

KR

LM Guide Actuator Model KR

LM Guide + Ball Screw = Integrated-Structure Actuator

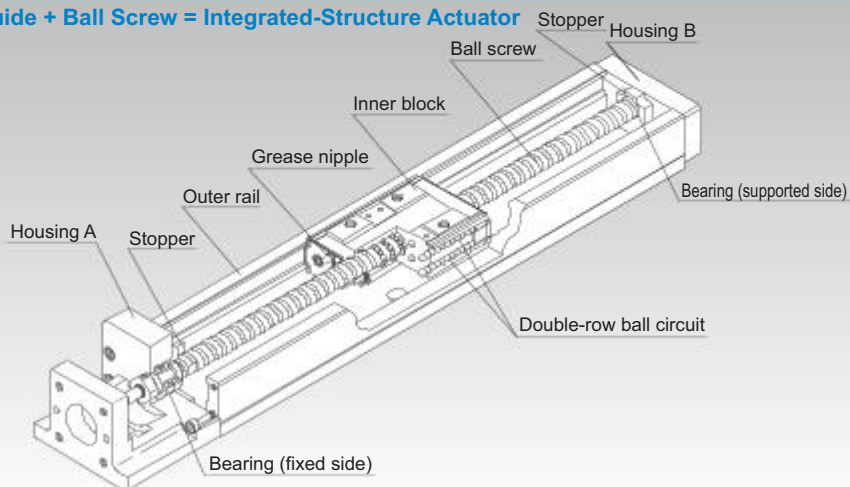


Fig. 1: Structure of LM Guide Actuator Model KR

Structure and Features

LM Guide Actuator Model KR achieves high rigidity and high accuracy in minimal space thanks to the highly rigid U-shaped cross section of its outer rail and its inner block that features LM Guide units on both side faces and an integrated ball screw unit in the center.

In addition, since housings A and B also serve as support units and the inner block serves as a table, this model allows for a significant reduction in labor hours required for design and assembly, thus contributing to an overall lower cost.

4-Way Equal Load

Each row of balls is arranged at a contact angle of 45° so that the load rating on the inner block is uniform in the four directions (radial, reverse-radial, and lateral directions), enabling the Model KR to be used in any mounting orientation.

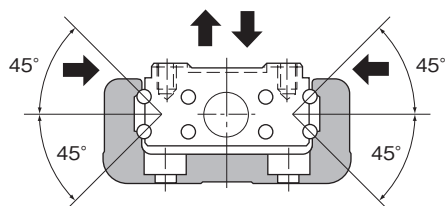


Fig. 2: Load Capacity and Contact Angle of Model KR

High Rigidity

Use of an outer rail with a U-shaped cross section increases the rigidity against moments and torsion.

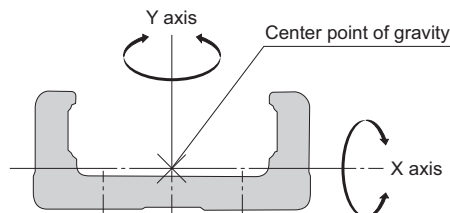


Fig. 3: Cross Section of the Outer Rail

Table 1: Cross-Sectional Characteristics of the Outer Rail

Model No.	$I_x (\text{mm}^4)$	$I_y (\text{mm}^4)$	Mass (kg/m)
KR15	9.08×10^2	1.42×10^4	1.04
KR20	6.1×10^3	6.2×10^4	2.6
KR26	1.7×10^4	1.5×10^5	3.9
KR30H	2.7×10^4	2.8×10^5	5.0
KR33	6.2×10^4	3.8×10^5	6.6
KR45H	8.4×10^4	8.9×10^5	9.0
KR46	2.4×10^5	1.5×10^6	12.6
KR55	2.2×10^5	2.3×10^6	15.0
KR65	4.6×10^5	5.9×10^6	23.1

I_x = geometric moment of inertia around X axis

I_y = geometric moment of inertia around Y axis

High Accuracy

Since the linear guide consists of four rows of circular-arc grooves that enable balls to smoothly move with two points of contact even under a preload, a highly rigid guide with no clearance is achieved. Additionally, variation in frictional resistance caused by load fluctuation is minimized, allowing highly accurate feeding. The system contributes significantly to increasing precision and quality by providing precision-grade positioning performance to all kinds of machines.

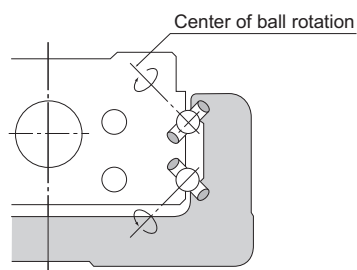


Fig. 4: Contact Structure of Model KR

Space Saving

Use of an inner block integrating LM Guide units on both ends and a ball screw unit in the center makes Model KR a highly rigid and highly accurate actuator in minimal space.

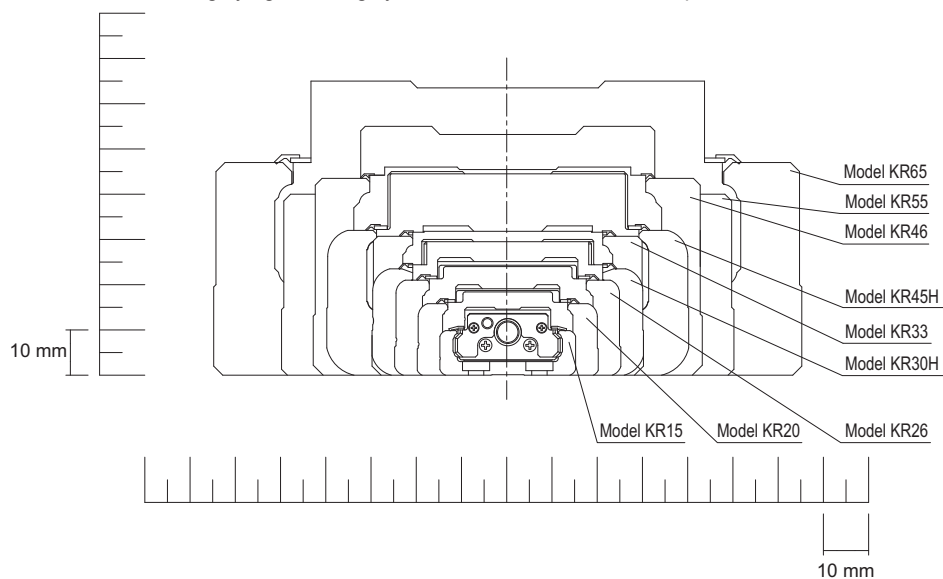


Fig. 5: Cross-Sectional Drawing

Seal

Model KR is equipped with end seals and side seals for contamination protection as standard.

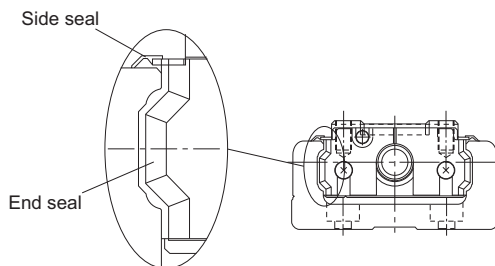


Table 2 shows the rolling resistance and seal resistance per inner block (guide section).

Table 2: Maximum Resistance Value Unit: N

Model No.	Rolling resistance value	Seal resistance value	Total
KR15	0.2	0.7	0.9
KR20	0.5	0.7	1.2
KR26	0.6	0.8	1.4
KR30H	1.5	2.0	3.5
KR33	1.5	1.9	3.4
KR45H	2.5	2.6	5.1
KR46	2.5	2.5	5
KR55	5.0	3.8	8.8
KR65	6.0	4.1	10.1

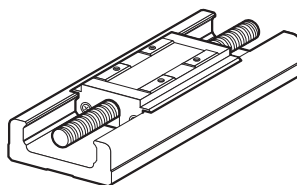
Note: The rolling resistance represents the value when a lubricant is not used.

Types and Configurations

Types

Model KR-A (with a Single Long Block)

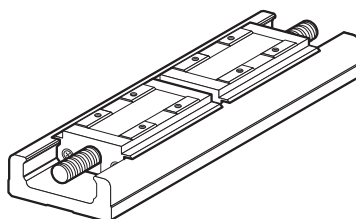
This is the representative model of KR.



Model KR-A

Model KR-B (with Two Long Blocks)

Equipped with two units of the inner block of Model KR-A, this model achieves higher rigidity and higher load-carrying capacity.

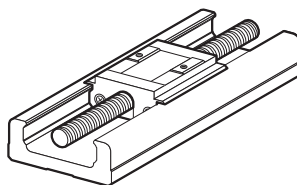


Model KR-B

Model KR-C (with a Single Short Block)

This model has a shorter overall length of the inner block and a longer stroke than Model KR-A.

(Supported models: models KR30H, 33, 45H, 46)

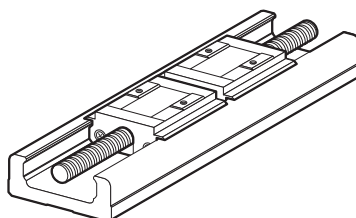


Model KR-C

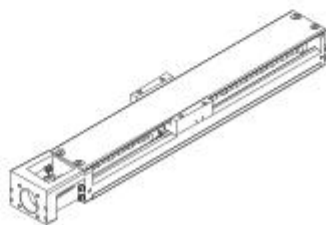
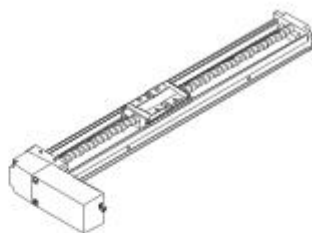
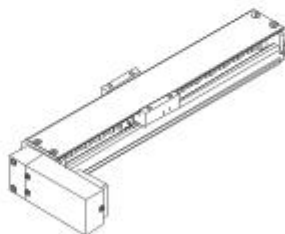
Model KR-D (with Two Short Blocks)

Equipped with two units of the inner block of Model KR-C, this design allows for a span between blocks that matches each application and achieves high rigidity.

(Supported models: models KR30H, 33, 45H, 46)

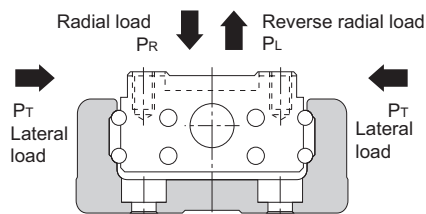


Model KR-D

Con $\square$ figurations**Direct Motor Coupling (Without Cover)****Direct Motor Coupling (With Cover)****Motor Wrap (Without Cover)****Motor Wrap (With Cover)**

Load Ratings in All Directions and Static Permissible Moment

Load Rating



● LM Guide Unit

Model KR is capable of receiving loads in four directions (radial, reverse-radial, and lateral directions). Its basic load ratings are equal in all four directions (radial, reverse-radial, and lateral directions), and their values are indicated in Table 3 on **A2-120** and **A2-121**.

● Ball Screw Unit

Since a ball screw nut is incorporated into the inner block, Model KR is capable of receiving an axial load. The basic load rating value is indicated in Table 3 on **A2-120** and **A2-121**.

● Bearing Unit (Fixed Side)

Since housing A contains an angular bearing, Model KR is capable of receiving an axial load.

The basic load rating value is indicated in Table 3 on **A2-120** and **A2-121**.

Equivalent Load (LM Guide Unit)

The equivalent load when the LM Guide unit of Model KR simultaneously receives loads in all directions is obtained from the following equation.

$$P_E = P_R (P_L) + P_T$$

P_E : Equivalent load (N)

: Radial direction

: Reverse-radial direction

: Lateral direction

P_R : Radial load (N)

P_L : Reverse-radial load (N)

P_T : Lateral load (N)

Table 3: Load Rating of Model KR

Model No.			KR15		KR20		KR26		
			KR1501	KR1502	KR2001	KR2006	KR2602	KR2606	
LM Guide unit	Basic dynamic load rating C (N)	Long block	1,930		3,590		7,240		
		Short block	□		□		□		
	Basic static load rating C ₀ (N)	Long block	3,450		6,300		12,150		
		Short block	□		□		□		
	Radial clearance (mm)	Normal grade, High Accuracy grade	□0.001 to +0.002		□0.003 to +0.002		□0.004 to +0.002		
		Precision grade	□0.005 to □0.002		□0.007 to □0.003		□0.01 to □0.004		
Ball screw unit	Basic dynamic load rating C _a (N)	Normal grade, High Accuracy grade	340	230	660	860	2,350	1,950	
		Precision grade	340	230	660	1,060	2,350	2,390	
	Basic static load rating C _{0a} (N)	Normal grade, High Accuracy grade	660	410	1,170	1,450	4,020	3,510	
		Precision grade	660	410	1,170	1,600	4,020	3,900	
	Screw shaft diameter (mm)		5		6		8		
	Lead (mm)		1	2	1	6	2	6	
	Thread minor diameter (mm)		4.5		5.3	5.0	6.6	6.7	
	Ball center-to-center diameter (mm)		5.15		6.15	6.3	8.3	8.4	
Bearing unit (Fixed side)	Axial direction	Basic dynamic load rating C _a (N)	590		1,000		1,380		
		Static permissible load P _{0a} (N)	290		1,240		1,760		

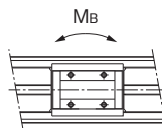
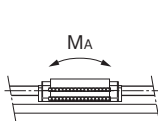
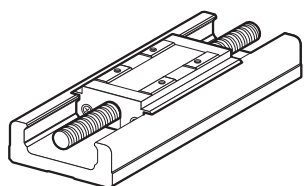
Notes: The load ratings in the LM Guide unit each indicate the load rating per inner block.
 Ball screws of Precision grade (grade P) for models KR30H, KR33, KR45H05, KR45H10, and KR4610 are incorporated with spacer balls in a one-to-one ratio.
 Ball screws of Precision grade (grade P) for models KR45H20, KR4620, KR55, and KR65 are incorporated with spacer balls in a two-to-one ratio.

	KR30H			KR33			KR45H			KR46			KR55	KR65
	KR30 H05	KR30 H06	KR30 H10	KR33 05	KR33 06	KR33 10	KR45H 05	KR45H 10	KR45H 20	KR46 05	KR46 10	KR46 20		
	11,600			11,600			23,300			27,400			38,100	50,900
	4,900			4,900			11,900			14,000			□	□
	20,200			20,200			39,200			45,500			61,900	80,900
	10,000			10,000			19,600			22,700			□	□
	□0.004 to +0.002			□0.004 to +0.002			□0.006 to +0.003			□0.006 to +0.003			□0.007 to +0.004	□0.008 to +0.004
	□0.012 to □0.004			□0.012 to □0.004			□0.016 to □0.006			□0.016 to □0.006			□0.019 to □0.007	□0.022 to □0.008
	2,950	2,840	1,760	2,950	2,840	1,760	5,500	3,140	3,040	5,500	3,140	3,040	3,620	5,680
	1,860	2,250	1,370	1,860	2,250	1,370	4,100	2,940	3,430	4,100	2,940	3,430	3,980	5,950
	5,390	4,900	2,840	5,390	4,900	2,840	13,900	6,760	7,150	13,900	6,760	7,150	9,290	14,500
	2,690	2,740	1,570	2,690	2,740	1,570	6,960	3,720	5,290	6,960	3,720	5,290	6,850	10,700
	10			10			16	15		16	15		20	25
	5	6	10	5	6	10	5	10	20	5	10	20	20	25
	7.8			7.8			13.4	12.4		13.4	12.4		17.5	22
	10.5			10.5			16.75	15.75		16.75	15.75		20.75	26
	1,790			1,790			6,660			6,660			7,600	13,700
	2,590			2,590			3,240			3,240			3,990	5,830

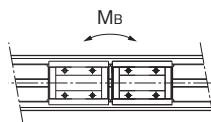
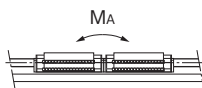
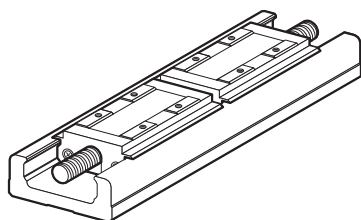
Static Permissible Moment (LM Guide Unit)

The inner block is capable of receiving moment loads in all three directions.

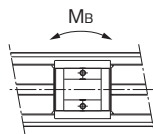
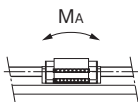
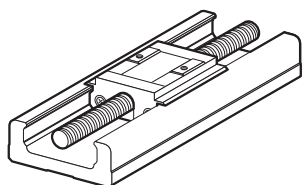
Table 4 on **A2-123** shows static permissible moments in the M_A , M_B , and M_C directions.



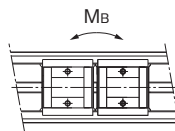
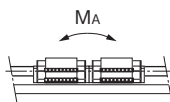
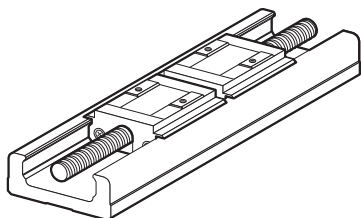
With a single long block (Model KR-A)



With double long blocks (Model KR-B)



With a single short block (Model KR-C)



With double short blocks (Model KR-D)

Table 4: Static Permissible Moments of Model KR

Unit: N·m

Model No.	Static permissible moment		
	M _A	M _B	M _C
KR15-A	12.1	12.1	38
KR15-B	70.3	70.3	76
KR20-A	31	31	83
KR20-B	176	176	165
KR26-A	84	84	208
KR26-B	480	480	416
KR30H-A	166	166	428
KR30H-B	908	908	857
KR30H-C	44	44	214
KR30H-D	319	319	427
KR33-A	166	166	428
KR33-B	908	908	857
KR33-C	44	44	214
KR33-D	319	319	427
KR45H-A	486	486	925
KR45H-B	2,732	2,732	1,850
KR45H-C	130	130	463
KR45H-D	994	994	925
KR46-A	547	547	1,400
KR46-B	2,940	2,940	2,800
KR46-C	149	149	700
KR46-D	1,010	1,010	1,400
KR55-A	870	870	2,280
KR55-B	4,890	4,890	4,570
KR65-A	1,300	1,300	3,920
KR65-B	7,230	7,230	7,840

Notes: Symbols A, B, C, or D in the end of each model number indicate the inner block size and the number of inner blocks used.

A: With a single long block

B: With double long blocks

C: With a single short block

D: With double short blocks

The values for models KR-B/D indicate the values when double inner blocks are used in close contact with each other. Static permissible moment is the maximum moment that can be permitted while the product is stationary.

Maximum Speeds with Different Strokes

Table 5: Maximum Speed

Model No.	Ball screw lead (mm)	Stroke ¹ (mm)		Outer rail length (mm)	Maximum speed (mm/s)					
					Precision grade	High Accuracy grade	Normal grade	Precision grade	High Accuracy grade	Normal grade
		Long block	Short block		Long block			Short block		
KR15	1	25	□	75	75	75		□		
		50	□	100	75	75		□		
		75	□	125	75	75		□		
		100	□	150	75	75		□		
		125	□	175	75	75		□		
	2	150	□	200	75	75		□		
		25	□	75	150	150		□		
		50	□	100	150	150		□		
		75	□	125	150	150		□		
		100	□	150	150	150		□		
KR20	1	125	□	175	150	150		□		
		150	□	200	150	150		□		
		30	□	100	100	100		□		
	6	80	□	150	100	100		□		
		130	□	200	100	100		□		
		30	□	100	600	600		□		
KR26	2	80	□	150	600	600		□		
		130	□	200	600	600		□		
		60	□	150	200	200		□		
		110	□	200	200	200		□		
	6	160	□	250	200	200		□		
		210	□	300	200	200		□		
		60	□	150	600	590		□		
		110	□	200	600	590		□		
KR30H	5	160	□	250	600	590		□		
		210	□	300	600	590		□		
		50	70	150	500	390	500	390		
		100	120	200	500	390	500	390		
		200	220	300	500	390	500	390		
		300	320	400	500	390	500	390		
	6	400	420	500	500	390	450	390		
		500	520	600	330	330	300	300		
		50	70	150	600	470	600	470		
		100	120	200	600	470	600	470		
		200	220	300	600	470	600	470		
		300	320	400	600	470	600	470		
	10	400	420	500	590	470	530	470		
		500	520	600	390	390	360	360		
		50	70	150	1,000	790	1,000	790		
		100	120	200	1,000	790	1,000	790		
		200	220	300	1,000	790	1,000	790		
		300	320	400	1,000	790	1,000	790		
		400	420	500	980	790	880	790		
		500	520	600	650	650	600	600		
KR33	5	50	75	150	500	390	500	390		
		100	125	200	500	390	500	390		
		200	225	300	500	390	500	390		
		300	325	400	500	390	500	390		
		400	425	500	500	390	450	390		
		500	525	600	330	330	300	300		
	6	600	625	700	230	230	220	220		
		50	75	150	600	470	600	470		
		100	125	200	600	470	600	470		
		200	225	300	600	470	600	470		
		300	325	400	600	470	600	470		
		400	425	500	590	470	530	470		
		500	525	600	390	390	360	360		
		600	625	700	280	280	260	260		

Model No.	Ball screw lead (mm)	Stroke ¹ (mm)		Outer rail length (mm)	Maximum speed (mm/s)					
					Precision grade	High Accuracy grade	Normal grade	Precision grade	High Accuracy grade	Normal grade
		Long block	Short block		Long block			Short block		
KR33	10	50	75	150	1,000	790		1,000	790	
		100	125	200	1,000	790		1,000	790	
		200	225	300	1,000	790		1,000	790	
		300	325	400	1,000	790		1,000	790	
		400	425	500	980	790		880	790	
		500	525	600	650	650		600	600	
		600	625	700	470	470		430	430	
KR45H	5	200	230	340	340	240		340	240	
		300	330	440	340	240		340	240	
		400	430	540	340	240		340	240	
		500	530	640	340	240		340	240	
		600	630	740	340	240		340	240	
		700	730	840	290	240		260	240	
		800	830	940	230	230		200	200	
	10	200	230	340	740	520		740	520	
		300	330	440	740	520		740	520	
		400	430	540	740	520		740	520	
		500	530	640	740	520		740	520	
		600	630	740	730	520		640	520	
		700	730	840	550	520		490	490	
		800	830	940	430	430		380	380	
	20	200	230	340	1,480	1,050		1,480	1,050	
		300	330	440	1,480	1,050		1,480	1,050	
		400	430	540	1,480	1,050		1,480	1,050	
		500	530	640	1,480	1,050		1,480	1,050	
		600	630	740	1,430	1,050		1,280	1,050	
		700	730	840	1,080	1,050		980	980	
		800	830	940	840	840		770	770	
KR46	5	190	220	340	340	240		340	240	
		290	320	440	340	240		340	240	
		390	420	540	340	240		340	240	
		490	520	640	340	240		340	240	
		590	620	740	340	240		340	240	
		690	720	840	300	240		260	240	
		790	820	940	230	230		210	210	
	10	190	220	340	740	520		740	520	
		290	320	440	740	520		740	520	
		390	420	540	740	520		740	520	
		490	520	640	740	520		740	520	
		590	620	740	740	520		650	520	
		690	720	840	550	520		490	490	
		790	820	940	430	430		390	390	
	20	190	220	340	1,480	1,050		1,480	1,050	
		290	320	440	1,480	1,050		1,480	1,050	
		390	420	540	1,480	1,050		1,480	1,050	
		490	520	640	1,480	1,050		1,480	1,050	
		590	620	740	1,440	1,050		1,300	1,050	
		690	720	840	1,090	1,050		990	990	
		790	820	940	850	850		780	780	
KR55	20	800	□	980	1,120	800			□	
		900	□	1,080	900	800			□	
		1,000	□	1,180	740	740			□	
		1,100	□	1,280	□	620			□	
		1,200	□	1,380	□	530			□	
KR65	25	790	□	980	1,120	800			□	
		990	□	1,180	1,120	800			□	
		1,190	□	1,380	840	800			□	
		1,490	□	1,680	□	550			□	

¹ Indicates stroke length with one inner block.

