SLIDE GUIDE Miniature SEB Type

The NB slide guide SEB type is a linear motion bearing in which the ball elements roll along two raceway grooves. This is the smallest and lightest slide guide series offered by Nippon Bearing. The compact design allows for the size and weight of machinery and other equipment to be reduced.

STRUCTURE AND ADVANTAGES

The SEB type slide guide consists of a rail with precisely machined raceway grooves and a block assembly consisting of the main body, return caps and ball elements.

Retained Ball

Because of the ball retainers, the SEBS-B type is able to be removed from the guide rail, simplifying its installation and resulting in lower assembly costs.

All Stainless Steel Type

By using stainless steel for the return caps, the SEBS-BM type is made of all stainless steel components, making it the ideal choice for special environments such as high temperature, clean room, or vacuum applications.

Moment Resistant

A wide block (WB/WA) type, a long block (BY/AY) type, and a wide/long block (WBY/WAY) type are moment resistant slide guide types. The most suitable type can be selected for any demanding operating condition.

Tapped Hole Rail Type

For the SEB rails, counterbore (standard) and optional tapped hole (N) types are available enabling various installation methods.

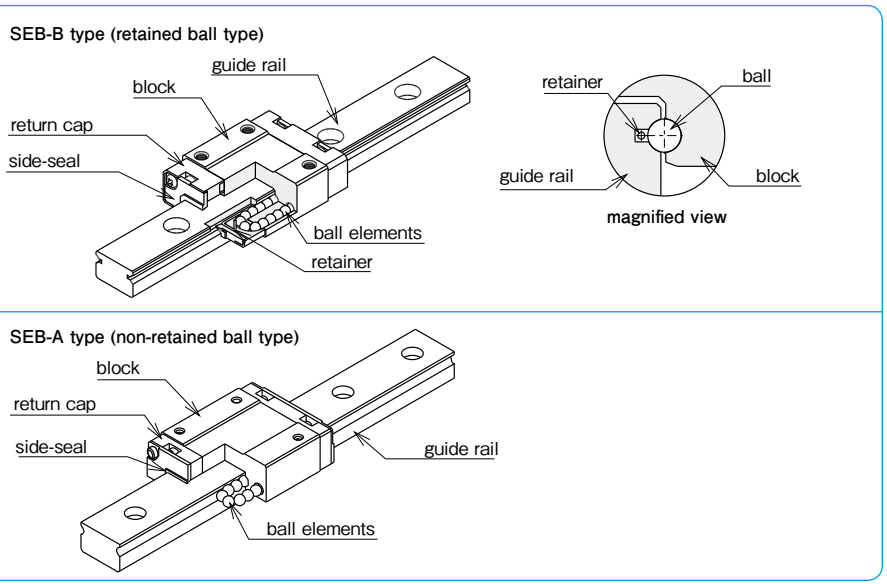
Compact Design

SEB type has a 2-row, 4-point contact structure. This structure minimizes the installation height, which contributes to light-weight and miniaturization of machinery and equipment.

AD Profile

AD profile dissipates guide block deformation caused by installation. (refer to page A-19)

Figure A-35 Structure of SEB type Slide Guide



TYPES

The SEB(S) type slide guides are categorized according to their block shape and the rail installation method.

Table A-5 Type

		standard block standard type rail (counterbore)	long block standard type rail (counterbore)	standard block N type rail (tapped hole)	long block N type rail (tapped hole)
retained ball type		SEBS-B type P.A-26	SEBS-BY type P.A-26	SEBS-B-N type P.A-26	SEBS-BY-N type P.A-26
	all stainless steel	SEBS-BM type P.A-26	SEBS-BYM type P.A-26	SEBS-BM-N type P.A-26	SEBS-BYM-N type P.A-26
	wide type	SEBS-WB type P.A-28	SEBS-WBY type P.A-28	SEBS-WB-N type P.A-28	SEBS-WBY-N type P.A-28
non-retained ball type		SEB-A type P.A-30	SEB-AY type P.A-30	SEB-A-N type P.A-30	SEB-AY-N type P.A-30
	wide type	SEB-WA type P.A-32	SEB-WAY type P.A-32	SEB-WA-N type P.A-32	SEB-WAY-N type P.A-32

ACCURACY

The SEB(S) slide guides are available in two grades of accuracy: high grade and precision grade (P).

Table A-6 Accuracy unit／mm

accuracy grade	high	precision
accuracy symbol	blank	P
allowable dimensional difference in height H	±0.020	±0.010
paired difference for height H	0.015	0.007
allowable dimensional difference in width W	±0.025	±0.015
paired difference for width W	0.020	0.010
running parallelism of surface C to surface A	refer to figure A-36,37	
running parallelism of surface D to surface B		

