

igubal[®] spherical balls

Maintenance-free dry operation

Corrosion-free

High compressive strength

Flexible

Lightweight

Variety of material options

Spherical balls for metallic bearing housings



igubal® spherical balls | Advantages

Every single iglide® material has its own special properties, which determines the suitability for your special applications and requirements. We have available spherical balls made from iglide® materials W300 (standard), J, J4, R, RN248, UW and X. The spherical balls for metallic bearing housings are available in three materials for housing numbers 203 to 210.



Maintenance-free,
dry operation



Corrosion-resistant



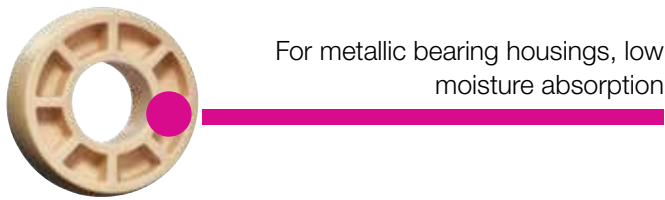
High compressive strength



Flexible



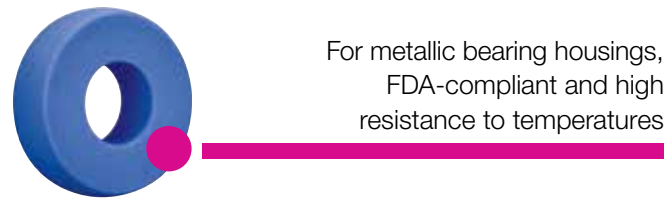
Different materials



For metallic bearing housings, low
moisture absorption



For metallic bearing housings,
FDA-compliant



For metallic bearing housings,
FDA-compliant and high
resistance to temperatures



When to use it?

- If you need maintenance-free material
- If different iglide® materials should be tested
- If high compressive strength is required
- If high flexibility is required
- Replacing ball bearings in metallic housings



When not to use it?

- When temperatures are higher than +482 °F
- When dimensions above 50mm are required
- When rotation speeds higher than 98 fpm (0.5m/s) are required

Tolerances

Maintenance-free igubal® spherical balls are designed with a tolerance of the inner diameter of E10. The shaft tolerance should be included between h6 and h9. All values and tolerances according to DIN ISO 2768-m.



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order value. No minimum order quantity



