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NB

NEW ITEM

SGL-HYF AND -HYE types

SLIDE GUIDE

EXTRA LONG BLOCK NOW AVAILABLE!

ISO9001/ISO14001

NIPPON BEARING CO., LTD.

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NB

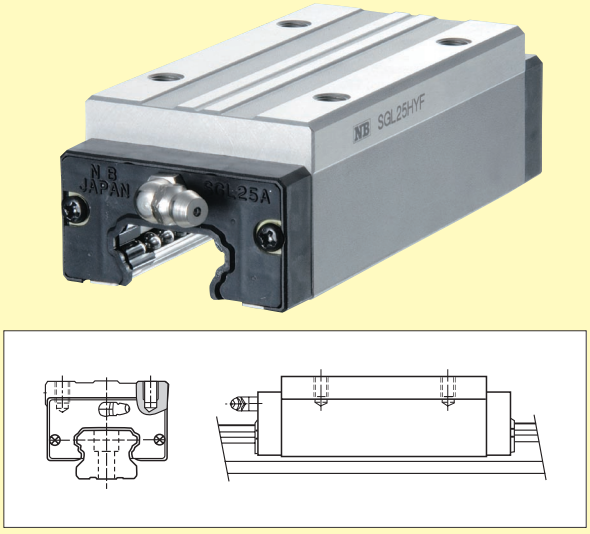
SLIDE GUIDE SGL type NEW Lineup

SGL-HYF and -HYE type

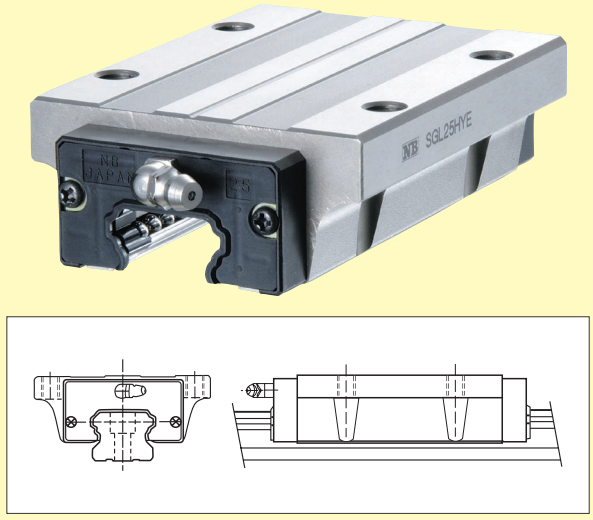
SGL-H SERIES NOW HAS AN EXTRA LONG BLOCK DESIGN FOR HIGHER LOAD CAPACITY AND MOMENT LOADS.

