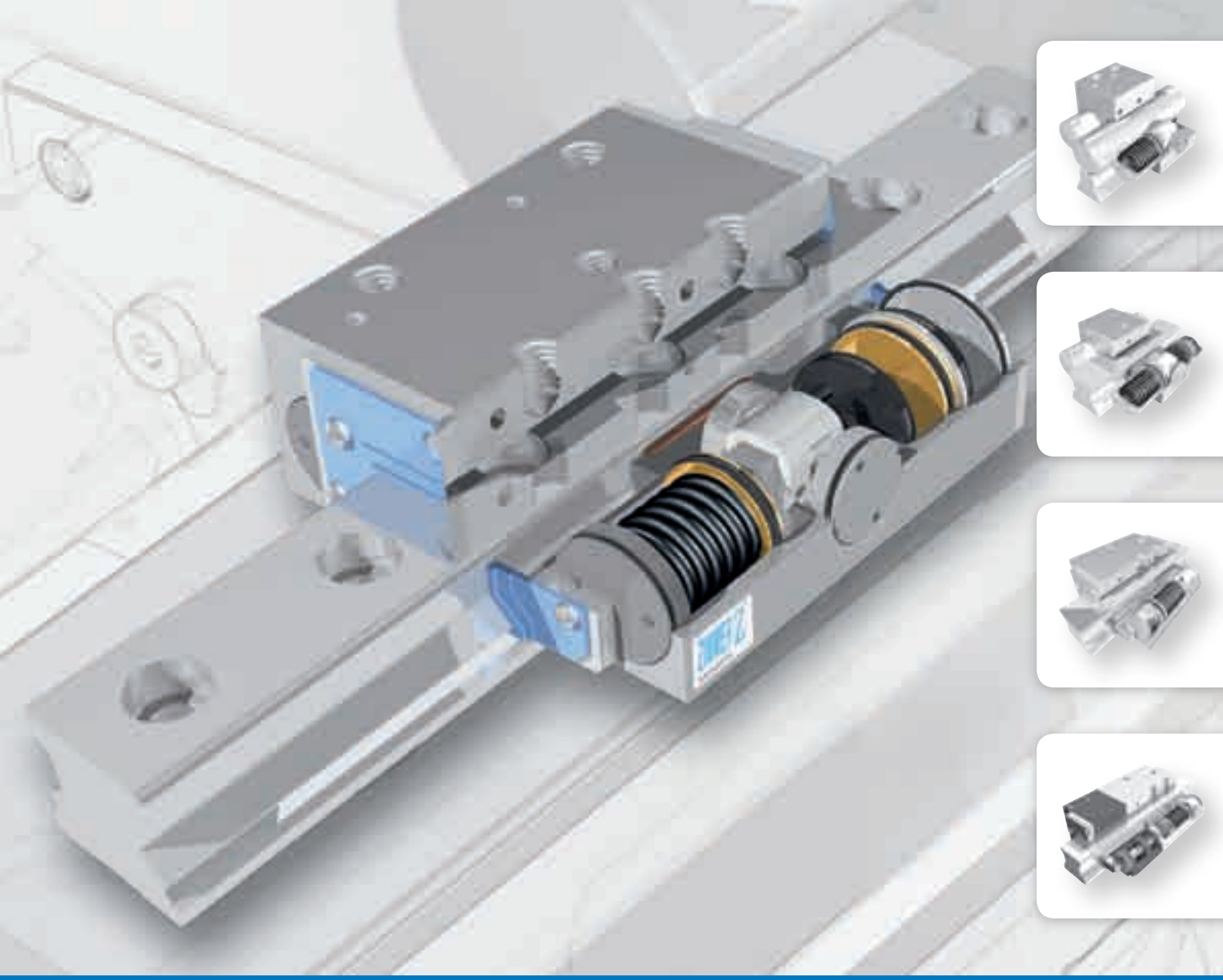

Clamping and Braking Elements for linear guides

MK | MKR | MB | BW | TK | UB | LB | MC | RB | TP | KW | KB | KBHS | MKE | HK | miniHK | HKR

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TECHNISCHE WERKSTÄTTEN

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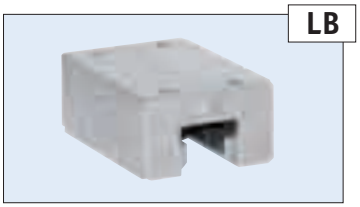
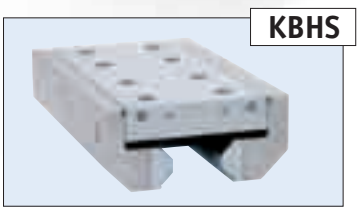
Summary

NEW:





Powerful, durable, innovative and unique:

Zimmer® Clamping and Braking Elements for linear positioning applications.

Our products have been thoroughly developed and tested for tough, industrial applications. Our aim is not only to optimise products and adapt them to new requirements, we also want to open up new applications through innovative developments.

Our construction series feature a number of special characteristics which are typical of all Zimmer® developments.

High performance, maximum quality.

Zimmer® clamping and braking elements offer a new and innovative approach for positioning, holding and stopping applications. Here are some of the key benefits:

- **Small size with incredible holding force**
- **No relative movement for the workpiece**
- **No active clamping forces on the guide carriage**
- **High positioning accuracy**
- **High rigidity and long lifecycle**
- **Easy to install**
- **Excellent value**
- **Custom solutions available on request**
- **Series with special friction coating for brake lining material**

Our staff are highly qualified, motivated and consistently ensure the high quality of our products. Naturally we are ISO 9001 certified.

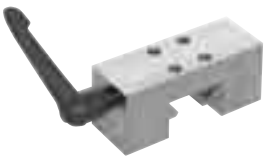
We look forward to servicing your clamping and braking needs. If you are in our vicinity, please do not hesitate to visit us.

Product Range

	Series	Features
	**MK** **MKS**	• Compact design • Precise positioning
	**MKR** **MKRS**	• Suitable for all current rod-type guides
	**MB**	• High holding loads • Short reaction times • Compact design
	**BW**	• Heavy load type • High holding loads • Short reaction times • Locating shoulder
	**TK**	• Super-heavy load type • Highest holding loads • Short reaction times • Locating shoulder
NEW 	**UB**	• Super-heavy load type • Highest holding loads • Short reaction times • Locating shoulder
NEW 	**LB**	• Narrow, low construction form • High holding loads • Inexpensive
NEW 	**MC**	• Clamping for miniature guiding systems • Asymmetrical arrangement
NEW 	**RB**	• Piston rod brake • Highest holding loads • Clamping and braking without pressure • No reset for restarting
NEW 	**TP**	• Low construction form • High torque take-up • Zero backlash and maintenance

Pressure medium	Spring-loaded energy storage	Suitable for braking	DIN 645 compatible	Operating pressure	Holding power
Pneumatic	✓ **(MKS)**			Pneumatic 6 bar	Holding power up to 3,200 N
Pneumatic	✓ **(MKRS)**			Pneumatic 6 bar	Holding power up to 3,000 N
Pneumatic	✓	✓		Pneumatic 4,5 bar	Holding power up to 3,500 N
Pneumatic	✓	✓	✓	Pneumatic 6 bar	Holding power up to 6,000 N
Pneumatic	✓	✓	✓	Pneumatic 6 bar	Holding power up to 7,000 N
Pneumatic	✓	✓	✓	Pneumatic 6 bar	Holding power up to 9,000 N
Pneumatic	✓	✓		Pneumatic 4 bar	Holding power up to 2,000 N
Pneumatic	✓ **(MCPS)**			Pneumatic 6 bar	Holding power up to 500 N
Pneumatic	✓	✓		Pneumatic 4 bar	Holding power up to 60,000 N
	✓			Pneumatic 4 bar	Holding torque up to 3,000 Nm

Product Range

	Series	Features
	**KW**	• Super-heavy load type • Large-surface contact sections • Locating shoulder
	**KB**	• Super-heavy load type • Special brake lining • Locating shoulder
NEW 	**KBHS**	• Super-heavy load brake • Special brake lining • Active without pressure
	**MKE**	• Compact design • Exact positioning • Self-locking
	**HK**	• Simple and inexpensive • Compact
	**mini HK**	• Manual clamping for miniature guiding systems • Holding power up to 220 N
	**HKR**	• Suitable for all current round-shaft guides

Pressure medium	Spring-loaded energy storage	Suitable for braking	DIN 645 compatible	Operating pressure	Holding power
Hydraulic			✓	Hydraulic 20–150 bar (depending on size)	Holding power up to 46,000 N
Hydraulic	✓	✓	✓	Hydraulic 20–150 bar (depending on size)	Holding power up to 46,000 N
Hydraulic	✓	✓		Hydraulic 150 bar	Holding power up to 40,000 N
Electric				24V DC	Holding power up to 2,000 N
Manual					Holding power up to 2,000 N
Manual					Holding power up to 220 N
Manual					Holding power up to 4,000 N

Clamping, Braking and Areas of Use

The MK / MKR / MB / BW / TK / UB series are built with two parallel (synchronous) wedge slide gears, which means the lifting movements of the contact sections can be carried out from either side. Relative movements resulting from the clamping process are therefore not expected to occur. Care must however be taken to ensure the connection design is correct.

The KW / KB / MCP / HK / HKR / miniHK series are mounted on floating bearings and so no lateral forces are exerted on the connection design during the clamping process. The friction connection between the clamping element and the linear guide is created at the free surfaces of the guide rails without causing wear and tear on the rails.

Series MK / MKR / MCP / KWH / HK / HKR and miniHK are designed exclusively for static clamping processes.

Because they feature the appropriate contact sections, the MB / BW / TK / UB / LB / KB / KBHS and RBPS series are also suitable for dynamic use (brakes).

Pneumatic Connections

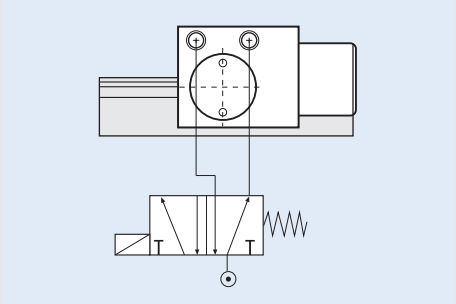
Cleaned, lubricated compressed air must be used for the pneumatic elements. The recommended filter size is 25 µm. The cable cross-section for the elements should be as large as possible to match the air supply connection. Smaller cross-sections reduce the response and reaction times of the elements. The feed line should be kept as short as possible.

In principle, all conventional pneumatic valves are suitable. The reaction time for the corresponding valve should be obtained from the respective manufacturer, especially when the valve is employed as a brake or as a safety device against falling.

Higher Supporting Forces by PLUS Connection

The holding force of the elements MKS / MCPS / BWPS / TKPS and UBPS can be increased by way of pressure support from the spring-loaded energy storage and insertion of a 5/2 (overflow-free) or 5/3 directional valve. In this case, the ventilation filter is replaced by connection of a second pneumatic line.

In case of use as a safety element, it should be noted that the higher holding force (PLUS connection) can only be achieved through additional charging with available pneumatic pressure.



Hydraulic Connections

The hydraulic clamping elements are prefilled with HLP 46 at the factory. The hydraulic connection is available on both sides, however one connection is sufficient for operation. Special care must be taken when exposing the rigid and flexible hydraulic inlet pipes to air, since airlocks can damage the sealing elements.

Connection Design, Installation of the Clamping Elements

To avoid adverse effects such as permanent rubbing on the linear guide, the connection must be designed strictly according to the load taken and requirements made. Any inclination of the clamping elements can cause rubbing, wear and tear, and thus damage to the linear guide rails.
Factory presetting is adjusted for the linear guide and must not be altered during installation. Always observe the installation instructions for the clamping and brake elements and for the linear guides.
Some spring-loaded elements are equipped with a transport securing device between the contact sections. This must be removed during installation by charging the element with pressure. When the pressure is removed, the transport securing device or linear guide must always lie between the contact sections.

The clamping elements have no guiding function. Replacement of a guide carriage by a clamping element is therefore not possible. The ideal position of the clamping element is between two guide carriages.
When several clamping elements are used, they should be distributed evenly on both guide rails to achieve maximum rigidity of the overall construction.

You can find additional installation notes at www.zimmer-gmbh.com under "Product choice".

Lubrication

If the prescribed pressure medium is used, subsequent lubrication is not required.

Surface Protection

All clamping housings are chemically nickelled and thus offer limited rust protection. Parts made from aluminium are chemically nickelled or hard-anodized, according to requirements.

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Theoretical calculation of the braking distance

Example: Two guide carriages and a UBPS braking element (size 45)

A (number of braking elements)	= 1	v_0 (initial speed)	= 2 m/s
F (holding force of braking element)	= 3,700 N	μ_G (dynamic friction)	= 0.06
t_R (reaction time)	= 0.06 s	μ_G (static friction)	= 0.1
t_R (response time)	= 0.01 s	g (weight)	= 9.81 m/s²
m (mass)	= 50 kg		

The values for μ_G and μ_R are based on serial tests and many years of industrial experience. However, due to particular environmental conditions, different results may occur. The values t_R and t_A refer to measured test values.

Stopping distance (horizontal deployment)
The stopping distance is the theoretical, anticipated distance required to bring a known mass travelling at a defined speed to a standstill. During braking kinetic energy is converted into friction energy.

In addition, the braking distance is extended by the distance required by the overall system to apply the brakes. Short hose lines, fast valves and clean rails shorten the pathways.

Energy formulas:

$$W_{Kin} = \tfrac{1}{2} m \times v_0^2$$

$$W_{Fric} = F \times A \times \frac{\mu_G}{\mu_H} \times S_B$$

$$W_{Kin} = W_{Fric}$$

Braking distance S_B:

$$S_B = \frac{m \times v_0^2}{2 \times F \times A \times \frac{\mu_G}{\mu_H}} = \frac{50kg \times (2\,\frac{m}{s})^2}{2 \times 3{,}700N \times 1 \times \frac{0.06}{0.1}} = 0.045m$$

Reaction distance + response distance S_R:

$$S_R = v_0 \times (t_R + t_A) = 2\,\frac{m}{s} \times (0.06s + 0.01s) = 0.14m$$

Stopping distance S_H:

$$S_H = S_B + S_R = 0.045m + 0.14m = 0.185m$$

Stopping distance (vertical deployment)
Vertical deployment speeds up the system until the element is triggered and braking is applied. The holding force is reduced by the weight.

Speed at start of brake application V_{brake}:

$$V_{brake} = v_0 + g \times (t_R + t_A) = 2\,\frac{m}{s} + 9.81\,\frac{m}{s^2} \times (0.06s + 0.01s) = 2.69\,\frac{m}{s}$$

Braking distance S_B:

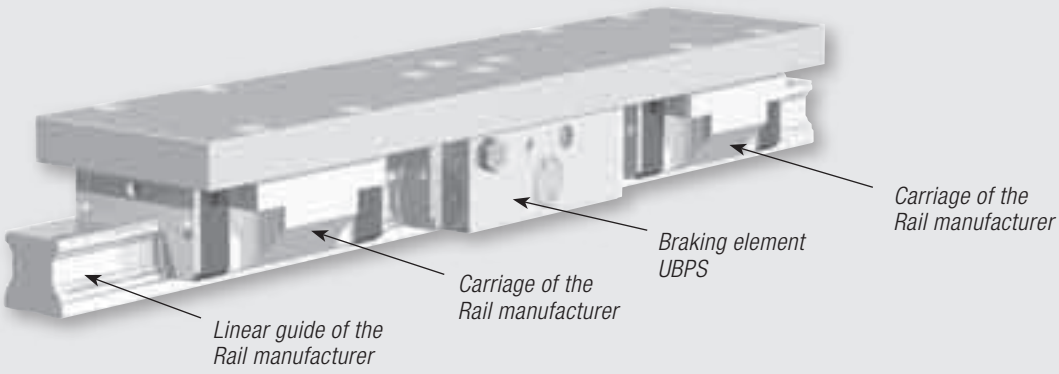
$$S_B = \frac{m \times v^2_{brake}}{2 \times ((F \times A \times \frac{\mu_G}{\mu_H}) - m \times g)} = \frac{50kg \times (2.69\,\frac{m}{s})^2}{2 \times ((3{,}700N \times 1 \times \frac{0.06}{0,1}) - 50kg \times 9.81\,\frac{m}{s^2})} = 0.104m$$

Reaction distance + response distance S_R:

$$S_R = v_0 \times (t_R + t_A) + \frac{1}{2} \times g \times (t_R + t_A)^2 = 2\,\frac{m}{s} \times (0.06s + 0.01s) + \frac{1}{2} \times 9.81\,\frac{m}{s^2} \times (0.06s + 0.01s)^2 = 0.164m$$

Stopping distance S_H:

$$S_H = S_B + S_R = 0.104m + 0.164 = 0.268m$$



During installation of the axis, with the brakes, the applicable machinery directives must be followed. Please contact us for help with the installation!

Part Number Explanation

Number codes for construction series:

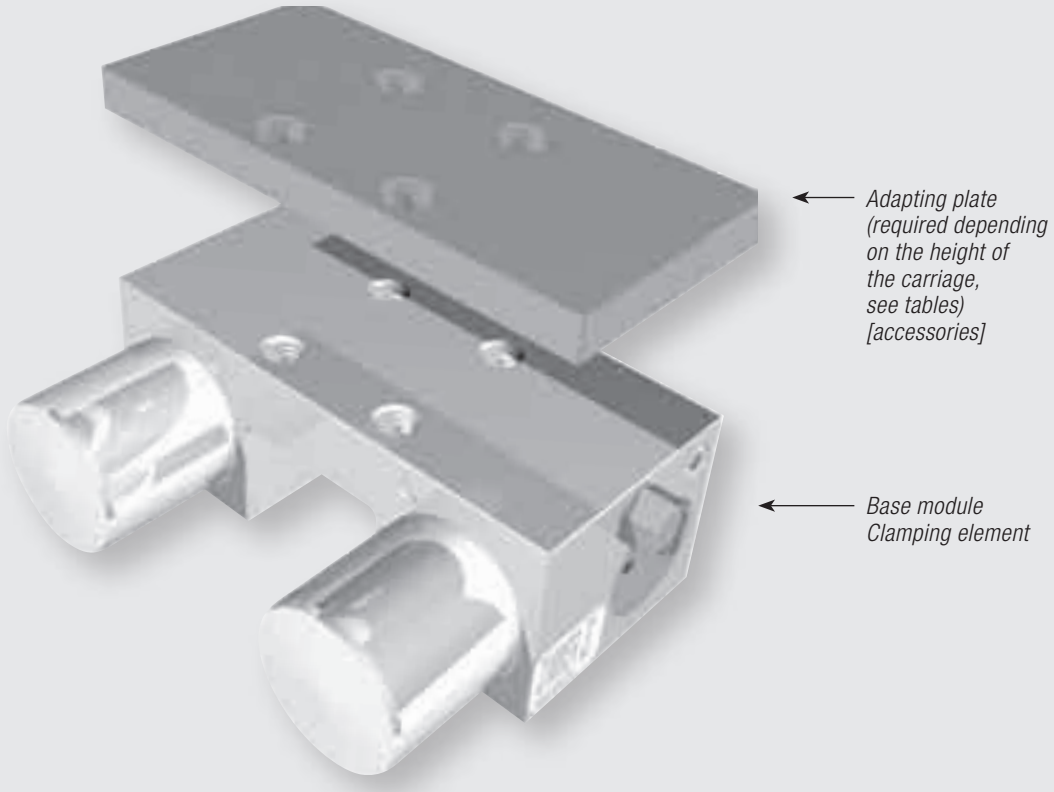
- ➔ **MK**
- ➔ **MKR**
- ➔ **MC**
- ➔ **HK**
- ➔ **miniHK**
- ➔ **HKR**
- ➔ **RB**
- ➔ **TP**
- ➔ **MKE**

Series	Spring-loaded energy storage	Installation size	Manufacturer of linear guide	Rail variation		Adapting plate
M K	S	3 5	0 3	M R	+	PMK 35-7 [accessories]

Example: ordering our MK series.
The tables on the overview pages contain the part numbers of the elements as well as (if required) the part number of the appropriate adapting plate (accessories).
Please include both part numbers if an adapting plate is required.

You will find sizes and outlines underneath each particular construction series.

Example
(MKS series)

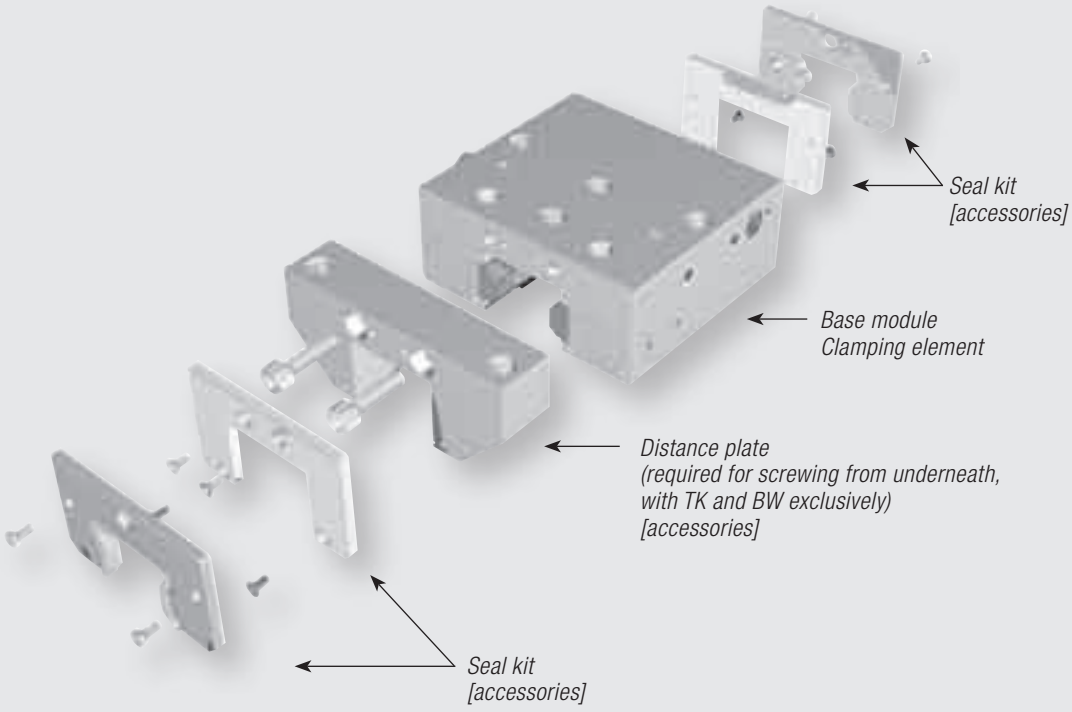


Series	Pressure medium Spring-loaded energy storage	Installation size	Manufacturer of linear guide	Rail variation	Type of carriage	Distance plate	Seal kit
B W	P S	3 5	0 1	A	S 1	D	A
						[accessories]	

Example: ordering our BW series.
The tables on the overview pages already contain the complete numbers, except for accessories. If required, simply add your desired accessory to the part number as letter D and/or A.

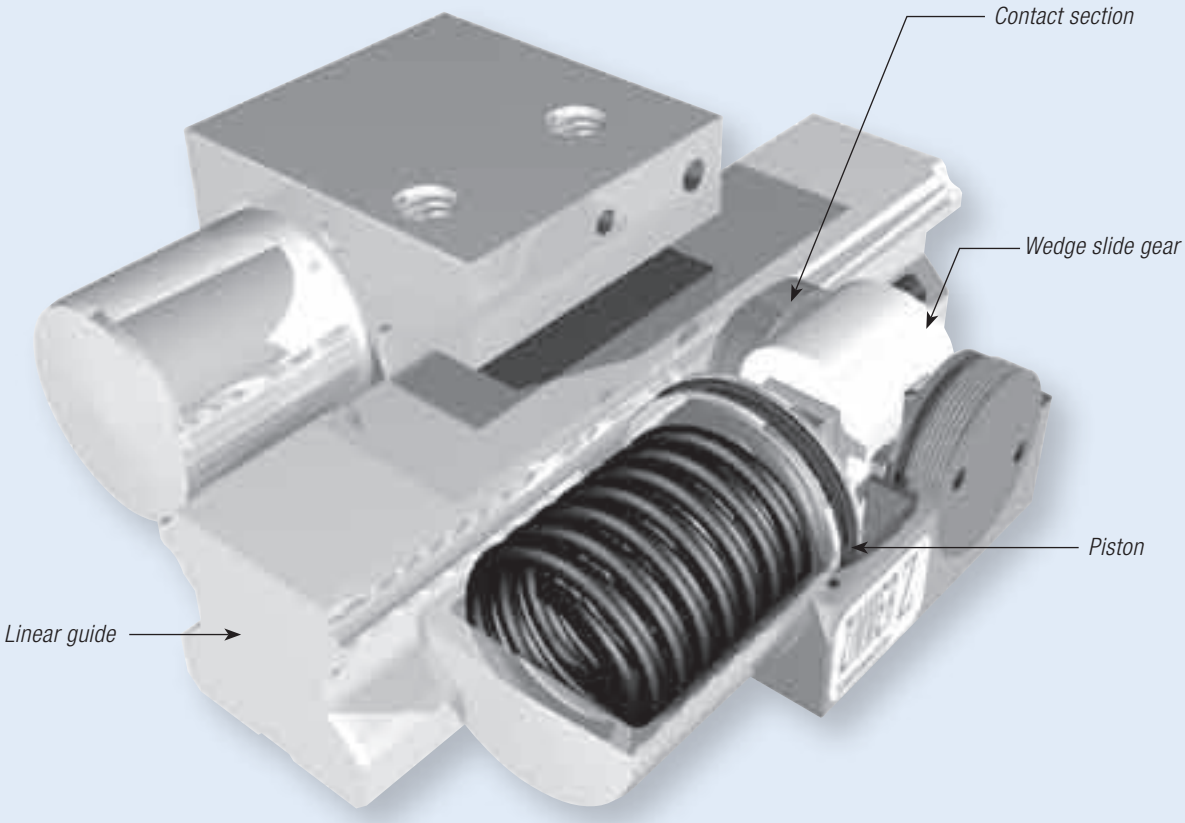
You will find sizes and outlines underneath each particular construction series.

Example
(flange carriage)



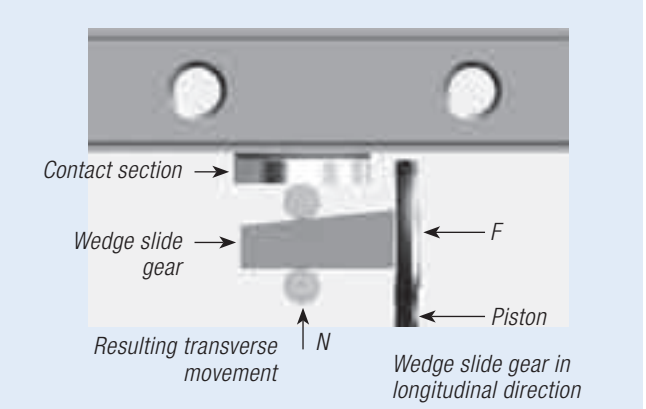
Number codes for construction series:

➔ **MB**
➔ **BW**
➔ **TK**
➔ **UB**
➔ **KW**
➔ **KB**
➔ **LB**
➔ **KBHS**

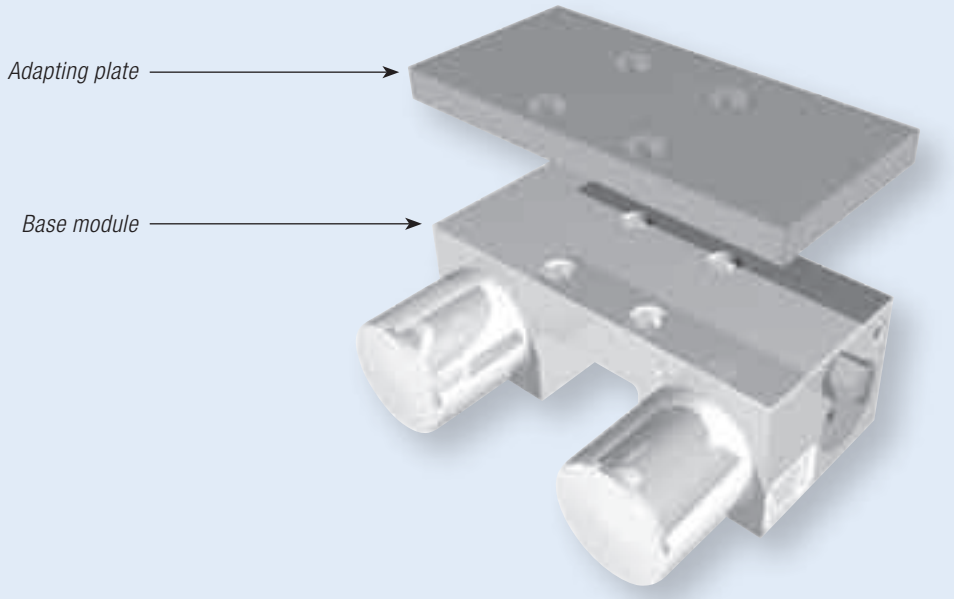


High holding forces – low cost:
The pneumatic Clamping Element MK.

The MK series is the classic Zimmer clamping element. The patented wedge slide gear achieves high supporting forces. The pressure medium moves the wedge slide gear in a longitudinal direction. The resulting transverse movement presses contact sections with high force against the free surfaces of the section rail guide. The MK is clamped (closed) by pneumatic pressure. The MKS is clamped (closed) by spring-loaded energy storage and is opened by pneumatic pressure.



MKS Design



Special characteristics:
- Compact design
- High clamping forces
- Exact positioning
- Strong axial and horizontal rigidity

Application scenarios for MK:
- Positioning of axes
- Fixing of vertical axes
- Positioning of lifting devices
- Clamping of machine tables

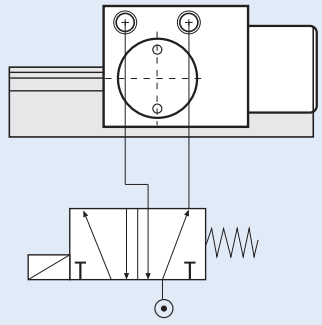
MKS version:
In addition to the MK construction series, there is a spring-loaded energy storage version: The MKS, a pneumatic clamping element opening with pressure.
Opening pressure **> 5.5 bar, pneumatic.**

Application scenarios for MKS:
- Clamping in case of pressure drop
- Clamping without energy requirement

Variations:
Depending on the height of the carriage, an additional adapting plate must be ordered (see table).

Connection options:
The MK/MKS series have air connections on both sides as part of their standard equipment. This means that the air connection and the air-release filter can be moved over to the opposite side.

Higher supporting forces with PLUS connection (MKS):
By using a 5/2 (overflow-free) or 5/3 valve it is possible to support the spring power with pneumatic pressure. By using the PLUS connection, the stated supporting force will be increased.
When the PLUS connection (MKS only) is being used the air-release filter is replaced by connecting a second pneumatic tube (see drawing).
For further information, please refer to the assembly instructions or visit www.zimmer-gmbh.com.



Rail manufacturer

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Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
SR / SSR	15	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MK/MKS 1501 A		24	1
	20	SR..TB, SR..SB, SR..W, SR..V, SSR..XW, SSR..XV, SSR..XTB	MK/MKS 2001 A		28	7
	25	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MK/MKS 2501 A		33	17
	30	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MK/MKS 3001 A		42	29
	35	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MK/MKS 3501 A		48	38
	45	SR..TB, SR..W	MK/MKS 4501 A		60	46
	55	SR..TB, SR..W	MK/MKS 5501 SR		68	55
HSR	15	HSR..A, HSR..B	MK/MKS 1501 A		24	1
		HSR..R	MK/MKS 1501 A	PMK 15-4	28	
	20	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 2001 A		30	9
	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 2501 A		36	19
		HSR..R, HSR..LR	MK/MKS 2501 A	PMK 25-4	40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 3001 A		42	29
		HSR..R, HSR..LR	MK/MKS 3001 A	PMK 30-3	45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 3501 A	PMK 35-3	48	36
		HSR..R, HSR..LR	MK/MKS 3501 A	PMK 35-10	55	
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 4501 A		60	46
		HSR..R, HSR..LR	MK/MKS 4501 A	PMK 45-10	70	
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MK/MKS 5501 A		70	56
		HSR..R, HSR..LR	MK/MKS 5501 A	PMK 55-10	80	
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB, HSR..R, HSR..LR	MK/MKS 6501 A		90	60
GSR	15	GSR..T, GSR..V	✆		20	
	20	GSR..T, GSR..V	MK/MKS 2001 G★		24	5
	25	GSR..T, GSR..V	MK/MKS 2501 G★		30	23
	30	GSR..T	MK/MKS 3001 G★		33	31
	35	GSR..T	MK/MKS 3501 G★		38	32
HRW	17	HRW..CA, HRW..CR	MK/MKS 1701 B		17	11
	21	HRW..CA, HRW..CR	MK/MKS 2101 B★		21	24
	27	HRW..CA, HRW..CR	MK/MKS 2701 B★		27	25
	35	HRW..CA, HRW..CR	MK/MKS 3501 B		35	49
	50	HRW..CA, HRW..CR	MK/MKS 5001 B		50	62
	60	HRW..CA	✆		60	
SHW	17	SHW..CAM, SHW..CRM	MK/MKS 1701 B		17	11
	21	SHW..CA, SHW..CR	MK/MKS 2101 B★		21	24
	27	SHW..CA, SHW..CR	MK/MKS 2701 B★		27	25
	35	SHW..CA, SHW..CR	MK/MKS 3501 B		35	49
	50	SHW..CA, SHW..CR	MK/MKS 5001 B		50	62
	60	SHW..CA	✆		60	
SNR/SNS	25	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 2501 N		31	61
	30	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 3001 A		38	26
	35	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 3501 A		44	37
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆			
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	MK/MKS 3501 A	PMK 35-11	55	
	45	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 4501 A		52	43
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	MK/MKS 4501 A	PMK 45-8	60	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	MK/MKS 4501 A	PMK 45-18	70	
	55	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 5501 A		63	52
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	MK/MKS 5501 A	PMK 55-7	70	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	MK/MKS 5501 A	PMK 55-17	80	
	65	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MK/MKS 6501 N		75	47

★ PLUS connection not possible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

THK
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Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
NR / NRS	25	NR / NRS..XR, NR / NRS..XLR, NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	MK/MKS 2501 N		31	61
	30	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MK/MKS 3001 A		38	26
	35	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MK/MKS 3501 A		44	37
	45	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MK/MKS 4501 A		52	43
	55	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MK/MKS 5501 A		63	52
	65	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MK/MKS 6501 N		75	47
SHS	15	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 1501 A		24	1
		SHS..R	MK/MKS 1501 A	PMK 15-4	28	
	20	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 2001 A		30	9
	25	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 2501 A	PMK 25-2	36	18
		SHS..R, SHS..LR	MK/MKS 2501 A	PMK 25-6	40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 3001 A		42	29
		SHS..R, SHS..LR	MK/MKS 3001 A	PMK 30-3	45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 3501 A	PMK 35-4	48	37
		SHS..R, SHS..LR	MK/MKS 3501 A	PMK 35-11	55	
	45	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 4501 A	PMK 45-6	60	44
		SHS..R, SHS..LR	MK/MKS 4501 A	PMK 45-16	70	
	55	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 5501 A	PMK 55-6	70	53
		SHS..R, SHS..LR	MK/MKS 5501 A	PMK 55-16	80	
	65	SHS..C, SHS..LC, SHS..V, SHS..LV	MK/MKS 6501 A		90	60
SRG	15	SRG..A, SRG..V	MK/MKS 1501 E		24	2
	20	SRG..A, SRG..LA, SRG..V, SRG..LV	MK/MKS 2001 E		30	8
	25	SRG..C, SRG..LC	MK/MKS 2501 E	PMK 25-5	36	48
		SRG..R, SRG..LR	MK/MKS 2501 E	PMK 25-9	40	
	30	SRG..C, SRG..LC	MK/MKS 3001 E		42	15
		SRG..R, SRG..LR	MK/MKS 3001 E	PMK 30-3	45	
	35	SRG..C, SRG..LC	MK/MKS 3501 E		48	35
		SRG..R, SRG..LR	MK/MKS 3501 E	PMK 35-7	55	
	45	SRG..C, SRG..LC	MK/MKS 4501 E		60	42
		SRG..R, SRG..LR	MK/MKS 4501 E	PMK 45-10	70	
	55	SRG..C, SRG..LC	MK/MKS 5501 F	PMK 55-7	70	40
		SRG..R, SRG..LR	MK/MKS 5501 F	PMK 55-17	80	
	65	SRG..LC, SRG..LV	MK/MKS 6501 F	PMK 65-15	90	39
HCR	15	HCR 15A +60/150R	MK/MKS 1501/150		24	64
		HCR 15A +60/300R	MK/MKS 1501/300			
		HCR 15A +60/400R	MK/MKS 1501/400			
	25	HCR 25A +60/500R	MK/MKS 2501/500		36	65
		HCR 25A +60/750R	MK/MKS 2501/750			
		HCR 25A +60/1000R	MK/MKS 2501/1000			
	35	HCR 35A +60/600R	MK/MKS 3501/600		48	66
		HCR 35A +60/800R	MK/MKS 3501/800			
		HCR 35A +60/1000R	MK/MKS 3501/1000			
		HCR 35A +60/1300R	MK/MKS 3501/1300			
	45	HCR 45A +60/800R	MK/MKS 4501/800		60	51
		HCR 45A +60/1000R	MK/MKS 4501/1000			
		HCR 45A +60/1200R	MK/MKS 4501/1200			
		HCR 45A +60/1600R	MK/MKS 4501/1600			
		HCR 45A +60/3850R	MK/MKS 4501/3850			
	65	HCR 65A +60/1000R	✆			
		HCR 65A +60/1500R				
		HCR 65A +45/2000R				
		HCR 65A +45/2500R				
		HCR 65A +30/3000R				

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

Rexroth
Bosch Group

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
1605	15	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662,	MK/MKS 1505 AK		24	2
1607		1665, 1666				
1645		1621	MK/MKS 1505 AK	PMK 15-4	28	
1647	20	1622, 1623, 1651, 1653, 1661, 1662, 1665, 1666	MK/MKS 2005 AK		30	8
	25	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MK/MKS 2505 AK		36	14
		1621, 1624	MK/MKS 2505 AK	PMK 25-4	40	
	30	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MK/MKS 3005 AK		42	27
		1621, 1624	MK/MKS 3005 AK	PMK 30-3	45	
	35	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MK/MKS 3505 AK		48	35
		1621, 1624	MK/MKS 3505 AK	PMK 35-7	55	
	45	1622, 1623, 1651, 1653	MK/MKS 4505 AK		60	42
		1621,1624	MK/MKS 4505 AK	PMK 45-10	70	
	55	1622, 1623, 1651, 1653	MK/MKS 5505 AK		70	50
		1621, 1624	MK/MKS 5505 AK	PMK 55-10	80	
	65	1622, 1623, 1651, 1653	MK/MKS 6505 AK		90	59
1675	20	1671	MK/MKS 2005 KB		27	58
1677	25	1671	MK/MKS 2505 KB		35	41
	35	1671	MK/MKS 3505 KB		50	63
1805	25	1851, 1853	MK/MKS 2505 AR		36	14
1807		1821, 1824	MK/MKS 2505 AR	PMK 25-4	40	
	35	1851, 1853	MK/MKS 3505 AR		48	35
		1821, 1824	MK/MKS 3505 AR	PMK 35-7	55	
	45	1851, 1853	MK/MKS 4505 AR		60	42
		1821, 1824	MK/MKS 4505 AR	PMK 45-10	70	
	55	1851, 1853	MK/MKS 5505 AR		70	50
		1821, 1824	MK/MKS 5505 AR	PMK 55-10	80	
	65	1853, 1824	MK/MKS 6505 AR		90	59

Rail manufacturer

SCHNEEBERGER

MR	25	MR..A, MR..B	MK/MKS 2503 MR		36	14
		MR..C, MR..D, MR..E	MK/MKS 2503 MR	PMK 25-4	40	
	35	MR..A, MR..B	MK/MKS 3503 MR		48	35
		MR..C, MR..D, MR..E	MK/MKS 3503 MR	PMK 35-7	55	
	45	MR..A, MR..B	MK/MKS 4503 MR		60	42
		MR..C, MR..D	MK/MKS 4503 MR	PMK 45-10	70	
	55	MR..A, MR..B	MK/MKS 5503 MR		70	50
		MR..C, MR..D	MK/MKS 5503 MR	PMK 55-10	80	
	65	MR..B, MR..D	MK/MKS 6503 MR		90	59
BM	15	BM..A, BM..F, BM..K	MK/MKS 1503 BM		24	2
		BM..C	MK/MKS 1503 BM	PMK 15-4	28	
	20	BM..A, BM..B, BM..C, BM..D, BM..F, BM..G, BM..K	MK/MKS 2003 BM		30	8
	25	BM..A ,BM..B, BM..F, BM..G	MK/MKS 2503 BM		36	10
		BM..C, BM..D, BM..E	MK/MKS 2503 BM	PMK 25-4/02	40	
	30	BM..A ,BM..B, BM..F, BM..G	MK/MKS 3003 BM		42	27
		BM..C, BM..D, BM..E	MK/MKS 3003 BM	PMK 30-3	45	
	35	BM..A ,BM..B, BM..F, BM..G	MK/MKS 3503 BM		48	35
		BM..C, BM..D, BM..E	MK/MKS 3503 BM	PMK 35-7	55	
	45	BM..A ,BM..B	MK/MKS 4503 BM		60	42
		BM..C, BM..D	MK/MKS 4503 BM	PMK 45-10	70	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