Figure A-36 Accuracy

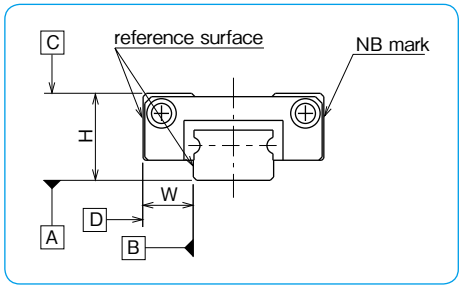
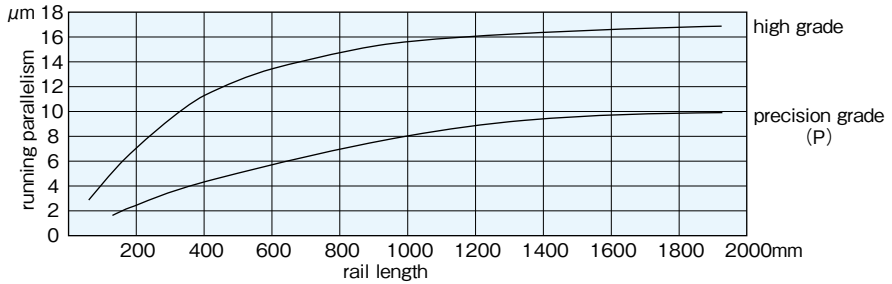


Figure A-37 Motion Accuracy



PRELOAD

SEB(S) slide guides are available with a standard preload (blank), light preload (T1), and a positive-clearance (T0).

Table A-7 Preload Symbol and Radial Clearance unit／μm

size	preload and symbol		
	clearance T0	standard blank	light T1
2	+1～+3	–	–
3			
5		−1～0	
7	+3～+6	−3～0	−4～−2
9			
12			
15	+4～+8		−7～−3
20			
3W	+1～+3	–	–
5W		−1～0	–
7W	+3～+6	−3～0	−4～−2
9W			
12W			
15W	+4～+8		−7～−3

Table A-8 Operating Conditions and Preload

preload	symbol	operating conditions
clearance	T0	light motion is required. installation errors to be absorbed.
standard	blank	minute vibration is applied. accurate motion is required. moment is applied in a given direction.
light	T1	light vibration is applied. light torsional load is applied. moment is applied.

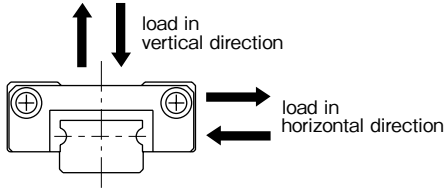
LOAD RATING

The load rating for SEB(S) slide guides depends on the direction of load.

Table A-9 Load Rating

		ratained ball type	non-retained ball type
basic dynamic load rating	vertical	1.00×C	1.00×C
	horizontal	0.89×C	1.13×C
basic static load rating	vertical	1.00×Co	1.00×Co
	horizontal	0.84×Co	1.19×Co

Figure A-38 Direction of Load



EQUIVALENT LOAD

For a guide to which vertical load and horizontal load are applied at the same time, calculate its static equivalent load using the following equation.

$$P=Pa+X\cdot Ps$$

P: equivalent load Pa: vertical load Ps: horizontal load
X: 0.84 for SEB-A type; 1.19 for SEBS-B type

RAIL LENGTH

Slide guides with most commonly used lengths are available as standard. For slide guides with a non-standard length, unless otherwise specified, the distance from one end of the rail to the first hole center (N) will be within the ranges listed in Tables A-10 and A-11, satisfying the following equation.

$$L=M\cdot P+2N$$

L: length (mm) M: number of pitches P: hole pitch (mm)
N: distance from the end of the rail to the first hole center (mm)

Figure A-39 Rail

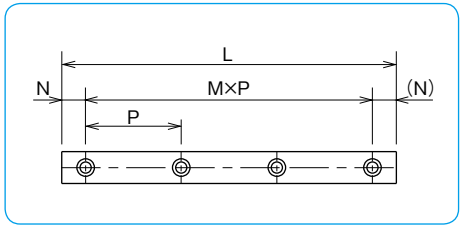


Table A-10 N Dimension (standard type) unit/mm

size	N	
	and over	less than
2	3	7
3		8
5		10.5
7		
9	4	14
12		16.5
15		24
20	6	36

Table A-11 N Dimension (wide type) unit/mm

size	N	
	and over	less than
3W	3	10.5
5W	4	14
7W		19
9W		
12W	5	25
15W		

MOUNTING

Mounting Surface Profile

Slide guides are mounted by pushing the reference surface of the rail and the block against the shoulder provided on the mounting surface. An escape groove or a radius corner should be provided at the corner of the shoulder to prevent interference. The recommended shoulder height values on the mounting reference surface are shown in Table A-12. (Table A-13 for corner radius)

Figure A-40 Mounting Surface Profile-1

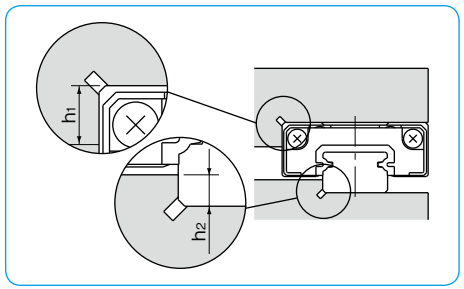


Figure A-41 Mounting Surface Profile-2

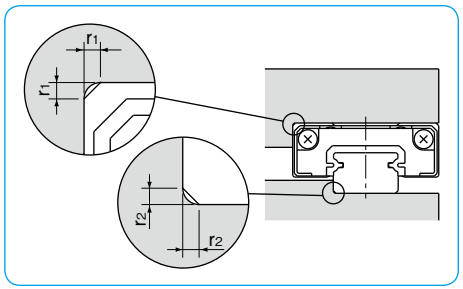


Table A-12 Shoulder Height on the Mounting Reference Surface unit／mm

size	shoulder height on the block side h_1	shoulder height on the rail side h_2
2	1	0.5
3	1.2	0.8
5	2	1
7	2.5	
9	3	1.5
12	4	2
15	5	3.5
20		5
3W	1.5	0.8
5W	2	1
7W	3	1.5
9W		2.5
12W	4	
15W	5	