Notes: The maximum speed is restricted by the permissible rotation speed of the ball screw, the permissible speed of the guide or 6,000 min⁻¹ of motor speed.

If you are considering using this product at the maximum travel speed of Table 5 or faster, contact THK.

Lubrication

Table 6 shows standard greases used in Model KR and grease nipple types.

Table 6: Types of Standard Grease and Grease Nipples Used

Model No.	Standard grease	Grease nipple used
KR15	THK AFF Grease	□
KR20	THK AFA Grease	PB107
KR26	THK AFA Grease	PB107
KR30H	THK AFB-LF Grease	PB107
KR33	THK AFB-LF Grease	PB107
KR45H	THK AFB-LF Grease	A-M6F
KR46	THK AFB-LF Grease	A-M6F
KR55	THK AFB-LF Grease	A-M6F
KR65	THK AFB-LF Grease	A-M6F

Static Safety Factor

● LM Guide Unit

During actual operation, damage may be caused by an unexpectedly large load acting on the LM Guide that is caused in particular by sudden starting and stopping or a large moment created by an overhang. Therefore, a static safety factor f_s must be considered.

The static safety factor f_s is derived from the relationship between the applied load and the basic static load rating. The guidelines for the static safety factor based on operating conditions are given in Table 7.

$$f_s = \frac{C_0}{P_{\max}}$$

f_s : Static safety factor

C_0^1 : Basic static load rating (N)

$P_{\max}$: Maximum applied load (N)

● Ball Screw Unit and Bearing Unit (Fixed Side)

For the ball screw and the bearing, a static safety factor f_s based on the relationship between the calculated maximum axial load and the static load rating must be considered. Vibrations, impacts, or inertia due to starting and stopping may result in an unexpectedly large load. Therefore, please confirm that a sufficient static safety factor has been ensured when selecting a model. The guidelines for the static safety factor based on operating conditions are given in Table 7.

$$f_s = \frac{C_{0a}}{F_{\max}}$$

f_s : Static safety factor

C_{0a}^1 : Basic static load rating (N)

$F_{\max}$: Maximum applied load (N)

Table 7: Estimates of the Static Safety Factor (f_s)

Load conditions ²	Lower Limit of f_s
Without vibrations or impacts	2
With vibrations or impacts	5

¹ The basic static load rating is a static load with a constant direction and size where the sum of the permanent deformation of the rolling element and that of the raceway on the contact area under the maximum stress is 0.0001 times the rolling element diameter.

² Vibrations and impacts are typically caused by factors such as acceleration and deceleration, sudden starting and stopping, vibrations and impacts from an external machine, and changes in processing power over time.

Service Life

LM Guide Unit

● Nominal Life

■ Calculating the Nominal Life

The nominal life (L_{10}) of an LM Guide with balls is obtained from the following formula using the basic dynamic load rating (C) based on a reference distance of 50 km, and the calculated load acting on the LM Guide (P_c).

□ LM Guide with balls (Using a basic dynamic load rating based on a nominal life of 50 km)

$$L_{10} = \left(\frac{C}{P_c} \right)^3 \times 50 \quad \dots\dots\dots (1)$$

L_{10}	: Nominal life	(km)
C	: Basic dynamic load rating	(N)
P_c	: Calculated load	(N)

Note: This nominal life formula may not apply if the length of the stroke is less than or equal to twice the length of the LM block.

When comparing the nominal life (L_{10}), you must take into account whether the basic dynamic load rating was defined based on 50 km or 100 km. Convert the basic dynamic load rating based on ISO 14728-1 as necessary.

ISO-regulated basic dynamic load rating conversion formula:

□ LM Guide with balls

$$C_{100} = \frac{C_{50}}{1.26}$$

C_{50}	: Basic dynamic load rating based on a nominal life of 50 km
C_{100}	: Basic dynamic load rating based on a nominal life of 100 km

■ Calculating the Modified Nominal Life

During use, an LM Guide may be subjected to vibrations and shocks as well as fluctuating loads, which are difficult to detect. In addition, having LM blocks arranged directly behind one another will have a decisive impact on the service life. Taking these factors into account, the modified nominal life (L_{10m}) can be calculated according to formula (2) below.

● Modified factor α

$$\alpha = \frac{f_c}{f_w}$$

α	: Modified factor
f_c	: Contact factor (see Table 8 on A2-131)
f_w	: Load factor (see Table 9 on A2-131)

● Modified nominal life L_{10m}

□ LM Guide with balls

$$L_{10m} = \left(\alpha \times \frac{C}{P_c} \right)^3 \times 50 \quad \dots\dots\dots (2)$$

L_{10m}	: Modified nominal life	(km)
C	: Basic dynamic load rating	(N)
P_c	: Calculated load	(N)

- If a moment is applied to models KR-A/C or models KR-B/D using two inner blocks in close contact with each other, calculate the equivalent load by multiplying the applied moment by the equivalent factor indicated in Table 10 on **A2-131**.

$$P_m = K \cdot M$$

- P_m : Equivalent load (per inner block) (N)
 K : Equivalent moment factor (see Table 10 on **A2-131**)
 M : Applied moment (N·mm)
 (If planning to use the product with a wide inner block span, contact THK.)

- If moment M_c is applied to Model KR-B/D

$$P_m = \frac{K_c \cdot M_c}{2}$$

- If a radial load (P) and a moment are simultaneously applied to Model KR

$$P_E = P_m + P$$

- P_E : Total equivalent radial load (N)
 Perform a nominal life calculation using the above data.

● Service Life Time

When the nominal life (L_{10}) has been obtained, the service life time is obtained using the following equation (if the stroke length and the number of reciprocations per minute are constant).

$$L_h = \frac{L_{10} \times 10^6}{2 \cdot \ell_s \cdot n_1 \times 60}$$

- L_h : Service life time (h)
 ℓ_s : Stroke length (mm)
 n_1 : Number of reciprocations per minute (min^{-1})

Ball Screw Unit and Bearing Unit (Fixed Side)

● Nominal Life

■ Calculating the Nominal Life

The nominal life (L_{10}) of an LM System is obtained from the following formula using the basic dynamic load rating (C) and the load acting on the ball screw in the axial direction (F_a).

$$L_{10} = \left(\frac{C_a}{F_a} \right)^3 \times 10^6 \dots\dots\dots (1)$$

L_{10}	: Nominal life	(rev.)
C_a	: Basic dynamic load rating	(N)
F_a	: Axial load	(N)

■ Calculating the Modified Nominal Life

During use, a ball screw may be subjected to vibrations and shocks as well as fluctuating loads, which are difficult to detect. Taking these factors into account, the modified nominal life (L_{10m}) can be calculated according to the formula (2) below.

- Modified factor α

$$\alpha = \frac{1}{f_w}$$

α	: Modified factor	
f_w	: Load factor	(see Table 9 on A2-131)

- Modified nominal life L_{10m}

$$L_{10m} = \left(\alpha \times \frac{C_a}{F_a} \right)^3 \times 10^6 \dots\dots\dots (2)$$

L_{10m}	: Modified nominal life	(rev.)
α	: Modified factor	
C_a	: Basic dynamic load rating	(N)
F_a	: Axial load	(N)

● Service Life Time

When the nominal life (L_{10}) has been obtained, the service life time is obtained using the following equation (if the stroke length and the number of reciprocations per minute are constant).

$$L_h = \frac{L_{10} \cdot \ell}{2 \cdot \ell_s \cdot n_1 \times 60}$$

L_h	: Service life time	(h)
ℓ_s	: Stroke length	(mm)
n_1	: Number of reciprocations per minute	(min ⁻¹)
ℓ	: Ball screw lead	(mm)

■ f_c : Contact Factor

If two inner blocks are used in close contact with each other with models KR-B/D, multiply the basic load rating by the corresponding contact factor indicated in Table 8.

Table 8: Contact Factor (f_c)

Inner block types	Contact factor f_c
Model KR-B Model KR-D	0.81

■ f_w : Load Factor

Table 9 shows load factors.

Table 9: Load Factor (f_w)

Vibrations/impacts	Speed(V)	f_w
Faint	Very low $V \leq 0.25$ m/s	1 to 1.2
Weak	Slow $0.25 < V \leq 1$ m/s	1.2 to 1.5
Medium	Medium $1 < V \leq 2$ m/s	1.5 to 2
Strong	High $V > 2$ m/s	2 to 3.5

■K: Moment Equivalent Factor (LM Guide Unit)

When Model KR travels under a moment, the distribution of load applied to the LM Guide is locally large (see **A 1-40**). In such cases, calculate the load by multiplying the moment value by the corresponding moment equivalent factor indicated in Table 10.

Symbols K_A , K_B , and K_C indicate the moment equivalent loads in the M_A , M_B , and M_C directions, respectively.

Table 10: Equivalent Moment Factor (K)

Model No.	K_A	K_B	K_C
KR15-A	3.2×10^{-1}	3.2×10^{-1}	9.09×10^{-2}
KR15-B	5.96×10^{-2}	5.96×10^{-2}	9.09×10^{-2}
KR20-A	2.4×10^{-1}	2.4×10^{-1}	7.69×10^{-2}
KR20-B	4.26×10^{-2}	4.26×10^{-2}	7.69×10^{-2}
KR26-A	1.73×10^{-1}	1.73×10^{-1}	5.88×10^{-2}
KR26-B	3.06×10^{-2}	3.06×10^{-2}	5.88×10^{-2}
KR30H-A	1.51×10^{-1}	1.51×10^{-1}	4.78×10^{-2}
KR30H-B	2.76×10^{-2}	2.76×10^{-2}	4.78×10^{-2}
KR30H-C	2.77×10^{-1}	2.77×10^{-1}	4.78×10^{-2}
KR30H-D	3.99×10^{-2}	3.99×10^{-2}	4.78×10^{-2}
KR33-A	1.51×10^{-1}	1.51×10^{-1}	4.93×10^{-2}
KR33-B	2.57×10^{-2}	2.57×10^{-2}	4.93×10^{-2}
KR33-C	2.77×10^{-1}	2.77×10^{-1}	4.93×10^{-2}
KR33-D	3.55×10^{-2}	3.55×10^{-2}	4.93×10^{-2}
KR45H-A	9.83×10^{-2}	9.83×10^{-2}	3.45×10^{-2}
KR45H-B	1.87×10^{-2}	1.87×10^{-2}	3.45×10^{-2}
KR45H-C	1.83×10^{-1}	1.83×10^{-1}	3.45×10^{-2}
KR45H-D	2.81×10^{-2}	2.81×10^{-2}	3.45×10^{-2}
KR46-A	1.01×10^{-1}	1.01×10^{-1}	3.38×10^{-2}
KR46-B	1.78×10^{-2}	1.78×10^{-2}	3.38×10^{-2}
KR46-C	1.85×10^{-1}	1.85×10^{-1}	3.38×10^{-2}
KR46-D	2.5×10^{-2}	2.5×10^{-2}	3.38×10^{-2}
KR55-A	8.63×10^{-2}	8.63×10^{-2}	2.83×10^{-2}
KR55-B	1.53×10^{-2}	1.53×10^{-2}	2.83×10^{-2}
KR65-A	7.55×10^{-2}	7.55×10^{-2}	2.14×10^{-2}
KR65-B	1.35×10^{-2}	1.35×10^{-2}	2.14×10^{-2}

Note: The values for models KR-B/D indicate the values when double inner blocks are used in close contact with each other.

Accuracy Standards

The accuracy standards of Model KR are defined in terms of positioning repeatability, positioning accuracy, running parallelism (vertical direction) and backlash.

Positioning Repeatability

Command the position to a given arbitrary point. Measure the position and repeat seven times from the same direction. Record the difference between the largest and smallest values. Conduct the same test at three points: the middle of the stroke, and at both the approximate maximum and minimum positions of travel. Express the maximum difference value of the three measurements divided by 2 with a $\pm$ symbol.

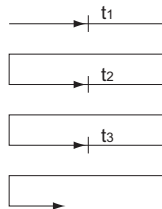


Fig. 6: Positioning Repeatability

Positioning Accuracy

Using the maximum stroke as the reference length, express the maximum error between the actual distance traveled from the reference point and the command value in an absolute value as positioning accuracy.

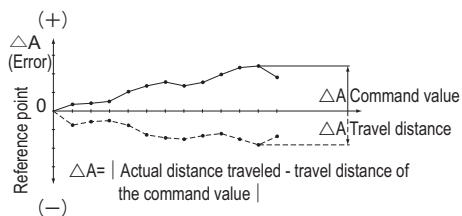


Fig. 7: Positioning Accuracy

Running Parallelism (Vertical Direction)

Place a straightedge on the surface table where Model KR is mounted, measure most of the travel distance of the inner block using a test indicator. Use the maximum difference among the readings within the travel distance as the running parallelism measurement.

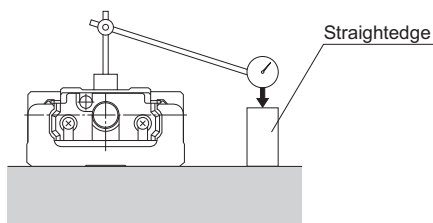


Fig. 8: Running Parallelism

Backlash

Feed and slightly move the inner block and read the measurement on the test indicator as the reference value. Subsequently, apply a load to the inner block from the same direction (table feed direction), and then release the inner block from the load. Use the difference between the reference value and the return as the backlash measurement.

Perform this measurement in the center and near both ends, and use the maximum value as the measurement value.

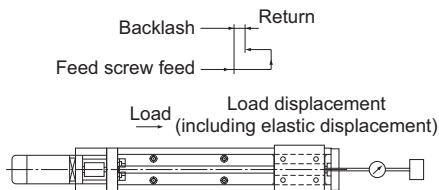


Fig. 9: Backlash

The accuracies of Model KR are classified into Normal grade (no symbol), High Accuracy grade (H) and Precision grade (P). Tables below show standards for all the accuracies.

Table 11: Normal Grade (No Symbol)

Unit: mm

Model No.	Stroke ¹	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical direction)	Backlash	Starting torque (N·cm)
KR20	30	100	±0.01	No standard defined	No standard defined	0.02	0.5
	80	150					
	130	200					
KR26	60	150	±0.01	No standard defined	No standard defined	0.02	1.5
	110	200					
	160	250					
KR30H	210	300	±0.01	No standard defined	No standard defined	0.02	7
	50	150					
	100	200					
	200	300					
	300	400					
KR33	400	500	±0.01	No standard defined	No standard defined	0.02	7
	500	600					
	600	700					
	200	340					
	300	440					
KR45H	400	540	±0.01	No standard defined	No standard defined	0.02	10
	500	640					
	600	740					
	700	840					
	800	940					
KR46	190	340	±0.01	No standard defined	No standard defined	0.02	10
	290	440					
	390	540					
	490	640					
	590	740					
KR55	690	840	±0.01	No standard defined	No standard defined	0.05	12
	790	940					
	800	980					
	900	1,080					
	1,000	1,180					
KR65	1,100	1,280	±0.01	No standard defined	No standard defined	0.05	12
	1,200	1,380					
	790	980					
	990	1,180					
	1,190	1,380	±0.012				15
	1,490	1,680					

¹ Indicates stroke length with one long inner block.

Notes: The evaluation method complies with THK standards.

Measurements are taken while using a motor provided by THK. For motor-wrap configuration, these values may not apply.

The starting torque refers to the values when the below greases are used.

Models KR20, KR26: THK AFA Grease

Models KR30H, KR33, KR45H, KR46, KR55, KR65: THK AFB-LF Grease

If highly viscous grease such as vacuum grease or clean room grease is used, the actual starting torque may exceed the corresponding value in the table. Use caution in selecting a motor.

Contact THK for accuracy information of units longer than the standard length.

Model KR15 is available in High Accuracy grade (H) and Precision grade (P) only.

Table 12: High Accuracy Grade (H)

Unit: mm

Model No.	Stroke¹	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical direction)	Backlash	Starting torque (N·cm)
KR15	25	75	±0.004	0.04	0.02	0.01	0.4
	50	100					
	75	125					
	100	150					
	125	175					
150	200						
KR20	30	100	±0.005	0.06	0.025	0.01	0.5
	80	150					
	130	200					
KR26	60	150	±0.005	0.06	0.025	0.01	1.5
	110	200					
	160	250					
	210	300					
KR30H	50	150	±0.005	0.06	0.025	0.02	7
	100	200		0.10	0.035		
	200	300					
	300	400					
	400	500					
500	600						
KR33	50	150	±0.005	0.06	0.025	0.02	7
	100	200		0.10	0.035		
	200	300					
	300	400					
	400	500					
	500	600					
600	700	0.14					
KR45H	200	340	±0.005	0.10	0.035	0.02	10
	300	440		0.12	0.04		
	400	540		0.15	0.05		
	500	640					
	600	740					
	700	840					
	800	940					
KR46	190	340	±0.005	0.10	0.035	0.02	10
	290	440		0.12	0.04		
	390	540		0.15	0.05		
	490	640					
	590	740					
	690	840					
KR55	790	940	±0.005	0.18	0.05	0.05	12
	900	1,080		0.25			
	1,000	1,180					
	1,100	1,280					
	1,200	1,380					
KR65	790	980	±0.008	0.18	0.05	0.05	12
	990	1,180		0.20			
	1,190	1,380					
	1,490	1,680					

¹ Indicates stroke length with one long inner block.

Notes: The evaluation method for accuracy standards complies with THK standards.

Measurements are taken while using a motor provided by THK. For motor-wrap configurations, these values may not apply. The starting torque refers to the values when the below greases are used.

KR15: THK AFF Grease

Models KR20, KR26: THK AFA Grease

Models KR30H, KR33, KR45H, KR46, KR55, KR65: THK AFB-LF Grease

If highly viscous grease such as vacuum grease or clean room grease is used, the actual starting torque may exceed the corresponding value in the table. Use caution in selecting a motor.

Contact THK for accuracy information of units longer than the standard length.

Table 13: Precision Grade (P)

Unit: mm

Model No.	Stroke¹	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical direction)	Backlash	Starting torque (N·cm)
KR15	25	75	±0.003	0.02	0.01	0.002	0.8
	50	100					
	75	125					
	100	150					
	125	175					
KR20	150	200	±0.003	0.02	0.01	0.003	1.2
	30	100					
	80	150					
KR26	130	200	±0.003	0.02	0.01	0.003	4
	60	150					
	110	200					
	160	250					
KR30H	210	300	±0.003	0.02	0.01	0.003	15
	50	150					
	100	200					
	200	300					
	300	400					
	400	500					
KR33	500	600	±0.003	0.025	0.015	0.003	15
	50	150					
	100	200					
	200	300					
	300	400					
	400	500					
	500	600					
KR45H	600	700	±0.003	0.025	0.015	0.003	15
	200	340					
	300	440		0.03	0.02		17
	400	540		±0.005	0.035		
500	640						
600	740						
KR46	700	840	±0.003	0.025	0.015	0.003	15
	800	940					
	190	340					
	290	440					
	390	540	±0.005	0.035	0.025		17
	490	640					
	590	740					
KR55	690	840	±0.005	0.035	0.025	0.003	17
	790	940					
	800	980					
KR65	900	1,080	±0.005	0.035	0.025	0.005	20
	1,000	1,180					
	790	980					
KR65	990	1,180	±0.005	0.035	0.025	0.005	20
	1,190	1,380					
	790	980					

¹ Indicates stroke length with one long inner block.

Notes: The evaluation method complies with THK standards.

Measurements are taken while using a motor provided by THK. For motor-wrap configuration, these values may not apply.

The starting torque refers to the values when the below greases are used.

KR15: THK AFF Grease

Models KR20, KR26: THK AFA Grease

Models KR30H, KR33, KR45H, KR46, KR55, KR65: THK AFB-LF Grease

If highly viscous grease such as vacuum grease or clean room grease is used, the actual starting torque may exceed the corresponding value in the table. Use caution in selecting a motor.

Contact THK for accuracy information of units longer than the standard length.

Model Number Coding

Model No.	Ball screw lead	Inner block type	QZ specification	Stroke	Accuracy grade
KR33	10	A	QZ	0275	P
①	②	③	④	⑤	⑥

KR15	01: 1 mm	A	No symbol : No QZ	0020: 20 mm	No symbol: Normal grade
KR20	02: 2 mm	B	QZ	0025: 25 mm	H: High Accuracy grade
KR26	05: 5 mm	C	QZA	to	P: Precision grade
KR30H	06: 6 mm	D	QZB	1490: 1,490 mm	
KR33	10: 10 mm		QZAD		
KR45H	20: 20 mm				
KR46	25: 25 mm				
KR55					
KR65					

QZ specification ④ can be selected on the following models.

KR33 (→ **A2-158**)

KR46 (→ **A2-174**)

KR55 (→ **A2-182**)

KR65 (→ **A2-188**)

Note: It cannot be selected for KR15, KR20, KR26, KR30H, KR3305, and KR45H.

If QZ, QZA, QZB, or QZAD is selected for QZ specification ④, specify a stroke incorporating QZ. (→ **A2-193**)

If "2: with a bellows" has been selected for Cover ⑧, specify a stroke incorporating the bellows. (→ **A2-204**)

The available ball screw leads differ depending on the model.

KR15: "01," "02"

KR20: "01," "06"

KR26: "02," "06"

KR30H: "05," "06," "10"

KR33: "05," "06," "10"

KR45H: "05," "10," "20"

KR46: "05," "10," "20"

KR55: "20"

KR65: "25"

With/without a motor	Cover	Sensor	Housing A/ Intermediate flange
0	1	B	AQ

⑦

With direct coupling
0: Direct coupling (without motor)
1: Direct coupling (THK will purchase and mount the motor you specify)
With motor wrap
R1: Non-standard side wrap (without motor)
R2: Standard side wrap (without motor)
R3: Bottom side wrap (without motor)
R4: Non-standard side wrap (THK will purchase and mount the motor you specify)
R5: Standard side wrap (THK will purchase and mount the motor you specify)
R6: Bottom side wrap (THK will purchase and mount the motor you specify)

⑧

0: Without cover
1: With cover
2: With bellows

⑨

0: None
1
2
6
7
B
E
H
L
J
M

⑩

With direct coupling	With motor wrap
A0	WN-05D
AN	WP-08D
AP	WP-08K
AQ	WP-08M
AR	WQ-08D
AS	WQ-08K
AT	WQ-08M
AU	WV-14M
AV	WY-11M
AY	WY-14M
AZ	WZ-16M
A5	WZ-19M
A6	W5-19M
10	
20	
30	
40	
60	

If QZ specification ④ "QZ," "QZA," "QZB," or "QZAD" is selected, "2: With bellows" cannot be selected.

