Compact linear bearing

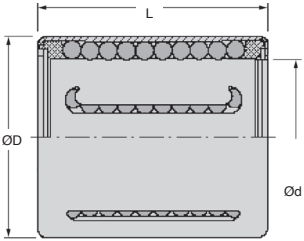
Ste Stock ★★★

KH

Compact

- ***Compact cylindrical bearing***
- *With integrated seals*
- *Material:*
  Housing: Pressed sheet steel
  Balls: Steel 70 HRC +/-2
- *Only for linear movement (not rotation)*

For light loads



Part number	normal backlash bore	normal backlash shaft	reduced backlash bore	reduced backlash shaft
Steel or cast iron housing	H7	h6	H6	j7
Light alloy housing	K7	h6	K6	j5

DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

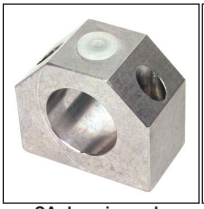
Part number	Ød (mm)	ØD (mm)	L (mm)	Weight (g)	Loads Dynamic Cr (N)	Loads Static Co (N)	Stock*	Price each 1 to 4
KH12-28-LL	12	19	28	18,5	605	495	✔	15,66 €
KH14-28-LL	14	21	28	20,5	600	505	✔	15,99 €
KH16-30-LL	16	24	30	27,5	775	600	✔	18,17 €
KH20-30-LL	20	28	30	32,5	1050	880	✔	16,40 €
KH25-40-LL	25	35	40	66,0	1830	1560	-	20,11 €
KH30-50-LL	30	40	50	95,0	2700	2450	✔	28,21 €
KH40-60-LL	40	52	60	182,0	4250	4000	-	38,32 €
KH50-70-LL	50	62	70	252,0	5300	5700	-	53,55 €

**Depending on availabililty - Dimensions in mm*

Compact

SA
SAKH

- **Closed housing**
- For linear guiding
- **SA**: Housing only
  SAKH : Housing and light **KH** bearing with seal
- Material: anodised aluminium

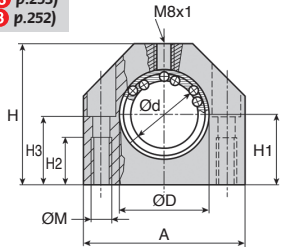


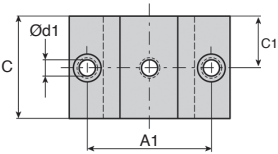
SA: housing only

SAKH: housing + KH bearing

Accessories

- Hardened ground shafts
  Z-A (tome 3 p.246)
  Z-B (tome 3 p.247)
- End support for shafts
  FGWA (tome 3 p.253)
  SFWR (tome 3 p.252)





DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number Housing only	Part number Housing and bearing	For shaft Ød	ØD	A	C	H	A1 +/-0,15	C1
SA12	SAKH-12-LL	12	19	40	28	33	29	14
SA16	SAKH-16-LL	16	24	45	30	38	34	15
SA20	SAKH-20-LL	20	28	53	30	45	40	15
SA25	SAKH-25-LL	25	35	62	40	54	48	20
SA30	SAKH-30-LL	30	40	67	50	60	53	25
SA40	SAKH-40-LL	40	52	87	60	76	69	30
SA50	SAKH-50-LL	50	62	103	70	92	82	35

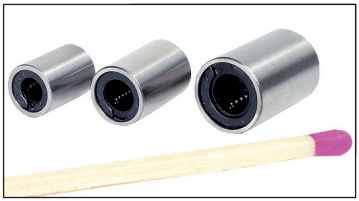
Part number Housing only	Part number Housing and bearing	H1 +0,010 -0,02	H2	H3	ØM	Ød1	Stock* Housing + bearing	Price each 1 to 4 Housing only	Price each 1 to 4 Housing + bearing
SA12	SAKH-12-LL	17	11	16	M5	4,3	✔	39,12 €	55,53 €
SA16	SAKH-16-LL	19	11	18	M5	4,3	✔	40,89 €	62,00 €
SA20	SAKH-20-LL	23	13	22	M6	5,3	✔	45,57 €	69,00 €
SA25	SAKH-25-LL	27	18	26	M8	6,6	✔	57,31 €	83,06 €
SA30	SAKH-30-LL	30	18	29	M8	6,6	✔	74,84 €	110,00 €
SA40	SAKH-40-LL	39	22	38	M10	8,4	-	111,16 €	162,70 €
SA50	SAKH-50-LL	47	26	46	M12	10,5	-	146,33 €	210,75 €