Depending on material



8 types

Ø 3/16 to 1 inch
Ø 2–50mm



Online product finder

► www.igus.com/igubal-finder

igubal® spherical balls | Application examples

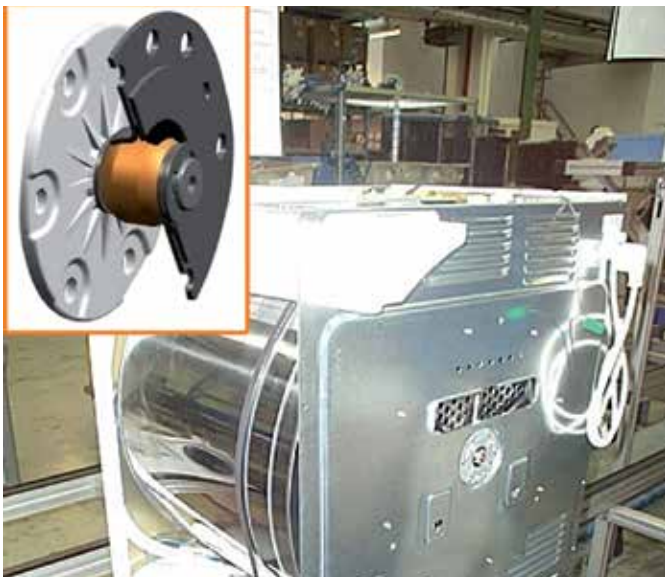


Typical sectors of industry and application areas

- 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

igubal® spherical balls | Product overview

Standard - igubal spherical balls
iglide® W300 ▶ Page 211

Low-cost - spherical balls
iglide® R ▶ Page 303



WKI / WEI
Dimensional K/E series
inch

▶ Page 970



WKM / WEM
Dimensional K/E series
metric

▶ Page 971



REI
Dimensional E series
inch / metric

▶ Page 972



RKM/REM
Dimensional K/E series
metric

▶ Page 973

High temperatures – igubal® spherical balls
iglide® X ▶ Page 339

Low moisture absorption – igubal® spherical balls
iglide® J ▶ Page 193



XKM
Dimensional K series
metric

▶ Page 974



XEM
Dimensional E series
metric

▶ Page 974



JKM
Dimensional K series
metric

▶ Page 975



JEM
Dimensional E series
metric

▶ Page 975



JKM / JKM-GT
Large dimensions
metric

▶ Page 976

Cost-effective – igubal® spherical balls
iglide® J4, ▶ Page 1780

Underwater applications – igubal® spherical balls
iglide® UW ▶ Page 613

Pre-loaded – igubal® spherical balls
iglide® J4 ▶ Page 1780



J4KM
Dimensional K series
metric

▶ Page 978



J4EM
