THK

LM Guide Actuator **KR**

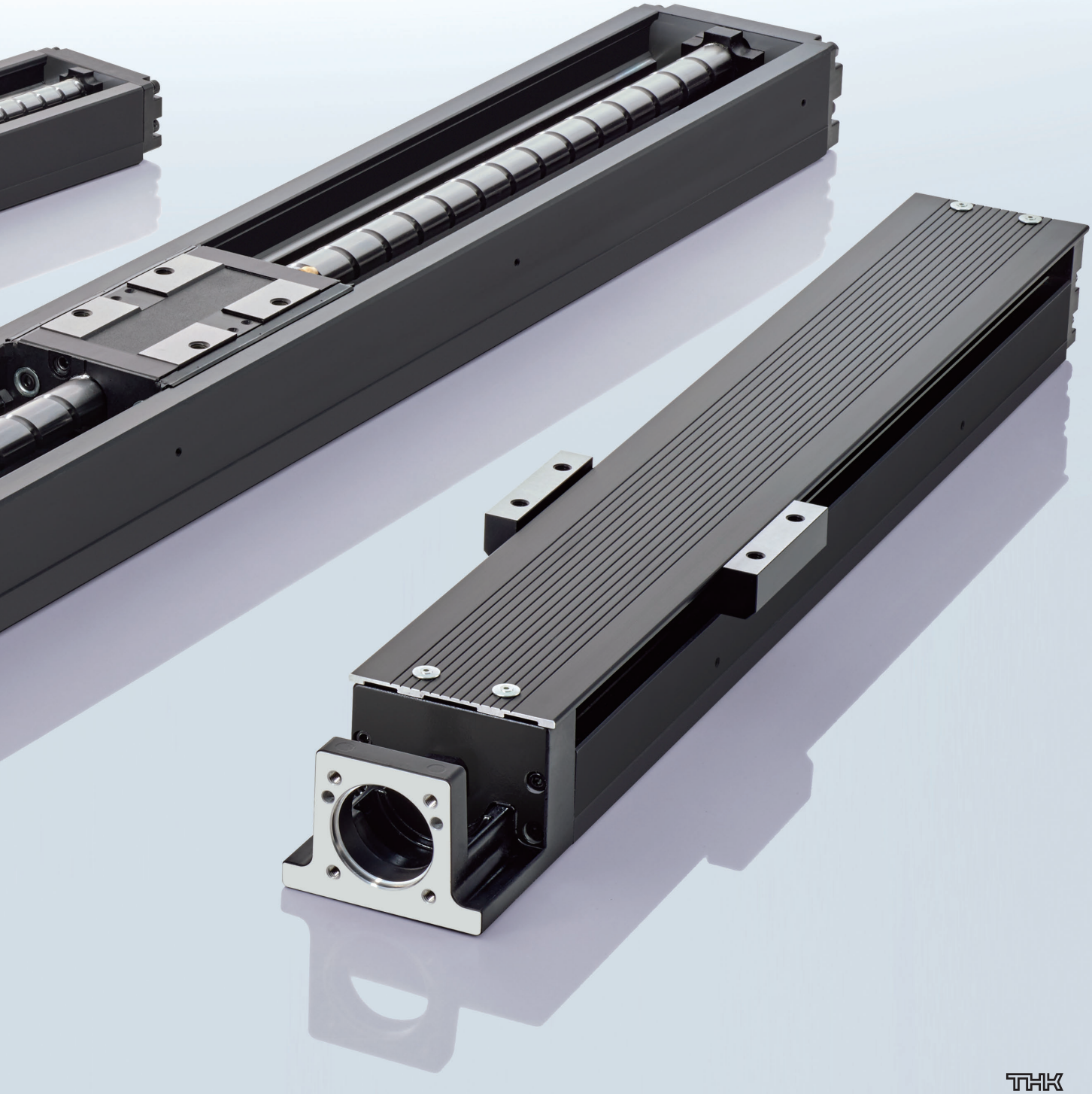
Modularized to reduce work hours and
make moving parts more compact.
Versatile size options.

Front Runner

KR

LM Guide Actuator

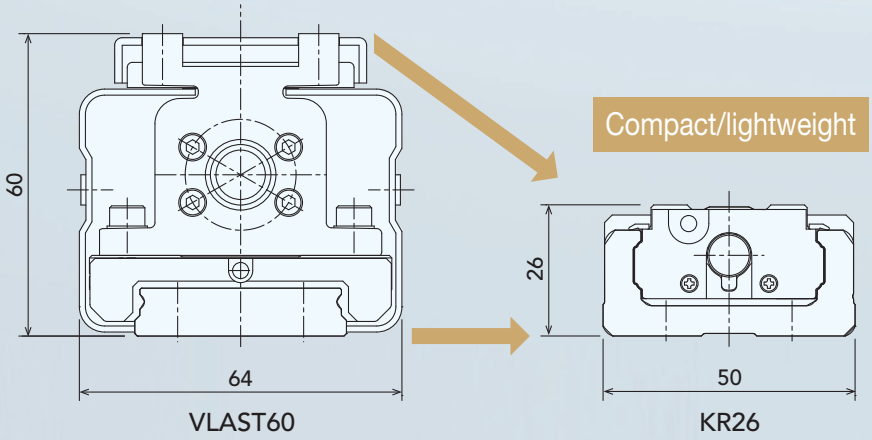
THK has sold LM Guide actuators for use in various applications
for over 30 years in more than 40 countries worldwide.
Introduced as a pioneer of modular products, the lineup has grown to include 9 sizes and
has been met with high praise from customers.
Even now, as a compact actuator front runner, it continues to help
customers solve problems in a wide variety of fields,
such as transport, inspections, and assembly.



The many advantages of

THK Technology 1 Compact Structure (Combined Modules)

KR actuators have a structure embedding an inner block, which consists of an LM block and ball screw nut, in an outer rail with a U-shaped cross-section. They have achieved significant miniaturization compared to conventional products. They can easily be combined with other devices, which further contributes to miniaturization of those devices.



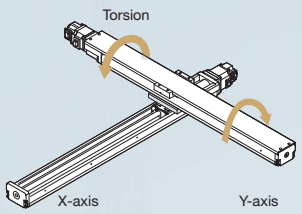
Sectional dimensions 66%

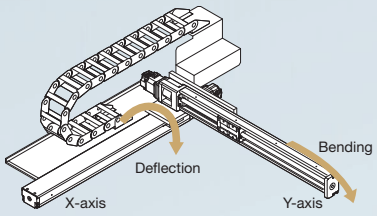
Weight 31%

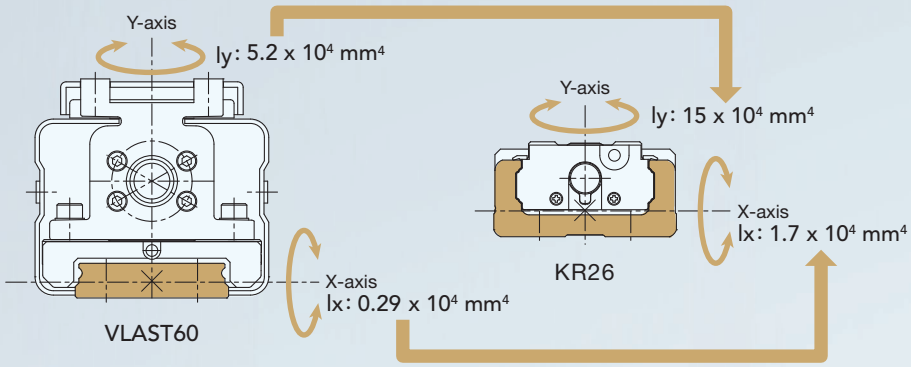
Reduction!

THK Technology 2 High-Rigidity Structure (Outer Rail with a U-Shaped Cross-Section)

Excellent high rigidity is achieved by using an outer rail with a U-shaped cross-section to create a structure resilient against torsion, bending, and deflection that enables a larger moment to be received. It is also suitable for applications with long overhangs such as the top axis of XY-axes.







Geometrical moment of inertia around the Y-axis

Approx. 2.8x

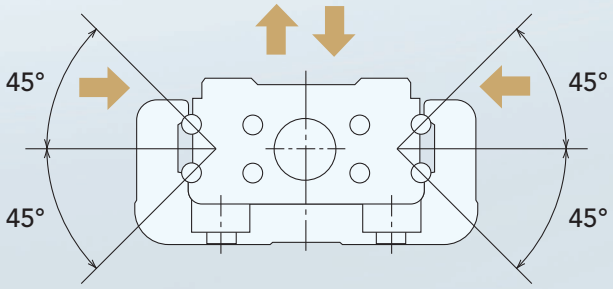
Geometrical moment of inertia around the X-axis

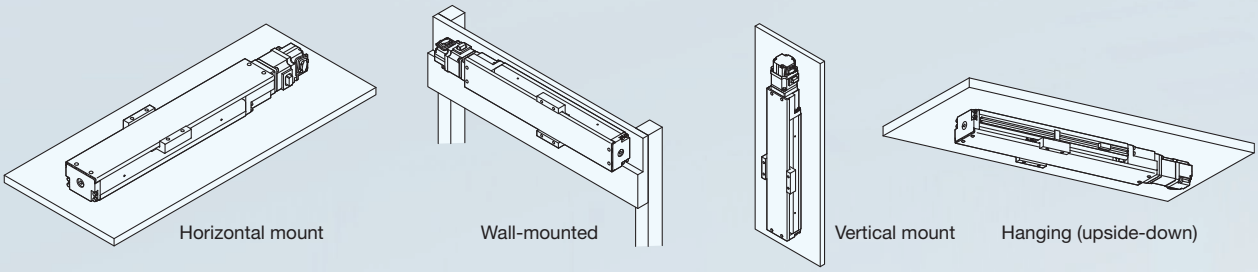
Approx. 5.8x

THK's original structure

THK Technology 3 Can Be Used in Any Orientation (Same Rated Load in 4 Directions)

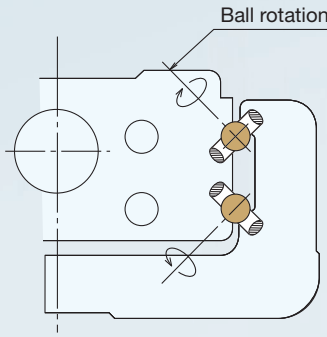
Each row of balls in the linear guide is arranged at a 45° contact angle, achieving the same rated load performance for each of the 4 directions (radial, reverse-radial, and horizontal directions) acting on the inner block.
It can be used in any orientation.





THK Technology 4 High Followability (Circular Arc Groove)

The linear guide has a circular arc groove that moves lightly and without clearance. As such, it can be easily used as a high-precision feed. It achieves precision grade positioning for all types of devices, contributing to improved high-precision and high-quality performance.

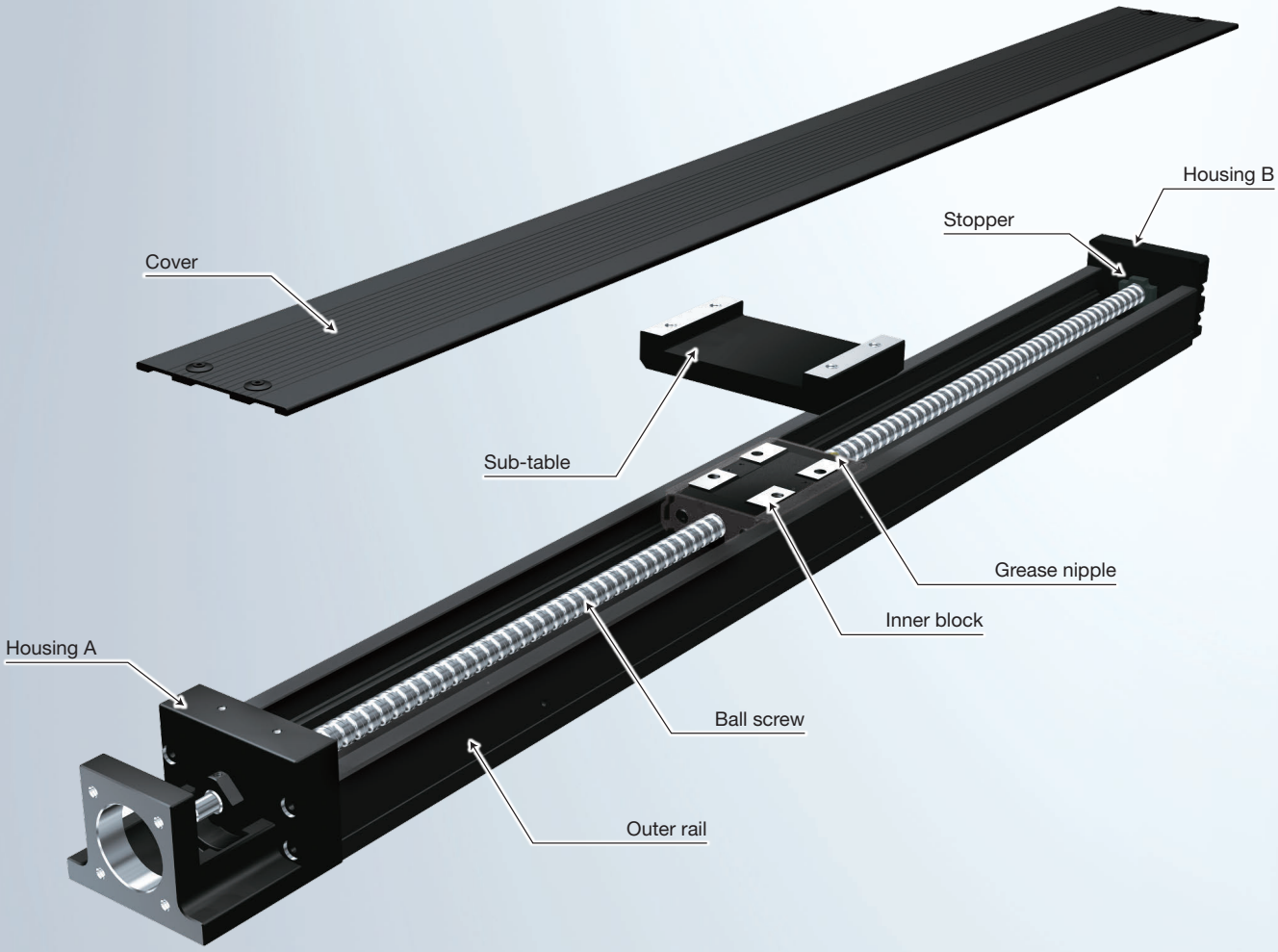


Positioning repeatability

as precise as ±0.003 mm!!

(Precision grade)

Modular structure with integrated

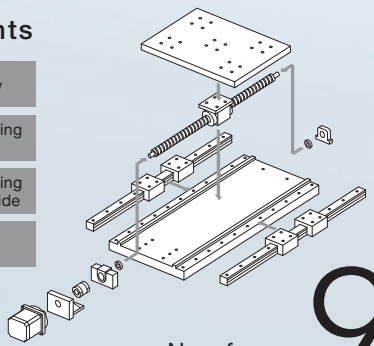


Reduces components by 1/3

Adopts a KR modular structure to greatly reduce the number of parts for components using an LM Guide and ball screw. In addition, the time required for procurement work, delivery management, design, and assembly is reduced, resulting in the lead time to complete the equipment being shortened.

General components

LM Guide	Ball screw
Base	Support bearing fixed side
Table	Support bearing supported side
Motor bracket	Coupling
Motor	



No. of components: 9

No. of components greatly reduced

KR

KR	Coupling
Motor	

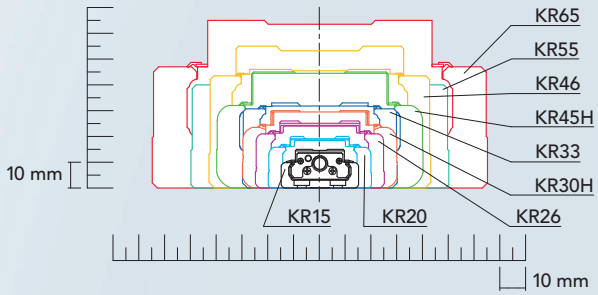
No. of components: 3

LM Guide and ball screw

Select the Optimal Model

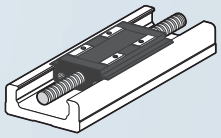
A lineup of different shapes and sizes with 4 types of blocks and motor mounting specifications (direct coupling or wrap) enables selection to suit the application.

Size Lineup



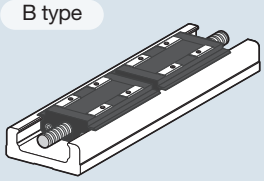
Block Types

A type



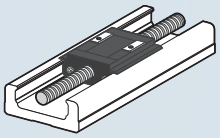
Typical block type.

B type



Shape using 2 A type inner blocks to achieve high rigidity and high load capacity.

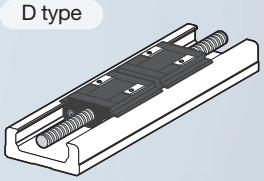
C type



Shorter overall length than the A type inner blocks as an extended stroke type.

Note) Only KR30H, 33, 45H, and 46.

D type



Shape using 2 C type inner blocks to achieve high rigidity and high load capacity.

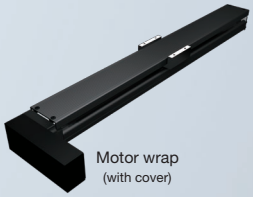
Note) Only KR30H, 33, 45H, and 46.

Shape Lineup

Direct motor coupling (without cover)

Motor wrap (without cover)

Direct motor coupling (with cover)



Motor wrap (with cover)

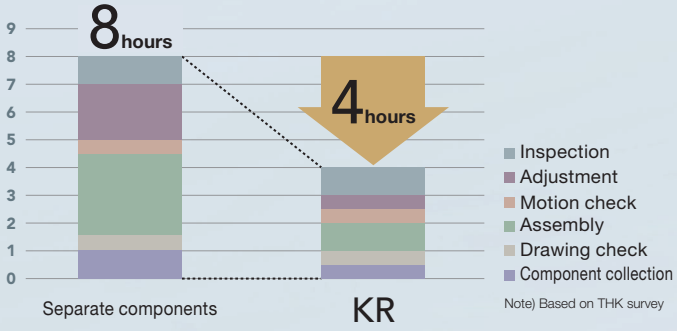
Reduces design time by Approx. 57%

Adopts a modular structure to greatly reduce design time when using an LM Guide and ball screw.

Note) Based on THK survey

Reduces assembly time by 50%

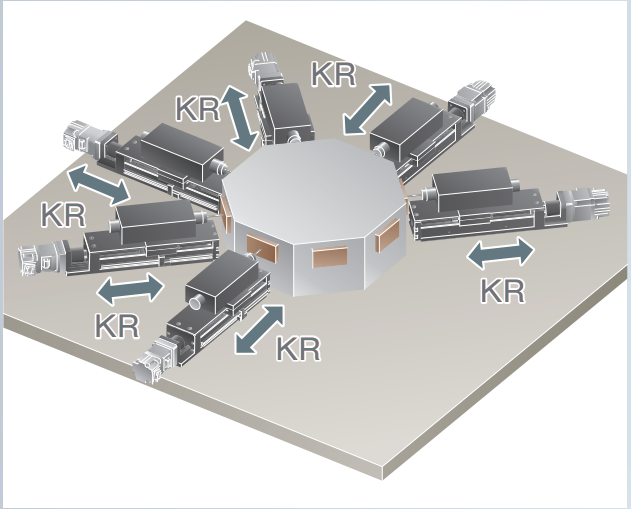
Adopts a modular structure to greatly reduce assembly time when using an LM Guide and ball screw.



Note) Based on THK survey

Machine tool industry

Workpiece Drilling Machine

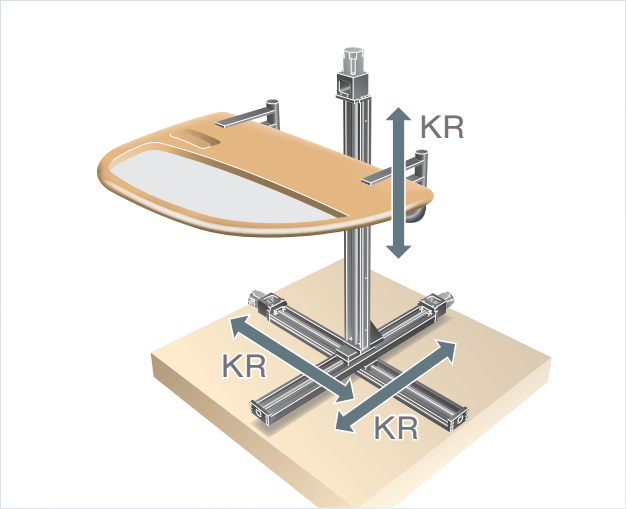


KR is used in workpiece drilling machines. KR's features include its compact form and high rigidity, which allow reduced machinery size while maintaining precision.

Model used: KR3306A

Automotive industry

Processing/Assembly Locater

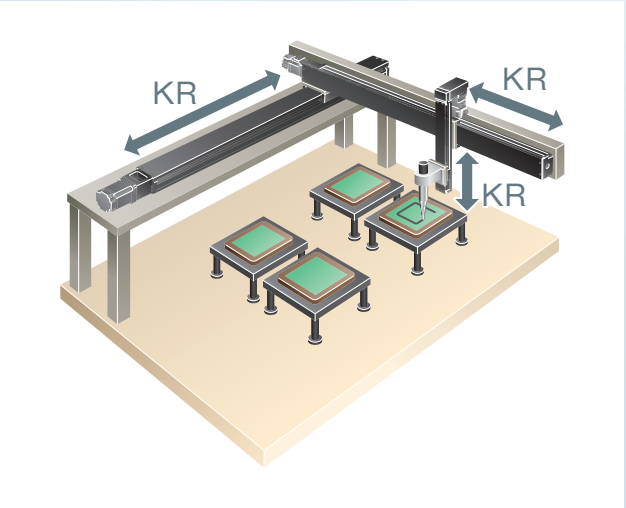


The KR is used for processing and conveying automobile doors. High precision positioning is enabled through the use of KR. KR also provides high rigidity and is able to withstand welding warpage force without an auxiliary guide.

Model used:
X-axis: KR6525B
Y-axis: KR5520B
Z-axis: KR4610B

Electronic components industry

Sealing Equipment

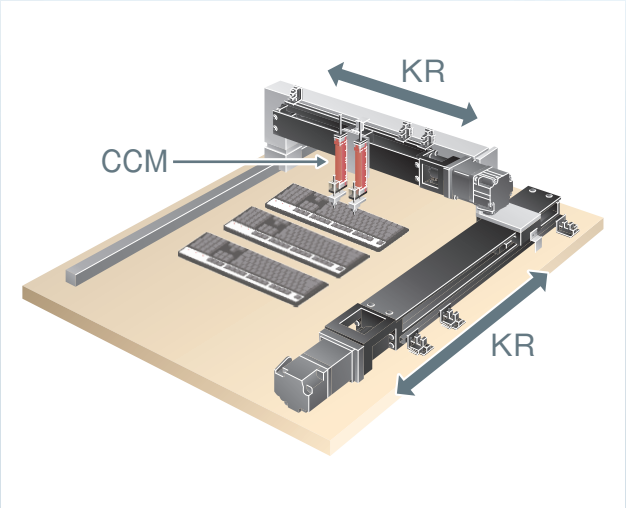


The KR is used for the moving nozzle section of sealing equipment. The KR has excellent rigidity to suppress vibrations at the overhang and nozzle tip, contributing to improved productivity.

Model used:
X-axis: KR5520A
Y-axis: KR3310A
Z-axis: KR2006A

Electronic components industry

Push Button Inspection Equipment

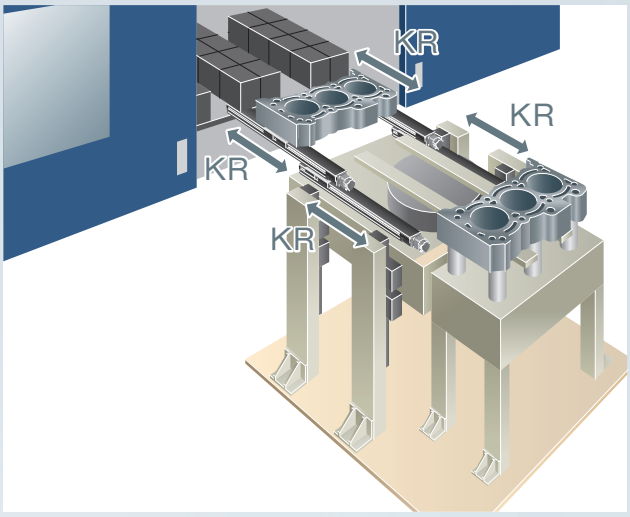


The KR and CCM are used in inspection equipment. The Z-axis was moved from the air cylinder to the linear motor, allowing all of the axes to be motorized. In combination with improved positioning accuracy compared to conventional models due to the KR's high accuracy and speed, this enables operations with rapid takt times.

Model used:
X-axis: KR3310A
Y-axis: KR2606A
Z-axis: CCM05

Machine tool industry

Pallet Changer

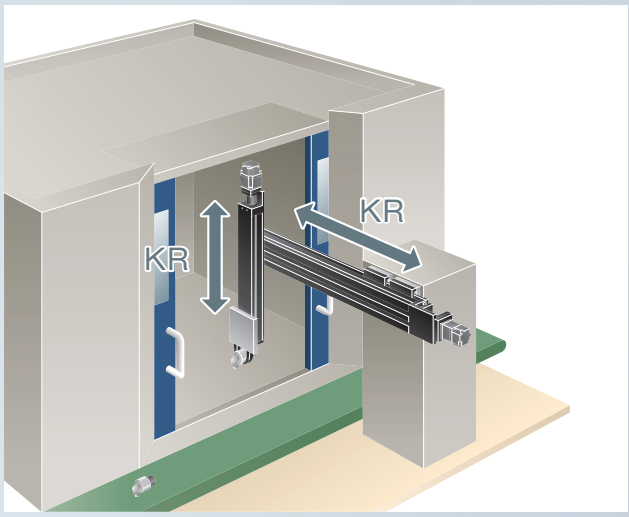


Two 2-block KRs are stacked in the changer. A high rigidity KR unit is used to carry the load of the large overhang. This also takes up less space than conventional multi-jointed robots.

Model used	Lower axis: KR4620B Upper axis: KR4620B

Machine tool industry

Workpiece Inserter

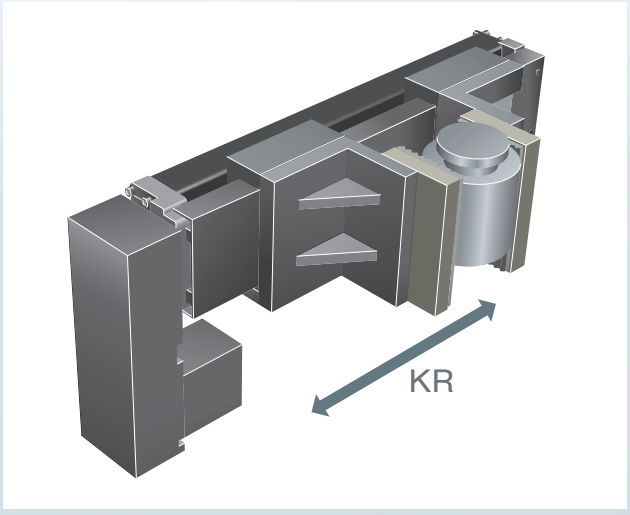


The KR is used in the workpiece inserter axis. The KR outer rail can move to insert items into the opening/closing part. The KR has high rigidity to support large loads.

Model used	Horizontal axis: KR4620B Lifting axis: KR3310B

Manufacturing in general

Servo Chuck

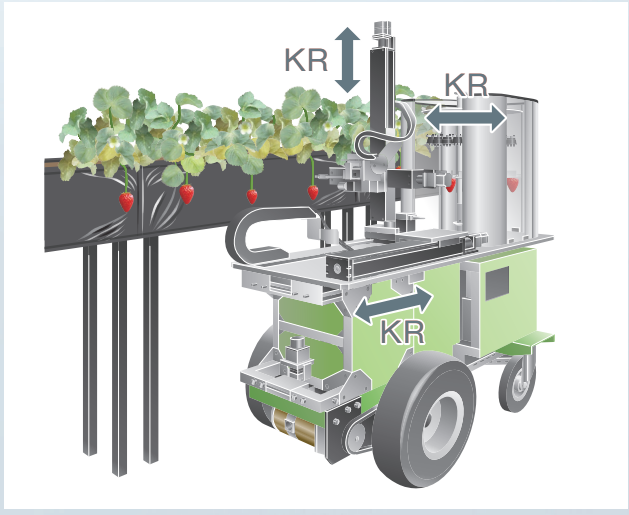


A special KR unit (left/right ball screw specification) is used for the hand chuck that conveys the workpiece. Using a modularized LM Guide and ball screw helps to reduce design/assembly time and achieve even smaller sizes.

Model used	Special KR (left/right ball screw specification)

Food industry

Strawberry Picking Robot



A 3-axis KR combination is used for the light sensor-equipped self-driving robot. A camera is used to measure the ripeness of strawberries and determine which ones to pick. The high-rigidity KR is used to pick ripe strawberries further away from the robot.

Model used	X-axis: KR4620B Y-axis: KR3310A Z-axis: KR4610A

Series Lineup

Model	Ball screw lead (mm)	Stroke[1] (mm)	Hypothetical motor capacity (W)	Maximum load capacity[2, 3] (kg)		
				Horizontal	Wall-mounted	Vertical
KR15	1	25 to 150	-	-	-	-
	2			-	-	-
KR20	1	30 to 130	50	12.5	10	3 (2.5)
	6			12.5	8.5	4
KR26	2	60 to 210	50	27.5	22	9.5 (6.5)
	6			27.5	19	7
KR30H	6	50 to 500	100	35	28	15.5 (12)
	10			28.5	23	9
KR33	6	50 to 600	100	43.5	33	15
	10			37.5	25.5	12 (11.5)
KR45H	10	200 to 800	200	65	52	18
	20			42 (31)	36.5 (31)	8
	10		400	65	52	24.5 (18.5)
	20			59.5	36.5	18
KR46	10	190 to 790	200	77	64.5	18
	20			43.5 (30.5)	42.5 (30.5)	8
	10		400	96	64.5	23 (18)
	20			66.5	42.5	18
KR55	20	800 to 1200	400	68 (67.5)	68 (67.5)	17
	20		750	84	83	33.5
KR65	25	790 to 1490	750	95	95	24

[1] The stroke is the value with 1 block (A type: without QZ).
[2] Maximum load capacity is the weight at the speed and acceleration/deceleration rate as below.
Speed: Rated motor rotational speed 3000 min^{-1}
Acceleration and deceleration rate: 0.15 G for a lead less than 10 mm, 0.3 G for a lead of 10 mm, and 0.5 G for a lead of 20 mm or more
[3] The value in parentheses is for motor wrap specifications.
[4] The maximum speed is limited by the actuator's permissible speed.
It is also the speed when 1 block (A type: without QZ) and normal accuracy grade are selected.
[5] The maximum speed may be different for the KR33/46 short blocks (C/D type). Refer to the applicable specification page for details.

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)		Stroke (5)
KR46	10	A	QZA	-	0675
KR15	01: 1 mm	A: x 1	No symbol: Without QZ		0015: 15 mm
KR20	02: 2 mm	B: x 2	QZ		0020: 20 mm
KR26	06: 6 mm	C: x 1	QZA		0030: 30 mm
KR30H	10: 10 mm	D: x 2	QZB		0035: 35 mm
KR33	20: 20 mm		QZAD		0060: 60 mm
KR45H	25: 25 mm				0080: 80 mm
KR46					0110: 110 mm
KR55					0140: 140 mm
KR65					0550: 550 mm
					0590: 590 mm
					to
					1490: 1490 mm

Ball screw leads that can be selected differ depending on the model.
KR15: "01," "02"
KR20: "01," "06"
KR26: "02," "06"
KR30H: "06," "10"
KR33: "06," "10"
KR45H: "10," "20"
KR46: "10," "20"
KR55: "20"
KR65: "25"

The following models allow selection of (4) QZ specifications.
KR33 → p. 61
KR46 → p. 103
KR55 → p. 127
KR65 → p. 145
* Selection is not possible for KR15, KR20, KR26, KR30H and KR45H.

When selecting "QZ," "QZA," "QZB" or "QZAD" for (4) QZ specification, specify the stroke with QZ.
KR33 → p. 79 to p. 84
KR46 → p. 121 to p. 126
KR55 → p. 141 to p. 144
KR65 → p. 157 to p. 160
When selecting 2: With bellows for (8) Cover: Specify the stroke with bellows.
→ p. 161 to p. 164

	Maximum speed for each stroke[4, 5] (mm/s)																Product page
	Stroke[1] (mm)																
	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500		
	70																p. 11
	200																
	100																p. 19
	600																
	200																p. 31
	590																
	470			390													p. 43
	790			650													
	470			390	280												p. 61
	790			650	470												
	520						430										p. 85
	1050						840										
	520						430										
	1050						840										
	520						430										p. 103
	1050						850										
	520						430										
	1050						850										
	800								740	620	530						p. 127
	800								740	620	530						
	800										550						p. 145

Accuracy grade	With/without motor		Cover	Sensors	Housing A/Intermediate flange	
(6)	(7)		(8)	(9)	(10)	
- P	0		- 1	2	AV	
No symbol: Normal grade	For direct coupling		0: Without cover	0	For direct coupling	For wrap
H: High accuracy grade	0: Direct coupling (without motor)		1: With cover	1	A0	WN-05D
P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	2	AN	WP-08D
	For wrap			6	AP	WP-08K
	R1: Non-standard side wrap (without motor)			7	AQ	WP-08M
	R2: Standard side wrap (without motor)			B	AR	WQ-08D
	R3: Bottom side wrap (without motor)			E	AS	WQ-08K
	R4: Non-standard side wrap (Specified motor prepared and mounted by THK)			H	AT	WQ-08M
	R5: Standard side wrap (Specified motor prepared and mounted by THK)			L	AU	WV-14M
	R6: Bottom side wrap (Specified motor prepared and mounted by THK)			J	AV	WY-11M
				M	AY	WY-14M
					AZ	WZ-16M
					A5	WZ-19M
					A6	W5-19M
					10	
					20	
					30	
					40	
					60	

When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "R1," "R2," or "R3":
A timing pulley and timing belt are provided.

When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately.
Select (10) Housing A/Intermediate flange to match the specified motor.

When selecting (4) QZ specification, 2: With bellows cannot be selected.

Motors from various manufacturers can be mounted. Contact THK for details.

KR15 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 30 mm | Main Unit Height 15 mm | Stroke Max. 150 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	-	Stroke (4)	-	Accuracy grade (5)	With/without motor (6)	-	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR15	01	A	-	0025	-	P	O	-	1	1	AN
KR15	01: 1 mm	A: x 1		0025: 25 mm		H: High accuracy grade	For direct coupling		0: Without cover	0	For direct coupling
	02: 2 mm	B: x 2		to		P: Precision grade	0: Direct coupling (without motor)		1: With cover	1	A0
				0150: 150 mm			1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	7	AN
							For wrap			B	AS
							R1: Non-standard side wrap (without motor)			E	20
							R2: Standard side wrap (without motor)			Sensor details → p. 15	For wrap
							R3: Bottom side wrap (without motor)				WN-05D
							R4: Non-standard side wrap (Specified motor prepared and mounted by THK)				
							R5: Standard side wrap (Specified motor prepared and mounted by THK)				
							R6: Bottom side wrap (Specified motor prepared and mounted by THK)				

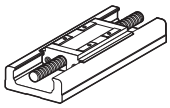
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 161 to p. 162

When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

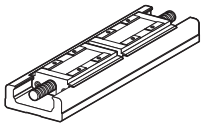
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

For direct coupling → p. 16
For wrap → p. 17

(3) Block type

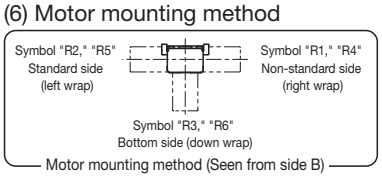


A: Block x 1 (A type)



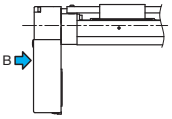
B: Block x 2 (B type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



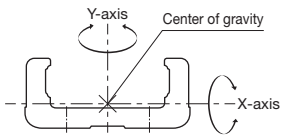
Selection Materials

Basic Specifications

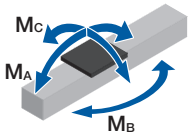
LM Guide	Basic dynamic load rating C (N)		1930	
	Basic static load rating C_0 (N)		3450	
	Radial clearance (mm)	High accuracy grade (H)	-0.001 to +0.002	
		Precision grade (P)	-0.005 to -0.002	
	Geometrical moment of inertia	I_X[1] (mm^4)	9.08×10^2	
		I_Y[2] (mm^4)	1.42×10^4	
		Weight (kg/m)	1.04	
Ball screw	Ball screw lead (mm)		1	2
	Basic dynamic load rating Ca (N)	High accuracy grade (H)	340	230
		Precision grade (P)		
	Basic static load rating C_0a (N)	High accuracy grade (H)	660	410
		Precision grade (P)		
	Screw shaft diameter (mm)		ϕ5	
	Thread minor diameter (mm)		ϕ4.5	
	Ball center-to-center diameter (mm)		ϕ5.15	
	Permissible rotational speed[3] (min^{-1})	High accuracy grade (H)	4500	
		Precision grade (P)		
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	590	
		Static permissible load P_0a (N)	290	
Permissible input torque (N·m)		Direct coupling	0.05	0.10
		Wrap		
Static permissible moment[4, 5] (N·m)			M_A: 12.1 (70.3), M_B: 12.1 (70.3), M_C: 38 (76)	
Standard grease			THK AFF Grease	

[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
Note 1) LM Guide load rating is the load rating per block.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[6]					
		25	50	75	100	125	150
High accuracy grade (H)	Positioning repeatability (mm)	±0.004					
	Positioning accuracy (mm)	0.04					
	Running parallelism (vertical direction) (mm)	0.02					
	Backlash (mm)	0.01					
	Starting torque (N·cm)	0.4					

Accuracy grade	Item	Stroke[6]					
		25	50	75	100	125	150
Precision grade (P)	Positioning repeatability (mm)	±0.003					
	Positioning accuracy (mm)	0.02					
	Running parallelism (vertical direction) (mm)	0.01					
	Backlash (mm)	0.002					
	Starting torque (N·cm)	0.8					

[6] Stroke with 1 block (A type).
Note 2) Precision evaluation in accordance with THK standards.
Note 3) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 4) The starting torque represents the value when containing THK AFF Grease.
Note 5) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 6) Contact THK for accuracy higher than the standard stroke.

Motor Selection Specifications

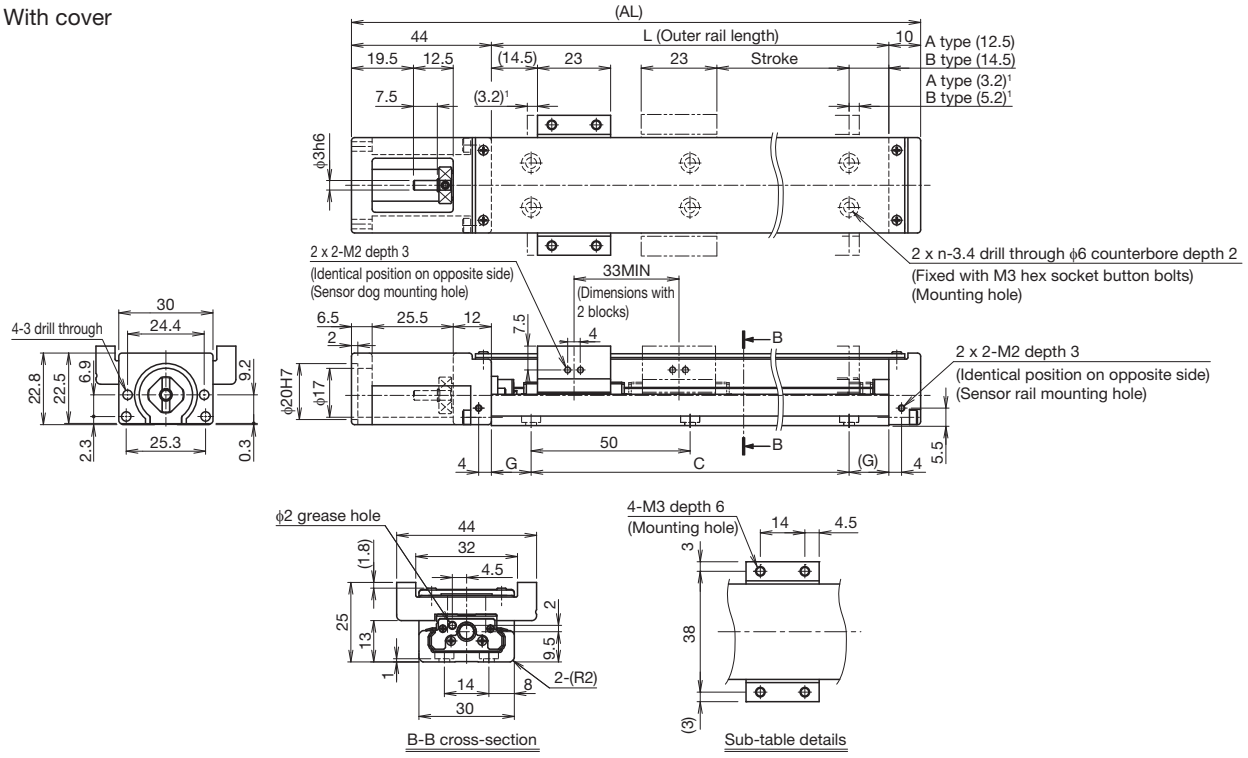
Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m^2)
25 to 150	75 to 200	A type 0.04 B type 0.08	A type 0.03 B type 0.06	A type 0.07 B type 0.14	0.9	1, 2	106 to 231	ϕ3h7	0.004

[1] Stroke with 1 block (A type).
[2] Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 16 for applicable couplings.

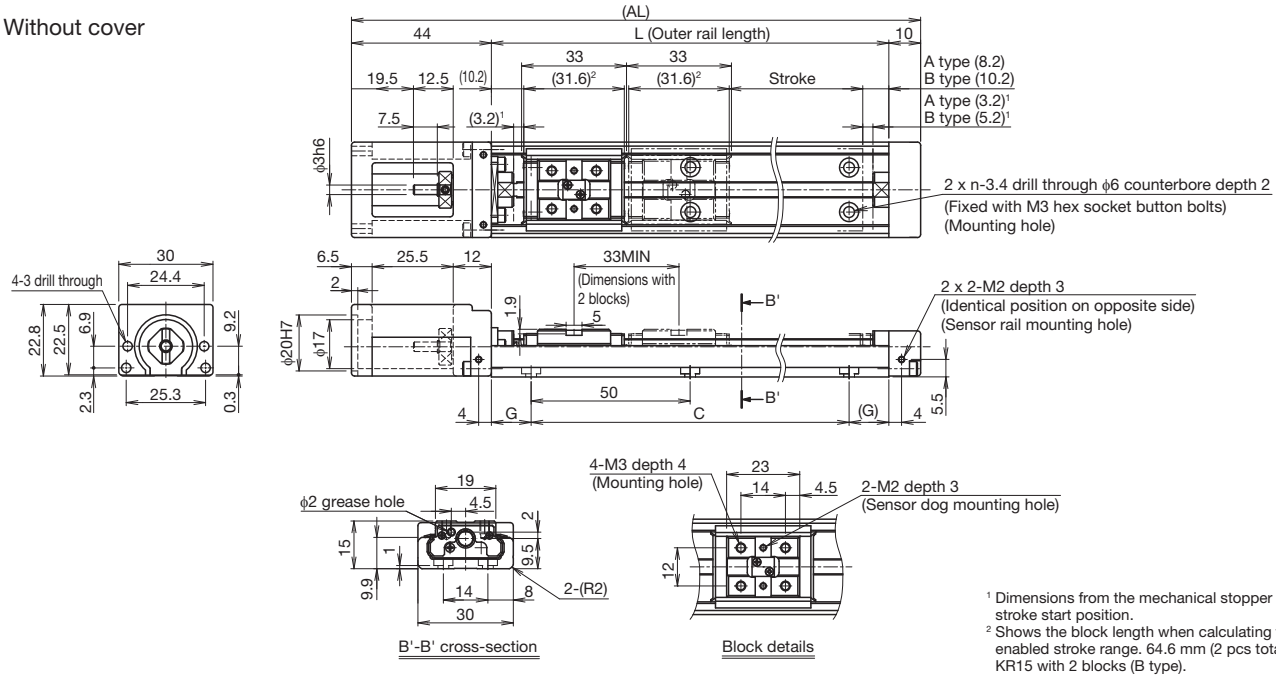
With cover/Without cover
Direct motor coupling

Dimensions

With cover



Without cover



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 64.6 mm (2 pcs total) for KR15 with 2 blocks (B type).

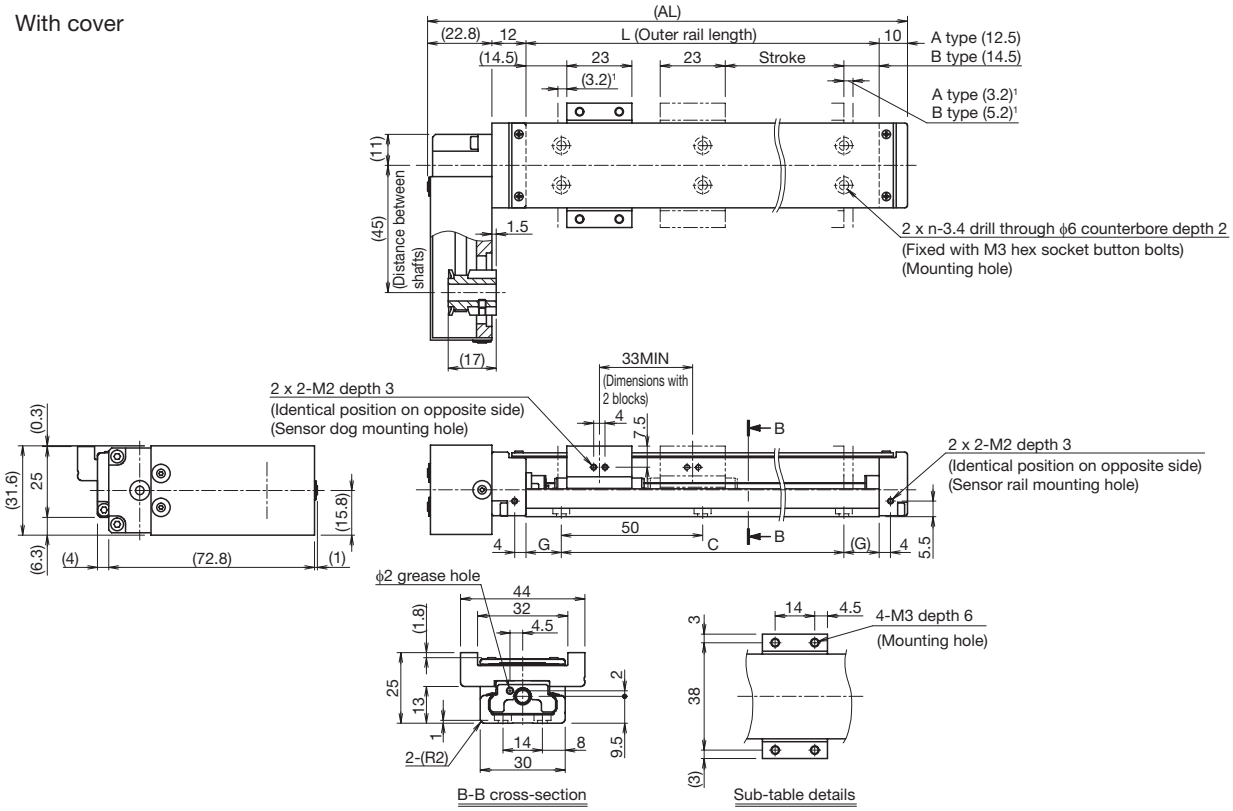
Stroke (mm) (Stroke between mechanical stoppers)	A type	25 (31.4)	50 (56.4)	75 (81.4)	100 (106.4)	125 (131.4)	150 (156.4)
	B type[3]	-	-	40 (48.4)	65 (73.4)	90 (98.4)	115 (123.4)
Maximum speed[4] (mm/s)	Ball screw lead: 1 mm	70					
	Ball screw lead: 2 mm	200					
Dimensions (mm)	AL	129	154	179	204	229	254
	L	75	100	125	150	175	200
	C	50	50	100	100	150	150
	G	12.5	25	12.5	25	12.5	25
Mounting hole count	n	2	2	3	3	4	4
Weight[5,6] (kg)		0.25 (0.2)	0.28 (0.23)	0.32 (0.26)	0.35 (0.29)	0.38 (0.32)	0.41 (0.35)

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.07 kg (with cover) or 0.04 kg added.
[6] Parentheses show the values without cover.

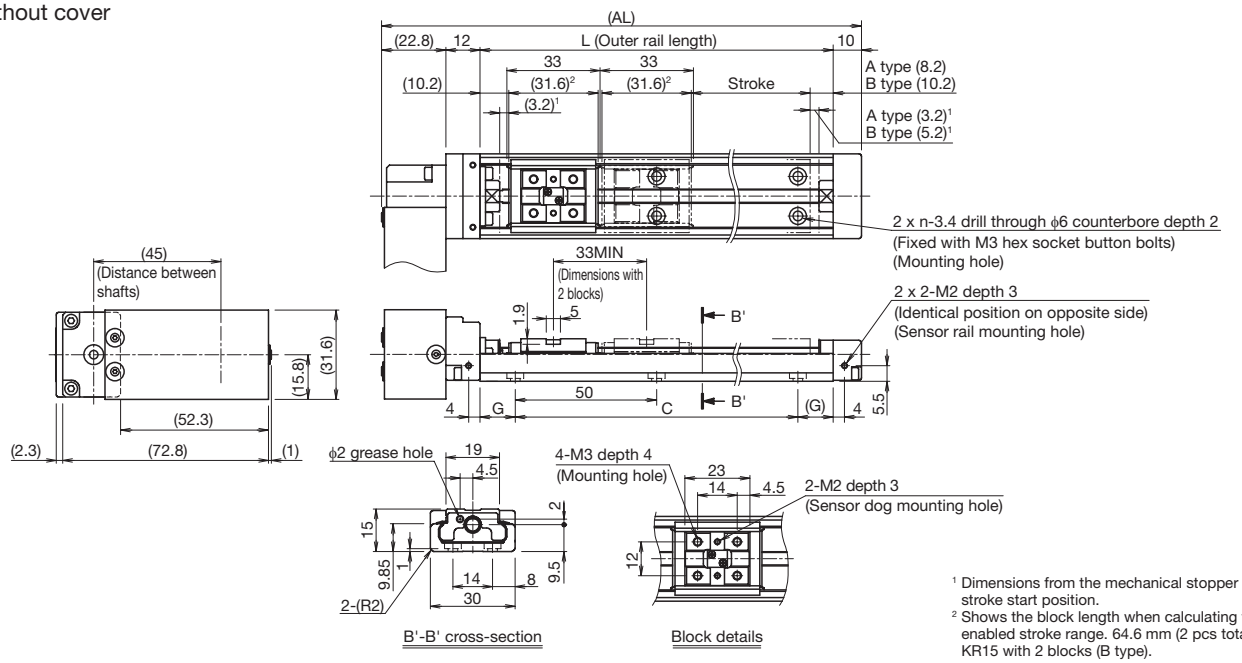
With cover/Without cover
Motor wrap

Dimensions

With cover



Without cover



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 64.6 mm (2 pcs total) for KR15 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	25 (31.4)	50 (56.4)	75 (81.4)	100 (106.4)	125 (131.4)	150 (156.4)
	B type[3]	-	-	40 (48.4)	65 (73.4)	90 (98.4)	115 (123.4)
Maximum speed[4] (mm/s)	Ball screw lead: 1 mm	70					
	Ball screw lead: 2 mm	200					
Dimensions (mm)	AL	119.8	144.8	169.8	194.8	219.8	244.8
	L	75	100	125	150	175	200
	C	50	50	100	100	150	150
	G	12.5	25	12.5	25	12.5	25
Mounting hole count	n	2	2	3	3	4	4
Weight[5, 6] (kg)		0.43 (0.38)	0.46 (0.41)	0.49 (0.44)	0.53 (0.47)	0.56 (0.5)	0.59 (0.53)

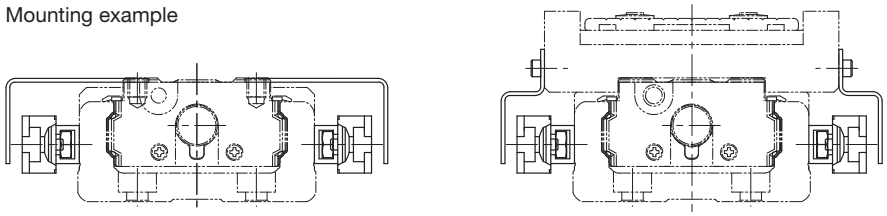
[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.07 kg (with cover) or 0.04 kg added.
[6] Parentheses show the values without cover.

