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NB

NEW PRODUCT

SLIDE GUIDE

SEB type

Standard Miniature Slide Guide series has 2 New Types added.

SEBS-B Type: Retained Ball Type (Block may be removed from Rail without loosing balls)

SEBS-BM Type: All Stainless Steel Type (All components are metallic - no plastic)

LLOYD'S REGISTER QUALITY ASSURANCE ISO9001 UKAS QUALITY MANAGEMENT 001

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NIPPON BEARING CO., LTD.

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Retained Ball and All Stainless Steel Types are now added

The retained ball and all stainless steel types are now included into NB's most compact slide guide series. Both types allow for the removal of guide block from the rail without the loss of ball elements and permits easy re-assembly of block to the rail. The SEBS-M type has stainless steel return caps which is ideal in application environments such as: high temperatures, clean room, or vacuum.

STRUCTURE AND ADVANTAGES

NB'S slide guide SEB type consists of a block and a guide rail, both of which have two prescision ground raceway grooves. The block consists of a main body, balls, and return caps. With this retained ball type has a retainer which prevents ball bearings from escaping when block is remove from rail.

Retained Balls (Both SEBS-B & -BM Types)

With the retained balls, the guide block may be removed from the rail without the balls falling out. This makes dis-assembly and re-assembly work easier.

All Stainless Steel Type (SEBS-M Type)

All components are made of stainless steel. The return caps are now metallic and this increases usage versatility under special environments such as high temperature, clean room, or vacuum.

Compact Design

The two raceway and four-point contact structure of the SEB types minimize its height and give further advantage installation with limited space and reduces overall weight.

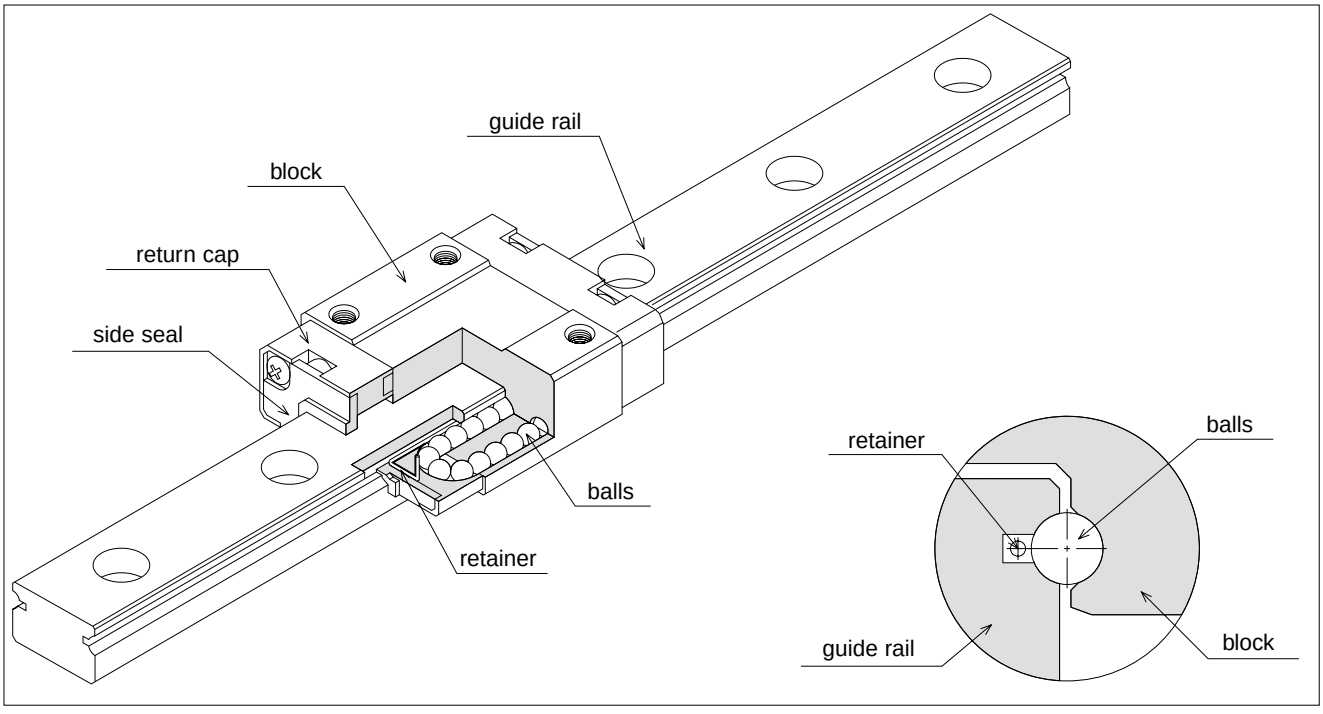
High Moment Loads- (SEBS-BY & -BYM Types)

With the wide and long types an increase of moment capacity is realized. This permits for the use of “single" block designs possible.

Tapped-Hole Rail Types ("-N")

Slide guides with clearance holes are standard and the tapped holes ("-N") are available upon request.

Figure 1 Structure of SEBS-B Types (Retained Ball Type)



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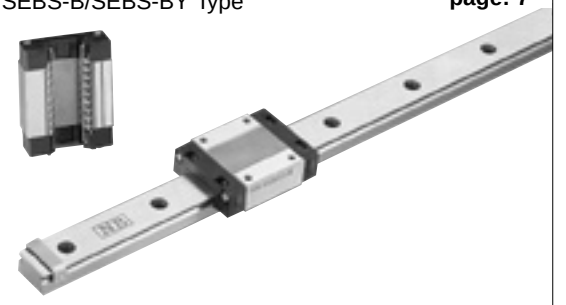
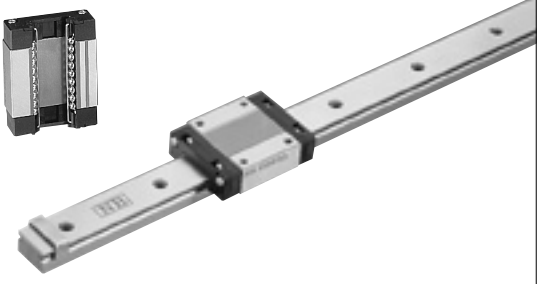
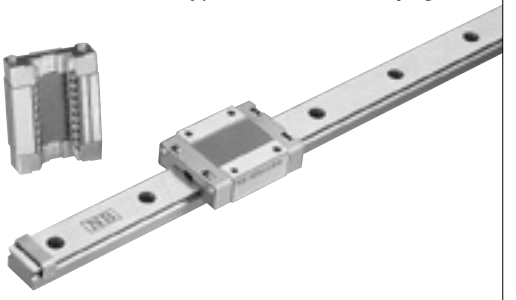
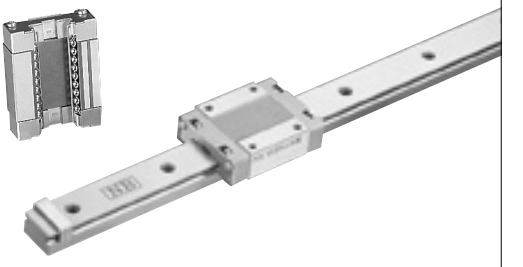
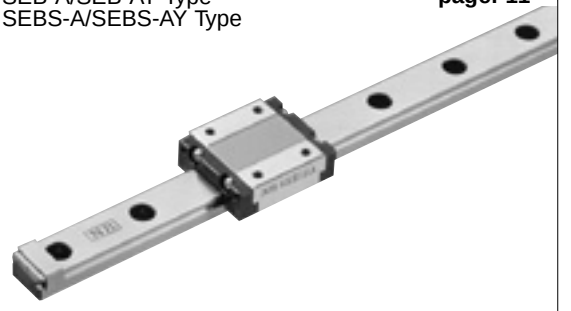
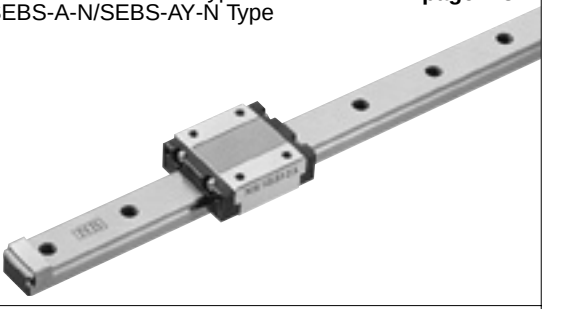
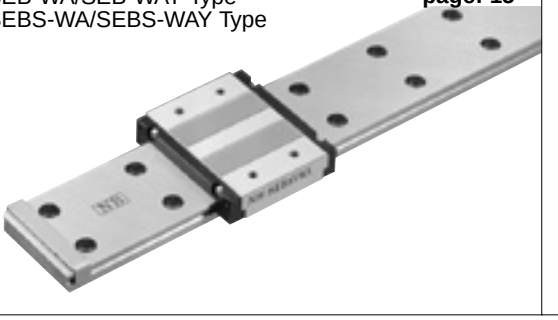
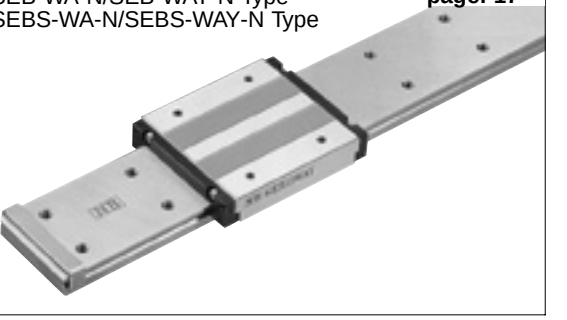
TYPES

The miniature slide guide series (SEB Types) are categorized according to their block shape and the rail installation method. They are also available with or without Side Seals.