If "0" is selected:

No coupling will be attached. Please specify if a coupling is required when ordering.

If "R1," "R2," or "R3" is selected:

A timing pulley and timing belt will be included.

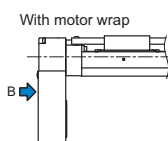
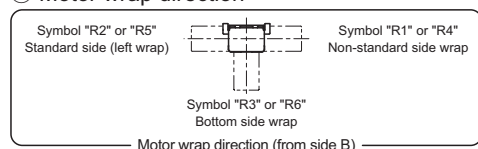
If "1," "R4," "R5," or "R6" is selected:

The designated motor will be mounted. Please specify the motor cable direction separately.

Please select an option for ⑩ Housing A/intermediate flange that matches the specified motor.

Note: This product is compatible with motors from various manufacturers. Contact THK for details.

⑦ Motor wrap direction

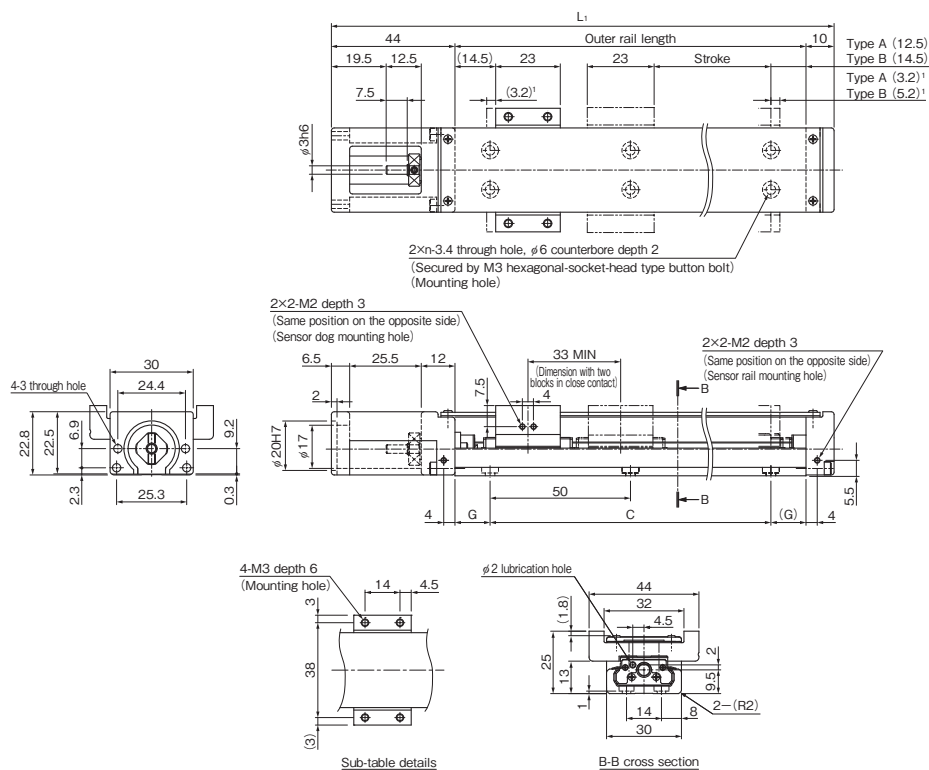


KR15 With Cover, Direct Motor Coupling

Model KR15□□A (with a Single Long Block)

Model KR15□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
25 (31.4)	□	75	129	50	12.5	2	0.25	□
50 (56.4)	□	100	154	50	25	2	0.28	□
75 (81.4)	40 (48.4)	125	179	100	12.5	3	0.32	0.39
100 (106.4)	65 (73.4)	150	204	100	25	3	0.35	0.42
125 (131.4)	90 (98.4)	175	229	150	12.5	4	0.38	0.45
150 (156.4)	115 (123.4)	200	254	150	25	4	0.41	0.48

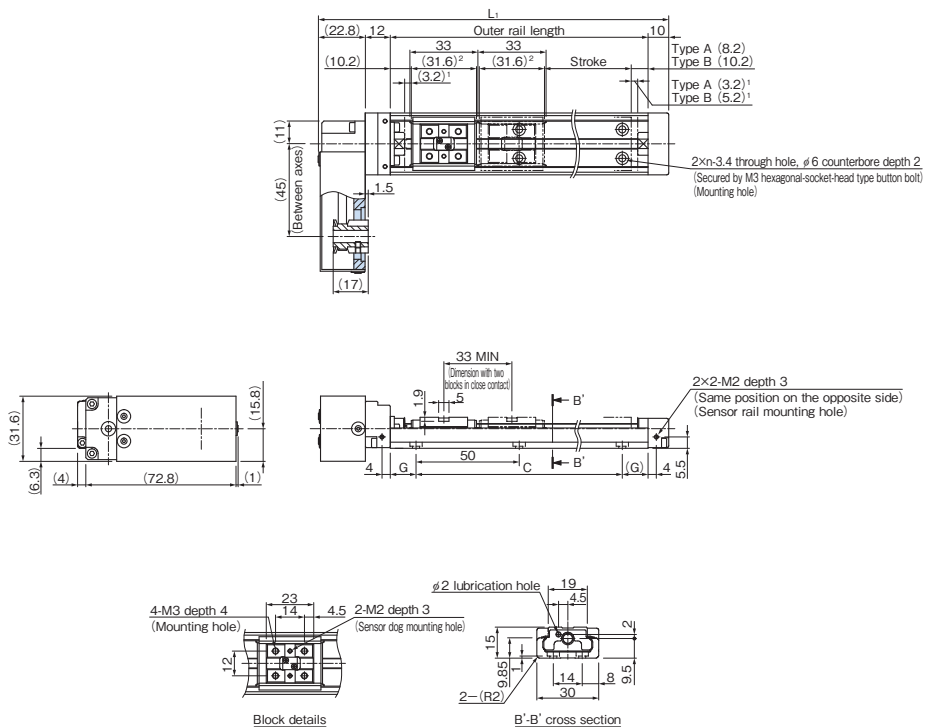
¹ Indicates a value when two inner blocks are in close contact with each other.

KR15 Without Cover, Motor Wrap

Model KR15□□A (with a Single Long Block)

Model KR15□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 64.6 mm (total) for a KR15 with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
25 (31.4)	□	75	119.8	50	12.5	2	0.38	□
50 (56.4)	□	100	144.8	50	25	2	0.41	□
75 (81.4)	40 (48.4)	125	169.8	100	12.5	3	0.44	0.48
100 (106.4)	65 (73.4)	150	194.8	100	25	3	0.47	0.51
125 (131.4)	90 (98.4)	175	219.8	150	12.5	4	0.5	0.54
150 (156.4)	115 (123.4)	200	244.8	150	25	4	0.53	0.57

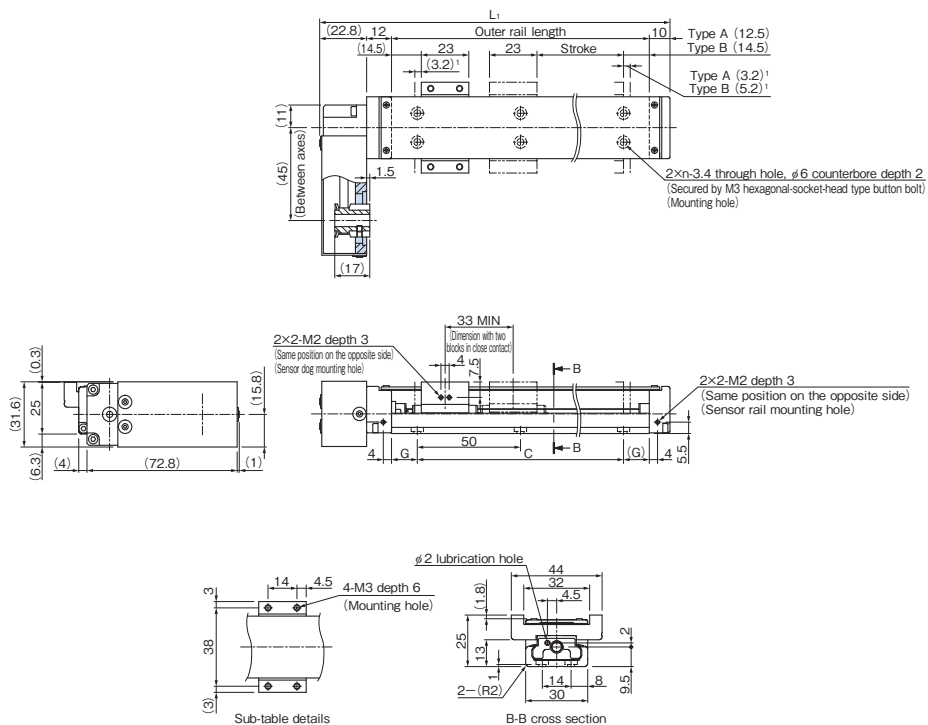
¹ Indicates a value when two inner blocks are in close contact with each other.

KR15 With Cover, Motor Wrap

Model KR15□□A (with a Single Long Block)

Model KR15□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
25 (31.4)	□	75	119.8	50	12.5	2	0.43	□
50 (56.4)	□	100	144.8	50	25	2	0.46	□
75 (81.4)	40 (48.4)	125	169.8	100	12.5	3	0.49	0.56
100 (106.4)	65 (73.4)	150	194.8	100	25	3	0.53	0.6
125 (131.4)	90 (98.4)	175	219.8	150	12.5	4	0.56	0.63
150 (156.4)	115 (123.4)	200	244.8	150	25	4	0.59	0.66

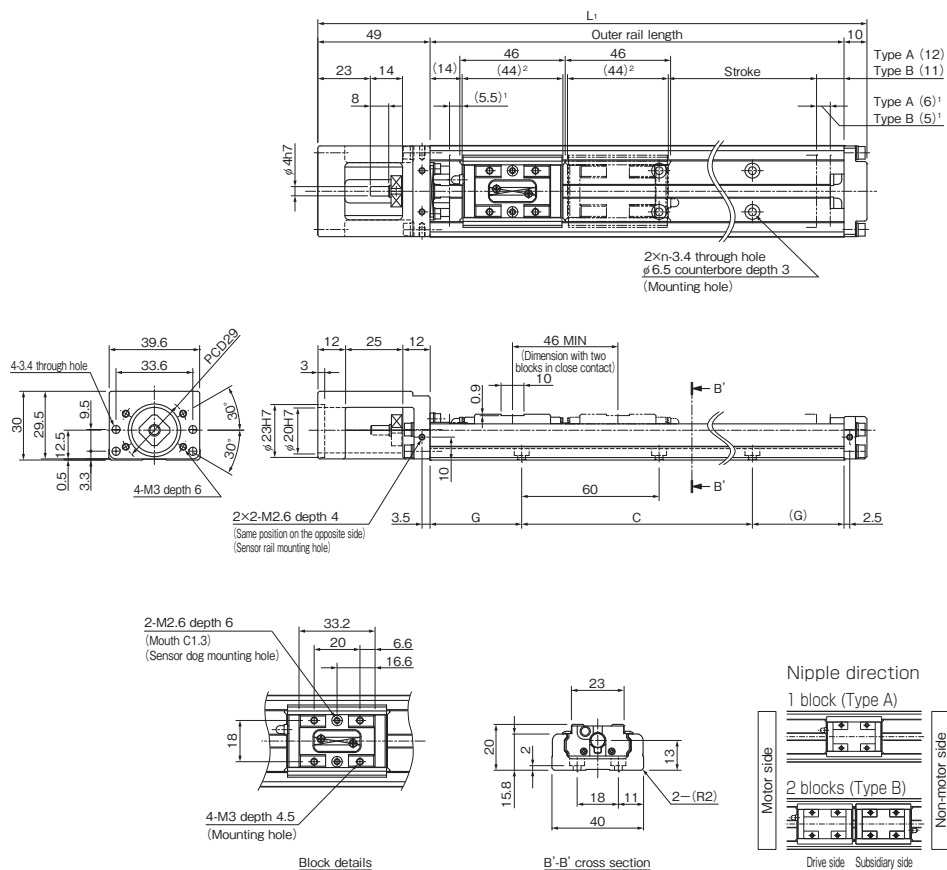
¹ Indicates a value when two inner blocks are in close contact with each other.

KR20 Without Cover, Direct Motor Coupling

Model KR20□□A (with a Single Long Block)

Model KR20□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

¹ This indicates the block length when calculating the possible stroke range.
It is 90 mm (total) for a KR20 with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
30 (41.5)	□	100	159	60	20	2	0.48	□
80 (91.5)	35 (45.5)	150	209	120	15	3	0.61	0.69
130 (141.5)	85 (95.5)	200	259	120	40	3	0.75	0.83

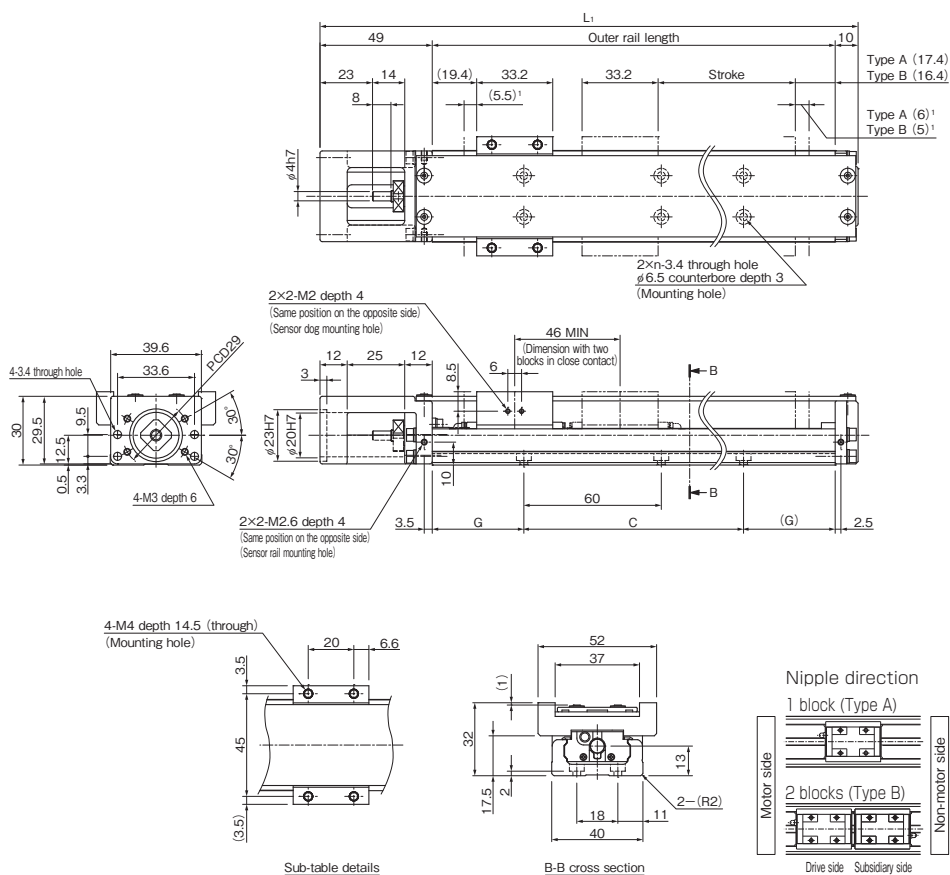
¹ Indicates a value when two inner blocks are in close contact with each other.

KR20 With Cover, Direct Motor Coupling

Model KR20□□A (with a Single Long Block)

Model KR20□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
30 (41.5)	□	100	159	60	20	2	0.56	□
80 (91.5)	35 (45.5)	150	209	120	15	3	0.71	0.84
130 (141.5)	85 (95.5)	200	259	120	40	3	0.85	0.98

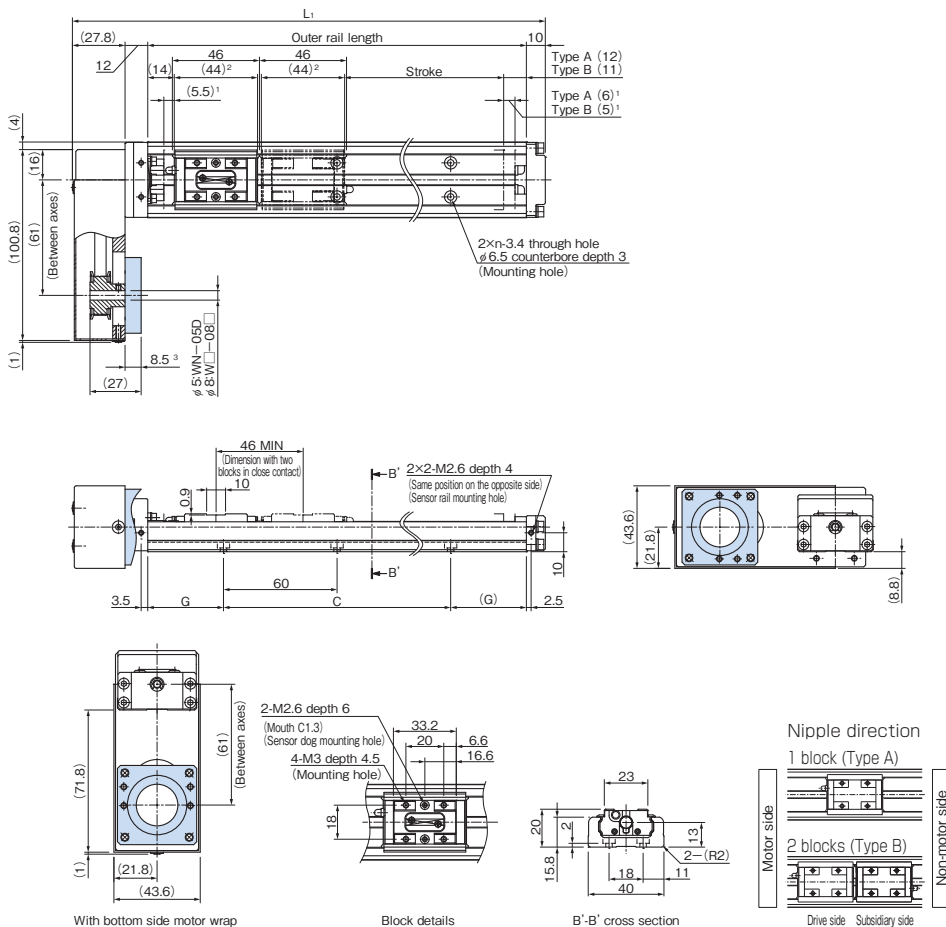
¹ Indicates a value when two inner blocks are in close contact with each other.

KR20 Without Cover, Motor Wrap

Model KR20□□A (with a Single Long Block)

Model KR20□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



With bottom side motor wrap

Block details

B'-B' cross section

¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 90 mm (total) for a KR20 with two blocks in close contact with each other (Type B).

³ Dimensions will vary if 'WN' is selected for model number coding. ⁴ Housing A/intermediate ⁵ angle. For details, see **A2-227**.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
30 (41.5)	□	100	149.8	60	20	2	0.73	□
80 (91.5)	35 (45.5)	150	199.8	120	15	3	0.87	0.95
130 (141.5)	85 (95.5)	200	249.8	120	40	3	1.01	1.09

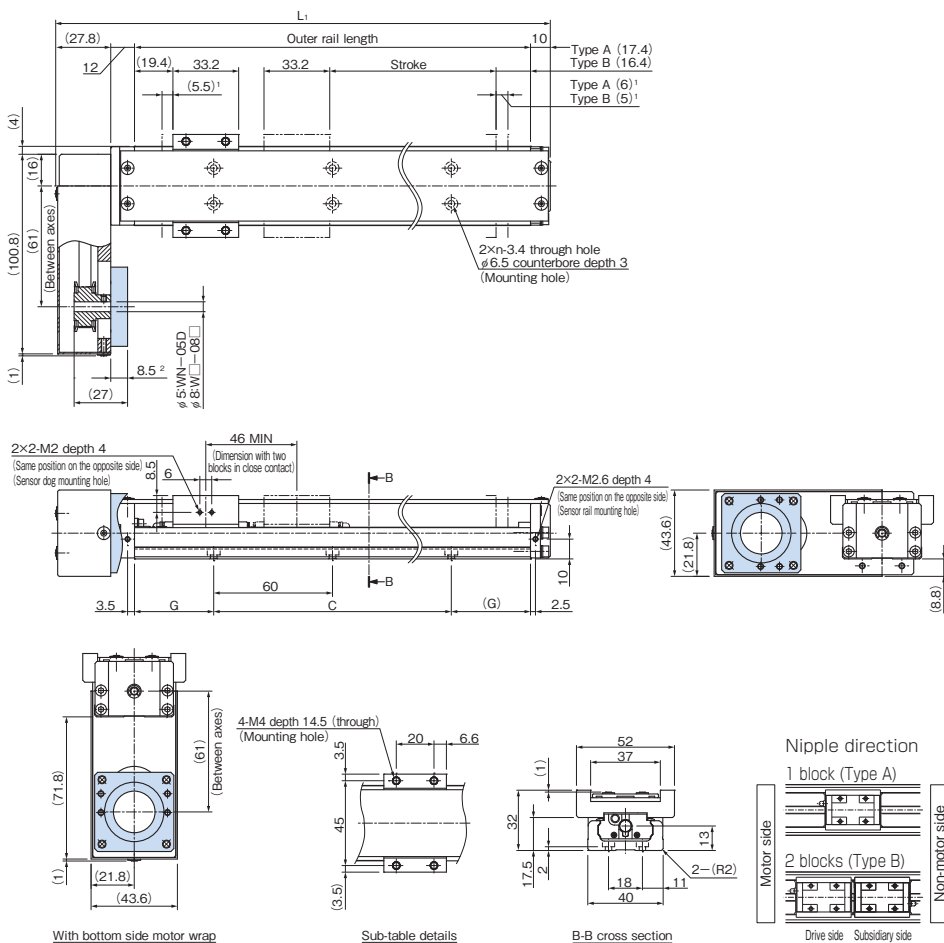
¹ Indicates a value when two inner blocks are in close contact with each other.

