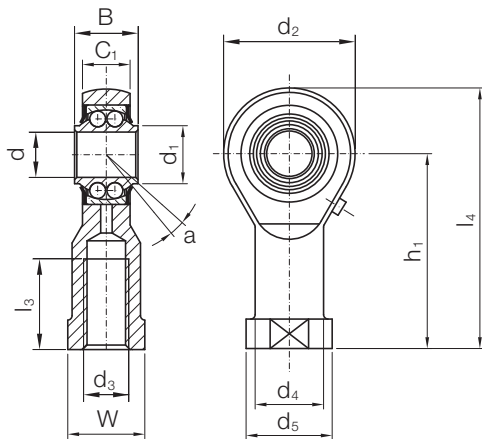


ASKUBAL® Rod ends and spherical bearings

Ball bearing
Mounting sizes acc. to DIN ISO 12240-4 dimension series K

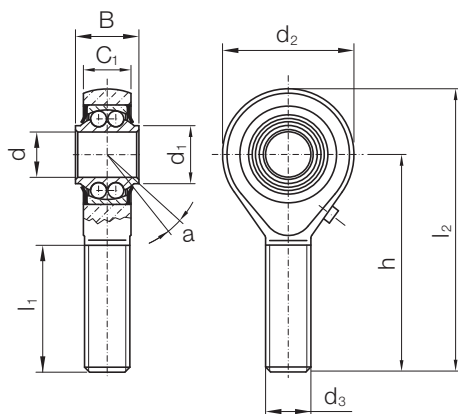
- Inner ring:** Antifriction bearing steel, hardened, high precision machined.
- Housing:** Steel with bearing outer ring pressed into housing, raceway precision ground.
- Rolling element:** Balls made from through-hardened, antifriction bearing steel.
- Covering disc:** Stainless steel caulked into housing.
- Lubrication:** The rod ends are given initial lubrication.
- Note:** With these rod ends, it is important to ensure that the tilt angle specified in the table is not exceeded, either while mounting or during operation, otherwise the cover washers may be damaged.

Female thread



Designation		d	d ₃	B	C ₁	d ₁ ≈	d ₂
Righthand thread	Lefthand thread	mm	mm	mm	mm	mm	mm
KUI 6-ZZ	KUIL 6-ZZ	6	M6	9	6.75	8.0	21
KUI 8-ZZ	KUIL 8-ZZ	8	M8	12	9.00	10.0	25
KUI 10-ZZ	KUIL 10-ZZ	10	M10	14	10.50	12.4	29
KUI 12-ZZ	KUIL 12-ZZ	12	M12	16	12.00	14.6	33
KUI 14-ZZ	KUIL 14-ZZ	14	M14	19	13.50	16.4	37
KUI 16-ZZ	KUIL 16-ZZ	16	M16	21	15.00	18.7	43
KUI 18-ZZ	KUIL 18-ZZ	18	M18 x 1.5	23	16.50	22.0	47
KUI 20-ZZ	KUIL 20-ZZ	20	M20 x 1.5	25	18.00	24.0	51
KUI 22-ZZ	KUIL 22-ZZ	22	M22 x 1.5	28	20.00	26.0	55
KUI 25-ZZ	KUIL 25-ZZ	25	M24 x 2	31	22.00	29.8	61
KUI 30-ZZ	KUIL 30-ZZ	30	M30 x 2	37	25.00	35.6	71

Male thread



Designation		d	d ₃	B	C ₁	d ₁ ≈	d ₂
Righthand thread	Lefthand thread	mm	mm	mm	mm	mm	mm
KUA 6-ZZ	KUAL 6-ZZ	6	M6	9	6.75	8.0	21
KUA 8-ZZ	KUAL 8-ZZ	8	M8	12	9.00	10.0	25
KUA 10-ZZ	KUAL 10-ZZ	10	M10	14	10.50	12.4	29
KUA 12-ZZ	KUAL 12-ZZ	12	M12	16	12.00	14.6	33
KUA 14-ZZ	KUAL 14-ZZ	14	M14	14	13.50	16.4	37
KUA 16-ZZ	KUAL 16-ZZ	16	M16	21	15.00	18.7	43
KUA 18-ZZ	KUAL 18-ZZ	18	M18x1,5	23	16.50	22.0	47
KUA 20-ZZ	KUAL 20-ZZ	20	M20x1,5	25	18.00	24.0	51
KUA 22-ZZ	KUAL 22-ZZ	22	M22x1,5	28	20.00	26.0	55
KUA 25-ZZ	KUAL 25-ZZ	25	M24x2	31	22.00	29.8	61
KUA 30-ZZ	KUAL 30-ZZ	30	M30x2	37	25.00	35.6	71


