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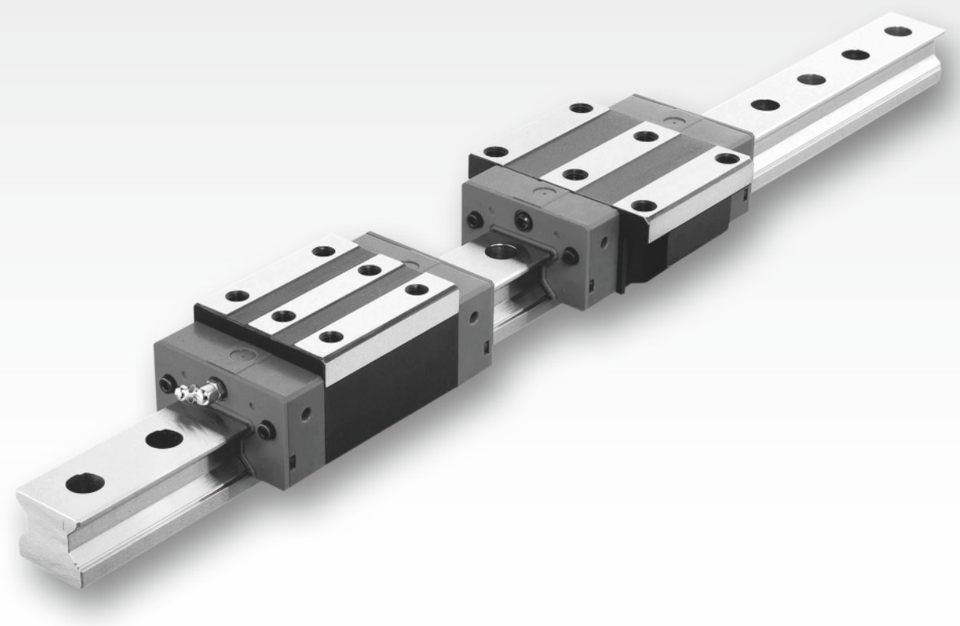
SALES AGENT:

PRECISION LINEAR GUIDEWAYS

NPB
Linear Guideways



PRECISION LINEAR GUIDEWAYS

NPB
BEARING (CHINA) CO.,LTD
Company Introduction

NPB BEARING (China) Co.,Ltd was established in 2000, is a professional company integrating technology and trade with more than 20 years of rich manufacturing experience.

Since its establishment, NPB has been implementing ISO 9001 system standards on quality and technical process control. Through long-time efforts, NPB products have successfully entered the European market and become stable and long-term OEM cooperator of many world-famous bearing manufacturers.

With the rapid development of 4G, 5G technologies, mechanical automation and 3D printing technology, we have never stopped the pace of innovation. Since 2015, NPB has been committing to the development of linear guide products and to providing high-precision linear transmission solutions and after-sales technical services. With the strict industrial standard, mature supply chain system and professional sales services, the company's linear guides are widely used in wooden machine, robot industry, medical equipment, printing machinery and automation equipment due to their characteristics of heavy load, high precision, low noise and environmental protection etc. NPB & its partner have become the leader of linear guides industry in China.

NPB adheres to the standard of meeting customer requirements, and provides fast service and high performance and high quality products. NPB is committed to being the preferred supplier of linear motion products around the world.

CONTENTS

PRECISION LINEAR GUIDEWAYS

NPB Linear Guideway Product Series

NPB can offers HN series, EN series, MNH series and MNW series Linear Guideways.

Types & Series

Series	Assembly Height	Load	Square Tap hole	Flange		
				Tap hole	Drilled hole	Combination
HN	High	Heavy Load	HNH-CA	-	-	-
		Super Heavy Load	HNH-HA	-	-	-
	Low	Heavy Load	HNL-CA	-	-	HNW-CC
		Super Heavy Load	HNL-HA	-	-	HNW-HC
EN	Low	Medium Load	ENH-SA	-	-	ENW-SC
		Heavy Load	ENH-CA	-	-	ENW-CC
MNH		Standard	MNH-C			
		Long	MNH-H			
MNW		Standard	MNW-C			
		Long	MNW-H			

PRECISION LINEAR GUIDEWAYS

LINEAR GUIDEWAYS

Linear Guideways

1 Model Number

(1) Interchangeable type

E	N	W	2	0	C	A				E	Z	O	H	Z	Z	/	E	2
Series			Models								Preload		Class	Accessories				
①			②		③	④				⑧	⑨		⑩	⑫				

H	N	R	2	0				R	1	6	0	0	E			H					R	C
Series			Models						Rail Length(mm)									Accessories					
①			②					⑥	⑦				⑧			⑩			⑫			

(2) Non-Interchangeable type

H	N	W	2	0	C	A	2	R	2	0	0	0		Z	O	H	II	D	D	/	E	2
Series			Models						Rail Length(mm)					Preload				Accessories					
①			②		③	④	⑤	⑥	⑦				⑧	⑨		⑩	⑪	⑫				

Remarks:

③
Load Types
C: Heavy Load
S: Medium Load
H: Super Heavy Load

④
Block Mounting Type
A: Mounting From Top
B: Bottom
C: Top or Bottom

⑤
No. of Blocks per Rail

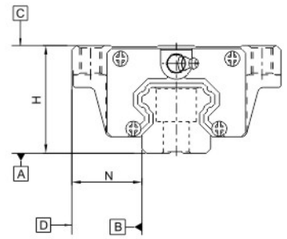
⑥
Rail Mounting Type
R: Mounting Type
T: Bottom

⑧
E: Special Block
None: Standard Block

⑪
Nos. of rails per axis set 1

2. Accuracy Classes

The accuracy of HN series can be classified into normal (N), high (H), precision (P), three classes. Please choose the class by referring the accuracy of applied equipment.



2.1 Accuracy of non-interchangeable guideways

Table 2.1.1 Accuracy Standards

Unit: mm

Items	HN – 15, 20		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.03	0 −0.03
Dimensional tolerance of Width N	±0.1	±0.03	0 −0.03
Variation of height H	0.02	0.01	0.006
Variation of width N	0.02	0.01	0.006
Running parallelism of block surface C to Surface A		See Table	
Running parallelism of block surface D to Surface B		See Table	

Table 2.1.2 Accuracy Standards

Unit: mm

Items	HN – 25, 30, 35		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.04	0 −0.04
Dimensional tolerance of Width N	±0.1	±0.04	0 −0.04
Variation of height H	0.02	0.015	0.007
Variation of width N	0.03	0.015	0.007
Running parallelism of block surface C to Surface A		See Table	
Running parallelism of block surface D to Surface B		See Table	

Table 2.1.3 Accuracy Standards

Unit: mm

Items	HN – 45		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.05	0 −0.05
Dimensional tolerance of Width N	±0.1	±0.05	0 −0.05
Variation of height H	0.03	0.015	0.007
Variation of width N	0.03	0.02	0.01
Running parallelism of block surface C to Surface A		See Table	
Running parallelism of block surface D to Surface B		See Table	

2.2 Accuracy of interchangeable guideways

Table 2.2.1 Accuracy Standards

Unit: mm

Items	HN – 15, 20		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.03	±0.015
Dimensional tolerance of width N	±0.1	±0.03	±0.015
Variation of height H	0.02	0.01	0.006
Variation of width N	0.02	0.01	0.006
Running parallelism of block surface C to surface A		See Table	
Running parallelism of block surface D to surface B		See Table	

Table 2.2.2 Accuracy Standards

Unit: mm

Items	HN – 25, 30, 35		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.04	±0.02
Dimensional tolerance of width N	±0.1	±0.04	±0.02
Variation of height H	0.02	0.015	0.007
Variation of width N	0.03	0.015	0.007
Running parallelism of block surface C to surface A		See Table	
Running parallelism of block surface D to surface B		See Table	

Table 2.2.3 Accuracy Standards

Unit: mm

Items	HN – 45		
Accuracy Classes	Normal (N)	High (H)	Precision (P)
Dimensional tolerance of height H	±0.1	±0.05	±0.025
Dimensional tolerance of width N	±0.1	±0.05	±0.025
Variation of height H	0.03	0.015	0.007
Variation of width N	0.03	0.02	0.01
Running parallelism of block surface C to surface A		See Table	
Running parallelism of block surface D to surface B		See Table	

2.3 Accuracy of running parallelism

Table 2.3.1 Accuracy of Running Parallelism

Rail Length (mm)	Accuracy (μm)		
	N	H	P
0 ~ 100	12	7	3
100 ~ 200	14	9	4
200 ~ 300	15	10	5
300 ~ 500	17	12	6
500 ~ 700	20	13	7
700 ~ 900	22	15	8
900 ~ 1100	24	16	9
1100 ~ 1500	26	18	11
1500 ~ 1900	28	20	13
1900 ~ 2500	31	22	15
2500 ~ 3100	33	25	18
3100 ~ 3600	36	27	20
3600 ~ 4000	37	28	21

3. Preload

3.1 Definition

A preload can be applied to each guideway. Oversized balls are used.Generally, a linear motion guideway has a negative clearance between groove and balls in order to improve stiffness and maintain high precision.

