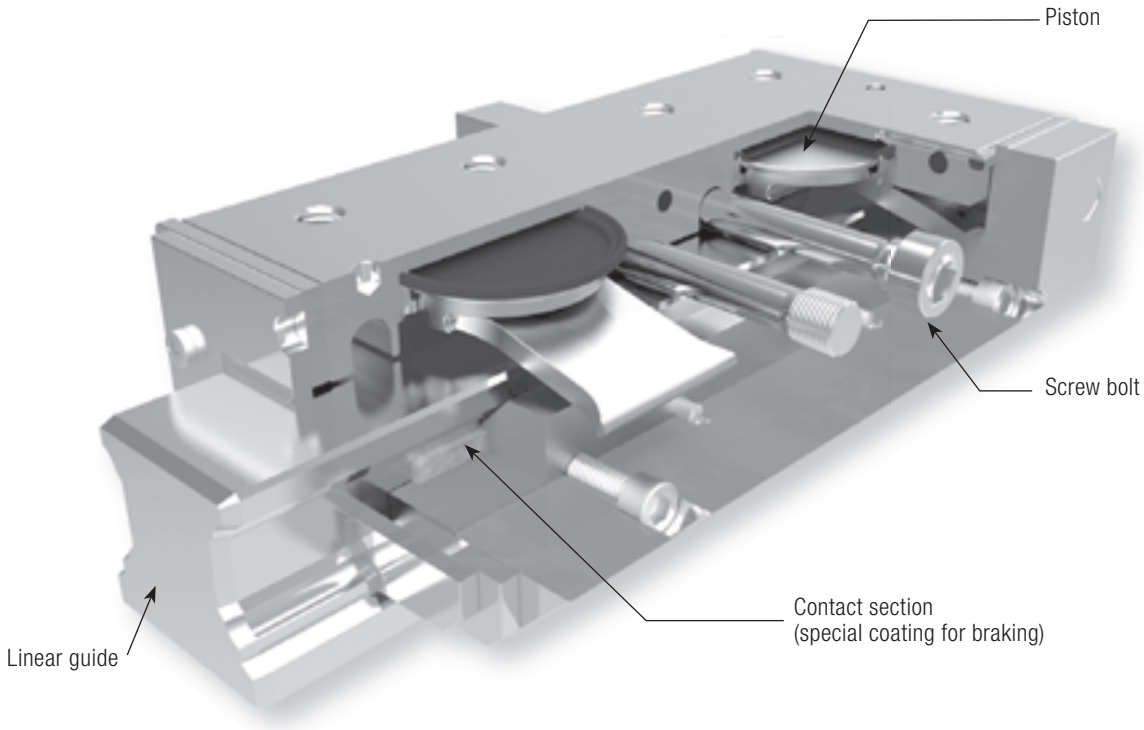
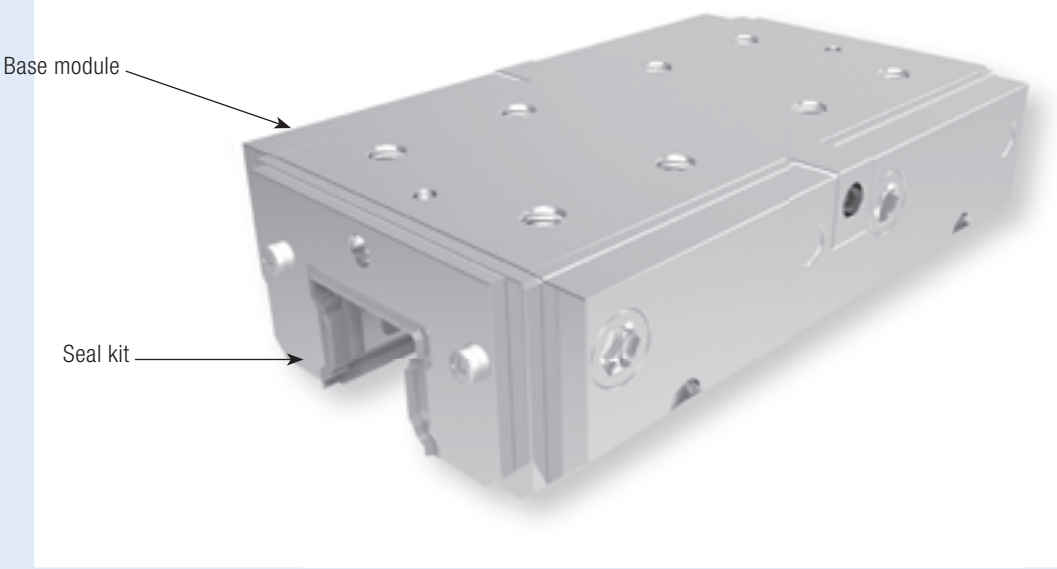