IKO

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
LWH	15	LWH..B, LWH..SL, LWH..M, LWHT..B, LWHT..SL, LWHT..M, LWHS..B, LWHS..SL, LWHS..M	MK/MKS 1501 A		24	1
		LWHD..B, LWHD..M, LWHY	MK/MKS 1501 A	PMK 15-4	28	
	20	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHY	MK/MKS 2001 A		30	9
	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	MK/MKS 2501 A		36	19
		LWHD..B, LWHD..M, LWHDG, LWHY	MK/MKS 2501 A	PMK 25-4	40	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M,LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	MK/MKS 3001 A		42	29
		LWHD..B, LWHD..M, LWHDG, LWHY	MK/MKS 3001 A	PMK 30-3	45	
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	MK/MKS 3501 A		48	38
		LWHD..B, LWHD..M, LWHDG, LWHY	MK/MKS 3501 A	PMK 35-7	55	
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	MK/MKS 4501 A	PMK 45-2	60	45
		LWHD..B, LWHD..M, LWHDG, LWHY	MK/MKS 4501 A	PMK 45-12	70	
	55	LWH..B, LWHG, LWHT..B, LWHTG	MK/MKS 5501 A		70	56
		LWHD..B, LWHDG, LWHY	MK/MKS 5501 A	PMK 55-10	80	
	65	LWH..B, LWHG, LWHT..B, LWHTG, LWHD..B, LWHDG, LWHY	MK/MKS 6501 A		90	60
LWE	15	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	MK/MKS 1501 A		24	1
	20	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	MK/MKS 2001 A		28	7
	25	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	MK/MKS 2501 A		33	17
	30	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	MK/MKS 3001 A		42	29
	35	LWE..Q, LWET..Q,LWES..Q, LWEC, LWE, LWETC, LWET, LWESC, LWES	MK/MKS 3501 A		48	38
	45	LWE, LWET, LWES	MK/MKS 4501 A		60	46
LRX	15	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MK/MKS 1501 A		24	1
		LRXDC, LRXD, LRXDG	MK/MKS 1501 A		28	4
	20	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MK/MKS 2010 B		30	9
		LRXDC, LRXD, LRXDG	MK/MKS 2010 B	PMK 20-4	34	
	25	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MK/MKS 2501 A		36	19
		LRXDC, LRXD, LRXDG	MK/MKS 2501 A		40	21
	30	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MK/MKS 3001 A		42	29
		LRXDC, LRXD, LRXDG	MK/MKS 3001 A		45	30
	35	LRXC, LRX, LRXG	MK/MKS 3501 A		48	38
		LRXDC, LRXD, LRXDG	MK/MKS 3501 A	PMK 35-7	55	
	45	LRXC, LRX, LRXG	MK/MKS 4501 A		60	46
		LRXDC, LRXD, LRXDG	MK/MKS 4501 A	PMK45-10	70	
	55	LRXC, LRX, LRXG	MK/MKS 5501 A		70	56
		LRXDC, LRXD, LRXDG	MK/MKS 5501 A	PMK 55-10	80	
	65	LRXDC, LRXD, LRXDG	✆		90	

LRX: This table applies only for rail use without cover sheet!
* PLUS connection not possible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
TKD (KUE)	15	KWE	MK/MKS 1501 A		24	1
		KWE..-H	MK/MKS 1501 A	PMK 15-4	28	
	20	KWE, KWE..-H	MK/MKS 2001 A		30	9
	25	KWE	MK/MKS 2501 A	PMK 25-4	36	16
		KWE..-H	MK/MKS 2501 A	PMK 25-8	40	
	30	KWE	MK/MKS 3001 A	PMK 30-2	42	28
		KWE..-H	MK/MKS 3001 A	PMK 30-5	45	
	35	KWE	MK/MKS 3501 A	PMK 35-8	48	33
		KWE..-H	MK/MKS 3501 A	PMK 35-15	55	
TKSD (KUSE)	20	KWSE, KWSE..-L, KWSE..-H, KWSE..-HL	MK/MKS 2001 A		30	9
	25	KWSE, KWSE.. -L	MK/MKS 2501 A		36	19
		KWSE..-H, KWSE..-HL	MK/MKS 2501 A	PMK 25-4	40	
	30	KWSE, KWSE..-L	MK/MKS 3001 A		42	29
		KWSE..-H, KWSE..-HL	MK/MKS 3001 A	PMK 30-3	45	
	35	KWSE, KWSE..L	MK/MKS 3501 A		48	38
		KWSE..-H, KWSE..-HL	MK/MKS 3501 A	PMK 35-7	55	
	45	KWSE, KWSE..-L	MK/MKS 4501 A		60	46
		KWSE..-H, KWSE..-HL	MK/MKS 4501 A	PMK 45-10	70	
	55	KWSE, KWSE..-L	MK/MKS 5501 A		70	56
		KWSE..-H, KWSE..-HL	MK/MKS 5501 A	PMK 55-10	80	
TKVD (KUVE)	15	KWVE..-B, KWVE..-B-EC, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	MK/MKS 1502 K		24	1
		KWVE..-B-H, KWVE..-B-KT-H, KWVE..-B-KT-HL	MK/MKS 1502 K	PMK 15-4	28	
	20	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	MK/MKS 2002 K		30	9
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	MK/MKS 2002 K		27	6
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	MK/MKS 2002 K		28	7
	25	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-SN-K, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MK/MKS 2502 K	PMK 25-2	36	18
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	MK/MKS 2502 K		33	17
		KWVE..-ES-K, KWVE..-ESC-K	✆			
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MK/MKS 2502 K	PMK 25-6	40	18
	30	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	MK/MKS 3002 K		42	29
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	MK/MKS 3002 K		38	26
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MK/MKS 3002 K	PMK 30-3	45	29
	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MK/MKS 3502 K		48	38
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	MK/MKS 3502 K		44	37
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MK/MKS 3502 K	PMK 35-11	55	
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MK/MKS 4502 K		60	46
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL,	MK/MKS 4502 E		52	54
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MK/MKS 4502 K	PMK 45-10	70	46
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	✆		70	
TKVD - W (KUVE-W)	15	KWVE..-W	MK/MKS 1502 KB★		21	57
	20	KWVE..-W	MK/MKS 2002KB		27	13
	25	KWVE..-WL, KWVE..-B-KT-W, KWVE..-B-KT-WL	MK/MKS 2502KB		35	49
	30	KWVE..-W	MK/MKS 3002KB		42	3
	35	KWVE..-WL	MK/MKS 3502KB		50	62

★ PLUS connection not possible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
TSX - E (RUE)	25	RWU..-D, RWU.. -D-L	MK/MKS 2502 R★	PMK 25-2	36	18
		RWU..-D-H, RWU..-D-HL	MK/MKS 2502 R★	PMK 25-6	40	
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	MK/MKS 3502 R★	PMK 35-3	48	35
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	MK/MKS 3502 R★	PMK 35-7	55	
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	MK/MKS 4502 R★	PMK 45-2	60	45
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	MK/MKS 4502 R★	PMK 45-12	70	
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	MK/MKS 5502 R★		70	50
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	MK/MKS 5502 R★	PMK 55-10	80	
	65	RWU..-E, RWU..-E-L	MK/MKS 6502 R★		90	60
		RWU..-E-H, RWU..-E-HL	MK/MKS 6502 R★	PMK 65-10	100	

Rail manufacturer

INA

LH	15	LAH..EMZ, LAH..GMZ	MK/MKS 1501 A		24	1
		LAH..ANZ, LAH..BNZ	MK/MKS 1501 A	PMK 15-4	28	
	20	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	MK/MKS 2001 A		30	9
	25	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MK/MKS 2501 A		36	19
		LAH..ANZ, LAH..BNZ	MK/MKS 2501 A	PMK 25-4	40	
	30	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MK/MKS 3001 A		42	29
		LAH..ANZ, LAH..BNZ	MK/MKS 3001 A		45	30
	35	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MK/MKS 3501 A		48	38
		LAH..ANZ, LAH..BNZ	MK/MKS 3501 A	PMK 35-7	55	
	45	LAH..EMZ, LAH..GMZ	MK/MKS 4501 A		60	46
		LAH..ANZ, LAH..BNZ	MK/MKS 4501 A	PMK 45-10	70	
	55	LAH..EMZ, LAH..GMZ	MK/MKS 5501 A		70	56
		LAH..ANZ, LAH..BNZ	MK/MKS 5501 A	PMK 55-10	80	
	65	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	MK/MKS 6501 A		90	60
SH	15	SAH..EMZ, SAH..GMZ	MK/MKS 1501 A		24	1
		SAH..ANZ, SAH..BNZ	MK/MKS 1501 A	PMK 15-4	28	
	20	SAH..EMZ, SAH..GMZ, SAH..ANZ, SAH..BNZ	MK/MKS 2001 A		30	9
	25	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MK/MKS 2501 A		36	19
		SAH..ANZ, SAH..BNZ	MK/MKS 2501 A	PMK 25-4	40	
	30	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MK/MKS 3001 A		42	29
		SAH..ANZ, SAH..BNZ	MK/MKS 3001 A		45	30
	35	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MK/MKS 3501 A		48	38
		SAH..ANZ, SAH..BNZ	MK/MKS 3501 A	PMK 35-7	55	
LS	15	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	MK/MKS 1501 A		24	1
	20	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	MK/MKS 2001 A		28	7
	25	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	MK/MKS 2501 A		33	17
	30	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	MK/MKS 3001 A		42	29
	35	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	MK/MKS 3501 A	PMK 35-4	48	37
SS	15	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	MK/MKS 1501 A		24	1
	20	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	MK/MKS 2001 A		28	7
	25	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	MK/MKS 2501 A		33	17
	30	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	MK/MKS 3001 A		42	29
	35	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	MK/MKS 3501 A	PMK 35-4	48	37
LY	15	LY..EL,LY.. FL, LY..AL	MK/MKS 1501 A		24	1
		LY..AN	MK/MKS 1501 A	PMK 15-4	28	
	20	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 2001 A		30	9
	25	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 2501 A		36	19
		LY..AN, LY..BN	MK/MKS 2501 A	PMK 25-4	40	
	30	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 3001 A		42	29
		LY..AN, LY..BN	MK/MKS 3001 A		45	30
	35	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 3501 A		48	38
		LY..AN, LY..BN	MK/MKS 3501 A	PMK 35-7	55	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 4501 A		60	46
		LY..AN, LY..BN	MK/MKS 4501 A	PMK 45-10	70	
	55	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MK/MKS 5501 A		70	56
		LY..AN, LY..BN	MK/MKS 5501 A	PMK 55-10	80	
	65	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AN, LY..BN	MK/MKS 6501 A		90	60

Rail manufacturer

NSK

★ PLUS connection not possible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

NSK

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
LA	25	LA..EL, LA..GL, LA..FL, LA..HL	MK/MKS 2501 A		36	19
		LA..AN, LA..BN	MK/MKS 2501 A	PMK 25-4	40	
	30	LA..EL, LA..GL, LA..FL, LA..HL	MK/MKS 3001 A		42	29
		LA..AN, LA..BN	MK/MKS 3001 A		45	30
	35	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	MK/MKS 3501 A		48	38
		LA..AN, LA..BN	MK/MKS 3501 A	PMK 35-7	55	
	45	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	MK/MKS 4501 A		60	46
		LA..AN, LA..BN	MK/MKS 4501 A	PMK 45-10	70	
	55	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	MK/MKS 5501 A		70	56
		LA..AN, LA..BN	MK/MKS 5501 A	PMK 55-10	80	
	65	LA..EL, LA..GL, LA..FL, LA..HL, LA..AN, LA..BN	MK/MKS 6501 A		90	60
LW	17	LW..ELZ	MK/MKS 1701 B		17	11
	21	LW..ELZ	MK/MKS 2101 B★		21	24
	27	LW..ELZ	MK/MKS 2701 B★		27	25
	35	LW..ELZ	MK/MKS 3501 B		35	49
	50	LW..ELZ	MK/MKS 5001 B		50	62
RA	15	RA..AL, RA..BL, RA..EM, RA..GM	✆		24	
		RA..AN, RA..BN	✆		28	
	20	RA..EM, RA..GM, RA..AN, RA..BN	✆		30	
	25	RA..AL, RA..BL, RA..EM, RA..GM	MK/MKS 2505 AR		36	14
		RA..AN, RA..BN	MK/MKS 2505 AR	PMK 25-4	40	
	30	RA..AL, RA..BL, RA..EM, RA..GM	MK/MKS 3004 F		42	15
		RA..AN, RA..BN	MK/MKS 3004 F	PMK 30-3	45	
	35	RA..AL, RA..BL, RA..EM, RA..GM	✆		48	
		RA..AN, RA..BN	✆		55	
	45	RA..AL, RA..BL, RA..EM, RA..GM	MK/MKS 4504 F		60	42
		RA..AN, RA..BN	MK/MKS 4504 F	PMK 45-10	70	
	55	RA..AL, RA..BL, RA..EM, RA..GM	MK/MKS 5504 F	PMK 55-3	70	22
		RA..AN, RA..BN	MK/MKS 5504 F	PMK 55-13	80	
	65	RA..EM, RA..GM, RA..AN, RA..BN	MK/MKS 6504 F	PMK 65-12	90	34

Rail manufacturer

ROLLON

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
MR	15	MRS, MRS..C, MRT..W, MRT..SW	MK/MKS 1501 A		24	1
		MRS..W	MK/MKS 1501 A	PMK 15-4	28	
	20	MRT..S, MRT..SC, MRT..W, MRT..SW	MK/MKS 2001 A		28	7
		MRS, MRS..L, MRS..C, MRS..LC,MRS..W, MRS..LW	MK/MKS 2001 A	PMK 20-2	30	
	25	MRT, MRT..S, MRT..C, MRT..SC, MRT..W, MRT..SW, MRT..LW	✆		33	
		MRS, MRS..L, MRS..C, MRS..LC	MK/MKS 2501 A		36	19
		MRS..W, MRS..LW	MK/MKS 2501 A	PMK 25-4	40	
	30	MRS, MRS..L, MRS..C, MRS..LC, MRT..W, MRT..SW, MRT..LW	MK/MKS 3001 A		42	29
		MRS..W, MRS..LW	MK/MKS 3001 A	PMK 30-3	45	
	35	MRS, MRS..L, MRT..W, MRT..SW, MRT..LW	MK/MKS 3501 A		48	38
		MRS..W, MRS..LW	MK/MKS 3501 A	PMK 35-7	55	
	45	MRS, MRS..L, MRT..W, MRT..LW	MK/MKS 4501 A		60	46
		MRS..W, MRS..LW	MK/MKS 4501 A	PMK 45-10	70	
	55	MRT..W, MRT..LW	✆		68	
		MRS, MRS..L	MK/MKS 5501 A		70	56
		MRS..W, MRS..LW	MK/MKS 5501 A	PMK 55-10	80	

★ PLUS connection not possible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

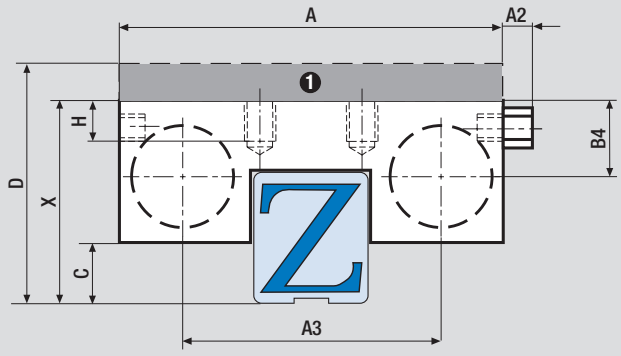
Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 24 and 25]
LGR..T	15	LGW..CC,	MK/MKS 1501 A		24	1
LGR..R		LGH..CA	MK/MKS 1501 A	PMK 15-4	28	
	20	LGW..CC, LGW..HC, LGH..CA, LGH..HA	MK/MKS 2001 A		30	9
	25	LGW..CC, LGW..HC	MK/MKS 2501 A		36	19
		LGH..CA, LGH..HA	MK/MKS 2501 A	PMK 25-4	40	
	30	LGW..CC, LGW..HC	MK/MKS 3001 A		42	29
		LGH..CA, LGH..HA	MK/MKS 3001 A	PMK 30-3	45	
	35	LGW..CC, LGW..HC	MK/MKS 3501 A	PMK 35-4	48	37
		LGH..CA, LGH..HA	MK/MKS 3501 A	PMK 35-11	55	
	45	LGW..CC, LGW..HC	MK/MKS 4501 A	PMK 45-8	60	43
		LGH..CA, LGH..HA	MK/MKS 4501 A	PMK 45-18	70	
	55	LGW..CC, LGW..HC	MK/MKS 5501 A	PMK 55-4	70	53
		LGH..CA, LGH..HA	MK/MKS 5501 A	PMK 55-14	80	
	65	LGW..CC, LGW..HC,LGH..CA, LGH..HA	MK/MKS 6501 A		90	60
HGR..T	15	HGW..CC	MK/MKS 1501 A		24	1
HGR..R		HGH..CA	MK/MKS 1501 A	PMK 15-4	28	
	20	HGW..CC, HGW..HC, HGH..CA, HGH..HA	MK/MKS 2001 A		30	9
	25	HGW..CC, HGW..HC	MK/MKS 2501 A		36	19
		HGH..CA, HGH..HA	MK/MKS 2501 A	PMK 25-4	40	
	30	HGW..CC, HGW..HC	MK/MKS 3001 A		42	29
		HGH..CA, HGH..HA	MK/MKS 3001 A	PMK 30-3	45	
	35	HGW..CC, HGW..HC	MK/MKS 3501 A		48	38
		HGH..CA, HGH..HA	MK/MKS 3501 A	PMK 35-7	55	
	45	HGW..CC, HGW..HC	MK/MKS 4501 A	PMK 45-2	60	45
		HGH..CA, HGH..HA	MK/MKS 4501 A	PMK 45-12	70	
	55	HGW..CC, HGW..HC	MK/MKS 5501 A	PMK 55-2	70	55
		HGH..CA, HGH..HA	MK/MKS 5501 A	PMK 55-12	80	
	65	HGW..CC, HGW..HC, HGH..CA, HGH..HA	MK/MKS 6501 A		90	60
EGR..T	15	EGH...SA, EGH...CA, EGW...SC, EGW...CC	MK/MKS 1501 A		24	1
	20	EGH...SA, EGH...CA, EGW...SC, EGW...CC	MK/MKS 2001 A		28	7
	25	EGH...SA, EGH...CA, EGW...SC, EGW...CC	MK/MKS 2501 A	PMK 25-2	33	20
	30	EGH...SA, EGH...CA, EGW...SC, EGW...CC	MK/MKS 3001 A	PMK 30-2	42	28
RG..T	25	RGW..CC, RGW..HC	MK/MKS 2512 F		36	14
		RGH..CA, RGH..HA	MK/MKS 2512 F	PMK 25-4	40	
	30	RGW..CC, RGW..HC	MK/MKS 3012 F		42	15
		RGH..CA, RGH..HA	MK/MKS 3012 F	PMK 30-3	45	
	35	RGW..CC, RGW..HC	MK/MKS 3512 F		48	35
		RGH..CA, RGH..HA	MK/MKS 3512 F	PMK 35-7	55	
	45	RGW..CC, RGW..HC	✆		60	
		RGH..CA, RGH..HA	✆		70	
	55	RGW..CC, RGW..HC	MK/MKS 5501 F	PMK 55-6	70	12
		RGH..CA, RGH..HA	MK/MKS 5501 F	PMK 55-16	80	
	65	RGW..CC, RGW..HC	✆		90	
		RGH..CA, RGH..HA	✆		90	

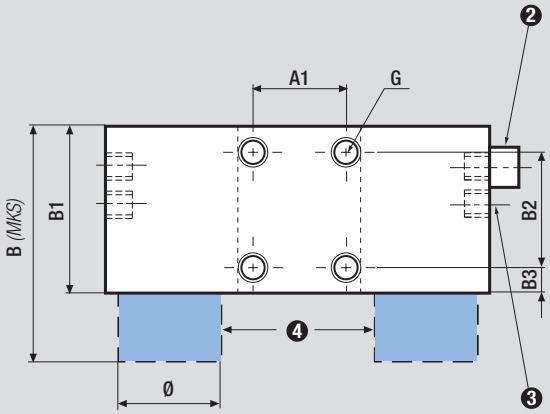
Rail manufacturer

HIWIN® Lineartechnologie

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation





Note: Consider measurement C!

Air connections are located on both sides and can be exchanged according to mounting requirements.
Only one connection is necessary for function.

1. Adapting plate PMK (accessory)
2. MK Series: Air filter
   MKS: M5 port (air connection)
3. MK Series: M5 port (air connection)
   MKS: Air filter / Plus connection M5.
4. Mounting of spring unit at MKS is omitted at MK.

Measure table	Holding Power [N] MK	Holding Power [N] MKS	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	B4 [mm]	C [mm]	X [mm]	G	H [mm]	Ø
1	650	400	55	15	6	34	58	39	15	15,5	12	2,5	24	M4	4,5	16
2	650	400	55	15	6	34	58	39	15	15,5	11,6	3,2	24	M4	4,5	16
3	1750	1050	142	22	5	110	68	39	22	8,5	20,5	7	42	M8	10	25
4	650	400	55	15	6	34	58	39	15	15,5	12	6,5	28	M4	4,5	16
5	650	400	60	15	5	39	68	59	25	12	10,5	4,5	24	M5	6	16
6	1000	600	66	20	6	43	61	39	20	5	14,4	1,5	27	M5	5	20
7	1000	600	66	20	6	43	61	39	20	5	14,4	2,5	28	M5	5	20
8	1000	600	66	20	5	43	61	39	20	9	15,5	3	30	M6	6	20
9	1000	600	66	20	6	43	61	39	20	5	14,4	4,5	30	M5	5	20
10	1200	750	70	20	5	47	61	39	20	5	19,5	5	36	M6	8	20
11	460	440	70	15	5	50,6	64	48	15	8,5	8,3	1,2	17	M5	7,5	12
12	3000	2000	128	30	5	86,8	82	49	30	9,5	36,2	11	64	M10	15	30
13	1000	600	88	20	5	65	61	39	20	5	14,4	1,5	27	M5	5,5	20
14	1200	750	75	20	5	49	56	35	20	5	20	3,5	36	M6	8	22
15	1200	750	90	22	5	64	60	39	22	8,5	24,5	5	42	M8	9	22
16	1200	750	75	20	5	49	56	35	20	5	15,5	4	32	M6	8	22
17	1200	750	75	20	5	49	56	35	20	5	15,5	5	33	M6	8	22
18	1200	750	75	20	5	49	56	35	20	5	15,5	6	34	M6	8	22
19	1200	750	75	20	5	49	56	35	20	5	15,5	8	36	M6	8	22
20	1200	750	75	20	5	49	56	35	20	5	15,5	3.0	31	M6	8	22
21	1200	750	75	20	5	49	56	35	20	5	15,5	12	40	M6	8	22
22	3000	2000	128	30	5	86,8	82	49	30	9,5	40	10	67	M10	15	30
23	1200	750	75	20	5	49	65	54	20	12	12,5	5	30	M6	8	22
24	650	400	77	15	5	56	58	49	15	21,5	9,6	2	21	M5	5	16
25	1000	600	88	20	5	65	65	53	20	19,5	11,5	4	27	M6	6	20
26	1750	1050	90	22	5	58	68	39	22	8,5	20,5	3	38	M8	10	25
27	1750	1050	90	22	5	58	68	39	22	8,5	24	3,5	42	M8	9	25
28	1750	1050	90	22	5	58	68	39	22	8,5	20,5	5	40	M8	10	25
29	1750	1050	90	22	5	58	68	39	22	8,5	20,5	7	42	M8	10	25
30	1750	1050	90	22	5	58	68	39	22	8,5	20,5	10	45	M8	10	25
31	1750	1050	90	22	5	58	78	59	22	13,5	14	5	33	M8	8	25
32	1750	1050	96	20	5	64	73	54	20	10	15,5	8,5	38	M8	10	25
33	2000	1250	100	24	5	68	67	39	24	7,5	20,5	3,5	40	M8	10	28
34	3000	2000	138	30	5	96,8	82	49	30	9,5	43,7	14,5	78	M10	15	30
35	2000	1250	100	24	5	68	67	39	24	7,5	20,5	4	48	M8	10	28
36	2000	1250	100	24	5	68	67	39	24	7,5	20,5	8,5	45	M8	10	28
37	2000	1250	100	24	5	68	67	39	24	7,5	20,5	7,5	44	M8	10	28
38	2000	1250	100	24	5	68	67	39	24	7,5	20,5	11,5	48	M8	10	28
39	3000	2000	138	30	5	96,8	82	49	30	9,5	43,7	11,5	75	M10	15	30
40	3000	2000	128	30	5	86,8	82	49	30	9,5	36,2	10	63	M10	15	30
41	1200	750	120	50	5	94	56	35	20	5	20	2,5	35	M6	8	22
42	2250	1450	120	26	5	78,8	82	49	26	11,5	35,5	8	60	M10	15	30
43	2250	1450	120	26	5	78,8	82	49	26	11,5	26,8	8,5	52	M10	15	30
44	2250	1450	120	26	5	78,8	82	49	26	11,5	26,8	10,5	54	M10	15	30
45	2250	1450	120	26	5	78,8	82	49	26	11,5	26,8	14,5	58	M10	15	30
46	2250	1450	120	26	5	78,8	82	49	26	11,5	26,8	16,5	60	M10	15	30
47	2250	1450	138	30	5	97	82	49	30	9,5	42	16	75	M10	15	30
48	1200	750	75	20	5	49	56	35	20	5	15,3	3,5	31	M6	7,5	22
49	1200	750	121	50	5	95	57	36	20	5	17,5	5	35	M8	10	22
50	3000	2000	128	30	5	86,8	82	49	30	9,5	40	13	70	M10	15	30
51	2250	1450	130	26	5	88,8	82	49	26	11,5	26,8	16,5	60	M10	15	30
52	2250	1450	128	30	5	87	82	49	30	9,5	30,5	14,5	63	M10	18	30
53	2250	1450	128	30	5	87	82	49	30	9,5	30,5	15,5	64	M10	18	30
54	2250	1450	120	26	5	78,8	82	49	26	11,5	27,5	8	52	M10	13,8	30
55	2250	1450	128	30	5	87	82	49	30	9,5	30,5	19,5	68	M10	18	30
56	2250	1450	128	30	5	87	82	49	30	9,5	30,5	21,5	70	M10	18	30
57	650	400	77	15	5	56	58	39	15	21,5	9,6	2	21	M5	5	16
58	650	400	80	20	5	59	58	39	20	15,5	14	3,5	27	M4	4,5	16
59	3000	2000	138	30	5	96,8	82	49	30	9,5	55	16,5	90	M10	20	30
60	2250	1450	138	30	5	96,8	82	49	30	9,5	46	27	90	M10	19	30
61	1200	750	75	20	5	50,4	56	35	20	5	15,5	3	31	M6	8	22
62	2000	1250	156	60	5	124	67	39	20	9,5	29,5	4,5	50	M10	10	28
63	2000	1250	156	60	5	124	70	42	20	9,5	30	4,5	50	M10	10	28
64	650	400	64	15	6	45,4	58	39	15	15,5	12	2,5	24	M4	4,5	16
65	1200	750	84	20	5	58	56	35	20	5	15,5	8	36	M6	8	22
66	1200	750	114	24	5	82	67	39	24	7,5	20,5	11,5	48	M8	10	28

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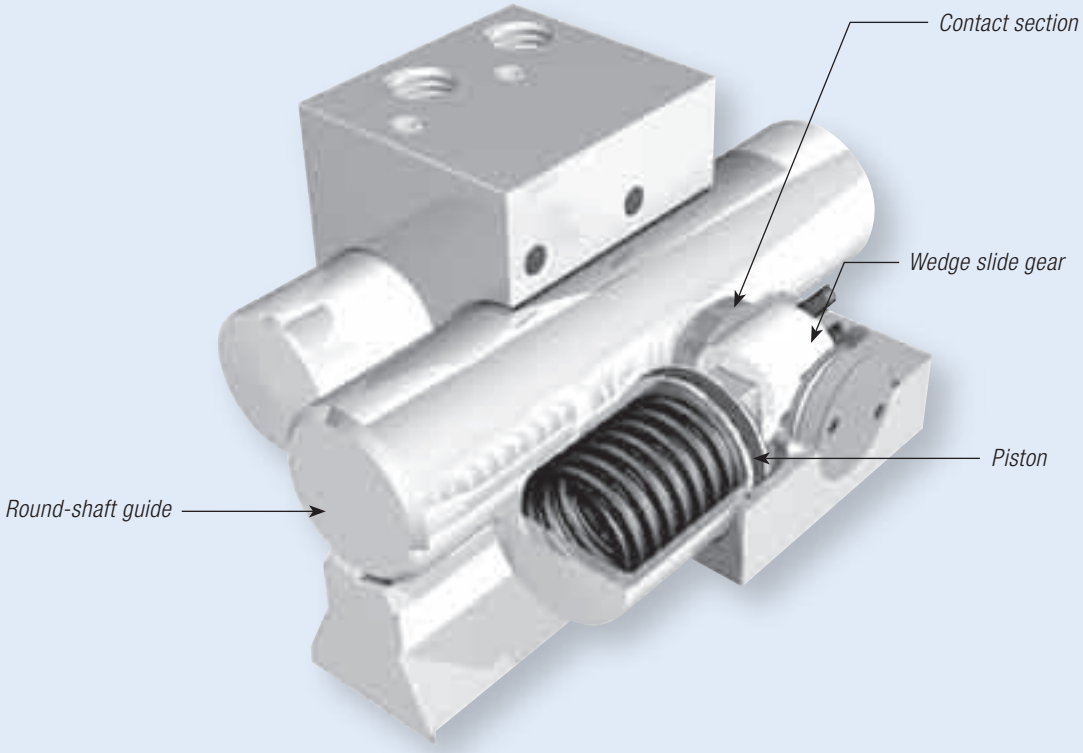
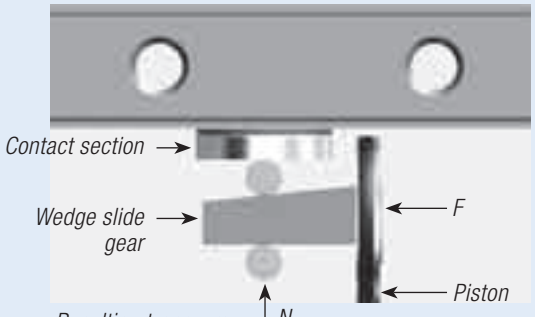


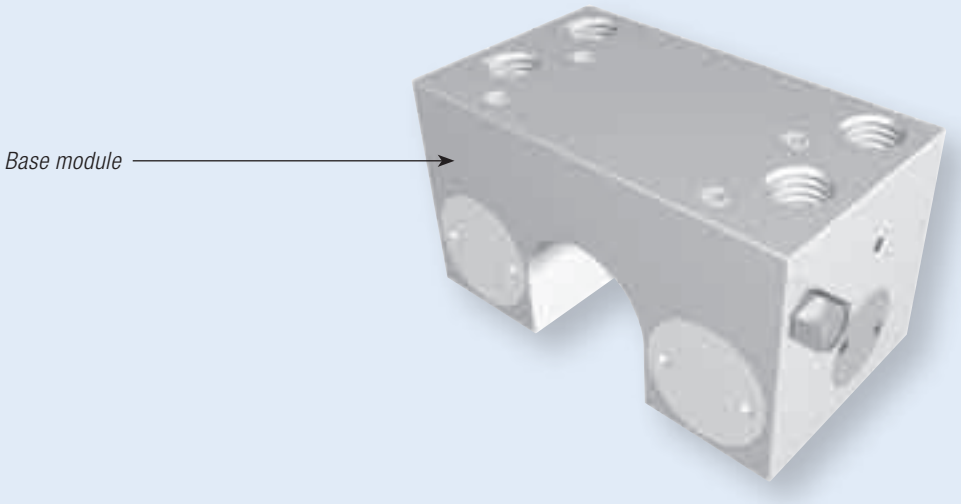
Efficient clamping elements for round-shaft guides **MKR.**

The MKR series is our classic element for round-shaft guides that clamp (close) with pneumatic pressure.
The patented wedge slide gear enables high supporting forces. The pressure medium moves the wedge slide gear in a longitudinal direction.

The resulting transverse movement presses the contact sections against the shaft guides.
In addition to the MKR, there is a spring-loaded energy storage version, the MKRS.



MKR Design



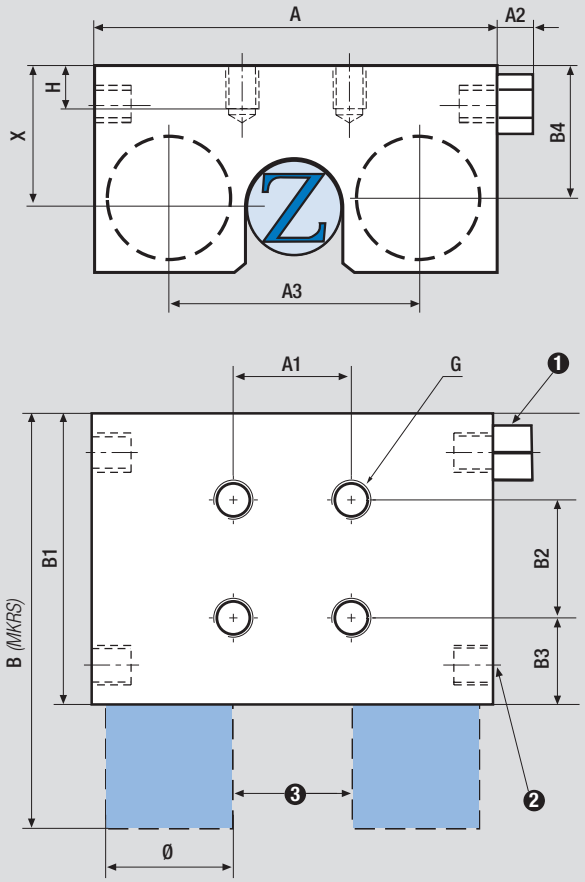
Special characteristics:
- Compact design
- High holding force and exact positioning
- Strong axial and horizontal rigidity
- MKRS: opening pressure **> 5.5 bar**

Application scenarios for MKR:
- Axes with pneumatic positioning
- Table traverses in wood industry
- Fixing of vertical axes
- Positioning of lifting devices
- Pneumatic clamping of machine tables
- Machine table clamping of work centres

Additional application scenarios for MKRS:
- Clamping in case of pressure drop
- Clamping without energy requirement

Connection options:
The MKR/MKRS series have air connections on both sides as part of their standard equipment. This means that the air connection and the air-release filter can be moved over to the opposite side. PLUS connection is not possible with the MKR series.

MKR



Air connections are located on both sides
and can be exchanged according
to mounting requirements.
Only one connection is necessary for function.

❶ MKR Series: Air filter
MKRS Series: M5 port (air connection)

❷ MKR Series: M5 port (air connection)
MKRS Series: Air filter

❸ Mounting of spring unit at MKRS is
omitted at MKR

Size [mm]	Item number	Holding power [N] MKR	Holding power [N] MKRS	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	B4 [mm]	X [mm]	G	H [mm]	Ø [mm]
12	MKR/MKRS 1200 A	650	350	51	15	5	31	56	37	15	11	18	18	M5	6	16
16	MKR/MKRS 1600 A	650	400	55	15	5	35	58	39	15	12,5	22	22	M5	6	16
20	MKR/MKRS 2000 A	1000	600	66	45	5	43	60	38	18	13	25	25	M8	10	20
25	MKR/MKRS 2500 A	1200	750	77	60	5	51	63	43	20	15	30	30	M10	12	22
30	MKR/MKRS 3000 A	1750	1050	92	68	5	60	77,5	48,5	25	14	34	35	M10	13	25
40	MKR/MKRS 4000 A	2250	1450	120	90	5	78,8	82	49	26	14	45	45	M10	15	30
50	MKR/MKRS 5000 A	3000	2000	132	108	5	90,8	82	49	30	9,5	50	50	M10	15	30
60	MKR/MKRS 6000 A	3000	2000	142	108	5	100,8	82	49	30	9,5	50	50	M10	15	30

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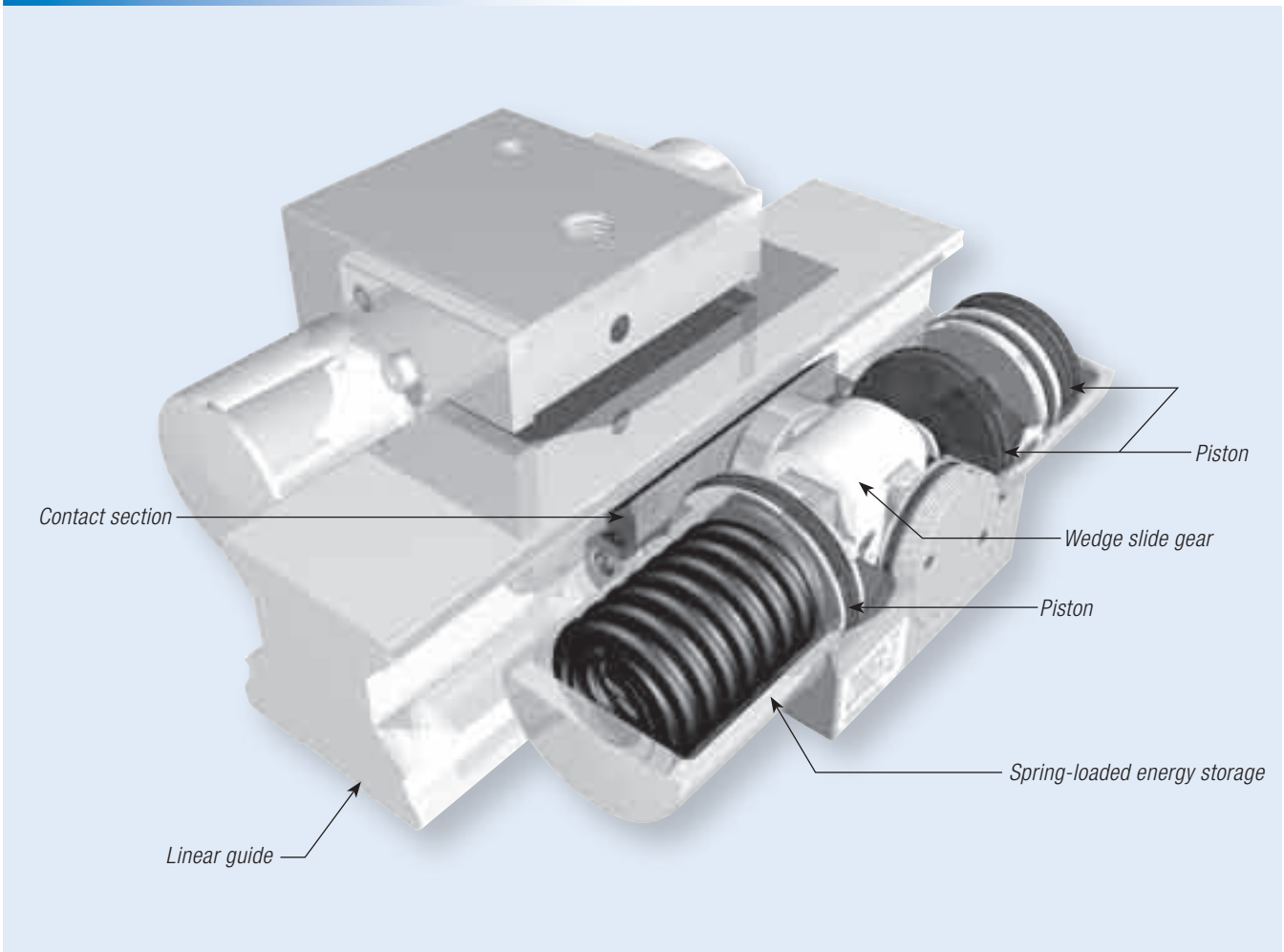
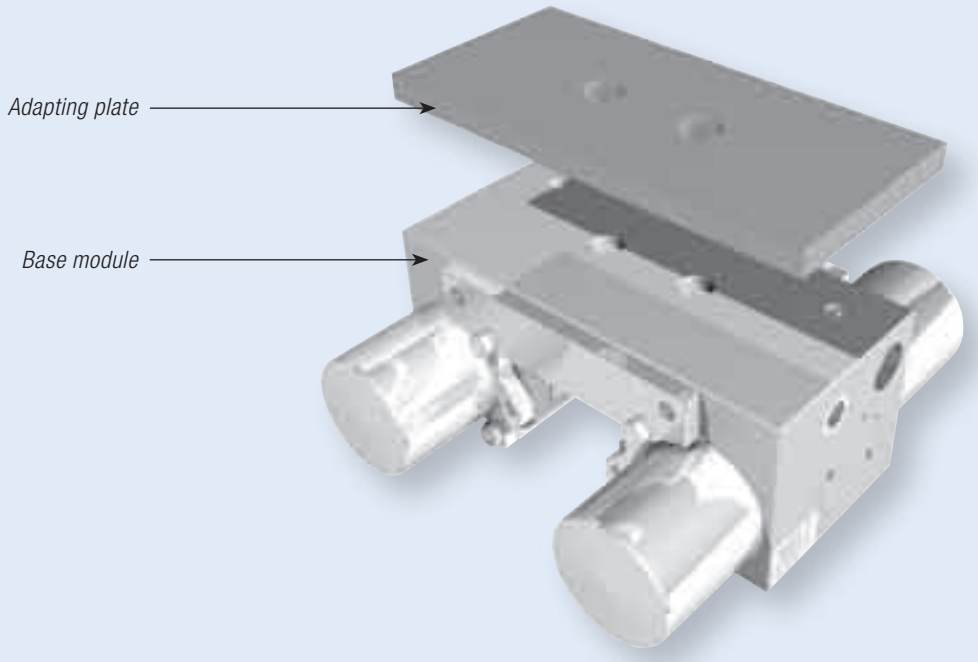


Active without pressure:
The Clamping and Braking Element including spring-loaded energy storage **MB.**

The MB series is based on a dual-effective wedge slide gear with spring-loaded energy storage for clamping and braking without pressure. As a specific feature it has three pistons connected in a line. This arrangement allows use of a stronger spring at 4.5 **bar than** the BW series does.
The stronger spring-loaded storage permits holding forces up to 3,800 N. The MB series is designed for braking 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 contamination with chips (chips between contact section and linear guide), the majority of elements can be fitted with original seals from the respective linear guide manufacturer 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.

MB Design



Special characteristics:
- Special friction coating for braking
- Lower air consumption
- Opening pressure >4.5 bar, pneumatic

Application scenarios for MB:
- Clamping in case of pressure drop
- Emergency OFF function
- Braking for linear motors
- Z-axes positioning in neutral position
- Machine table clamping of work centres

Variations:
Depending on the height of the carriage, an additional adapting plate is required (see table).