Table 1 Types

		counterbore rail type	tapped hole rail type
retained ball type	resin return cap	SEBS-B/SEBS-BY Type **page: 7** 	SEBS-B-N/SEBS-BY-N Type **page: 9** 
	stainless return cap	SEBS-BM/SEBS-BYM Type **page: 7** 	SEBS-BM-N/SEBS-BYM-N Type **page: 9** 
standard type	resin return cap	SEB-A/SEB-AY Type SEBS-A/SEBS-AY Type **page: 11** 	SEB-A-N/SEB-AY-N Type SEBS-A-N/SEBS-AY-N Type **page: 13** 
		SEB-WA/SEB-WAY Type SEBS-WA/SEBS-WAY Type **page: 15** 	SEB-WA-N/SEB-WAY-N Type SEBS-WA-N/SEBS-WAY-N Type **page: 17** 

ACCURACY

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

Table 2 Accuracy unit/mm

accuracy grade	high	precision
accuracy symbol	none	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 3	
Running parallelism of surface D to surface B		

The difference of above pairs are applied to multiple number of blocks on the same rail. When the difference of height(H) of a pair on different rails is required, please indicate the rails in the part number.(Please refer to the "Part Number Structure" for furher details.

Figure 2 Accuracy

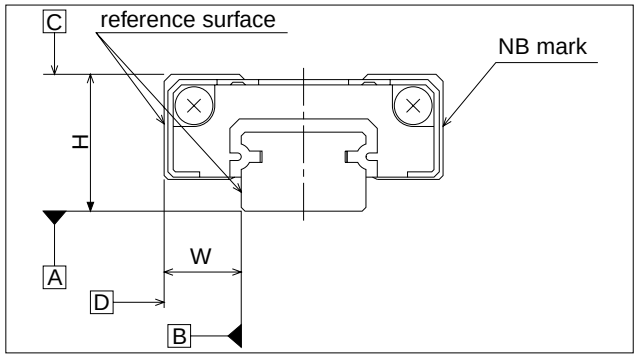
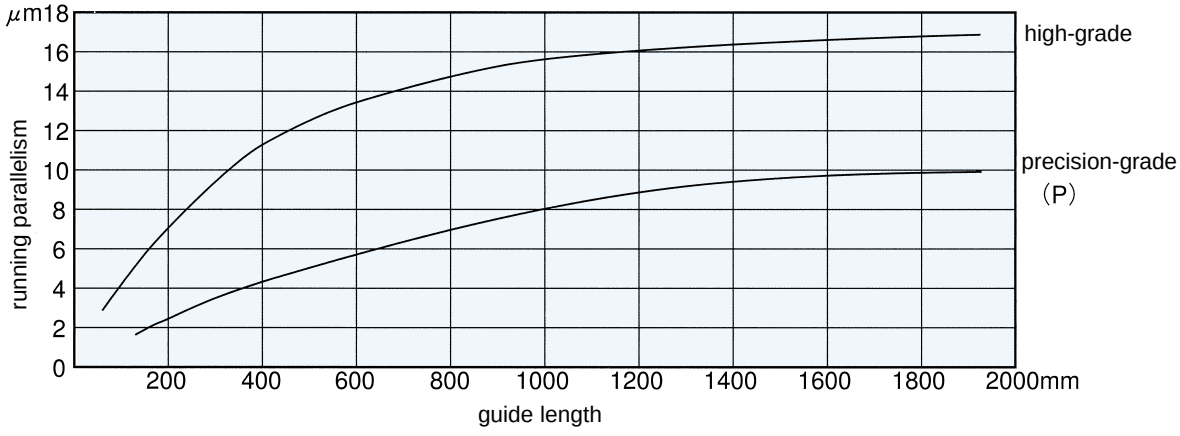


Figure 3 Motion Accuracy



PRE-LOAD

SEB slide guides are available with a standard pre-load (no suffix), light pre-load (T1), and a positive-clearance (T0).

Table 3 Pre-Load Symbol and Radial Clearance unit/μm

size	type of pre-load and its symbol		
	clearance	standard	light
	T 0	none	T 1
5	+3～+6	−3～0	−4～−2
7			
9			
12			
15	+4～+8		−7～−3
20			
7W	+3～+6	−3～0	−4～−2
9W			
12W			
15W	+4～+8		−7～−3

Table 4 Operating Conditions and Pre-Load

pre-load	symbol	operating conditions
clearance	T0	Smooth movement is crucial. The installation tolerance is to be absorbed.
standard	none	Minute vibration is applied. High-precision movement is required. A moment in a given direction is applied.
light	T1	Light vibration is applied. A slight torque is applied. When moment is applied.

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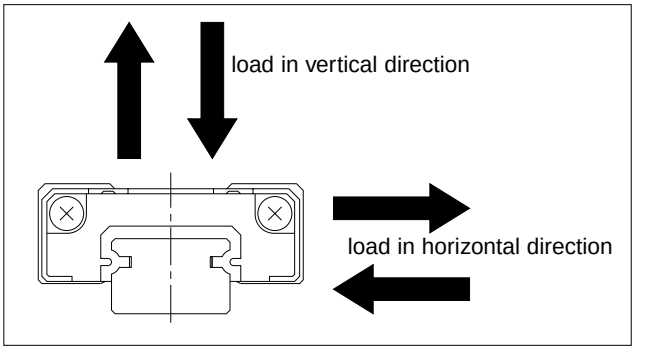
RATED LOAD

The load rating for SEB Type slide guides depends upon the direction of load.

Table 5 Load Rating

		retained ball types	standard types
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 4 Direction of Load



RAIL LENGTH

Slide guides with most commonly used lengths are available as standard. Unless otherwise specified, the distance to the first mounting hole (N) from one end of the rail will be located within the ranges listed in Table 6 for slide guides with non-standard lengths satisfying the following equation.

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

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

Figure 5 Rail

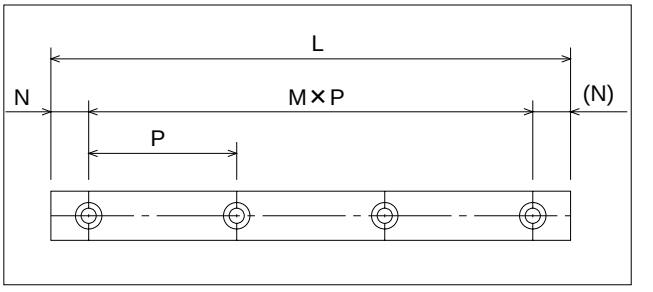


Table 6 Range of N dimension unit/mm

size	N	
	more	less
5	3	10.5
7		
9	4	14
12		16.5
15		24
20	6	36
7W	4	19
9W		
12W	5	25
15W		

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INSTALLATION

Shapes of mounting planes

Slide guides are generally mounted by pushing the reference surface of the rail and block against the shoulder of the mounting surface, An escape groove should be provided at the comer of the shoulder in order to avoid interference with the corner of the rall or block.

Table 7. Mounting Surface Dimensions unit/mm

size	shoulder demensions	
	h_1	h_2
5	2	1
7	2.5	
9	3	1.5
12	4	2
15	5	3.5
20		5
7W	3	1.5
9W		2.5
12W	4	
15W	5	

Recommended tightening torque.

The bolts used to secure the rail shouid be tightened using a torque wrench. The recommended torque is listed below.

