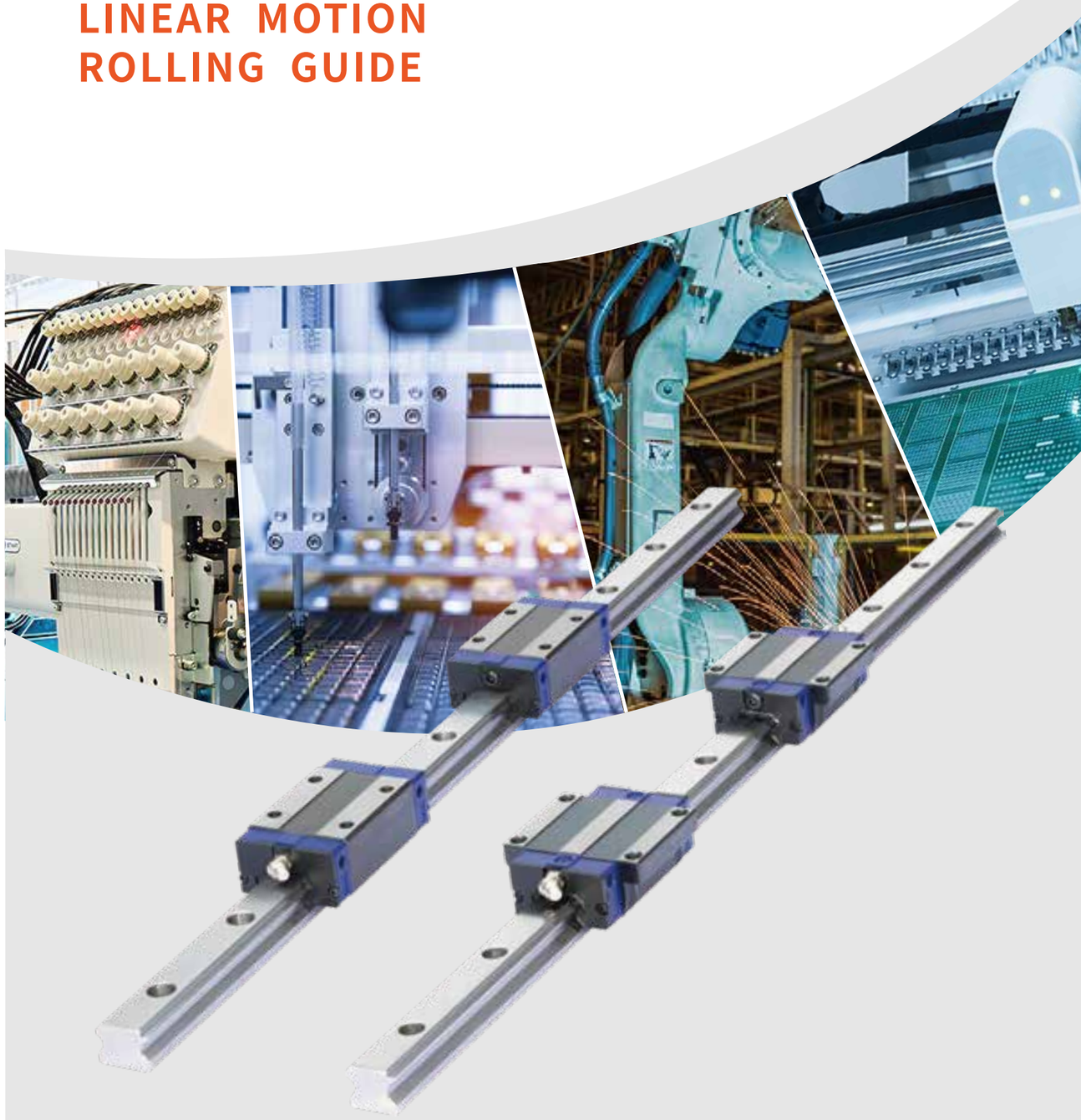
AXPB

EXCELLENCE IN PRECISION

LINEAR MOTION ROLLING GUIDE



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AXPB LINEAR MOTION ROLLING GUIDE PRODUCT SERIES

Types & Series

AH Types & Series

Assembly types please refer to table 1, sizes please refer to table 2.