The figure shows the load is multiplied by the preload, the rigidity is doubled and the deflection is reduced by one half. The preload not larger than ZA would be recommended for the model size under HN20 to avoid an over-preload affecting the guideways' life.

3.2 Preload classes

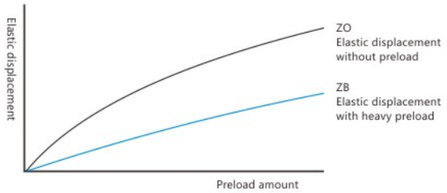
NPB offers three classes of standard preload for various applications and conditions.

Table 3.2.1 Preload Types

Class	Code	Preload	Conditon	Examples of Application
Light Preload	Z0	0~0.02C	Certain load direction,low impact,low precision required	Transportation devices, auto–packing machines,X–Y axi for general industrial machines, welding machines, welders
Medium Preload	ZA	0.05C~0.07C	High precision required	Machining centers, Z axis for general industrial,machines, EDM, NC lathes, Precision X–Y tables,measuring equipment
Heavy Preload	ZB	0.10C~0.12C	High rigidity required, with vibration and impact	Machining centers, grinding machines, NC lathes,horizontal and vertical milling machines, Z axis of machine tools,Heavy cutting machines

Class	Interchangeable guideways	Non–Interchangeable guideways
Preload Classes	Z0, ZA	Z0, ZA,ZB

Note: The "C" in the preload column denotes basic dynamic load rating.



3.3 Rigidity

Rigidity depends on preload, below formula can be used to determine deformation depending on rigidity.

$$\delta = \frac{p}{k}$$

δ: Deformation (μm)
p: Operating load (N)
k: Rigidity (N/μm)

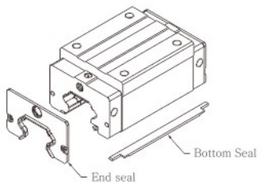
Table 3.3.1 Radial rigidity for HN series

Load Class	Series/size	Rigidity depending on preload		
		Z0	ZA	ZB
Medium load	HN_20 S	130	170	190
Heavy load	HN_15 C	200	260	290
	HN_20 C	250	320	360
	HN_25 C	300	390	440
	HN_30 C	370	480	550
	HN_35 C	410	530	610
	HN_45 C	510	660	750
Super heavy load	HN_20 H	310	400	460
	HN_25 H	390	510	580
	HN_30 H	480	620	710
	HN_35 H	530	690	790
	HN_45 H	650	850	970

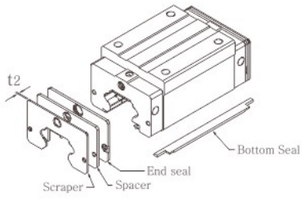
4. Dust Proof Accessories

4.1 Codes of standard dust proof accessories

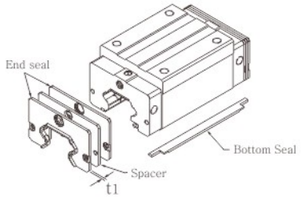
If the following accessories are needed, please add the code followed by the model number.



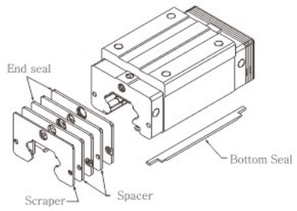
No symbol: Standard Protection
(End seal + Bottom Seal)



ZZ (End seal + Bottom Seal + Scraper)



DD (Double seals + Bottom Seal)
Note: HN_20/25/65 are without spacer.



KK (Double seals + Bottom Seal + Scraper)

4.2 End seal and bottom seal

To prevent life reduction caused by iron chips or dust entering the block.

4.3 Double seals

Enhances the wiping effect, foreign matter can be completely wiped off.
Table 4.3.1 Dimensions of end seal

Size	Thickness (t1) (mm)
HN 15 ES	3
HN 20 ES	3.5
HN 25 ES	3.5
HN 30 ES	3.2
HN 35 ES	3.2
HN 45 ES	4.5

4.4 Scraper

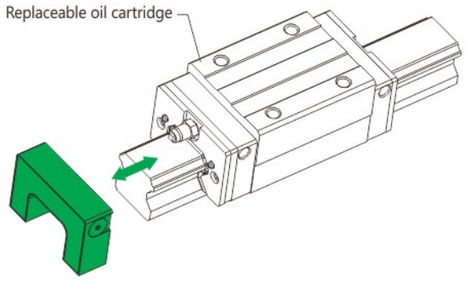
The scraper removes high-temperature iron chips and larger foreign objects.
Table 4.4.1 Dimensions of scraper

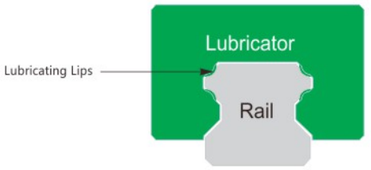
Size	Thickness (t2) (mm)
HN 15 SC	1.5
HN 20 SC	1.5
HN 25 SC	1.5
HN 30 SC	1.5
HN 35 SC	1.5
HN 45 SC	1.5

4.5 E2 Type - Self lubrication Kit for Linear Guideway

E2 self-lubricating linear guideway contains a lubricator between the end cap and end seal.
Outside of the block is equipped with a replaceable oil cartridge,
the configuration of which is listed below.

Lubrication oil flows from the replaceable oil cartridge to the lubricator and then lubricates grooves of rails.
The Oil cartridge comprises a oil conductor with 3D structure that enables the lubricator to contact oil despite that blocks are placed at a random position , and thus the lubrication oil inside the oil cartridge can be used up via capillary action.





5. Standard and Maximum Lengths of Rail

NPB offers standard rail lengths for customer needs. For non-standard E-values,
the recommended dimension should no greater than 1/2 of the pitch (P) dimension.
This will prevent an unstable rail end.

L=(n-1)xP+2xE ----------Eq. 5
L : Total length of rail (mm)
n : Number of mounting holes
P : Distance between any two holes (mm)
E : Distance from the center of the last hole to the edge (mm)

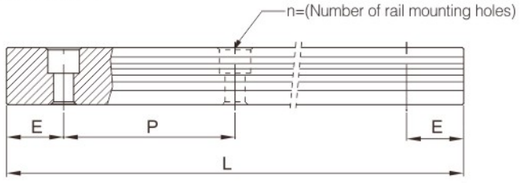
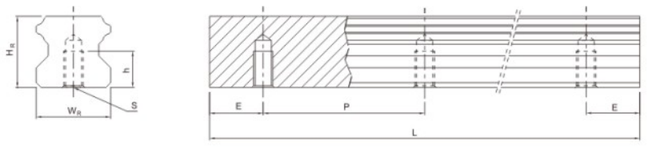


Table 5-1 Rail Standard Length and Max. Length unit: mm

Item	15	20	25	30	35	45	55	65
	160(3)	220(4)	220(4)	280(4)	280(4)	570 (6)	780 (7)	1,270 (9)
	220(4)	280(5)	280(5)	440(6)	440(6)	885 (9)	1,020 (9)	1,570 (11)
	280(5)	340(6)	340(6)	600(8)	600(8)	1,200 (12)	1,260 (11)	2,020 (14)
	340(6)	460(8)	460(8)	760(10)	760(10)	1,620 (16)	1,500 (13)	2,620 (18)
Standard Length L(n)	460(8)	640(11)	640(11)	1,000(13)	1,000(13)	2,040 (20)	1,980 (17)	
	640(11)	820(14)	820(14)	1,640(21)	1,640(21)	2,460 (24)	2,580 (22)	
	820(14)	1,000(17)	1,000(17)	2,040(26)	2,040(26)	2,985 (29)	2,940 (25)	
		1,240(21)	1,240(21)	2,520(32)	2,520(32)			
			1,600(27)	3,000(38)	3,000(38)			
Pitch (P)	60	60	60	80	80	105	120	150
Distance to End (E)	20	20	20	20	20	22.5	30	35
Max. Standard Length	4,000(67)	4,000(67)	4,000(67)	3,960(50)	3,960(50)	3,930 (38)	3,900 (33)	3,970 (27)
Max. Length	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000

Note : 1. Tolerance of E value for standard rail is 0.5 ~ -0.5 mm. Tolerance of E value for jointed rail is 0 ~ -0.3 mm.
2. Maximum standard length means the max. rail length with standard E value on both sides.
3. If different E value is needed, please contact NPB.