Options

Sensors

Optional proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog. Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

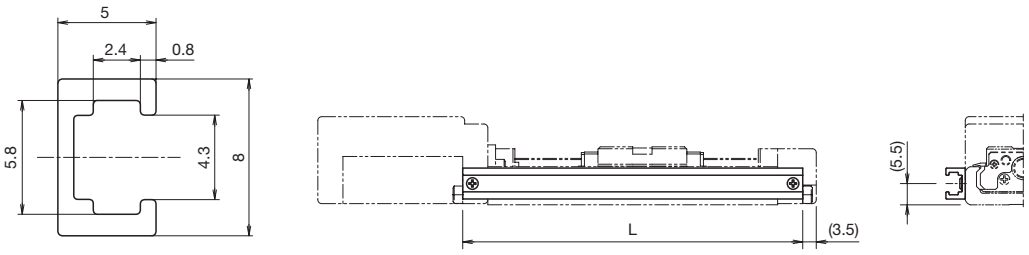


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
7	Proximity sensor NO contact[1] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[2] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[1] (x1) NC contact[2] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog, sensor rail (x1 or 2)

[1] NO contact: Normally open contact point
[2] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



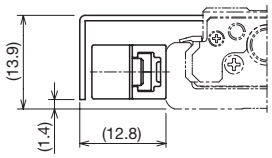
Sensor rail details

Stroke[3] (mm)	Outer rail length (mm)	L (mm)
25	75	88
50	100	113
75	125	138
100	150	163
125	175	188
150	200	213

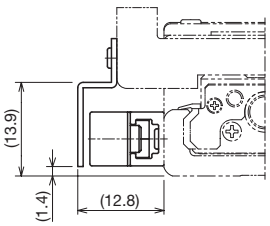
[3] Stroke with 1 block (A type).

Proximity Sensor Mounting Dimensions

Without cover



With cover



Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width (without cover): 5 mm
Sensor dog width (with cover): 8 mm

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	AN	SFC-005DA2-3B-5B	XGT2-15C-3-5
				SGMMV-A2	20				
				SGMMV-A3	30				
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	AN	SFC-005DA2-3B-5B	XGT2-15C-3-5
				HG-AK0236	20				
				HG-AK0336	30				

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ2*, AR2*	□28	AS	SFC-005DA2-3B-5B-L26	XGT2-15C-3-5
		5-phase	CRK	CRK52*				
			CVK	PKP52*				
		2-phase	CVK	PKP22*				
	Keyence Corporation	2-phase		QS-M28	□28	AS	SFC-005DA2-3B-5B-L26	XGT2-15C-3-5
	Sanyo Denki Co., Ltd.	PB		PBDM28*	□28	AS	SFC-005DA2-3B-5B	XGT2-15C-3-5
		5-phase		FAF/FDF52*			SFC-005DA2-3B-5B-L26	
		2-phase		D*14S28*				

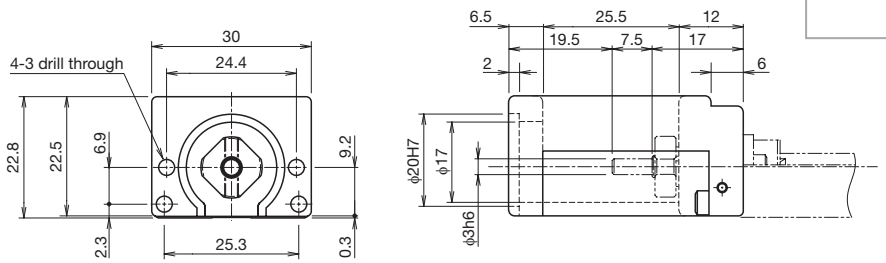
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 11), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

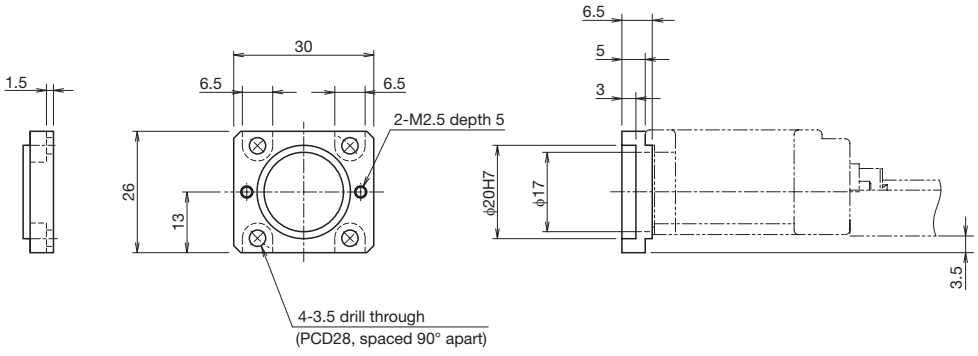
Housing A

KR15
A0

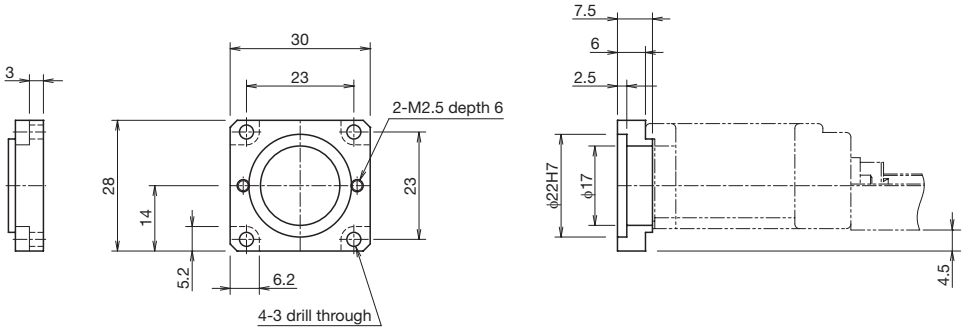


Intermediate flange

KR15
AN



KR15
AS



Options

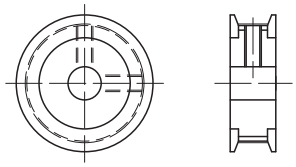
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	N	-	05	D
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	D: D-cut

Motor shaft fixing method



D-cut

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	WN-05D
				SGMMV-A2	20		
				SGMMV-A3	30		
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	WN-05D
				HG-AK0236	20		
				HG-AK0336	30		

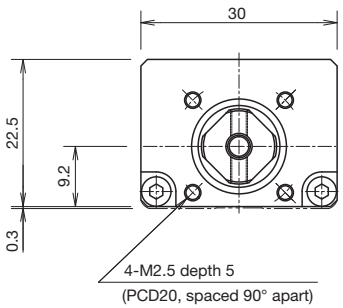
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 11), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

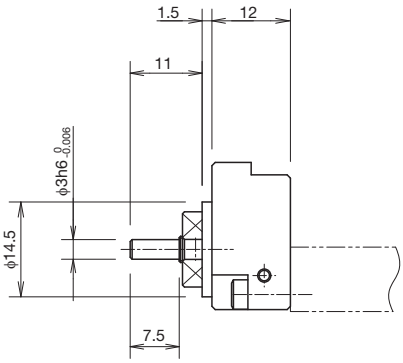
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR15
20





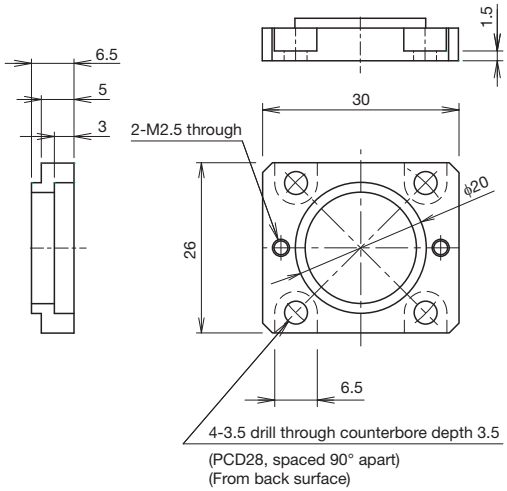
Note) Shaft end must be considered separately for motor wrap types. Contact THK for details.

Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

KR15
WN



KR20 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 40 mm | Main Unit Height 20 mm | Stroke Max. 130 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	-	Stroke (4)	-	Accuracy grade (5)	With/without motor (6)	-	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR20	01	A	-	0030	-	P	0	-	1	2	AQ
KR20	01: 1 mm	A: x 1		0030: 30 mm		No symbol: Normal grade	For direct coupling		0: Without cover	0	For direct coupling
	06: 6 mm	B: x 2		to		H: High accuracy grade	0: Direct coupling (without motor)		1: With cover	1	A0
				0130: 130 mm		P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	2	AN
							For wrap			6	AP
							R1: Non-standard side wrap (without motor)			7	AQ
							R2: Standard side wrap (without motor)			B	AR
							R3: Bottom side wrap (without motor)			E	AS
							R4: Non-standard side wrap (Specified motor prepared and mounted by THK)			H	20
							R5: Standard side wrap (Specified motor prepared and mounted by THK)			L	For wrap
							R6: Bottom side wrap (Specified motor prepared and mounted by THK)			J	WN-05D
										M	WP-08D
										Sensor details → p. 25	WP-08K
											WQ-08D
											WQ-08K

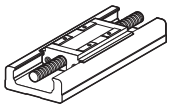
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows. → p. 161 to p. 162

When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

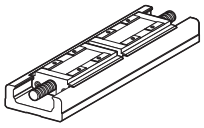
When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

For direct coupling → p. 27
For wrap → p. 29

(3) Block type

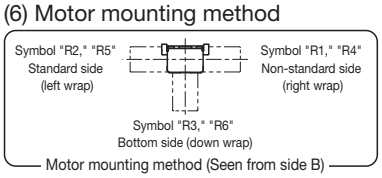


A: Block x 1 (A type)



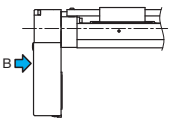
B: Block x 2 (B type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		3590	
	Basic static load rating C_0 (N)		6300	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.003 to +0.002	
		Precision grade (P)	-0.007 to -0.003	
	Geometrical moment of inertia	I_X[1] (mm^4)	6.1×10^3	
		I_Y[2] (mm^4)	6.2×10^4	
		Weight (kg/m)	2.6	
Ball screw	Ball screw lead (mm)		1	6
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	660	860
		Precision grade (P)		1060
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	1170	1450
		Precision grade (P)		1600
	Screw shaft diameter (mm)		ϕ6	
	Thread minor diameter (mm)		ϕ5.3	ϕ5
	Ball center-to-center diameter (mm)		ϕ6.15	ϕ6.3
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	6000	
		Precision grade (P)		
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1000	
		Static permissible load P_0a (N)	1240	
Permissible input torque (N·m)		Direct coupling	0.20	0.42
		Wrap		0.40
Static permissible moment[4, 5] (N·m)			M_A: 31 (176), M_B: 31 (176), M_C: 83 (165)	
Running life[6] (km)			3,000	5,000
Standard grease/Grease nipple used			THK AFA Grease/PB107	

[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows: Stroke: 80 mm (A type), 85 mm (B type). Speed: 50 mm/s (for a 1 mm lead), 300 mm/s (for a 6 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: on the center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.

Precision

Accuracy grade	Item	Stroke[7] 30	80	130
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01		
	Positioning accuracy (mm)	Not specified		
	Running parallelism (vertical direction) (mm)	Not specified		
	Backlash (mm)	0.02		
	Starting torque (N·cm)	0.5		

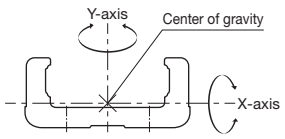
Accuracy grade	Item	Stroke[7] 30	80	130
High accuracy grade (H)	Positioning repeatability (mm)	±0.005		
	Positioning accuracy (mm)	0.06		
	Running parallelism (vertical direction) (mm)	0.025		
	Backlash (mm)	0.01		
	Starting torque (N·cm)	0.5		

Accuracy grade	Item	Stroke[7] 30	80	130
Precision grade (P)	Positioning repeatability (mm)	±0.003		
	Positioning accuracy (mm)	0.02		
	Running parallelism (vertical direction) (mm)	0.01		
	Backlash (mm)	0.003		
	Starting torque (N·cm)	1.2		

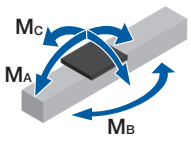
[7] Stroke with 1 block (A type).

Note 2) Precision evaluation in accordance with THK standards.
Note 3) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 4) The starting torque represents the value when containing THK AFA Grease.
Note 5) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 6) Contact THK for accuracy higher than the standard stroke.

Geometrical moment of inertia



Static permissible moment



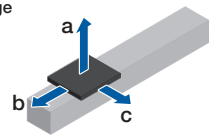
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
30 to 130	100 to 200	A type 0.08 B type 0.16	A type 0.05 B type 0.1	A type 0.13 B type 0.26	1.2	1, 6	133 to 233	ϕ4h7	0.013

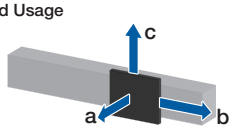
[1] Stroke with 1 block (A type).
[2] Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 27 for applicable couplings.

Permissible Overhang Length[3]

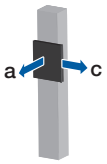
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	1	3	350	90	160
			6	160	40	80
			12.5	70	20	40
		6	3	350	80	160
			6	160	30	80
			12.5	70	10	40
	B type	1	4	400	370	250
			8.5	400	170	110
			17.5	260	80	50
		6	4	400	340	250
			8.5	400	160	110
			17.5	260	70	50
Wrap	A type	1	3	350	90	160
			6	160	40	80
			12.5	70	20	40
		6	3	350	80	160
			6	160	30	80
			12.5	70	10	40
	B type	1	4	400	370	250
			8.5	400	170	110
			17.5	260	80	50
		6	4	400	340	250
			8.5	400	160	110
			17.5	260	70	50

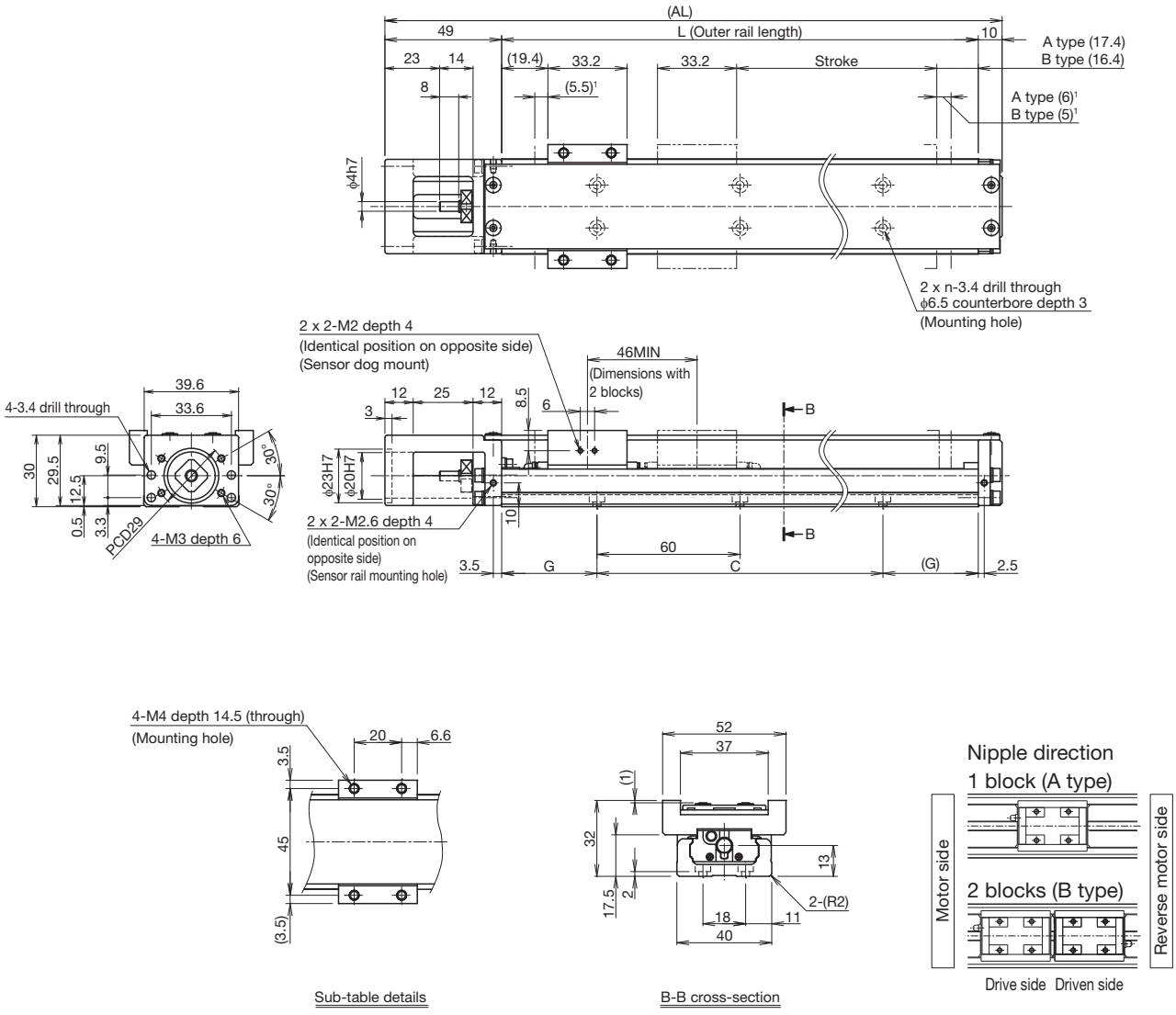
Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	1	2.5	170	110	360
			5	70	50	180
			10	20	20	90
		6	2	220	120	400
			4	100	50	220
			8	40	20	110
	B type	1	3.5	260	300	400
			7	120	150	400
			14	50	70	250
		6	3.5	260	300	400
			7	120	150	400
			14	50	70	250
Wrap	A type	1	2.5	170	110	360
			5	70	50	180
			10	20	20	90
		6	2	220	120	400
			4	100	50	220
			8	40	20	110
	B type	1	3.5	260	300	400
			7	120	150	400
			14	50	70	250
		6	3.5	260	300	400
			7	120	150	400
			14	50	70	250

Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	1	0.5	400	400
			1.5	150	140
			3	60	70
		6	1	240	210
			2	110	100
			4	40	40
	B type	1	0.5	400	400
			1.5	400	400
			3.5	310	230
		6	1.5	400	400
			3.5	310	230
			7	140	110
Wrap	A type	1	0.5	400	400
			1	230	210
			2.5	80	80
		6	1	240	210
			2	110	100
			4	40	40
	B type	1	0.5	400	400
			1.5	400	400
			3.5	310	230
		6	1.5	400	400
			3	360	260
			6.5	150	120

[3] Value when LM Guide running life is restricted to 5,000 km (3,000 km for 1 mm lead only). The calculation conditions are as follows.
Stroke: 80 mm (A type), 60 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 50 mm/s (for 1 mm lead), 300 mm/s (for 6 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



Sub-table details

B-B cross-section

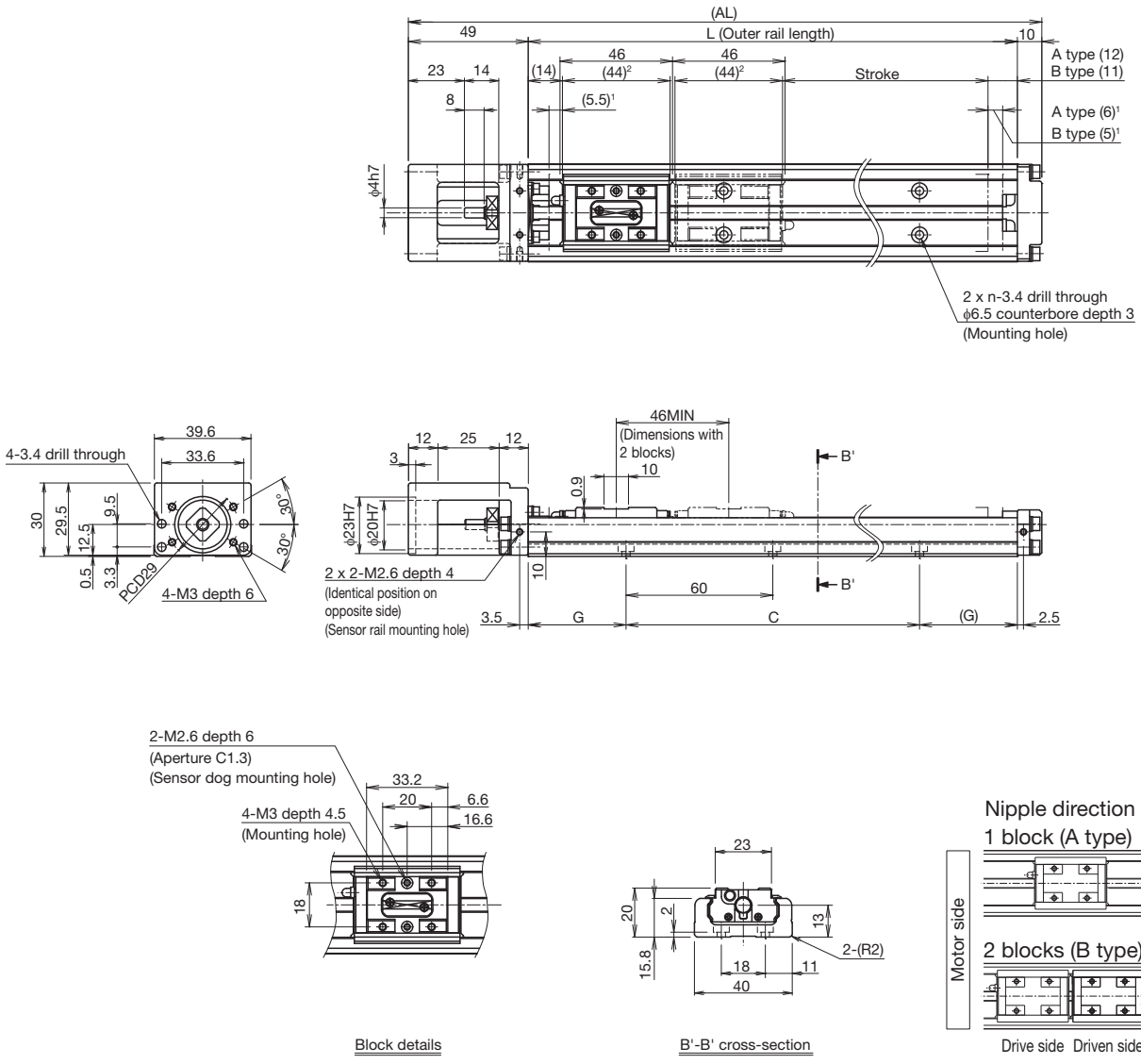
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (41.5)	80 (91.5)	130 (141.5)
	B type[2]	-	35 (45.5)	85 (95.5)
Maximum speed[3] (mm/s)	Ball screw lead: 1 mm	100		
	Ball screw lead: 6 mm	600		
Dimensions (mm)	AL	159	209	259
	L	100	150	200
	C	60	120	120
	G	20	15	40
Mounting hole count	n	2	3	3
Weight[4] (kg)		0.56	0.71	0.85

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.13 kg added.

Without cover
Direct motor coupling

Dimensions



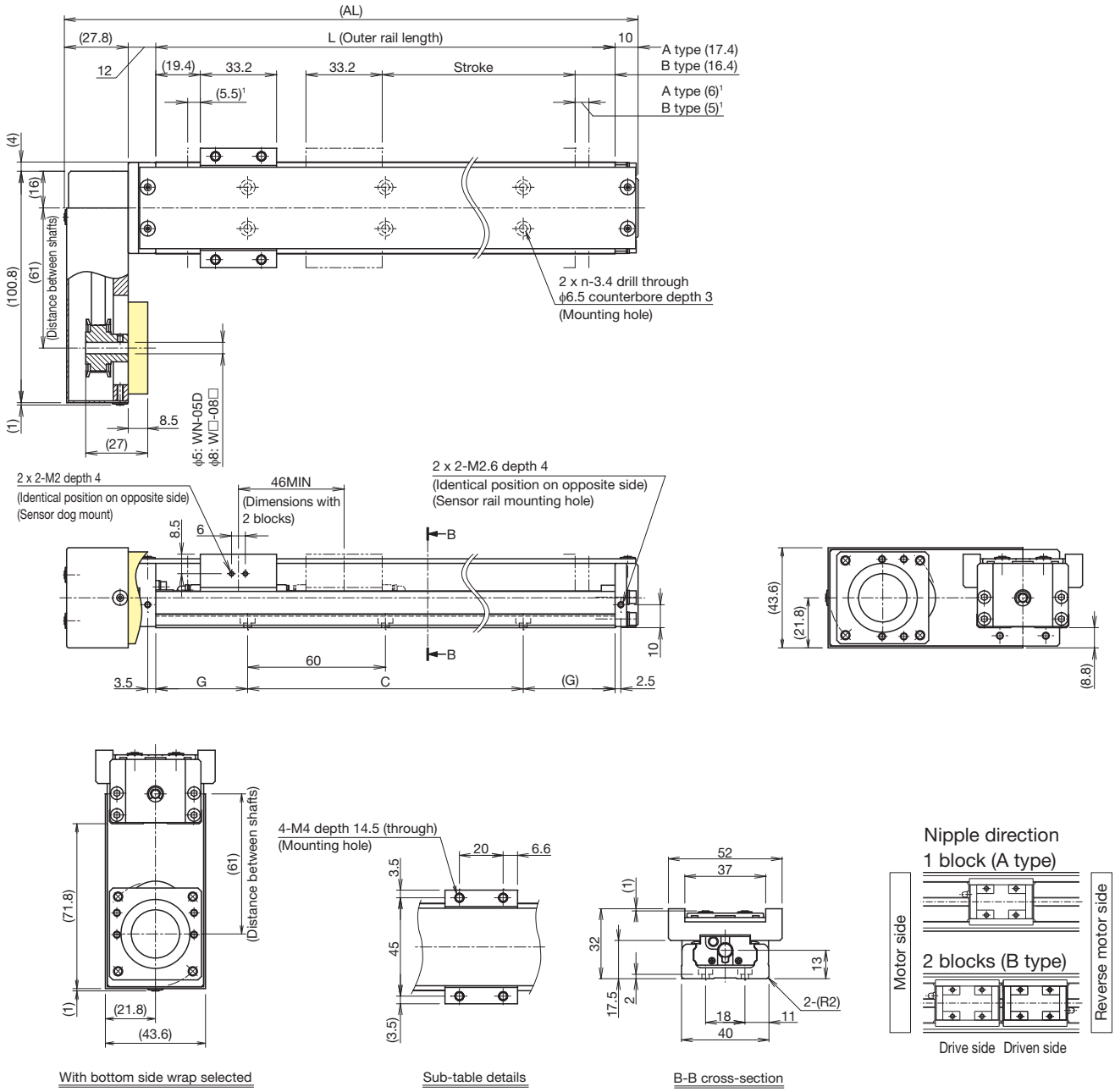
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 90 mm (2 pcs total) for KR20 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (41.5)	80 (91.5)	130 (141.5)
	B type[3]	-	35 (45.5)	85 (95.5)
Maximum speed[4] (mm/s)	Ball screw lead: 1 mm	100		
	Ball screw lead: 6 mm	600		
Dimensions (mm)	AL	159	209	259
	L	100	150	200
	C	60	120	120
	G	20	15	40
Mounting hole count	n	2	3	3
Weight[5] (kg)		0.48	0.61	0.75

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.08 kg added.

With cover
Motor wrap

Dimensions



With bottom side wrap selected

Sub-table details

B-B cross-section

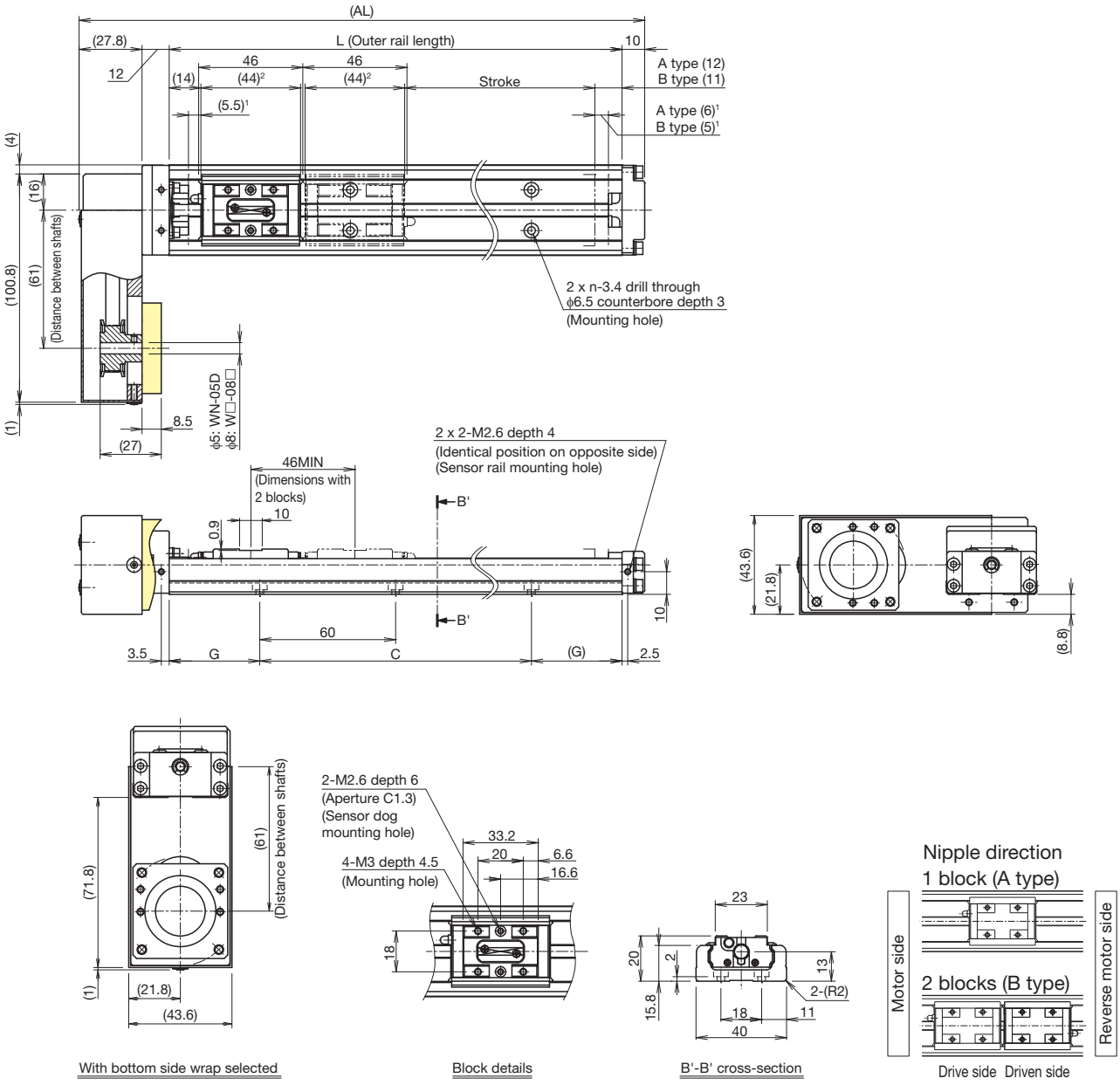
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (41.5)	80 (91.5)	130 (141.5)
	B type[2]	-	35 (45.5)	85 (95.5)
Maximum speed[3] (mm/s)	Ball screw lead: 1 mm	100		
	Ball screw lead: 6 mm	600		
Dimensions (mm)	AL	149.8	199.8	249.8
	L	100	150	200
	C	60	120	120
	G	20	15	40
Mounting hole count	n	2	3	3
Weight[4] (kg)		0.82	0.96	1.11

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.13 kg added.

Without cover
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 90 mm (2 pcs total) for KR20 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (41.5)	80 (91.5)	130 (141.5)
	B type[3]	-	35 (45.5)	85 (95.5)
Maximum speed[4] (mm/s)	Ball screw lead: 1 mm	100		
	Ball screw lead: 6 mm	600		
Dimensions (mm)	AL	149.8	199.8	249.8
	L	100	150	200
	C	60	120	120
	G	20	15	40
Mounting hole count	n	2	3	3
Weight[5] (kg)		0.73	0.87	1.01

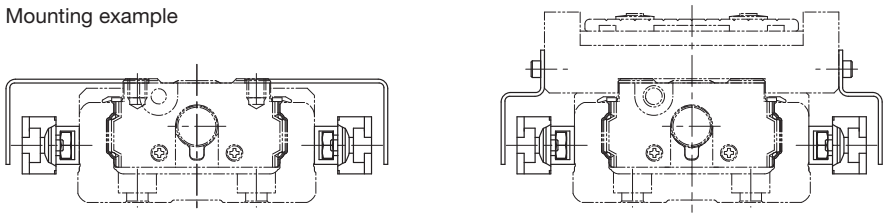
[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.08 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

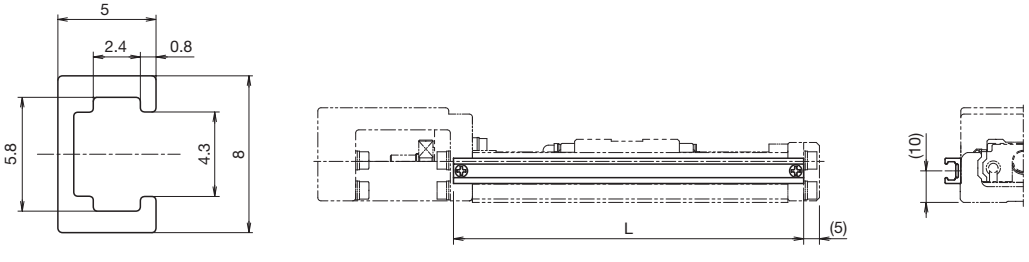


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details

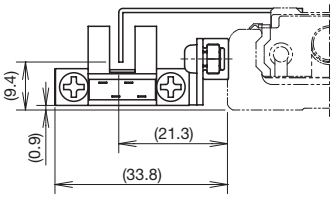
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
30	100	111
80	150	161
130	200	211

[4] Stroke with 1 block (A type).

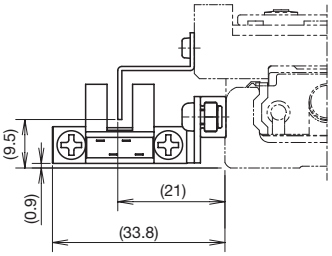
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



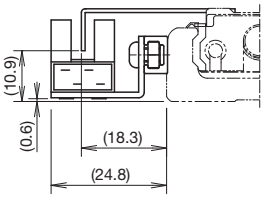
With cover



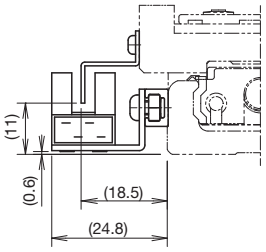
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 10 mm

Without cover



With cover

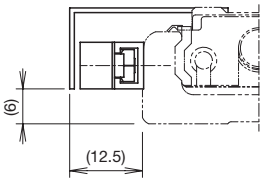


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

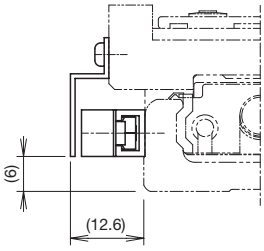
Sensor dog width: 10 mm

Proximity Sensor Mounting Dimensions

Without cover



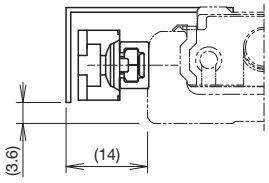
With cover



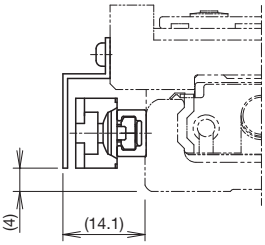
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 10 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 10 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	AN	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				SGMMV-A2	20				
				SGMMV-A3	30				
		Σ-V		SGMJV-A5	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
				SGMAV-A5					
		Σ-7		SGM7J-A5	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
				SGM7A-A5					
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	AN	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				HG-AK0236	20				
				HG-AK0336	30				
				HG-KR053	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
				HG-MR053					
			JN	HF-KN053	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
		TBL-iIV		TSM3102					
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	AP	SFC-010DA2-4B-8B	XGT2-19C-4-8
				MSME5A					
			A6	MSMF5A	50	□38	AP	SFC-010DA2-4B-8B	XGT2-19C-4-8
				MHMF5A		□40	AQ		
	Keyence Corporation	SV		SV-M005	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
		SV2		SV2-M005					
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ2*, AR2*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				AZ4*, AR4* (excluding AZM48)	□42	AR	SFC-010DA2-4B-6B	XGT2-15C-4-6
				AZM48			SFC-010DA2-4B-8B	XGT2-19C-4-8
		5-phase	CRK	CRK52*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				CRK54*	□42	AR	SFC-010DA2-4B-5B	
			RKII	RKS54*	□42	AR	SFC-010DA2-4B-6B	XGT2-15C-4-6
			PKA	PKA544	□42	AR	SFC-010DA2-4B-5B	XGT2-15C-4-5
			CVK	PKP52*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				PKP54*	□42	AR	SFC-010DA2-4B-5B	
		2-phase	CVK	PKP22*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				PKP24*	□42	AR	SFC-010DA2-4B-5B	
	Keyence Corporation	2-phase		QS-M28	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				QS-M42	□42	AR	SFC-010DA2-4B-5B	
	Sanyo Denki Co., Ltd.	PB		PBDM28*	□28	AS	SFC-010DA2-4B-5B	XGT2-15C-4-5
				PBDM423, PBA**423	□42	AR	SFC-010DA2-4B-6B	XGT2-15C-4-6
		5-phase		FAF/FDF52*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				FAF54*/FDF54*/ FA511M42/FB511M42	□42	AR	SFC-010DA2-4B-6B	XGT2-15C-4-6
		2-phase		D*14S28*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5
				DB14H52*	□42	AR	SFC-010DA2-4B-5B	XGT2-15C-4-5
				DU15H52*				

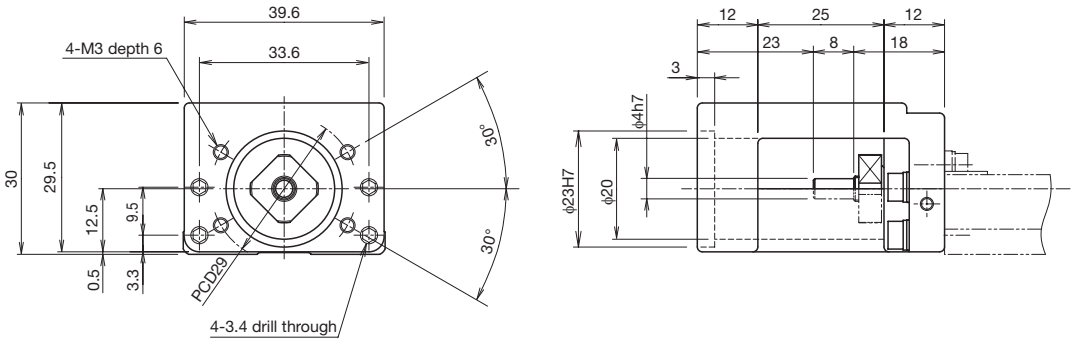
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 19), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

KR**
●◇

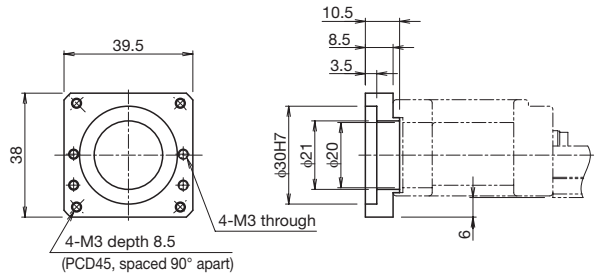
Actuator model
●: Housing A
◇: Intermediate flange

KR20
A0

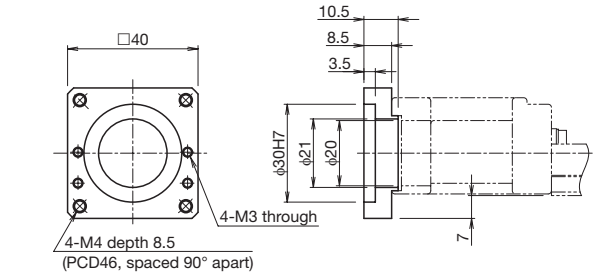


Intermediate flange

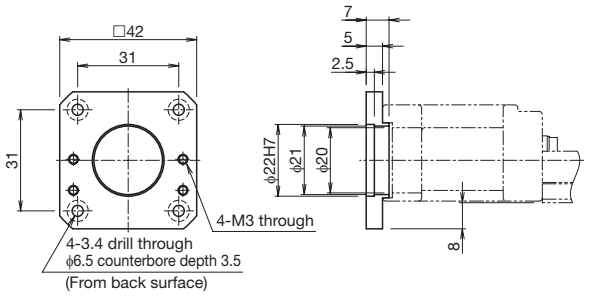
KR20
AP



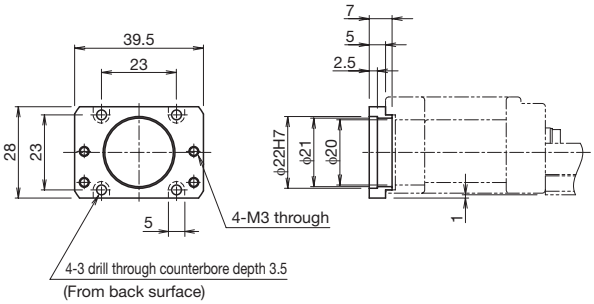
KR20
AQ



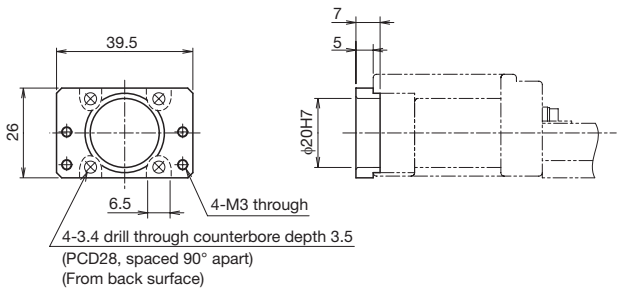
KR20
AR



KR20
AS



KR20
AN



Options

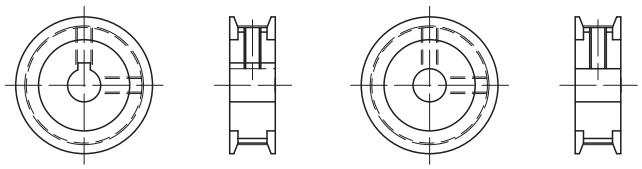
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	Q	-	08	D
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	K: Key D: D-cut

Motor shaft fixing method



Key D-cut

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	WN-05D
				SGMMV-A2	20		
				SGMMV-A3	30		
		Σ-V		SGMJV-A5	50	□40	WQ-08K
				SGMAV-A5			
		Σ-7		SGM7J-A5	50	□40	WQ-08K
				SGM7A-A5			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	WN-05D
				HG-AK0236	20		
				HG-AK0336	30		
				HG-KR053	50	□40	WQ-08D
				HG-MR053			
			JN	HF-KN053	50	□40	WQ-08D
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	WQ-08D
		TBL-iIV		TSM3102			
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	WP-08D, WP-08K
				MSME5A			
			A6	MSMF5A	50	□38	WP-08K
				MHMF5A		□40	WQ-08K
	Keyence Corporation	SV		SV-M005	50	□40	WQ-08K
		SV2		SV2-M005			
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	WQ-08K
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	WQ-08K
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	WQ-08K

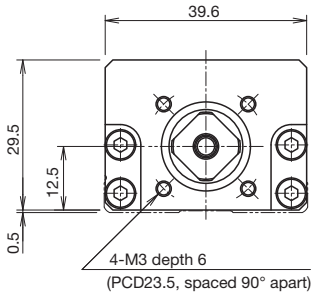
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 19), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

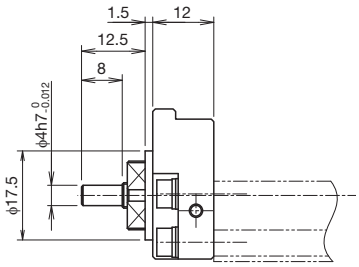
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR20
20





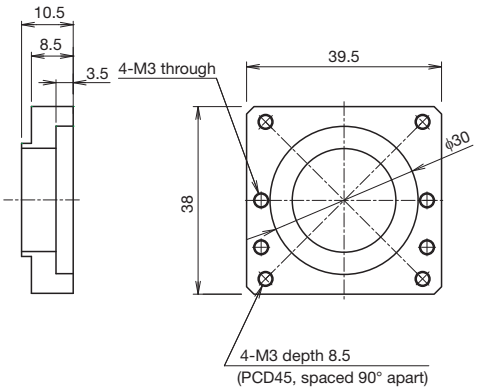
Note) Shaft end must be considered separately for motor wrap types. Contact THK for details.

Wrap specification (intermediate flange)

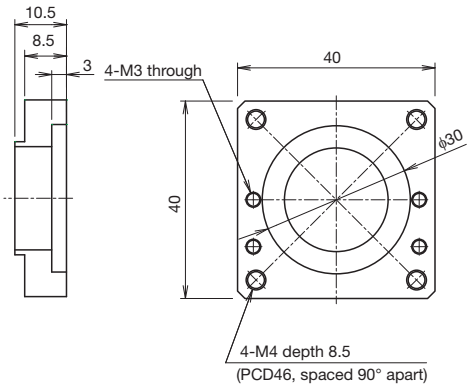
KR**
W□

Actuator model
□: Intermediate flange

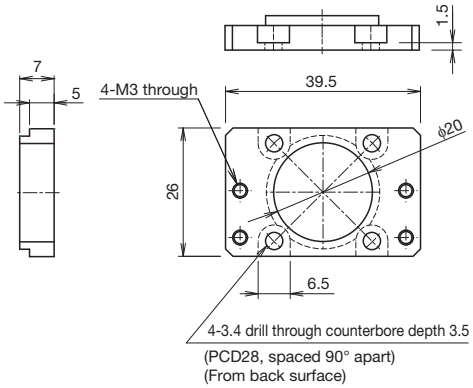
KR20
WP



KR20
WQ



KR20
WN



KR26 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 50 mm | Main Unit Height 26 mm | Stroke Max. 210 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	Stroke (4)	Accuracy grade (5)	With/without motor (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR26	02	A	0060	P	0	1	2	AQ
KR26	02: 2 mm	A: x 1	0060: 60 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	06: 6 mm	B: x 2	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			0210: 210 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AN
					For wrap		6	AP
					R1: Non-standard side wrap (without motor)		7	AQ
					R2: Standard side wrap (without motor)		B	AR
					R3: Bottom side wrap (without motor)		E	AS
					R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	20
					R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	For wrap
					R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WN-05D
							M	WP-08D
								WP-08K
								WQ-08D
								WQ-08K

When selecting 2: With bellows for (7) Cover, specify the stroke with bellows. → p. 161 to p. 162

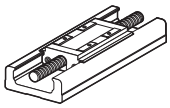
When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

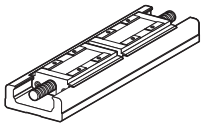
Sensor details → p. 37

For direct coupling → p. 39
For wrap → p. 41

(3) Block type

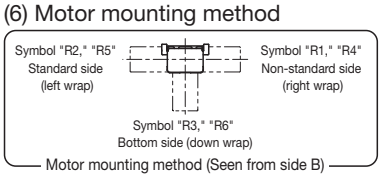


A: Block x 1 (A type)



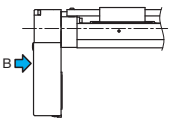
B: Block x 2 (B type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		7240	
	Basic static load rating C_0 (N)		12150	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to +0.002	
		Precision grade (P)	-0.01 to -0.004	
	Geometrical moment of inertia	I_X[1] (mm^4)	1.7×10^4	
		I_Y[2] (mm^4)	1.5×10^5	
		Weight (kg/m)	3.9	
Ball screw	Ball screw lead (mm)		2	6
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	2350	1950
		Precision grade (P)		2390
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	4020	3510
		Precision grade (P)		3900
	Screw shaft diameter (mm)		ϕ8	
	Thread minor diameter (mm)		ϕ6.6	ϕ6.7
	Ball center-to-center diameter (mm)		ϕ8.3	ϕ8.4
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	6000	5900
		Precision grade (P)		6000
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1380	
		Static permissible load P_0a (N)	1760	
Permissible input torque (N·m)		Direct coupling	0.62	0.80
		Wrap	0.40	
Static permissible moment[4, 5] (N·m)			M_A: 84 (480), M_B: 84 (480) M_C: 208 (416)	
Running life[6] (km)			3,000	5,000
Standard grease/Grease nipple used			THK AFA Grease/PB107	

[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 160 mm (A type), 95 mm (B type). Speed: 100 mm/s (for 2 mm lead), 300 mm/s (for 6 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.
Note 1) LM Guide load rating is the load rating per block.

Precision

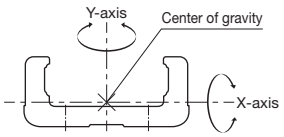
Accuracy grade	Item	Stroke[7] 60	110	160	210
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01			
	Positioning accuracy (mm)	Not specified			
	Running parallelism (vertical direction) (mm)	Not specified			
	Backlash (mm)	0.02			
	Starting torque (N·cm)	1.5			

Accuracy grade	Item	Stroke[7] 60	110	160	210
High accuracy grade (H)	Positioning repeatability (mm)	±0.005			
	Positioning accuracy (mm)	0.06			
	Running parallelism (vertical direction) (mm)	0.025			
	Backlash (mm)	0.01			
	Starting torque (N·cm)	1.5			

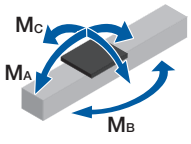
Accuracy grade	Item	Stroke[7] 60	110	160	210
Precision grade (P)	Positioning repeatability (mm)	±0.003			
	Positioning accuracy (mm)	0.02			
	Running parallelism (vertical direction) (mm)	0.01			
	Backlash (mm)	0.003			
	Starting torque (N·cm)	4			

[7] Stroke with 1 block (A type).
Note 2) Precision evaluation in accordance with THK standards.
Note 3) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 4) The starting torque represents the value when containing THK AFA Grease.
Note 5) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 6) Contact THK for accuracy higher than the standard stroke.

Geometrical moment of inertia



Static permissible moment



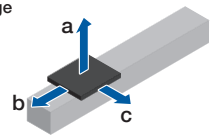
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
60 to 210	150 to 300	A type 0.19 B type 0.38	A type 0.09 B type 0.18	A type 0.28 B type 0.56	1.4	2, 6	190 to 340	ϕ5h7	0.013

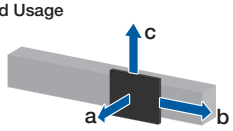
[1] Stroke with 1 block (A type).
[2] Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 39 for applicable couplings.