**Depending on availability - Dimensions in mm*

LBE IKO

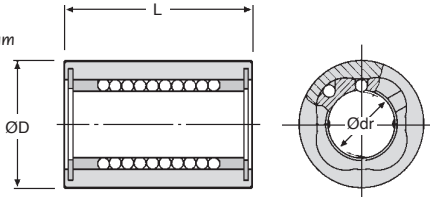
For 3-5mm shaft diameters

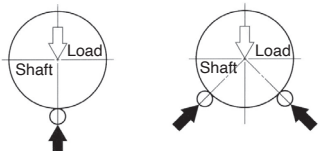
- ***Miniature slide bearing***
- *For linear guiding*
- *Material: steel*



Assembly

- *Recommended tolerances:*
  Standard assembly
  Shaft: 6µm / -14µm
  Housing: 0 / +12µm
  Precise assembly
  Shaft: -4µm / -9µm
  Housing: 0 / +8µm
- *Hardened depth: min. 0.8mm*
- *Surface hardness: HRc 58-64*
- *Surface roughness: min. Ra 0.8µm*





Load in direction A
Case A

Load in direction B
Case B

DISCOUNTS

Qty	1+	6+	20+
Disc.	List	-10%	On request

Part number	Shaft Ø (mm)	No. of ball tracks	Weight (g)	Max. eccentricity (µm)	Basic dynamic load - C Case A (N)	Basic dynamic load - C Case B (N)	Basic static load - CO Case A (N)	Basic static load - CO Case B (N)
LBE3M	3	4	1,8	4	18,40	21,20	39,40	55,80
LBE4M	4	4	2,8	4	23,50	27,00	48,60	68,70
LBE5M	5	4	3,8	4	51,30	53,00	108,00	152,00

Part number	Ødr Tolerance (µm)	ØD Tolerance (µm)	L Tolerance (µm)	Stock*	Price each 1 to 5
LBE3M	3^{+0}_{-8}	7^{+0}_{-8}	10^{+0}_{-120}	✔	41,97 €
LBE4M	4^{+0}_{-8}	8^{+0}_{-8}	12^{+0}_{-120}	✔	39,26 €
LBE5M	5^{+0}_{-8}	10^{+0}_{-8}	15^{+0}_{-120}	✔	38,26 €

**Depending on availability - Dimensions in mm*

Economy range

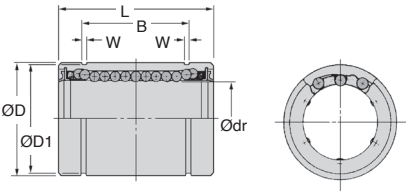
KBww
KBSww

- ***Precise guiding accuracy***
- *Integrated seals*
- *Working temperature range -20°C to +80°C*
- *Material:*
  Housing: Steel or stainless steel
  Ball raceway: Polyamide

info.

- *Should be used with* ***Z-A (tome 3 p.246)*** *or* ***Z-B (tome 3 p.247)*** *hardened and ground shafts*

