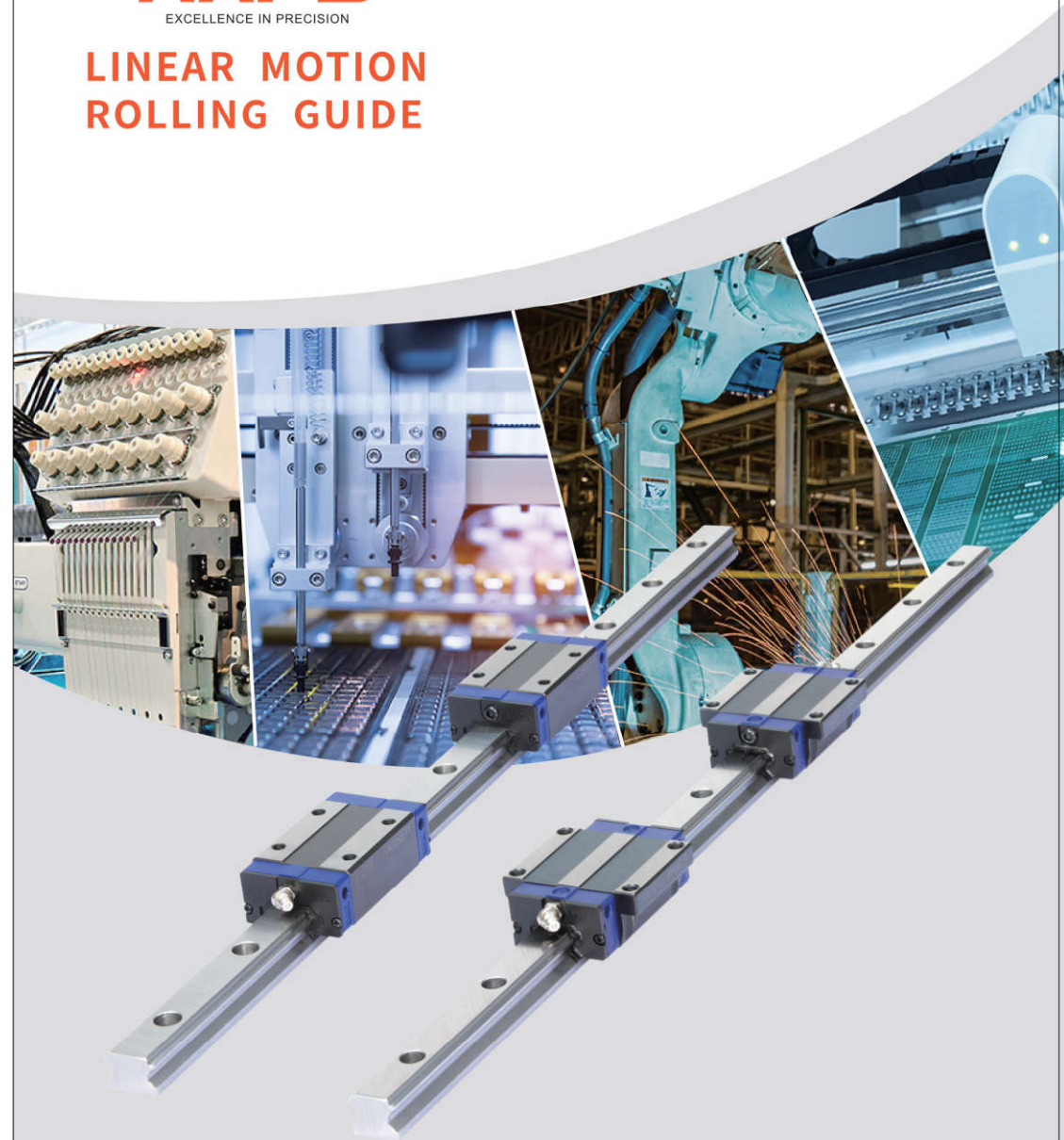


# AXPB

EXCELLENCE IN PRECISION

## LINEAR MOTION ROLLING GUIDE



**UBC | AXPB**  
An **IKO** Company

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**UBC Precision Bearing Mfg. Co., Ltd.**

