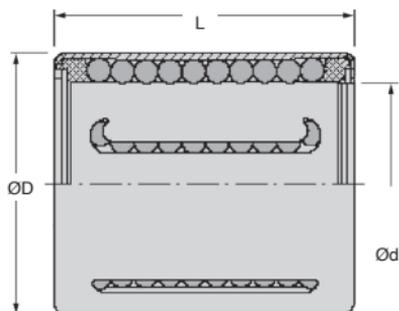


- Compact cylindrical bearing
- With integrated seals
- Material:
  - Housing: Pressed sheet steel
  - Balls: Steel 70 HRC +/-2
- Only for linear movement (not rotation)



For light loads



Part number	normal backlash		reduced backlash	
	bore	shaft	bore	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		Price each 1 to 4
					Dynamic Cr (N)	Static Co (N)	
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 availability - 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



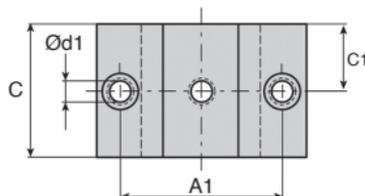
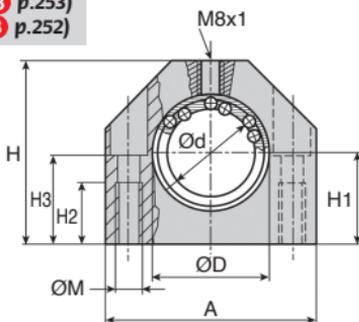
SA: housing only



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	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	Housing and bearing	H1 +0,010 -0,02	H2	H3	ØM	Ød1	Stock* Housing + bearing	Price each 1 to 4 Housing only	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 €

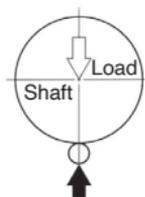
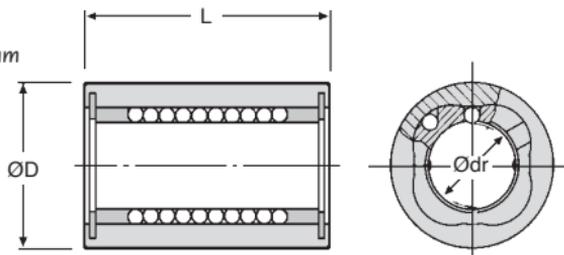
\* Depending on availability - Dimensions in mm

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

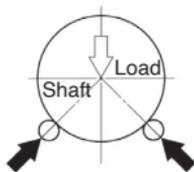


### Assembly

- Recommended tolerances:
  - Standard assembly
    - Shaft:  $6\mu\text{m} / -14\mu\text{m}$
    - Housing:  $0 / +12\mu\text{m}$
  - Precise assembly
    - Shaft:  $-4\mu\text{m} / -9\mu\text{m}$
    - Housing:  $0 / +8\mu\text{m}$
- Hardened depth: min. 0.8mm
- Surface hardness: HRC 58-64
- Surface roughness: min. Ra 0.8 $\mu\text{m}$



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	Max. Weight eccentricity (g)	Max. eccentricity ( $\mu\text{m}$ )	Basic dynamic load - C		Basic static load - CO	
					Case A (N)	Case B (N)	Case A (N)	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 ( $\mu\text{m}$ )	ØD Tolerance ( $\mu\text{m}$ )	L Tolerance ( $\mu\text{m}$ )	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

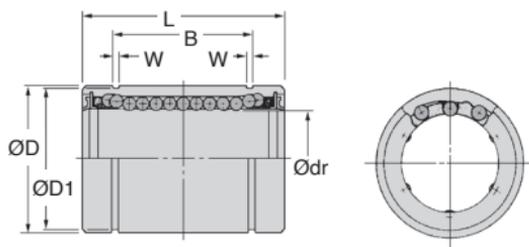
- Precise guiding accuracy
- Integrated seals
- Working temperature range -20°C to +80°C
- Material:

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

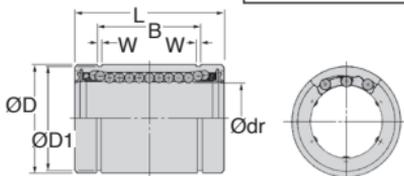
**Economy range****DISCOUNTS**

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

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

\*Depending on availability - Dimensions in mm

- 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		Price each 1 to 4	
							Dynamic C (N)	Static Co (N)		
<b>With steel raceway</b>										
KB-5-UU	5 <sup>-0.008</sup> / <sub>+0.008</sub>	12 <sup>+0.000</sup> / <sub>-0.008</sub>	22 <sup>+0.0</sup> / <sub>-0.2</sub>	14.5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,10	11,50	206	265	✓	46,11 €
KB-8-UU	8 <sup>-0.008</sup> / <sub>+0.008</sub>	16 <sup>+0.000</sup> / <sub>-0.008</sub>	25 <sup>+0.0</sup> / <sub>-0.2</sub>	16.5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,10	15,20	265	402	✓	27,87 €
KB-10-UU	10 <sup>-0.008</sup> / <sub>+0.008</sub>	19 <sup>+0.000</sup> / <sub>-0.009</sub>	29 <sup>+0.0</sup> / <sub>-0.2</sub>	22,0 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	18,00	372	549	✓	29,59 €
KB-12-UU	12 <sup>-0.008</sup> / <sub>+0.008</sub>	22 <sup>+0.000</sup> / <sub>-0.009</sub>	32 <sup>+0.0</sup> / <sub>-0.2</sub>	22,9 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	21,00	510	784	✓	31,81 €
KB-16-UU	16 <sup>-0.001</sup> / <sub>+0.009</sub>	26 <sup>+0.000</sup> / <sub>-0.009</sub>	36 <sup>+0.0</sup> / <sub>-0.2</sub>	24,9 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	24,90	578	892	✓	38,06 €
KB-20-UU	20 <sup>-0.001</sup> / <sub>+0.009</sub>	32 <sup>+0.000</sup> / <sub>-0.011</sub>	45 <sup>+0.0</sup> / <sub>-0.2</sub>	31,5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,60	30,30	862	1370	✓	45,85 €
KB-25-UU	25 <sup>-0.011</sup> / <sub>+0.011</sub>	40 <sup>+0.000</sup> / <sub>-0.011</sub>	58 <sup>+0.0</sup> / <sub>-0.3</sub>	44,1 <sup>+0.0</sup> / <sub>-0.3</sub>	1,85	37,50	980	1570	✓	61,05 €
KB-30-UU	30 <sup>-0.001</sup> / <sub>+0.011</sub>	47 <sup>+0.000</sup> / <sub>-0.011</sub>	68 <sup>+0.0</sup> / <sub>-0.3</sub>	52,1 <sup>+0.0</sup> / <sub>-0.3</sub>	1,85	44,50	1570	2740	✓	79,73 €
KB-40-UU	40 <sup>-0.002</sup> / <sub>+0.013</sub>	62 <sup>+0.000</sup> / <sub>-0.013</sub>	80 <sup>+0.0</sup> / <sub>-0.3</sub>	60,6 <sup>+0.0</sup> / <sub>-0.3</sub>	2,15	59,00	2160	4020	✓	131,57 €
KB-60-UU	60 <sup>-0.002</sup> / <sub>+0.013</sub>	90 <sup>+0.000</sup> / <sub>-0.015</sub>	125 <sup>+0.0</sup> / <sub>-0.4</sub>	101,7 <sup>+0.0</sup> / <sub>-0.4</sub>	3,15	72,00	4700	9800	-	288,22 €
