

Narrow and low design (S2/S3): The Clamping and Braking Element with spring-loaded energy storage LBPS

The LBPS series is set apart by the narrow and low design to DIN645-1 and the high holding forces.

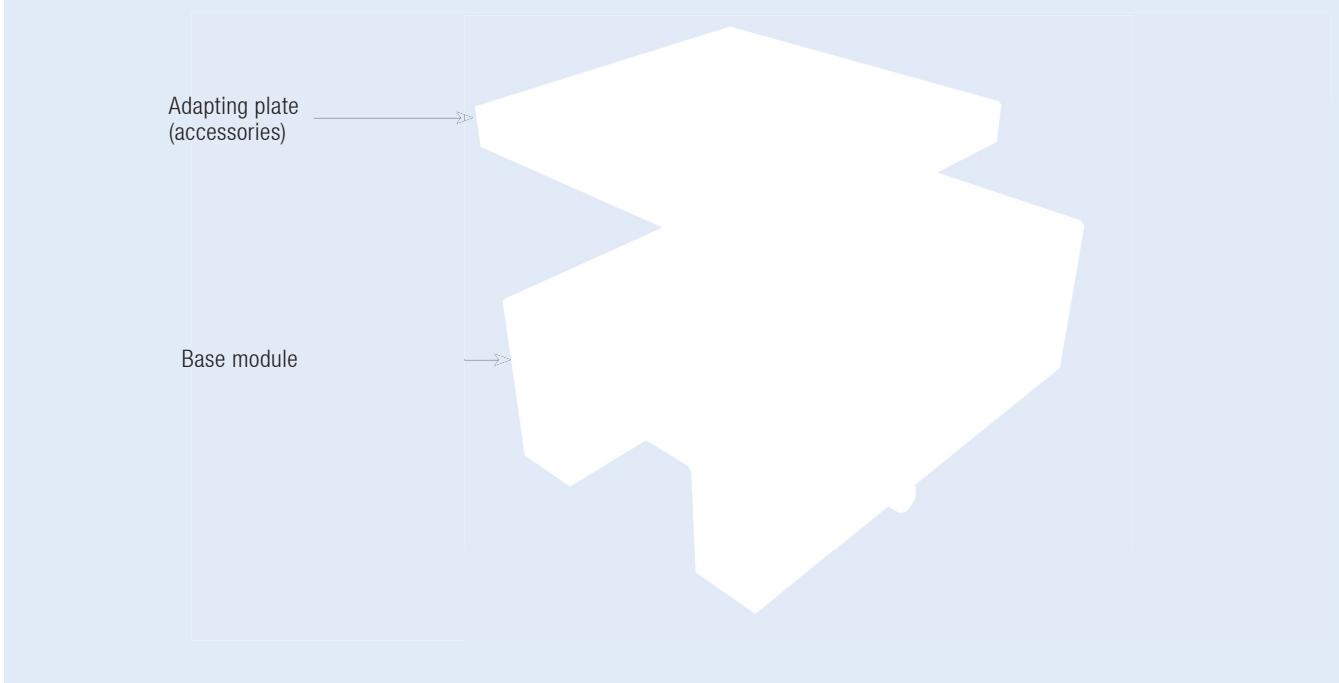
The LBPS series is a low-cost clamping and braking element available for rail sizes 15-55.

The LBPS 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.

The LBPS is closed by a spring-loaded energy storage and opened under the impact of air. At a pneumatic opening pressure of 5.5 bar, a retention force of up to 3,600 N is achieved.

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.

LBPS Series



Technical data for LBPS series:

Rail size	15-55
Holding forces	400 N-3,600 N
Min. pressure	5.5 bar
Max. pressure	8 bar
Spring-loaded energy storage	✓
PLUS connection	-
Clamping cycles	5 mil. (B10d-value)
Braking cycles	2,000

Application scenarios for LBPS:

- Clamping in case of pressure drop
- Emergency OFF function
- Clamping without energy requirement
- Braking for linear motors

Connection options for LBPS:

The LBPS 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.

LBPS

Adapting plate accessory for LBPS:

Depending on the height of the carriage (measure D), an additional adapting plate is required (see table from page 94).