Table 1 Assembly Types of AH Series Linear Guideway – Four-row

Material and length of slides \ Series			Shape of slides		
			Flange		Square
			Mounting from bottom	Mounting from top	Mounting from top
			Symbol:AH	Symbol:AH···T	Symbol:AH···D
Carbon steel	Standard	No symbol	AH	AH···T	AH···D
	Extra long	Symbol:G	AH···G	AH···TG	AH···DG

Table 2 Sizes of AH Series Linear Guideway – Four-row

Assembly Types	Available sizes					
Series	15	20	25	30	35	45
AH	○	○	○	○	○	○
AH···G	—	○	○	○	○	○
AH···T	○	○	○	○	○	○
AH···TG	—	○	○	○	○	○
AH···D	○	○	○	○	○	○
AH···DG	—	○	○	○	○	○

AE Types & Series

Assembly types please refer to table 3, sizes please refer to table 4.

Table 3 Assembly Types of AE Series Linear Guideway – Four-row

Material and length of slides \ Series			Shape of slides
			Square
			Mounting from top
			Symbol:AE···S
Carbon steel	Extra short	symbol:K	AE···SK
	Standard	No symbol	AE···S

Table 4 Sizes of AE Series Linear Guideway – Four-row

Assembly Types	Available sizes		
Series	15	20	25
AE···SK	○	○	—
AE···S	○	○	○

Special suffixes

Description and marking of special suffixes

Special suffixes please refer to table 5.

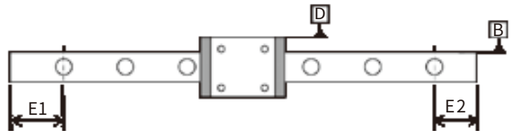
Example) AH 20 T C2 R960 B T1 H / (E30,30)

<Minimum description>

Example) AE 20 S C2 R960 B T1 H / (E30,30)

<Maximum description>

Example) AH 25 DG C2 R960 B T1 H/ A2 VZ MBT FI (E30, 30)

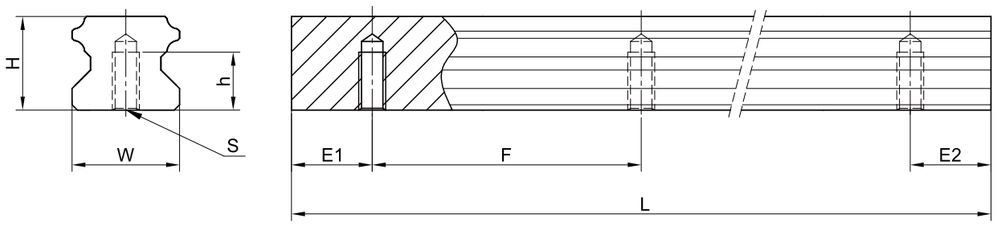


Sketch of E size

Table 5 Special Suffixes of AXPB Linear Motion Rolling Guides

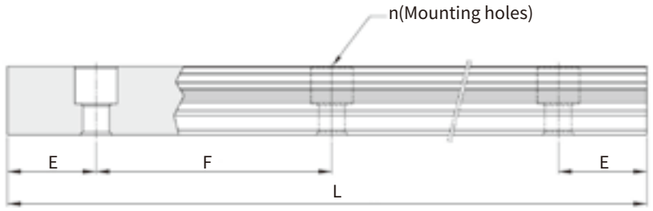
Description of special suffix	Code of suffix	Remark
Specified location of the mounting holes	E	Applicable to rail length not equal to 4 meters
Dust cap for the mounting holes in the rail	F	
Inspection report for finished product	I	Only applicable for accuracy class of H and P
Individual packing method	B02	Only applicable to ordinary precision C class
Number of splicing linear rails	AO	
Double rubber seals	V	
Metal scraper + Rubber seal	Z	
Metal scraper + Dual rubber seals	VZ	
Both rail and sliders are coated with black chrome film	MB	
Slider coated with black chrome film	MBC	
Rail coated with black chrome film	MBT	
Special processing on linear rail or slider	EO	
Rail mounting from bottom	E4	

