

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.

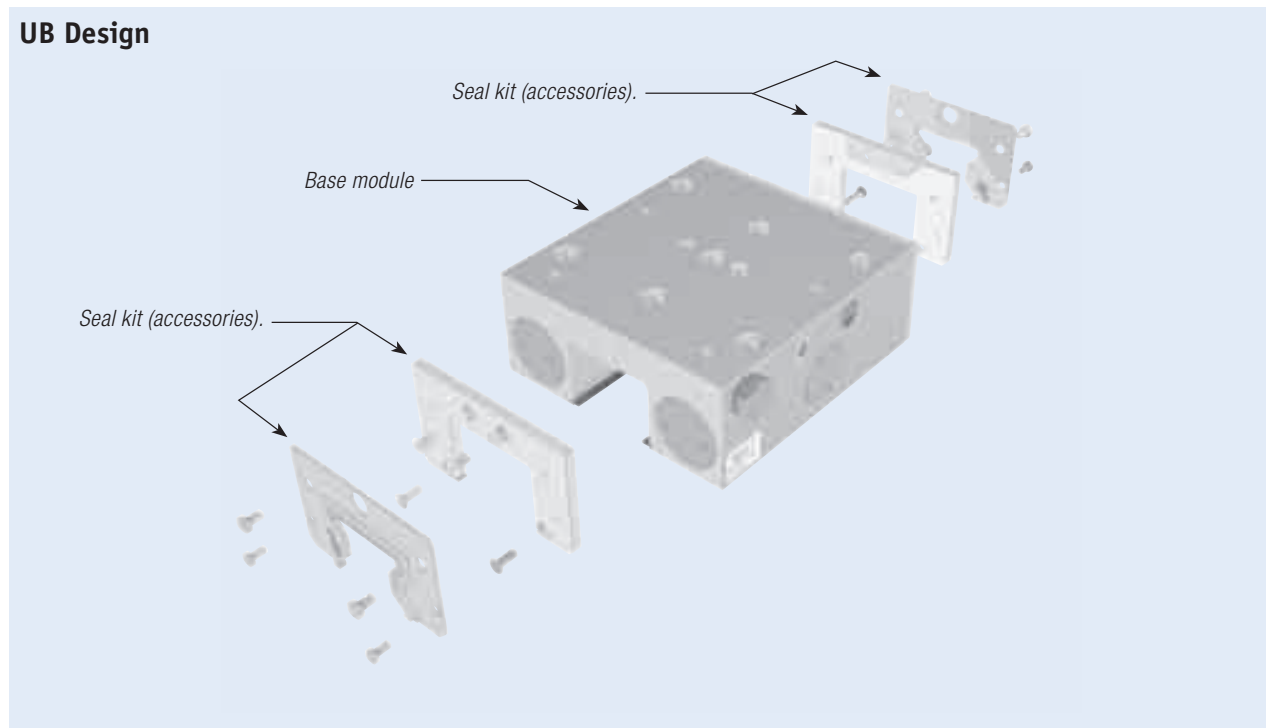
The UB series is designed for braking on linear guides. Because of the material combination of the linear guide/contact section, the linear guide won't be damaged by the contact section.

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



UB

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:

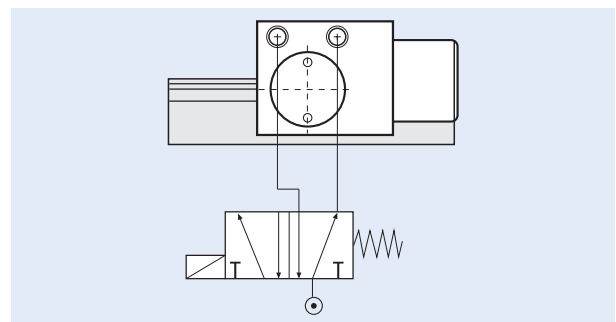
The basic version of the UB series features air connections on both sides. This means that the air connection and the air-release filter can be moved over to the opposite side.