Connection options:
The MB series has air connections on both sides as part of its standard equipment. This means that the air connection can be moved over to the opposite side.
PLUS connection is not possible with the MB series.

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 37]
SRG	15	SRG..A, SRG..V	MBPS 1501 ES1		24	23
	20	SRG..A, SRG..LA, SRG..V, SRG..LV	MBPS 2001 ES1		30	12
	25	SRG..C, SRG..LC	MBPS 2501 ES1		36	1
		SRG..R, SRG..LR	MBPS 2501 ES1	PMB 25-4	40	
	30	SRG..C, SRG..LC	MBPS 3001 ES1		42	5
		SRG..R, SRG..LR	MBPS 3001 ES1	PMB 30-3	45	
	35	SRG..C, SRG..LC	MBPS 3501 ES1		48	3
		SRG..R, SRG..LR	MBPS 3501 ES1	PMB 35-7	55	
	45	SRG..C, SRG..LC	MBPS 4501 ES1		60	4
		SRG..R, SRG..LR	MBPS 4501 ES1	PMB 45-10	70	
	55	SRG..C, SRG..LC	MBPS 5501 ES1	PMB 55-3	70	16
		SRG..R, SRG..LR	MBPS 5501 ES1	PMB 55-13	80	
	65	SRG..LC, SRG..LV	✆		90	
SRN	35	SRN..C, SRN..LC, SRN..L, SRN..LR	✆		44	
	45	SRN..C, SRN..LC, SRN..L, SRN..LR	✆		52	
	55	SRN..C, SRN..LC, SRN..L, SRN..LR	✆		63	
	65	SRN..LC, SRN..LR	✆		75	
SHS	15	SHS..C, SHS..LC, SHS..V, SHS..LV	x			
		SHS..R	x			
	20	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 2001 CS1		30	12
	25	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 2501 CS1	PMB 25-1	36	11
		SHS..R, SHS..LR	MBPS 2501 CS1	PMB 25-5	40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 3001 CS1		42	5
		SHS..R, SHS..LR	MBPS 3001 CS1	PMB 30-3	45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 3501 CS1		48	8
		SHS..R, SHS..LR	MBPS 3501 CS1	PMB 35-7	55	
	45	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 4501 CS1	PMB 45-3	60	9
		SHS..R, SHS..LR	MBPS 4501 CS1	PMB 45-13	70	
	55	SHS..C, SHS..LC, SHS..V, SHS..LV	MBPS 5501 CS1		70	15
		SHS..R, SHS..LR	MBPS 5501 CS1	PMK 65-10	80	
	65	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		90	
HSR	15	HSR..A, HSR.. B	MBPS 1501 AS1		24	22
		HSR..R	MBPS 1501 AS1	PMB 15-4	28	
	20	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MBPS 2001 AS1		30	12
	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MBPS 2501 AS1		36	10
		HSR..R, HSR..LR	MBPS 2501 AS1	PMB 25-4	40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MBPS 3001 AS1		42	5
		HSR..R, HSR..LR	MBPS 3001 AS1	PMB 30-3	45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MBPS 3501 AS1		48	6
		HSR..R, HSR..LR	MBPS 3501 AS1	PMB 35-7	55	
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MBPS 4501 AS1		60	7
		HSR..R, HSR..LR	MBPS 4501 AS1	PMB 45-10	70	
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		70	
		HSR..R, HSR..LR	✆		80	
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		90	
SSR	15	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MBPS 1501 GS1		24	22
	20	SR..TB, SR..SB, SR..W, SR..V, SSR..XW, SSR..XV, SSR..XTB	MBPS 2001 GS1		28	14
	25	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MBPS 2501 GS1		33	13
	30	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MBPS 3001 GS1		42	5
	35	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MBPS 3501 GS1	PMB 35-4	48	17
	45	SR..TB, SR..W	✆		60	
	55	SR..TB, SR..W	✆		68	

x: not feasible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 37]
NR /NRS	25	NR / NRS..XR, NR / NRS..XLR, NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	✆		31	
	30	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MBPS 3001 BS1		38	26
	35	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MBPS 3501 BS1		44	21
	45	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	MBPS 4501 BS1		52	27
	55	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆		63	
	65	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆		75	
SNR /SNS	25	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MBPS 2501 ISI		31	25
	30	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		38	
	35	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MBPS 3501 ISI		44	21
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	MBPS 3501 ISI	PMB 35-4	48	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	MBPS 3501 ISI	PMB 35-11	55	
	45	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		52	
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		60	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		70	
	55	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		63	
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		70	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		80	
	65	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		75	

Rail manufacturer

Rexroth
Bosch Group

1605, 1607	15	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	MBPS 1505 AS1		24	24
1645, 1647	20	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	MBPS 2005 AS1		30	12
	25	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	MBPS 2505 AS1		36	1
		1631, 1632				
		1621, 1624	MBPS 2505 AS1	PMB 25-4	40	
	30	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	MBPS 3005 AS1		42	2
		1631, 1632				
		1621, 1624	MBPS 3005 AS1	PMB 30-3	45	
	35	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	MBPS 3505 AS1		48	3
		1631, 1632				
		1621, 1624	MBPS 3505 AS1	PMB 35-7	55	
	45	1651, 1653, 1622, 1623	MBPS 4505 AS1		60	4
		1621, 1624	MBPS 4505 AS1	PMB 45-10	70	
	55	1651, 1653, 1622, 1623	MBPS 5505 AS1		70	18
		1621, 1624	MBPS 5505 AS1	PMB 55-10	80	
	65	1651, 1653, 1622, 1623, 1621, 1624	MBPS 6505 AS1		90	19
1805, 1807	25	1851, 1853	MBPS 2505 BS1		36	1
		1821, 1824	MBPS 2505 BS1	PMB 25-4	40	
	35	1851, 1853	MBPS 3505 BS1		48	3
		1821, 1824	MBPS 3505 BS1	PMB 35-7	55	
	45	1851, 1853	MBPS 4505 BS1		60	4
		1821, 1824	MBPS 4505 BS1	PMB 45-10	70	
	55	1851, 1853	MBPS 5505 BS1		70	18
		1821, 1824	MBPS 5505 BS1	PMB 55-10	80	
	65	1853, 1824	✆		90	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer

SCHNEEBERGER

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 37]
MR	25	MR..A, MR..B	MBPS 2503 AS1		36	1
		MR..C, MR..D, MR..E	MBPS 2503 AS1	PMB 25-4	40	
	35	MR..A, MR..B	MBPS 3503 AS1		48	3
		MR..C, MR..D, MR..E	MBPS 3503 AS1	PMB 35-7	55	
	45	MR..A, MR..B	MBPS 4503 AS1		60	4
		MR..C, MR..D	MBPS 4503 AS1	PMB 45-10	70	
	55	MR..A, MR..B	✆		70	
		MR..C, MR..D	✆		80	
	65	MR..B, MR..D	✆		90	

Rail manufacturer

IKO

LRX	15	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		24	
		LRXDC, LRXD, LRXDG	✆		28	
	20	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		30	
		LRXDC, LRXD, LRXDG	✆		34	
	25	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MBPS 2510 BS1		36	1
		LRXDC, LRXD, LRXDG	MBPS 2510 BS1	PMB 25-4	40	
	30	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	MBPS 3010 BS1		42	5
		LRXDC, LRXD, LRXDG	MBPS 3010 BS1	PMB 30-3	45	
	35	LRXC, LRX, LRXG	MBPS 3510 BS1		48	3
		LRXDC, LRXD, LRXDG	MBPS 3510 BS1	PMB 35-7	55	
	45	LRXC, LRX, LRXG	MBPS 4510 BS1		60	4
		LRXDC, LRXD, LRXDG	MBPS 4510 BS1	PMB 45-10	70	
	55	LRXC, LRX, LRXG	✆		70	
		LRXDC, LRXD, LRXDG	✆		80	
	65	LRXDC, LRXD, LRXDG	✆		90	

Size 45 only for use without cover sheet!

Rail manufacturer

INA

TKSD (KUSE)	20	KWSE, KWSE..-L, KWSE..-H, KWSE..-HL	✆		30	
	25	KWSE, KWSE..-L	MBPS 2502 AS1		36	10
		KWSE..-H, KWSE..-HL	MBPS 2502 AS1	PMB 25-4	40	
	30	KWSE, KWSE..-L	✆		42	
		KWSE..-H, KWSE..-HL	✆		45	
	35	KWSE, KWSE..-L	MBPS 3502 AS1		48	6
		KWSE..-H, KWSE..-HL	MBPS 3502 AS1	PMB 35-7	55	
	45	KWSE, KWSE..-L	✆		60	
		KWSE..-H, KWSE..-HL	✆		70	
	55	KWSE, KWSE..-L	✆		70	
		KWSE..-H, KWSE..-HL	✆		80	
TKVD (KUVE)	15	KWVE..-B, KWVE..-B-EC, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	✆		24	
		KWVE..-B-H, KWVE..-B-KT-H, KWVE..-B-KT-HL	✆		28	
	20	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MBPS 2002 BS1		30	12
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	✆		27	
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	✆		28	
	25	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-SN-K, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MBPS 2502 BS1	PMB 25-3	36	20
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	✆		31	
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	✆		33	
		KWVE..-ES-K, KWVE..-ESC-K	✆		38	
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MBPS 2502 BS1	PMB 25-7	40	20

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer

INA

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 37]
	30	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	MBPS 3002 BS1		42	2
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	✆		38	
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MBPS 3002 BS1	PMB 30-3	45	2
	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	MBPS 3502 BS1	PMB 35-4	48	21
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	✆		44	
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MBPS 3502 BS1	PMB 35-11	55	21
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	MBPS 4502 BS1		60	4
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	✆		52	
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	MBPS 4502 BS1	PMB 45-10	70	4
TSX - E (RUE)	25	RWU..-D, RWU..-D-L	MBPS 2502 DS1		36	28
		RWU..-D-H, RWU..-D-HL	MBPS 2502 DS1	PMB 25-4/01	40	
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	MBPS 3502 DS1	PMB 35-2	48	29
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	MBPS 3502 DS1	PMB 35-9	55	
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	MBPS 4502 DS1		60	4
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	MBPS 4502 DS1	PMB 45-10	70	
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	✆		70	
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	✆		80	
	65	RWU..-E, RWU..-E-L	✆		90	
		RWU..-E-H, RWU..-E-HL	✆		100	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

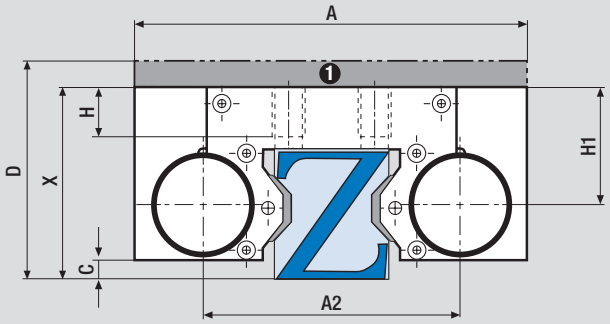
Rail manufacturer

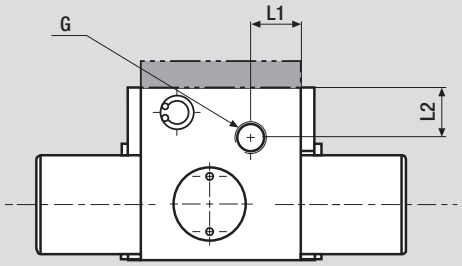
NSK

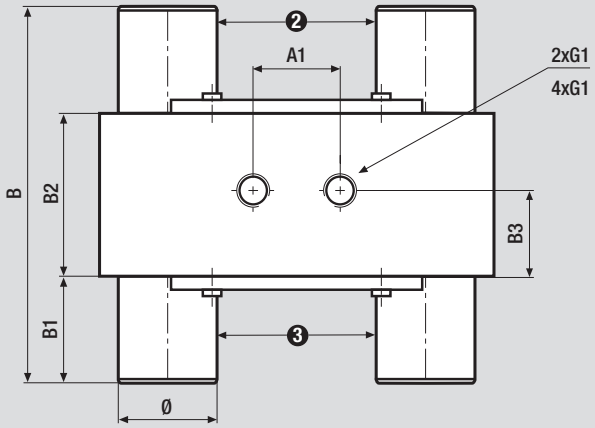
Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 37]
LH	15	LAH..EMZ, LAH..GMZ	✆		24	
		LAH..ANZ, LAH..BNZ	✆		28	
	20	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	MBPS 2004 BS1		30	12
	25	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MBPS 2504 BS1		36	10
		LAH..ANZ, LAH..BNZ	MBPS 2504 BS1	PMB 25-4	40	
	30	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MBPS 3004 BS1		42	5
		LAH..ANZ, LAH..BNZ	MBPS 3004 BS1	PMB 30-3	45	
	35	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	MBPS 3504 BS1		48	6
		LAH..ANZ, LAH..BNZ	MBPS 3504 BS1	PMB 35-7	55	
	45	LAH..EMZ, LAH..GMZ	MBPS 4504 BS1		60	7
		LAH..ANZ, LAH..BNZ	MBPS 4504 BS1	PMB 45-10	70	
	55	LAH..EMZ, LAH..GMZ	✆		70	
		LAH..ANZ, LAH..BNZ	✆		80	
	65	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	✆		90	
SH	15	SAH..EMZ, SAH..GMZ	✆		24	
		SAH..ANZ, SAH..BNZ	✆		28	
	20	SAH..EMZ, SAH..GMZ, SAH..ANZ, SAH..BNZ	MBPS 2004 BS1		30	12
	25	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MBPS 2504 BS1		36	10
		SAH..ANZ, SAH..BNZ	MBPS 2504 BS1	PMB 25-4	40	
	30	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MBPS 3004 BS1		42	5
		SAH..ANZ, SAH..BNZ	MBPS 3004 BS1	PMB 30-3	45	
	35	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	MBPS 3504 BS1		48	6
		SAH..ANZ, SAH..BNZ	MBPS 3504 BS1	PMB 35-7	55	
LY	15	LY..EL,LY.. FL, LY..AL	✆		24	
		LY..AN	✆		28	
	20	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		30	
	25	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		36	
		LY..AN, LY..BN	✆		40	
	30	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MBPS 3004 CS1		42	5
		LY..AN, LY..BN	MBPS 3004 CS1	PMB 30-3	45	
	35	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MBPS 3504 CS1		48	6
		LY..AN, LY..BN	MBPS 3504 CS1	PMB 35-7	55	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	MBPS 4504 CS1		60	7
		LY..AN, LY..BN	MBPS 4504 CS1	PMB 45-10	70	
	55	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		70	
		LY..AN, LY..BN	✆		80	
	65	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AN, LY..BN	✆		90	
LA			x			
RA	15	RA..AL, RA..BL, RA..EM, RA..GM	✆		24	
		RA..AN, RA..BN	✆		28	
	20	RA..EM, RA..GM, RA..AN, RA..BN	✆		30	
	25	RA..AL, RA..BL, RA..EM, RA..GM	MBPS 2504 FS1		36	1
		RA..AN, RA..BN	MBPS 2504 FS1	PMB 25-4	40	
	30	RA..AL, RA..BL, RA..EM, RA..GM	MBPS 3004 FS1		42	2
		RA..AN, RA..BN	MBPS 3004 FS1	PMB 30-3	45	
	35	RA..AL, RA..BL, RA..EM, RA..GM	MBPS 3504 FS1		48	3
		RA..AN, RA..BN	MBPS 3504 FS1	PMB 35-7	55	
	45	RA..AL, RA..BL, RA..EM, RA..GM	MBPS 4504 FS1		60	4
		RA..AN, RA..BN	MBPS 4504 FS1	PMB 45-10	70	
	55	RA..AL, RA..BL, RA..EM, RA..GM	✆		70	
		RA..AN, RA..BN	✆		80	
	65	RA..EM, RA..GM, RA..AN, RA..BN	✆		90	

x: not feasible
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation







Note: Consider measurement C!

Air connections are located on both sides and can be exchanged according to mounting requirements.
Only one connection is necessary for function.

1. Adapter plate PMB (accessory)
2. mounting of piston unit
3. mounting of spring unit

Measure table	Holding power [N] MB	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	G1	L1 [mm]	L2 [mm]	Ø [mm]	H [mm]	H1 [mm]
1	1300	75	20	49	95,2	20,2	44	22	3,5	36	M5	M6	16,5	6,5	22	8	20
2	2000	90	22	58	107	29	47	23	3,5	42	M5	M8	30,5	7,2	25	9	24
3	2600	100	24	68	105,7	27,7	46	24,5	6	48	G1/8“	M8	19	9	28	10	26,5
4	3800	120	26	78,8	113,2	32,2	49	24,5	8	60	G1/8“	M10	31,1	15	30	15	35,5
5	1300	90	22	64	98,2	20,2	47	23	7	42	M5	M8	14	6,5	22	9	22,5
6	2000	100	24	70	106	29	46	24,5	9,5	48	M5	M8	19	7,2	25	9	24
7	2600	120	26	88	108,7	27,7	49	24,5	15	60	G1/8“	M10	16	8	28	14	29,5
8	2000	100	24	70	106	29	46	24,5	8	48	M5	M8	19	8,7	25	9	25,5
9	2600	120	26	88	108	27,2	49	24,5	12	57	G1/8“	M10	16	8	28	14	29,5
10	1200	75	20	52	94	22	44	22	6,5	36	M5	M6	16,2	5	20	8	18
11	1200	75	20	52	94	22	44	22	5,5	36	M5	M6	16,2	6	20	7	19
12	750	66	20	45,7	94	19	44	22	4,2	30	M5	M6	15,5	5,5	16	8,6	16,2
13	1200	75	23	52	95	22	44	22	5,5	33	M5	M6	16,2	5	20	8	16,5
14	1000	66	20	45,7	94	19	44	22	2,2	28	M5	M6	15,5	5,5	16	8,6	16,2
15	3800	140	30/30	98,8	113,2	32,2	49	9,5	13	70	G1/8“	M10	30,3	15	30	18	40,5
16	4700	140	38/38	97	144	41	62	12	8	67	G1/8“	M10	23	11	39	18	38
17	1700	100	24	70	106	29	46	24,5	5,5	44	M5	M8	19	7,2	25	9	24
18	4700	140	38/38	97	144	41	62	12	11	70	M5	M10	23	11	39	18	38
19	4700	150	38/38	106	144	41	62	12	14,5	90	M5	M10	23	16	39	18	53,5
20	1200	75	20	52	94	22	44	22	3,5	33	M5	M6	16,2	5	20	7	18
21	2000	100	24	70	106	29	46	24,5	5,5	44	M5	M8	19	7,2	25	9	24
22	750	61	15	40,8	94	19	44	22	2,5	24	M5	M5	34,5	5,3	16	7,3	11,8
23	750	61	15	40,8	94	19	44	22	2,5	24	M5	M6	34,5	5,3	16	8,6	11,8
24	1000	61	15	40,8	94	19	44	22	2,5	24	M5	M5	34,3	5,3	16	7,5	11,8
25	750	72	20	52	94	19	44	22	5,2	31	M5	M6	35,2	8,2	16	8,6	16,2
26	1300	90	22	64	98,2	20,2	47	23	3	38	M5	M8	14	6,5	22	9	22,5
27	2600	120	26	88	109	27,7	49	24,5	7	52	G1/8“	M10	16	8	28	14	29,5
28	750	70	23	48	94	19	44	22	4	36	M5	M6	15,5	10	16	8	22,5
29	2100	100	24	68	105,7	27,7	46	24,5	4	46	G1/8“	M8	19	9	28	10	26,5

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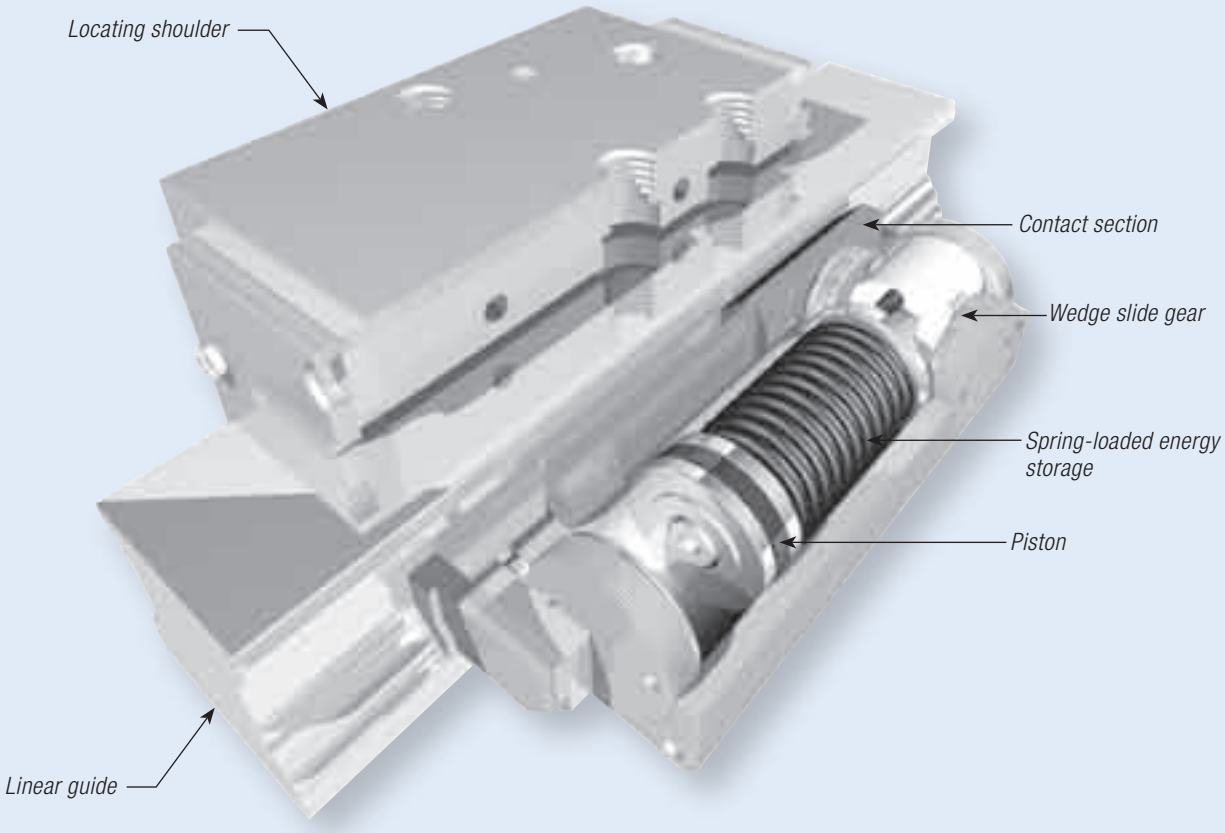
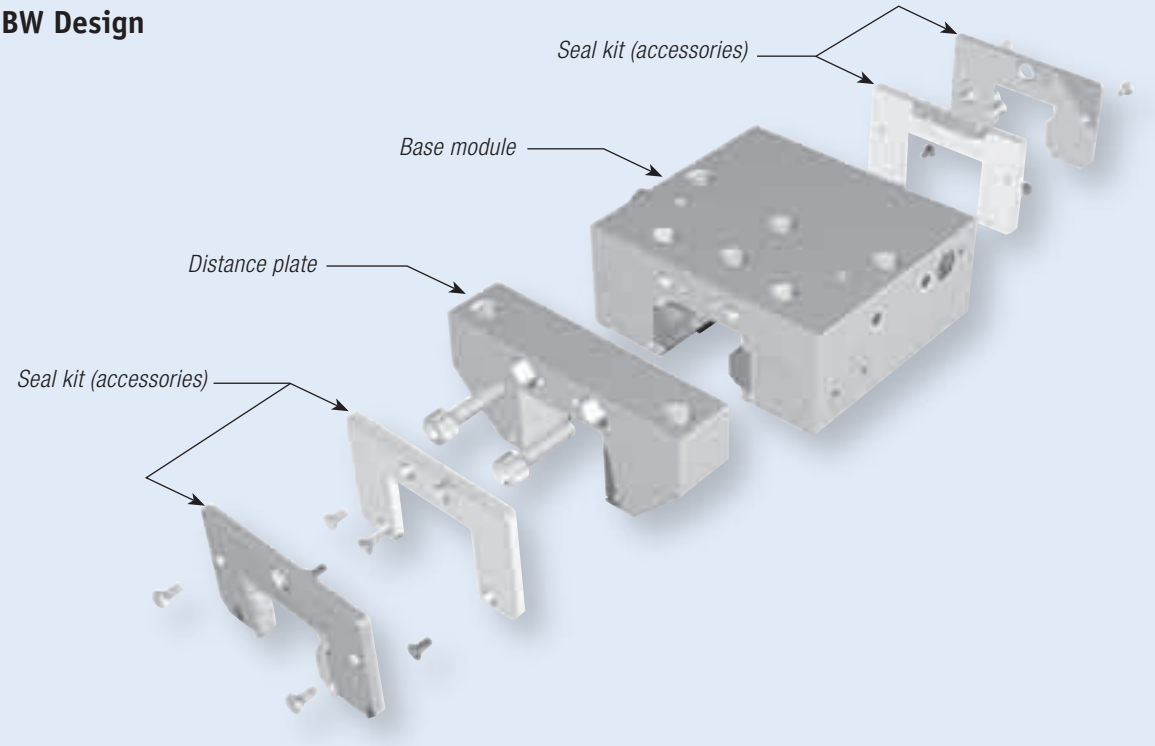


Active without Pressure and Efficient:
The Clamping and Braking Element with spring-loaded energy storage **BW.**

The BW series is based on a dual-effective wedge slide gear with spring-loaded energy storage for clamping and braking without pressure. Compressed air is used as the pressure medium. Positive fit contact sections mounted within a strong casing guarantee high axial and horizontal rigidity.
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 used in harsh work environments or with cooling liquid, seals should be used as well. 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.

BW Design



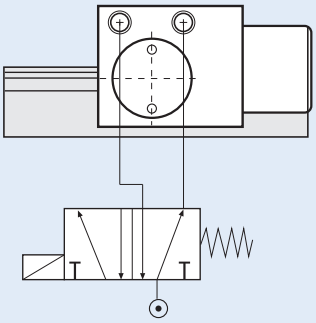
Special characteristics:
- Special friction coating for braking
- Solid and rigid outer casing
- Lower air consumption
- Compact design, DIN 645 compatible
- Exact positioning
- Supporting forces up to 6,000 N
- Opening pressure **> 5.5 bar, pneumatic**

Application scenarios for BW:
- Clamping in case of pressure drop
- Emergency OFF function
- Braking for linear motors
- Z-axes positioning in neutral position
- Machine table clamping of work centres

Variations:
The BW series offers various combination options. To screw elements from underneath a distance plate is required. Seals are recommended in harsh work environments.

Connection options:
The basic version of the BW series features air connections on both sides. This means that the air connection and the air-release filter can be moved over to the opposite side. In addition, you can connect the element from the front
(PLUS connection not possible at the front).

Higher supporting forces with PLUS connection (BWPS):
By using a 5/2 (overflow-free) or 5/3 valve it is possible to support the spring power with pneumatic pressure. By using the PLUS connection, the stated supporting force will be increased. Connection takes place according to the prestated plan.
When the PLUS connection is used, the air-release filter is replaced by connecting a second pneumatic tube. **The BWPS series** is fitted with integrated quick-action exhaust valves depending on the size of the unit.
For further information, please refer to the assembly instructions or visit www.zimmer-gmbh.com.



Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Measure table [page 42 and 43]
HSR	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	BWPS 3501 AS1	1
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	BWPS 4501 AS1	2
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	BWPS 5501 AS1	3
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	BWPS 6501 AS1	4
NR/NRS	35	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	BWPS 3501 BS1	5
	45	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	BWPS 4501 BS1	6
	55	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	BWPS 5501 BS1	7
	65	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	BWPS 6501 BS1	8
SHS	35	SHS..C, SHS..LC	BWPS 3501 CS1	1
	45	SHS..C, SHS..LC	BWPS 4501 CS1	2
	55	SHS..C, SHS..LC	BWPS 5501 CS1	3
	65	SHS..C, SHS..LC	BWPS 6501 CS1	4
SRG	35	SRG..C, SRG..LC	BWPS 3501 ES1	1
	45	SRG..C, SRG..LC	BWPS 4501 ES1	2
	55	SRG..C, SRG..LC	BWPS 5501 ES1	3
	65	SRG..C, SRG..LC	BWPS 6501 ES1	4
SNR/SNS	35	SNR..C, SNR..LC, SNS..C, SNS..LC	BWPS 3501 IS1	5
	45	SNR..C, SNR..LC, SNS..C, SNS..LC	BWPS 4501 IS1	6
	55	SNR..C, SNR..LC, SNS..C, SNS..LC	BWPS 5501 IS1	7
	65	SNR..C, SNR..LC, SNS..C, SNS..LC	BWPS 6501 IS1	8

Rail manufacturer

Rexroth
Bosch Group

1605, 1607 1645, 1647	35	1651, 1661, 1665, 1653, 1631	BWPS 3505 AS1	1
	45	1651, 1653	BWPS 4505 AS1	2
	55	1651, 1653	BWPS 5505 AS1	3
	65	1651, 1653	BWPS 6505 AS1	4
1805, 1807	35	1851, 1853	BWPS 3505 BS1	1
	45	1851, 1853	BWPS 4505 BS1	2
	55	1851, 1853	BWPS 5505 BS1	3
	65	1853	BWPS 6505 BS1	4

Rail manufacturer

SCHNEEBERGER

MR	35	MR..A, MR..B	BWPS 3503 AS1	1
	45	MR..A, MR..B	BWPS 4503 AS1	2
	55	MR..A, MR..B	BWPS 5503 AS1	3
	65	MR..B	BWPS 6503 AS1	4

Rail manufacturer

IKO

LWH	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	BWPS 3510 AS1	1
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	BWPS 4510 AS1	2
	55	LWH..B, LWHG, LWHT..B, LWHTG	BWPS 5510 AS1	3
	65	LWH..B, LWHG, LWHT..B, LWHTG	BWPS 6510 AS1	4
LRX	35	LRXC, LRX, LRXG	BWPS 3510 BS1	1
	45	LRXC, LRX, LRXG	BWPS 4510 BS1	2
	55	LRXC, LRX, LRXG	BWPS 5510 BS1	3
	65	LRXC, LRX, LRXG	BWPS 6510 BS1	4
LWE	35	LWEC, LWE, LWETC, LWET, LWE..Q, LWET..Q, LWES..Q	BWPS 3510 CS1	1
	45	LWE, LWET	BWPS 4510 CS1	2

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Measure table [page 42 and 43]
TKSD (KUSE)	35	KWSE, KWSE..-L	BWPS 3502 AS1	1
	45	KWSE, KWSE..-L	BWPS 4502 AS1	2
	55	KWSE, KWSE..-L	BWPS 5502 AS1	3
TKVD (KUVE)	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-B-KT, KWVE..-B-KT-L	BWPS 3502 BS1	1
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-B-KT, KWVE..-B-KT-L	BWPS 4502 BS1	2
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	✆	
TSX - E (RUE)	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	BWPS 3502 DS1	1
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	BWPS 4502 DS1	2
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	BWPS 5502 DS1	3
	65	RWU..-E, RWU..-E-L	BWPS 6502 DS1	4

Rail manufacturer

INA

LS	35	LAS..KLZ, LAS.. FLZ, LAS..ELZ	BWPS 3504 AS1	1
LH	35	LAH..EMZ, LAH..GMZ	BWPS 3504 BS1	1
	45	LAH..EMZ, LAH..GMZ	BWPS 4504 BS1	2
	55	LAH..EMZ, LAH..GMZ	BWPS 5504 BS1	3
	65	LAH..EMZ, LAH..GMZ	BWPS 6504 BS1	4
SH	35	SAH..EMZ, SAH..GMZ	BWPS 3504 BS1	1
LY	35	LY..EL, LY..FL, LY.. GL, LY.. HL	BWPS 3504 CS1	1
	45	LY..EL, LY..FL, LY.. GL, LY.. HL	BWPS 4504 CS1	2
	55	LY..EL, LY..FL, LY.. GL, LY.. HL	BWPS 5504 CS1	3
	65	LY..EL, LY..FL, LY.. GL, LY.. HL	BWPS 6504 CS1	4
LA			x	
RA	35	RA..AL, RA..BL, RA..EM, RA..GM	✆	
	45	RA..AL, RA..BL, RA..EM, RA..GM	✆	
	55	RA..AL, RA..BL, RA..EM, RA..GM	✆	
	65	RA..EM, RA..GM	BWPS 6504 FS1	4

Rail manufacturer

NSK

LGR..T, LGR..R	35	LGW..CC, LGW..HC	BWPS 3512 BS1	1
	45	LGW..CC, LGW..HC	BWPS 4512 BS1	2
	55	LGW..CC, LGW..HC	BWPS 5512 BS1	3
	65	LGW..CC, LGW..HC	BWPS 6512 BS1	4
HGR..T HGR..R	35	HGW..CC, HGW..HC	✆	
	45	HGW..CC, HGW..HC	✆	
	55	HGW..CC, HGW..HC	✆	
	65	HGW..CC, HGW..HC	✆	
RG..T	35	RGW..CC, RGW..HC	✆	
	45	RGW..CC, RGW..HC	✆	
	55	RGW..CC, RGW..HC	✆	
	65	RGW..CC, RGW..HC	✆	

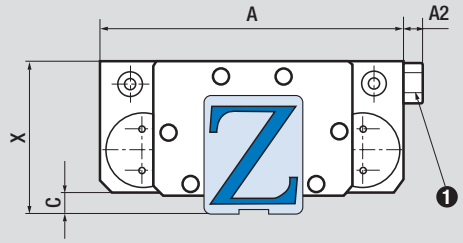
Rail manufacturer

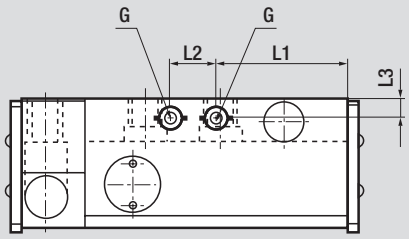
HIWIN Lineartechnologie

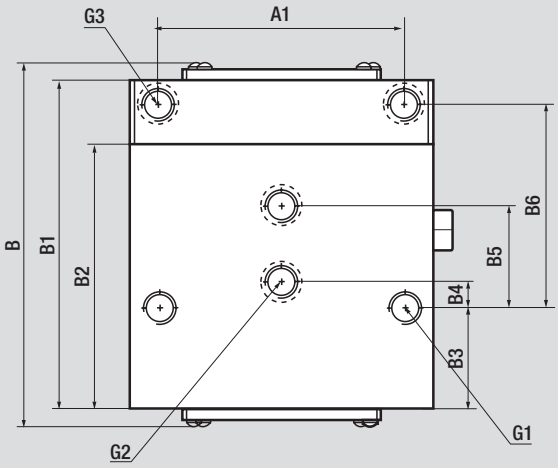
x: not feasible

See page 13 for part number explanation

BW







Note: Consider measurement C!

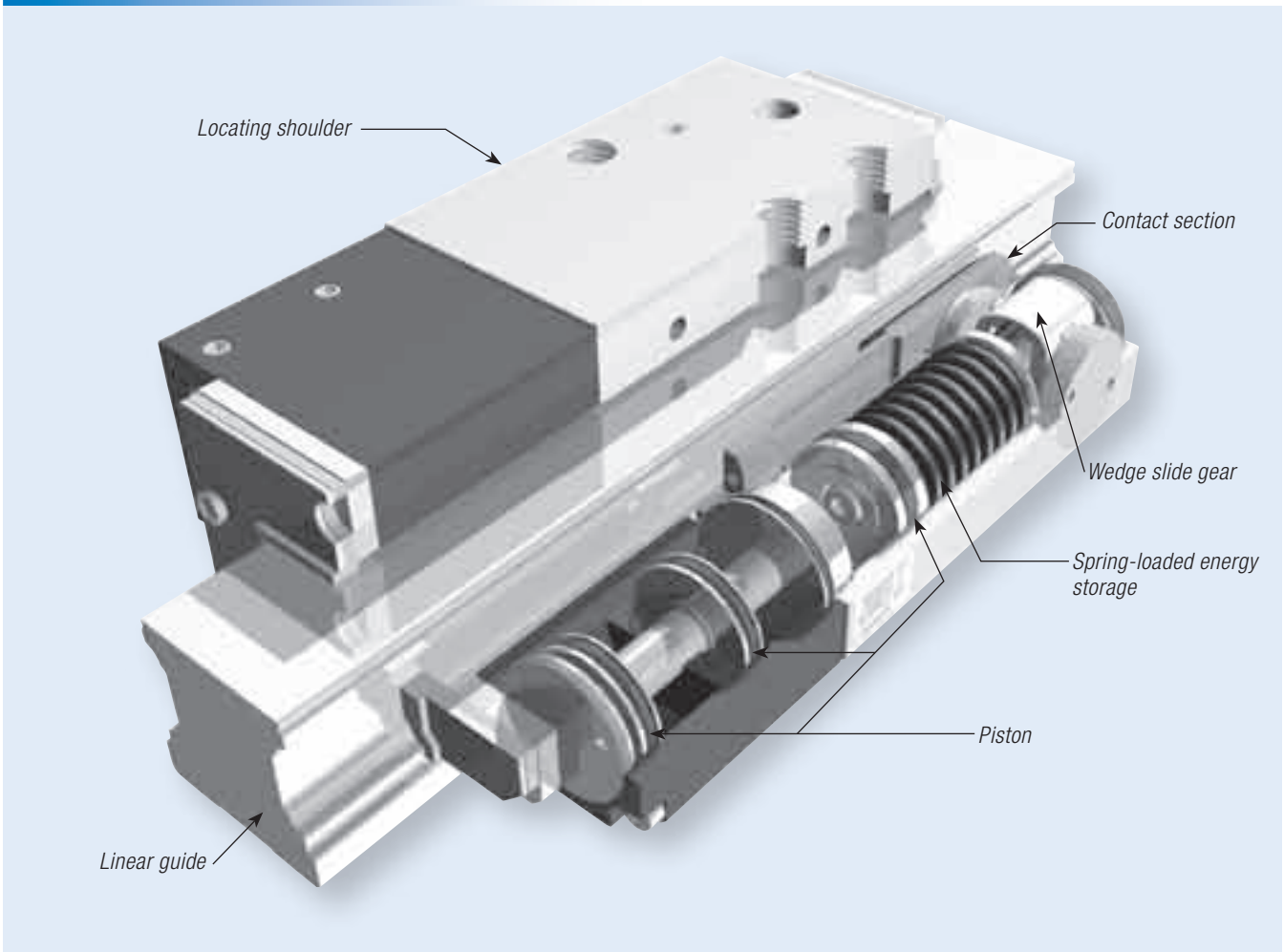
Comment:
The air filter is not necessary if the PLUS-connection is being used.
Air connections are located on both sides and can be exchanged according to mounting requirements.
The air connection can be fitted to the short side.
Only one connection is necessary for function.

G1: air connection
G2: can be unscrewed from underneath with DIN 7984
G3: can be unscrewed from underneath with DIN EN ISO 4762

1 air filter

Measure table	Holding power [N] BW Standard	Holding power [N] BW PLUS	min. releasing pressure [bar]	Normal liter [dm^3 _/Stroke] Standard	Normal liter [dm^3 _/stroke] PLUS	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]
1	900	2300	5,5	0,05	0,335	100	82	6	max.140	113	90	42
2	1800	4000	5,5	0,081	0,542	120	100	6	max.157	129,5	104	40
3	2800	5000	5,5	0,106	1,062	140	116	6	max.189	159,5	135	52,5
4	3000	6000	5,5	0,166	1,935	170	142	6	max.216	179,5	150	56
5	900	2300	5,5	0,05	0,335	100	82	6	max.132	113	90	42
6	1800	4000	5,5	0,081	0,542	120	100	6	max.148	129,5	104	40
7	2800	5000	5,5	0,106	1,062	140	116	6	max.195	159,5	135	52,5
8	3000	6000	5,5	0,166	1,935	170	142	6	max.216	179,5	150	56

B4 [mm]	B5 [mm]	B6 [mm]	C [mm]	X [mm]	G	G1 ø/depth	G2 ø/depth	G3 ø/depth	L1 [mm]	L2 [mm]	L3 [mm]
5	31	62	6	48	G1/8“	M10/10	M10/9,5	M10/14	31	28	10
10	40	80	8	60	G1/8“	M12/15	M12/12.4	M12/18	52	18	9
12,5	47,5	95	11	70	G1/8“	M14/12,5	M14/12,5	M14/18	17	70	8,5
14	55	110	14	90	G1/4“	M16/22	M16/20	M16/22	20	75	20
0	31	62	7	44	G1/8“	M10/10	M10/10,7	M10/10,5	31	26	9
0	40	80	9	52	G1/8“	M12/10	M12/10,7	M12/12	52	16	8
0	47,5	95	11	63	G1/8“	M14/12	M14/15,7	M14/18	17	70	8,5
0	55	110	11	75	G1/4“	M16/14	M16/17,5	M16/20	20	75	11

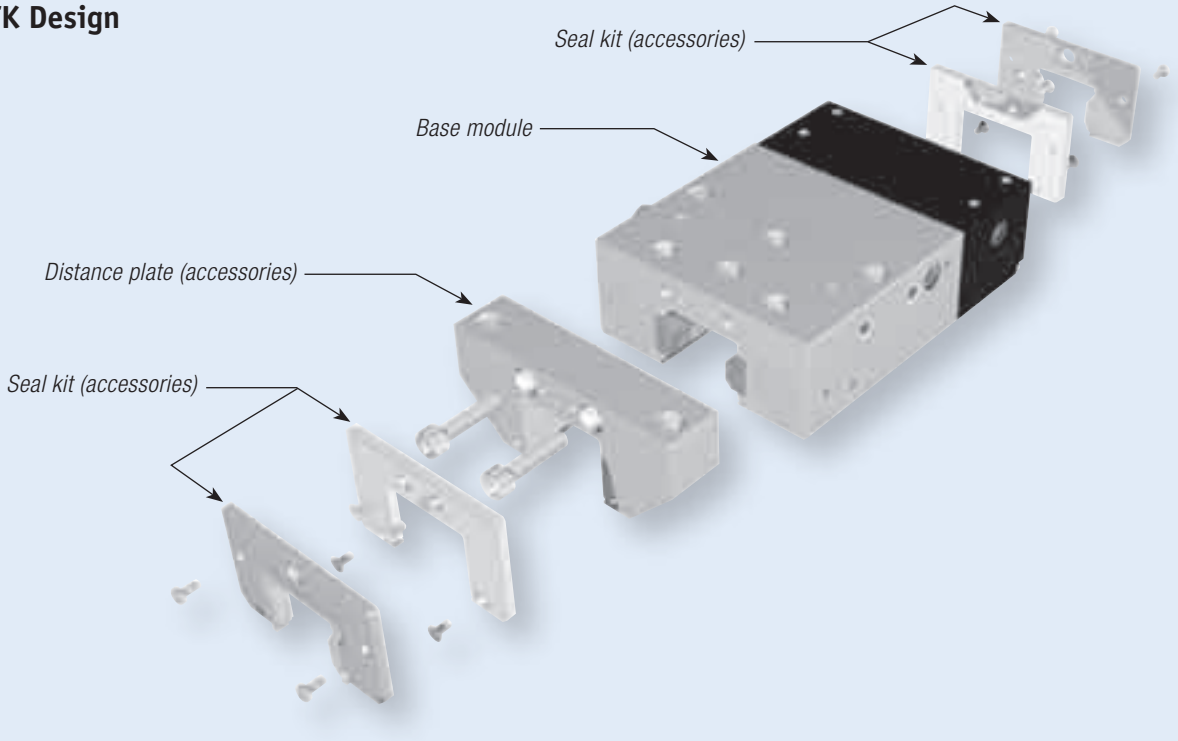


Active without pressure and highly efficient:
The Clamping and Braking Element with spring-loaded energy storage **TK.**

The TK series is based on a dual-effective wedge slide gear with spring-loaded energy storage for clamping and braking without pressure.
As a specific feature it has three pistons connected in a line. This arrangement allows use of a stronger spring at 5.5 **bar than the BW** series does. The stronger spring-loaded storage permits holding forces up to 6,700 N. Positive fit contact sections mounted within a strong casing guarantee high axial and horizontal rigidity.
The TK series is designed for braking 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 contamination with chips (chips between 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 used in harsh work environments or with cooling liquid, seals should be used as well. 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.