KR20 With Cover, Motor Wrap

Model KR20□□A (with a Single Long Block)

Model KR20□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² Dimensions will vary if "WN" is selected for model number coding. ³ Housing A/intermediate ⁴ange. For details, see **A2-227**.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
30 (41.5)	□	100	149.8	60	20	2	0.82	□
80 (91.5)	35 (45.5)	150	199.8	120	15	3	0.96	1.09
130 (141.5)	85 (95.5)	200	249.8	120	40	3	1.11	1.24

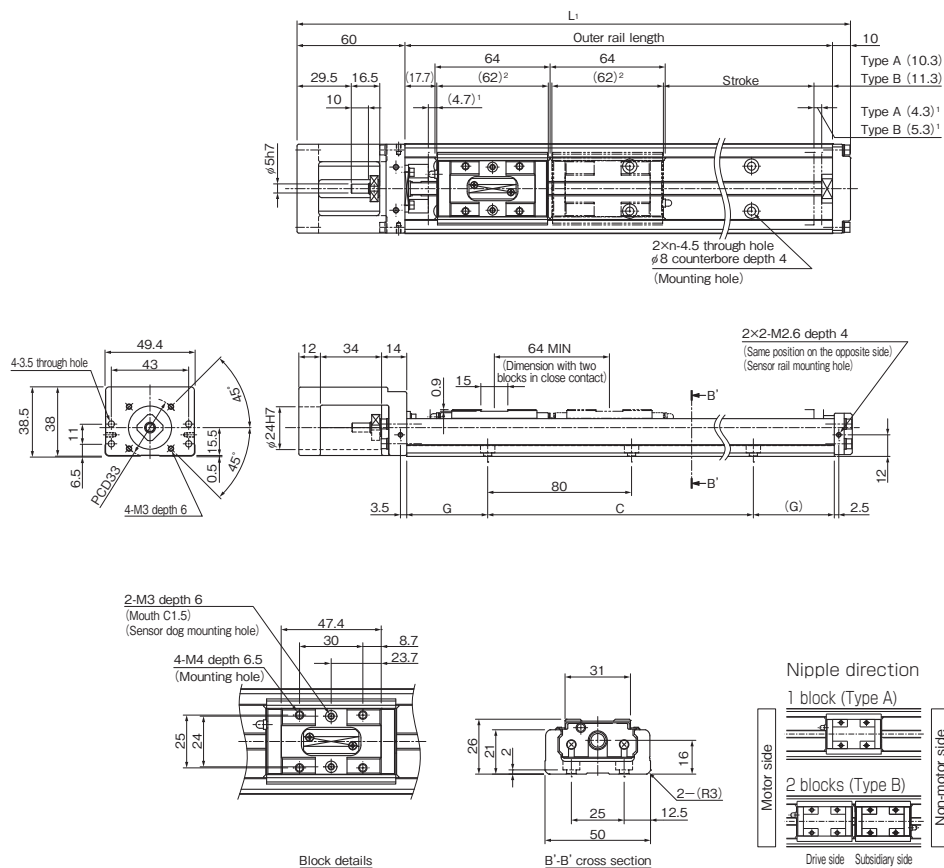
¹ Indicates a value when two inner blocks are in close contact with each other.

KR26 Without Cover, Direct Motor Coupling

Model KR26□□A (with a Single Long Block)

Model KR26□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.
It is 126 mm (total) for a KR26 with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
60 (69)	□	150	220	80	35	2	1.04	□
110 (119)	45 (55)	200	270	160	20	3	1.25	1.44
160 (169)	95 (105)	250	320	160	45	3	1.46	1.65
210 (219)	145 (155)	300	370	240	30	4	1.67	1.86

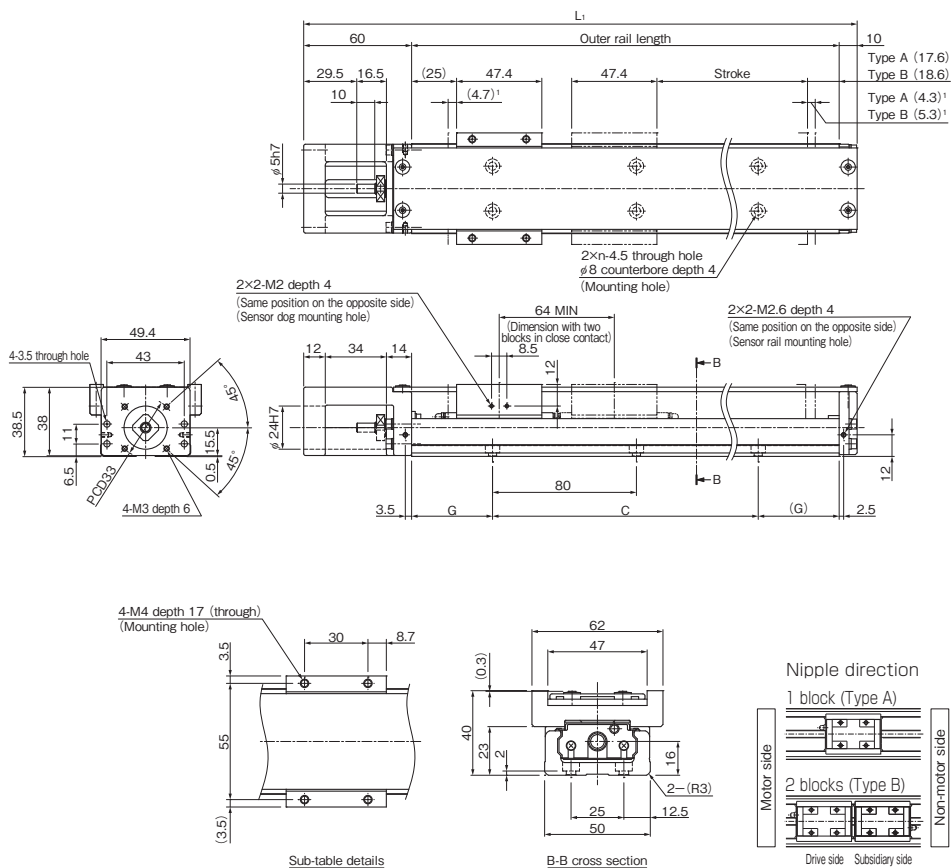
¹ Indicates a value when two inner blocks are in close contact with each other.

KR26 With Cover, Direct Motor Coupling

Model KR26□□A (with a Single Long Block)

Model KR26□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
60 (69)	□	150	220	80	35	2	1.2	□
110 (119)	45 (55)	200	270	160	20	3	1.42	1.7
160 (169)	95 (105)	250	320	160	45	3	1.65	1.93
210 (219)	145 (155)	300	370	240	30	4	1.87	2.15

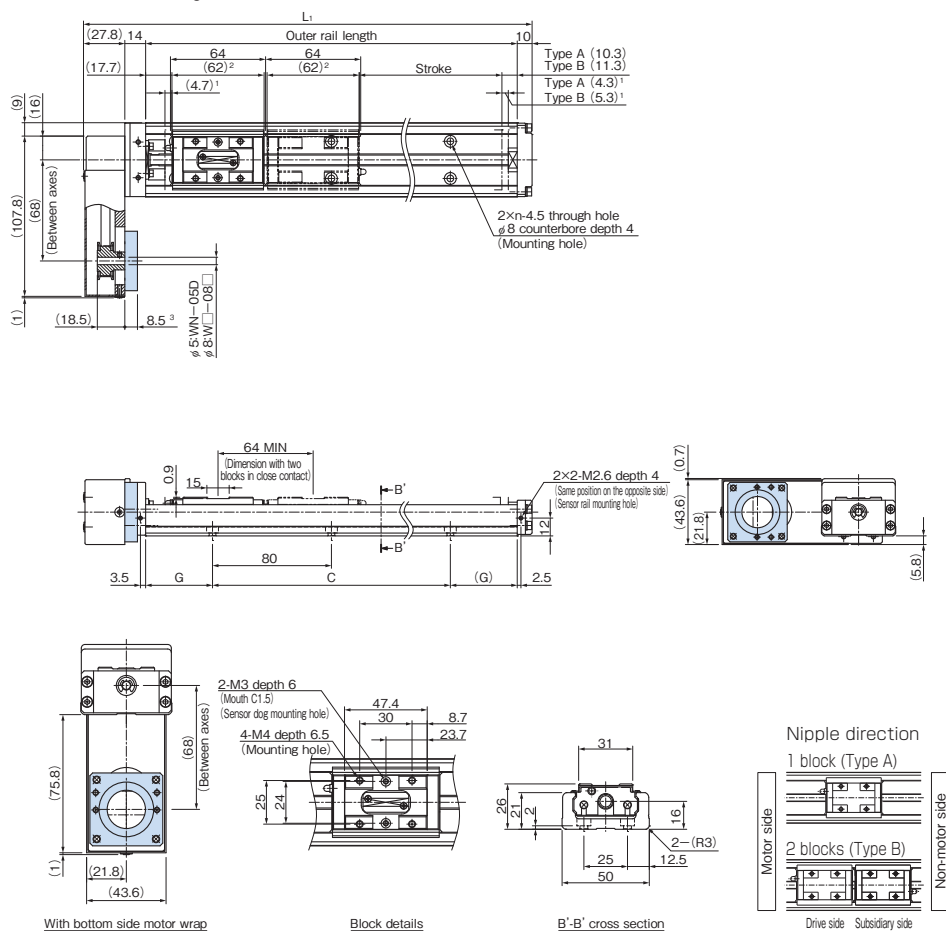
¹ Indicates a value when two inner blocks are in close contact with each other.

KR26 Without Cover, Motor Wrap

Model KR26□□A (with a Single Long Block)

Model KR26□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



With bottom side motor wrap

Block details

B'-B' cross section

¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 126 mm (total) for a KR26 with two blocks in close contact with each other (Type B).

³ Dimensions will vary if WN is selected for model number coding. Housing A/intermediate range. For details, see **A2-230**.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B ¹						Type A	Type B
60 (69)	□	150	201.8	80	35	2	1.26	□
110 (119)	45 (55)	200	251.8	160	20	3	1.47	1.66
160 (169)	95 (105)	250	301.8	160	45	3	1.69	1.88
210 (219)	145 (155)	300	351.8	240	30	4	1.9	2.09

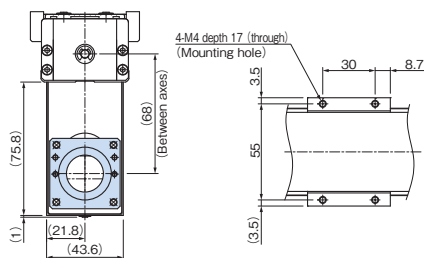
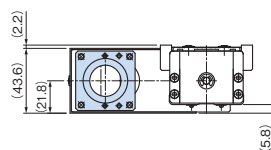
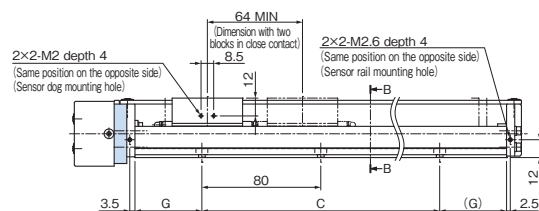
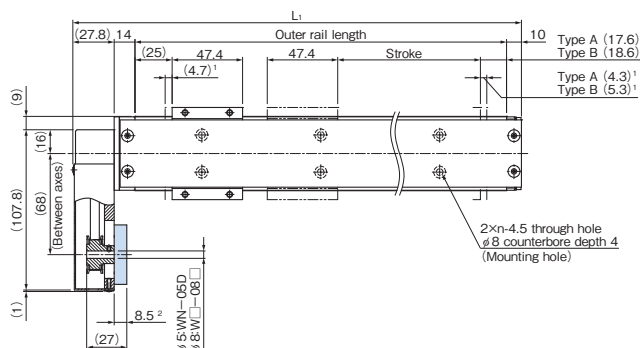
¹ Indicates a value when two inner blocks are in close contact with each other.

KR26 With Cover, Motor Wrap

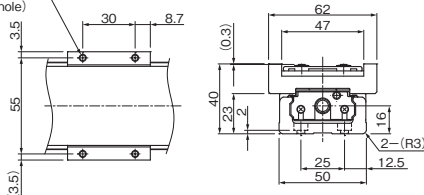
Model KR26□□A (with a Single Long Block)

Model KR26□□B (with Two Long Blocks)

For model number coding, see **A2-136**.

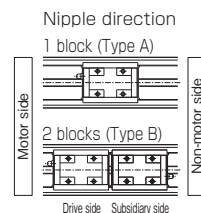


With bottom side motor wrap



Sub-table details

B-B cross section



¹ Distance between the mechanical stopper and the stroke starting position.

² Dimensions will vary if 3WN is selected for model number coding. □ Housing A/intermediate range. For details, see **A2-230**.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	n	Overall main unit mass (kg)	
Type A	Type B¹						Type A	Type B
60 (69)	□	150	201.8	80	35	2	1.43	□
110 (119)	45 (55)	200	251.8	160	20	3	1.65	1.93
160 (169)	95 (105)	250	301.8	160	45	3	1.87	2.15
210 (219)	145 (155)	300	351.8	240	30	4	2.1	2.38

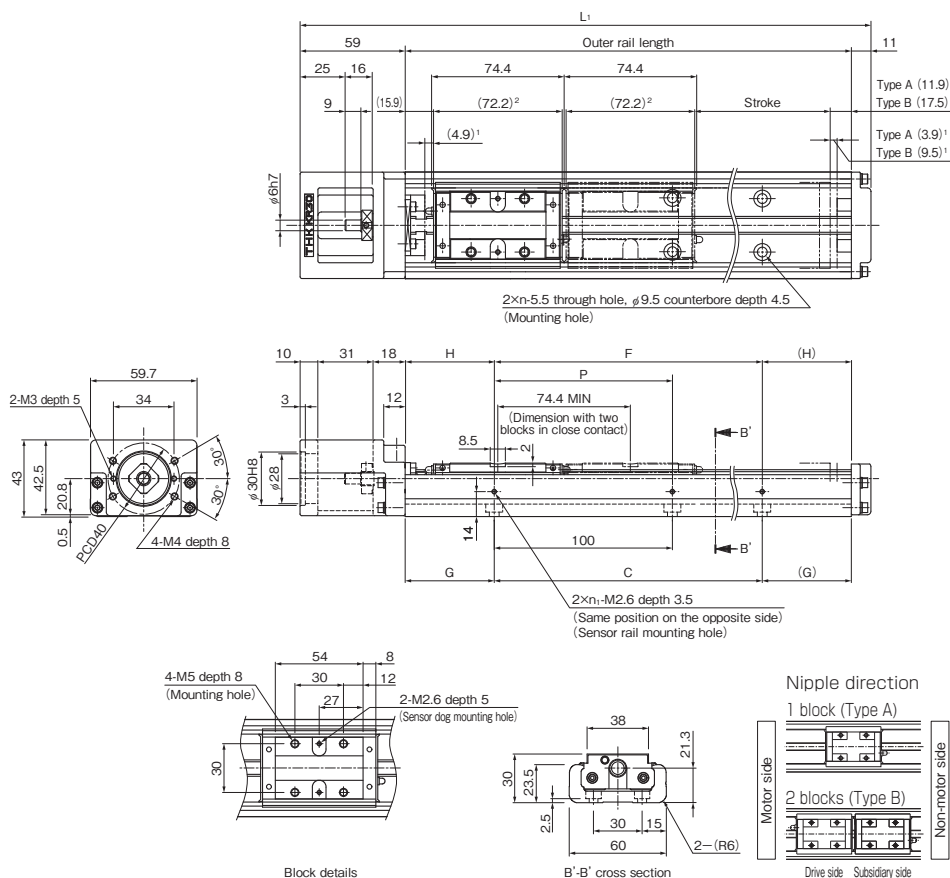
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H Without Cover, Direct Motor Coupling

Model KR30H□□A (with a Single Long Block)

Model KR30H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 146.6 mm (total) for a KR30H with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (58.8)	□	150	220	100	25	100	100	25	2	2	1.6	□
100 (108.8)	□	200	270	100	50	100	100	50	2	2	1.9	□
200 (208.8)	120 (134.4)	300	370	200	50	200	200	50	3	2	2.5	2.9
300 (308.8)	220 (234.4)	400	470	300	50	200	200	100	4	2	3	3.4
400 (408.8)	320 (334.4)	500	570	400	50	200	400	50	5	3	3.6	4
500 (508.8)	420 (434.4)	600	670	500	50	200	400	100	6	3	4.2	4.6

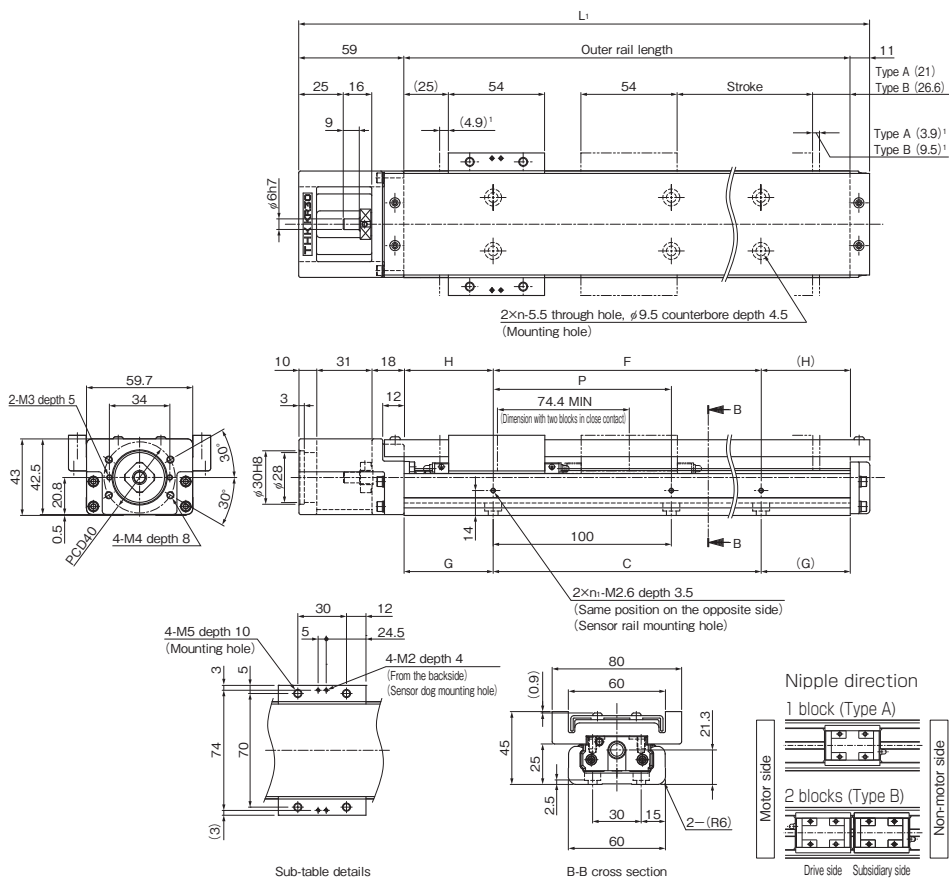
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H With Cover, Direct Motor Coupling

Model KR30H□□A (with a Single Long Block)

Model KR30H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (58.8)	□	150	220	100	25	100	100	25	2	2	1.9	□
100 (108.8)	□	200	270	100	50	100	100	50	2	2	2.2	□
200 (208.8)	120 (134.4)	300	370	200	50	200	200	50	3	2	2.8	3.4
300 (308.8)	220 (234.4)	400	470	300	50	200	200	100	4	2	3.4	4
400 (408.8)	320 (334.4)	500	570	400	50	200	400	50	5	3	4	4.6
500 (508.8)	420 (434.4)	600	670	500	50	200	400	100	6	3	4.6	5.2

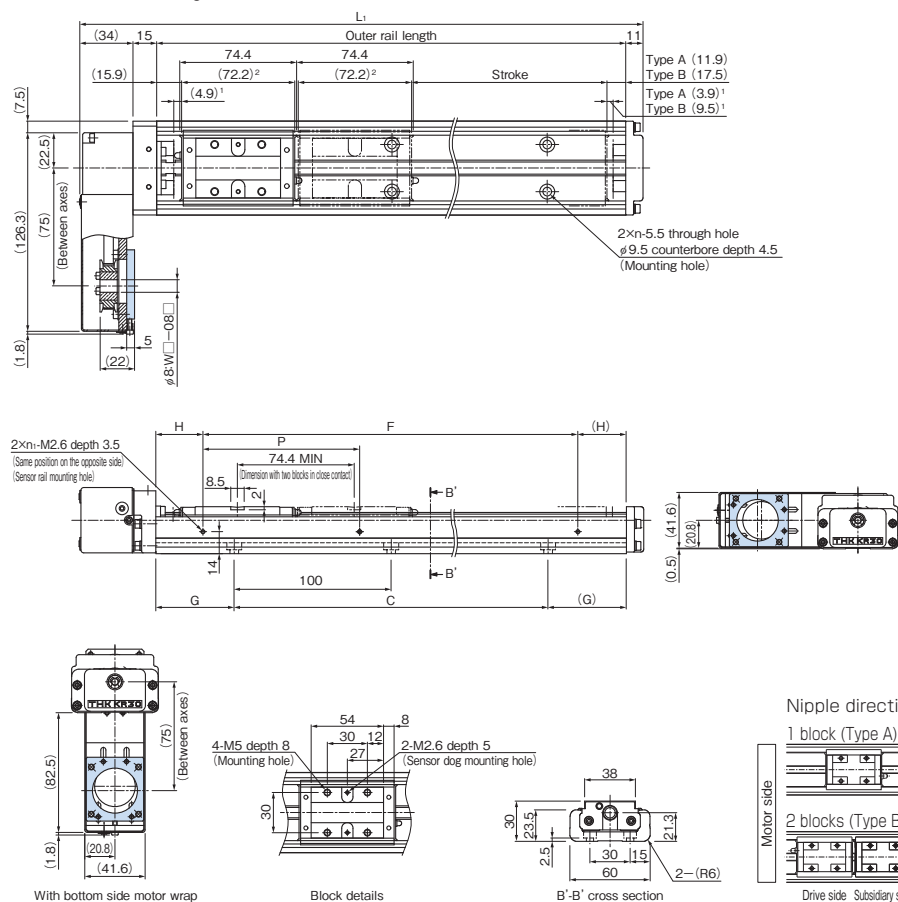
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H Without Cover, Motor Wrap

Model KR30H□□A (with a Single Long Block)

Model KR30H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 146.6 mm (total) for a KR30H with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (58.8)	□	150	210	100	25	100	100	25	2	2	1.9	□
100 (108.8)	□	200	260	100	50	100	100	50	2	2	2.2	□
200 (208.8)	120 (134.4)	300	360	200	50	200	200	50	3	2	2.8	3.2
300 (308.8)	220 (234.4)	400	460	300	50	200	200	100	4	2	3.4	3.8
400 (408.8)	320 (334.4)	500	560	400	50	200	400	50	5	3	3.9	4.3
500 (508.8)	420 (434.4)	600	660	500	50	200	400	100	6	3	4.5	4.9