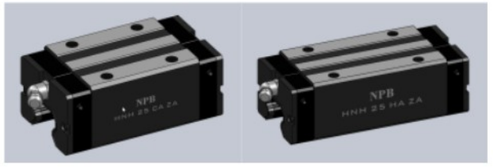
6. Dimensions for HNR-T (Rail Mounting from Bottom)

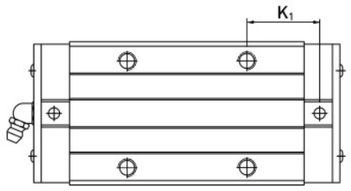


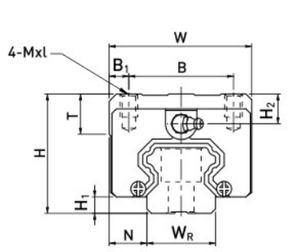
Model No.	Dimension of Rail (mm)						Weight
	W_R	H_R	S	h	P	E	(kg/m)
HNR15T	15	15	M5 × 0.8P	8	60	20	1.48
HNR20T	20	17.5	M6 × 1P	10	60	20	2.29
HNR25T	23	22	M6 × 1P	12	60	20	3.35
HNR30T	28	26	M8 × 1.25P	15	80	20	4.67
HNR35T	34	29	M8 × 1.25P	17	80	20	6.51

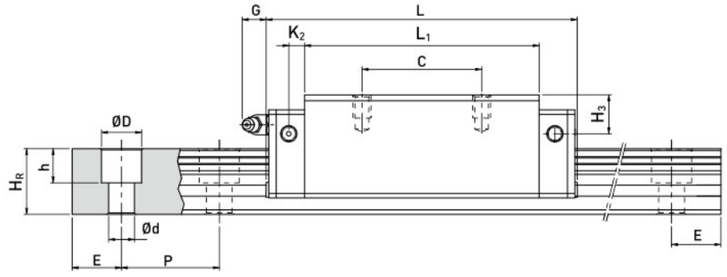
SERIES HNH-CA / HNH-HA

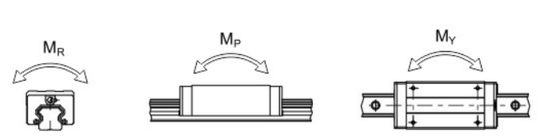
Heavy Load and Super Heavy Load
Ball Type Linear Blocks (Square)
Series HNH-CA / HNH-HA









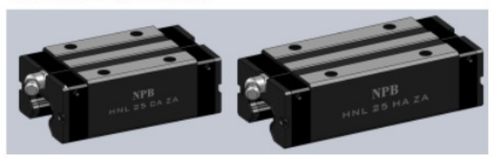


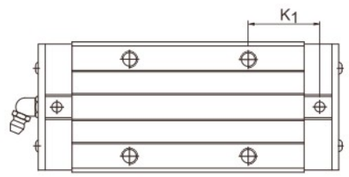
Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)												Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
	H	H_1	N	W	B	B_1	C	L_1	L	K_1	G	MxL	T	H_2	H_3	W_R	H_R	D	h	d	P	E	(mm)	C(KN)	C0(KN)	M_R KN-m	M_P KN-m	M_Y KN-m	Block kg	Rail kg/m
HNH 15 CA	28	4.3	9.5	34	26	4	26	39.4	61.4	10	5.3	M4x5	6	7.95	7.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15	0.18	1.45
HNH 20 CA	30	4.4	12	44	32	6	36	50.5	77.5	12.25	12	M5x6	8	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	37.84	0.38	0.27	0.27	0.30	2.21
HNH 20 HA	30	4.4	12	44	32	6	50	65.2	92.2	12.6	12	M5x6	8	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	21.18	48.84	0.48	0.47	0.47	0.39	2.21
HNH 25 CA	40	5.4	12.5	48	35	6.5	35	58	84	15.7	12	M6x8	8	10	9	23	22	11	9	7	60	20	M6x20	26.48	56.19	0.64	0.51	0.51	0.51	3.21
HNH 25 HA	40	5.4	12.5	48	35	6.5	50	78.6	104.6	18.5	12	M6x8	8	10	9	23	22	11	9	7	60	20	M6x20	32.75	76.00	0.87	0.88	0.88	0.69	3.21
HNH 30 CA	45	5.5	16	60	40	10	40	70	97.4	20.25	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85	0.88	4.47
HNH 30 HA	45	5.5	16	60	40	10	60	93	120.4	21.75	12	M8x10	8.5	9.5	13.8	28	26	14	12	9	80	20	M8x25	47.27	110.13	1.40	1.47	1.47	1.16	4.47
HNH 35 CA	55	7.5	18	70	50	10	50	80	112.4	20.6	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20	1.45	6.30
HNH 35 HA	55	7.5	18	70	50	10	72	105.8	138.2	22.5	12	M8x12	10.2	16	19.6	34	29	14	12	9	80	20	M8x25	60.21	136.31	2.29	2.08	2.08	1.92	6.30
HNH 45 CA	70	9.5	20.5	86	60	13	60	97	139.4	23	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35	2.73	10.41
HNH 45 HA	70	9.5	20.5	86	60	13	80	128.8	171.2	28.9	12.9	M10x17	16	18.5	30.5	45	38	20	17	14	105	22.5	M12x35	94.54	207.12	4.00	4.07	4.07	3.61	10.41
HNH 55 CA	80	13	23.5	100	75	12.5	75	117.7	166.7	27.35	12.9	M12x18	17.5	22	29	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.17	15.08
HNH 55 HA	80	13	23.5	100	75	12.5	95	155.8	204.8	36.4	12.9	M12x18	17.5	22	29	53	44	23	20	16	120	30	M14x45	184.9	276.23	4.88	4.57	4.57	5.49	15.08
HNH 65 CA	90	15	31.5	126	76	25	70	144.2	200.2	43.1	12.9	M16x20	25	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	7.00	21.18
HNH 65 HA	90	15	31.5	126	76	25	120	203.6	259.6	47.8	12.9	M16x20	25	15	15	63	53	26	22	18	150	35	M16x50	277.8	420.17	9.38	7.38	7.38	9.82	21.18

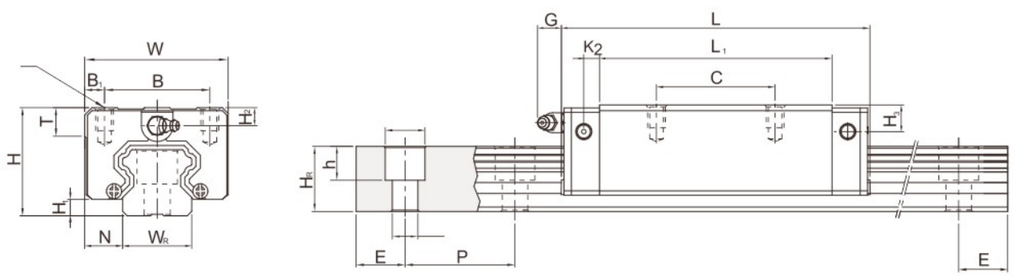
If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

SERIES HNL-CA / HNL-HA

Heavy Load and Super Heavy Load
Ball Type Low Linear Blocks (Square)
Series HNL-CA / HNL-HA