Max. permissible speed:

This is affected by the bearing load, the bearing clearance, the lubricant and heat output and input. The maximum permissible speed given in the tables applies for a purely radial load, normal bearing clearance tolerance, no external heat, an operating temperature which is not above the limit, and a low and absolutely shock-free load.

Cabrivating nipple:

Size 6 to 10: DIN 3405
Size 12 to 30: DIN 71412

Load ratings:

calculated acc. to DIN ISO 76 and 281.

Special versions:

available on request

d_4 ≈	d_5	h_1	l_3 min.	l_4 ≈	W	Limiting speed	Load ratings bearing dynamic	Load ratings bearing static C_0	Tilt angle
mm	mm	mm	mm	mm	mm	min ⁻¹	kN	kN	α°
10.0	13.0	30	9	40.5	11	1300	1.83	0.36	7
12.5	16.0	36	12	48.5	14	1250	3.08	0.69	7
15.0	19.0	43	15	57.5	17	1200	3.91	0.94	7
17.5	22.0	50	18	66.5	19	1150	4.90	1.23	7
20.0	25.0	57	21	75.5	22	1000	5.00	1.36	7
22.0	27.0	64	24	85.5	22	950	5.20	1.55	7
25.0	31.0	71	27	94.5	27	850	6.49	1.97	7
27.5	34.0	77	30	102.5	30	800	6.70	2.17	7
30.0	37.0	84	33	111.5	32	725	7.23	2.39	7
32.5	42.0	94	36	124.5	36	550	10.90	3.05	7
40.0	50.8	110	45	145.5	41	425	14.88	5.01	7

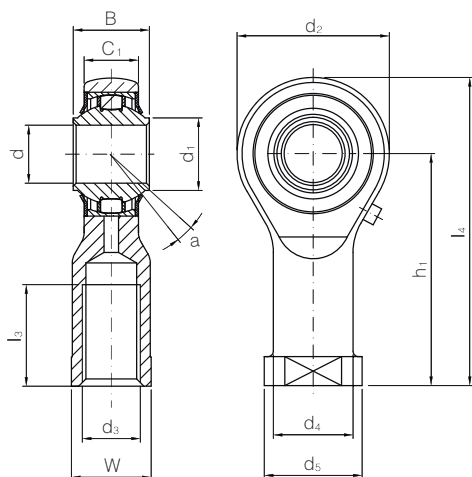
h	l_1 min.	l_2 ≈	Limiting speed	Load ratings bearing dynamic C	Load ratings bearing static C_0	Tilt angle
mm	mm	mm	min ⁻¹	kN	kN	α°
36	21	46.5	1300	1.83	0.36	7
42	25	54.5	1250	3.08	0.69	7
48	28	62.5	1200	3.91	0.94	7
54	32	70.5	1150	4.90	1.23	7
60	36	78.5	1000	5.00	1.36	7
66	37	87.5	950	5.20	1.55	7
72	41	95.5	850	6.49	1.97	7
78	45	103.5	800	6.70	2.17	7
84	48	111.5	725	7.23	2.39	7
94	55	124.5	550	10.90	3.05	7
110	66	145.5	425	14.88	5.01	7