Table 8. Recommended Tightning Torque unit/N・m

size	standard rail		N type rail	
	bolt size	recommended torque	bolt size	recommended torque
5	M2	0.4	M2.6	0.6
7			M3	1.0
9	M3	1.0	M4	2.5
12				
15			M5	4.9
20	M5	4.9	M6	10.0
7W	M3	1.0	M4	2.5
9W				
12W	M4	2.5	M5	4.9
15W				

Figure 6 Mounting Reference Surface Shapes

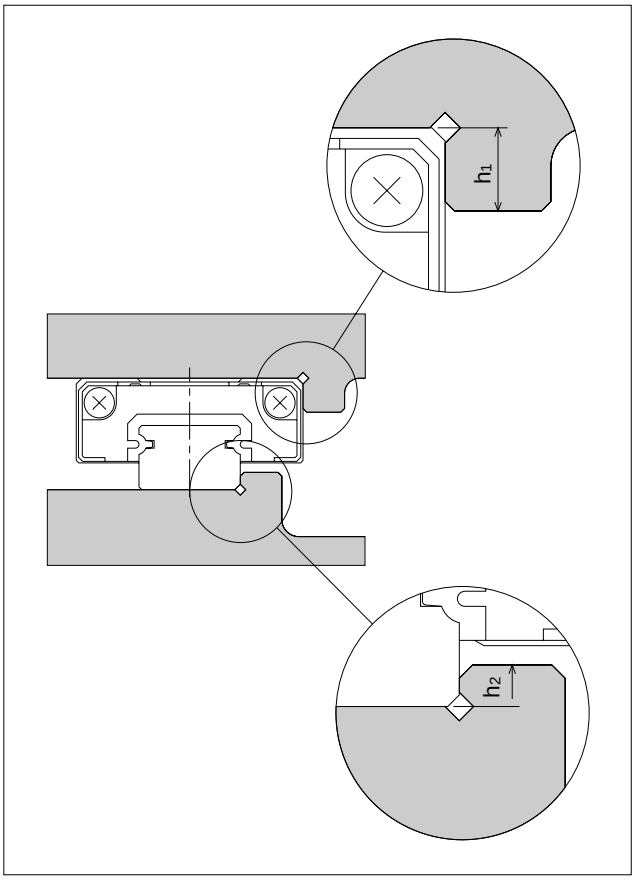
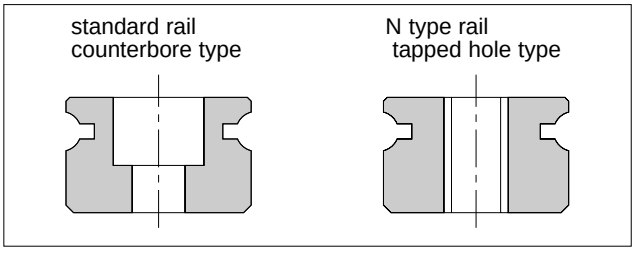


Figure 7 Shapes of Rail



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MOUNTING BOLTS

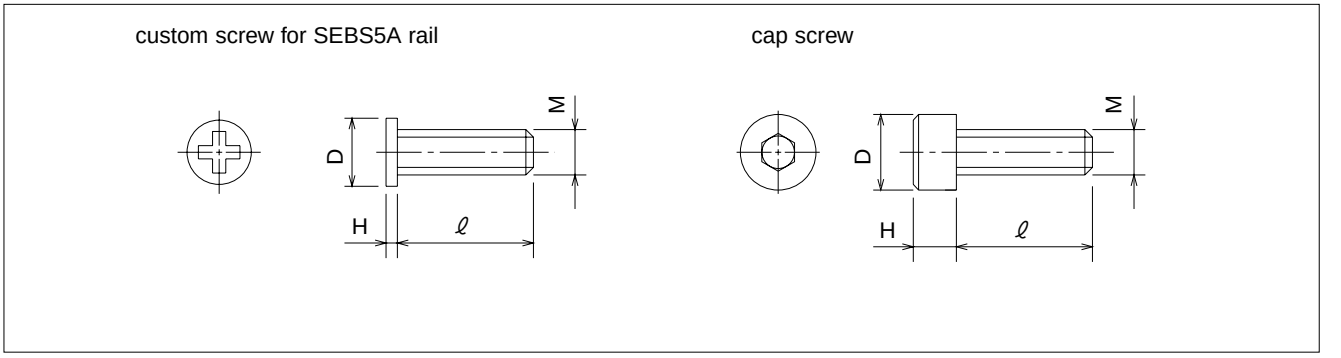
Small bolts for the SEB type are available from NB.

Table 9 Mounting Bolt Dimension(stainless steel) unit/mm

type	bolt size	D mm	H mm	pitch mm	length ℓ mm
custom screw	M2(custom)	3	0.6	0.4	6
cap screw	M2	3.8	2	0.4	4,5,6,8,10
	M2.6	4.5	2.6	0.45	4,5,6,8,10

Custom screws for SEBS5A rails come with the rail.

Figure 8 Mounting Bolts



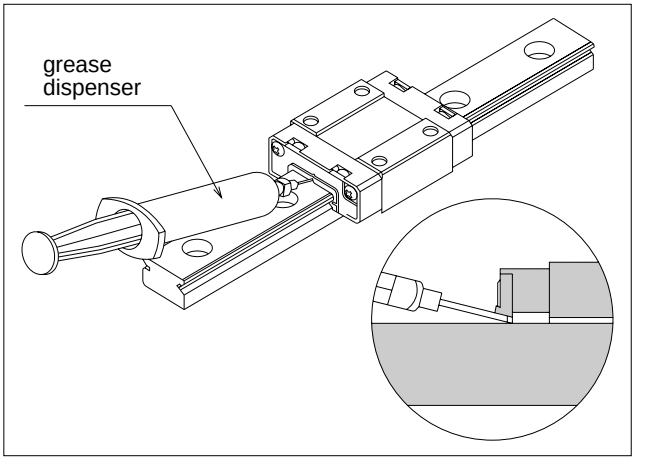
LUBRICATION

* To minimize friction between Ball Elements and Rail Raceway
* To reduce heat build-up within the Block
* To reduce wear of contact surfaces
* To prevent corrossion

Lubrication is very important to the SEB Slide Guide's for performance and life. Quality grease is applied to NB Slide Guides before they are shipped so that they are ready for immediate use. The same type of grease should be added periodically depending upon the operating conditions.

A special syringe type lubricant applicator for (re Fig. 9) is available from NB as an option. Table 10 reflects types of grease available from NB.

Fig. 9. Greasing Method.



K grease is a low dust generation lubricant for linear systems that provides long-term and stable dust control.

This particular type has very few impurities, yet its lubricating effect, contamination control, and rust prevention characteristics are equivalent to that of lithium soap grease.

Table 10. Type of Grease

use	name of greasepitch	contents
general	Multemp PS No.2 (Kyodo Yushi)	10g
low dust	K grease (NB)	10g

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NEW

SEBS-B/SEBS-BY Type

SEBS-BM/SEBS-BYM Type

– Retained Ball Type –

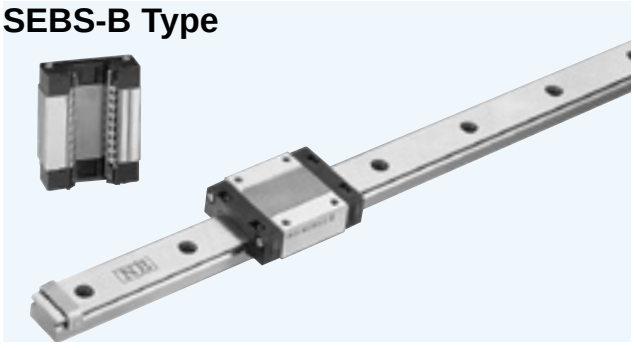
part number structure

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

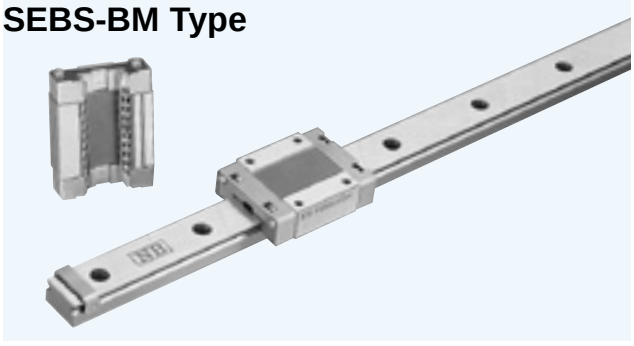
- SEBS: anticorrosion
- size
- retained ball type
- block size: blank standard; Y long
- return cap: blank resin; M stainless steal
- seal: blank without seal; UU seals on both ends
- number of blocks attached to one rail
- pre-load symbol: T0 clearance; blank standard; T1 light pre-load
- total length of rail
- accuracy grade: blank high; P precision
- symbol for number of rails: blank single rail; W2 double rails; W3 triple rails

Note: The symbol for the number of rails does not mean the number of rails ordered.

SEBS-B Type



SEBS-BM Type



part number		assembly dimensions		block dimensions								
		H	W	B	L_1	L_2	P_1	P_2	S_1	ℓ	L_3	b
resin return cap	stainless return cap	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm
SEBS 5B	**SEBS 5BM**	6	3.5	12	16.3	16.7	8	–	M2	1.5	9.3	4.5
SEBS 5BY	**SEBS 5BYM**				19.3	19.7	–	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	
SEBS 12B	**SEBS 12BM**	13	7.5	27	33.8	34.2	20	15		3.5	20.2	10
SEBS 12BY	**SEBS 12BYM**				45.7	46.1		20			32.1	
SEBS 15B	**SEBS 15BM**	16	8.5	32	41.6	42	25	20		4	26.6	12
SEBS 15BY	**SEBS 15BYM**				57.5	57.9		25			42.5	
SEBS 20B	**SEBS 20BM**	25	13	46	65.9	65.9	38	38	M4	6	44.7	17.5
SEBS 20BY	**SEBS 20BYM**				85.7	85.7					64.5	

※1 Custom mounting bolts are provided for SEBS 5.(See Page6)

rail size	standard rail length L mm											
5	40	55	70	85	100	130	160					
7	40	55	70	85	100	130	160	190	220	250	280	310
9	55	75	95	115	135	155	175	195	235	275	315	355
12	70	95	120	145	170	195	220	245	270	295	320	345
15	70	110	150	190	230	270	310	350	390	430	470	510
20	220	280	340	400	460	520	580	640	760	880	1,000	

With custom length rails, kindly advise distance (N) from one end of rail to first hole.
Unless we are advised (N) distance by customer, we assume distance (N) to be as state in Page4.
Joint rails are used when the required length exceeds the maximum standard length listed in the dimensional tables contact NB for details.