TK Design



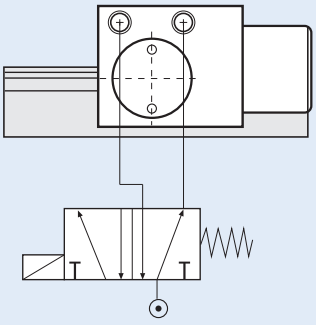
Special characteristics:
- Special friction coating for braking
- Multiple pistons arranged in a row
- Heavy load type
- Solid and rigid outer casing
- Extremely low air consumption
- Compact design, DIN 645 compatible
- Exact positioning
- Supporting forces up to 6,700 N
- Opening pressure **> 5.5 bar, pneumatic**

Application scenarios for TK:
- Clamping in case of pressure drop
- Emergency OFF function
- Braking for linear motors
- Z-axes positioning in neutral position
- Machine table clamping of work centres

Variations:
The TK series offers various combination options. To screw elements from underneath a distance plate is required.
The element can also be ordered with seals.

Connection options:
The TK series has air connections on both sides as part of its standard equipment. This means that the air connection and the air-release filter can be moved over to the opposite side.
In addition, you can connect the element from the front (PLUS connection not possible at the front).

Higher supporting forces with PLUS connection (TKPS):
By using a 5/2 (overflow-free) or 5/3 valve it is possible to support the spring power with pneumatic pressure. By using the PLUS connection, the stated supporting force will be increased. Connection takes place according to the prestated plan.
When the PLUS connection is being used the air-release filter is replaced by connecting a second pneumatic tube.
The BWPS/TKPS series are fitted with integrated quick-action exhaust valves depending on the size of the unit.
For further information, please refer to the assembly instructions or visit www.zimmer-gmbh.com.



Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Measure table [page 48 and 49]
HSR	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	TKPS 3501 AS1	1
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	TKPS 4501 AS1	2
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	TKPS 5501 AS1	3
NR/NRS	35	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	TKPS 3501 BS1	4
	45	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	TKPS 4501 BS1	5
	55	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	TKPS 5501 BS1	6
SHS	35	SHS..C, SHS..LC	TKPS 3501 CS1	1
	45	SHS..C, SHS..LC	TKPS 4501 CS1	2
	55	SHS..C, SHS..LC	TKPS 5501 CS1	3
SRG	35	SRG..C, SRG..LC	TKPS 3501 ES1	1
	45	SRG..C, SRG..LC	TKPS 4501 ES1	2
	55	SRG..C, SRG..LC	TKPS 5501 ES1	3
SNR/SNS	35	SNR..C, SNR..LC, SNS..C, SNS..LC	TKPS 3501 IS1	4
	45	SNR..C, SNR..LC, SNS..C, SNS..LC	TKPS 4501 IS1	5
	55	SNR..C, SNR..LC, SNS..C, SNS..LC	TKPS 5501 IS1	6

Rail manufacturer

Rexroth
Bosch Group

1605, 1607 1645, 1647	35	1651, 1661, 1665, 1653, 1631,	TKPS 3505 AS1	1
	45	1651, 1653	TKPS 4505 AS1	2
	55	1651, 1653	TKPS 5505 AS1	3
1805 1807	35	1851, 1853,	TKPS 3505 BS1	1
	45	1851, 1853,	TKPS 4505 BS1	2
	55	1851, 1853,	TKPS 5505 BS1	3

Rail manufacturer

SCHNEEBERGER

MR	35	MR..A, MR..B	TKPS 3503 AS1	1
	45	MR..A, MR..B	TKPS 4503 AS1	2
	55	MR..A, MR..B	TKPS 5503 AS1	3

Rail manufacturer

IKO

LWH	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG,	TKPS 3510 AS1	7
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG,	TKPS 4510 AS1	2
	55	LWH..B, LWHG, LWHT..B, LWHTG,	TKPS 5510 AS1	3
LRX	35	LRXC, LRX, LRXG	TKPS 3510 BS1	1
	45	LRXC, LRX, LRXG	TKPS 4510 BS1	2
	55	LRXC, LRX, LRXG	TKPS 5510 BS1	3
LWE	35	LWEC, LWE, LWETC, LWET, LWE..Q, LWET..Q, LWES..Q	TKPS 3510 CS1	1
	45	LWE, LWET	TKPS 4510 CS1	2

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Measure table [page 48 and 49]
TKSD (KUSE)	35	KWSE, KWSE..-L	TKPS 3502 AS1	1
	45	KWSE, KWSE..-L	TKPS 4502 AS1	2
	55	KWSE, KWSE..-L	TKPS 5502 AS1	3
TKVD (KUVE)	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-B-KT, KWVE..-B-KT-L	TKPS 3502 BS1	1
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-B-KT, KWVE..-B-KT-L	TKPS 4502 BS1	2
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	✆	
TSX..D (RUE)	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	TKPS 3502 DS1	1
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	TKPS 4502 DS1	2
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	TKPS 5502 DS1	3

Rail manufacturer

INA

LS	35	LAS..KLZ, LAS.. FLZ, LAS..ELZ	TKPS 3504 AS1	1
LH	35	LAH..EMZ, LAH..GMZ	TKPS 3504 BS1	1
	45	LAH..EMZ, LAH..GMZ	TKPS 4504 BS1	2
	55	LAH..EMZ, LAH..GMZ	TKPS 5504 BS1	3
SH	35	SAH..EMZ, SAH..GMZ	TKPS 3504 BS1	1
LY	35	LY..EL, LY..FL, LY.. GL, LY.. HL	TKPS 3504 CS1	1
	45	LY..EL, LY..FL, LY.. GL, LY.. HL	TKPS 4504 CS1	2
	55	LY..EL, LY..FL, LY.. GL, LY.. HL	TKPS 5504 CS1	3
LA			x	
RA	35	RA..AL, RA..BL, RA..EM, RA..GM	TKPS 3504 FS1	1
	45	RA..AL, RA..BL, RA..EM, RA..GM	TKPS 4504 FS1	2
	55	RA..AL, RA..BL, RA..EM, RA..GM	✆	

Rail manufacturer

NSK

LGR..T **LGR..R**	35	LGW..CC, LGW..HC	TKPS 3512 BS1	1
	45	LGW..CC, LGW..HC	TKPS 4512 BS1	2
	55	LGW..CC, LGW..HC	TKPS 5512 BS1	3
HGR..T **HGR..R**	35	HGW..CC, HGW..HC	✆	
	45	HGW..CC, HGW..HC	✆	
	55	HGW..CC, HGW..HC	✆	
RG..T	35	RGW..CC, RGW..HC	✆	
	45	RGW..CC, RGW..HC	✆	
	55	RGW..CC, RGW..HC	✆	

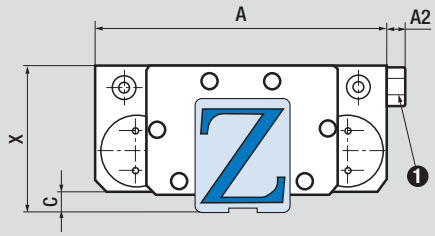
Rail manufacturer

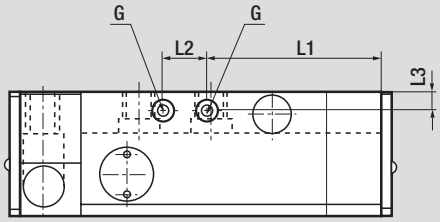
HIWIN Lineartechnologie

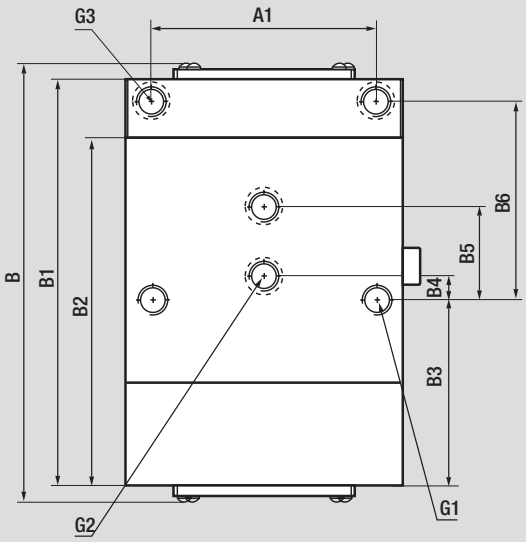
x: not feasible

See page 13 for part number explanation

TK







Note: Consider measurement C!

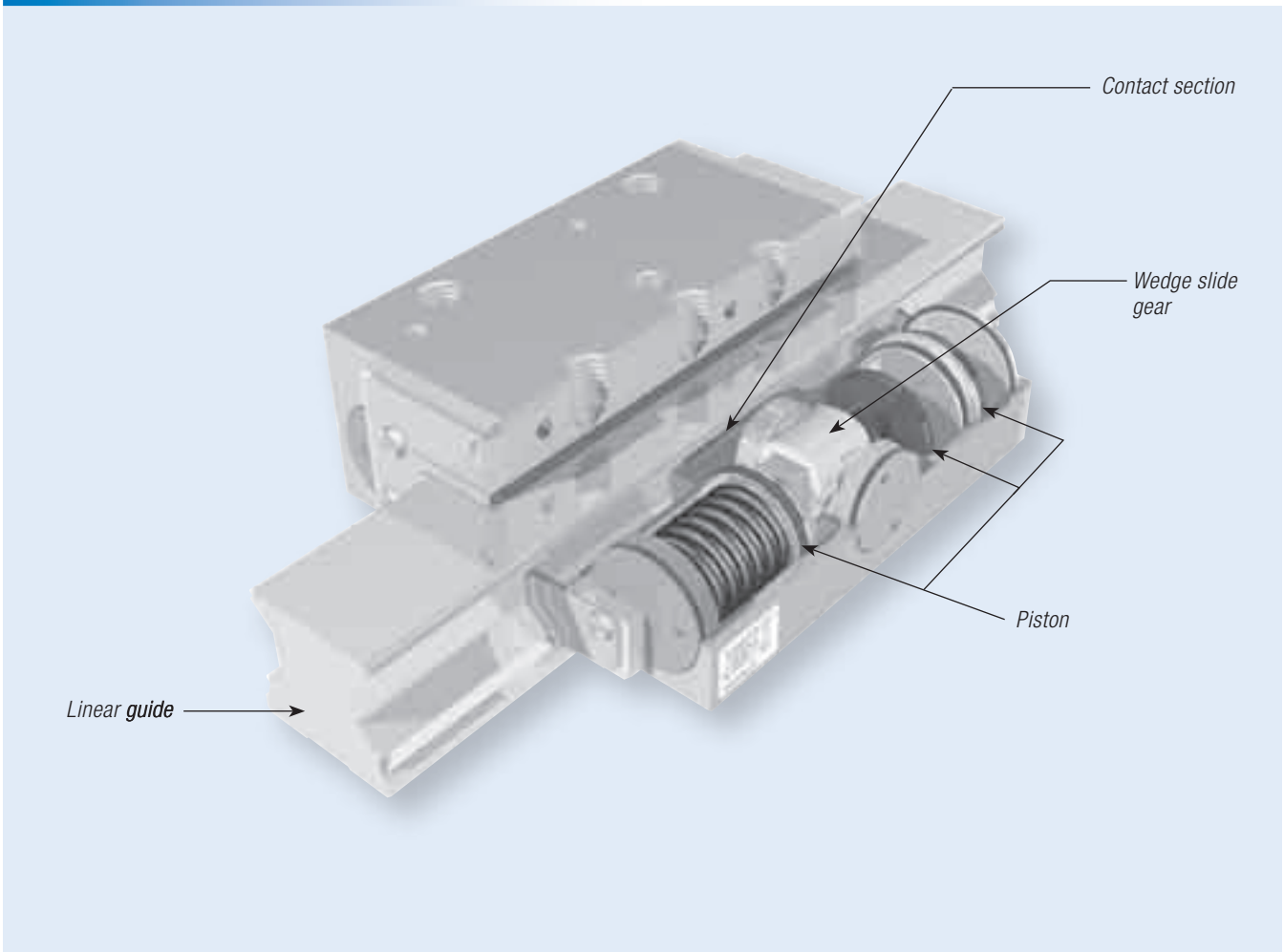
Comment:
The air filter is not necessary if the PLUS-connection is being used. Air connections are located on both sides and can be exchanged according to mounting requirements. The air connection can be fitted to the short side. Only one connection is necessary for function.

G: air connection
G2: can be unscrewed from underneath with DIN 7984
G3: can be unscrewed from underneath with DIN EN ISO 4762

1 air filter

Measure table	Holding power [N] TK Standard	Holding power [N] TK PLUS	min. releasing pressure [bar]	Normal liter [dm³ _/Stroke] Standard	Normal liter [dm³ _/stroke] PLUS	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]
1	2200	3200	5,5	0,15	0,335	100	82	6	max. 186	159	136	88
2	3800	5000	5,5	0,243	0,542	120	100	6	max. 206	177,5	152	88
3	4800	6700	5,5	0,318	1,062	140	116	6	max. 240	207,5	183	100,5
4	2200	3200	5,5	0,15	0,335	100	82	6	max. 178	159	136	88
5	3800	5000	5,5	0,243	0,542	120	100	6	max. 196	177,5	152	88
6	4800	6700	5,5	0,318	1,062	140	116	6	max. 240	207,5	183	100,5
7	2200	3200	5,5	0,15	0,335	100	82	6	max. 175	159	136	88

B4 [mm]	B5 [mm]	B6 [mm]	C [mm]	X [mm]	G	G1 ø/depth	G2 ø/depth	G3 ø/depth	L1 [mm]	L2 [mm]	L3 [mm]
5	31	62	6	48	G1/8“	M10/10	M10/9.5	M10/14	77	28	10
10	40	80	8	60	G1/8“	M12/15	M12/12,4	M12/18	100	18	9
12,5	47,5	95	11	70	G1/8“	M14/12,5	M14/12.5	M14/18	65	70	8,5
0	31	62	7	44	G1/8“	M10/10	M10/10,5	M10/10,5	77	26	9
0	40	80	9	52	G1/8“	M12/10	M12/10,7	M12/12	100	16	8
0	47,5	95	11	63	G1/8“	M14/12	M14/17,5	M14/18	65	70	8,5
0	31	62	11	48	G1/8“	M10/10	M10/10,5	M10/10,5	77	26	9

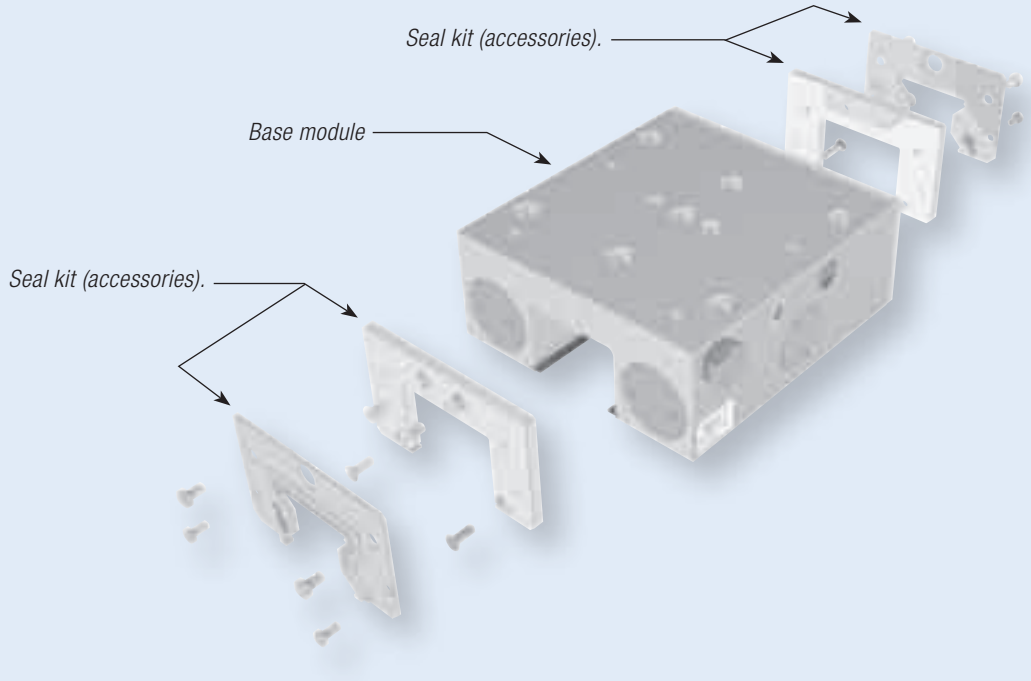


Active without pressure – compact and powerful:
The Clamping and Braking Element with spring-loaded energy storage **UB.**

The UB series combines the technology of the BW, TK and MB series. The rigid housing and central position of the wedge slide gear achieve very high supporting forces. The mounting hole template enables the BW, TK and MB series to be substituted.
The UB series is based on a dual-effective wedge slide gear with spring-loaded energy storage for clamping and braking without pressure. This arrangement of three pistons connected in a line allows use of a stronger spring at 5.5 **bar. The stronger spring-loaded storage** permits holding forces up to 9,000 N. Positive fit contact sections mounted within a strong casing guarantee high axial and horizontal rigidity.
The UB series is designed for braking 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 exclude damage from contamination with chips (chips between contact section and linear guide), the elements can be fitted with original seals (seal kit) from the respective linear guide manufacturer and longitudinal seals as accessories.
When used in harsh work environments or with cooling liquid, the seal kit should be used as well. 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.

UB Design



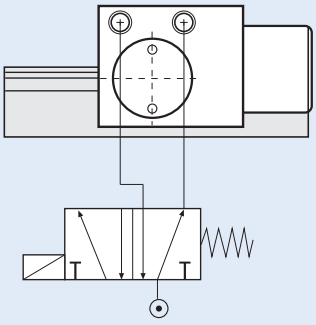
Special characteristics:
- Compatible with the BW, TK and MB series
- Special friction coating for braking
- Pneumatic heavy load type
- Solid and rigid outer casing
- Compact design, DIN 645 compatible
- Exact positioning
- Supporting forces up to 9,000 N
- Higher supporting force with PLUS connection
- Available with CE certification

Application scenarios for UB:
- Clamping in case of pressure drop
- Clamping without energy requirement
- Emergency OFF function
- Braking for linear motors
- Z-axes positioning in neutral position
- Machine table clamping of work centres

Variations:
Seals are recommended in harsh work environments.
The element is also available with CE certification.

Connection options:
The basic version of the UB series features air connections on both sides. This means that the air connection and the air-release filter can be moved over to the opposite side.

Higher supporting forces with PLUS connection:
By using a 5/2 (overflow-free) or 5/3 valve it is possible to support the spring power with pneumatic pressure. By using the PLUS connection, the stated supporting force will be increased.
When the PLUS connection is being used the air-release filter is replaced by connecting a second pneumatic tube (see drawing).
For further information, please refer to the assembly instructions or visit www.zimmer-gmbh.com.



Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [pPage 56]
HSR	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		36	4
		HSR..R, HSR..LR	✆		40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	UBPS 3001 AS1		42	3
		HSR..R, HSR..LR	UBPS 3001 AS1	PUB 30-3	45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	UBPS 3501 AS1		48	6
		HSR..R, HSR..LR	UBPS 3501 AS1	PUB 35-7	55	
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	UBPS 4501 AS1		60	9
		HSR..R, HSR..LR	UBPS 4501 AS1	PUB 45-10	70	
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		70	
		HSR..R, HSR..LR	✆		80	
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		90	
NR/NRS	25	NR / NRS..XR, NR / NRS..XLR, NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	✆		31	
	30	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆		38	
	35	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	UBPS 3501 BS1		44	7
	45	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	UBPS 4501 BS1		52	10
	55	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆		63	
	65	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆		75	
SHS	25	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		36	
		SHS..R, SHS..LR	✆		40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	UBPS 3001 CS1		42	3
		SHS..R, SHS..LR	UBPS 3001 CS1	PUB 30-3	45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	UBPS 3501 CS1		48	6
		SHS..R, SHS..LR	UBPS 3501 CS1	PUB 35-7	55	
	45	SHS..C, SHS..LC, SHS..V, SHS..LV	UBPS 4501 CS1		60	9
		SHS..R, SHS..LR	UBPS 4501 CS1	PUB 45-10	70	
	55	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		70	
		SHS..R, SHS..LR	✆		80	
	65	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		90	
SRG	25	SRG..C, SRG..LC	✆		36	
		SRG..R, SRG..LR	✆		40	
	30	SRG..C, SRG..LC	UBPS 3001 ES1		42	2
		SRG..R, SRG..LR	UBPS 3001 ES1	PUB 30-3	45	
	35	SRG..C, SRG..LC	UBPS 3501 ES1		48	5
		SRG..R, SRG..LR	UBPS 3501 ES1	PUB 35-7	55	
	45	SRG..C, SRG..LC	UBPS 4501 ES1		60	8
		SRG..R, SRG..LR	UBPS 4501 ES1	PUB 45-10	70	
	55	SRG..C, SRG..LC	UBPS 5501 ES1		70	4
		SRG..R, SRG..LR	UBPS 5501 ES1	PUB 55-10	80	
	65	SRG..LC, SRG..LV	✆		90	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 56]
SNR/SNS	25	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		31	
	30	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		38	
	35	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	UBPS 3501 IS1		44	7
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		48	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		55	
	45	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	UBPS 4501 IS1		52	10
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		60	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		70	
	55	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		63	
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		70	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		80	
	65	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	✆		75	

Rail manufacturer

THK The Mark of Linear Motion

UB

1605, 1607, 1645, 1647	15	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662,1665, 1666	✆			
	20	1622, 1623, 1651, 1653, 1661, 1662, 1665, 1666	✆			
	25	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	UBPS 2505 AS1		36	1
		1621, 1624	UBPS 2505 AS1	PUB 25-4	40	
	30	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	UBPS 3005 AS1		42	2
		1621, 1624	UBPS 3005 AS1	PUB 30-3	45	
	35	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	UBPS 3505 AS1		48	5
		1621, 1624	UBPS 3505 AS1	PUB 35-7	55	
	45	1622, 1623, 1651, 1653	UBPS 4505 AS1		60	8
		1621, 1624	UBPS 4505 AS1	PUB 45-10	70	
	55	1651, 1653	UBPS 5505 AS1		70	4
		1621, 1624	UBPS 5505 AS1	PUB 55-10	80	
1805, 1807	25	1851, 1853	UBPS 2505 BS1		36	1
		1821, 1824	UBPS 2505 BS1	PUB 25-4	40	
	35	1851, 1853	UBPS 3505 BS1		48	5
		1821, 1824	UBPS 3505 BS1	PUB 35-7	55	
	45	1851, 1853	UBPS 4505 BS1		60	8
		1821, 1824	UBPS 4505 BS1	PUB 45-10	70	
	55	1851, 1853	UBPS 5505 BS1		70	4
		1821, 1824	UBPS 5505 BS1	PUB 55-10	80	
	65	1853, 1824	✆		90	

Rail manufacturer

Rexroth Bosch Group

MR	25	MR..A, MR..B	✆		36	
		MR..C, MR..D, MR..E	✆		40	
	35	MR..A, MR..B	UBPS 3503 AS1		48	5
		MR..C, MR..D, MR..E	UBPS 3503 AS1	PUB 35-7	55	
	45	MR..A, MR..B	✆		60	
		MR..C, MR..D	✆		70	
	55	MR..A, MR..B	UBPS 5503 AS1		70	4
		MR..C, MR..D	UBPS 5503 AS1	PUB 55-10	80	
	65	MR..B, MR..D	✆		90	

Rail manufacturer

SCHNEEBERGER

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer

IKO

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 56]
LWH	15	LWH..B, LWH..SL, LWH..M, LWHT..B, LWHT..SL, LWHT..M, LWHS..B, LWHS..SL, LWHS..M	✆		24	
		LWHD..B, LWHD..M, LWHY	✆		28	
	20	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHY	✆		30	
	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	✆		36	
		LWHD..B, LWHD..M, LWHDG, LWHY	✆		40	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M,LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	UBPS 3010 AS1		42	3
		LWHD..B, LWHD..M, LWHDG, LWHY	UBPS 3010 AS1	PUB 30-3	45	
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	UBPS 3510 AS1		48	6
		LWHD..B, LWHD..M, LWHDG, LWHY	UBPS 3510 AS1	PUB 35-7	55	
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	✆		60	
		LWHD..B, LWHD..M, LWHDG, LWHY	✆		70	
	55	LWH..B, LWHG, LWHT..B, LWHTG	✆		70	
		LWHD..B, LWHDG, LWHY	✆		80	
	65	LWH..B, LWHG, LWHT..B, LWHTG, LWHD..B, LWHDG, LWHY	✆		90	
LWE	15	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		24	
	20	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		28	
	25	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		33	
	30	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	UBPS 3010 DS1		42	3
	35	LWE..Q, LWET..Q,LWES..Q, LWEC, LWE, LWETC, LWET, LWESC, LWES	UBPS 3510 DS1		48	6
	45	LWE, LWET, LWES	✆		60	
LRX	15	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		24	
		LRXDC, LRXD, LRXDG	✆		28	
	20	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		30	
		LRXDC, LRXD, LRXDG	✆		34	
	25	LRXC, LRX, LRXG	✆		36	
		LRXDC, LRXD, LRXDG	✆		40	
	30	LRXC, LRX, LRXG	UBPS 3010 BS1		42	2
		LRXDC, LRXD, LRXDG	UBPS 3010 BS1	PUB 30-3	45	
	35	LRXC, LRX, LRXG	UBPS 3510 BS1		48	5
		LRXDC, LRXD, LRXDG	UBPS 3510 BS1	PUB 35-7	55	
	45	LRXC, LRX, LRXG	UBPS 4510 BS1		60	8
		LRXDC, LRXD, LRXDG	UBPS 4510 BS1	PUB 45-10	70	
ME	25	MEC, ME, MEG, METC, MET, METG	✆		36	
	30	MEC, ME, MEG, METC, MET, METG	✆		42	
	35	MEC, ME, METC, MET	UBPS 3510 DS1		48	6
	45	ME, MET	✆		60	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer

NSK

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 56]
LH	15	LAH..EMZ, LAH..GMZ	✆		24	
		LAH..ANZ, LAH..BNZ	✆		28	
	20	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	✆		30	
	25	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	✆		36	
		LAH..ANZ, LAH..BNZ	✆		40	
	30	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	UBPS 3004 BS1		42	3
		LAH..ANZ, LAH..BNZ	UBPS 3004 BS1	PUB 30-3	45	
	35	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	UBPS 3504 BS1		48	6
		LAH..ANZ, LAH..BNZ	UBPS 3504 BS1	PUB 35-7	55	
	45	LAH..EMZ, LAH..GMZ	UBPS 4504 BS1		60	9
		LAH..ANZ, LAH..BNZ	UBPS 4504 BS1	PUB 45-10	70	
	55	LAH..EMZ, LAH..GMZ	✆		70	
		LAH..ANZ, LAH..BNZ	✆		80	
	65	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	✆		90	
SH	15	SAH..EMZ, SAH..GMZ	✆		24	
		SAH..ANZ, SAH..BNZ	✆		28	
	20	SAH..EMZ, SAH..GMZ, SAH..ANZ, SAH..BNZ	✆		30	
	25	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	✆		36	
		SAH..ANZ, SAH..BNZ	✆		40	
	30	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	UBPS 3004 BS1		42	3
		SAH..ANZ, SAH..BNZ	UBPS 3004 BS1	PUB 30-3	45	
	35	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	UBPS 3504 BS1		48	6
		SAH..ANZ, SAH..BNZ	UBPS 3504 BS1	PUB 35-7	55	
LY	15	LY..EL, LY..FL, LY.. AL	✆		24	
		LY..AN	✆		28	
	20	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		30	
	25	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		36	
		LY..AN, LY..BN	✆		40	
	30	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	UBPS 3004 CS1		42	3
		LY..AN, LY..BN	UBPS 3004 CS1	PUB 30-3	45	
	35	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	UBPS 3504 CS1		48	6
		LY..AN, LY..BN	UBPS 3504 CS1	PUB 35-7	55	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	UBPS 4504 CS1		60	9
		LY..AN, LY..BN	UBPS 4504 CS1	PUB 45-10	70	
RA	15	RA..AL, RA..BL, RA..EM, RA..GM	✆		24	
		RA..AN, RA..BN	✆		28	
	20	RA..EM, RA..GM, RA..AN, RA..BN	✆		30	
	25	RA..AL, RA..BL, RA..EM, RA..GM	✆		36	
		RA..AN, RA..BN	✆		40	
	30	RA..AL, RA..BL, RA..EM, RA..GM	✆		42	
		RA..AN, RA..BN	✆		45	
	35	RA..AL, RA..BL, RA..EM, RA..GM	UBPS 3504 FS1		48	5
		RA..AN, RA..BN	UBPS 3504 FS1	PUB 35-7	55	
	45	RA..AL, RA..BL, RA..EM, RA..GM	UBPS 4504 FS1		60	8
		RA..AN, RA..BN	UBPS 4504 FS1	PUB 45-10	70	
	55	RA..AL, RA..BL, RA..EM, RA..GM	✆		70	
		RA..AN, RA..BN	✆		80	
	65	RA..EM, RA..GM, RA..AN, RA..BN	✆		90	
LS	15	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	✆		24	
	20	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	✆		28	
	25	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	✆		33	
	30	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	UBPS 3004 AS1		42	3
	35	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	UBPS 3504 AS1		48	6
SS	15	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	✆		24	
	20	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	✆		28	
	25	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	✆		33	
	30	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	UBPS 3004 AS1		42	3
	35	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	UBPS 3504 AS1		48	6

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

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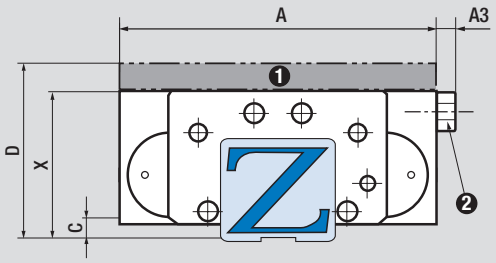
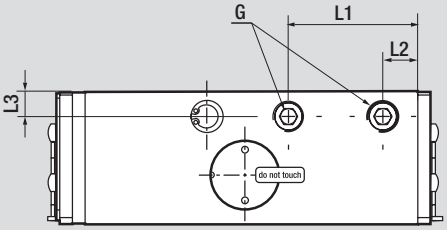
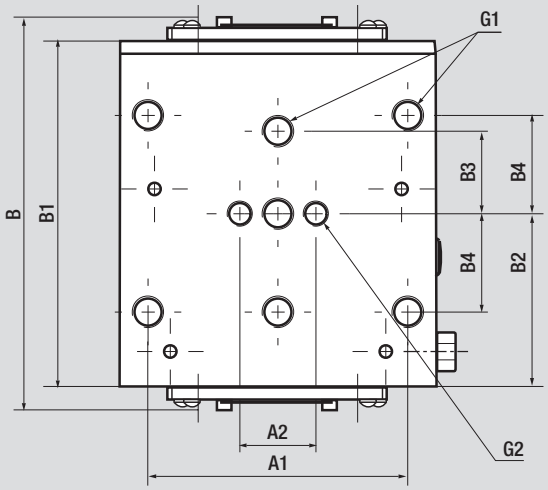
UB





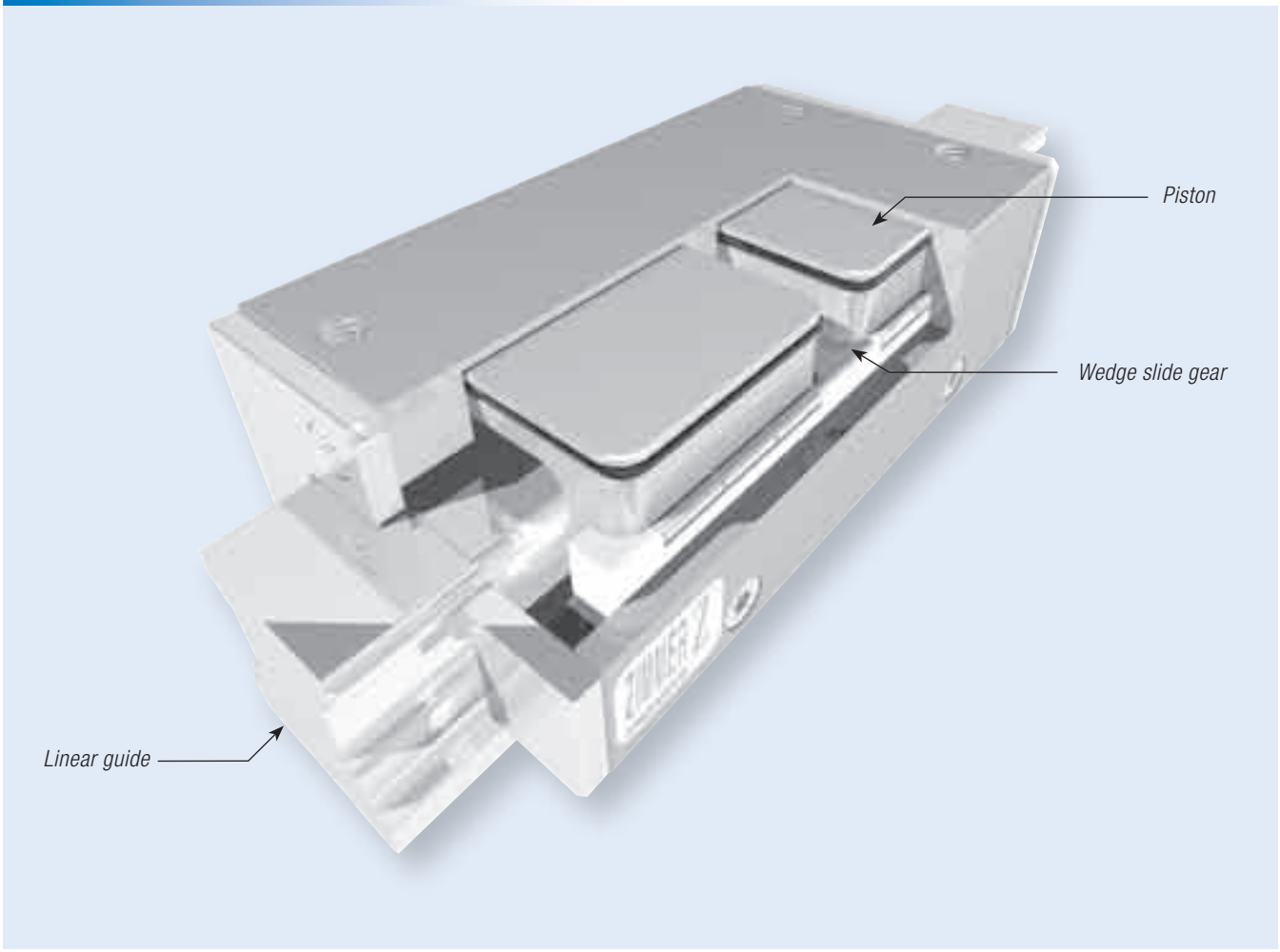


Note: Consider measurement C!

Comment:
The air filter is not necessary if the PLUS-connection is being used. Air connections are located on both sides and can be exchanged according to mounting requirements. Only one connection is necessary for function.

1. Adapter plate PUB (accessory)
2. air filter

Measure table	Holding power [N] UB	Holding power [N] UB [PLUS]	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	B4 [mm]	C	X [mm]	G	G1	G2	L1 [mm]	L2 [mm]	L3 [mm]
1	1.850	2.650	70	57	20	5	max.123	99	49,5	20	22,5	5	36	M5	M8/7	M6/7	34,3	11	6,5
2	2.500	3.300	90	72	22	5	max.134	109	54,5	22	26	5	42	M5	M10/8	M8/8	40,8	11	6,5
3	1.850	2.650	90	72	22	5	max.134	109	54,5	22	26	5	42	M5	M10/8	M8/8	40,8	11	6,5
4	7.700	9.200	140	116	-	6	max.158	139	69,5	35	47,5	10	70	1/8“	M14/14	-	65	37,5	12
5	2.800	3.800	100	82	24	6	max.136	108	54,5	26	31	6	48	1/8“	M10/10	M8/10	40,8	11	8
6	2.500	3.300	100	82	24	6	max.134	108	54,5	26	31	6	48	1/8“	M10/10	M8/10	40,8	11	8
7	2.500	3.300	100	-	24	6	max.124	109	54,5	-	31	5,5	44	1/8“	M10/10	M8/10	40,8	11	7
8	3.700	4.800	120	100	26	6	max.141	117	58,5	30	40	8	60	1/8“	M12/12	M10/12	48,8	31,5	12
9	2.800	3.800	120	100	26	6	max.130	109	54,5	30	40	8	60	1/8“	M12/12	M10/12	45	28	8
10	2.800	3.800	120	-	26	6	max.130	109	54,5	40	-	7	52	1/8“	M12/12	M10/12	84	25	7



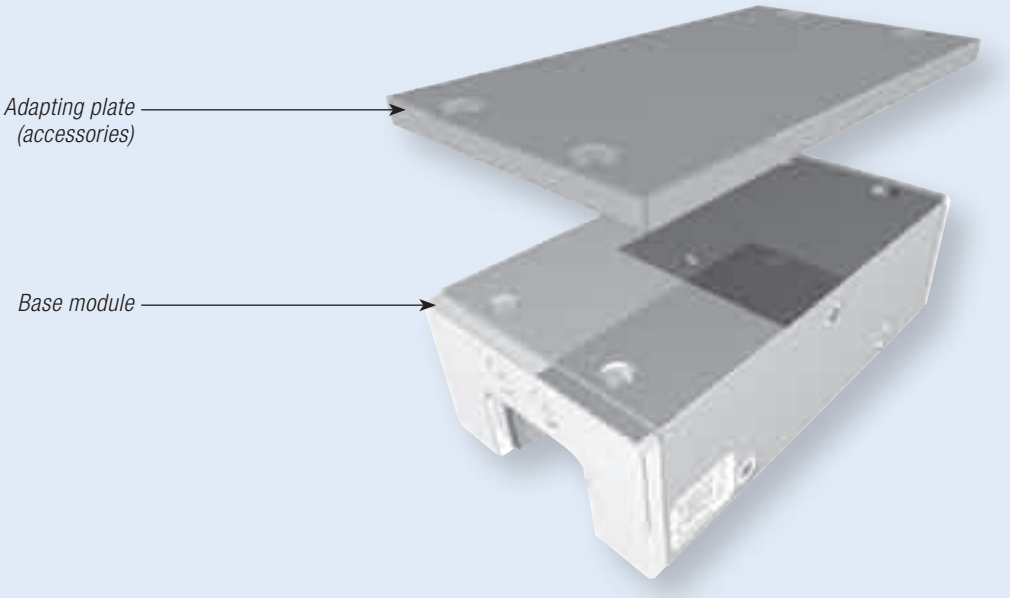
Active without pressure – narrow and low (S2):
The Clamping and Braking Element with spring-loaded energy storage **LB.**

The LB series uses the housing attached to the connection design for direct spring-loaded energy storage. This enables very exact positioning and high supporting forces.
The LB series is an inexpensive clamping and braking element which is available for rail sizes 15-45. At a pneumatic opening pressure of **>4 bar a holding power of up to 2,000 N is achieved.**

Because of the material combination of the linear guide/contact section, the linear guide won't be damaged by the contact section.

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.

LB Design



Special characteristics:
- Inexpensive
- High clamping forces
- Narrow, low construction form
- Maximum axial rigidity from direct transmission of power from connection design to guide rail
- Exact positioning
- Lower opening pressure of >4 bar
- Special coating for braking
- Short reaction time

Application scenarios for LB:
- Clamping in case of pressure drop
- Emergency OFF function
- Braking for linear motors
- Fixing of vertical axes in neutral position
- Machine table clamping of work centres

Variations:
Depending on the height of the carriage, an additional adapting plate must be ordered (see table).

Connection options:
The air can be connected on both sides.