Table A-13 Maximum Corner Radius Values unit／mm

size	block mounting part r_1	rail mounting part r_2
2	0.1	0.1
3	0.15	
5	0.3	0.3
7		
9		
12		
15		
20		0.5
3W	0.15	0.1
5W	0.3	0.3
7W		
9W		
12W		
15W		

Recommended Torque Values

The screws to fasten the rail should be tightened to an equal torque using a torque wrench in order to secure the motion accuracy. The recommended torque values are given in Tables A-14. Please adjust the torque depending on the operating conditions.

Table A-14 Recommended Torque unit／N・m

size	M1	M1.4	M1.6	M2	M2.6	M3	M4	M5	M6
recommended torque	0.03	0.10	0.15	0.3	0.65	1.0	2.3	4.7	8.0

(for stainless steel screw A2-70)

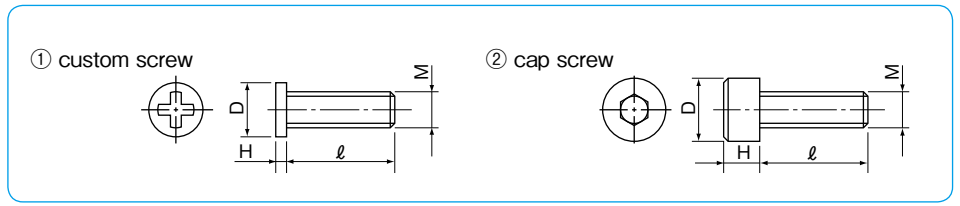
MOUNTING SCREW

Extremely small custom screws are available from NB.

Table A-15 Mounting Screw (stainless steel) unit／mm

type	shape	size	D mm	H mm	pitch mm	ℓ mm
custom screw	Figure A-42①	M1	1.8	0.45	0.25	3, 4, 5
		M1.4	2.5	0.8	0.3	2.5, 3, 4
		M1.6	2.3	0.5	0.35	4, 5, 6
		M2	3	0.6	0.4	6
cap screw	Figure A-42②	M2	3.8	2	0.4	4, 5, 6, 8, 10
		M2.6	4.5	2.6	0.45	4, 5, 6, 8, 10

Figure A-42 Mounting Screw

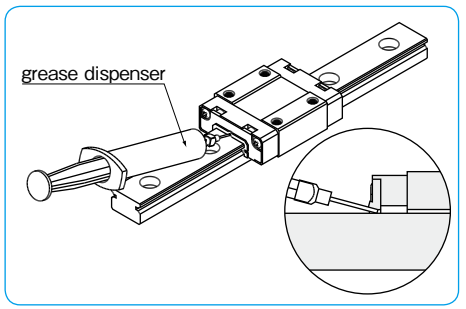


LUBRICATION

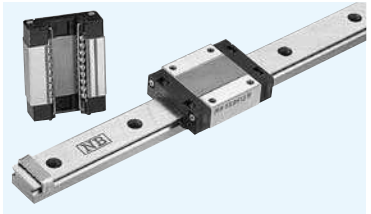
A high grade lithium soap based grease is applied to the NB slide guides prior to shipment for immediate use.
Please relubricate with a similar type of grease periodically depending on the operating conditions.
For use in clean rooms or vacuum environments, NB slide guides without grease are available upon request.
Please contact NB for customer specified grease types.

A special syringe lubricant dispenser (refer to Figure A-43) is available from NB as an option. In particular, the SEBS-B retained ball type has a special structure that allows the user to replenish lubricant easily (patented), as the magnified view of Figure A-43 shows.
Please refer to page Eng-39 for details on the low dust generation grease.

Figure A-43 Greasing Method



SEBS-B/SEBS-BY TYPE
SEBS-BM/SEBS-BYM TYPE
– Retained Ball Type –

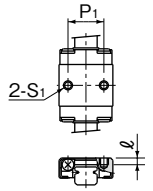


part number structure

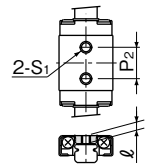
example **SEBS 15B Y M UU 2 T1 -589 N P/W2**

- **SEBS**: anti-corrosion
- size
- block — **blank**: standard, **Y**: long
- return cap — **blank**: resin, **M**: stainless steel
- seal — **blank**: without side-seal, **UU**: with side-seals
- number of blocks attached to one rail
- preload symbol — **T0**: clearance, **blank**: standard, **T1**: light
- total length of rail
- rail mounting hole — **blank**: counterbore, **N**: tapped hole
- accuracy grade — **blank**: high, **P**: precision
- symbol for number of axes※ — **blank**: single axis, **W2**: 2 parallel axes, **W3**: 3parallel axes

