	14.0	33.8	16.0	24.0	4.5	8.5	3.2 x 5.5
EFOM-08	8	18.0	44.2	22.0	31.0	5.5	10.5	4.3 x 6.5
EFOM-10	10	22.0	52.0	26.0	36.0	6.5	12.0	5.3 x 8.0
EFOM-12	12	25.0	56.7	31.0	41.0	7.0	13.0	5.3 x 8.0
EFOM-15	15	30.0	68.6	36.0	50.0	8.5	15.5	6.4 x 10.0
EFOM-16	16	32.0	72.6	38.0	53.0	10.0	17.5	6.4 x 10.1
EFOM-17	17	35.0	74.6	41.0	55.0	10.0	18.0	6.4 x 10.2
EFOM-20	20	40.0	89.0	47.0	65.0	11.0	20.0	8.4 x 12.5
EFOM-25	25	48.5	101.0	58.5	75.0	14.0	25.0	8.4 x 12.6
EFOM-30	30	55.0	118.0	65.0	87.5	15.0	26.0	10.5 x 16.0

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



REM:
low-cost

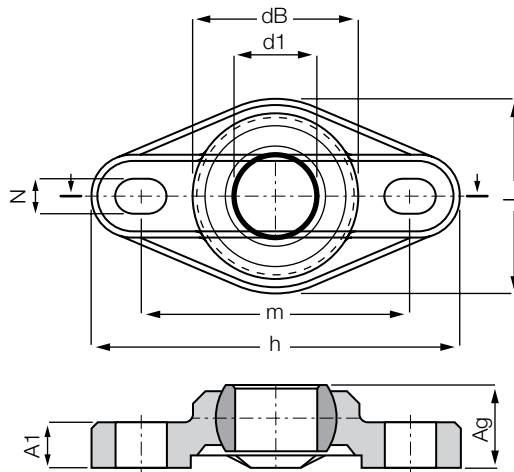


J4EM: low-cost
and low moisture
absorption

igubal® Flange Bearing - Product range

EFOM - Flange bearing - 2 holes - mm

igubal®
flange
bearing



Order key

Type Size

E F O M - 04

Dimensional E series	Flange bearing	2 holes	Metric	Inner-Ø [mm]
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque Holes [ft lbs]	Maximum pivot angle	Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [ft lbs]			
EFOM-04	90	45	168	84	0.44	28°	1.9
EFOM-05	90	45	168	84	0.44	29°	2.3
EFOM-06	112	56	180	90	0.44	25°	1.8
EFOM-08	158	78	247	124	0.96	25°	4.1
EFOM-10	191	96	450	225	1.84	25°	6.8
EFOM-12	247	124	495	247	1.84	21°	8.9
EFOM-15	292	146	540	270	3.32	20°	15.0
EFOM-16	315	158	629	315	3.32	27°	17.7
EFOM-17	405	202	719	360	3.32	21°	24.9
EFOM-20	405	202	1236	618	7.74	19°	32.8
EFOM-25	674	337	1348	674	7.74	15°	58.5
EFOM-30	687	393	1461	730	15.86	14°	78.9

▶ Tolerance Table, Page 75

*W300 is the European material equivalent for iglide® L280.

igubal® Flange Bearing - Product range

EFSI - Flange bearing - 4 holes - inch



- Spherical ball made from wear-resistant iglide® L280 (W300)
- Easy assembly
- Compensation of alignment errors
- Corrosion-resistant
- Lightweight
- Maintenance free, dry-running

Dimensions [mm]

Part No.	d1 [E10]	dB	L	J Hole pitch	A1 Height of housing	Ag Total height	N Bore diameter d x 1
EFSI-03	.1875	.551	.984	.669	.177	.311	.126
EFSI-04	.2500	.551	.984	.669	.177	.343	.126
EFSI-05	.3125	.709	1.299	.866	.217	.413	.169
EFSI-06	.3750	.866	1.496	1.024	.256	.484	.209
EFSI-07	.4375	.984	1.575	1.102	.276	.520	.209
EFSI-08	.5000	.984	1.575	1.102	.276	.520	.209
EFSI-10	.6250	1.260	2.047	1.417	.354	.654	.252
EFSI-12	.7500	1.575	2.559	1.772	.433	.787	.331
EFSI-16	1.000	1.909	2.913	2.047	.551	.965	.331

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



REM:
low-cost

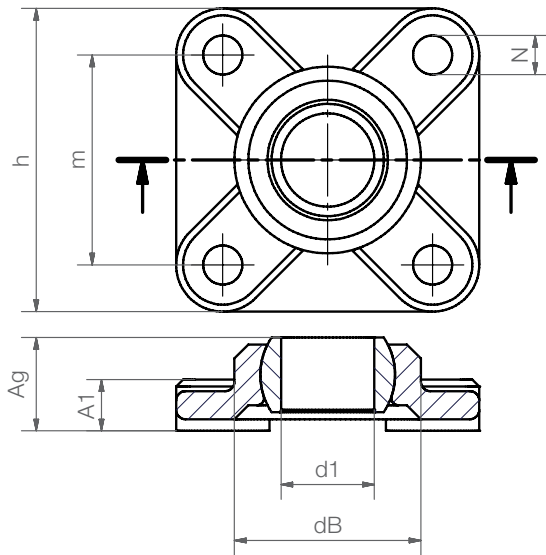


J4EM: low-cost
and low moisture
absorption

igubal® Flange Bearing - Product range

igubal®
flange
bearing

EFSI - Flange bearing - 4 holes - inch



Order key

Type Size

E F S I - 04

Dimensional E series	Flange bearing	4 Holes	Inch	Inner-Ø [inch] Based on 1/16"
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque	Maximum pivot angle	Weight
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [ft lbs]	Holes [ft lbs]		
EFSI-03	50	25	224	112	0.44	33°	2.3
EFSI-04	56	28	224	112	0.96	27°	2.0
EFSI-05	90	45	314	157	1.84	24°	4.0
EFSI-06	112	56	448	224	1.84	24°	6.5
EFSI-07	134	67	562	281	1.84	21°	7.5
EFSI-08	134	67	562	281	3.32	21°	12.0
EFSI-10	282	141	720	360	3.32	24°	17.2
EFSI-12	428	214	900	450	3.32	17°	31.5
EFSI-16	584	292	1258	629	7.74	14°	77.0

▶ Tolerance Table, Page 75

*W300 is the European material equivalent for iglide® L280.

igubal® Flange Bearing - Product range

EFSM - Flange bearing - 4 holes - mm



- Spherical ball made from wear-resistant iglide® L280 (W300)
- Easy assembly
- Compensation of alignment errors
- Corrosion-resistant
- Lightweight
- Maintenance free, dry-running

Dimensions [mm]

Part No.	d1 [E10]	dB	L	J Hole pitch	A1 Height of housing	Ag Total height	N Bore diameter d x 1
EFSM-04	4	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-05	5	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-06	6	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-08	8	18.0	33.0	22.0	5.5	10.5	4.3
EFSM-10	10	22.0	38.0	26.0	6.5	12.0	5.3
EFSM-12	12	25.0	40.0	28.0	7.0	13.0	5.3
EFSM-15	15	30.0	49.0	34.0	8.5	15.5	6.4
EFSM-16	16	32.5	52.0	36.0	9.0	16.5	6.4
EFSM-17	17	35.0	54.0	38.0	10.0	18.0	6.4
EFSM-20	20	40.0	65.0	45.0	11.0	20.0	8.4
EFSM-25	25	48.5	74.0	52.0	14.0	25.0	8.4
EFSM-30	30	55.0	85.0	60.0	15.0	26.0	10.5

Spherical ball materials to choose ► Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



REM:
low-cost

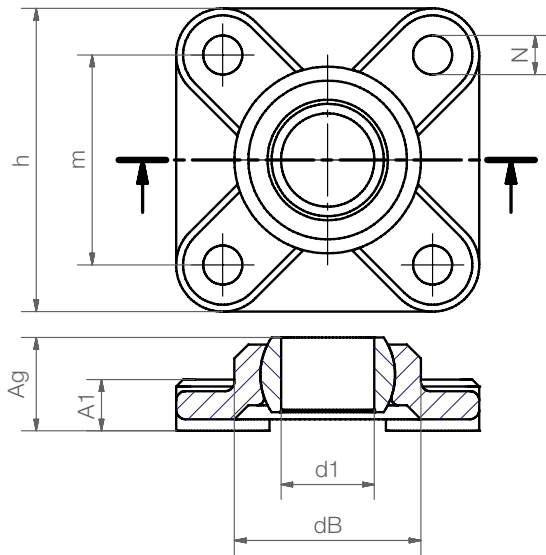


J4EM: low-cost
and low moisture
absorption

igubal® Flange Bearing - Product range

EFSM - Flange bearing - 4 holes - mm

igubal®
flange
bearing



Order key

Type Size

E F S M - 04

Dimensional E series	Flange bearing	4 Holes	Metric	Inner-Ø [mm]
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque	Maximum pivot angle	Weight
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [ft lbs]	Holes [ft lbs]		
EFSM-04	45	22	225	112	0.44	27°	2.0
EFSM-05	67	34	225	12	0.44	24°	4.0
EFSM-06	67	34	225	112	0.44	24°	6.5
EFSM-08	101	51	315	158	0.96	21°	12.0
EFSM-10	158	78	450	225	1.84	24°	17.2
EFSM-12	191	96	562	281	1.84	17°	31.5
EFSM-15	247	124	674	337	3.32	20°	20.2
EFSM-16	304	152	719	360	3.32	14°	59.0
EFSM-17	360	180	764	382	3.32	21°	27.9
EFSM-20	450	225	900	450	7.74	19°	45.0
EFSM-25	540	270	1259	629	7.74	15°	76.0
EFSM-30	629	315	1348	674	15.86	14°	100.7

▶ Tolerance Table, Page 75

*W300 is the European material equivalent for iglide® L280.

igubal® Flange Bearing - Product range

GFSM-...-IG - Complete housing with ball stud, female thread



- Maintenance-free and corrosion-resistant
- Easy connection – easy assembly
- Compensation of misalignments



Order key

Type	Size
GF	S M - 06 - IG
Flange mounted	4 Holes
	Metric
	Inner-Ø [mm]
	Female thread

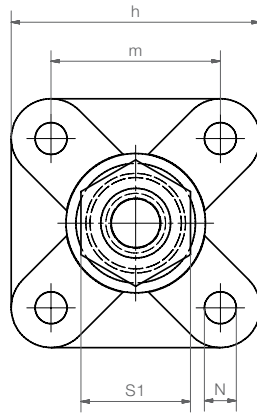
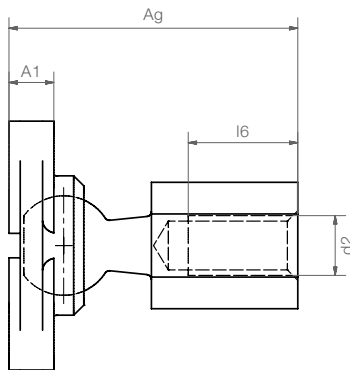


Material:

Housing: **igumid G** ▶ Page 1373

Ball stud: **Galvanized steel** ²⁸⁾

Other ball stud materials on request



Tensile force ↑ ↓ Compressive force



Force test
direction

Dimensions [mm]

Part No.	d2 [E10]	m	h	Ag	A1	I6	N	S1
GFSM-06-IG	M6	17.0	25.0	29.0	4.5	11.0	3.2	SW11
GFSM-08-IG	M8	22.0	33.0	36.0	5.5	12.0	4.3	SW14
GFSM-10-IG	M10	26.0	38.0	43.5	6.5	16.0	5.3	SW17

Technical data

Part No.	Max. axial tensile force		Max. axial compressive force		Max. pivot angle	Weight [g]
	Short term	Long term	Short term	Long term		
	[lbs]	[lbs]	[lbs]	[lbs]		
GFSM-06-IG	33.7	16.9	78.7	39.3	32°	16.4
GFSM-08-IG	56.2	28.1	168.6	84.3	34°	34.0
GFSM-10-IG	31.5	15.7	269.8	134.9	40°	61.1

²⁸⁾ Stainless steel ball stud on request

igubal® Flange Bearing - Product range

GFSM-...-AG - Complete housing with ball stud, male thread

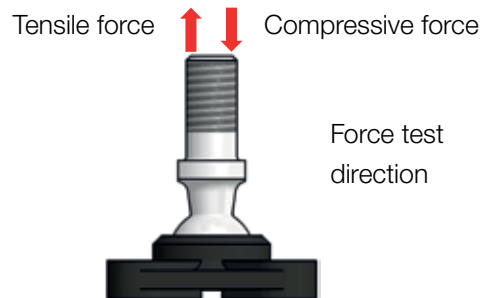
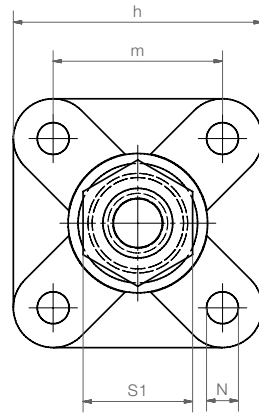
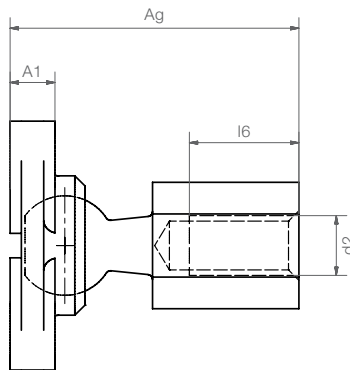


- Maintenance-free and corrosion-resistant
- Easy connection – easy assembly
- Compensation of misalignments



Order key

Type	Size
GF	S M - 06 - AG
Flange mounted	4 Holes
	Metric
	Inner-Ø [mm]
	Male thread



Material:

Housing: **igumid G** ▶ Page 1373

Ball stud: **Galvanized steel**²⁸⁾

Other ball stud materials on request

Dimensions [mm]

Part No.	d2 [E10]	m	h	Ag	A1	l6	N	S1
GFSM-06-IG	M6	17.0	25.0	29.0	4.5	10.5	3.2	SW8
GFSM-08-IG	M8	22.0	33.0	36.0	5.5	13.5	4.3	SW11
GFSM-10-IG	M10	26.0	38.0	43.5	6.5	16.0	5.3	SW13

Technical data

Part No.	Max. axial tensile force		Max. axial compressive force		Max. pivot angle	Weight [g]
	Short term	Long term	Short term	Long term		
	[lbs]	[lbs]	[lbs]	[lbs]		
GFSM-06-IG	33.7	16.9	78.7	39.3	32°	10.6
GFSM-08-IG	56.2	28.1	168.6	84.3	34°	23.1
GFSM-10-IG	31.5	15.7	269.8	134.9	40°	41.2

²⁸⁾ Stainless steel ball stud on request

igubal® Flange Bearing - Product range

KFSM-GT - Flange bearings - 4 holes - split housing



- Preassembled
- Option with plug-in feet
- Resistant to dirt
- Lightweight
- Low installation space
- For high static loads
- High tensile strength and fatigue strength
- Predictable lifetime
- Maintenance free, dry-running
- Mounting: with plug-in feet M10
without plug-in feet M12



Order key

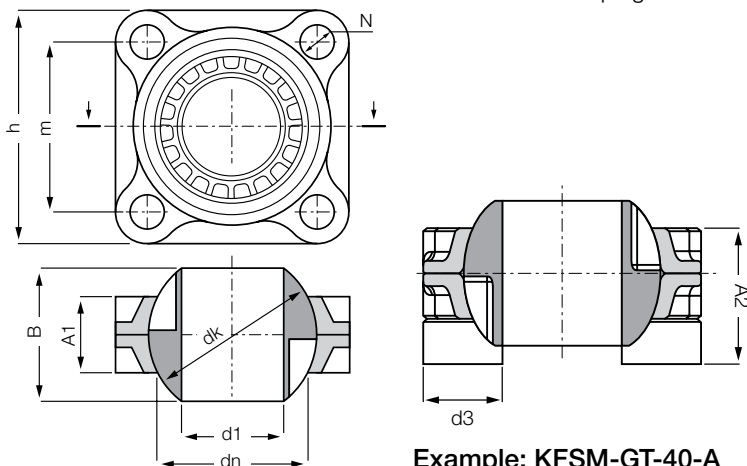
Type	Size	Option
K F S M - GT	35	A
Dimensional K series		
Flange bearing	4 Holes	Metric
Split housing	Inner-Ø [mm]	With spacer feet



Material:

Housing: **RN33**

Spherical ball: **iglide® J**



Example: KFSM-GT-40-A

Dimensions [mm]

Part No.	d1 [E10]	dn	d3	dk Hole pitch	A1 Height of housing	A2 Total height	B	m	h	N Bore diameter d x 1
KFSM-GT35	35.0	59.0	26.0	66.0	30.0	45.0	48.5	66.0	92.0	13.5
KFSM-GT40	40.0	59.0	26.0	66.0	30.0	45.0	48.5	66.0	92.0	13.5
KFSM-GT45	45.0	72.0	26.0	82.0	40.0	60.0	60.0	78.0	104.0	13.5
KFSM-GT50	50.0	72.0	26.0	82.0	40.0	60.0	60.0	78.0	104.0	13.5

For KFSM with spacer feet, please add an "A" to the part no. Example: KFSM-GT50-A.