# 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 slider			Series			Shape of slider		
						Flange		Square
			Mounting from bottom		Mounting from top	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					
	15	20	25	30	35	45
Series	○	○	○	○	○	○
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 slider			Series		Shape of slider			
					Square			
					Mounting from top			
Symbol:AE···S		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		
	15	20	25
Series	○	○	○
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) AE 15 S C2 R960 B T1 H / F1 (E30,30)

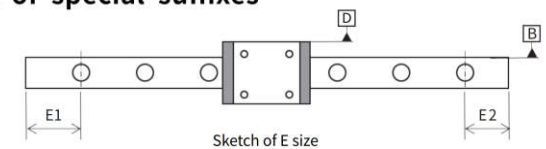
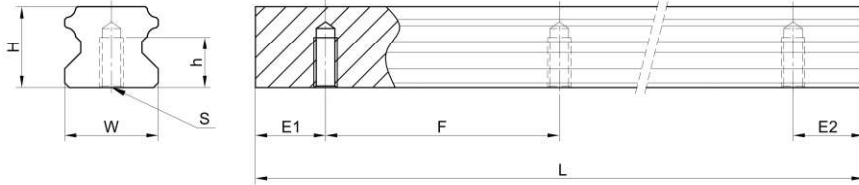


Table 5 Special Suffixes of AXPB Linear Guideway – Four-row

Description of special suffix	Suffixes	Sizes	
		AH Series	AE Series
Fixed location of the mounting holes	E (Note 1)	All available sizes	All available sizes
Dust cap for the mounting holes	F	All available sizes	All available sizes
Inspection report (Note 2)	I	All available sizes	All available sizes
Both rail and slider are coated with black chrome film	MB	All available sizes	Only applicable for rail&sliders sets
Slider coated with black chrome film	MBC	All available sizes	
Rail coated with black chrome film	MBT	All available sizes	
Rail mounting from bottom	E4	All available sizes	

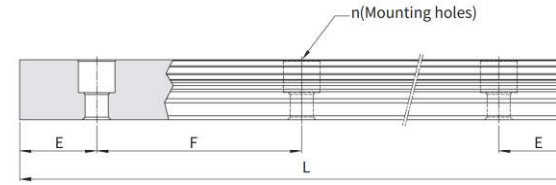
Note 1: Applicable for non-standard lengths (AXPB standard length: 4 meters)  
 Note 2: Only available for H and P precision levels

### Size Table of E4 type: Rail Mounting from Bottom



Model Number	Dimension(mm)					Weight (Kg/m)
	W	h	H	S	F	
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 slide rail



$$L = [n-1] \times F + 2 \times E$$

L: Total length of slide rail (mm)

F: Distance between mounting holes (mm)

n: Number of mounting holes

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

The standard length of the slide rail

Unit: mm

	AH15 / AE15	AH20 / AE20	AH25 / AE25	AH30	AH35
Standard length	1560	1560	1560	1600	1600
	2460	2460	2460	2480	2480
	4000	4000	4000	4000	4000
Spacing between mounting holes	60	60	60	80	80
E1 Size	With length of 4000mm, 20±0.5	With length of 4000mm, 20±0.5	With length of 4000mm, 20±0.5	With length of 4000mm, 20±0.5	With length of 4000mm, 20±0.5
	With length of 1560/2460mm, 30±1	With length of 1560/2460mm, 30±1	With length of 1560/2460mm, 30±1	With length of 1600/2480mm, 40±1	With length of 1600/2480mm, 40±1

Note:

1. Maximum standard length means the max. rail length with standard E value on both sides.

2. In case of standard length of 4000mm, the actual length is 4020mm. And if with mounting hole spacing of 60mm, E1 dimension is 20±0.5mm. If with mounting hole spacing of 80mm, E1 dimension is 40±0.5mm.