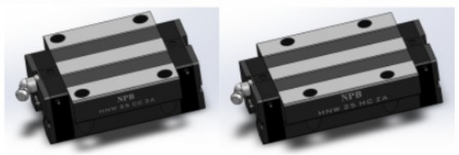


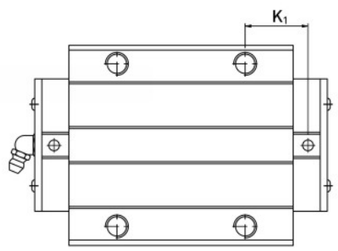
Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)												Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
	H	H_1	N	W	B	B_1	C	L_1	L	K_1	G	MxL	T	H_2	H_3	W_R	H_R	D	h	d	P	E	(mm)	C(KN)	C0(KN)	M_R KN-m	M_P KN-m	M_Y KN-m	Block kg	Rail kg/m
HNL 15 CA	24	4.4	9.5	34	26	4	26	39.5	61.8	10	5.3	M4x4	6	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	14.70	23.47	0.12	0.10	0.10	0.14	1.45
HNL 25 CA	36	5.6	12.5	48	35	6.5	35	58	83.3	15.70	12	M6x6	8	6	5	23	22	11	9	7	60	20	M6x20	34.90	52.82	0.42	0.33	0.33	0.42	3.21
HNL 25 HA	36	5.6	12.5	48	35	6.5	50	78.6	103.9	18.50	12	M6x6	8	6	5	23	22	11	9	7	60	20	M6x20	42.20	69.07	0.56	0.57	0.57	0.57	3.21
HNL 30 CA	42	5.9	16	60	40	10	40	70	98.3	20.25	12	M8x10	8.5	6.5	10.80	28	26	14	12	9	60	20	M8x25	48.50	71.87	0.66	0.53	0.53	0.78	4.47
HNL 30 HA	42	5.9	16	60	40	10	60	93	121.3	21.75	12	M8x10	8.5	6.5	10.80	28	26	14	12	9	60	20	M8x25	58.60	93.99	0.88	0.92	0.92	1.03	4.47
HNL 35 CA	48	7.4	18	70	50	10	50	80	112.2	20.60	12	M8x12	10.2	9	12.60	34	29	14	12	9	80	20	M8x25	64.60	93.88	1.16	0.81	0.81	1.14	6.30
HNL 35 HA	48	7.4	18	70	50	10	72	105.8	138.0	22.50	12	M8x12	10.2	9	12.60	34	29	14	12	9	80	20	M8x25	77.90	122.77	1.54	1.40	1.40	1.52	6.30
HNL 45CA	60	9.4	20.5	86	60	13	60	97	137.1	23	12.9	M10x17	16	8.5	20.50	45	38	20	17	14	105	22.5	M12x35	103.80	146.71	1.98	1.55	1.55	2.08	10.41
HNL 45 HA	60	9.4	20.5	86	60	13	80	128.8	168.9	28.90	12.9	M10x17	16	8.5	20.50	45	38	20	17	14	105	22.5	M12x35	125.30	191.85	2.63	2.68	2.68	2.75	10.41

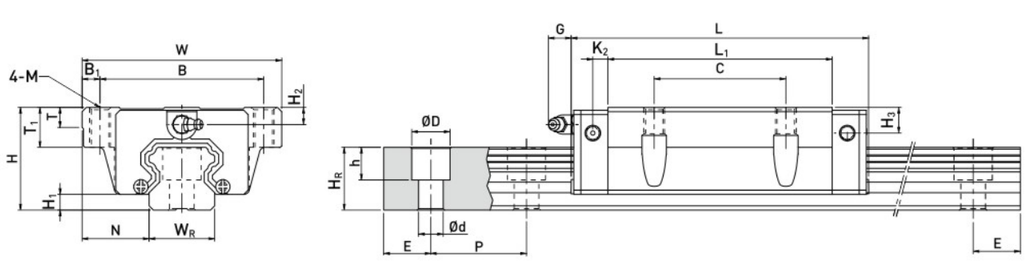
If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

SERIES HNW-CC / HNW-HC

Heavy Load and Super Heavy Load
Ball Type High Linear Blocks (Flange)
Series HNW-CC / HNW-HC





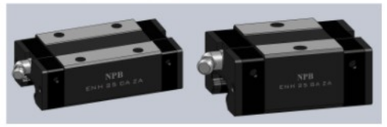


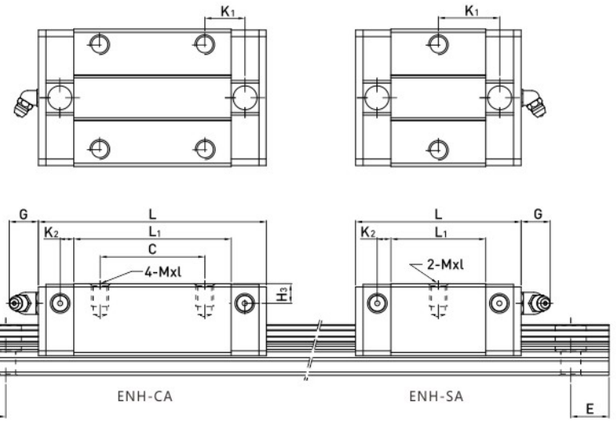
Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)													Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
	H	H_1	N	W	B	B_1	C	L_1	L	K_1	G	M	T	T_1	H_2	H_3	W_R	H_R	D	h	d	P	E	(mm)	C (KN)	C0 (KN)	M_R KN-m	M_P KN-m	M_Y KN-m	Block kg	Rail kg/m
HNW 15 CC	24	4.3	16	47	38	4.5	30	39.4	61.4	10	5.3	M5	6	8.9	3.95	3.7	15	15	7.5	5.3	4.5	60	20	M4x16	11.38	25.31	0.17	0.15	0.15	0.17	1.45
HNW 20 CC	30	4.4	21.5	63	53	5	40	50.5	77.5	12.25	12	M6	8	10	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	17.75	37.84	0.38	0.27	0.27	0.40	2.21
HNW 20 HC	30	4.4	21.5	63	53	5	40	65.2	92.2	12.6	12	M6	8	10	6	6	20	17.5	9.5	8.5	6	60	20	M5x16	21.18	48.84	0.48	0.47	0.47	0.52	2.21
HNW 25 CC	36	5.4	23.5	70	57	6.5	45	58	84	15.7	12	M8	8	14	6	5	23	22	11	9	7	60	20	M6x20	26.48	56.19	0.64	0.51	0.51	0.59	3.21
HNW 25 HC	36	5.4	23.5	70	57	6.5	45	78.6	104.6	18.5	12	M8	8	14	6	5	23	22	11	9	7	60	20	M6x20	32.75	76.00	0.87	0.88	0.88	0.80	3.21
HNW 30 CC	42	5.5	31	90	72	9	52	70	97.4	20.25	12	M10	8.5	16	6.5	10.8	28	26	14	12	9	80	20	M8x25	38.74	83.06	1.06	0.85	0.85	1.09	4.47
HNW 30 HC	42	5.5	31	90	72	9	52	93	120.4	21.75	12	M10	8.5	16	6.5	10.8	28	26	14	12	9	80	20	M8x25	47.27	110.13	1.40	1.47	1.47	1.44	4.47
HNW 35 CC	48	7.5	33	100	82	9	62	80	112.4	20.6	12	M10	10.1	18	9	12.6	34	29	14	12	9	80	20	M8x25	49.52	102.87	1.73	1.20	1.20	1.56	6.30
HNW 35 HC	48	7.5	33	100	82	9	62	105.8	138.2	22.5	12	M10	10.1	18	9	12.6	34	29	14	12	9	80	20	M8x25	60.21	136.31	2.29	2.08	2.08	2.06	6.30
HNW 45 CC	60	9.5	37.5	120	100	10	80	97	139.4	23	12.9	M12	15.1	22	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	77.57	155.93	3.01	2.35	2.35	2.79	10.41
HNW 45 HC	60	9.5	37.5	120	100	10	80	128.8	171.2	28.9	12.9	M12	15.1	22	8.5	20.5	45	38	20	17	14	105	22.5	M12x35	94.54	207.12	4.00	4.07	4.07	3.69	10.41
HNW 55 CC	70	13	43.5	140	116	12	95	117.7	166.7	17.35	12.9	M14	17.5	26.5	12	19	53	44	23	20	16	120	30	M14x45	153.2	211.23	3.69	2.64	2.64	4.52	15.08
HNW 55 HC	70	13	43.5	140	116	12	95	155.8	204.8	36.4	12.9	M14	17.5	26.5	12	19	53	44	23	20	16	120	30	M14x45	184.9	276.23	4.88	4.57	4.57	5.96	15.08
HNW 65 CC	90	15	53.5	170	142	14	110	144.2	200.2	23.1	12.9	M16	25	37.5	15	15	63	53	26	22	18	150	35	M16x50	213.2	287.48	6.65	4.27	4.27	9.17	21.18
HNW 65 HC	90	15	53.5	170	142	14	110	203.6	259.6	52.8	12.9	M16	25	37.5	15	15	63	53	26	22	18	150	35	M16x50	277.8	420.17	9.38	7.38	7.38	12.89	21.18

If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

SERIES ENH-CA / ENH-SA

Heavy Load and Medium Load
Ball Type Low Linear Blocks (Square)
Series ENH-CA / ENH-SA





Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)											Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
	H	H1	N	W	B	B1	C	L1	L	K1	G	MxL	T	H2	H3	WR	HR	D	h	d	P	E	(mm)	C (KN)	C0 (KN)	MR KN-m	MP KN-m	MY KN-m	Block kg	Rail kg/m
ENH 15 SA	24	4.5	9.5	34	26	4	–	23.1	40.1	14.8	5.7	M4x6	6	5.5	6	15	12.5	7.5	5.3	4.5	60	20	M4x16	5.35	9.40	0.08	0.04	0.04	0.09	1.25
ENH 15 CA	24	4.5	9.5	34	26	4	26	39.8	56.8	10.15	5.7	M4x6	6	5.5	6	15	12.5	7.5	5.3	4.5	60	20	M4x16	7.83	16.19	0.13	0.10	0.10	0.15	1.25
ENH 20 SA	28	6	11	44	32	6	–	29	50	18.75	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	7.23	12.74	0.13	0.06	0.06	0.15	2.08
ENH 20 CA	28	6	11	44	32	6	32	48.1	69.1	12.3	12	M5x7	7.5	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	10.31	21.13	0.22	0.16	0.16	0.24	2.08
ENH 25 SA	33	7	12.5	48	35	6.5	–	35.5	59.1	21.9	12	M6x9	8	8	8	23	18	11	9	7	60	20	M6x20	11.40	19.50	0.23	0.12	0.12	0.25	2.67
ENH 25 CA	33	7	12.5	48	35	6.5	35	59	82.6	16.15	12	M6x9	8	8	8	23	18	11	9	7	80	20	M6x20	16.27	32.40	0.38	0.32	0.32	0.41	2.67
ENH 30 SA	42	10	16	60	40	10	–	41.5	69.5	26.75	12	M8x12	9	8	9	28	23	14	12	9	80	20	M8x25	16.42	28.10	0.40	0.21	0.21	0.45	4.35
ENH 30 CA	42	10	16	60	40	10	40	70.1	98.1	21.05	12	M8x12	9	8	9	28	23	14	12	9	80	20	M8x25	23.70	47.46	0.68	0.55	0.55	0.76	4.35

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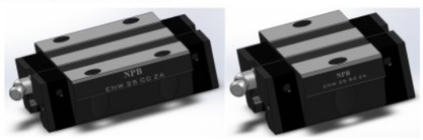
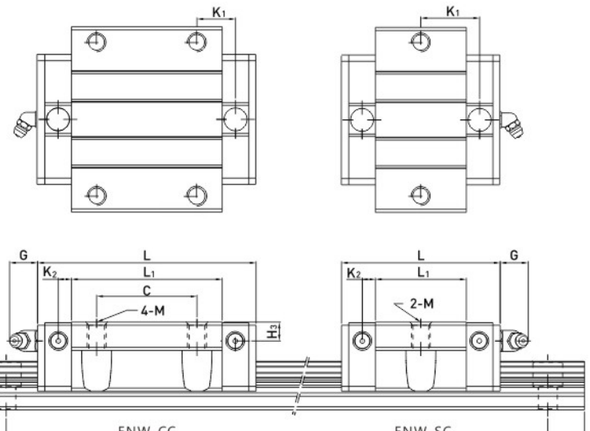
Series ENW-CC / ENW-SC

Heavy Load and Medium Load
Ball Type Low Linear Blocks (Flange)
Series ENW-CC / ENW-SC





Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)													Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
	H	H1	N	W	B	B1	C	L1	L	K1	G	M	T	T1	H2	H3	WR	HR	D	h	d	P	E	(mm)	C (KN)	C0 (KN)	MR KN-m	MP KN-m	MY KN-m	Block kg	Rail kg/m
ENW 15 SC	24	4.5	18.5	52	41	5.5	–	23.1	40.1	14.8	5.7	M5	5	7	5.5	6	15	12.5	7.5	5.3	4.5	60	20	M4x16	5.35	9.40	0.08	0.04	0.04	0.12	1.25
ENW 15 CC	24	4.5	18.5	52	41	5.5	26	39.8	56.8	10.15	5.7	M5	5	7	5.5	6	15	12.5	7.5	5.3	4.5	60	20	M4x16	7.83	16.19	0.13	0.10	0.10	0.21	1.25
ENW 20 SC	28	6	19.5	59	49	5	–	29	50	18.75	12	M6	7	9	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	7.23	12.74	0.13	0.06	0.06	0.19	2.08
ENW 20 CC	28	6	19.5	59	49	5	32	48.1	69.1	12.3	12	M6	7	9	6	6	20	15.5	9.5	8.5	6	60	20	M5x16	10.31	21.13	0.22	0.16	0.16	0.32	2.08
ENW 25 SC	33	7	25	73	60	6.5	–	35.5	59.1	21.9	12	M8	7.5	10	8	8	23	18	11	9	7	60	20	M6x20	11.40	19.50	0.23	0.12	0.12	0.35	2.67
ENW 25 CC	33	7	25	73	60	6.5	35	59	82.6	16.15	12	M8	7.5	10	8	8	23	18	11	9	7	60	20	M6x20	16.27	23.40	0.38	0.32	0.32	0.59	2.67
ENW 30 SC	42	10	31	90	72	9	–	41.5	69.5	26.75	12	M10	7	10	8	9	28	23	14	12	9	80	20	M8x25	16.42	28.10	0.40	0.21	0.21	0.62	4.35
ENW 30 CC	42	10	31	90	72	9	40	70.1	98.1	21.05	12	M10	7	10	8	9	28	23	14	12	9	80	20	M8x25	23.70	47.46	0.68	0.55	0.55	1.04	4.35

If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

Type Comparison Table For The Linear Guide

Fully Interchangable

Type	NPB	HIWIN
HNH Series	HNH15CA	HGH15CA
	HNH20CA	HGH20CA
	HNH20HA	HGH20HA
	HNH25CA	HGH25CA
	HNH25HA	HGH25HA
	HNH30CA	HGH30CA
	HNH30HA	HGH30HA
	HNH35CA	HGH35CA
	HNH35HA	HGH35HA
	HNH45CA	HGH45CA
	HNH45HA	HGH45HA
HNL Series	HNL 15 CA	HGL15CA/C
	HNL 25 CA	HGL25CA/C
	HNL 25 HA	HGL25HA/C
	HNL 30 CA	HGL30CA/C
	HNL 30 HA	HGL30HA/C
	HNL 35 CA	HGL35CA/C
	HNL 35 HA	HGL35HA/C
	HNL 45 CA	HGL45CA/C
	HNL 45 HA	HGL45HA/C

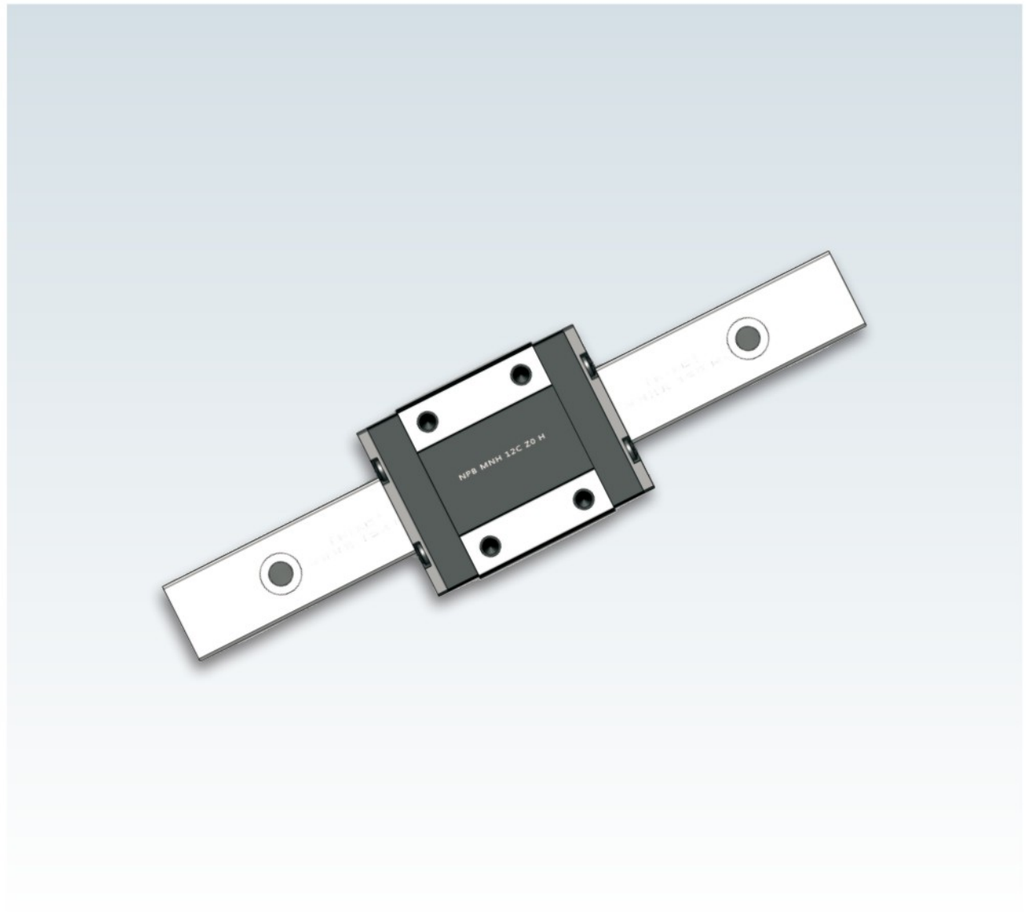
Type	NPB	HIWIN
HNW Series	HNW15CC	HGW15CA/CB/CC
	HNW20CC	HGW20CA/CB/CC
	HNW20HC	HGW20HA/HB/HC
	HNW25CC	HGW25CA/CB/CC
	HNW25HC	HGW25HA/HB/HC
	HNW30CC	HGW30CA/CB/CC
	HNW30HC	HGW30HA/HB/HC
	HNW35CC	HGW35CA/CB/CC
	HNW45CC	HGW45CA/CB/CC
ENH Series	ENH15SA/CA	EGH15SA/CA
	ENH20SA/CA	EGH20SA/CA
	ENH25SA/CA	EGH25SA/CA
	ENH30SA/CA	EGH30SA/CA
ENW Series	ENW15SC/CC	EGW15SC/CC
	ENW20SC/CC	EGW20SC/CC
	ENW25SC/CC	EGW25SC/CC
	ENW30SC/CC	EGW30SC/CC