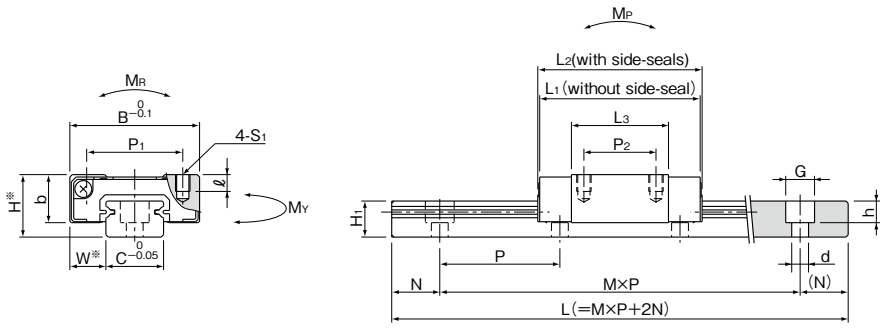
※ The symbol for the number of axes does not mean the number of rails ordered.



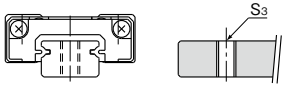
SEBS5B



SEBS5BY



M: number of pitches



N type rail
(tapped hole)

※Please refer to page A-22 for accuracy.

part number resin return cap	part number stainless return cap	assembly dimensions H mm	assembly dimensions W mm	block dimensions B mm	L1 mm	L2 mm	P1 mm	P2 mm	S1	ℓ mm	L3 mm	b mm
SEBS 5B	SEBS 5BM	6	3.5	12	16.5	16.9	8	—	M2	1.5	9.3	4.5
SEBS 5BY	SEBS 5BYM				19.5	19.9	—	7	M2.6	1.8	12.3	
SEBS 7B	SEBS 7BM	8	5	17	23	23	12	8	M2	2.5	12.8	6.5
SEBS 7BY	SEBS 7BYM				32.5	32.5		13			22.3	
SEBS 9B	SEBS 9BM	10	5.5	20	30.8	30.8	15	10	M3	3	19.6	7.8
SEBS 9BY	SEBS 9BYM				40.3	40.3		16			29.1	
SEBS12B	SEBS12BM	13	7.5	27	33.8	34.2	20	15		3.5	20.2	10
SEBS12BY	SEBS12BYM				45.7	46.1		20			32.1	
SEBS15B	SEBS15BM	16	8.5	32	42.6	43	25	20		4	27.6	12
SEBS15BY	SEBS15BYM				58.6	59		25			43.6	
SEBS20B	SEBS20BM	25	13	46	65.9	65.9	38	38	M4	6	44.7	17.5
SEBS20BY	SEBS20BYM				85.7	85.7					64.5	

part number	standard rail length L mm															
SEBS 5B	40	55	70	85	100	115	130	145	160							
SEBS 7B	40	55	70	85	100	115	130	145	160	175	190	205	220	235	250	265
SEBS 9B	55	75	95	115	135	155	175	195	215	235	255	275	295	315	335	355
SEBS12B	70	95	120	145	170	195	220	245	270	295	320	345	370	395	420	445
SEBS15B	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630	670
SEBS20B	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000		

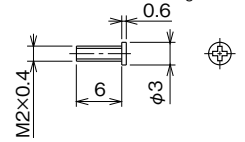
Rails exceeding the maximum specified length may be fabricated if joints are used. Please contact NB for assistance.

guide rail dimensions H1 mm	C mm	d×G×h mm	S3	N mm	P mm	basic load rating dynamic C kN	basic load rating static Co kN	allowable static moment MP N・m	allowable static moment MY N・m	allowable static moment MR N・m	mass block g resin return cap	mass block g stainless return cap	guide rail g/100mm	block size
4	5	2.4×3.5×0.8	M2.6	5	15	0.52	0.76	1.14	0.96	1.97	3	4	13	5B
						0.64	1.01	1.95	1.64	2.62	4	5		5BY
4.7	7	2.4×4.2×2.3	M3			1.29	1.69	3.66	3.07	6.18	9	12	21	7B
						1.90	2.96	10.42	8.74	10.82	15	18		7BY
5.5	9	3.5×6×3.5	M4	7.5	20	1.71	2.54	7.78	6.53	11.81	18	22	31	9B
						2.27	3.80	16.84	14.13	17.71	27	31		9BY
7.5	12	3.5×6×4.5		10	25	3.10	3.83	12.43	10.43	23.91	35	44	59	12B
						4.35	6.22	30.73	25.78	38.85	53	62		12BY
9.5	15		M5	15	40	5.66	6.76	29.29	24.58	52.41	64	77	97	15B
						7.94	10.99	72.43	60.78	85.16	98	110		15BY
15	20	6×9.5×8.5	M6	20	60	11.45	14.58	103.69	87.00	149.50	228	266	205	20B
						14.88	21.21	210.80	176.88	217.45	323	360		20BY

1kN≒102kgf　1N・m≒0.102kgf・m

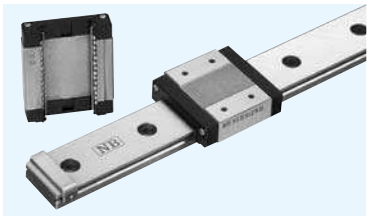
						maximum length mm counterbore	maximum length mm tapped hole (N type)
						600	300
280	295	310				1,000	700
375	395	415	435	455	475	1,300	1,000
470	495						

SEBS5 rail mounting screw
SEBS5 counterbore type rails are provided with custom screws for mounting.