Economy range



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-30%	On request

Part number	Ødr	ØD	L	B	W	ØD1	Loads Dynamic C (N)	Loads Static Co (N)	Stock*	Price each 1 to 4
Steel with polyamide raceway										
KB-8-WW	8 $^{0}_{+0,008}$	16 $^{0}_{-0,008}$	25 $^{0}_{-0,2}$	16,5 $^{0}_{-0,2}$	1,10	15,2	265	402	✔	10,20 €
KB-12-WW	12 $^{0}_{+0,008}$	22 $^{0}_{-0,009}$	32 $^{0}_{-0,2}$	22,9 $^{0}_{-0,2}$	1,30	21,0	510	784	✔	11,90 €
KB-16-WW	16 $^{-0,001}_{+0,009}$	26 $^{0}_{-0,009}$	36 $^{0}_{-0,2}$	24,9 $^{0}_{-0,2}$	1,30	24,9	578	892	✔	13,47 €
KB-20-WW	20 $^{-0,001}_{+0,009}$	32 $^{0}_{-0,011}$	45 $^{0}_{-0,2}$	31,5 $^{0}_{-0,2}$	1,60	30,3	862	1370	✔	14,19 €
KB-25-WW	25 $^{-0,001}_{+0,011}$	40 $^{0}_{-0,011}$	58 $^{0}_{-0,3}$	44,1 $^{0}_{-0,3}$	1,85	37,5	980	1570	✔	24,85 €
KB-30-WW	30 $^{-0,001}_{+0,011}$	47 $^{0}_{-0,011}$	68 $^{0}_{-0,3}$	52,1 $^{0}_{-0,3}$	1,85	44,5	1570	2740	✔	28,74 €
KB-40-WW	40 $^{-0,002}_{+0,013}$	62 $^{0}_{-0,013}$	80 $^{0}_{-0,3}$	60,6 $^{0}_{-0,3}$	2,15	59,0	2160	4020	✔	49,30 €
Stainless steel with polyamide raceway										
KBS-12-WW	12 $^{0}_{+0,008}$	22 $^{0}_{-0,009}$	32 $^{0}_{-0,2}$	22,9 $^{0}_{-0,2}$	1,30	21,00	510	784	✔	32,52 €
KBS-16-WW	16 $^{-0,001}_{+0,009}$	26 $^{0}_{-0,009}$	36 $^{0}_{-0,2}$	24,9 $^{0}_{-0,2}$	1,30	24,90	578	892	✔	45,55 €
KBS-20-WW	20 $^{-0,001}_{+0,009}$	32 $^{0}_{-0,011}$	45 $^{0}_{-0,2}$	31,5 $^{0}_{-0,2}$	1,60	30,30	862	1370	✔	53,39 €
KBS-25-WW	25 $^{-0,001}_{+0,011}$	40 $^{0}_{-0,011}$	58 $^{0}_{-0,3}$	44,1 $^{0}_{-0,3}$	1,85	37,50	980	1570	✔	78,17 €
KBS-30-WW	30 $^{-0,001}_{+0,011}$	47 $^{0}_{-0,011}$	68 $^{0}_{-0,3}$	52,1 $^{0}_{-0,3}$	1,85	44,50	1570	2740	-	104,27 €
KBS-40-WW	40 $^{-0,002}_{+0,013}$	62 $^{0}_{-0,013}$	80 $^{0}_{-0,3}$	60,6 $^{0}_{-0,3}$	2,15	59,00	2160	4020	-	220,28 €

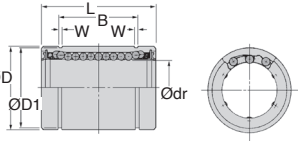
**Depending on availability - Dimensions in mm*

KBUU
KBUUG

NB NIPPON BEARING Co.

High load capacity

- ***Bearing with solid external ring***
- *For linear guiding*
- *Closed construction*
- *Radial backlash cannot be adjusted*
- *Easy to install*
- *Very good guiding precision*
- *Integrated seals*
- *Working temperature:*
  steel/polyamide: -20°C to +80°C
  steel/steel: -20°C/+110°C
- *Materials:*
  Body: Steel 100C6
  Balls: Steel 70 HRc ±2
  Raceway: Steel or polyamide



Info.

- *Should only be used with* **Z-A** ***(tome 3 p.246)*** *or* **Z-B** ***(tome 3 p.247)*** *hardened and ground shafts*

DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	Ødr	ØD	L	B	W	ØD1	Loads Dynamic C (N)	Loads Static Co (N)	Stock*	Price each 1 to 4
With steel raceway										
KB-5-UU	5 -0,000 +0,008	12 +0,000 -0,008	22 +0,0 -0,2	14,5 +0,0 -0,2	1,10	11,50	206	265	✔	46,11 €
KB-8-UU	8 -0,000 +0,008	16 +0,000 -0,008	25 +0,0 -0,2	16,5 +0,0 -0,2	1,10	15,20	265	402	✔	27,87 €
KB-10-UU	10 -0,000 +0,008	19 +0,000 -0,009	29 +0,0 -0,2	22,0 +0,0 -0,2	1,30	18,00	372	549	✔	29,59 €
KB-12-UU	12 -0,000 +0,008	22 +0,000 -0,009	32 +0,0 -0,2	22,9 +0,0 -0,2	1,30	21,00	510	784	✔	31,81 €
KB-16-UU	16 -0,001 +0,009	26 +0,000 -0,009	36 +0,0 -0,2	24,9 +0,0 -0,2	1,30	24,90	578	892	✔	38,06 €
KB-20-UU	20 -0,001 +0,009	32 +0,000 -0,011	45 +0,0 -0,2	31,5 +0,0 -0,2	1,60	30,30	862	1370	✔	45,85 €
KB-25-UU	25 -0,001 +0,011	40 +0,000 -0,011	58 +0,0 -0,3	44,1 +0,0 -0,3	1,85	37,50	980	1570	✔	61,05 €
KB-30-UU	30 -0,001 +0,011	47 +0,000 -0,011	68 +0,0 -0,3	52,1 +0,0 -0,3	1,85	44,50	1570	2740	✔	79,73 €
KB-40-UU	40 -0,002 +0,013	62 +0,000 -0,013	80 +0,0 -0,3	60,6 +0,0 -0,3	2,15	59,00	2160	4020	✔	131,57 €
KB-60-UU	60 -0,002 +0,013	90 +0,000 -0,015	125 +0,0 -0,4	101,7 +0,0 -0,4	3,15	72,00	4700	9800	-	288,22 €
KB-80-UU	80 -0,004 +0,016	120 +0,000 -0,015	165 +0,0 -0,4	133,7 +0,0 -0,4	4,15	116,00	7350	16000	-	571,03 €
With polyamide raceway										
KB-5-UUG	5 -0,000 +0,008	12 +0,000 -0,008	22 +0,0 -0,2	14,5 +0,0 -0,2	1,10	11,50	206	265	-	20,07 €
KB-8-UUG	8 -0,000 +0,008	16 +0,000 -0,008	25 +0,0 -0,2	16,5 +0,0 -0,2	1,10	15,20	265	402	✔	18,17 €
KB-10-UUG	10 -0,000 +0,008	19 +0,000 -0,009	29 +0,0 -0,2	22,0 +0,0 -0,2	1,30	18,00	372	549	✔	18,80 €
KB-12-UUG	12 -0,000 +0,008	22 +0,000 -0,009	32 +0,0 -0,2	22,9 +0,0 -0,2	1,30	21,00	510	784	✔	19,42 €
KB-16-UUG	16 -0,001 +0,009	26 +0,000 -0,009	36 +0,0 -0,2	24,9 +0,0 -0,2	1,30	24,90	578	892	✔	24,42 €
KB-20-UUG	20 -0,001 +0,009	32 +0,000 -0,011	45 +0,0 -0,2	31,5 +0,0 -0,2	1,60	30,30	862	1370	✔	31,99 €
KB-25-UUG	25 -0,001 +0,011	40 +0,000 -0,011	58 +0,0 -0,3	44,1 +0,0 -0,3	1,85	37,50	980	1570	-	43,30 €
KB-30-UUG	30 -0,001 +0,011	47 +0,000 -0,011	68 +0,0 -0,3	52,1 +0,0 -0,3	1,85	44,50	1570	2740	✔	57,77 €
KB-40-UUG	40 -0,002 +0,013	62 +0,000 -0,013	80 +0,0 -0,3	60,6 +0,0 -0,3	2,15	59,00	2160	4020	-	90,44 €
KB-50-UUG	50 -0,002 +0,013	75 +0,000 -0,013	100 +0,0 -0,3	77,6 +0,0 -0,3	2,65	72,00	3820	7940	-	144,50 €
KB-60-UUG	60 -0,002 +0,013	90 +0,000 -0,015	125 +0,0 -0,4	101,7 +0,0 -0,4	3,15	86,50	4700	9800	-	191,09 €

**Depending on availability - Dimensions in mm*

High load capacity

NB NIPPON BEARING Co.