Type Comparison Table For The Linear Guide

Interchangable

Type	NPB	THK	PMI	TBI	ABBA	STAF	CPC
HNH Series	HNH15CA	HSR15R	MSA15S	TRH15VL	BRC15RO	BGXH15BN	HRC15MN
	HNH20CA	HSR20R	MSA20S	TRH20VL	BRC20RO	BGXH25BN	HRC20MN
	HNH20HA	HSR20LR	MSA20LS	TRH20VE	BRC20LR	BGXH20BL	HRC20ML
	HNH25CA	HSR25R	MSA25S	TRH25VN	BRC25RO	BGXH25BN	HRC25MN
	HNH25HA	HSR25LR	MSA25LS	TRH25VE	BRC25LR	BGXH25BL	HRC25ML
	HNH30CA	HSR30R	MSA30S	TRH30VN	BRC30RO	BGXH30BN	HRC30MN
	HNH30HA	HSR30LR	MSA30LS	TRH30VE	BRC30LR	BGXH30BL	HRC30ML
	HNH35CA	HSR35R	MSA35S	TRH35VN	BRC35RO	BGXH35BN	HRC35MN
	HNH35HA	HSR45LR	MSA35LS	TRH35VE	BRC35LR	BGXH35BL	HRC35ML
	HNH45CA	HSR45SR	MSA45S	TRH45VN	BRC45RO	BGXH45BN	HRC45MN
	HNH45HA	HSR45LR	MSA45LS	TRH45VE	BRC45LR	BGXH45BL	HRC45ML
HNW Series	HNW15CC	/	MSA15E/A	TRH15FN	BRC15AO	BGXH15FN	HRC15FN
	HNW20CC	HSR20CA	MSA20E/A	TRH20FN	BRC20AO	BGXH20FN	HRC20FN
	HNW20HC	HSR20HA/HB	MSA20LE/LA	TRH20FE	BRC20LA	BGXH20FL	HRC20FL
	HNW25CC	HSR25CA	MSA25E/A	TRH25FN	BRC25AO	BGXH25FN	HRC25FN
	HNW25HC	HSR25HA/HB	MSA25LE/LA	TRH25FE	BRC25LA	BGXH25FL	HRC25FL
	HNW30CC	HSR30CA	MSA30E/A	TRH30FN	BRC30AO	BGXH30FN	HRC30FN
	HNW30HC	HSR30HA/HB	MSA30LE/LA	TRH30FE	BRC30LA	BGXH30FL	HRC30FL
	HNW35CC	HSR35CA	MSA35E/A	TRH35FN	BRC35AO	BGXH35FN	HRC35FN
	HNW45CC	HSR45CA	MSA45E/A	TRH45FN	BRC45AO	BGXH45FN	HRC45FN
ENH Series	ENH15SA/CA	SSR15WY/WMY SR15W/WM	MSB15S	TRS15VN	BRC15UO	BGXS15BN	ARC15MN
	ENH20SA/CA	SSR20WY/WMY SR20W/WM	MSB20S	TRS20VN	BRC20UO	BGXS20BN	ARC20MN
	ENH25SA/CA	SSR25WY/WMY SR25W/WM	MSB25S	TRS25VN	BRC25UO	BGXS25BN	ARC25MN
	ENH30SA/CA	SSR30WY/WMY SR30W/WM	MSB30S	TRS30VN	BRC30UO	BGXS30BN	ARC30MN
ENW Series	ENW15SC/CC	SR15TB/TBM	MSB15E	TRS15FN	/	BGXS15FN	ARC15FN
	ENW20SC/CC	SR20TB/TBM	MSB20E	TRS20FN	/	BGXS20FN	ARC20FN
	ENW25SC/CC	SR25TB/TBM	MSB25E	TRS25FN	/	BGXS25FN	ARC25FN
	ENW30SC/CC	SR30TB/TBM	MSB30E	TRS30FN	/	BGXS30FN	ARC30FN

MINIATURE LINEAR GUIDEWAYS



Miniature Linear Guideways

1. Model Number

(1) Non-Interchangeable type

M	N	W	1	2	C	E	2	R	1	6	0	0	E	Z	0	H	M	II	U	/	R	C
Series			Models						Rail Length(mm)					Preload						Accessories			
①			②		③	④	⑤	⑥	⑦				⑧	⑨		⑩	⑪	⑫	⑬				

(2) Interchangeable type

M	N	W	1	2	C	E								Z	0	H	M		U			
Series			Models											Preload					Accessories			
①			②		③	④								⑨		⑩	⑪	⑫	⑬			

M	N	W						R	1	0	0	0	E			H	M				R	C
Series								Rail Length(mm)											Accessories			
①								⑥	⑦				⑧			⑩	⑪	⑫	⑬			

Remarks:

③
Load Types
C: Standard
H: Long

⑥
Rail Length (mm)

⑪
Material: No symbol,M,HC

④
E: Special Block
None:Standard Block

⑧
E: Special Block
None:Standard Block

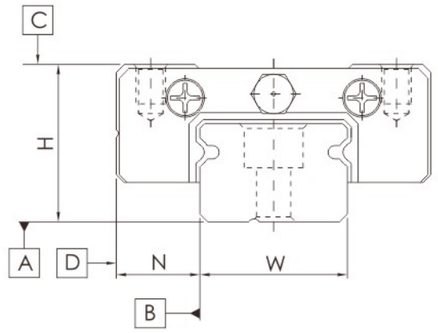
⑫
Nos. of rails per Axis

⑤
No. of Blocks per Rail

⑩
Precision Codes:C, H, P

2. Accuracy Classes

The accuracy of MNH/MNW series can be classified into three classes: normal (C), high (H), precision (P).Choices for different accuracy classes are available according to various requirements.



(1) Accuracy of non-interchangeable guideways

Table 1 Accuracy Standard of Non-interchangeable Type

Unit: mm

Accuracy Classes	Normal (C)	High (H)	Precision (P)
Dimensional tolerance of height H	± 0.04	± 0.02	± 0.01
Dimensional tolerance of width N	± 0.04	± 0.025	± 0.015
Pair Variation of height H	0.03	0.015	0.007
Pair Variation of width N (Master Rail)	0.03	0.02	0.01
Running parallelism of block surface C to surface A	See Table		
Running parallelism of block surface D to surface B	See Table		

(2) Accuracy of interchangeable guideways

Table 2 Accuracy Standard of Interchangeable Type

Unit: mm

Accuracy Classes		Normal (C)	High (H)	Precision (P)
Dimensional tolerance of height H		± 0.04	± 0.02	± 0.01
Dimensional tolerance of width N		± 0.04	± 0.025	± 0.015
One Set	Pair Variation of height H	0.03	0.015	0.007
	Pair Variation of width N	0.03	0.02	0.01
Pair Variation of width N (Master Rail)		0.07	0.04	0.02
Running parallelism of block surface C to surface A		See Table		
Running parallelism of block surface D to surface B		See Table		

(3) Accuracy of running parallelism
The running parallelism C to A and D to B are related to the rail length.

Table 3 Accuracy of Running Parallelism

Rail Length (mm)	Accuracy (μm) (C)	(H)	(P)	Rail Length (mm)	Accuracy (μm) (C)	(H)	(P)
~ 50	12	6	2	1,000 ~ 1,200	25	18	11
50 ~ 80	13	7	3	1,200 ~ 1,300	25	18	11
80 ~ 125	14	8	3.5	1,300 ~ 1,400	26	19	12
125 ~ 200	15	9	4	1,400 ~ 1,500	27	19	12
200 ~ 250	16	10	5	1,500 ~ 1,600	28	20	13
250 ~ 315	17	11	5	1,600 ~ 1,700	29	20	14
315 ~ 400	18	11	6	1,700 ~ 1,800	30	21	14
400 ~ 500	19	12	6	1,800 ~ 1,900	30	21	15
500 ~ 630	20	13	7	1,900 ~ 2,000	31	22	15
630 ~ 800	22	14	8	2,000 ~	31	22	16
800 ~ 1,000	23	16	9				

3. Preload

Table 4 MNH/MNW series provide three different preload levels for various applications.