Rail manufacturer
THK
 The Mark of Linear Motion

	Type of rail	Size	Type of carriage	Item number	Adapting plate [for height compensation]	Measure D [mm] ^{*1}	Measure table [page 99]
SR, SSR	15	SR..W, SR..WM, SR..V, SR..VM, SSR..XW, SSR..XWM, SSR..XV, SSR..XWM	LBPS 1501 AS2		24	1	
		SR..W, SR..WM, SR..V, SR..VM, SSR..XW, SSR..XWM, SSR..XV, SSR..XWM	LBPS 2001 AS2		28	3	
		SR..W, SR..WM, SR..V, SR..VM, SSR..XW, SSR..XWM, SSR..XV, SSR..XWM	LBPS 2501 AS2		33	5	
		SR..W, SR..WM, SR..V, SR..VM, SSR..XW, SSR..XWM	(C)		42	(C)	
		SR..W, SR..WM, SR..V, SR..VM, SSR..XW	(C)		48	(C)	
		SR..W	(C)		60	(C)	
		SR..W	(C)		68	(C)	
HSR	15	HSR..R, HSR..RM, HSR..YR, HSR..YRM	LBPS 1501 AS2	PLK 15-4	28	1	
		HSR..R, HSR..RM, HSR..LR, HSR..LRM, HSR..R, HSR..YR, HSR..YRM	LBPS 2001 AS2		30	2	
		HSR..R, HSR..RM, HSR..LR, HSR..LRM, HSR..R, HSR..YR, HSR..YRM	LBPS 2501 AS2	PLK 25-4	40	4	
		HSR..R, HSR..RM, HSR..LR, HSR..LRM, HSR..R, HSR..YR, HSR..YRM	(C)		45	(C)	
		HSR..R, HSR..RM, HSR..LR, HSR..LRM, HSR..R, HSR..YR, HSR..YRM	(C)		55	(C)	
		HSR..R, HSR..LR, HSR..YR	(C)		70	(C)	
		HSR..R, HSR..LR, HSR..YR	(C)		80	(C)	
SHS	15	SHS..V, SHS..LV	LBPS 1501 AS2		24	1	
		SHS..R	LBPS 1501 AS2	PLK 15-4	28		
		SHS..V, SHS..LV	LBPS 2001 AS2		30	3	
		SHS..V, SHS..LV SHS..R, SHS..LR	LBPS 2501 AS2	PLK 25-2	36	6	
		SHS..V, SHS..LV SHS..R, SHS..LR	LBPS 2501 AS2	PLK 25-6	40		
		SHS..V, SHS..LV SHS..R, SHS..LR	(C)		42	(C)	
		SHS..V, SHS..LV SHS..R, SHS..LR	(C)		45		
SRG	15	SRG..V	LBPS 1501 AS2		24	1	
		SRG..V, SRG..LV	LBPS 2001 AS2		30	2	
		SRG..R, SRG..LR	LBPS 2501 AS2		40	4	
		SRG..R, SRG..LR	(C)		45	(C)	
		SRG..R, SRG..LR	(C)		55	(C)	
		SRG..R, SRG..LR	(C)		70	(C)	
		SRG..R, SRG..LR	(C)		80	(C)	

Rail manufacturer
Rexroth
 Bosch Group

R1605, R1607, R1645, R1647 R2045, R2047	15	R1622, R1623, R1632, R1662, R1666, R2011 R1621	LBPS 1505 AS2		24	1
		R1622, R1623, R1632, R1662, R1666, R2011	LBPS 1505 AS2	PLK 15-4	28	
		R1622, R1623, R1632, R1662, R1666, R2011	LBPS 2005 AS2		30	2
		R1621, R1624	LBPS 2505 AS2		36	4
		R1622, R1623, R1632, R1662, R1666, R2011 R1621, R1624	LBPS 2505 AS2	PLK 25-4	40	
		R1621, R1624	(C)		42	(C)
		R1621, R1624	(C)		45	
R1805, R1806, R1807	25	R1821, R1824	LBPS 2505 BS2	PLK 25-4	40	4
		R1821, R1824	(C)		55	(C)
		R1821, R1824	(C)		70	(C)
		R1821, R1824	(C)		80	(C)