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Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm]	*2 Measure table [page 63]
HSR	15	HSR..A, HSR.. B	✆		24	
		HSR..R	✆		28	
	20	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		30	
	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	LBPS 2501 AS2		36	1
		HSR.. R, HSR..LR	LBPS 2501 AS2	PLB 25-4	40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		42	
		HSR.. R, HSR..LR	✆		45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		48	
		HSR.. R, HSR..LR	✆		55	
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆		60	
		HSR.. R, HSR..LR	✆		70	
SHS	15	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		24	
		SHS..R	✆		28	
	20	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		30	
	25	SHS..C, SHS..LC, SHS..V, SHS..LV	LBPS 2501 CS2		36	1
		SHS..R, SHS..LR	LBPS 2501 CS2	PLB 25-4	40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		42	
		SHS..R, SHS..LR	✆		45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		48	
		SHS..R, SHS..LR	✆		55	
	45	SHS..C, SHS..LC, SHS..V, SHS..LV	✆		60	
		SHS..R, SHS..LR	✆		70	
SRG	15	SRG..A, SRG..V	✆		24	
	20	SRG..A, SRG..LA, SRG..V, SRG..LV	✆		30	
	25	SRG..C, SRG..LC	LBPS 2501 ES2		36	1
		SRG..R, SRG..LR	LBPS 2501 ES2	PLB 25-4	40	
	30	SRG..C, SRG..LC	✆		42	
		SRG..R, SRG..LR	✆		45	
	35	SRG..C, SRG..LC	✆		48	
		SRG..R, SRG..LR	✆		55	
	45	SRG..C, SRG..LC	✆		60	
		SRG..R, SRG..LR	✆		70	

Rail manufacturer

Rexroth
Bosch Group

1605, 1607, 1645, 1647	15	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	✆		24	
		1621	✆		28	
	20	1622, 1623, 1651, 1653, 1661, 1662, 1665, 1666	✆		30	
	25	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	LBPS 2505 AS2		36	1
		1621, 1624	LBPS 2505 AS2	PLB 25-4	40	
	30	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	✆		42	
		1621, 1624	✆		45	
	35	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	✆		48	
		1621, 1624	✆		55	
	45	1622, 1623, 1651, 1653	✆		60	
		1621, 1624	✆		70	
1805, 1807	25	1851, 1853	LBPS 2505 BS2		36	1
		1821, 1824	LBPS 2505 BS2	PLB 25-4	40	
	35	1851, 1853	✆		48	
		1821, 1824	✆		55	
	45	1851, 1853	✆		60	
		1821, 1824	✆		70	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table page 63]
MR	25	MR..A, MR..B	x			
		MR..C, MR..D, MR..E	LBPS 2503 AS3	PLB 25-2	40	2
	35	MR..A, MR..B	✆		48	
		MR..C, MR..D, MR..E	✆		55	
	45	MR..A, MR..B,	✆		60	
		MR..C, MR..D	✆		70	
LWH	15	LWH..B, LWH..SL, LWH..M, LWHT..B, LWHT..SL, LWHT..M, LWHS..B, LWHS..SL, LWHS..M	✆		24	
		LWHD..B, LWHD..M, LWHY	✆		28	
	20	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHY	✆		30	
	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	LBPS 2510 AS2		36	1
		LWHD..B, LWHD..M, LWHDG, LWHY	LBPS 2510 AS2	PLB 25-4	40	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M,LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	✆		42	
		LWHD..B, LWHD..M, LWHDG, LWHY	✆		45	
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	✆		48	
		LWHD..B, LWHD..M, LWHDG, LWHY	✆		55	
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	✆		60	
		LWHD..B, LWHD..M, LWHDG, LWHY	✆		70	
LWE	15	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		24	
	20	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		28	
	25	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	LBPS 2510 DS2		33	4
	30	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	✆		42	
	35	LWE..Q, LWET..Q,LWES..Q, LWEC, LWE, LWETC, LWET, LWESC, LWES	✆		48	
	45	LWE, LWET, LWES	✆		60	
LRX	15	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		24	
		LRXDC, LRXD, LRXDG	✆		28	
	20	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		30	
		LRXDC, LRXD, LRXDG	✆		34	
	25	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	x		36	
		LRXDC, LRXD, LRXDG	LBPS 2510 BS2		40	3
	30	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		42	
		LRXDC, LRXD, LRXDG	✆		45	
	35	LRXC, LRX, LRXG	✆		48	
		LRXDC, LRXD, LRXDG	✆		55	
	45	LRXC, LRX, LRXG	✆		60	
		LRXDC, LRXD, LRXDG	✆		70	

Rail manufacturer

SCHNEEBERGER

Rail manufacturer

IKO

LRX: This table applies only for rail use without cover sheet!
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet
x: not feasible

See page 13 for part number explanation

Rail manufacturer

INA

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 63]
TKD (KUE)	15	KWE	✆		24	
		KWE..-H	✆		28	
	20	KWE, KWE..-H	✆		30	
	25	KWE	✆		36	
		KWE..-H	✆		40	
	30	KWE	✆		42	
		KWE..-H	✆		45	
	35	KWE	✆		48	
		KWE..-H	✆		55	
TKSD (KUSE)	20	KWSE, KWSE..-L, KWSE..-H, KWSE..-HL	✆		30	
	25	KWSE, KWSE..-L	LBPS 2505 AS2		36	1
		KWSE..-H, KWSE..-HL	LBPS 2505 AS2	PLB 25-4	40	
	30	KWSE, KWSE..-L	✆		42	
		KWSE..-H, KWSE..-HL	✆		45	
	35	KWSE, KWSE..-L	✆		48	
		KWSE..-H, KWSE..-HL	✆		55	
	45	KWSE, KWSE..-L	✆		60	
		KWSE..-H, KWSE..-HL	✆		70	
TSX - E (RUE)	25	RWU..-D, RWU.. -D-L	LBPS 2505 DS2		36	1
		RWU..-D-H, RWU..-D-HL	LBPS 2505DS2	PLB 25-4	40	
	30	RWU..-E, RWU..-E-L, RWU..-E-KT-L	✆		42	
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	✆		45	
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	✆		48	
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	✆		55	

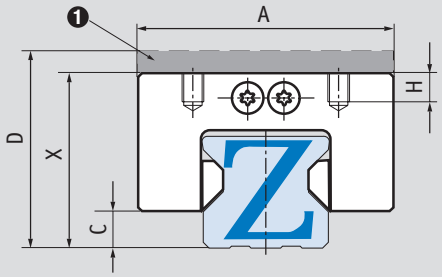
Rail manufacturer

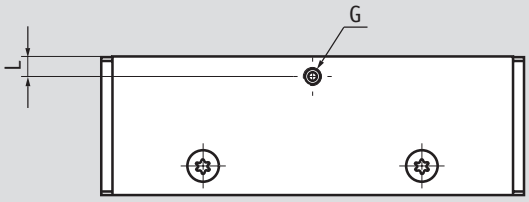
NSK

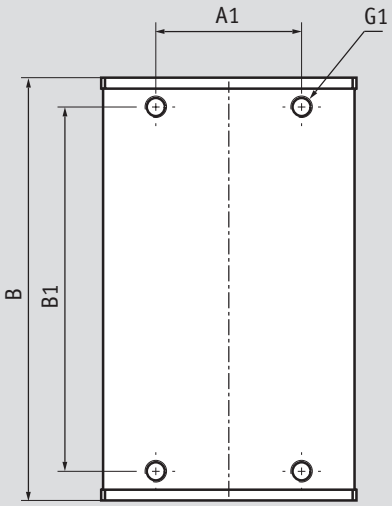
LH	15	LAH..EMZ, LAH..GMZ	✆		24	
		LAH..ANZ, LAH..BNZ	✆		28	
	20	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	✆		30	
	25	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	LBPS 2504 BS2		36	1
		LAH..ANZ, LAH..BNZ	LBPS 2504 BS2	PLB 25-4	40	
	30	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	✆		42	
		LAH..ANZ, LAH..BNZ	✆		45	
	35	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	✆		48	
		LAH..ANZ, LAH..BNZ	✆		55	
	45	LAH..EMZ, LAH..GMZ	✆		60	
		LAH..ANZ, LAH..BNZ	✆		70	
LY	15	LY..EL, LY..FL, LY.. AL	✆		24	
		LY..AN	✆		28	
	20	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		30	
	25	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	LBPS 2504 CS2		36	1
		LY..AN, LY..BN	LBPS 2504 CS2	PLB 25-4	40	
	30	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		42	
		LY..AN, LY..BN	✆		45	
	35	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		48	
		LY..AN, LY..BN	✆		55	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	✆		60	
		LY..AN, LY..BN	✆		70	
LA	25	LA..EL, LA..GL, LA..FL, LA..HL	LBPS 2504 DS2		36	1
		LA..AN, LA..BN	LBPS 2504 DS2	PLB 25-4	40	
	30	LA..EL, LA..GL, LA..FL, LA..HL	✆		42	
		LA..AN, LA..BN	✆		45	
	35	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	✆		48	
		LA..AN, LA..BN	✆		55	
	45	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	✆		60	
		LA..AN, LA..BN	✆		70	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 13 for part number explanation







Note: Consider measurement C!

G: Air connection

1 Adapting plate PLB (accessories)

Measure table	Holding power [N] LB	A [mm]	A1 [mm]	B [mm]	B1 [mm]	C [mm]	X [mm]	G	G1	H [mm]	L [mm]
1	750	48	25	90	76	8,5	36	M5	M5	6	5,5
2	750	48	25	90	76	10,5	38	M5	M5	6	5,5
3	750	48	25	90	76	12,5	40	M5	M5	6	5,5
4	750	48	25	90	76	5,5	33	M5	M5	6	5,5

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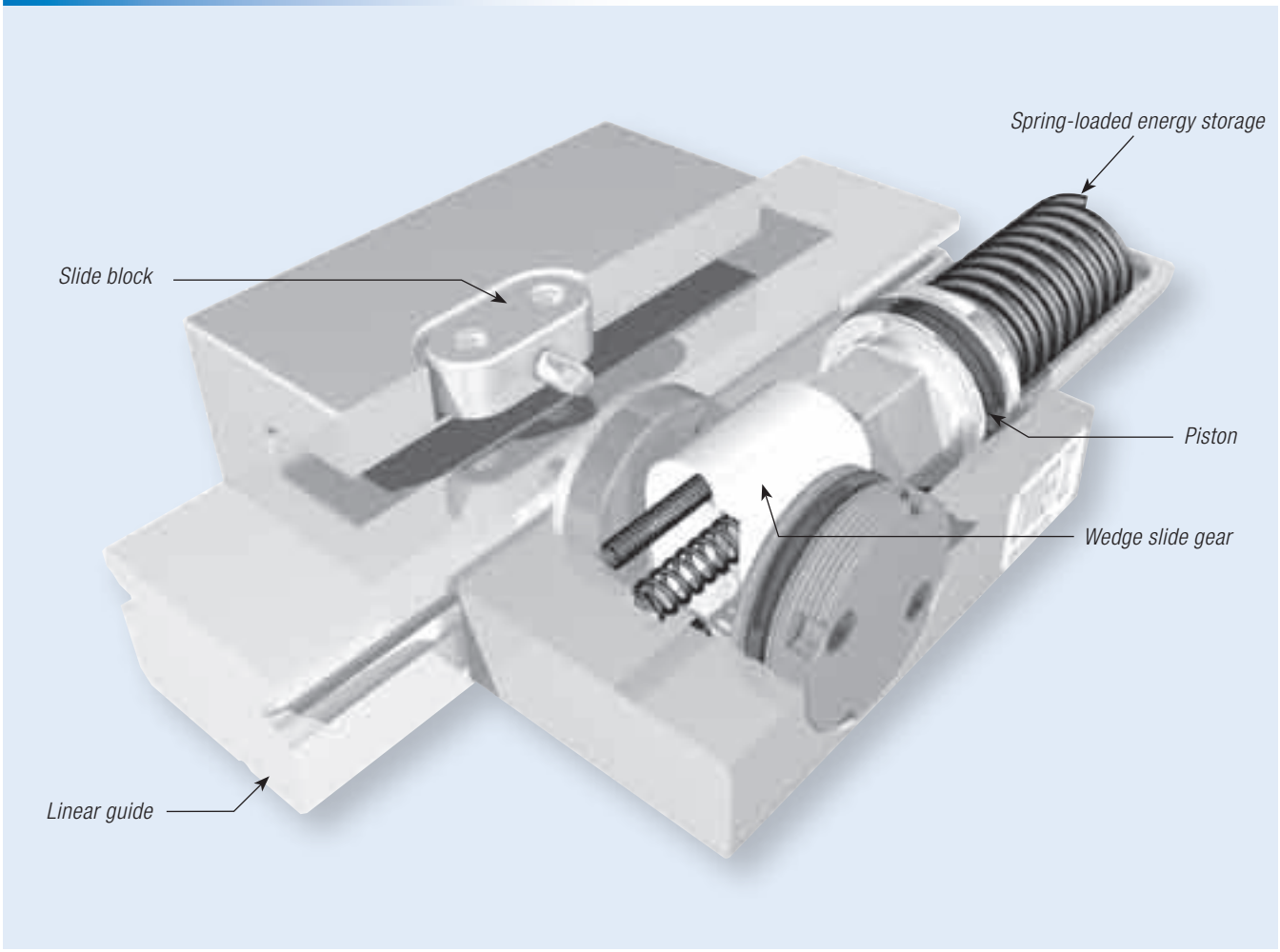
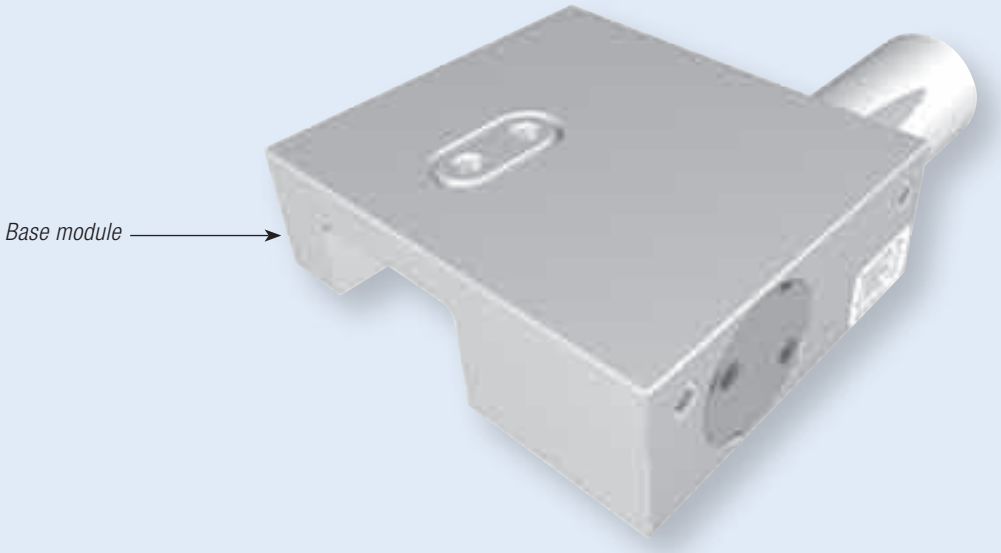


New product for miniature section rails:
Miniature clamping MC.

The MC series was developed specially for miniature guide rails and can be used for miniature rail sizes from 5–20. They are asymmetrically arranged with respect to the rail axis,which makes it possible to keep the carriage width on one side.

The wrap-around clamp is floating, consequently there are no transverse forces in adjoining structures. This also enables a friction connection for the contact sections between the element and linear guide.

MC Design

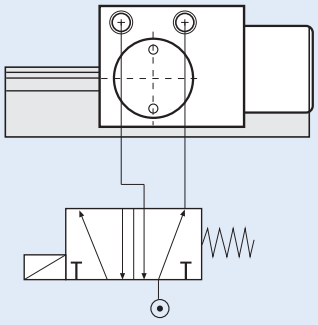


Special characteristics:
- Clamping for miniature guiding systems
- Compact design
- Exact positioning
- Supporting forces up to 500 N
- Opening pressure **> 5.5 bar**
- No lateral forces

Application scenarios for MC:
- Clamping in case of pressure drop
- Clamping of guide tables
- Clamping without energy requirement
- Axes positioning in neutral position

Connection options:
The air connection is located on the side.

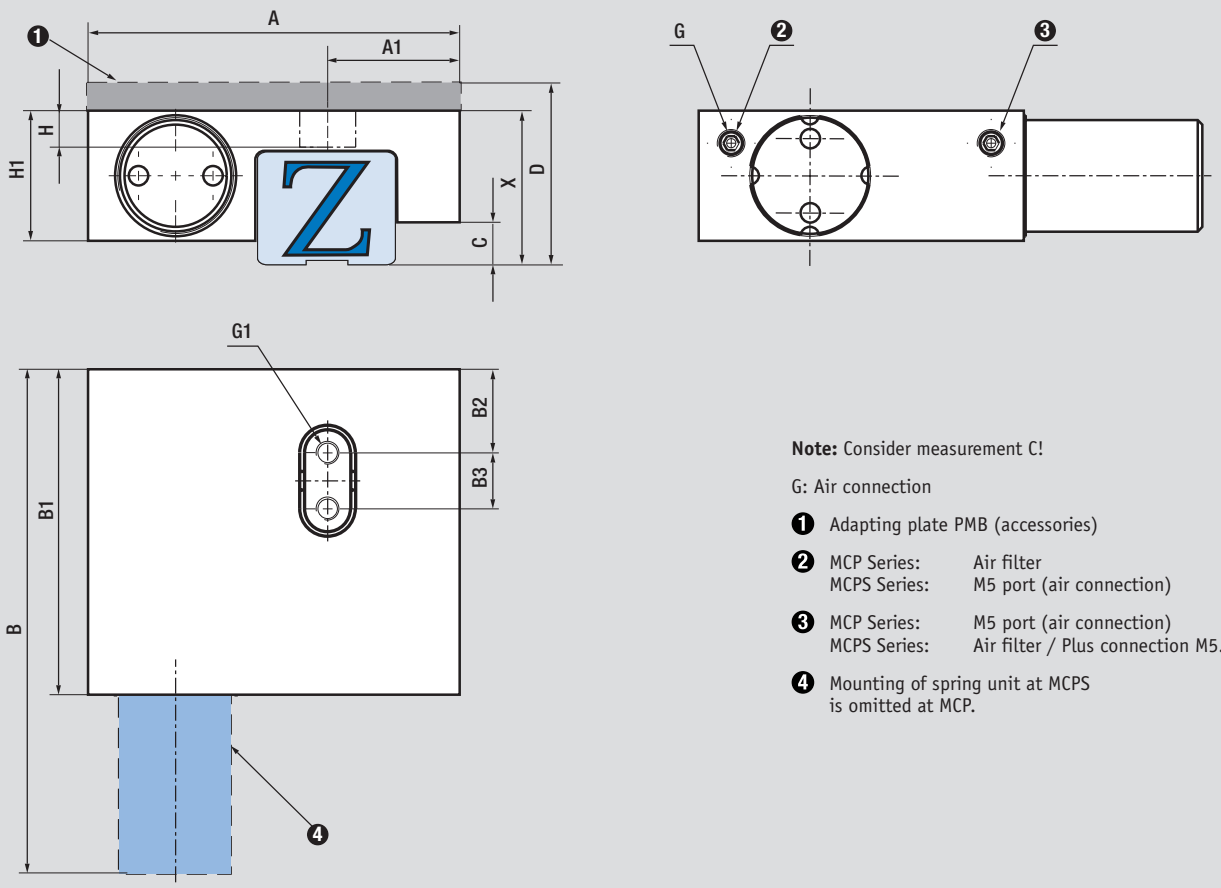
Higher supporting forces with PLUS connection (MCPS):
By using a 5/2 (overflow-free) or 5/3 valve it is possible to support the spring power with pneumatic pressure. By using the PLUS connection, thestated supporting force will be increased.
When the PLUS connection (MCPS only) is being used the air-release filter is replaced by connecting a second pneumatic tube (see drawing).
For further information, please refer to the assembly instructions or visit www.zimmer-gmbh.com.



Rail manufacturer	Type of rail	Size	Type of carriage	Item number	Measure D [mm]*2	Measure table [page 67]
THK The Mark of Linear Motion	SRS	9	SRS..M	MCP/MCPS 0901 H	10	5
		12	SRS..M	MCP/MCPS 1201 A	13	2
		15	SRS..M	MCP/MCPS 1501 H	16	3
		20	SRS..M	MCP/MCPS 2001 A	20	4
	RSR	3	RSR..M, RSR..N	✆	4	
		5	RSR..M, RSR..N	✆	6	
		7	RSR..M, RSR..N, RSR..ZM	✆	8	
		9	RSR..KM, RSR..N, RSR..ZM	MCP/MCPS 0901 A	10	1
		12	RSR..VM, RSR..N, RSR..ZM	✆	13	
		15	RSR..VM, RSR..N, RSR..ZM	✆	16	
		20	RSR..VM, RSR..N	✆	20	
Rail manufacturer Rexroth Bosch Group	0445	7	0442..7, 0444..7	✆	8	
		9	0442..9/M3, 0442..9/M2, 0444..9/M3	MCP/MCPS 0901 A	10	1
		12	0442..12, 0444..12	MCP/MCPS 1205 A	13	2
		15	0442..15, 0444..15	MCP/MCPS 1505 A	16	3
		20	0442..20	✆	25	
Rail manufacturer SCHNEEBERGER	MN	7	MNN	✆	8	
		9	MNN	MCP/MCPS 0901 A	10	1
		12	MNN	MCP/MCPS 1201 A	13	2
		15	MNN	MCP/MCPS 1504 A	16	3
Rail manufacturer IKO	LWL	5	LWLC..B, LWLC..N, LWL..B, LWL..N	✆	6	
		7	LWLC..B, LWLC..N, LWL..B, LWL..N, LWLG..B, LWLG..N	✆	8	
		9	LWLC..B, LWLC..N, LWL..B, LWL..N, LWL..BCS, LWLG..B, LWLG..N	MCP/MCPS 0901 A	10	1
		12	LWLC..B, LWL..B, LWL..BCS, LWLG..B	MCP/MCPS 1201 A	13	2
		15	LWLC..B, LWL..B, LWL..BCS, LWLG..B	MCP/MCPS 1504 A	16	3
		20	LWLC..B, LWL..B, LWL..BCS, LWLG..B	MCP/MCPS 2001 A	20	4
		25	LWLC..B, LWL..B, LWLG..B,	✆	25	
Rail manufacturer INA	TKDM (KUME)	5	KWEM, KWEM..-C	✆	6	
		7	KWEM, KWEM..-L, KWEM..-C	✆	8	
		9	KWEM, KWEM..-L, KWEM..-C	MCP/MCPS 0901 A	10	1
		12	KWEM, KWEM..-L, KWEM..-C	MCP/MCPS 1201 A	13	2
		15	KWEM, KWEM..-L, KWEM..-C	MCP/MCPS 1504 A	16	3
Rail manufacturer HIWIN Lineartechnologie	MGN	9	MGN..C, MGN..H	MCP/MCPS 0901 A	10	1
		12	MGN..C, MGN..H	MCP/MCPS 1201 A	13	2
		15	MGN..C, MGN..H	MCP/MCPS 1504 A	16	3
Rail manufacturer NSK	LU PU	5	LU..TL, PU..TR	✆	6	
		7	LU..AL, PU..AR	✆	8	
		9	LU..AR, LU..TR , LU..AL , LU..TL , LU..BL, LU..UL, PU..TR	MCP/MCPS 0901 A	10	1
		12	LU..AR, LU..TR , LU..AL , LU..TL , LU..BL, LU..UL, PU..TR	MCP/MCPS 1201 A	13	2
		15	LU..AL , LU..BL, PU..AL	MCP/MCPS 1504 A	16	3

*2 Supplements the measure table and datasheet

See page 12 for part number explanation



Note: Consider measurement C!

G: Air connection

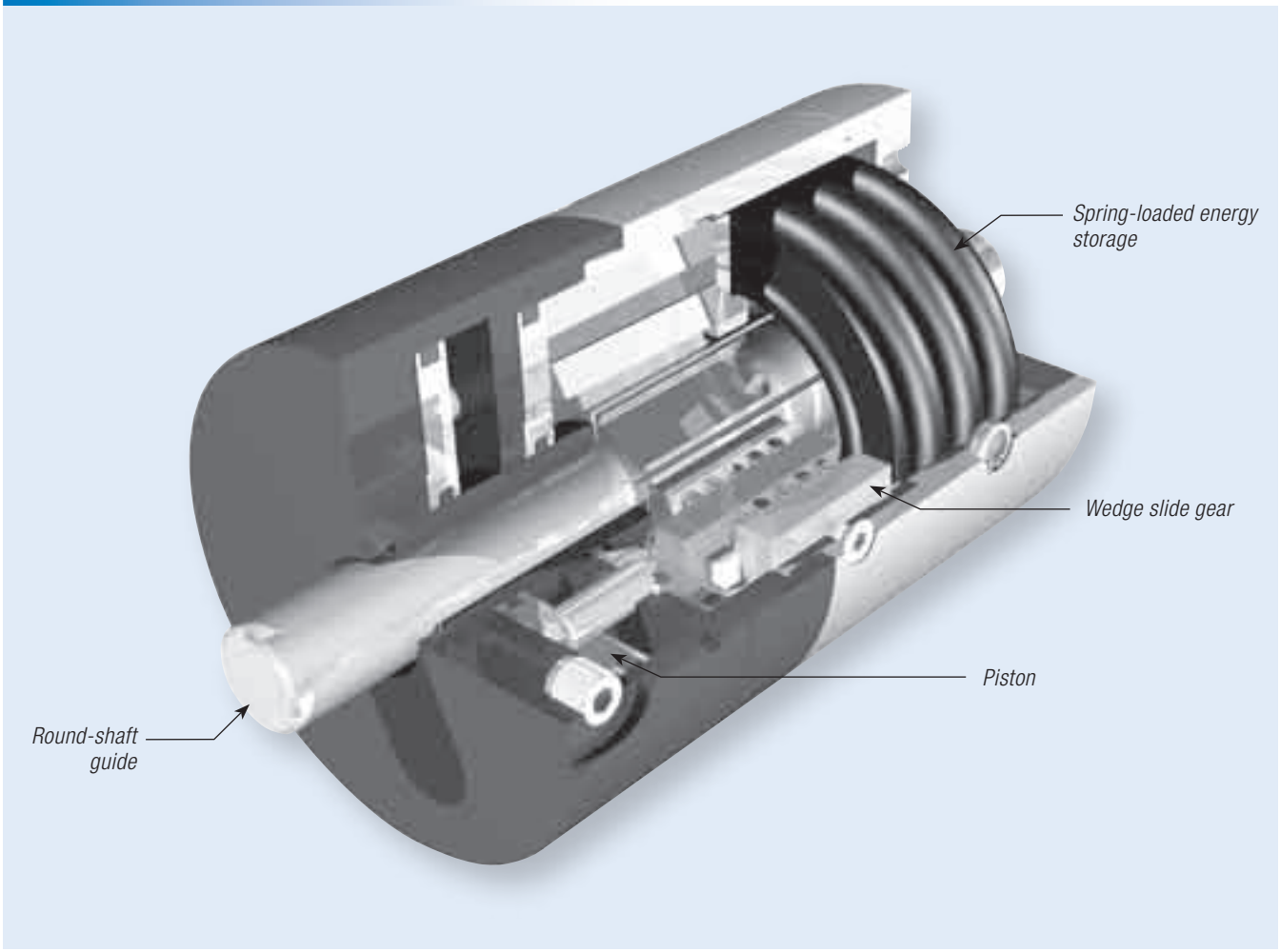
❶ Adapting plate PMB (accessories)

❷ MCP Series: Air filter
MCPS Series: M5 port (air connection)

❸ MCP Series: M5 port (air connection)
MCPS Series: Air filter / Plus connection M5.

❹ Mounting of spring unit at MCPS is omitted at MCP.

Measure table	Holding power [N] MCP	Holding power [N] MCPS	A [mm]	A1 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	G1	H [mm]	H1 [mm]
1	130	80	32,5	9,7	53	34	8,25	5,5	2,15	10	M3	M2,5	3,3	15
2	280	240	37,5	13,2	53,2	34	8,25	5,5	2,95	13	M3	M2,5	3,5	16
3	320	280	41,5	15,7	53,2	34	8	6	3,95	16	M3	M2,5	3,8	16
4	550	400	48,7	19,7	60	41	10,5	8	2,45	20	M3	M4	6,2	23
5	200	170	32	9,2	46	34	8,25	5,5	2,05	10	M3	M2,5	3,3	14



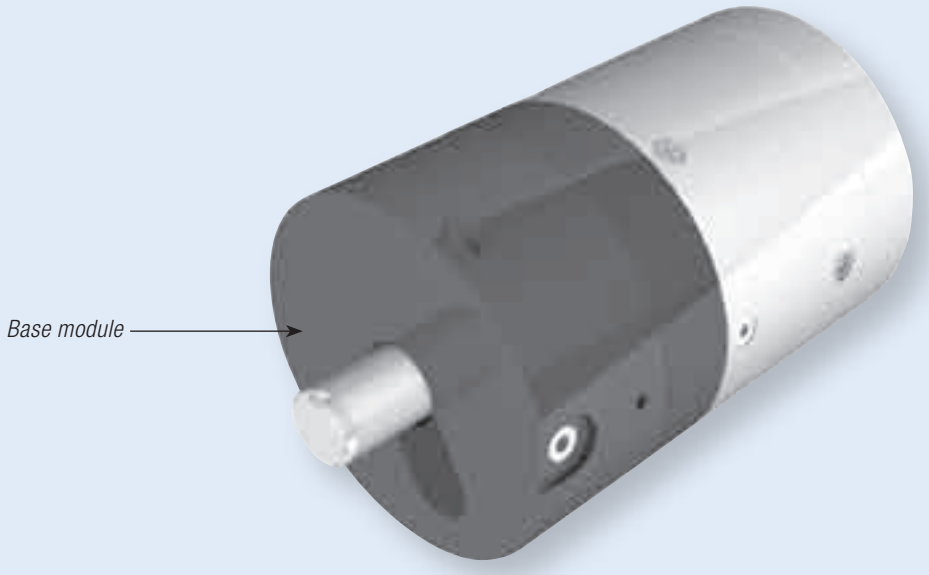
Active without pressure – incredible holding force

The pneumatic Clamping and Braking Element for piston rods **RB.**

The RB series is based on our proven wedge slide gear principle and is used for clamping and braking without pressure.
This element was developed for deployment on round-shaft guides or piston rods with a surface hardness of min. HRC 54.
The compact design is suitable for shaft diameters of Ø10 to Ø60 and allows holding forces of up to 60,000 N at a pneumatic opening pressure of just 4 bar.

As a specific feature no reset is needed for restarting.
The RB series stands out for its short reaction times. Even in vertical deployment, short braking distance are achieved in less than 30 ms.
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.

RB Design

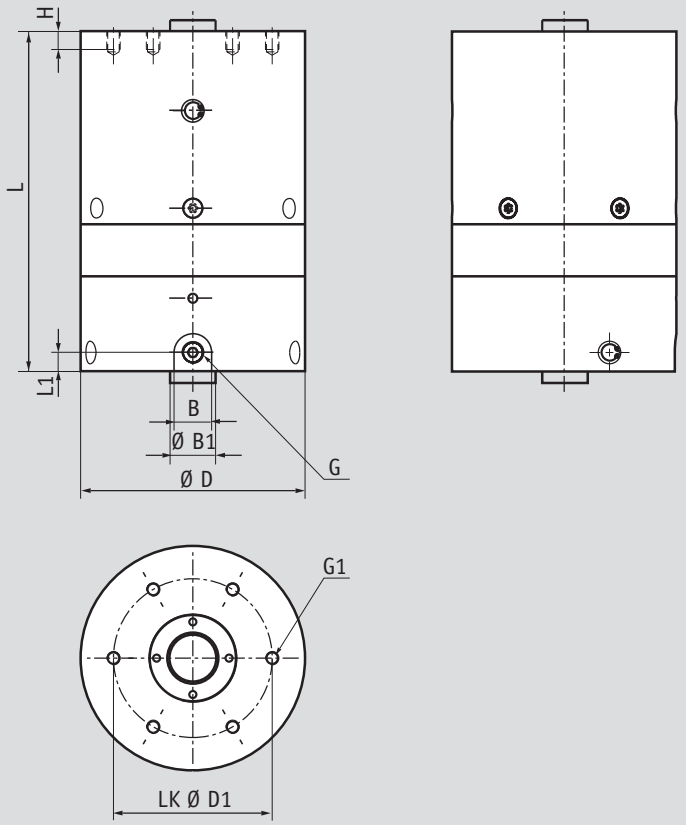


Special characteristics:
- Compact design
- High clamping forces
- Short reaction times
- Exact positioning
- Opening pressure **>4 bar, pneumatic**
- Holding power up to 60,000 N
- Reaction time **<30 ms**
- No reset for restarting
- Short cycle times

Application scenarios for RB:
- Positioning of axes
- Clamping and braking in case of pressure drop
- Fixing of vertical axes
- Positioning of lifting devices

Connection options:
The air connection is located on the side.
A PLUS connection (see Technical Operation Principles) is not possible.

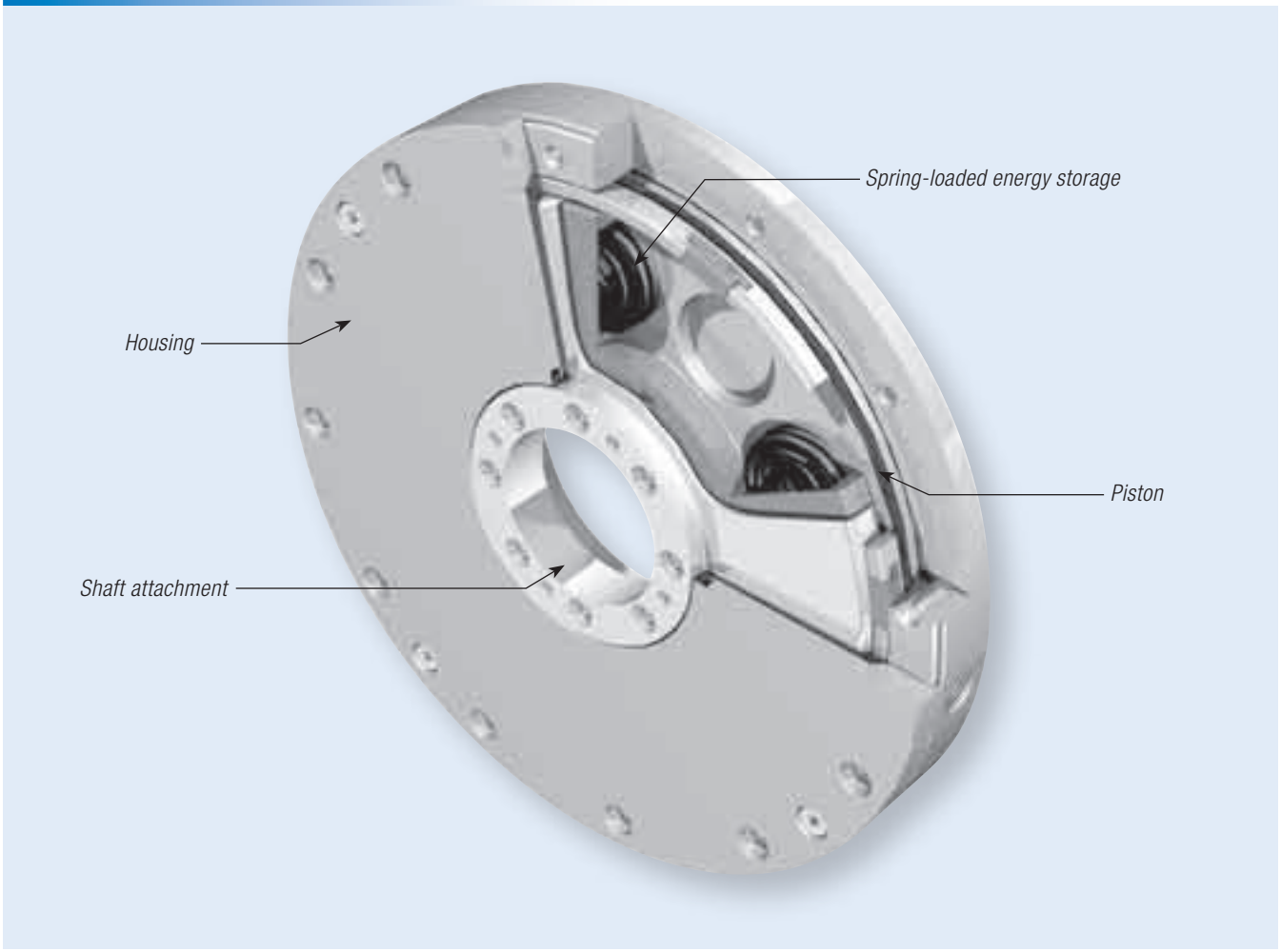
RB



G: Air connection

Size [mm]	Item Number	Holding power [N] RB	Ø D [mm]	LK Ø D1 [mm]	L [mm]	L1 [mm]	G	G1	H [mm]	B [mm]	Ø B1 [mm]
12	RBPS 1200	10000	99	70	150	8,4	G1/8“	M6	8	16,6	20
14	RBPS 1400	10000	99	70	150	8,4	G1/8“	M6	8	16,6	20
15	RBPS 1500	10000	99	70	150	8,4	G1/8“	M6	8	16,6	20
16	RBPS 1600	10000	99	70	150	8,4	G1/8“	M6	8	16,6	20
18	RBPS 1800	10000	99	70	150	8,4	G1/8“	M6	8	16,6	20
20	**RBPS 2000**	**10000**	**99**	**70**	**150**	**8,4**	**G1/8“**	**M6**	**8**	**16,6**	**20**
22	RBPS 2200	18.000	135	90	165	9,25	G1/8“	M8	9	20	28
24	RBPS 2400	18.000	135	90	165	9,25	G1/8“	M8	9	20	28
25	RBPS 2500	18.000	135	90	165	9,25	G1/8“	M8	9	20	28
26	RBPS 2600	18.000	135	90	165	9,25	G1/8“	M8	9	20	28
28	**RBPS 2800**	**18.000**	**135**	**90**	**165**	**9,25**	**G1/8“**	**M8**	**9**	**20**	**28**
30	RBPS 3000	✆									
32	RBPS 3200	✆									
35	RBPS 3500	✆									
36	RBPS 3600	✆									
38	RBPS 3800	✆									
40	RBPS 4000	✆									
42	RBPS 4200	✆									
45	**RBPS 4500**	✆									
46	RBPS 4600	✆									
48	RBPS 4800	✆									
50	RBPS 5000	✆									
55	RBPS 5500	✆									
60	**RBPS 6000**	✆									

Further round-shaft sizes on request.
Highlighted sizes are standard products.

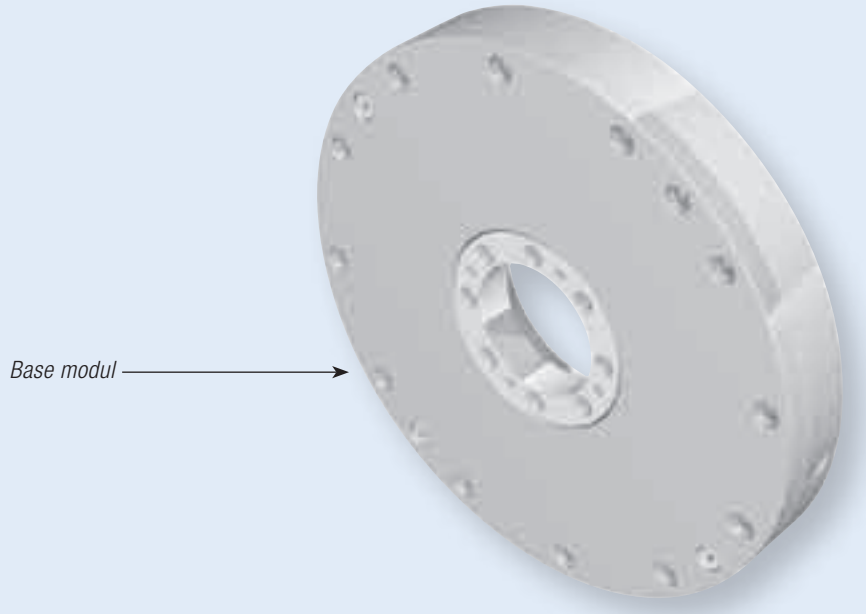


Active without pressure – flat design:
The Clamping Element for torque take-up with spring-loaded energy storage **TP.**

The TP series is a pneumatic clamping element for torque motors or for rotational axes. It works with a newly developed spring-loaded energy storage system. Torque take-up occurs inside the TP which excludes wear on the driven shaft. TP achieves high holding torques at a pneumatic opening pressure of > 4 bar.

Due to high rigidity, positioning accuracy is exact in use.
The zero maintenance TP is suitable for shaft diameters of Ø50 to Ø320 mm. It is characterised by easy assembly and a flat design.