Dimensional E series
metric

▶ Page 978



UWEM
Dimensional E series
metric

▶ Page 979



J4VEM
Dimensional E series
metric

▶ Page 980

Detectable – igubal® spherical balls
iglide® RN248 ▶ Page 1785

For metallic bearing housings – igubal® spherical balls

iglide® J
▶ Page 193

iglide® A180
▶ Page 493

iglide® A350
▶ Page 469



RN248KM
Dimensional K series
metric

▶ Page 981



RN248EM
Dimensional E series
metric

▶ Page 981



Standard/Cost effective
Dimensional UC series
metric

▶ Page 982/983



FDA-compliant
Dimensional UC series
metric

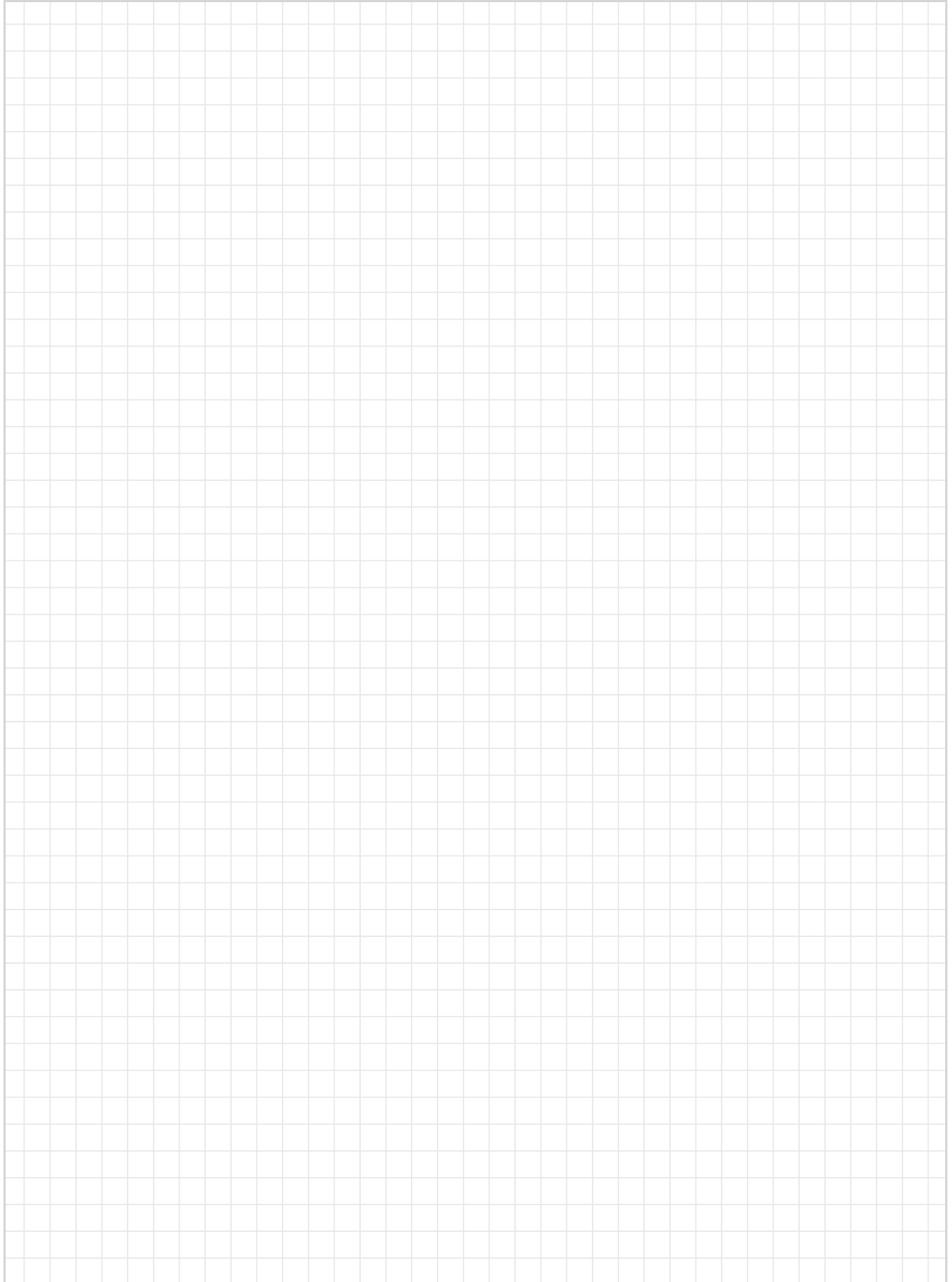
▶ Page 982

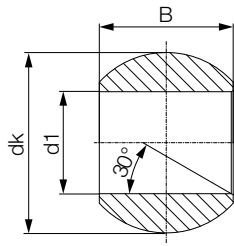


FDA-compliant, high temp.
Dimensional UC series
metric

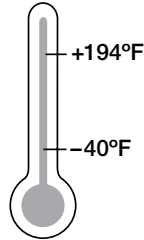
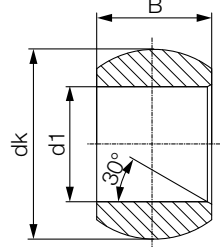
▶ Page 982

Notes





Standard – iglide® W300
extreme wear resistance



Order key

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

Dimensions [inch]

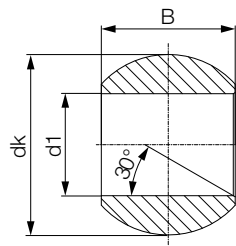
Part No.	d1 [E10]	dK	B	Weight [g]
WKI-03	0.1875	0.444	0.312	0.6
WKI-04	0.2500	0.516	0.375	1.0
WKI-05	0.3125	0.625	0.437	1.7
WKI-06	0.3750	0.718	0.500	2.3
WKI-07	0.4375	0.828	0.562	3.5
WKI-08	0.5000	0.938	0.625	5.0
WKI-10	0.6250	1.125	0.750	8.2
WKI-12	0.7500	1.312	0.875	12.5
WKI-16	1.0000	1.750	1.375	31.7

Dimensions [inch]

