

igus[®]



igubal[®]
Clevis Joint



Available Components

Available Styles



E Series

Clevis Joint

- Available in left- or right-hand thread
- High tensile strength
- Vibration dampening

GERI/GELI - inch
Page 56.5

GERM/GELM - metric
Page 56.6



E Series

**Clevis Joint with
Clevis Pin and Clevis Clip**

- Available in left- or right-hand thread
- Can be used in combination with Series E rod ends

GERIK/GELIK - inch

Page 56.7

GERMK/GELMK - metric
Page 56.8



E Series

**Clevis Joint with
Clevis Pin, Circlip and Rod End**

- Available in left- or right-hand thread
- Universal corrosion resistance

GERMKE/GELMKE - metric

Page 56.9



E Series

**Clevis Joint with
Spring Loaded Pin**

- Available in left- or right-hand thread
- Easy assembly in hard to reach locations

GERMF/GELMF - metric

Page 56.10



E Series

**Clevis Joint with
Spring Loaded Pin and Rod End**

- Available in left- or right-hand thread
- Lightweight

GERMFE/GELMFE - metric

Page 56.11



K Series

Spring Loaded Pin (as separate part)

Clevis Pin (as separate part)

Clevis Clip (as separate part)

- Easy to assemble
- Lightweight

GEFM - Spring loaded pin - metric
Page 56.9

GBM - Clevis pin - metric

GSR - Clevis Clip - metric

Page 56.12

igubal® Spherical Bearings Clevis Joint Application Examples



Typical industries and applications

- Food industry
- Heavy duty
- Packaging
- Automotive
- Disposal Engineering
- Automation, etc.



Both the housing material and the universal ball joint are made of materials that are safe in food environments



Packaging industry



A low-cost alternative to stainless steel: igubal® clevis joints combinations made of plastic



Pneumatic cylinder



igubal® Spherical Bearings Clevis Joint

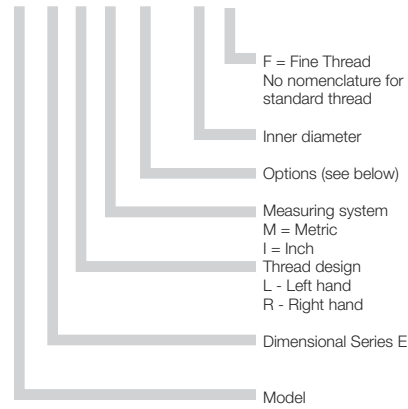
Product Range

- Female threads
- Left hand and right hand threads
- Diameters from 4–20 mm
- With bold and clip or spring loaded pin
- Combination with dimensional Series E

Part Number Structure

Part Number Structure

G E R M KE - 12 F



Options:

- K = with clevis pin and clip
- KE = with clevis pin, clip and rod end bearing
- F = with spring-loaded clasp pin
- FE = with spring-loaded clasp pin and rod end bearing



Advantages

- Maintenance-free, dry running
- 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
- Maintenance-free, lubrication-free

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 +176°F. igubal® clevis joints are made out of a high-wear resistant material which requires no lubrication.

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.

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.