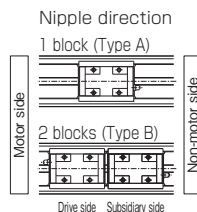
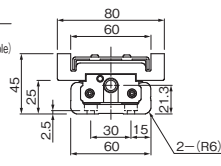
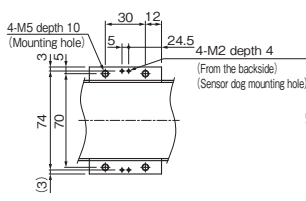
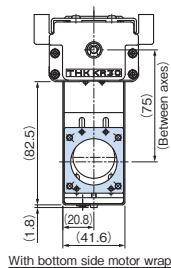
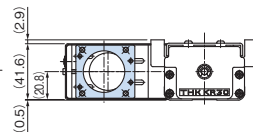
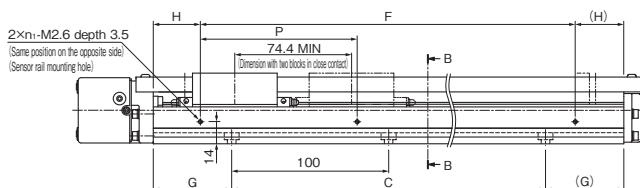
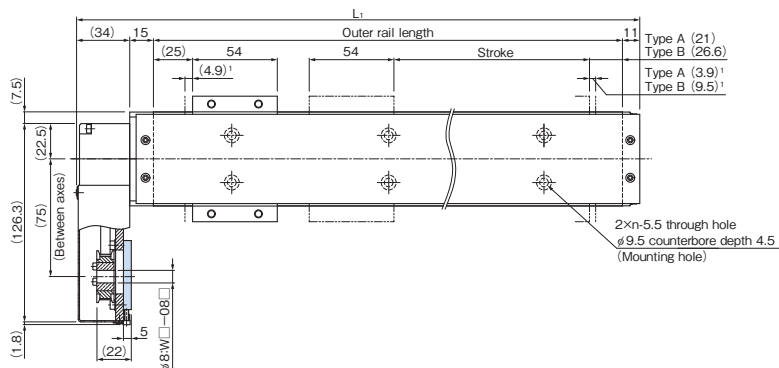
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H With Cover, Motor Wrap

Model KR30H□□A (with a Single Long Block)

Model KR30H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



With bottom side motor wrap

Sub-table details

B-B cross section

¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (58.8)	□	150	210	100	25	100	100	25	2	2	2.2	□
100 (108.8)	□	200	260	100	50	100	100	50	2	2	2.5	□
200 (208.8)	120 (134.4)	300	360	200	50	200	200	50	3	2	3.1	3.7
300 (308.8)	220 (234.4)	400	460	300	50	200	200	100	4	2	3.7	4.3
400 (408.8)	320 (334.4)	500	560	400	50	200	400	50	5	3	4.4	5
500 (508.8)	420 (434.4)	600	660	500	50	200	400	100	6	3	5	5.6

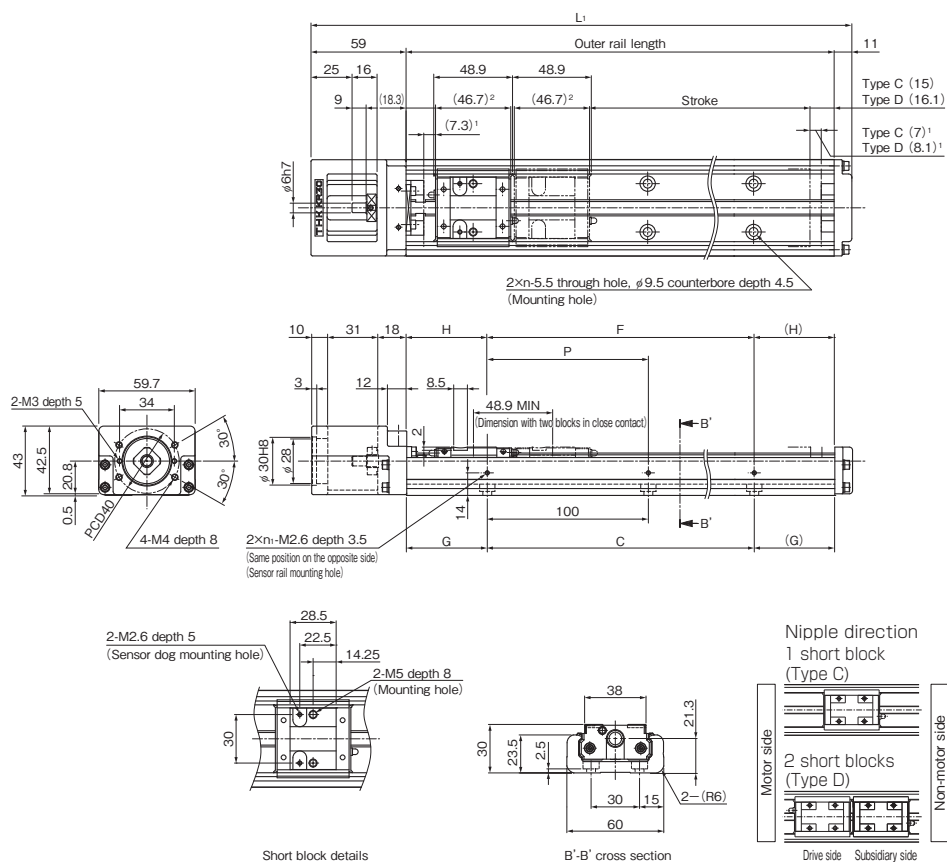
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H Without Cover, Direct Motor Coupling

Model KR30H□□C (with a Single Short Block)

Model KR30H□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the short block length when calculating the possible stroke range.

It is 95.6 mm (total) for a KR30H with two short blocks in close contact with each other (Type D).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type C	Type D ¹										Type C	Type D
70 (84.3)	20 (35.4)	150	220	100	25	100	100	25	2	2	1.4	1.6
120 (134.3)	70 (85.4)	200	270	100	50	100	100	50	2	2	1.7	1.9
220 (234.3)	170 (185.4)	300	370	200	50	200	200	50	3	2	2.3	2.5
320 (334.3)	270 (285.4)	400	470	300	50	200	200	100	4	2	2.8	3
420 (434.3)	370 (385.4)	500	570	400	50	200	400	50	5	3	3.4	3.6
520 (534.3)	470 (485.4)	600	670	500	50	200	400	100	6	3	4	4.2

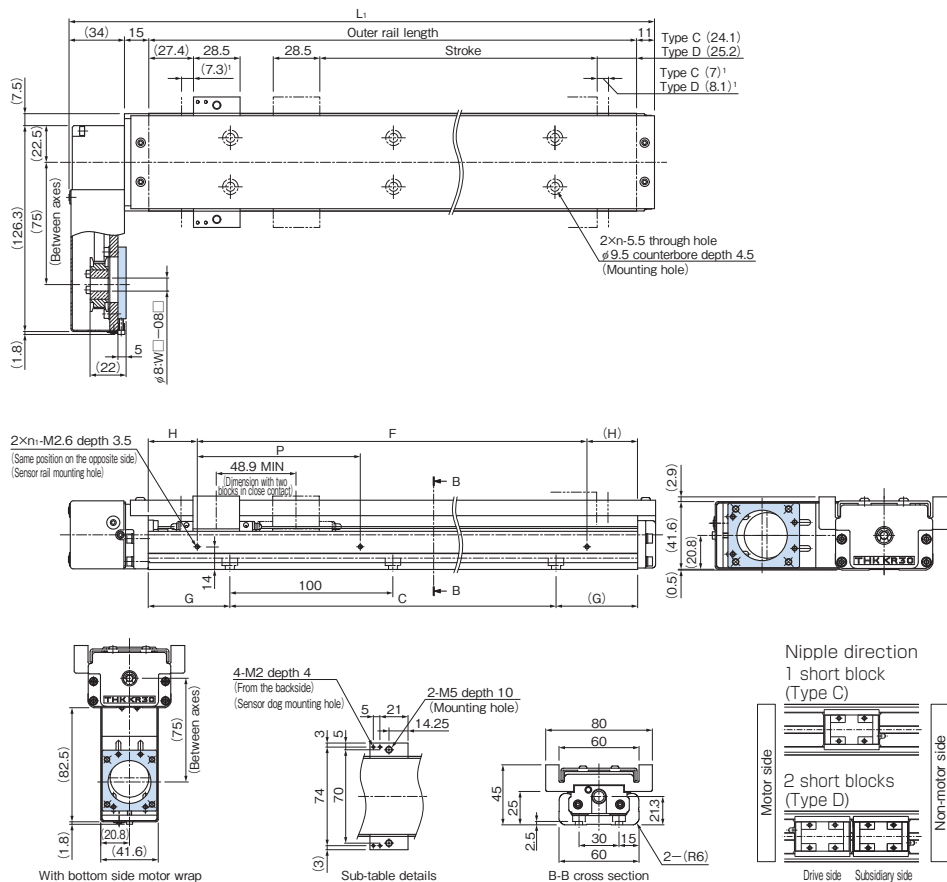
¹ Indicates a value when two inner blocks are in close contact with each other.

KR30H With Cover, Motor Wrap

Model KR30H□□C (with a Single Short Block)

Model KR30H□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type C	Type D¹										Type C	Type D
70 (84.3)	20 (35.4)	150	210	100	25	100	100	25	2	2	1.9	2.2
120 (134.3)	70 (85.4)	200	260	100	50	100	100	50	2	2	2.2	2.5
220 (234.3)	170 (185.4)	300	360	200	50	200	200	50	3	2	2.8	3.1
320 (334.3)	270 (285.4)	400	460	300	50	200	200	100	4	2	3.4	3.7
420 (434.3)	370 (385.4)	500	560	400	50	200	400	50	5	3	4.1	4.4
520 (534.3)	470 (485.4)	600	660	500	50	200	400	100	6	3	4.7	5

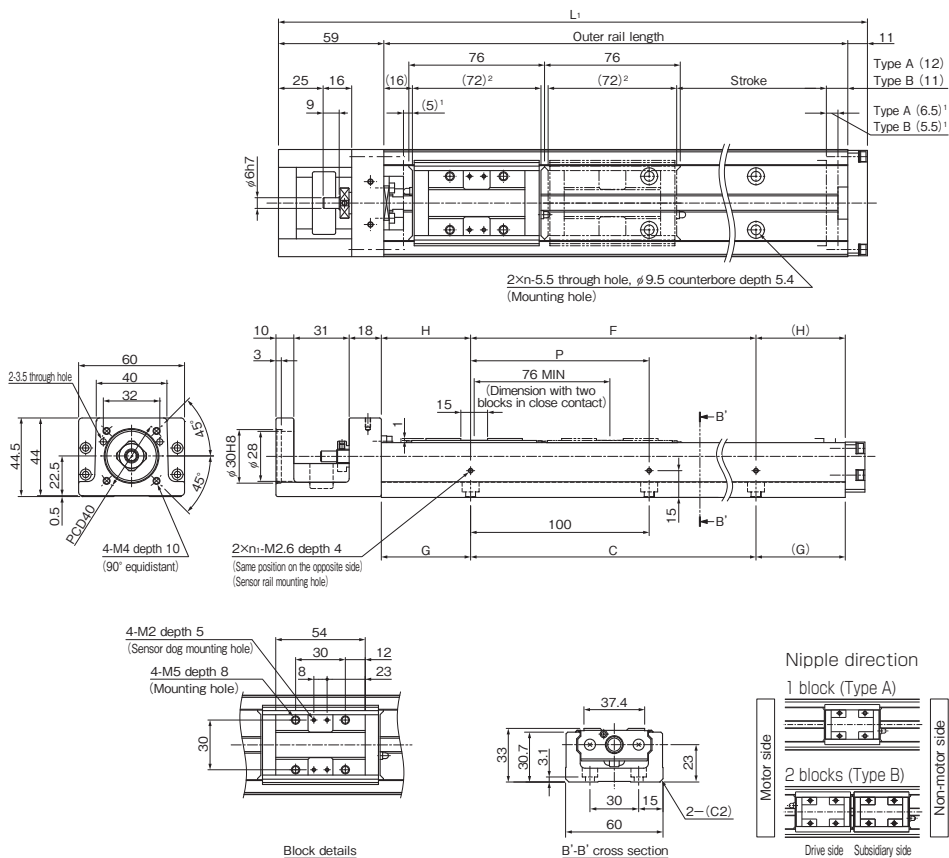
¹ Indicates a value when two inner blocks are in close contact with each other.

KR33 Without Cover, Direct Motor Coupling

Model KR33□□A (with a Single Long Block)

Model KR33□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 148 mm (total) for a KR33 with two blocks in close contact with each other (Type B, without QZ).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (61.5)	□	150	220	100	25	100	100	25	2	2	1.9	□
100 (111.5)	□	200	270	100	50	100	100	50	2	2	2.2	□
200 (211.5)	125 (135.5)	300	370	200	50	200	200	50	3	2	3	3.4
300 (311.5)	225 (235.5)	400	470	300	50	200	200	100	4	2	3.7	4.1
400 (411.5)	325 (335.5)	500	570	400	50	200	400	50	5	3	4.4	4.8
500 (511.5)	425 (435.5)	600	670	500	50	200	400	100	6	3	5.2	5.6
600 (611.5)	525 (535.5)	700	770	600	50	200	600	50	7	4	5.9	6.3

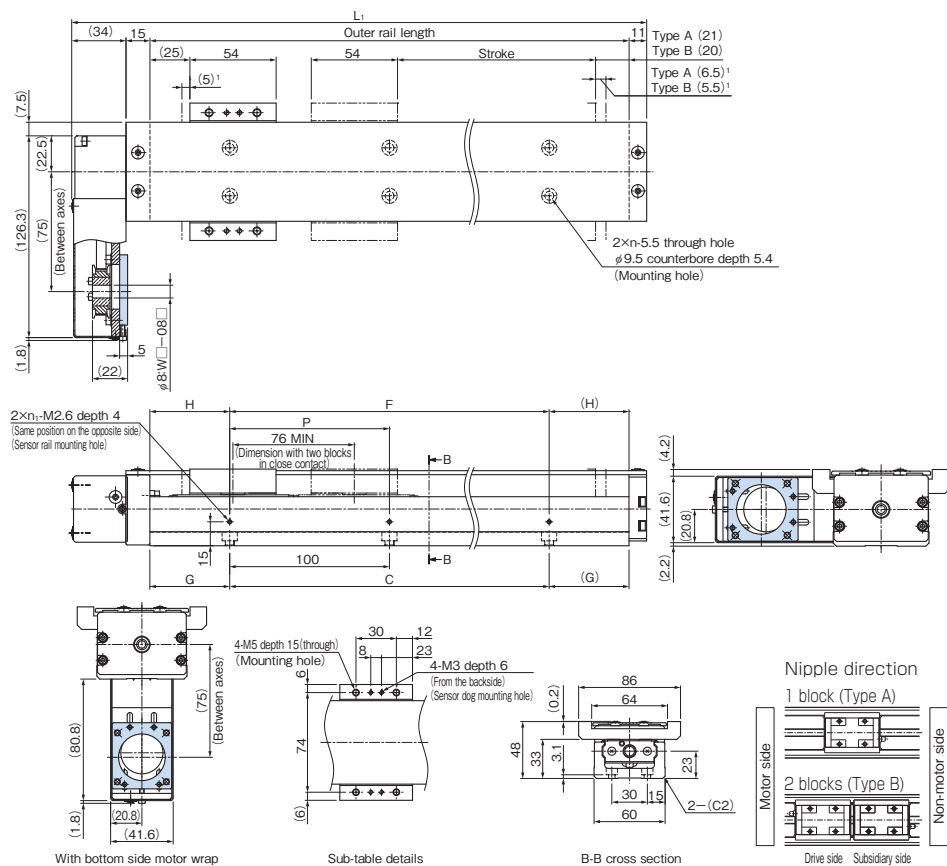
¹ Indicates a value when two inner blocks are in close contact with each other.

KR33 With Cover, Motor Wrap

Model KR33□□A (with a Single Long Block)

Model KR33□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹										Type A	Type B
50 (61.5)	□	150	210	100	25	100	100	25	2	2	2.5	□
100 (111.5)	□	200	260	100	50	100	100	50	2	2	2.9	□
200 (211.5)	125 (135.5)	300	360	200	50	200	200	50	3	2	3.6	4.2
300 (311.5)	225 (235.5)	400	460	300	50	200	200	100	4	2	4.4	5
400 (411.5)	325 (335.5)	500	560	400	50	200	400	50	5	3	5.2	5.8
500 (511.5)	425 (435.5)	600	660	500	50	200	400	100	6	3	5.9	6.5
600 (611.5)	525 (535.5)	700	760	600	50	200	600	50	7	4	6.7	7.3

¹ Indicates a value when two inner blocks are in close contact with each other.

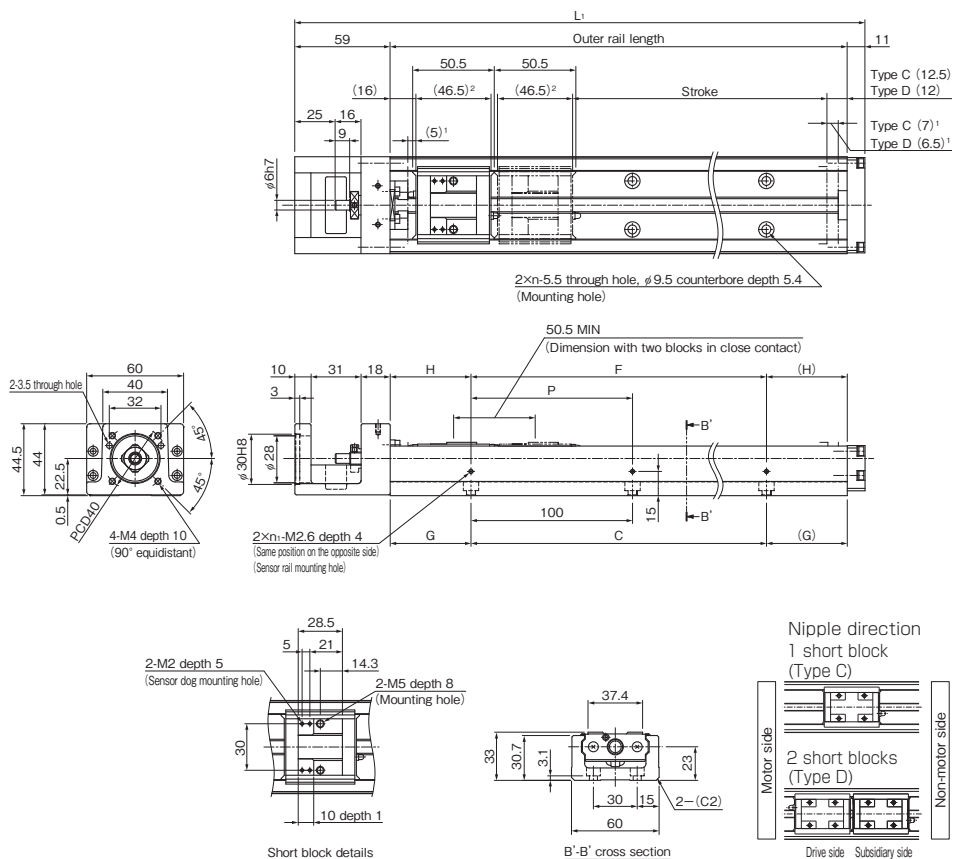
Note: It must be noted that the cover-mounting bolt is 0.2 mm higher than the top face of the sub-table.

KR33 Without Cover, Direct Motor Coupling

Model KR33□□C (with a Single Short Block)

Model KR33□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

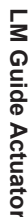
² This indicates the short block length when calculating the possible stroke range.

It is 97.2 mm (total) for a KR33 with two short blocks in close contact with each other (Type D, without QZ).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type C	Type D ¹										Type C	Type D
75 (87)	25 (36.5)	150	220	100	25	100	100	25	2	2	1.7	1.9
125 (137)	75 (86.5)	200	270	100	50	100	100	50	2	2	2	2.2
225 (237)	175 (186.5)	300	370	200	50	200	200	50	3	2	2.8	3
325 (337)	275 (286.5)	400	470	300	50	200	200	100	4	2	3.5	3.7
425 (437)	375 (386.5)	500	570	400	50	200	400	50	5	3	4.2	4.4
525 (537)	475 (486.5)	600	670	500	50	200	400	100	6	3	5	5.2
625 (637)	575 (586.5)	700	770	600	50	200	600	50	7	4	5.7	5.9

¹ Indicates a value when two inner blocks are in close contact with each other.

For model number coding, see **A2-136**.

¹ Distance between the mechanical stopper and the stroke starting position.

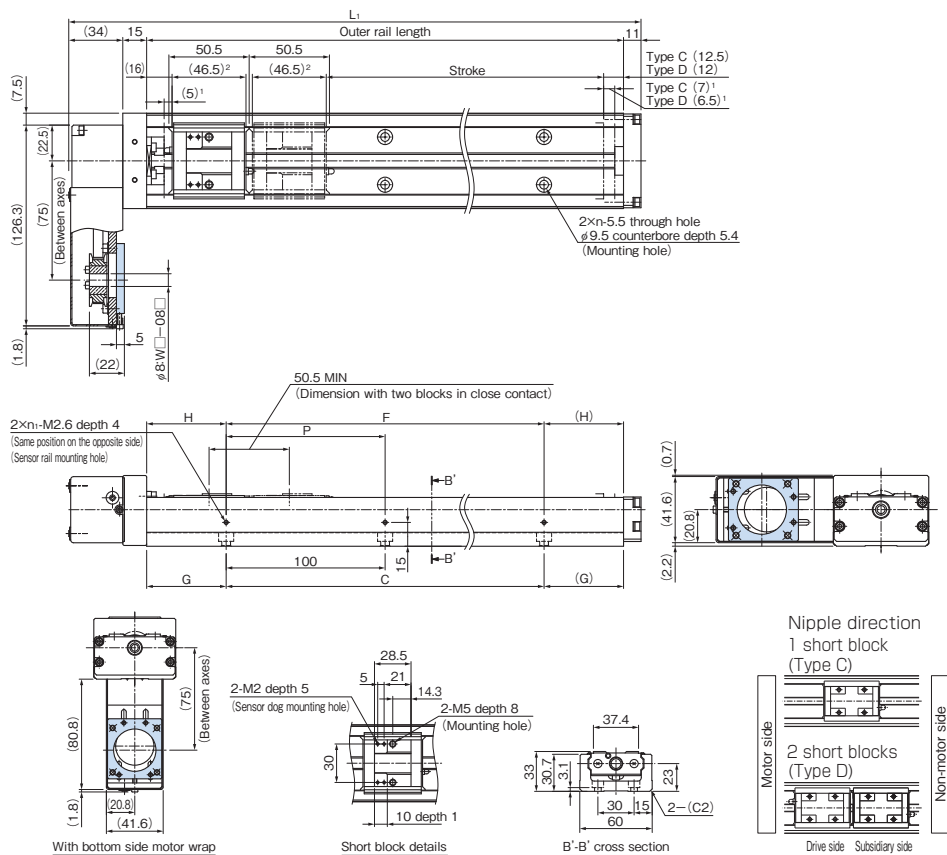
Note: It must be noted that the cover-mounting bolt is 0.2 mm higher than the top face of the sub-table.

KR33 Without Cover, Motor Wrap

Model KR33□□C (with a Single Short Block)

Model KR33□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the short block length when calculating the possible stroke range.