SEBS-WB/SEBS-WBY TYPE

– Retained Ball · Wide Type –

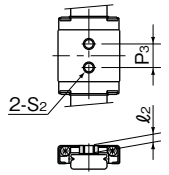


part number structure

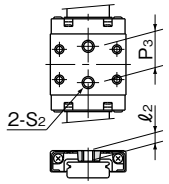
example **SEBS 15WB Y UU 2 T1 -589 N P /W2**

- **SEBS**: anti-corrosion
- size
- block — **blank**: standard, **Y**: long
- seal — **blank**: without side-seal, **UU**: with side-seals
- number of blocks attached to one rail
- preload symbol — **TO**: clearance, **blank**: standard, **T1**: light
- total length of rail
- rail mounting hole — **blank**: counterbore, **N**: tapped hole
- accuracy grade — **blank**: high, **P**: precision
- symbol for number of axes※ — **blank**: single axis, **W2**: 2 parallel axes, **W3**: 3 parallel axes

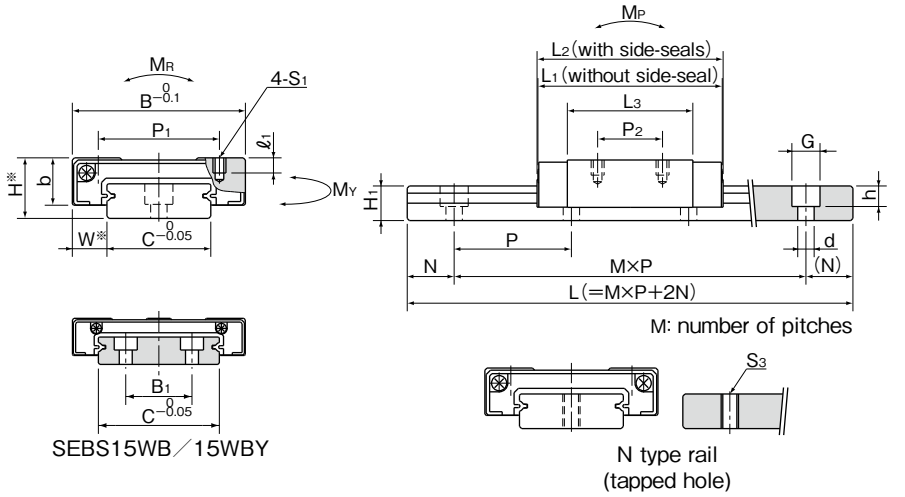
※ The symbol for the number of axes does not mean the number of rails ordered.



SEBS 5WB／5WBY



SEBS 7WB／7WBY



SEBS15WB／15WBY

N type rail
(tapped hole)

※Please refer to page A-22 for accuracy.

part number	assembly dimensions H	W	block dimensions B	L1	L2	P1	P2	S1	ℓ1	L3	P3	S2	ℓ2	b
	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm		mm	mm
SEBS 5WB	6.5	3.5	17	21.3	21.7	—	—	—	—	14.3	6.5	M3	2.3	5
SEBS 5WBY				27.3	27.7					20.3	11			
SEBS 7WB	9	5.5	25	31.4	31.4	19	10	M3	2.8	20.2	12	M4	3.5	7
SEBS 7WBY				40.1	40.1		19			28.9	18			
SEBS 9WB	12	6	30	38.5	38.5	21	12			26.3	—	—	—	9
SEBS 9WBY				50.5	50.5	23	24		3	38.3				
SEBS12WB	14	8	40	42.6	43	28	15		3.6	29	—	—	—	11
SEBS12WBY				58.1	58.5		28			44.5				
SEBS15WB	16	9	60	54.2	54.6	45	20	M4	4.5	38.8	—	—	—	13
SEBS15WBY				73.3	73.7		35			57.9				

part number	standard rail length L mm														
SEBS 5WB	50	70	90	110	130	150	170	190							
SEBS 7WB	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470
SEBS 9WB	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470
SEBS12WB	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630
SEBS15WB	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630

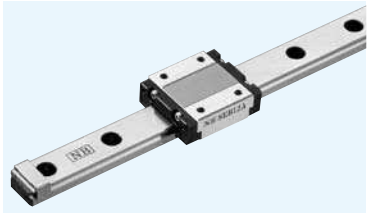
Rails exceeding the maximum specified length may be fabricated if joints are used. Please contact NB for assistance.
The minimum standard rail can not be used for SEBS 9 WBY and SEBS 15 WBY.