KB-80-UU	80 <sup>-0.004</sup> / <sub>+0.018</sub>	120 <sup>+0.000</sup> / <sub>-0.015</sub>	165 <sup>+0.0</sup> / <sub>-0.4</sub>	133,7 <sup>+0.0</sup> / <sub>-0.4</sub>	4,15	116,00	7350	16000	-	571,03 €
<b>With polyamide raceway</b>										
KB-5-UUG	5 <sup>-0.008</sup> / <sub>+0.008</sub>	12 <sup>+0.000</sup> / <sub>-0.008</sub>	22 <sup>+0.0</sup> / <sub>-0.2</sub>	14.5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,10	11,50	206	265	-	20,07 €
KB-8-UUG	8 <sup>-0.008</sup> / <sub>+0.008</sub>	16 <sup>+0.000</sup> / <sub>-0.008</sub>	25 <sup>+0.0</sup> / <sub>-0.2</sub>	16.5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,10	15,20	265	402	✓	18,17 €
KB-10-UUG	10 <sup>-0.008</sup> / <sub>+0.008</sub>	19 <sup>+0.000</sup> / <sub>-0.009</sub>	29 <sup>+0.0</sup> / <sub>-0.2</sub>	22,0 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	18,00	372	549	✓	18,80 €
KB-12-UUG	12 <sup>-0.008</sup> / <sub>+0.008</sub>	22 <sup>+0.000</sup> / <sub>-0.009</sub>	32 <sup>+0.0</sup> / <sub>-0.2</sub>	22,9 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	21,00	510	784	✓	19,42 €
KB-16-UUG	16 <sup>-0.001</sup> / <sub>+0.009</sub>	26 <sup>+0.000</sup> / <sub>-0.009</sub>	36 <sup>+0.0</sup> / <sub>-0.2</sub>	24,9 <sup>+0.0</sup> / <sub>-0.2</sub>	1,30	24,90	578	892	✓	24,42 €
KB-20-UUG	20 <sup>-0.001</sup> / <sub>+0.009</sub>	32 <sup>+0.000</sup> / <sub>-0.011</sub>	45 <sup>+0.0</sup> / <sub>-0.2</sub>	31,5 <sup>+0.0</sup> / <sub>-0.2</sub>	1,60	30,30	862	1370	✓	31,99 €
KB-25-UUG	25 <sup>-0.011</sup> / <sub>+0.011</sub>	40 <sup>+0.000</sup> / <sub>-0.011</sub>	58 <sup>+0.0</sup> / <sub>-0.3</sub>	44,1 <sup>+0.0</sup> / <sub>-0.3</sub>	1,85	37,50	980	1570	-	43,30 €
KB-30-UUG	30 <sup>-0.001</sup> / <sub>+0.011</sub>	47 <sup>+0.000</sup> / <sub>-0.011</sub>	68 <sup>+0.0</sup> / <sub>-0.3</sub>	52,1 <sup>+0.0</sup> / <sub>-0.3</sub>	1,85	44,50	1570	2740	✓	57,77 €
KB-40-UUG	40 <sup>-0.002</sup> / <sub>+0.013</sub>	62 <sup>+0.000</sup> / <sub>-0.013</sub>	80 <sup>+0.0</sup> / <sub>-0.3</sub>	60,6 <sup>+0.0</sup> / <sub>-0.3</sub>	2,15	59,00	2160	4020	-	90,44 €
KB-50-UUG	50 <sup>-0.002</sup> / <sub>+0.013</sub>	75 <sup>+0.000</sup> / <sub>-0.013</sub>	100 <sup>+0.0</sup> / <sub>-0.3</sub>	77,6 <sup>+0.0</sup> / <sub>-0.3</sub>	2,65	72,00	3820	7940	-	144,50 €
KB-60-UUG	60 <sup>-0.002</sup> / <sub>+0.013</sub>	90 <sup>+0.000</sup> / <sub>-0.015</sub>	125 <sup>+0.0</sup> / <sub>-0.4</sub>	101,7 <sup>+0.0</sup> / <sub>-0.4</sub>	3,15	86,50	4700	9800	-	191,09 €