It is 97.2 mm (total) for a KR33 with two short blocks in close contact with each other (Type D, without QZ).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹										Type C	Type D
75 (87)	25 (36.5)	150	210	100	25	100	100	25	2	2	2	2.2
125 (137)	75 (86.5)	200	260	100	50	100	100	50	2	2	2.4	2.6
225 (237)	175 (186.5)	300	360	200	50	200	200	50	3	2	3.1	3.3
325 (337)	275 (286.5)	400	460	300	50	200	200	100	4	2	3.8	4
425 (437)	375 (386.5)	500	560	400	50	200	400	50	5	3	4.5	4.7
525 (537)	475 (486.5)	600	660	500	50	200	400	100	6	3	5.3	5.5
625 (637)	575 (586.5)	700	760	600	50	200	600	50	7	4	6	6.2

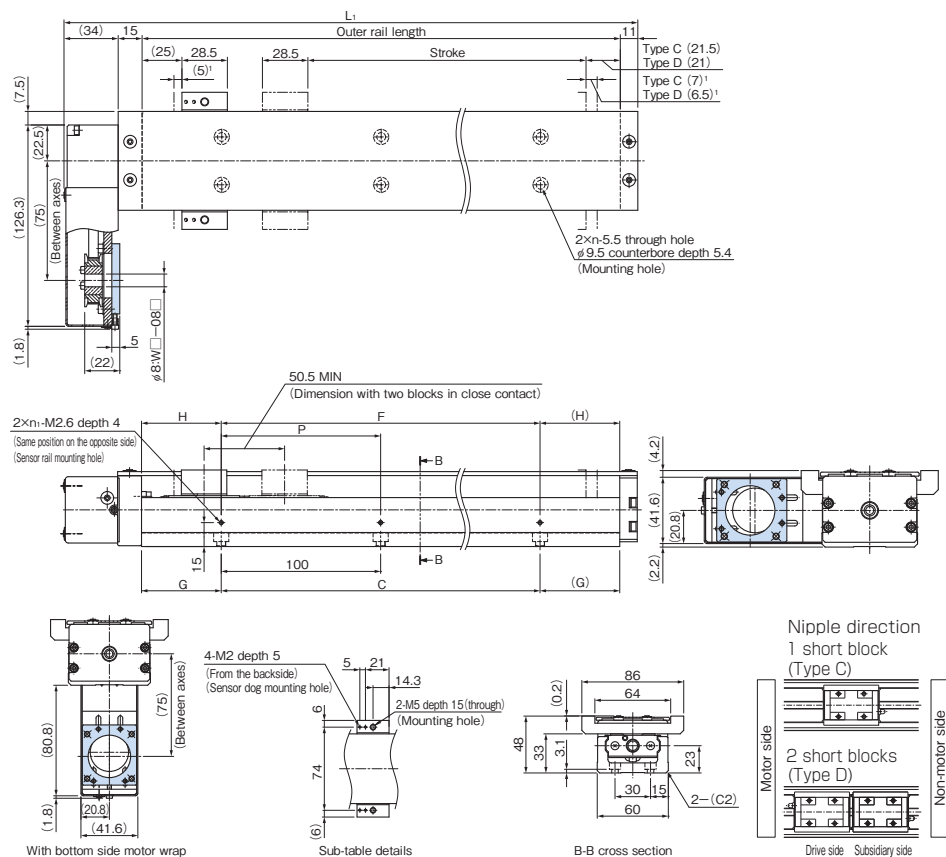
¹ Indicates a value when two inner blocks are in close contact with each other.

KR33 With Cover, Motor Wrap

Model KR33□□C (with a Single Short Block)

Model KR33□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	P (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹										Type C	Type D
75 (87)	25 (36.5)	150	210	100	25	100	100	25	2	2	2.2	2.5
125 (137)	75 (86.5)	200	260	100	50	100	100	50	2	2	2.6	2.9
225 (237)	175 (186.5)	300	360	200	50	200	200	50	3	2	3.3	3.6
325 (337)	275 (286.5)	400	460	300	50	200	200	100	4	2	4.1	4.4
425 (437)	375 (386.5)	500	560	400	50	200	400	50	5	3	4.9	5.2
525 (537)	475 (486.5)	600	660	500	50	200	400	100	6	3	5.6	5.9
625 (637)	575 (586.5)	700	760	600	50	200	600	50	7	4	6.4	6.7

¹ Indicates a value when two inner blocks are in close contact with each other.

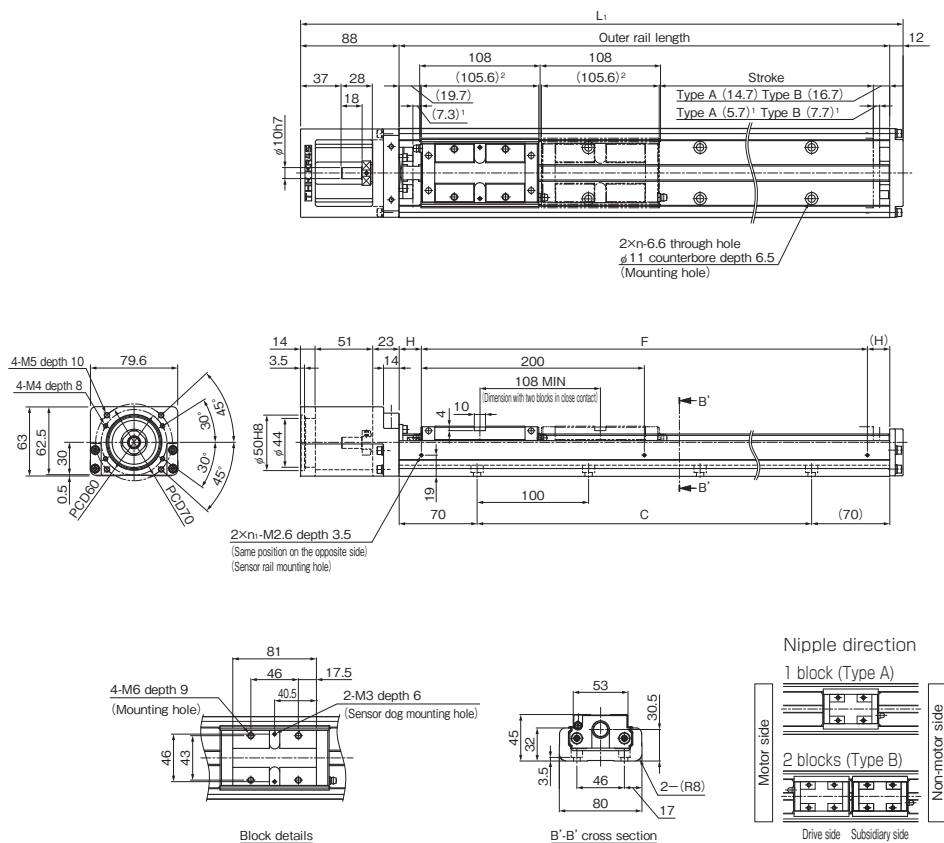
Note: It must be noted that the cover-mounting bolt is 0.2 mm higher than the top face of the sub-table.

KR45H Without Cover, Direct Motor Coupling

Model KR45H□□A (with a Single Long Block)

Model KR45H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 213.6 mm (total) for a KR45H with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
200 (213)	90 (105)	340	440	200	200	70	3	2	5.4	6.4
300 (313)	190 (205)	440	540	300	400	20	4	3	6.5	7.5
400 (413)	290 (305)	540	640	400	400	70	5	3	7.5	8.5
500 (513)	390 (405)	640	740	500	600	20	6	4	8.6	9.6
600 (613)	490 (505)	740	840	600	600	70	7	4	9.7	10.7
700 (713)	590 (605)	840	940	700	800	20	8	5	10.7	11.7
800 (813)	690 (705)	940	1,040	800	800	70	9	5	11.8	12.8

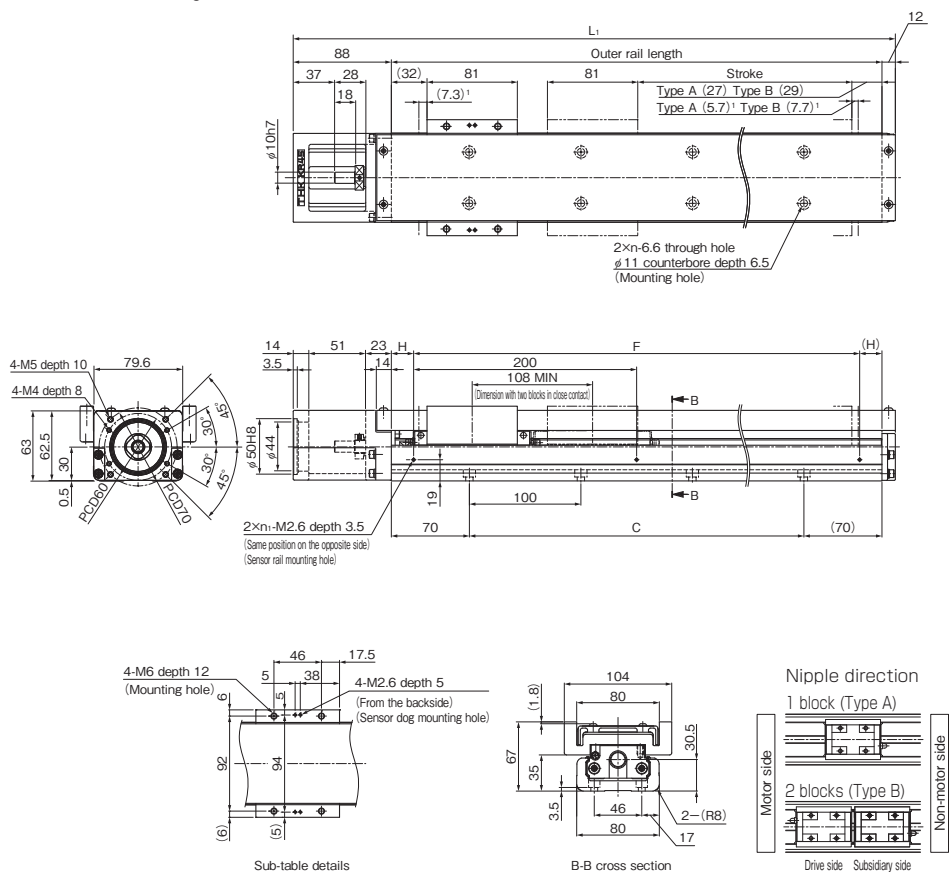
¹ Indicates a value when two inner blocks are in close contact with each other.

KR45H With Cover, Direct Motor Coupling

Model KR45H□□A (with a Single Long Block)

Model KR45H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
200 (213)	90 (105)	340	440	200	200	70	3	2	6.4	7.8
300 (313)	190 (205)	440	540	300	400	20	4	3	7.6	9
400 (413)	290 (305)	540	640	400	400	70	5	3	8.7	10.1
500 (513)	390 (405)	640	740	500	600	20	6	4	9.9	11.3
600 (613)	490 (505)	740	840	600	600	70	7	4	11	12.4
700 (713)	590 (605)	840	940	700	800	20	8	5	12.2	13.6
800 (813)	690 (705)	940	1,040	800	800	70	9	5	13.3	14.7

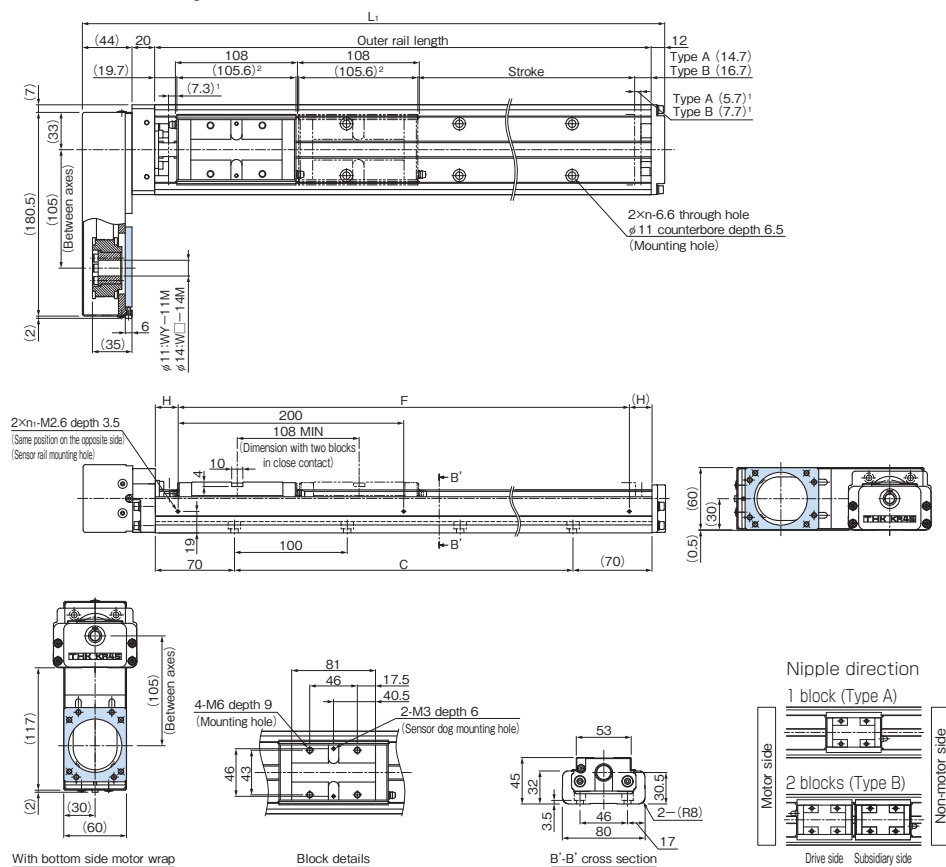
¹ Indicates a value when two inner blocks are in close contact with each other.

KR45H Without Cover, Motor Wrap

Model KR45H□□A (with a Single Long Block)

Model KR45H□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the block length when calculating the possible stroke range.

It is 213.6 mm (total) for a KR45H with two blocks in close contact with each other (Type B).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
200 (213)	90 (105)	340	416	200	200	70	3	2	6.4	7.4
300 (313)	190 (205)	440	516	300	400	20	4	3	7.4	8.4
400 (413)	290 (305)	540	616	400	400	70	5	3	8.5	9.5
500 (513)	390 (405)	640	716	500	600	20	6	4	9.5	10.5
600 (613)	490 (505)	740	816	600	600	70	7	4	10.6	11.6
700 (713)	590 (605)	840	916	700	800	20	8	5	11.7	12.7
800 (813)	690 (705)	940	1,016	800	800	70	9	5	12.7	13.7

¹ Indicates a value when two inner blocks are in close contact with each other.

For model number coding, see **A2-136**.



Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L: (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
200 (213)	90 (105)	340	416	200	200	70	3	2	7.4	8.8
300 (313)	190 (205)	440	516	300	400	20	4	3	8.5	9.9
400 (413)	290 (305)	540	616	400	400	70	5	3	9.7	11.1
500 (513)	390 (405)	640	716	500	600	20	6	4	10.8	12.2
600 (613)	490 (505)	740	816	600	600	70	7	4	12	13.4
700 (713)	590 (605)	840	916	700	800	20	8	5	13.1	14.5
800 (813)	690 (705)	940	1.016	800	800	70	9	5	14.2	15.6

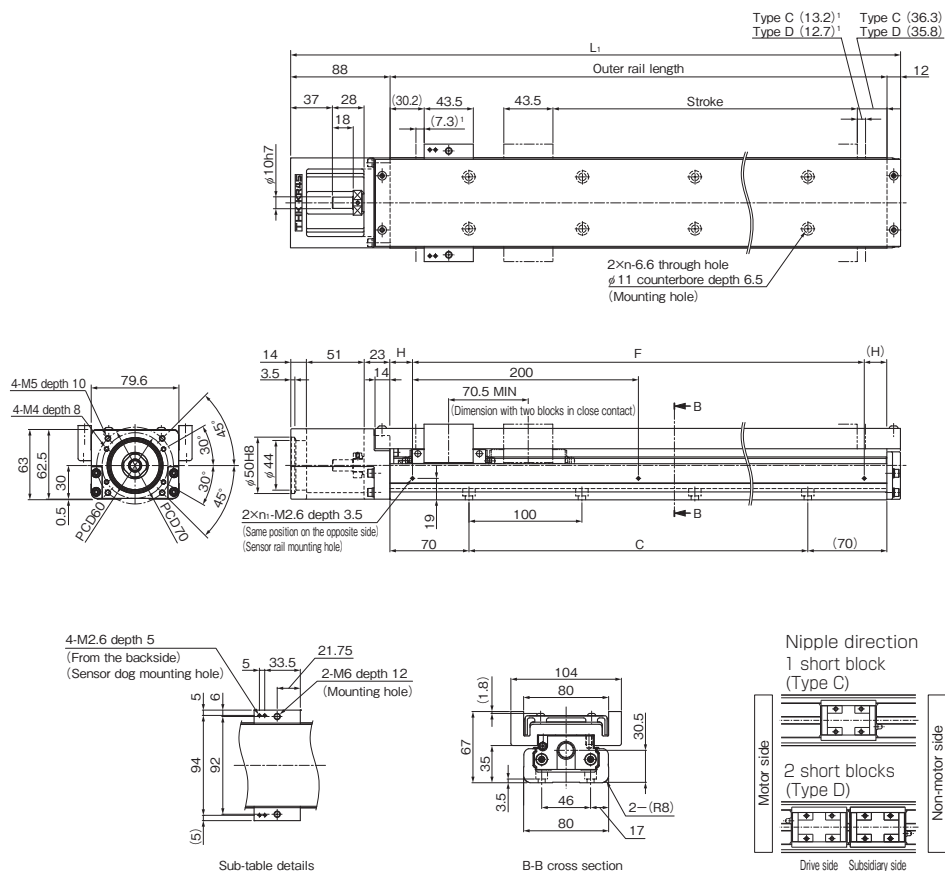
¹ Indicates a value when two inner blocks are in close contact with each other.

KR45H With Cover, Direct Motor Coupling

Model KR45H□□C (with a Single Short Block)

Model KR45H□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
230 (250.5)	160 (180)	340	440	200	200	70	3	2	5.8	6.6
330 (350.5)	260 (280)	440	540	300	400	20	4	3	7	7.8
430 (450.5)	360 (380)	540	640	400	400	70	5	3	8.1	8.9
530 (550.5)	460 (480)	640	740	500	600	20	6	4	9.3	10.1
630 (650.5)	560 (580)	740	840	600	600	70	7	4	10.4	11.2
730 (750.5)	660 (680)	840	940	700	800	20	8	5	11.6	12.4
830 (850.5)	760 (780)	940	1,040	800	800	70	9	5	12.7	13.5

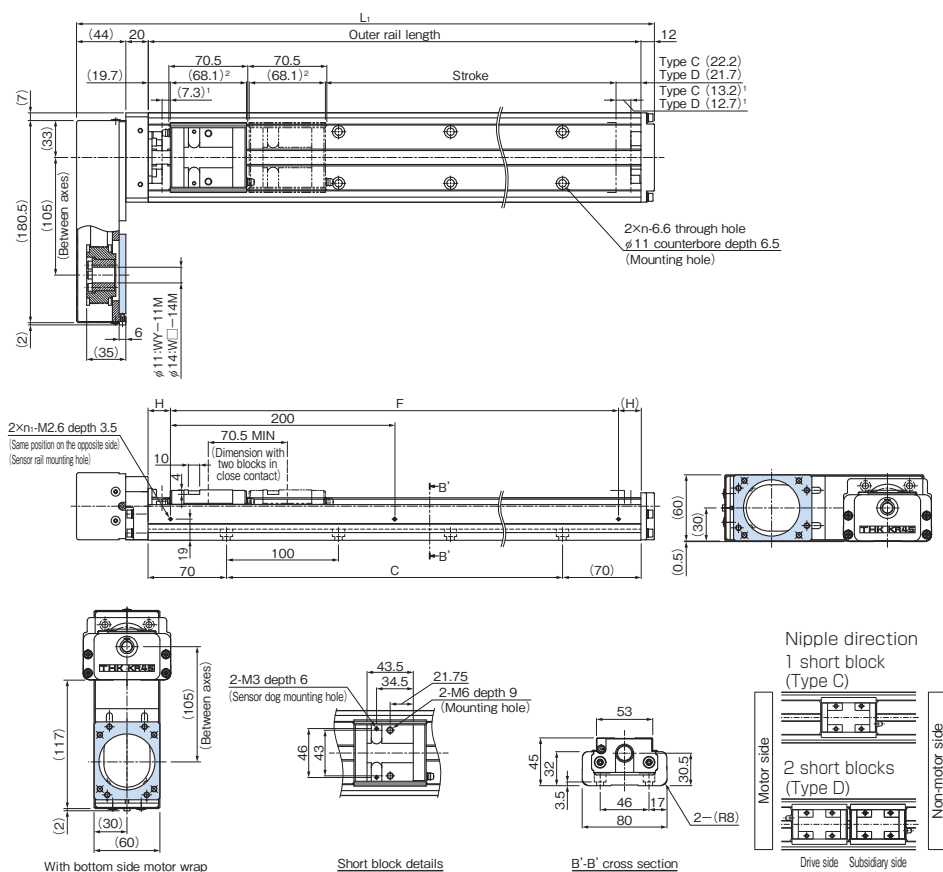
¹ Indicates a value when two inner blocks are in close contact with each other.

KR45H Without Cover, Motor Wrap

Model KR45H□□C (with a Single Short Block)

Model KR45H□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the short block length when calculating the possible stroke range.