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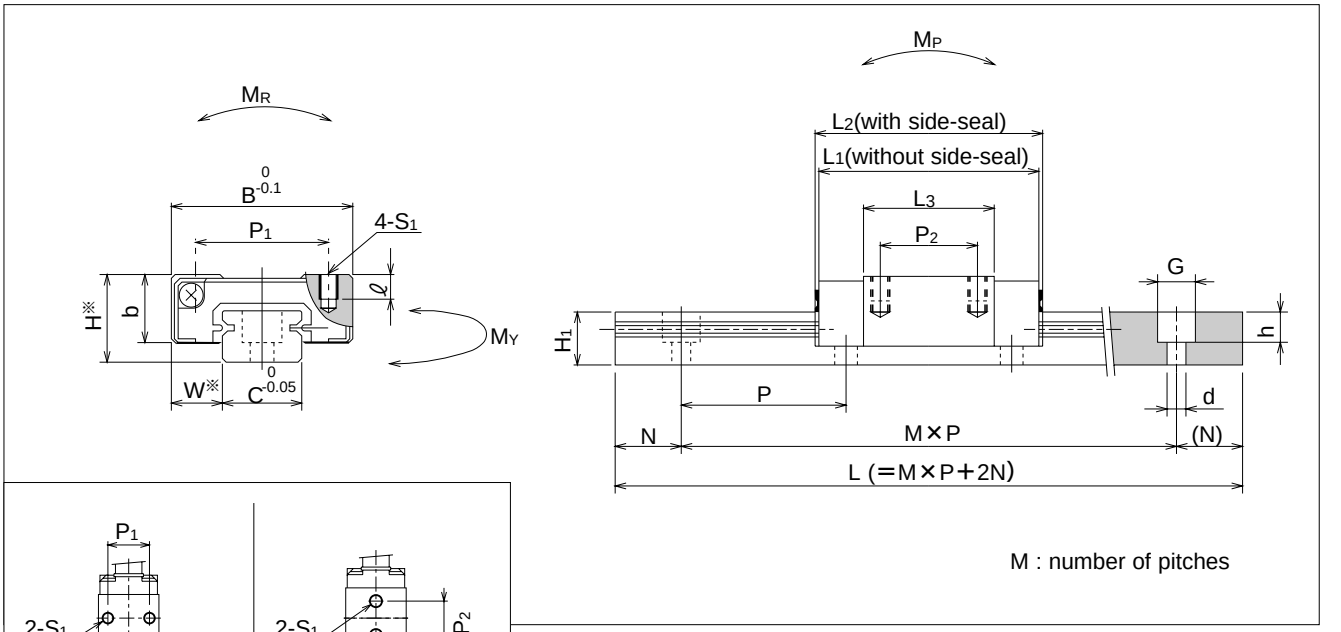
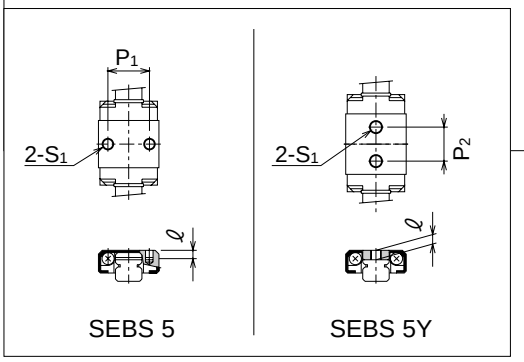
SLIDE GUIDE





※Refer to page 3 for description of accuracy

guide-rail dimensions					basic load rating		allowable static moment			mass			block size
H_1	C	d×G×h	N	P	dynamic C	static Co	M_P	M_Y	M_R	block kg resin return cap	block kg stainless return cap	guide rail kg/m	
mm	mm	mm	mm	mm	kN	kN	N・m	N・m	N・m				
4	5	2.4×3.5×0.8※1	5	15	0.39	0.66	0.9	0.8	1.7	0.003	0.004	0.13	**5B**
					0.52	0.88	1.7	1.4	2.2	0.004	0.005		**5BY**
4.7	7	2.4×4.2×2.3			1.10	1.70	3.5	3.0	6.2	0.009	0.011	0.19	**7B**
					1.93	2.98	11.0	9.3	10.8	0.015	0.017		**7BY**
5.5	9	3.5×6×3.5	7.5	20	1.67	2.47	7.8	6.6	11.5	0.02	0.02	0.31	**9B**
					2.47	3.70	17.6	14.9	17.2	0.03	0.03		**9BY**
7.5	12	3.5×6×4.5	10	25	2.55	3.70	11.7	9.9	23.1	0.03	0.04	0.61	**12B**
					4.15	6.02	31.0	26.3	37.6	0.05	0.06		**12BY**
9.5	15		15	40	4.26	6.36	26.9	22.8	49.2	0.06	0.08	1.02	**15B**
					6.92	10.3	71.1	60.2	80.1	0.10	0.11		**15BY**
15	20	6×9.5×8.5	20	60	8.91	12.7	92.7	78.5	130	0.23	0.27	2.14	**20B**
					12.9	18.5	195	165	189	0.32	0.36		**20BY**

1kN≒102kgf　1N・m≒0.102kgf・m

395	435	475			
370	395	420	445	470	495
550	590	630	670		

NEW

SEBS-B-N/SEBS-BY-N Type

SEBS-BM-N/SEBS-BYM-N Type

– Retained Ball Type / Tapped Hole rail –

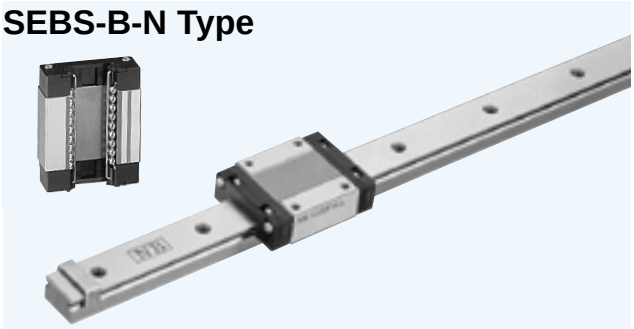
part number structure

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

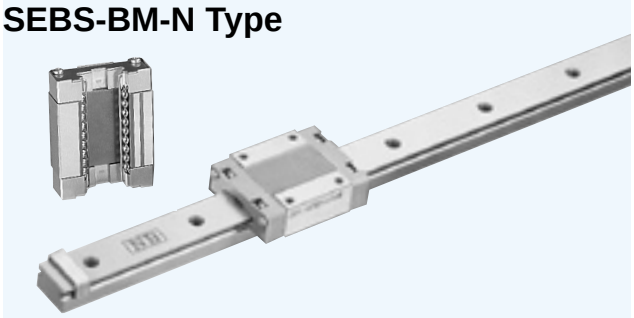
- SEBS: anticorrosion
- size
- retained ball type
- block size: blank standard; Y long
- return cap: blank resin; M stainless steel
- seal: blank without seal; UU seals on both ends
- number of blocks attached to one rail
- pre-load symbol: T0 clearance; blank standard; T1 light pre-load
- total length of rail
- accuracy grade: blank high; P precision
- tapped hole rail
- symbol for number of rails: blank single rail; W2 double rails; W3 triple rails

Note: The symbol for the number of rails does not mean the number of rails ordered.