Size Table of E4 type: Rail Mounting from Bottom



Model Number	Dimension(mm)					Weight
	W	h	H	S	F	(Kg/m)
AH15E4	15	8	15	M5×0.8P	60	1.48
AH20E4	20	10	17.5	M6×1P	60	2.29
AH25E4	23	12	22	M6×1P	60	3.35
AH30E4	28	15	26	M8×1.25P	80	4.67
AH35E4	34	17	29	M8×1.25P	80	6.51
AE15E4	15	7	12.5	M5×0.8P	60	1.26
AE20E4	20	9	15.5	M6×1P	60	2.15
AE25E4	23	10	18	M6×1P	60	2.79

Standard length and maximum length of a single linear rail



L = [n-1]×F+ 2×E

L: Total length of linear rail (mm)

F: Spacing between mounting holes (mm)

n: Number of mounting holes

E: Distance from mounting hole to end face (mm)

The standard length of the linear rail

Unit: mm

	AH15／AE15	AH20／AE20	AH25／AE25	AH30	AH35	AH45
Standard length	1560 2460 4000	1560 2460 4000	1560 2460 4000	1600 2480 4000	1600 2480 4000	1620 2460 4000
Spacing between mounting holes	60	60	60	80	80	105
E1 Size	In case of length 4000mm, 20±1	In case of length 4000mm, 20±1	In case of length 4000mm, 20±1	40±1	40±1	In case of length 4000mm, 57.5±1
	In case of length 1560/2460mm, 30±1	In case of length 1560/2460mm, 30±1	In case of length 1560/2460mm, 30±1			In case of length 1620/2460mm, 22.5±1

Advantages and Features of AXPB Linear Motion Rolling Guides

01

High positioning accuracy

When a load is driven by a linear guideway, the frictional contact between the load and the bed desk is rolling contact. The friction coefficient of rolling contact is only 1/50 of traditional contact, and the difference between the dynamic coefficient and the static coefficient of friction is small. Therefore, there would be no slippage while the load is moving.

02

Long life with high motion accuracy

With a traditional sliding guide, errors in accuracy are caused by the counter flow of the oil film. Insufficient lubrication causes wear between the contact surfaces, which become increasingly inaccurate. In contrast, rolling contact has little wear; therefore, machines can achieve a long life with highly accurate motion.

03

High speed motion is possible with a low driving force

Because linear guideways have little friction resistance, only a small driving force is needed to move a load. This results in greater power savings, especially in the moving parts of a system. This is especially true for the reciprocating parts.

04

Equal loading capacity in all directions

With this special design, these linear guideways can bear loads in either vertical or horizontal directions.
Traditional sliding guide can only bear small loads in the direction parallel to the contact surface. They are also more likely to become inaccurate when they are subjected to these loads.

05

Easy installation

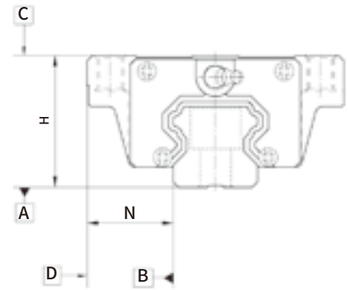
Installing a linear guideway is fairly easy. Grinding or milling the machine surface, following the recommended installation procedure, and tightening the bolts to their specified torque can achieve highly accurate linear motion.

06

Easy lubrication

With a traditional sliding system, insufficient lubrication causes wear on the contact surfaces. Also, it can be quite difficult to supply sufficient lubrication to the contact surfaces because finding an appropriate lubrication point is not very easy. With a linear motion guideway, grease can be easily supplied through the grease nipple on the linear guideway slides. It is also possible to utilize a centralized oil lubrication system by piping the lubrication oil to the piping joint.