It is 138.6 mm (total) for a KR45H with two short blocks in close contact with each other (Type D).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
230 (250.5)	160 (180)	340	416	200	200	70	3	2	6	6.6
330 (350.5)	260 (280)	440	516	300	400	20	4	3	7	7.6
430 (450.5)	360 (380)	540	616	400	400	70	5	3	8.1	8.7
530 (550.5)	460 (480)	640	716	500	600	20	6	4	9.1	9.7
630 (650.5)	560 (580)	740	816	600	600	70	7	4	10.2	10.8
730 (750.5)	660 (680)	840	916	700	800	20	8	5	11.3	11.9
830 (850.5)	760 (780)	940	1,016	800	800	70	9	5	12.3	12.9

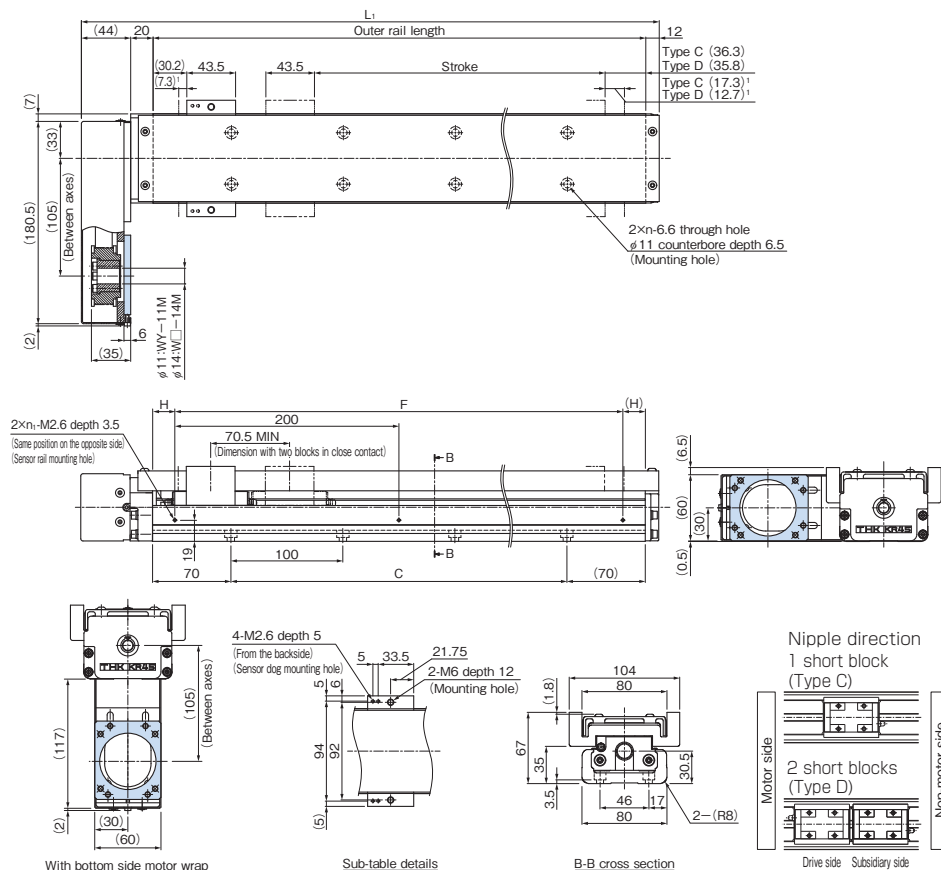
¹ Indicates a value when two inner blocks are in close contact with each other.

KR45H With Cover, Motor Wrap

Model KR45H□□C (with a Single Short Block)

Model KR45H□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



With bottom side motor wrap

Sub-table details

B-B cross section

¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
230 (250.5)	160 (180)	340	416	200	200	70	3	2	6.8	7.6
330 (350.5)	260 (280)	440	516	300	400	20	4	3	7.9	8.7
430 (450.5)	360 (380)	540	616	400	400	70	5	3	9.1	9.9
530 (550.5)	460 (480)	640	716	500	600	20	6	4	10.2	11
630 (650.5)	560 (580)	740	816	600	600	70	7	4	11.4	12.2
730 (750.5)	660 (680)	840	916	700	800	20	8	5	12.5	13.3
830 (850.5)	760 (780)	940	1,016	800	800	70	9	5	13.6	14.4

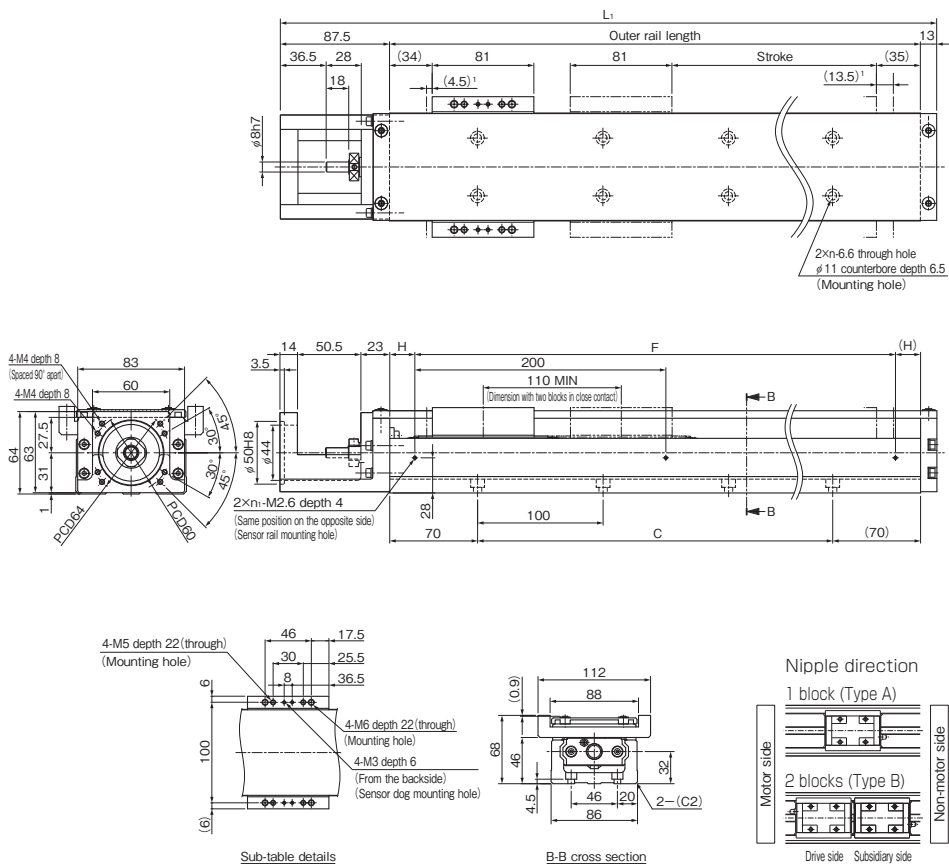
¹ Indicates a value when two inner blocks are in close contact with each other.

KR46 With Cover, Direct Motor Coupling

Model KR46□□A (with a Single Long Block)

Model KR46□□B (with Two Long Blocks)

For model number coding, see **A2-136**.

¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L: (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
190 (208)	80 (98)	340	440.5	200	200	70	3	2	7.5	8.9
290 (308)	180 (198)	440	540.5	300	400	20	4	3	9	10.4
390 (408)	280 (298)	540	640.5	400	400	70	5	3	10.5	11.9
490 (508)	380 (398)	640	740.5	500	600	20	6	4	12	13.4
590 (608)	480 (498)	740	840.5	600	600	70	7	4	13.5	14.9
690 (708)	580 (598)	840	940.5	700	800	20	8	5	14.9	16.3
790 (808)	680 (698)	940	1,040.5	800	800	70	9	5	16.4	17.8

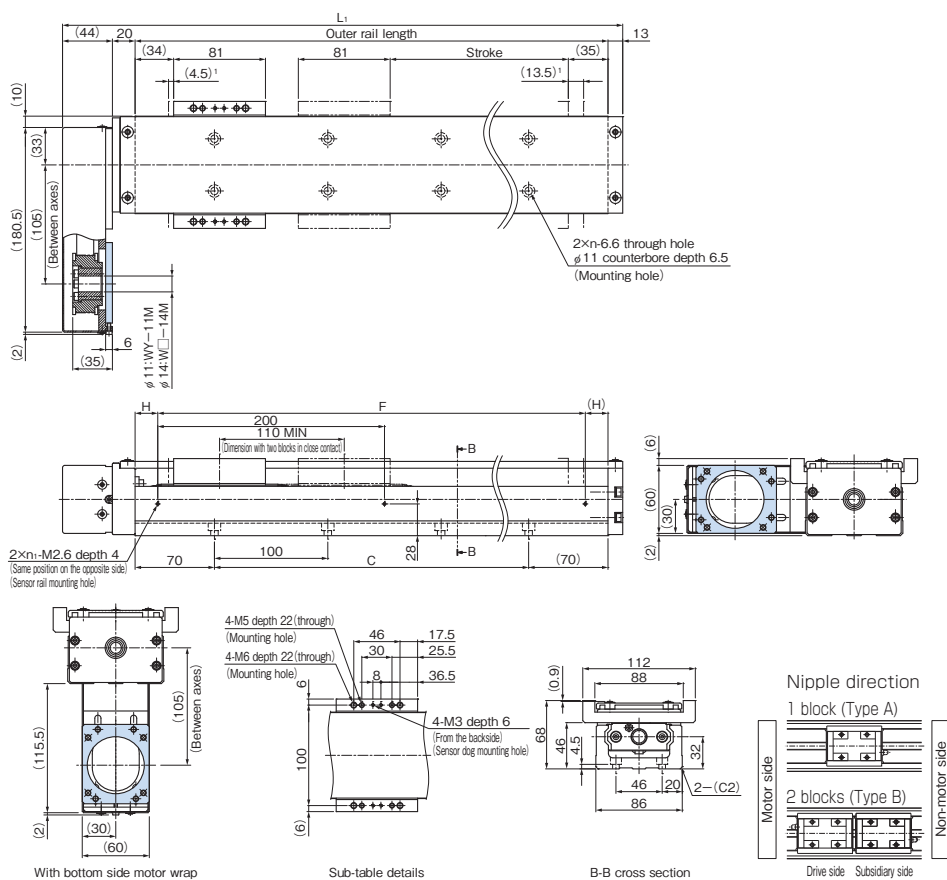
¹ Indicates a value when two inner blocks are in close contact with each other.

KR46 With Cover, Motor Wrap

Model KR46□□A (with a Single Long Block)

Model KR46□□B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹								Type A	Type B
190 (208)	80 (98)	340	417	200	200	70	3	2	8.6	10
290 (308)	180 (198)	440	517	300	400	20	4	3	10	11.4
390 (408)	280 (298)	540	617	400	400	70	5	3	11.5	12.9
490 (508)	380 (398)	640	717	500	600	20	6	4	13	14.4
590 (608)	480 (498)	740	817	600	600	70	7	4	14.5	15.9
690 (708)	580 (598)	840	917	700	800	20	8	5	16	17.4
790 (808)	680 (698)	940	1,017	800	800	70	9	5	17.4	18.8

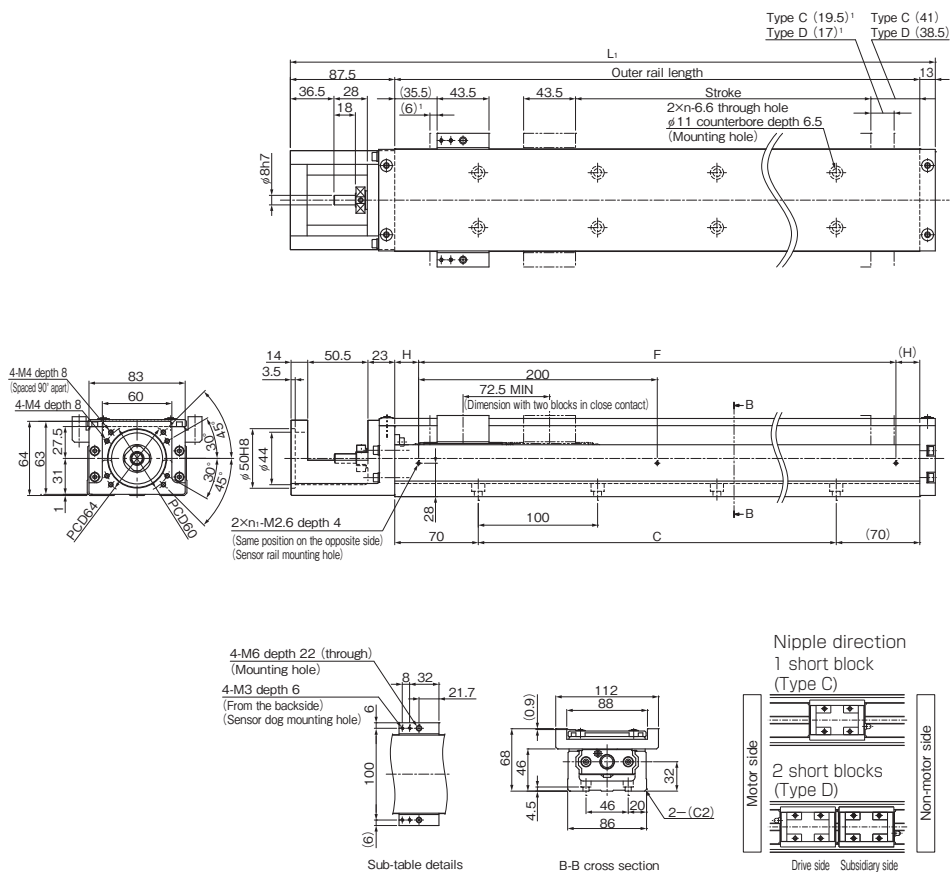
¹ Indicates a value when two inner blocks are in close contact with each other.

KR46 With Cover, Direct Motor Coupling

Model KR46□□C (with a Single Short Block)

Model KR46□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_i (mm)	C (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
220 (245.5)	150 (173)	340	440.5	200	200	70	3	2	6.9	7.7
320 (345.5)	250 (273)	440	540.5	300	400	20	4	3	8.4	9.2
420 (445.5)	350 (373)	540	640.5	400	400	70	5	3	9.9	10.7
520 (545.5)	450 (473)	640	740.5	500	600	20	6	4	11.4	12.2
620 (645.5)	550 (573)	740	840.5	600	600	70	7	4	12.9	13.7
720 (745.5)	650 (673)	840	940.5	700	800	20	8	5	14.3	15.1
820 (845.5)	750 (773)	940	1,040.5	800	800	70	9	5	15.8	16.6

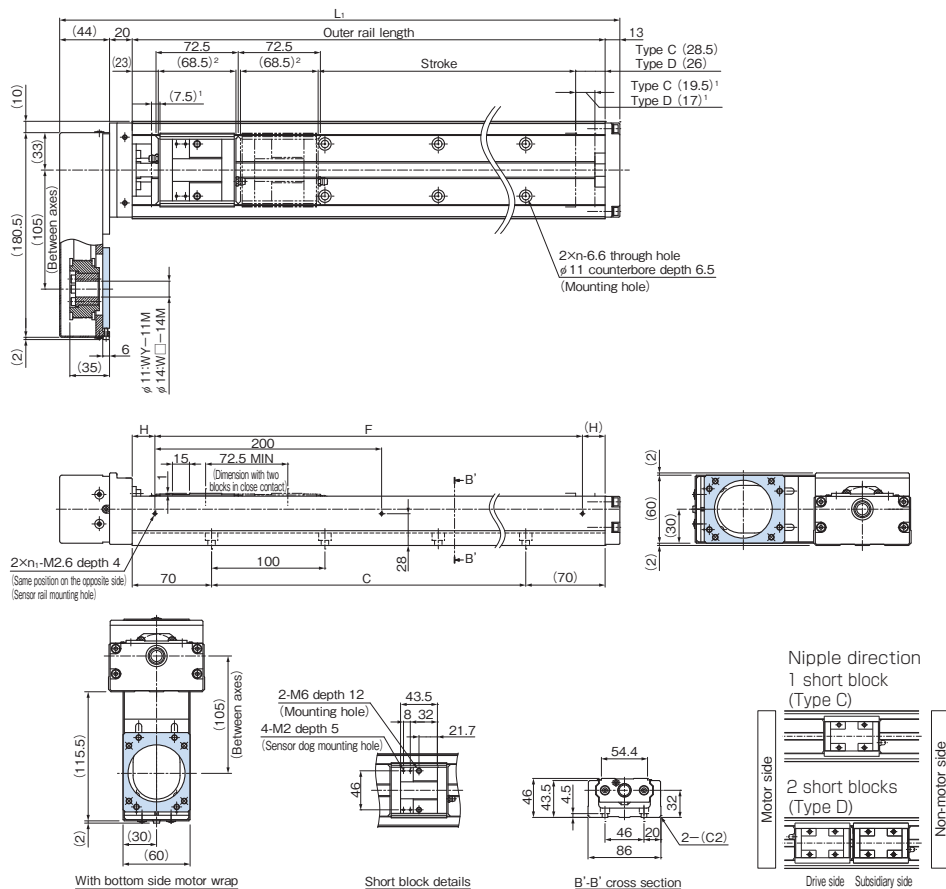
¹ Indicates a value when two inner blocks are in close contact with each other.

KR46 Without Cover, Motor Wrap

Model KR46□□C (with a Single Short Block)

Model KR46□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

² This indicates the short block length when calculating the possible stroke range.

It is 141 mm (total) for a KR46 with two short blocks in close contact with each other (Type D, without Q2).

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
220 (245.5)	150 (173)	340	417	200	200	70	3	2	7.2	7.8
320 (345.5)	250 (273)	440	517	300	400	20	4	3	8.6	9.2
420 (445.5)	350 (373)	540	617	400	400	70	5	3	10	10.6
520 (545.5)	450 (473)	640	717	500	600	20	6	4	11.4	12
620 (645.5)	550 (573)	740	817	600	600	70	7	4	12.8	13.4
720 (745.5)	650 (673)	840	917	700	800	20	8	5	14.2	14.8
820 (845.5)	750 (773)	940	1,017	800	800	70	9	5	15.6	16.2

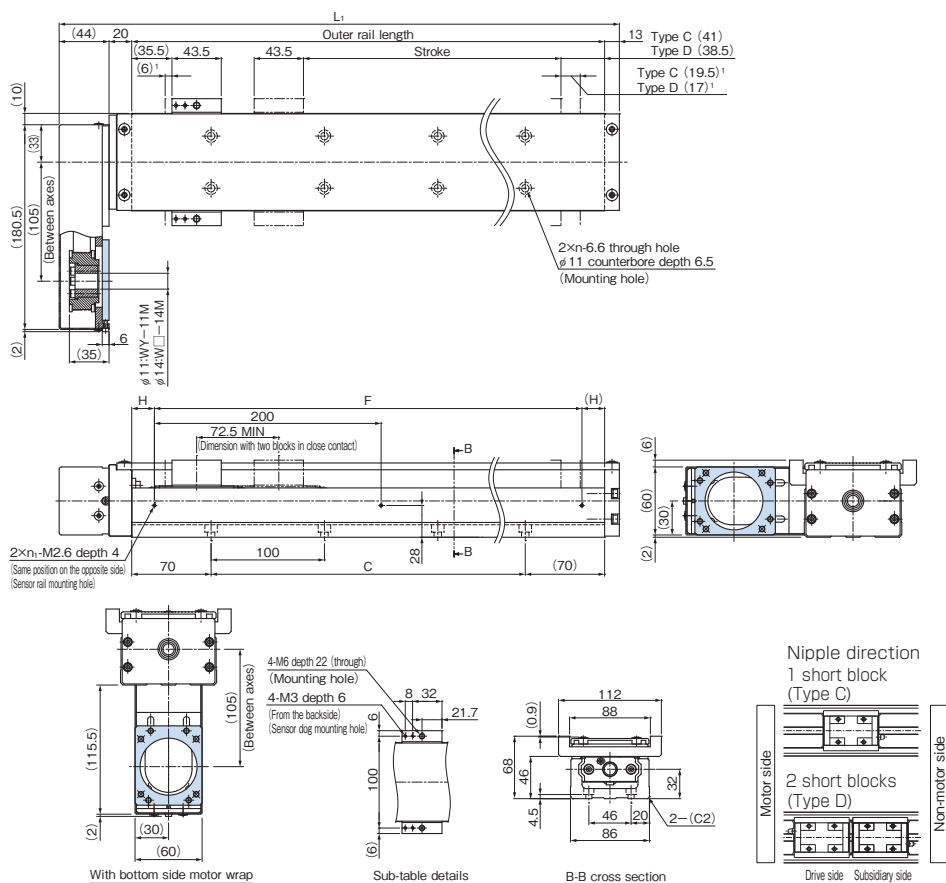
¹ Indicates a value when two inner blocks are in close contact with each other.

KR46 With Cover, Motor Wrap

Model KR46□□C (with a Single Short Block)

Model KR46□□D (with Two Short Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type C	Type D ¹								Type C	Type D
220 (245.5)	150 (173)	340	417	200	200	70	3	2	8	8.8
320 (345.5)	250 (273)	440	517	300	400	20	4	3	9.4	10.2
420 (445.5)	350 (373)	540	617	400	400	70	5	3	10.9	11.7
520 (545.5)	450 (473)	640	717	500	600	20	6	4	12.4	13.2
620 (645.5)	550 (573)	740	817	600	600	70	7	4	13.9	14.7
720 (745.5)	650 (673)	840	917	700	800	20	8	5	15.4	16.2
820 (845.5)	750 (773)	940	1,017	800	800	70	9	5	16.8	17.6

¹ Indicates a value when two inner blocks are in close contact with each other.

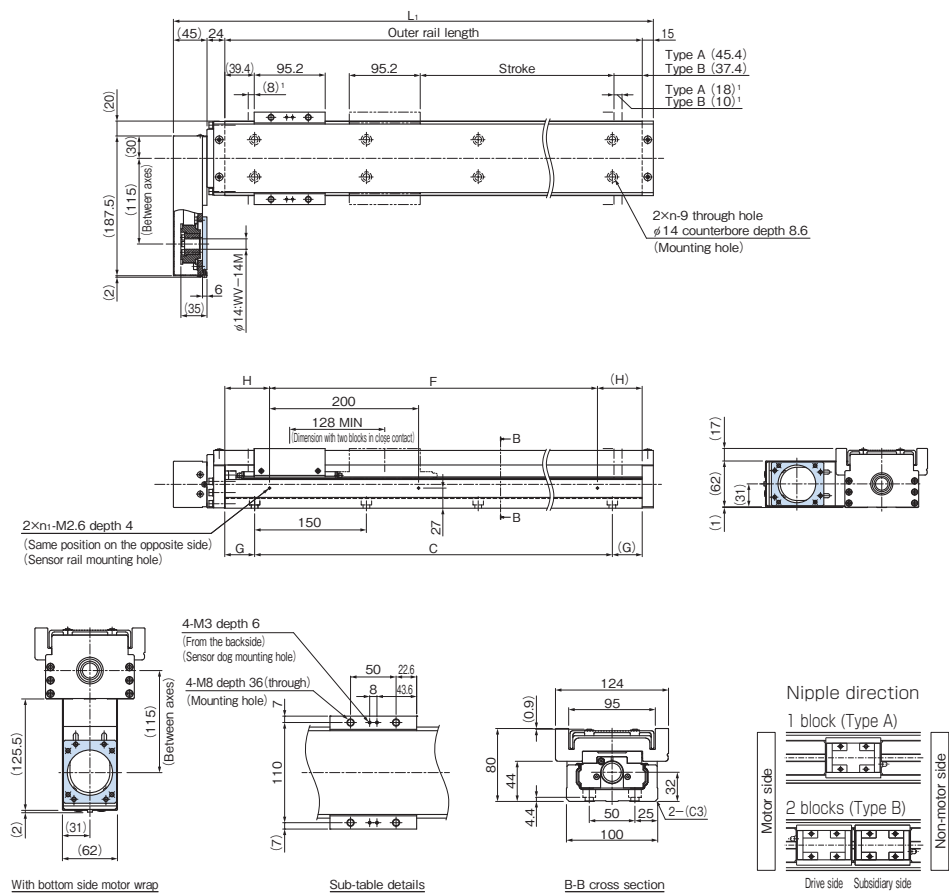
KR55 With Cover, Motor Wrap

Motor Flange Size, 60×60

Model KR5520A (with a Single Long Block)

Model KR5520B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L _t (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
800 (826)	680 (698)	980	1,064	900	40	800	90	7	5	25	28.7
900 (926)	780 (798)	1,080	1,164	1,050	15	1,000	40	8	6	26.8	30.5
1,000 (1,026)	880 (898)	1,180	1,264	1,050	65	1,000	90	8	6	28.6	32.3
1,100 (1,126)	980 (998)	1,280	1,364	1,200	40	1,200	40	9	7	30.5	34.2
1,200 (1,226)	1,080 (1,098)	1,380	1,464	1,350	15	1,200	90	10	7	32.3	36

¹ Indicates a value when two inner blocks are in close contact with each other.