TP Design

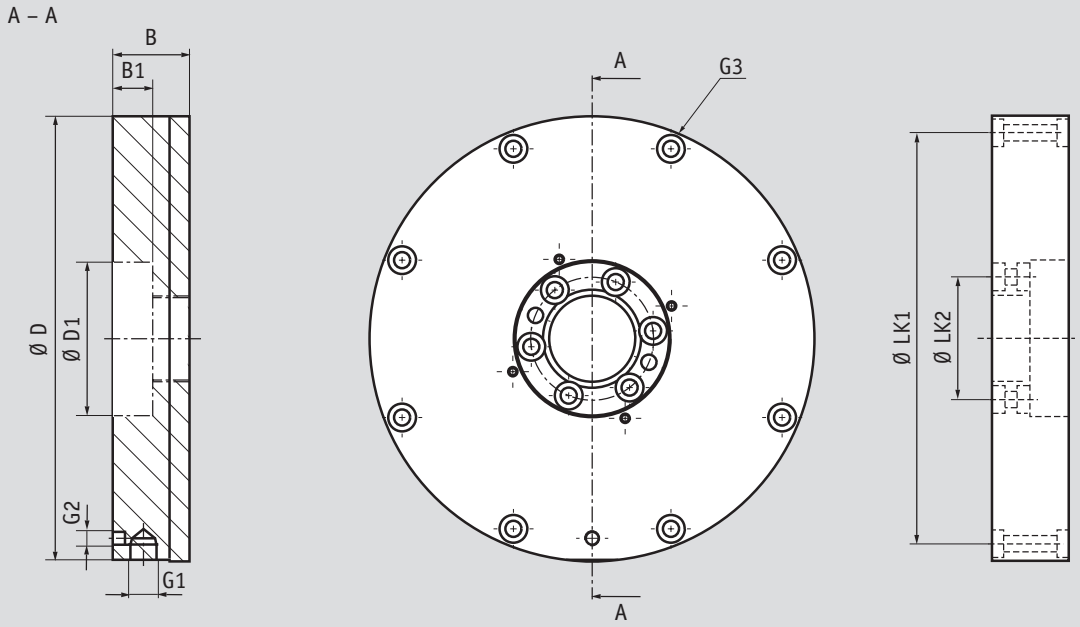


Special characteristics:
- High holding torques
- High rigidity
- Exact positioning
- Flat design

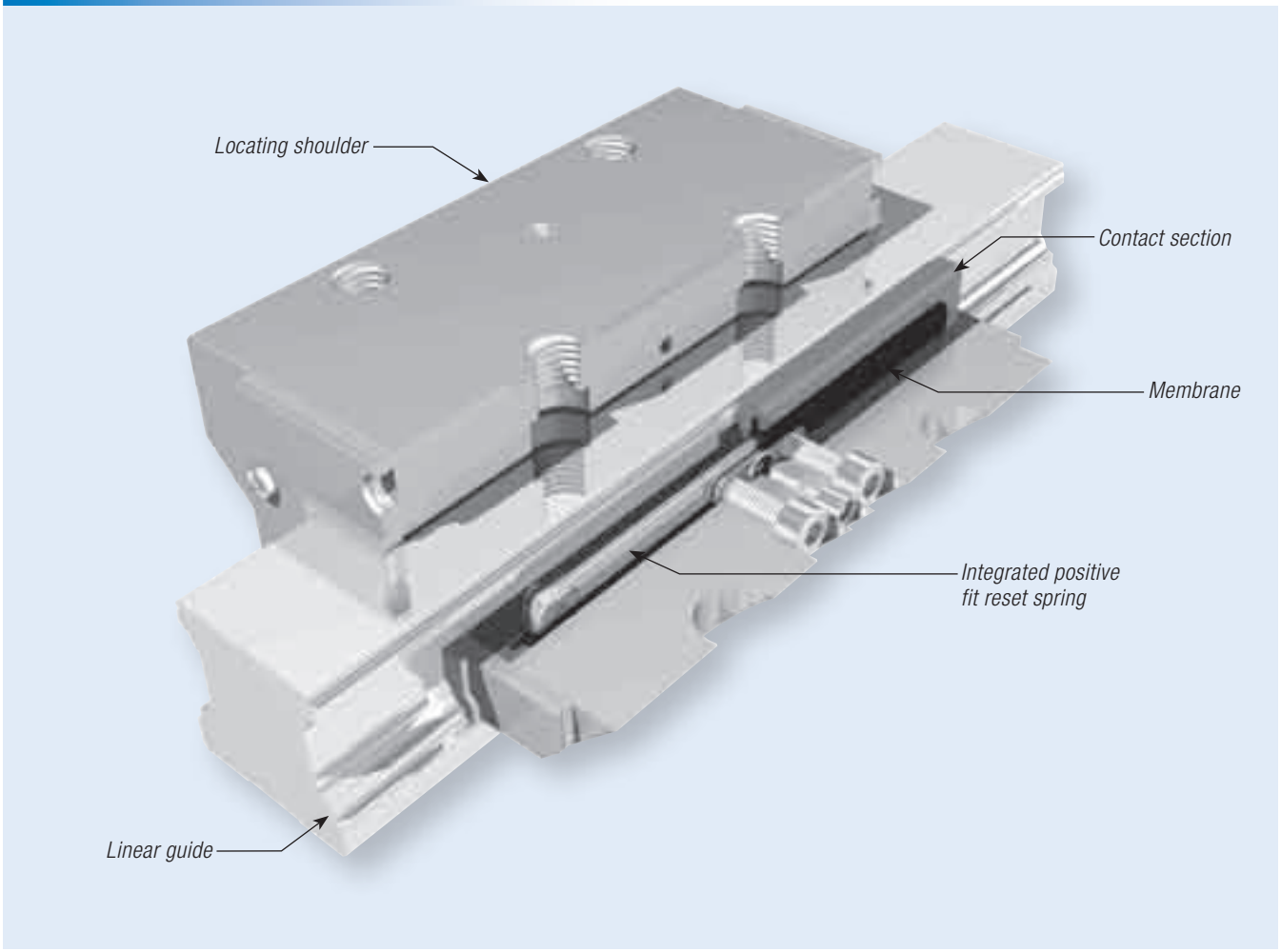
Application scenarios for TP:
- For deployment in torque motors
- For deployment in rotating disc contactors
- For deployment in axis modules
- Torque take-up of shafts
- Clamping in case of pressure drop

Variations:
Available as 6 **bar variation with higher** holding forces on request.

Connection options:
The air connection features a radial and axial arrangement.



Size [mm]	Item number	Holding torque [Nm] TP	B [mm]	B1 [mm]	Ø D [mm]	Ø D1 [mm]	Ø LK1 [mm]	Ø LK2 [mm]	G1	G2	G3
50	TPS050	60	25	13	145	50	134	40	G1/8“	M5	M5
60	✆										
70	✆										
80	✆										
90	TPS090	130	28	14	185	90	174	80	G1/8“	M5	M5

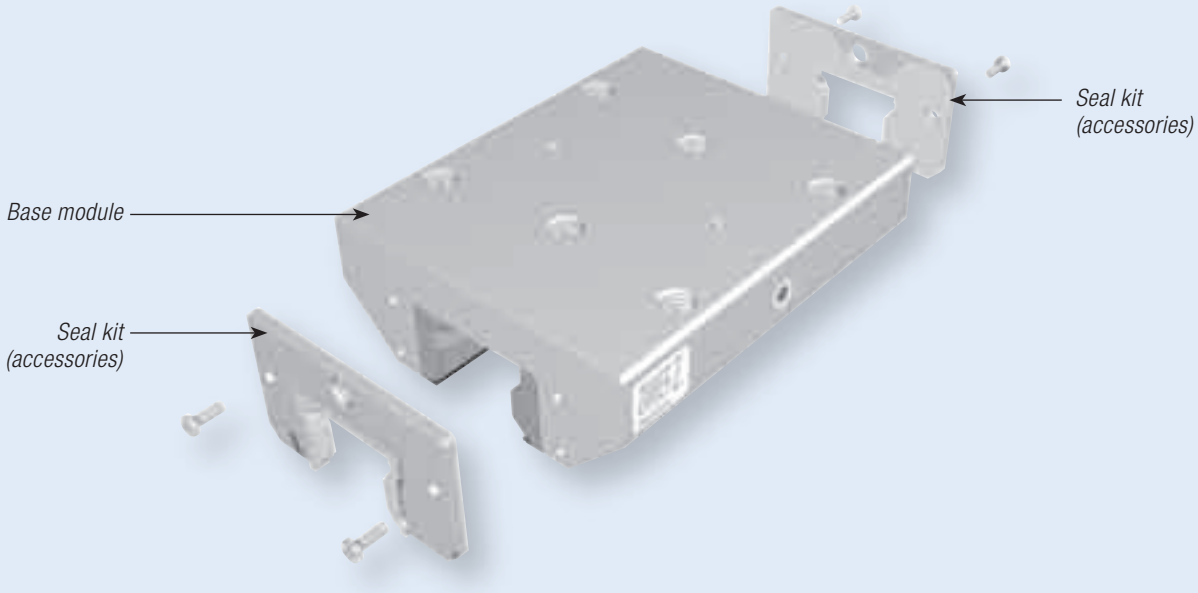


Hydraulic super-heavy load clamping:
The Clamping Element with membrane technology **KW**

The KW series is a hydraulically operated heavy load clamping device. The hydraulic oil presses the large-surface contact sections directly onto the section rail guide via a piston mechanism.
When used in harsh work environments or with cooling liquid, the elements can be fitted with original seals from the respective linear guide manufacturer and longitudinal seals as accessories.
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 maximum.**
The KW series features zero backlash and extremely low absorption volumes of maximum 7.6 cm^3 per clamping operation.
For more information visit www.zimmer-gmbh.com.

KW Design



Special characteristics:
- Super-heavy load type
- Solid and rigid outer casing
- Compact design, DIN 645 compatible
- Integrated positive fit contact sections for maximum axial rigidity
- High operational reliability by pressure membrane technology
- Exact positioning
- Supporting forces up to 46,000 N

Application scenarios for KW:
- Machine table clamping of heavy cutting work centres
- Clamping of heavy handling systems

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

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

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Measure table [page 82 and 83]
HSR	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 2501 AS1	5
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 3001 AS1	12
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 3501 AS1	19
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 4501 AS1	28
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 5501 AS1	34
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KWH 6501 AS1	42
	85	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	✆	
	100	HSR..HA, HSR..HB, HSR..HR	✆	
NR/NRS	25	NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	KWH 2501 BS1	1
	30	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KWH 3001 BS1	9
	35	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KWH 3501 BS1	15
	45	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KWH 4501 BS1	23
	55	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KWH 5501 BS1	31
	65	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	KWH 6501 BS1	38
	75	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
	85	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
	100	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
SHS	25	SHS..C, SHS..LC	KWH 2501 CS1	5
	30	SHS..C, SHS..LC	KWH 3001 CS1	12
	35	SHS..C, SHS..LC	KWH 3501 CS1	19
	45	SHS..C, SHS..LC	KWH 4501 CS1	28
	55	SHS..C, SHS..LC	KWH 5501 CS1	34
	65	SHS..C, SHS..LC	KWH 6501 CS1	42
SRG	25	SRG..C, SRG..LC	KWH 2501 ES1	5
	30	SRG..C, SRG..LC	KWH 3001 ES1	12
	35	SRG..C, SRG..LC	KWH 3501 ES1	19
	45	SRG..C, SRG..LC	KWH 4501 ES1	28
	55	SRG..C, SRG..LC	KWH 5501 ES1	34
	65	SRG..C, SRG..LC	KWH 6501 ES1	42
	85	SRG..LC	KWH 8501 ES1	53
	100	SRG..LC	KWH 10001 ES1	54
SNR/SNS	25	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 2501 IS1	1
	30	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 3001 IS1	9
	35	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 3501 IS1	15
	45	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 4501 IS1	23
	55	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 5501 IS1	31
	65	SNR..C, SNR..LC, SNS..C, SNS..LC	KWH 6501 IS1	38
SRN	35	SRN..C, SRN..LC	✆	
	45	SRN..C, SRN..LC	✆	
	55	SRN..C, SRN..LC	✆	
	65	SRN..LC	✆	

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Measure table [page 82 and 83]
1605, 1607 1645, 1647	25	1631, 1651, 1653, 1661, 1665	KWH 2505 AS1	3
		1622, 1623 , 1632, 1662, 1666	KWH 2505 AS2	6
		1621, 1624	KWH 2505 AS3	8
	30	1631, 1651, 1653, 1661, 1665	KWH 3005 AS1	10
		1622, 1623 , 1632, 1662, 1666	KWH 3005 AS2	13
		1621, 1624	KWH 3005 AS3	14
	35	1631, 1651, 1653, 1661, 1665	KWH 3505 AS1	17
		1622, 1623 , 1632, 1662, 1666	KWH 3505 AS2	20
		1621, 1624	KWH 3505 AS3	22
	45	1651, 1653	KWH 4505 AS1	25
		1622, 1623	KWH 4505 AS2	27
		1621, 1624	KWH 4505 AS3	30
	55	1651, 1653	KWH 5505 AS1	33
		1622, 1623	KWH 5505 AS2	35
		1621, 1624	KWH 5505 AS3	37
	65	1651, 1653	KWH 6505 AS1	41
		1622, 1623	KWH 6505 AS2	44
1805, 1807	25	1851, 1853	KWH 2505 BS1	2
		1821, 1824	KWH 2505 BS3	7
	35	1851, 1853	KWH 3505 BS1	16
		1821, 1824	KWH 3505 BS3	21
	45	1851, 1853	KWH 4505 BS1	24
		1821, 1824	KWH 4505 BS3	29
	55	1851, 1853	KWH 5505 BS1	32
		1821, 1824	KWH 5505 BS3	36
	65	1853	KWH 6505 BS1	39
		1824	KWH 6505 BS3	43
1875, 1873	55	1872	✆	
	65	1872	KWH 6505 BS4	52
	85	1872	✆	
	100	1872	✆	
1835, 1865	100	1861, 1863	✆	
	125	1861, 1863	KWH 12505 BS1	55

See page 13 for part number explanation

Rail manufacturer

Rexroth
Bosch Group

Rail manufacturer

SCHNEEBERGER

Type of rail	Size	Type of carriage	Item number	Measure table [page 82 and 83]
MR	25	MR..A, MR..B	KWH 2503 AS1	4
	35	MR..A, MR..B	KWH 3503 AS1	18
		MR..C, MR..D, MR..E	KWH 3503 AS3	46
	45	MR..A, MR..B	KWH 4503 AS1	26
		MR..C, MR..D	KWH 4503 AS3	48
	55	MR..A, MR..B	KWH 5503 AS1	45
		MR..C, MR..D	KWH 5503 AS3	49
	65	MR..B	KWH 6503 AS1	40
	100	MR..B	KWH 10003 AS1	54

Rail manufacturer

IKO

LWH	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG	KWH 2510 AS1	5
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG	KWH 3010 AS1	12
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	KWH 3510 AS1	19
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	KWH 4510 AS1	28
	55	LWH..B, LWHG, LWHT..B, LWHTG	KWH 5510 AS1	34
	65	LWH..B, LWHG, LWHT..B, LWHTG	KWH 6510 AS1	42
	85	LWHG, LWHTG	✆	
LRX	25	LRXC, LRX, LRXG	KWH 2510 BS1	5
	30	LRXC, LRX, LRXG	✆	
	35	LRXC, LRX, LRXG	KWH 3510 BS1	19
	45	LRXC, LRX, LRXG	KWH 4510 BS1	28
	55	LRXC, LRX, LRXG	KWH 5510 BS1	34
	65	LRXC, LRX, LRXG	KWH 6510 BS1	42
	85	LRX, LRXG	✆	
	100	LRXG	✆	
LWE	25	LWE..Q, LWET..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL, LWETG, LWETG..SL	KWH 2510 DS1	47
	35	LWEC, LWE, LWETC, LWET, LWE..Q, LWET..Q, LWES..Q	✆	
	45	LWE, LWET	✆	
ME	25	MEC, METC, ME, MET, MEG, METG, MH, MHT, MHG, MHTG	KWH 2510 DS1	47
	30	MEC, METC, ME, MET, MEG, METG, MH, MHT, MHG, MHTG	✆	
	35	MEC, METC, ME, MET, MH, MHT, MHG, MHTG	✆	
	45	ME, MET, MH, MHT, MHG, MHTG	✆	

Rail manufacturer

INA

TKSD (KUSE)	25	KWSE, KWSE..-L	KWH 2502 AS1	4
	30	KWSE, KWSE..-L	KWH 3002 AS1	11
	35	KWSE, KWSE..-L	KWH 3502 AS1	18
	45	KWSE, KWSE..-L	KWH 4502 AS1	26
	55	KWSE, KWSE..-L	KWH 5502 AS1	45
TKVD (KUVE)	25	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	KWH 2502 BS1	4
	30	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KWH 3002 BS1	11
	35	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KWH 3502 BS1	18
	45	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KWH 4502 BS1	26
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	✆	
TSX..E (RUE)	25	RWU..-D, RWU.. -D-L	KWH 2502 DS1	4
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KWH 3502 DS1	18
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	KWH 3502 DS3	50
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KWH 4502 DS1	26
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KWH 5502 DS1	45
	65	RWU..-E, RWU..-E-L	KWH 6502 DS1	40

See page 13 for part number explanation

Rail manufacturer

NSK

Type of rail	Size	Type of carriage	Item number	Measure table [page 82 and 83]
LH	25	LAH..EMZ, LAH..GMZ	KWH 2504 BS1	5
	30	LAH..EMZ, LAH..GMZ	KWH 3004 BS1	12
	35	LAH..EMZ, LAH..GMZ	KWH 3504 BS1	19
	45	LAH..EMZ, LAH..GMZ	KWH 4504 BS1	28
	55	LAH..EMZ, LAH..GMZ	KWH 5504 BS1	34
	65	LAH..EMZ, LAH..GMZ	KWH 6504 BS1	42
SH	35	SAH..EMZ, SAH..GMZ	KWH 3504 BS1	19
LS	25	LAS..KLZ, LAS.. JMZ, LAS..EMZ	✆	-
	30	LAS..KLZ, LAS.. JMZ, LAS..EMZ	KWH 3004 AS1	12
	35	LAS..KLZ, LAS.. JMZ, LAS..EMZ	KWH 3504 AS1	19
LY	25	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 2504 CS1	5
	30	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 3004 CS1	12
	35	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 3504 CS1	19
	45	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 4504 CS1	28
	55	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 5504 CS1	34
	65	LY..EL, LY..FL, LY.. GL, LY.. HL	KWH 6504 CS1	42
LA			x	
RA	25	RA..EM, RA..GM	✆	
	30	RA..EM, RA..GM	KWH 3004 FS1	51
	35	RA..EM, RA..GM	KWH 3504 FS1	19
	45	RA..EM, RA..GM	KWH 4504 FS1	28
	55	RA..EM, RA..GM	KWH 5504 FS1	34
	65	RA..EM, RA..GM	✆	

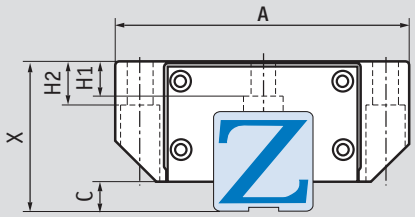
Rail manufacturer

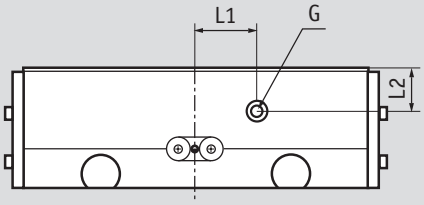
HIWIN Lineartechnologie

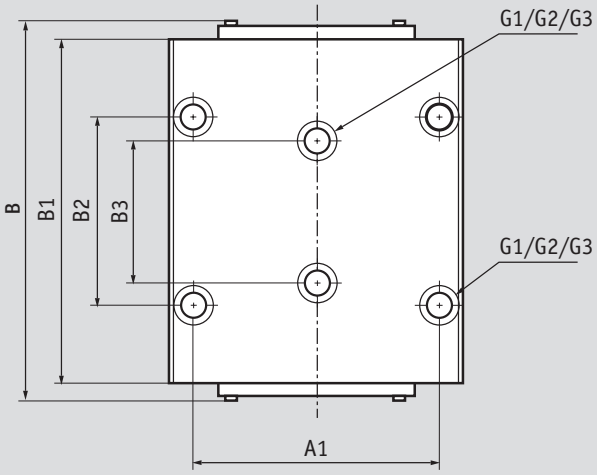
LGR..T, LGR..R	25	LGW..CC, LGW..HC	KWH 2512 BS1	5
	30	LGW..CC, LGW..HC	KWH 3012 BS1	12
	35	LGW..CC, LGW..HC	KWH 3512 BS1	19
	45	LGW..CC, LGW..HC	KWH 4512 BS1	28
	55	LGW..CC, LGW..HC	KWH 5512 BS1	34
	65	LGW..CC, LGW..HC	KWH 6512 BS1	42
HGR..T HGR..R	35	HGW..CC, HGW..HC	✆	
	45	HGW..CC, HGW..HC	✆	
	55	HGW..CC, HGW..HC	✆	
	65	HGW..CC, HGW..HC	✆	
EGR..T	25	EGW...SC, EGW...CC	x	
	30	EGW...SC, EGW...CC	✆	
RG..T	25	RGW..CC, RGW..HC	✆	
	30	RGW..CC, RGW..HC	KWH 3012 FS1	11
	35	RGW..CC, RGW..HC	KWH 3512 FS1	18
	45	RGW..CC, RGW..HC	✆	
	55	RGW..CC, RGW..HC	✆	

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] KW	max. operating pressure [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	1600	100	70	57	116	92	45	45	5,5	31	1/8“	M8	6,8	M6	7,7	9	10	9,5
2	2200	100	70	57	100	92	45	40	6	36	1/8“	M8	6,8	M6	7,3	9	0	9,5
3	2200	100	70	57	102	92	45	40	6,5	36	1/8“	M8	6,8	M6	7	9	0	8
4	2200	100	70	57	116	92	45	40	6,5	36	1/8“	M8	6,8	M6	5,8	9	10	9
5	2200	100	70	57	116	92	45	45	6,5	36	1/8“	M8	6,8	M6	5,8	9	10	9
6	1600	100	48	35	103	92	50	50	6,5	36	1/8“	M6	-	-	8	8	10	8
7	1600	100	48	35	100	92	50	50	6,5	40	1/8“	M6	-	-	12	12	10	12
8	1600	100	48	35	103	92	50	50	6,5	40	1/8“	M6	-	-	12	12	10	12
9	2100	100	90	72	128	103,5	52	52	7	38	1/8“	M10	8,6	M8	7	10	0	10,5
10	3000	100	90	72	115	103,5	52	44	7	42	1/8“	M10	8,6	M8	8	11	0	10,5
11	3000	100	90	72	128	103,5	52	44	7	42	1/8“	M10	8,6	M8	7	10	0	10,5
12	3000	100	90	72	128	103,5	52	52	7	42	1/8“	M10	8,6	M8	7	10	0	10,5
13	3000	100	60	40	115	103,5	60	60	7	42	1/8“	M8	-	-	8	8	10	9
14	3000	100	60	40	115	103,5	60	60	7	45	1/8“	M8	-	-	11	11	10	12
15	4300	150	100	82	145	120,5	62	62	8	44	1/8“	M10	8,6	M8	7	12	0	12
16	5700	150	100	82	128,5	120,5	62	52	7	48	1/8“	M10	8,6	M8	11	12	0	12
17	5700	150	100	82	133	120,5	62	52	8	48	1/8“	M10	8,6	M8	10,2	12	0	12
18	5700	150	100	82	147	120,5	62	52	8	48	1/8“	M10	8,6	M8	6,4	12	0	12
19	5700	150	100	82	145	120,5	62	62	8	48	1/8“	M10	8,6	M8	6,4	12	0	12
20	3500	100	70	50	133	120,5	72	72	8	48	1/8“	M8	-	-	13	13	0	12
21	3500	100	70	50	128	120,5	72	72	7	55	1/8“	M8	-	-	13	13	0	18
22	3500	100	70	50	133	120,5	72	72	8	55	1/8“	M8	-	-	13	13	0	18
23	7400	150	120	100	169	155	80	80	10	52	1/8“	M12	10,5	M10	10,4	15	0	12
24	9900	150	120	100	166	155	80	60	9	60	1/8“	M12	10,5	M10	13,5	15	0	15
25	9900	150	120	100	170	155	80	60	10	60	1/8“	M12	10,5	M10	12,4	15	0	15
26	9900	150	120	100	184	155	80	60	10	60	1/8“	M12	10,5	M10	11,9	15	0	15
27	7400	100	86	60	170	155	80	80	10	60	1/8“	M10	-	-	15	15	0	15
28	9900	150	120	100	176	155	80	80	10	60	1/8“	M12	10,5	M10	11,9	15	0	15
29	7400	100	86	60	166	155	80	80	9	70	1/8“	M10	-	-	18	18	0	24
30	7400	100	86	60	170	155	80	80	10	70	1/8“	M10	-	-	18	18	0	24
31	10200	150	140	116	208	184	95	95	12	63	1/8“	M14	12,5	M12	13,7	16	0	16
32	13700	150	140	116	197	184	95	70	12	70	1/8“	M14	12,5	M12	13,7	18	0	16
33	13700	150	140	116	201	184	95	70	13	70	1/8“	M14	12,5	M12	13,5	18	0	16
34	13700	150	140	116	208	184	95	95	13	70	1/8“	M14	12,5	M12	13,5	18	0	16
35	13700	150	100	75	200	184	95	95	13	70	1/8“	M12	-	-	20,8	18	0	16
36	13700	150	100	75	197	184	95	95	12	80	1/8“	M12	-	-	19	19	0	26
37	13700	150	100	75	200	184	95	95	13	80	1/8“	M12	-	-	19	19	0	26
38	17000	150	170	142	219	200	110	110	11	75	1/4“	M16	14,5	M14	21	25	0	20
39	22700	150	170	142	238	227	110	82	14	90	1/4“	M16	14,5	M14	21,5	23	0	20
40	22700	150	170	142	256	227	110	82	14	90	1/4“	M16	14,5	M14	14,5	22	0	20
41	22700	150	170	142	256	227	110	82	14	90	1/4“	M16	14,5	M14	14	23	0	20
42	22700	150	170	142	253	227	110	110	14	90	1/4“	M16	14,5	M14	14,5	22	0	20
43	22700	150	126	76	238	227	120	120	14	90	1/4“	M16	-	-	21	21	0	20
44	22700	150	126	76	255	227	120	120	14	90	1/4“	M16	-	-	21	21	0	20
45	13700	150	140	116	215	184	95	70	13	70	1/8“	M14	12,5	M12	13,5	18	0	16
46	3500	100	70	50	140	120,5	72	72	8	55	1/8“	M8	-	-	13	13	0	18
47	2200	100	70	57	106	92	45	45	3,5	33	1/8“	M8	6,8	M6	5,8	9	10	9
48	7400	100	86	60	190	155	80	80	10	70	1/8“	M10	-	-	18	18	0	24
49	13700	150	100	75	215	184	95	95	13	80	1/8“	M12	-	-	19	19	0	26
50	3500	100	70	50	135	120,5	72	72	5	55	1/8“	M8	-	-	13	13	0	18
51	3000	100	90	72	128	103,5	52	52	6,5	42	1/8“	M10	8,6	M8	7	10	0	10,5
52	22700	150	200	172	260	227	110	110	14	100	1/4“	M14	12,5	M12	20	20	0	20
53	27400	150	215	185	210	184	140	140	16	110	1/4“	M20	17,5	M16	19,8	35	0	20
54	34000	150	250	200	230	200	150	150	15	120	1/4“	M20	17,5	M16	17,5	30	0	20
55	46000	150	320	270	245	227	102,5	102,5	25	160	1/4“	M27	24	M24	29	45	0	50

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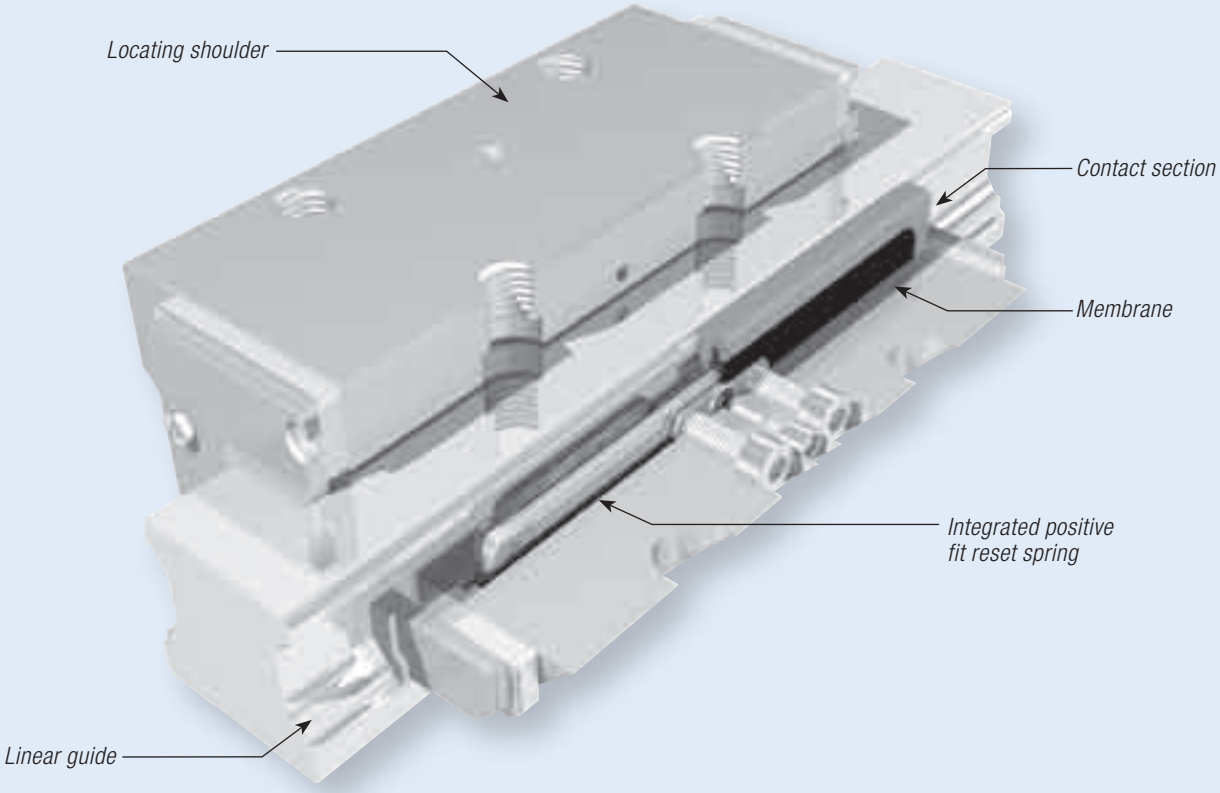
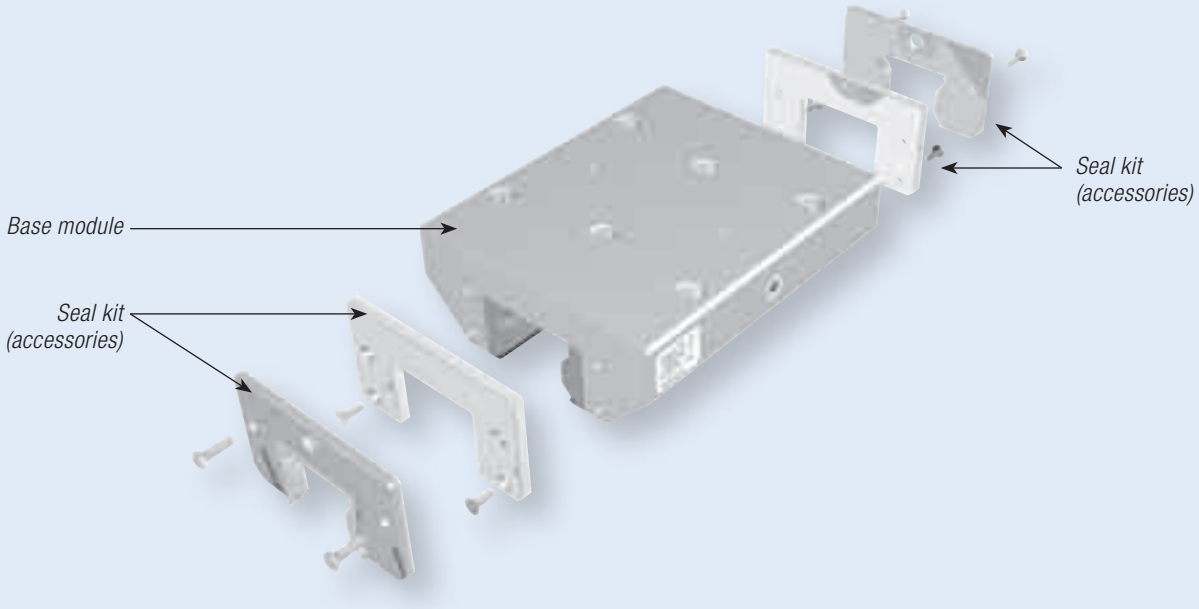


Hydraulic heavy load brake:
The Braking and Clamping Element with membrane technology **KB.**

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 cm^3 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.

✆ +49.7844.9138-0
www.zimmer-gmbh.com

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Measure table [page 89]
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

Rexroth
Bosch Group

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

SCHNEEBERGER

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

Rail manufacturer

IKO

Type of rail	Size	Type of carriage	Item number	Measure table [page 89]
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

INA

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

NSK

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	✆	

x: Not feasible

See page 13 for part number explanation

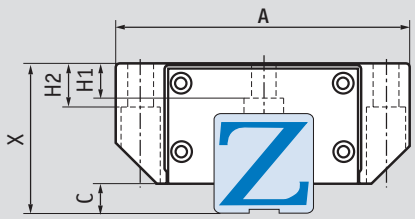
Rail manufacturer

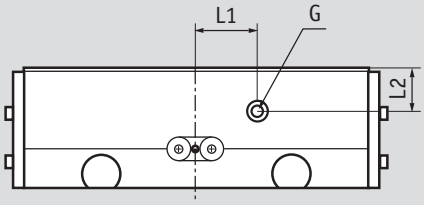
HIWIN Lineartechnologie

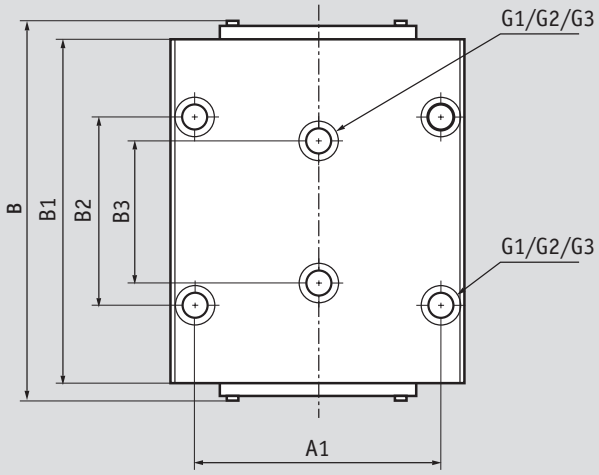
Type of rail	Size	Type of carriage	Item number	Measure table [page 89]
LGR..T LGR..R	25	LGW..CC, LGW..HC	✆	
	30	LGW..CC, LGW..HC	✆	
	35	LGW..CC, LGW..HC	KBH 3512 BS1	8
	45	LGW..CC, LGW..HC	KBH 4512 BS1	14
	55	LGW..CC, LGW..HC	KBH 5512 BS1	19
	65	LGW..CC, LGW..HC	KBH 6512 BS1	25
HGR..T HGR..R	35	HGW..CC, HGW..HC	✆	
	45	HGW..CC, HGW..HC	✆	
	55	HGW..CC, HGW..HC	✆	
	65	HGW..CC, HGW..HC	✆	
EGR..T	25	EGW...SC, EGW...CC	x	
	30	EGW...SC, EGW...CC	✆	
RG..T	25	RGW..CC, RGW..HC	✆	
	30	RGW..CC, RGW..HC	✆	
	35	RGW..CC, RGW..HC	✆	
	45	RGW..CC, RGW..HC	✆	
	55	RGW..CC, RGW..HC	✆	

x: Not feasible

See page 13 for part number explanation





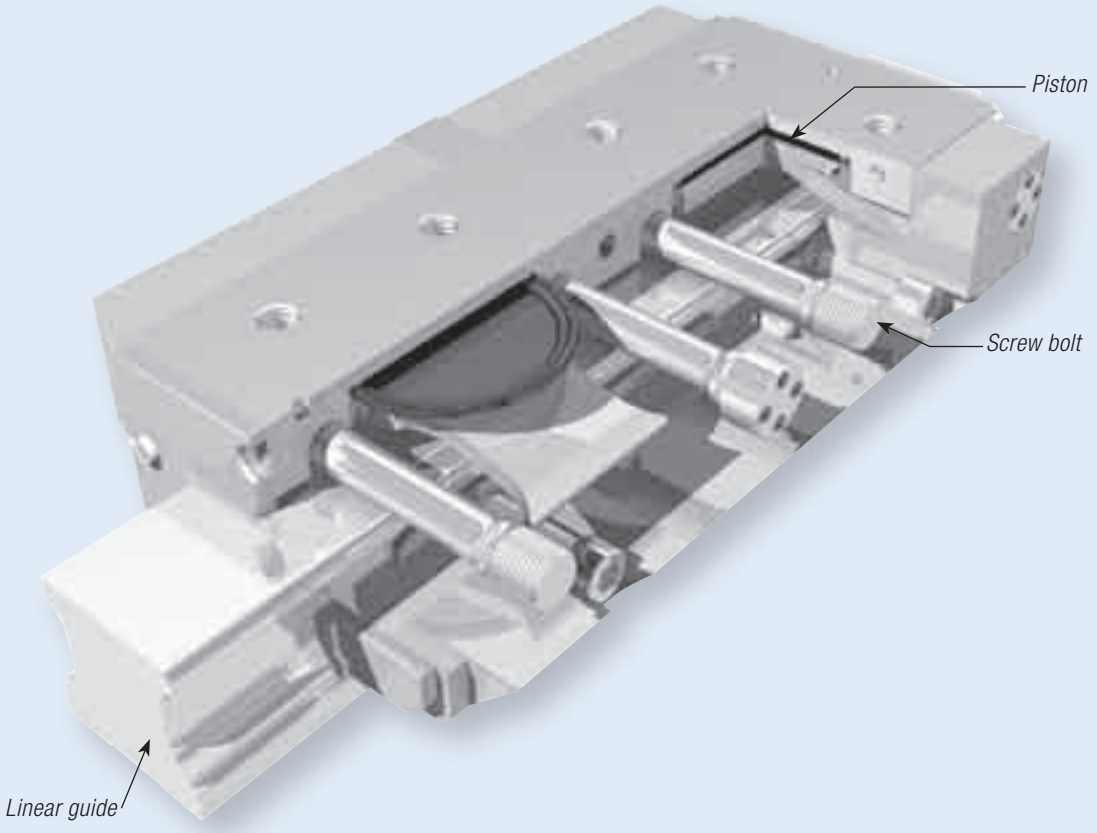


Note: Consider measurement C!

