

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.

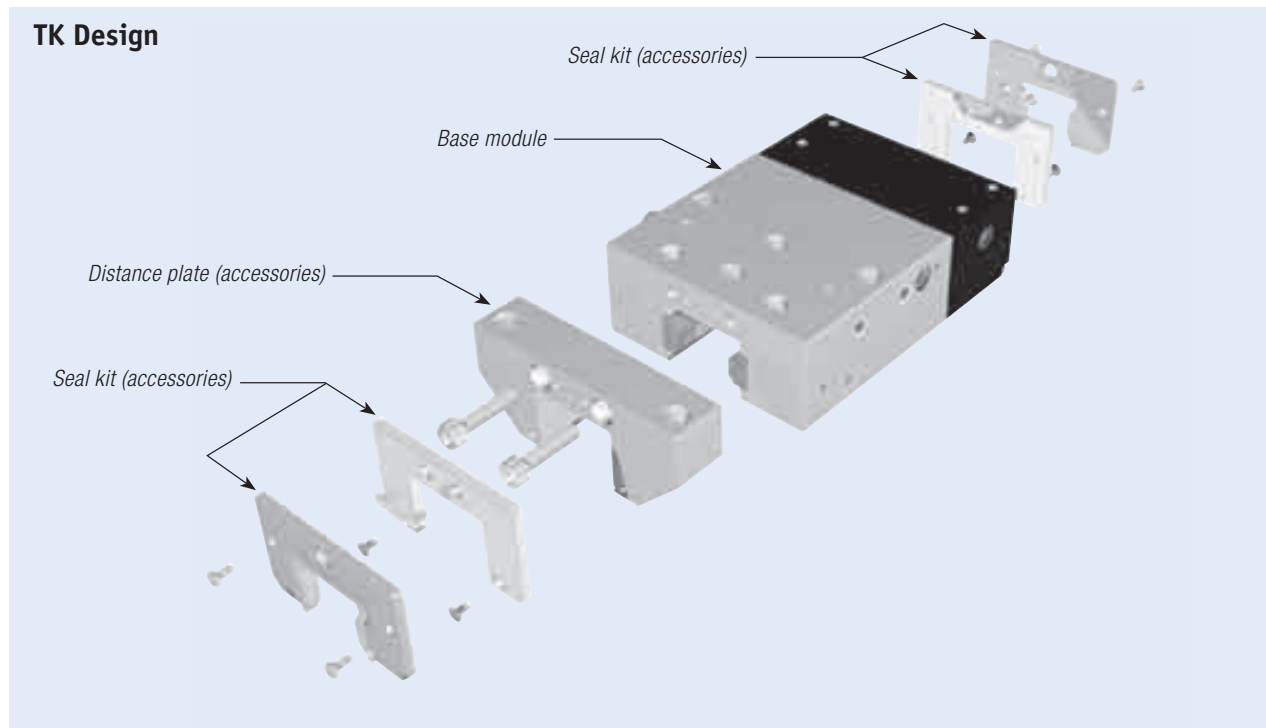
The TK series is designed for braking on linear guides. Because of the material combination of the linear guide/contact section, the linear guide won't be damaged by the contact section.

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).

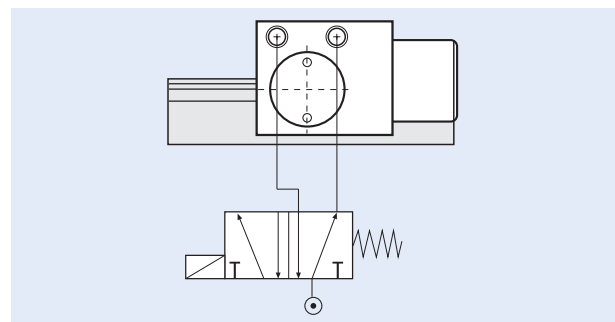
Higher supporting forces with PLUS connection (TKPS):

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



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



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



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



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



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



TK

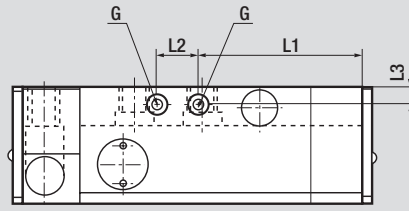
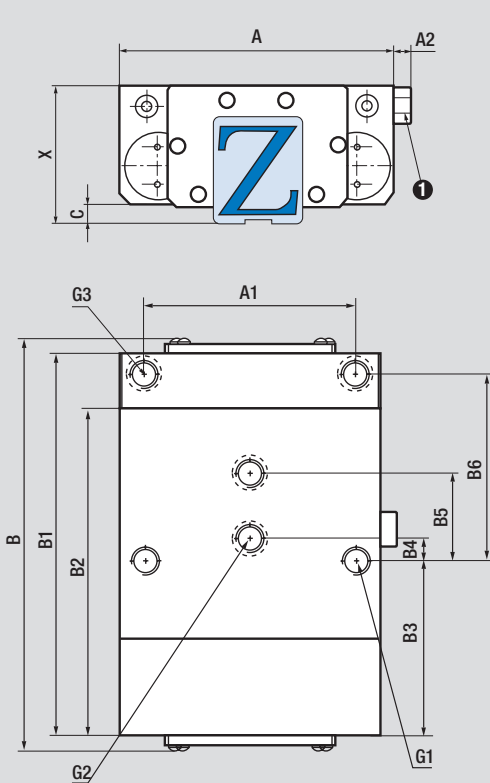
LGR..T LGR..R	35	LGW..CC, LGW..HC	TKPS 3512 BS1	1
	45	LGW..CC, LGW..HC	TKPS 4512 BS1	2
	55	LGW..CC, LGW..HC	TKPS 5512 BS1	3
HGR..T HGR..R	35	HGW..CC, HGW..HC	☉	
	45	HGW..CC, HGW..HC	☉	
	55	HGW..CC, HGW..HC	☉	
RG..T	35	RGW..CC, RGW..HC	☉	
	45	RGW..CC, RGW..HC	☉	
	55	RGW..CC, RGW..HC	☉	

Rail manufacturer



x: not feasible

See page 13 for part number explanation



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

❶ air filter

Measure table	Holding power [N] TK		min. releasing pressure [bar]	Normal liter [dm ³ /Stroke]		A [mm]	A1 [mm]	A2 [mm]	B [mm]	B1 [mm]	B2 [mm]	B3 [mm]
	Standard	PLUS		Standard	PLUS							
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