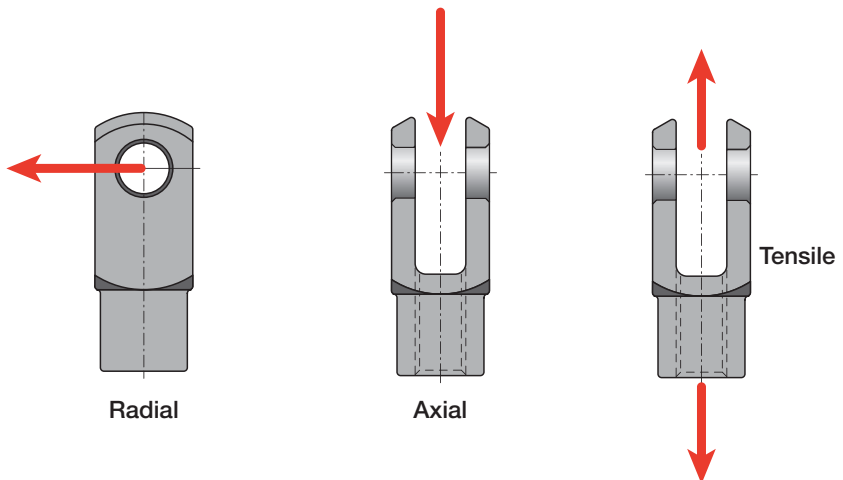
Usage Guidelines



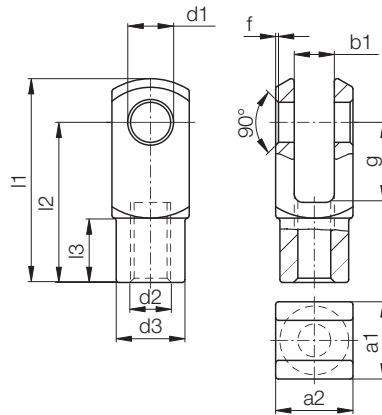
- If high rigidity is required
- If corrosion resistance is required
- In applications where lubrication could present an issue
- If simple assembly is necessary
- If a lightweight option is preferred



- If temperatures are higher than 248°F
- If dimensions above 1" or 30 mm are necessary



igubal® Spherical Bearings
Clevis Joint
GERI / GELI - inch



Material:
igumid G

igubal® Clevis Joint

Dimensions (inch)

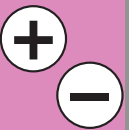
Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1	d2 Thread- Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.2
GER(L)I-03	0.1875	0.394	0.394	0.394	0.197	10-32	0.354	.02	1.024	0.787	0.295
GER(L)I-04	0.2500	0.472	0.472	0.472	0.236	1/4-28	0.394	.02	1.205	0.945	0.354
GER(L)I-05	0.3125	0.630	0.630	0.630	0.315	5/16-24	0.551	.02	1.638	1.260	0.472
GER(L)I-06	0.3750	0.787	0.787	0.787	0.394	3/8-24	0.709	.02	2.020	1.575	0.591
GER(L)I-07	0.4375	0.945	0.945	0.945	0.472	7/16-20	0.787	.02	2.413	1.890	0.709
GER(L)I-08	0.5000	1.102	1.063	1.063	0.551	1/2-20	0.945	.02	2.807	2.205	0.886

Load Data

Right (Left) Thread	Max. Static Axial Tensile Strength GERI		Weight (g)
	Short-term (lbs)	Long-term (lbs)	
GER(L)I-03	225	112	1.6
GER(L)I-04	270	135	2.9
GER(L)I-05	607	303	6.1
GER(L)I-06	1056	528	13.0
GER(L)I-07	1281	640	16.5
GER(L)I-08	719	360	20.8

► Tolerance Table, Page 1.14

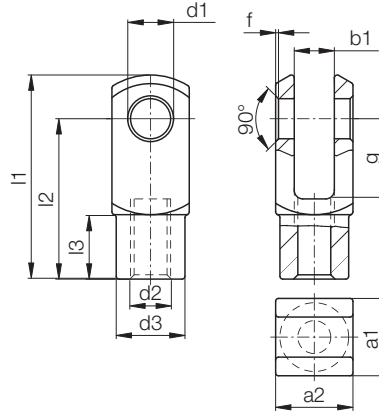
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igubal® Spherical Bearings Clevis Joint GERM/GELM - mm

igubal® Clevis Joint



Material:
igumid G

Dimensions (mm)

Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1	d2 Thread- Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.
GER(L)M-04	4	8	8	8	4	M4	8.0	0.5	21.0	20	6.0
GER(L)M-05 DIN M4	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)M-05 DIN M5	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)M-05	5	12	12	12	6	M05	10.0	0.5	30.6	24.0	9.0
GER(L)M-06	6	12	12	12	6	M06	10.0	0.5	30.6	24.0	9.0
GER(L)M-08	8	16	16	16	8	M08	14.0	0.5	41.6	32.0	12.0
GER(L)M-10	10	20	20	20	10	M10	18.0	0.5	52.0	40.0	15.0
GER(L)M-10 F	10	20	20	20	10	M10x1.25	18.0	0.5	51.3	40.0	15.0
GER(L)M-12	12	24	24	24	12	M12	20.0	0.5	61.3	48.0	18.0
GER(L)M-12 F	12	24	24	24	12	M12x1.25	20.0	0.5	61.3	48.0	18.0
GER(L)M-14	14	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)M-15	15	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)M-16	16	32	32	32	16	M16	26.0	1.0	81.9	64.0	24.0
GER(L)M-16 F	16	32	32	32	16	M16x1.5	26.0	1.0	81.9	64.0	24.0
GER(L)M-20	20	40	40	40	20	M20x1.5	34.0	1.0	105.0	80.0	30.0
GER(L)M-20	20	40	40	40	20	M20x2.5	34.0	1.0	105.0	80.0	30.0

Imperial sizes available. Minimum quantities may be required. ➤ Tolerance Table, Page 1.14

Load Data

Right (Left) Thread	Max. Static Tensile Strength GERM		Weight (g)
	Short-term (lbs)	Long-term (lbs)	
GER(L)M-04	179	90	0.9
GER(L)M-05 DIN M4	225	112	1.5
GER(L)M-05 DIN M5	225	112	1.5
GER(L)M-05	270	135	1.5
GER(L)M-06	314	157	2.5
GER(L)M-08	607	303	6.3
GER(L)M-10	1056	528	13.2
GER(L)M-10 F	1056	528	13.2
GER(L)M-12	1281	640	20.2
GER(L)M-12 F	1281	640	20.2
GER(L)M-14	1483	741	29.9
GER(L)M-15	719	360	30.0
GER(L)M-16	1686	843	49.9
GER(L)M-16 F	1686	843	49.9
GER(L)M-20	2136	1068	105.0
GER(L)M-20	2136	1068	105.0

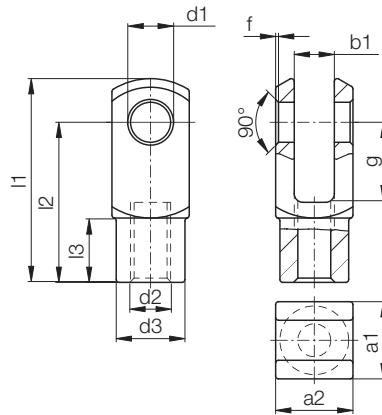
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igubal® Spherical Bearings
Clevis Joint with Pin, Clip and rod end -
GERIK / GELIK- inch



Material:
igumid G



Dimensions (inch)

Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1	d2 Thread- Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.2
GER(L)IK-03	0.1875	0.394	0.394	0.394	0.197	10-32	0.354	.02	1.024	0.787	0.295
GER(L)IK-04	0.2500	0.472	0.472	0.472	0.236	1/4-28	0.394	.02	1.205	0.945	0.354
GER(L)IK-05	0.3125	0.630	0.630	0.630	0.315	5/16-24	0.551	.02	1.638	1.260	0.472
GER(L)IK-06	0.3750	0.787	0.787	0.787	0.394	3/8-24	0.709	.02	2.020	1.575	0.591
GER(L)IK-07	0.4375	0.945	0.945	0.945	0.472	7/16-20	0.787	.02	2.413	1.890	0.709
GER(L)IK-08	0.5000	1.102	1.063	1.063	0.551	1/2-20	0.945	.02	2.807	2.205	0.886

Load Data

Right (Left) Thread	Max. Static Tensile Strength GER(L)IK		Weight (g)
	Short-term (lbs)	Long-term (lbs)	
	GER(L)IK-03	180	90
GER(L)IK-04	202	101	3.5
GER(L)IK-05	472	236	7.7
GER(L)IK-06	674	404	16.0
GER(L)IK-07	787	393	21.4
GER(L)IK-08	629	315	26.3