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

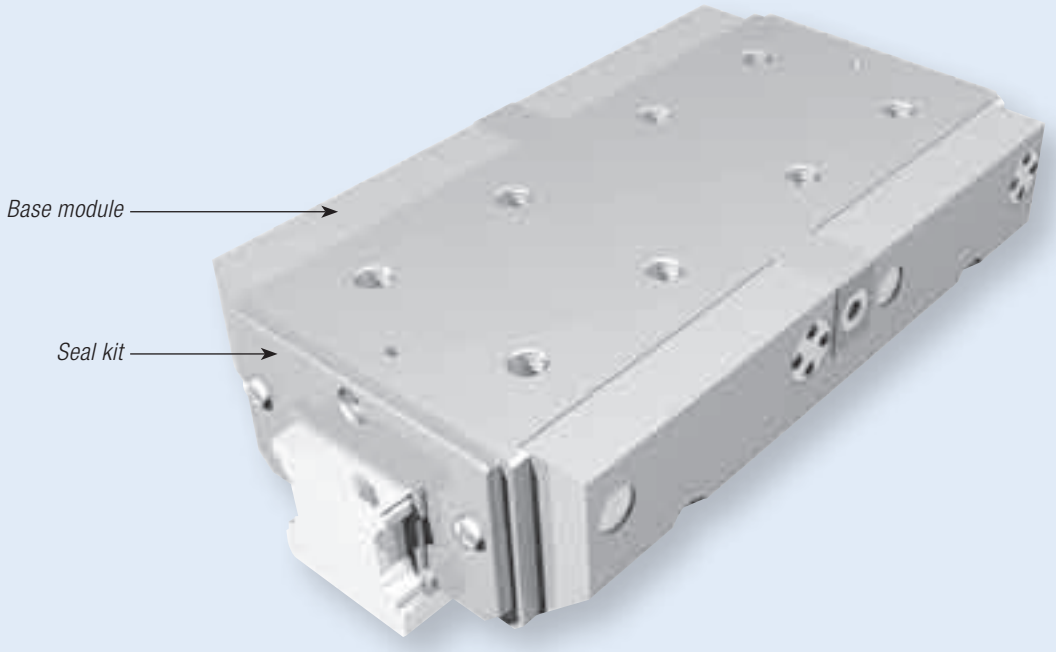


Hydraulic heavy load brake:

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 40,000 **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 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
- Exact positioning
- Opening pressure 150 **bar, hydraulic**
- Holding power up to 40,000 **N**
- Closed without pressure

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

Connection options:
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 94]
HSR	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	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	✆	
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	KBHS 6501 AS1A	3
NR/NRS	35	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
	45	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
	55	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
	65	NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	✆	
SHS	35	SHS..C, SHS..LC	KBHS 3501 CS1A	1
	45	SHS..C, SHS..LC	KBHS 4501 CS1A	2
	55	SHS..C, SHS..LC	✆	
	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	✆	
	65	SRG..LC	KBHS 6501 ES1A	3
SNR/SNS	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	✆	
	65	SNR..C, SNR..LC, SNS..C, SNS..LC	✆	

Rail manufacturer

Rexroth
Bosch Group

1605, 1607, 1645, 1647	35	1631, 1651, 1653, 1661, 1665	KBHS 3505 AS1A	1
	45	1651, 1653	KBHS 4505 AS1A	2
	55	1651, 1653	✆	
	65	1651, 1653	KBHS 6505 AS1A	3
1805, 1807	35	1851, 1853	KBHS 3505 BS1A	1
	45	1851, 1853	KBHS 4505 BS1A	2
	55	1851, 1853	✆	
	65	1853	KBHS 6505 BS1A	3

Rail manufacturer

SCHNEEBERGER

MR	35	MR..A, MR..B	KBHS 3503 AS1A	1
	45	MR..A, MR..B	KBHS 4503 AS1A	2
	55	MR..A, MR..B	x	
	65	MR..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	✆	
LRX	35	LRXC, LRX, LRXG	KBHS 3510 BS1A	1
	45	LRXC, LRX, LRXG	KBHS 4510 BS1A	2
	55	LRXC, LRX, LRXG	✆	
	65	LRXC, LRX, LRXG	KBHS 6510 BS1A	3

x: Not feasible

See page 13 for part number explanation

Type of rail	Size	Type of carriage	Item number	Measure table [page 94]
TKSD (KUSE)	35	KWSE, KWSE..-L	KBHS 3502 AS1A	1
	45	KWSE, KWSE..-L	KBHS 4502 AS1A	2
	55	KWSE, KWSE..-L	✆	
TKVD (KUVE)	35	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KBHS 3502 BS1A	1
	45	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-E, KWVE..-B-EC	KBHS 4502 BS1A	2
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-KT, KWVE..-B-KT-L	✆	
TSX -E (RUE)	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KBHS 3502 DS1A	1
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	KBHS 4502 DS1A	2
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	✆	
	65	RWU..-E, RWU..-E-L	KBHS 6502 DS1A	3

Rail manufacturer

INA

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	KBHS 6504 BS1A	3
LS	35	LAS..KLZ, LAS.. FLZ, LAS..ELZ	KBHS 3504 AS1A	1
LY	35	LY..EL, LY..FL, LY.. GL, LY.. HL	✆	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL	✆	
	55	LY..EL, LY..FL, LY.. GL, LY.. HL	✆	
	65	LY..EL, LY..FL, LY.. GL, LY.. HL	✆	
LA			x	
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

NSK

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

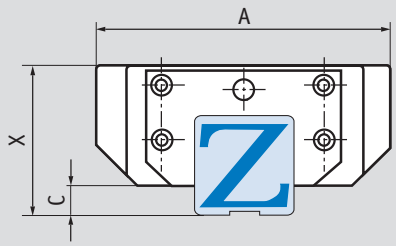
Rail manufacturer

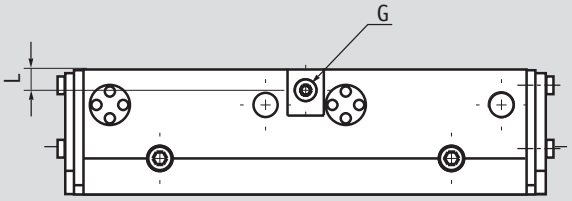
HIWIN Lineartechnologie

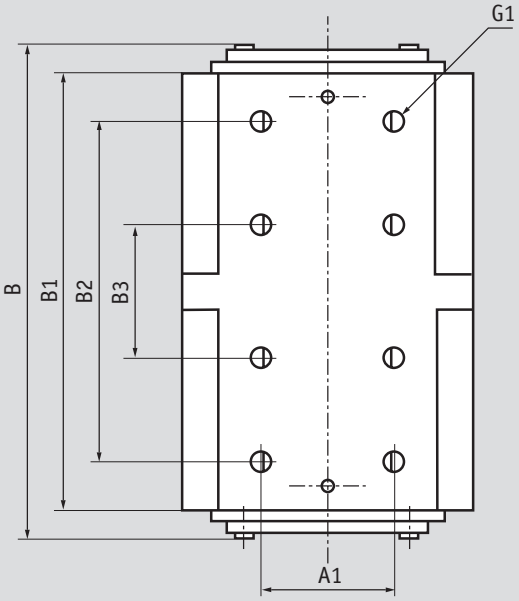
x: Not feasible

See page 13 for part number explanation

KBHS





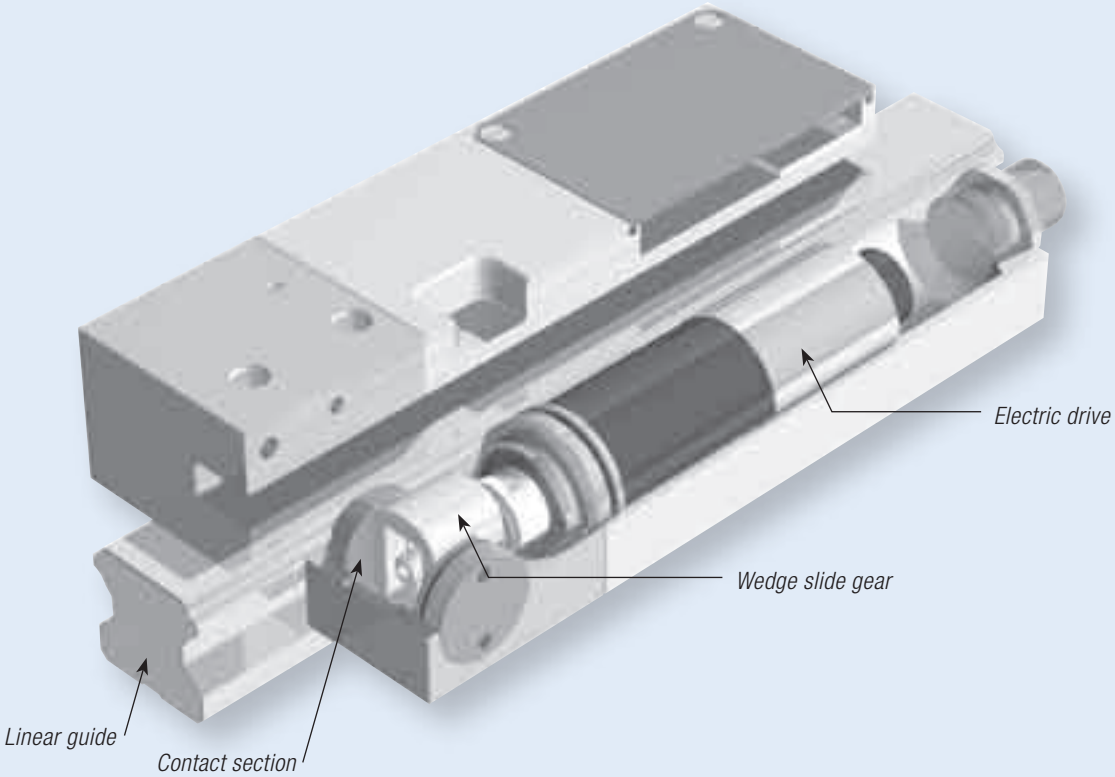


Note: Consider measurement C!

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] 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	7.500	150	100	41	182	155	122	46	6	48	1/8“	M8/15	9
2	9.000	150	120	55	210	180	140	55	8	60	1/8“	M10/19,3	9
3	16.000	150	170	70	300	270	205	80	11,5	90	1/4“	M16/29,3	11

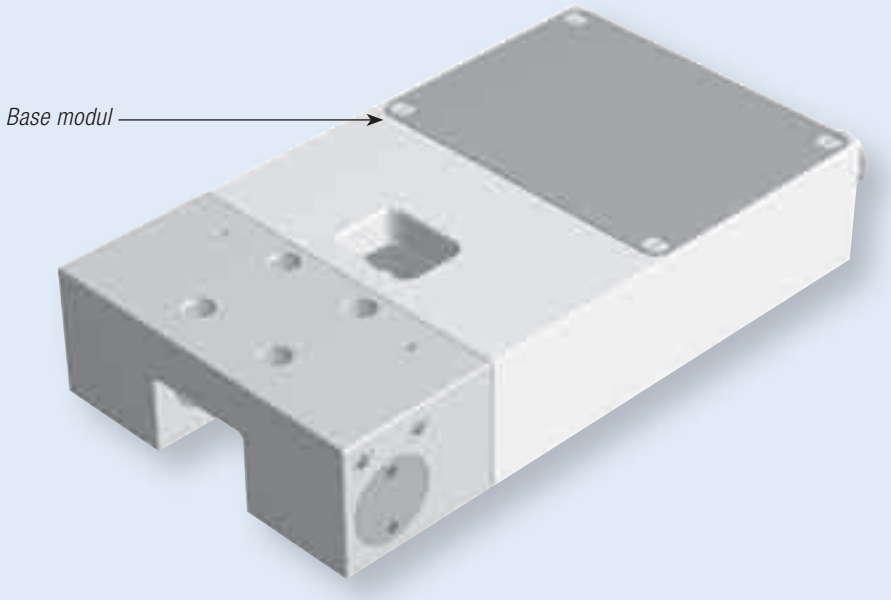


High holding forces – electric drive:
The electric Clamping Element **MKE.**

The MKE has been developed from the MK series. The clamping power is generated using our conventional wedge slide gear.
The electronic components consist of two parts, the part integrated into the clamping element and the triggering electronics. By monitoring the current electronically, the required holding power is achieved.

The functional principle of self-locking makes clamping without electric current possible, i.e. in the released or clamped state only the control voltage is applied.
The element is available with a cable or as a standard element with a connector on request.

MKE Design



Special characteristics:
- Tension control in clamped position
- Tension control in unclamped position
- High clamping power
- Exact positioning
- Strong axial and horizontal rigidity
- Reliable mechanism

Application scenarios for MKE:
- Axes with electric positioning
- Table traverses in medical applications
- Fixing of vertical axes
- Positioning of lifting devices
- Electric clamping of machine tables
- Machine table clamping of work centres

Variations:
Depending on the height of the carriage, an additional adapting plate must be ordered (see table).

Connection options:
The MKE is supplied with an external control and as a standard element with a straight plug version. The clamping element is available with an angulated plug version or cable version on request.

Technical Data:

Safety category:	IP 65
External electronic components	
Supply voltage:	24V DC
Power consumption:	**Switch-on current depends on size,** see datasheet
Fuse:	**Electronic component group fitted** with separate fuse
Dimensions:	L = 100 mm, W = 22.5 mm, D = 115 mm
Mounting:	Can be clipped on rail section
Control inputs:	Direction (open/closed) 24V DC
Control outputs:	**Pos. 0 (open)** PNP 24V, 100mA resistance to short circuit **Pos. 1 (closed)** PNP 24V, 100mA resistance to short circuit
Connection lead:	**Plug 12x1, plug on clamping side,** Plug lead, 8-pole, sheathed (available as accessory) or clamping with clamp arrangement (3 m).

Plan of terminal connections: See www.zimmer-gmbh.com

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 100]
SR, SSR	15	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MKE 1501 A		24	1
	20	SR..TB, SR..SB, SR..W, SR..V, SSR..XW, SSR..XV, SSR..XTB	MKE 2001 A		28	8
	25	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	MKE 2501 A		33	11
	30	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MKE 3001 A		42	15
	35	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	MKE 3501 A		48	9
HSR	15	HSR..A, HSR..B	MKE 1501 A		24	1
		HSR..R	MKE 1501 A	PMK 15-4	28	
	20	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MKE 2001 A		30	3
	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MKE 2501 A		36	7
		HSR..R, HSR..LR	MKE 2501 A	PMK 25-4	40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MKE 3001 A		42	15
		HSR..R, HSR..LR	MKE 3001 A	PMK 30-3	45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	MKE 3501 A	PMK 35-3	48	16
		HSR..R, HSR..LR	MKE 3501 A	PMK 35-10	55	
SNR/SNS	25	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MKE 2501 N		31	12
	30	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MKE 3001 A		38	17
	35	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	MKE 3501 A		44	13
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	MKE 3501 A	PMK 35-11	55	13
SHS	15	SHS..C, SHS..LC, SHS..V, SHS..LV	MKE 1501 A		24	1
		SHS..R	MKE 1501 A	PMK 15-4	28	
	20	SHS..C, SHS..LC, SHS..V, SHS..LV	MKE 2001 A		30	3
	25	SHS..C, SHS..LC, SHS..V, SHS..LV	MKE 2501 A	PMK 25-2	36	14
		SHS..R, SHS..LR	MKE 2501 A	PMK 25-6	40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	MKE 3001 A		42	15
		SHS..R, SHS..LR	MKE 3001 A	PMK 30-3	45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	MKE 3501 A	PMK 35-4	48	13
		SHS..R, SHS..LR	MKE 3501 A	PMK 35-11	55	
SRG	15	SRG..A, SRG..V	MKE 1501 E		24	2
	20	SRG..A, SRG..LA, SRG..V, SRG..LV	✆		30	
	25	SRG..C, SRG..LC	MKE 2501 E	PMK 25-5	36	5
		SRG..R, SRG..LR	MKE 2501 E	PMK 25-9	40	
	30	SRG..C, SRG..LC	✆		42	
		SRG..R, SRG..LR	✆		45	
	35	SRG..C, SRG..LC	MKE 3501 E		48	10
		SRG..R, SRG..LR	MKE 3501 E	PMK 35-7	55	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

Rexroth
Bosch Group

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 100]
1605, 1607	15	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MKE 1505 AK		24	2
		1621	MKE 1505 AK	PMK 15-4	28	
	20	1622, 1623, 1651, 1653, 1661, 1662, 1665, 1666	MKE 2005 AK		30	4
	25	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MKE 2505 AK		36	6
		1621, 1624	MKE 2505 AK	PMK 25-4	40	
	30	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	✆			
		1621, 1624				
	35	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	MKE 3505 AK		48	10
		1621, 1624	MKE 3505 AK	PMK 35-7	55	
1805, 1807	25	1851, 1853	MKE 2505 AR		36	6
		1821, 1824	MKE 2505 AR	PMK 25-4	40	
	35	1851, 1853	MKE 3505 AR		48	10
		1821, 1824	MKE 3505 AR	PMK 35-7	55	

Rail manufacturer

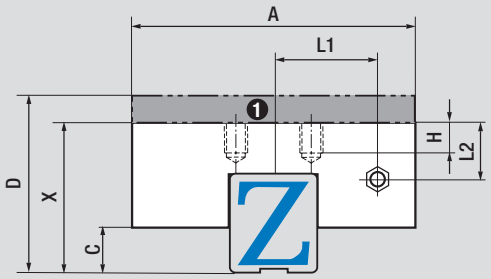
SCHNEEBERGER

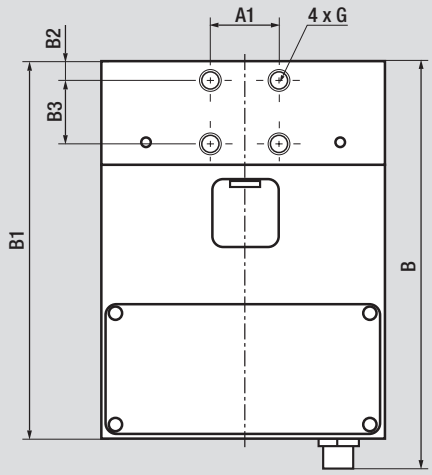
MR	25	MR..A, MR..B	MKE 2503 MR		36	6
		MR..C, MR..D, MR..E	MKE 2503 MR	PMK 25-4	40	
	35	MR..A, MR..B	MKE 3503 MR		48	10
		MR..C, MR..D, MR..E	MKE 3503 MR	PMK 35-7	55	
BM	15	BM..A, BM..F, BM..K / BM..C	✆		24/28	
	20	BM..A, BM..B, BM..C, BM..D, BM..F, BM..G, BM..K	MKE 2003 BM		30	4
	25	BM..A ,BM..B, BM..F, BM..G	MKE 2503 BM		36	6
		BM..C, BM..D, BM..E	MKE 2503 BM	PMK 25-4	40	
	30	BM..A ,BM..B, BM..F, BM..G / BM..C, BM..D, BM..E	✆		42/45	
	35	BM..A ,BM..B, BM..F, BM..G	MKE 3503 BM		48	10
		BM..C, BM..D, BM..E	MKE 3503 BM	PMK 35-7	55	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

MKE

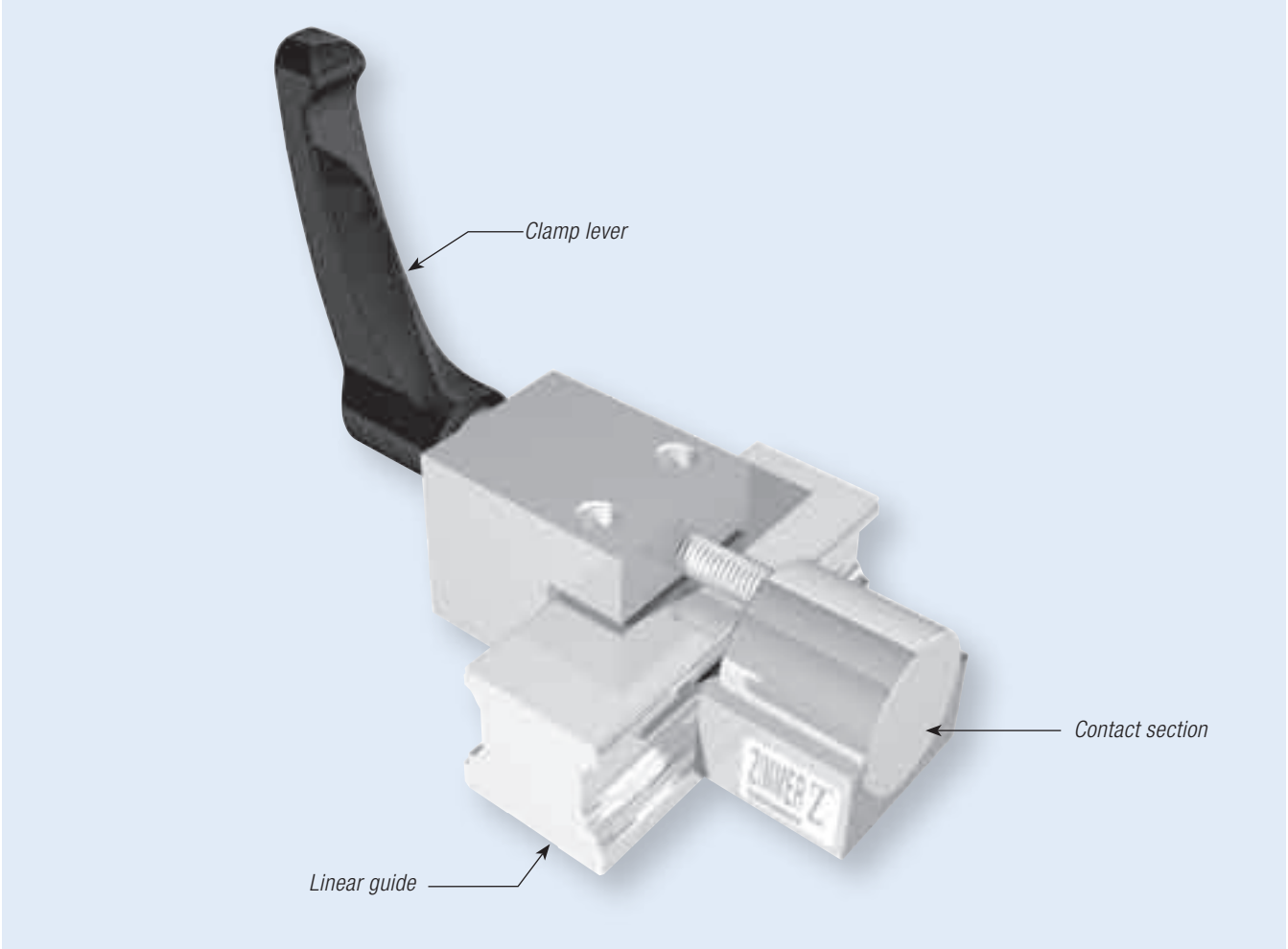




Note: Consider measurement C!

1 adapting plate PMK (accessories)

Measure table	Holding power [N] MKE	A [mm]	A1 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	L1 [mm]	L2 [mm]	H [mm]
1	550	55	15	133	120	8,5	15	2,5	24	M4	17	12	4,5
2	550	55	15	133	120	8,5	15	3,2	24	M4	17	11,6	4,5
3	800	66	20	135	120	14	20	4,5	30	M5	21,5	14,4	5
4	800	66	20	133	120	10	20	3	30	M6	21,5	15,5	6
5	1200	75	20	148	135	10	20	3,5	31	M6	24,5	20	8
6	1200	75	20	148	135	10	20	3,5	36	M6	24,5	20	8
7	1200	75	20	148	135	10	20	8	36	M6	24,5	15,4	8
8	800	66	20	135	120	14	20	2,5	28	M5	21,5	14,4	5
9	2000	100	24	174	161	7,5	24	11,5	48	M8	34	20,5	10
10	2000	100	24	174	161	7,5	24	4	48	M8	34	28	10
11	1200	75	20	148	135	10	20	5	33	M6	24,5	15,4	8
12	1200	75	20	148	135	10	20	3	31	M6	24,5	15,4	8
13	2000	100	24	174	161	7,5	24	7,5	44	M8	34	20,5	10
14	1200	75	20	148	135	10	20	6	34	M6	24,5	15,4	8
15	2000	90	22	174	161	8,5	22	7	42	M8	29	20,3	10
16	2000	100	24	174	161	7,5	24	8,5	45	M8	34	20,5	10
17	2000	90	22	174	161	8,5	22	3	38	M8	29	20,3	10

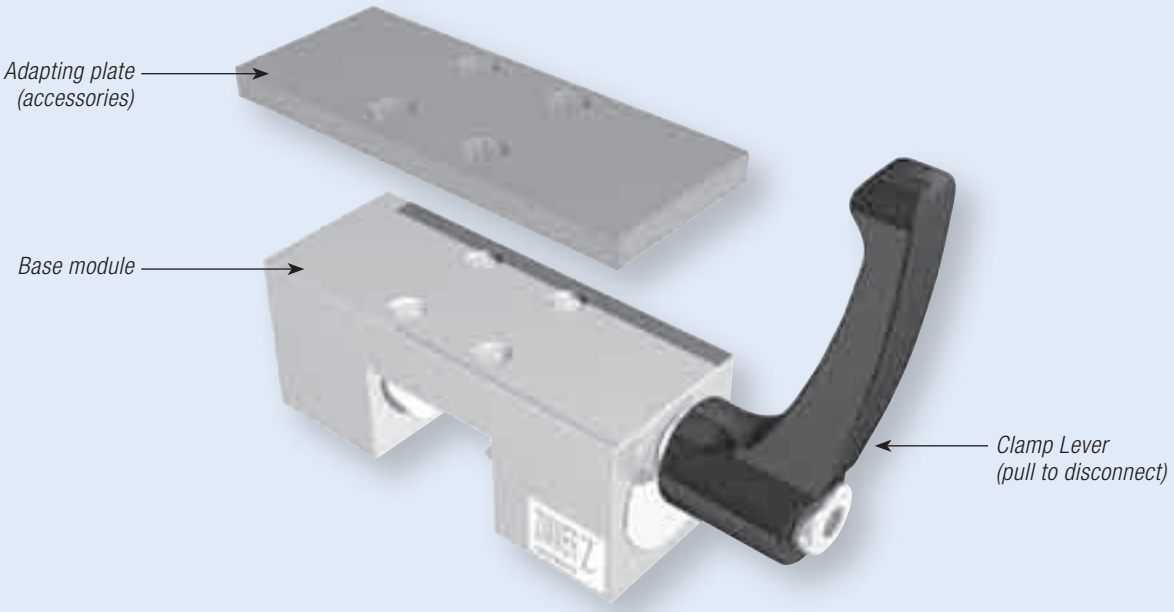


Simple and Reliable:
The manual Clamping Element **HK.**

The HK series is a manually operated clamping element. By rotating the freely adjustable clamp lever, the contact sections are pressed synchronously against the free surfaces of the section rail guide.

The floating contact sections guarantee symmetric power transmission.

HK Design



Special characteristics:
- Simple and safe construction
- Floating supported contact sections
- Exact positioning
- Holding power up to 2,000 **N**

Application scenarios for HK:
- Table traverses and carriages
- Adjustment of width and stops
- Positioning of optic instruments and measuring tables

Variations:
Depending on the height of the carriage, an additional adapting plate must be ordered (see table).

Operation:
Standard with hand lever. Other operation options available on request, e.g. a DIN 912 screw.

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
SR/SSR	15	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	HK 1501 A		24	3
	20	SR..TB, SR..SB, SR..W, SR..V, SSR..XW, SSR..XV, SSR..XTB	HK 2001 A		28	8
	25	SR..TB, SR..SB, SR..W, SR..V, SSR..XWY, SSR..XVY, SSR..XTBY	HK 2501 A		33	17
	30	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	HK 3001 A		42	28
	35	SR..TB, SR..SB, SR..W, SR..V, SSR..XW	HK 3501 A	PMK 35-4	48	31
	45	SR..TB, SR..W	HK 4501 A		60	43
	55	SR..TB, SR..W	HK 5501 S		68	48
HSR	15	HSR..A, HSR..B	HK 1501 A		24	3
		HSR..R	HK 1501 A	PHK 15-4	28	
	20	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 2001 A		30	11
	25	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 2501 A		36	21
		HSR..R, HSR..LR	HK 2501 A	PHK 25-4	40	
	30	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 3001 A		42	28
		HSR..R, HSR..LR	HK 3001 A	PHK 30-3	45	
	35	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 3501 A		48	35
		HSR..R, HSR..LR	HK 3501 A	PMK 35-7	55	
	45	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 4501 A		60	43
		HSR..R, HSR..LR	HK 4501 A	PHK 45-10	70	
	55	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 5501 A		70	62
		HSR..R, HSR..LR	HK 5501 A	PHK 55-10	80	
	65	HSR..A, HSR..LA, HSR..B, HSR..LB, HSR..R, HSR..LR, HSR..CA, HSR..HA, HSR..CB, HSR..HB	HK 6501 A		90	53
GSR	15	GSR..T, GSR..V	HK 1501 G		20	58
	20	GSR..T, GSR..V	HK 2001 G		24	59
	25	GSR..T, GSR..V	HK 2501 G		30	60
	30	GSR..T	HK 3001 G		33	57
	35	GSR..T	HK 3501 G		38	61
HRW	17	HRW..CA, HRW..CR	HK 1701 B		17	39
	21	HRW..CA, HRW..CR	HK 2101 B		21	23
	27	HRW..CA, HRW..CR	HK 2701 B		27	24
	35	HRW..CA, HRW..CR	HK 3501 B		35	45
	50	HRW..CA, HRW..CR	HK 5001 B		50	50
	60	HRW..CA	✆		60	
SHW	17	SHW..CAM, SHW..CRM	HK 1701 B		17	39
	21	SHW..CA, SHW..CR	HK 2101 B		21	23
	27	SHW..CA, SHW..CR	HK 2701 B		27	24
	35	SHW..CA, SHW..CR	HK 3501 B		35	45
	50	SHW..CA, SHW..CR	HK 5001 B		50	50
	60	SHW..CA	✆		60	
SNR/SNS	25	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 2501 N		31	13
	30	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 3001 A		38	25
	35	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 3501 A		44	31
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		48	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		55	
	45	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 4501 A		52	40
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH, SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		60	
	55	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 5501 A		63	46
		SNR..CH, SNR..LCH, SNS..CH, SNS..LCH	✆		70	
		SNR..RH, SNR..LRH, SNS..RH, SNS..LRH	✆		80	
	65	SNR..R, SNR..LR, SNR..C, SNR..LC, SNS..R, SNS..LR, SNS..C, SNS..LC	HK 6501 N		75	52

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

THK
The Mark of Linear Motion

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
NR / NRS	25	NR / NRS..XR, NR / NRS..XLR, NR / NRS..XA, NR / NRS..XLA, NR / NRS..XB, NR / NRS..XLB	HK 2501 N		31	13
	30	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	HK 3001 A		38	25
	35	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	HK 3501 A		44	31
	45	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	HK 4501 A		52	40
	55	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	HK 5501 A		63	46
	65	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	HK 6501 N		75	52
SHS	15	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 1501 A	PHK 15-2	24	1
		SHS..R	HK 1501 A	PHK 15-6	28	
	20	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 2001 A	PHK 20-2	30	8
	25	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 2501 A	PHK 25-2	36	19
		SHS..R, SHS..LR	HK 2501 A	PHK 25-6	40	
	30	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 3001 A		42	28
		SHS..R, SHS..LR	HK 3001 A	PHK 30-3	45	
	35	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 3501 A	PMK 35-4	48	31
		SHS..R, SHS..LR	HK 3501 A	PMK 35-11	55	
	45	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 4501 A		60	43
		SHS..R, SHS..LR	HK 4501 A	PHK 45-10	70	
	55	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 5501 A		70	62
		SHS..R, SHS..LR	HK 5501 A	PHK 55-10	80	
	65	SHS..C, SHS..LC, SHS..V, SHS..LV	HK 6501 A		90	53
SRG	15	SRG..A, SRG..V	✆		24	
	20	SRG..A, SRG..LA, SRG..V, SRG..LV	✆		30	
	25	SRG..A, SRG..V	HK 2501 E		36	20
		SRG..A, SRG..LA, SRG..V, SRG..LV	HK 2501 E	PHK 25-4	40	
	30	SRG..C, SRG..LC	HK 3001 E		42	27
		SRG..R, SRG..LR	HK 3001 E	PHK 30-3	45	
	35	SRG..C, SRG..LC	HK 3501 E		48	33
		SRG..R, SRG..LR	HK 3501 E	PMK 35-7	55	
	45	SRG..C, SRG..LC	HK 4501 E		60	42
		SRG..R, SRG..LR	HK 4501 E	PHK 45-10	70	
	55	SRG..C, SRG..LC	HK 5501 E		70	47
		SRG..R, SRG..LR	HK 5501 E	PHK 55-10	80	
	65	SRG..LC, SRG..LV	HK 6501 E		90	51
HCR	15	HCR 15A +60/150R	HK 1501/150		24	3
		HCR 15A +60/300R	HK 1501/300			
		HCR 15A +60/400R	HK 1501/400			
	25	HCR 25A +60/500R	HK 2501/500		36	21
		HCR 25A +60/750R	HK 2501/750			
		HCR 25A +60/1000R	HK 2501/1000			
		HCR 25A +60/1600R	HK 2501/1600			
	35	HCR 35A +60/600R	HK 3501/600		48	35
		HCR 35A +60/800R	HK 3501/800			
		HCR 35A +60/1000R	HK 3501/1000			
		HCR 35A +60/1300R	HK 3501/1300			
	45	HCR 45A +60/800R	✆			
		HCR 45A +60/1000R	✆			
		HCR 45A +60/1200R	✆			
		HCR 45A +60/1600R	✆			
	65	HCR 65A +60/1000R	✆			
		HCR 65A +60/1500R	✆			
		HCR 65A +45/2000R	✆			
		HCR 65A +45/2500R	✆			
		HCR 65A +30/3000R	✆			

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

Rexroth
Bosch Group

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
1605, 1607, 1645, 1647	15	1622, 1623, 1631, 1632, 1651, 1653, 1661, 1662, 1665, 1666	HK 1505 KR		24	2
		1621	HK 1505 KR	PHK 15-4	28	
	20	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623	HK 2005 KR		30	10
	25	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623, 1631, 1632	HK 2505 KR		36	20
		1621, 1624	HK 2505 KR	PHK 25-4	40	
	30	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623, 1631, 1632	HK 3005 KR		42	27
		1621, 1624	HK 3005 KR	PHK 30-3	45	
	35	1661, 1662, 1665, 1651, 1653, 1666, 1622, 1623, 1631, 1632	HK 3505 KR		48	33
		1621, 1624	HK 3505 KR	PMK 35-7	55	
	45	1651, 1653, 1622, 1623	HK 4505 KR		60	42
		1621, 1624	HK 4505 KR	PHK 45-10	70	
	55	1651, 1653, 1622, 1623	HK 5505 KR		70	47
		1621, 1624	HK 5505 KR	PHK 55-10	80	
	65	1651, 1653, 1622, 1623,	HK 6505 KR		90	51
1675, 1677	20	1671	HK 2005 KB		27	49
	25	1671	HK 2505 KB		35	38
	35	1671	HK 3505 KB		50	50
1805, 1807	25	1851, 1853	HK 2505 KR		36	20
		1821, 1824	HK 2505 KR	PHK 25-4	40	
	35	1851, 1853	HK 3505 KR		48	33
		1821, 1824	HK 3505 KR	PMK 35-7	55	
	45	1851, 1853	HK 4505 KR		60	42
		1821, 1824	HK 4505 KR	PHK 45-10	70	
	55	1851, 1853	HK 5505 KR		70	47
		1821, 1824	HK 5505 KR	PHK 55-10	80	
	65	1853, 1824	HK 6505 KR		90	51
R2035 R2037	15	R2031, R2032 R2041, R2042	HK 1505 F		24	54
	20	R2031, R2032 R2041, R2042	HK 2005 F		30	55
	25	R2031, R2032 R2041, R2042	HK 2505 F		36	56

Rail manufacturer

SCHNEEBERGER

MR	25	MR..A, MR..B	HK 2503 MR		36	20
		MR..C, MR..D, MR..E	HK 2503 MR	PHK 25-4	40	
	35	MR..A, MR..B	HK 3503 MR		48	33
		MR..C, MR..D, MR..E	HK 3503 MR	PMK 35-7	55	
	45	MR..A, MR..B	HK 4503 MR		60	42
		MR..C, MR..D	HK 4503 MR	PHK 45-10	70	
	55	MR..A, MR..B	HK 5503 MR		70	47
		MR..C, MR..D	HK 5503 MR	PHK 55-10	80	
	65	MR..B, MR..D	HK 6503 MR		90	51
BM	15	BM..A, BM..F, BM..K	HK 1503 BM		24	2
		BM..C	HK 1503 BM	PHK 15-4	28	
	20	BM..A, BM..B, BM..C, BM..D, BM..F, BM..G, BM..K	HK 2003 BM		30	10
	25	BM..A ,BM..B, BM..F, BM..G	HK 2503 BM		36	20
		BM..C, BM..D, BM..E	HK 2503 BM	PHK 25-4	40	
	30	BM..A ,BM..B, BM..F, BM..G	HK 3003 BM		42	27
		BM..C, BM..D, BM..E	HK 3003 BM	PHK 30-3	45	
	35	BM..A ,BM..B, BM..F, BM..G	HK 3503 BM		48	33
		BM..C, BM..D, BM..E	HK 3503 BM	PMK 35-7	55	
	45	BM..A ,BM..B	HK 4503 BM		60	42
		BM..C, BM..D	HK 4503 BM	PHK 45-10	70	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
LWH	15	LWH..B, LWH..SL, LWH..M, LWHT..B, LWHT..SL, LWHT..M	HK 1501 A		24	3
		LWHS..B, LWHS..SL, LWHS..M				
		LWHD..B, LWHD..M, LWHY	HK 1501 A	PHK 15-4	28	
	20	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHY	HK 2001 A		30	11
	25	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	HK 2501 A		36	21
		LWHD..B, LWHD..M, LWHDG, LWHY	HK 2501 A	PHK 25-4	40	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	HK 3001 A		42	28
		LWHD..B, LWHD..M, LWHDG, LWHY	HK 3001 A	PHK 30-3	45	
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	HK 3501 A		48	35
		LWHD..B, LWHD..M, LWHDG, LWHY	HK 3501 A	PMK 35-7	55	
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	HK 4501 A		60	43
		LWHD..B, LWHD..M, LWHDG, LWHY	HK 4501 A	PHK 45-10	70	
	55	LWH..B, LWHG, LWHT..B, LWHTG	HK 5501 A		70	62
		LWHD..B, LWHDG, LWHY	HK 5501 A	PHK 55-10	80	
	65	LWH..B, LWHG, LWHT..B, LWHTG, LWHD..B, LWHDG, LWHY	HK 6501 A		90	53
LWE	15	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	HK 1501 A		24	3
	20	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	HK 2001 A		28	8
	25	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	HK 2501 A		33	17
	30	LWE..Q, LWET..Q,LWES..Q, LWEC, LWEC..SL, LWE, LWE..SL, LWEG, LWEG..SL, LWETC, LWETC..SL, LWET, LWET..SL; LWETG, LWETG..SL, LWESC, LWESC..SL, LWES, LWES..SL,LWESG, LWESG..SL	HK 3001 A		42	28
	35	LWE..Q, LWET..Q,LWES..Q, LWEC, LWE, LWETC, LWET, LWESC, LWES	HK 3501 A		48	35
	45	LWE, LWET, LWES	HK 4501 A		60	43
LRX	15	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	HK 1510 B		24	5
		LRXDC, LRXD, LRXDG	HK 1510 B	PHK 15-4/01	28	
	20	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	HK 2010 B		30	10
		LRXDC, LRXD, LRXDG	HK 2010 B	PHK 20-4	34	
	25	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		36	
		LRXDC, LRXD, LRXDG	HK 2501 A		40	22
	30	LRXC, LRX, LRXG, LRXSC, LRXS, LRXSG	✆		42	
		LRXDC, LRXD, LRXDG	HK 3001 A		45	29
	35	LRXC, LRX, LRXG,	HK 3501 A		48	35
		LRXDC, LRXD, LRXDG	HK 3501 A	PMK 35-7	55	
	45	LRXC, LRX, LRXG,	HK 4501 A		60	43
		LRXDC, LRXD, LRXDG	HK 4501 A	PHK 45-10	70	
	55	LRXC, LRX, LRXG,	HK 5501 A		70	62
		LRXDC, LRXD, LRXDG	HK 5501 A	PHK 55-10	80	
	65	LRXDC, LRXD, LRXDG	HK 6510 R		90	44

LRX: For rail use with cover sheet please contact us!
*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

IKO

Rail manufacturer

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
TKD (KUE)	15	KWE	HK 1501 A		24	3
		KWE..-H	HK 1501 A	PHK 15-4	28	
	20	KWE, KWE..-H	HK 2001 A		30	11
	25	KWE	HK 2501 A	PHK 25-4	36	15
		KWE..-H	HK 2501 A	PHK 25-8	40	
	30	KWE	HK 3001 A	PHK 30-4	42	25
		KWE..-H	HK 3001 A	PHK 30-7	45	
	35	KWE	HK 3501 A	PMK 35-8	48	30
		KWE..-H	HK 3501 A	PMK 35-15	55	
TKSD (KUSE)	20	KWSE, KWSE..-L, KWSE..-H, KWSE..-HL	HK 2001 A		30	11
	25	KWSE, KWSE.. -L	HK 2501 A		36	21
		KWSE..-H, KWSE..-HL	HK 2501 A	PHK 25-4	40	
	30	KWSE, KWSE..-L	HK 3001 A		42	28
		KWSE..-H, KWSE..-HL	HK 3001 A	PHK 30-3	45	
	35	KWSE, KWSE..-L	HK 3501 A		48	35
		KWSE..-H, KWSE..-HL	HK 3501 A	PMK 35-7	55	
	45	KWSE, KWSE..-L	HK 4501 A		60	43
		KWSE..-H, KWSE..-HL	HK 4501 A	PHK 45-10	70	
	55	KWSE, KWSE..-L	HK 5501 A		70	62
		KWSE..-H, KWSE..-HL	HK 5501 A	PHK 55-10	80	
TKVD (KUVE)	15	KWVE..-B, KWVE..-B-EC, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	HK 1502 K		24	3
		KWVE..-B-H, KWVE..-B-KT-H, KWVE..-B-KT-HL	HK 1502 K	PHK 15-4	28	
	20	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	HK 2002 K		30	12
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	HK 2002 K		27	7
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	HK 2002 K		28	9
	25	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-SN-K, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	HK 2502 K	PHK 25-4	36	16
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	HK 2502 K		31	14
		KWVE..-E, KWVE..-B-EC, KWVE..-ES, KWVE..-B-ESC	HK 2502 K		33	18
		KWVE..-ES-K, KWVE..-ESC-K	✆			
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	HK 2502 K	PHK 25-7	40	18
	30	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	HK 3002 K		42	28
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	HK 3002 K		38	25
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	HK 3002 K	PHK 30-3	45	28
	35	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	HK 3502 K	PMK 35-4	48	31
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	HK 3502 K		44	
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	HK 3502 K	PMK 35-11	55	
	45	KWVE..-B, KWVE..-B-EC, KWVE..-B-L, KWVE..-E, KWVE..-ES, KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL,	HK 4502 K		60	41
		KWVE..-B-N, KWVE..-B-NL, KWVE..-B-SN, KWVE..-B-SNL	HK 4502 K		52	40
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-KT-H, KWVE..-B-KT-HL	HK 4502 K	PHK 45-10	70	41
	55	KWVE..-B, KWVE..-B-L, KWVE..-B-S, KWVE..-B-SL, KWVE..-B-KT, KWVE..-B-KT-L, KWVE..-B-KT-S, KWVE..-B-KT-SL	✆		70	
TKVD..W (KUVE..W)	15	KWVE..-W	HK 1502 KB		21	4
	20	KWVE..-W	HK 2002 KB		27	24
	25	KWVE..-WL, KWVE..-B-KT-W, KWVE..-B-KT-WL	HK 2502 KB		35	37
	30	KWVE..-W	✆			
	35	KWVE..-WL	HK 3502 KB		50	50

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

INA

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
TSX..D (RUE)	25	RWU..-D, RWU..-D-L	HK 2502 R		36	21
		RWU..-D-H, RWU..-D-HL	HK 2502 R	PHK 25-4	40	
	35	RWU..-E, RWU..-E-L, RWU..-E-KT-L	HK 3502 R		48	35
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	HK 3502 R	PMK 35-7	55	
	45	RWU..-E, RWU..-E-L, RWU..-E-KT-L	HK 4502 R		60	43
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	HK 4502 R	PHK 45-10	70	
	55	RWU..-E, RWU..-E-L, RWU..-E-KT-L	HK 5502 R		70	47
		RWU..-E-H, RWU..-E-HL, RWU..-E-KT-HL	HK 5502 R	PHK 55-10	80	
	65	RWU..-E, RWU..-E-L	HK 6502 R		90	53
		RWU..-E-H, RWU..-E-HL	HK 6502 R	PHK 65-10	100	