BLOCK TYPES

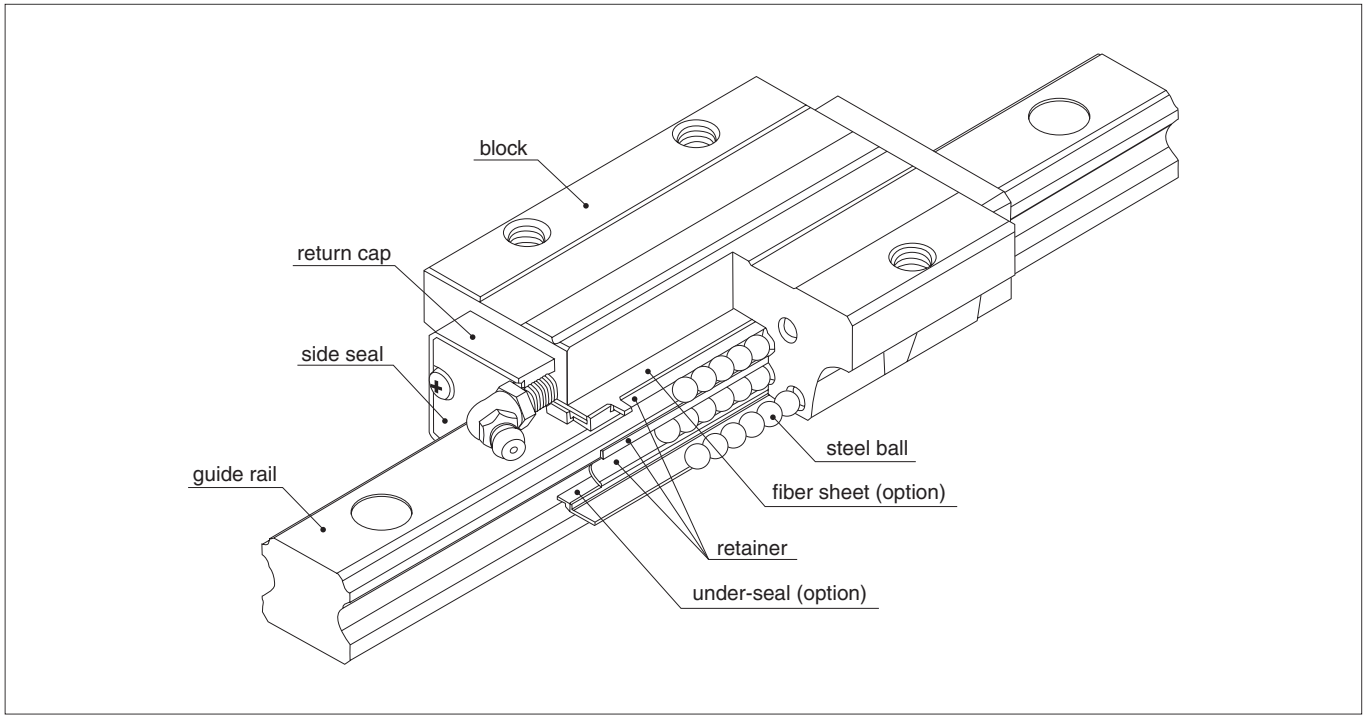
SGL-HYF type P.3



SGL-HYE type P.5



STRUCTURE



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ACCURACY

Three accuracy grades are available: normal-grade (no suffix), high-grade (H), and precision-grade (P).

Table 1 Accuracy unit/mm

part number	SGL15,20			SGL25,30,35			SGL45		
accuracy grade	normal	high	precision	normal	high	precision	normal	high	precision
accuracy symbol	none	H	P	none	H	P	none	H	P
allowable dimensional tolerance for height H	±0.1	±0.03	–0.03~0	±0.1	±0.04	–0.04~0	±0.1	±0.05	–0.05~0
paired difference for height H	0.02	0.01	0.006	0.02	0.015	0.007	0.03	0.015	0.007
allowable dimensional tolerance for width W	±0.1	±0.03	–0.03~0	±0.1	±0.04	–0.04~0	±0.1	±0.05	–0.05~0
paired difference for width W	0.02	0.01	0.006	0.03	0.015	0.007	0.03	0.02	0.01
Running parallelism of surface C to surface A Running parallelism of surface D to surface B	refer to Figure 1								

Figure 1 Motion Accuracy

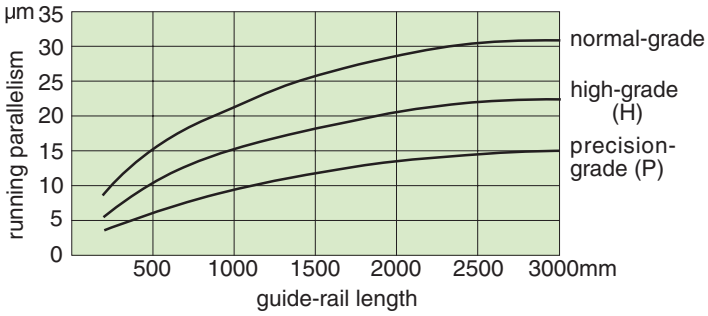
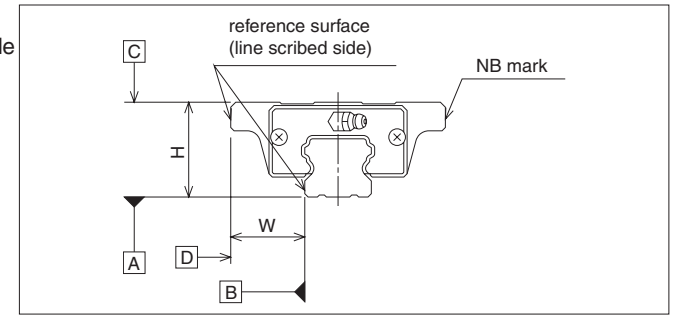


Figure 2 Accuracy



PRE-LOAD

SGL type slide guides are available with a standard pre-load (no suffix), light pre-load (T1), and medium pre-load (T2).