Rail manufacturer
SCHNEEBERGER
 LINEAR TECHNOLOGY

MRS	25	MRW..C, MRW..D, MRW..E	LBPS 2501 AS2	PLK 25-4	40	4
		MRW..C, MRW..D, MRW..E	(C)		55	(C)
		MRW..C, MRW..D	(C)		70	(C)
		MRW..C, MRW..D	(C)		80	(C)

*¹ Supplements the measure table and datasheet

See page 11 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate [for height compensation]	Measure D [mm] ^{*1} [page 99]	Measure table
LWH	15	LWHS..B, LWHS..SL, LWHS..M LWHD..B, LWHD..M, LWHY	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	LWHS..B, LWHS..SL, LWHS..M, LWHSG, LWHSG	LBPS 2001 AS2		30	2
	25	LWHS..B, LWHS..SL, LWHS..M, LWHSG LWHD..B, LWHD..M, LWHDG, LWHY	LBPS 2501 AS2 LBPS 2501 AS2	PLK 25-4	36 40	4
	30	LWHS..B, LWHS..SL, LWHS..M, LWHSG LWHD..B, LWHD..M, LWHDG, LWHY	(C)		42 45	(C)
	35	LWHD..B, LWHD..M, LWHDG, LWHY	(C)		55	(C)
	45	LWHD..B, LWHD..M, LWHDG, LWHY	(C)		70	(C)
	55	LWHD..B, LWHDG, LWHY	(C)		80	(C)
MH	15	MHS MHD	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	MHS, MHSG	LBPS 2001 AS2		30	2
	25	MHS, MHSG MHD, MHDG	LBPS 2501 AS2 LBPS 2501 AS2	PLK 25-4	36 40	4
	30	MHS, MHSG MHD, MHDG	(C)		42 45	(C)
	35	MHD, MHDG	(C)		55	(C)
	45	MHD, MHDG	(C)		70	(C)
	55					
LRX	15	LRXSC, LRXS, LRXSG LRXDC, LRXDC..SL, LRXD, LRXD..SL, LRXDG, LRXDG..SL	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	LRXSC, LRXS, LRXSG LRXDC, LRXDC..SL, LRXD, LRXD..SL, LRXDG, LRXDG..SL	(C)		30 34	(C)
	25	LRXSC, LRXS, LRXSG LRXDC, LRXDC..SL, LRXD, LRXD..SL, LRXDG, LRXDG..SL	LBPS 2501 AS2 LBPS 2501 AS2	PLK 25-4	36 40	4
	30	LRXSC, LRXS, LRXSG LRXDC, LRXDC..SL, LRXD, LRXD..SL, LRXDG, LRXDG..SL	(C)		42 45	(C)
	35	LRXDC, LRXD, LRXDG	(C)		55	(C)
	45	LRXDC, LRXD, LRXDG	(C)		70	(C)
	55	LRXDC, LRXD, LRXDG	(C)		80	(C)
MX	15	MXSC, MXS, MXSG MXDC, MXD, MXDG	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	MXSC, MXS, MXSG, MXSL MXDC, MXD, MXDG, MXDL	(C)		30 34	(C)
	25	MXSC, MXS, MXSG, MXSL MXDC, MXD, MXDG, MXDL	LBPS 2501 AS2 LBPS 2501 AS2	PLK 25-4	36 40	4
	30	MXSC, MXS, MXSG, MXSL MXDC, MXD, MXDG, MXDL	(C)		42 45	(C)
	35	MXNS, MXNSG	(C)		44	(C)
	45	MXNS, MXNSG	(C)		52	(C)
	55	MXNS, MXNSG	(C)		63	(C)
LWE	15	LWES..Q, LWESC, LWESC..SL, LWES, LWES..SL, LWESG, LWESG..SL	LBPS 1501 AS2		24	1
	20	LWES..Q, LWESC, LWESC..SL, LWES, LWES..SL, LWESG, LWESG..SL	LBPS 2001 AS2		28	3
	25	LWES..Q, LWESC, LWESC..SL, LWES, LWES..SL, LWESG, LWESG..SL	LBPS 2501 AS2		33	5
	30	LWES..Q, LWESC, LWESC..SL, LWES, LWES..SL, LWESG, LWESG..SL	(C)		42	(C)
	35	LWES..Q, LWESC, LWES	(C)		48	(C)
	45	LWES	(C)		60	(C)
ME	15	MESC, MESC..SL, MES, MES..SL, MESG, MESG..SL, MHS MHD	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	MESC, MESC..SL, MES, MES..SL, MESG, MESG..SL MHS, MHSG	LBPS 2001 AS2 LBPS 2001 AS2	PLK 20-2	28 30	3
	25	MESC, MESC..SL, MES, MES..SL, MESG, MESG..SL MHS, MHSG MHD, MHDG	LBPS 2501 AS2 LBPS 2501 AS2 LBPS 2501 AS2	PLK 25-2 PLK 25-6	33 36 40	5 6
	30	MESC, MESC..SL, MES, MES..SL, MESG, MESG..SL, MHS, MHSG MHD, MHDG	(C)		42	(C)
	35	MESC, MES MHD, MHDG	(C)		45 55	(C)
	45	MES MHD, MHDG	(C)		60 70	(C)