### 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 slide, 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 take loads in either the vertical or horizontal directions. Conventional linear slides can only take 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

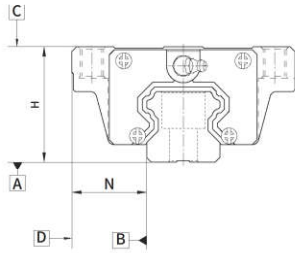
Installing a linear guideway is fairly easy. Grinding or milling the machine surface, following the recommended installation procedure, and tightening the bolts to their specified torque can achieve highly accurate linear motion.

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



Applicable Size: 15-20

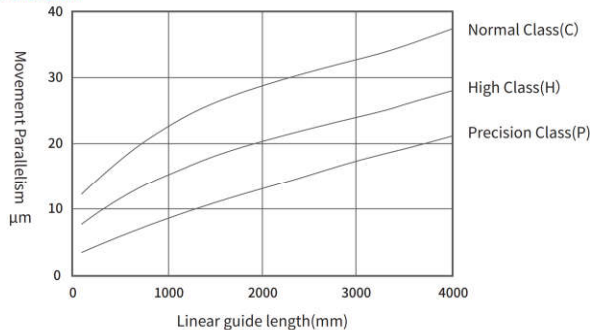
Unit: mm

Model Number	AH15,20 / AE 15, 20		AH25, 30, 35 / AE25		AH45	
	High Class (H)	Precision Class (P)	High Class (H)	Precision Class (P)	High Class (H)	Precision Class (P)
Size Tolerance of H dimension	± 0.3	$\begin{matrix} 0 \\ -0.03 \end{matrix}$	± 0.4	$\begin{matrix} 0 \\ -0.04 \end{matrix}$	± 0.05	$\begin{matrix} 0 \\ -0.05 \end{matrix}$
Size Tolerance of N dimension	± 0.3	$\begin{matrix} 0 \\ -0.03 \end{matrix}$	± 0.4	$\begin{matrix} 0 \\ -0.04 \end{matrix}$	± 0.05	$\begin{matrix} 0 \\ -0.05 \end{matrix}$
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						

Applicable Size: 25-45

Model Number	AH15,20 / AE 15, 20		AH25, 30, 35 / AE25		AH45	
	Normal Class (C)	High Class (H)	High Class (H)	Precision Class (P)	High Class (H)	Precision Class (P)
Size Tolerance of H dimension	± 0.1	± 0.01	± 0.01	$\begin{matrix} 0 \\ -0.01 \end{matrix}$	± 0.01	$\begin{matrix} 0 \\ -0.01 \end{matrix}$
Size Tolerance of N dimension	± 0.1	± 0.01	± 0.01	$\begin{matrix} 0 \\ -0.01 \end{matrix}$	± 0.01	$\begin{matrix} 0 \\ -0.01 \end{matrix}$
Variation Tolerance of H dimension	0.02	0.02	0.02	0.03	0.02	0.03
Variation Tolerance of N dimension	0.03	0.03	0.03	0.03	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