Options⇒ **A2-193**

THK A2-185

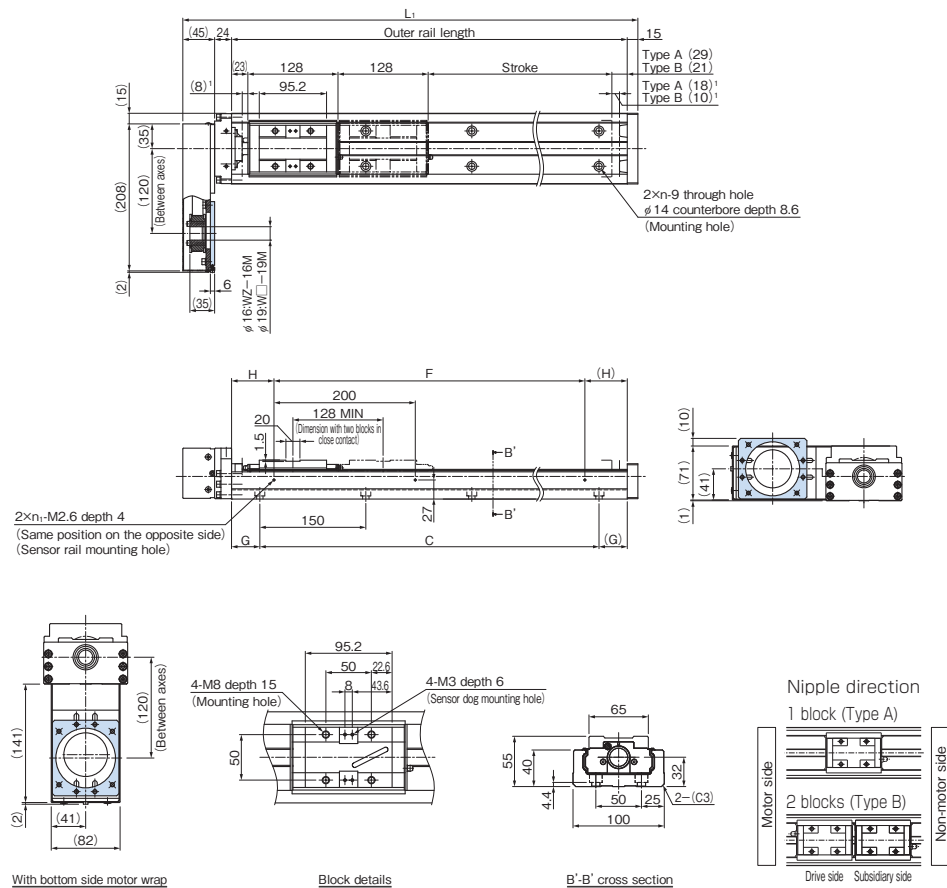
KR55 Without Cover, Motor Wrap

Motor Flange Size, 80×80

Model KR5520A (with a Single Long Block)

Model KR5520B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
800 (826)	680 (698)	980	1,064	900	40	800	90	7	5	21.1	22.9
900 (926)	780 (798)	1,080	1,164	1,050	15	1,000	40	8	6	22.8	24.6
1,000 (1,026)	880 (898)	1,180	1,264	1,050	65	1,000	90	8	6	24.5	26.3
1,100 (1,126)	980 (998)	1,280	1,364	1,200	40	1,200	40	9	7	26.3	28.1
1,200 (1,226)	1,080 (1,098)	1,380	1,464	1,350	15	1,200	90	10	7	28	29.8

¹ Indicates a value when two inner blocks are in close contact with each other.

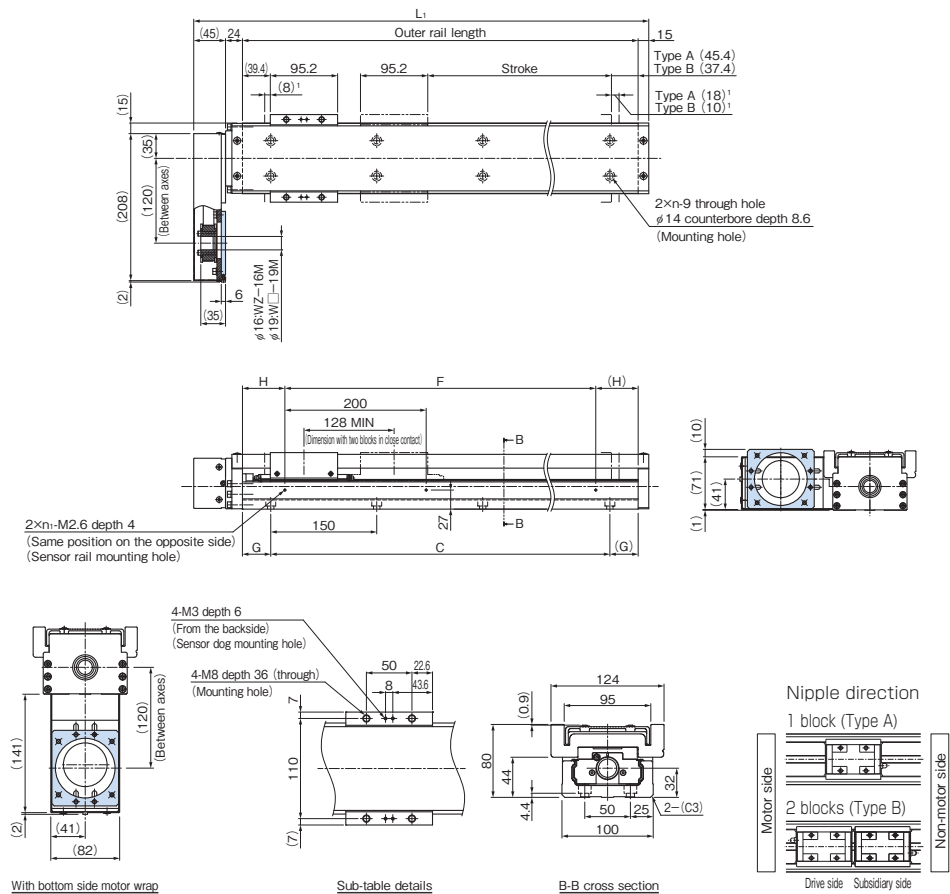
KR55 With Cover, Motor Wrap

Motor Flange Size, 80×80

Model KR5520A (with a Single Long Block)

Model KR5520B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
800 (826)	680 (698)	980	1,064	900	40	800	90	7	5	25	28.7
900 (926)	780 (798)	1,080	1,164	1,050	15	1,000	40	8	6	26.8	30.5
1,000 (1,026)	880 (898)	1,180	1,264	1,050	65	1,000	90	8	6	28.6	32.3
1,100 (1,126)	980 (998)	1,280	1,364	1,200	40	1,200	40	9	7	30.5	34.2
1,200 (1,226)	1,080 (1,098)	1,380	1,464	1,350	15	1,200	90	10	7	32.3	36

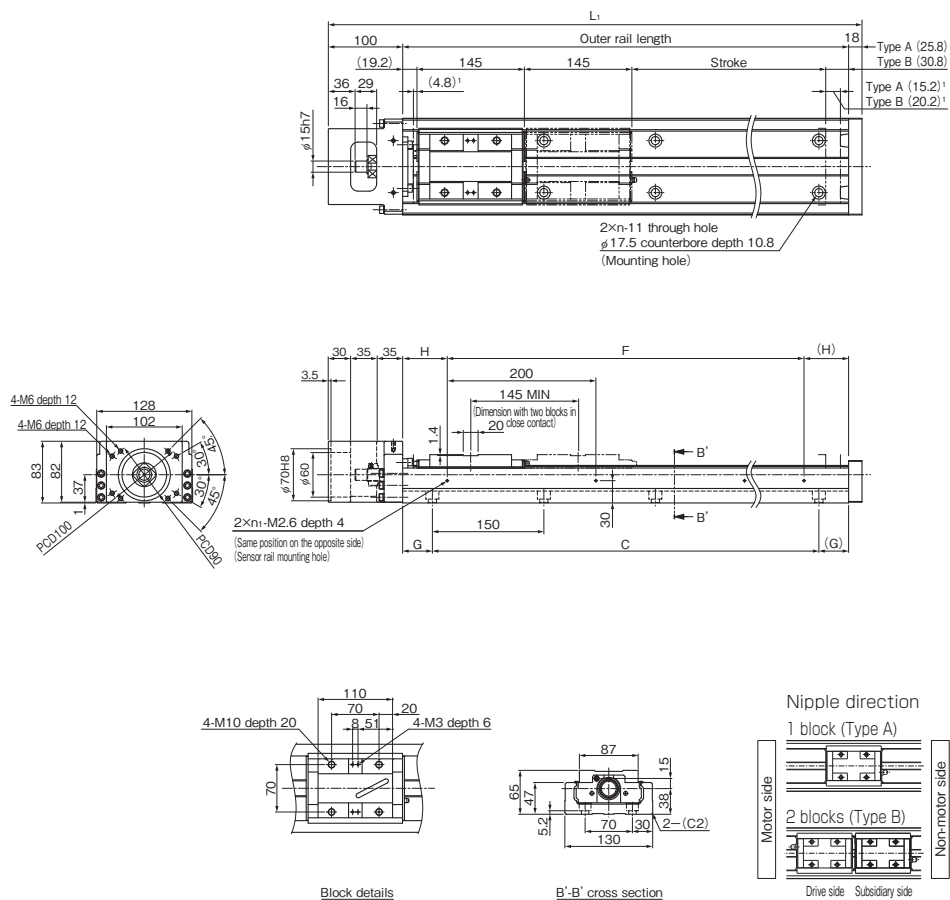
¹ Indicates a value when two inner blocks are in close contact with each other.

KR65 Without Cover, Direct Motor Coupling

Model KR6525A (with a Single Long Block)

Model KR6525B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
790 (810)	640 (665)	980	1,098	900	40	800	90	7	5	32.2	35.5
990 (1,010)	840 (865)	1,180	1,298	1,050	65	1,000	90	8	6	37.6	40.9
1,190 (1,210)	1,040 (1,065)	1,380	1,498	1,200	90	1,200	90	9	7	43	46.3
1,490 (1,510)	1,340 (1,365)	1,680	1,798	1,500	90	1,600	40	11	9	51.1	54.4

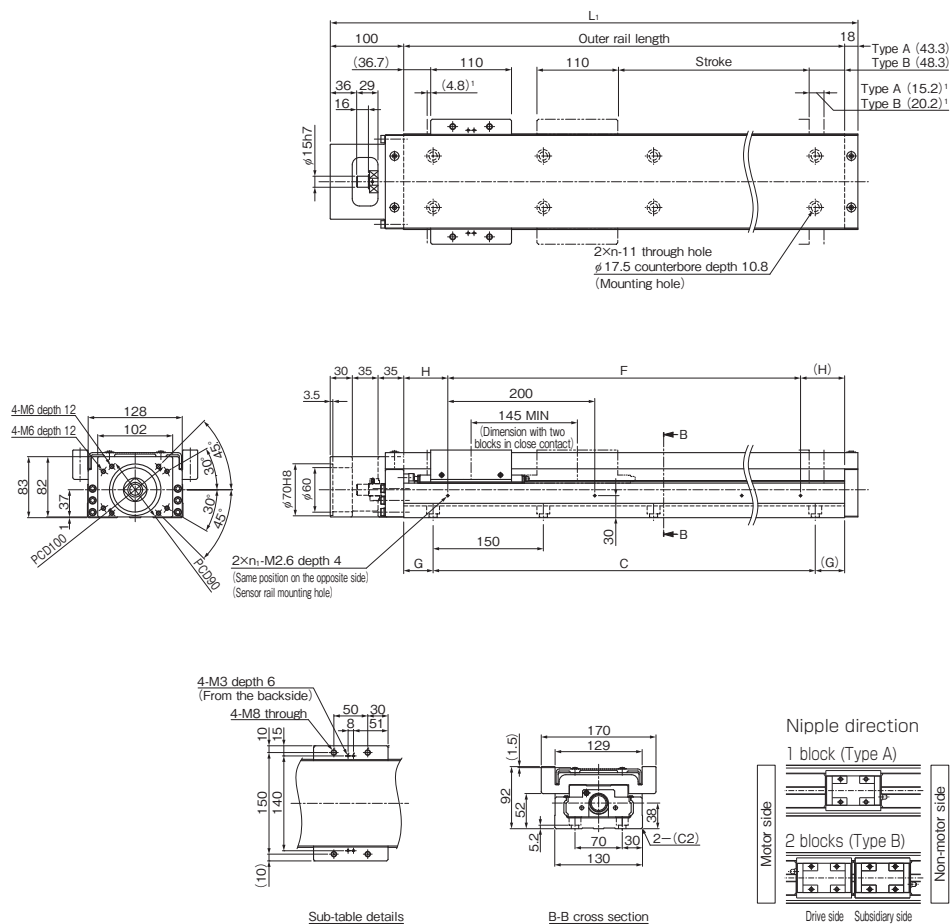
¹ Indicates a value when two inner blocks are in close contact with each other.

KR65 With Cover, Direct Motor Coupling

Model KR6525A (with a Single Long Block)

Model KR6525B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L ₁ (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n ₁	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
790 (810)	640 (665)	980	1,098	900	40	800	90	7	5	38.6	45.2
990 (1,010)	840 (865)	1,180	1,298	1,050	65	1,000	90	8	6	44.3	50.9
1,190 (1,210)	1,040 (1,065)	1,380	1,498	1,200	90	1,200	90	9	7	50	56.6
1,490 (1,510)	1,340 (1,365)	1,680	1,798	1,500	90	1,600	40	11	9	58.5	65.1

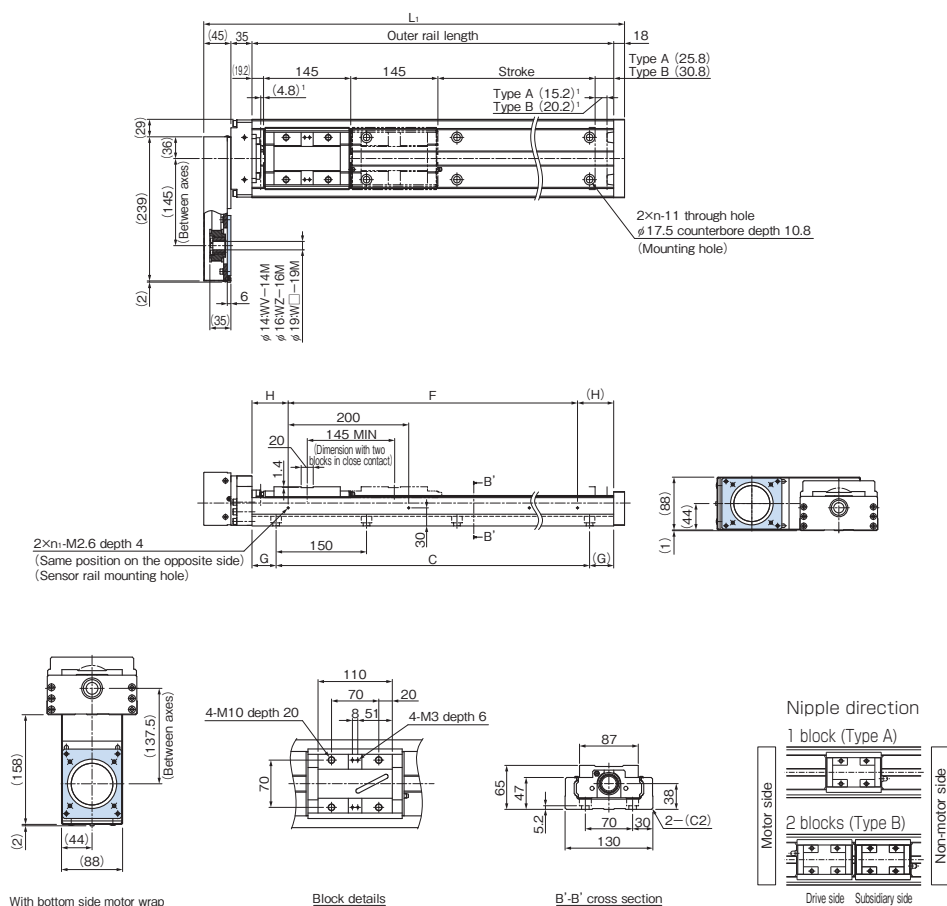
¹ Indicates a value when two inner blocks are in close contact with each other.

KR65 Without Cover, Motor Wrap

Model KR6525A (with a Single Long Block)

Model KR6525B (with Two Long Blocks)

For model number coding, see **A2-136**.



With bottom side motor wrap

Block details

B'-B' cross section

¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
790 (810)	640 (665)	980	1,078	900	40	800	90	7	5	33.9	37.2
990 (1,010)	840 (865)	1,180	1,278	1,050	65	1,000	90	8	6	39.3	42.6
1,190 (1,210)	1,040 (1,065)	1,380	1,478	1,200	90	1,200	90	9	7	44.7	48
1,490 (1,510)	1,340 (1,365)	1,680	1,778	1,500	90	1,600	40	11	9	52.7	56

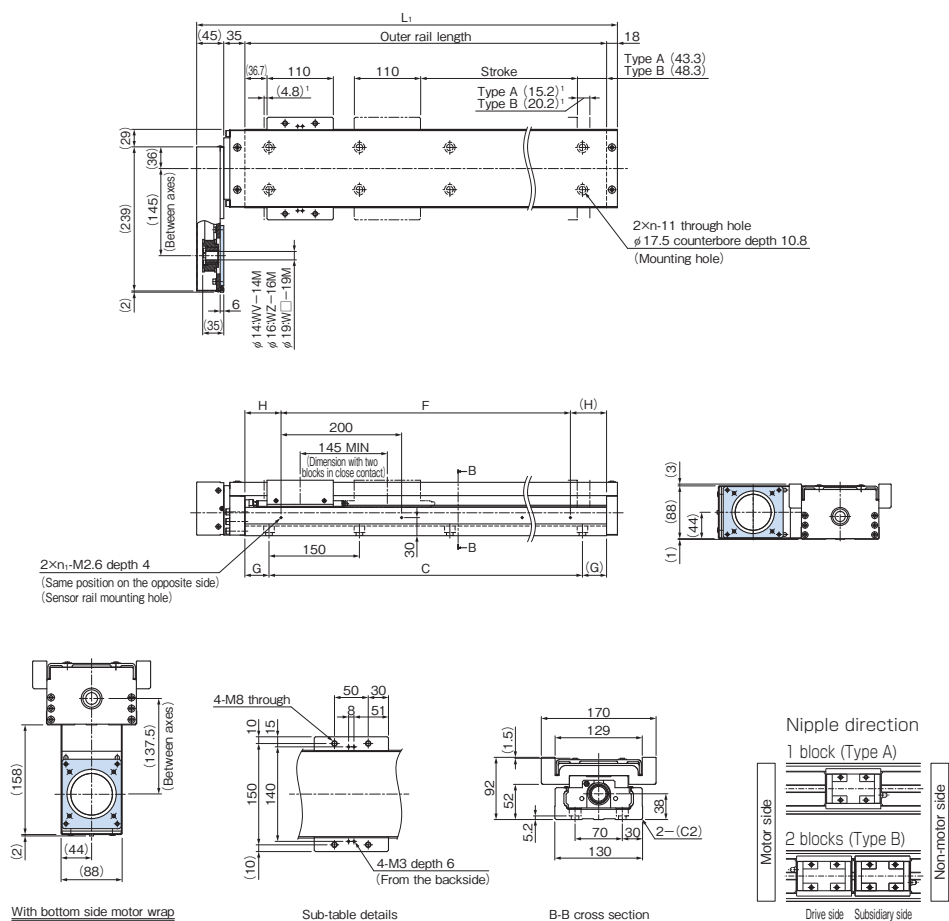
¹ Indicates a value when two inner blocks are in close contact with each other.

KR65 With Cover, Motor Wrap

Model KR6525A (with a Single Long Block)

Model KR6525B (with Two Long Blocks)

For model number coding, see **A2-136**.



¹ Distance between the mechanical stopper and the stroke starting position.

Stroke (mm) (stroke between mechanical stoppers)		Outer rail length (mm)	Overall length L_1 (mm)	C (mm)	G (mm)	F (mm)	H (mm)	n	n_1	Overall main unit mass (kg)	
Type A	Type B ¹									Type A	Type B
790 (810)	640 (665)	980	1,078	900	40	800	90	7	5	40.3	46.9
990 (1,010)	840 (865)	1,180	1,278	1,050	65	1,000	90	8	6	46	52.6
1,190 (1,210)	1,040 (1,065)	1,380	1,478	1,200	90	1,200	90	9	7	51.7	58.3
1,490 (1,510)	1,340 (1,365)	1,680	1,778	1,500	90	1,600	40	11	9	60.2	66.8

¹ Indicates a value when two inner blocks are in close contact with each other.

Mass of Moving Elements

Table 14 shows the mass of the inner block and sub-table of Model KR.

Table 14: Mass of the Inner Block and Sub-Table of KR

Unit: kg

Model No.	Long block types				Short block types			
	A/B	Inner block	Sub-table	Total mass	C/D	Inner block	Sub-table	Total mass
KR15	Type A	0.04	0.03	0.07	Type C	□	□	□
	Type B	0.08	0.06	0.14	Type D	□	□	□
KR20	Type A	0.08	0.05	0.13	Type C	□	□	□
	Type B	0.16	0.1	0.26	Type D	□	□	□
KR26	Type A	0.19	0.09	0.28	Type C	□	□	□
	Type B	0.38	0.18	0.56	Type D	□	□	□
KR30H	Type A	0.4	0.2	0.6	Type C	0.2	0.1	0.3
	Type B	0.8	0.4	1.2	Type D	0.4	0.2	0.6
KR33	Type A	0.4	0.2	0.6	Type C	0.2	0.1	0.3
	Type B	0.8	0.4	1.2	Type D	0.4	0.2	0.6
KR45H	Type A	1.0	0.4	1.4	Type C	0.6	0.2	0.8
	Type B	2.0	0.8	2.8	Type D	1.2	0.4	1.6
KR46	Type A	1.0	0.4	1.4	Type C	0.6	0.2	0.8
	Type B	2.0	0.8	2.8	Type D	1.2	0.4	1.6
KR55	Type A	1.8	1.9	3.7	Type C	□	□	□
	Type B	3.6	3.8	7.4	Type D	□	□	□
KR65	Type A	3.3	3.3	6.6	Type C	□	□	□
	Type B	6.6	6.6	13.2	Type D	□	□	□