LRX: this table applies only for rail use without cover sheet!

*¹ Supplements the measure table and datasheet

See page 11 for part number explanation

Rail manufacturer
IKO

Rail manufacturer



	Type of rail	Size	Type of carriage	Item number	Adapting plate [for height compensation]	Measure D [mm] ^{*1}	Measure table [page 99]
(KUE)	15	KWE..-H		∅		28	∅
	20	KWE..-H		LBPS 2001 AS2		30	2
	25	KWE..-H		LBPS 2501 AS2	PLK 25-6	40	6
	30	KWE..-H		∅		45	∅
	35	KWE..-H		∅		55	∅
TKVD (KUVE)	15	KWVE..-B-ESC, KWVE..-B-S		∅		24	∅
		KWVE..-B-H		∅		28	∅
	20	KWVE..-B-S, KWVE..-B-SL, KWVE..-B-H		∅		30	∅
		KWVE..-B-SN, KWVE..-B-SNL		∅		27	∅
		KWVE..-B-ESC		∅		28	∅
	25	KWVE..-B-S, KWVE..-B-SL, KWVE..-B-S-HS		∅		36	∅
		KWVE..-B-ESC		∅		33	∅
		KWVE..-B-H, KWVE..-B-HL, KWVE..-B-H-HS		∅		40	∅
	30	KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL		∅		42	∅
		KWVE..-B-SN, KWVE..-B-SNL		∅		38	∅
TKSD (KUSE)	30	KWVE..-B-H, KWVE..-B-HL		∅		45	∅
	35	KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL		∅		48	∅
		KWVE..-B-SN, KWVE..-B-SNL		∅		44	∅
		KWVE..-B-H, KWVE..-B-HL		∅		55	∅
	45	KWVE..-B-ESC, KWVE..-B-S, KWVE..-B-SL		∅		60	∅
(KUSE)		KWVE..-B-SN, KWVE..-B-SNL		∅		52	∅
		KWVE..-B-H, KWVE..-B-HL		∅		70	∅
	55	KWVE..-B-S, KWVE..-B-SL		∅		70	∅