guide rail dimensions H1	C	B1	d×G×h	S3	N	P	basic load rating dynamic C	static Co	allowable static moment MP	MY	MR	mass block	guide rail	block size
mm	mm	mm	mm		mm	mm	kN	kN	N・m	N・m	N・m	g	g/100mm	
4	10	—	3×5.5×3	M3	5	20	0.71	1.18	2.61	2.19	6.00	7	26	**5WB**
							0.91	1.68	5.17	4.33	8.57	10		**5WBY**
5.2	14	—	3.5×6×3.2	M4	10	30	1.71	2.54	7.78	6.53	18.15	20	51	**7WB**
							2.27	3.80	16.84	14.13	27.22	28		**7WBY**
7.5	18	—	3.5×6×4.5				2.97	4.37	18.14	15.22	40.41	37	96	**9WB**
							3.87	6.38	37.43	31.41	59.05	52		**9WBY**
8	24	—	4.5×8×4.5	M5	15	40	4.11	5.74	26.42	22.16	70.29	71	137	**12WB**
							5.46	8.61	57.16	47.96	105.44	106		**12WBY**
9.5	42	23					7.50	10.14	62.27	52.25	215.53	148	286	**15WB**
							9.95	15.21	134.73	113.05	323.30	216		**15WBY**

1kN≒102kgf　1N・m≒0.102kgf・m

													maximum length mm counterbore	tapped hole (N type)
													600	500
													1,000	700
500	530												1,300	1,000
670	710													
670	710	750	790	830	870									

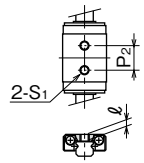
SEB-A/AY TYPE



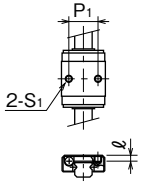
part number structure

example **SEBS 15A Y UU 2 T1 -589 N P /W2**

- specification — **SEB**: standard; **SEBS**: anti-corrosion
- size
- block — **blank**: standard; **Y**: long
- seal — **blank**: without side-seal; **UU**: with side-seals
- number of blocks attached to one rail
- preload symbol — **TO**: clearance; **blank**: standard; **T1**: light
- total length of rail
- rail mounting hole — **blank**: counterbore; **N**: tapped hole
- accuracy grade — **blank**: high; **P**: precision
- symbol for number of axes※ — **blank**: single axis; **W2**: 2 parallel axes; **W3**: 3 parallel axes



SEBS 2A/3A/3AY/5AY



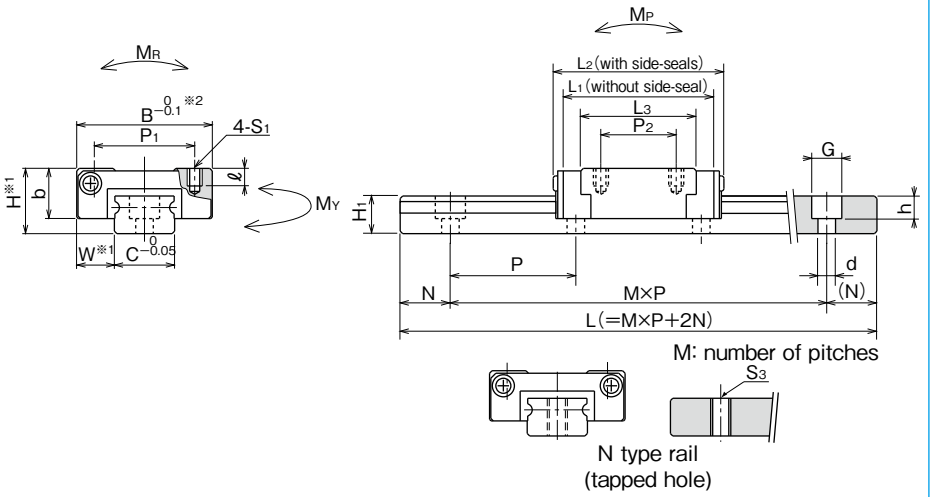
SEBS 5A

※ The symbol for the number of axes does not mean the number of rails ordered.

part number		assembly dimensions		block dimensions									
		H	W	B	L_1	L_2	P_1	P_2	S_1	ℓ	L_3	b
standard	anti-corrosion	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm
—	SEBS 2A	3.2	2	6	12.9	14.3	—	4	M1.4	1.05	9.3	2.5
—	SEBS 3A	4	2.5	8	10.5	11.8	—	3.5	M1.6	1.3	6.5	3
	SEBS 3AY				14.5	15.8	—	5.5	M2		10.5	
—	SEBS 5A	6	3.5	12	15.6	17	8	—	M2	1.5	9.8	4.5
	SEBS 5AY				19.2	20.6	—	7	M2.6	1.8	13.4	
—	SEBS 7A	8	5	17	21.9	24	12	8	M2	2.5	15.1	6.5
	SEBS 7AY				31	33		13			24.6	
SEB 9A	SEBS 9A	10	5.5	20	28.1	29.5	15	10		3	20.4	7.8
SEB 9AY	SEBS 9AY				38.1	40		16			30.4	
SEB12A	SEBS12A	13	7.5	27	30	33.5	20	15	M3	3.5	22.8	10
SEB12AY	SEBS12AY				42	45.5		20			34.7	
SEB15A	SEBS15A	16	8.5	32	38.5	42	25	20		4	29.5	12
SEB15AY	SEBS15AY				54.5	58		25			45.4	
SEB20A	SEBS20A	25	13	46	55.7	61	38	38	M4	6	45.7	17.5
SEB20AY	SEBS20AY				79.5	85					69.5	