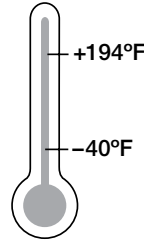
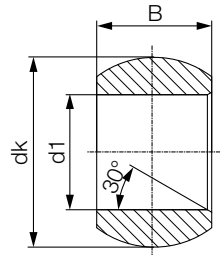
Part No.	d1 [E10]	dK	B	Weight [g]
WEI-03	0.1875	0.402	0.1900	0.3
WEI-04	0.2500	0.402	0.2500	0.3
WEI-05	0.3125	0.520	0.3125	0.7
WEI-06	0.3750	0.630	0.3750	1.3
WEI-07	0.4375	0.709	0.4063	1.6
WEI-08	0.5000	0.709	0.4063	2.6
WEI-10	0.6250	0.945	0.5000	3.1
WEI-12	0.7500	1.138	0.6250	5.9
WEI-16	1.0000	1.398	0.7500	9.2

igubal® spherical balls | Product Range

WKM and WEM - Standard spherical balls - metric



Standard – iglide® W300
extreme wear resistance



Order key

Type	Size
W ... M - 08 - 04	
Spherical ball material iglide® W300	Inner-Ø [mm]
Dimensional series K = K series E = E series	Width
Metric	

Dimensions [mm]

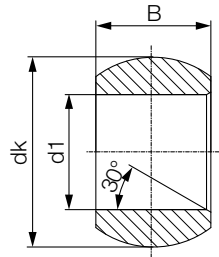
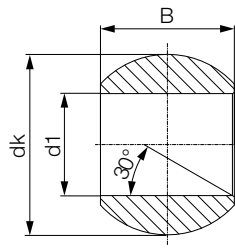
Part No.	d1 [E10]	dK	B	Weight [g]
WKM-02-04	2	5.10	4	0.1
WKM-03-06	3	8.10	6	0.3
WKM-05-08	5	11.30	8	0.6
WKM-06-09	6	12.80	9	0.9
WKM-08-12	8	16.00	12	1.6
WKM-10-14	10	19.00	14	2.7
WKM-12-16	12	22.10	16	4.0
WKM-14-19	14	25.40	19	6.0
WKM-16-21	16	28.40	21	8.2
WKM-18-23	18	31.50	23	10.8
WKM-20-25	20	35.10	25	14.5
WKM-22-28	22	38.30	28	18.7
WKM-25-31	25	42.90	31	26.0
WKM-30-37	30	51.20	37	44.7

Dimensions [mm]

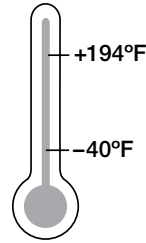
Part No.	d1 [E10]	dK	B	Weight [g]
WEM-04-05	4	8.30	5	0.2
WEM-05-06	5	10.30	6	0.3
WEM-06-06	6	10.30	6	0.4
WEM-08-08	8	13.30	8	0.7
WEM-10-09	10	16.10	9	1.2
WEM-12-10	12	18.10	10	1.5
WEM-15-12	15	22.00	12	2.4
WEM-16-13	16	24.10	13	3.3
WEM-17-14	17	25.10	14	3.7
WEM-20-16	20	29.10	16	5.3
WEM-25-20	25	35.60	20	9.5
WEM-30-22	30	40.90	22	12.1

igubal® spherical balls | Product Range

REI - igubal® spherical balls



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



Order key

Type Size

R E I - 04

Spherical ball material
iglide® R

Dimensional E series

Inch

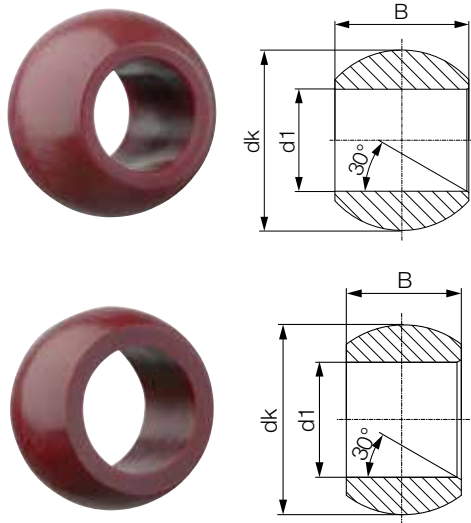
Inner-Ø [mm]

Dimensions [inch]