²³⁾ Diameter given by iglide® J bore reducer

► Tolerance Table, Page 75

Technical data

Part No.	Maximum static radial load		Maximum static axial load		Max. pivot angle	Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [ft lbs]		
KFSM-GT35	1125	562	1012	505	24°	183.5
KFSM-GT40	1125	562	1012	505	24°	161.6
KFSM-GT45	1348	674	1125	562	24°	294.6
KFSM-GT50	1348	674	1125	562	24°	260.1

Max. tightening torque for fixing: 30 Nm

igubal® Flange Bearing - Product range

EFOM-HT - Flange bearings - 2 holes - High temperature



- For high temperatures up to +392 °F
- Easy assembly
- Compensation for alignment errors
- Corrosion-resistance
- Lightweight
- Chemical resistant
chemical table ► Page 364
- Underwater use



Order key

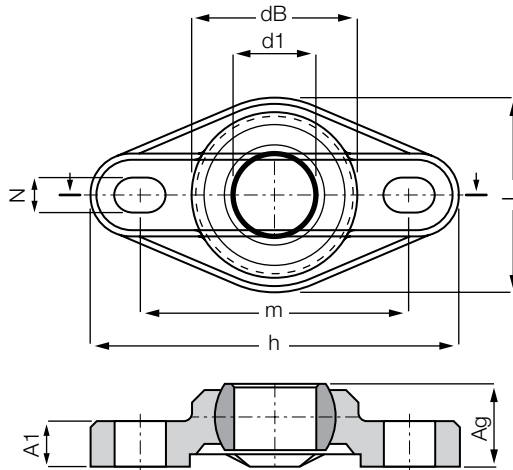
Type	Version
E F O M - 06 HT	
Dimensional E series	
Flange bearing	
2 holes	
Metric	
Inner-Ø [mm]	
High temperature	



Material:

Housing: **iguton G**

Spherical ball: **iglide® T500 (X)**



Dimensions [mm]

Part No.	d1 [E10]	dB	H Length	L Width	m Hole pitch	A1 Height of plate	Ag Total height	N Bore diameter d x 1
EFOM-05-HT	5	14.0	33.8	16.0	24.0	4.5	8.5	3.2 x 5.0
EFOM-06-HT	6	14.0	33.8	16.0	24.0	4.5	8.5	3.2 x 5.5
EFOM-08-HT	8	18.0	44.2	22.0	31.0	5.5	10.5	4.3 x 6.5
EFOM-10-HT	10	22.0	52.0	26.0	36.0	6.5	12.0	5.3 x 8.0
EFOM-12-HT	12	25.0	56.7	31.0	41.0	7.0	13.0	5.3 x 8.0

► Tolerance Table, Page 75

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque	Maximum pivot angle	Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	Holes [ft lbs]		
EFOM-05-HT	61.8	31.0	103.4	51.7	.44	29°	2.5
EFOM-06-HT	67.4	33.7	137.4	68.6	.44	27°	2.3
EFOM-08-HT	144.8	72.4	210.0	105.0	.96	24°	5.0
EFOM-10-HT	171.7	85.9	224.8	112.4	1.84	24°	8.3
EFOM-12-HT	196.5	98.2	290.0	145.0	1.84	21°	10.7

*X is the European material equivalent for iglide® T500.

EFSM-HT - Flange bearings - 4 holes - High temperature



- For high temperatures up to +392 °F
- Easy assembly
- Compensation for alignment errors
- Corrosion-resistance
- Lightweight
- Chemical resistant
chemical table ► Page 364
- Underwater use



Order key

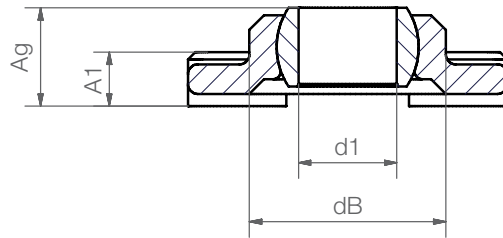
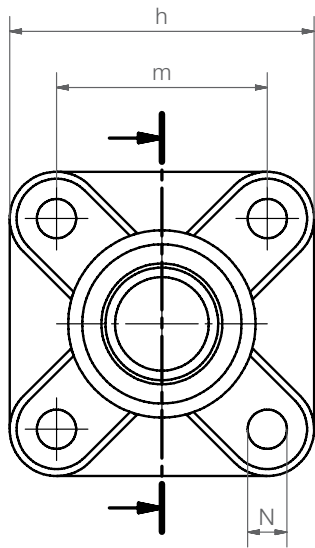
Type	Version
E F S M - 05	HT
Dimensional E series	
Flange bearing	
4 holes	
Metric	
Inner-Ø [mm]	
High temperature	



Material:

Housing: **iguton G**

Spherical ball: **iglide® T500 (X)**



Dimensions [mm]

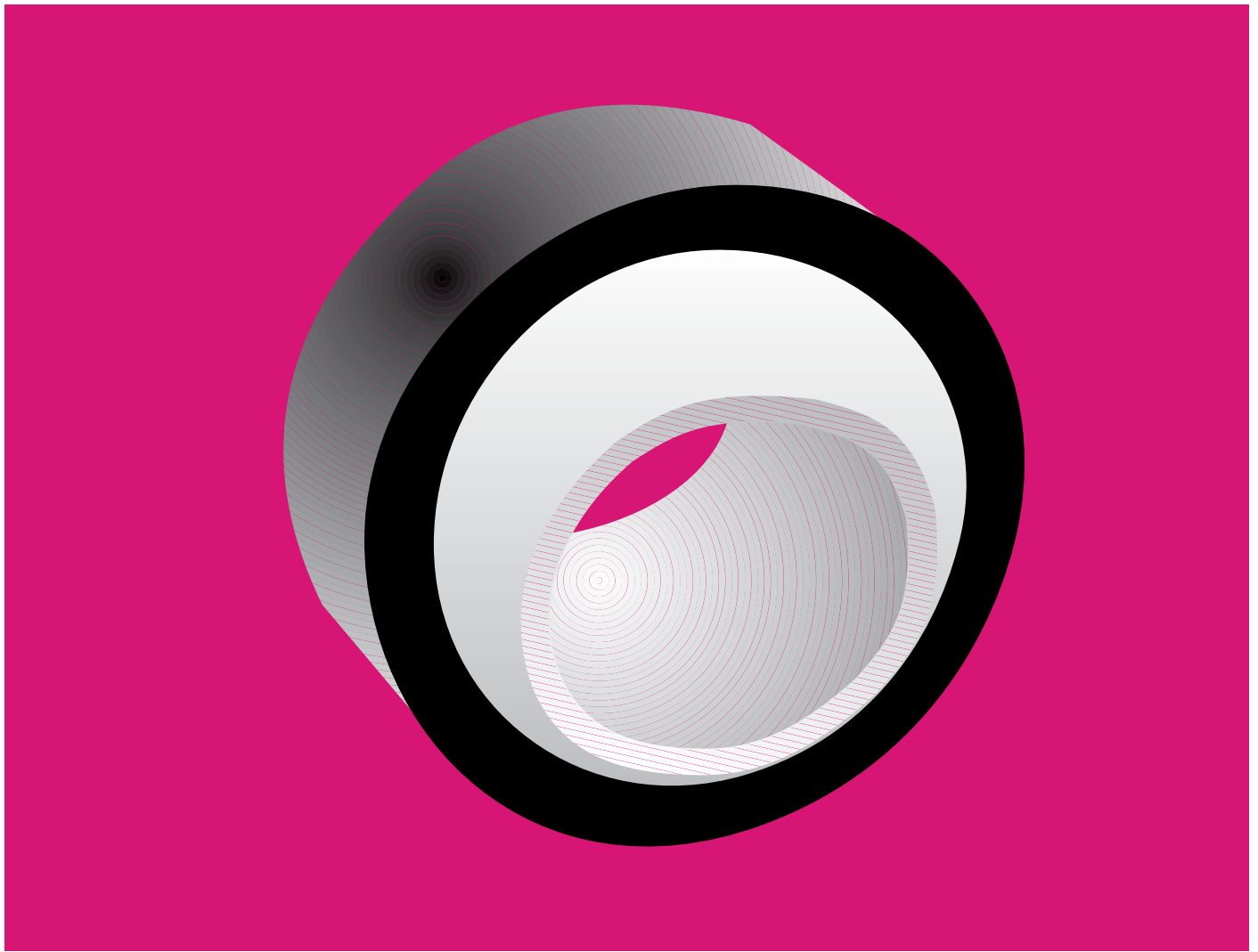
Part No.	d1 [E10]	dB	H Length	m Hole pitch	A1 Height of plate	Ag Total height	N Bore diameter d x 1
EFSM-05-HT	5	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-06 HT	6	14.0	25.0	17.0	4.5	8.5	3.2
EFSM-08 HT	8	18.0	33.0	22.0	5.5	10.5	4.3
EFSM-10 HT	10	22.0	38.0	26.0	6.5	12.0	5.3
EFSM-12 HT	12	25.0	40.0	28.0	7.0	13.0	5.3

► Tolerance Table, Page 75

Technical data

Part No.	Maximum static axial load		Maximum static radial load		Maximum static torque	Maximum pivot angle	Weight
	Short term	Long term	Short term	Long term	Holes		
	[lbs]	[lbs]	[lbs]	[lbs]	[ft lbs]		[g]
EFSM-05-HT	61.8	31.0	98.9	49.5	.44	29°	3.5
EFSM-06-HT	76.2	38.2	117.6	58.9	.44	25°	3.3
EFSM-08-HT	92.6	46.3	160.3	80.0	.96	25°	7.1
EFSM-10-HT	194.2	97.1	270.2	135.1	1.84	25°	11.2
EFSM-12-HT	230.2	115.1	302.8	151.5	1.84	21°	13.3

*X is the European material equivalent for iglide® T500.

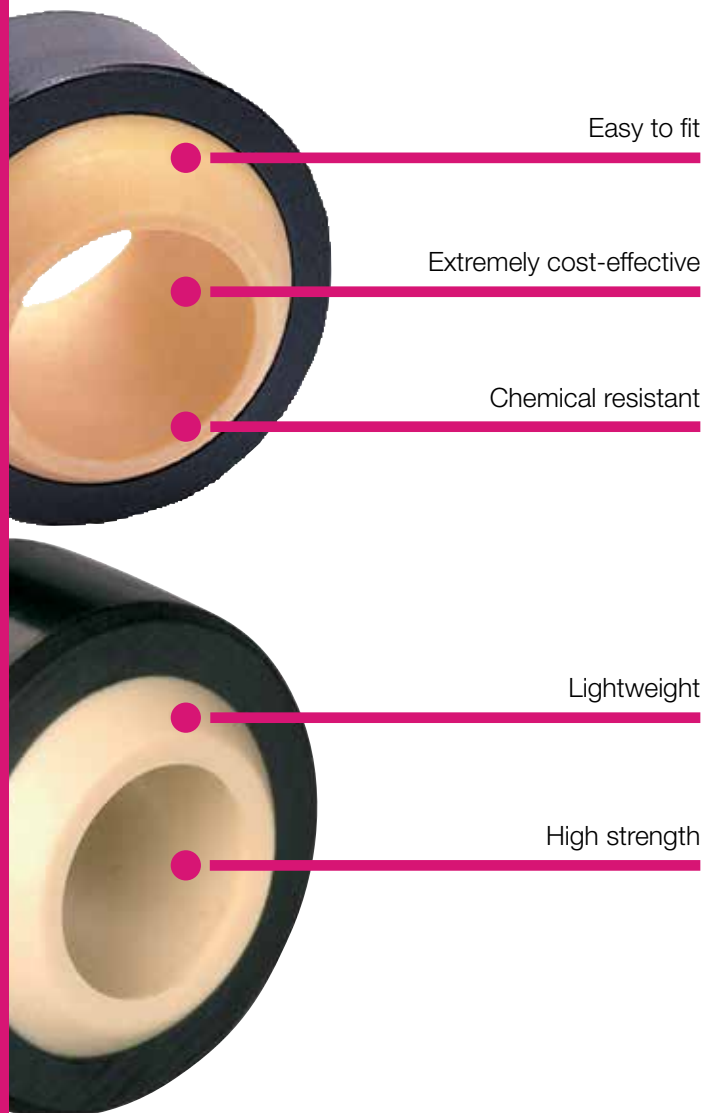


igubal® Pressfit Spherical Bearings

- Easy to fit
- Extremely cost-effective
- Chemical resistant
- Lightweight
- High strength

igubal® Pressfit Spherical Bearings

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



When to use it?

- For high axial and radial loads
- When an easy installation is required
- In case of reduced installation place
- 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?

- If temperatures are higher than +176°F
- If diameters above 1 inch or 30 mm are required
- If rotation speeds higher than 98.4 fpm (0.5 m/s) are required



Online product finder

► www.igus.com/igubal-finder



max. +176°F
min. -22°F



inch Ø 3/16 to 1 inch



4 types
mm Ø 2 to 30 mm



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order.



Typical application areas

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



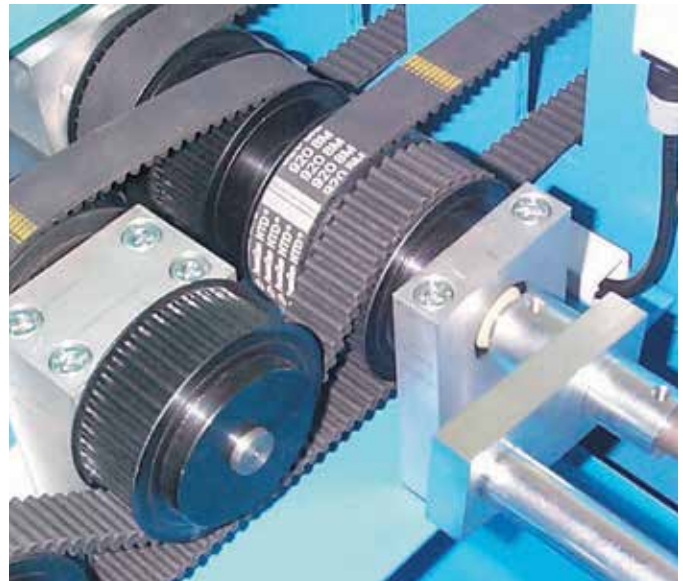
Food industry



Railway technology



Automotive industry



Hose-skiing

igubal® Pivoting Bearings

The use of pivoting bearings is usually associated with heavier traditional metal bearings, difficult installation, and high costs. Most of the time, maintenance is still necessary over the 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 bearings must be readjusted, reamed, or retrofit in order to compensate for misalignment.