► Tolerance Table, Page 1.14

igubal® Clevis Joint

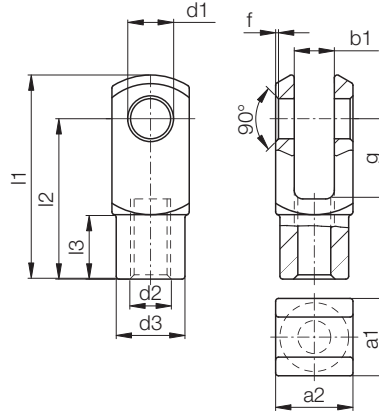
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RoHS info: www.igus.com/RoHS





igubal® Spherical Bearings Clevis Joint with Pin and Clip GERMK/GELMK - mm

igubal® Clevis Joint



Material:
igumid G

Dimensions (mm)

Right (Left) Thread	d1 H9	g h11	a1	a2 +0.3 -0.16	b1	d2 Thread- Tolerance 6H	d3 +0.3 -0.3	f +0.3 -0.3	l1 +0.5 -0.5	l2 +0.3 -0.3	l3 +0.2 -0.
GER(L)MK-04	4	8	8	8	4	M4	8.0	0.5	21.0	20	7.5
GER(L)MK-05 DIN M4	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)MK-05 DIN M5	5	10	10	10	5	M04	9	0.5	25.5	20	7.5
GER(L)MK-05	5	12	12	12	6	M05	10.0	0.5	30.6	24.0	9.0
GER(L)MK-06	6	12	12	12	6	M06	10.0	0.5	30.6	24.0	9.0
GER(L)MK-08	8	16	16	16	8	M08	14.0	0.5	41.6	32.0	12.0
GER(L)MK-10	10	20	20	20	10	M10	18.0	0.5	51.3	40.0	15.0
GER(L)MK-10 F	10	20	20	20	10	M10x1.25	18.0	0.5	51.3	40.0	15.0
GER(L)MK-12	12	24	24	24	12	M12	20.0	0.5	61.3	48.0	18.0
GER(L)MK-12 F	12	24	24	24	12	M12x1.25	20.0	0.5	61.3	48.0	18.0
GER(L)MK-14	14	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)MK-15	15	28	27	27	14	M14	24.0	0.5	71.3	56.0	22.5
GER(L)MK-16	16	32	32	32	16	M16	26.0	1.0	81.9	64.0	24.0
GER(L)MK-16 F	16	32	32	32	16	M16x1.5	26.0	1.0	81.9	64.0	24.0
GER(L)MK-20	20	40	40	40	20	M20x1.5	34.0	1.0	105.0	80.0	30.0
GER(L)MK-20 M20	20	40	40	40	20	M20x2.5	34.0	1.0	105.0	80.0	30.0

► Tolerance Table, Page 1.14

Load Data

Right (Left) Thread	Max. Static Axial Tensile Strength GER(L)MK		Max. Static Radial Load		Weight (g)
	Short-term (lbs)	Long-term (lbs)	Short-term (lbs)	Long-term (lbs)	
GER(L)MK-04	112	56	56	28	1.3
GER(L)MK-05 DIN M4	180	90	56	28	2.1
GER(L)MK-05 DIN M5	180	90	56	28	2.1
GER(L)MK-05	202	101	56	28	3.3
GER(L)MK-06	292	146	67	33	3.3
GER(L)MK-08	472	236	146	73	7.9
GER(L)MK-10	674	337	180	90	16.4
GER(L)MK-10 F	674	337	180	90	16.4
GER(L)MK-12	787	393	202	101	25.3
GER(L)MK-12 F	787	393	202	101	25.3
GER(L)MK-14	1371	685	224	112	31.2
GER(L)MK-15	629	315	224	112	38.9
GER(L)MK-16	1573	786	270	135	60.8
GER(L)MK-16 F	1573	786	270	135	60.8
GER(L)MK-20	2023	1012	674	337	125.2
GER(L)MK-20 M20	2023	1012	674	337	125.2

Telephone 1-800-521-2747
Fax 1-401-438-7270

Internet: <http://www.igus.com>
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igubal® Spherical Bearings Clevis Joint with Pin, Clip and rod end - GERMKE / GELMKE- mm