Permissible Overhang Length[3]

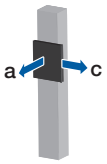
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	2	6.5	500	120	330
			13.5	270	60	160
			27.5	120	20	70
		6	6.5	500	100	260
			13.5	270	40	120
			27.5	120	20	50
	B type	2	9.5	500	500	500
			19	500	240	250
			38.5	470	110	120
		6	9.5	500	430	420
			19	500	200	200
			38.5	470	90	90
Wrap	A type	2	6.5	500	120	330
			13.5	270	60	160
			27.5	120	20	70
		6	6.5	500	100	260
			13.5	270	40	120
			27.5	120	20	50
	B type	2	9.5	500	500	500
			19	500	240	250
			38.5	470	110	120
		6	9.5	500	430	420
			19	500	200	200
			38.5	470	90	90

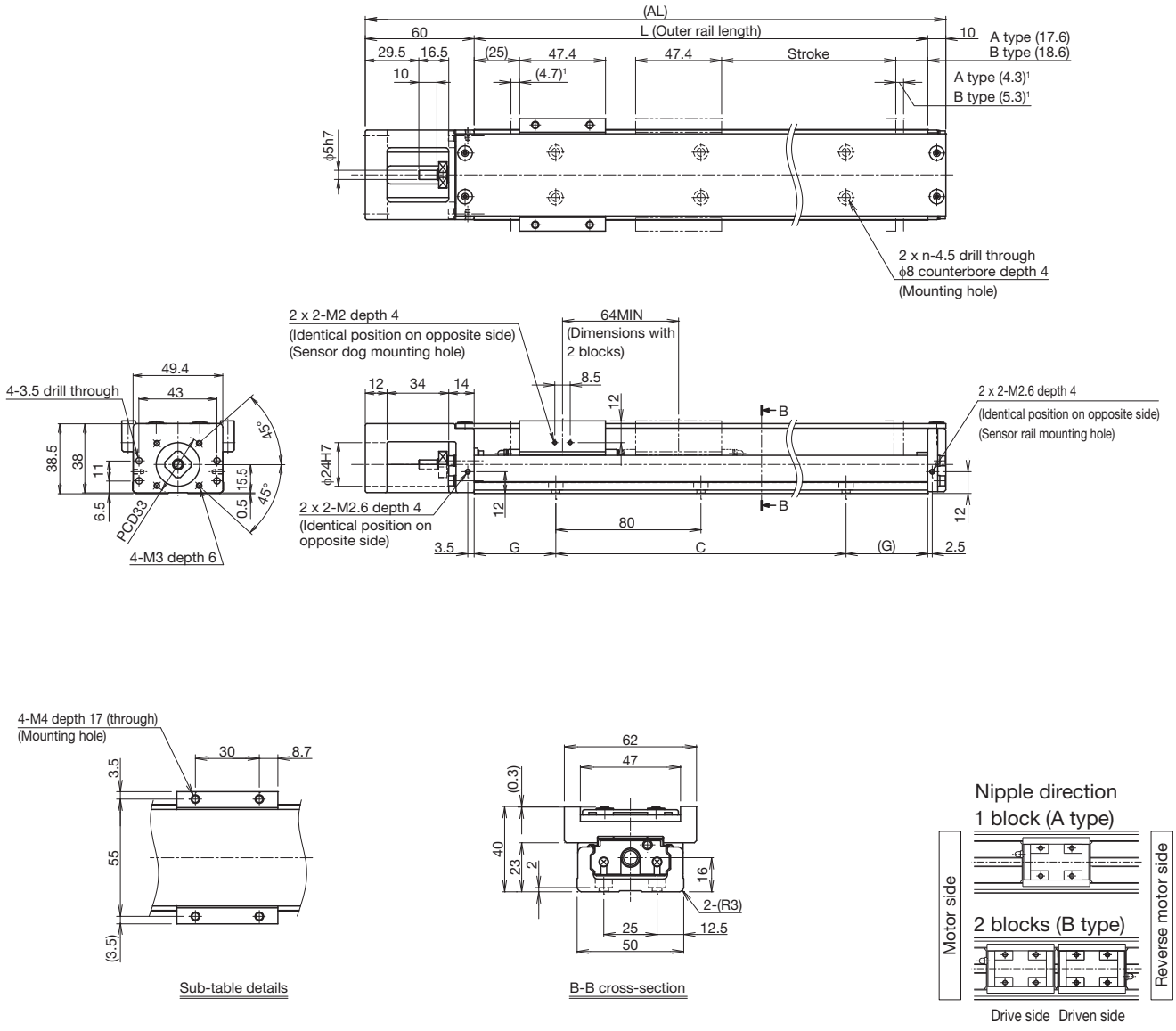
Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	2	5.5	170	110	390
			11	70	50	190
			22	20	20	90
		6	4.5	220	140	480
			9	90	60	240
			18.5	30	20	110
	B type	2	7.5	270	240	500
			15.5	110	110	390
			31	40	50	190
		6	7.5	270	240	500
			15.5	110	110	390
			31	40	50	190
Wrap	A type	2	5.5	170	110	390
			11	70	50	190
			22	20	20	90
		6	4.5	220	140	480
			9	90	60	240
			18.5	30	20	110
	B type	2	7.5	270	240	500
			15.5	110	110	390
			31	40	50	190
		6	7.5	270	240	500
			15.5	110	110	390
			31	40	50	190

Hypothetical motor capacity 50 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	2	2	350	250
			4.5	160	110
			9.5	70	50
		6	1.5	400	330
			3.5	180	140
			7	80	70
	B type	2	2	500	500
			4.5	500	310
			9.5	440	140
		6	2	500	500
			4.5	500	310
			9.5	410	140
Wrap	A type	2	1.5	500	330
			3	250	160
			6.5	110	70
		6	1.5	400	330
			3.5	180	140
			7	80	70
	B type	2	1.5	500	500
			3.5	500	390
			7.5	500	180
		6	2	500	500
			4.5	500	310
			9.5	410	140

[3] Value when LM Guide running life is restricted to 5,000 km (3,000 km for 2 mm lead only). The calculation conditions are as follows.
Stroke: 135 mm (A type), 95 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 100 mm/s (for 2 mm lead), 300 mm/s (for 6 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



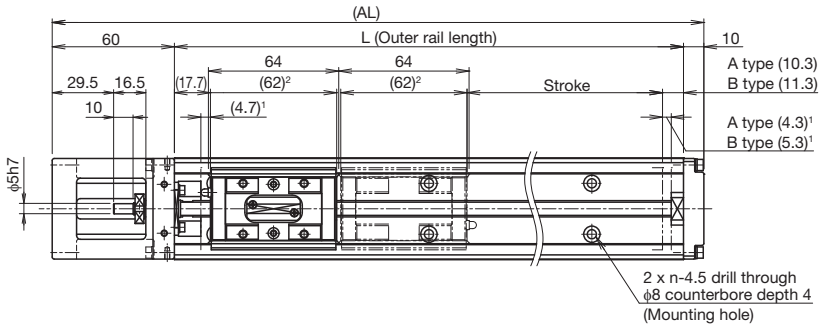
[1] Dimensions from the mechanical stopper to the stroke start position.

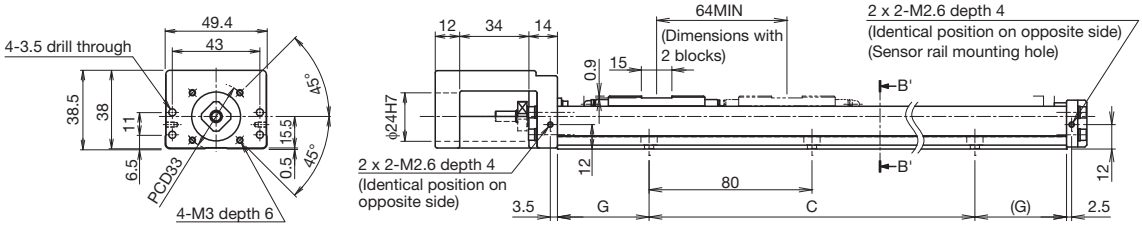
Stroke (mm) (Stroke between mechanical stoppers)	A type		60 (69)	110 (119)	160 (169)	210 (219)
	B type[2]		-	45 (55)	95 (105)	145 (155)
Maximum speed[3] (mm/s)	Ball screw lead: 2 mm		200			
	Ball screw lead: 6 mm	Normal grade/High accuracy grade	590			
		Precision grade	600			
Dimensions (mm)	AL		220	270	320	370
	L		150	200	250	300
	C		80	160	160	240
	G		35	20	45	30
Mounting hole count	n		2	3	3	4
Weight[4] (kg)			1.2	1.42	1.65	1.87

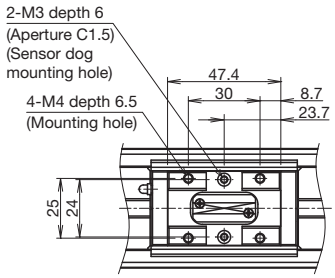
[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.28 kg added.

Without cover
Direct motor coupling

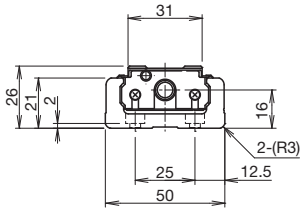
Dimensions



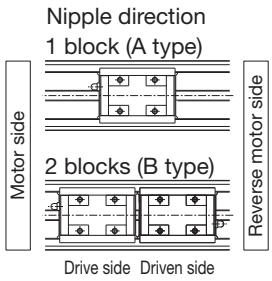




Block details



B'-B' cross-section



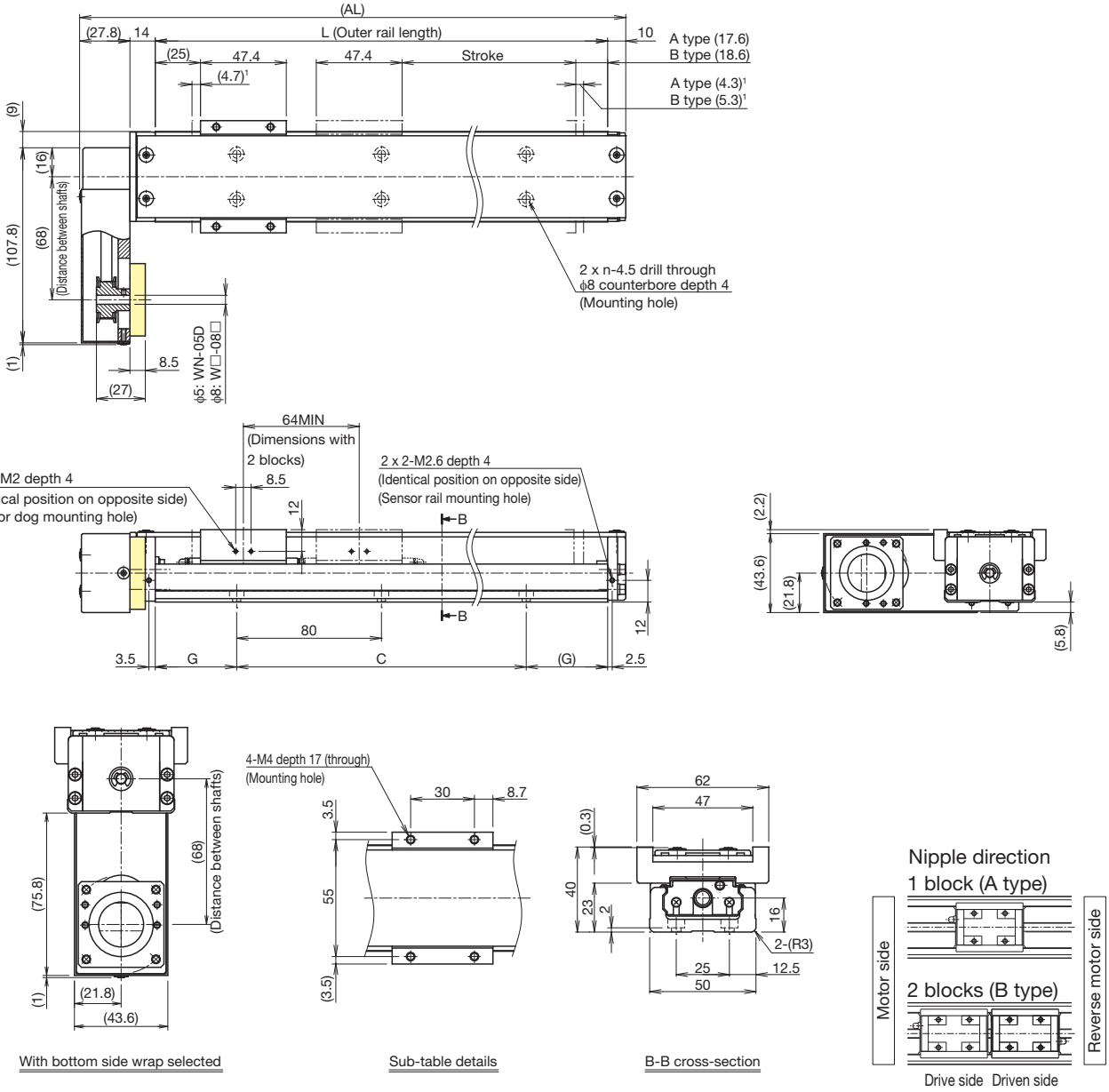
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
126 mm (2 pcs total) for KR26 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type		60 (69)	110 (119)	160 (169)	210 (219)
	B type[3]		-	45 (55)	95 (105)	145 (155)
Maximum speed[4] (mm/s)	Ball screw lead: 2 mm		200			
	Ball screw lead: 6 mm	Normal grade/High accuracy grade	590			
		Precision grade	600			
Dimensions (mm)	AL		220	270	320	370
	L		150	200	250	300
	C		80	160	160	240
	G		35	20	45	30
Mounting hole count	n		2	3	3	4
Weight[5] (kg)			1.04	1.25	1.46	1.67

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.19 kg added.

With cover
Motor wrap

Dimensions



With bottom side wrap selected

Sub-table details

B-B cross-section

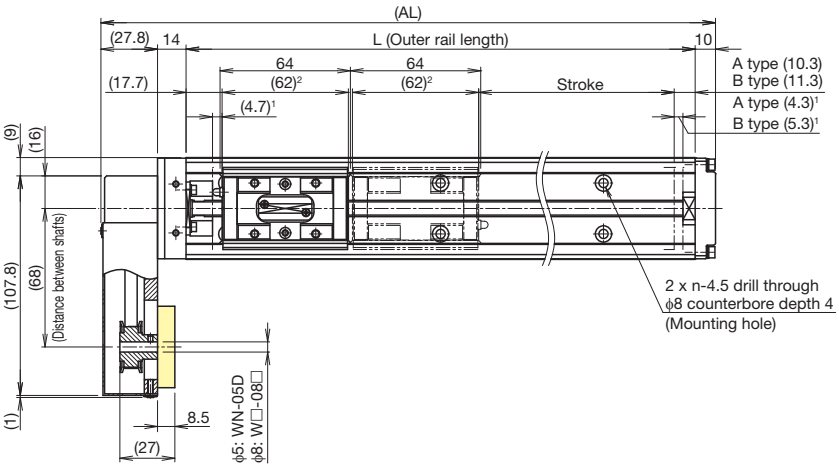
[1] Dimensions from the mechanical stopper to the stroke start position.

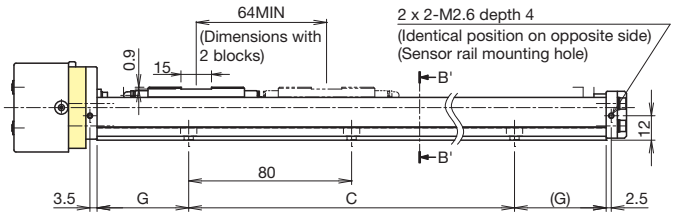
Stroke (mm) (Stroke between mechanical stoppers)	A type		60 (69)	110 (119)	160 (169)	210 (219)
	B type[2]		-	45 (55)	95 (105)	145 (155)
Maximum speed[3] (mm/s)	Ball screw lead: 2 mm		200			
	Ball screw lead: 6 mm	Normal grade/High accuracy grade	590			
		Precision grade	600			
Dimensions (mm)	AL		201.8	251.8	301.8	351.8
	L		150	200	250	300
	C		80	160	160	240
	G		35	20	45	30
Mounting hole count	n		2	3	3	4
Weight[4] (kg)			1.43	1.65	1.87	2.1

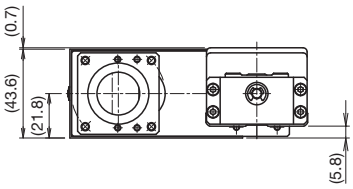
[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.28 kg added.

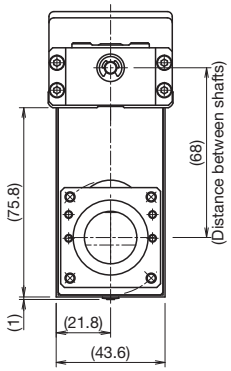
Without cover
Motor wrap

Dimensions

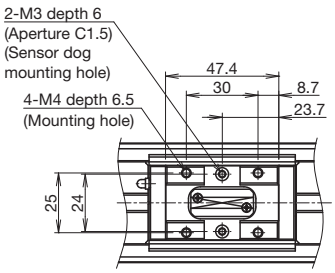




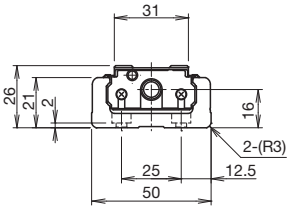




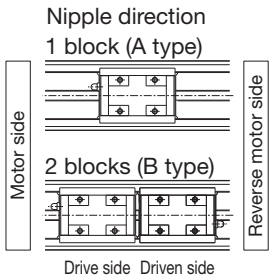
With bottom side wrap selected



Block details



B'-B' cross-section



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
126 mm (2 pcs total) for KR26 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type		60 (69)	110 (119)	160 (169)	210 (219)
	B type[3]		-	45 (55)	95 (105)	145 (155)
Maximum speed[4] (mm/s)	Ball screw lead: 2 mm		200			
	Ball screw lead: 6 mm	Normal grade/High accuracy grade	590			
		Precision grade	600			
Dimensions (mm)	AL		201.8	251.8	301.8	351.8
	L		150	200	250	300
	C		80	160	160	240
	G		35	20	45	30
Mounting hole count	n		2	3	3	4
Weight[5] (kg)			1.26	1.47	1.69	1.9

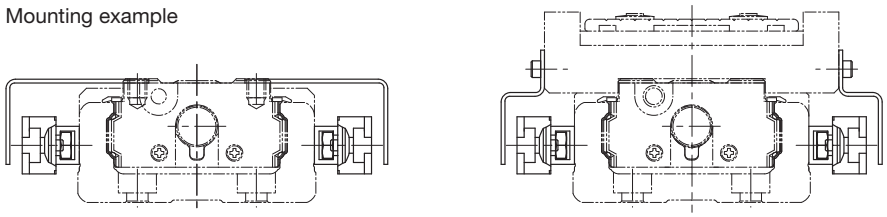
[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.19 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

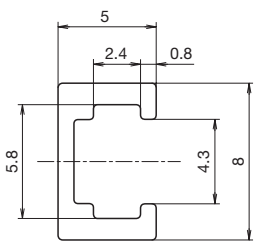


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

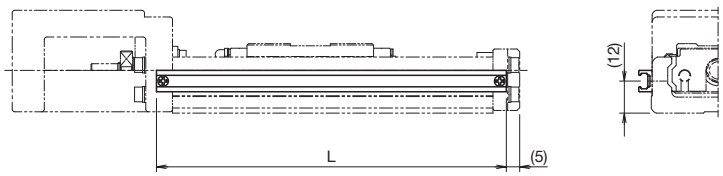
[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details



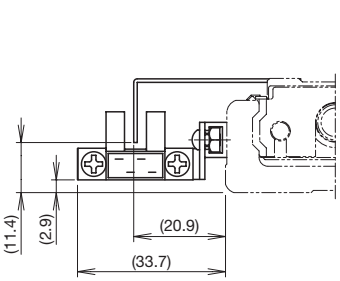
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
60	150	161
110	200	211
160	250	261
210	300	311

[4] Stroke with 1 block (A type).

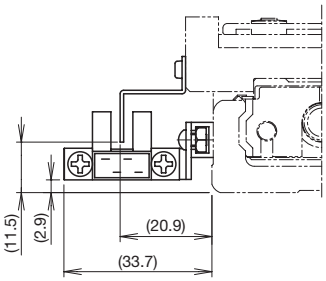
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



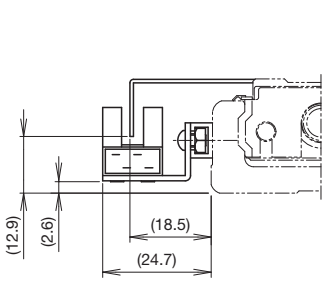
With cover



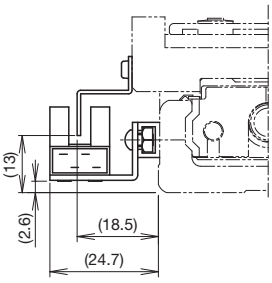
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 15 mm

Without cover



With cover

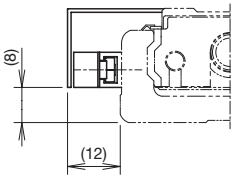


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

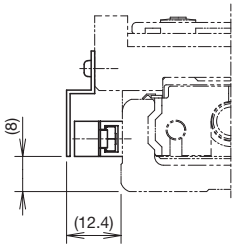
Sensor dog width: 15 mm

Proximity Sensor Mounting Dimensions

Without cover



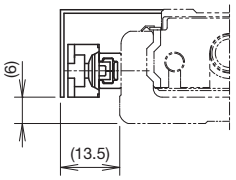
With cover



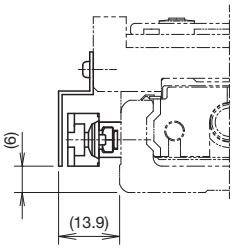
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 15 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 15 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	AN	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
				SGMMV-A2	20				
				SGMMV-A3	30				
		Σ-V		SGMJV-A5	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
				SGMAV-A5					
		Σ-7		SGM7J-A5	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
				SGM7A-A5					
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	AN	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
				HG-AK0236	20				
				HG-AK0336	30				
				HG-KR053	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
				HG-MR053					
			JN	HF-KN053	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
		TBL-iIV		TSM3102					
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	AP	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
				MSME5A					
			A6	MSMF5A	50	□38	AP	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
				MHMF5A		□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
	Keyence Corporation	SV		SV-M005	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
		SV2		SV2-M005					
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ2*, AR2*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				AZ4*, AR4* (excluding AZM48)	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6
				AZM48	□42	AR	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8
		5-phase	CRK	CRK52*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				CRK54*	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
			RK II	RKS54*	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6
			PKA	PKA544	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
			CVK	PKP52*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				PKP54*	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
		2-phase	CVK	PKP22*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				PKP24*	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
	Keyence Corporation	2-phase		QS-M28	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				QS-M42	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
	Sanyo Denki Co., Ltd.	PB		PBDM28*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				PBDM423, PBA**423	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6
		5-phase		FAF/FDF52*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				FAF54*/FDF54*/ FA511M42/FB511M42	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6
		2-phase		D*14S28*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5
				DB14H52*	□42	AR	SFC-010DA2-5B-5B-L37	XGT2-15C-5-5
				DU15H52*				

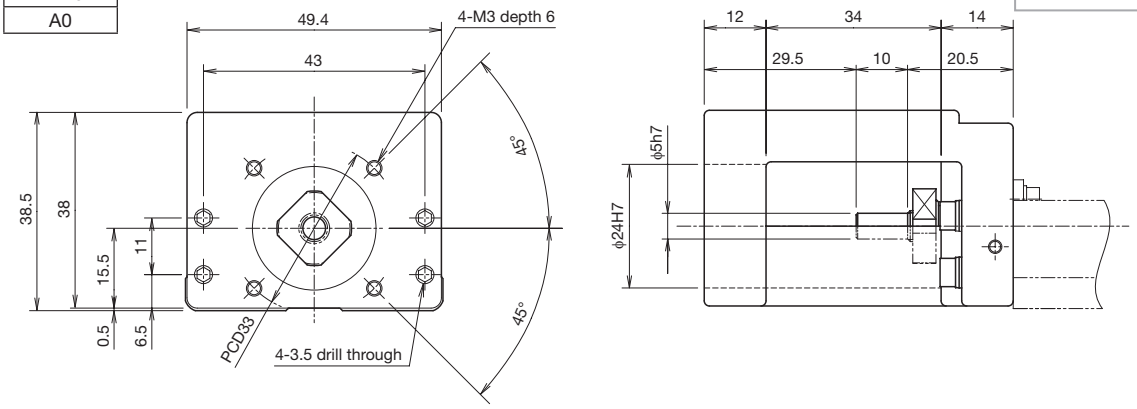
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 31), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

KR**
●◇

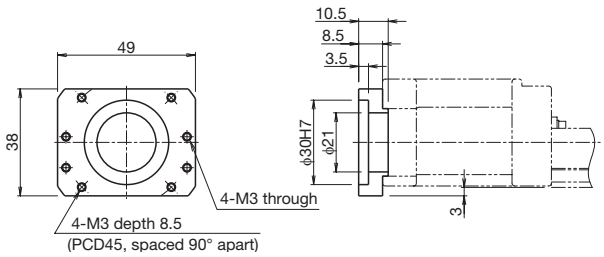
Actuator model
●: Housing A
◇: Intermediate flange

KR26
A0

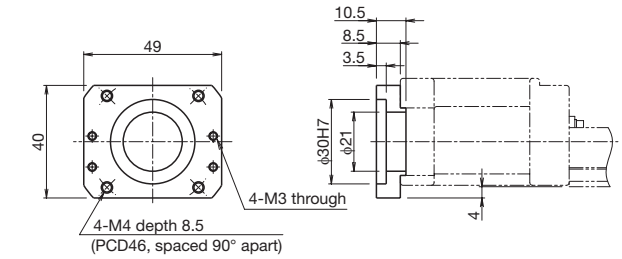


Intermediate flange

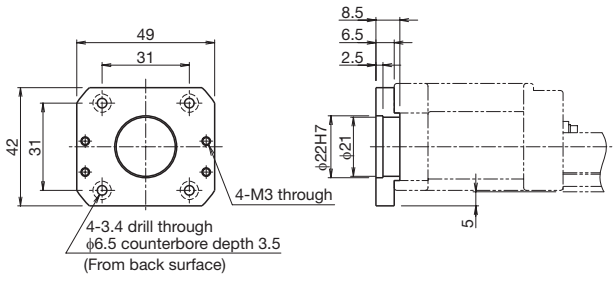
KR26
AP



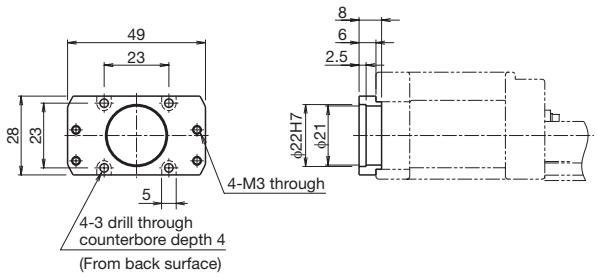
KR26
AQ



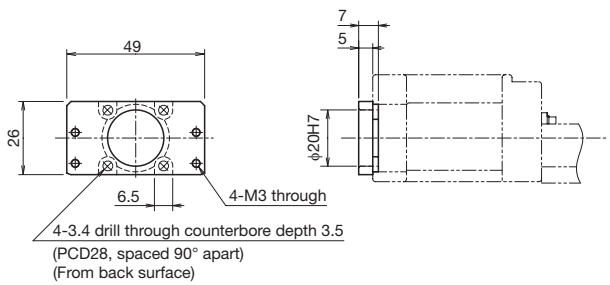
KR26
AR



KR26
AS



KR26
AN



Options

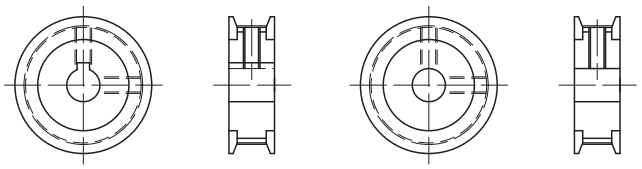
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	Q	-	08	D
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	K: Key D: D-cut

Motor shaft fixing method



Key D-cut

Compatibility Table: Motors used, wrap symbols

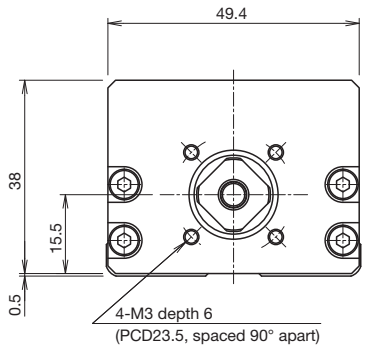
Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini		SGMMV-A1	10	□25	WN-05D
				SGMMV-A2	20		
				SGMMV-A3	30		
		Σ-V		SGMJV-A5	50	□40	WQ-08K
				SGMAV-A5			
		Σ-7		SGM7J-A5	50	□40	WQ-08K
				SGM7A-A5			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-AK0136	10	□25	WN-05D
				HG-AK0236	20		
				HG-AK0336	30		
				HG-KR053	50	□40	WQ-08D
				HG-MR053			
			JN	HF-KN053	50	□40	WQ-08D
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	WQ-08D
		TBL-iIV		TSM3102			
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	WP-08D, WP-08K
				MSME5A			
			A6	MSMF5A	50	□38	WP-08K
				MHMF5A		□40	WQ-08K
	Keyence Corporation	SV		SV-M005	50	□40	WQ-08K
		SV2		SV2-M005			
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	WQ-08K
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	WQ-08K
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	WQ-08K

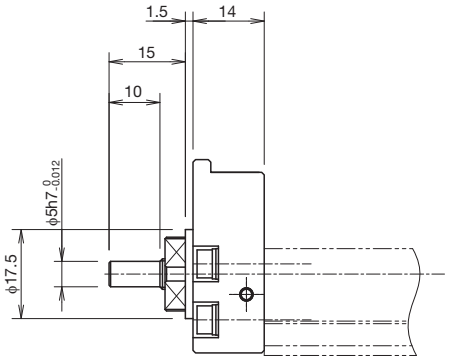
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 31), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

KR26
20

KR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange



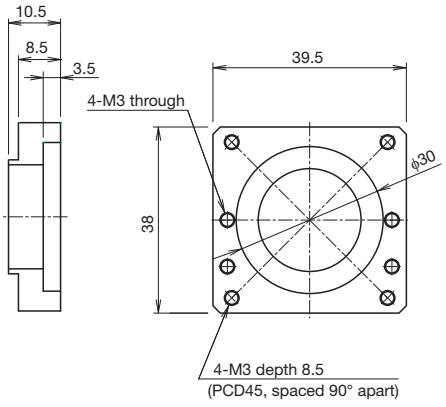


Note) Shaft end must be considered separately for motor wrap types. Contact THK for details.

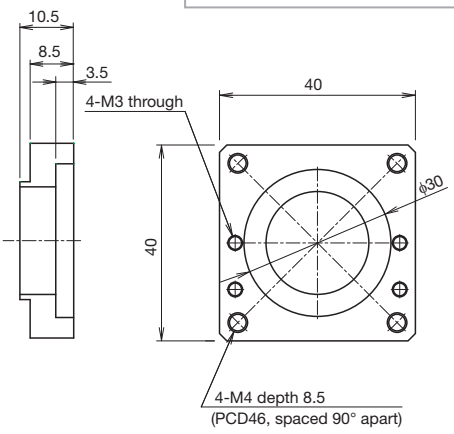
Wrap specification (intermediate flange)

KR**	Actuator model
W□	□: Intermediate flange

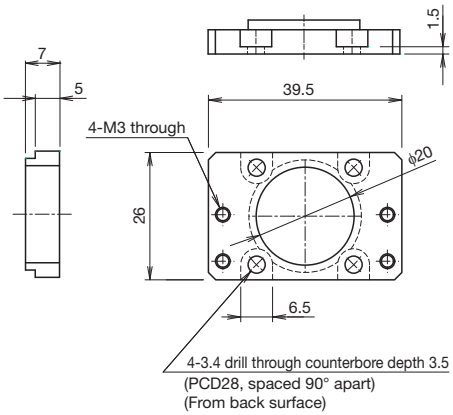
KR26
WP



KR26
WQ



KR26
WN



KR30H A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 60 mm | Main Unit Height 30 mm | Stroke Max. 500 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	Stroke (4)	Accuracy grade (5)	With/without motor (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR30H	06	A	0050	P	0	1	2	AQ
KR30H	06: 6 mm	A: x 1	0050: 50 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	10: 10 mm	B: x 2	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			0500: 500 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AP
					For wrap		6	AQ
					R1: Non-standard side wrap (without motor)		7	AR
					R2: Standard side wrap (without motor)		B	AT
					R3: Bottom side wrap (without motor)		E	AU
					R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	40
					R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	For wrap
					R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WP-08D
							M	WP-08K
								WP-08M
								WQ-08D
								WQ-08K
								WQ-08M

When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 161 to p. 162

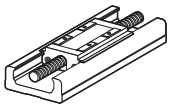
When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

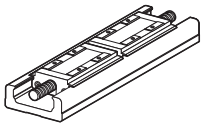
Sensor details
→ p. 55

For direct coupling → p. 57
For wrap → p. 59

(3) Block type

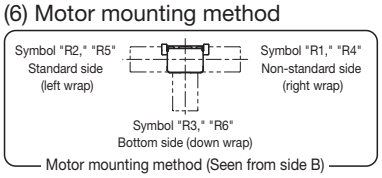


A: Block x 1 (A type)



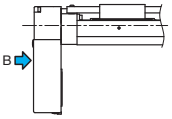
B: Block x 2 (B type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		11600	
	Basic static load rating C_0 (N)		20200	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to +0.002	
		Precision grade (P)	-0.012 to -0.004	
	Geometrical moment of inertia	I_X[1] (mm^4)	2.7×10^4	
		I_Y[2] (mm^4)	2.8×10^5	
		Weight (kg/m)	5	
Ball screw	Ball screw lead (mm)		6	10
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	2840	1760
		Precision grade (P)	2250	1370
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	4900	2840
		Precision grade (P)	2740	1570
	Screw shaft diameter (mm)		ϕ10	
	Thread minor diameter (mm)		ϕ7.8	
	Ball center-to-center diameter (mm)		ϕ10.5	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	4700	
		Precision grade (P)	6000	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1790	
		Static permissible load P_0a (N)	2590	
Permissible input torque (N·m)		Direct coupling	1.2	
		Wrap	0.98	
Static permissible moment[4, 5] (N·m)			M_A: 166 (908), M_B: 166 (908), M_C: 428 (857)	
Running life[6] (km)			5,000	10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/PB107	

[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 300 mm (A type), 320 mm (B type). Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.

Precision

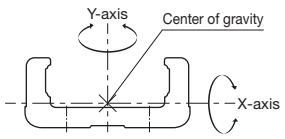
Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01					
	Positioning accuracy (mm)	Not specified					
	Running parallelism (vertical direction) (mm)	Not specified					
	Backlash (mm)	0.02					
	Starting torque (N·cm)	7					

Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500
High accuracy grade (H)	Positioning repeatability (mm)	±0.005					
	Positioning accuracy (mm)	0.06				0.1	
	Running parallelism (vertical direction) (mm)	0.025				0.035	
	Backlash (mm)	0.02					
	Starting torque (N·cm)	7					

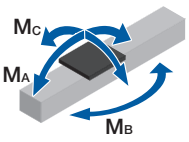
Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500
Precision grade (P)	Positioning repeatability (mm)	±0.003					
	Positioning accuracy (mm)	0.02				0.025	
	Running parallelism (vertical direction) (mm)	0.01				0.015	
	Backlash (mm)	0.003					
	Starting torque (N·cm)	15					

[7] Stroke with 1 block (A type).
Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

Geometrical moment of inertia



Static permissible moment



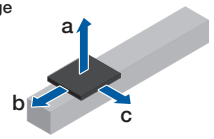
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
50 to 500	150 to 600	A type 0.4 B type 0.8	A type 0.2 B type 0.4	A type 0.6 B type 1.2	3.5	6, 10	191 to 641	ϕ6h7	0.041

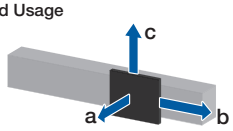
[1] Stroke with 1 block (A type).
[2] Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 57 for applicable couplings.

Permissible Overhang Length[3]

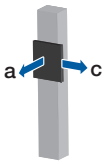
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	6	8.5	450	140	200
			17.5	200	60	100
			35	90	30	50
		10	7	550	140	250
			14	260	70	120
			28.5	110	30	60
	B type	6	12	600	600	320
			24.5	600	290	160
			49	600	130	80
		10	9	600	600	430
			18.5	600	300	210
			37.5	600	140	100
Wrap	A type	6	8.5	450	140	200
			17.5	200	60	100
			35	90	30	50
		10	7	550	140	250
			14	260	70	120
			28.5	110	30	60
	B type	6	12	600	600	320
			24.5	600	290	160
			49	600	130	80
		10	9	600	600	430
			18.5	600	310	210
			37	600	140	100

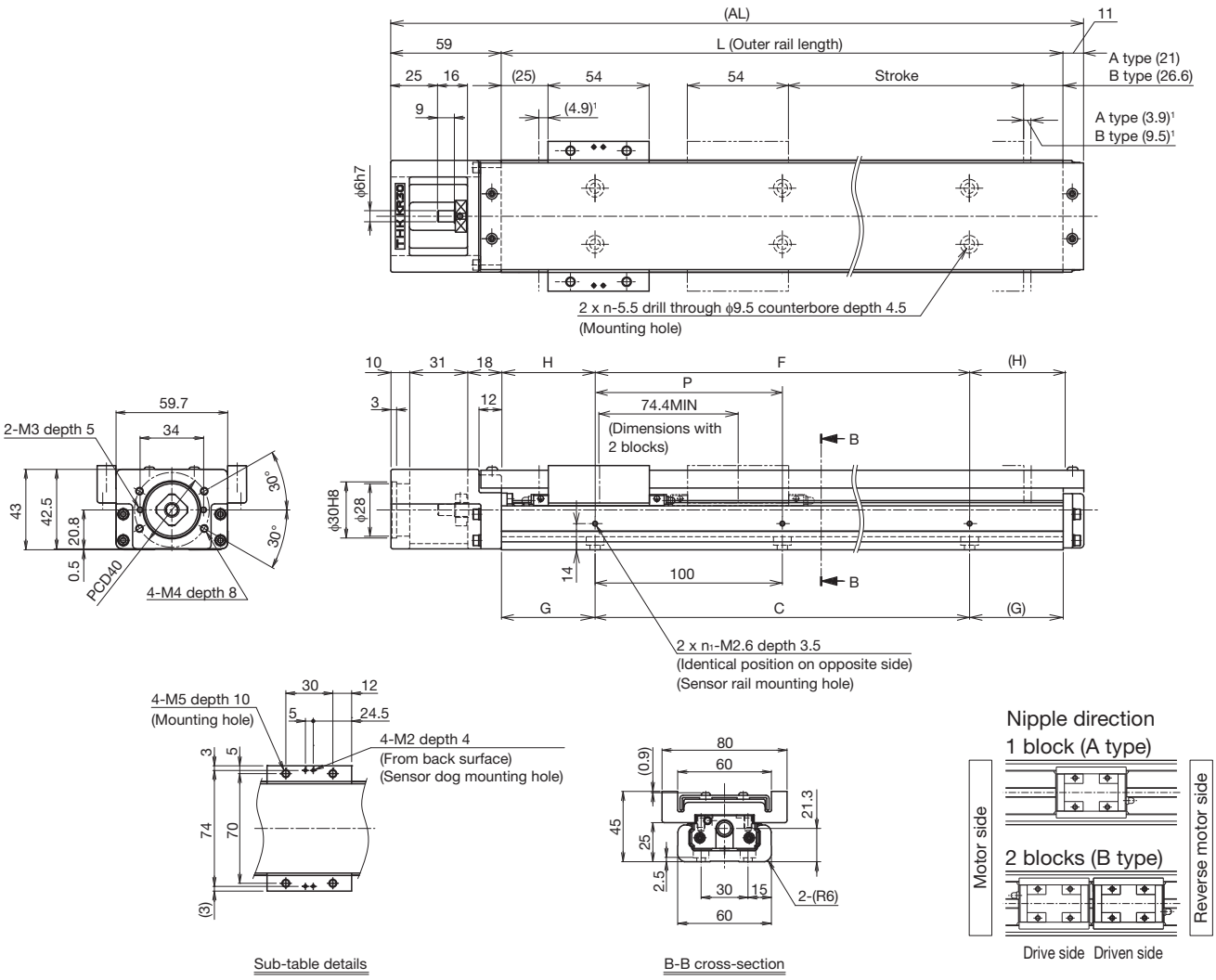
Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	6	7	220	170	590
			14	100	80	290
			28	30	30	140
		10	5.5	290	170	600
			11.5	120	80	360
			23	50	30	180
	B type	6	9.5	380	360	600
			19.5	170	170	580
			39.5	70	80	290
		10	8	460	420	600
			16	220	210	600
			32.5	90	100	350
Wrap	A type	6	7	220	180	590
			14	100	80	290
			28	30	30	140
		10	5.5	290	170	600
			11.5	120	80	360
			23	50	30	180
	B type	6	9.5	380	360	600
			19.5	170	170	580
			39.5	70	80	290
		10	8	460	420	600
			16	220	210	600
			32.5	90	100	350

Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	6	3.5	240	270
			7.5	100	120
			15	30	60
		10	2	440	450
			4.5	180	210
			9	80	90
	B type	6	3.5	600	600
			7.5	600	350
			15	470	170
		10	3	600	600
			6	600	440
			12.5	450	210
Wrap	A type	6	2.5	340	380
			5.5	140	170
			11.5	50	80
		10	2	440	450
			4.5	180	210
			9	80	90
	B type	6	2.5	600	600
			5.5	600	480
			11.5	600	230
		10	2.5	600	600
			5	600	520
			10	560	260

[3] Value when LM Guide running life is restricted to 10,000 km (5,000 km for 6 mm lead only). The calculation conditions are as follows.
Stroke: 275 mm (A type), 270 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



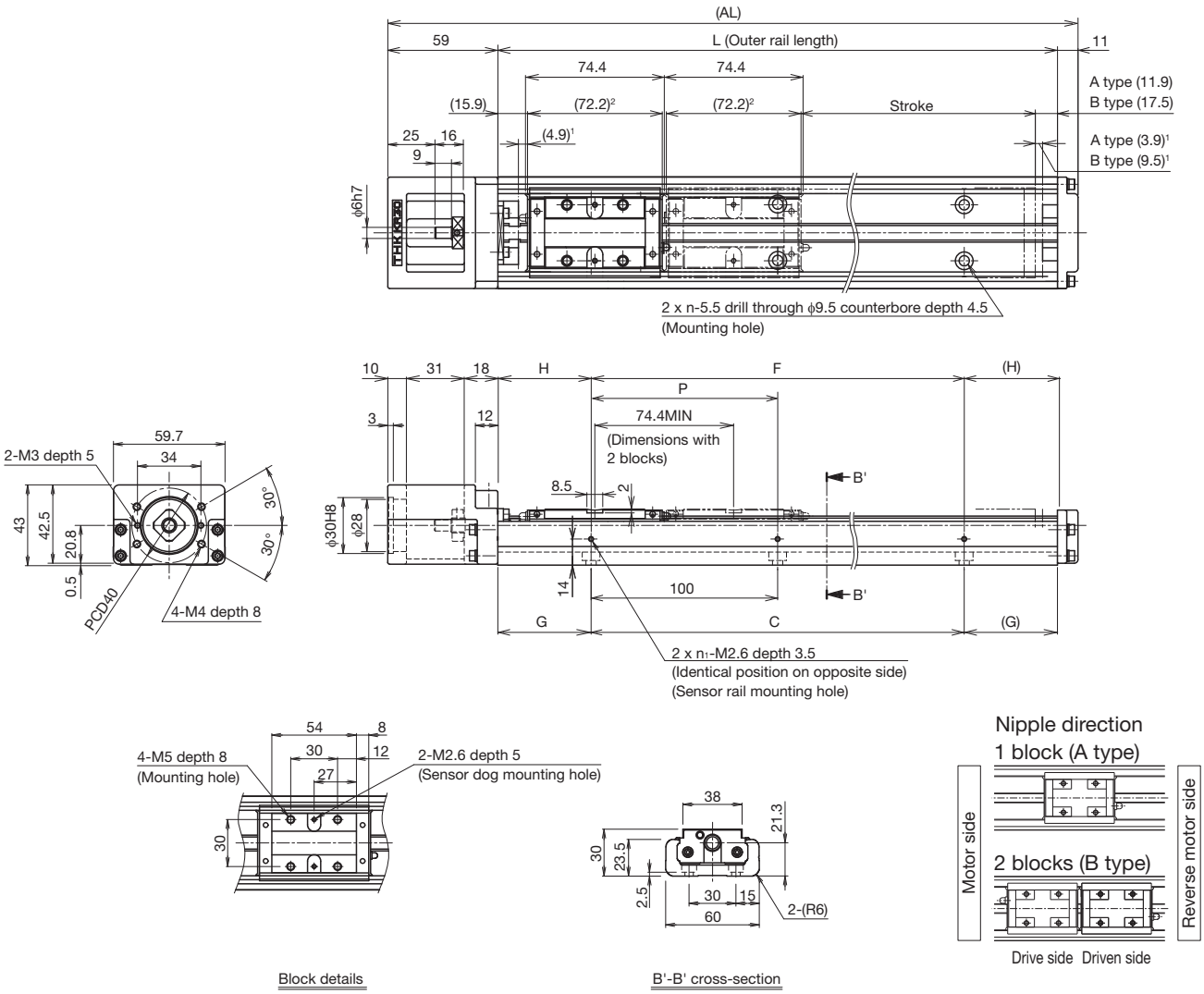
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (58.8)	100 (108.8)	200 (208.8)	300 (308.8)	400 (408.8)	500 (508.8)
	B type[2]		-	-	120 (134.4)	220 (234.4)	320 (334.4)	420 (434.4)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390
		Precision grade	600				590	390
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650
		Precision grade	1000				980	650
Dimensions (mm)	AL		220	270	370	470	570	670
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[4] (kg)			1.9	2.2	2.8	3.4	4	4.6

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.6 kg added.

Without cover
Direct motor coupling

Dimensions



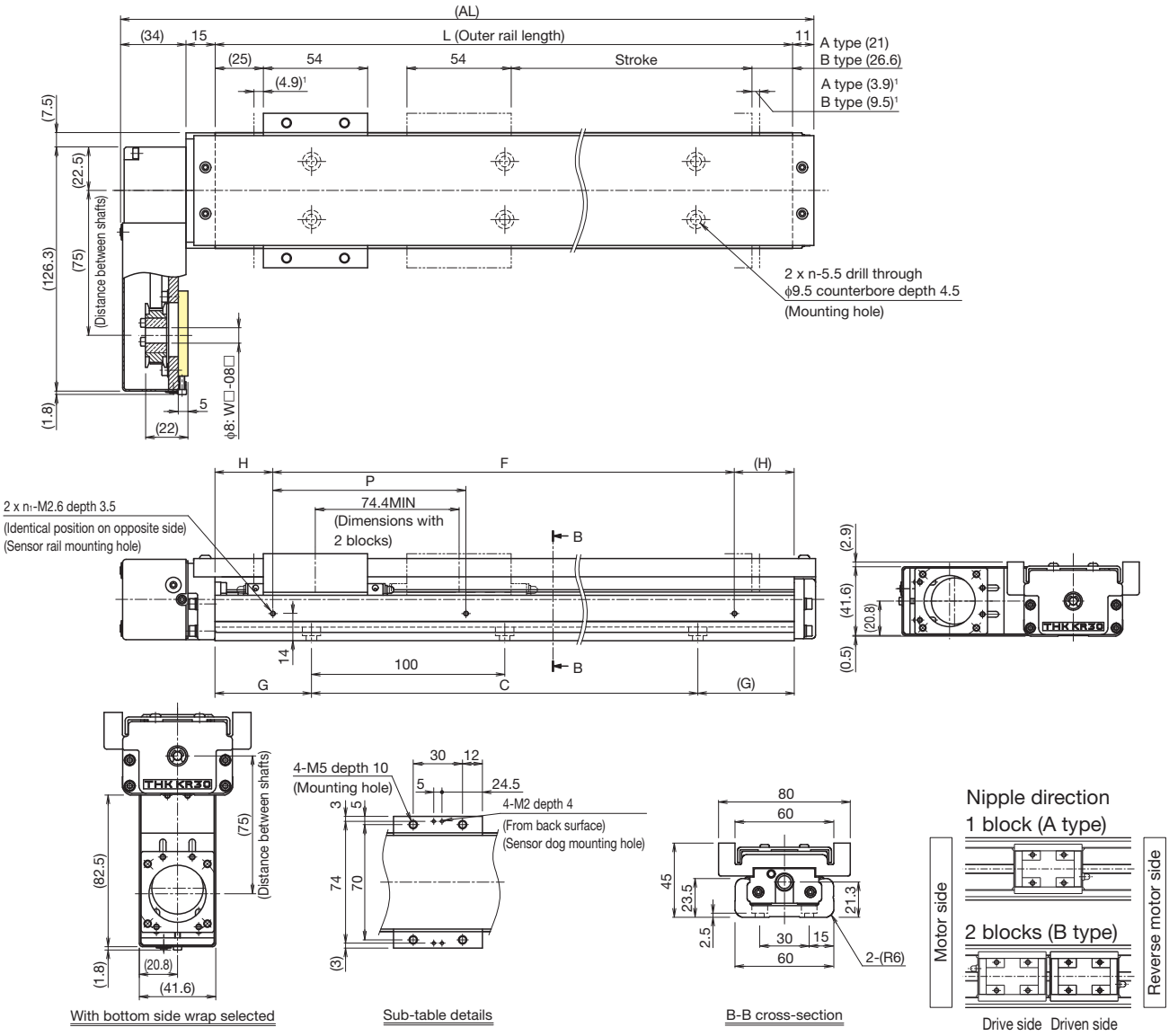
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
146.6 mm (2 pcs total) for KR30H with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (58.8)	100 (108.8)	200 (208.8)	300 (308.8)	400 (408.8)	500 (508.8)
	B type[3]		-	-	120 (134.4)	220 (234.4)	320 (334.4)	420 (434.4)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390
		Precision grade	600				590	390
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650
		Precision grade	1000				980	650
Dimensions (mm)	AL		220	270	370	470	570	670
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[5] (kg)			1.6	1.9	2.5	3	3.6	4.2

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.4 kg added.

With cover
Motor wrap

Dimensions



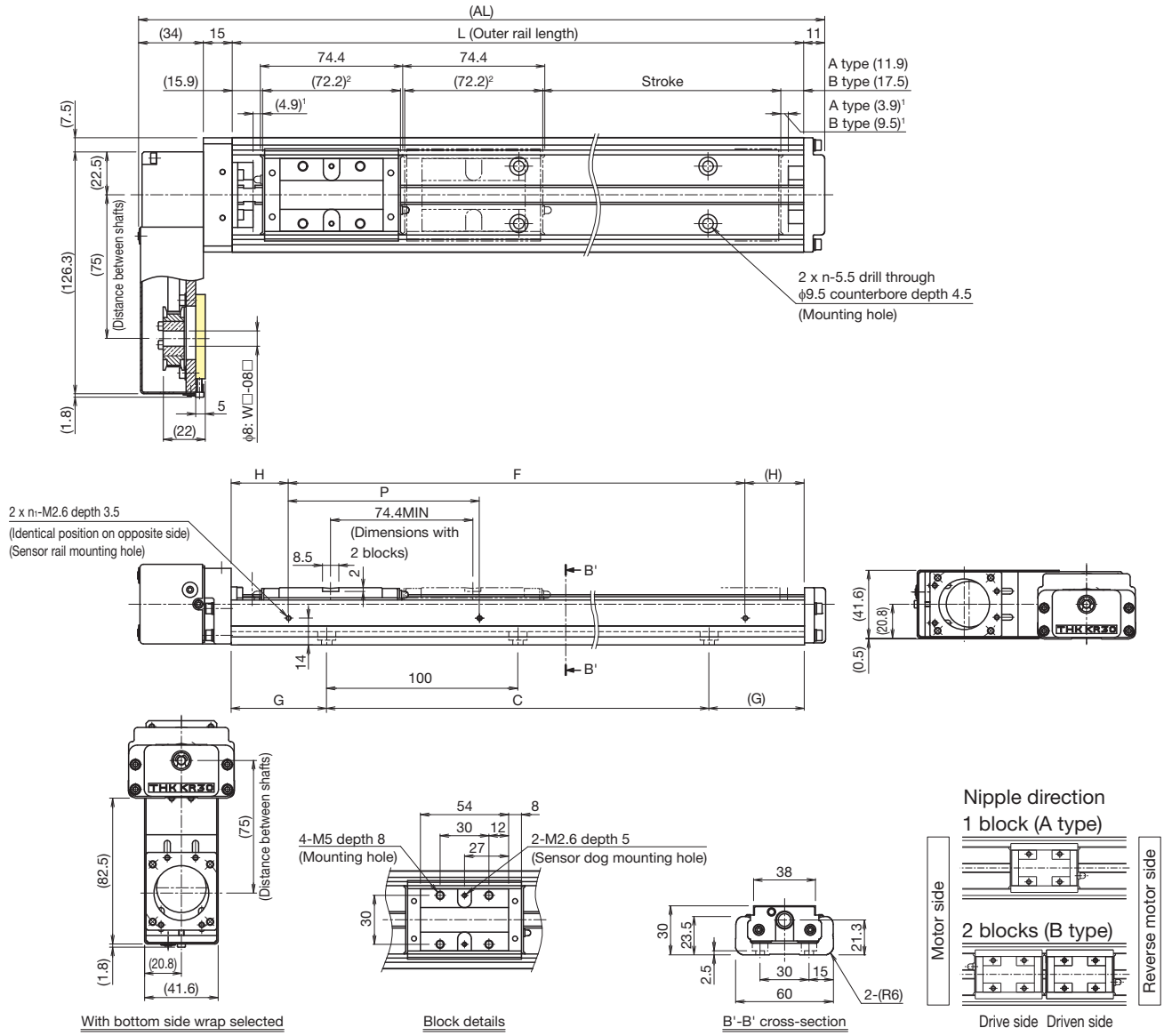
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)		A type	50 (58.8)	100 (108.8)	200 (208.8)	300 (308.8)	400 (408.8)	500 (508.8)
		B type[2]	-	-	120 (134.4)	220 (234.4)	320 (334.4)	420 (434.4)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390
		Precision grade	600				590	390
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650
		Precision grade	1000				980	650
Dimensions (mm)	AL		210	260	360	460	560	660
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[4] (kg)			2.2	2.5	3.1	3.7	4.4	5

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.6 kg added.