Table 2 Pre-load Symbol and Radial Clearance unit/μm

pre-load category	standard	light	medium
pre-load symbol	none	T1	T2
SGL15	– 4~+2	–12~– 4	–
SGL20	– 5~+2	–14~– 5	–23~–14
SGL25	– 6~+3	–16~– 6	–26~–16
SGL30	– 7~+4	–19~– 7	–31~–19
SGL35	– 8~+4	–22~– 8	–35~–22
SGL45	–10~+5	–25~–10	–40~–25

Table 3 Operating Condition and Pre-Load

category	symbol	operating condition
standard	none	Minute vibration is applied. Precision motion is required. Moment in a given direction is applied.
light	T1	Light vibration is applied. Light combined load is applied. Moment is applied.
medium	T2	Shock/vibration is applied. Over-hang load Is applied. Combined load is applied.

MOUNTING

As shown in Figure 3, the standard method of slide guide mounting is to bring the reference surface of the rail and/or block into contact with the shoulder on the mounting surface. The shape of the shoulder should be finished to no more than the value shown in Table 5, to prevent interfere with the corner of the rail or block.

Use a torque wrench to attach the rail with the set torque, to ensure the precision performances. The recommended torque values are shown in Table 4. Adjust the torque value as needed according to the operating conditions.

Table 4 Recommended Torque unit/N·m

bolt size	M3	M4	M5	M6	M8	M12
recommended torque	1.4	3.2	6.6	11.2	27.6	96.4

(When using alloy steel bolts)

Figure 3 Mounting Reference Surface Shapes

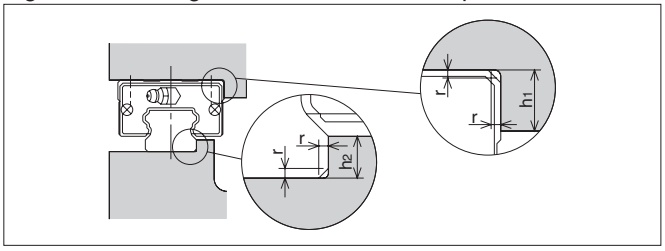


Table 5 Mounting Surface Dimensions unit/mm

part number	h_1	h_2	r_{max}
SGL15	4	3.5	0.5
SGL20	5	5	0.5
SGL25	5	5.5	1
SGL30	6	7.5	1
SGL35	6	8	1
SGL45	8	8	1

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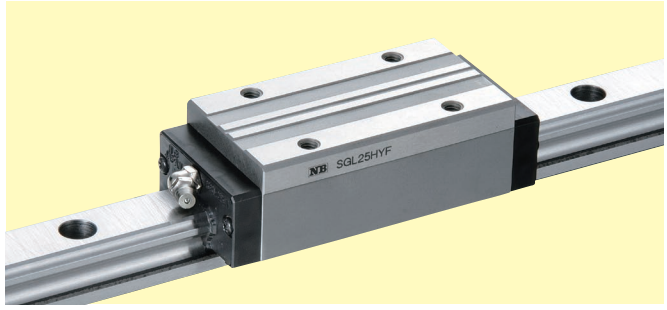
NB

SGL-HYF type



part number structure example **SGL 15 HYF B 2 T1 - 589 P / W2 FS LB F J - KGL**

- SGL type
- size
- block style
- seal

blank	With side-seals
B	With side seals + under-seals
BW	With double seals + under-seals
BS	B + scraper

- number of blocks per rail
- symbol for pre-load

blank	standard
T1	light
T2	medium

- total length of rail
- accuracy grade

blank	standard
H	high
P	precision

- symbol for grease

blank	standard grease
KGL	litium-based grease
KGU	urea-based grease
KGF	anti-fretting grease
GK	K-grease