part number		standard rail length L mm															
standard	anti-corrosion																
—	SEBS 2A	32	40	56	80	104											
—	SEBS 3A	30	40	60	80	100											
—	SEBS 5A	40	55	70	85	100	115	130	145	160							
—	SEBS 7A	40	55	70	85	100	115	130	145	160	175	190	205	220	235	250	
SEB 9A	SEBS 9A	55	75	95	115	135	155	175	195	215	235	255	275	295	315	335	
SEB12A	SEBS12A	70	95	120	145	170	195	220	245	270	295	320	345	370	395	420	
SEB15A	SEBS15A	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630	
SEB20A	SEBS20A	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000		

Joint rails are used when the required length exceeds the maximum standard length listed in the dimension tables.
Please contact NB for details. Only N type rail is available for SEBS 2A and SEBS 3A.



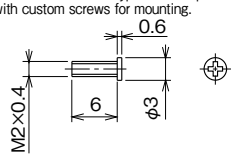
※Please refer to page A-22 for accuracy.
B-$^{0}_{0.05}$only for SEBS 2A, 3A and 3AY.

guide rail dimensions						basic load rating		allowable static moment			mass		block size
H_1	C	S_3	d×G×h	N	P	dynamic C	static Co	M_P	M_Y	M_R	block	guide rail	
mm	mm		mm	mm	mm	kN	kN	N・m	N・m	N・m	g	g/100mm	
2	2	M1	—	4	8	0.21	0.38	0.53	0.64	0.41	0.8	2.8	2A
2.6	3	M1.6	—	5	10	0.25	0.36	0.39	0.46	0.57	1	5	3A
						0.35	0.58	0.97	1.16	0.93	2		3AY
4	5	M2.6	2.4×3.5×1	5	15	0.59	0.81	1.32	1.58	2.11	4	13	5A
4.7	7	M3	2.4×4.2×2.3			0.74	1.11	2.39	2.86	2.90	5		5AY
						1.08	1.41	3.07	3.66	5.18	11	21	7A
						1.59	2.48	8.74	10.4	9.07	16		7AY
5.5	9	M4	3.5×6×3.5	7.5	20	1.92	2.53	7.64	9.11	11.5	19	30	9A
						2.62	3.94	17.5	20.8	17.9	28		9AY
7.5	12		3.5×6×4.5	10	25	2.60	3.20	10.4	12.4	20.0	37	60	12A
						3.65	5.21	25.7	30.7	32.6	55		12AY
9.5	15	M5		15	40	4.74	5.67	24.5	29.2	43.9	68	100	15A
						6.65	9.22	60.7	72.4	71.4	101		15AY
15	20	M6	6×9.5×8.5	20	60	8.99	11.1	72.7	86.7	114	226	209	20A
						12.4	17.8	176	210	182	338		20AY

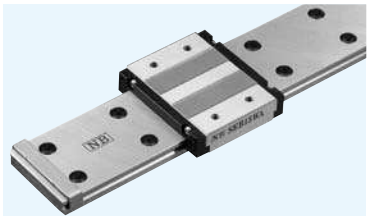
1kN≒102kgf　1N・m≒0.102kgf・m

	maximum length mm			
	counterbore		tapped hole (N type)	
	standard	anti-corrosion	standard	anti-corrosion
	—	—	—	150
	—	—	—	150
	—	600	—	300
265 280 295 310	—	1,000	—	700
355 375 395 415 435 455 475	500	1,300	500	1,000
445 470 495				
670	1,900		1,900	

SEBS5 rail mounting screw
SEBS5 counterbore type rails are provided with custom screws for mounting.



SEB-WA/SEB-WAY TYPE
– Wide Type –

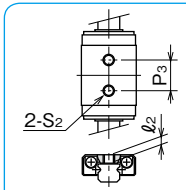


part number structure

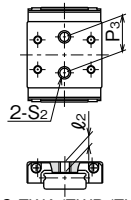
example **SEBS 15WA Y UU 2 T1 -589 N P /W2**

- specification — **SEB**: standard; **SEBS**: anti-corrosion
- size
- block — **blank**: standard; **Y**: long
- seal — **blank**: without side-seal; **UU**: with side-seals
- number of blocks attached to one rail
- preload symbol — **TO**: clearance; **blank**: standard; **T1**: light
- total length of rail
- rail mounting hole — **blank**: counterbore; **N**: tapped hole
- accuracy grade — **blank**: high; **P**: precision
- symbol for number of axes※ — **blank**: single axis; **W2**: 2 parallel axes; **W3**: 3 parallel axes