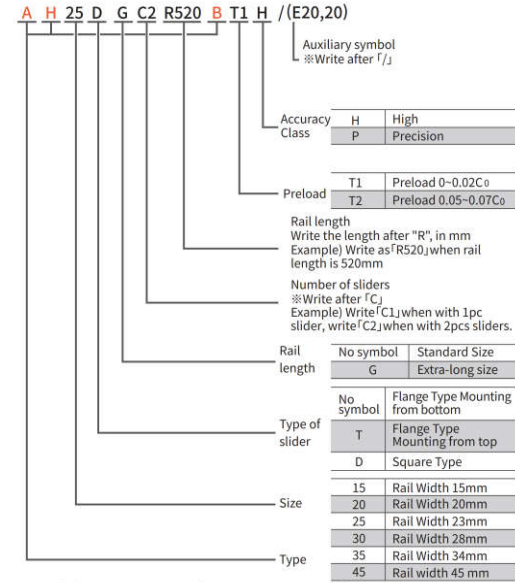


## AH Series - Ball Type Linear Motion Rolling Guides

### Description of AH Series

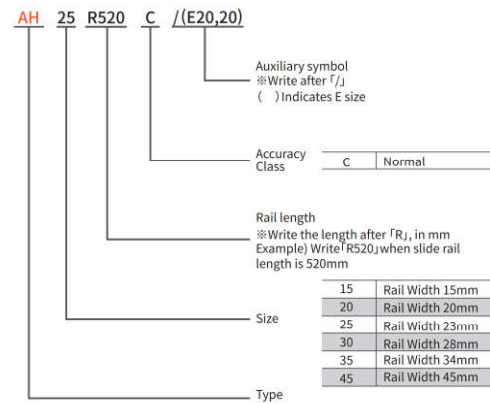
AH Series linear motion rolling guides are classified into non-interchangeable and interchangeable types. The sizes of these two types are of the same. The main difference of these two types is that the interchangeable type of sliders and rails can be freely exchanged and mounted, but the assembled precision 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 type