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

Area of Application

Ease of installation makes diverse applications possible for igubal® pivoting bearings. They can be used anywhere the self-adjusting feature offers design advantages or helps to simplify assembly.

Tolerances

Maintenance-free igubal® pivoting bearings are meant to be oversized before being pressfit. After proper installation into a recommended housing bore, the inner diameter adjusts to meet our specified tolerances. Please adhere to the catalog specifications for housing bore and recommended shaft sizes. This will help to ensure optimal performance of iglide plain bearings. Please contact an iglide® technical expert for support.

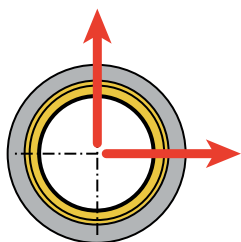
► Tolerance Table, Page 75

Installation

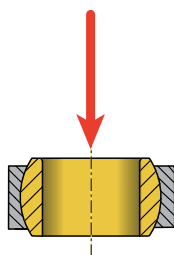
igubal® pivoting bearings are pressfit into a recommended housing bore and axially secured. An exact orientation of the bearing housing is not necessary, since the pivoting bearing compensates for misalignment.

Dimensions

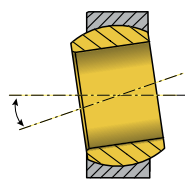
igubal® spherical bearings are manufactured according to DIN ISO 12240 dimensional K series and E series. The product range provides dimensions from 0.1875 to 1.0" and 2 to 30mm. Please contact us if you need other dimensions.



Compressive Strength
Radial



Compressive Strength
Axial



Pivot Angle

igubal® pressfit spherical bearing



Standard,
easy to fit,
inch dimensions
K series
KGLI

► Page 840



Standard,
easy to fit
K series
KGLM

► Page 841



For extremely
narrow installation
space
K series
KGLI-SL

► Page 842



For extremely
narrow installation
space
K series
KGLM-SL

► Page 843



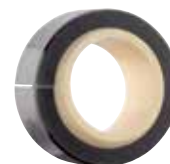
Easy to fit,
low-cost,
ball material options
K series
KGLM-LC

► Page 844



For small space
requirement
E series
EGLM

► Page 845



Cost-effective,
ball material options
E series
EGLM-LC

► Page 846

igubal® self-aligning clip bearing



Easy to install
High temperature
E series
ECLM

► Page 847



For higher radial loads
High temperature
E series
ECLM-HD

► Page 848



For tolerance compensation,
ball material options
E series
EGFM-T

► Page 849

igubal® double joint



Solid polymer,
selectable ball
material
E series
EGZM

► Page 850



Selectable ball and
tube materials,
individual dimensions
and alignment
KDGM

► Page 851



Selectable ball stud
and tube materials, individual
dimensions
and alignment
WDGM

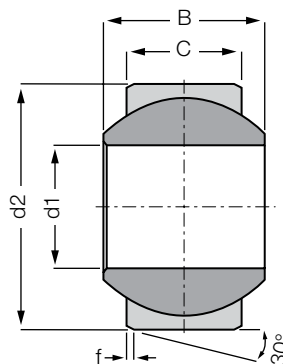
► Page 852

igubal® Pressfit Spherical Bearings - Product range

KGLI - Pressfit bearing - inch



- Compensation of misalignment and edge loads
- Corrosion-resistant
- High dampening qualities
- High vibration-dampening capacity
- Suitable for rotating, oscillating and linear movements



Order key

Type Size

K GL I - 03

Dimensional K series

Pressfit spherical bearing

Inch

Inner-Ø [inch]
Based on 1/16"



Material:

Housing: igumid G ▶ Page 1373

Spherical ball: iglide® L280 (W300)*

Dimensions [inch]

Part No.	d1 [E10]	d2	B	C	f	Max. pivot angle	Weight [g]
KGLI-03	.1875	.5625	.312	.218	0.3	34°	1.2
KGLI-04	.2500	.6562	.375	.250	0.3	30°	1.7
KGLI-05	.3125	.7500	.437	.281	0.3	29°	2.6
KGLI-06	.3750	.8125	.500	.312	0.5	25°	3.3
KGLI-07	.4375	.9375	.562	.343	0.5	25°	4.9
KGLI-08	.5000	1.0625	.625	.390	0.5	25°	7.1
KGLI-10	.6250	1.1875	.750	.500	0.5	23°	10.2
KGLI-12	.7500	1.4375	.875	.593	0.5	23°	17.5
KGLI-16	1.0000	2.1250	1.375	1.005	0.5	23°	62.0

Technical data

Part No.	Maximum Static Compressive Strength		Maximum Torque for the assembly [ft lbs]	Housing Bore		Shaft Size	
	radial [lbs]	axial [lbs]		Min	Max.	Min.	Max.
	KGLI-03	225	34	3.69	.5625	.5630	.1888
KGLI-04	337	56	7.37	.6562	.6568	.2485	.2500
KGLI-05	450	79	8.85	.7500	.7509	.3110	.3125
KGLI-06	629	90	14.75	.8125	.8134	.3735	.3750
KGLI-07	843	101	22.13	.9375	.9382	.4358	.4375
KGLI-08	955	112	25.82	1.0625	1.0632	.4983	.5000
KGLI-10	1191	169	29.50	1.1875	1.1882	.6233	.6250
KGLI-12	1911	191	40.57	1.4375	1.4383	.7479	.7500
KGLI-16	3057	562	47.94	2.1250	2.1258	.9988	1.0000

▶ Tolerance Table, Page 75

For housing bores (H7)
For shaft sizes (h7)

*W300 is the European material equivalent for iglide® L280.

²⁹⁾ The maximum static axial load is determined in a remote location hole

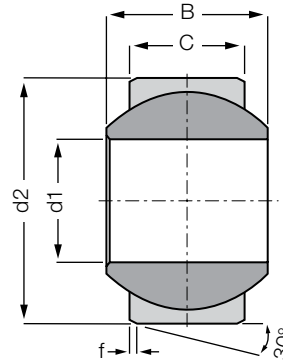
igubal® Pressfit Spherical Bearings - Product range

igubal®
pressfit
spherical
bearing

KGLM - Pressfit bearing - mm



- Compensation of misalignment and edge loads
- Corrosion-resistant
- High dampening qualities
- High vibration-dampening capacity
- Suitable for rotating, oscillating and linear movements



Order key

Type Size

K GL M - 03

Dimensional K series

Pressfit spherical bearing

Metric

Inner-Ø [inch]



Material:

Housing: igamid G ▶ Page 1373

Spherical ball: iglide® L280 (W300)*

Dimensions [mm]

Part No.	d1 [E10]	d2	B	C	f	Max. pivot angle	Weight [g]
KGLM-02	2	8	4	3.0	0.8	32°	0.1
KGLM-03	3	10	6	4.5	0.8	32°	0.5
KGLM-05	5	13	8	6.0	0.8	30°	1.0
KGLM-06	6	16	9	6.5	0.8	29°	1.6
KGLM-08	8	19	12	9.0	0.8	25°	2.9
KGLM-10	10	22	14	10.5	0.8	25°	4.4
KGLM-12	12	26	16	12.0	0.8	25°	7.0
KGLM-14	14	28	19	13.5	0.8	23°	9.1
KGLM-16	16	32	21	15.0	0.8	23°	12.8
KGLM-18	18	35	23	16.5	0.8	23°	16.6
KGLM-20	20	40	25	18.0	0.8	23°	24.4
KGLM-22	22	42	28	20.0	0.8	22°	28.5

Technical data

Part No.	Maximum Static Compressive Strength		Maximum Torque through the ball	Housing Bore		Shaft Size	
	radial	axial		Min	Max.	Min.	Max.
	[lbs]	[lbs]	[ft lbs]				
KGLM-02	67	13	0.7	8.0000	8.0150	1.9900	2.0000
KGLM-03	119	34	2.2	10.0000	10.0150	2.9900	3.0000
KGLM-05	281	56	3.7	13.0000	13.0180	4.9800	5.0000
KGLM-06	393	90	7.4	16.0000	16.0180	5.9800	6.0000
KGLM-08	528	180	8.9	19.0000	19.0210	7.9850	8.0000
KGLM-10	798	202	14.8	22.0000	22.0210	9.9850	10.0000
KGLM-12	944	214	22.1	26.0000	26.0210	11.9820	12.0000
KGLM-14	1281	270	25.8	28.0000	28.0250	13.9820	14.0000
KGLM-16	1686	292	29.5	32.0000	32.0250	15.9820	16.0000
KGLM-18	1910	315	33.2	35.0000	35.0250	17.9820	18.0000
KGLM-20	2203	427	40.6	40.0000	40.0250	19.9790	20.0000
KGLM-22	2630	584	44.3	42.0000	42.0250	21.9790	22.0000

▶ Tolerance Table, Page 75

For housing bores (H7)
For shaft sizes (h7)

*W300 is the European material equivalent for iglide® L280.

²⁹⁾ The maximum static axial load is determined in a remote location hole

igubal® Pressfit Spherical Bearings - Product range

KGLI SL - Slimline- Pressfit spherical bearing - inch



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

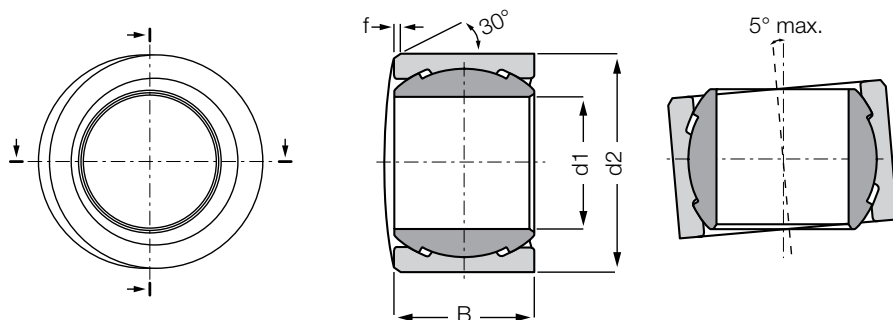


Order key

Type	Size	Version
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K GL I - 03 SL

Dimensional K series	Pressfit spherical bearing	Inch	Inner-Ø [inch] Based on 1/16"	Slimline
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® R**

Dimensions [inch]

Part No.	d1 [E10]	d2	B	f	Max. pivot angle	Weight [g]
KGLI-03 SL	.1875	.3750	.1875	.0200	5°	0.69
KGLI-04 SL	.2500	.5000	.2500	.0200	5°	0.75
KGLI-05 SL	.3125	.5000	.3125	.0200	5°	1.0
KGLI-06 SL	.3750	.6250	.3750	.0200	5°	1.3
KGLI-08 SL	.5000	.8125	.5000	.2000	5°	2.5

Technical data

Part No.	Maximum radial compressive strength		Maximum Axial compressive strength		Housing Bore		Shaft Size	
	Short term	Long term	Short term	Long term	Min	Max.	Min.	Max.
	[lbs]	[lbs]	[ft lbs]					
KGLI-03 SL	225	112	34	17	.3750	.3756	.1888	.1900
KGLI-04 SL	337	168	56	28	.5000	.5007	.2485	.2500
KGLI-05 SL	450	225	79	39	.5000	.5007	.3110	.3125
KGLI-06 SL	630	315	112	56	.6250	.6257	.3735	.3750
KGLI-08 SL	955	478	135	67	.8125	.8133	.4983	.5000

igubal® Pressfit Spherical Bearings - Product range

igubal®
pressfit
spherical
bearing

KGLM SL - Slimline- Pressfit spherical bearing - mm



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



Order key

Type	Size	Version
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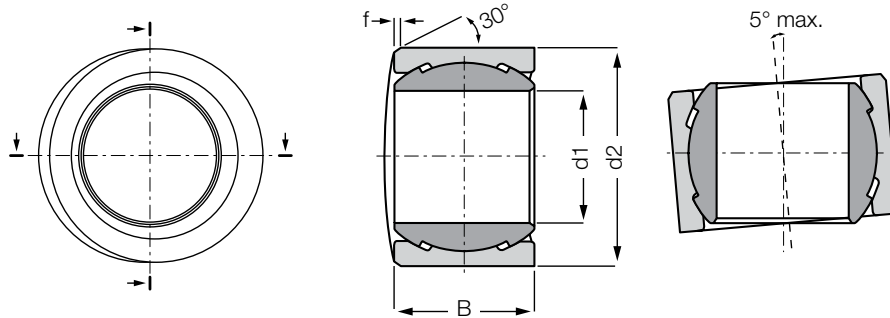
K GL M - 03 SL

Dimensional K series	Pressfit spherical bearing	Metric	Inner-Ø [mm]	Slimline
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***



Dimensions [inch]

Part No.	d1 [E10]	d2	B	f	Max. pivot angle	Weight [g]
KGLM-08 SL	8	14	9.0	0.5	5°	1.1
KGLM-10 SL	10	16	10.5	0.5	5°	1.5
KGLM-12 SL	12	18	12.0	0.5	5°	2.0
KGLM-16 SL	16	22	15.0	0.5	5°	3.1

Technical data

Part No.	Maximum radial compressive strength		Maximum Axial compressive strength	
	Short term	Long term	Short term	Long term
	[lbs]	[lbs]	[ft lbs]	
KGLM-08 SL	807	101	304	51
KGLM-10 SL	899	169	450	84
KGLM-12 SL	1012	169	506	84
KGLM-16 SL	1461	112	731	56

*W300 is the European material equivalent for iglide® L280.

igubal® Pressfit Spherical Bearings - Product range

KGLM LC - Low cost- Pressfit spherical bearing - mm



- Variety of ball materials
- Easy to install
- Low-cost
- Split housing



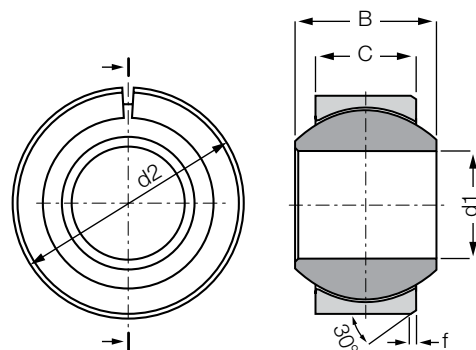
Order key

Type	Size	Version
K	GL	M - 03
Dimensional K series	Pressfit spherical bearing	Metric
	Inner-Ø [mm]	Slimline



Material:

Housing: igumid G ► Page 1373
Spherical ball: iglide® L280 (W300)*
Other ball stud materials on request



Dimensions [mm]

Part No.	d1 [E10]	d2 ³⁰⁾	B	C	f	Max. pivot angle	Weight [g]
KGLM-05 LC	5	13.0	8	6.0	0.8	30°	1.0
KGLM-10 LC	10	22.0	14	10.5	0.8	25°	4.3
KGLM-12 LC	12	26.0	16	12	0.8	25°	6.9
KGLM-16 LC	16	32.0	21	15	0.8	23°	12.7
KGLM-18 LC	18	35.0	23	16.5	0.8	23°	16.6
KGLM-20 LC	20	40.0	25	18	0.8	23°	23.6
KGLM-25 LC	25	47.0	31	22	0.8	22°	38.9
KGLM-30 LC	30	55.0	37	25	1.0	22°	61.0

Technical data

Part No.	Maximum radial Compressive Strength		Maximum axial ²⁹⁾ Compressive Strength	
	Short term	Long term	Short term	Long term
	[lbs]	[lbs]	Min	Max.
KGLM-05 LC	292	-	112	-
KGLM-10 LC	899	450	315	157
KGLM-12 LC	1214	607	337	169
KGLM-16 LC	1798	899	674	337
KGLM-20 LC	2248	1124	1124	562
KGLM-25 LC	3057	1529	1686	843
KGLM-30 LC	4496	2248	2023	1012

²⁹⁾ The maximum static axial load is determined in a remote location hole

³⁰⁾ Pressfit

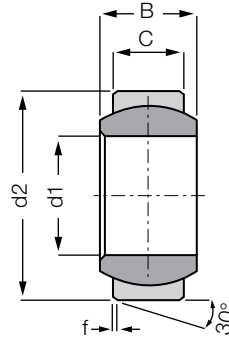
igubal® Pressfit Spherical Bearings - Product range

igubal®
pressfit
spherical
bearing

EGLM - Pressfit spherical bearing - mm



- Compensation of misalignment errors and edge loads
- Corrosion-resistant
- High dampening qualities
- Excellent vibration dampening
- Suitable for rotating, oscillating and linear movements



Order key

Type E Size GL M - 04

E **GL M - 04**

Dimensional E series	Flange bearing	Metric	Inner-Ø [mm]
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***

Dimensions [mm] and Technical data

Part No.	Max. static compressive strength		Maximum torque through ball [ft lbs]	d1 [E10]	d2	B	C	f	Max. pivot angle	Weight [g]
	radial [lbs]	axial ²⁹⁾ [lbs]								
EGLM-04	135	11	1.5	4	12	5	3.0	0.5	37°	0.4
EGLM-05	213	22	1.5	5	14	6	4.0	0.5	33°	0.8
EGLM-06	236	28	1.8	6	14	6	4.0	0.5	27°	0.9
EGLM-08	303	39	5.2	8	16	8	5.0	0.5	24°	1.2
EGLM-10	449	67	10.3	10	19	9	6.0	0.5	24°	1.9
EGLM-12	505	101	18.4	12	22	10	7.0	0.5	21°	2.8
EGLM-15	775	112	22.1	15	26	12	9.0	0.5	21°	6.9
EGLM-16	876	135	23.6	16	28	13	9.5	0.5	21°	9.0
EGLM-17	921	157	25.8	17	30	14	10.0	1.0	21°	10.6
EGLM-20	1202	269	29.5	20	35	16	12.0	1.0	18°	16.3
EGLM-25	1843	393	40.6	25	42	20	16.0	1.0	16°	29.0
EGLM-30	2472	562	51.6	30	47	22	18.0	1.0	13°	37.4
EGLM-40	5058	562	59.0	40	62	28	22.0	1.0	13°	57.0

▶ Tolerance Table, Page 75

For housing bores (H7)
For shaft sizes (h7)

*W300 is the European material equivalent for iglide® L280.