Without cover
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
146.6 mm (2 pcs total) for KR30H with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (58.8)	100 (108.8)	200 (208.8)	300 (308.8)	400 (408.8)	500 (508.8)
	B type[3]		-	-	120 (134.4)	220 (234.4)	320 (334.4)	420 (434.4)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390
		Precision grade	600				590	390
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650
		Precision grade	1000				980	650
Dimensions (mm)	AL		210	260	360	460	560	660
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[5] (kg)			1.9	2.2	2.8	3.4	3.9	4.5

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.4 kg added.

KR30H C/D

Direct Motor Coupling | Motor Wrap | Main Unit Width 60 mm | Main Unit Height 30 mm | Stroke Max. 520 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	-	Stroke (4)	-	Accuracy grade (5)	With/without motor (6)	-	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR30H	06	C	-	0070	-	P	0	-	1	2	AQ
KR30H	06: 6 mm	C: x 1		0020: 20 mm		No symbol: Normal grade	For direct coupling		0: Without cover	0	For direct coupling
	10: 10 mm	D: x 2		to		H: High accuracy grade	0: Direct coupling (without motor)		1: With cover	1	A0
				0520: 520 mm		P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	2	AP
							For wrap			6	AQ
							R1: Non-standard side wrap (without motor)			7	AR
							R2: Standard side wrap (without motor)			B	AT
							R3: Bottom side wrap (without motor)			E	AU
							R4: Non-standard side wrap (Specified motor prepared and mounted by THK)			H	40
							R5: Standard side wrap (Specified motor prepared and mounted by THK)			L	For wrap
							R6: Bottom side wrap (Specified motor prepared and mounted by THK)			J	WP-08D
										M	WP-08K
											WP-08M
											WQ-08D
											WQ-08K
											WQ-08M

When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 163 to p. 164

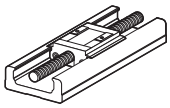
When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

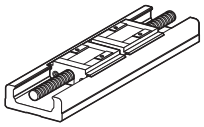
Sensor details
→ p. 55

For direct coupling → p. 57
For wrap → p. 59

(3) Block type

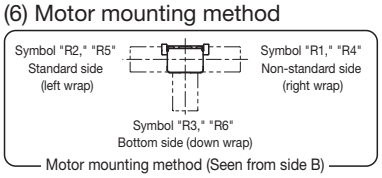


C: Short block x 1 (C type)



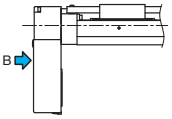
D: Short block x 2 (D type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		4900	
	Basic static load rating C_0 (N)		10000	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to +0.002	
		Precision grade (P)	-0.012 to -0.004	
	Geometrical moment of inertia	I_X[1] (mm^4)	2.7×10^4	
		I_Y[2] (mm^4)	2.8×10^5	
		Weight (kg/m)	5	
Ball screw	Ball screw lead (mm)		6	10
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	2840	1760
		Precision grade (P)	2250	1370
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	4900	2840
		Precision grade (P)	2740	1570
	Screw shaft diameter (mm)		ϕ10	
	Thread minor diameter (mm)		ϕ7.8	
	Ball center-to-center diameter (mm)		ϕ10.5	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	4700	
		Precision grade (P)	6000	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1790	
		Static permissible load P_0a (N)	2590	
Permissible input torque (N·m)		Direct coupling	1.2	
		Wrap	0.98	
Static permissible moment[4, 5] (N·m)			M_A: 44 (319), M_B: 44 (319), M_C: 214 (427)	
Running life[6] (km)			5,000	10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/PB107	

[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 short blocks (D type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 320 mm (C type), 270 mm (D type). Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per short block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.

Precision

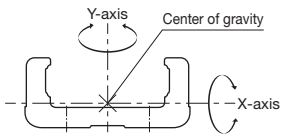
Accuracy grade	Item	Stroke[7] 70	120	220	320	420	520
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01					
	Positioning accuracy (mm)	Not specified					
	Running parallelism (vertical direction) (mm)	Not specified					
	Backlash (mm)	0.02					
	Starting torque (N·cm)	7					

Accuracy grade	Item	Stroke[7] 70	120	220	320	420	520
High accuracy grade (H)	Positioning repeatability (mm)	±0.005					
	Positioning accuracy (mm)	0.06				0.1	
	Running parallelism (vertical direction) (mm)	0.025				0.035	
	Backlash (mm)	0.02					
	Starting torque (N·cm)	7					

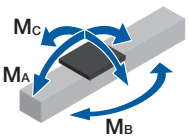
Accuracy grade	Item	Stroke[7] 70	120	220	320	420	520
Precision grade (P)	Positioning repeatability (mm)	±0.003					
	Positioning accuracy (mm)	0.02				0.025	
	Running parallelism (vertical direction) (mm)	0.01				0.015	
	Backlash (mm)	0.003					
	Starting torque (N·cm)	15					

[7] Stroke with 1 short block (C type).
Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

Geometrical moment of inertia



Static permissible moment



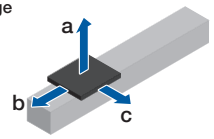
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
70 to 520	150 to 600	C type 0.2 D type 0.4	C type 0.1 D type 0.2	C type 0.3 D type 0.6	3.2	6, 10	191 to 641	ϕ6h7	0.041

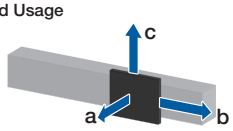
[1] Stroke with 1 short block (C type).
[2] Value with 1 short block (C type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 57 for applicable couplings.

Permissible Overhang Length[3]

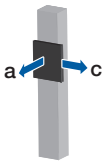
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	6	6	170	40	120
			12.5	60	20	60
			25	10	0	30
		10	3	380	70	250
			6.5	150	30	110
			13	60	10	50
	D type	6	8.5	600	240	230
			17.5	570	110	110
			35.5	260	50	50
		10	7	600	230	280
			14.5	600	100	130
			29	300	40	60
Wrap	C type	6	6	170	40	120
			12.5	60	20	60
			25	0	0	30
		10	3	380	70	250
			6.5	150	30	110
			13	60	10	50
	D type	6	8.5	600	240	230
			17.5	570	110	110
			35.5	260	50	50
		10	7	600	230	280
			14.5	600	100	130
			29	300	40	60

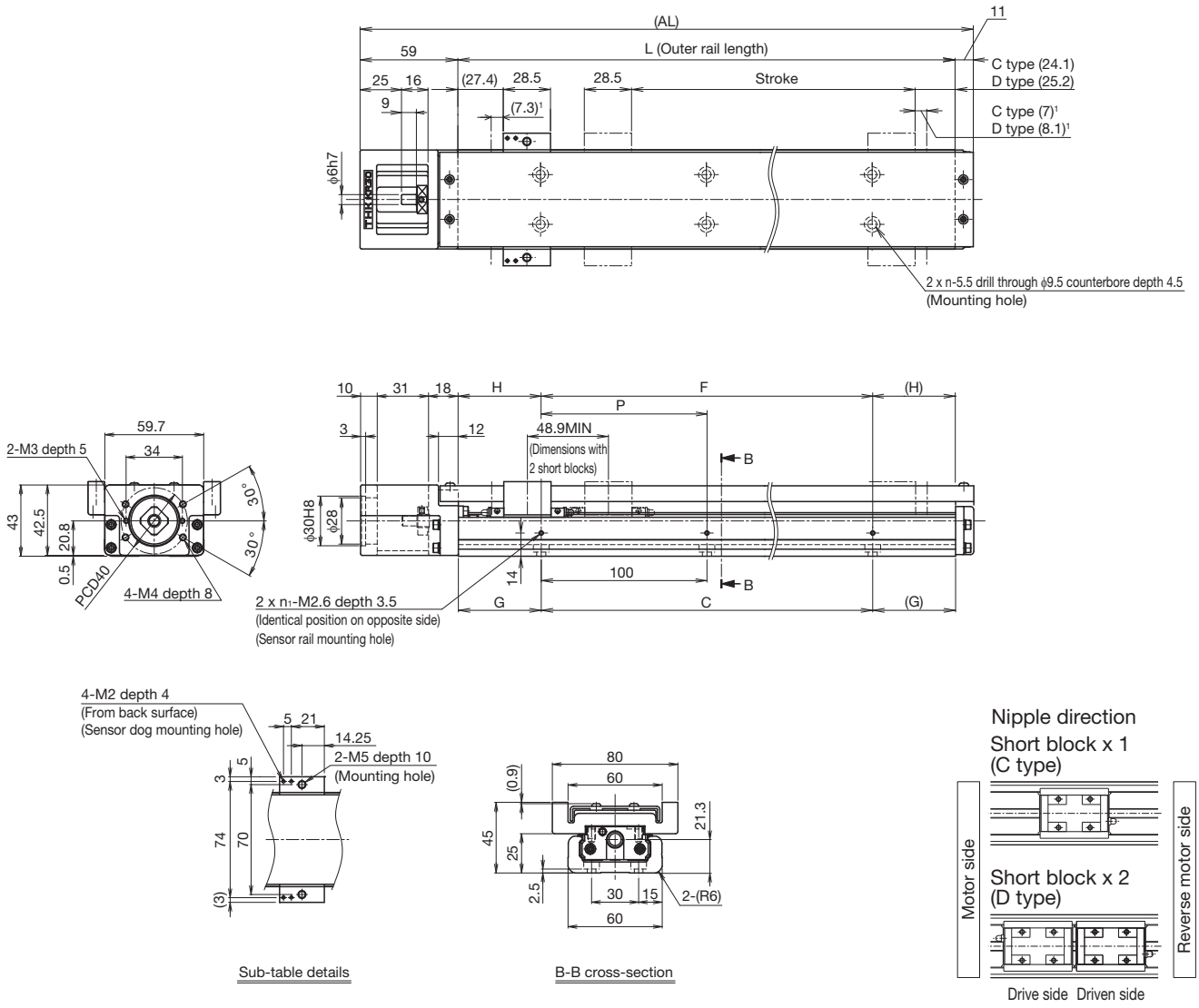
Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	6	3.5	180	70	420
			7	70	30	210
			14.5	20	10	100
		10	2	350	90	600
			4.5	140	40	280
			9.5	50	10	110
	D type	6	7	250	200	600
			14	110	100	330
			28.5	30	40	160
		10	5.5	320	250	600
			11	140	120	420
			22.5	50	40	200
Wrap	C type	6	3.5	180	70	420
			7	70	30	210
			14.5	20	10	100
		10	2	350	90	600
			4.5	140	40	280
			9.5	50	10	110
	D type	6	7	250	200	600
			14	110	100	330
			28.5	30	40	160
		10	5.5	320	250	600
			11	140	120	420
			22.5	50	40	200

Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	6	1	250	250
			2	100	110
			4.5	20	40
		10	0.5	250	250
			1.5	110	110
			3.5	40	40
	D type	6	3.5	560	300
			7.5	270	140
			15	120	70
		10	2	600	540
			4.5	350	240
			9	160	120
Wrap	C type	6	1	250	250
			2	100	110
			4.5	20	40
		10	0.5	250	250
			1.5	110	110
			3.5	40	40
	D type	6	2.5	600	430
			5.5	360	190
			11.5	160	90
		10	2	600	540
			4.5	350	240
			9	160	120

[3] Value when LM Guide running life is restricted to 10,000 km (5,000 km for 6 mm lead only). The calculation conditions are as follows.
Stroke: 295 mm (C type), 245 mm (D type). Acceleration/deceleration rate: 0.3 G. Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



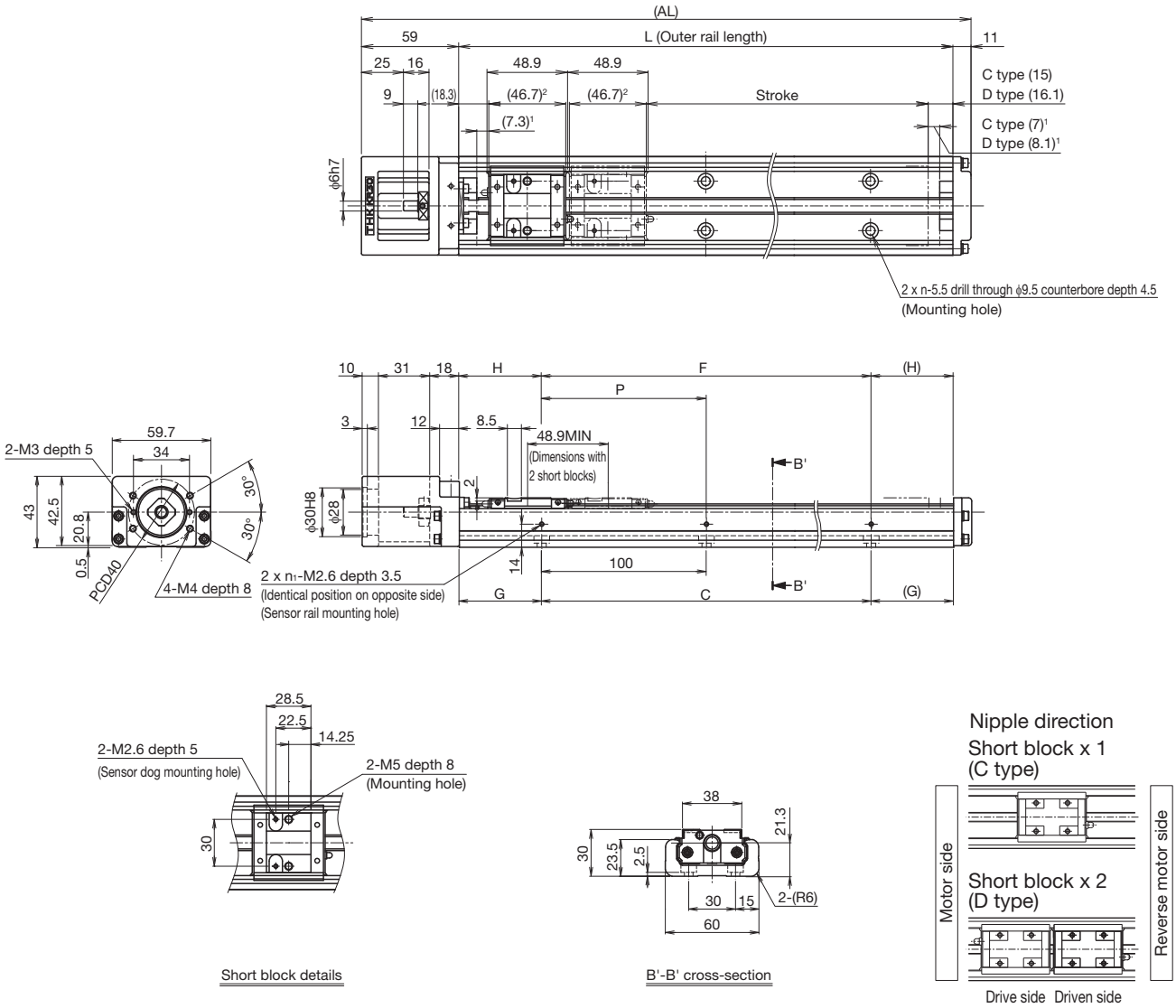
1 Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		70 (84.3)	120 (134.3)	220 (234.3)	320 (334.3)	420 (434.3)	520 (534.3)
	D type[2]		20 (35.4)	70 (85.4)	170 (185.4)	270 (285.4)	370 (385.4)	470 (485.4)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360
		Precision grade	600				530	360
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600
		Precision grade	1000				880	600
Dimensions (mm)	AL		220	270	370	470	570	670
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[4] (kg)			1.6	1.9	2.5	3.1	3.7	4.3

2 The value with 2 short blocks (D type) attached.
3 The maximum speed is limited by the actuator's permissible speed.
4 The weight with 2 short blocks (D type) has 0.3 kg added.

Without cover
Direct motor coupling

Dimensions



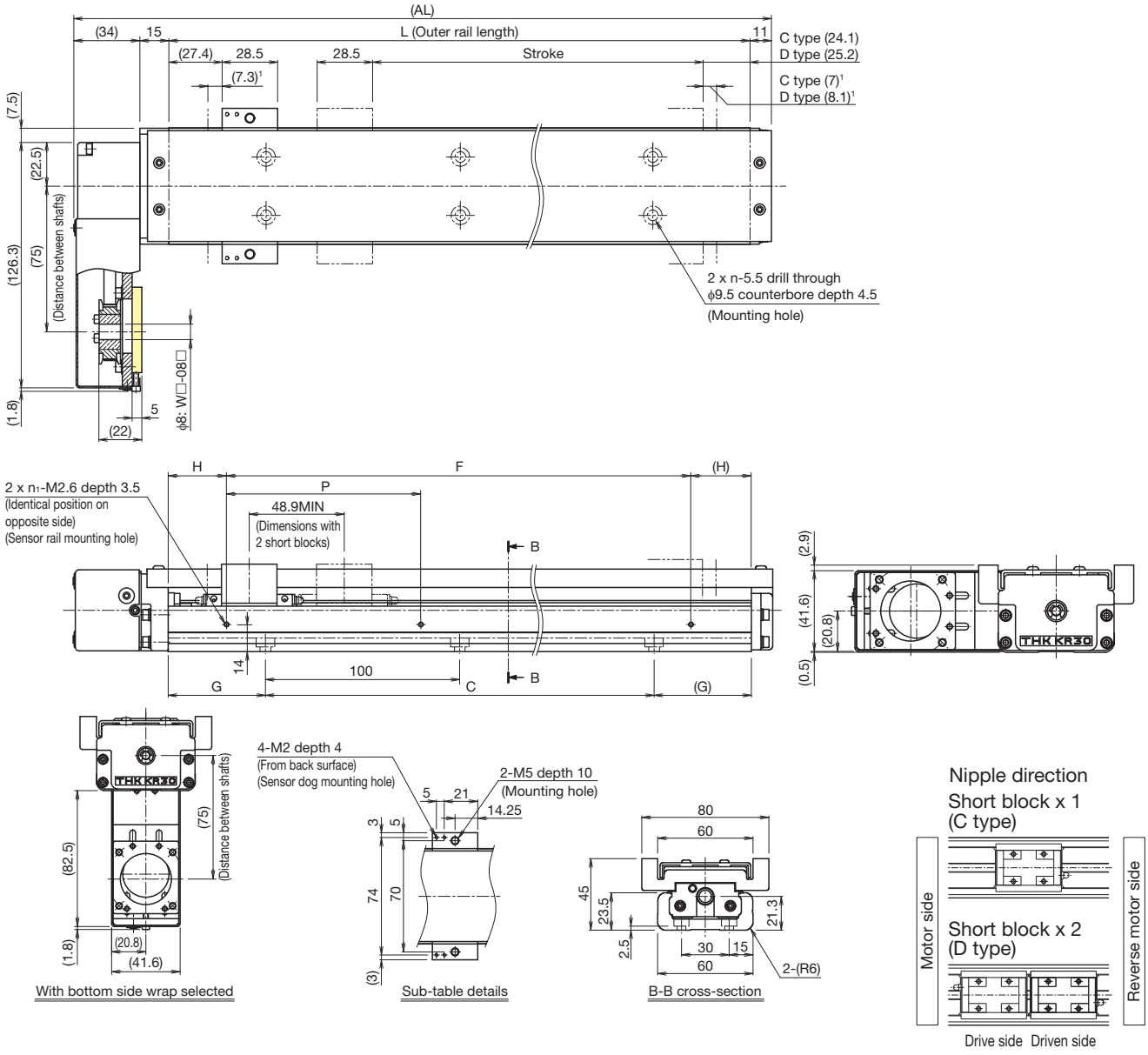
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range. 95.6 mm (2 pcs total) for KR30H with 2 short blocks (D type).

Stroke (mm) (Stroke between mechanical stoppers)	C type		70 (84.3)	120 (134.3)	220 (234.3)	320 (334.3)	420 (434.3)	520 (534.3)
	D type[3]		20 (35.4)	70 (85.4)	170 (185.4)	270 (285.4)	370 (385.4)	470 (485.4)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360
		Precision grade	600				530	360
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600
		Precision grade	1000				880	600
Dimensions (mm)	AL		220	270	370	470	570	670
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[5] (kg)			1.4	1.7	2.3	2.8	3.4	4

[3] The value with 2 short blocks (D type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.2 kg added.

With cover
Motor wrap

Dimensions



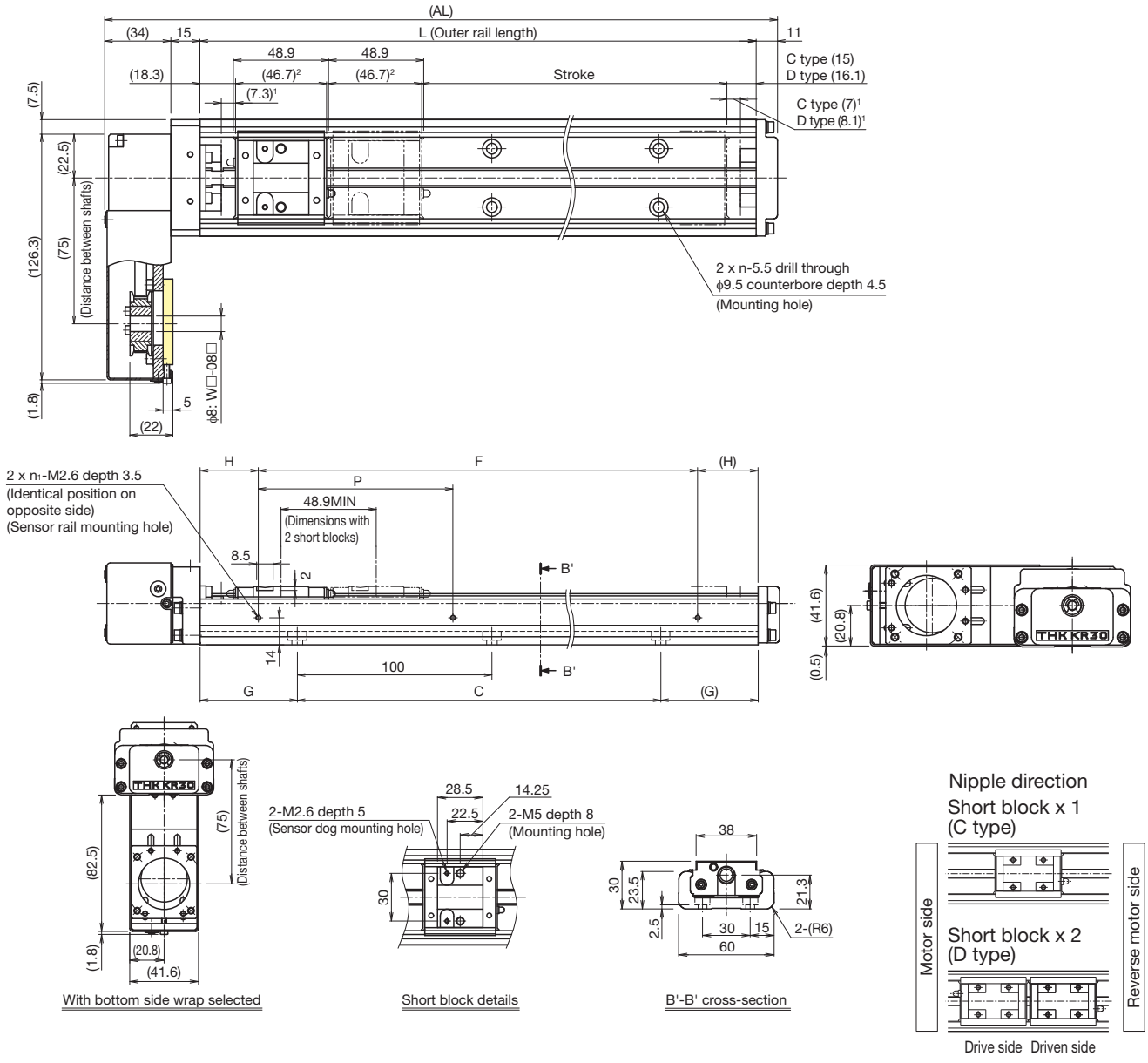
¹ Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		70 (84.3)	120 (134.3)	220 (234.3)	320 (334.3)	420 (434.3)	520 (534.3)
	D type[2]		20 (35.4)	70 (85.4)	170 (185.4)	270 (285.4)	370 (385.4)	470 (485.4)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360
		Precision grade	600				530	360
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600
		Precision grade	1000				880	600
Dimensions (mm)	AL		210	260	360	460	560	660
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[4] (kg)			1.9	2.2	2.8	3.4	4.1	4.7

[2] The value with 2 short blocks (D type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.3 kg added.

Without cover
Motor wrap

Dimensions



With bottom side wrap selected

Short block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range. 95.6 mm (2 pcs total) for KR30H with 2 short blocks (D type).

Stroke (mm) (Stroke between mechanical stoppers)	C type		70 (84.3)	120 (134.3)	220 (234.3)	320 (334.3)	420 (434.3)	520 (534.3)
	D type[3]		20 (35.4)	70 (85.4)	170 (185.4)	270 (285.4)	370 (385.4)	470 (485.4)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360
		Precision grade	600				530	360
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600
		Precision grade	1000				880	600
Dimensions (mm)	AL		210	260	360	460	560	660
	L		150	200	300	400	500	600
	C		100	100	200	300	400	500
	G		25	50	50	50	50	50
	P		100	100	200	200	200	200
	F		100	100	200	200	400	400
	H		25	50	50	100	50	100
Mounting hole count	n		2	2	3	4	5	6
	n_1		2	2	2	2	3	3
Weight[5] (kg)			1.7	2	2.6	3.2	3.7	4.3

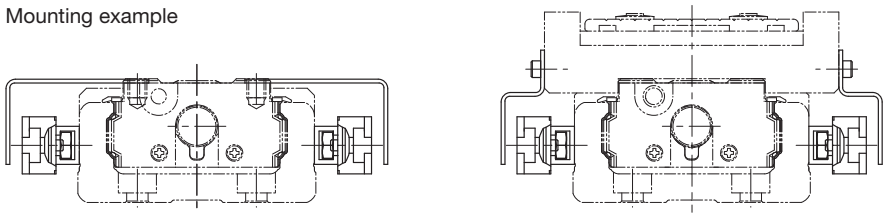
[3] The value with 2 short blocks (D type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.2 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

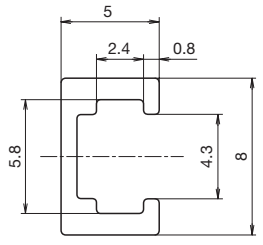


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

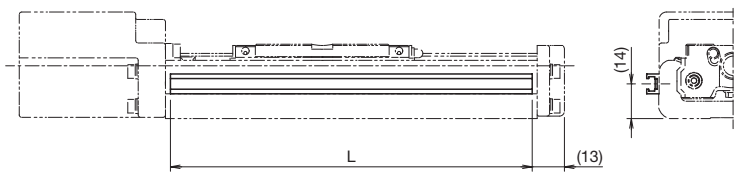
[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details



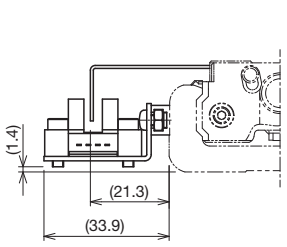
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
50	150	146
100	200	196
200	300	296
300	400	396
400	500	496
500	600	596

[4] Stroke with 1 block (A type).

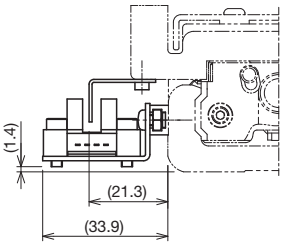
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



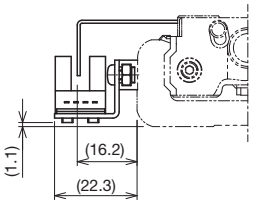
With cover



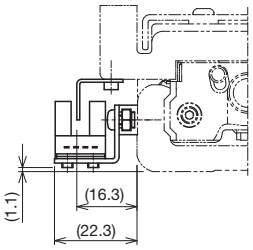
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm

Without cover



With cover

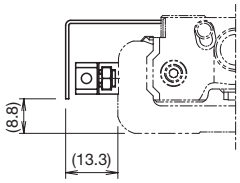


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

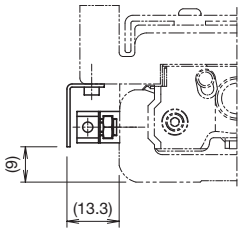
Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm

Proximity Sensor Mounting Dimensions

Without cover



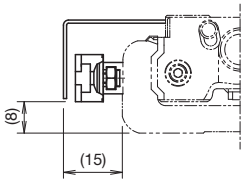
With cover



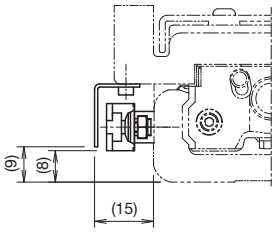
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-A5	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SGMAV-A5					
				SGMJV-01	100				
				SGMAV-01					
				SGMJV-C2	150				
		Σ-7		SGM7J-A5	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SGM7A-A5					
				SGM7J-01	100				
				SGM7A-01					
				SGM7J-C2	150				
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR053	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				HG-MR053					
				HG-KR13	100				
				HG-MR13					
			JN	HF-KN053	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				HF-KN13	100				
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				TS4603	100				
				TS4604	150				
		TBL-iIV		TSM3102	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				TSM3104	100				
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MSME5A					
				MSMD01	100				
				MSME01					
			A6	MSMF5A	50	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MHMF5A		□40	AQ		
				MSMF01	100	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MHMF01		□40	AQ		
	Keyence Corporation	SV		SV-M005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SV-M010	100				
		SV2		SV2-M005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SV2-M010	100				
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				R2EA04008	80				
				R2□A04010	100				
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				R88M-K10030	100				
		1S		R88M-1M10030	100	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				βis0.3/5000	100				

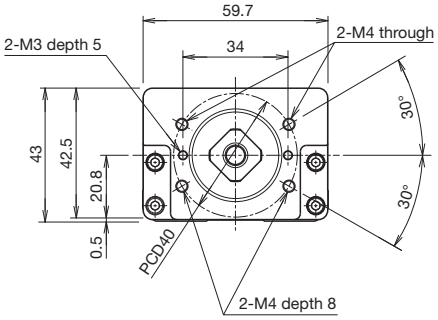
Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ4*, AR4* (excluding AZM48)	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				AZM48	□42	AR	SFC-010DA2-6B-8B-L32	XGT2-19C-6-8
				AZ6*, AR6*	□60	AU	SFC-020DA2-6B-10B	XGT2-25C-6-10
		5-phase	CRK[1]	CRK54*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				CRK56* (CRK569PM*)	□60	AU	SFC-020DA2-6B-8B (SFC-020DA2-6B-10B)	XGT2-25C-6-8 (XGT2-25C-6-10)
			RK II	RKS54*	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				RKS56*	□60	AU	SFC-020DA2-6B-10B	XGT2-25C-6-10
			PKA	PKA544	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKA566	□60	AU	SFC-020DA2-6B-8B	XGT2-25C-6-8
			CVK[1]	PKP54*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKP56*	□56.4	AT	SFC-020DA2-6B-8B	XGT2-19C-6-8
				PKP56* (PKP569FM*)	□60	AU	SFC-020DA2-6B-8B (SFC-020DA2-6B-10B)	XGT2-25C-6-8 (XGT2-25C-6-10)
		2-phase	CVK	PKP24*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKP26*	□56.4	AT	SFC-020DA2-6B-8B	XGT2-25C-6-8
	Keyence Corporation	2-phase		QS-M42	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				QS-M60	□60	AU	SFC-020DA2-6B-8B	XGT2-25C-6-8
	Sanyo Denki Co., Ltd.	PB		PBDM423, PBA**423	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				PBDM60*, PBA**60*	□60	AU	SFC-020DA2-6B-10B-L34	XGT2-25C-6-10
		5-phase		FAF54*/FDF54*/ FA511M42/FB511M42	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				FAM56*/FDM56*/ FA512M60/FB512M60	□60	AU	SFC-020DA2-6B-10B-L34	XGT2-25C-6-10
		2-phase		DB14H52*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				DU15H52*		AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				D*16H71*	□56	AT	SFC-020DA2-6B-6.35B-L34	XGT2-19C-6-6.35
				DB16H78*	□60	AU	SFC-020DA2-6B-8B-L34	XGT2-25C-6-8

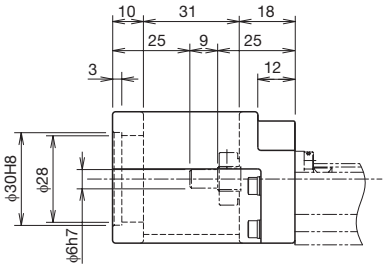
[1] Items in parentheses have different motor shaft diameters and require a coupling to be specified.
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 43, C/D → p. 49), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

KR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Housing A

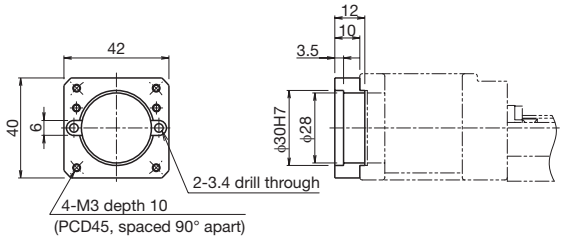
KR30H
A0



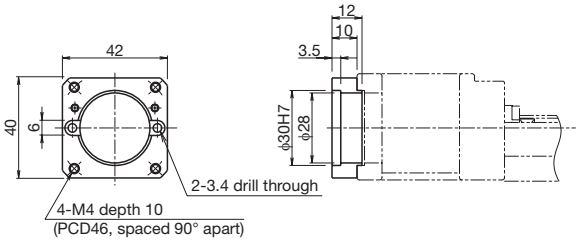


Intermediate flange

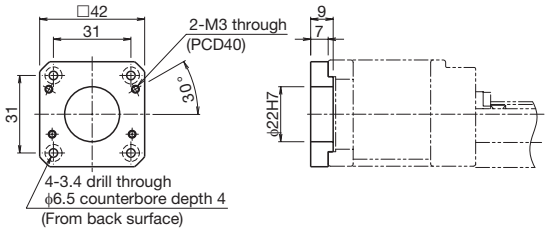
KR30H
AP



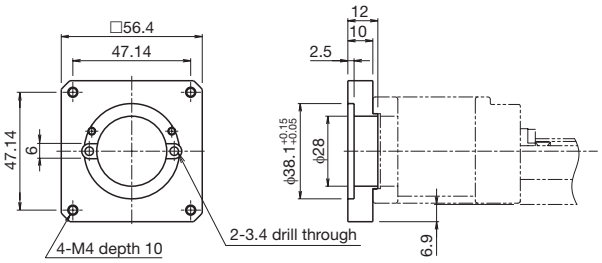
KR30H
AQ



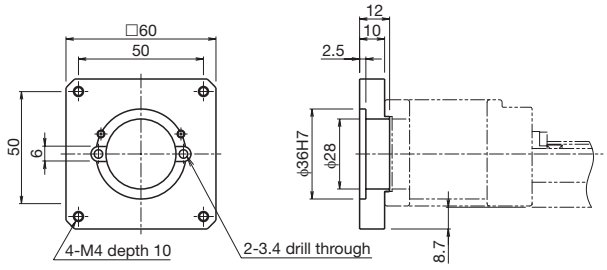
KR30H
AR



KR30H
AT



KR30H
AU



Options

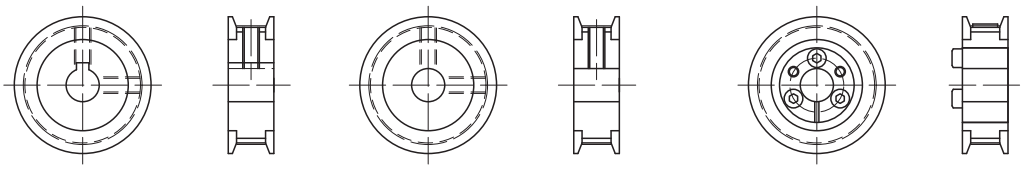
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	Q	-	08	D
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	K: Key D: D-cut M: Friction tightening tool

Motor shaft fixing method



Key　　D-cut　　Friction tightening tool

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-A5	50	□40	WQ-08K, WQ-08M
				SGMAV-A5			
				SGMJV-01	100		
				SGMAV-01			
				SGMJV-C2	150		
		Σ-7		SGM7J-A5	50	□40	WQ-08K, WQ-08M
				SGM7A-A5			
				SGM7J-01	100		
				SGM7A-01			
				SGM7J-C2	150		
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR053	50	□40	WQ-08D, WQ-08M
				HG-MR053			
				HG-KR13	100		
				HG-MR13			
			JN	HF-KN053	50	□40	WQ-08D, WQ-08M
				HF-KN13	100		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	WQ-08D, WQ-08M
				TS4603	100		
				TS4604	150		
		TBL-iIV		TSM3102	50	□40	WQ-08D, WQ-08M
				TSM3104	100		
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	WP-08D, WP-08K, WP-08M
				MSME5A			
				MSMD01	100		
				MSME01			
			A6	MSMF5A	50	□38	WP-08K, WP-08M
				MHMF5A		□40	WQ-08K, WQ-08M
				MSMF01	100	□38	WP-08K, WP-08M
				MHMF01		□40	WQ-08K, WQ-08M
	Keyence Corporation	SV		SV-M005	50	□40	WQ-08K, WQ-08M
				SV-M010	100		
		SV2		SV2-M005	50	□40	WQ-08K, WQ-08M
				SV2-M010	100		
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	WQ-08M
				R2EA04008	80		
				R2□A04010	100		
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	WQ-08K, WQ-08M
				R88M-K10030	100		
		1S		R88M-1M10030	100	□40	WQ-08K, WQ-08M

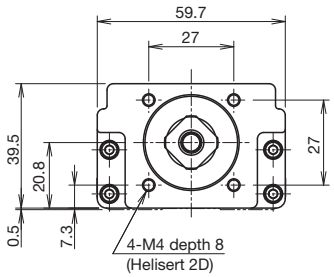
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 43, C/D → p. 49), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

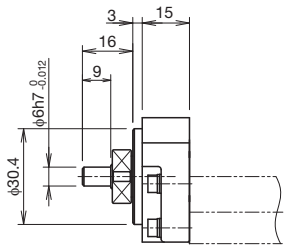
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR30H
40





Note) Shaft end must be considered separately for motor wrap types.
Contact THK for details.

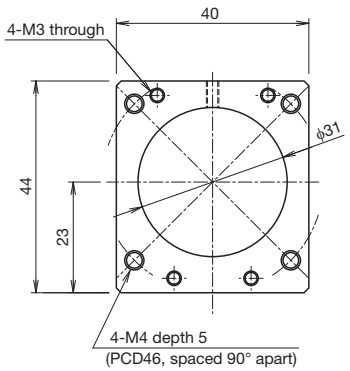
Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

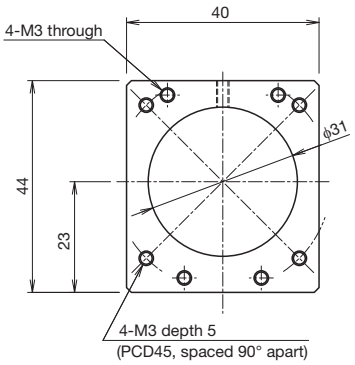
KR30H
WQ

Thickness: 5 mm



KR30H
WP

Thickness: 5 mm



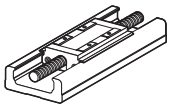
KR33 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 60 mm | Main Unit Height 33 mm | Stroke Max. 600 mm

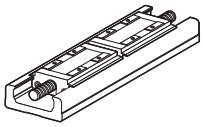
Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)		Stroke (5)		Accuracy grade (6)	With/without motor (7)		Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR33	06	A	QZA	-	0085	-	P	0	-	1	2	AQ
KR33	06: 6 mm	A: x 1	No symbol: Without QZ		0050: 50 mm		No symbol: Normal grade	For direct coupling		0: Without cover	0	For direct coupling
	10: 10 mm	B: x 2	QZ		to		H: High accuracy grade	0: Direct coupling (without motor)		1: With cover	1	A0
			QZA		0600: 600 mm		P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	2	AP
			QZB		When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 161 to p. 162			For wrap			6	AQ
			QZAD					R1: Non-standard side wrap (without motor)			7	AR
			Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 79 to p. 84					R2: Standard side wrap (without motor)			B	AT
								R3: Bottom side wrap (without motor)			E	AU
								R4: Non-standard side wrap (Specified motor prepared and mounted by THK)			H	40
								R5: Standard side wrap (Specified motor prepared and mounted by THK)			L	For wrap
								R6: Bottom side wrap (Specified motor prepared and mounted by THK)			J	WP-08D
								When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.			M	WP-08K
								When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.			Sensor details → p. 73	WP-08M
												WQ-08D
												WQ-08K
												WQ-08M
												For direct coupling → p. 75 For wrap → p. 77

(3) Block type

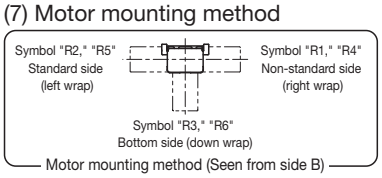


A: Block x 1 (A type)



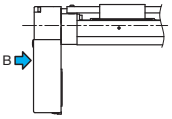
B: Block x 2 (B type)

(7) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

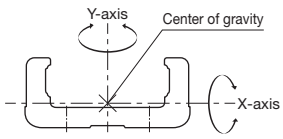
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		11600	
	Basic static load rating C_0 (N)		20200	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to +0.002	
		Precision grade (P)	-0.012 to -0.004	
	Geometrical moment of inertia	I_X[1] (mm^4)	6.2×10^4	
		I_Y[2] (mm^4)	3.8×10^5	
		Weight (kg/m)	5	
Ball screw	Ball screw lead (mm)		6	10
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	2840	1760
		Precision grade (P)	2250	1370
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	4900	2840
		Precision grade (P)	2740	1570
	Screw shaft diameter (mm)		ϕ10	
	Thread minor diameter (mm)		ϕ7.8	
	Ball center-to-center diameter (mm)		ϕ10.5	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	4700	
		Precision grade (P)	6000	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1790	
		Static permissible load P_0a (N)	2590	
Permissible input torque (N·m)		Direct coupling	1.2	
		Wrap	0.98	
Static permissible moment[4, 5] (N·m)			M_A: 166 (908), M_B: 166 (908), M_C: 428 (857)	
Running life[6] (km)			5,000	10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/PB107	

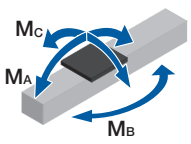
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 400 mm (A type), 325 mm (B type). Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500	600
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	7						

Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500	600
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.06				0.1		0.14
	Running parallelism (vertical direction) (mm)	0.025				0.035		
	Backlash (mm)	0.02						
	Starting torque (N·cm)	7						

Accuracy grade	Item	Stroke[7] 50	100	200	300	400	500	600
Precision grade (P)	Positioning repeatability (mm)	±0.003						
	Positioning accuracy (mm)	0.02				0.025		0.03
	Running parallelism (vertical direction) (mm)	0.01				0.015		
	Backlash (mm)	0.003						
	Starting torque (N·cm)	15						

[7] Stroke with 1 block (A type, without QZ).
Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

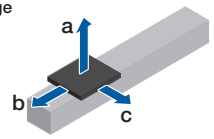
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
50 to 600	150 to 700	A type 0.4 B type 0.8	A type 0.2 B type 0.4	A type 0.6 B type 1.2	3.4	6, 10	194 to 744	ϕ6h7	0.041

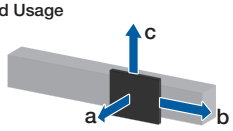
[1] Stroke with 1 block (A type, without QZ).
[2] Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 75 for applicable couplings.

Permissible Overhang Length[3]

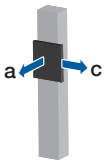
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	6	10.5	600	120	180
			21.5	280	50	90
			43.5	120	20	40
		10	9	600	11	210
			18.5	330	50	100
			37.5	140	20	50
	B type	6	15	600	510	260
			30.5	600	240	120
			61.5	510	110	60
		10	9	600	600	430
			18.5	600	320	210
			37.5	600	150	100
Wrap	A type	6	10.5	600	120	180
			21.5	280	50	90
			43.5	120	20	40
		10	9	600	110	210
			18.5	330	50	100
			37.5	140	20	50
	B type	6	15	600	510	260
			30.5	600	240	120
			61.5	510	110	60
		10	9	600	600	430
			18.5	600	330	210
			37	600	150	100

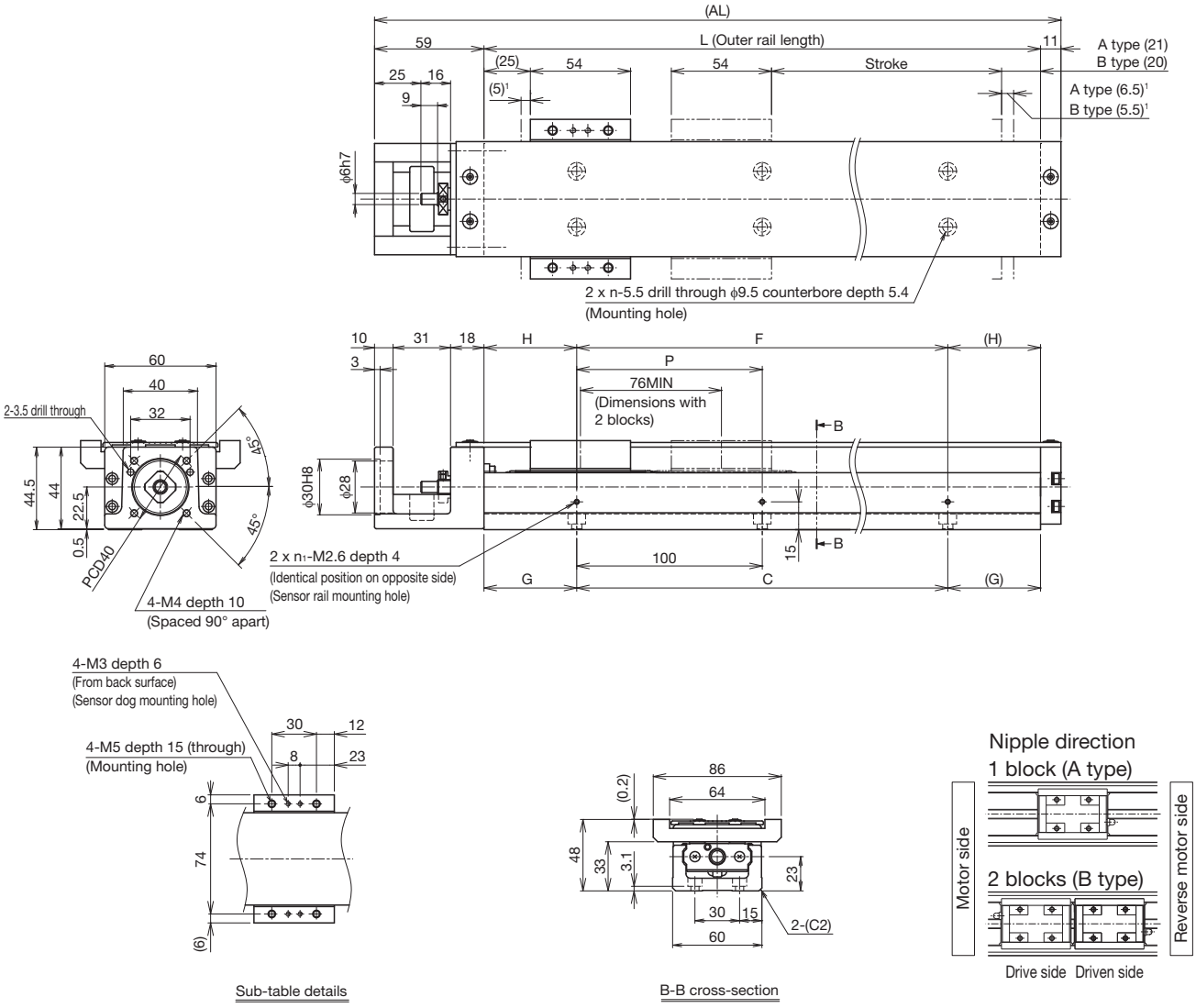
Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	6	8	220	150	530
			16	90	70	260
			32.5	30	20	130
		10	6	300	160	600
			12	130	70	350
			24	50	30	170
	B type	6	12	300	290	600
			24.5	130	140	480
			49	50	70	240
		10	9	410	390	600
			18.5	180	190	600
			37.5	70	90	310
Wrap	A type	6	8	220	150	530
			16	90	70	260
			32.5	30	20	130
		10	6	300	160	600
			12	130	70	350
			24	50	30	170
	B type	6	12	300	290	600
			24.5	130	140	480
			49	50	70	240
		10	9	410	390	600
			18.5	180	190	600
			37	80	90	320

Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	6	3.5	340	280
			7.5	150	130
			15	60	60
		10	3	330	320
			6	150	150
			12	60	60
	B type	6	3.5	600	600
			7.5	600	360
			15	480	180
		10	3	600	600
			6	600	450
			12.5	480	210
Wrap	A type	6	2.5	450	390
			5.5	210	170
			11.5	90	80
		10	2.5	500	390
			5.5	230	170
			10.5	100	90
	B type	6	2.5	600	600
			5.5	600	490
			11.5	600	230
		10	2.5	600	600
			5	600	540
			10	600	270

[3] Value when LM Guide running life is restricted to 10,000 km (5,000 km for 6 mm lead only). The calculation conditions are as follows.
Stroke: 325 mm (A type, B type). Acceleration/deceleration rate: 0.3 G. Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Overhang direction: Load in one direction only. Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



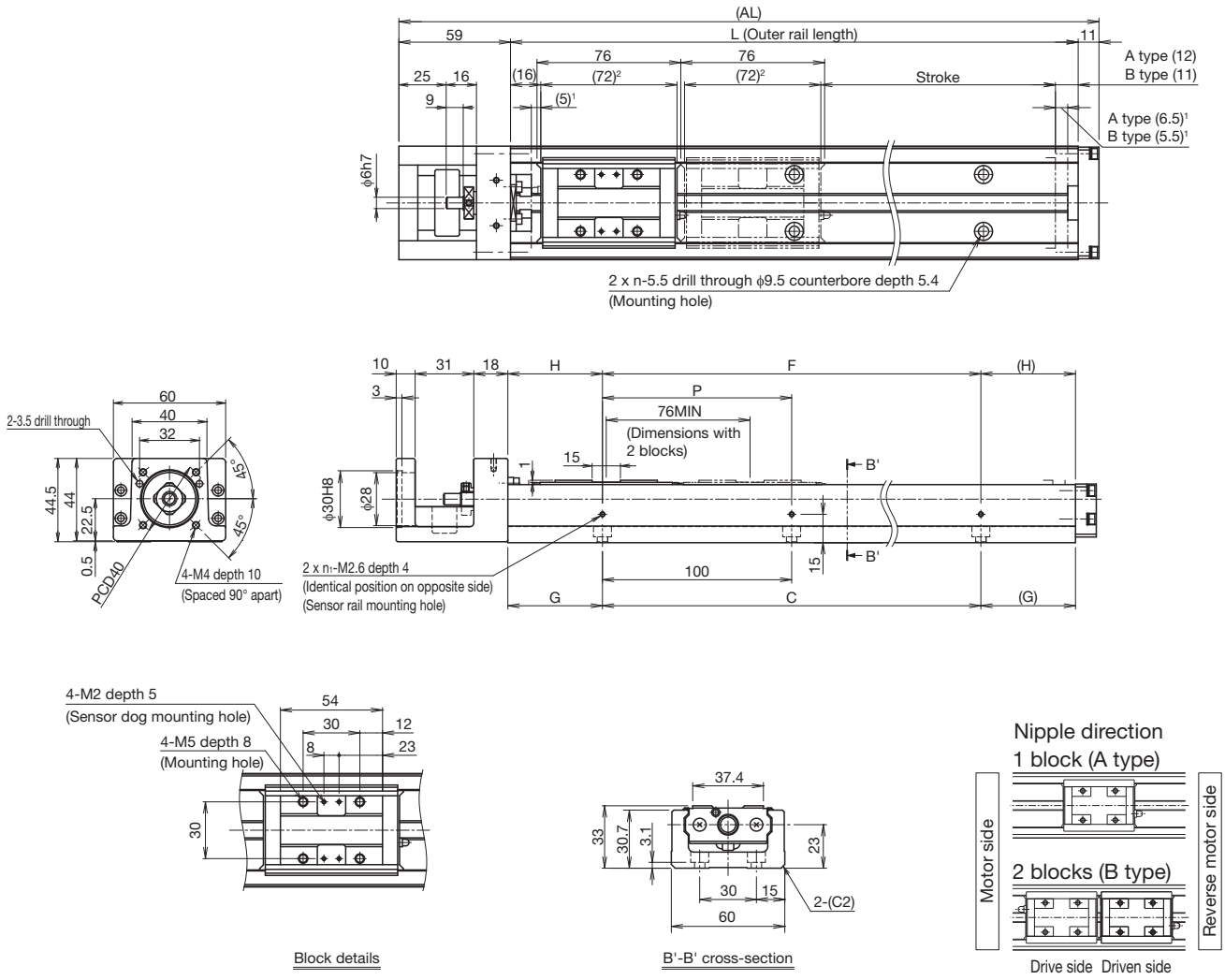
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (61.5)	100 (111.5)	200 (211.5)	300 (311.5)	400 (411.5)	500 (511.5)	600 (611.5)
	B type[2]		-	-	125 (135.5)	225 (235.5)	325 (335.5)	425 (435.5)	525 (535.5)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390	280
		Precision grade	600				590	390	280
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650	470
		Precision grade	1000				980	650	470
Dimensions (mm)	AL		220	270	370	470	570	670	770
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[4] (kg)			2.2	2.6	3.3	4.1	4.9	5.6	6.4

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.6 kg added.