SEBS-B-N Type



SEBS-BM-N Type



part number		assembly dimensions		block dimensions								
		H	W	B	L_1	L_2	P_1	P_2	S_1	ℓ	L_3	b
resin return cap	stainless return cap	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm
SEBS 5B -N	**SEBS 5BM -N**	6	3.5	12	16.3	16.7	8	–	M2	1.5	9.3	4.5
SEBS 5BY-N	**SEBS 5BYM-N**				19.3	19.7	–	7	M2.6	1.8	12.3	
SEBS 7B -N	**SEBS 7BM -N**	8	5	17	23	23	12	8	M2	2.5	12.8	6.5
SEBS 7BY-N	**SEBS 7BYM-N**				32.5	32.5		13			22.3	
SEBS 9B -N	**SEBS 9BM -N**	10	5.5	20	30.8	30.8	15	10	M3	3	19.6	7.8
SEBS 9BY-N	**SEBS 9BYM-N**				40.3	40.3		16			29.1	
SEBS 12B -N	**SEBS 12BM -N**	13	7.5	27	33.8	34.2	20	15		3.5	20.2	10
SEBS 12BY-N	**SEBS 12BYM-N**				45.7	46.1		20			32.1	
SEBS 15B -N	**SEBS 15BM -N**	16	8.5	32	41.6	42	25	20		4	26.6	12
SEBS 15BY-N	**SEBS 15BYM-N**				57.5	57.9		25			42.5	
SEBS 20B -N	**SEBS 20BM -N**	25	13	46	65.9	65.9	38	38	M4	6	44.7	17.5
SEBS 20BY-N	**SEBS 20BYM-N**				85.7	85.7					64.5	

rail size	standard rail length L mm											
5	40	55	70	85	100	130	160					
7	40	55	70	85	100	130	160	190	220	250	280	310
9	55	75	95	115	135	155	175	195	235	275	315	355
12	70	95	120	145	170	195	220	245	270	295	320	345
15	70	110	150	190	230	270	310	350	390	430	470	510
20	220	280	340	400	460	520	580	640	760	880	1,000	

With custom length rails, kindly advise distance (N) from one end of rail to first hole.
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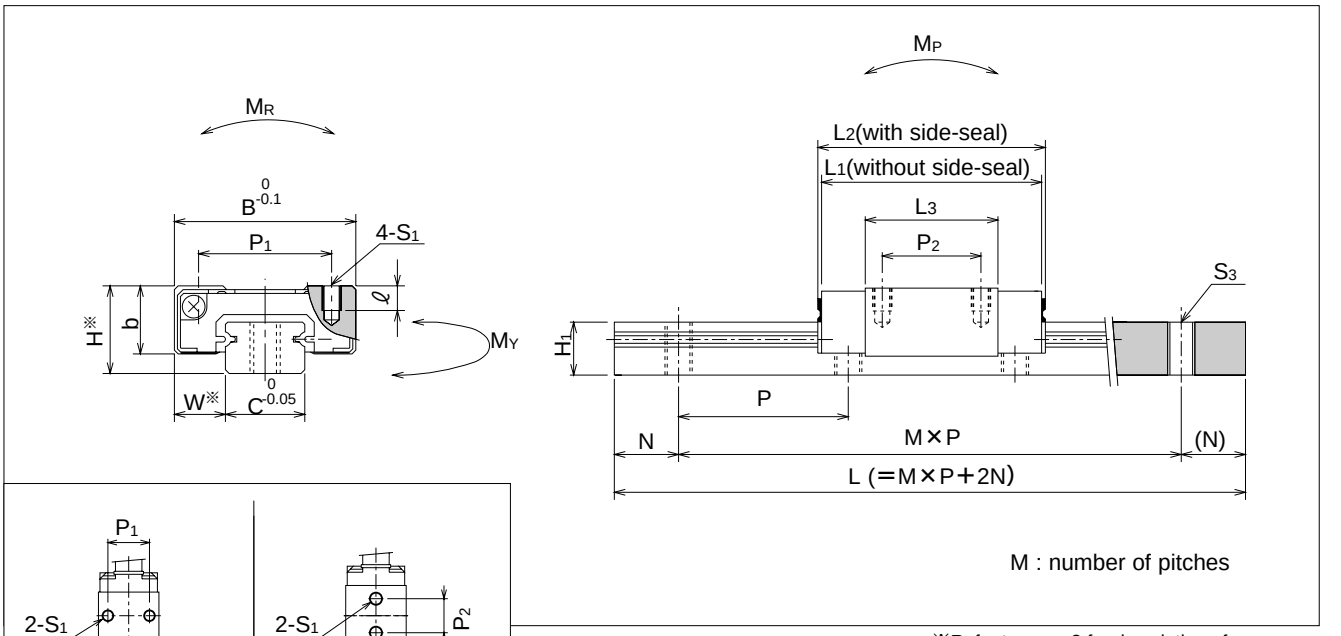
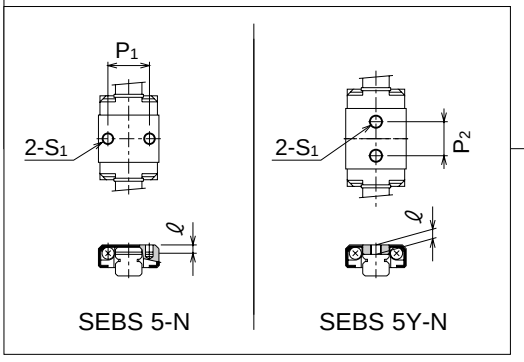




※Refer to page 3 for description of accuracy

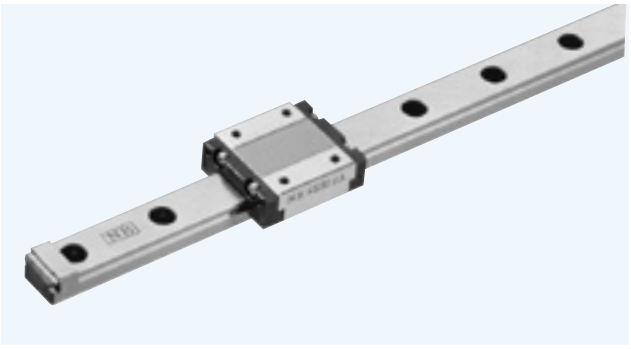
guide-rail dimensions					basic load rating		allowable static moment			mass			block size
					dynamic	static				block kg		guide rail kg/m	
H_1 mm	C mm	S_3	N mm	P mm	C kN	Co kN	M_P N・m	M_Y N・m	M_R N・m	resin return cap	stainless return cap		
4	5	M2.6	5	15	0.39	0.66	0.9	0.8	1.7	0.003	0.004	0.13	**5B**
					0.52	0.88	1.7	1.4	2.2	0.004	0.005		**5BY**
4.7	7	M3			1.10	1.70	3.5	3.0	6.2	0.009	0.011	0.19	**7B**
					1.93	2.98	11.0	9.3	10.8	0.015	0.017		**7BY**
5.5	9	M4	7.5	20	1.67	2.47	7.8	6.6	11.5	0.02	0.02	0.31	**9B**
					2.47	3.70	17.6	14.9	17.2	0.03	0.03		**9BY**
7.5	12		10	25	2.55	3.70	11.7	9.9	23.1	0.03	0.04	0.61	**12B**
					4.15	6.02	31.0	26.3	37.6	0.05	0.06		**12BY**
9.5	15	M5	15	40	4.26	6.36	26.9	22.8	49.2	0.06	0.08	1.02	**15B**
					6.92	10.3	71.1	60.2	80.1	0.10	0.11		**15BY**
15	20	M6	20	60	8.91	12.7	92.7	78.5	130	0.23	0.27	2.14	**20B**
					12.9	18.5	195	165	189	0.32	0.36		**20BY**

1kN≒102kgf　1N・m≒0.102kgf・m

395	435	475			
370	395	420	445	470	495
550	590	630	670		

SEB-A/AY TYPE

– Standard Type –



part number structure

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

specification
- SEB standard
- SEBS anticorrosion

size

block
- blank standard
- Y long

seal
- blank without side-seal
- UU seals on both ends

number of blocks attached to one rail

pre-load symbol
- T0 clearance
- blank standard
- T1 light pre-load

total length of rail

accuracy grade
- blank high
- P precision

symbol for number of rails
- blank single rail
- W2 double rails
- W3 triple rails

Note: The symbol for the number of rails 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	anticorrosion	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm
–	**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	30	15	10	M3	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		3.5	23	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	

※1 Custom mounting bolts are provided for SEBS 5.(See Page6)

rail size	standard rail length L mm											
5	40	55	70	85	100	130	160					
7	40	55	70	85	100	130	160	190	220	250	280	310
9	55	75	95	115	135	155	175	195	235	275	315	355
12	70	95	120	145	170	195	220	245	270	295	320	345
15	70	110	150	190	230	270	310	350	390	430	470	510
20	220	280	340	400	460	520	580	640	760	880	1,000	