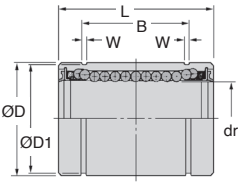
KBSUU
KBSUUG

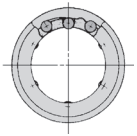
- ***Bearing with solid external ring***
- *For linear guiding*
- *Closed construction*
- *Radial backlash cannot be adjusted*
- *Easy to install*
- *Very good guiding accuracy*
- *Integral seals*
- *Working temperature:*
  steel/polyamide: -20°C to +80°C
  steel/steel: -20°C to +140°C
- *Materials:*
  Cylinder: Stainless steel
  Balls: Stainless steel
  Raceway: Stainless steel or polyamide

Info.

- *Should be used with a* **Z-B** ***(tome 3 p.247)*** *hardened and ground shaft*

For hostile environments





DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	Ødr	ØD	L	B	W	D1	Loads Dynamic C (N)	Loads Static Co (N)	Stock*	Price each 1 to 4
With stainless steel raceway (-20°C+140°C)										
KBS-12-UU	12 $^{0}_{+0,008}$	22 $^{0}_{-0,009}$	32 $^{0}_{-0,2}$	22,9 $^{0}_{-0,2}$	1,30	21,00	510	784	✔	80,76 €
KBS-16-UU	16 $^{-0,001}_{+0,009}$	26 $^{0}_{-0,009}$	36 $^{0}_{-0,2}$	24,9 $^{0}_{-0,2}$	1,30	24,90	578	892	✔	97,74 €
KBS-20-UU	20 $^{-0,001}_{+0,009}$	32 $^{0}_{-0,011}$	45 $^{0}_{-0,2}$	31,5 $^{0}_{-0,2}$	1,60	30,30	862	1370	✔	110,77 €
KBS-25-UU	25 $^{-0,001}_{+0,011}$	40 $^{0}_{-0,011}$	58 $^{0}_{-0,3}$	44,1 $^{0}_{-0,3}$	1,85	37,50	980	1570	-	156,41 €
KBS-30-UU	30 $^{-0,001}_{+0,011}$	47 $^{0}_{-0,011}$	68 $^{0}_{-0,3}$	52,1 $^{0}_{-0,3}$	1,85	44,50	1570	2740	-	202,04 €
KBS-40-UU	40 $^{-0,002}_{+0,013}$	62 $^{0}_{-0,013}$	80 $^{0}_{-0,3}$	60,6 $^{0}_{-0,3}$	2,15	59,00	2160	4020	-	325,96 €
KBS-50-UU	50 $^{-0,002}_{+0,013}$	75 $^{0}_{-0,013}$	100 $^{0}_{-0,3}$	77,6 $^{0}_{-0,3}$	2,65	72,00	3820	7940	-	456,35 €
With polyamide raceway (-20°C+80°C)										
KBS-12-UUG	12 $^{0}_{+0,008}$	22 $^{0}_{-0,009}$	32 $^{0}_{-0,2}$	22,9 $^{0}_{-0,2}$	1,30	21,00	510	784	✔	54,73 €
KBS-16-UUG	16 $^{-0,001}_{+0,009}$	26 $^{0}_{-0,009}$	36 $^{0}_{-0,2}$	24,9 $^{0}_{-0,2}$	1,30	24,90	578	892	✔	65,12 €
KBS-20-UUG	20 $^{-0,001}_{+0,009}$	32 $^{0}_{-0,011}$	45 $^{0}_{-0,2}$	31,5 $^{0}_{-0,2}$	1,60	30,30	862	1370	✔	84,67 €
KBS-25-UUG	25 $^{-0,001}_{+0,011}$	40 $^{0}_{-0,011}$	58 $^{0}_{-0,3}$	44,1 $^{0}_{-0,3}$	1,85	37,50	980	1570	-	126,16 €
KBS-30-UUG	30 $^{-0,001}_{+0,011}$	47 $^{0}_{-0,011}$	68 $^{0}_{-0,3}$	52,1 $^{0}_{-0,3}$	1,85	44,50	1570	2740	-	156,41 €
KBS-40-UUG	40 $^{-0,002}_{+0,013}$	62 $^{0}_{-0,013}$	80 $^{0}_{-0,3}$	60,6 $^{0}_{-0,3}$	2,15	59,00	2160	4020	-	241,19 €
KBS-50-UUG	50 $^{-0,002}_{+0,013}$	75 $^{0}_{-0,013}$	100 $^{0}_{-0,3}$	77,6 $^{0}_{-0,3}$	2,65	72,00	3820	7940	-	352,04 €