Without cover
Direct motor coupling

Dimensions



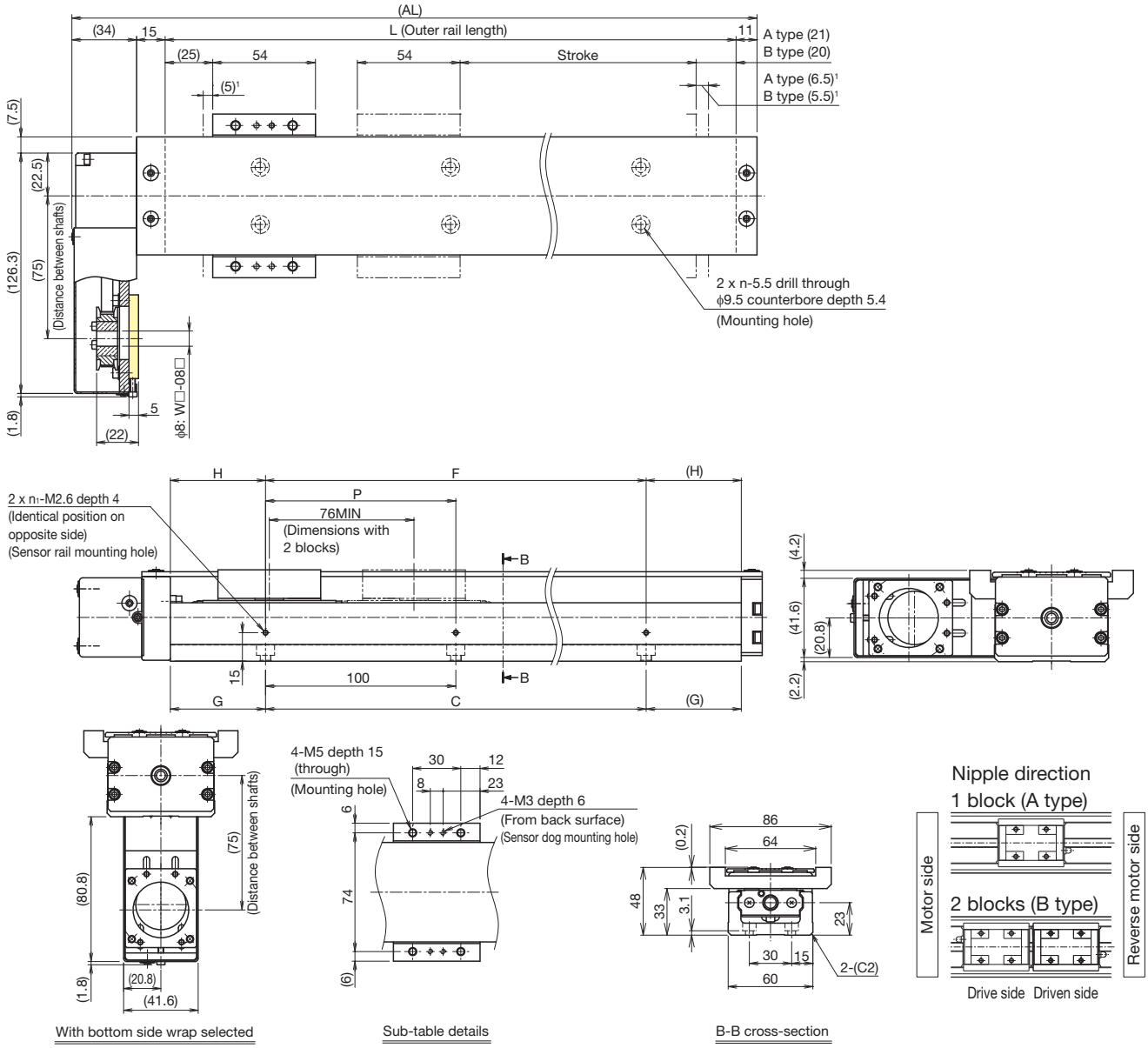
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
148 mm (2 pcs total) for KR33 with 2 blocks (B type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)			50 (61.5)	100 (111.5)	200 (211.5)	300 (311.5)	400 (411.5)	500 (511.5)	600 (611.5)
	A type								
	B type[3]		-	-	125 (135.5)	225 (235.5)	325 (335.5)	425 (435.5)	525 (535.5)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390	280
		Precision grade	600				590	390	280
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650	470
		Precision grade	1000				980	650	470
Dimensions (mm)	AL		220	270	370	470	570	670	770
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[5] (kg)			1.9	2.2	3	3.7	4.4	5.2	5.9

[3] The value with 2 blocks (B type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.4 kg added.

With cover
Motor wrap

Dimensions



With bottom side wrap selected

Sub-table details

B-B cross-section

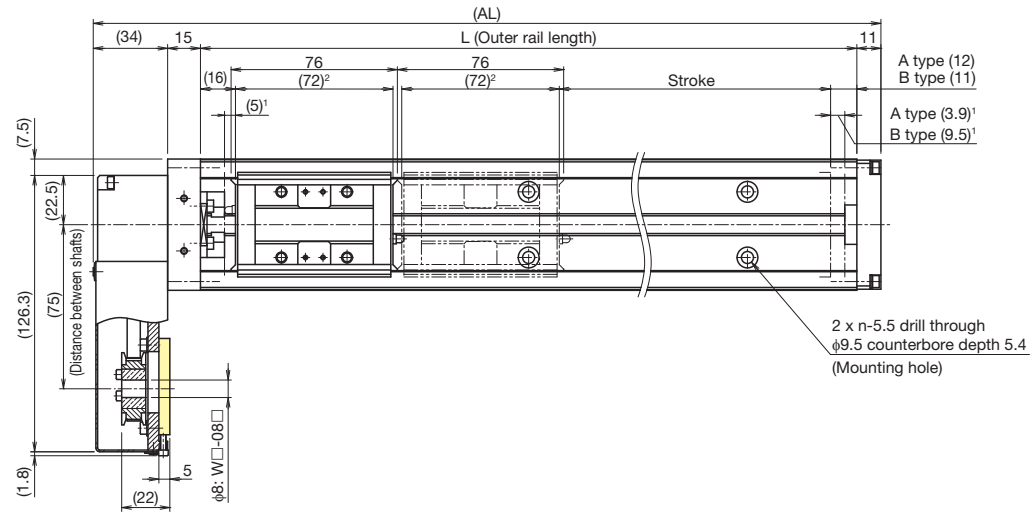
[1] Dimensions from the mechanical stopper to the stroke start position.

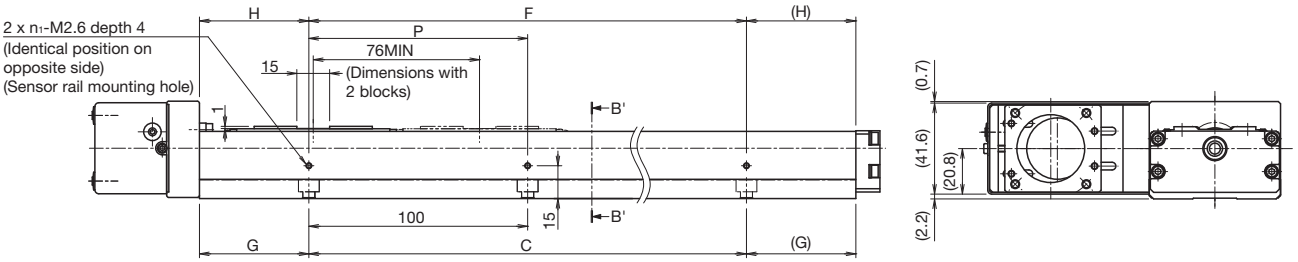
Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (61.5)	100 (111.5)	200 (211.5)	300 (311.5)	400 (411.5)	500 (511.5)	600 (611.5)
	B type[2]		-	-	125 (135.5)	225 (235.5)	325 (335.5)	425 (435.5)	525 (535.5)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390	280
		Precision grade	600				590	390	280
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650	470
		Precision grade	1000				980	650	470
Dimensions (mm)	AL		210	260	360	460	560	660	760
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[4] (kg)			2.5	2.9	3.6	4.4	5.2	5.9	6.7

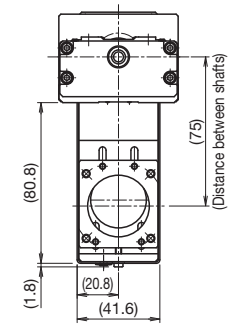
[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 0.6 kg added.

Without cover
Motor wrap

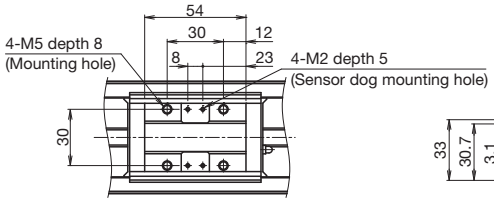
Dimensions



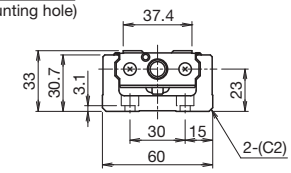




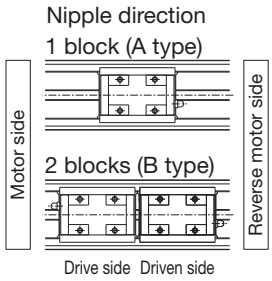
With bottom side wrap selected



Block details



B'-B' cross-section



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
148 mm (2 pcs total) for KR33 with 2 blocks (B type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	A type		50 (61.5)	100 (111.5)	200 (211.5)	300 (311.5)	400 (411.5)	500 (511.5)	600 (611.5)
	B type[3]		-	-	125 (135.5)	225 (235.5)	325 (335.5)	425 (435.5)	525 (535.5)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					390	280
		Precision grade	600				590	390	280
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					650	470
		Precision grade	1000				980	650	470
Dimensions (mm)	AL		210	260	360	460	560	660	760
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[5] (kg)			2.2	2.6	3.3	4	4.7	5.5	6.2

[3] The value with 2 blocks (B type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 0.4 kg added.

KR33 C/D

Direct Motor Coupling | Motor Wrap | Main Unit Width 60 mm | Main Unit Height 33 mm | Stroke Max. 625 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)	Stroke (5)	Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR33	06	C	QZA	0060	P	0	1	2	AQ
KR33	06: 6 mm	C: x 1	No symbol: Without QZ	0025: 25 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	10: 10 mm	D: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			QZA	0625: 625 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AP
			QZB			For wrap		6	AQ
			QZAD			R1: Non-standard side wrap (without motor)		7	AR
						R2: Standard side wrap (without motor)		B	AT
						R3: Bottom side wrap (without motor)		E	AU
						R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	40
						R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	For wrap
						R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WP-08D
								M	WP-08K
								Sensor details → p. 73	WP-08M
									WQ-08D
									WQ-08K
									WQ-08M

Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 79 to p. 84

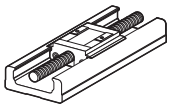
When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 163 to p. 164

When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

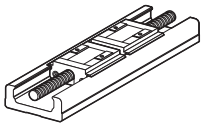
When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

For direct coupling → p. 75
For wrap → p. 77

(3) Block type

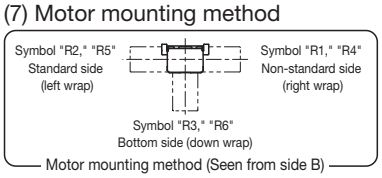


C: Short block x 1 (C type)



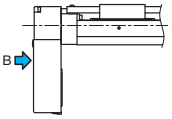
D: Short block x 2 (D type)

(7) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

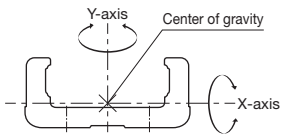
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		4900	
	Basic static load rating C_0 (N)		10000	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to +0.002	
		Precision grade (P)	-0.012 to -0.004	
	Geometrical moment of inertia	I_X[1] (mm^4)	6.2×10^4	
		I_Y[2] (mm^4)	3.8×10^5	
	Weight (kg/m)		5	
Ball screw	Ball screw lead (mm)		6	10
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	2840	1760
		Precision grade (P)	2250	1370
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	4900	2840
		Precision grade (P)	2740	1570
	Screw shaft diameter (mm)		ϕ10	
	Thread minor diameter (mm)		ϕ7.8	
	Ball center-to-center diameter (mm)		ϕ10.5	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	4760	
		Precision grade (P)	6000	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	1790	
		Static permissible load P_0a (N)	2590	
Permissible input torque (N·m)		Direct coupling	1.2	
		Wrap	0.98	
Static permissible moment[4, 5] (N·m)			M_A: 44 (319), M_B: 44 (319), M_C: 214 (427)	
Running life[6] (km)			5,000	10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/PB107	

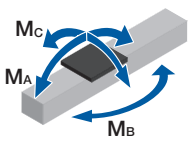
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 short blocks (D type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 425 mm (C type), 375 mm (D type). Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per short block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 75	125	225	325	425	525	625
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	7						

Accuracy grade	Item	Stroke[7] 75	125	225	325	425	525	625
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.06				0.1		0.14
	Running parallelism (vertical direction) (mm)	0.025				0.035		
	Backlash (mm)	0.02						
	Starting torque (N·cm)	7						

Accuracy grade	Item	Stroke[7] 75	125	225	325	425	525	625
Precision grade (P)	Positioning repeatability (mm)	±0.003						
	Positioning accuracy (mm)	0.02				0.025		0.03
	Running parallelism (vertical direction) (mm)	0.01				0.015		
	Backlash (mm)	0.003						
	Starting torque (N·cm)	15						

[7] Stroke with 1 short block (C type, without QZ).
Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

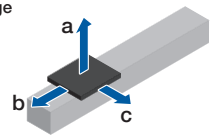
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
75 to 625	150 to 700	C type 0.2 D type 0.4	C type 0.1 D type 0.2	C type 0.3 D type 0.6	3.1	6, 10	191 to 741	ϕ6h7	0.041

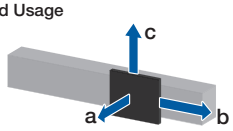
[1] Stroke with 1 short block (C type, without QZ).
[2] Value with 1 short block (C type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 75 for applicable couplings.

Permissible Overhang Length[3]

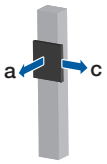
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	6	7	100	30	140
			14	40	10	70
			28	0	0	30
		10	3.5	230	60	270
			7	100	30	130
			14	40	10	60
	D type	6	11	600	210	180
			22	470	90	90
			44.5	220	40	40
		10	9	600	190	220
			18.5	570	90	100
			37.5	260	30	50
Wrap	C type	6	7	100	30	140
			14	40	10	70
			28	0	0	30
		10	3.5	230	60	270
			7	100	30	130
			14	40	10	60
	D type	6	11	600	210	180
			22	470	90	90
			44.5	220	40	40
		10	9	600	190	220
			18.5	570	90	100
			37.5	260	30	50

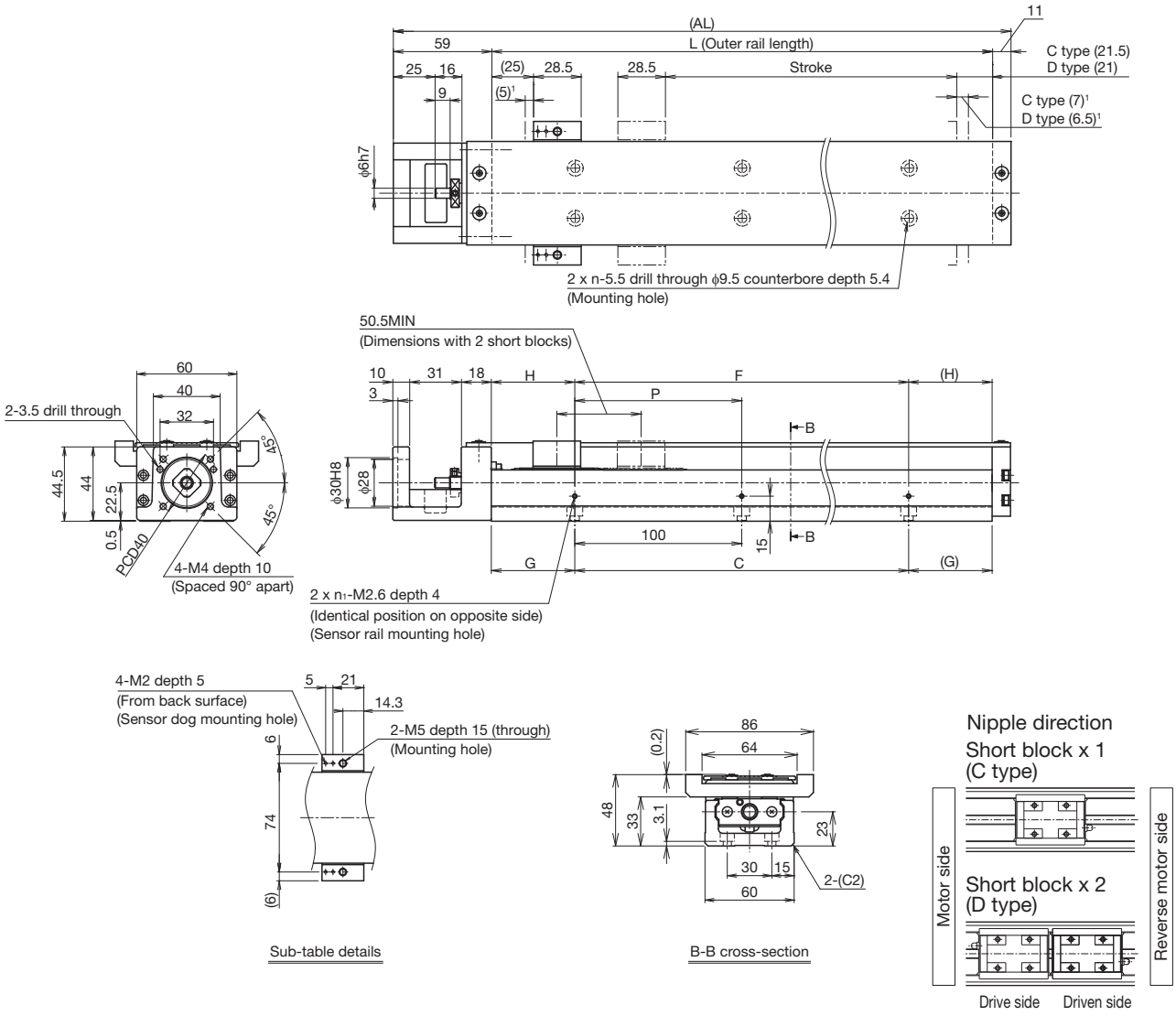
Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	6	3.5	230	70	410
			7.5	90	30	190
			15	30	10	90
		10	2.5	330	90	580
			5	150	40	290
			10	60	10	110
	D type	6	7	260	210	410
			14.5	110	100	330
			29	40	50	170
		10	5.5	340	260	600
			11.5	140	120	420
			23	60	50	210
Wrap	C type	6	3.5	130	70	410
			7.5	90	30	190
			15	30	10	90
		10	2.5	330	90	580
			5	150	40	290
			10	60	10	110
	D type	6	7	260	210	410
			14.5	110	100	330
			29	40	50	170
		10	5.5	340	260	600
			11.5	140	120	420
			23	60	50	210

Hypothetical motor capacity 100 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	6	1	180	250
			2	80	110
			4.5	20	40
		10	0.5	250	250
			1.5	110	110
			3.5	35	40
	D type	6	3.5	600	320
			7.5	310	150
			15	140	70
		10	3	600	370
			6	400	180
			12	170	90
Wrap	C type	6	1	180	250
			2	80	110
			4.5	20	40
		10	0.5	250	250
			1.5	110	110
			3.5	30	40
	D type	6	2.5	600	450
			5.5	430	200
			11.5	190	90
		10	2.5	600	450
			5	480	220
			10.5	230	110

[3] Value when LM Guide running life is restricted to 10,000 km (5,000 km for 6 mm lead only). The calculation conditions are as follows.
Stroke: 350 mm (C type), 300 mm (D type). Acceleration/deceleration rate: 0.3 G. Speed: 300 mm/s (for 6 mm lead), 500 mm/s (for 10 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



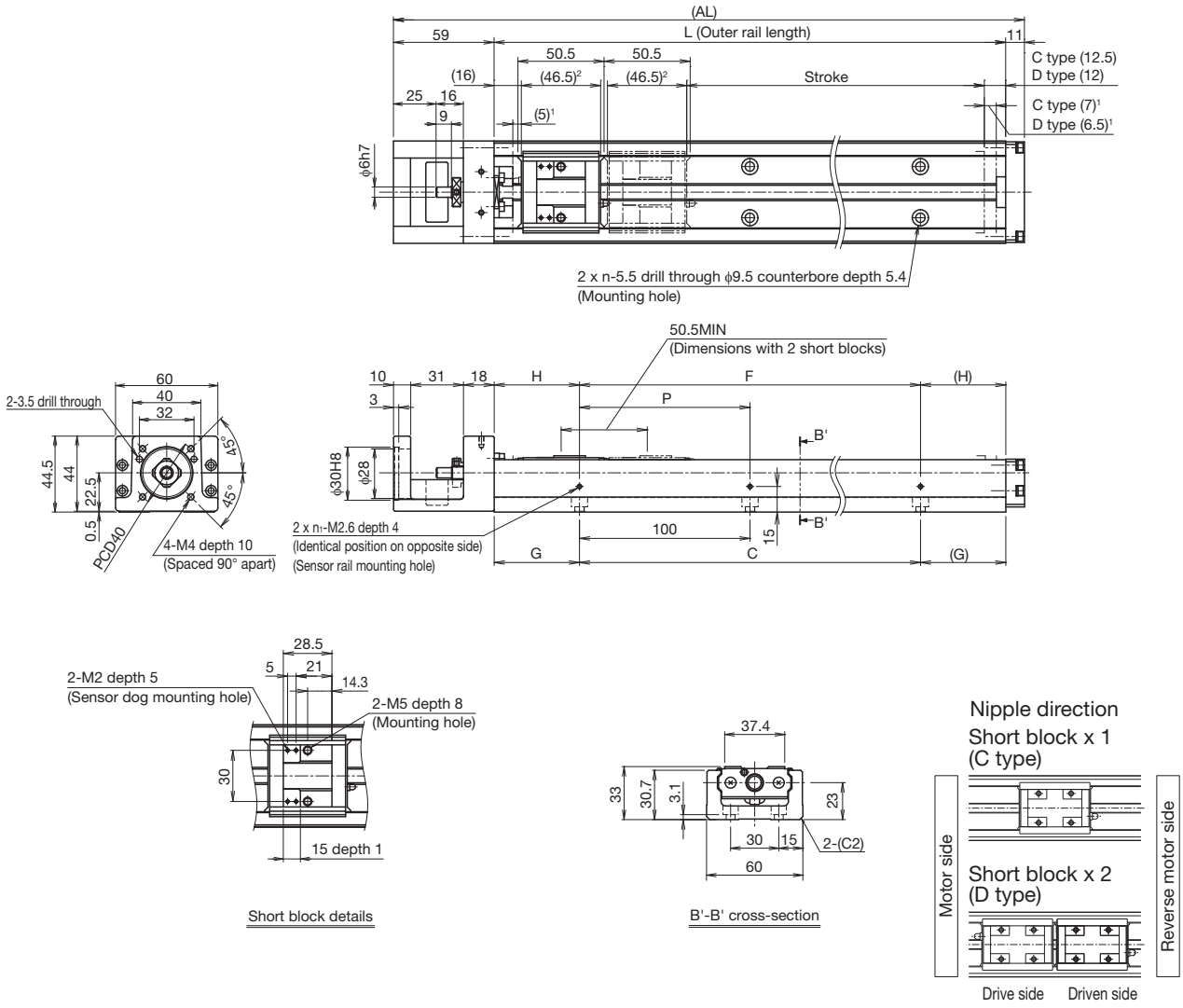
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		75 (87)	125 (137)	225 (237)	325 (337)	425 (437)	525 (537)	625 (637)
	D type[2]		25 (36.5)	75 (86.5)	175 (186.5)	275 (286.5)	375 (386.5)	475 (486.5)	575 (586.5)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360	260
		Precision grade	600				530	360	260
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600	430
		Precision grade	1000				880	600	430
Dimensions (mm)	AL		220	270	370	470	570	670	770
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[4] (kg)			1.9	2.3	3	3.8	4.6	5.3	6.1

[2] The value with 2 short blocks (D type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.3 kg added.

Without cover
Direct motor coupling

Dimensions



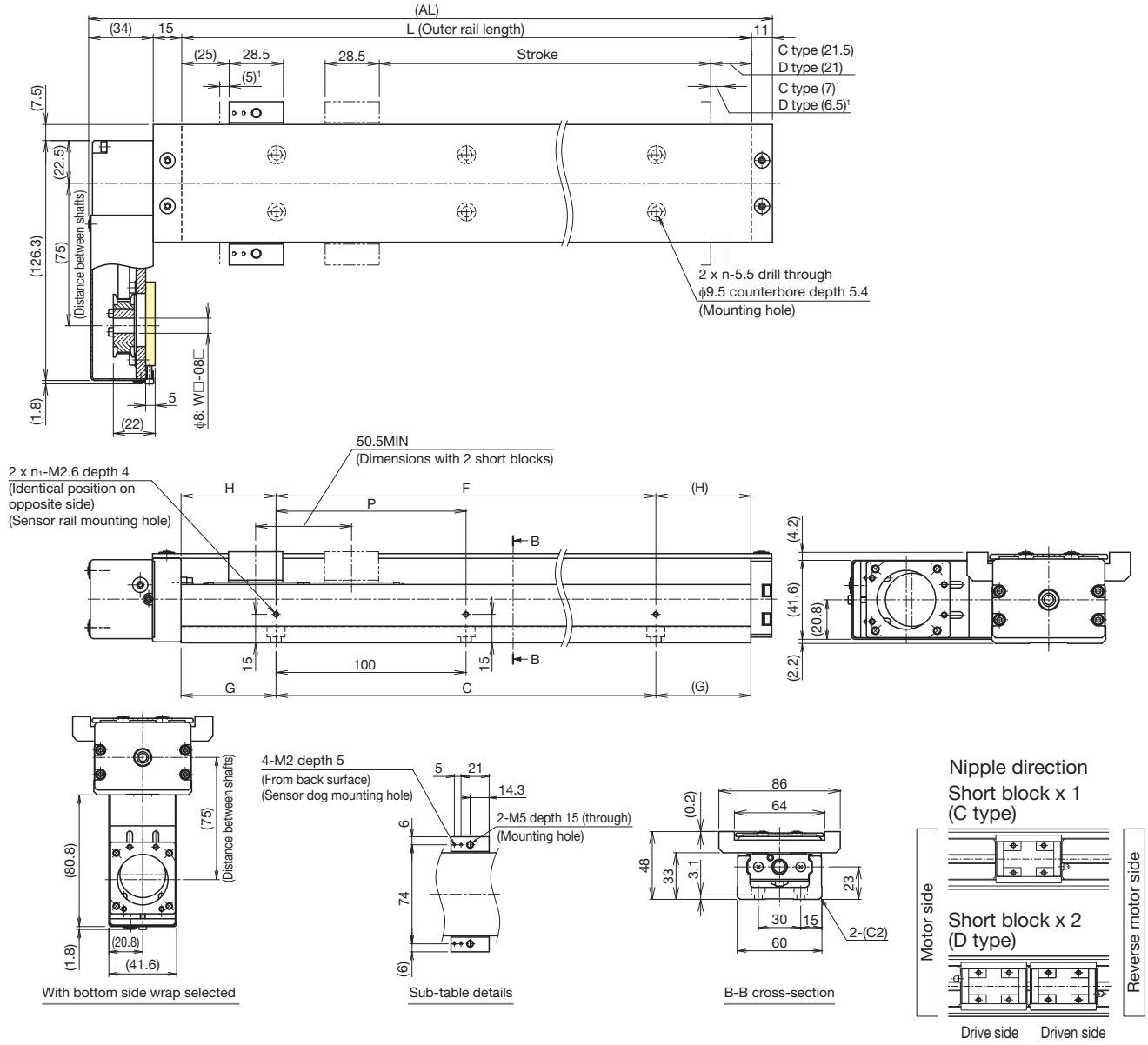
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range. 97.2 mm (2 pcs total) for KR33 with 2 short blocks (D type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	C type		75 (87)	125 (137)	225 (237)	325 (337)	425 (437)	525 (537)	625 (637)
	D type[3]		25 (36.5)	75 (86.5)	175 (186.5)	275 (286.5)	375 (386.5)	475 (486.5)	575 (586.5)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360	260
		Precision grade	600				530	360	260
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600	430
		Precision grade	1000				880	600	430
Dimensions (mm)	AL		220	270	370	470	570	670	770
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[5] (kg)			1.7	2	2.8	3.5	4.2	5	5.7

[3] The value with 2 short blocks (D type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.2 kg added.

With cover
Motor wrap

Dimensions



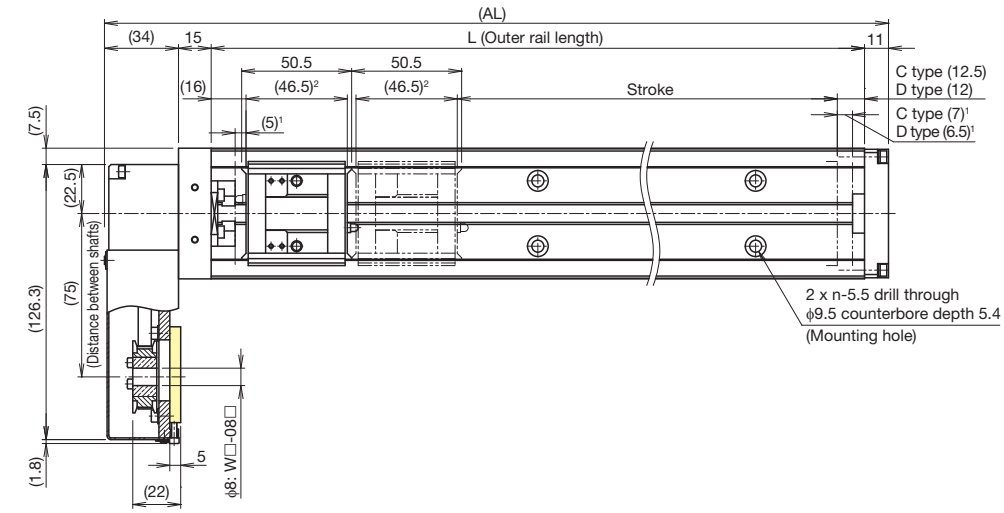
[1] Dimensions from the mechanical stopper to the stroke start position.

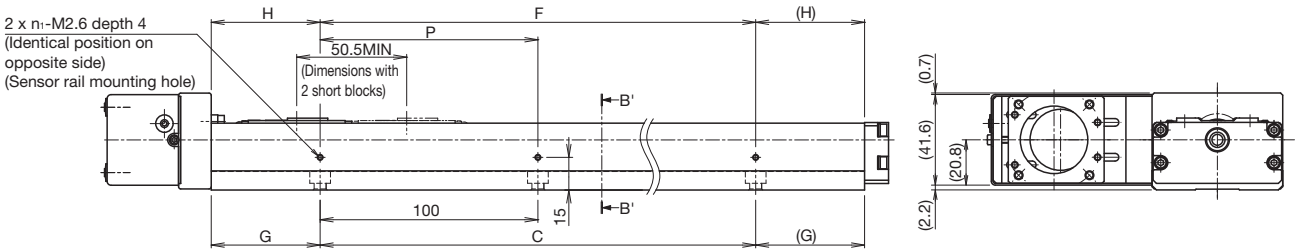
Stroke (mm) (Stroke between mechanical stoppers)	C type		75 (87)	125 (137)	225 (237)	325 (337)	425 (437)	525 (537)	625 (637)
	D type[2]		25 (36.5)	75 (86.5)	175 (186.5)	275 (286.5)	375 (386.5)	475 (486.5)	575 (586.5)
Maximum speed[3] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360	260
		Precision grade	600				530	360	260
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600	430
		Precision grade	1000				880	600	430
Dimensions (mm)	AL		210	260	360	460	560	660	760
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[4] (kg)			2.2	2.6	3.3	4.1	4.9	5.6	6.4

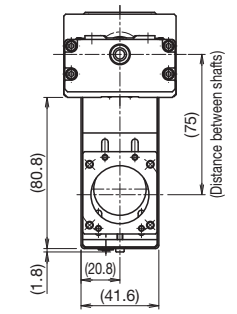
[2] The value with 2 short blocks (D type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.3 kg added.

Without cover
Motor wrap

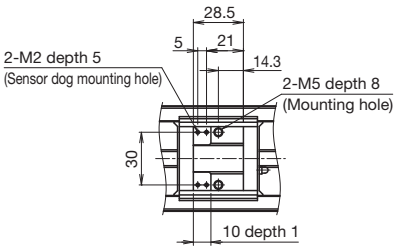
Dimensions



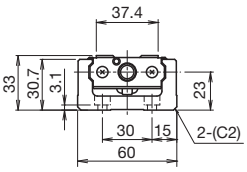




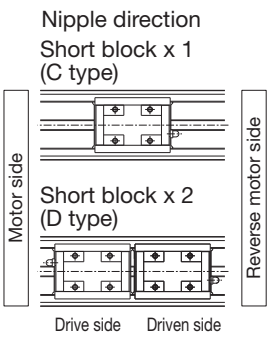
With bottom side wrap selected



Short block details



B'-B' cross-section



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range.
97.2 mm (2 pcs total) for KR33 with 2 short blocks (D type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	C type		75 (87)	125 (137)	225 (237)	325 (337)	425 (437)	525 (537)	625 (637)
	D type[3]		25 (36.5)	75 (86.5)	175 (186.5)	275 (286.5)	375 (386.5)	475 (486.5)	575 (586.5)
Maximum speed[4] (mm/s)	Ball screw lead: 6 mm	Normal grade/High accuracy grade	470					360	260
		Precision grade	600				530	360	260
	Ball screw lead: 10 mm	Normal grade/High accuracy grade	790					600	430
		Precision grade	1000				880	600	430
Dimensions (mm)	AL		210	260	360	460	560	660	760
	L		150	200	300	400	500	600	700
	C		100	100	200	300	400	500	600
	G		25	50	50	50	50	50	50
	P		100	100	200	200	200	200	200
	F		100	100	200	200	400	400	600
	H		25	50	50	100	50	100	50
Mounting hole count	n		2	2	3	4	5	6	7
	n_1		2	2	2	2	3	3	4
Weight[5] (kg)			2	2.4	3.1	3.8	4.5	5.3	6

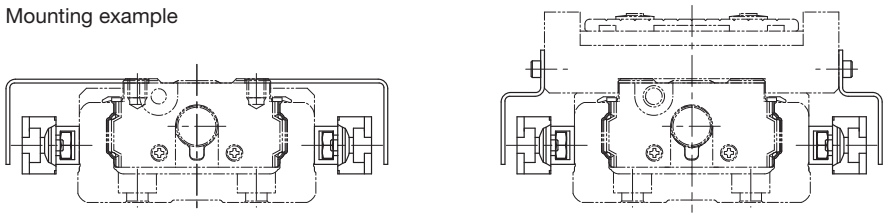
[3] The value with 2 short blocks (D type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.2 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

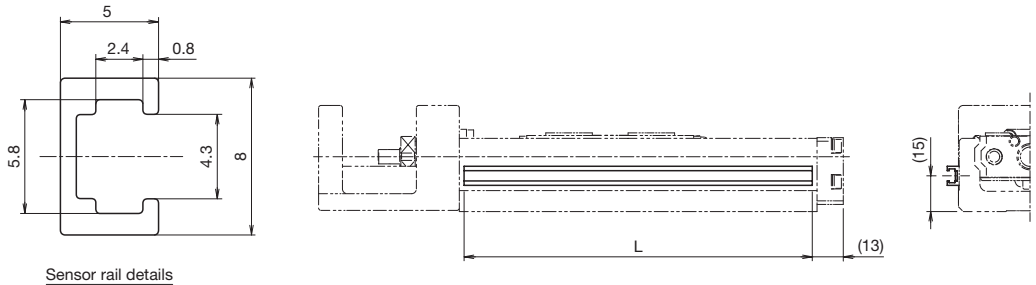


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details

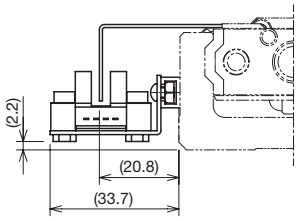
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
50	150	146
100	200	196
200	300	296
300	400	396
400	500	496
500	600	596
600	700	696

[4] Stroke with 1 block (A type).

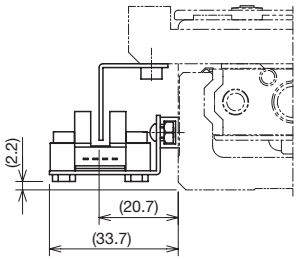
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



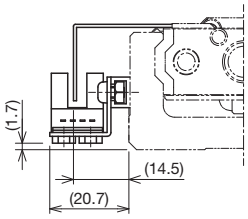
With cover



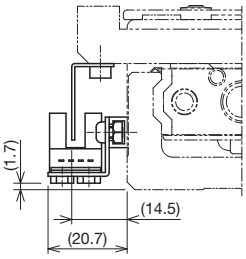
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 15 mm (10 mm)[1]

Without cover



With cover



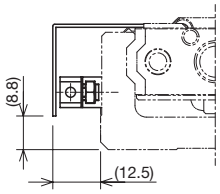
Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

Sensor dog width: 15 mm (10 mm)[1]

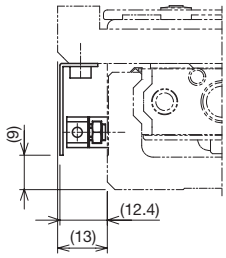
[1] The value in parentheses is for short block specifications.

Proximity Sensor Mounting Dimensions

Without cover



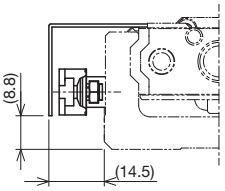
With cover



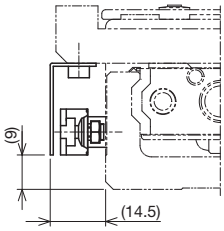
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 15 mm (10 mm)[2]

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 15 mm (10 mm)[2]

[2] The value in parentheses is for short block specifications.

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-A5	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SGMAV-A5					
				SGMJV-01	100				
				SGMAV-01					
				SGMJV-C2	150				
		Σ-7		SGM7J-A5	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SGM7A-A5					
				SGM7J-01	100				
				SGM7A-01					
				SGM7J-C2	150				
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR053	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				HG-MR053					
				HG-KR13	100				
				HG-MR13					
			JN	HF-KN053	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				HF-KN13	100				
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				TS4603	100				
				TS4604	150				
		TBL-iIV		TSM3102	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				TSM3104	100				
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MSME5A					
				MSMD01	100				
				MSME01					
			A6	MSMF5A	50	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MHMF5A		□40	AQ		
				MSMF01	100	□38	AP	SFC-020DA2-6B-8B	XGT2-19C-6-8
				MHMF01		□40	AQ		
	Keyence Corporation	SV		SV-M005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SV-M010	100				
		SV2		SV2-M005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				SV2-M010	100				
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				R2EA04008	80				
				R2□A04010	100				
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				R88M-K10030	100				
		1S		R88M-1M10030	100	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
	Fanuc Corporation	βis Series		βis0.2/5000	50	□40	AQ	SFC-020DA2-6B-8B	XGT2-19C-6-8
				βis0.3/5000	100				

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ4*, AR4* (excluding AZM48)	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				AZM48	□42	AR	SFC-010DA2-6B-8B-L32	XGT2-19C-6-8
				AZ6*, AR6*	□60	AU	SFC-020DA2-6B-10B	XGT2-25C-6-10
		5-phase	CRK[1]	CRK54*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				CRK56* (CRK569PM*)	□60	AU	SFC-020DA2-6B-8B (SFC-020DA2-6B-10B)	XGT2-25C-6-8 (XGT2-25C-6-10)
			RK II	RKS54*	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				RKS56*	□60	AU	SFC-020DA2-6B-10B	XGT2-25C-6-10
			PKA	PKA544	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKA566	□60	AU	SFC-020DA2-6B-8B	XGT2-25C-6-8
			CVK[1]	PKP54*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKP56*	□56.4	AT	SFC-020DA2-6B-8B	XGT2-19C-6-8
				PKP56* (PKP569FM*)	□60	AU	SFC-020DA2-6B-8B (SFC-020DA2-6B-10B)	XGT2-25C-6-8 (XGT2-25C-6-10)
		2-phase	CVK	PKP24*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				PKP26*	□56.4	AT	SFC-020DA2-6B-8B	XGT2-25C-6-8
	Keyence Corporation	2-phase		QS-M42	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				QS-M60	□60	AU	SFC-020DA2-6B-8B	XGT2-25C-6-8
	Sanyo Denki Co., Ltd.	PB		PBDM423, PBA**423	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				PBDM60*, PBA**60*	□60	AU	SFC-020DA2-6B-10B-L34	XGT2-25C-6-10
		5-phase		FAF54*/FDF54*/ FA511M42/FB511M42	□42	AR	SFC-010DA2-6B-6B-L32	XGT2-15C-6-6
				FAM56*/FDM56*/ FA512M60/FB512M60	□60	AU	SFC-020DA2-6B-10B-L34	XGT2-25C-6-10
		2-phase		DB14H52*	□42	AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				DU15H52*		AR	SFC-010DA2-5B-6B-L32	XGT2-15C-5-6
				D*16H71*	□56	AT	SFC-020DA2-6B-6.35B-L34	XGT2-19C-6-6.35
				DB16H78*	□60	AU	SFC-020DA2-6B-8B-L34	XGT2-25C-6-8

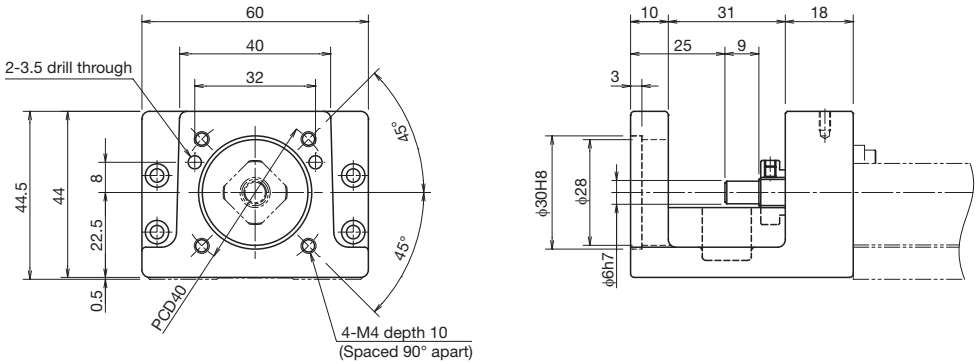
[1] Items in parentheses have different motor shaft diameters and require a coupling to be specified.
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 61, C/D → p. 67), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

KR**
●◇

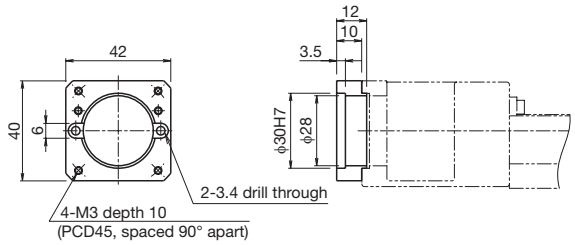
Actuator model
●: Housing A
◇: Intermediate flange

KR33
A0

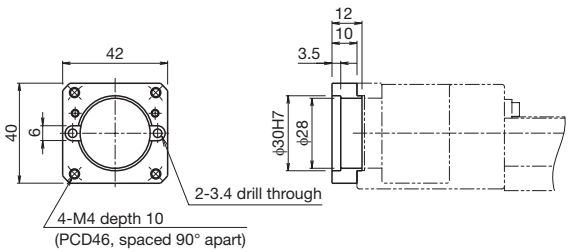


Intermediate flange

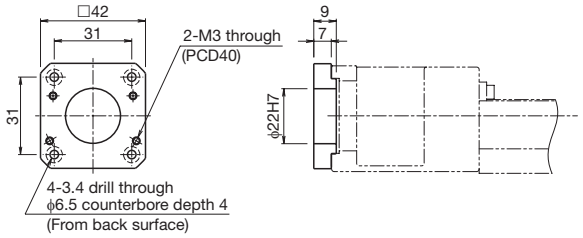
KR33
AP



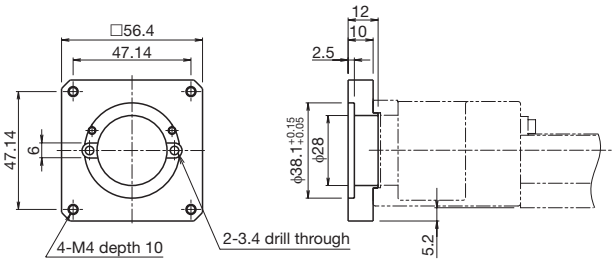
KR33
AQ



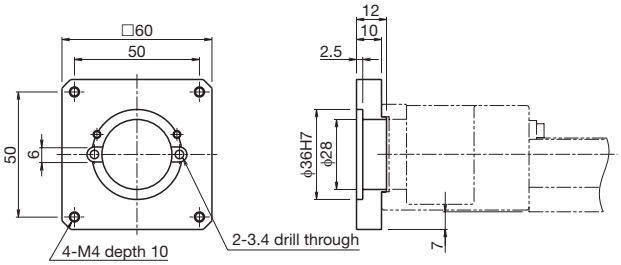
KR33
AR



KR33
AT



KR33
AU



Options

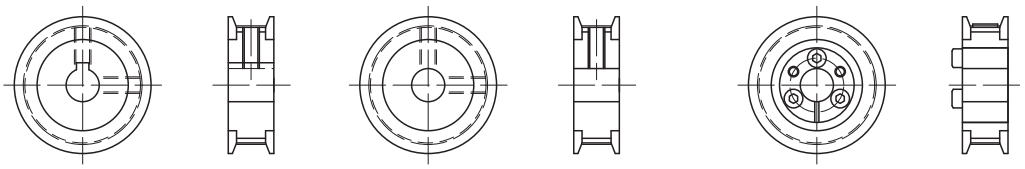
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	Q	-	08	D
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	K: Key D: D-cut M: Friction tightening tool

Motor shaft fixing method



Key　　D-cut　　Friction tightening tool

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-A5	50	□40	WQ-08K, WQ-08M
				SGMAV-A5			
				SGMJV-01	100		
				SGMAV-01			
				SGMJV-C2	150		
		Σ-7		SGM7J-A5	50	□40	WQ-08K, WQ-08M
				SGM7A-A5			
				SGM7J-01	100		
				SGM7A-01			
				SGM7J-C2	150		
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR053	50	□40	WQ-08D, WQ-08M
				HG-MR053			
				HG-KR13	100		
				HG-MR13			
			JN	HF-KN053	50	□40	WQ-08D, WQ-08M
				HF-KN13	100		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4602	50	□40	WQ-08D, WQ-08M
				TS4603	100		
				TS4604	150		
		TBL-iIV		TSM3102	50	□40	WQ-08D, WQ-08M
				TSM3104	100		
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	WP-08D, WP-08K, WP-08M
				MSME5A			
				MSMD01	100		
				MSME01			
			A6	MSMF5A	50	□38	WP-08K, WP-08M
				MHMF5A		□40	WQ-08K, WQ-08M
				MSMF01	100	□38	WP-08K, WP-08M
				MHMF01		□40	WQ-08K, WQ-08M
	Keyence Corporation	SV		SV-M005	50	□40	WQ-08K, WQ-08M
				SV-M010	100		
		SV2		SV2-M005	50	□40	WQ-08K, WQ-08M
				SV2-M010	100		
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A04005	50	□40	WQ-08M
				R2EA04008	80		
				R2□A04010	100		
	OMRON Corporation	OMNUC G5		R88M-K05030	50	□40	WQ-08K, WQ-08M
				R88M-K10030	100		
		1S		R88M-1M10030	100	□40	WQ-08K, WQ-08M

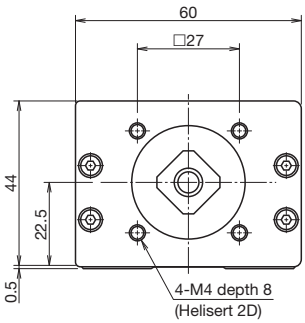
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 61, C/D → p. 67), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

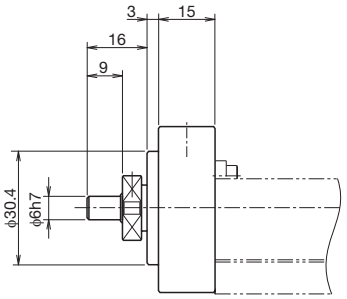
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR33
40





Note) Shaft end must be considered separately for motor wrap types. Contact THK for details.