Rail manufacturer



LH	15	LAH..ANZ, LAH..BNZ	LBPS 1501 AS2	PLK 15-4	28	1
	20	LAH..ANZ, LAH..BNZ	LBPS 2001 AS2	PLK 20-2	30	3
	25	LAH..ALZ, LAH..BLZ	LBPS 2501 AS2		36	6
		LAH..ANZ, LAH..BNZ	LBPS 2501 AS2	PLK 25-6	40	
	30	LAH..ALZ, LAH..BLZ	∅		42	∅
		LAH..ANZ, LAH..BNZ	∅		45	∅
	35	LAH..ALZ, LAH..BLZ	∅		48	∅
		LAH..ANZ, LAH..BNZ	∅		55	∅
	45	LAH..ANZ, LAH..BNZ	∅		70	∅
SH	15	SAH..ANZ, SAH..BNZ	LBPS 1501 AS2	PLK 15-4	28	1
	20	SAH..ANZ, SAH..BNZ	LBPS 2001 AS2	PLK 20-2	30	3
	25	SAH..ALZ, SAH..BLZ	LBPS 2501 AS2		36	6
		SAH..ANZ, SAH..BNZ	LBPS 2501 AS2	PLK 25-6	40	
	30	SAH..ALZ, SAH..BLZ	∅		42	∅
		SAH..ANZ, SAH..BNZ	∅		45	∅
	35	SAH..ALZ, SAH..BLZ	∅		48	∅
		SAH..ANZ, SAH..BNZ	∅		55	∅
LS	15	LAS..CLZ, LAS..ALZ	LBPS 1501 AS2		24	1
	20	LAS..CLZ, LAS..ALZ	LBPS 2001 AS2		28	3
	25	LAS..CLZ, LAS..ALZ	LBPS 2501 AS2		33	5
	30	LAS..CLZ, LAS..ALZ	∅		42	∅
	35	LAS..CLZ, LAS..ALZ	∅		48	∅
SS	15	SAS..CLZ, SAS..ALZ	LBPS 1501 AS2		24	1
	20	SAS..CLZ, SAS..ALZ	LBPS 2001 AS2		28	3
	25	SAS..CLZ, SAS..ALZ	LBPS 2501 AS2		33	5
	30	SAS..CLZ, SAS..ALZ	∅		42	∅
	35	SAS..CLZ, SAS..ALZ	∅		48	∅
RA	15	RA..AL, RA..BL	∅		24	∅
		RA..AN, RA..BN	∅		28	∅
	20	RA..EM, RA..GM, RA..AN, RA..BN	∅		30	∅
	25	RA..AL, RA..BL	∅		36	∅
		RA..AN, RA..BN	∅		40	∅
	30	RA..AL, RA..BL	∅		42	∅
		RA..AN, RA..BN	∅		45	∅
	35	RA..AL, RA..BL	∅		48	∅
		RA..AN, RA..BN	∅		55	∅
	45	RA..AL, RA..BL	∅		60	∅
		RA..AN, RA..BN	∅		70	∅
	55	RA..AL, RA..BL	∅		70	∅
		RA..AN, RA..BN	∅		80	∅

^{*1} Supplements the measure table and datasheet

See page 11 for part number explanation

Type of rail	Size	Type of carriage	Item number	Adapting plate [for height compensation]	Measure D [mm] ^{*1} [page 99]	Measure table
HGR..R, HGR..T	15	HGL..CA, HGH..CA, QHH..CA	LBPS 1501 AS2		24	1
	20	HGH..CA, HGH..HA, QHH..CA, QHH..HA	LBPS 2001 AS2	PLK 20-2	30	3
	25	HGL..CA, HGL..HA HGH..CA, HGH..HA, QHH..CA, QHH..HA	LBPS 2501 AS2		36	4
	30	HGL..CA, HGL..HA HGH..CA, HGH..HA, QHH..CA, QHH..HA	∅		42	∅
	35	HGL..CA, HGL..HA HGH..CA, HGH..HA, QHH..CA, QHH..HA	∅		48	∅
	45	HGL..CA, HGL..HA HGH..CA, HGH..HA, QHH..CA, QHH..HA	∅		60	∅
	55	HGL..CA, HGL..HA, HGH..CA, HGH..HA	∅		70	∅
			∅		80	∅
EGR..R, EGR..U, EGR..T	15	EGH..SA, EGH..CA, QEH..SA, QEH..CA	LBPS 1501 AS2		24	1
	20	EGH..SA, EGH..CA, QEH..SA, QEH..CA	LBPS 2001 AS2		28	3
	25	EGH..SA, EGH..CA QEH..SA, QEH..CA	∅		33	∅
	30	EGH..SA, EGH..CA, QEH..SA, QEH..CA	∅		42	∅
	35	EGH..SA, EGH..CA	∅		48	∅
RG..T	15	RGH..CA	∅		28	∅
	20	RGH..CA, RGH..HA	∅		34	∅
	25	RGH..CA, RGH..HA	LBPS 2501 AS2	PLK 25-4	40	4
	30	RGH..CA, RGH..HA	∅		45	∅
	35	RGH..CA, RGH..HA	∅		55	∅
	45	RGH..CA, RGH..HA	∅		70	∅
	55	RGH..CA, RGH..HA	∅		80	∅