- with bellows
- with rail mounting hole caps
- with low temperature black chrome treatment
- with Fiber Sheet
  Fiber sheet comes only with standard grease.
- symbol for number of rails

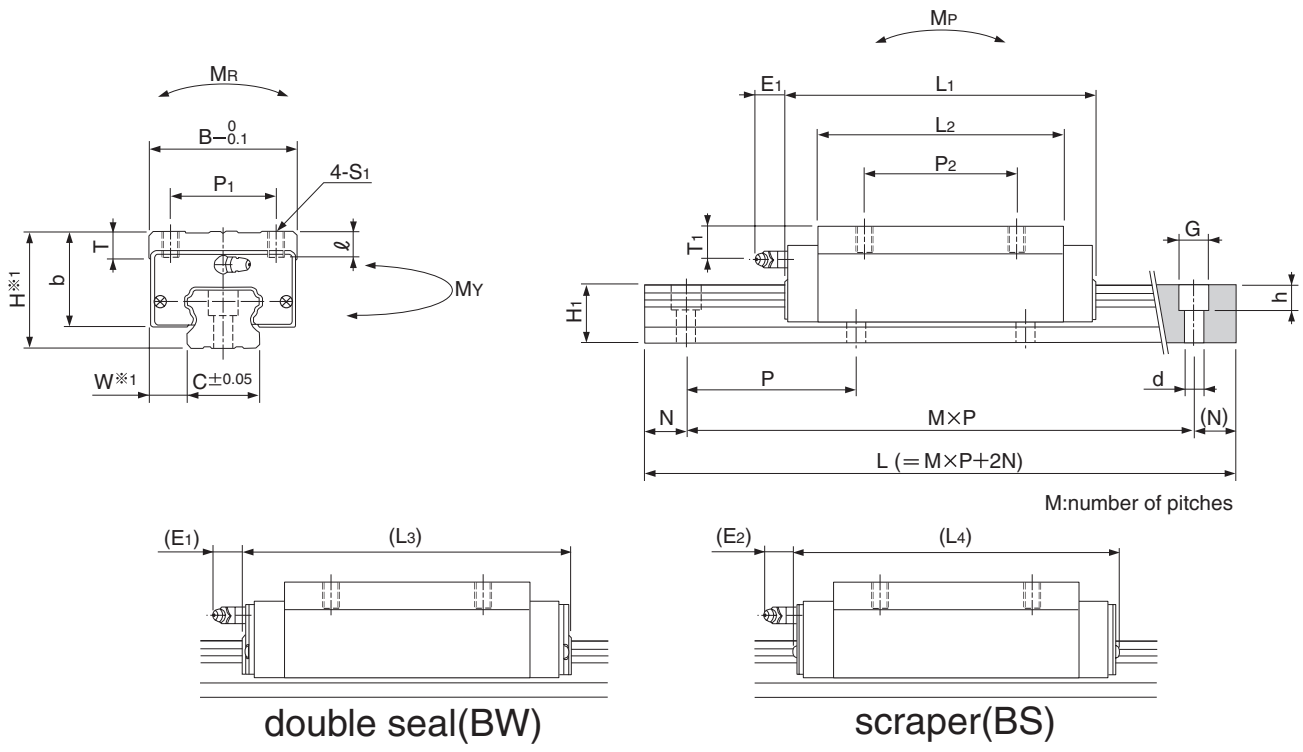
blank	single rail
W2	double rails
W3	triple rails

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	L_3	L_4	P_1	P_2	S_1	ℓ	T	b	E_1	E_2
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SGL15HYF	28	9.5	34	79	61	82.5	85.6	26	26	M4	5	6	23.7	6	5.4
SGL20HYF	30	12	44	96	77.6	102.2	102.6	32	50	M5	6	9.5	24	12	11
SGL25HYF	40	12.5	48	109	88	115.4	116.2	35	50	M6	8	9	33		
SGL30HYF	45	16	60	129	101	137.6	136.6	40	60	M8	10		35.5		
SGL35HYF	55	18	70	147	116	155.6	154.6	50	72		12	13	45		
SGL45HYF	70	20.5	86	171	134	179.5	180	60	80	M10	17	15	60	15	15

part number	standard rail length L mm															
SGL15	160	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120
SGL20	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120	1,240
SGL25	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120	1,240
SGL30	280	360	440	520	600	680	760	840	920	1,000	1,080	1,160	1,240	1,320	1,400	1,480
SGL35	280	360	440	520	600	680	760	840	920	1,000	1,080	1,160	1,240	1,320	1,400	1,480
SGL45	570	675	780	885	990	1,095	1,200	1,305	1,410	1,515	1,620	1,725	1,830	1,935	2,040	2,145

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



※1 Refer to page 2 for accuracy.

