

Hydraulic heavy load brake: The Braking and Clamping Element with membrane technology KB.

The KB series is a hydraulically operated heavy load brake. The hydraulic oil presses the large-surface contact sections, which are equipped with a special brake lining, directly onto the section rail guide via a piston mechanism.

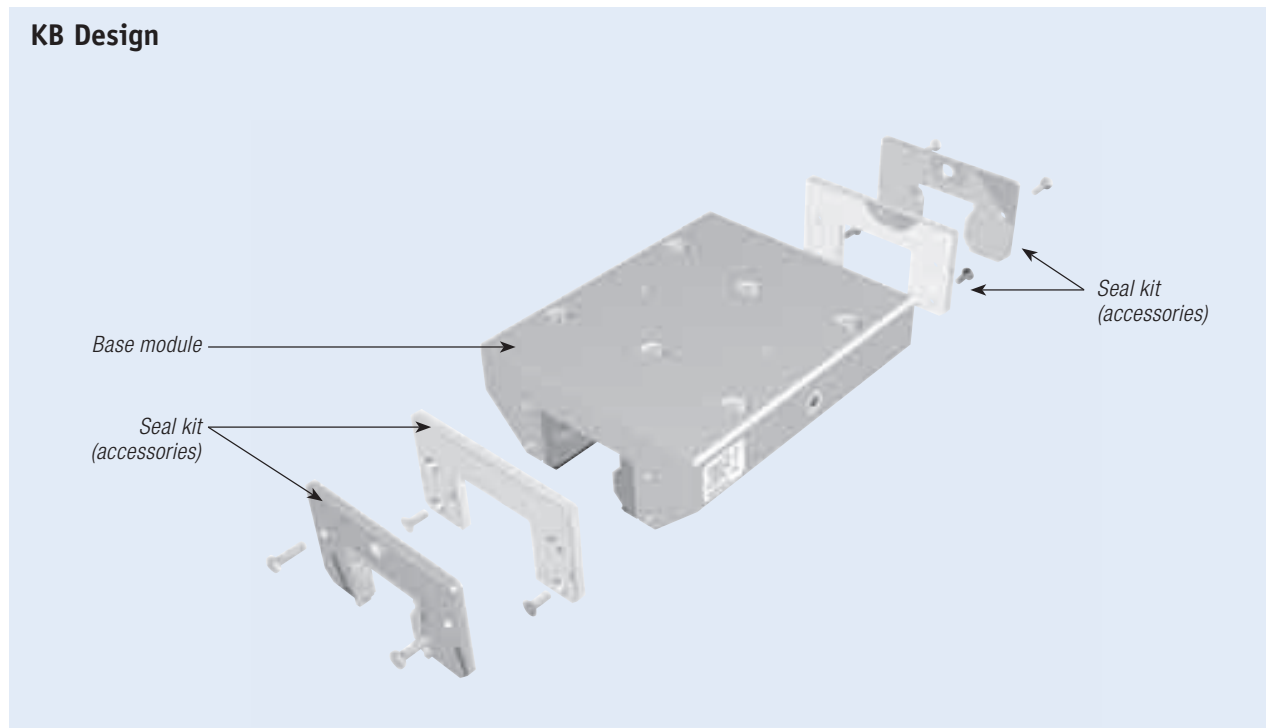
Because of the material combination of the linear guide/contact section, the linear guide won't be damaged by the contact section. In order to prevent damage from chips between the contact section and linear guide, the elements can be fitted with original seals from the respective linear guide manufacturer and longitudinal seals as accessories.

When the braking element is used in harsh work environments or with cooling liquid, seals should be used as well.

A pre-tensioned reset spring enables short cycle times. The special pressure membrane technology guarantees operational reliability. The pressure ranges from 20 bar to a 100 bar maximum for sizes 25 and 30. **All sizes from 35 to 125 operate in a pressure range from 30 bar to a 150 bar. The KB series features zero backlash and extremely low absorption volumes of maximum 7.6 cm³ per clamping operation.**

For more information visit www.zimmer-gmbh.com.

KB Design



Special characteristics:

- Special friction coating for braking
- Super-heavy load type
- Solid and rigid outer casing
- Compact design
- Integrated positive fit contact sections for maximum axial rigidity
- High operational reliability by pressure membrane technology
- Exact positioning
- Holding power up to 46,000 N

Application scenarios for KB:

- Machine table clamping of heavy cutting work centres
- Clamping and braking of heavy handling systems
- Braking

Variations:

The KB series is available with seals (as accessories) which are recommended for harsh work environments.