\*Depending on availability - Dimensions in mm

## High load capacity

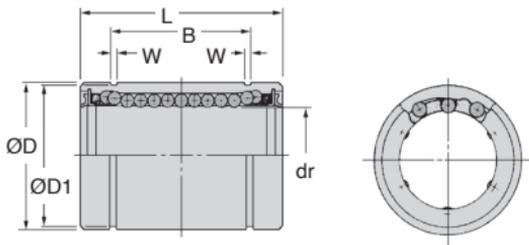
- Bearing with solid external ring
- For linear guiding
- Closed construction
- Radial backlash cannot be adjusted
- Easy to install
- Very good guiding accuracy
- Integral seals
- Working temperature:  
steel/polyamide: -20°C to +80°C  
steel/steel: -20°C to +140°C
- Materials:  
Cylinder: Stainless 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		Price each 1 to 4	
							Dynamic C (N)	Static Co (N)		
<b>With stainless steel raceway (-20°C+140°C)</b>										
KBS-12-UU	12 <sup>0/+0,008</sup>	22 <sup>0/-0,009</sup>	32 <sup>0/-0,009</sup>	32 <sup>0/-0,2</sup>	22,9 <sup>0/-0,2</sup>	1,30	21,00	510	784	✓ 80,76 €
KBS-16-UU	16 <sup>0/-0,001</sup>	26 <sup>0/+0,009</sup>	36 <sup>0/-0,009</sup>	36 <sup>0/-0,2</sup>	24,9 <sup>0/-0,2</sup>	1,30	24,90	578	892	✓ 97,74 €
KBS-20-UU	20 <sup>0/-0,001</sup>	32 <sup>0/+0,009</sup>	45 <sup>0/-0,011</sup>	45 <sup>0/-0,2</sup>	31,5 <sup>0/-0,2</sup>	1,60	30,30	862	1370	✓ 110,77 €
KBS-25-UU	25 <sup>0/-0,001</sup>	40 <sup>0/+0,011</sup>	58 <sup>0/-0,011</sup>	58 <sup>0/-0,3</sup>	44,1 <sup>0/-0,3</sup>	1,85	37,50	980	1570	- 156,41 €
KBS-30-UU	30 <sup>0/-0,001</sup>	47 <sup>0/+0,011</sup>	68 <sup>0/-0,011</sup>	68 <sup>0/-0,3</sup>	52,1 <sup>0/-0,3</sup>	1,85	44,50	1570	2740	- 202,04 €
KBS-40-UU	40 <sup>0/-0,002</sup>	62 <sup>0/+0,013</sup>	80 <sup>0/-0,013</sup>	80 <sup>0/-0,3</sup>	60,6 <sup>0/-0,3</sup>	2,15	59,00	2160	4020	- 325,96 €
KBS-50-UU	50 <sup>0/-0,002</sup>	75 <sup>0/+0,013</sup>	100 <sup>0/-0,013</sup>	100 <sup>0/-0,3</sup>	77,6 <sup>0/-0,3</sup>	2,65	72,00	3820	7940	- 456,35 €
<b>With polyamide raceway (-20°C+80°C)</b>										
KBS-12-UUG	12 <sup>0/+0,008</sup>	22 <sup>0/-0,009</sup>	32 <sup>0/-0,009</sup>	32 <sup>0/-0,2</sup>	22,9 <sup>0/-0,2</sup>	1,30	21,00	510	784	✓ 54,73 €
KBS-16-UUG	16 <sup>0/-0,001</sup>	26 <sup>0/+0,009</sup>	36 <sup>0/-0,009</sup>	36 <sup>0/-0,2</sup>	24,9 <sup>0/-0,2</sup>	1,30	24,90	578	892	✓ 65,12 €
KBS-20-UUG	20 <sup>0/-0,001</sup>	32 <sup>0/+0,009</sup>	45 <sup>0/-0,011</sup>	45 <sup>0/-0,2</sup>	31,5 <sup>0/-0,2</sup>	1,60	30,30	862	1370	✓ 84,67 €
KBS-25-UUG	25 <sup>0/-0,001</sup>	40 <sup>0/+0,011</sup>	58 <sup>0/-0,011</sup>	58 <sup>0/-0,3</sup>	44,1 <sup>0/-0,3</sup>	1,85	37,50	980	1570	- 126,16 €
KBS-30-UUG	30 <sup>0/-0,001</sup>	47 <sup>0/+0,011</sup>	68 <sup>0/-0,011</sup>	68 <sup>0/-0,3</sup>	52,1 <sup>0/-0,3</sup>	1,85	44,50	1570	2740	- 156,41 €
KBS-40-UUG	40 <sup>0/-0,002</sup>	62 <sup>0/+0,013</sup>	80 <sup>0/-0,013</sup>	80 <sup>0/-0,3</sup>	60,6 <sup>0/-0,3</sup>	2,15	59,00	2160	4020	- 241,19 €
KBS-50-UUG	50 <sup>0/-0,002</sup>	75 <sup>0/+0,013</sup>	100 <sup>0/-0,013</sup>	100 <sup>0/-0,3</sup>	77,6 <sup>0/-0,3</sup>	2,65	72,00	3820	7940	- 352,04 €