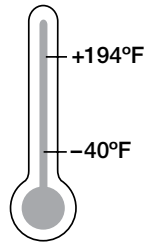
Part No.	d1 [E10]	dK	B	Weight [g]
REI-03	0.1875	0.402	0.1900	0.3
REI-04	0.2500	0.402	0.2500	0.3
REI-05	0.3125	0.520	0.3125	0.7
REI-06	0.3750	0.630	0.3750	1.3
REI-07	0.4275	0.709	0.4063	1.6
REI-08	0.5000	0.709	0.4063	2.6
REI-10	0.6250	0.945	0.5000	3.1
REI-12	0.7500	1.138	0.6250	5.9
REI-16	1.0000	1.398	0.7500	9.2

igubal® spherical balls | Product Range

RKM and REM - igubal® spherical balls



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



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

Dimensions [mm]

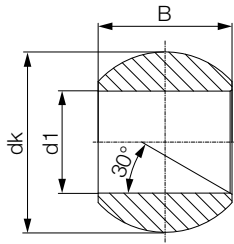
Part No.	d1 [E10]	dK	B	Weight [g]
RKM-10-14	10	19.00	14	2.9

Dimensions [mm]

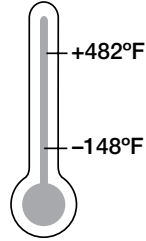
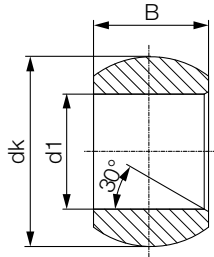
Part No.	d1 [E10]	dK	B	Weight [g]
REM-05-06	5	10.20	6	0.4
REM-06-06	6	10.20	6	0.4
REM-08-08	8	13.20	8	0.8
REM-10-09	10	16.00	9	1.3
REM-12-10	12	18.00	10	1.8

igubal® spherical balls | Product Range

XKM and XEM - igubal® spherical balls



iglide® X - resistant to chemicals, high temperatures



Order key

Type

Size

X ... **M - 06 - 08**

Spherical ball material
iglide® X

Dimensional series
K = K series
E = E series

Metric

Inner-Ø [mm]

Width

Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
XKM-10-04	10	19.10	14	2.9

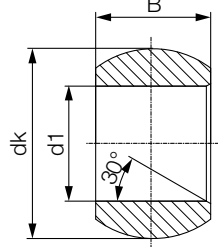
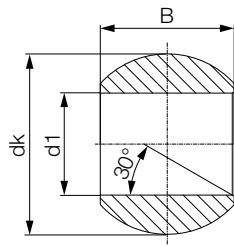
Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
XEM-05-06	5	10.30	6	0.4
XEM-06-06	6	10.20	6	0.4
XEM-08-08	8	13.20	8	0.8
XEM-10-09	10	16.00	9	1.3
XEM-12-10	12	18.00	10	1.6

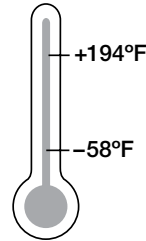
*X is the European material equivalent for iglide® T500.

igubal® spherical balls | Product Range

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



iglide® J - low moisture absorption, low friction values



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

Dimensions [mm]

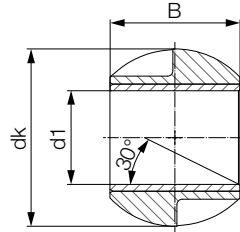
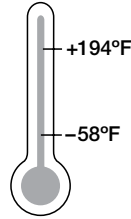
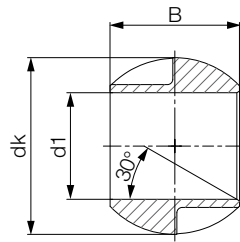
Part No.	d1 [E10]	dK	B	Weight [g]
JKM-03-06	3	8.10	6	0.3
JKM-05-08	5	11.30	8	0.7
JKM-06-09	6	12.80	9	1.0
JKM-08-12	8	15.90	12	1.9
JKM-10-14	10	19.00	14	3.1
JKM-12-16	12	22.10	16	4.7
JKM-16-21	16	28.40	21	9.4
JKM-20-25	20	35.10	25	17.6
JKM-25-31	25	42.80	31	31.6
JKM-30-37	30	51.20	37	53.0

Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
JEM-04-05	4	8.30	5	0.3
JEM-05-06	5	10.20	6	0.4
JEM-06-06	6	10.20	6	0.4
JEM-08-08	8	13.30	8	0.8
JEM-10-09	10	16.10	9	1.3
JEM-12-10	12	18.10	10	1.7
JEM-15-12	15	22.00	12	2.9
JEM-16-13	16	24.10	13	3.9
JEM-17-14	17	25.20	14	4.1
JEM-20-16	20	29.10	16	6.4
JEM-25-20	25	35.60	20	11.5
JEM-30-22	30	40.90	22	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

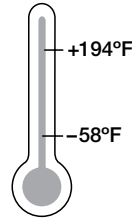
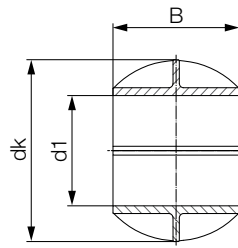
Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
JKM-35-49 ³⁵⁾	35	66.30	49	75.5
JKM-40-49	40	66.30	49	54.5
JKM-45-60 ³⁵⁾	45	82.40	60	125.1
JKM-50-60	50	82.40	60	92.1

³⁵⁾ Diameter reduced by means of a plain bearing

igubal® spherical balls | Product Range

JKM-GT and JEM-GT - igubal® spherical balls - split



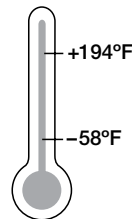
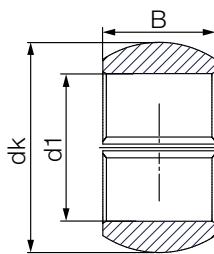
Order key

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]	dK	B	Weight [g]
JKM-GT-40	40	66.30	49	54.5
JKM-GT-50	50	82.40	60	92.1



Order key

Type	Size			
J	E	M	- GT - 16	
Spherical ball material iglide® J	Dimensional E series	Metric	Split ball	Inner-Ø [mm]

iglide® J - Low moisture absorption

Dimensions [mm]

Part No.	d1 E10	dK	B	Weight [g]
JEM-GT16	16	23.7	13	3.7
JEM-GT20	20	28.9	16	6.1
JEM-GT25	25	35.6	20	10.9
JEM-GT30	30	40.8	22	14.6

igubal® spherical balls | Product Range

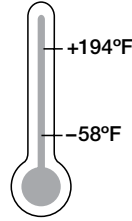
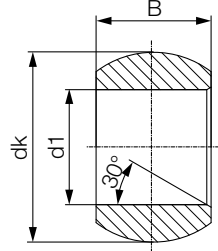
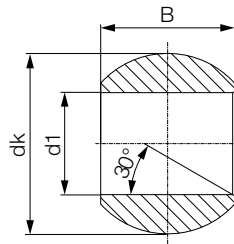
J4KM and J4EM - igubal® spherical balls - cost-effective



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]

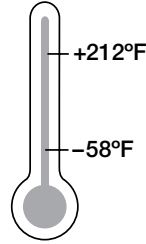
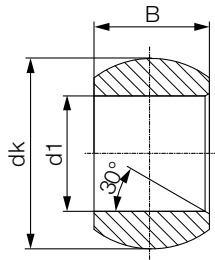
Part No.	d1 [E10]	dK	B	Weight [g]
J4KM-10-14	10	19.10	14	3.1
J4KM-10-16	10	22.10	16	3.1

Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
J4EM-04-05	4	8.25	5	0.3
J4EM-05-06	5	10.20	6	0.4
J4EM-06-06	6	10.20	6	0.4
J4EM-08-08	8	13.30	8	0.8
J4EM-10-09	10	16.00	9	1.3
J4EM-12-10	12	18.00	10	1.7
J4EM-15-12	15	22.00	12	2.9
J4EM-16-13	16	24.00	13	3.9
J4EM-17-14	17	25.10	14	4.1
J4EM-20-16	20	28.90	16	6.4
J4EM-25-20	25	35.50	20	11.5
J4EM-30-22	30	40.90	22	14.5

igubal® spherical balls | Product Range

UWEM - igubal® spherical balls - for 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]	dK	B	Weight [g]
UWEM-1009	10	16.10	9	1.4
UWEM-16-13	16	23.80	13	4.0
UWEM-20-16	20	28.80	16	6.5
UWEM-25-20	25	35.30	20	11.6
UWEM-30-22	30	40.50	22	15.2

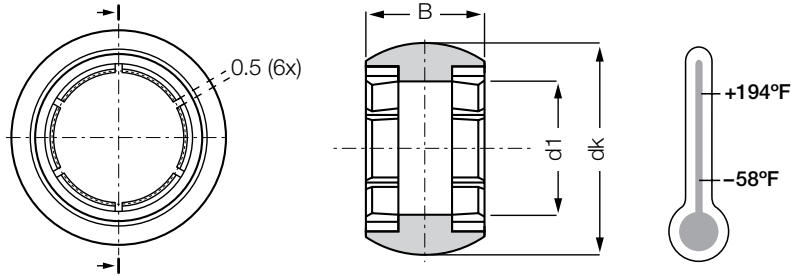


Order key

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



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

Dimensions [mm]

Part No.	d1 [E10]	dK	B	Weight [g]
J4VEM-08-08	8	13.20	8	0.7
J4VEM-10-09	10	16.10	9	1.2
J4VEM-12-10	12	18.10	10	1.5
J4VEM-16-13	16	24.10	13	3.7
J4VEM-20-16	20	29.10	16	6.2

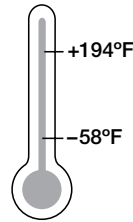
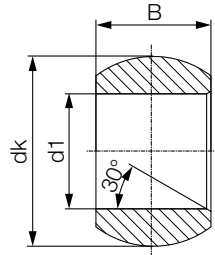
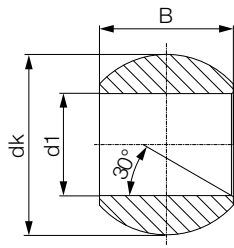
5 Sizes available: Ø 8, 10, 12, 16, 20 mm

Can be combined with:

igubal® rod ends	EBRM/EBLM	► Page 860
igubal® rod ends	EARM/EALM	► Page 868
igubal® pillow block bearing	ESTM	► Page 909
igubal® flange bearing	EFOM	► Page 924
igubal® flange bearing	EFSM	► Page 927
igubal® pressfit bearing	EGLM	► Page 949
igubal® pressfit bearing	EGFM-T	► Page 953
igubal® double joint	EGZM	► Page 956

igubal® spherical balls | Product Range

RN248KM and RN248EM - igubal® spherical balls - Detectable



Order key

Type	Size [mm]	Options
RN248 ... M - 06 - 09		
igubal® RN248 spherical balls	Dimensional series	Series
	Metric	K = Dimensional K series
	Inner Ø d1	E = Dimensional E series
	Width	

Dimensions [mm]

Part No.	d1 E10	dK	B	Weight [g]
RN248KM-06-09	6	12.80	9	1

Dimensions [mm]