Accuracy of Linear Motion Rolling Guides with sliders



Accuracy of non-interchangeable linear guides

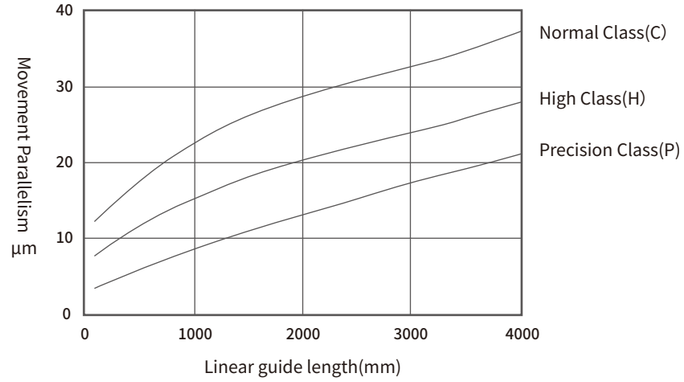
Unit: mm

Model Number	AH15,20 / AE 15, 20		AH25, 30, 35 / AE25		AH45	
Accuracy Class	High Accuracy Class (H)	Precision Class (P)	High Accuracy Class (H)	Precision Class (P)	High Accuracy Class (H)	Precision Class (P)
Tolerance of H dimension	±0.03	0 −0.03	±0.04	0 −0.04	±0.05	0 −0.05
Tolerance of N dimension	±0.03	0 −0.03	±0.04	0 −0.04	±0.05	0 −0.05
Variation Tolerance of H dimension	0.01	0.006	0.015	0.007	0.015	0.007
Variation Tolerance of N dimension	0.01	0.006	0.015	0.007	0.02	0.01
The movement parallelism of C side, with A as the reference surface	Please see below figure					
The movement parallelism of D side, with B as the reference surface						

Accuracy of interchangeable linear guides

Model Number	AH15,20 / AE 15, 20	AH25, 30, 35 / AE25	AH45
Accuracy Class	Normal Class (C)	Normal Class (C)	Normal Class (C)
Tolerance of H dimension	±0.1	±0.1	0 −0.1
Tolerance of N dimension	±0.1	±0.1	0 −0.1
Variation Tolerance of H dimension	0.02	0.02	0.03
Variation Tolerance of N dimension	0.02	0.03	0.03
The movement parallelism of C side, with A as the reference surface	Please see below figure		
The movement parallelism of D side, with B as the reference surface			

Movement Parallelism



AH Series - Ball Type Linear Motion Rolling Guides

Description of AH Series

AH Series linear motion rolling guides are classified into non-interchangeable and interchangeable types. The sizes of these two types are of the same. The main difference of these two types is that the interchangeable type of slides and rails can be freely exchanged and mounted, but the assembled precision can not reach H or P precision level. Because of the strict dimensional control on AXPB interchangeable type, it will be a wise choice for customers when rails do not need to be assembled together with slides. The model number of the AH series identifies the size, type, accuracy class, preload class, etc.

Non-interchangeable linear rail

A H 25 D G C2 R520 B T1 H /(E20,20)

Auxiliary symbol
※Write after「/」

Accuracy Class

H	High
P	Precision

Preload

T1	Preload 0~0.02C
T2	Preload 0.05~0.07C

Rail length
Write the length after "R", in mm
Example) Write as「R520」when rail length is 520mm

Number of sliders
※Write after「C」
Example) Write「C1」when with 1pc slide, write「C2」when with 2pcs sliders.

slider length

No symbol	Standard Size
G	Extra-long size

Type of slider

No symbol	Flange Type Mounting from bottom
T	Flange Type Mounting from top
D	Square Type

Size

15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm
30	Rail Width 28mm
35	Rail Width 34mm
45	Rail width 45 mm

Type

For slider size# 15, extra-long type is not available.

Interchangeable slider

● Model Number of AH slider

A H 25 D G C1 T1 C -B02

Auxiliary symbol

Accuracy Class

C	Normal

Preload

T1	Preload 0~0.02C
T2	Preload 0.05~0.07C

Number of sliders

Rail length

No symbol	Standard Size
G	Extra-long size

Type of slider

No symbol	Flange Type Mounting from bottom
T	Flange Type Mounting from top
D	Square Type

Size

15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm
30	Rail Width 28mm
35	Rail Width 34mm
45	Rail width 45 mm

Type

For slider size# 15, extra-long type is not available.

Interchangeable linear rail

AH 25 R520 C /(E20,20)

Auxiliary symbol
※Write after「/」
( ) Indicates E size

Accuracy Class

C	Normal

Rail length
※Write the length after「R」, in mm
Example) Write「R520」when slide rail length is 520mm

Size

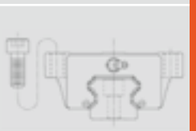
15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm
30	Rail Width 28mm
35	Rail Width 34mm
45	Rail Width 45mm

Type

※In principle, the length of the slide rail for delivery is 4000mm
In this case, it is not necessary to indicate the E size.