Hydraulic heavy load brake:
The Braking and Clamping Element with spring-loaded energy storage **KBHS.**

The KBHS series is a hydraulically operated heavy load brake featuring spring-loaded energy storage.
This function is based on the toggle lever principle. Pre-tensioned stress bolts provide holding force in case of pressure drop. Here the large-surface contact sections, which are equipped with a special brake lining, are pressed directly onto the free surfaces of the section rail.
At a hydraulic opening pressure of 150 bar a holding power of up to 25,000 N is achieved. The KBHS series features a compact design and is suitable from sizes 35 to 125.

The KBHS series is designed for braking and clamping on linear guides. 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 are fitted with original seals from the respective linear guide manufacturer and longitudinal seals as accessories. In order to guarantee the lifetime of the seals, follow the corresponding instructions from the respective linear guide manufacturer.
Details on the length of the brake path to be expected can be obtained from our technical advisors. The computations are based on serial tests and our industrial experience.

KBHS Series



Technical data for KBHS series:

Rail size	35–125
Holding forces	7,500 N–25,000 N
Minimum operating pressure	150 bar
Maximum permissible peak pressure	160 bar
Spring-loaded energy storage	√
PLUS connection	-
Clamping cycles	500,000 (B10d - value)
Braking cycles	2,000

Application scenarios for KBHS:
- Machine table clamping of heavy cutting work centres
- Clamping and braking of heavy handling systems
- Braking in emergency OFF situations
- Clamping in case of pressure drop

Seal kit for KBH:
The KBHS series is only available with seal kit.

Connection options for KBHS:
The KBHS series has a hydraulic supply port on both sides.

KBHS

Rail manufacturer THK – The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Measure table [page 124]
HSR	35	HSR..A, HSR..AM, HSR..LA, HSR..LAM, HSR..B, HSR..BM, HSR..LB, HSR..LBM, HSR..C, HSR..CA, HSR..CAM, HSR..HA, HSR..HAM, HSR..CB, HSR..CBM, HSR..HB, HSR..HBM	KBHS 3501 AS1A	1
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBHS 4501 AS1A	2
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBHS 5501 AS1A	4
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBHS 6501 AS1A	3
SHS	35	SHS..C, SHS..LC	KBHS 3501 CS1A	1
	45	SHS..C, SHS..LC	KBHS 4501 CS1A	2
	55	SHS..C, SHS..LC	KBHS 5501 CS1A	4
	65	SHS..C, SHS..LC	KBHS 6501 CS1A	3
SRG	35	SRG..C, SRG..LC	KBHS 3501 ES1A	1
	45	SRG..C, SRG..LC	KBHS 4501 ES1A	2
	55	SRG..C, SRG..LC	KBHS 5501 ES1A	4
	65	SRG..LC	KBHS 6501 ES1A	3