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

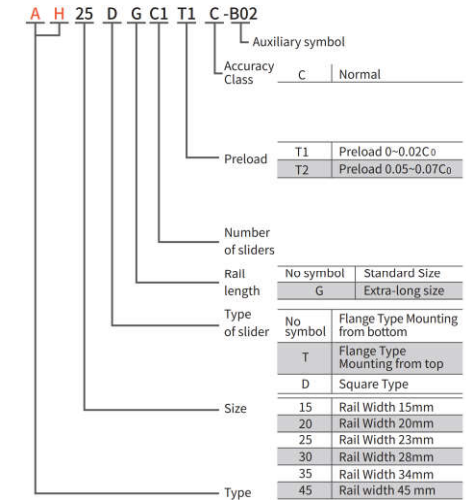
### Model Number of AH Rail



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

### Interchangeable Type

#### Model Number of AH slider



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

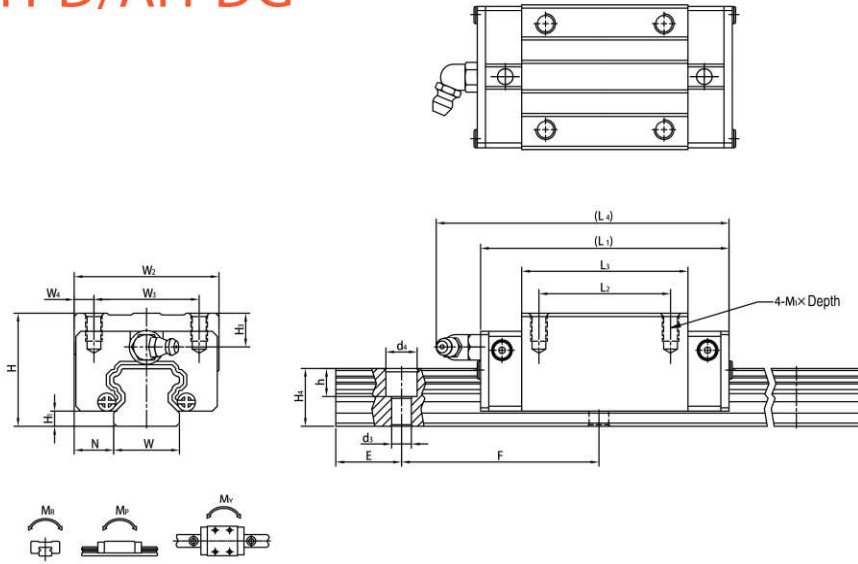
### AH series

#### Slider type

Type	Specification	Shape	Applications
Square Type	AH-D		<ul style="list-style-type: none"> <li>Machining Centers</li> <li>Machine tools</li> <li>Precision Machining Machines</li> <li>Heavy Cutting Machines</li> </ul>
	AH-DG		
Flange Type	AH-T		<ul style="list-style-type: none"> <li>Marble cutting machine</li> <li>Grinding Machines</li> <li>Injection machine</li> <li>Puncher</li> <li>Automation Devices</li> <li>Transportation Equipment</li> <li>Measuring Equipment</li> <li>Laser Cutting Machine</li> </ul>
	AH-TG		
	AH-AH-G		

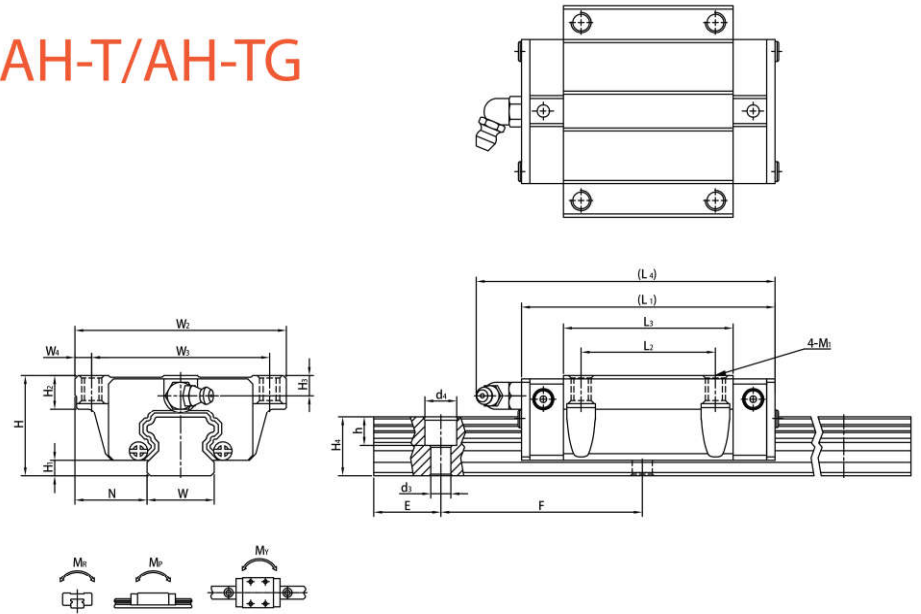
Dimensions Table-AH Series

AH-D/AH-DG



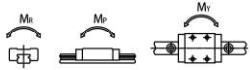
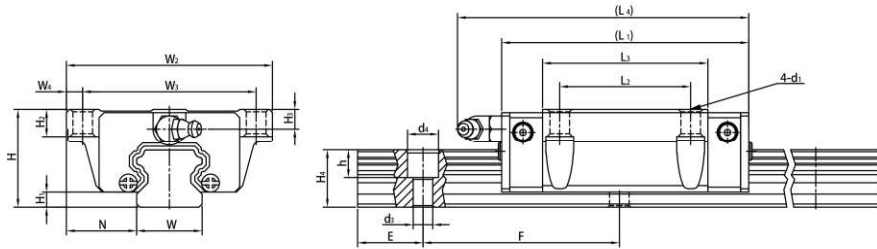
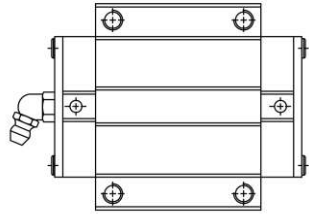
Part No.	Assembled dimensions (mm)		Dimensions of slider(mm)										Dimensions of rail(mm)					Dimensions of rail (mm)	Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings			Net weight			
	H	H1	N	W2	W3	W4	L1	L2	L3	L4	M1	Depth	H3	W	H4	d3	d4				h	F	(mm)	C0(kN)	C00(kN)	Mn kN-m	Mp kN-m
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)																	
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)																	
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)																	
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)																	
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)																	