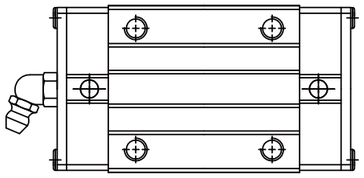
AH series

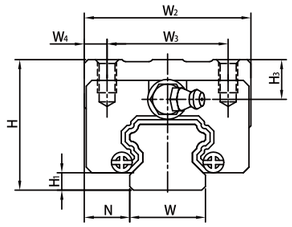
Slider type

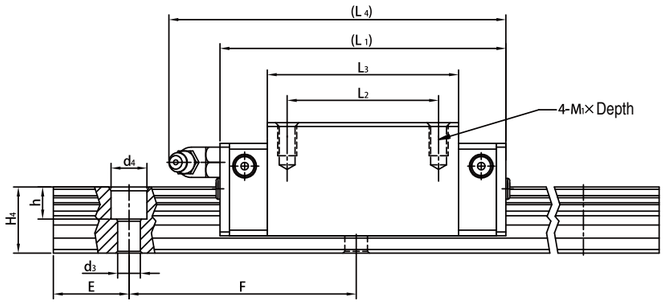
Type	Specification	Shape	Applications
Square Type	AH-D AH-DG		• Machining Centers • Machine tools • Precision Machining Machines • Heavy Cutting Machines • Marble cutting machine • Grinding Machines • Injection machine • Puncher • Automation Devices • Transportation Equipment • Measuring Equipment • Laser Cutting Machine
Flange Type	AH-T AH-TG		
	AH AH-G		