Connection options:

The KB series has a hydraulic supply port on both sides.

KB

Rail manufacturer



Type of rail	Size	Type of carriage	Item number	Measure table (page 88)
HSR	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	⊕	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	⊕	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBH 3501 AS1	8
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBH 4501 AS1	14
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBH 5501 AS1	19
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBH 6501 AS1	25
NR/NRS	25	NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	⊕	
	30	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	⊕	
	35	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KBH 3501 BS1	4
	45	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KBH 4501 BS1	10
	55	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KBH 5501 BS1	16
	65	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KBH 6501 BS1	21
SHS	25	SHS..C, SHS..LC	KBH 2501 CS1	2
	30	SHS..C, SHS..LC	KBH 3001 CS1	3
	35	SHS..C, SHS..LC	KBH 3501 CS1	8
	45	SHS..C, SHS..LC	KBH 4501 CS1	14
	55	SHS..C, SHS..LC	KBH 5501 CS1	19
	65	SHS..C, SHS..LC	KBH 6501 CS1	25
SRG	25	SRG..C, SRG..LC	KBH 2501 ES1	2
	30	SRG..C, SRG..LC	KBH 3001 ES1	3
	35	SRG..C, SRG..LC	KBH 3501 ES1	8
	45	SRG..C, SRG..LC	KBH 4501 ES1	14
	55	SRG..C, SRG..LC	KBH 5501 ES1	19
	65	SRG..C, SRG..LC	KBH 6501 ES1	25
SNR/SNS	25	SNR..C, SNR..LC, SNS..C, SNS..LC	⊕	
	30	SNR..C, SNR..LC, SNS..C, SNS..LC	⊕	
	35	SNR..C, SNR..LC, SNS..C, SNS..LC	⊕	
	45	SNR..C, SNR..LC, SNS..C, SNS..LC	⊕	
	55	SNR..C, SNR..LC, SNS..C, SNS..LC	KBH 5501 IS1	16
	65	SNR..C, SNR..LC, SNS..C, SNS..LC	KBH 6501 IS1	21
SRN	35	SRN..C, SRN..LC	⊕	
	45	SRN..C, SRN..LC	⊕	
	55	SRN..C, SRN..LC	⊕	
	65	SRN..LC	⊕	

Rail manufacturer



1605, 1607 1645, 1647	25	1631, 1651, 1653, 1661, 1665	KBH 2505 AS1	1
	30	1631, 1651, 1653, 1661, 1665	⊕	
	35	1631, 1651, 1653, 1661, 1665	KBH 3505 AS1	6
	45	1651, 1653	KBH 4505 AS1	12
	55	1651, 1653	KBH 5505 AS1	18
	65	1651, 1653	KBH 6505 AS1	24
		1622, 1623	KBH 6505 AS2	26
1805, 1807	25	1851, 1853	⊕	
	35	1851, 1853	KBH 3505 BS1	5
		1821, 1824	KBH 3505 BS3	9
	45	1851, 1853	KBH 4505 BS1	11
		1821, 1824	KBH 4505 BS3	15
	55	1851, 1853	KBH 5505 BS1	17
		1821, 1824	KBH 5505 BS3	20
	65	1853	KBH 6505 BS1	22
1875, 1873	55	1872	⊕	
	65	1872	KBH 6505 BS4	28

Rail manufacturer



MR	25	MR..A, MR..B	⊕	
	35	MR..A, MR..B	KBH 3503 AS1	7
	45	MR..A, MR..B	KBH 4503 AS1	13
	55	MR..A, MR..B	KBH 5503 AS1	27
	65	MR..B	KBH 6503 AS1	23

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Measure table (page 69)
LWH	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG	☉	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG	☉	
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	KBH 3510 AS1	8
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	KBH 4510 AS1	14
	55	LWH..B, LWHG, LWHT..B, LWHTG	KBH 5510 AS1	19
	65	LWH..B, LWHG, LWHT..B, LWHTG	KBH 6510 AS1	25
LRX	25	LRXC, LRX, LRXG	☉	
	30	LRXC, LRX, LRXG	☉	
	35	LRXC, LRX, LRXG	KBH 3510 BS1	8
	45	LRXC, LRX, LRXG	KBH 4510 BS1	14
	55	LRXC, LRX, LRXG	KBH 5510 BS1	19
	65	LRXC, LRX, LRXG	KBH 6510 BS1	25