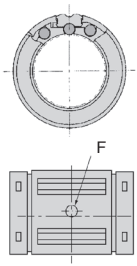
**Depending on availability - Dimensions in mm*

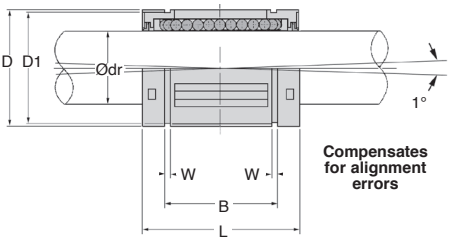
TKUU Compensates for any flexing of the shaft

- ***Self aligning closed linear bearing***
- *For linear guiding*
- *Compensates for any alignment errors or flexing of the shaft*
- *Integrated seals*
- *Materials:*
  Bearing: Thermoplastic
  Balls: Steel 70 HRC[±2]

Accessories

- *Hardened and ground shafts*
  Z-A (tome 3 p.246)
  Z-B (tome 3 p.247)
- *Housings*
  NSB (tome 3 p.268)
  S2B (tome 3 p.269





Compensates for alignment errors

DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	dr	D	L	W	D1	h	F	J	G	B	Loads Dyn. C (N)	Loads Stat. Co (N)	Stock*	Price each 1 to 4
TK-12-UU	12	22	32	1,30	21,00	-	3	0,7	-	22,9	1020	1290	✔	23,90 €
TK-16-UU	16	26	36	1,30	24,90	-	3	0,7	-	24,9	1250	1550	✔	29,34 €
TK-20-UU	20	32	45	1,60	30,30	-	3	0,9	-	31,5	2090	2630	✔	38,05 €
TK-25-UU	25	40	58	1,85	37,50	-	3	1,4	1,5	44,1	3780	4720	✔	50,01 €
TK-30-UU	30	47	68	1,85	44,50	-	3	2,2	2,0	52,1	5470	6810	✔	68,49 €
TK-40-UU	40	62	80	2,15	59,00	-	3	2,7	1,5	60,6	6590	8230	-	104,72 €

**Depending on availability - Dimensions in mm*

Closed polymer DryLin®R bearing

Insensitive to dirt

RJUM01
RJZM01

- **Closed bearing with polymer slide surface**
- Max. speed
  Dry working 8m/s
  With lubrication >10 m/s
- Working temperature from -60°C to +100°C
  (wear increases if temperature >80°C)
- Max. load 35 N/mm²
- Recommended load 5N/mm² (linear)
- Material:
  Housing: Aluminium
  Bearing: DryLin®R

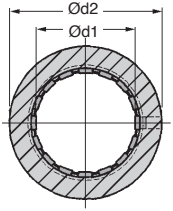
Fast and silent

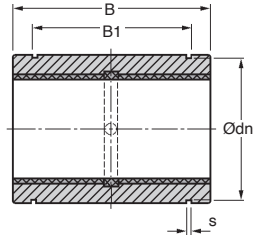
Advantages

- Maintenance free
- Self lubricating
- 20% of weight of equivalent steel version
- Silent in operation

Accessories

- **AWM** aluminium shaft
  (tome 3 p.245)





DISCOUNTS

Qty	1+	6+	20+	40+	60+
Disc.	List	-10%	-15%	-20%	On request

Part number	Ød1	Tolerance	Ød2 (h7)	B (h10)	B1 (H10)	s (H10)	Ødn	Stock*	Price each 1 to 5
RJZM01-05	5	0,02 - 0,05	12	22	14,20	1,10	11,50	-	17,33 €
RJZM01-08	8	0,02 - 0,05	16	25	16,20	1,10	15,20	✔	17,70 €
RJUM01-10	10	0,02 - 0,05	19	29	21,60	1,30	17,50	✔	20,00 €
RJUM01-12	12	0,02 - 0,05	22	32	22,60	1,30	20,50	✔	22,72 €
RJUM01-16	16	0,02 - 0,05	26	36	24,60	1,30	24,20	✔	24,91 €
RJUM01-20	20	0,02 - 0,06	32	45	31,20	1,60	29,60	✔	31,22 €
RJUM01-25	25	0,02 - 0,06	40	58	43,70	1,85	36,50	✔	40,24 €
RJUM01-30	30	0,02 - 0,07	47	68	51,70	1,85	43,50	✔	51,59 €
RJUM01-40	40	0,02 - 0,07	62	80	60,30	2,15	57,80	-	84,48 €
RJUM01-50	50	0,02 - 0,09	75	100	77,30	2,65	70,50	-	124,08 €