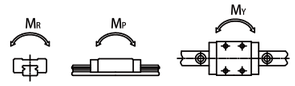
Dimensions Table-AH Series

AH-D/AH-DG



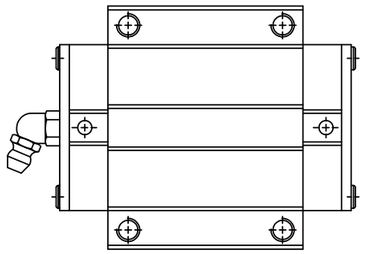


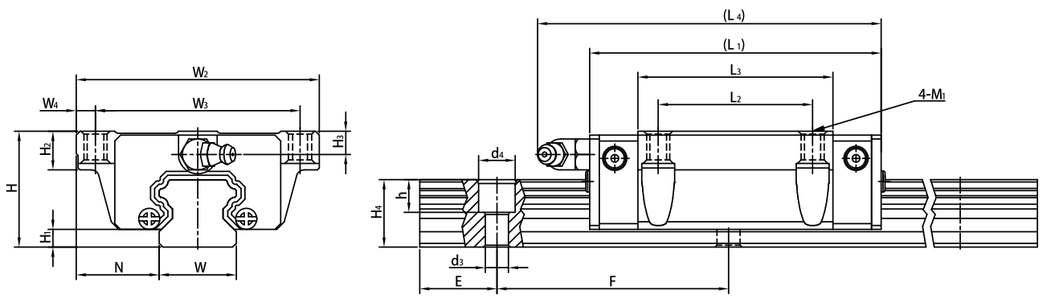


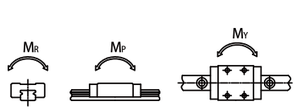


Part No.	Assembled dimensions (mm)			Dimensions of slider(mm)										Dimensions of rail(mm)						Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings	Basic static torque			Net weight	
	H	H1	N	W2	W3	W4	L1	L2	L3	L4	M1	Depth	H3	W	H4	d3	d4	h	F	(mm)	C (kN)	C0 (kN)	MR kN·m	MP kN·m	MY kN·m	slider kg	rail kg/m
AH 15D	28	4.3	9.5	34	26	4	61.4	26	39.4	(66.7)	M4	5	7.95	15	15	4.5	7.5	5.3	60	M4×16	11.38	16.97	0.12	0.10	0.10	0.18	1.45
AH 20D	30	4.6	12	44	32	6	77.5	36	50.5	(89.5)	M5	6	6	20	17.5	6	9.5	8.5	60	M5×16	17.75	27.76	0.27	0.20	0.20	0.30	2.21
AH 20DG							92.2	50	65.2	(104.2)											21.18	35.90	0.35	0.35	0.35	0.39	
AH 25D	40	5.5	12.5	48	35	6.5	84	35	58	(96)	M6	8	10	23	22	7	11	9	60	M6×20	26.48	36.49	0.42	0.33	0.33	0.51	3.21
AH 25DG							104.6	50	78.6	(116.6)											32.75	49.44	0.56	0.57	0.57	0.69	
AH 30D	45	6	16	60	40	10	97.4	40	70	(109.4)	M8	10	9.5	28	26	9	14	12	80	M8×25	38.74	52.19	0.66	0.53	0.53	0.88	4.47
AH 30DG							120.4	60	93	(132.4)											47.27	69.16	0.88	0.92	0.92	1.16	
AH 35D	55	7.5	18	70	50	10	112.4	50	80	(124.4)	M8	12	16	34	29	9	14	12	80	M8×25	49.52	69.16	1.16	0.81	0.81	1.45	6.30
AH 35DG							138.2	72	105.8	(150.2)											60.21	91.63	1.54	1.40	1.40	1.92	
AH 45D	70	9.5	20.5	86	60	13	133.8	60	97	(152.3)	M10	17	16	45	38	14	20	17	105	M12×35	103.8	146.71	1.98	1.55	1.55	2.73	10.41
AH 45DG							165.6	80	128.8	(184.1)											125.3	191.85	2.63	2.68	2.68	3.61	

AH-T/AH-TG

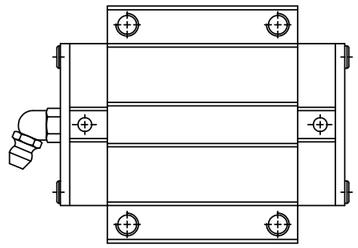


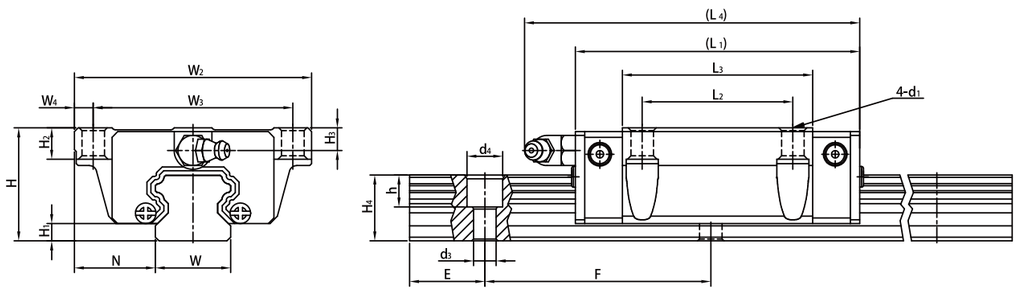


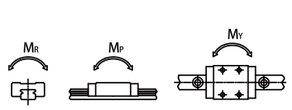


Part No.	Assembled dimensions (mm)			Dimensions of slider(mm)							Dimensions of rail(mm)						Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings	Basic static torque			Net weight	
	H	H1	N	W2	W3	W4	L1	L2	L3	L4	M1	H2	H3	W	H4	d3	d4	h	F	(mm)	C(kN)	C0(kN)	MR kN·m	MP kN·m	MY kN·m	slider kg	rail kg/m
AH 15T	24	4.3	16	47	38	4.5	61.4	30	39.4	(66.7)	M5	8.9	3.95	15	15	4.5	7.5	5.3	60	M4×16	11.38	16.97	0.12	0.10	0.10	0.17	1.45
AH 20T	30	4.6	21.5	63	53	5	77.5	40	50.5	(89.5)	M6	10	6	20	17.5	6	9.5	8.5	60	M5×16	17.75	27.76	0.27	0.20	0.20	0.40	2.21
AH 20TG							92.2		65.2	(104.2)											21.18	35.90	0.35	0.35	0.35	0.52	
AH 25T	36	5.5	23.5	70	57	6.5	84	45	58	(96)	M8	14	6	23	22	7	11	9	60	M6×20	26.48	36.49	0.42	0.33	0.33	0.59	3.21
AH 25TG							104.6		78.6	(116.6)											32.75	49.44	0.56	0.57	0.57	0.8	
AH 30T	42	6	31	90	72	9	97.4	52	70	(109.4)	M10	16	6.5	28	26	9	14	12	80	M8×25	38.74	52.19	0.66	0.53	0.53	1.09	4.47
AH 30TG							120.4		93	(132.4)											47.27	69.16	0.88	0.92	0.92	1.44	
AH 35T	48	7.5	33	100	82	9	112.4	62	80	(124.4)	M10	18	9	34	29	9	14	12	80	M8×25	49.52	69.16	1.16	0.81	0.81	1.56	6.30
AH 35TG							138.2		105.8	(150.2)											60.21	91.63	1.54	1.40	1.40	2.06	
AH 45T	60	9.5	37.5	120	100	10	133.8	80	97	(152.3)	M12	15.1	8.5	45	38	14	20	17	105	M12×35	103.8	146.71	1.98	1.55	1.55	2.79	10.41
AH 45TG							165.6		128.8	(184.1)											125.3	191.85	2.63	2.68	2.68	3.69	