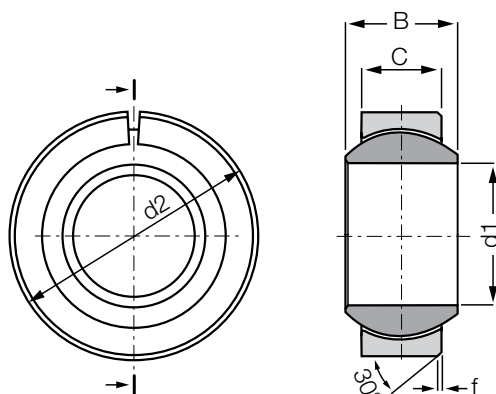
²⁹⁾ The maximum static axial load is determined in a remote location hole

igubal® Pressfit Spherical Bearings - Product range

EGLM - Pressfit spherical bearing - mm



- Easy to install
- Low-cost
- Chemical- and corrosion-resistant
- Very tough
- Compensation of misalignment errors



Order key

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

E GL M - 15 LC

Dimensional E series	Pressfit spherical bearing	Metric	Inner-Ø [mm]	Low cost
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***
Other ball stud materials on request

Dimensions [mm] and Technical data

Part No.	Max. static compressive strength		Maximum torque through ball [ft lbs]	d1 [E10]	d2	B	C	f	Max. pivot angle	Weight [g]
	radial	axial ²⁹⁾								
	[lbs]	[lbs]								
EGLM-15-LC	1236	225	22	15	26	12	9.0	0.5	21°	4.5
EGLM-16-LC	1349	259	24	16	28	13	9.5	0.5	21°	6
EGLM-20-LC	2023	315	30	20	35	16	12	1.0	18°	11
EGLM-25-LC	3147	652	41	25	42	20	16	1.0	16°	20
EGLM-30-LC	3822	899	52	30	47	22	18	1.0	13°	26

*W300 is the European material equivalent for iglide® L280.

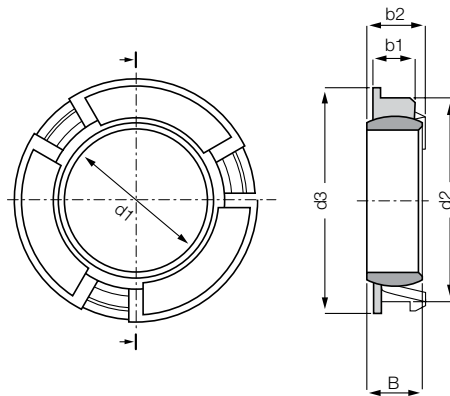
igubal® Self-aligning clip Bearings - Product range

igubal®
pressfit
spherical
bearing

ECLM - Self-aligning clip bearing



- Easy installation by simply snapping into sheet metal
- No additional axial fastening necessary
- Extremely small installation space: space-saving, thin-walled design



Order key

Type Size

E CL M - 05 - 02

Dimensional E series	Self-aligning clip bearing	Metric	Inner-Ø [mm]	Sheet thickness
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Material:

Housing: **igumid G** ▶ Page 1373

Spherical ball: **iglide® J**

Dimensions [mm]

Part No.	d1 [E10]	B	d2 ±0.2	d3	Sheet metal thickness y	b1 ±0.1	b2	Max. pivot angle
ECLM-05-02	5	6.0	12	13	2.0	3.9	6.0	25°
ECLM-06-02	6	6.0	12	13	2.0	3.9	6.0	18°
ECLM-08-02	8	6.0	14	15	2.0	3.9	6.0	16°
ECLM-10-03	10	6.0	16	17	3.0	4.5	6.7	12°
ECLM-12-03	12	6.0	18	19	3.0	4.5	6.7	12°
ECLM-16-03	16	6.0	22	24	3.0	4.5	6.7	12°

Technical data

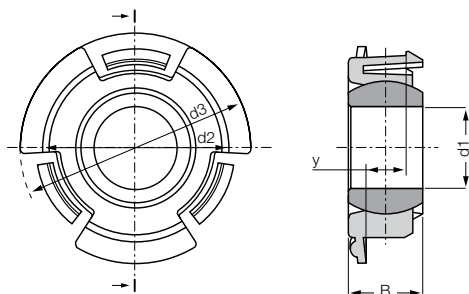
Part No.	Max. radial compressive strength		Max. axial compressive strength		Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	
ECLM-05-02	157	79	6	3	0.5
ECLM-06-02	157	79	6	3	0.5
ECLM-08-02	225	112	6	3	0.5
ECLM-10-03	315	157	7	2	0.8
ECLM-12-03	405	202	8	2	0.8
ECLM-16-03	629	315	10	5	1.1

igubal® Self-aligning clip Bearings - Product range

ECLM-HD Self-aligning clip bearing - Heavy duty



- High axial and radial loads
- Adjustment of axial and radial clearance by preloading
- Easily clips into sheet metal
- No additional axial fastening necessary
- For sheet thickness 4 to 8 mm



Order key

Type	Size	Version
E	CL M - 08 - 04 - HD	
Dimensional E series	Self-aligning clip bearing	Metric
	Inner-Ø [mm]	Sheet thickness
		Heavy Duty



Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***
Other ball stud materials on request

Dimensions [mm]

Part No.	d1 [E10]	B	d2 ±0.15	d3	Y ±0.1	Max. pivot angle
ECLM-08-04-HD	8.0	8.0	18.0	25	4.0	28°
ECLM-10-05-HD	10.0	9.0	22.0	28	5.0	24°
ECLM-12-06-HD	12.0	10.0	24.0	32	6.0	24°
ECLM-20-08-HD	20.0	16.0	36.0	44	8.0	21°

Technical data

Part No.	Max. radial compressive strength		Max. axial compressive strength		Weight [g]
	Short term [lbs]	Long term [lbs]	Short term [lbs]	Long term [lbs]	
ECLM-08-04-HD	393	28	197	13	2.0
ECLM-10-05-HD	565	34	281	17	3.1
ECLM-12-06-HD	787	39	393	19	3.8
ECLM-20-08-HD	1349	74	674	37	12.0

*W300 is the European material equivalent for iglide® L280.

Spherical ball materials to choose ▶ Page 857



J4VEM:
clearance free,
preloaded



JEM: low
moisture
absorption



REM:
low-cost



J4EM: low-cost
and low moisture
absorption

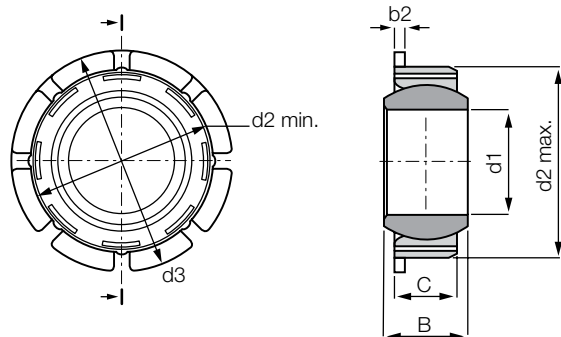
igubal® Self-aligning clip Bearings - Product range

igubal®
pressfit
spherical
bearing

EGFM T - Self-aligning clip bearing - Tolerance compensation



- Maintenance free, dry-running
- Easy to fit
- Max. tolerance compensation ± 0.2 mm



Order key

Type Size Version

E **GF** **M** - **05** - **T**

Dimensional E series	Self-aligning bearing with flange	Metric	Inner-Ø [mm]	Tolerance compensation
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Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***
Other ball stud materials on request

Dimensions [mm]

Part Number	Max. radial compressive strength		Max. axial compressive strength		Weight [g]
	Short term	Long term	Short term	Long term	
	[lbs]	[lbs]	[lbs]	[lbs]	
EGFM-08 T SL ³¹⁾	250	124	34	17	0.9
EGFM-10 T	427	214	50	25	2.4
EGFM-12 T	560	280	61	30	3.0
EGFM-16 T	1350	675	135	67	6.6
EGFM-20 T	2020	1012	180	90	11.1
EGFM-25 T	3147	1574	630	315	19.0
EGFM-30 T	3822	1910	675	337	24.0

Technical data

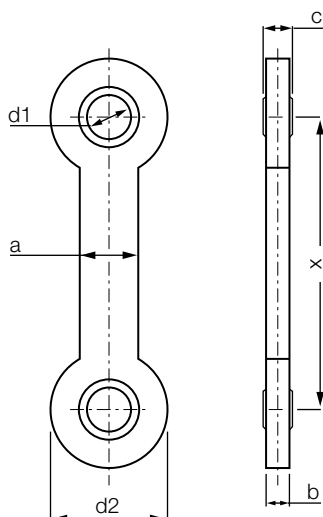
Part No.	d1	d2	d2	d3	C	B	b2	Housing		Max. pivot angle
		min.	max.					min.	max.	
EGFM-08 T SL ³¹⁾	8 (H10)	15.8	16.5	18	5.0	6	1.1	15.8	16.2	11°
EGFM-10 T	10	20.8	21.6	26	6.0	9	1.0	20.8	21.2	24°
EGFM-12 T	12	22.8	23.6	28	7.0	10	1.0	22.8	23.2	21°
EGFM-16 T	16	29.8	30.6	35	9.5	13	1.5	29.8	30.2	21°
EGFM-20 T	20	34.8	35.6	42	12.0	16	2.0	34.8	35.2	18°
EGFM-25 T	25	41.8	42.6	50	16.0	20	2.0	41.8	42.2	16°
EGFM-30 T	30	46.8	47.6	55	18.0	22	2.0	46.8	47.2	13°

³¹⁾ Spherical ball made from **iglide® J**

*W300 is the European material equivalent for **iglide® L280**.

igubal® Double Joint- Product range

EGZM - Double Joint



- Maintenance free, self-lubricating
- Mechanical joining link between 2 components
- Compensation of misalignment errors
- Corrosion-resistant
- Double joint turned 90° available on request



Order key

Type	Size
E GZ M - 04 - 25	
Dimensional E series	
Double joint	
Metric	
Inner-Ø [mm]	
Pitch X	



Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***
Other ball stud materials on request

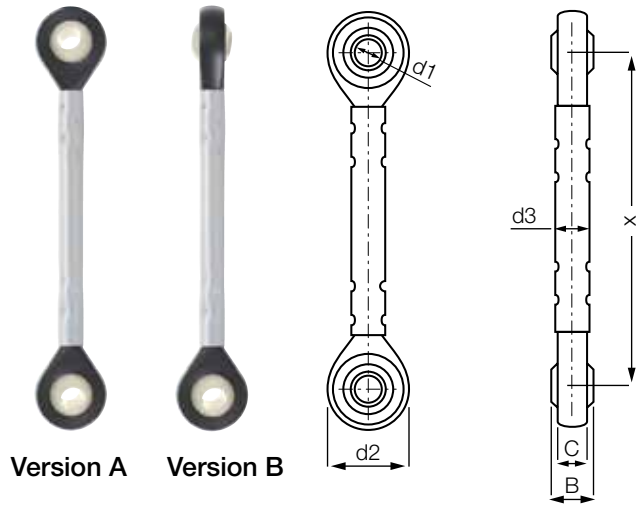
Dimensions [mm] and Technical data

Part No.	d1 [E10]	d2	x	b	a	Maximum radial static tensile strength		Maximum axial static tensile strength		Weight [g]
						Short term	Long term	Short term	Long term	
						[lbs]	[lbs]	[lbs]	[lbs]	
EGZM-04-25	04	20	25	4	10	247	124	292	146	3.5
EGZM-04-50	04	20	50	4	10	247	124	169	84	4.8
EGZM-04-75	04	20	75	4	10	247	124	112	56	6.1
EGZM-05-25	05	20	25	4	10	247	124	292	146	2.2
EGZM-05-50	05	20	50	4	10	247	124	169	84	4.9
EGZM-05-75	05	20	75	4	10	247	124	112	56	6.3
EGZM-06-25	06	20	25	4	10	247	124	292	146	3.4
EGZM-06-50	06	20	50	4	10	247	124	169	84	4.8
EGZM-06-75	06	20	75	4	10	247	124	112	56	3.4
EGZM-08-60	08	30	60	7	15	674	337	787	393	15.2
EGZM-08-100	08	30	100	7	15	674	337	427	214	19.5
EGZM-10-60	10	30	60	7	15	562	281	787	393	15.3
EGZM-10-85	10	30	85	7	15	562	281	517	259	18.1
EGZM-10-100	10	30	100	7	15	562	281	427	214	19.4
EGZM-12-60	12	30	60	7	15	450	225	787	393	14.7
EGZM-12-100	12	30	100	7	15	450	225	427	214	18.8

*W300 is the European material equivalent for iglide® L280.

igubal® Double Joint- Product range

KDGM - Variable double joint



- Ball diameters 6, 8, 10 and 12 mm
- Individual center dimensions and lengths
- Individual alignment of the bearing position



Order key

Type	Size	Options
K	DG	M - 06 - A - SR - J
Dimensional K series	Double joint	Metric
	Inner-Ø [mm]	Pitch X
	Tube material	Spherical ball material



Material:

Housing: **igumid G** ▶ Page 1373
Spherical ball: **iglide® L280 (W300)***
Other options available see below
Tube: galvanized or stainless steel

Options:

Tube material
SR = Steel
ER = Stainless steel

Spherical ball material

Blank = iglide® L280 (W300)
J = iglide® J
J4 = iglide® J4
R = iglide® R
EK = Stainless steel

Dimensions [mm]

Part No.	d1	d2	d3	X	B	C	Max. pivot angle
	E 10			min.			
KDGM-06-A-SR-J <input type="checkbox"/> ³²⁾	6.0	20.0	6.0	72.0	9.0	7.0	40°
KDGM-08-A-SR-J <input type="checkbox"/> ³²⁾	8.0	24.0	8.0	84.0	12.0	9.0	35°
KDGM-10-A-SR-J <input type="checkbox"/> ³²⁾	10.0	30.0	10.0	96.0	14.0	10.5	35°
KDGM-12-A-SR-J <input type="checkbox"/> ³²⁾	12.0	34.0	12.0	108.0	16.0	12.0	35°