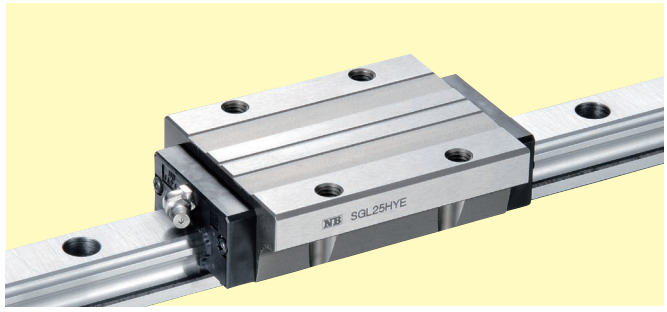
		guide-rail dimensions					basic load rating		allowable static moment			mass		size
T_1 mm	grease fitting	H_1 mm	C mm	d×G×h mm	N mm	P mm	dynamic C kN	static Co kN	M_P N·m	M_Y N·m	M_R N·m	block kg	guide rail kg/m	
9	pressed fitting	13.5	15	4.5×7.5×5.3	20	60	14.6	25.6	238	238	200	0.3	1.3	**15**
8	B-M6F	16	20	6×9.5×8.5			23.9	40.2	467	467	432	0.5	2.1	**20**
13.5		20	23	7×11×9			32.8	54.5	723	723	655	0.9	3.0	**25**
12		24	28	9×14×12		80	44.6	73.8	1,144	1,144	1,074	1.3	4.6	**30**
15.5		27.5	34				61.9	97.2	1,722	1,722	1,782	2.2	6.2	**35**
20	B-PT1/8	36.5	45	14×20×17	22.5	105	91.4	134.9	2,681	2,681	3,082	4.0	10.5	**45**

1kN ≒ 102kgf 1N·m ≒ 0.102kgf·m

								maximum length mm
1,240	1,360	1,480						2,000
1,360	1,480	1,600	1,660	1,720	1,840	1,960		3,000
1,360	1,480	1,600	1,660	1,720	1,840	1,960		3,000
1,640	1,720	1,800	1,880	1,960				3,000
1,640	1,720	1,800	1,880	1,960				3,000
2,250	2,355	2,460	2,565	2,670	2,775	2,880	2,985	3,000

NB

SGL-HYE type



part number structure example **SGL 15 HYE B 2 T1 - 589 P / W2 FS LB F J - KGL**

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part number	assembly dimensions		block dimensions												
	H	W	B	L_1	L_2	L_3	L_4	P_1	P_2	S_1	D	T	b	E_1	E_2
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
SGL15HYE	24	16	47	79	61	82.5	85.6	38	30	M5	4.4	7.5	19.7	6	5.4
SGL20HYE	30	21.5	63	96	77.6	102.2	102.6	53	40	M6	5.4	10.5	24	12	11
SGL25HYE	36	23.5	70	109	88	115.4	116.2	57	45	M8	6.8	12.5	29		
SGL30HYE	42	31	90	129	101	137.6	136.6	72	52	M10	8.5	10	32.5		
SGL35HYE	48	33	100	147	116	155.6	154.6	82	62			13	38		
SGL45HYE	60	37.5	120	171	134	179.5	180	100	80	M12	10.5	15	50	15	15

part number	standard rail length L mm															
SGL15	160	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120
SGL20	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120	1,240
SGL25	220	280	340	400	460	520	580	640	700	760	820	880	940	1,000	1,120	1,240
SGL30	280	360	440	520	600	680	760	840	920	1,000	1,080	1,160	1,240	1,320	1,400	1,480
SGL35	280	360	440	520	600	680	760	840	920	1,000	1,080	1,160	1,240	1,320	1,400	1,480
SGL45	570	675	780	885	990	1,095	1,200	1,305	1,410	1,515	1,620	1,725	1,830	1,935	2,040	2,145