Rail manufacturer

IKO

TKSD (KUSE)	25	KWSE, KWSE..-L	☉	
	30	KWSE, KWSE..-L	☉	
	35	KWSE, KWSE..-L	KBH 3502 AS1	7
	45	KWSE, KWSE..-L	KBH 4502 AS1	13
	55	KWSE, KWSE..-L	KBH 5502 AS1	27
TKVD (KUVE)	25	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	☉	
	30	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	☉	
	35	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KBH 3502 BS1	7
	45	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KBH 4502 BS1	13
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	☉	
TSX - E (RUE)	25	RWU..-D, RWU..-D-L	x	
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	x	
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KBH 4502 DS1	13
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KBH 5502 DS1	27
	65	RWU..-E, RWU..-E-L	KBH 6502 DS1	23

Rail manufacturer



LS	25	LAS..KLZ, LAS..JMZ, LAS..EMZ	☉	
	30	LAS..KLZ, LAS..FLZ, LAS..ELZ	☉	
	35	LAS..KLZ, LAS..FLZ, LAS..ELZ	KBH 3504 AS1	8
LH	25	LAH..EMZ, LAH..GMZ	☉	
	30	LAH..EMZ, LAH..GMZ	☉	
	35	LAH..EMZ, LAH..GMZ	KBH 3504 BS1	8
	45	LAH..EMZ, LAH..GMZ	KBH 4504 BS1	14
	55	LAH..EMZ, LAH..GMZ	KBH 5504 BS1	19
	65	LAH..EMZ, LAH..GMZ	KBH 6504 BS1	25
SH	35	SAH..EMZ, SAH..GMZ	KBH 3504 BS1	8
LY	25	LY..EL, LY..FL, LY..GL, LY..HL	☉	
	30	LY..EL, LY..FL, LY..GL, LY..HL	☉	
	35	LY..EL, LY..FL, LY..GL, LY..HL	KBH 3504 CS1	8
	45	LY..EL, LY..FL, LY..GL, LY..HL	KBH 4504 CS1	14
	55	LY..EL, LY..FL, LY..GL, LY..HL	KBH 5504 CS1	19
	65	LY..EL, LY..FL, LY..GL, LY..HL	KBH 6504 CS1	25
LA			x	
RA	25	RA..EM, RA..GM	☉	
	30	RA..EM, RA..GM	☉	
	35	RA..EM, RA..GM	☉	
	45	RA..EM, RA..GM	☉	
	55	RA..EM, RA..GM	KBH 5504 FS1	19
	65	RA..EM, RA..GM	☉	

Rail manufacturer

NSK

x: Not feasible

See page 13 for part number explanation

KB

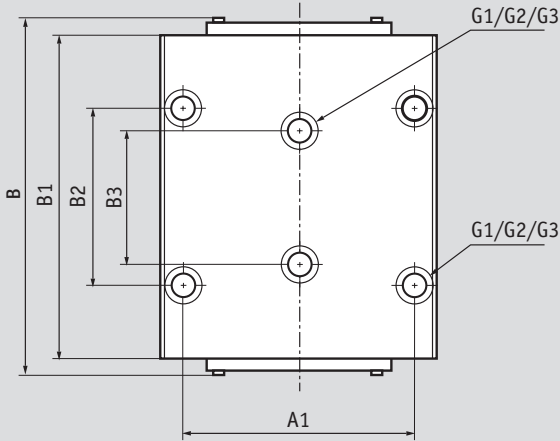
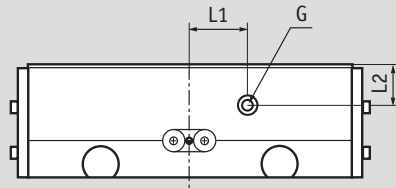
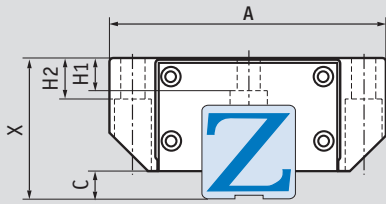
Rail manufacturer