Class	Code	Preload	Accuracy
Light Clearance	ZF	Clearance 4~10μm	C
Very Light Preload	Z0	Clearance 2μm~0.02C	C~P
Light Preload	Z1	0.02C	C~P

Note: "C" in column preload means basic dynamic load rating. Preload Classes

3.1 Stiffness performance
Stiffness depends on preload. The following table shows stiffness value of each size.

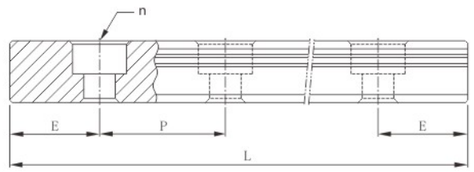
Table 5 Radial stifness for MN Series

Load type	Series / Size	Stiffness (N/μm) Z0	Z1	Series / Size	Stiffness (N/μm) Z0	Z1
Standard	MNH7C	26	73	MNW7C	44	112
	MNH9C	38	102	MNW9C	62	140
	MNH12C	44	105	MNW12C	72	148
	MNH15C	58	126	MNW15C	85	154
Long	MNH7H	42	122	MNW7H	64	168
	MNH9H	56	153	MNW9H	81	190
	MNH12H	70	175	MNW12H	102	217
	MNH15H	89	202	MNW15H	122	235

4. Standard and Maximum Lengths of Rail

NPB offers standard lengths of rail for instant requirements. For non-standard rail lengths, it's recommended that the E value is no greater than 1/2 of the pitch (P) to prevent instability at the end of the rail, and the E value should be no less than E min to avoid a broken mounting hole.

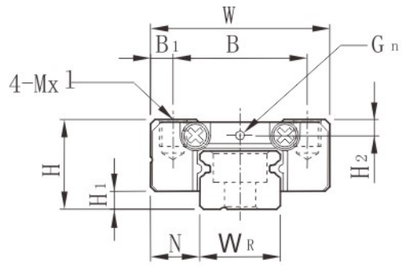
L =(n-1) xP + 2 x E
L : Total length of rail (mm)
n : Number of mounting holes
P : Distance between any two holes (mm)
E : Distance from the center of the last hole to the edge (mm)



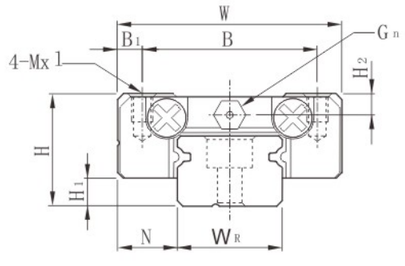
Items	MNHR7	MNHR9	MNHR12	MNHR15	MNWR7	MNWR9	MNWR12	MNWR15
Standard Length L(n)	40(3)	55(3)	70(3)	70(2)	80(3)	80(3)	110(3)	110(3)
	55(4)	75(4)	95(4)	110(3)	110(4)	110(4)	150(4)	150(4)
	70(5)	95(5)	120(5)	150(4)	140(5)	140(5)	190(5)	190(5)
	85(6)	115(6)	145(6)	190(5)	170(6)	170(6)	230(6)	230(6)
	100(7)	135(7)	170(7)	230(6)	200(7)	200(7)	270(7)	270(7)
	130(9)	155(8)	195(8)	270(7)	260(9)	230(8)	310(8)	310(8)
		175(9)	220(9)	310(8)		260(9)	350(9)	350(9)
		195(10)	245(10)	350(9)		290(10)	390(10)	390(10)
		275(14)	270(11)	390(10)		350(14)	430(11)	430(11)
		375(19)	320(13)	430(11)		500(19)	510(13)	510(13)
			370(15)	470(12)		710(24)	590(15)	590(15)
			470(19)	550(14)		860(29)	750(19)	750(19)
			570(23)	670(17)			910(23)	910(23)
			695(28)	870(22)			1070(27)	1070(27)
Pitch (P)	15	20	25	40	30	30	40	40
Distance to and (Es)	5	7.5	10	15	10	10	15	15
Max. Standard Length	595(40)	1195(60)	1995(80)	1990(50)	590(20)	1970(66)	1990(50)	1990(50)
Max. Length	600	1200	2000	2000	600	2000	2000	2000

Note: 1. Tolerance of E value for standard rail is 0.5~-0.5 mm. Tolerance of E value for jointed rail is 0~-0.3 mm.
2. Maximum standard length indicates the max. rail length with standard E value on both sides.
3. If smaller E value is needed, please contact NPB.

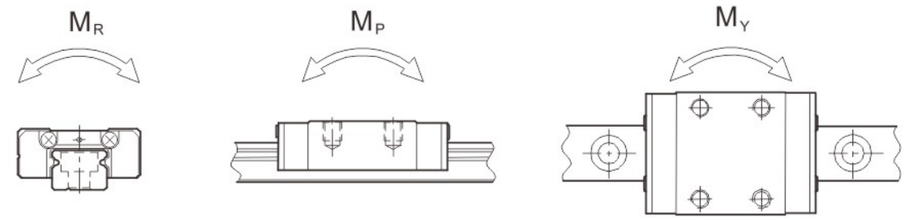
Series MNH-C / MNH-H



Series MNH 7/9/12



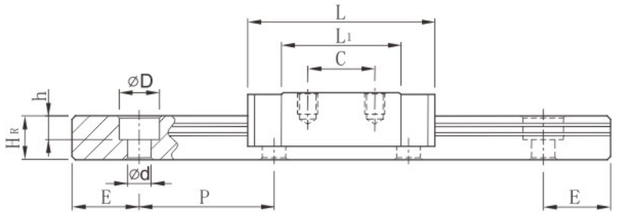
Series MNH 15

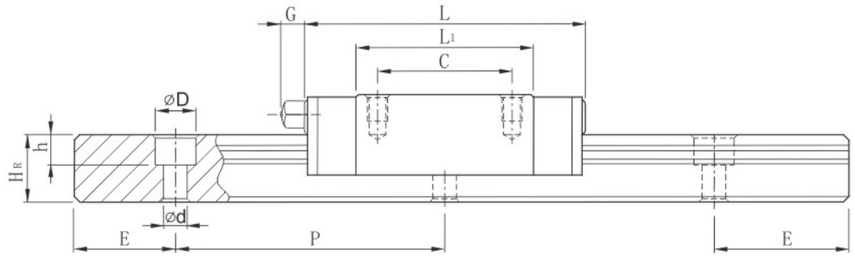


Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)									
	H	H1	N	W	B	B1	C	L1	L	G	Gn	MxL	H2
MNH 7 C	8	1.5	5	17	12	2.5	8	13.5	22.5	-	Φ1.2	M2x2.5	1.5
MNH 7 H	8	1.5	5	17	12	2.5	13	21.8	30.8	-	Φ1.2	M2x2.5	1.5
MNH 9 C	10	2	5.5	20	15	2.5	10	18.9	28.9	-	Φ1.4	M3x3	1.8
MNH 9 H	10	2	5.5	20	15	2.5	16	29.9	39.9	-	Φ1.4	M3x3	1.8
MNH 12 C	13	3	7.5	27	20	3.5	15	21.7	34.7	-	Φ2	M3x3.5	2.5
MNH 12 H	13	3	7.5	27	20	3.5	20	32.4	45.4	-	Φ2	M3x3.5	2.5
MNH 15 C	16	4	8.5	32	25	3.5	20	26.7	42.1	4.5	M3	M3x4	3
MNH 15 H	16	4	8.5	32	25	3.5	25	43.4	58.8	4.5	M3	M3x4	3

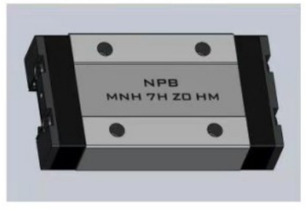
Note: Material :stainless steel SUS 440 C, suffix: M.
If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