Rail manufacturer Rexroth Bosch Group

R1605, R1606, R1607, R1608, R1645, R1647, R2045, R2047	35	R1631, R1651, R1653, R1661, R1665, R2001, R2002, R2000	KBHS 3505 AS1A	1
	45	R1651, R1653	KBHS 4505 AS1A	2
	55	R1651, R1653	✆	✆
	65	R1651, R1653	KBHS 6505 AS1A	3
R1805, R1806, R1807, R1845, R1846, R1847	35	R1851, R1853	KBHS 3505 BS1A	1
	45	R1851, R1853	KBHS 4505 BS1A	2
	55	R1851, R1853	KBHS 5505 BS1A	4
	65	R1851, R1853	KBHS 6505 BS1A	3
R1835, R1865	100	R1861, R1863	✆	✆
	125	R1861, R1863	KBHS 12505 BS1A	6

Rail manufacturer SCHNEEBERGER

MRS	35	MRW..A, MRW..B	KBHS 3503 AS1A	1
	45	MRW..A, MRW..B	KBHS 4503 AS1A	2
	55	MRW..A, MRW..B	X	X
	65	MRW..B	KBHS 6503 AS1A	3

Rail manufacturer IKO

LWH	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	✆	✆
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	✆	✆
	55	LWH..B, LWHG, LWHT..B, LWHTG	✆	✆
	65	LWH..B, LWHG, LWHT..B, LWHTG	✆	✆
MH	35	MH, MHG, MHT, MHTG	✆	✆
	45	MH, MHG, MHT, MHTG	✆	✆
LRX	35	LRXC, LRX, LRXG	KBHS 3510 BS1A	1
	45	LRXC, LRX, LRXG	KBHS 4510 BS1A	2
	55	LRXC, LRX, LRXG	KBHS 5510 BS1A	5
	65	LRXC, LRX, LRXG	KBHS 6510 BS1A	3
MX	35	MXC, MX, MXG, MXL	KBHS 3510 BS1A	1
	45	MXC, MX, MXG, MXL	KBHS 4510 BS1A	2
	55	MXC, MX, MXG	KBHS 5510 BS1A	5
	65	MXC, MX, MXG	KBHS 6510 BS1A	3
LWE	35	LWE..Q, LWET..Q, LWEC, LWE, LWETC, LWET	✆	✆
	45	LWE, LWET	✆	✆
ME	35	MEC, ME, METC, MET, MH, MHG, MHTG	✆	✆
	45	ME, MET, MH, MHG, MHT, MHTG	✆	✆

X: not feasible
*[1] Supplements the measure table and datasheet

See page 11 for part number explanation

Rail manufacturer

INA

Type of rail	Size	Type of carriage	Item number	Measure table [page 124]
TKVD (KUVE)	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L	KBHS 3502 BS1A	1
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L	KBHS 4502 BS1A	2
	55	KWVE..-B, KWVE..-B-L	✆	✆
TKSD (KUSE)	35	KWSE, KWSE..-L	KBHS 3502 AS1A	1
	45	KWSE, KWSE..-L	KBHS 4502 AS1A	2
	55	KWSE, KWSE..-L	✆	✆
TSX -E (RUE)	35	RWU..-E, RWU..-E-L	KBHS 3502 DS1A	1
	45	RWU..-E, RWU..-E-L	KBHS 4502 DS1A	2
	55	RWU..-E, RWU..-E-L	KBHS 5502 DS1A	4
	65	RWU..-E, RWU..-E-L	KBHS 6502 DS1A	3

Rail manufacturer

NSK

LH	35	LAH..EMZ, LAH..GMZ	KBHS 3504 BS1A	1
	45	LAH..EMZ, LAH..GMZ	KBHS 4504 BS1A	2
	55	LAH..EMZ, LAH..GMZ	✆	✆
	65	LAH..EMZ, LAH..GMZ	✆	✆
SH	35	SAH..EMZ, SAH..GMZ	KBHS 3504 BS1A	1
LS	35	LAS..JMZ, LAS..EMZ	KBHS 3504 AS1A	1
SS	35	SAS..JMZ, SAS..EMZ	KBHS 3504 AS1A	1
RA	35	RA..EM, RA..GM	KBHS 3504 FS1A	1
	45	RA..EM, RA..GM	KBHS 4504 FS1A	2
	55	RA..EM, RA..GM	✆	✆
	65	RA..EM, RA..GM	KBHS 6504 FS1A	3