Rail manufacturer
HIWIN
 Lineartechnologie

BG	15	BGCS..BS, BGCS..BN, BGCS..BL, BGXS..BS, BGXS..BN, BGXS..BL BGCH..BN, BGXH..BN	LBPS 1501 AS2		24	1
	20	BGCS..BS, BGCS..BN, BGXS..BS, BGXS..BN BGCH..BN, BGCH..BL, BGXH..BN, BGXH..BL	LBPS 2001 AS2	PLK 20-2	28	3
	25	BGCS..BS, BGCS..BN, BGXS..BS, BGXS..BN BGCH..FN, BGCH..FL, BGCH..FE, BGCH..BN, BGCH..BL, BGCH..BE, BGXX..BN, BGXX..BL, BGXX..BE BGCH..BN, BGCH..BL, BGCH..BE, BGXH..BN, BGXH..BL, BGXH..BE	LBPS 2501 AS2	PLK 25-2	33	5
	30	BGCH..FN, BGCH..FL, BGCH..FE, BGCS..BS, BGCS..BN, BGCS..BL, BGCS..BE, BGXS..BS, BGXS..BN, BGXS..BL, BGXS..BE BGCH..BN, BGCH..BL, BGCH..BE, BGXH..BN, BGXH..BL, BGXH..BE	∅		42	∅
	35	BGCH..FN, BGCH..FL, BGCH..FE, BGCS..BS, BGCS..BN, BGCS..BL, BGCS..BE, BGXS..BS, BGXS..BN, BGXS..BL, BGXS..BE BGCH..BN, BGCH..BL, BGCH..BE, BGXH..BN, BGXH..BL, BGXH..BE	∅		45	∅
	45	BGCH..FN, BGCH..FL, BGCH..FE, BGCS..BS, BGCS..BN, BGCS..BL, BGCS..BE, BGXS..BN, BGXS..BL, BGXS..BE BGCH..BN, BGCH..BL, BGCH..BE, BGXH..BN, BGXH..BL, BGXH..BE	∅		60	∅
	55	BGCH..FN, BGCH..FL, BGCH..FE, BGCS..BS, BGCS..BL, BGCS..BE, BGXS..BN, BGXS..BL, BGXS..BE BGCH..BN, BGCH..BL, BGCH..BE, BGXH..BN, BGXH..BL, BGXH..BE	∅		70	∅
			∅		80	∅