³²⁾ Please add the required center distance in mm

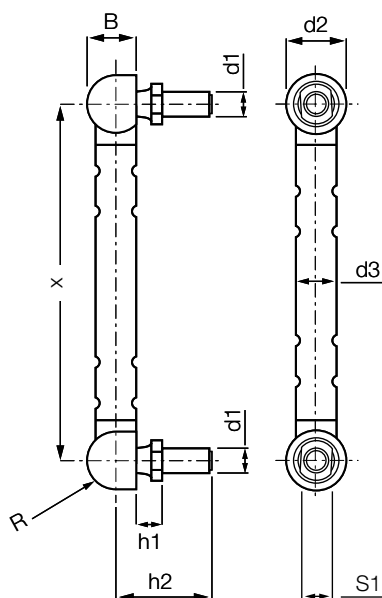
Order example, KDGM-06-A-SR-J, 100 : Double joint with 06 mm inner diameter, version A, tube material made of steel, spherical ball made of iglide® J, center distance 100mm

igubal® Double Joint- Product range

WDGM - Variable double Joint



Version A Version B Version C Version D



Order key

Type	Size	Options
W	DG	M - 06 - A - SR - J
Angle	Double joint	Metric
	Ball stud thread	Ball stud direction (A, B, C or D)
		Tube material
		Ball stud material



Material:

Housing: **igumid G** ▶ Page 1373

Spherical ball: **igumid G**, steel or stainless steel

Tube: galvanized or stainless steel

Options:

Tube material

SR = Steel

ER = Stainless steel

Spherical ball material

Blank = iglide® L280 (W300)

J = iglide® J

J4 = iglide® J4

R = iglide® R

EK = Stainless steel

- Socket cup M5, M6, M8 and M10
- Individual center dimensions and lengths
- Individual alignment of the bearing position

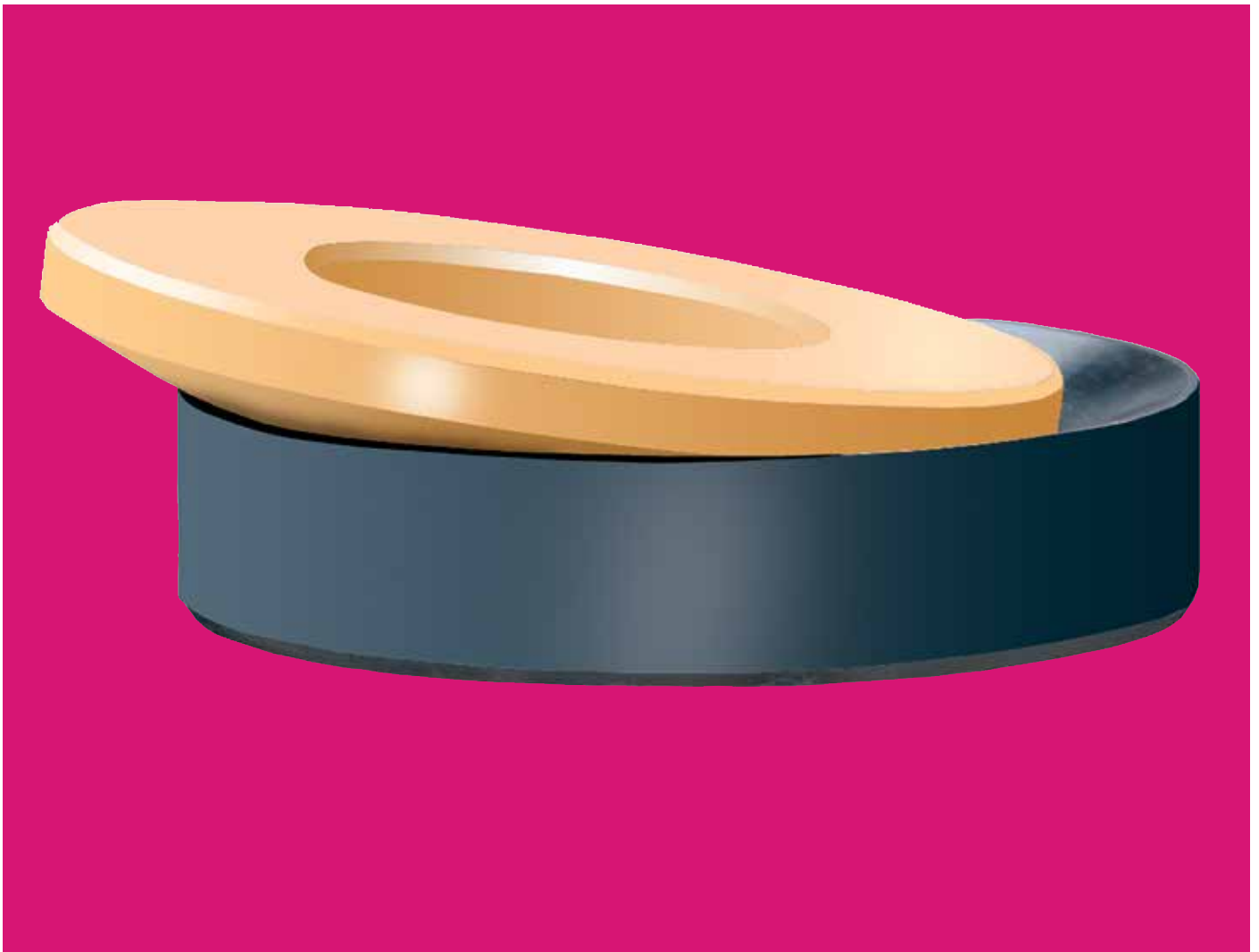
Dimensions [mm]

Part No.	d1	d2	d3	X	B	h1	h2	S1	R	Max. pivot angle
				min.				Width across flats		
WDGM-05-A-SR-SZ <input type="text"/> ³²⁾	M5	12.8	8.0	74.0	10.8	4.6	19.2	SW8	6.4	23°
WDGM-06-A-SR-SZ <input type="text"/> ³²⁾	M6	14.8	10.0	80.0	12.3	6.1	23.5	SW9	7.4	25°
WDGM-08-A-SR-SZ <input type="text"/> ³²⁾	M8	19.3	12.0	80.0	16.2	5.9	29.5	SW12	9.7	24°
WDGM-10-A-SR-SZ <input type="text"/> ³²⁾	M10 ³³⁾	19.3	12.0	80.0	16.2	7.9	36.0	SW14	9.7	24°

³²⁾ Please add the required center distance in mm

³³⁾ Housing's size 8 with a special M10 stud, available only in metal

Order example, WDGM-05-A-SR-SZ, 100 : Double joint with 05 ball stud thread, version A, tube material made of steel, ball stud made of steel, center distance 100mm

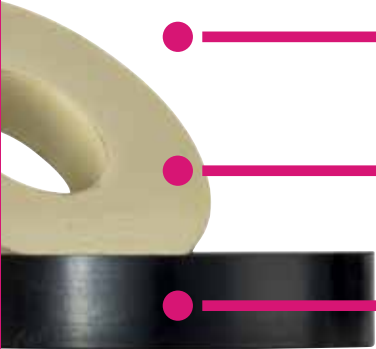


igubal® Spherical Thrust Bearings

- Easy to install
- Compensation of misalignment errors
- Compensation of edge loads
- Very good friction and wear properties

igubal® Spherical Thrust Bearing

igubal® self-aligning spherical thrust bearings are very easy to fit and help to compensate misalignment errors and prevent edge loads.



Easy to install

Compensation for
misalignment errors

Prevent edge loads

Very good friction and
wear properties



When to use it?

- If you want to save weight
- If corrosion resistance is requested
- If a bearing with a good coefficient of friction is sought



When not to use it?

- At very high loads
- If temperatures are higher than +176 °F
- If a high number of revolutions have to be achieved



max. +176°F
min. -22°F



1 type
Ø 5 to 20 mm



Available from stock
Detailed information about delivery time online.



Price breaks online
No minimum order.

Mechanical properties

igubal® self-aligning spherical thrust bearings are very easy to fit and help to compensate for alignment errors and prevent edge loads. The housing pad is made of the impact resistant, thermoplastic composite material igumid G. The spherical washer is made of the iglide® L280 (W300) plain bearing material. This combination provides exceptionally good friction and wear properties.

Loads

The load capacity of igubal® spherical thrust bearings is very high for standard ambient temperatures. For high continuous loads and high temperatures, the load capacity of the thrust bearings should be tested in an experiment that simulates the application.

Coefficients of friction and speed

Taking into account the radial load, maximum surface speeds up to 98.4 fpm (0.5 m/s) rotating are possible.

Installation

The housing pad is installed so that it is countersunk and secured. The spherical washer is loosely fitted in the socket and is held in place by the shaft that is placed into the bearing.

Product range

igubal® spherical thrust bearings are available in standard form to suit diameters from 5 to 20 mm. Please contact us if you require other dimensions.

*W300 is the European material equivalent for iglide® L280.



Order key

Type

Size

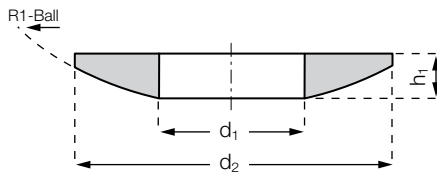
SA M- 04

Dimensional E series

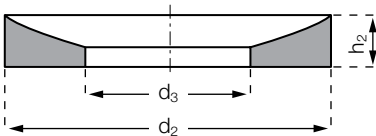
Inch

Inner-Ø [inch]
Based on 1/16"

Spherical washer



Housing pad

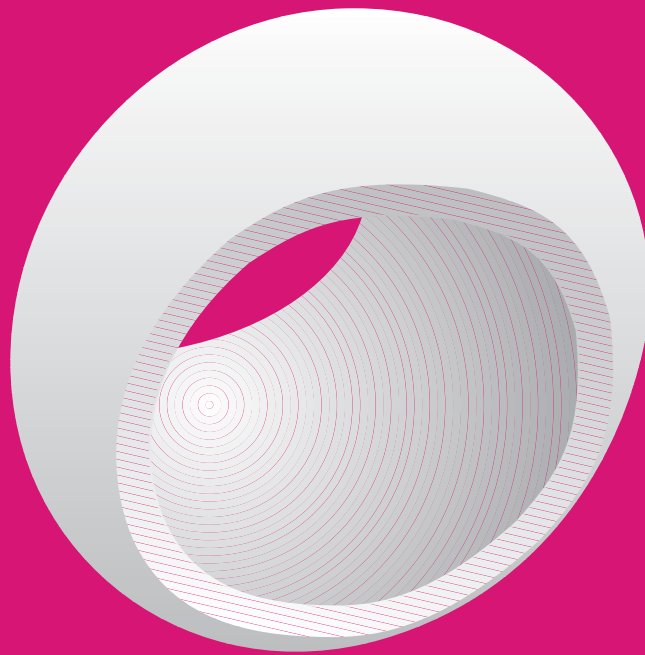


Material:

Housing pad: **igumid G** ▶ Page 1373
Spherical washer: **iglide® L280 (W300)***

Part No.	d1 Spherical Washer DIN 7168	d3 Housing DIN 7168	d2	h1 Housing	h2 Spherical Washer	H Total Height	R1 Radius	Compensation angle
SAM-05	5.2	7.0	15.0	3.0	3.5	4.7	15.0	3°
SAM-06	6.2	7.5	16.0	3.0	4.0	5.7	16.0	3°
SAM-08	8.2	10.0	20.0	4.0	5.0	6.4	20.0	2°
SAM-10	10.2	12.0	24.0	4.5	5.5	7.3	24.0	2°
SAM-12	12.2	14.5	30.0	5.0	6.0	7.9	32.0	2°
SAM-16	16.5	19.0	36.0	5.5	6.5	8.5	40.0	2°
SAM-20	20.2	23.0	44.0	6.0	7.0	8.4	45.0	2°

Part No.	Maximum Static Axial Tensile Strength		Weight [g]
	Short-term	Long-term	
	[lbs]	[lbs]	
SAM-05	900	450	0.9
SAM-06	1124	562	1.1
SAM-08	1798	899	2.2
SAM-10	2248	1124	3.4
SAM-12	2698	1349	5.9
SAM-16	3821	1910	8.5
SAM-20	4946	2473	12.8

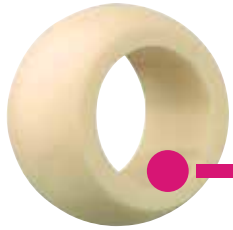


igubal® Spherical Balls

- Self-lubricating, maintenance-free
- Corrosion-resistant
- High compressive strength
- High elasticity
- Lightweight

igubal® Spherical Balls

Every iglide® material has its own special properties, which determines the suitability for your special applications and requirements. Today, igus® offers spherical bearings from iglide® materials L280 (W300)* as a standard, J, J4, R, RN248, UW and T500 (X)*. The spherical ball for metallic bearing housings are available for housing numbers 203 to 210.



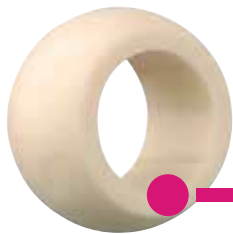
Self-lubricating, maintenance-free



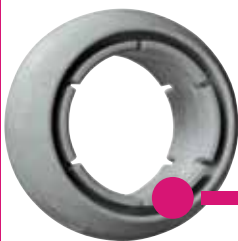
Corrosion-resistant



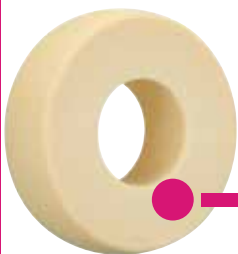
High compressive strength



High elasticity



A variety of materials



For metallic bearing housings



When to use it?

- If you need maintenance free material
- When dimensional E series and K components should be fitted
- If different iglide® materials should be tested
- If high compressive strength is required
- If high elasticity is required



When not to use it?

- If temperatures are higher than +482°F
- If dimensions above 1 inch or 50 mm are required
- If rotation speeds higher than 98.4 fpm (0.5 m/s) are required

Tolerances

The tolerance of the inner diameter is E10. The shaft tolerance should be included between h6 and h9.



Online product finder

► www.igus.com/igubal-finder



Temperature range depends on material



2 types

Ø 3/16 to 1 inch



8 types

Ø 2 to 50 mm



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order.

*W300 is the European material equivalent for iglide® L280, X is the European equivalent material for iglide® T500

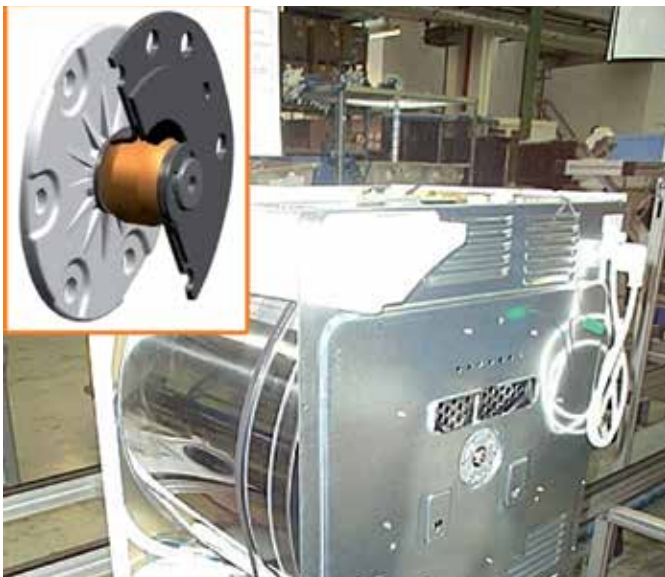


Typical application areas

- Plant design
- Model building
- Furniture/Industrial design etc.