Roller bearing

Mounting sizes acc. to DIN ISO 12240-4 dimension series K

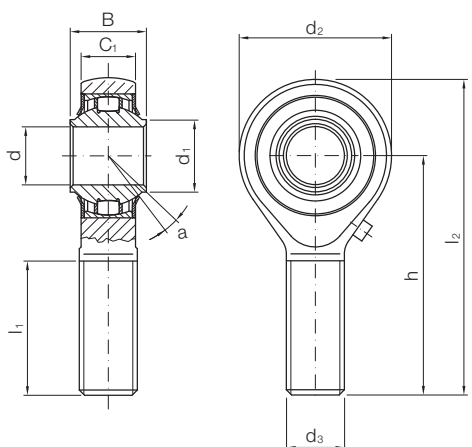
- Inner ring:** Antifriction bearing steel, hardened, high precision machined.
- Housing:** Steel with bearing outer ring pressed into housing, raceway precision ground.
- Rolling element:** Barrel roller bearings made from through-hardened, antifriction bearing steel.
- Retainer:** Synthetic material.
- Covering disc:** Stainless steel caulked into housing.
- Lubrication:** The rod ends are given initial lubrication.

Female thread



Designation		d	d ₃	B	C ₁	d ₁ ≈	d ₂ max.	d ₄
Righthand thread	Lefthand thread	mm	mm	mm	mm	mm	mm	mm
KI 20202-ZZ	KIL 20202-ZZ	12	M12	16	12	14.6	33	17.5
KI 20203-ZZ	KIL 20203-ZZ	16	M16	21	15	18.7	43	22.0
KI 20204-ZZ	KIL 20204-ZZ	20	M20x1.5	25	18	24.15	51	27.5
KI 20205-ZZ	KIL 20205-ZZ	25	M24x2	31	22	29.8	61	33.5
KI 20206-ZZ	KIL 20206-ZZ	30	M30x2	37	25	35.6	71	40.0

Male thread



Designation		d	d ₃	B	C ₁	d ₁ ≈	d ₂ max.	h
Righthand thread	Lefthand thread	mm	mm	mm	mm	mm	mm	mm
KA 20202-ZZ	KAL 20202-ZZ	12	M12	16	12	14.6	33	54
KA 20203-ZZ	KAL 20203-ZZ	16	M16	21	15	18.7	43	66
KA 20204-ZZ	KAL 20204-ZZ	20	M20x1.5	25	18	24.15	51	78
KA 20205-ZZ	KAL 20205-ZZ	25	M24x2	31	22	29.8	61	94
KA 20206-ZZ	KAL 20206-ZZ	30	M30x2	37	25	35.6	71	110



Note: With these rod ends, it is important to ensure that the tilt angle specified in the table is not exceeded, either while mounting or during operation, otherwise the sealing washers may be damaged.

Max. permissible speed: This is affected by the bearing load, the bearing clearance, the lubricant and heat output and input. The maximum permissible speed given in the tables applies for a purely radial load, normal bearing clearance tolerance, no external heat, an operating temperature which is not above the limit, and a low and absolutely shock-free load.

Cabrivating nipple: DIN 71412

Load ratings: calculated acc. to DIN ISO 76 and 281

Special versions:
 - full complement (without retainer)
 - sealing washer made of synthetic rubber-metal compound
 Further versions are available on request.

d ₅	h ₁	l ₃ min.	l ₄ ≈	W	Limiting speed	Load ratings		Tilt angle α°
						bearing dynamic C	bearing static C ₀	
mm	mm	mm	mm	mm	min ⁻¹	kN	kN	
22	50	18	66.5	19	950	9.55	7.70	7
27	64	24	85.5	22	650	9.55	8.10	7
34	77	30	103.5	30	550	14.99	13.40	7
42	94	36	124.5	36	400	23.12	21.85	5
50	110	45	145.5	41	300	28.82	26.20	7

l ₁ min.	l ₂ ≈	Limiting speed	Load ratings		Tilt angle α°
			bearing dynamic C	bearing static C ₀	
mm	mm	min ⁻¹	kN	kN	
32	70.5	950	9.55	7.70	7
37	87.5	650	9.55	8.10	7
45	104.5	550	14.90	13.40	7
55	124.5	400	23.12	21.85	5
66	145.5	300	28.82	26.20	7