Rail manufacturer
NTN SNR

*¹ Supplements the measure table and datasheet

See page 11 for part number explanation

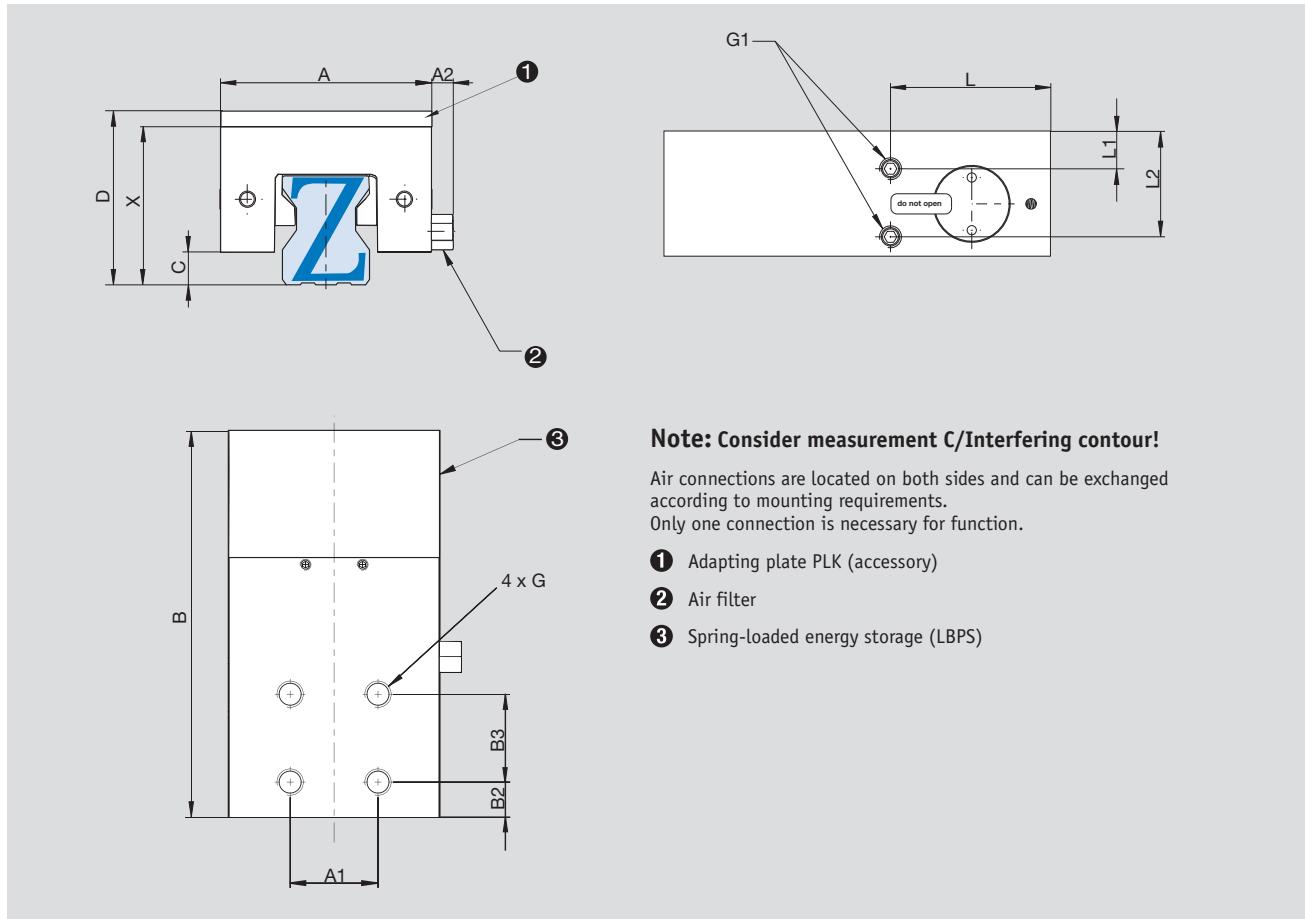
Rail manufacturer



Type of rail	Size	Type of carriage	Item number	Adapting plate [for height compensation]	Measure D [mm] ^{*1}	Measure table (page 99)
LLTH, LLTH..D4, LLTH..D6	15	LLTHC..SU, LLTHC..U LLTHC..R	LBPS 1501 AS2 LBPS 1501 AS2	PLK 15-4	24 28	1
	20	LLTHC..SU, LLTHC..U, LLTHC..LR	LBPS 2001 AS2	PLK 20-2	30	3
	25	LLTHC..SU, LLTHC..U, LLTHC..R, LLTHC..LR	LBPS 2501 AS2 LBPS 2501 AS2		36 40	4
	30	LLTHC..SU, LLTHC..U, LLTHC..R, LLTHC..LR	∅		42 45	∅
	35	LLTHC..SU, LLTHC..U, LLTHC..R, LLTHC..LR	∅		48 55	∅
	45	LLTHC..U, LLTHC..R, LLTHC..LR	∅		60 70	∅

^{*1} Supplements the measure table and datasheet

See page 11 for part number explanation



Measure table	Holding power [N] LBPS	A [mm]	A1 [mm]	A2 [mm]	B [mm]	B2 [mm]	B3 [mm]	C [mm]	X [mm]	G	G1	L [mm]	L1 [mm]	L2 [mm]
1	400	34	15	-	76	8,5	15	3,3	24	M4/4,5	M3	31,5	4,5	17
2	650	44	20	-	81	7	20	5,5	30	M5/5,5	M3	33,5	4,5	20,5
3	650	44	20	-	81	7	20	3,5	28	M5/5,5	M3	33,5	4,5	20,5
4	750	48	20	5	86	8	20	7,5	36	M6/6	M5	35,5	8,5	24
5	750	48	20	5	86	8	20	4,5	33	M6/6	M5	35,5	8,5	24
6	750	48	20	5	86	8	20	5,5	34	M6/6	M5	35,5	8,5	24