*Depending on availability - Dimensions in mm

Linear bearing with inclined ball tracks

KKB

High temperature

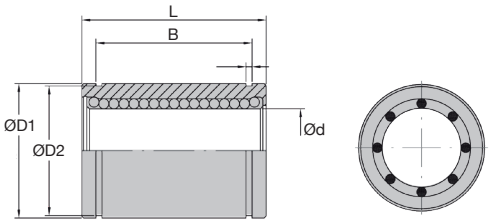
- A *linear bearing with an inclined ball track suitable for standard loads.*
- *Working temperature range: -20 to +200°C*
- *Can be uses with only a light lubrication*
- *Sealing joints included*
- *Materials:*
  Outer housing and balls: steel
  Raceway: bronze
  Seal: VITON®

Advantages

- *Higher working load compared to standard bearings*
- *No risk of marking the shaft*
- *Suitable for high temperatures*

Accessories

- *Hardened shaft*
  Z-A (tome 3 p.246)
  Z-B (tome 3 p.247)



DISCOUNTS

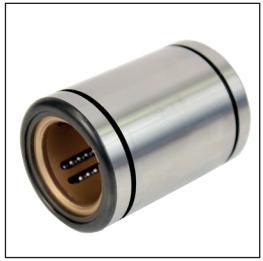
Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	ød	ØD1	L	B	W	øD2	Load Dynamic C(N)	Load Static Co(N)	Weight (g)	Price each 1 to 4
KKB-12AR	$12^{0/+0,008}$	$22^{0/+0,008}$	$32^{0/-0,2}$	$22,9^{0/-0,2}$	1,3	21	580	895	52	97,33 €
KKB-16AR	$16^{0/+0,009}$	$26^{0/+0,009}$	$36^{0/-0,2}$	$24,9^{0/-0,2}$	1,3	24,9	770	1180	75	109,05 €
KKB-20AR	$20^{0/+0,009}$	$32^{0/+0,009}$	$45^{0/-0,2}$	$31,5^{0/-0,2}$	1,6	30,3	1190	1910	140	117,32 €
KKB-25AR	$25^{0/+0,011}$	$40^{0/+0,011}$	$58^{0/-0,3}$	$44,1^{0/-0,3}$	1,85	37,5	1690	2720	298	157,67 €
KKB-30AR	$30^{0/+0,011}$	$47^{0/+0,011}$	$68^{0/-0,3}$	$52,1^{0/-0,3}$	1,85	44,5	2210	3880	445	211,31 €
KKB-40AR	$40^{0/+0,013}$	$62^{0/+0,013}$	$80^{0/-0,3}$	$60,6^{0/-0,3}$	2,15	59	2460	4620	1025	265,18 €

Dimensions in mm

Linear bearing with inclined ball tracks

High temperature, Heavy load — KKP



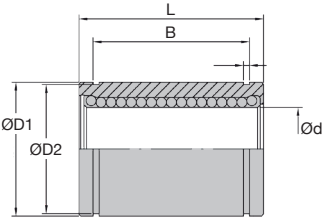
- **A linear bearing with an inclined ball track suitable for heavy loads.**
- Working temperature range: -20 to +200°C
- Can be uses with only a light lubrication
- Sealing joints included
- Materials:
  Outer housing and balls: steel
  Raceway: bronze
  Seal: VITON®

Advantages

- Higher working load compared to standard bearings
- No risk of marking the shaft
- Suitable for high temperatures

Accessories

- Hardened shaft
  Z-A (tome 3 p.246)
  Z-B (tome 3 p.247)