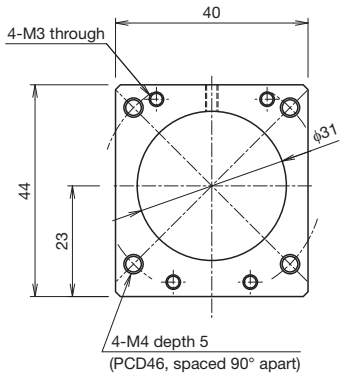
Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

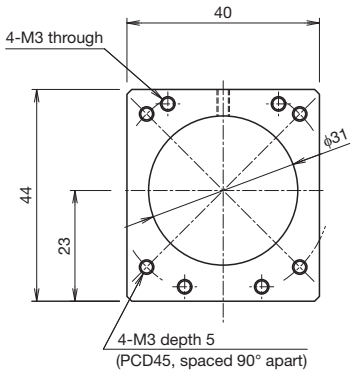
KR33
WQ

Thickness: 5 mm



KR33
WP

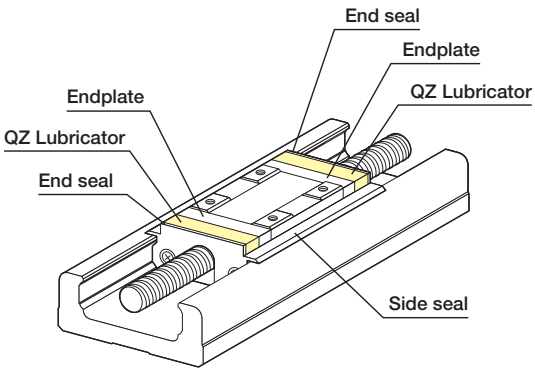
Thickness: 5 mm



Options

QZ Lubricator

The QZ Lubricator for KR feeds the right amount of lubricant to the outer rail and ball screw shaft raceways. This allows an oil film to be constantly formed between the balls and the raceway, and it significantly extends the lubrication maintenance interval.



Appearance

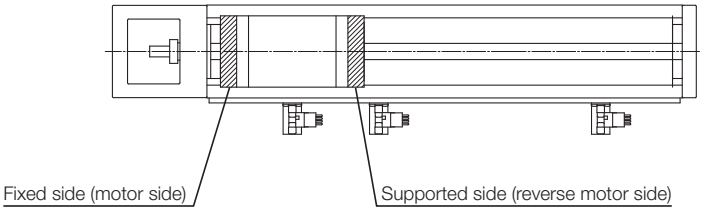
Features

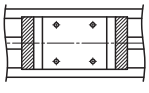
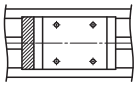
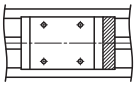
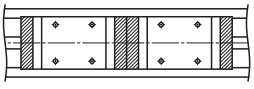
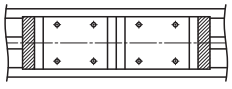
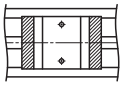
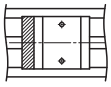
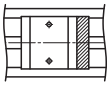
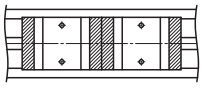
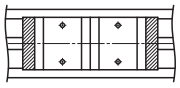
- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- It is an eco-friendly lubrication system that does not contaminate the surrounding area, as it feeds the right amount of lubricant to the ball raceway.

QZ Configuration

Symbol	Block type	Description
QZ	A/B/C/D	QZ all-block double-sided specification
QZA	A/C	QZ fixed side specification
QZB	A/C	QZ supported side specification
QZAD	B/D	QZ fixed side (drive side block) + QZ supported side (driven side block) specification

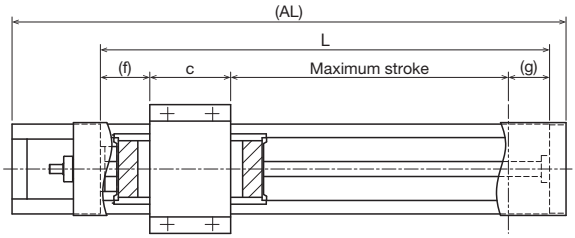
Note) QZ specification types do not have a grease nipple mounted. Contact THK if a grease nipple is required.



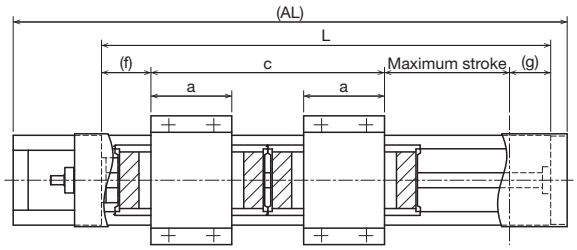
Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
B type (block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side
C type (short block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
D type (short block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side

Dimensions with QZ Lubricator

QZ (with cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

Unit: mm

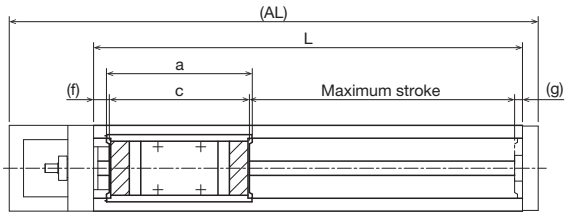
Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
A	270	200	75	85.5	-	54	33	27.5
	370	300	175	185.5				
	470	400	275	285.5				
	570	500	375	385.5				
	670	600	475	485.5				
	770	700	575	585.5				
B	370	300	70	83.5	54	156	33	27.5
	470	400	170	183.5				
	570	500	270	283.5				
	670	600	370	383.5				
	770	700	470	483.5				
C	220	150	50	61	-	28.5	33	27.5
	270	200	100	111				
	370	300	200	211				
	470	400	300	311				
	570	500	400	411				
	670	600	500	511				
	770	700	600	611				
D	370	300	125	134.5	28.5	105	33	27.5
	470	400	225	234.5				
	570	500	325	334.5				
	670	600	425	434.5				
	770	700	525	534.5				

[1] The value for B/D block types is with 2 blocks attached.

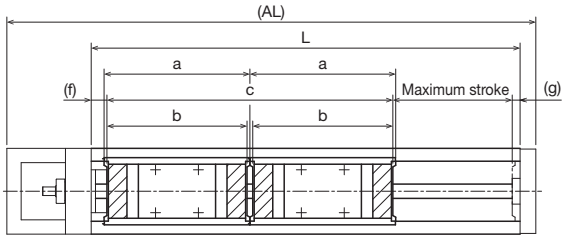
Options

Dimensions with QZ Lubricator

QZ (without cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

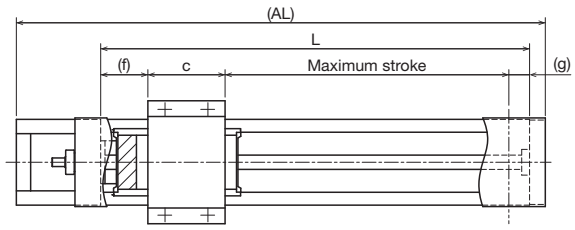
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	b	c	f	g
A	270	200	75	85.5	102	-	98	11	5.5
	370	300	175	185.5					
	470	400	275	285.5					
	570	500	375	385.5					
	670	600	475	485.5					
	770	700	575	585.5					
B	370	300	70	83.5	102	98	200	11	5.5
	470	400	170	183.5					
	570	500	270	283.5					
	670	600	370	383.5					
	770	700	470	483.5					
C	220	150	50	61	76.5	-	72.5	11	5.5
	270	200	100	111					
	370	300	200	211					
	470	400	300	311					
	570	500	400	411					
	670	600	500	511					
	770	700	600	611					
D	370	300	125	134.5	76.5	72.5	149	11	5.5
	470	400	225	234.5					
	570	500	325	334.5					
	670	600	425	434.5					
	770	700	525	534.5					

[1] The value for B/D block types is with 2 blocks attached.

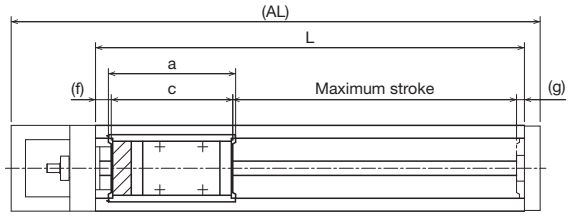
Dimensions with QZ Lubricator

QZA (with cover)
Block type: A/C



Block type A/C

QZA (without cover)
Block type: A/C



Block type A/C

QZA (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	270	200	85	98.5	54	33	14.5
	370	300	185	198.5			
	470	400	285	298.5			
	570	500	385	398.5			
	670	600	485	498.5			
	770	700	585	598.5			
C	220	150	60	74	28.5	33	14.5
	270	200	110	124			
	370	300	210	224			
	470	400	310	324			
	570	500	410	424			
	670	600	510	524			
	770	700	610	624			

Note 1) B/D block types cannot be selected for QZA.

QZA (without cover)

Unit: mm

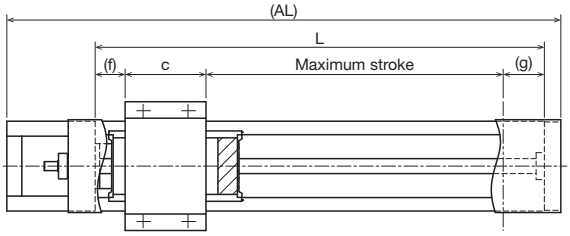
Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	270	200	85	98.5	89	85	11	5.5
	370	300	185	198.5				
	470	400	285	298.5				
	570	500	385	398.5				
	670	600	485	498.5				
	770	700	585	598.5				
C	220	150	60	74	63.5	59.5	11	5.5
	270	200	110	124				
	370	300	210	224				
	470	400	310	324				
	570	500	410	424				
	670	600	510	524				
	770	700	610	624				

Note 2) B/D block types cannot be selected for QZA.

Options

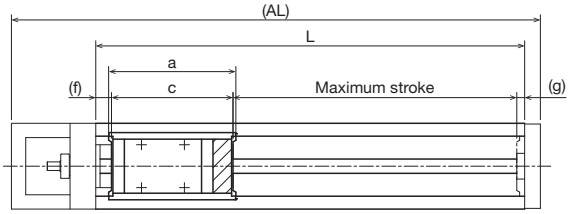
Dimensions with QZ Lubricator

QZB (with cover)
Block type: A/C



Block type A/C

QZB (without cover)
Block type: A/C



Block type A/C

QZB (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	270	200	85	98.5	54	20	27.5
	370	300	185	198.5			
	470	400	285	298.5			
	570	500	385	398.5			
	670	600	485	498.5			
	770	700	585	598.5			
C	220	150	60	74	28.5	20	27.5
	270	200	110	124			
	370	300	210	224			
	470	400	310	324			
	570	500	410	424			
	670	600	510	524			
	770	700	610	624			

Note 1) B/D block types cannot be selected for QZB.

QZB (without cover)

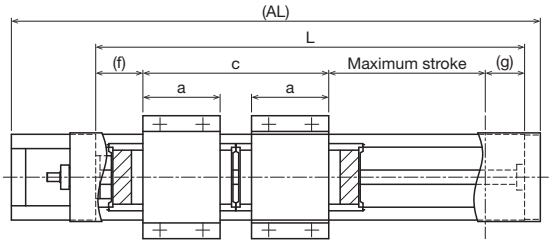
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	270	200	85	98.5	89	85	11	5.5
	370	300	185	198.5				
	470	400	285	298.5				
	570	500	385	398.5				
	670	600	485	498.5				
	770	700	585	598.5				
C	220	150	60	74	63.5	59.5	11	5.5
	270	200	110	124				
	370	300	210	224				
	470	400	310	324				
	570	500	410	424				
	670	600	510	524				
	770	700	610	624				

Note 2) B/D block types cannot be selected for QZB.

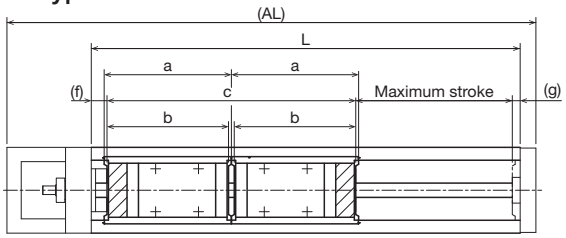
Dimensions with QZ Lubricator

QZAD (with cover)
Block type: B/D



Block type B/D

QZAD (without cover)
Block type: B/D



Block type B/D

QZAD (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
B	370	300	100	109.5	54	130	33	27.5
	470	400	200	209.5				
	570	500	300	309.5				
	670	600	400	409.5				
	770	700	500	509.5				
D	270	200	50	60.5	28.5	79	33	27.5
	370	300	150	160.5				
	470	400	250	260.5				
	570	500	350	360.5				
	670	600	450	460.5				
	770	700	550	560.5				

[1] The value for B/D block types is with 2 blocks attached.
Note 1) A/C block types cannot be selected for QZAD.

QZAD (without cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
B	370	300	100	109.5	89	85	174	11	5.5
	470	400	200	209.5					
	570	500	300	309.5					
	670	600	400	409.5					
	770	700	500	509.5					
D	270	200	50	60.5	63.5	59.5	123	11	5.5
	370	300	150	160.5					
	470	400	250	260.5					
	570	500	350	360.5					
	670	600	450	460.5					
	770	700	550	560.5					

[2] The value for B/D block types is with 2 blocks attached.
Note 2) A/C block types cannot be selected for QZAD.

KR45H A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 80 mm | Main Unit Height 45 mm | Stroke Max. 800 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	-	Stroke (4)	-	Accuracy grade (5)	With/without motor (6)	-	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR45H	10	A	-	0200	-	P	0	-	1	2	A0
KR45H	10: 10 mm	A: x 1		0090: 90 mm		No symbol: Normal grade	For direct coupling		0: Without cover	0	For direct coupling
	20: 20 mm	B: x 2		to		H: High accuracy grade	0: Direct coupling (without motor)		1: With cover	1	A0
				0800: 800 mm		P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)		2: With bellows	2	AU
							For wrap			6	AY
							R1: Non-standard side wrap (without motor)			7	60
							R2: Standard side wrap (without motor)			B	For wrap
							R3: Bottom side wrap (without motor)			E	WV-14M
							R4: Non-standard side wrap (Specified motor prepared and mounted by THK)			H	WY-11M
							R5: Standard side wrap (Specified motor prepared and mounted by THK)			L	WY-14M
							R6: Bottom side wrap (Specified motor prepared and mounted by THK)			J	For direct coupling → p. 99
										M	For wrap → p. 101

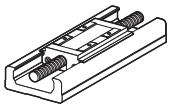
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows. → p. 161 to p. 162

When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

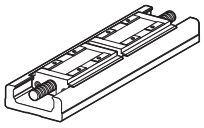
When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

Sensor details → p. 97

(3) Block type

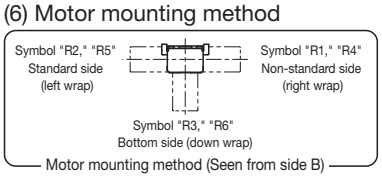


A: Block x 1 (A type)



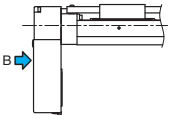
B: Block x 2 (B type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

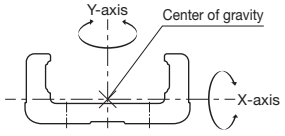
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		23300	
	Basic static load rating C_0 (N)		39200	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to +0.003	
		Precision grade (P)	-0.016 to -0.006	
	Geometrical moment of inertia	I_X[1] (mm^4)	8.4×10^4	
		I_Y[2] (mm^4)	8.9×10^5	
		Weight (kg/m)	9	
Ball screw	Ball screw lead (mm)		10	20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	3140	3040
		Precision grade (P)	2940	3430
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	6760	7150
		Precision grade (P)	3720	5290
	Screw shaft diameter (mm)		ϕ15	
	Thread minor diameter (mm)		ϕ12.5	
	Ball center-to-center diameter (mm)		ϕ15.75	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	3120	
		Precision grade (P)	4440	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	6660	
		Static permissible load P_0a (N)	3240	
Permissible input torque (N·m)		Direct coupling	5.3	
		Wrap	4.5	
Static permissible moment[4, 5] (N·m)			M_A: 486 (2732), M_B: 486 (2732), M_C: 925 (1850)	
Running life[6] (km)			10,000	
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F	

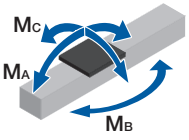
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 500 mm (A type), 390 mm (B type). Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) KR45H10 precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.
Note 3) KR45H20 precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 200	300	400	500	600	700	800
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 200	300	400	500	600	700	800
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.1				0.12	0.15	
	Running parallelism (vertical direction) (mm)	0.035				0.04	0.05	
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 200	300	400	500	600
Precision grade (P)	Positioning repeatability (mm)	±0.003				
	Positioning accuracy (mm)	0.025				0.03
	Running parallelism (vertical direction) (mm)	0.015				0.02
	Backlash (mm)	0.003				
	Starting torque (N·cm)	15			17	

[7] Stroke with 1 block (A type).

Note 4) Precision evaluation in accordance with THK standards.
Note 5) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 6) The starting torque represents the value when containing THK AFB-LF Grease.
Note 7) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 8) Contact THK for accuracy higher than the standard stroke.

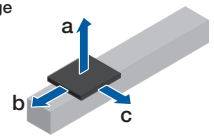
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
200 to 800	340 to 940	A type 1 B type 2	A type 0.4 B type 0.8	A type 1.4 B type 2.8	5.1	10, 20	403 to 1003	ϕ10h7	0.86

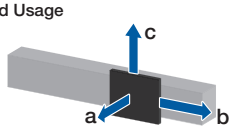
[1] Stroke with 1 block (A type).
[2] Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 99 for applicable couplings.

Permissible Overhang Length[3]

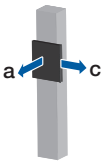
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	16	230	80	70
			32.5	90	30	30
			65	20	10	10
		20	6	680	210	200
			12	320	100	100
			24.5	130	50	40
	B type	10	22.5	800	270	100
			45.5	800	130	50
			91.5	180	60	20
		20	4.5	800	800	530
			9.5	800	640	250
			19.5	800	310	120
Wrap	A type	10	16	230	80	70
			32.5	90	30	30
			65	20	10	10
		20	3.5	0	370	340
			7.5	530	170	160
			15	250	80	80
	B type	10	20.5	800	290	110
			41.5	800	140	50
			83.5	200	70	20
		20	3.5	800	800	690
			7	800	800	340
			14	800	430	170

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	13	40	180	620
			26	0	90	310
			52	0	30	150
		20	6	150	400	800
			12	50	190	670
			24.5	0	80	330
	B type	10	18	80	380	800
			36.5	20	180	620
			73.5	0	90	310
		20	4.5	490	800	800
			9.5	210	720	800
			19.5	70	350	800
Wrap	A type	10	13	40	180	620
			26	0	90	310
			52	0	30	150
		20	3.5	300	690	800
			7.5	110	330	800
			15	30	150	530
	B type	10	18	80	380	800
			36.5	20	180	620
			73.5	0	90	310
		20	3.5	640	800	800
			7	300	800	800
			14	120	490	800

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	10	4.5	180	410
			9	70	200
			18	10	100
		20	2	460	800
			4	210	460
			8	80	230
	B type	10	5.5	800	800
			11.5	370	460
			23	160	230
		20	2	800	800
			4	800	800
			8	550	660
Wrap	A type	10	4.5	180	410
			9	70	200
			18	10	100
		20	1.5	620	800
			3.5	240	530
			7	100	260
	B type	10	4	800	800
			8.5	510	620
			17	230	310
		20	1.5	800	800
			3	800	800
			6.5	680	800

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	16	230	80	70
			32.5	90	30	30
			65	20	10	10
		20	10.5	370	120	110
			21.5	160	60	50
			43	60	30	20
	B type	10	22.5	800	270	100
			45.5	410	130	50
			91.5	180	60	20
		20	12	800	500	200
			24	800	250	100
			48.5	380	120	50
Wrap	A type	10	16	230	80	70
			32.5	90	30	30
			65	20	10	10
		20	10.5	370	120	110
			21.5	160	60	50
			43	60	30	20
	B type	10	22.5	800	270	100
			45.5	410	130	50
			91.5	180	60	20
		20	10.5	800	580	230
			21	800	290	110
			42.5	440	140	50

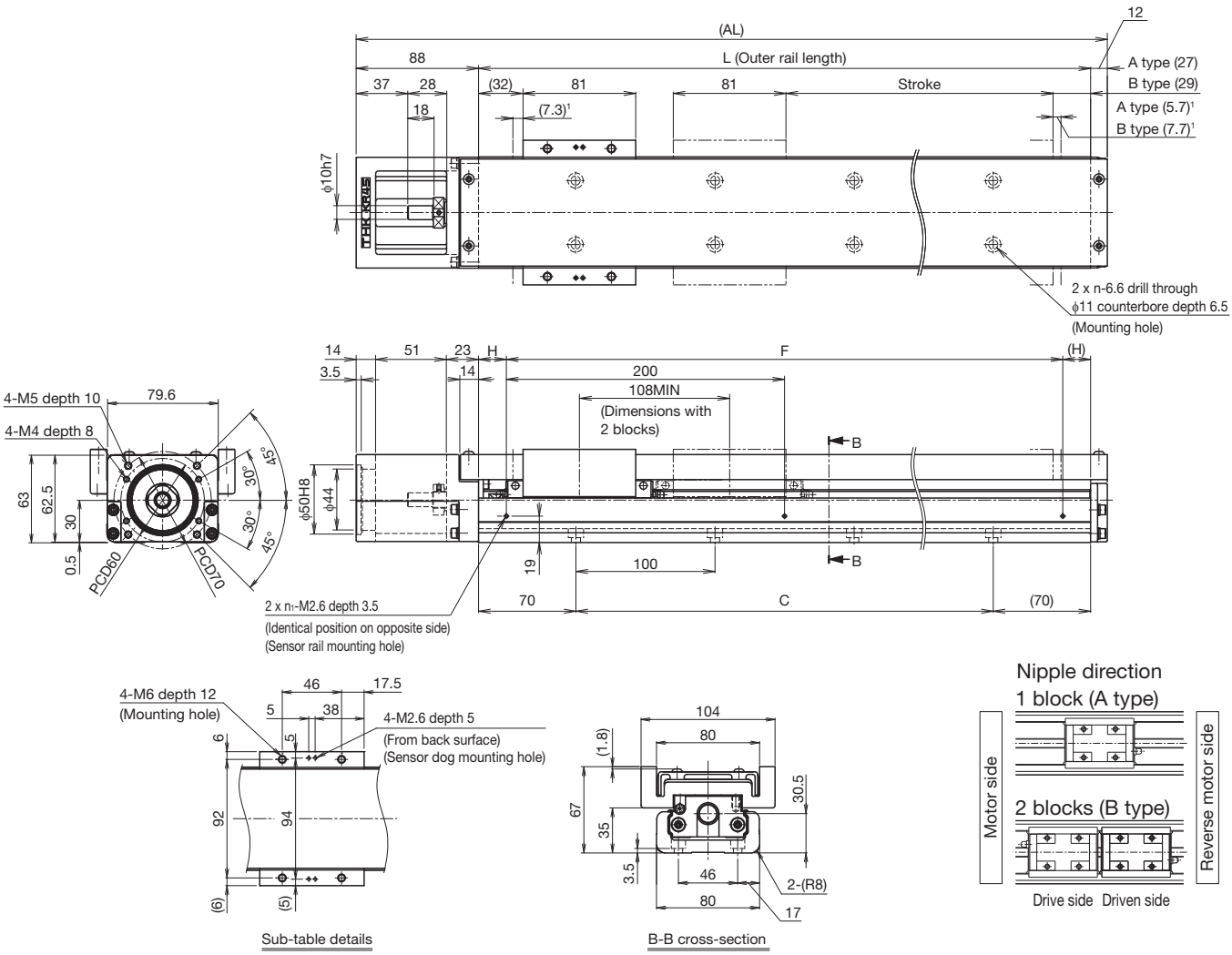
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	13	40	180	620
			26	0	90	310
			52	0	30	150
		20	7.5	110	310	800
			15.5	30	140	520
			31.5	0	50	250
	B type	10	18	80	380	800
			36.5	20	180	620
			73.5	0	90	310
		20	12	150	570	800
			24	50	280	800
			48	0	140	470
Wrap	A type	10	13	40	180	620
			26	0	90	310
			52	0	30	150
		20	7.5	110	310	800
			15.5	30	140	520
			31.5	0	50	250
	B type	10	18	80	380	800
			36.5	20	180	620
			73.5	0	90	310
		20	10.5	180	650	800
			21	70	320	800
			42.5	10	160	530

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	10	6	120	310
			12	40	150
			24.5	0	70
		20	4.5	180	410
			9	70	200
			18	10	230
	B type	10	5.5	800	800
			11.5	370	460
			23	160	230
		20	4.5	800	800
			9	480	580
			18.5	210	280
Wrap	A type	10	4.5	180	410
			9	70	200
			18	10	100
		20	4.5	180	410
			9	70	200
			18	10	100
	B type	10	4	800	800
			8.5	510	620
			17	230	310
		20	4	800	800
			8	550	660
			16.5	240	320

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 500 mm (A type), 390 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



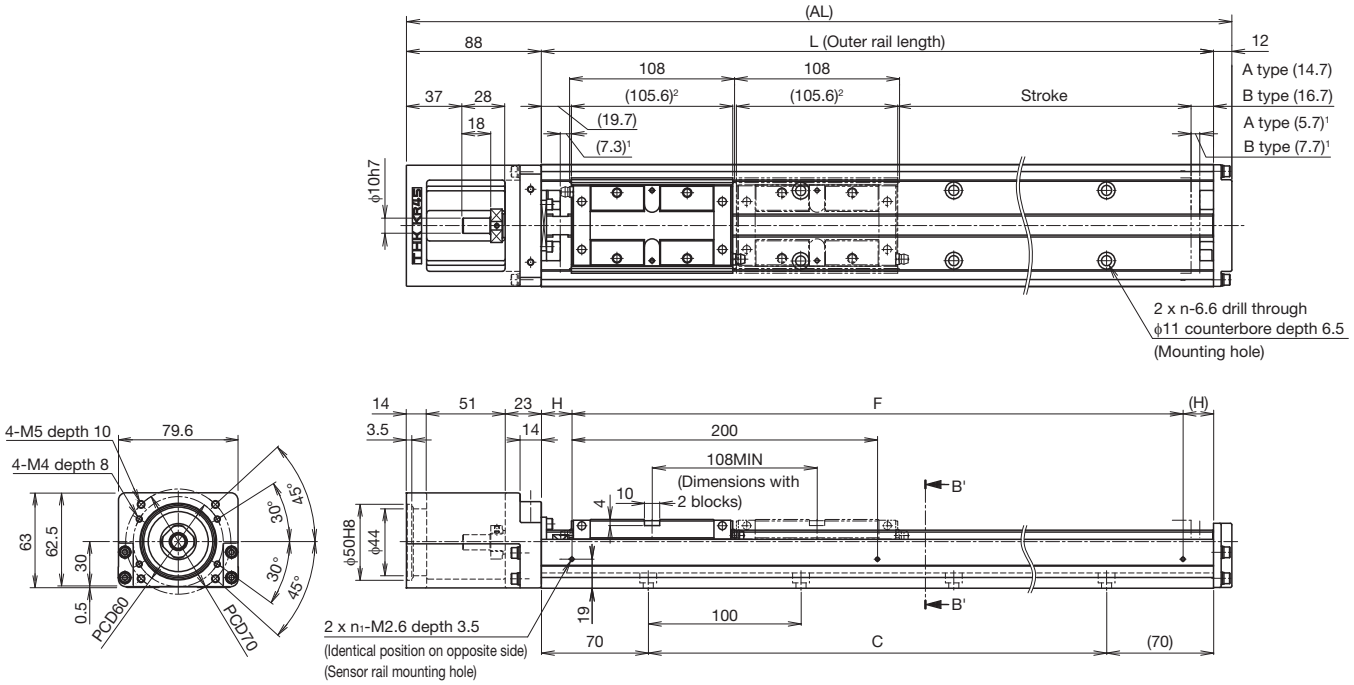
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)									
	A type		200 (213)	300 (313)	400 (413)	500 (513)	600 (613)	700 (713)	800 (813)
	B type[2]		90 (105)	190 (205)	290 (305)	390 (405)	490 (505)	590 (605)	690 (705)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740				730	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						840
		Precision grade	1480				1430	-	-
Dimensions (mm)	AL		440	540	640	740	840	940	1040
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			6.4	7.6	8.7	9.9	11	12.2	13.3

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.4 kg added.

Without cover
Direct motor coupling

Dimensions



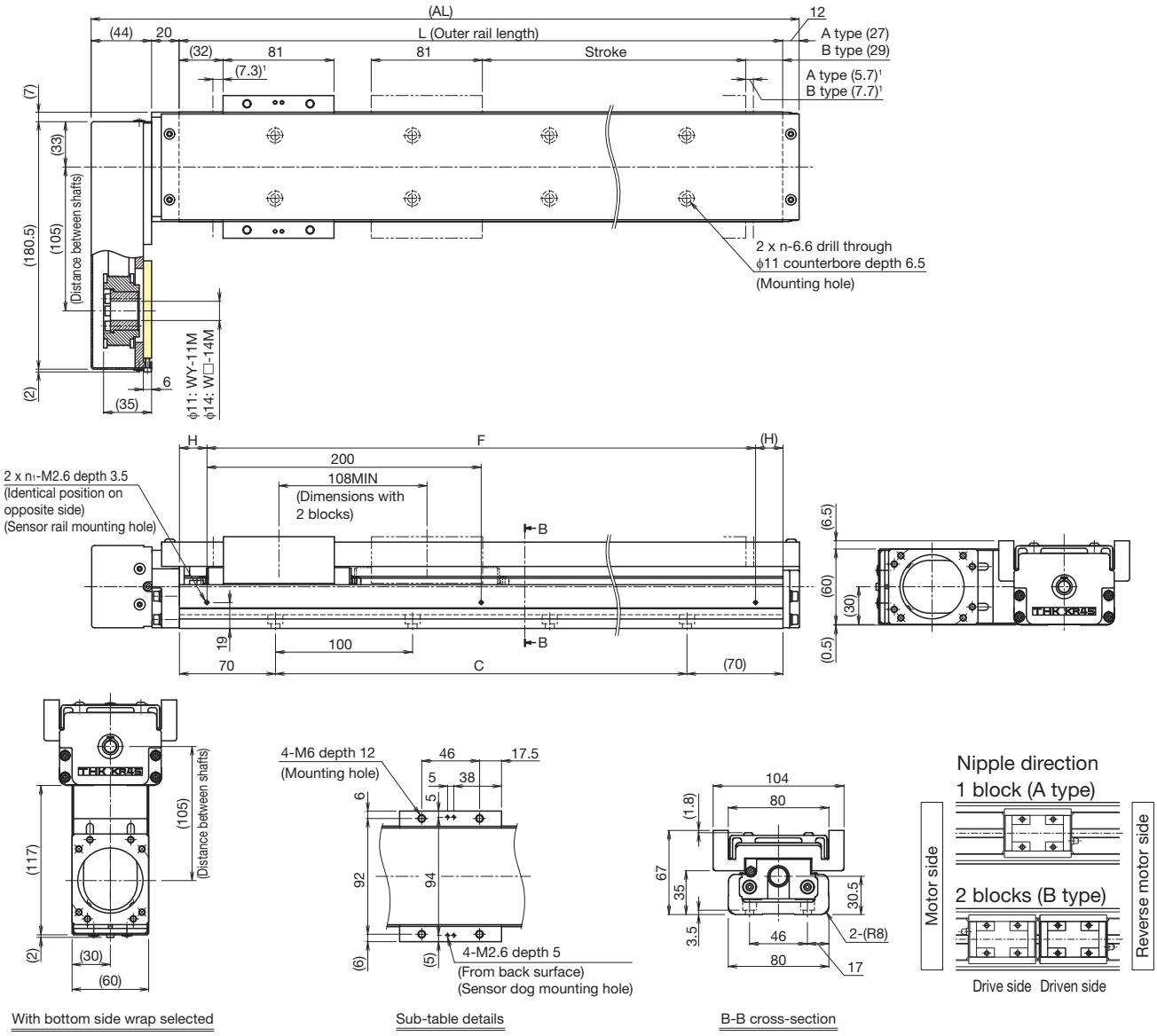
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 213.6 mm (2 pcs total) for KR45H with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type		200 (213)	300 (313)	400 (413)	500 (513)	600 (613)	700 (713)	800 (813)
	B type[3]		90 (105)	190 (205)	290 (305)	390 (405)	490 (505)	590 (605)	690 (705)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740				730	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						840
		Precision grade	1480				1430	-	-
Dimensions (mm)	AL		440	540	640	740	840	940	1040
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			5.4	6.5	7.5	8.6	9.7	10.7	11.8

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 1 kg added.

With cover
Motor wrap

Dimensions



With bottom side wrap selected

Sub-table details

B-B cross-section

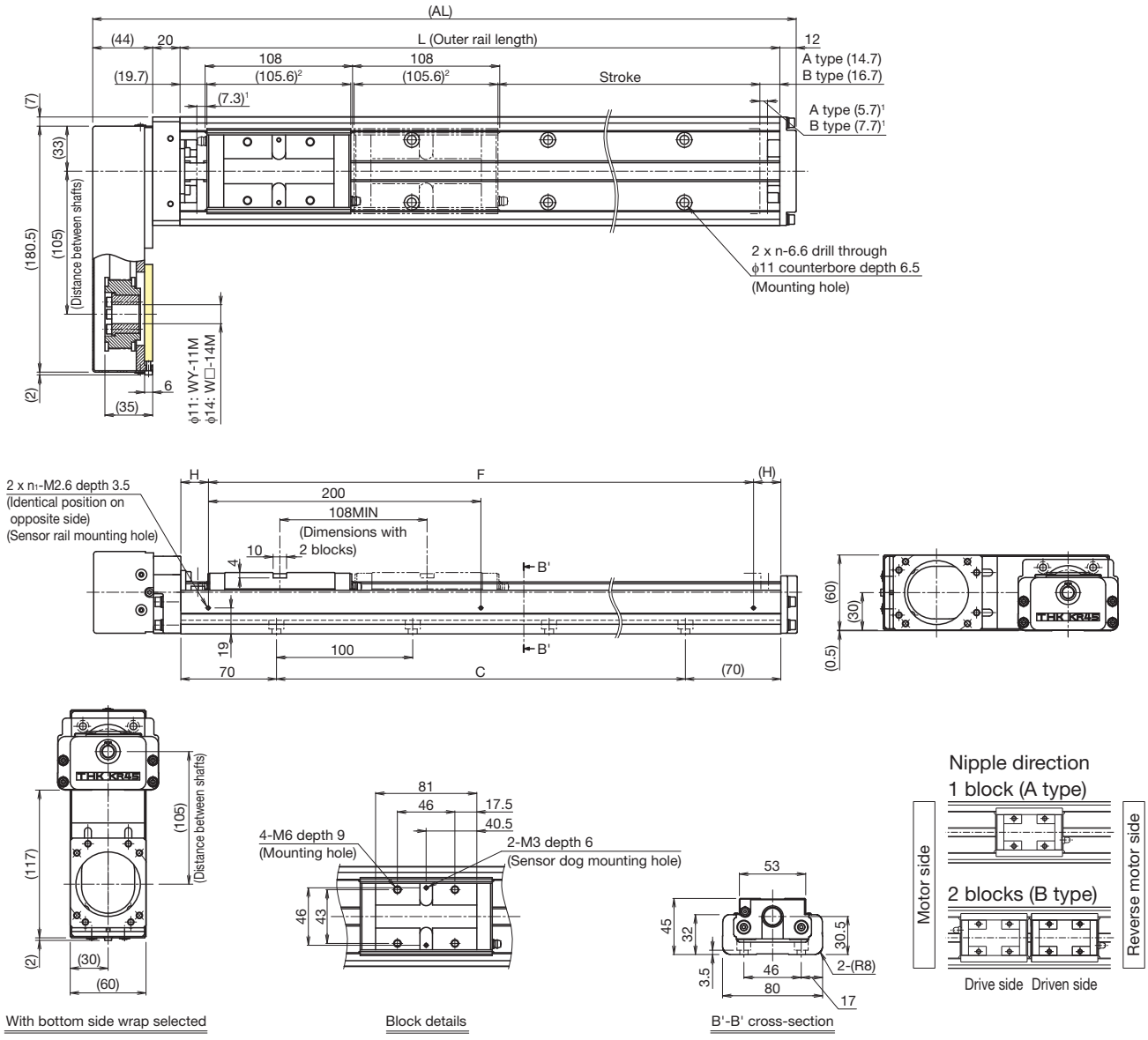
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		200 (213)	300 (313)	400 (413)	500 (513)	600 (613)	700 (713)	800 (813)
	B type[2]		90 (105)	190 (205)	290 (305)	390 (405)	490 (505)	590 (605)	690 (705)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740				730	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						840
		Precision grade	1480				1430	-	-
Dimensions (mm)	AL		416	516	616	716	816	916	1016
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n1		2	3	3	4	4	5	5
Weight[4] (kg)			7.4	8.5	9.7	10.8	12	13.1	14.2

[2] The value with 2 blocks (B type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.4 kg added.

Without cover
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range. 213.6 mm (2 pcs total) for KR45H with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)									
	A type		200 (213)	300 (313)	400 (413)	500 (513)	600 (613)	700 (713)	800 (813)
	B type[3]		90 (105)	190 (205)	290 (305)	390 (405)	490 (505)	590 (605)	690 (705)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740				730	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						840
		Precision grade	1480				1430	-	-
Dimensions (mm)	AL		416	516	616	716	816	916	1016
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			6.4	7.4	8.5	9.5	10.6	11.7	12.7

[3] The value with 2 blocks (B type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 1 kg added.

KR45H C/D

Direct Motor Coupling | Motor Wrap | Main Unit Width 80 mm | Main Unit Height 45 mm | Stroke Max. 830 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	Stroke (4)	Accuracy grade (5)	With/without motor (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
KR45H	10	C	0230	P	0	1	2	A0
KR45H	10: 10 mm	C: x 1	0160: 160 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	20: 20 mm	D: x 2	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			0830: 830 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AU
					For wrap		6	AY
					R1: Non-standard side wrap (without motor)		7	60
					R2: Standard side wrap (without motor)		B	For wrap
					R3: Bottom side wrap (without motor)		E	WV-14M
					R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	WY-11M
					R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	WY-14M
					R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	For direct coupling → p. 99
							M	For wrap → p. 101

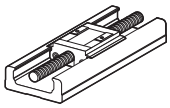
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 163 to p. 164

When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

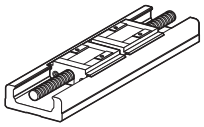
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

Sensor details
→ p. 97

(3) Block type

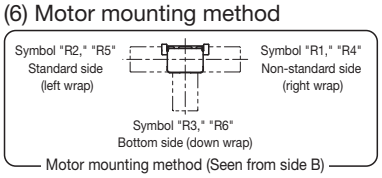


C: Short block x 1 (C type)



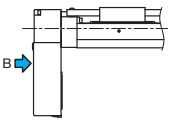
D: Short block x 2 (D type)

(6) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

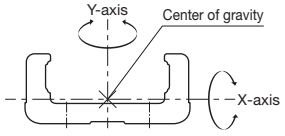
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		11900	
	Basic static load rating C_0 (N)		19600	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to +0.003	
		Precision grade (P)	-0.016 to -0.006	
	Geometrical moment of inertia	I_X[1] (mm^4)	8.4×10^4	
		I_Y[2] (mm^4)	8.9×10^5	
		Weight (kg/m)	9	
Ball screw	Ball screw lead (mm)		10	20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	3140	3040
		Precision grade (P)	2940	3430
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	6760	7150
		Precision grade (P)	3720	5290
	Screw shaft diameter (mm)		ϕ15	
	Thread minor diameter (mm)		ϕ12.5	
	Ball center-to-center diameter (mm)		ϕ15.75	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	3120	
		Precision grade (P)	4440	
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	6660	
		Static permissible load P_0a (N)	3240	
Permissible input torque (N·m)		Direct coupling	5.3	
		Wrap	4.5	
Static permissible moment[4, 5] (N·m)			M_A: 130 (994), M_B: 130 (994), M_C: 463 (925)	
Running life[6] (km)			10,000	
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F	

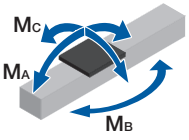
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 short blocks (D type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (7) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 530 mm (C type), 460 mm (D type). Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per short block.
Note 2) KR45H10 precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.
Note 3) KR45H20 precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 230	330	430	530	630	730	830
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 230	330	430	530	630	730	830
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.1				0.12	0.15	
	Running parallelism (vertical direction) (mm)	0.035				0.04	0.05	
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 230	330	430	530	630
Precision grade (P)	Positioning repeatability (mm)	±0.003				
	Positioning accuracy (mm)	0.025				0.03
	Running parallelism (vertical direction) (mm)	0.015				0.02
	Backlash (mm)	0.003				
	Starting torque (N·cm)	15			17	

[7] Stroke with 1 short block (C type).

Note 4) Precision evaluation in accordance with THK standards.
Note 5) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 6) The starting torque represents the value when containing THK AFB-LF Grease.
Note 7) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 8) Contact THK for accuracy higher than the standard stroke.

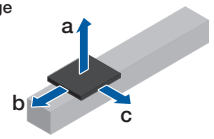
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
230 to 830	340 to 940	C type 0.6 D type 1.2	C type 0.2 D type 0.4	C type 0.8 D type 1.6	4.6	10, 20	403 to 1003	ϕ10h7	0.86

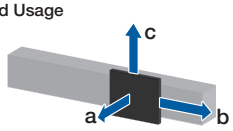
[1] Stroke with 1 short block (C type).
[2] Value with 1 short block (C type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 99 for applicable couplings.

Permissible Overhang Length[3]

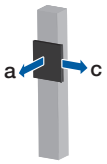
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	9.5	170	60	60
			19	70	30	30
			38.5	10	10	10
		20	3.5	540	170	170
			7.5	230	80	80
			15	90	40	40
	D type	10	16.5	360	120	70
			33	160	60	30
			66.5	60	20	10
		20	5.5	800	360	220
			11.5	540	170	100
			23	250	80	50
Wrap	C type	10	9.5	170	60	60
			19	70	30	30
			38.5	10	10	10
		20	3.5	540	170	170
			7.5	230	80	80
			15	90	40	40
	D type	10	16.5	360	120	70
			33	160	60	30
			66.5	60	20	10
		20	4	800	490	300
			8.5	740	230	140
			17	350	110	70

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	6	50	130	500
			12.5	0	50	240
			25.5	0	20	110
		20	3	150	210	800
			6.5	40	90	460
			13	0	40	0
	D type	10	13	40	210	700
			26.5	0	100	340
			53	0	50	170
		20	5.5	170	490	800
			11.5	60	230	790
			23	0	110	390
Wrap	C type	10	6	50	130	500
			12.5	0	50	240
			25.5	0	20	110
		20	3	150	210	800
			6.5	40	90	460
			13	0	40	190
	D type	10	13	40	210	700
			26.5	0	100	340
			53	0	50	170
		20	4	250	680	800
			8.5	90	320	800
			17	20	160	530

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	10	2	190	340
			4.5	60	150
			9.5	10	50
		20	1	430	460
			2.5	150	210
			5.5	40	80
	D type	10	4.5	300	460
			9	130	230
			18	40	110
		20	2	720	800
			4	340	520
			8	150	260
Wrap	C type	10	2	190	340
			4.5	60	150
			9.5	10	50
		20	1	430	460
			2.5	150	210
			5.5	40	80
	D type	10	4.5	300	460
			9	130	230
			18	40	110
		20	2	720	800
			4	340	520
			8	150	260

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	9.5	170	60	60
			19	70	30	30
			38.5	10	10	10
		20	3.5	540	170	170
			7.5	230	80	80
			15	90	40	40
	D type	10	16.5	360	120	70
			33	160	60	30
			66.5	60	20	10
		20	13	470	150	90
			26	210	70	40
			52.5	80	30	20
Wrap	C type	10	9.5	170	60	60
			19	70	30	30
			38.5	10	10	10
		20	3.5	540	170	170
			7.5	230	80	80
			15	90	40	40
	D type	10	16.5	360	120	70
			33	160	60	30
			66.5	60	20	10
		20	12	510	160	100
			24	230	80	50
			48	100	40	20

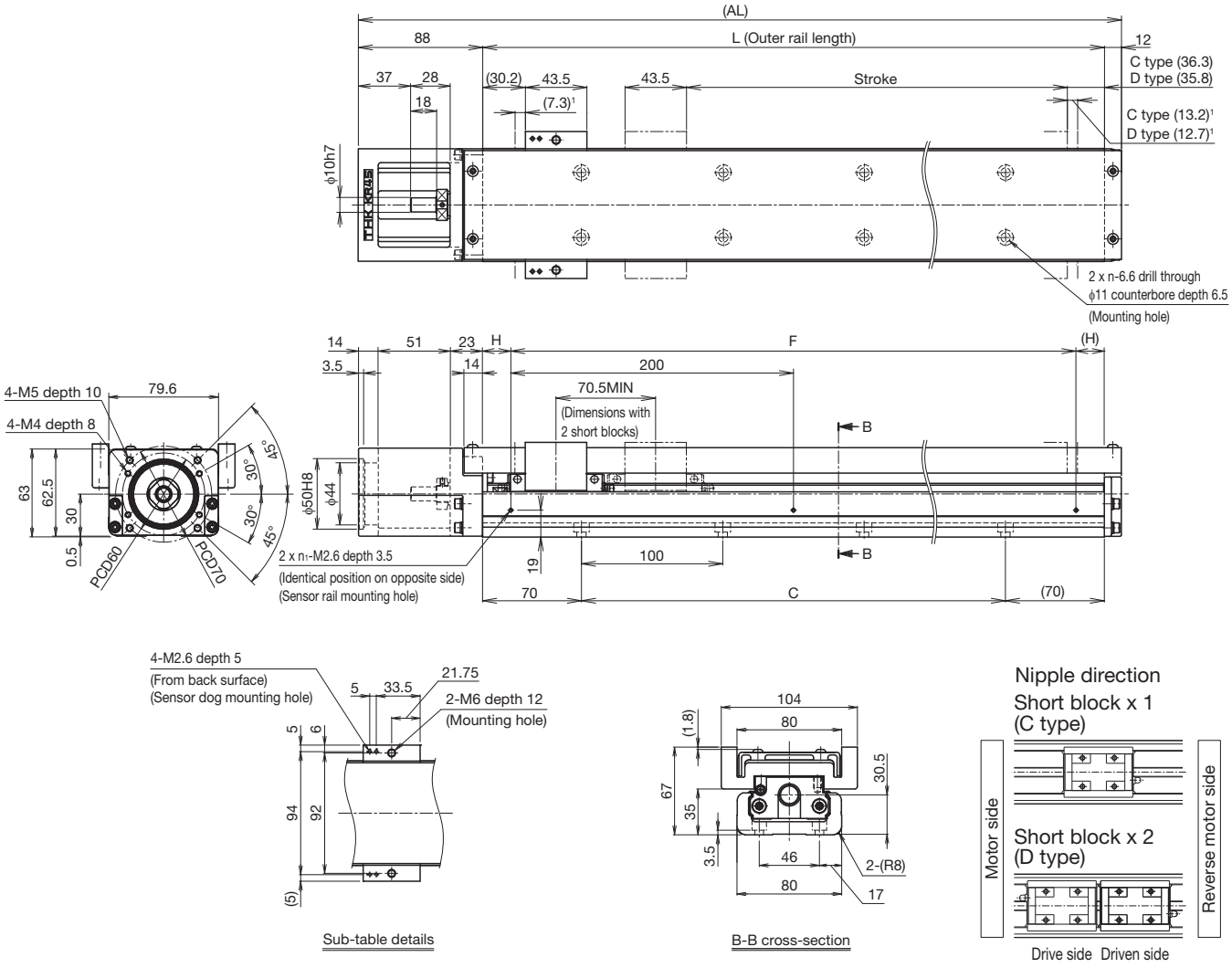
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	6	50	130	500
			12.5	0	50	240
			25.5	0	20	110
		20	3	150	210	800
			6.5	40	90	460
			13	0	40	190
	D type	10	13	40	210	700
			26.5	0	100	340
			53	0	50	170
		20	9.5	80	280	800
			19.5	10	140	460
			39	0	70	230
Wrap	C type	10	6	50	130	500
			12.5	0	50	240
			25.5	0	20	110
		20	3	150	210	800
			6.5	40	90	460
			13	0	40	190
	D type	10	13	40	210	700
			26.5	0	100	340
			53	0	50	170
		20	9.5	80	280	800
			19.5	10	140	460
			39	0	70	230

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	10	2	190	340
			4.5	60	150
			9.5	10	50
		20	1.5	270	460
			3.5	90	210
			7	30	80
	D type	10	6	210	350
			12	90	170
			24	20	80
		20	4.5	300	460
			9	130	230
			18	40	110
Wrap	C type	10	2	190	340
			4.5	60	150
			9.5	10	50
		20	1.5	430	460
			3.5	150	210
			7	40	80
	D type	10	4.5	300	460
			9	130	230
			18	40	110
		20	4.5	300	460
			9	130	230
			18	40	110

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 530 mm (C type), 460 mm (D type). Acceleration/deceleration rate: 0.3 G. Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



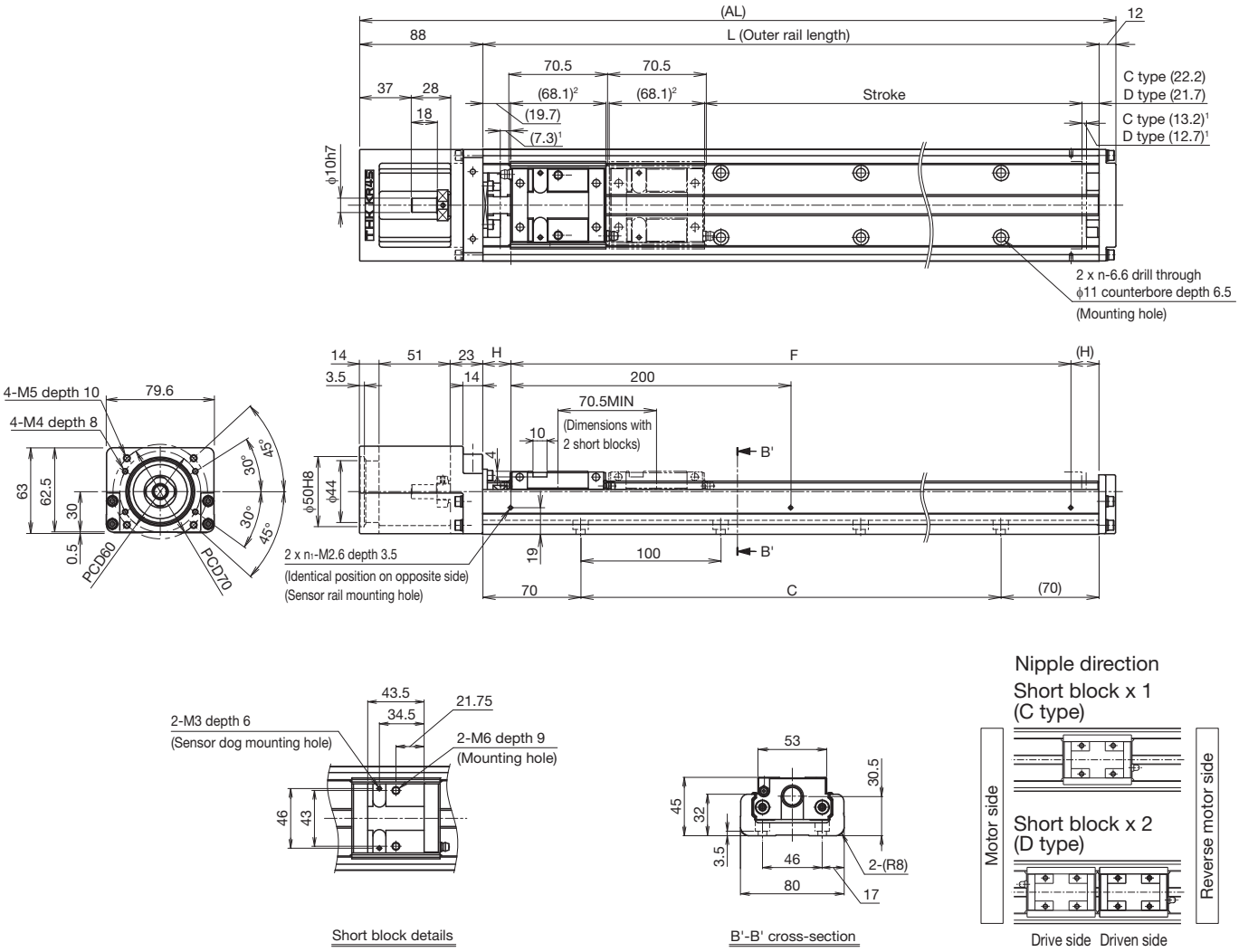
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		230 (250.5)	330 (350.5)	430 (450.5)	530 (550.5)	630 (650.5)	730 (750.5)	830 (850.5)
	D type[2]		160 (180)	260 (280)	360 (380)	460 (480)	560 (580)	660 (680)	760 (780)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	770
		Precision grade	1480				1080	-	-
Dimensions (mm)	AL		440	540	640	740	840	940	1040
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			5.8	7	8.1	9.3	10.4	11.6	12.7

[2] The value with 2 short blocks (D type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.8 kg added.