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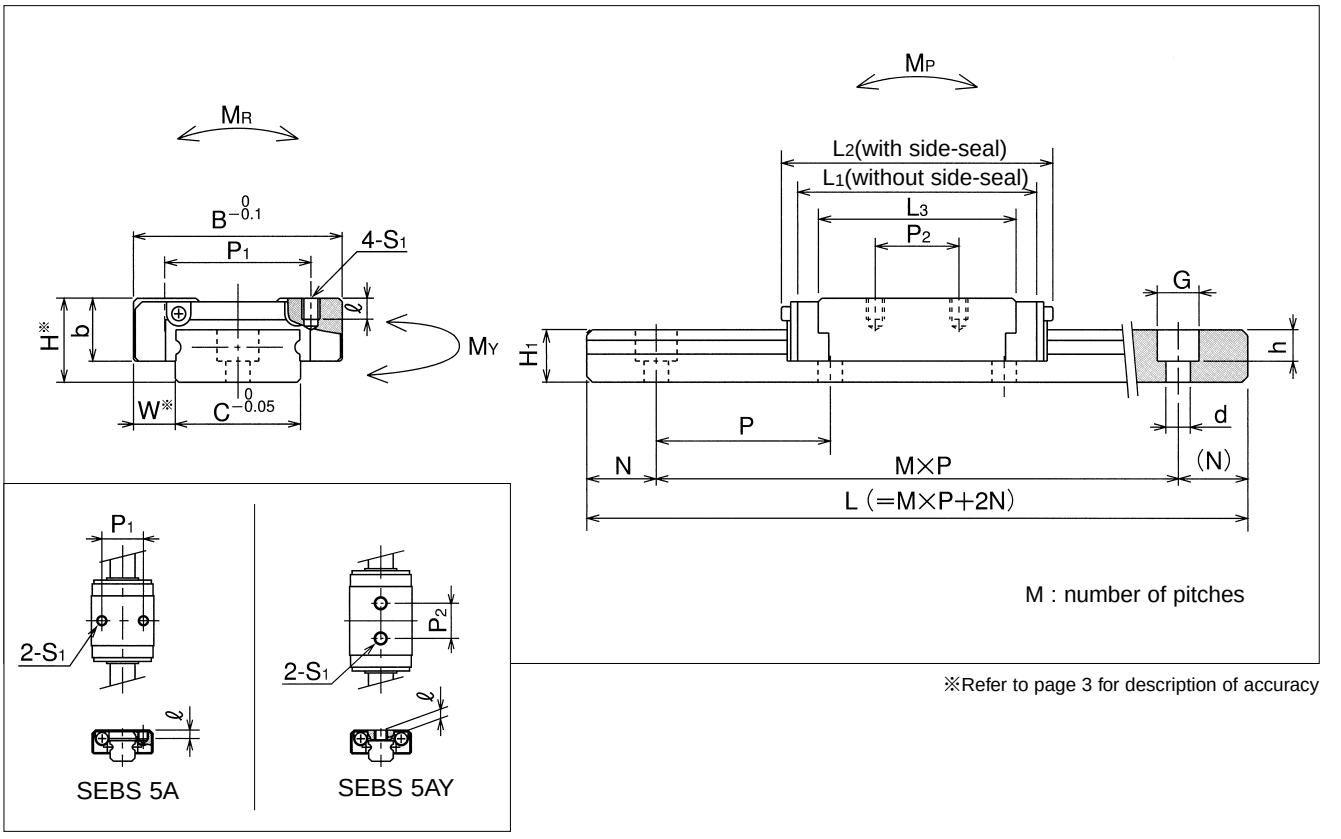

※Refer to page 3 for description of accuracy

guide-rail dimensions					basic load rating		allowable static moment			mass		size
H_1	C	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	kg	kg/m	
4	5	2.4×3.5×1※1	5	15	0.43	0.72	1.2	1.5	1.9	0.003	0.13	**5A**
					0.59	0.99	2.2	2.8	2.6	0.004		**5AY**
4.7	7	2.4×4.2×2.3			1.08	1.67	4.1	4.9	5.2	0.01	0.19	**7A**
					1.89	2.92	12.0	14.3	9.1	0.015		**7AY**
5.5	9	3.5×6×3.5	7.5	20	1.67	2.45	6.9	7.8	11.8	0.02	0.31	**9A**
					2.55	3.82	16.7	19.6	17.6	0.03		**9AY**
7.5	12	3.5×6×4.5	10	25	2.16	3.14	8.8	10.8	18.6	0.04	0.61	**12A**
					3.53	5.10	24.5	29.4	32.3	0.06		**12AY**
9.5	15		15	40	3.63	5.39	21.6	25.5	40.2	0.06	1.02	**15A**
					5.88	8.72	57.8	68.6	67.6	0.10		**15AY**
15	20	6×9.5×8.5	20	60	6.86	9.80	51.0	60.8	98.0	0.23	2.14	**20A**
					11.0	15.7	157	186	157	0.34		**20AY**

1kN≒102kgf　1N・m≒0.102kgf・m

						maximum length	
						standard	anticorrosion
						–	300
						–	700
395	435	475				500	1,000
370	395	420	445	470	495		
550	590	630	670			1,900	

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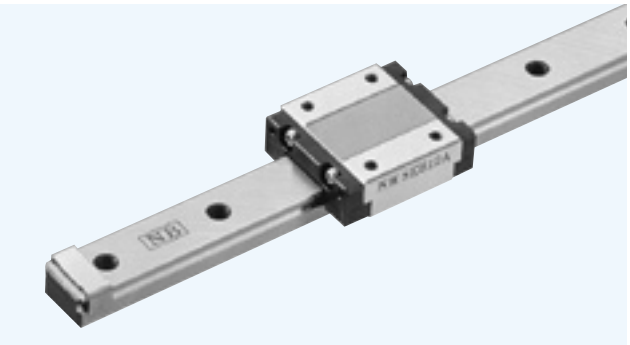
SEB-A-N/AY-N TYPE

– Standard Type w/Tapped Hole Rail –



part number structure

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

- specification: SEB standard; SEBS anticorrosion
- size: 15A
- block: blank standard; Y long
- seal: blank without side-seal; UU seals on both ends
- number of blocks attached to one rail: 2
- pre-load symbol: T0 clearance; blank standard; T1 light pre-load
- total length of rail: 589
- accuracy grade: blank high; P precision
- tapped hole rail: N
- symbol for number of rails: blank single rail; W2 double rails; W3 triple rails

Note: The symbol for the number of rails 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	anticorrosion	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm
–	**SEBS 5A-N**	6	3.5	12	15.6	17	8	–	M2	1.5	9.8	4.5
	SEBS 5AY-N				19.2	20.6	–	7	M2.6	1.8	13.4	
–	**SEBS 7A-N**	8	5	17	21.9	24	12	8	M2	2.5	15.1	6.5
	SEBS 7AY-N				31	33		13			24.6	
SEB 9A-N	**SEBS 9A-N**	10	5.5	20	28.1	30	15	10	M3	3	20.4	7.8
SEB 9AY-N	**SEBS 9AY-N**				38.1	40		16			30.4	
SEB12A-N	**SEBS12A-N**	13	7.5	27	30	33.5	20	15		3.5	23	10
SEB12AY-N	**SEBS12AY-N**				42	45.5		20			34.7	
SEB15A-N	**SEBS15A-N**	16	8.5	32	38.5	42	25	20		4	29.5	12
SEB15AY-N	**SEBS15AY-N**				54.5	58		25			45.4	
SEB20A-N	**SEBS20A-N**	25	13	46	55.7	61	38	38	M4	6	45.7	17.5
SEB20AY-N	**SEBS20AY-N**				79.5	85					69.5	

rail size	standard rail length L mm											
5	40	55	70	85	100	130	160					
7	40	55	70	85	100	130	160	190	220	250	280	310
9	55	75	95	115	135	155	175	195	235	275	315	355
12	70	95	120	145	170	195	220	245	270	295	320	345
15	70	110	150	190	230	270	310	350	390	430	470	510
20	220	280	340	400	460	520	580	640	760	880	1,000	

With custom length rails, kindly advise distance (N) from one end of rail to first hole.
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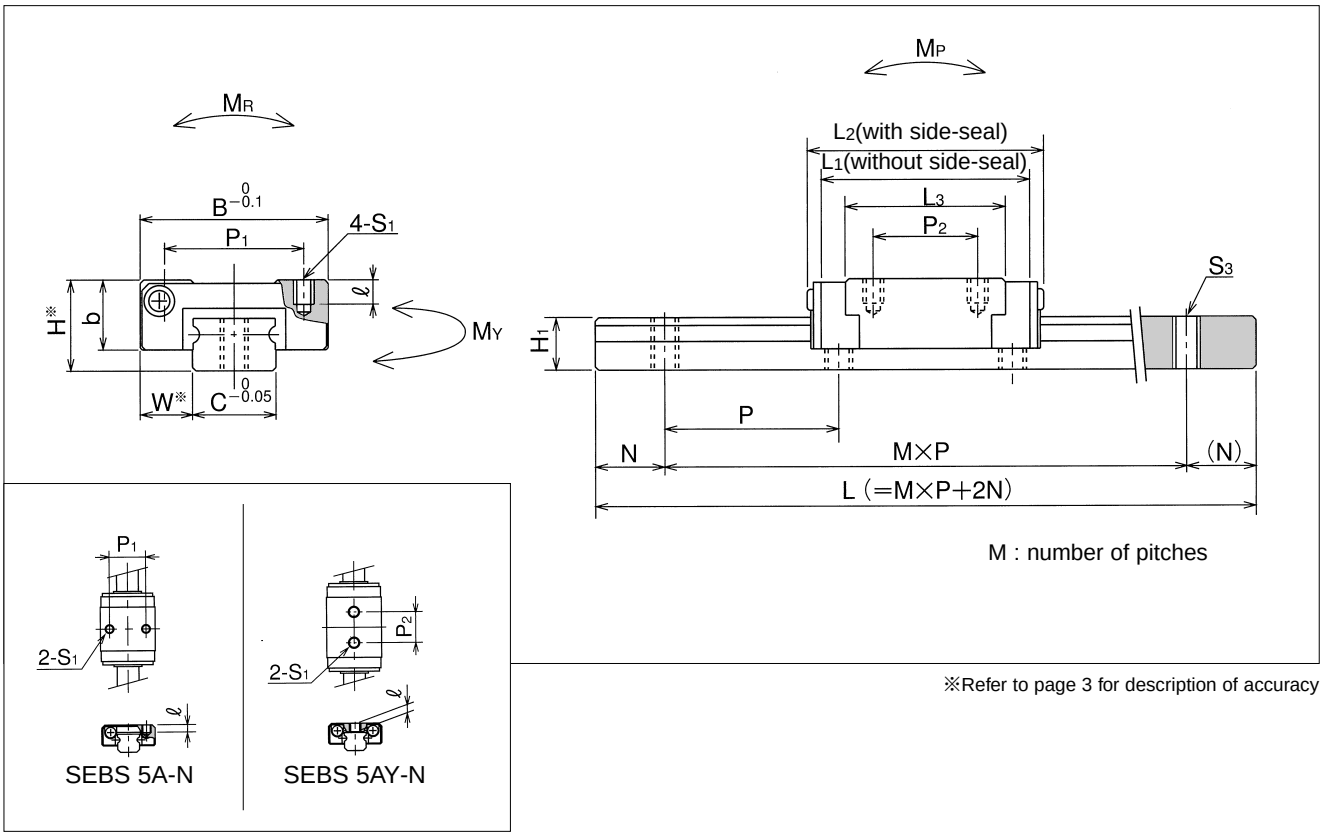