Rail manufacturer

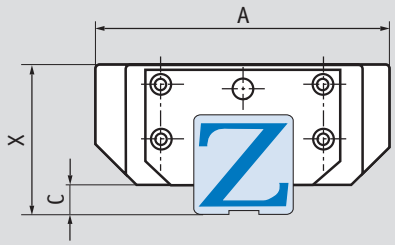
HIWIN
Lineartechnologie

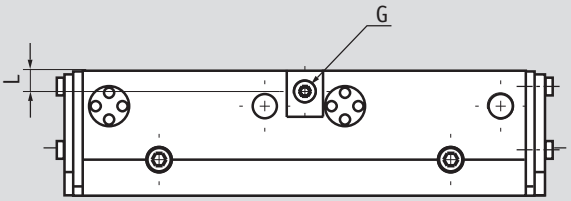
HGR..R, HGR..T	35	HGW..CC, HGW..HC, QHW..CC, QHW..HC	KBHS 3512 ES1A*4	1
	45	HGW..CC, HGW..HC, QHW..CC, QHW..HC	KBHS 4512 ES1A*4	2
	55	HGW..CC, HGW..HC	✆	✆
	65	HGW..CC, HGW..HC	✆	✆
RG..T	35	RGW..CC, RGW..HC	✆	
	45	RGW..CC, RGW..HC	KBHS 4512 FS1A	2
	55	RGW..CC, RGW..HC	KBHS 5512 FS1A	4
	65	RGW..CC, RGW..HC	KBHS 6512 FS1A	3

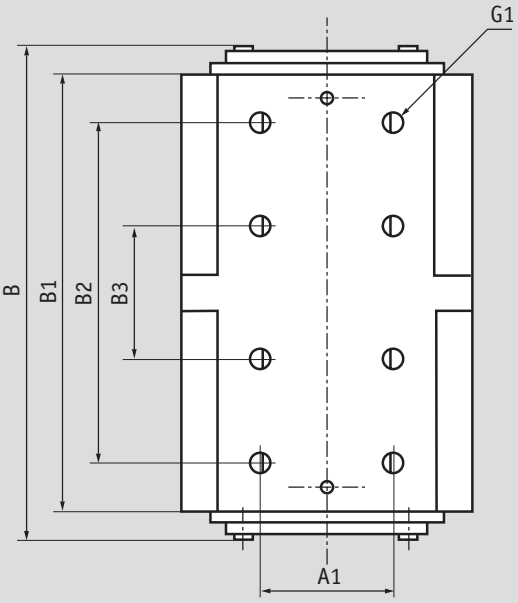
*4 Linear guide to be machined at the clamp contact section!

See page 11 for part number explanation

KBHS







Note: Consider measurement C/Interfering contour!

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] KBHS	max. operating pressure [bar]	A [mm]	A1 [mm]	B max. [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	G1	L [mm]
1	7500	150	100	41	184	155	122	46	6	48	1/8“	M8/15	9
2	9000	150	120	55	210	180	140	55	8	60	1/8“	M10/19,3	9
3	16000	150	170	70	301	270	205	80	11,5	90	1/4“	M16/29,3	11
4	11500	160	140	60	236	214	165	65	10	70	1/8“	M12/21,3	8
5	11500	160	140	60	233	214	165	65	9	70	1/8“	M12/21,3	8
6	25000	160	240	100	340	300	240	76	26	160	1/8“	M16/25	11