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)	C0(kN)	C00(kN)	Mn kN-m	Mp kN-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	40	65.2	(104.2)																	
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	45	78.6	(116.6)																	
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	52	93	(132.4)																	
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	62	105.8	(150.2)																	
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	80	128.8	(184.1)																	

# AH/AH-G



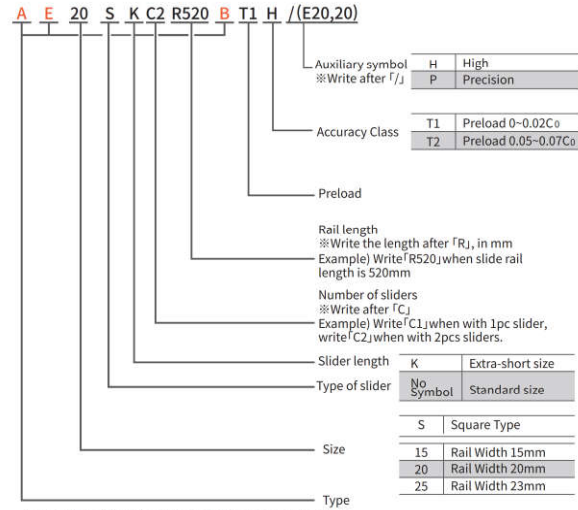
part No.	Assembled dimensions (mm)		Dimensions of slider(mm)						Dimensions of rail(mm)						Dimensions of bolt	Basic dynamic load ratings	Basic static load ratings	Basic static torque			slider kg	rail kg/m	Net weight				
	H	H <sub>1</sub>	N	W <sub>1</sub>	W <sub>2</sub>	W <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	H <sub>3</sub>	H <sub>2</sub>	d <sub>1</sub>	W				H <sub>4</sub>	d <sub>3</sub>	d <sub>4</sub>				h	F	(mm)	C (kN)
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	30	4.6	21.5	63	53	5	92.2	40	65.2	(104.2)	6	9.5	6	20	17.5	6	9.5	8.5	60	M5×16	21.18	35.90	0.35	0.35	0.35	0.52	2.21
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	36	5.5	23.5	70	57	6.5	104.6	45	78.6	(116.6)	6	10	7	23	22	7	11	9	60	M6×20	32.75	49.44	0.56	0.57	0.57	0.80	3.21
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	42	6	31	90	72	9	120.4	52	93	(132.4)	6.5	10	9	28	26	9	14	12	80	M8×25	47.27	69.16	0.88	0.92	0.92	1.44	4.47
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	48	7.5	33	100	82	9	138.2	62	105.8	(150.2)	9	13	9	34	29	9	14	12	80	M8×25	60.21	91.63	1.54	1.40	1.40	2.06	6.30
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	60	9.5	37.5	120	100	10	165.6	80	128.8	(184.1)	8.5	15	11	45	38	14	20	17	105	M12×35	125.3	191.85	2.63	2.68	2.68	3.69	10.41

## AE Series-Low Profile Ball Type Linear Motion Rolling Guides

### Description of AE Series

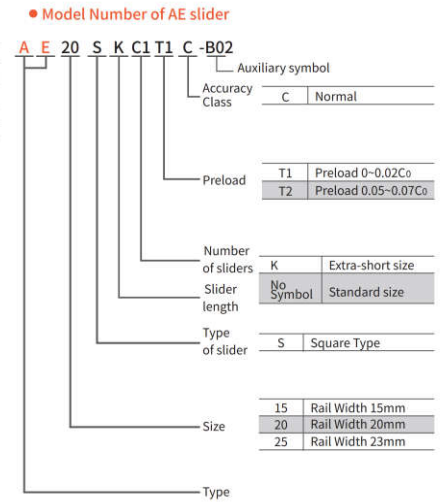
AE Series linear motion rolling guides are classified into non-interchangeable and interchangeable types. The sizes of these two types are of the same. The main difference of these two types is that the interchangeable type of slides and rails can be freely exchanged and mounted, but the assembled precision 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