Material:
igumid G

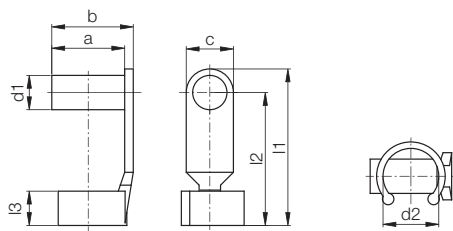
Load Data

Right-Thread	Left-Thread	Max. Static Tensile Strength		Max. Static Radial Load		Weight (g)
		Short Term (lbs)	Long Term (lbs)	Short Term (lbs)	Long Term (lbs)	
GERMKE-05 M5	GELMKE-05 M5	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	GERMKE-15	630	315	180	90	68.4
GERMKE-16	GERMKE-16	1124	562	191	96	86.9
GERMKE-16 F	GERMKE-16 F	1124	562	191	96	86.9
GERMKE-17	GERMKE-17	809	405	247	124	98.3
GERMKE-17 F	GERMKE-17 F	809	405	247	124	98.3
GERMKE-20	GERMKE-20	1619	809	405	202	175.2
GERMKE-20 F	GERMKE-20 F	1619	809	405	202	175.2

igubal® Clevis Joint

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CAD: www.igus.com/igubal-CAD
RoHS info: www.igus.com/RoHS

igubal® Spring Loaded Pins - mm - GEFM



Material:
igumid G

Dimensions (mm)

Part Number	d1 h11	d2	a	b	c	l1 ±0.5	l2	l3	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	5	9	12	13.5	8	23	19	5.5	1.0
GEFM-05	5	10	14	15.5	8	27	23	6.5	1.1
GEFM-06 LS	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

Imperial sizes available. Minimum quantities may be required.

➤ Tolerance Table, Page 1.14

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I

inch

mm



igubal® Spherical Bearings
Clevis Joint with Spring Loaded Pin
GERMF/GELMF - mm

igubal® Clevis Joint



Material:
igumid G

Telephone 1-800-521-2747
Fax 1-401-438-7270

Load Data

Right-Thread	Left-Thread	Max. Static Tensile Strength		Max. Static Radial Load		Weight (g)
		Short Term (lbs)	Long Term (lbs)	Short Term (lbs)	Long Term (lbs)	
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	GELMF-05 DIN M5 LS	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	GELMF-06 LS	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

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igubal® Spherical Bearings
Clevis Joint, Spring Loaded Pin and E-Series Rod End
GERMFE/GELMFE - mm



Material:
Housing - igumid G
Ball - iglide® L280

igubal® Clevis Joint

Load Data

Right-Thread	Left-Thread	Max. Static Tensile Strength		Max. Static Radial Load		Weight (g)
		Short Term (lbs)	Long Term (lbs)	Short Term (lbs)	Long Term (lbs)	
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

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CAD: www.igus.com/igubal-CAD
RoHS info: www.igus.com/RoHS



igubal® Spherical Bearings Clevis Pin GBI/GBM - inch/mm

igubal® Clevis Joint

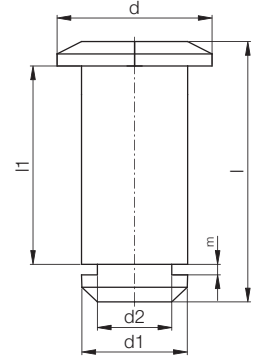
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56.12



Material:
Housing - igumid G



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

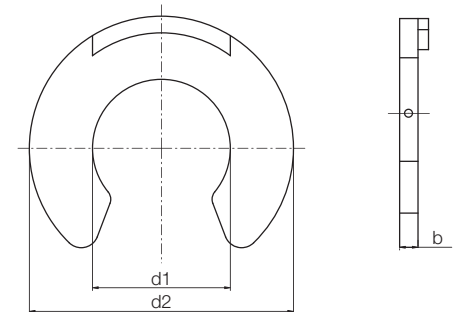
Dimensions (inch)

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

igubal® Clevis Clip GSR - mm

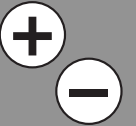


Material:
Housing - igumid G



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® Spherical Bearings Clevis Joint

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