\*Depending on availability - Dimensions in mm

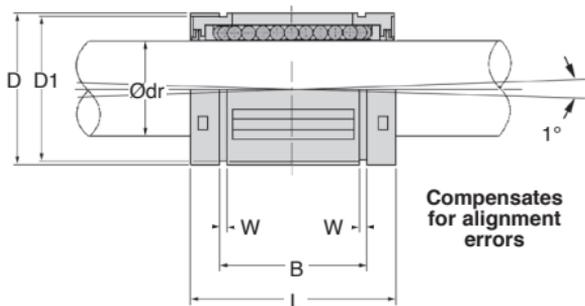
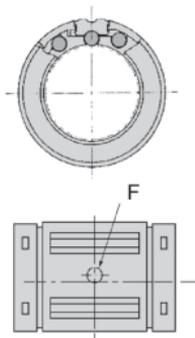
## TKUU Compensates for any flexing of the shaft

- 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<sup>2</sup>



### 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)



### 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		Stock*	Price each 1 to 4
											C (N)	Co (N)		
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/mm<sup>2</sup>**

**- Recommended load 5N/mm<sup>2</sup> (linear)**

**- Material:**

Housing: Aluminium

Bearing: DryLin®R



**Fast and silent**

**Advantages**

**- Maintenance free**

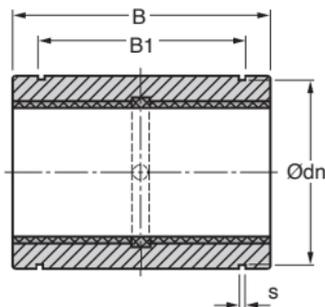
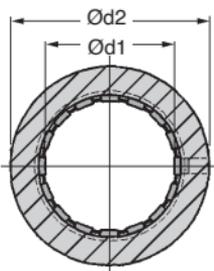
**- Self lubricating**

**- 20% of weight of equivalent steel version**

**- Silent in operation**

**Accessories**

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



**DISCOUNTS**

<b>Qty</b>	1+	6+	20+	40+	60+
<b>Disc.</b>	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 used 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