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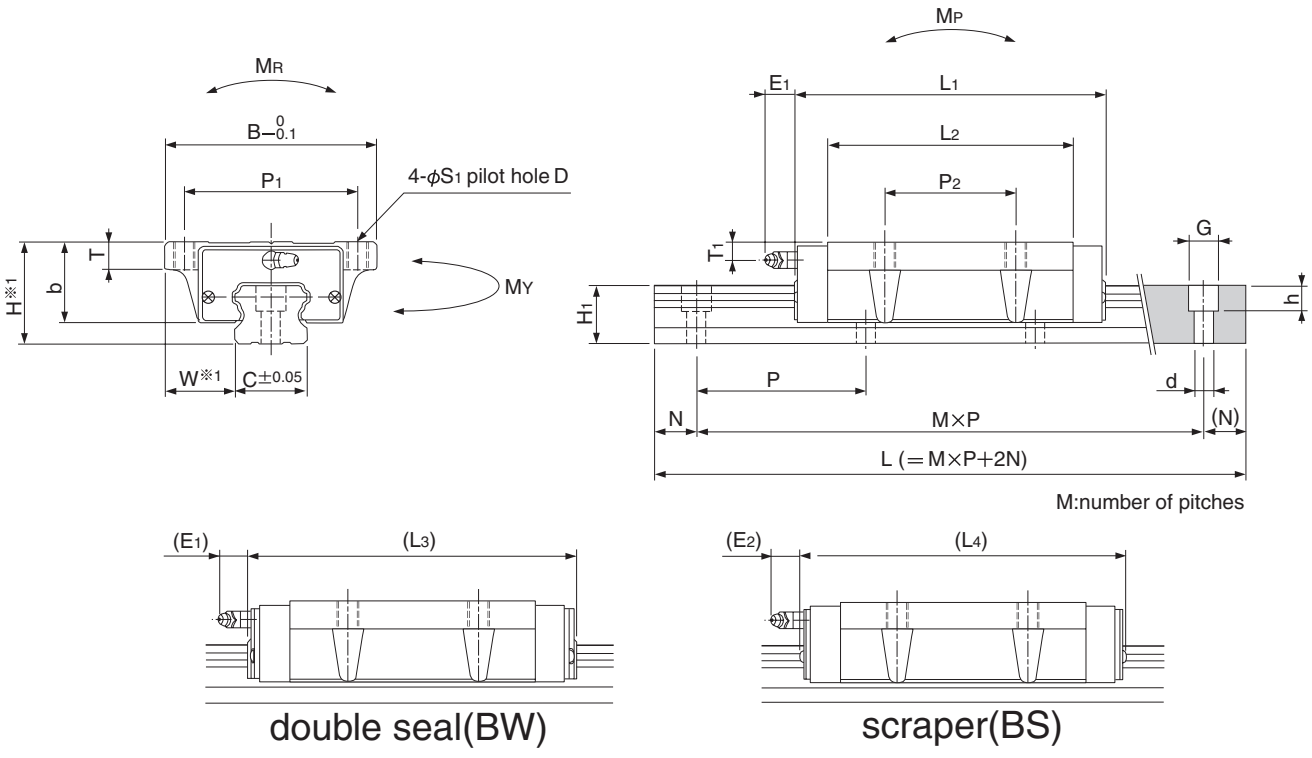

※1 Refer to page 2 for accuracy.

		guide-rail dimensions					basic load rating		allowable static moment			mass		size
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5	pressed fitting	13.5	15	4.5×7.5×5.3	20	60	14.6	25.6	238	238	200	0.3	1.3	**15**
8	B-M6F	16	20	6×9.5×8.5			23.9	40.2	467	467	432	0.7	2.1	**20**
9.5		20	23	7×11×9			32.8	54.5	723	723	655	1.0	3.0	**25**
9		24	28	9×14×12		80	44.6	73.8	1,144	1,144	1,074	1.5	4.6	**30**
8.5		27.5	34				61.9	97.2	1,722	1,722	1,782	2.2	6.2	**35**
10	B-PT1/8	36.5	45	14×20×17	22.5	105	91.4	134.9	2,681	2,681	3,082	4.0	10.5	**45**