AH/AH-G







part No.	Assembled dimensions (mm)			Dimensions of slider(mm)							Dimensions of rail(mm)						Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings	Basic static torque			Net weight	
	H	H1	N	W2	W3	W4	L1	L2	L3	L4	H3	H2	d1	W	H4	d3	d4	h	F	(mm)	C(kN)	C0(kN)	MR kN·m	MP kN·m	MY kN·m	slider kg	rail kg/m
AH 15	24	4.3	16	47	38	4.5	61.4	30	39.4	(66.7)	3.95	6.95	4.5	15	15	4.5	7.5	5.3	60	M4×16	11.38	16.97	0.12	0.10	0.10	0.17	1.45
AH 20	30	4.6	21.5	63	53	5	77.5	40	50.5	(89.5)	6	9.5	6	20	17.5	6	9.5	8.5	60	M5×16	17.75	27.76	0.27	0.20	0.20	0.40	2.21
AH 20G							92.2		65.2	(104.2)											21.18	35.90	0.35	0.35	0.35	0.52	
AH 25	36	5.5	23.5	70	57	6.5	84	45	58	(96)	6	10	7	23	22	7	11	9	60	M6×20	26.48	36.49	0.42	0.33	0.33	0.59	3.21
AH 25G							104.6		78.6	(116.6)											32.75	49.44	0.56	0.57	0.57	0.80	
AH 30	42	6	31	90	72	9	97.4	52	70	(109.4)	6.5	10	9	28	26	9	14	12	80	M8×25	38.74	52.19	0.66	0.53	0.53	1.09	4.47
AH 30G							120.4		93	(132.4)											47.27	69.16	0.88	0.92	0.92	1.44	
AH 35	48	7.5	33	100	82	9	112.4	62	80	(124.4)	9	13	9	34	29	9	14	12	80	M8×25	49.52	69.16	1.16	0.81	0.81	1.56	6.30
AH 35G							138.2		105.8	(150.2)											60.21	91.63	1.54	1.40	1.40	2.06	
AH 45	60	9.5	37.5	120	100	10	133.8	80	97	(152.3)	8.5	15	11	45	38	14	20	17	105	M12×35	103.8	146.71	1.98	1.55	1.55	2.79	10.41
AH 45G							165.6		128.8	(184.1)											125.3	191.85	2.63	2.68	2.68	3.69	

AE Series-Low Profile Ball Type Linear Motion Rolling Guides

Description of AE Series

AE Series linear motion rolling guides are classified into non-interchangeable and interchangeable types. The sizes of these two types are of the same. The main difference of these two types is that the interchangeable type of slides and rails can be freely exchanged and mounted, but the assembled precision can not reach H or P precision level. Because of the strict dimensional control on AXPB interchangeable type, it will be a wise choice for customers when rails do not need to be assembled together with slides. The model number of the AE series identifies the size, type, accuracy class, preload class, etc.

Non-interchangeable type linear motion rolling guides

A E 20 S K C2 R520 B T1 H /(E20,20)

Auxiliary symbol
※Write after「/」

Accuracy Class

H	High
P	Precision

Preload

T1	Preload 0~0.02C
T2	Preload 0.05~0.07C

Rail length
※Write the length after「R」, in mm
Example) Write「R520」when slide rail length is 520mm

Number of sliders
※Write after「C」
Example) Write「C1」when with 1pc slide, write「C2」when with 2pcs sliders.