Without cover
Direct motor coupling

Dimensions



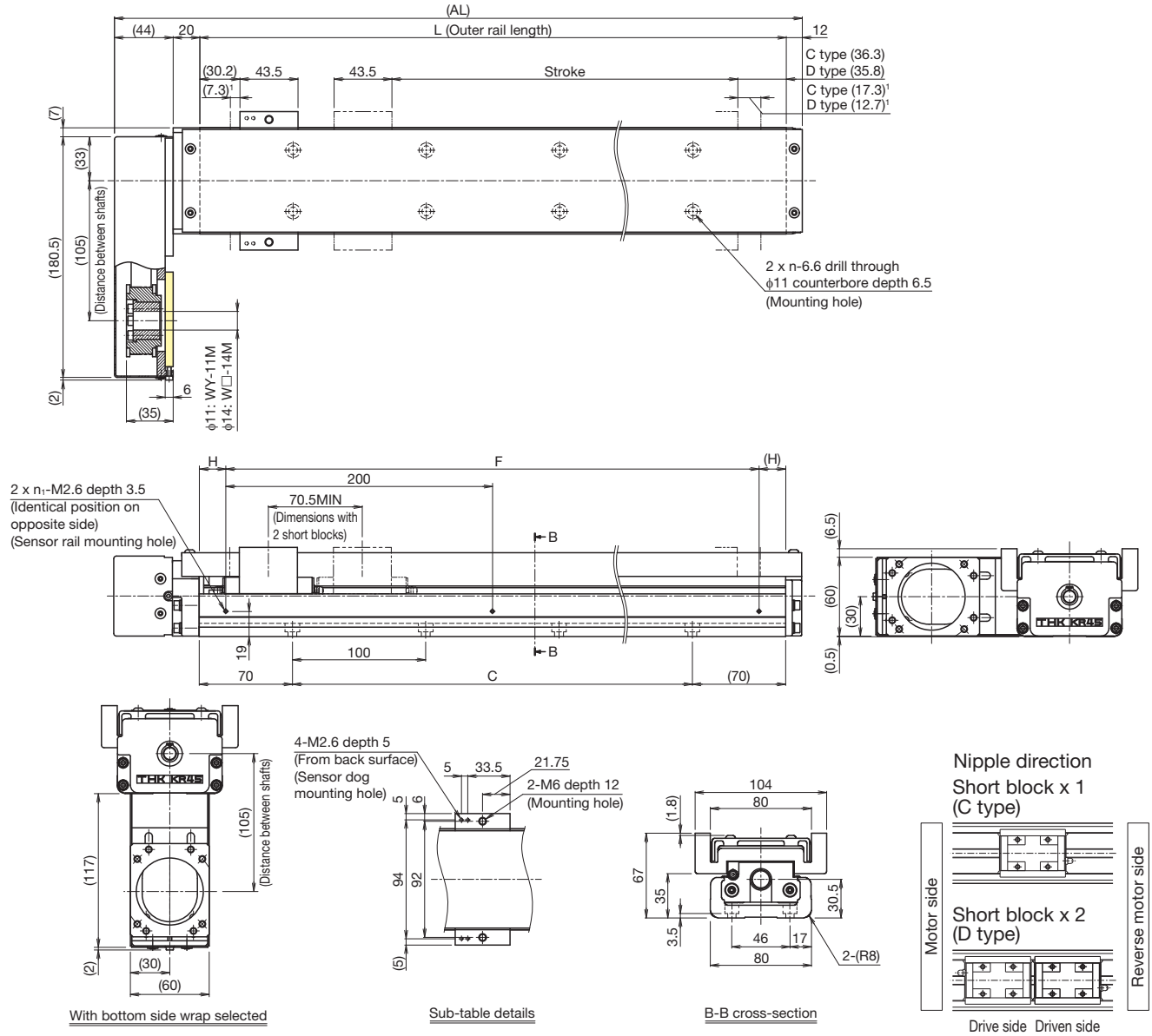
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range. 138.6 mm (2 pcs total) for KR45H with 2 short blocks (D type).

Stroke (mm) (Stroke between mechanical stoppers)			230 (250.5)	330 (350.5)	430 (450.5)	530 (550.5)	630 (650.5)	730 (750.5)	830 (850.5)
	C type		160 (180)	260 (280)	360 (380)	460 (480)	560 (580)	660 (680)	760 (780)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	770
		Precision grade	1480				1080	-	-
Dimensions (mm)	AL		440	540	640	740	840	940	1040
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			5	6.1	7.1	8.2	9.3	10.3	11.4

[3] The value with 2 short blocks (D type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.6 kg added.

With cover
Motor wrap

Dimensions



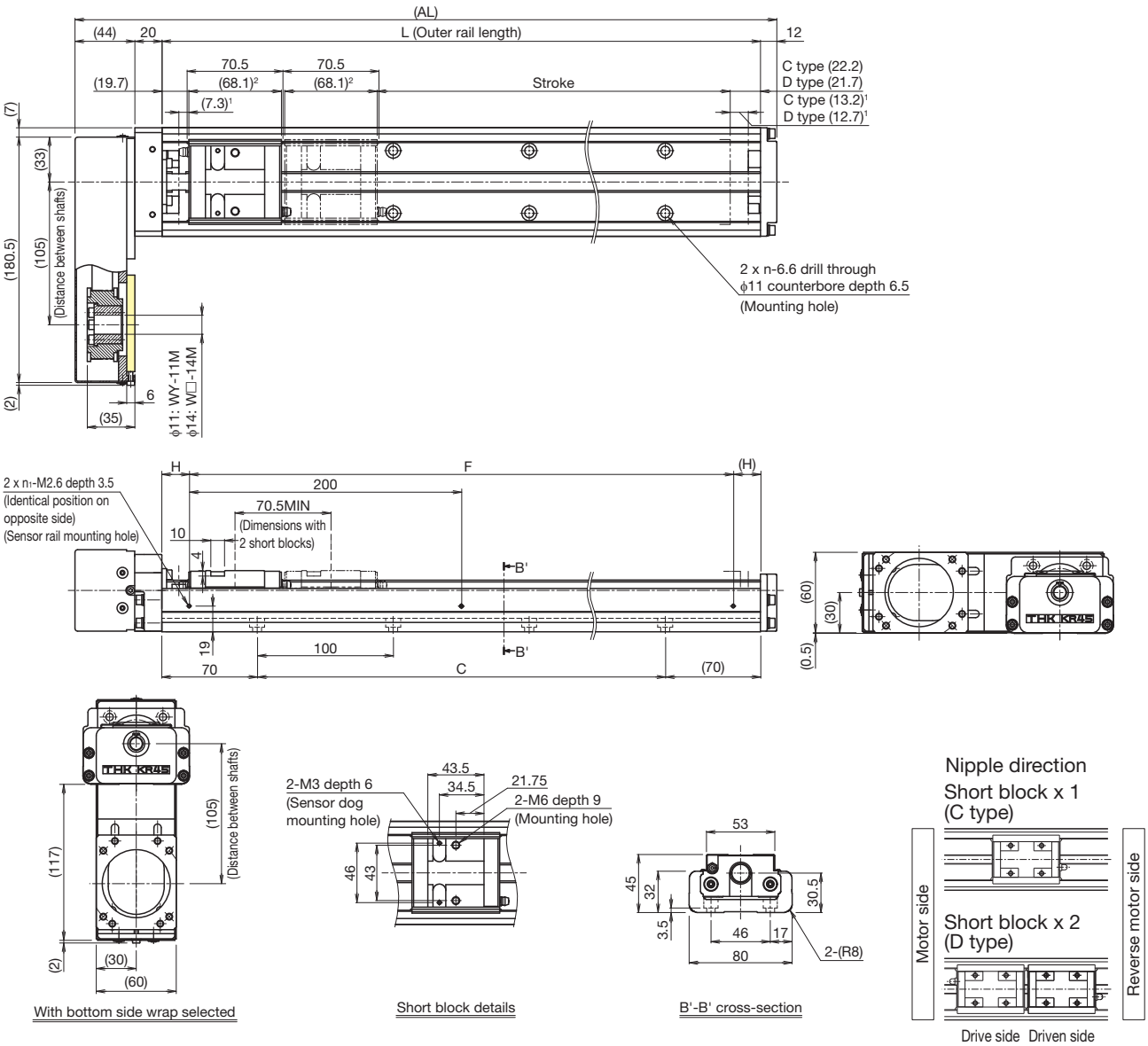
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		230 (250.5)	330 (350.5)	430 (450.5)	530 (550.5)	630 (650.5)	730 (750.5)	830 (850.5)
	D type[2]		160 (180)	260 (280)	360 (380)	460 (480)	560 (580)	660 (680)	760 (780)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	770
		Precision grade	1480				1080	-	-
Dimensions (mm)	AL		416	516	616	716	816	916	1016
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			6.8	7.9	9.1	10.2	11.4	12.5	13.6

[2] The value with 2 short blocks (D type) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.8 kg added.

Without cover
Motor wrap

Dimensions



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range.
138.6 mm (2 pcs total) for KR45H with 2 short blocks (D type).

Stroke (mm) (Stroke between mechanical stoppers)	C type		230 (250.5)	330 (350.5)	430 (450.5)	530 (550.5)	630 (650.5)	730 (750.5)	830 (850.5)
	D type[3]		160 (180)	260 (280)	360 (380)	460 (480)	560 (580)	660 (680)	760 (780)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	770
		Precision grade	1480				1080	-	-
Dimensions (mm)	AL		416	516	616	716	816	916	1016
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			6	7	8.1	9.1	10.2	11.3	12.3

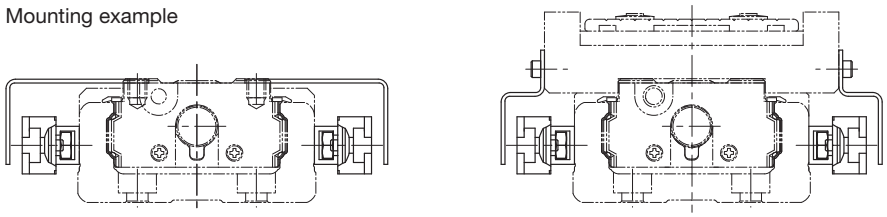
[3] The value with 2 short blocks (D type) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.6 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

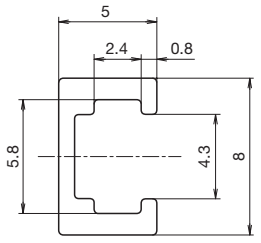


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

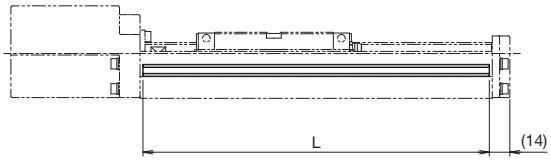
[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

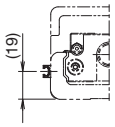
Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details





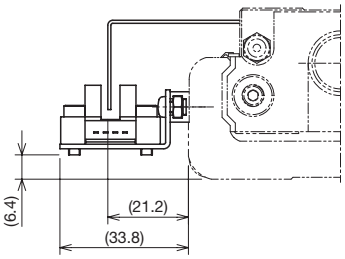
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
200	340	336
300	440	436
400	540	536
500	640	636
600	740	736
700	840	836
800	940	936

[4] Stroke with 1 block (A type).

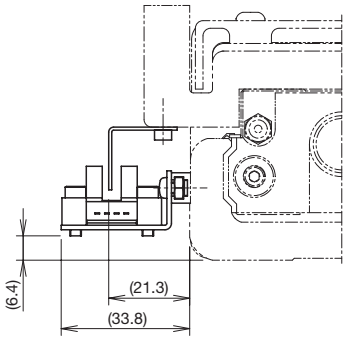
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



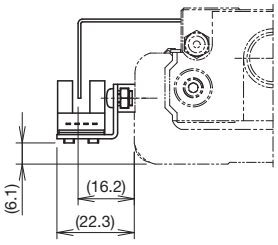
With cover



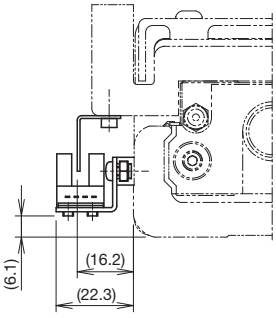
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 10 mm

Without cover



With cover

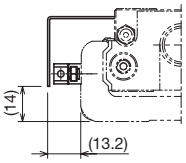


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

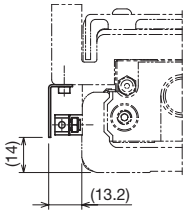
Sensor dog width: 10 mm

Proximity Sensor Mounting Dimensions

Without cover



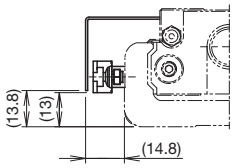
With cover



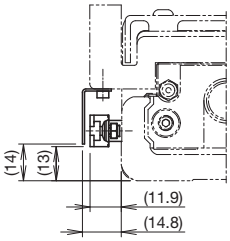
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 10 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 10 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				SGMAV-02					
				SGMJV-04	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
				SGMAV-04					
				SGMJV-06	600				XGT2-34C-10-14
		Σ-7		SGM7J-02	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				SGM7A-02					
				SGM7J-04	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
				SGM7A-04					
				SGM7J-06	600				XGT2-34C-10-14
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				HG-MR23					
				HG-KR43	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
				HG-MR43					
			JN	HF-KN23	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				HF-KN43	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				TS4609	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
		TBL-iIV		TSM3202	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				TSM3204	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
	Panasonic Corporation	MINAS	A5	MSMD02	200	□60	AY	SFC-030DA2-10B-11B	XGT2-30C-10-11
				MSME02					
				MSMD04	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
				MSME04					
			A6	MSMF02	200	□60	AY	SFC-030DA2-10B-11B	XGT2-30C-10-11
				MHMF02					
				MSMF04	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
				MHMF04					
	Keyence Corporation	SV		SV-M020	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				SV-M040	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
		SV2		SV2-M020	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				SV2-M040	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	A0	SFC-030DA2-10B-14B	XGT2-27C-10-14
				R2AA06040	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
	OMRON Corporation	OMNUC G5		R88M-K20030	200	□60	AY	SFC-030DA2-10B-11B	XGT2-30C-10-11
				R88M-K40030	400			SFC-035DA2-10B-14B	XGT2-30C-10-14
		1S		R88M-1M20030	200	□60	AY	SFC-030DA2-10B-11B	XGT2-30C-10-11
				R88M-1M40030	400			SFC-035DA2-10B-14B	XGT2-30C-10-14

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ6*, AR6*	□60	AU	SFC-025DA2-10B-10B-L46	XGL2-25C-10-10
		5-phase	CRK[1]	CRK56* (CRK569PM*)	□60	AU	SFC-025DA2-8B-10B-L46 (SFC-025DA2-10B-10B-L46)	XGL2-25C-8-10 (XGL2-25C-10-10)
			RK II	RKS56*	□60	AU	SFC-025DA2-10B-10B-L46	XGL2-25C-10-10
			PKA	PKA566	□60	AU	SFC-025DA2-8B-10B-L46	XGL2-25C-8-10
			CVK[1]	PKP56* (PKP569FM*)	□60	AU	SFC-025DA2-8B-10B-L46 (SFC-025DA2-10B-10B-L46)	XGL2-25C-8-10 (XGL2-25C-10-10)
	Keyence Corporation	2-phase		QS-M60	□60	AU	SFC-025DA2-8B-10B-L46	XGL2-25C-8-10
	Sanyo Denki Co., Ltd.	PB		PBDM60*, PBA**60*	□60	AU	SFC-025DA2-10B-10B-L46	XGL2-25C-10-10
		5-phase		FAM56*/FDM56*/ FA512M60/FB512M60	□60	AU	SFC-025DA2-10B-10B-L46	XGL2-25C-10-10
		2-phase		DB16H78*	□60	AU	SFC-025DA2-8B-10B-L46	XGL2-25C-8-10

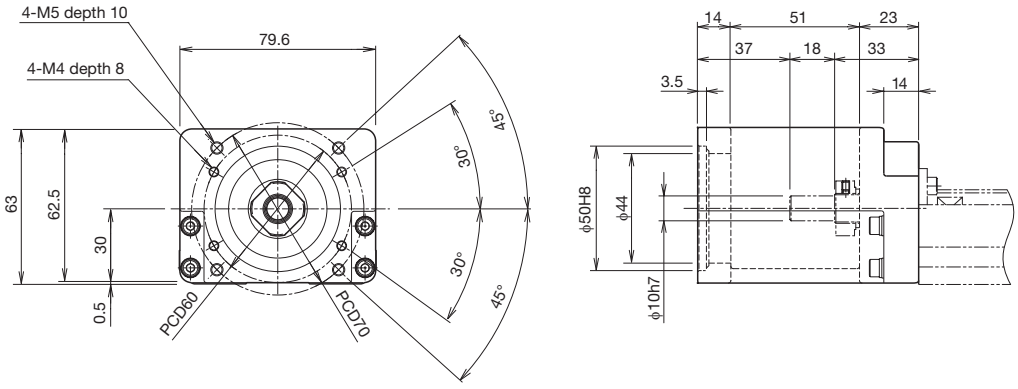
[1] Items in parentheses have different motor shaft diameters and require a coupling to be specified.
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 85, C/D → p. 91), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

KR**
●◇

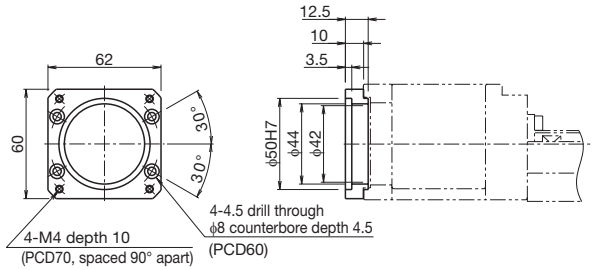
Actuator model
●: Housing A
◇: Intermediate flange

KR45H
A0

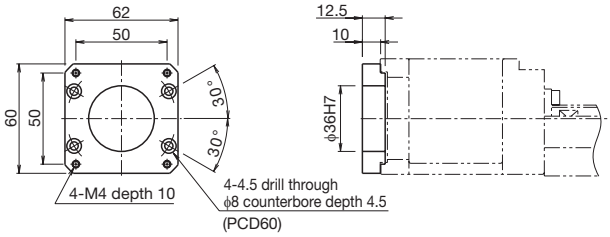


Intermediate flange

KR45H
AY



KR45H
AU



Options

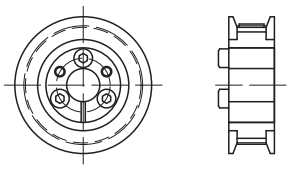
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (6) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	V	-	14	M
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	M: Friction tightening tool

Motor shaft fixing method



Friction tightening tool

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	WV-14M
				SGMAV-02			
				SGMJV-04	400		
				SGMAV-04			
				SGMJV-06	600		
		Σ-7		SGM7J-02	200	□60	WV-14M
				SGM7A-02			
				SGM7J-04	400		
				SGM7A-04			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	WV-14M
				HG-MR23			
				HG-KR43	400		
				HG-MR43			
			JN	HF-KN23	200	□60	WV-14M
				HF-KN43	400		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	WV-14M
				TS4609	400		
		TBL-iIV		TSM3202	200	□60	WV-14M
				TSM3204	400		
	Panasonic Corporation	MINAS	A5	MSMD02	200	□60	WY-11M
				MSME02			
				MSMD04	400		WY-14M
				MSME04			
			A6	MSMF02	200		WY-11M
				MHMF02			
				MSMF04	400		WY-14M
				MHMF04			
	Keyence Corporation	SV		SV-M020	200	□60	WV-14M
				SV-M040	400		
		SV2		SV2-M020	200	□60	WV-14M
				SV2-M040	400		
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	WV-14M
				R2AA06040	400		
	OMRON Corporation	OMNUC G5		R88M-K20030	200	□60	WY-11M
				R88M-K40030	400		WY-14M
		1S		R88M-1M20030	200	□60	WY-11M
				R88M-1M40030	400		WY-14M

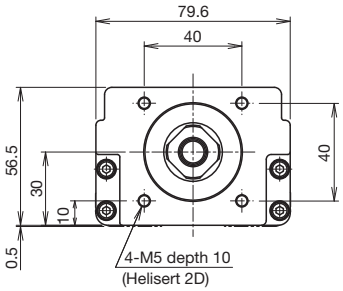
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 85, C/D → p. 91), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

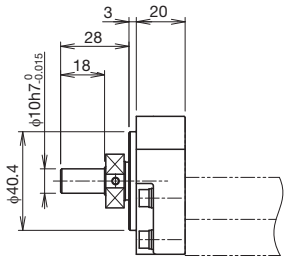
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR45H
60





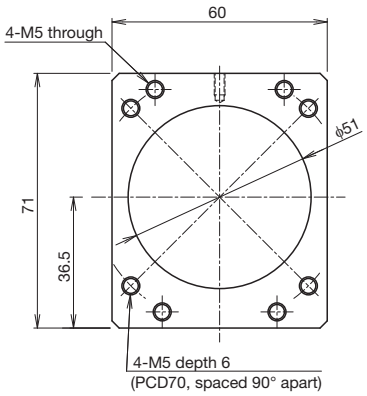
Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

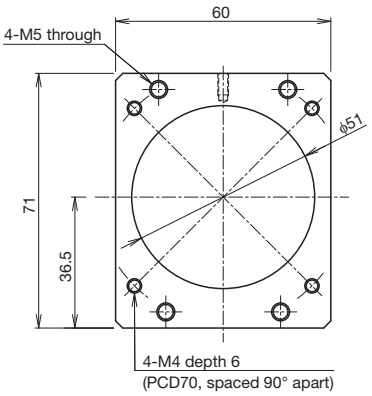
KR45H
WV

Thickness: 6 mm



KR45H
WY

Thickness: 6 mm



KR46 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 86 mm | Main Unit Height 46 mm | Stroke Max. 790 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)	Stroke (5)	Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR46	10: 10 mm	A: x 1	No symbol: Without QZ	0080: 80 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	20: 20 mm	B: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			QZA	0790: 790 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	10
			QZB			For wrap		6	30
			QZAD			R1: Non-standard side wrap (without motor)		7	40
						R2: Standard side wrap (without motor)		B	60
						R3: Bottom side wrap (without motor)		E	For wrap
						R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	WV-14M
						R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	WY-11M
						R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WY-14M
								M	For direct coupling → p. 117 For wrap → p. 119

Sensor details → p. 115

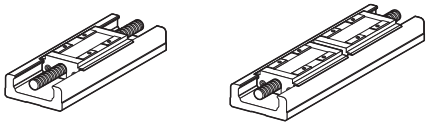
Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 121 to p. 126

When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 161 to p. 162

When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

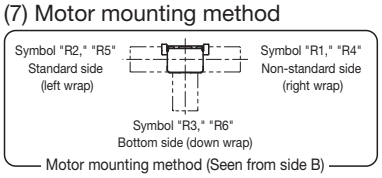
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

(3) Block type

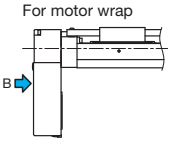


A: Block x 1 (A type) B: Block x 2 (B type)

(7) Motor mounting method



Motor mounting method (Seen from side B)



Selection Materials

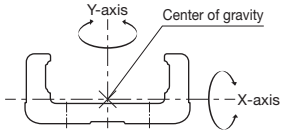
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		27400	
	Basic static load rating C_0 (N)		45500	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to +0.003	
		Precision grade (P)	-0.016 to -0.006	
	Geometrical moment of inertia	I_X[1] (mm^4)	2.4×10^5	
		I_Y[2] (mm^4)	1.5×10^6	
		Weight (kg/m)	12.6	
Ball screw	Ball screw lead (mm)		10	20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	3140	3040
		Precision grade (P)	2940	3430
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	6760	7150
		Precision grade (P)	3720	5290
	Screw shaft diameter (mm)		ϕ15	
	Thread minor diameter (mm)		ϕ12.5	
	Ball center-to-center diameter (mm)		ϕ15.75	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	6000	
		Precision grade (P)		
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	6660	
		Static permissible load P_0a (N)	3240	
Permissible input torque (N·m)		Direct coupling	2.5	
		Wrap	4.5	
Static permissible moment[4, 5] (N·m)			M_A: 547 (2940), M_B: 547 (2940), M_C: 1400 (2800)	
Running life[6] (km)			10,000	
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F	

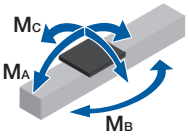
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 blocks (B type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 490 mm (A type), 380 mm (B type). Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) KR4610 precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.
Note 3) KR4620 precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 190	290	390	490	590	690	790
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 190	290	390	490	590	690	790
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.1				0.12	0.15	
	Running parallelism (vertical direction) (mm)	0.035				0.04	0.05	
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 190	290	390	490	590	690	790
Precision grade (P)	Positioning repeatability (mm)	±0.003					±0.005	
	Positioning accuracy (mm)	0.025				0.03	0.035	
	Running parallelism (vertical direction) (mm)	0.015				0.02	0.025	
	Backlash (mm)	0.003						
	Starting torque (N·cm)	15				17		

[7] Stroke with 1 block (A type, without QZ).

Note 4) Precision evaluation in accordance with THK standards.
Note 5) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 6) The starting torque represents the value when containing THK AFB-LF Grease.
Note 7) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 8) Contact THK for accuracy higher than the standard stroke.

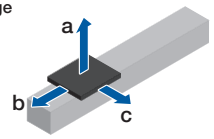
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
190 to 790	340 to 940	A type 1 B type 2	A type 0.4 B type 0.8	A type 1.4 B type 2.8	5	10, 20	403 to 1003	ϕ8h7	0.86

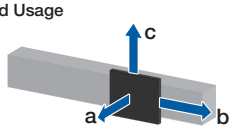
[1] Stroke with 1 block (A type, without QZ).
[2] Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 117 for applicable couplings.

Permissible Overhang Length[3]

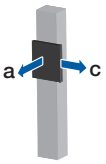
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	19	190	60	60
			38.5	70	30	30
			77	20	10	10
		20	6	690	210	210
			12.5	310	100	100
			25.5	130	50	50
	B type	10	27	860	230	90
			54	860	110	40
			108.5	150	50	20
		20	5	860	860	520
			10.5	860	600	250
			21	860	300	120
Wrap	A type	10	17.5	210	70	70
			35	80	30	30
			70.5	20	10	10
		20	3.5	860	370	370
			7	590	180	180
			14.5	260	90	90
	B type	10	20.5	860	300	120
			41.5	860	150	60
			83	210	70	30
		20	3	860	860	860
			6.5	860	860	400
			13	860	480	200

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	15.5	40	160	550
			31	0	80	270
			62	0	40	130
		20	6	180	430	860
			12.5	60	220	690
			25.5	10	90	340
	B type	10	27	60	260	860
			54	10	130	440
			108.5	0	60	220
		20	5	490	860	860
			10.5	210	680	860
			21	80	340	860
Wrap	A type	10	15.5	40	160	550
			31	0	80	270
			62	0	40	130
		20	3.5	340	740	860
			7	150	370	860
			14.5	50	170	590
	B type	10	20.5	90	350	860
			41.5	20	170	570
			83	0	80	280
		20	3	840	860	860
			6.5	360	860	860
			13	160	550	860

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	10	4.5	180	440
			9	70	220
			18	20	110
		20	2	470	860
			4	210	500
			8	90	250
	B type	10	5.5	840	860
			11	400	500
			22.5	170	240
		20	2	860	860
			4	860	860
			8.5	530	650
Wrap	A type	10	4.5	180	440
			9	70	220
			18	20	110
		20	1.5	630	860
			3.5	250	570
			7	100	280
	B type	10	4	860	860
			8	570	690
			16.5	250	330
		20	1.5	860	860
			3	860	860
			6	770	860

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	24	140	50	50
			48	50	20	20
			96	0	10	10
		20	12	320	100	100
			24	140	50	50
			48	50	20	20
	B type	10	31.5	630	200	80
			63.5	290	90	40
			127.5	120	40	20
		20	11.5	860	540	220
			23.5	850	260	110
			47.5	400	130	50
Wrap	A type	10	24	140	50	50
			48	50	20	20
			96	0	10	10
		20	10.5	380	120	120
			21.5	160	60	60
			43	60	30	30
	B type	10	31.5	630	200	80
			63.5	290	90	40
			127.5	120	40	20
		20	10	860	630	260
			20.5	860	300	120
			41.5	470	150	60

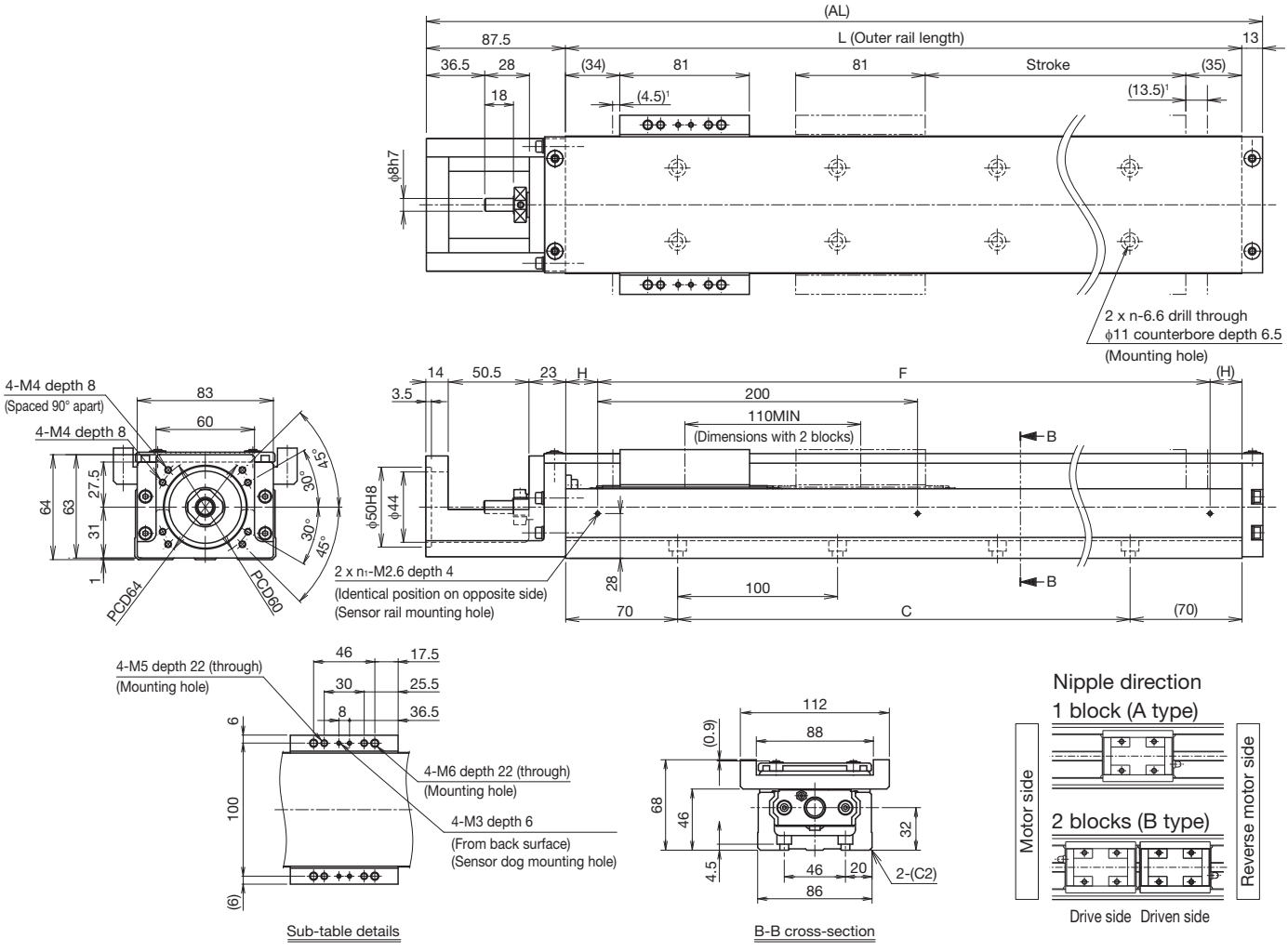
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	10	15.5	40	160	550
			31	0	80	270
			62	0	40	130
		20	9	110	280	860
			18	30	220	480
			36.5	0	90	230
	B type	10	27	60	260	860
			54	10	130	440
			108.5	0	60	220
		20	11.5	190	620	860
			23.5	70	300	860
			47.5	10	150	500
Wrap	A type	10	15.5	40	160	550
			31	0	80	270
			62	0	40	130
		20	9	110	280	860
			18	30	140	480
			36.5	0	60	230
	B type	10	27	60	260	860
			54	10	130	440
			108.5	0	60	220
		20	10	220	720	860
			20.5	90	350	860
			41.5	20	170	570

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	10	5.5	140	360
			11.5	50	170
			23	0	80
		20	4.5	180	440
			9	70	220
			18	20	110
	B type	10	5.5	840	860
			11	400	500
			22.5	170	240
		20	4.5	860	860
			9	500	610
			18	230	300
Wrap	A type	10	4.5	180	440
			9	70	220
			18	20	110
		20	4.5	180	440
			9	70	220
			18	20	110
	B type	10	4	860	860
			8	570	690
			16.5	250	330
		20	4	860	860
			8	570	690
			16	260	340

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 490 mm (A type), 380 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



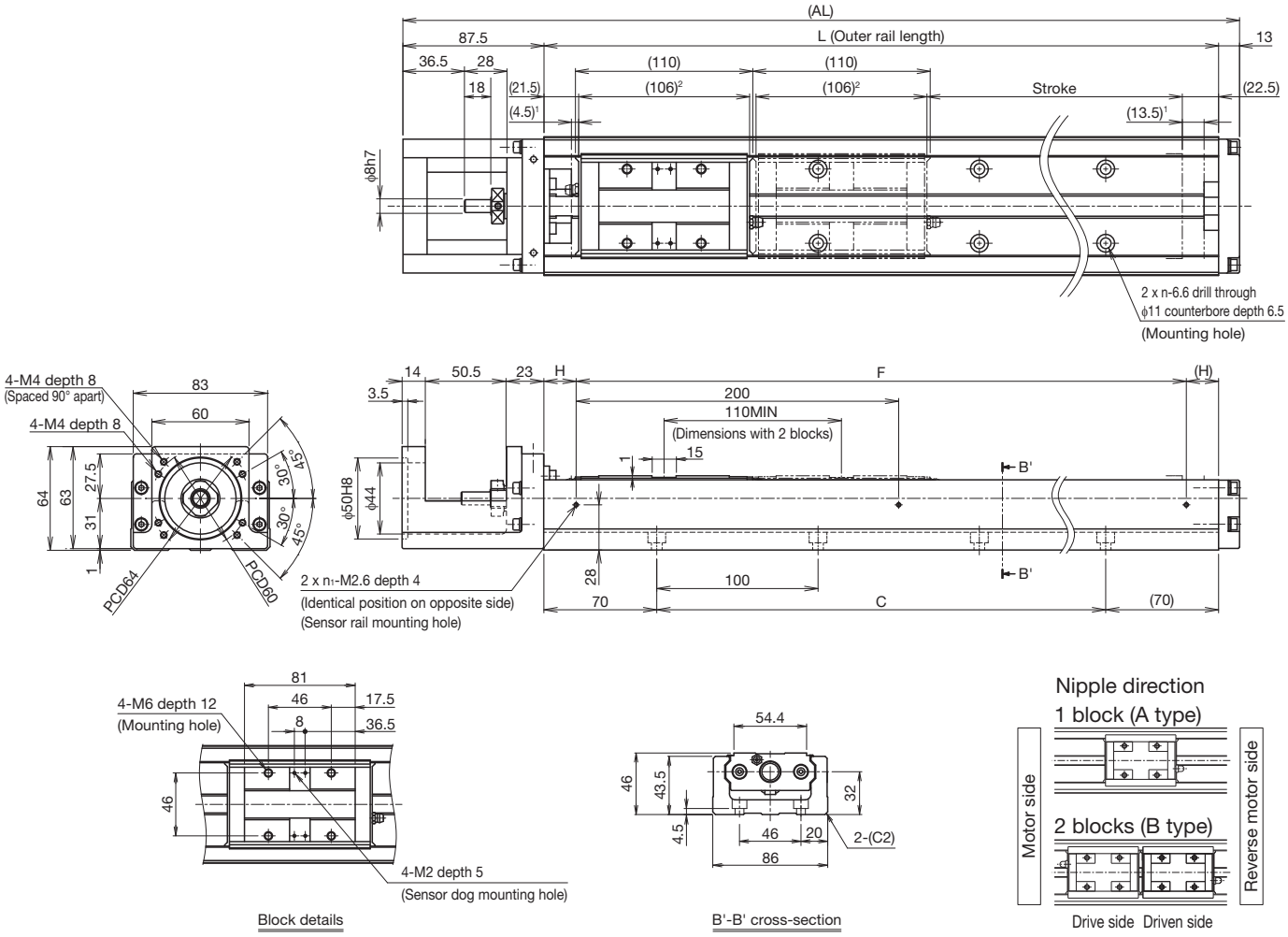
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)		A type	190 (208)	290 (308)	390 (408)	490 (508)	590 (608)	690 (708)	790 (808)
		B type[2]	80 (98)	180 (198)	280 (298)	380 (398)	480 (498)	580 (598)	680 (698)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740					-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						850
		Precision grade	1480				1440	-	-
Dimensions (mm)	AL		440.5	540.5	640.5	740.5	840.5	940.5	1040.5
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			7.5	9	10.5	12	13.5	14.9	16.4

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.4 kg added.

Without cover
Direct motor coupling

Dimensions



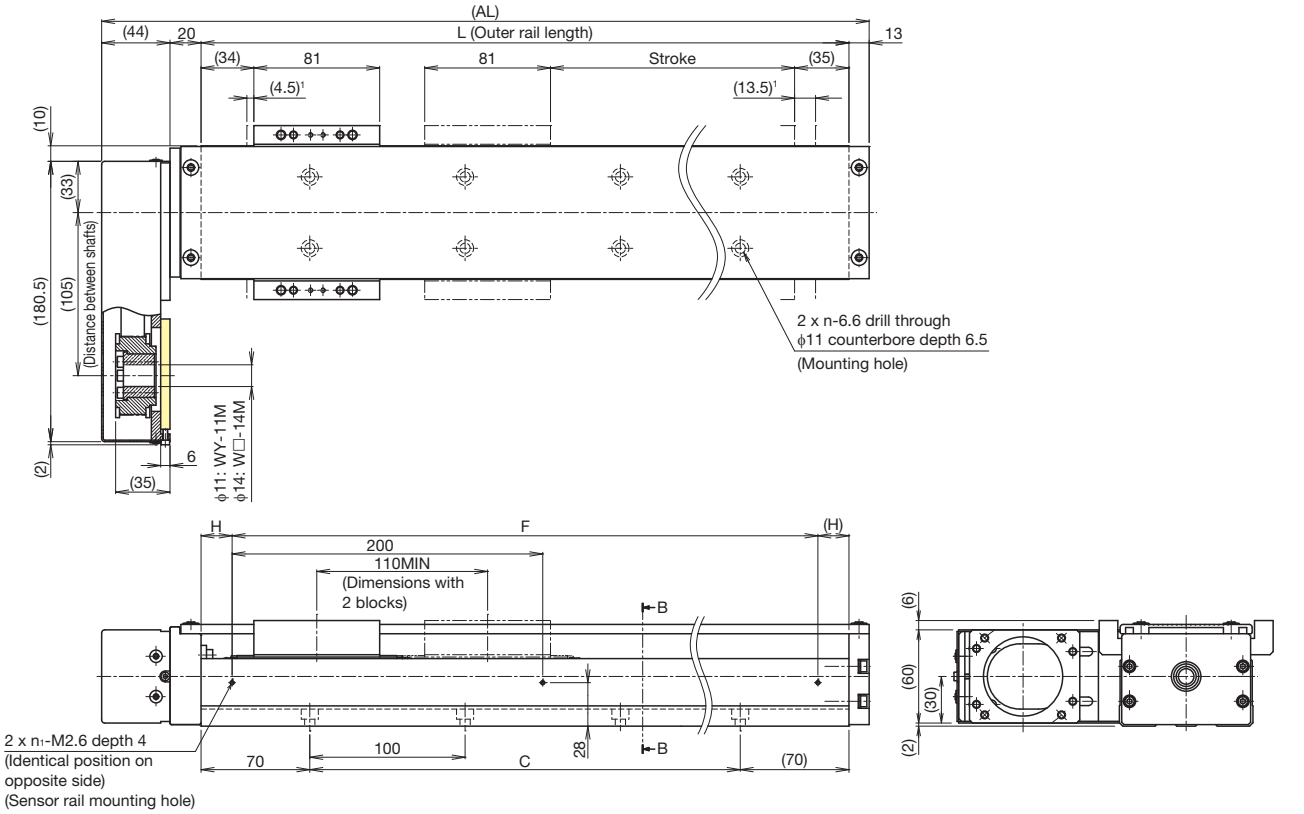
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
216 mm (2 pcs total) for KR46 with 2 blocks (B type, without QZ).

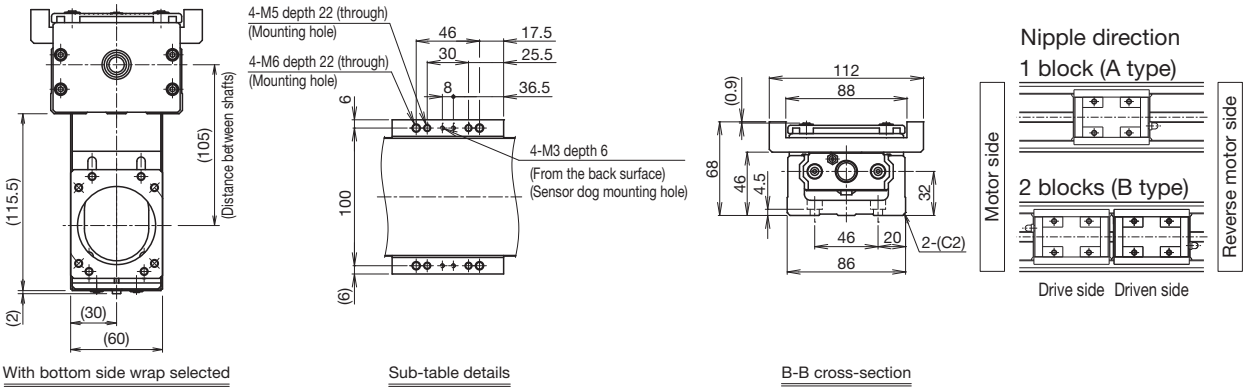
Stroke (mm) (Stroke between mechanical stoppers)			190 (208)	290 (308)	390 (408)	490 (508)	590 (608)	690 (708)	790 (808)
	A type								
	B type[3]		80 (98)	180 (198)	280 (298)	380 (398)	480 (498)	580 (598)	680 (698)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740					-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						850
		Precision grade	1480				1440	-	-
Dimensions (mm)	AL		440.5	540.5	640.5	740.5	840.5	940.5	1040.5
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			6.6	8	9.4	10.8	12.2	13.6	15

[3] The value with 2 blocks (B type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 1 kg added.

With cover
Motor wrap

Dimensions





With bottom side wrap selected

Sub-table details

B-B cross-section

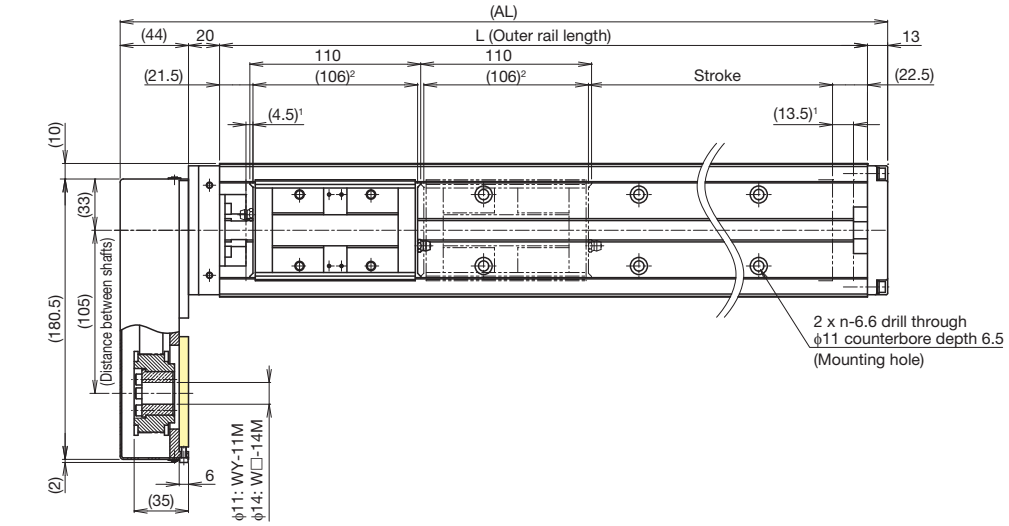
[1] Dimensions from the mechanical stopper to the stroke start position.

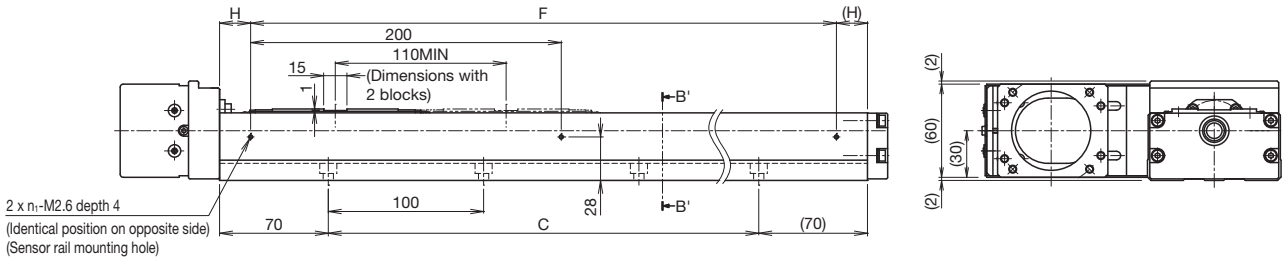
Stroke (mm) (Stroke between mechanical stoppers)	A type		190 (208)	290 (308)	390 (408)	490 (508)	590 (608)	690 (708)	790 (808)
	B type[2]		80 (98)	180 (198)	280 (298)	380 (398)	480 (498)	580 (598)	680 (698)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740					-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						850
		Precision grade	1480				1440	-	-
Dimensions (mm)	AL		417	517	617	717	817	917	1017
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			8.6	10	11.5	13	14.5	16	17.4

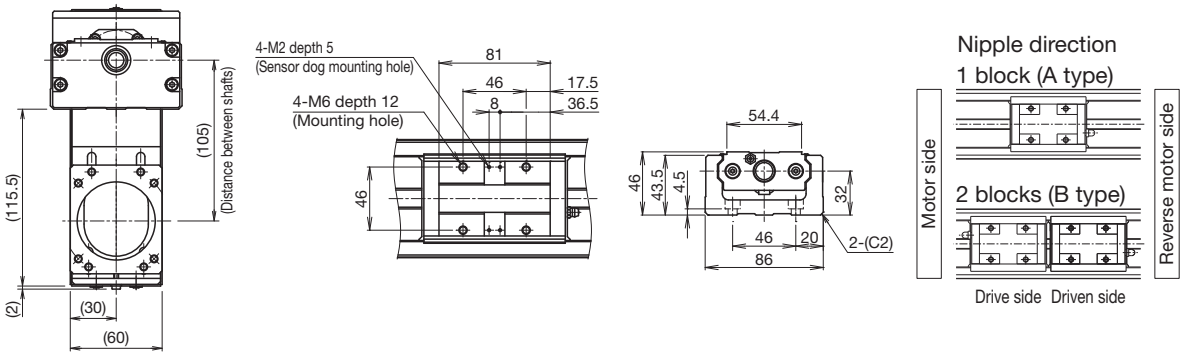
[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.4 kg added.

Without cover
Motor wrap

Dimensions







With bottom side wrap selected

Block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the block length when calculating the enabled stroke range.
216 mm (2 pcs total) for KR46 with 2 blocks (B type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	A type		190 (208)	290 (308)	390 (408)	490 (508)	590 (608)	690 (708)	790 (808)
	B type[3]		80 (98)	180 (198)	280 (298)	380 (398)	480 (498)	580 (598)	680 (698)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520						430
		Precision grade	740					-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050						850
		Precision grade	1480				1440	-	-
Dimensions (mm)	AL		417	517	617	717	817	917	1017
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			7.6	9	10.4	11.8	13.2	14.6	16

[3] The value with 2 blocks (B type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 blocks (B type) has 1 kg added.

KR46 C/D

Direct Motor Coupling | Motor Wrap | Main Unit Width 86 mm | Main Unit Height 46 mm | Stroke Max. 820 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)	Stroke (5)	Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR46	10: 10 mm	C: x 1	No symbol: Without QZ	0150: 150 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	20: 20 mm	D: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			QZA	0820: 820 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	10
			QZB			For wrap		6	30
			QZAD			R1: Non-standard side wrap (without motor)		7	40
						R2: Standard side wrap (without motor)		B	60
						R3: Bottom side wrap (without motor)		E	For wrap
						R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	WV-14M
						R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	WY-11M
						R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WY-14M
								M	For direct coupling → p. 117 For wrap → p. 119

Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 121 to p. 126

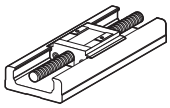
When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 163 to p. 164

When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

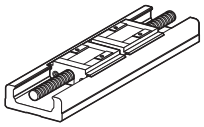
When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

Sensor details → p. 115

(3) Block type

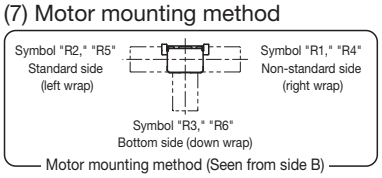


C: Short block x 1 (C type)



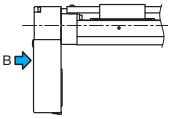
D: Short block x 2 (D type)

(7) Motor mounting method



Motor mounting method (Seen from side B)

For motor wrap



Selection Materials

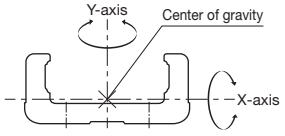
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		14000	
	Basic static load rating C_0 (N)		22700	
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to +0.003	
		Precision grade (P)	-0.016 to -0.006	
	Geometrical moment of inertia	I_X[1] (mm^4)	2.4×10^5	
		I_Y[2] (mm^4)	1.5×10^6	
		Weight (kg/m)	12.6	
Ball screw	Ball screw lead (mm)		10	20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	3140	3040
		Precision grade (P)	2940	3430
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	6760	7150
		Precision grade (P)	3720	5290
	Screw shaft diameter (mm)		ϕ15	
	Thread minor diameter (mm)		ϕ12.5	
	Ball center-to-center diameter (mm)		ϕ15.75	
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	6000	
		Precision grade (P)		
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	6660	
		Static permissible load P_0a (N)	3240	
Permissible input torque (N·m)		Direct coupling	2.5	
		Wrap	4.5	
Static permissible moment[4, 5] (N·m)			M_A: 149 (1010), M_B: 149 (1010), M_C: 700 (1400)	
Running life[6] (km)			10,000	
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F	

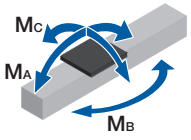
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The value in parentheses is with 2 short blocks (D type) attached.
[5] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[6] The conditions for calculation are as follows:
Stroke: 520 mm (C type), 450 mm (D type). Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Load mass: maximum load capacity (p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per short block.
Note 2) KR4610 precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.
Note 3) KR4620 precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[7] 220	320	420	520	620	720	820
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01						
	Positioning accuracy (mm)	Not specified						
	Running parallelism (vertical direction) (mm)	Not specified						
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 220	320	420	520	620	720	820
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.1				0.12	0.15	
	Running parallelism (vertical direction) (mm)	0.035				0.04	0.05	
	Backlash (mm)	0.02						
	Starting torque (N·cm)	10						

Accuracy grade	Item	Stroke[7] 220	320	420	520	620	720	820
Precision grade (P)	Positioning repeatability (mm)	±0.003					±0.005	
	Positioning accuracy (mm)	0.025				0.03	0.035	
	Running parallelism (vertical direction) (mm)	0.015				0.02	0.025	
	Backlash (mm)	0.003						
	Starting torque (N·cm)	15			17			

[7] Stroke with 1 short block (C type, without QZ).