1kN ≒ 102kgf 1N·m ≒ 0.102kgf·m

	maximum length mm
1,240 1,360 1,480	2,000
1,360 1,480 1,600 1,660 1,720 1,840 1,960	3,000
1,360 1,480 1,600 1,660 1,720 1,840 1,960	3,000
1,640 1,720 1,800 1,880 1,960	3,000
1,640 1,720 1,800 1,880 1,960	3,000
2,250 2,355 2,460 2,565 2,670 2,775 2,880 2,985	3,000

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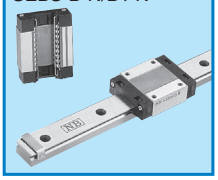
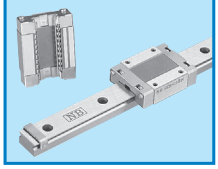
NB SLIDE GUIDE LINEUP

● miniature type (ball type)

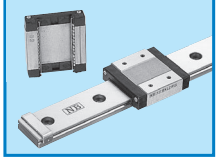
SEBS-B/BY
SEBS-B-N/BY-N



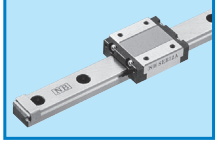
SEBS-BM/BYM
SEBS-BM-N/BYM-N



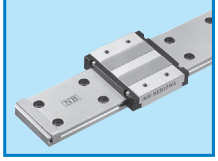
SEBS-WB/WBY
SEBS-WB-N/WBY-N



SEB-A/AY
SEB-A-N/AY-N

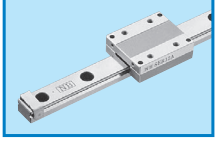


SEB-WA/WAY
SEB-WA-N/WAY-N

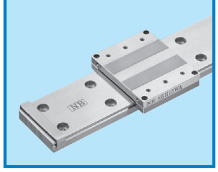


● miniature type (roller type)

SER-A
SER-A-N

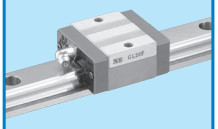


SER-WA
SER-WA-N

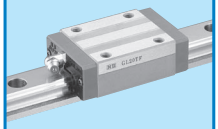


● high-rigidity type

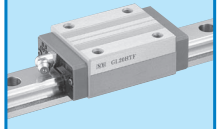
GL-F



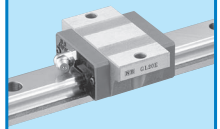
GL-TF



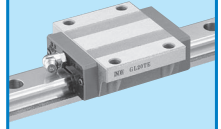
GL-HTF



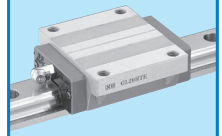
GL-E



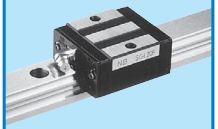
GL-TE



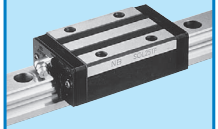
GL-HTE



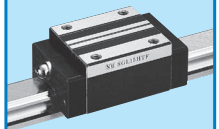
SGL-F



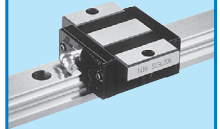
SGL-TF



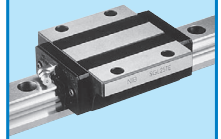
SGL-HTF



SGL-E



SGL-TE



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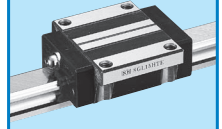
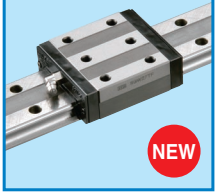
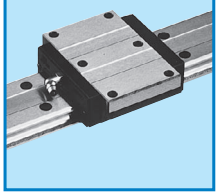


● high-rigidity type (wide type)

SGW-TF



SGW-TE



● high-rigidity type (extra long type)

SGL-HYF

SGL-HYE

Contact NB for assistance.

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