HIWIN
Lineartechnologie

Type of rail	Size	Type of carriage	Item number	Measure table (page 88)
LGR..T LGR..R	25	LGW..CC, LGW..HC	⓪	
	30	LGW..CC, LGW..HC	⓪	
	35	LGW..CC, LGW..HC	KBH 3512 BS1	8
	45	LGW..CC, LGW..HC	KBH 4512 BS1	14
	55	LGW..CC, LGW..HC	KBH 5512 BS1	19
	65	LGW..CC, LGW..HC	KBH 6512 BS1	25
HGR..T HGR..R	35	HGW..CC, HGW..HC	⓪	
	45	HGW..CC, HGW..HC	⓪	
	55	HGW..CC, HGW..HC	⓪	
	65	HGW..CC, HGW..HC	⓪	
EGR..T	25	EGW...SC, EGW...CC	x	
	30	EGW...SC, EGW...CC	⓪	
RG..T	25	RGW..CC, RGW..HC	⓪	
	30	RGW..CC, RGW..HC	⓪	
	35	RGW..CC, RGW..HC	⓪	
	45	RGW..CC, RGW..HC	⓪	
	55	RGW..CC, RGW..HC	⓪	

x: Not feasible

See page 13 for part number explanation



Note: Consider measurement C!

Comment:

G: The hydraulic connection is available on either side.

Only one connection is necessary for function.
Return line pressure < 1.5 bar.

Measure table	Holding power [N] KB	max. operating power [bar]	A [mm]	A1 [mm]	B max. [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	G1	G2 [mm]	G3	H1 [mm]	H2 [mm]	L1 [mm]	L2 [mm]
1	2200	100	70	57	102	92	45	40	6,5	36	1/8"	M8	6,8	M6	7	9	0	8
2	2200	100	70	57	116	92	45	45	6,5	36	1/8"	M8	6,8	M6	5,8	9	10	9
3	3000	100	90	72	128	103,5	52	52	7	42	1/8"	M10	8,6	M8	7	10	0	10,5
4	4300	150	100	82	145	120,5	62	62	8	44	1/8"	M10	8,6	M8	7	12	0	12
5	5700	150	100	82	128,5	120,5	62	52	7	48	1/8"	M10	8,6	M8	11	12	0	12
6	5700	150	100	82	133	120,5	62	52	8	48	1/8"	M10	8,6	M8	10,2	12	0	12
7	5700	150	100	82	147	120,5	62	52	8	48	1/8"	M10	8,6	M8	6,4	12	0	12
8	5700	150	100	82	145	120,5	62	62	8	48	1/8"	M10	8,6	M8	6,4	12	0	12
9	3500	100	70	50	128	120,5	72	72	7	55	1/8"	M8	-	-	13	13	0	18
10	7400	150	120	100	169	155	80	80	10	52	1/8"	M12	10,5	M10	10,4	15	0	12
11	9900	150	120	100	166	155	80	60	9	60	1/8"	M12	10,5	M10	13,5	15	0	15
12	9900	150	120	100	170	155	80	60	10	60	1/8"	M12	10,5	M10	12,4	15	0	15
13	9900	150	120	100	184	155	80	60	10	60	1/8"	M12	10,5	M10	11,9	15	0	15
14	9900	150	120	100	176	155	80	80	10	60	1/8"	M12	10,5	M10	11,9	15	0	15
15	7400	100	86	60	166	155	80	80	9	70	1/8"	M10	-	-	18	18	0	24
16	10200	150	140	116	208	184	95	95	12	63	1/8"	M14	12,5	M12	13,7	16	0	16
17	13700	150	140	116	197	184	95	70	12	70	1/8"	M14	12,5	M12	18,7	18	0	16
18	13700	150	140	116	201	184	95	70	13	70	1/8"	M14	12,5	M12	13,5	18	0	16
19	13700	150	140	116	208	184	95	95	13	70	1/8"	M14	12,5	M12	13,5	18	0	16
20	13700	150	100	75	197	184	95	95	12	80	1/8"	M12	-	-	19	19	0	26
21	17000	150	170	142	219	200	110	110	11	75	1/4"	M16	14,5	M14	21	25	0	20
22	22700	150	170	142	238	227	110	82	14	90	1/4"	M16	14,5	M14	21,5	23	0	20
23	22700	150	170	142	256	227	110	82	14	90	1/4"	M16	14,5	M14	14,5	22	0	20
24	22700	150	170	142	256	227	110	82	14	90	1/4"	M16	14,5	M14	14	23	0	20
25	22700	150	170	142	253	227	110	110	14	90	1/4"	M16	14,5	M14	14,5	22	0	20
26	22700	150	126	76	255	227	120	120	14	90	1/4"	M16	-	-	21	21	0	20
27	13700	150	140	116	215	184	95	70	13	70	1/8"	M14	12,5	M12	13,5	18	0	16
28	22700	150	200	172	260	227	110	110	14	100	1/4"	M14	20	M12	20	20	0	20

KB