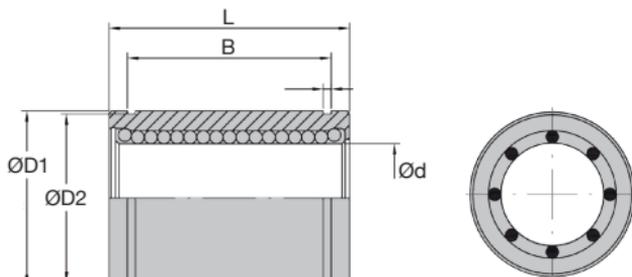
- Suitable for high temperatures

### 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		Weight (g)	Price each
							Dynamic C(N)	Static Co(N)		
KKB-12AR	12 <sup>0/+0,008</sup>	22 <sup>0/+0,008</sup>	32 <sup>0/-0,2</sup>	22,9 <sup>0/-0,2</sup>	1,3	21	580	895	52	97,33 €
KKB-16AR	16 <sup>0/+0,009</sup>	26 <sup>0/+0,009</sup>	36 <sup>0/-0,2</sup>	24,9 <sup>0/-0,2</sup>	1,3	24,9	770	1180	75	109,05 €
KKB-20AR	20 <sup>0/+0,009</sup>	32 <sup>0/+0,009</sup>	45 <sup>0/-0,2</sup>	31,5 <sup>0/-0,2</sup>	1,6	30,3	1190	1910	140	117,32 €
KKB-25AR	25 <sup>0/+0,011</sup>	40 <sup>0/+0,011</sup>	58 <sup>0/-0,3</sup>	44,1 <sup>0/-0,3</sup>	1,85	37,5	1690	2720	298	157,67 €
KKB-30AR	30 <sup>0/+0,011</sup>	47 <sup>0/+0,011</sup>	68 <sup>0/-0,3</sup>	52,1 <sup>0/-0,3</sup>	1,85	44,5	2210	3880	445	211,31 €
KKB-40AR	40 <sup>0/+0,013</sup>	62 <sup>0/+0,013</sup>	80 <sup>0/-0,3</sup>	60,6 <sup>0/-0,3</sup>	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 used with only a light lubrication
- Sealing joints included
- Materials:
  - Outer housing and balls: steel
  - Raceway: bronze
  - Seal: VITON®

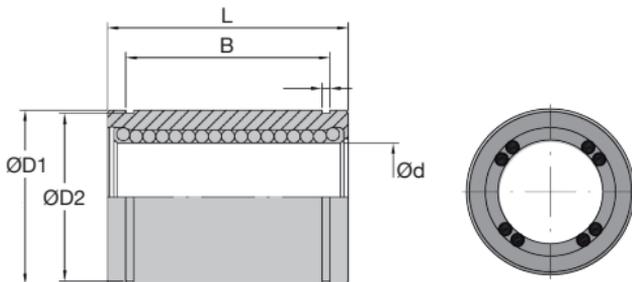


## Advantages

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

Dimensions in mm

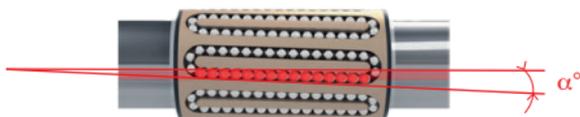
# Linear bearing with inclined ball tracks

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 ( $63 \pm 2$  HRC), precision ground

**Internal cage** is made from bronze (DIN1705)

High-precision steel **balls**

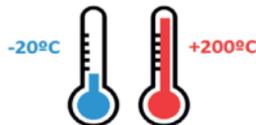
VITON® **seals** capable of supporting high temperatures

### 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  $+200^{\circ}\text{C}$ .

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 ( $v_{max}$ ) is 5 m/s

The maximum acceleration ( $a_{max}$ ) is 100 m/s<sup>2</sup>

When used at high speeds, it is recommended to decelerate before changing direction.

# Linear bearing with inclined ball tracks

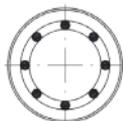
## Presentation

**KKB**  
**KKP**

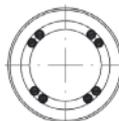
These linear bearings with inclined balls exist in 2 versions: the **KKB** standard range and the **KKP** range suitable for heavier loads. The rated load of a linear bearing will vary according to the position of the balls in relation to the load direction.

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:

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

L<sub>h</sub>: Normal working life in hours

H: Stroke length

n<sub>ose</sub>: Number of return strokes per minute

C: Basic dynamic load

P: Equivalent bearing load

Ft: Temperature factor (see Fig.1)

(h)

(m)

(min-1)

(N)

(N)

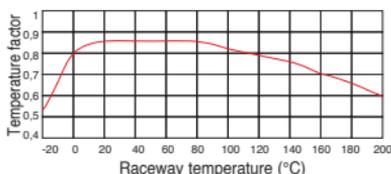


Fig.1- Temperature factor (Ft)

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.

## Lubrication

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