Improve technology and reduce costs –
110 exciting examples online

➤ www.igus.com/igubal-applications



Drum bearing in a tumble dryer



Food industry



Carriage in a crane system



Furniture design

Standard
iglide® L280 (W300)*



WKI/WKM
K series, metric/Inch

► Page 861



WEI/WEM
E series, metric/Inch

► Page 861

Low-cost
iglide® R



RKM
K series, metric

► Page 863



REI/REM
E series, metric

► Page 863

High temperatures
iglide® X



XKM
K series, metric

► Page 864



XEM
E series, metric

► Page 864

Low moisture absorption
iglide® J



JKM
K series, metric

► Page 865



JKM
Large dimensions,
metric

► Page 865



JEM
E series, metric

► Page 865

Cost-effective
iglide® J4



J4KM
K series, metric

► Page 867



J4EM
E series, metric

► Page 867

Cost-effective
iglide® UW



UWEM
E series, metric

► Page 868

Cost-effective
iglide® J4



J4VEM
E series, metric

► Page 869

Detectable
iglide® RN248



RN248KM
K series, metric

► Page 870



RN248EM
E series, metric

► Page 870

For metallic bearing housings



**iglide® J
Standard**
E series, metric

► Page 871



**iglide® A180
FDA-compliant**
E series, metric

► Page 871



**iglide® A350
FDA-compliant,
high temperature**
E series, metric

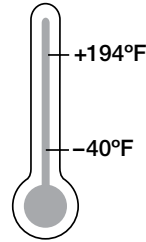
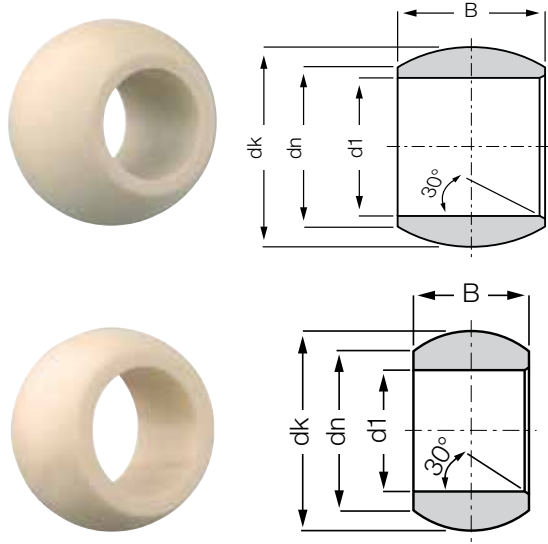
► Page 871

*W300 is the European material equivalent for iglide® L280.

*X is the European material equivalent for iglide® T500.

igubal® Spherical Balls - Product range

WKI and WEI - Standard igubal® spherical balls



Order key

Type	Size
W ... I	- 08 - 04
Spherical ball material iglide® L280 (W300)	Dimensional series K = K series E = E series
Inch	Inner-Ø [mm]
	Width

Dimensions [inch]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
WKI-03	.1875	.307	.444	.312	0.6
WKI-04	.2500	.354	.516	.375	1.0
WKI-05	.3125	.447	.625	.437	1.7
WKI-06	.3750	.504	.718	.500	2.3
WKI-07	.4375	.601	.828	.562	3.5
WKI-08	.5000	.700	.938	.625	5.0
WKI-10	.6250	.838	1.125	.750	8.2
WKI-12	.7500	.978	1.312	.875	12.5
WKI-16	1.0000	1.269	1.750	1.375	31.7

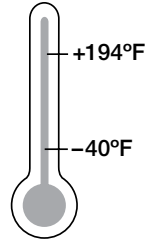
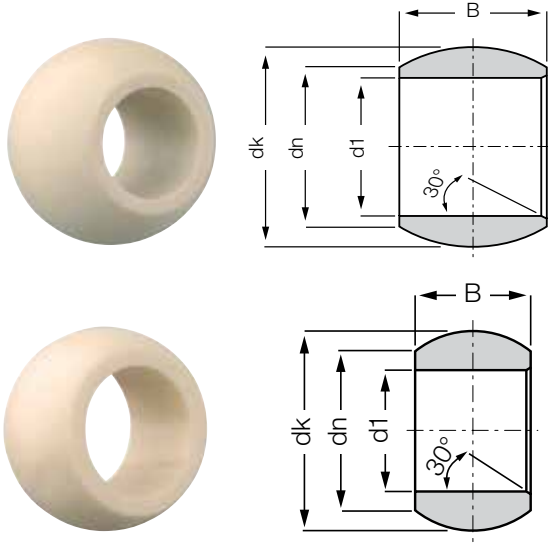
Dimensions [inch]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
WEI-03	.1875	.354	.402	.1900	0.3
WEI-04	.2500	.314	.402	.2500	0.3
WEI-05	.3125	.415	.520	.3125	0.7
WEI-06	.3750	.506	.630	.3750	1.3
WEI-07	.4375	.581	.709	.4063	1.6
WEI-08	.5000	.581	.709	.4063	2.6
WEI-10	.6250	.802	.945	.5000	3.1
WEI-12	.7500	.951	1.138	.6250	5.9
WEI-16	1.0000	1.180	1.398	.7500	9.2

*W300 is the European material equivalent for iglide® L280.

igubal® Spherical Balls - Product range

WKM and WEM - Standard spherical balls



Order key

Type Size

W ... **M - 08 - 04**

Spherical ball material iglide® L280 (W300)	Dimensional series	Metric	Inner-Ø [mm]	Width
--	--------------------	--------	--------------	-------

Standard – iglide® L280 (W300)*
extreme wear resistance

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
WKM-02-04	2.00	3.90	5.10	4.00	0.1
WKM-03-06	3.00	5.10	8.10	6.00	0.3
WKM-05-08	5.00	7.70	11.30	8.00	0.6
WKM-06-09	6.00	8.90	12.80	9.00	0.9
WKM-08-12	8.00	10.30	16.00	12.00	1.6
WKM-10-14	10.00	12.90	19.00	14.00	2.7
WKM-12-16	12.00	15.40	22.10	16.00	4.0
WKM-14-19	14.00	16.80	25.40	19.00	6.0
WKM-16-21	16.00	19.30	28.40	21.00	8.2
WKM-18-23	18.00	21.80	31.50	23.00	10.8
WKM-20-25	20.00	24.30	35.10	25.00	14.5
WKM-22-28	22.00	25.80	38.30	28.00	18.7
WKM-25-31	25.00	29.50	42.90	31.00	26.0
WKM-30-37	30.00	34.80	51.20	37.00	44.7

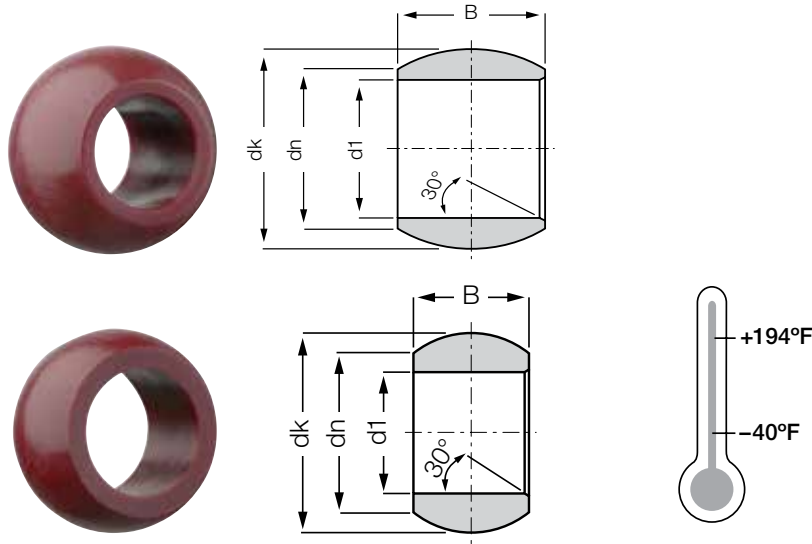
Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
WEM-04-05	4.00	6.25	8.30	5.00	0.2
WEM-05-06	5.00	8.00	10.30	6.00	0.3
WEM-06-06	6.00	8.00	10.30	6.00	0.4
WEM-08-08	8.00	10.00	13.30	8.00	0.7
WEM-10-09	10.00	13.00	16.10	9.00	1.2
WEM-12-10	12.00	15.00	18.10	10.00	1.5
WEM-15-12	15.00	18.00	22.00	12.00	2.4
WEM-16-13	16.00	19.50	24.10	13.00	3.3
WEM-17-14	17.00	20.00	25.10	14.00	3.7
WEM-20-16	20.00	24.00	29.10	16.00	5.3
WEM-25-20	25.00	29.00	35.60	20.00	9.5
WEM-30-22	30.00	34.00	40.90	22.00	12.1

*W300 is the European material equivalent for iglide® L280.

igubal® Spherical Balls - Product range

REI - igubal® spherical balls



Order key

Type Size

R E I - 04

Spherical ball material iglide® R	Dimensional E series	Inch	Inner-Ø [mm]
--------------------------------------	----------------------	------	--------------

iglide® R - low friction values,
low cost, low moisture
absorption

Dimensions [inch]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
REI-03	.1875	.354	.402	.1900	0.3
REI-04	.2500	.314	.402	.2500	0.3
REI-05	.3125	.415	.520	.3125	0.7
REI-06	.3750	.506	.630	.3750	1.3
REI-07	.4275	.581	.709	.4063	1.6
REI-08	.5000	.581	.709	.4063	2.6
REI-10	.6250	.802	.945	.5000	3.1
REI-12	.7500	.951	1.138	.6250	5.9
REI-16	1.0000	1.180	1.398	.7500	9.2

RKM and REM - igubal® spherical balls

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
RKM-10-14	10.00	12.90	19.00	14.00	2.9

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
REM-05-06	5.00	8.00	10.20	6.00	0.4
REM-06-06	6.00	8.00	10.20	6.00	0.4
REM-08-08	8.00	10.00	13.20	8.00	0.8
REM-10-09	10.00	13.00	16.00	9.00	1.3
REM-12-10	12.00	15.00	18.00	10.00	1.8



Order key

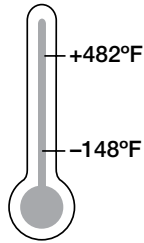
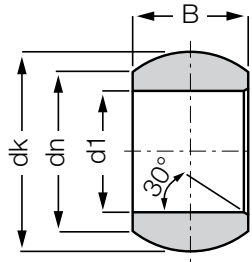
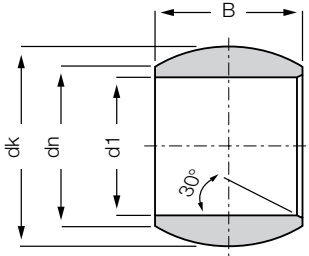
Type Size

R ... M - 06 - 08

Spherical ball material iglide® R	Dimensional series K = K series E = E series	Metric	Inner-Ø [mm]	Width
--------------------------------------	--	--------	--------------	-------

igubal® Spherical Balls - Product range

XKM and XEM - igubal® spherical balls



Order key

Type	Size
X ...	M - 06 - 08

Spherical ball material iglide® T500 (X)	Dimensional series K = K series E = E series	Metric	Inner-Ø [mm]	Width
---	--	--------	--------------	-------

iglide® T500 (X) - resistant to chemicals, high temperatures

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
XKM-10-04	10.00	12.90	19.10	14.00	2.9

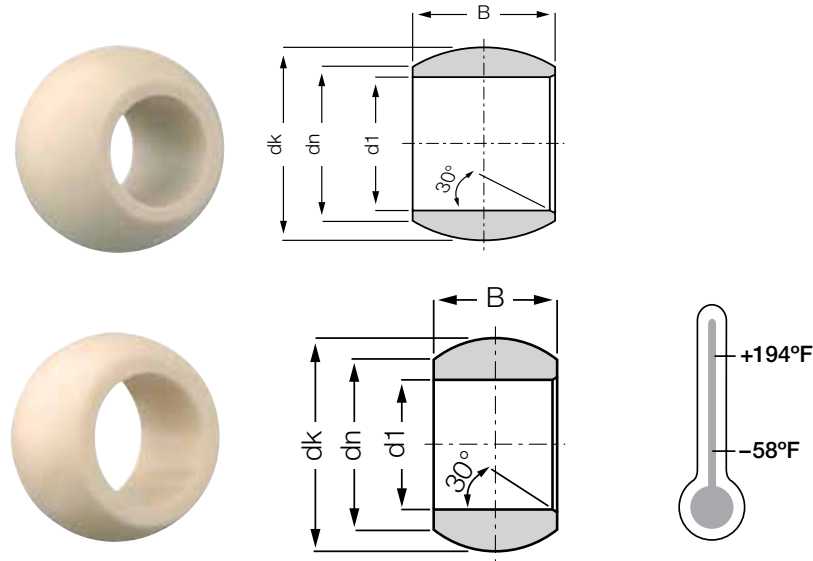
Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
XEM-05-06	5.00	8.00	10.30	6.00	0.4
XEM-06-06	6.00	8.00	10.20	6.00	0.4
XEM-08-08	8.00	10.00	13.20	8.00	0.8
XEM-10-09	10.00	13.00	16.00	9.00	1.3
XEM-12-10	12.00	15.00	18.00	10.00	1.6

*X is the European material equivalent for iglide® T500.

igubal® Spherical Balls - Product range

JKM and JEM - igubal® spherical balls - Low moisture absorption



Order key

Type	Size
J ... M	05 - 08
Spherical ball material iglide® J	Dimensional series K = K series E = E series
Metric	Inner-Ø [mm]
	Width

iglide® J - low moisture absorption,
low friction values

Dimensions [mm]

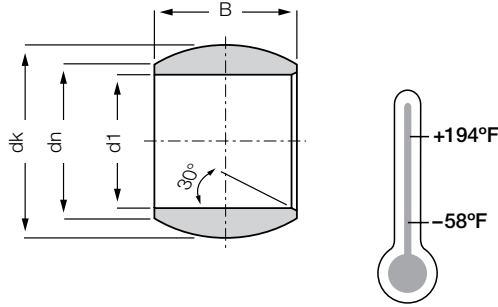
Part No.	d1 [E10]	dn	dK	B	Weight [g]
JKM-03-06	3.00	5.10	8.10	6.00	0.3
JKM-05-08	5.00	7.70	11.30	8.00	0.7
JKM-06-09	6.00	8.90	12.80	9.00	1.0
JKM-08-12	8.00	10.30	15.90	12.00	1.9
JKM-10-14	10.00	12.90	19.00	14.00	3.1
JKM-12-16	12.00	15.40	22.10	16.00	4.7
JKM-16-21	16.00	19.30	28.40	21.00	9.4
JKM-20-25	20.00	24.30	35.10	25.00	17.6
JKM-25-31	25.00	29.50	42.80	31.00	31.6
JKM-30-37	30.00	34.80	51.20	37.00	53.0

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
JEM-04-05	4.00	6.25	8.30	5.00	0.3
JEM-05-06	5.00	8.00	10.20	6.00	0.4
JEM-06-06	6.00	8.00	10.20	6.00	0.4
JEM-08-08	8.00	10.00	13.30	8.00	0.8
JEM-10-09	10.00	13.00	16.10	9.00	1.3
JEM-12-10	12.00	15.00	18.10	10.00	1.7
JEM-15-12	15.00	18.00	22.00	12.00	2.9
JEM-16-13	16.00	19.50	24.10	13.00	3.9
JEM-17-14	17.00	20.00	25.20	14.00	4.1
JEM-20-16	20.00	24.00	29.10	16.00	6.4
JEM-25-20	25.00	29.00	35.60	20.00	11.5
JEM-30-22	30.00	34.00	40.90	22.00	14.5

igubal® Spherical Balls - Product range

JKM - igubal® spherical balls - large dimensions



Order key

Type	Size
J	K M - 35 - 49
Spherical ball material iglide® J	Dimensional K series
	Metric
	Inner-Ø [mm]
	Width