Slider length

K	Extra-short size
No Symbol	Standard size

Type of slider

S	Square Type

Size

15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm

Type

※ For slider of size# 25, extra-short type is not available.

Interchangeable type linear motion rolling guides

● Model Number of AH slider

A E 20 S K C1 T1 C -B02

Auxiliary symbol

Accuracy Class

C	Normal

Preload

T1	Preload 0~0.02C
T2	Preload 0.05~0.07C

Number of sliders

Slider length

K	Extra-short size
No Symbol	Standard size

Type of slider

S	Square Type

Size

15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm

Type

※ For slider of size# 25, extra-short type is not available.

Interchangeable type rails

AE 20 R520 C /(E20,20)

Auxiliary symbol
※Write after「/」
( ) Indicates E size

Accuracy Class

C	Normal

Rail length
※Write the length after「R」, in mm
Example) Write「R520」when slide rail length is 520mm

Size

15	Rail Width 15mm
20	Rail Width 20mm
25	Rail Width 23mm

Type

※In principle, the length of the slide rail for delivery is 4000mm In this case, it is not necessary to indicate the E size.
※The jointing is also applicable for H class and P class products.

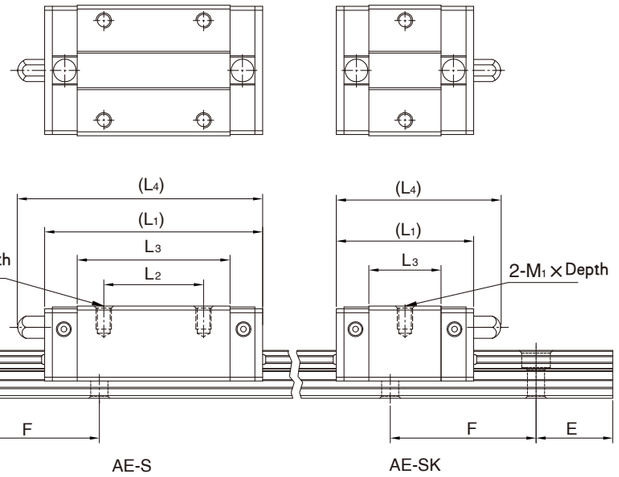
AE Series

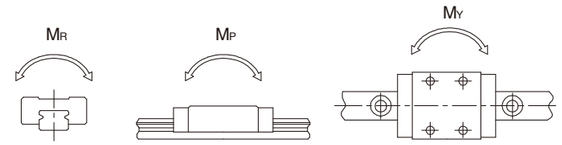
Type of Slides

Type	Specification	Shape	Applications
Square Type	AE…S AE…SK		• Automation devices • High-speed transportation equipment • Precision measuring equipment • Semiconductor equipment • Woodworking machine

Dimensions Table-AE Series

AE-S/AE-SK





Part No.	Assembled dimensions (mm)			Dimensions of slider(mm)										Dimensions of rail(mm)						Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings	Basic static torque			Net weight	
	H	H1	N	W2	W3	W4	L1	L2	L3	L4	M1	Depth	H3	W	H4	d3	d4	h	F	(mm)	C(kN)	C0(kN)	MR kN·m	MP kN·m	MY kN·m	slider kg	rail kg/m
AE 15SK	24	4.5	9.5	34	26	4	40.1	—	23.1	(46)	M4	6	5.5	15	12.5	4.5	7.5	5.3	60	M4×16	5.35	9.40	0.08	0.04	0.04	0.09	1.25
AE 15S							56.8	26	39.8	(62.5)											7.83	16.19	0.13	0.10	0.10	0.15	
AE 20SK	28	6	11	42	32	5	50	—	29	(55.7)	M5	7	6	20	15.5	6	9.5	8.5	60	M5×16	7.23	12.74	0.13	0.06	0.06	0.15	2.08
AE 20S							69.1	32	48.1	(81.1)											10.31	21.13	0.22	0.16	0.16	0.24	
AE 25S	33	7	12.5	48	35	6.5	82.6	35	59	(94.6)	M6	9	8	23	18	7	11	9	60	M6×20	16.27	32.40	0.38	0.32	0.32	0.41	2.67