Rail manufacturer

NSK

LH	15	LAH..EMZ, LAH..GMZ	HK 1501 A		24	3
		LAH..ANZ, LAH..BNZ	HK 1501 A	PHK 15-4	28	
	20	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	HK 2001 A		30	11
	25	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	HK 2501 A		36	21
		LAH..ANZ, LAH..BNZ	HK 2501 A	PHK 25-4	40	
	30	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	HK 3001 A		42	28
		LAH..ANZ, LAH..BNZ	HK 3001 A	PHK 30-3	45	
	35	LAH..EMZ, LAH..GMZ, LAH..ALZ, LAH..BLZ	HK 3501 A		48	35
		LAH..ANZ, LAH..BNZ	HK 3501 A	PMK 35-7	55	
	45	LAH..EMZ, LAH..GMZ	HK 4501 A		60	43
		LAH..ANZ, LAH..BNZ	HK 4501 A	PHK 45-10	70	
	55	LAH..EMZ, LAH..GMZ	HK 5501 A		70	62
		LAH..ANZ, LAH..BNZ	HK 5501 A	PHK 55-10	80	
	65	LAH..EMZ, LAH..GMZ, LAH..ANZ, LAH..BNZ	HK 6501 A		90	53
SH	15	SAH..EMZ, SAH..GMZ	HK 1501 A		24	3
		SAH..ANZ, SAH..BNZ	HK 1501 A	PHK 15-4	28	
	20	SAH..EMZ, SAH..GMZ, SAH..ANZ, SAH..BNZ	HK 2001 A		30	11
	25	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	HK 2501 A		36	21
		SAH..ANZ, SAH..BNZ	HK 2501 A	PHK 25-4	40	
	30	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	HK 3001 A		42	28
		SAH..ANZ, SAH..BNZ	HK 3001 A	PHK 30-3	45	
	35	SAH..EMZ, SAH..GMZ, SAH..ALZ, SAH..BLZ	HK 3501 A		48	35
		SAH..ANZ, SAH..BNZ	HK 3501 A	PMK 35-7	55	
LS	15	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	HK 1501 A	PHK 15-2	24	1
	20	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	HK 2001 A		28	8
	25	LAS..KLZ, LAS..JMZ, LAS..EMZ, LAS..CLZ, LAS..ALZ	HK 2501 A		33	17
	30	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	HK 3001 A	PHK 30-4	42	25
	35	LAS..KLZ, LAS..FLZ, LAS..ELZ, LAS..CLZ, LAS..ALZ	HK 3501 A		48	35
SS	15	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	HK 1501 A	PHK 15-2	24	1
	20	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	HK 2001 A		28	8
	25	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	HK 2501 A		33	17
	30	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	HK 3001 A	PHK 30-4	42	25
	35	SAS..KLZ, SAS..EMZ, SAS..CLZ, SAS..ALZ	HK 3501 A		48	35
LY	15	LY..EL,LY.. FL, LY..AL	HK 1501 A		24	3
		LY..AN	HK 1501 A	PHK 15-4	28	
	20	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 2001 A		30	11
	25	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 2501 A		36	21
		LY..AN, LY..BN	HK 2501 A	PHK 25-4	40	
	30	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 3001 A		42	28
		LY..AN, LY..BN	HK 3001 A		45	29
	35	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 3501 A		48	35
		LY..AN, LY..BN	HK 3501 A	PMK 35-7	55	
	45	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 4501 A		60	43
		LY..AN, LY..BN	HK 4501 A	PHK 45-10	70	
	55	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AL, LY..BL	HK 5501 A		70	62
		LY..AN, LY..BN	HK 5501 A	PHK 55-10	80	
	65	LY..EL, LY..FL, LY.. GL, LY.. HL, LY..AN, LY..BN	HK 6501 A		90	53

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

Rail manufacturer

NSK

Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
LA	25	LA..EL, LA..GL, LA..FL, LA..HL	HK 2501 A		36	21
		LA..AN, LA..BN	HK 2501 A	PHK 25-4	40	
	30	LA..EL, LA..GL, LA..FL, LA..HL	HK 3001 A		42	28
		LA..AN, LA..BN	HK 3001 A		45	29
	35	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	HK 3501 A		48	35
		LA..AN, LA..BN	HK 3501 A	PMK 35-7	55	
	45	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	HK 4501 A		60	43
		LA..AN, LA..BN	HK 4501 A	PHK 45-10	70	
	55	LA..EL, LA..GL, LA..FL, LA..HL, LA..AL, LA..BL	HK 5501 A		70	62
		LA..AN, LA..BN	HK 5501 A	PHK 55-10	80	
	65	LA..EL, LA..GL, LA..FL, LA..HL, LA..AN, LA..BN	HK 6501 A		90	53
LW	17	LW..ELZ	HK 1701 B		17	39
	21	LW..ELZ	HK 2101 B		21	23
	27	LW..ELZ	HK 2701 B		27	24
	35	LW..ELZ	HK 3501 B		35	45
	50	LW..ELZ	HK 5001 B		50	50
RA	15	RA..AL, RA..BL, RA..EM, RA..GM	✆		24	
		RA..AN, RA..BN	✆		28	
	20	RA..EM, RA..GM, RA..AN, RA..BN	✆		30	
	25	RA..AL, RA..BL, RA..EM, RA..GM	✆		36	
		RA..AN, RA..BN	✆		40	
	30	RA..AL, RA..BL, RA..EM, RA..GM	✆		42	
		RA..AN, RA..BN	✆		45	
	35	RA..AL, RA..BL, RA..EM, RA..GM	✆		48	
		RA..AN, RA..BN	✆		55	
	45	RA..AL, RA..BL, RA..EM, RA..GM	✆		60	
		RA..AN, RA..BN	✆		70	
	55	RA..AL, RA..BL, RA..EM, RA..GM	✆		70	
		RA..AN, RA..BN	✆		80	
	65	RA..EM, RA..GM, RA..AN, RA..BN	✆		90	

Rail manufacturer

ROLLON

MR	15	MRS, MRS..C, MRT..W, MRT..SW	HK 1501 A		24	3
		MRS..W	HK 1501 A	PHK 15-4	28	
	20	MRT..S, MRT..SC, MRT..W, MRT..SW	HK 2001 A		28	11
		MRS, MRS..L, MRS..C, MRS..LC,MRS..W, MRS..LW	HK 2001 A	PHK 20-2	30	
	25	MRT, MRT..S, MRT..C, MRT..SC, MRT..W, MRT..SW, MRT..LW..	HK 2514 A		33	34
		MRS, MRS..L, MRS..C, MRS..LC	HK 2501 A		36	21
		MRS..W, MRS..LW	HK 2501 A	PHK 25-4	40	
	30	MRS, MRS..L, MRS..C, MRS..LC, MRT..W, MRT..SW, MRT..LW	HK 3001 A		42	28
		MRS..W, MRS..LW	HK 3001 A	PHK 30-3	45	
	35	MRS, MRS..L, MRT..W, MRT..SW, MRT..LW	HK 3501 A		48	35
		MRS..W, MRS..LW	HK 3501 A	PMK 35-7	55	
	45	MRS, MRS..L, MRT..W, MRT..LW	HK 4501 A		60	43
		MRS..W, MRS..LW	HK 4501 A	PHK 45-10	70	
	55	MRT..W, MRT..LW	✆		68	
		MRS, MRS..L	HK 5501 A		70	62
		MRS..W, MRS..LW	HK 5501 A	PHK 55-10	80	

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation

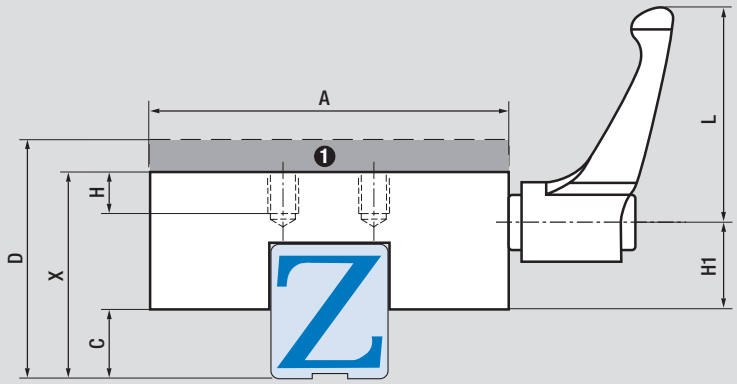
Type of rail	Size	Type of carriage	Item number	Adapting plate *1 [for height compensation]	Measure D [mm] *2	Measure table [page 112 and 113]
LGR..T	15	LGW..CC	HK 1501 A		24	3
LGR..R		LGH..CA	HK 1501 A	PHK 15-4	28	
	20	LGW..CC, LGW..HC, LGH..CA, LGH..HA	HK 2001 A	PHK 20-4	30	6
	25	LGW..CC, LGW..HC	HK 2501 A		36	21
		LGH..CA, LGH..HA	HK 2501 A	PHK 25-4	40	
	30	LGW..CC, LGW..HC	HK 3001 A		42	28
		LGH..CA, LGH..HA	HK 3001 A	PHK 30-3	45	
	35	LGW..CC, LGW..HC	HK 3501 A	PMK 35-4	48	31
		LGH..CA, LGH..HA	HK 3501 A	PMK 35-10	55	32
	45	LGW..CC, LGW..HC	HK 4501 A		60	43
		LGH..CA, LGH..HA	HK 4501 A	PHK 45-10	70	
	55	LGW..CC, LGW..HC	HK 5501 A		70	62
		LGH..CA, LGH..HA	HK 5501 A	PHK 55-10	80	
	65	LGW..CC, LGW..HC,LGH..CA, LGH..HA	HK 6501 A		90	53
HGR..T	15	HGW..CC	HK 1501 A		24	3
HGR..R		HGH..CA	HK 1501 A	PHK 15-4	28	
	20	HGW..CC, HGW..HC, HGH..CA, HGH..HA	HK 2001 A	PHK 20-1	30	63
	25	HGW..CC, HGW..HC	HK 2501 A		36	21
		HGH..CA, HGH..HA	HK 2501 A	PHK 25-4	40	
	30	HGW..CC, HGW..HC	HK 3001 A		42	28
		HGH..CA, HGH..HA	HK 3001 A	PHK 30-3	45	
	35	HGW..CC, HGW..HC	HK 3501 A		48	35
		HGH..CA, HGH..HA	HK 3501 A	PMK 35-7	55	
	45	HGW..CC, HGW..HC	HK 4501 A		60	43
		HGH..CA, HGH..HA	HK 4501 A	PHK 45-10	70	
	55	HGW..CC, HGW..HC	HK 5501 A		70	62
		HGH..CA, HGH..HA	HK 5501 A	PHK 55-10	80	
	65	HGW..CC, HGW..HC, HGH..CA, HGH..HA	HK 6501 A		90	53
EGR..T	15	EGH...SA, EGH...CA, EGW...SC, EGW...CC	HK 1501 A	PHK 15-3	24	36
	20	EGH...SA, EGH...CA, EGW...SC, EGW...CC	HK 2001 A		28	8
	25	EGH...SA, EGH...CA, EGW...SC, EGW...CC	HK 2501 A	PHK 25-1	33	15
	30	EGH...SA, EGH...CA, EGW...SC, EGW...CC	HK 3001 A		42	28
RG..T	25	RGW..CC, RGW..HC	✆		36	
		RGH..CA, RGH..HA	✆		40	
	30	RGW..CC, RGW..HC	HK 3001 A		42	28
		RGH..CA, RGH..HA	HK 3001 A		45	29
	35	RGW..CC, RGW..HC	HK 3501 A		48	35
		RGH..CA, RGH..HA	HK 3501 A	PMK 35-7	55	
	45	RGW..CC, RGW..HC	✆		60	
		RGH..CA, RGH..HA	✆		70	
	55	RGW..CC, RGW..HC	HK 5501 A		70	62
		RGH..CA, RGH..HA	HK 5501 A	PHK 55-10	80	
	65	RGW..CC, RGW..HC, RGH..CA, RGH..HA	✆		90	

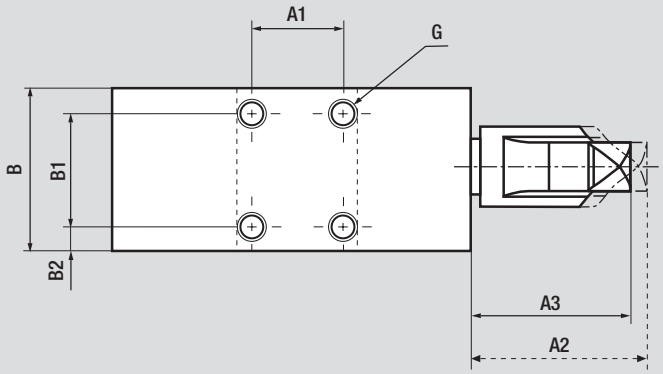
Rail manufacturer

HIWIN Lineartechnologie

*1 Only required for high carriage design
*2 Supplements the measure table and datasheet

See page 12 for part number explanation



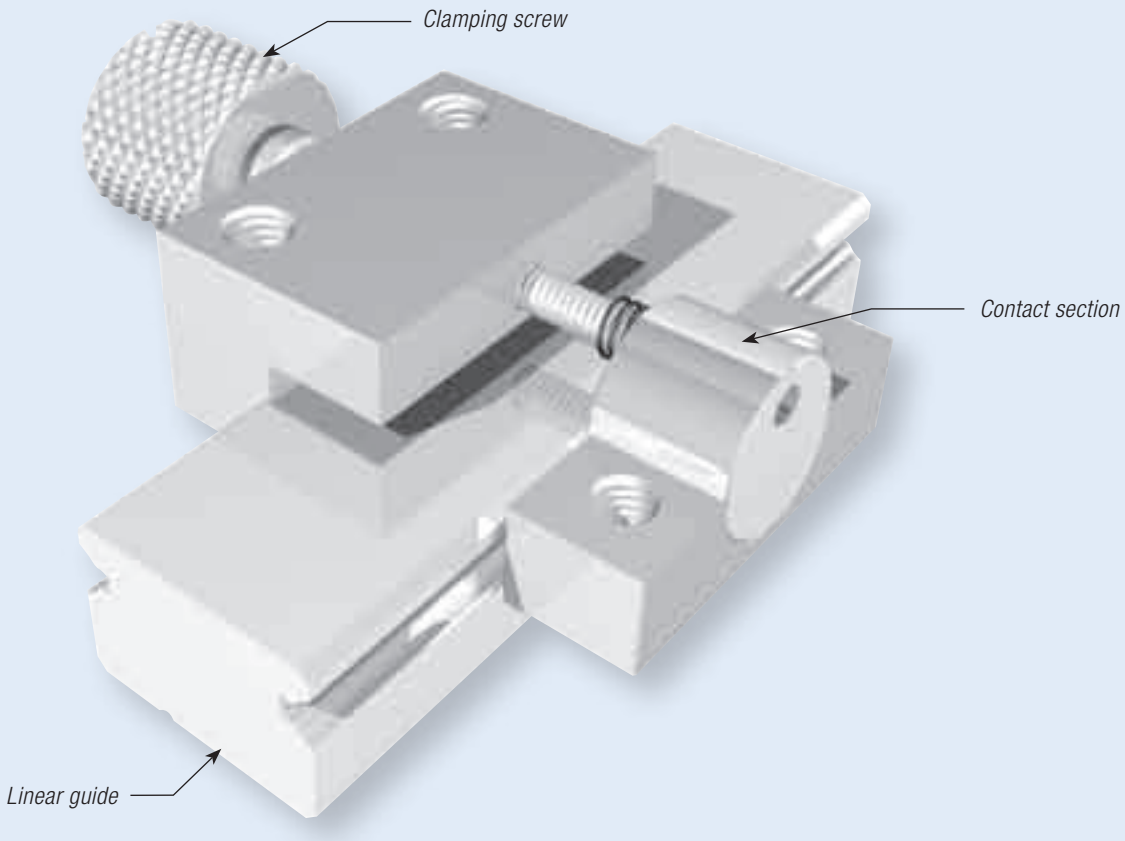


Note: Consider measurement C!

❶ Adapting plate (accessories)

X = measure of function to be complied
D = Dimension of installation-linear guide
(if necessary with adapting plate accessories)

Measure table	Holding power [N] HK Fastening torque [Nm]	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	B [mm]	B1 [mm]	B2 [mm]	C [mm]	X [mm]	G	L [mm]	H [mm]	H1 [mm]
1	1200/5	47	17	33,5	30,5	25	17	4	4,5	22	M4	44	5	12,5
2	1200/4	47	17	33,5	30,5	25	17	4	5	24	M4	44	5	14,3
3	1200/5	47	17	33,5	30,5	25	17	4	6,5	24	M4	44	5	12,5
4	1200/5	69	17	33,5	30,5	25	17	4	3,5	21	M4	44	5	12,5
5	1200/7	47	38	33,5	30,5	29	20	4,5	6,5	24	M5	44	6	13,4
6	1200/7	60	15	41,5	38,5	24	15	4,5	6	26	M5	63	6	13
7	1200/4	60	15	33,5	30,5	24	15	4,5	8	27	M5	44	6	12,5
8	1200/7	60	15	41,5	38,5	24	15	4,5	8	28	M5	63	6	13
9	1200/4	60	15	33,5	30,5	24	15	4,5	9	28	M5	44	6	12,5
10	1200/5	60	15	33,5	30,5	24	15	4,5	7	30	M5	44	6	17,5
11	1200/7	60	15	41,5	38,5	24	15	4,5	10	30	M5	63	6	13
12	1200/4	60	15	33,5	30,5	24	15	4,5	11	30	M5	44	5	12,5
13	1200/7	72	20	41,5	38,5	30	20	5	7	31	M6	63	8	15
14	1200/7	70	20	41,5	38,5	30	20	5	8	31	M6	63	6	15,5
15	1200/7	70	20	41,5	38,5	30	20	5	8	32	M6	63	8	15
16	1200/7	70	20	41,5	38,5	30	20	5	9	32	M6	63	6	15,5
17	1200/7	70	20	41,5	38,5	30	20	5	9	33	M6	63	8	15
18	1200/7	70	20	41,5	38,5	30	20	5	10	33	M6	63	6	15,5
19	1200/7	70	20	41,5	38,5	30	20	5	10	34	M6	63	8	15
20	1200/7	70	20	41,5	38,5	30	20	5	7	36	M6	63	7	22,3
21	1200/7	70	20	41,5	38,5	30	20	5	12	36	M6	63	8	15
22	1200/7	70	20	41,5	38,5	30	20	5	16	40	M6	63	8	15
23	1200/4	77	24	33,5	30,5	24	15	4,5	3	21	M5	44	6	12,5
24	1200/4	80	20	33,5	30,5	30	20	5	4	27	M6	44	6	17
25	2000/15	90	22	50,5	46,5	39	22	8,5	8	38	M6	78	8	21,5
26	2000/15	90	22	50,5	46,5	39	22	8,5	8	42	M6	78	8	21,5
27	2000/15	90	22	50,5	46,5	39	22	8,5	9	42	M6	78	8	25
28	2000/15	90	22	50,5	46,5	39	22	8,5	12	42	M6	78	8	21,5
29	2000/15	90	22	50,5	46,5	39	22	8,5	15	45	M6	78	8	21,5
30	2000/15	100	24	50,5	46,5	39	24	7,5	8	40	M8	78	10	21,5
31	2000/15	100	24	50,5	46,5	39	24	7,5	12	44	M8	78	10	21,5
32	2000/15	100	24	50,5	46,5	39	24	7,5	13	45	M8	78	10	21,5
33	2000/15	100	24	50,5	46,5	39	24	7,5	7	48	M8	78	10	31
34	1200/7	70	20	41,5	38,5	30	20	5	11,5	33	M6	63	8	15
35	2000/15	100	24	50,5	46,5	39	24	7,5	16	48	M8	78	10	21,5
36	1200/5	47	17	33,5	30,5	25	17	4	3,5	21	M4	44	5	12,5
37	1200/7	118	20	41,5	38,5	30	20	5	11	35	M6	63	8	13,5
38	1200/7	120	50	41,5	38,5	39	25	7	5	35	M6	63	11	23,2
39	1200/4	60	17	33,5	30,5	25	17	4	2,5	17	M4	44	5	10
40	2000/15	120	26	50,5	46,5	44	26	9	10	52	M10	78	14	26,5
41	2000/15	120	26	50,5	46,5	44	26	9	12	60	M10	78	12,5	35,7
42	2000/15	120	26	50,5	46,5	44	26	9	12	60	M10	78	14	35
43	2000/15	120	26	50,5	46,5	44	26	9	18	60	M10	78	14	26,5
44	2000/18	170	35	61,5	56,5	64	35	14,5	26	90	M16	95	20	38,5
45	2000/15	135	50	50,5	46,5	39	20	9,5	4	35	M8	78	10	20,5
46	2000/22	140	30	61,5	56,5	49	30	9,5	14	63	M14	95	16	31
47	2000/22	140	30	61,5	56,5	49	30	9,5	19	70	M14	95	14	37,5
48	2000/22	140	30	61,5	56,5	49	30	9,5	19	68	M14	95	16	31
49	1200/4	80	15	33,5	30,5	24	15	4,5	4	27	M5	44	10	18,8
50	2000/15	145	60	50,5	46,5	39	20	9,5	11	50	M8	78	11	29,9
51	2000/22	160	35	61,5	56,5	64	35	14,5	24	90	M16	95	20	45,5
52	2000/22	170	35	61,5	56,5	64	35	14,5	15	75	M16	95	21	36
53	2000/22	170	35	61,5	56,5	64	35	14,5	26	90	M16	95	24	36
54	130/3	34	10	33,5	30,5	20	10	5	4,2	24	M3	40	6	12,9
55	250/3	44	12	33,5	30,5	24	12	6	6	30	M4	40	6	16
56	330/3	48	15	33,5	30,5	30	15	7,5	7	36	M5	44	7	19,6
57	2000/15	57	18	50,5	46,5	29	18	5,5	12	33	M6	78	8	13
58	1200/4	32	17	33,5	30,5	25	17	4	7	20	M4	44	5	7,8
59	1200/5	43	15	33,5	30,5	24	15	4,5	8,5	24	M5	44	6	8,8
60	1200/7	47	20	41,5	38,5	30	20	5	11	30	M6	63	7	10
61	2000/15	68	24	50,5	46,5	39	24	7,5	14	38	M8	78	10	15
62	2000/22	140	30	61,5	56,5	49	30	9,5	21	70	M14	95	16	31
63	1200/7	60	15	41,5	38,5	24	15	4,5	9	29	M5	63	6	13
64	2000/15	120	26	50,5	46,5	44	26	9	4	52	M10	78	12,5	35,7



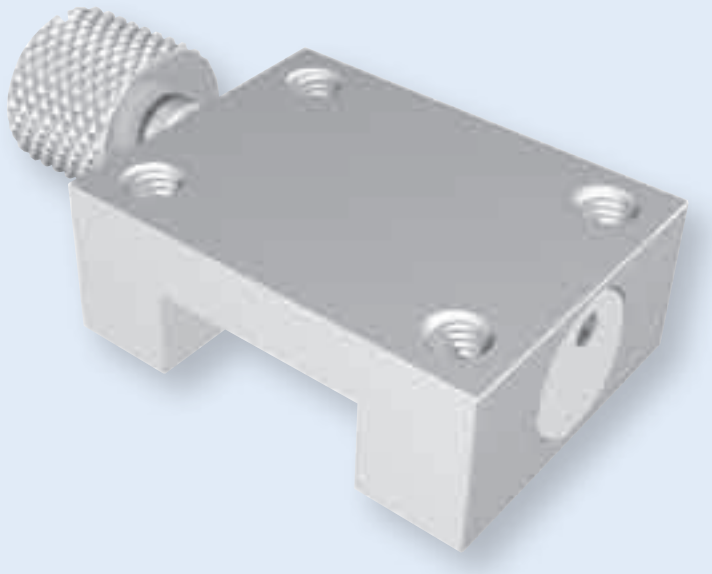
Small and efficient!

Miniature Manual Clamping **miniHK.**

The miniHK series is a manually operated clamping element. By tightening the clamping screw, the contact sections are pressed synchronously against the free surfaces of the section rail guide.

The floating contact sections guarantee symmetric power transmission.

mini**HK Design**



Special characteristics:
- Simple and safe construction
- Floating supported contact sections
- Exact positioning
- Holding power up to 220 **N**

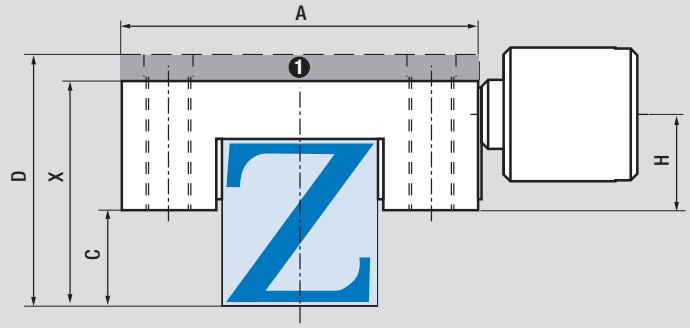
Application scenarios for mini**HK:**
- Placement robot
- Measuring instruments
- Assembly aids

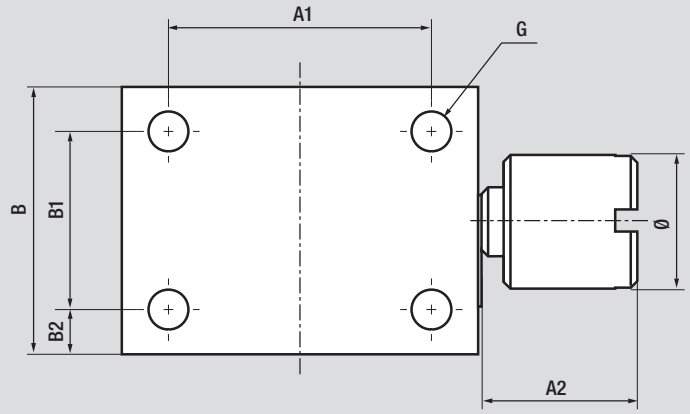
Operation:
With clamping screw.

Rail manufacturer	Type of rail	Size	Type of carriage	Item number	Measure D [mm] *2	Measure table [page 117]
THK The Mark of Linear Motion	RSR, RSH	5	RSR..M, RSR..N	✆	6	
		7	RSR..M, RSH..M, RSR..N	HK 0700 M	8	1
		9	RSR..KM, RSH..KM, RSR..N	HK 0900 M	10	2
		12	RSR..KM, RSH..VM, RSR..N	✆	13	
		15	RSR..VM, RSR..N	HK 1500 M	16	4
		20	RSR..VM, RSR..N	HK 2000 M	25	6
	SRS..M	9	SRS..M	✆	10	
		12	SRS..M	HK 1200 M	13	3
		15	SRS..M	✆	16	
		20	SRS..M	HK 2000 M	20	5
		25	SRS..M	✆	25	
Rail manufacturer						
Rexroth Bosch Group	0445	7	0442..7, 0444..7	✆	8	
		9	0442..9/ M3, 0442..9/M2, 0444..9/M3	HK 0900 M	10	2
		12	0442..12, 0444..12	HK 1200 M	13	3
		15	0442..15, 0444..15	HK 1500 M	16	4
		20	0442..20	HK 2000 M	25	6
Rail manufacturer						
SCHNEEBERGER	MN	7	MNN	✆	8	
		9	MNN	HK 0900 M	10	2
		12	MNN	HK 1200 M	13	3
		15	MNN	HK 1500 M	16	4
Rail manufacturer						
IKO	LWL	5	LWLC..B, LWLC..N, LWL..B, LWL..N	✆	6	
		7	LWLC..B, LWLC..N, LWL..B, LWL..N, LWLG..B, LWLG..N	HK 0700 M	8	1
		9	LWLC..B, LWLC..N, LWL..B, LWL..N, LWL..BCS, LWLG..B, LWLG..N	HK 0900 M	10	2
		12	LWLC..B, LWL..B, LWL..BCS, LWLG..B,	HK 1200 M	13	3
		15	LWLC..B, LWL..B, LWL..BCS, LWLG..B,	HK 1500 M	16	4
		20	LWLC..B, LWL..B, LWL..BCS, LWLG..B,	✆	20	
		25	LWLC..B, LWL..B, LWLG..B	✆	25	
Rail manufacturer						
INA	TKDM	5	KWEM, KWEM..-C	✆	6	
		7	KWEM, KWEM..-L, KWEM..-C	HK 0700 M	8	1
		9	KWEM, KWEM..-L, KWEM..-C	HK 0900 M	10	2
		12	KWEM, KWEM..-L, KWEM..-C	HK 1200 M	13	3
		15	KWEM, KWEM..-L, KWEM..-C	HK 1500 M	16	4
Rail manufacturer						
NSK	LU	5	LU..TL, PU..TR	✆	6	
		7	LU..AL, PU..AR	HK 0700 M	8	1
		9	LU..AR, LU..TR, LU..AL, LU..TL, LU..BL, LU..UL, PU..TR	HK 0900 M	10	2
		12	LU..AR, LU..TR, LU..AL, LU..TL, LU..BL, LU..UL, PU..TR	HK 1200 M	13	3
		15	LU..AL, LU..BL, PU..AL	HK 1500 M	16	4
Rail manufacturer						
HIWIN Lineartechnologie	MGN	7	MGN..C, MGN..H	HK 0700 M	8	1
		9	MGN..C, MGN..H	HK 0900 M	10	2
		12	MGN..C, MGN..H	HK 1200 M	13	3
		15	MGN..C, MGN..H	HK 1500 M	16	4

*2 Supplements the measure table and datasheet

See page 12 for part number explanation

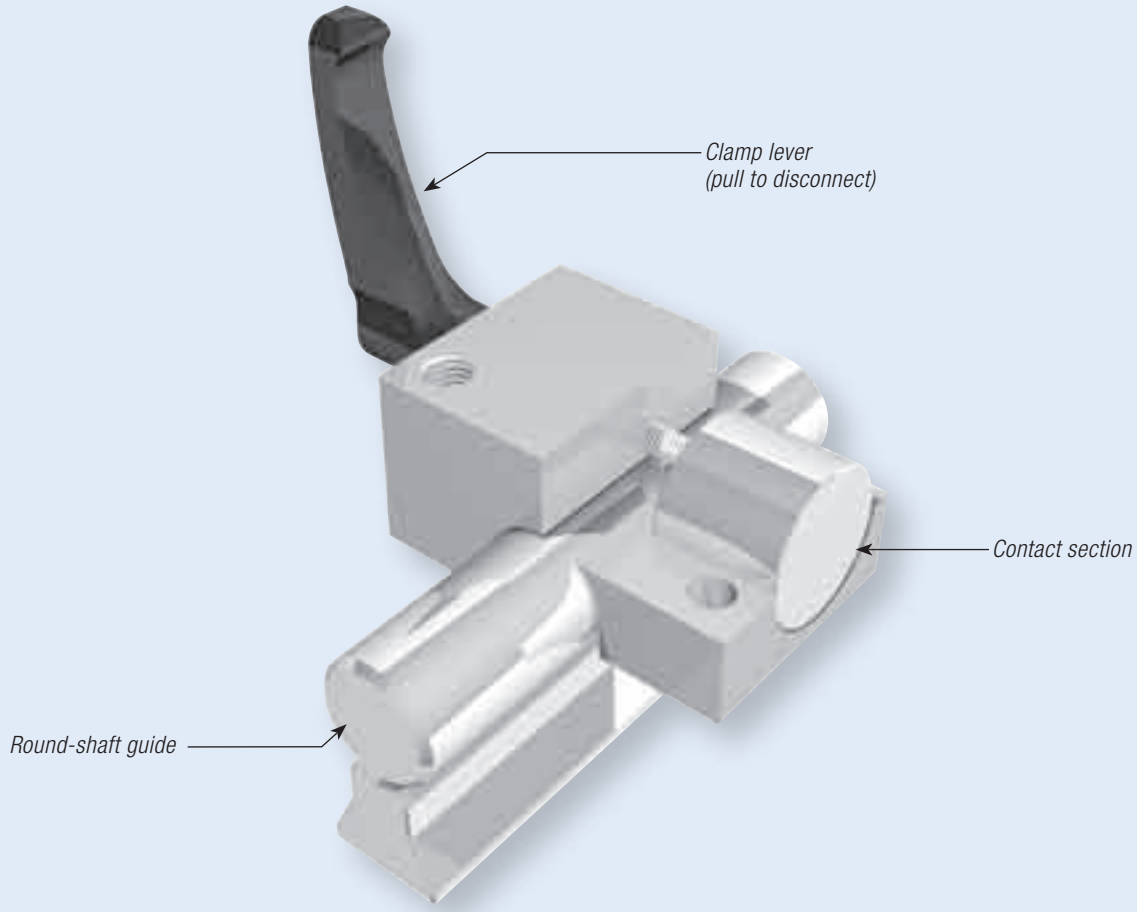




Note: Consider measurement C!

❶ adapting plate PHK (accessories)

Measure table	Holding power [N] miniHK Fastening torque [Nm]	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	C [mm]	X [mm]	G	Ø [mm]	H [mm]
1	65/0,15	17	12	7	12	8	2	2	8	M2	6	4,3
2	100/0,24	20	15	9	17	11	3	2,7	10	M3	8	5,35
3	150/0,50	27	20	10	19	13	3	3,5	13	M3	10	7,15
4	180/1,02	32	25	14	20	14	3	5	16	M3	12	8,05
5	220/1,8	46	38	14	26	19	3,5	5	20	M4	14	9,60
6	220/1,8	46	38	14	26	19	3,5	10	25	M4	14	9,60

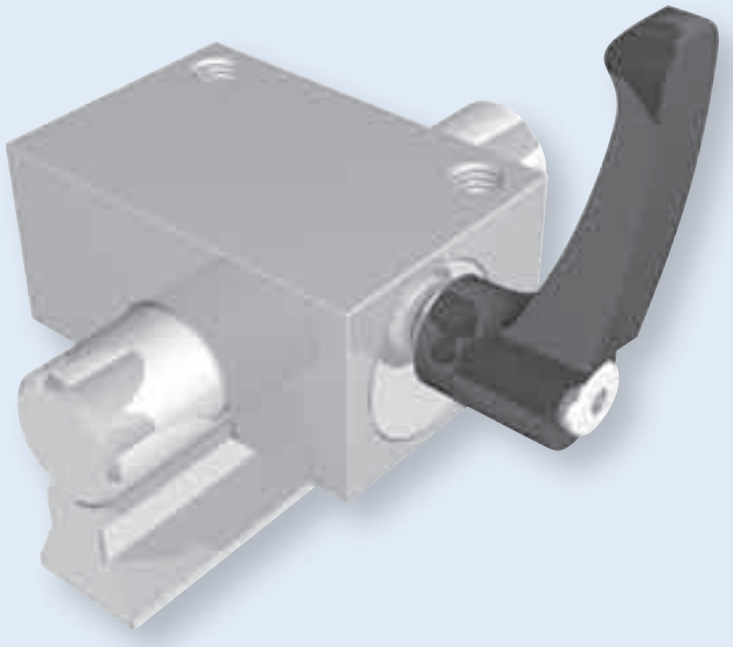


Efficient clamping elements for round-shaft guides HKR.

The HKR series is a manually operated clamping element for round-shaft guides. By rotating the freely adjustable clamp lever, the contact sections are pressed synchronously against the free surfaces of the round-shaft guide.

The floating contact sections guarantee symmetric power transmission.

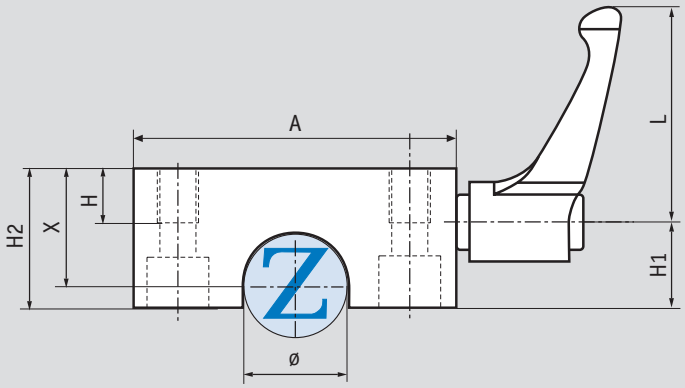
HKR Design

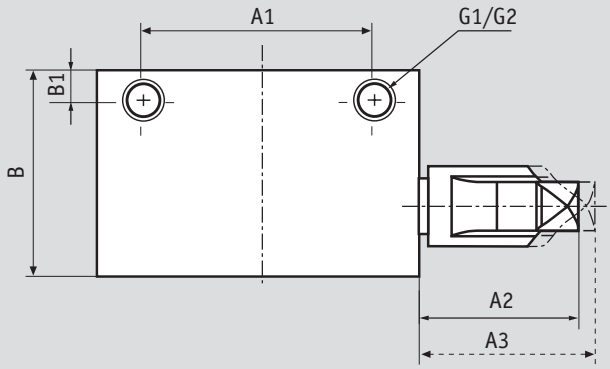


Special characteristics:
- Simple and safe construction
- Floating supported contact sections
- Holding power up to 2,000 **N**
- Exact positioning

Application scenarios for HKR:
- Table traverses in wood industry
- Adjustment of width in plastics processing
- Positioning of optic instruments and measuring tables

HKR



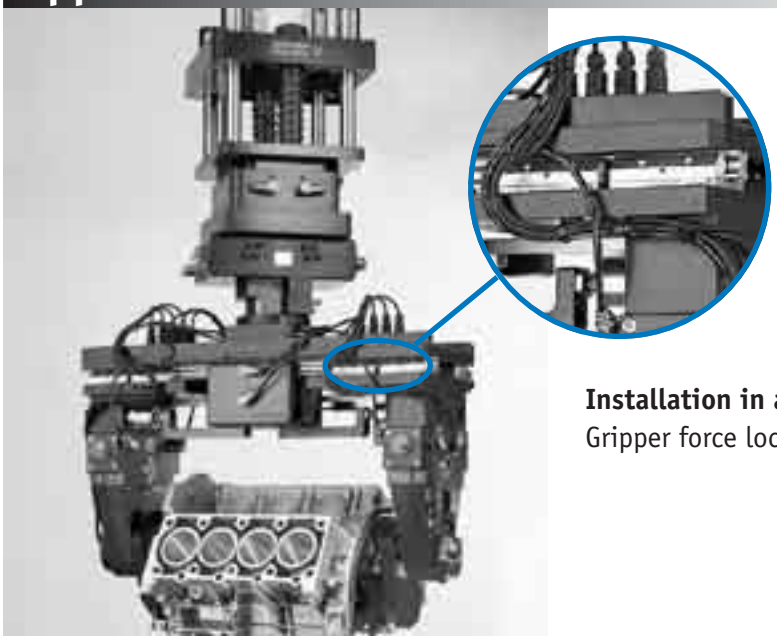


Comment

G1: connection from above
G2: connection from below

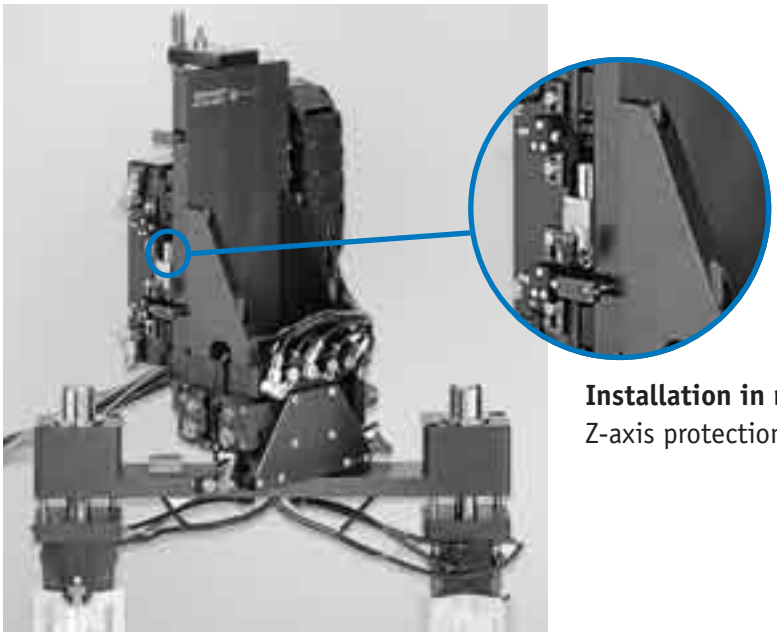
Sizee [mm]	Item number	Holding power [N] HKR Fastening torque [Nm]	A [mm]	A1 [mm]	A2 [mm]	A3 [mm]	B [mm]	B1 [mm]	X [mm]	H [mm]	H1 [mm]	H2 [mm]	G1	G2	L [mm]
12	HKR 1200 A	1200N/5Nm	43	32	30,5	33,5	32	4,5	18	10	16	24	M5	M4	44
16	HKR 1600 A	1200N/5Nm	53	40	30,5	33,5	38	5,5	22	12	19	29	M6	M5	44
20	HKR 2000 A	1200N/7Nm	60	45	38,5	41,5	44	6,5	25	14	21,5	32	M8	M6	63
25	HKR 2500 A	1200N/7Nm	78	60	38,5	41,5	52	9	30	16	25	38	M10	M8	63
30	HKR 3000 A	2000N/15Nm	87	68	46,5	50,5	58	10	35	16	28,5	43	M10	M8	78
40	HKR 4000 A	2000N/22Nm	108	86	56,5	61,5	68	11	45	20	34,5	53	M12	M10	95
50	HKR 5000 A	2000N/36Nm	132	108	56,5	61,5	76	12	50	22	39,5	58	M16	M14	95

Application scenarios



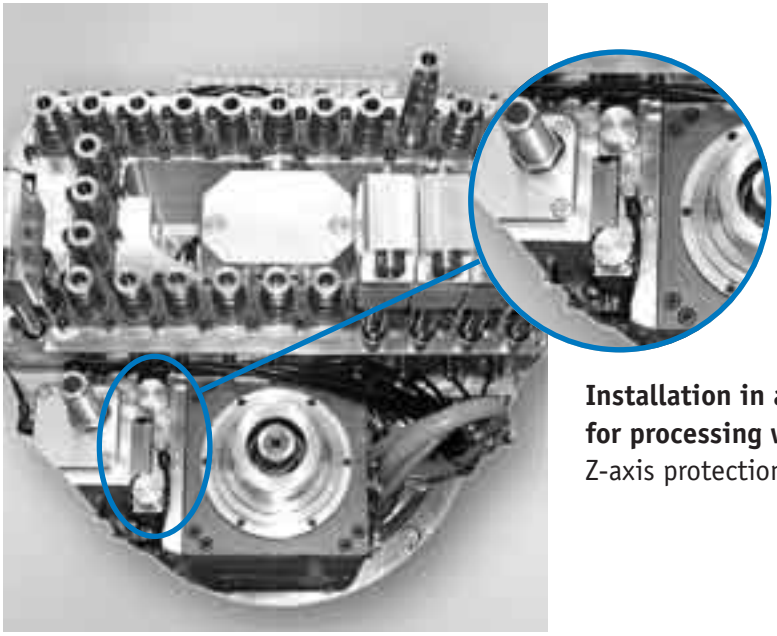
MKS 2501 A

Installation in a crank case handling machine
Gripper force lock



MKS 2001 A

Installation in measuring machine equipment
Z-axis protection



MKS 2701 B

Installation in a fully automatic cutting unit for processing wood
Z-axis protection

If you have any questions or if you need further information do not hesitate to contact us.

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