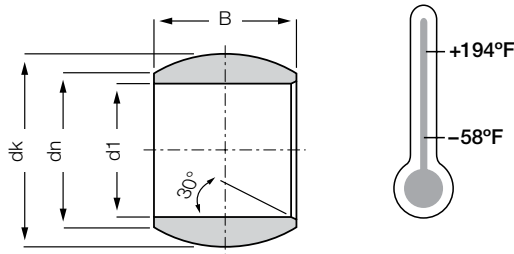
iglide® J - Low moisture absorption

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
JKM-35-49 ³⁵⁾	35.00	44.50	66.30	49.00	75.5
JKM-40-49	40.00	44.50	66.30	49.00	54.5
JKM-45-60 ³⁵⁾	45.00	56.50	82.40	60.00	125.1
JKM-50-60	50.00	56.50	82.40	60.00	92.1

³⁵⁾ Diameter reduced by means of a plain bearing

JKM-GT - igubal® spherical balls - Split



Order key

Type	Size
J	K M - GT - 49
Spherical ball material iglide® J	Dimensional K series
	Metric
	Split ball
	Inner-Ø [mm]

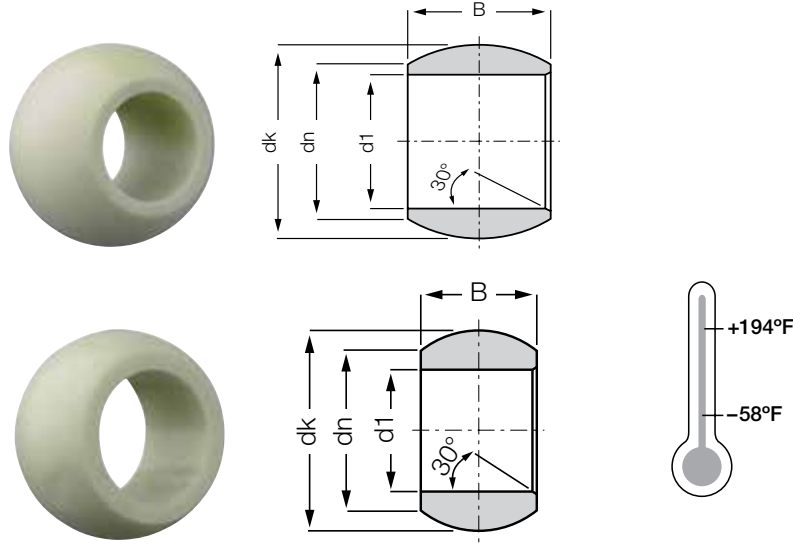
iglide® J - Low moisture absorption

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
JKM-GT-40	40.00	44.50	66.30	49.00	54.5
JKM-GT-50	50.00	56.50	82.40	60.00	92.1

igubal® Spherical Balls - Product range

J4KM and J4EM - igubal® spherical balls



Order key

Type	Size
J4 ... M - 08 - 08	
Spherical ball material iglide® J4	
Dimensional series K = K series E = E series	
Metric	
Inner-Ø [mm]	
Width	

iglide® J4 - low moisture absorption,
low friction values

Dimensions [mm]

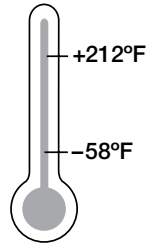
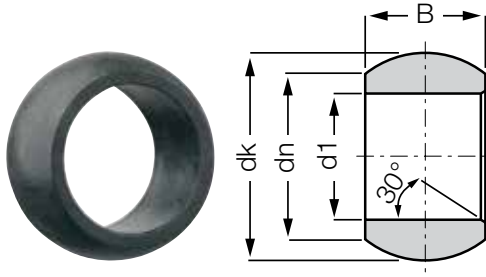
Part No.	d1 [E10]	dn	dK	B	Weight [g]
J4KM-10-14	10.00	12.90	19.10	14.00	3.1

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
J4EM-04-05	4.00	6.25	8.25	5.00	0.3
J4EM-05-06	5.00	8.00	10.20	6.00	0.4
J4EM-06-06	6.00	8.00	10.20	6.00	0.4
J4EM-08-08	8.00	10.00	13.30	8.00	0.8
J4EM-10-09	10.00	13.00	16.00	9.00	1.3
J4EM-12-10	12.00	15.00	18.00	10.00	1.7
J4EM-15-12	15.00	18.00	22.00	12.00	2.9
J4EM-16-13	16.00	19.50	24.00	13.00	3.9
J4EM-17-14	17.00	20.00	25.10	14.00	4.1
J4EM-20-16	20.00	24.00	28.90	16.00	6.4
J4EM-25-20	25.00	29.00	35.50	20.00	11.5
J4EM-30-22	30.00	34.00	40.90	22.00	14.5

igubal® Spherical Balls - Product range

UWEM - igubal® spherical balls - underwater applications



Order key

Type	Size
UW	E M - 08 - 08
Spherical ball material iglide® UW	Dimensional series E = E series
	Metric
	Inner-Ø [mm]
	Width

iglide® UW - For underwater use

Dimensions [mm]

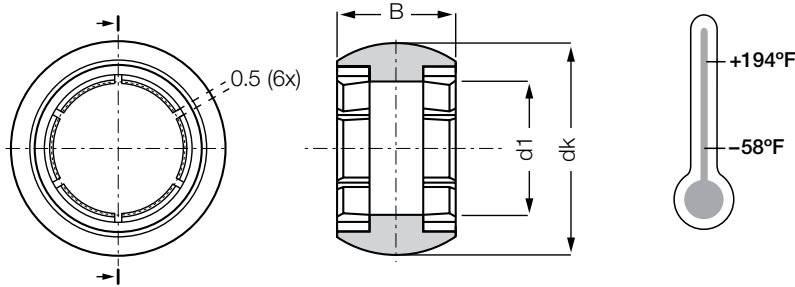
Part No.	d1 [E10]	dn	dK	B	Weight [g]
UWEM-16-13	16.00	19.50	23.80	13.00	4.0
UWEM-20-16	20.00	24.00	28.80	16.00	6.5
UWEM-25-20	25.00	29.00	35.30	20.00	11.6
UWEM-30-22	30.00	34.00	40.50	22.00	15.2

igubal® Spherical Balls - Product range

J4VEM - igubal® spherical balls - clearance-free, single piece



- Can be combined with all E series housings
- Sizes 8 to 20 mm
- Preloaded
- Totally clearance free in unloaded state



Order key

Type	Size				
J4	V	E	M	- 08	- 08
Spherical ball material iglide® J4	Preloaded	Dimensional E series	Metric	Inner-Ø [mm]	Width

iglide® J4 - low moisture absorption, low friction values

Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
J4VEM-08-08	8	13.20	8.00	0.7
J4VEM-10-09	10	16.10	9.00	1.2
J4VEM-12-10	12	18.10	10.00	1.5
J4VEM-16-13	16	24.10	13.00	3.7
J4VEM-20-16	20	29.10	16.00	6.2

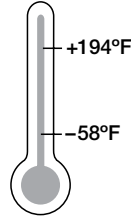
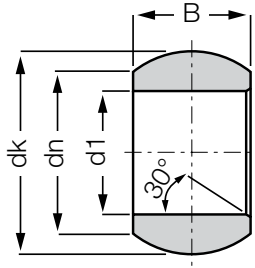
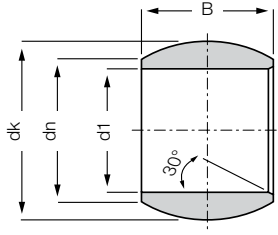
5 Sizes available: Ø 8, 10, 12, 16, 20 mm

Can be combined with:

igubal® rod ends	EBRM/EBLM	► Page 764
igubal® rod ends	EARM/EALM	► Page 774
igubal® pillow block bearing	ESTM	► Page 811
igubal® flange bearing	EFOM	► Page 824
igubal® flange bearing	EFSM	► Page 828
igubal® pressfit bearing	EGLM	► Page 845
igubal® pressfit bearing	EGFM-T	► Page 849
igubal® double joint	EGZM	► Page 850

igubal® Spherical Balls - Product range

RN248KM and RN248EM - igubal® spherical balls - detectable



Order key

Type Size

RN248 E M - 08 - 08

Spherical ball material iglide® RN248	Dimensional series K = K series E = E series	Metric	Inner-Ø [mm]	Width
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iglide® RN248 - Detectable

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
RN248KM-06-09	6.00	8.90	12.80	9.0	1.0

Dimensions [mm]

Part No.	d1 [E10]	dn	dK	B	Weight [g]
RN248EM-05-06	5.00	8.00	10.30	6.00	0.4
RN248EM-06-06	6.00	8.00	10.20	6.00	0.4
RN248EM-08-08	8.00	10.00	13.20	8.00	0.8
RN248EM-10-09	10.00	13.00	16.10	9.00	1.3
RN248EM-12-10	12.00	15.00	18.10	10.00	1.6

igubal® Spherical Balls - Product range

Slim spherical balls for various metallic bearing housings



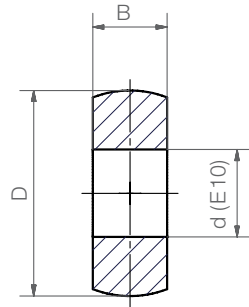
iglide® J



iglide® A180



iglide® A350



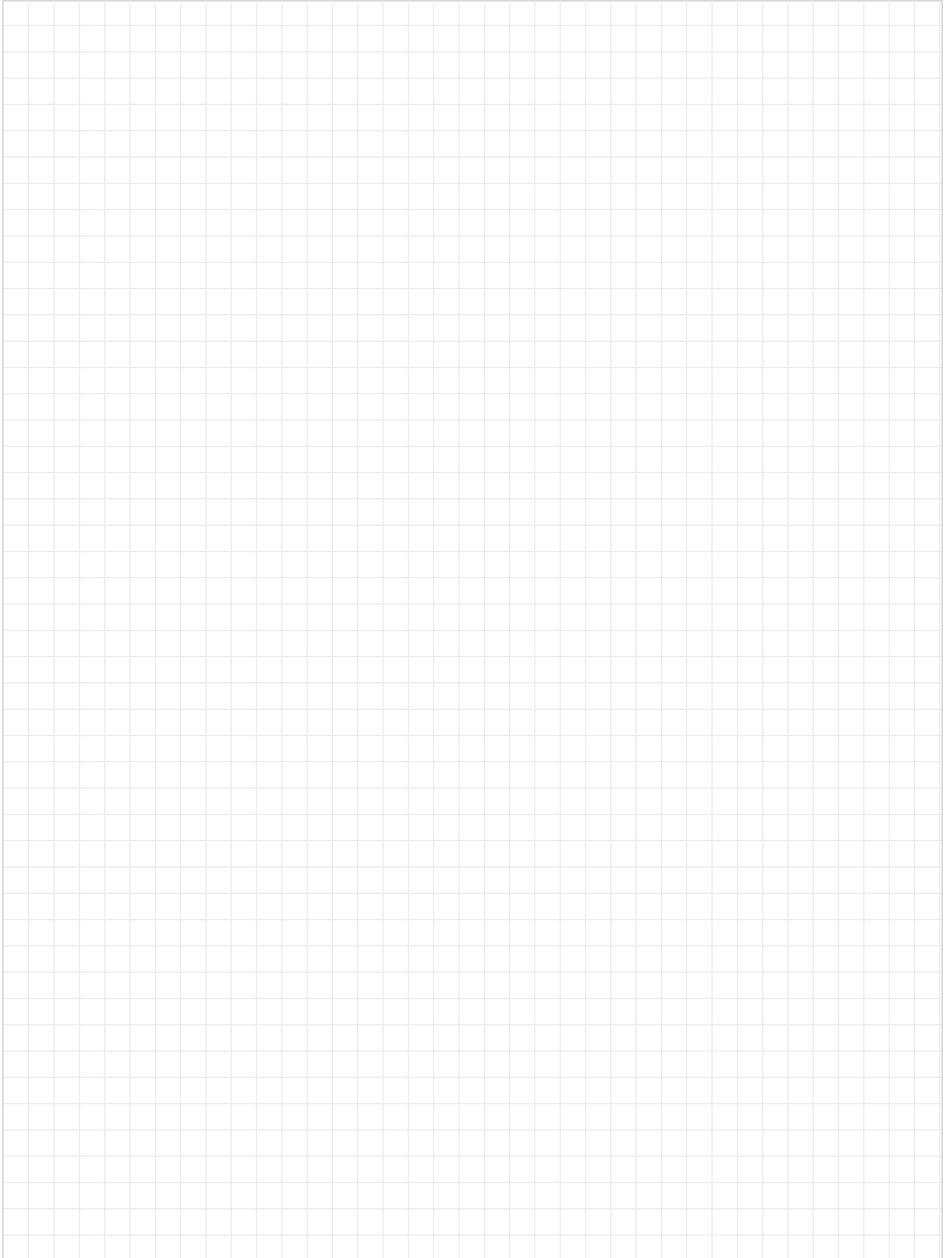
Representative image

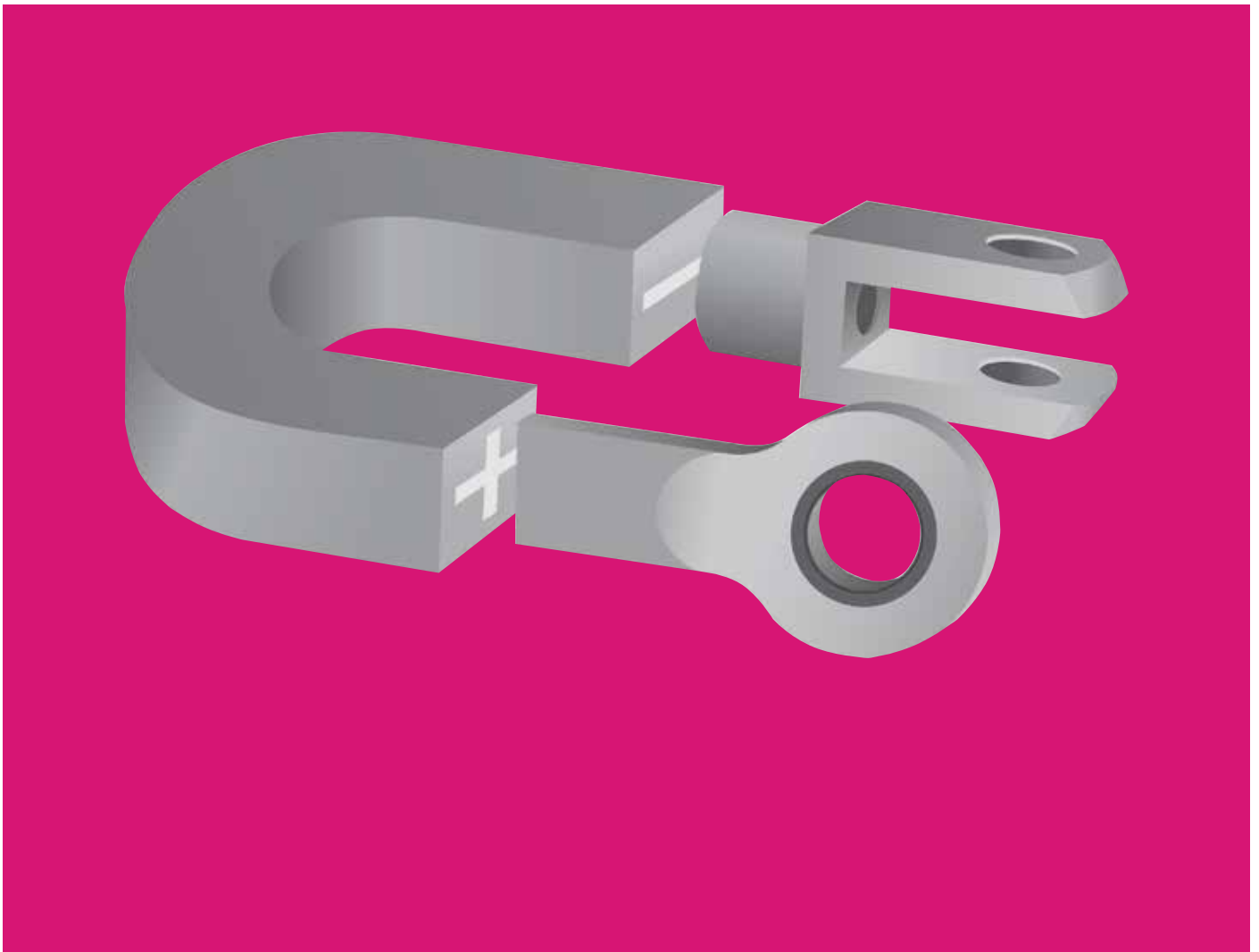
- 3 different spherical ball materials available:
iglide® J, A180 and A350
- Eight dimensions for housing numbers 203 to 210
- Maintenance free dry-running
- High strength
- Corrosion-resistant
- Dirt resistant