Part No.	d1 E10	dK	B	Weight [g]
RN248EM-05-06	5	10.30	6	0.4
RN248EM-06-06	6	10.20	6	0.4
RN248EM-08-08	8	13.20	8	0.8
RN248EM-10-09	10	16.10	9	1.3
RN248EM-12-10	12	18.10	10	1.6

igubal® spherical balls | Product Range

Slim spherical balls for various metallic UC type bearing housings



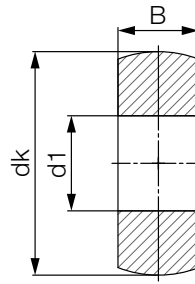
iglide® J



iglide® A180



iglide® A350



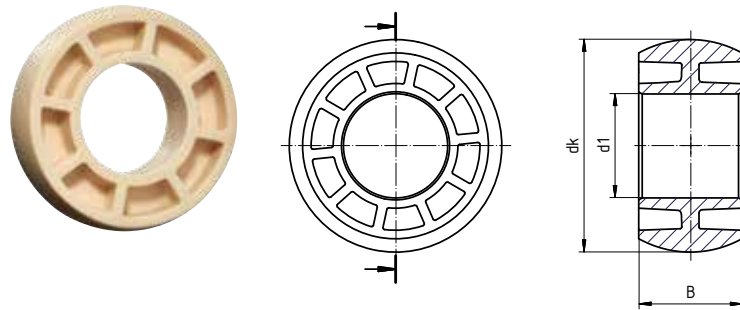
- 3 different spherical ball materials available: iglide® J, A180 and A350
- Eight dimensions for housing numbers from 203 to 210
- Maintenance-free, dry operation
- Durable
- Corrosion-free
- Resistant to dirt

Dimensions [mm]

Part No.	Housing No.	d1 E10	dk	B	Max. static compressive force	
					radial [kN]	axial [kN]
made of iglide® J, low coefficient of friction (material information ► From page 193)						
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 all-rounder (material information ► From page 493)						
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, for high temperatures and chemicals (material information ► From page 469)						
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

igubal® spherical balls | Product Range

Cost-effective spherical balls for various metallic UC type bearing housings



Order key

Type Size Version

J EM-17-17-SP

iglide® material	iglide® spherical balls	Inner Ø d1	Width	Injection molding
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- Cost-effective due to injection molding method
- Eight dimensions for housing numbers from 203 to 210
- Maintenance-free, dry operation
- Durable
- Resistant to corrosion and chemicals
- Resistant to dirt
- Low moisture absorption

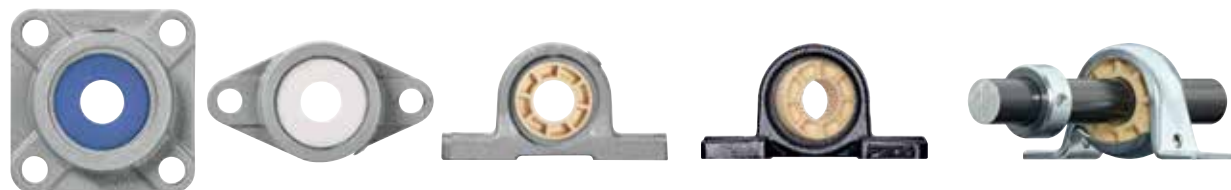


Material:

iglide® J, low coefficients of friction ► Page 193
iglide® J4, Low-cost material ► Page 1780

Dimensions [mm]

Part No.	Housing No.	d1	dk	B	Max. static compressive force	
		E10			radial [lbs]	axial [lbs]
JEM-17-17-SP	UC203	17	47	17	1686.0	899.0
□EM-20-14-SP	P204	20	47	14	1798.0	899.0
JEM-20-17-SP	UC204	20	47	17	1798.0	899.0
□EM-25-15-SP	P205	25	52	15	2023.0	899.0
JEM-25-17-SP	UC205	25	52	17	2023.0	786.5
□EM-30-16-SP	P206	30	62	16	3034.5	1124.0
JEM-30-19-SP	UC206	30	62	19	3034.5	1124.0
JEM-35-20-SP	UC207	35	72	20	3259.5	1461.0
JEM-40-21-SP	UC208	40	80	21	4720.5	1348.5
JEM-45-22-SP	UC209	45	85	22	5170.0	1236.0
JEM-50-24-SP	UC210	50	90	24	5620.0	1236.0



Notes

A large grid of graph paper for taking notes, consisting of 20 columns and 30 rows of small squares.