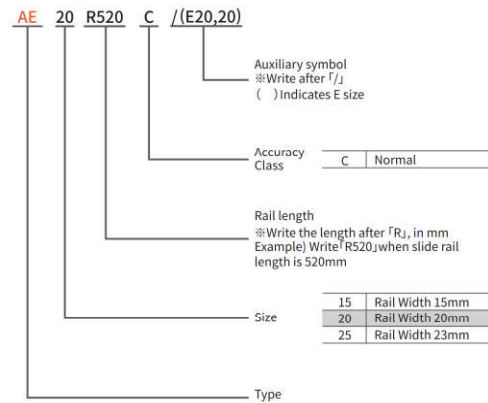
※ For slider of size# 25, extra-short type is not available.

### Interchangeable type linear motion rolling guides



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

### Interchangeable type rails



※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.

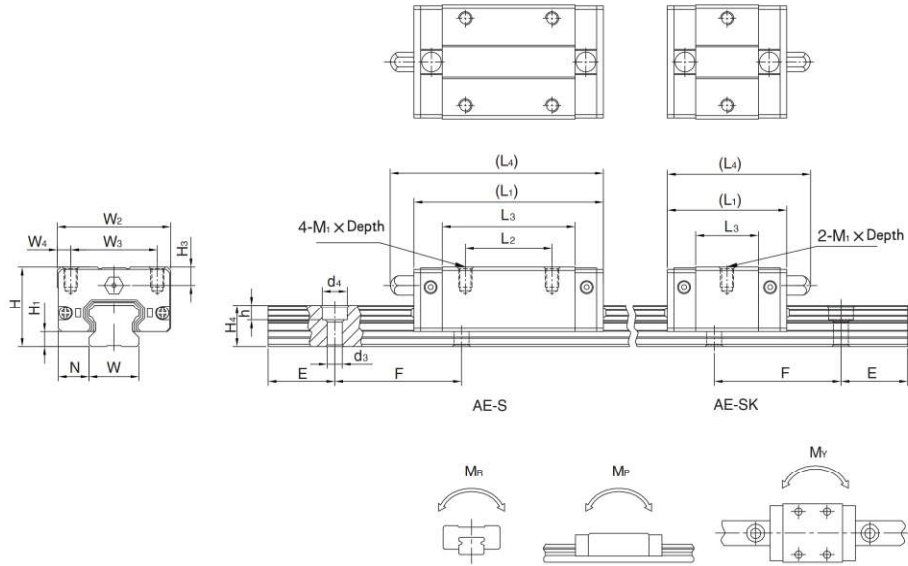
### AE Series

#### Slider type

Type	Specification	Shape	Applications
Square Type	AE...S AE...Sk		<ul style="list-style-type: none"> <li>Automation devices</li> <li>High-speed transportation equipment</li> <li>Precision measuring equipment</li> <li>Semiconductor equipment</li> <li>Woodworking machine</li> </ul>

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 C (kN)	Basic static load ratings C0 (kN)	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)	Mh (kN-m)	Mp (kN-m)	Mv (kN-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	M4x16	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							50	—	29	(55.7)											7.23	12.74	0.13	0.06	0.06	0.15		
AE 20S	28	6	11	42	32	5	69.1	32	48.1	(81.1)	M5	7	6	20	15.5	6	9.5	8.5	60	M5x16	10.31	21.13	0.22	0.16	0.16	0.24		2.08
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	M6x20	16.27	32.40	0.38	0.32	0.32	0.41		2.67