Dimensions [mm]

Part No.	Housing No.	d [E10]	D	B	Max. static compressive strength	
					radial [kN]	axial [kN]
Made of iglide® J, low friction (material information ► Page 115)						
JEM-17-17	UC203	17	47	17	10.0	7.5
JEM-20-17	UC204	20	47	17	11.5	7.5
JEM-25-17	UC205	25	52	17	14.5	7.5
JEM-30-19	UC206	30	62	19	19.5	9.5
JEM-35-20	UC207	35	72	20	24.0	10.5
JEM-40-21	UC208	40	80	21	29.0	12.0
JEM-45-22	UC209	45	85	22	34.0	13.0
JEM-50-24	UC210	50	90	24	41.5	15.5
Made of iglide® A180, FDA-compliant, general purpose (material information ► Page 423)						
A180EM-17-17	UC203	17	47	17	7.5	6.0
A180EM-20-17	UC204	20	47	17	9.0	6.0
A180EM-25-17	UC205	25	52	17	11.5	6.0
A180EM-30-19	UC206	30	62	19	15.5	7.5
A180EM-35-20	UC207	35	72	20	19.0	8.5
A180EM-40-21	UC208	40	80	21	23.0	9.0
A180EM-45-22	UC209	45	85	22	27.0	10.0
A180EM-50-24	UC210	50	90	24	33.0	12.0
Made of iglide® A350, FDA-compliant, wear resistant (material information ► Page 447)						
A350EM-17-17	UC203	17	47	17	17.0	13.0
A350EM-20-17	UC204	20	47	17	20.0	13.0
A350EM-25-17	UC205	25	52	17	25.0	13.0
A350EM-30-19	UC206	30	62	19	34.0	17.0
A350EM-35-20	UC207	35	72	20	41.5	18.5
A350EM-40-21	UC208	40	80	21	50.0	20.0

Notes





igubal[®] Detectable

- Resistant to dust and dirt
- Self-lubricating and maintenance-free
- Vibration dampening
- Lightweight
- Corrosion resistant

igubal® Pillow Block

igubal® bearings can be found quickly in case of misuse or crash of the system through metal detectable material. Even the smallest fragment can be found by metal detectors.



When to use it?

- When particles should be detectable
- When maintenance free materials are required
- If dimensional K series and E series should be used
- If high pressure resistance is required
- If high elasticity is requested



When not to use it?

- If temperatures are higher than +176°F
- If diameters above 16 mm are required
- If rotation speeds higher than 0.5 m/s are required



Online product finder

➤ www.igus.com/igubal-finder



max. +176°F
min. -22°F



4 types
Ø 4 to 12 mm



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order.

From stock



Integrated lock nut for easy assembly

K series
KBRM-...-CL-DT
KBLM-...-CL-DT

► Page 876



For small space requirement

E series
EBRM-...-DT
EBLM-...-DT

► Page 877



High strength under impact loads

E series
GERM-...-DT
GELM-...-DT

► Page 878



Spring-loaded fixing clip

E series
GEFM-DT

► Page 879



Clevis joints with spring-loaded fixing clip

E series
GERMF-...-DT
GELMF-...-DT

► Page 880



Spherical balls

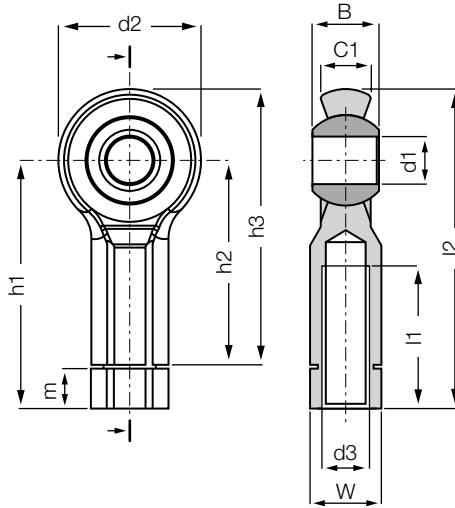
K series and E series
RN248KM
RN248EM

► Page 870

Other igubal product may be available as detectable. Please consult igus for availability and lead times.

igubal® Detectable - Product range

KBRM-CL-DT and KRLM-CL-DT - Rod end, female thread



Order key

Type	Size	Version
K B ... M - 06 - CL - DT		
Dimensional K series		
Housing (female thread)		
Thread L = Left hand thread R = Right hand thread		
Metric		
Inner-Ø [mm]		
2nd generation		
Detectable		



Material:

Housing: **RN246** ▶ Page 1375
Spherical ball: **RN248KM**

- Smooth design does not trap dirt
- Compensation for shaft misalignment
- Lightweight
- Excellent corrosion resistance
- Dimensional K series according to standard DIN ISO 12240

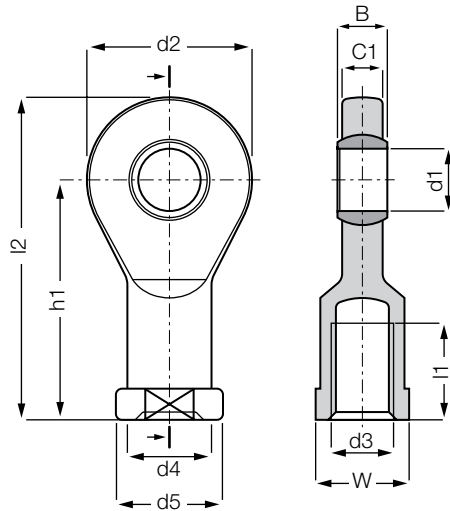
Dimensions [mm]

Part No.		d1	d2	d3	W	B	C1	h3	h1	h2	l1	l2	m	max. pivot angle
Right-hand thread	Left-hand thread	[E10]												
KBRM-06-CL-DT	KBLM-06-CL-DT	6	20	M06	SW10	9	7	40	36.5	30	20	46.5	5.7	40°

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Min. thread depth	Max. torque strength	Max. torque through ball	Weight
Right-hand thread	Left-hand thread	Short term	Long term	Short term	Long term	Thread	Inner threading	Standard without MH	
		[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft lbs]	[ft lbs]	[g]
KBRM-06-CL-DT	KBLM-06-CL-DT	220	110	47	24	8	0.59	7.4	4.5

EBRM-DT and EBLM-DT- Rod end, female thread



Order key

Type	Size	Version
E	B	... M - 06 - DT
Dimensional E series	Housing (female thread)	Thread L = Left hand thread R = Right hand thread
	Metric	Inner-Ø [mm]
		Detectable



Material:

Housing: **RN246** ▶ Page 1375
Spherical ball: **RN248EM**

- Smooth design has no dirt traps
- Clip in ball
- Compensation for shaft misalignment
- Lightweight
- Excellent corrosion resistance

Dimensions [mm]

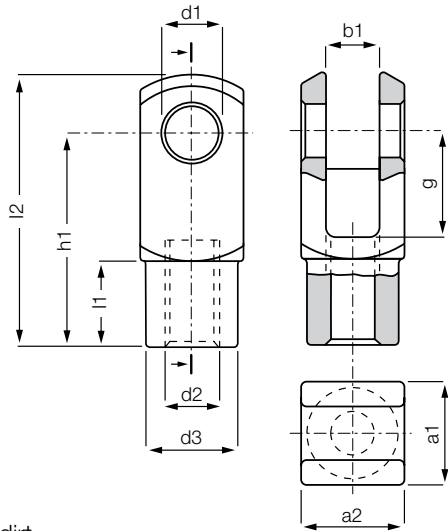
Part No.		d1	d2	d3	d4	d5	C1	B	h1	l1	l2	W	Maximum pivot angle
Right-hand thread	Left-hand thread	[E10]											
EBRM-04-DT	EBLM-04-DT	4	15	M04	-	-	3.5	5	22.5	9.5	30.0	SW08	33°
EBRM-05-DT	EBLM-05-DT	5	19	M05	9.0	11	4.4	6	30	12	39.5	SW09	33°
EBRM-06-DT	EBLM-06-DT	6	21	M06	11.0	13	4.4	6	30	8	40.5	SW11	27°
EBRM-08-DT	EBLM-08-DT	8	24	M08	13.0	16	6.0	8	36	14	48.0	SW14	24°
EBRM-10-DT	EBLM-10-DT	10	29	M10	15.0	19	7.0	9	43	18	57.5	SW17	24°
EBRM-12-DT	EBLM-12-DT	12	34	M12	18.0	22	8.0	10	50	20	67.0	SW19	21°

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Min. thread depth	Max. torque strength	Max. torque through ball	Weight
Right-hand thread	Left-hand thread	Short term	Long term	Short term	Long term	Thread	Inner threading	Standard without MH	
		[lbs]	[lbs]	[lbs]	[lbs]	[mm]	[ft lbs]	[ft lbs]	[g]
EBRM-04-DT	EBLM-04-DT	126	63	16	8	7	0.3	1.5	1.8
EBRM-05-DT	EBLM-05-DT	205	102	24	12	8	0.4	1.5	3.2
EBRM-06-DT	EBLM-06-DT	236	118	31	16	8	1.1	1.8	4.0
EBRM-08-DT	EBLM-08-DT	315	157	71	35	11	3.7	5.2	6.9
EBRM-10-DT	EBLM-10-DT	362	181	79	39	13	11.1	10.3	11.2
EBRM-12-DT	EBLM-12-DT	519	260	87	43	14	14.8	18.4	17.1

igubal® Detectable - Product range

GERM-DT and GELM-DT - Clevis joint, detectable



Order key

Type	Size	Version	Option
G	E	...	M - 04 - DT - F
Clevis joint	Dimensional E series	Thread L = Left hand thread R = Right hand thread	Metric
	Inner-Ø [mm]	Detectable	Fine Thread



Material:
RN246 ▶ Page 1375

- Detectable
- Resistant to dust and dirt
- Self-lubricating and maintenance-free
- Vibration dampening
- Lightweight

Dimensions [mm]

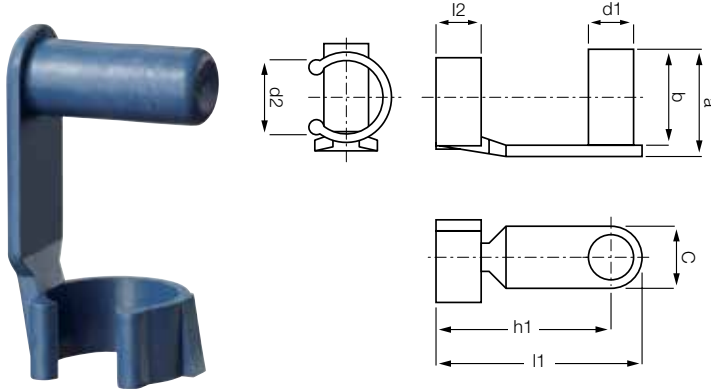
Part No.		d1	g	a1	a2	b1	d2	d3	l2	h1	l1
		H9	h11	+0.3	+0.3	B13	Thread tolerance	+0.3	+0.5	+0.3	+0.2
Right-hand thread	Left-hand thread			-0.16	-0.16		6H	-0.3	-0.5	-0.3	-0.2
GERM-04-DT	GELM-04-DT	4	8	8	8	4	M04	8.0	21.0	16.0	6.0
GERM-05-DT	GELM-05-DT	5	12	12	12	6	M05	10.0	30.6	24.0	9.0
GERM-06-DT	GELM-06-DT	6	12	12	12	6	M06	10.0	30.6	24.0	9.0
GERM-08-DT	GELM-08-DT	8	16	16	16	8	M08	14.0	41.6	32.0	12.0
GERM-10-DT	GELM-10-DT	10	20	20	20	10	M10	18.0	51.3	40.0	15.0
GERM-10-DT-F	GELM-10-DT-F	10	20	20	20	10	M10 x 1.25	18.0	51.3	40.0	15.0
GERM-12-DT	GELM-12-DT	12	24	24	24	12	M12	20.0	61.3	48.0	18.0
GERM-12-DT-F	GELM-12-DT-F	12	24	24	24	12	M12 x 1.25	20.0	61.3	48.0	18.0

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Weight
Right-hand thread	Left-hand thread	Short term	Long term	Short term	Long term	[g]
		[N]	[N]	[N]	[N]	
GERM-04-DT	GELM-04-DT	102	51	39	20	0.9
GERM-05-DT	GELM-05-DT	189	94	39	20	2.7
GERM-06-DT	GELM-06-DT	220	110	47	24	2.5
GERM-08-DT	GELM-08-DT	425	212	102	51	6.3
GERM-10-DT	GELM-10-DT	740	370	126	63	13.2
GERM-10-DT-F	GELM-10-DT-F	740	370	126	63	13.2
GERM-12-DT	GELM-12-DT	897	448	142	71	20.2
GERM-12-DT-F	GELM-12-DT-F	897	448	142	71	20.2

igubal® Detectable - Product range

GEFM-DT - Spring loaded fixing clip, detectable



- Detectable
- Resistant to dust and dirt
- Self-lubricating and maintenance-free
- Vibration dampening
- Lightweight



Order key

Type Size Version

G E F M - 04 - DT

Clevis joint	Dimensional E series	Spring loaded fixing clip	Metric	Inner-Ø [mm]	Detectable
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Material:

RN246 ▶ Page 1375

Dimensions [mm]

Part No.	d1	d2	a	b	c	l1 ±0.5	h1	l2	Weight [g]
GEFM-04-DT	4	8	9.5	10.5	8	19	15	4.5	0.5
GEFM-05-DT	5	10	14	15.5	8	27	23	6.5	1.1
GEFM-06-DT	6	10	14	15.5	8	27	23	6.5	1.2
GEFM-08-DT	8	14	19	21.0	11	35.5	30	8.0	2.8
GEFM-10-DT	10	18	23	25.5	14	45	38	10.0	5.0
GEFM-12-DT	12	20	28	31.0	16	53	45	12.0	8.3

igubal® Detectable - Product range

GERMF-DT and GELMF-DT - Clevis joint and fixing clip, detectable



- Detectable
- Resistant to dust and dirt
- Maintenance free and lubrication free
- Vibration dampening
- Lightweight

Order key

Type	Size	Version	Option
G	E	...	M F
Clevis joint	Dimensional E series	Thread L = Left hand thread R = Right hand thread	Metric
		Spring loaded fixing clip	
	Inner-Ø [mm]		
		Detectable	
			Fine Thread

i Material:
RN246 ▶ Page 1375

Technical data

Part No.		Max. static tensile strength		Max. static radial load		Weight
Right-hand thread	Left-hand thread	Short term	Long term	Short term	Long term	
		[N]	[N]	[N]	[N]	[g]
GERMF-04-DT	GELMF-04-DT	79	39	39	20	1.3
GERMF-05-DT	GELMF-05-DT	142	71	39	20	3.8
GERMF-06-DT	GELMF-06-DT	205	102	47	24	3.9
GERMF-08-DT	GELMF-08-DT	330	165	102	51	9.1
GERMF-10-DT	GELMF-10-DT	472	236	126	63	18.2
GERMF-10-DT-F	GELMF-10-DT-F	472	236	126	63	18.2
GERMF-12-DT	GELMF-12-DT	551	275	142	71	28.6
GERMF-12-DT-F	GELMF-12-DT-F	551	275	142	71	28.6



Individual components: Clevis joint GERM-DT and spring-loaded fixing clip GEFM-DT