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



Type of rail	Size	Type of carriage	Item number	Adapting plate ^{*1} (for height compensation)	Measure D [mm]	Measure table (Page 56) ^{*2}
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	
			☉		38	
	30	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	☉		44	7
			UBPS 3501 BS1		52	10
	45	NR / NRS..R, NR / NRS..LR, NR / NRS..A, NR / NRS..LA, NR / NRS..B, NR / NRS..LB	☉		63	
			☉		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]	Measure table (page 56) ^{*2}
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



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



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



^{*1} Only required for high carriage design

^{*2} Supplements the measure table and datasheet

See page 13 for part number explanation

Rail manufacturer



Type of rail	Size	Type of carriage	Item number	Adapting plate *1 (for height compensation)	Measure D [mm]	Measure table (page 56) *2
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	
		LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHD..B, LWHD..M, LWHDG, LWHY	☉		36	
	30	LWH..B, LWH..SL, LWH..M, LWHG, LWHT..B, LWHT..SL, LWHT..M, LWHTG, LWHS..B, LWHS..SL, LWHS..M, LWHSG	☉		40	
		LWHD..B, LWHD..M, LWHDG, LWHY	☉		42	3
	35	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	UBPS 3010 AS1		45	
		LWHD..B, LWHD..M, LWHDG, LWHY	UBPS 3010 AS1	PUB 30-3	48	6
	45	LWH..B, LWH..M, LWHG, LWHT..B, LWHT..M, LWHTG	UBPS 3510 AS1		55	
		LWHD..B, LWHD..M, LWHDG, LWHY	UBPS 3510 AS1	PUB 35-7	60	
	55	LWH..B, LWHG, LWHT..B, LWHTG	☉		70	
		LWHD..B, LWHDG, LWHY	☉		70	
	65	LWH..B, LWHG, LWHT..B, LWHTG, LWHD..B, LWHDG, LWHY	☉		80	
		☉		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	
		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	
		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
		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

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	

Rail manufacturer

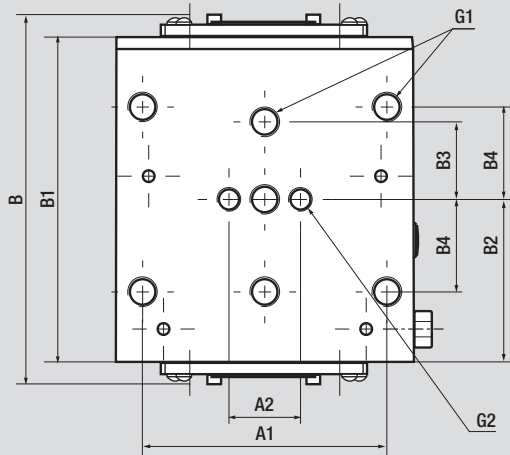
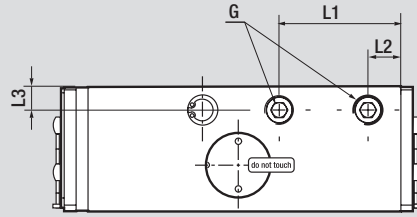
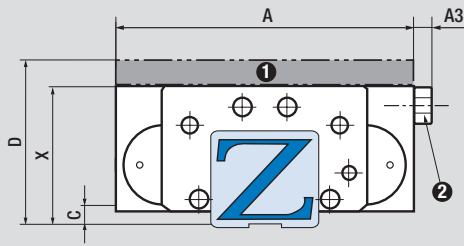
NSK

UB

*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!

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.

- ❶ Adapter plate PUB (accessory)
- ❷ air filter

Measure table	Holding power [N] UB		Holding power [N] UB (PLUS)					B [mm]				C	X [mm]	G	G1	G2	L1 [mm]	L2 [mm]	L3 [mm]	
			A [mm]	A1 [mm]	A2 [mm]	A3 [mm]		B1 [mm]	B2 [mm]	B3 [mm]	B4 [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	