Series MNH-C / MNH-H



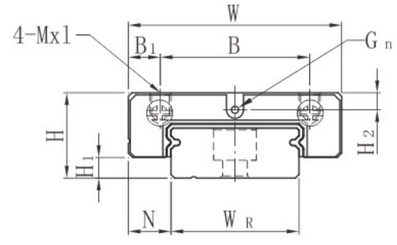


Standard/Long Miniature Linear Blocks(Square)
Series MNH-C / MNH-H

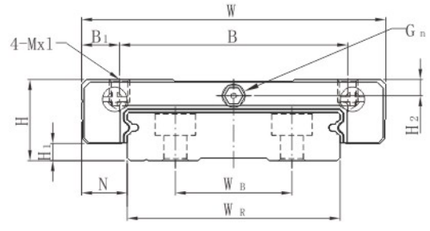


Dimensions of Rail (mm)							Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
										MR	MP	MY	Block	Rail
WR	HR	D	h	d	P	E	(mm)	C(KN)	C0(KN)	KN-m	KN-m	KN-m	kg	kg/m
7	4.8	4.2	2.3	2.4	15	5	M2x6	0.98	1.24	4.70	2.84	2.84	0.010	0.22
7	4.8	4.2	2.3	2.4	15	5	M2x6	1.37	1.96	7.64	4.80	4.80	0.015	0.22
9	6.5	6	3.5	3.5	20	7.5	M3x8	1.86	2.55	11.76	7.35	7.35	0.016	0.38
9	6.5	6	3.5	3.5	20	7.5	M3x8	2.55	4.02	19.60	18.62	18.62	0.026	0.38
12	8	6	4.5	3.5	25	10	M3x8	2.84	3.92	25.48	13.72	13.72	0.034	0.65
12	8	6	4.5	3.5	25	10	M3x8	3.72	5.88	38.22	36.26	36.26	0.054	0.65
15	10	6	4.5	3.5	40	15	M3x10	4.61	5.59	45.08	21.56	21.56	0.059	1.06
15	10	6	4.5	3.5	40	15	M3x10	6.37	9.11	73.50	57.82	57.82	0.092	1.06

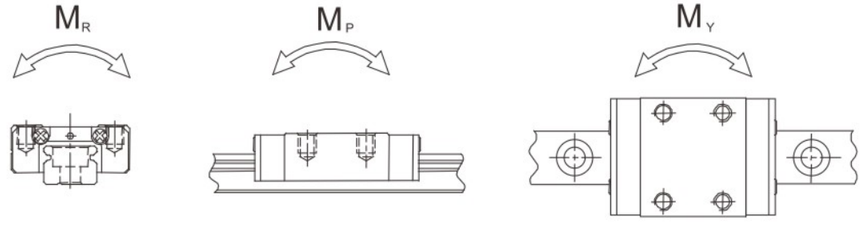
Series MNW-C / MNW-H



Series MNW 7/9/12



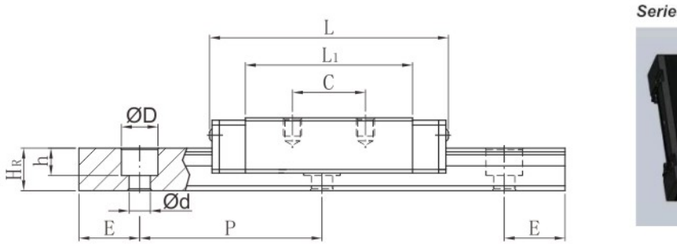
Series MNW 15

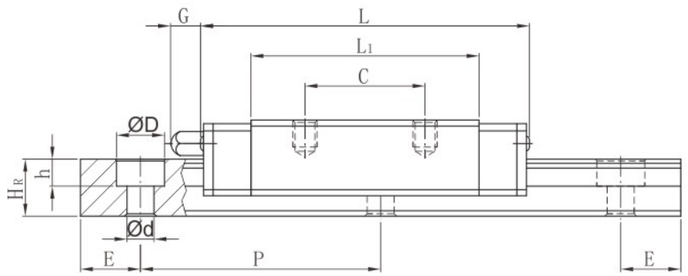


Model No.	Dimensions of Assembly (mm)			Dimensions of Block (mm)									
	H	H1	N	W	B	B1	C	L1	L	G	Gn	MxL	H2
MNW 7 C	9	1.9	5.5	25	19	3	10	21	31.2	-	Φ1.2	M3x3	1.85
MNW 7 H	9	1.9	5.5	25	19	3	19	30.8	41	-	Φ1.2	M3x3	1.85
MNW 9 C	12	2.9	6	30	21	4.5	12	27.5	39.3	-	Φ1.2	M3x3	2.4
MNW 9 H	12	2.9	6	30	23	3.5	24	38.5	50.7	-	Φ1.2	M3x3	2.4
MNW 12 C	14	3.4	8	40	28	6	15	31.3	46.1	-	Φ1.2	M3x3.6	2.8
MNW 12 H	14	3.4	8	40	28	6	28	45.6	60.4	-	Φ1.2	M3x3.6	2.8
MNW 15 C	16	3.4	9	60	45	7.5	20	38	54.8	5.2	M3	M4x4.2	3.2
MNW 15 H	16	3.4	9	60	45	7.5	35	57	73.8	5.2	M3	M4x4.2	3.2

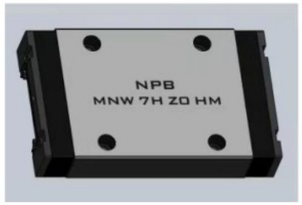
Note: Material :stainless steel SUS 440 C, suffix: M.
If you have more technical inquiries, please inquire NPB web-site: https://www.npbautomation.com

Series MNW-C / MNW-H





Standard/Long Miniature Linear Blocks(Flange)
Series MNW-C / MNW-H



Dimensions of Rail (mm)								Mounting Bolt for Rail	Basic Dynamic Load Rating	Basic Static Load Rating	Static Rated Moment(kfg.m)			Weight	
											MR	MP	MY	Block	Rail
WR	WB	HR	D	h	d	P	E	(mm)	C(KN)	C0(KN)	KN-m	KN-m	KN-m	kg	kg/m
14	–	5.2	6	3.2	3.5	30	10	M3x6	1.37	2.06	15.70	7.14	7.14	0.020	0.51
14	–	5.2	6	3.2	3.5	30	10	M3x6	1.77	3.14	23.45	15.53	15.53	0.029	0.51
18	–	7	6	4.5	3.5	30	10	M3x8	2.75	4.12	40.12	18.96	18.96	0.040	0.91
18	–	7	6	4.5	3.5	30	10	M3x8	3.43	5.89	54.54	34.00	34.00	0.057	0.91
24	–	8.5	8	4.5	4.5	40	15	M4x8	3.92	5.59	70.34	27.80	27.80	0.071	1.49
24	–	8.5	8	4.5	4.5	40	15	M4x8	5.10	8.24	102.70	57.37	57.37	0.103	1.49
42	23	9.5	8	4.5	4.5	40	15	M4x10	6.77	9.22	199.34	56.66	56.66	0.143	2.86
42	23	9.5	8	4.5	4.5	40	15	M4x10	8.93	13.38	299.01	122.60	122.60	0.215	2.86

PRECISION LINEAR GUIDEWAYS

Type Comparison Table For The Miniature Linear Guide

Fully Interchangable			Interchangable				
Type	NPB	HIWIN	PMI	STAF	TBI	SBC	WON
MNH Series	MNH 07C	MGN 07C	MSC 07M		TM 07NN	SBM 07	M 07N
	MNH 09C	MGN 09C	MSC 09M	MBX 09SN	TM 09NN	SBM 09	M 09N
	MNH 12C	MGN 12C	MSC 12M	MBX 12SN	TM 12NN	SBM 12	M 12N
	MNH 15C	MGN 15C	MSC 15M	MBX 15SN	TM 15NN	SBM 15	M 15N
	MNH 07H	MGN 07H	MSC 07LM		TM 07NL	SBML 07	M 07L
	MNH 09H	MGN 09H	MSC 09LM	MBX 09SL	TM 09NL	SBML 09	M 09L
	MNH 12H	MGN 12H	MSC 12LM	MBX 12SL	TM 12NL	SBML 12	M 12L
	MNH 15H	MGN 15H	MSC 15LM	MBX 15SL	TM 15NL	SBML 15	M 15L
MNW Series	MNW 07C	MGW 07C	MSD 07M	MBX 07WN	TM 07WN	SBMW 07	MB 07N
	MNW 09C	MGW 09C	MSD 09M	MBX 09WN	TM 09WN	SBMW 09	MB 09N
	MNW 12C	MGW 12C	MSD 12M	MBX 12WN	TM 12WN	SBMW 12	MB 12N
	MNW 15C	MGW 15C	MSD 15M		TM 15WN	SBMW 15	MB 15N
	MNW 07H	MGW 07H	MSD 07LM	MBX 07WL	TM 07WL	SBMWL 07	MB 07L
	MNW 09H	MGW 09H	MSD 09LM	MBX 09WL	TM 09WL	SBMWL 09	MB 09L
	MNW 12H	MGW 12H	MSD 12LM	MBX 12WL	TM 12WL	SBMWL 12	MB 12L
	MNW 15H	MGW 15H	MSD 15LM		TM 15WL	SBMWL 15	MB 15L