※Refer to page 3 for description of accuracy

guide-rail dimensions					basic load rating		allowable static moment			mass		size
H_1	C	S_3	N	P	dynamic C	static Co	M_P	M_Y	M_R	block	guide rail	
mm	mm		mm	mm	kN	kN	N・m	N・m	N・m	kg	kg/m	
4	5	M2.6	5	15	0.43	0.72	1.2	1.5	1.9	0.003	0.13	**5A**
					0.59	0.99	2.2	2.8	2.6	0.004		**5AY**
4.7	7	M3			1.08	1.67	4.1	4.9	5.2	0.01	0.19	**7A**
					1.89	2.92	12.0	14.3	9.1	0.015		**7AY**
5.5	9	M4	7.5	20	1.67	2.45	6.9	7.8	11.8	0.02	0.31	**9A**
					2.55	3.82	16.7	19.6	17.6	0.03		**9AY**
7.5	12		10	25	2.16	3.14	8.8	10.8	18.6	0.04	0.61	**12A**
					3.53	5.10	24.5	29.4	32.3	0.06		**12AY**
9.5	15	M5	15	40	3.63	5.39	21.6	25.5	40.2	0.06	1.02	**15A**
					5.88	8.72	57.8	68.6	67.6	0.10		**15AY**
15	20	M6	20	60	6.86	9.80	51.0	60.8	98.0	0.23	2.14	**20A**
					11.0	15.7	157	186	157	0.34		**20AY**

1kN≒102kgf　1N・m≒0.102kgf・m

						maximum length	
						standard	anticorrosion
						–	300
						–	700
395	435	475				500	1,000
370	395	420	445	470	495		
550	590	630	670			1,900	

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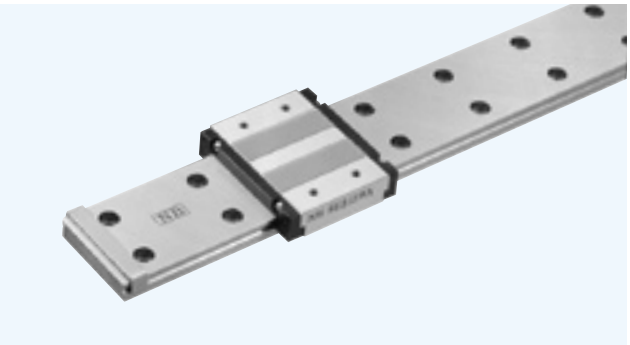
SEB-WA/WAY TYPE

– Standard Wide Type –



part number structure

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

- specification: SEB standard; SEBS anticorrosion
- size
- block: blank standard; Y long
- seal: blank without side-seal; UU seals on both ends
- number of blocks attached to one rail
- pre-load symbol: T0 clearance; blank standard; T1 light pre-load
- total length of rail
- accuracy grade: blank high; P precision
- symbol for number of rails: blank single rail; W2 double rails; W3 triple rails

Note: The symbol for the number of rails 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	P_3	S_2	ℓ_2	b
standard	anticorrosion	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm		mm	mm
–	**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		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				

rail size	standard rail length L mm										
7WA	50	80	110	140	170	200	230	260	290	350	410
9WA	50	80	110	140	170	200	230	260	290	350	410
12WA	70	110	150	190	230	270	310	350	390	430	470
15WA	70	110	150	190	230	270	310	350	390	430	470

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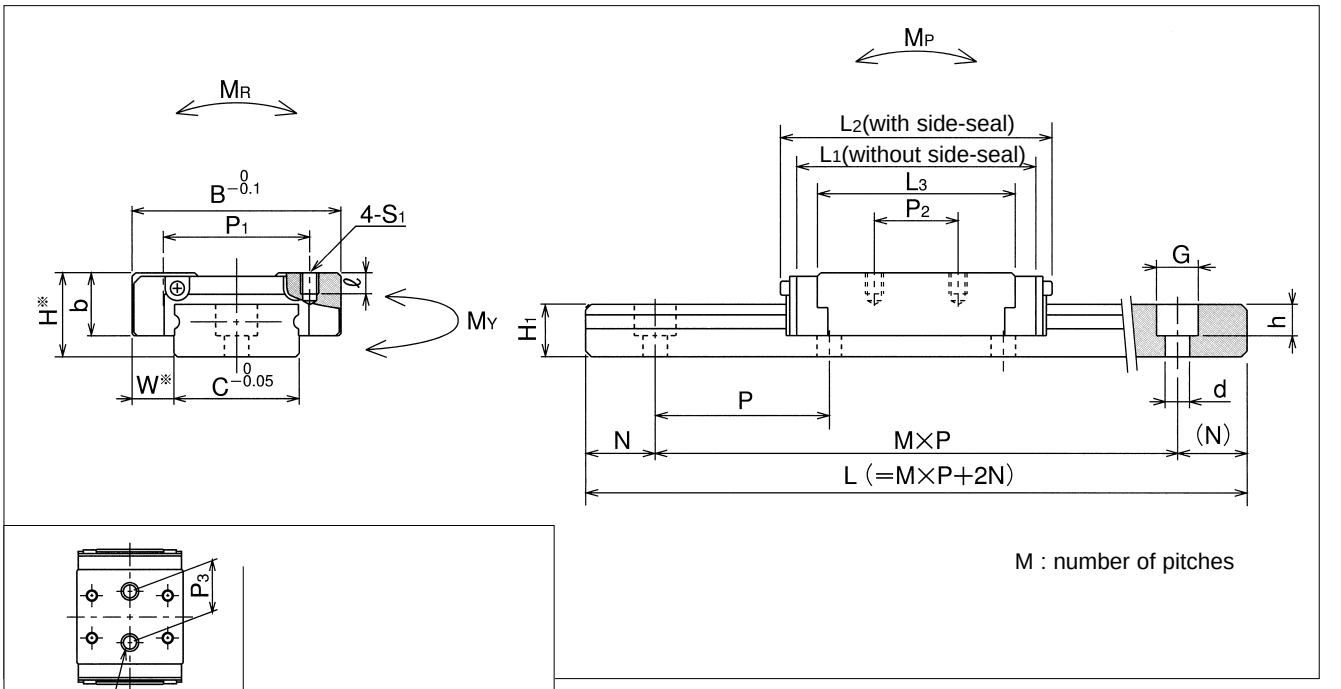

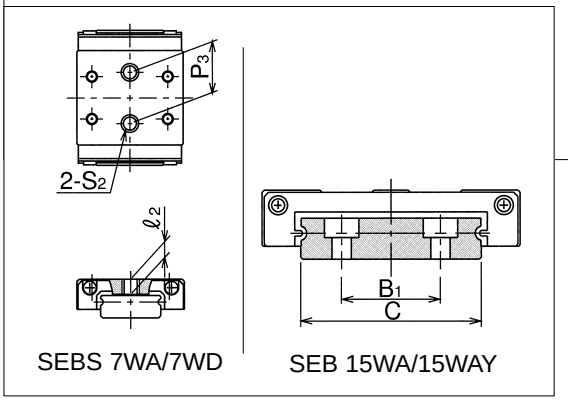

※Refer to page A-3 for description of accuracy

guide-rail dimensions						basic load rating		allowable static moment			mass		size
H_1	C	B_1	d×G×h	N	P	dynamic C	static Co	M_P	M_Y	M_R	block	guide rail	
mm	mm	mm	mm	mm	mm	kN	kN	N・m	N・m	N・m	kg	kg/m	
5.2	14	–	3.5×6×3.2	10	30	15.7	2.45	7.8	9.8	15.7	0.02	0.5	**7WA** **7WD**
						2.36	3.68	17.2	21.6	23.6	0.03		**7WAY**
7.5	18	–	3.5×6×4.5			2.25	3.33	13.7	16.7	30.4	0.04	0.96	**9WA** **9WD**
						3.33	4.9	29.4	35.3	45.1	0.06		**9WAY**
8	24	–	4.5×8×4.5	15	40	2.94	4.31	20.6	24.5	51.9	0.08	1.40	**12WA**
						4.31	6.27	44.1	52.9	76.4	0.11		**12WAY**
9.5	42	23				4.9	7.06	40.2	48.0	148	0.15	2.95	**15WA**
						7.35	10.6	94.1	108	225	0.22		**15WAY**