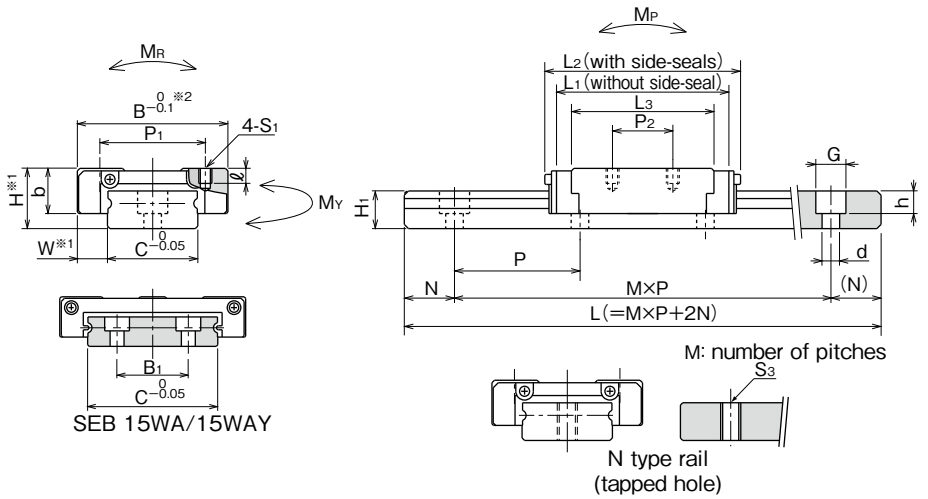
※ The symbol for the number of axes does not mean the number of rails ordered.



SEBS 3WA/3WAY



SEBS 7WA/7WD/7WAY



SEB 15WA/15WAY

N type rail (tapped hole)

※Please refer to page A-22 for accuracy.
B-$^{0}_{\infty}$only for SEBS 3WA and 3WAY

part number		assembly dimensions		block dimensions												
standard	anti-corrosion	H	W	B	L1	L2	P1	P2	S1	ℓ	L3	P3	S2	ℓ2	b	
		mm	mm	mm	mm	mm	mm	mm		mm	mm	mm		mm	mm	
—	SEBS 3WA	4.5	3	12	14.2	15	—	—	—	—	9.7	4.5	M2	1.7	3.5	
	SEBS 3WAY				19	19.8					14.5	8				
—	SEBS 7WA	9	5.5	25	30.1	32	18	12	M2.6	2.5	22.1	12	M4	3.5	7	
	SEBS 7WD						19	10	M3	2.8						
	SEBS 7WAY				39.6	41		19			31.6	18				
SEB 9WA	SEBS 9WA	12	6	30	35.9	38	21	12	M2.6	3	28.4	—	—	—	9	
SEB 9WD	SEBS 9WD								M3	2.8						
SEB 9WAY	SEBS 9WAY				48	50	23	24		3	40.4					
SEB12WA	SEBS12WA	14	8	40	40.7	44	28	15	M3	3.5	33.5	—	—	—	11	
SEB12WAY	SEBS12WAY				55	58.5		28			47.8					
SEB15WA	SEBS15WA	16	9	60	51.2	55	45	20	M4	4.5	42	—	—	—	13	
SEB15WAY	SEBS15WAY				70.5	74		35			61.1					

part number		standard rail length L mm														
standard	anti-corrosion															
—	SEBS 3WA	40	55	70	85	100										
—	SEBS 7WA	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470
SEB 9WA	SEBS 9WA	50	80	110	140	170	200	230	260	290	320	350	380	410	440	470
SEB12WA	SEBS12WA	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630
SEB15WA	SEBS15WA	70	110	150	190	230	270	310	350	390	430	470	510	550	590	630

Joint rails are used when the required length exceeds the maximum standard length listed in the dimension tables.
Please contact NB for details. SEB9WAY and SEB15WAY block lengths exceed the minimum standard rail length.

guide rail dimensions							basic load rating		allowable static moment			mass		block size
H1	C	B1	S3	d×G×h	N	P	dynamic C	static Co	MP	MY	MR	block	guide rail	
mm	mm	mm		mm	mm	mm	kN	kN	N・m	N・m	N・m	g	g/100mm	
2.6	6	—	M3	2.4×4×1.5	5	15	0.33	0.54	0.83	0.99	1.67	3	10	3WA
							0.44	0.81	1.81	2.15	2.51	4		3WAY
5.2	14	—	M4	3.5×6×3.2	10	30	1.43	2.12	6.53	7.78	15.2	21	51	7WA
														7WD
							1.90	3.19	14.1	16.8	22.8	30		7WAY
7.5	18	—		3.5×6×4.5			2.49	3.66	15.2	18.1	33.9	38	96	9WA
														9WD
							3.25	5.35	31.4	37.4	49.5	55		9WAY
8	24	—	M5	4.5×8×4.5	15	40	3.64	5.21	25.7	30.7	63.8	77	138	12WA
							4.75	7.62	53.2	63.4	93.3	109		12WAY
9.5	42	23					6.29	8.51	52.2	62.2	180	154	294	15WA
							8.35	12.7	113	134	271	222		15WAY

1kN≒102kgf　1N・m≒0.102kgf・m

maximum length mm																
counterbore														tapped hole (N type)		
standard													anti-corrosion	standard	anti-corrosion	
—													500	—	150	
—													1,000	—	700	
500	530															
670	710												1,900	1,300	1,900	1,000
670	710	750	790	830	870											

SEBS3WA/3WAY rail mounting screw
SEBS3WA/3WAY counterbore type rails are provided with custom screws for mounting.