DISCOUNTS

Qty	1+	5+	10+	25+
Disc.	List	-6%	-12%	On request

Part number	ød	ØD1	L	B	W	øD2	Load Dynamic C(N)	Load Static Co(N)	Weight (g)	Price each 1 to 4
KKP-12AR	12 $^{0/+0,008}$	22 $^{0/+0,008}$	32 $^{0/-0,2}$	22,9 $^{0/-0,2}$	1,3	21	670	1210	52	109,76 €
KKP-16AR	16 $^{0/+0,009}$	26 $^{0/+0,009}$	36 $^{0/-0,2}$	24,9 $^{0/-0,2}$	1,3	24,9	880	1690	75	122,84 €
KKP-20AR	20 $^{0/+0,009}$	32 $^{0/+0,009}$	45 $^{0/-0,2}$	31,5 $^{0/-0,2}$	1,6	30,3	1500	3050	140	132,08 €
KKP-25AR	25 $^{0/+0,011}$	40 $^{0/+0,011}$	58 $^{0/-0,3}$	44,1 $^{0/-0,3}$	1,85	37,5	1920	4350	298	177,77 €
KKP-30AR	30 $^{0/+0,011}$	47 $^{0/+0,011}$	68 $^{0/-0,3}$	52,1 $^{0/-0,3}$	1,85	44,5	3110	7760	445	237,70 €
KKP-40AR	40 $^{0/+0,013}$	62 $^{0/+0,013}$	80 $^{0/-0,3}$	60,6 $^{0/-0,3}$	2,15	59	3400	8940	1025	296,31 €

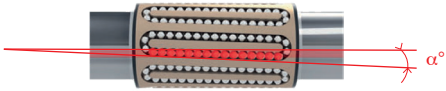
Dimensions in mm

Linear bearing with inclined ball tracks

KKB
KKP

Presentation

Inclined ball tracks
The slight angle enlarges the contact area with the shaft and enables a greater load capacity and a longer working life.



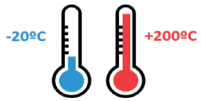
Structure

seal **balls** **internal cage** **outer housing** **seal**

Outer housing *is made from 100Cr6 hardened steel (63 ± 2 HRC), precision ground*
Internal cage *is made from bronze (DIN1705)*
High-precision steel ***balls***
VITON® ***seals*** *capable of supporting high temperatures*

Working temperature

The structure of the materials and their treatment makes these bearings suitable for use over a wide range of temperatures from -20 up to +200°C.
Note that extreme conditions may have an impact on the performance of linear bearings.
Please refer to the Temperature Factor table.



Speed and acceleration

The maximum speed (Vmax) is 5 m/s
The maximum acceleration (Amax) is 100 m/s2
When used at high speeds, it is recommended to decelerate before changing direction.

Linear bearing with inclined ball tracks

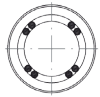
Presentation

KKB
KKP

These linear bearings with inclined balls exist in 2 versions: the **KKB** standard range and the **KKP** range suitable for heavier loads.The rated load of a linear bearing will vary according to the position of the balls in relation to the load direction.

The **KKB** range has equidistant lines of balls which allow for the symmetrical load distribution on the shaft.
For the **KKP** range, the lines of balls are grouped together so as to support heavier loads.

KKB



KKP

Calculating the working life

The nominal life of these linear bearings can be obtained using the following equation:

$$L_h = \frac{833}{H \times n_{ose}} \times \left(\frac{C}{P}\right)^3 \times Ft$$

Lh: Normal working life in hours
H: Stroke length (h)
n_{ose}: Number of return strokes per minute (m)
C: Basic dynamic load (min-1)
P: Equivalent bearing load (N)
Ft: Temperature factor (see Fig.1) (N)

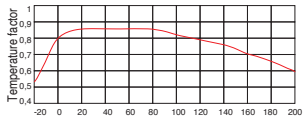


Fig.1- Temperature factor (Ft)

The nominal working life is defined as the life actually achieved by a shaft guidance system. It may differ significantly from the calculated life. The following influences can lead to premature failure through wear or fatigue:
- Contamination
- Misalignment between the shafts or guiding elements
- Vibration
- Inadequate lubrication
- Rotating movement

Due to the wide variety of possible mounting and operating conditions, it is not possible to precisely predetermine the operating life of a shaft guidance system.
The safest way to arrive at an appropriate estimate of operating life is comparison with similar applications.

Lubrification

The type of lubricant used is determined on the speed and working temperature.
In some cases, no lubricant is required.

	Temperature	Speed
Oil	Low	High
Grease*	High	Low

* Grease should have a Lithium or oil base