1kN≒102kgf　1N・m≒0.102kgf・m

	maximum length	
	standard	anticorrosion
470	–	700
470 530	1,000	1,000
550 630 710	1,900	
550 630 710 790 870		

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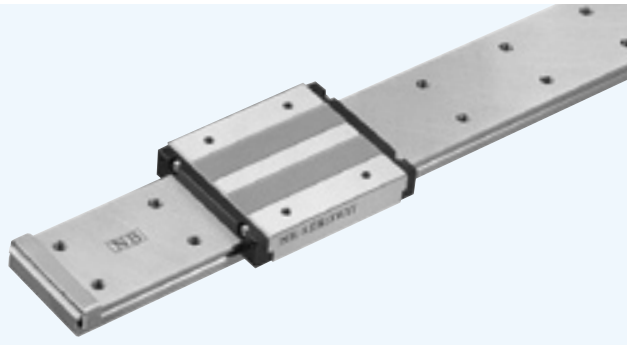
SEB-WA-N/WAY-N TYPE

– Standard Wide Type w/Tapped Hole Rail –



part number structure

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

- specification: SEB standard; SEBS anticorrosion
- size
- block: blank standard; Y long
- seal: blank without side-seal; UU seals on both ends
- number of blocks attached to one rail
- pre-load symbol: T0 clearance; blank standard; T1 light pre-load
- total length of rail
- accuracy grade: blank high; P precision
- tapped hole rail
- symbol for number of rails: blank single rail; W2 double rails; W3 triple rails

Note: The symbol for the number of rails 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	P_3	S_2	ℓ_2	b
standard	anticorrosion	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm		mm	mm
–	**SEBS 7WA-N**	9	5.5	25	30.1	32	18	12	M2.6	2.5	22.1	12	M4	3.5	7
	SEBS 7WD-N						19	10	M3	2.8					
	SEBS 7WAY-N				39.6	41		19			31.6	18			
SEB 9WA-N	**SEBS 9WA-N**	12	6	30	35.9	38	21	12	M2.6	3	28.4	–	–	–	9
SEB 9WD-N	**SEBS 9WD-N**								M3	2.8					
SEB 9WAY-N	**SEBS 9WAY-N**				48	50	23	24		3	40.4				
SEB12WA-N	**SEBS12WA-N**	14	8	40	40.7	44	28	15		3.5	33.5	–	–	–	11
SEB12WAY-N	**SEBS12WAY-N**				55	58.5		28			47.8				
SEB15WA-N	**SEBS15WA-N**	16	9	60	51.2	55	45	20	M4	4.5	42	–	–	–	13
SEB15WAY-N	**SEBS15WAY-N**				70.5	74		35			61.1				

rail size	standard rail length L mm										
7W	50	80	110	140	170	200	230	260	290	350	410
9W	50	80	110	140	170	200	230	260	290	350	410
12W	70	110	150	190	230	270	310	350	390	430	470
15W	70	110	150	190	230	270	310	350	390	430	470

With custom length rails, kindly advise distance (N) from one end of rail to first hole.
Unless we are advised (N) distance by customer, we assume distance (N) to be as state in Page4.
Joint rails are used when the required length exceeds the maximum standard length listed in the dimensional tables. Contact NB for details.

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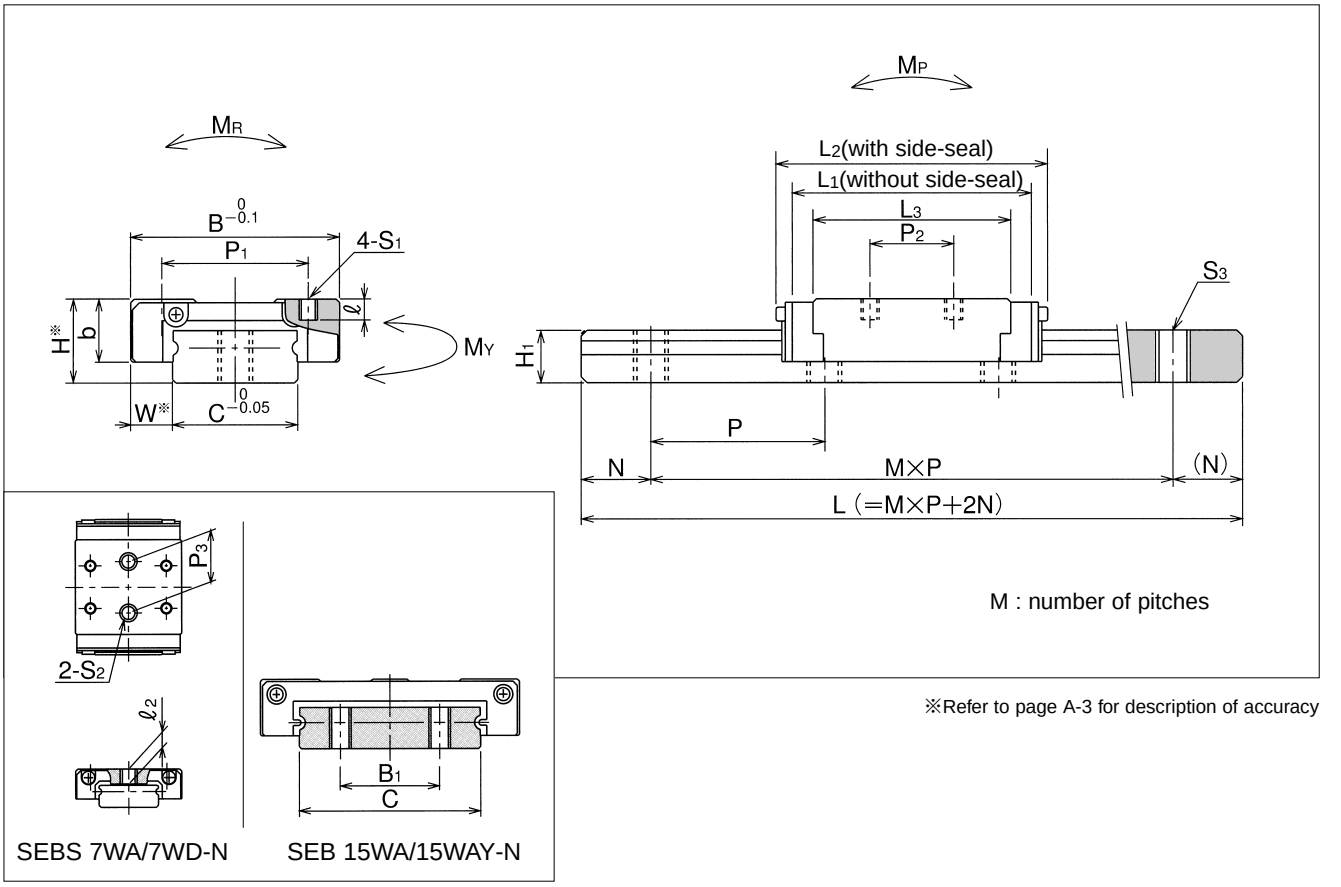

※Refer to page A-3 for description of accuracy

guide-rail dimensions						basic load rating		allowable static moment			mass		size
H_1 mm	C mm	B_1 mm	S_3	N mm	P mm	dynamic C kN	static Co kN	M_P N・m	M_Y N・m	M_R N・m	block kg	guide rail kg/m	
5.2	14	–	M4	10	30	1.57	2.45	7.8	9.8	15.7	0.02	0.5	**7WA** **7WD**
						2.36	3.68	17.2	21.6	23.6	0.03		**7WAY**
7.5	18	–				2.25	3.33	13.7	16.7	30.4	0.04	0.96	**9WA** **9WD**
						3.33	4.9	29.4	35.5	45.1	0.06		**9WAY**
8	24	–	M5	15	40	2.94	4.31	20.6	24.5	51.9	0.08	1.40	**12WA**
						4.31	6.27	44.1	52.9	76.4	0.11		**12WAY**
9.5	42	23				4.9	7.06	40.2	48.0	148	0.15	2.95	**15WA**
						7.35	10.6	94.1	108	225	0.22		**15WAY**

1kN≒102kgf　1N・m≒0.102kgf・m

					maximum length	
					standard	anticorrosion
470					–	700
470	530				1,000	1,000
550	630	710			1,900	
550	630	710	790	870		

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