Note 4) Precision evaluation in accordance with THK standards.
Note 5) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 6) The starting torque represents the value when containing THK AFB-LF Grease.
Note 7) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 8) Contact THK for accuracy higher than the standard stroke.

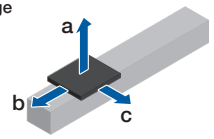
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
220 to 820	340 to 940	C type 0.6 D type 1.2	C type 0.2 D type 0.4	C type 0.8 D type 1.6	4.5	10, 20	405 to 1005	ϕ8h7	0.86

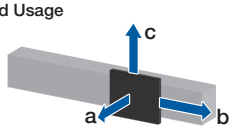
[1] Stroke with 1 short block (C type).
[2] Value with 1 short block (C type). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 117 for applicable couplings.

Permissible Overhang Length[3]

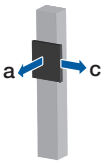
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	10.5	150	50	60
			21.5	50	20	30
			43.5	0	10	10
		20	4	450	140	160
			8.5	190	60	70
			17	80	30	30
	D type	10	19.5	310	100	60
			39.5	130	50	30
			79	50	20	10
		20	6	860	340	210
			12	540	170	100
			24	250	80	50
Wrap	C type	10	10.5	150	50	60
			21.5	50	20	30
			43.5	0	10	10
		20	4	450	140	160
			8	210	70	80
			16	80	30	40
	D type	10	19.5	310	100	60
			39.5	130	50	30
			79	50	20	10
		20	4	860	520	320
			8	830	260	160
			16.5	380	120	70

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	7.5	50	160	500
			15	0	80	250
			30	0	20	120
		20	3.5	150	430	860
			7.5	50	200	690
			15	0	40	340
	D type	10	17	40	170	570
			34	0	80	280
			68	0	40	140
		20	6	180	480	860
			12	70	240	810
			24	10	120	400
Wrap	C type	10	7.5	50	160	500
			15	0	80	250
			30	0	20	120
		20	3.5	150	740	860
			7.5	50	370	480
			15	0	170	590
	D type	10	17	40	170	570
			34	0	80	280
			68	0	40	140
		20	4	290	720	860
			8	120	360	860
			16.5	40	170	580

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	10	2.5	140	340
			5.5	40	150
			11	0	50
		20	1	410	540
			2.5	140	250
			5.5	40	100
	D type	10	4.5	310	490
			9	140	240
			18	50	120
		20	2	760	860
			4	360	560
			8	160	280
Wrap	C type	10	2.5	140	340
			5.5	40	150
			11	0	50
		20	1	410	540
			2.5	140	250
			5.5	40	100
	D type	10	4	360	560
			8.5	150	260
			17.5	50	120
		20	1.5	860	860
			3.5	420	640
			7.5	170	290

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	10.5	150	50	60
			21.5	50	20	30
			43.5	0	10	10
		20	4	450	140	160
			8.5	190	60	70
			17	80	30	30
	D type	10	24.5	240	80	50
			49	100	40	20
			98.5	30	20	10
		20	12.5	510	160	100
			25.5	230	80	50
			51.5	90	40	20
Wrap	C type	10	10.5	150	50	60
			21.5	50	20	30
			43.5	0	10	10
		20	4	450	140	160
			8.5	190	60	70
			17	80	30	30
	D type	10	24.5	240	80	50
			49	100	40	20
			98.5	30	20	10
		20	11.5	560	180	110
			23	260	90	50
			46.5	110	40	20

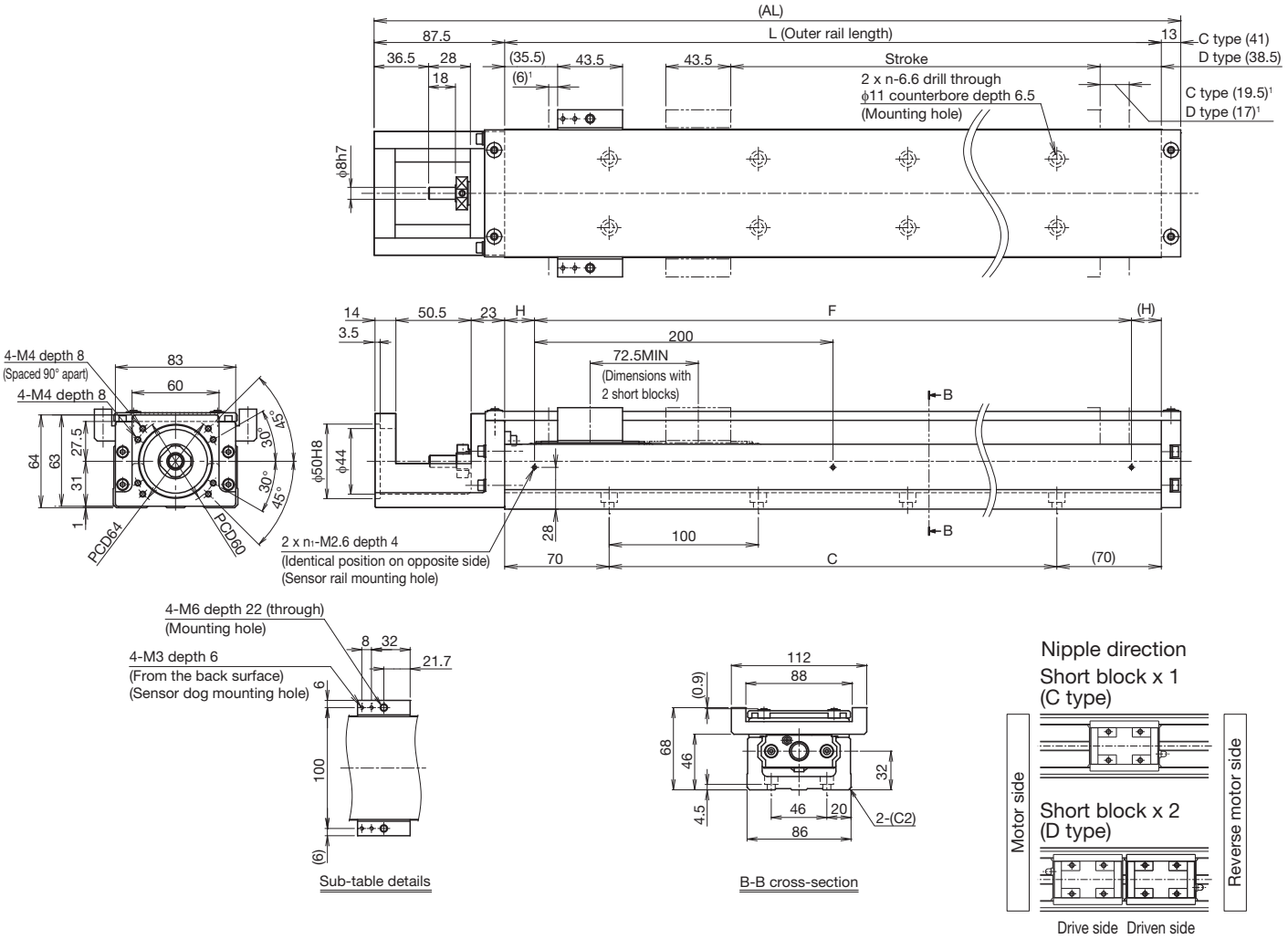
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type	10	7.5	50	130	500
			15	0	50	250
			30	0	20	120
		20	3.5	150	210	860
			7.5	50	100	480
			15	0	40	200
	D type	10	17	40	170	570
			34	0	80	280
			68	0	40	140
		20	12	70	240	810
			24	10	120	400
			48	0	60	200
Wrap	C type	10	7.5	50	160	500
			15	0	80	250
			30	0	20	120
		20	3.5	150	740	860
			7.5	50	370	480
			15	0	170	200
	D type	10	17	40	170	570
			34	0	80	280
			68	0	40	140
		20	11.5	70	250	840
			23	20	120	420
			46.5	0	60	200

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type	10	2.5	140	340
			5.5	40	150
			11	0	50
		20	2	190	360
			4	70	160
			8	20	60
	D type	10	5.5	250	180
			11.5	100	80
			23.5	30	40
		20	4.5	310	220
			9	140	110
			18	50	50
Wrap	C type	10	2.5	140	340
			5.5	40	150
			11	0	50
		20	2	190	360
			4	70	160
			8	20	60
	D type	10	4	360	250
			8.5	150	110
			17.5	50	50
		20	4	360	250
			8.5	150	110
			17.5	50	50

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 520 mm (C type), 450 mm (D type). Acceleration/deceleration rate: 0.3 G. Speed: 500 mm/s (for 10 mm lead), 1000 mm/s (for 20 mm lead). Overhang direction: Load in one direction only.
Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



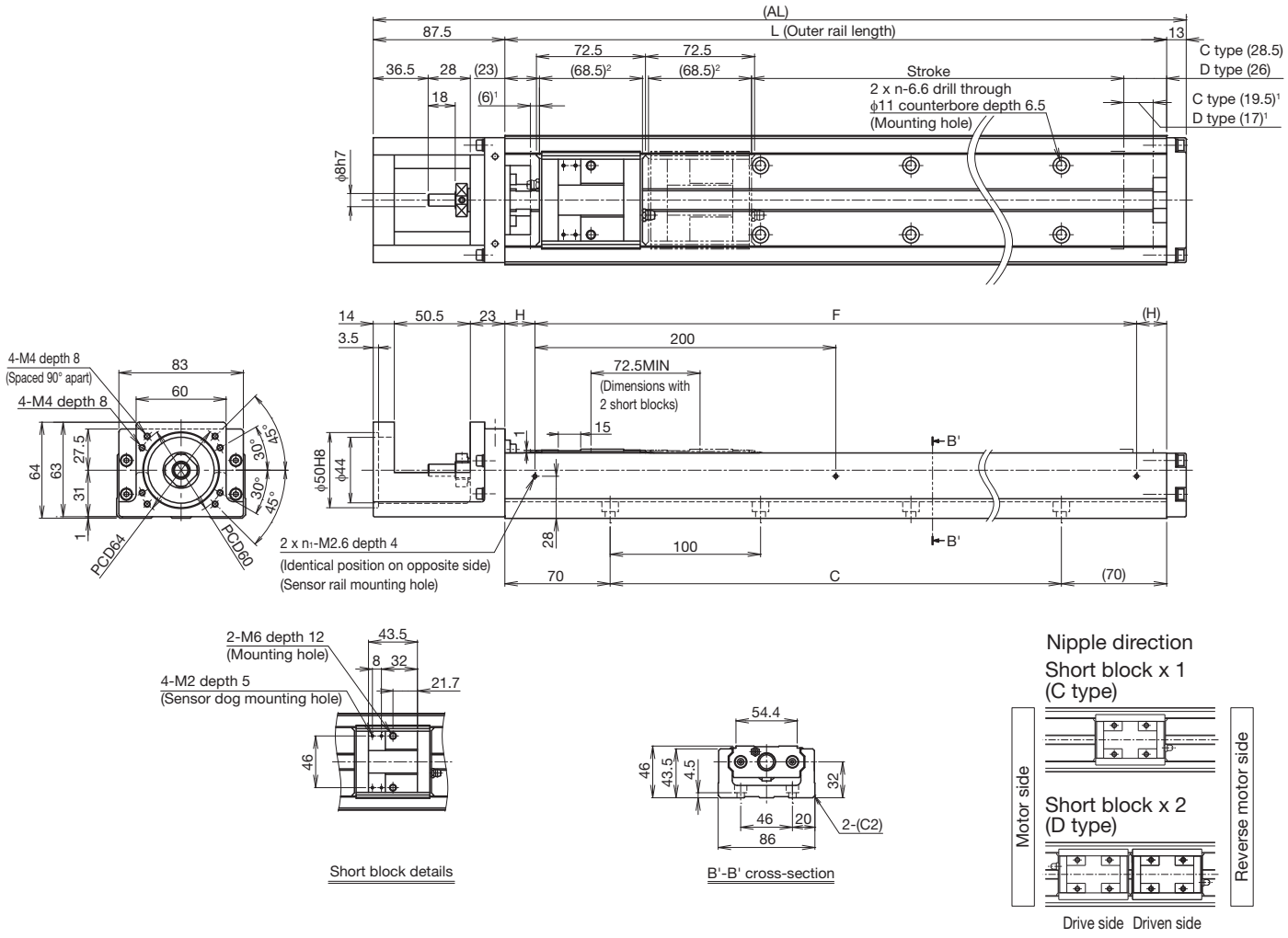
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		220 (245.5)	320 (345.5)	420 (445.5)	520 (545.5)	620 (645.5)	720 (745.5)	820 (845.5)
	D type[2]		150 (173)	250 (273)	350 (373)	450 (473)	550 (573)	650 (673)	750 (773)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	780
		Precision grade	1480				1280	-	-
Dimensions (mm)	AL		440.5	540.5	640.5	740.5	840.5	940.5	1040.5
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[4] (kg)			6.9	8.4	9.9	11.4	12.9	14.3	15.8

[2] The value with 2 short blocks (D type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.8 kg added.

Without cover
Direct motor coupling

Dimensions



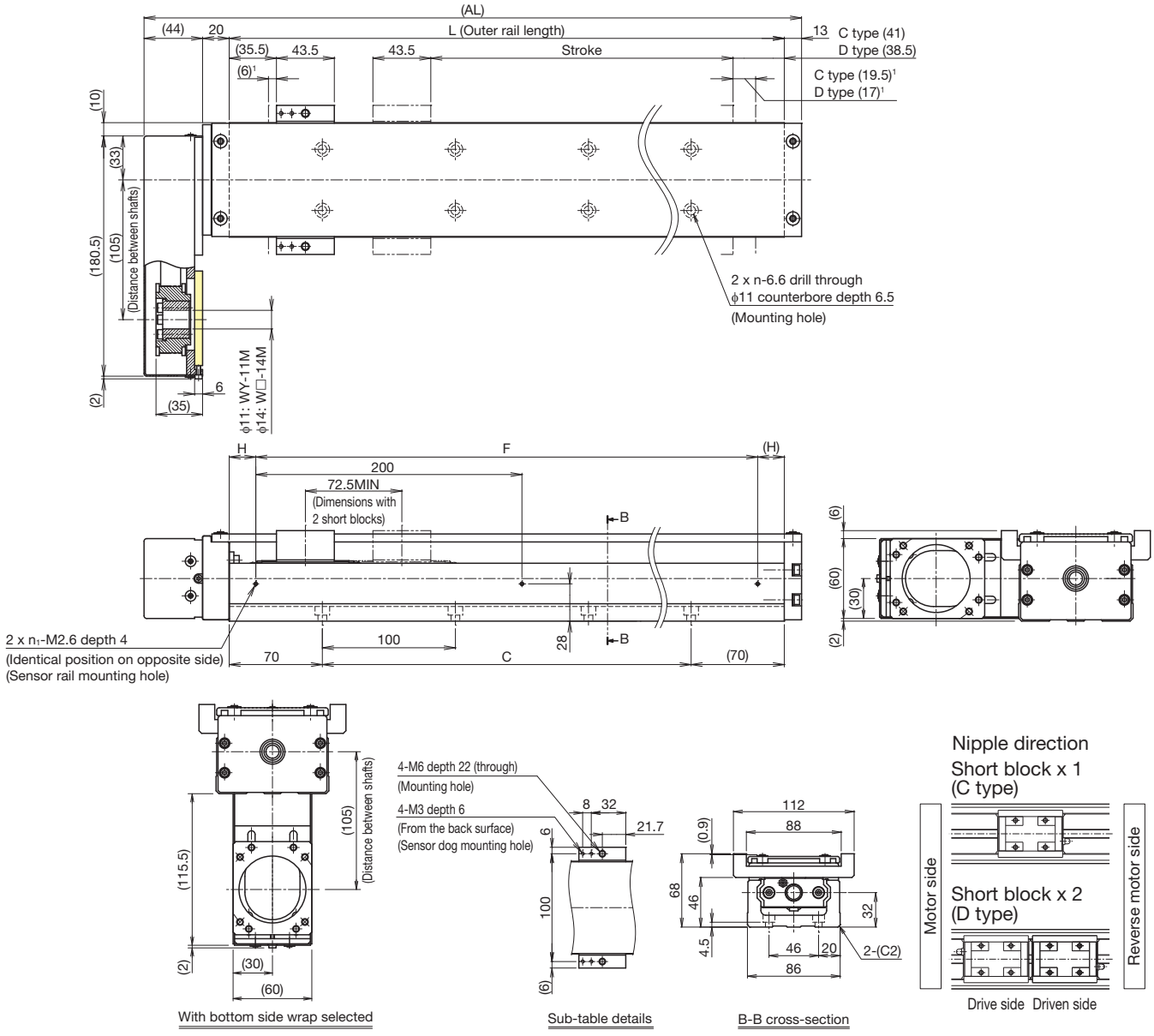
[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range.
141 mm (2 pcs total) for KR46 with 2 short blocks (D type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	C type		220 (245.5)	320 (345.5)	420 (445.5)	520 (545.5)	620 (645.5)	720 (745.5)	820 (845.5)
	D type[3]		150 (173)	250 (273)	350 (373)	450 (473)	550 (573)	650 (673)	750 (773)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	780
		Precision grade	1480				1280	-	-
Dimensions (mm)	AL		440.5	540.5	640.5	740.5	840.5	940.5	1040.5
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n_1		2	3	3	4	4	5	5
Weight[5] (kg)			6.2	7.6	9	10.4	11.8	13.2	14.6

[3] The value with 2 short blocks (D type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.6 kg added.

With cover
Motor wrap

Dimensions



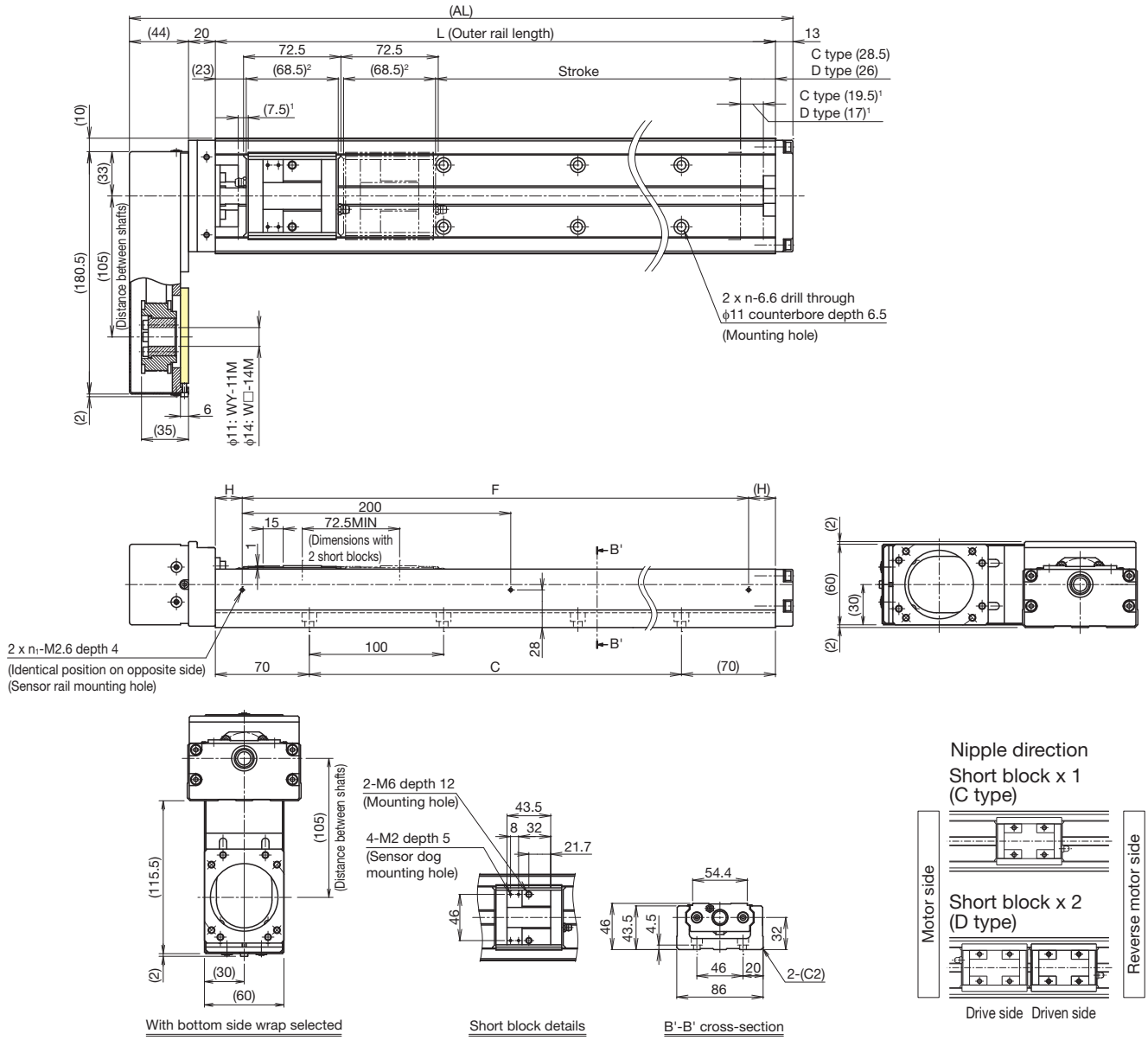
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type		220 (245.5)	320 (345.5)	420 (445.5)	520 (545.5)	620 (645.5)	720 (745.5)	820 (845.5)
	D type[2]		150 (173)	250 (273)	350 (373)	450 (473)	550 (573)	650 (673)	750 (773)
Maximum speed[3] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	780
		Precision grade	1480				1280	-	-
Dimensions (mm)	AL		417	517	617	717	817	917	1017
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n1		2	3	3	4	4	5	5
Weight[4] (kg)			8	9.4	10.9	12.4	13.9	15.4	16.8

[2] The value with 2 short blocks (D type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 short blocks (D type) has 0.8 kg added.

Without cover
Motor wrap

Dimensions



[1] Dimensions from the mechanical stopper to the stroke start position.
[2] Shows the short block length when calculating the enabled stroke range. 141 mm (2 pcs total) for KR46 with 2 short blocks (D type, without QZ).

Stroke (mm) (Stroke between mechanical stoppers)	C type		220 (245.5)	320 (345.5)	420 (445.5)	520 (545.5)	620 (645.5)	720 (745.5)	820 (845.5)
	D type[3]		150 (173)	250 (273)	350 (373)	450 (473)	550 (573)	650 (673)	750 (773)
Maximum speed[4] (mm/s)	Ball screw lead: 10 mm	Normal grade/high accuracy grade	520					490	380
		Precision grade	740				640	-	-
	Ball screw lead: 20 mm	Normal grade/high accuracy grade	1050					980	780
		Precision grade	1480				1280	-	-
Dimensions (mm)	AL		417	517	617	717	817	917	1017
	L		340	440	540	640	740	840	940
	C		200	300	400	500	600	700	800
	F		200	400	400	600	600	800	800
	H		70	20	70	20	70	20	70
Mounting hole count	n		3	4	5	6	7	8	9
	n1		2	3	3	4	4	5	5
Weight[5] (kg)			7.2	8.6	10	11.4	12.8	14.2	15.6

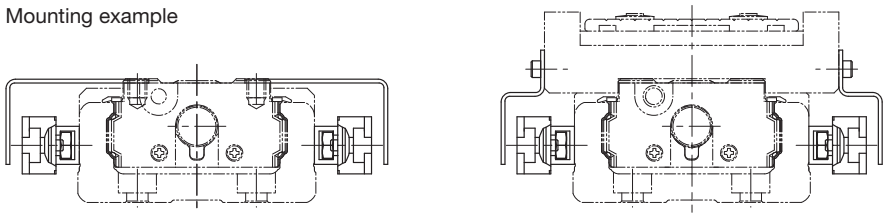
[3] The value with 2 short blocks (D type, without QZ) attached.
[4] The maximum speed is limited by the actuator's permissible speed.
[5] The weight with 2 short blocks (D type) has 0.6 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

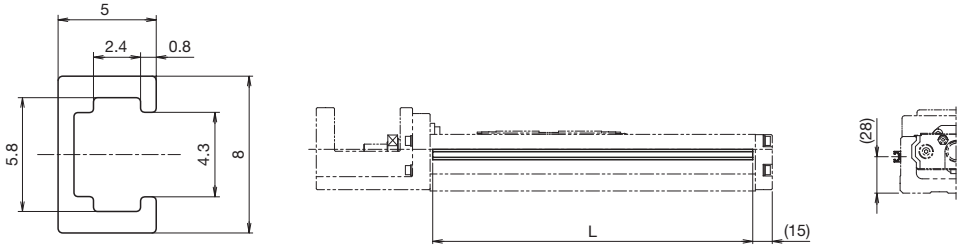


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details

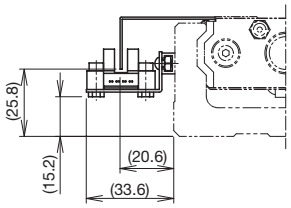
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
190	340	336
290	440	436
390	540	536
490	640	636
590	740	736
690	840	836
790	940	936

[4] Stroke with 1 block (A type).

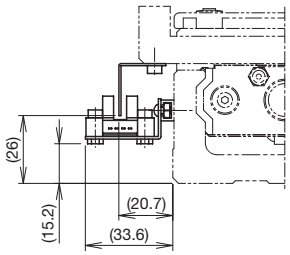
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



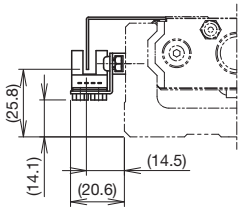
With cover



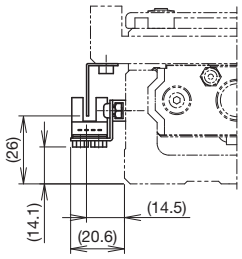
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 15 mm

Without cover



With cover

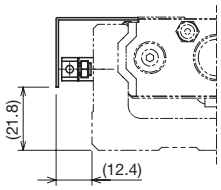


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

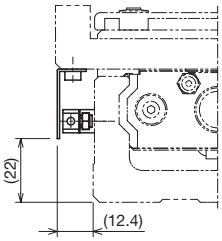
Sensor dog width: 15 mm

Proximity Sensor Mounting Dimensions

Without cover



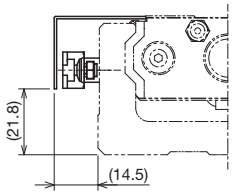
With cover



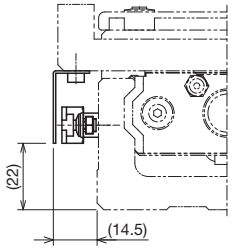
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 15 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 15 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				SGMAV-02					
				SGMJV-04	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
				SGMAV-04					
		Σ-7		SGM7J-02	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				SGM7A-02					
				SGM7J-04	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
				SGM7A-04					
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				HG-MR23					
				HG-KR43	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
				HG-MR43					
			JN	HF-KN23	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				HF-KN43	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				TS4609	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
		TBL-iIV		TSM3202	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				TSM3204	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
	Panasonic Corporation	MINAS	A5	MSMD02	200	□60	30	SFC-030DA2-8B-11B	XGT2-25C-8-11
				MSME02					
				MSMD04	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
				MSME04					
			A6	MSMF02	200	□60	30	SFC-030DA2-8B-11B	XGT2-25C-8-11
				MHMF02					
				MSMF04	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
				MHMF04					
	Keyence Corporation	SV		SV-M020	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				SV-M040	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
		SV2		SV2-M020	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				SV2-M040	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	40	SFC-030DA2-8B-14B	XGT2-27C-8-14
				R2AA06040	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
	OMRON Corporation	OMNUC G5		R88M-K20030	200	□60	30	SFC-030DA2-8B-11B	XGT2-25C-8-11
				R88M-K40030	400			SFC-035DA2-8B-14B	XGT2-30C-8-14
		1S		R88M-1M20030	200	□60	30	SFC-030DA2-8B-11B	XGT2-25C-8-11
				R88M-1M40030	400			SFC-035DA2-8B-14B	XGT2-30C-8-14

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ6*, AR6*	□60	10	SFC-025DA2-8B-10B-L46	XGT2-25C-8-10
		5-phase	CRK[1]	CRK56* (CRK569PM*)	□60	10	SFC-025DA2-8B-8B-L46 (SFC-025DA2-8B-10B-L46)	XGT2-25C-8-8 (XGT2-25C-8-10)
			RK II	RKS56*	□60	10	SFC-025DA2-10B-10B-L46	XGT2-25C-10-10
			PKA	PKA566	□60	10	SFC-025DA2-8B-8B-L46	XGT2-25C-8-8
			CVK[1]	PKP56* (PKP569FM*)	□60	10	SFC-025DA2-8B-8B-L46 (SFC-025DA2-8B-10B-L46)	XGT2-25C-8-8 (XGT2-25C-8-10)
	Keyence Corporation	2-phase		QS-M60	□60	10	SFC-025DA2-8B-8B-L46	XGT2-25C-8-8
	Sanyo Denki Co., Ltd.	PB		PBDM60*, PBA**60*	□60	10	SFC-025DA2-8B-10B-L46	XGT2-25C-8-10
		5-phase		FAM56*/FDM56*/ FA512M60/FB512M60	□60	10	SFC-025DA2-8B-10B-L46	XGT2-25C-8-10
		2-phase		DB16H78*	□60	10	SFC-025DA2-8B-8B-L46	XGT2-25C-8-8

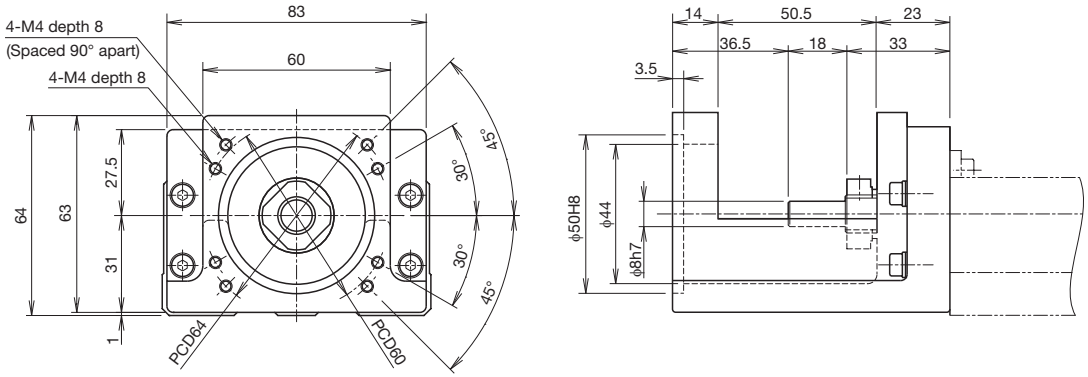
[1] Items in parentheses have different motor shaft diameters and require a coupling to be specified.
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 103, C/D → p. 109), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

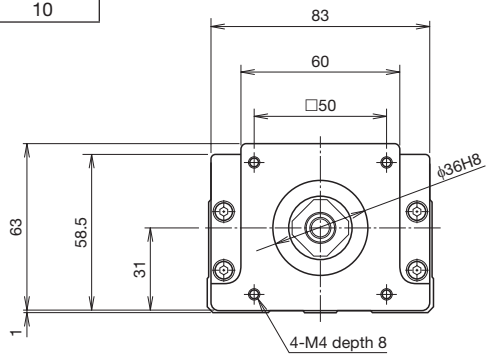
KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

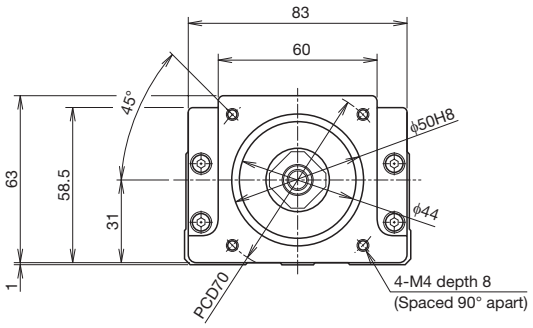
KR46
A0



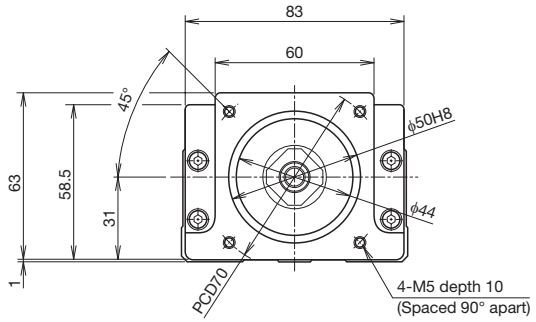
KR46
10



KR46
30



KR46
40



Options

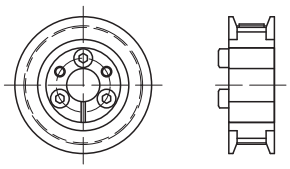
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	V	-	14	M
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	M: Friction tightening tool

Motor shaft fixing method



Friction tightening tool

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	WV-14M
				SGMAV-02			
				SGMJV-04	400		
				SGMAV-04			
		Σ-7		SGM7J-02	200	□60	WV-14M
				SGM7A-02			
				SGM7J-04	400		
				SGM7A-04			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	WV-14M
				HG-MR23			
				HG-KR43	400		
				HG-MR43			
			JN	HF-KN23	200	□60	WV-14M
				HF-KN43	400		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	WV-14M
				TS4609	400		
		TBL-iIV		TSM3202	200	□60	WV-14M
				TSM3204	400		
	Panasonic Corporation	MINAS	A5	MSMD02	200	□60	WY-11M
				MSME02			
				MSMD04	400		WY-14M
				MSME04			
			A6	MSMF02	200		WY-11M
				MHMF02			
				MSMF04	400		WY-14M
				MHMF04			
	Keyence Corporation	SV		SV-M020	200	□60	WV-14M
				SV-M040	400		
		SV2		SV2-M020	200	□60	WV-14M
				SV2-M040	400		
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	WV-14M
				R2AA06040	400		
	OMRON Corporation	OMNUC G5		R88M-K20030	200	□60	WY-11M
				R88M-K40030	400		WY-14M
		1S		R88M-1M20030	200	□60	WY-11M
				R88M-1M40030	400		WY-14M

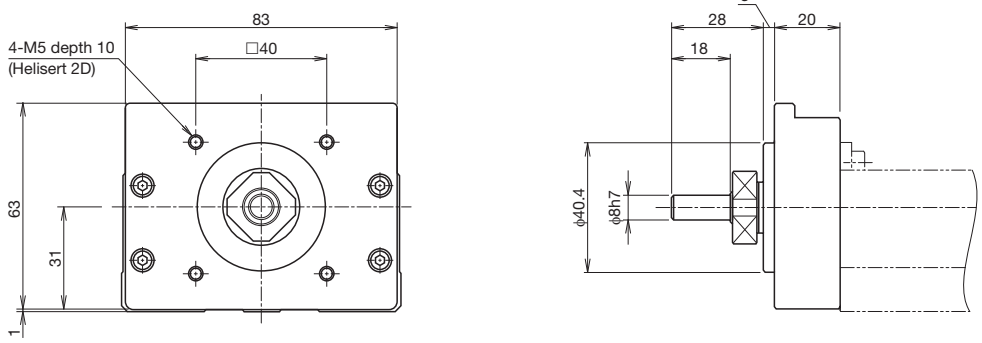
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 103, C/D → p. 109), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR46
60



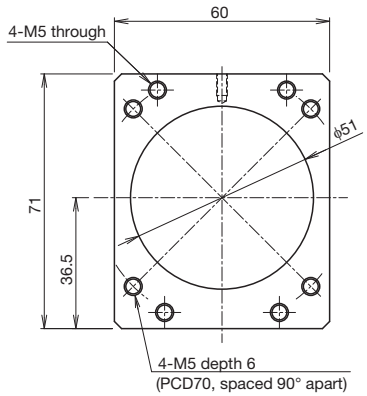
Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

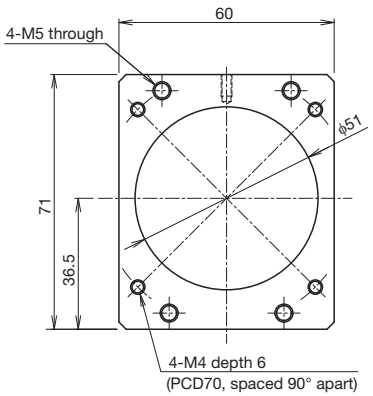
KR46
WV

Thickness: 6 mm



KR46
WY

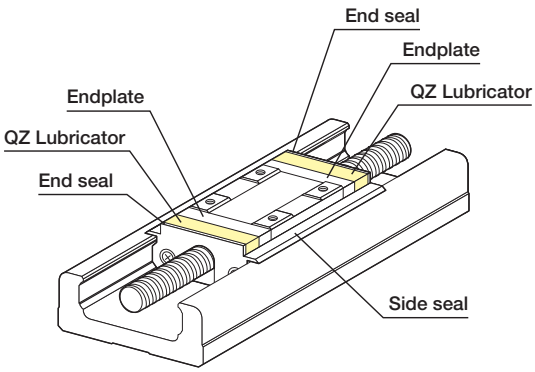
Thickness: 6 mm



Options

QZ Lubricator

The QZ Lubricator for KR feeds the right amount of lubricant to the outer rail and ball screw shaft raceways. This allows an oil film to be constantly formed between the balls and the raceway, and it significantly extends the lubrication maintenance interval.



Appearance

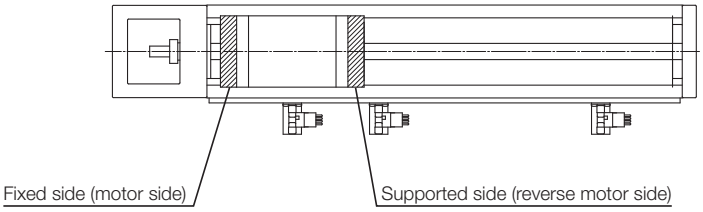
Features

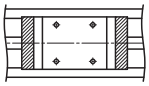
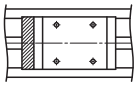
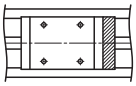
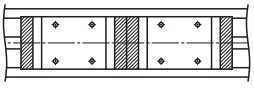
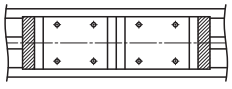
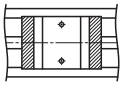
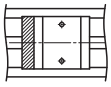
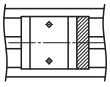
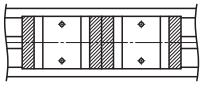
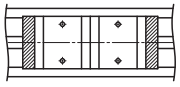
- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- It is an eco-friendly lubrication system that does not contaminate the surrounding area, as it feeds the right amount of lubricant to the ball raceway.

QZ Configuration

Symbol	Block type	Description
QZ	A/B/C/D	QZ all-block double-sided specification
QZA	A/C	QZ fixed side specification
QZB	A/C	QZ supported side specification
QZAD	B/D	QZ fixed side (drive side block) + QZ supported side (driven side block) specification

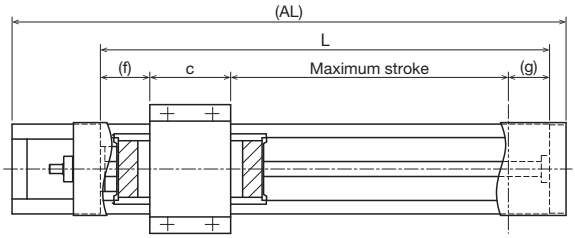
Note) QZ specification types do not have a grease nipple mounted. Contact THK if a grease nipple is required.



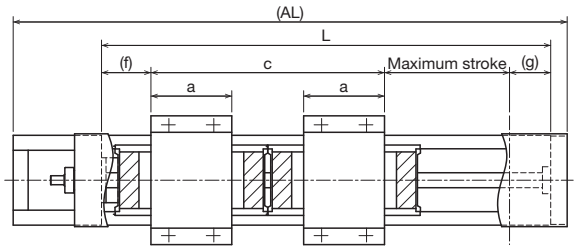
Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
B type (block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side
C type (short block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
D type (short block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side

Dimensions with QZ Lubricator

QZ (with cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

Unit: mm

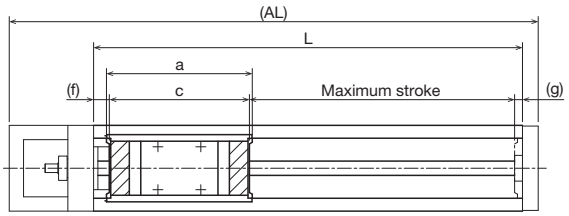
Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
A	440.5	340	160	178	-	81	44.5	36.5
	540.5	440	260	278				
	640.5	540	360	378				
	740.5	640	460	478				
	840.5	740	560	578				
	940.5	840	660	678				
	1040.5	940	760	778				
B	540.5	440	120	138	81	221	44.5	36.5
	640.5	540	220	238				
	740.5	640	320	338				
	840.5	740	420	438				
	940.5	840	520	538				
	1040.5	940	620	638				
C	440.5	340	190	215.5	-	43.5	44.5	36.5
	540.5	440	290	315.5				
	640.5	540	390	415.5				
	740.5	640	490	515.5				
	840.5	740	590	615.5				
	940.5	840	690	715.5				
	1040.5	940	790	815.5				
D	440.5	340	90	113	43.5	146	44.5	36.5
	540.5	440	190	213				
	640.5	540	290	313				
	740.5	640	390	413				
	840.5	740	490	513				
	940.5	840	590	613				
	1040.5	940	690	713				

[1] The value for B/D block types is with 2 blocks attached.

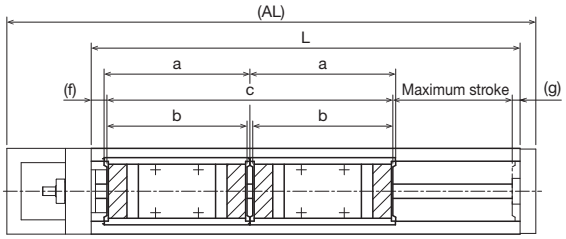
Options

Dimensions with QZ Lubricator

QZ (without cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

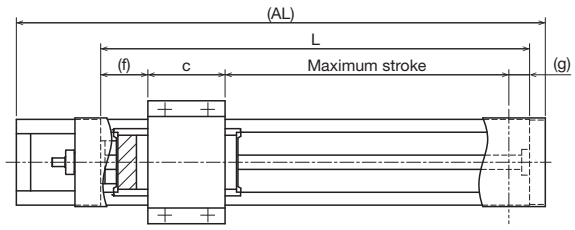
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	b	c	f	g
A	440.5	340	160	178	140	-	136	17	9
	540.5	440	260	278					
	640.5	540	360	378					
	740.5	640	460	478					
	840.5	740	560	578					
	940.5	840	660	678					
	1040.5	940	760	778					
B	540.5	440	120	138	140	136	276	17	9
	640.5	540	220	238					
	740.5	640	320	338					
	840.5	740	420	438					
	940.5	840	520	538					
	1040.5	940	620	638					
C	440.5	340	190	215.5	102.5	-	98.5	17	9
	540.5	440	290	315.5					
	640.5	540	390	415.5					
	740.5	640	490	515.5					
	840.5	740	590	615.5					
	940.5	840	690	715.5					
	1040.5	940	790	815.5					
D	440.5	340	90	113	102.5	98.5	201	17	9
	540.5	440	190	213					
	640.5	540	290	313					
	740.5	640	390	413					
	840.5	740	490	513					
	940.5	840	590	613					
	1040.5	940	690	713					

[1] The value for B/D block types is with 2 blocks attached.

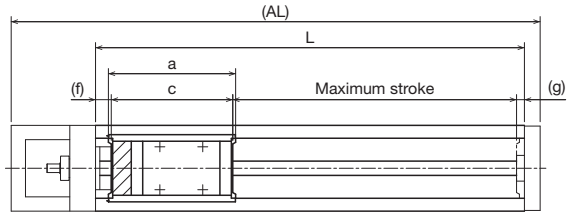
Dimensions with QZ Lubricator

QZA (with cover)
Block type: A/C



Block type A/C

QZA (without cover)
Block type: A/C



Block type A/C

QZA (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	440.5	340	175	193	81	44.5	21.5
	540.5	440	275	293			
	640.5	540	375	393			
	740.5	640	475	493			
	840.5	740	575	593			
	940.5	840	675	693			
	1040.5	940	775	793			
C	440.5	340	205	230.5	43.5	44.5	21.5
	540.5	440	305	330.5			
	640.5	540	405	430.5			
	740.5	640	505	530.5			
	840.5	740	605	630.5			
	940.5	840	705	730.5			
	1040.5	940	805	830.5			

Note 1) B/D block types cannot be selected for QZA.

QZA (without cover)

Unit: mm

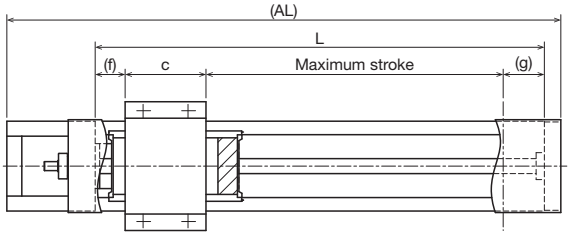
Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	440.5	340	175	193	125	121	17	9
	540.5	440	275	293				
	640.5	540	375	393				
	740.5	640	475	493				
	840.5	740	575	593				
	940.5	840	675	693				
	1040.5	940	775	793				
C	440.5	340	205	230.5	87.5	83.5	17	9
	540.5	440	305	330.5				
	640.5	540	405	430.5				
	740.5	640	505	530.5				
	840.5	740	605	630.5				
	940.5	840	705	730.5				
	1040.5	940	805	830.5				

Note 2) B/D block types cannot be selected for QZA.

Options

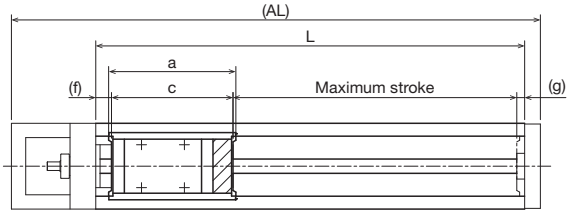
Dimensions with QZ Lubricator

QZB (with cover)
Block type: A/C



Block type A/C

QZB (without cover)
Block type: A/C



Block type A/C

QZB (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	440.5	340	175	193	81	29.5	36.5
	540.5	440	275	293			
	640.5	540	375	393			
	740.5	640	475	493			
	840.5	740	575	593			
	940.5	840	675	693			
	1040.5	940	775	793			
C	440.5	340	205	230.5	43.5	29.5	36.5
	540.5	440	305	330.5			
	640.5	540	405	430.5			
	740.5	640	505	530.5			
	840.5	740	605	630.5			
	940.5	840	705	730.5			
	1040.5	940	805	830.5			

Note 1) B/D block types cannot be selected for QZB.

QZB (without cover)

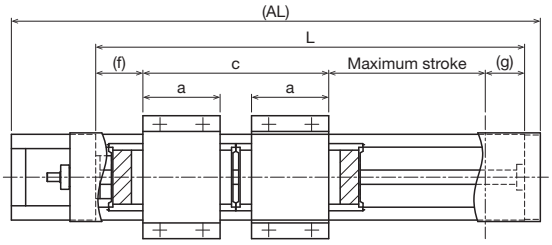
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	440.5	340	175	193	125	121	17	9
	540.5	440	275	293				
	640.5	540	375	393				
	740.5	640	475	493				
	840.5	740	575	593				
	940.5	840	675	693				
	1040.5	940	775	793				
C	440.5	340	205	230.5	87.5	83.5	17	9
	540.5	440	305	330.5				
	640.5	540	405	430.5				
	740.5	640	505	530.5				
	840.5	740	605	630.5				
	940.5	840	705	730.5				
	1040.5	940	805	830.5				

Note 2) B/D block types cannot be selected for QZB.

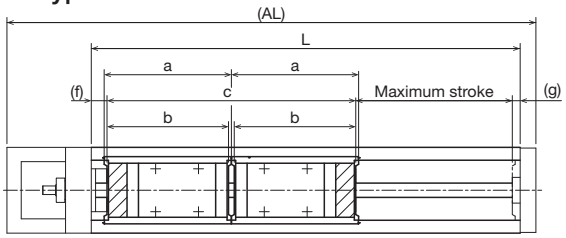
Dimensions with QZ Lubricator

QZAD (with cover)
Block type: B/D



Block type B/D

QZAD (without cover)
Block type: B/D



Block type B/D

QZAD (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
B	540.5	440	150	168	81	191	44.5	36.5
	640.5	540	250	268				
	740.5	640	350	368				
	840.5	740	450	468				
	940.5	840	550	568				
	1040.5	940	650	668				
D	440.5	340	120	143	43.5	116	44.5	36.5
	540.5	440	220	243				
	640.5	540	320	343				
	740.5	640	420	443				
	840.5	740	520	543				
	940.5	840	620	643				
	1040.5	940	720	743				

[1] The value for B/D block types is with 2 blocks attached.
Note 1) A/C block types cannot be selected for QZAD.

QZAD (without cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
B	540.5	440	150	168	125	121	246	17	9
	640.5	540	250	268					
	740.5	640	350	368					
	840.5	740	450	468					
	940.5	840	550	568					
	1040.5	940	650	668					
D	440.5	340	120	143	87.5	83.5	171	17	9
	540.5	440	220	243					
	640.5	540	320	343					
	740.5	640	420	443					
	840.5	740	520	543					
	940.5	840	620	643					
	1040.5	940	720	743					

[2] The value for B/D block types is with 2 blocks attached.
Note 2) A/C block types cannot be selected for QZAD.

KR55 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 100 mm | Main Unit Height 55 mm | Stroke Max. 1200 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)	Stroke (5)	Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR55	20	A	QZA	0785	P	0	1	2	A0
KR55	20: 20 mm	A: x 1	No symbol: Without QZ	0680: 680 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
		B: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			QZA	1200: 1200 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AZ
			QZB			For wrap		6	A5
			QZAD			R1: Non-standard side wrap (without motor)		7	A6
						R2: Standard side wrap (without motor)		B	20
						R3: Bottom side wrap (without motor)		E	For wrap
						R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	WV-14M
						R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	WZ-16M
						R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WZ-19M
								M	W5-19M

Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 141 to p. 144

When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 161 to p. 162

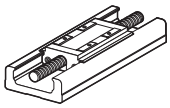
When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

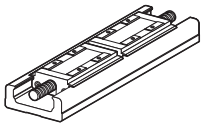
Sensor details → p. 135

For direct coupling → p. 137
For wrap → p. 139

(3) Block type

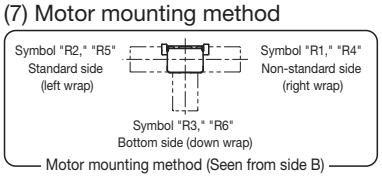


A: Block x 1 (A type)

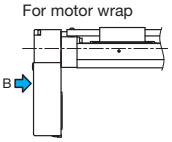


B: Block x 2 (B type)

(7) Motor mounting method



Motor mounting method (Seen from side B)



Selection Materials

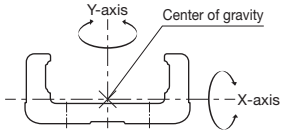
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		38100
	Basic static load rating C_0 (N)		61900
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.007 to +0.004
		Precision grade (P)	-0.019 to -0.007
	Geometrical moment of inertia	I_X[1] (mm^4)	2.2×10^5
		I_Y[2] (mm^4)	2.3×10^6
		Weight (kg/m)	15
Ball screw	Ball screw lead (mm)		20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	3620
		Precision grade (P)	3980
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	9290
		Precision grade (P)	6850
	Screw shaft diameter (mm)		ϕ20
	Thread minor diameter (mm)		ϕ17.5
	Ball center-to-center diameter (mm)		ϕ20.75
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	2400
		Precision grade (P)	3360
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	7600
		Static permissible load P_0a (N)	3990
Permissible input torque (N·m)		Direct coupling	8.5
		Wrap[4]	6.8 (6.4)
Static permissible moment[5, 6] (N·m)			M_A: 870 (4890), M_B: 870 (4890), M_C: 2280 (4570)
Running life[7] (km)			10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F

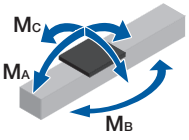
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The values in parentheses are for precision grade.
[5] The value in parentheses is with 2 blocks (B type) attached.
[6] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[7] The conditions for calculation are as follows:
Stroke: 1000 mm (A type), 880 mm (B type). Speed: 800 mm/s (for 20 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[8] 800	900	1000	1100	1200
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01				
	Positioning accuracy (mm)	Not specified				
	Running parallelism (vertical direction) (mm)	Not specified				
	Backlash (mm)	0.05				
	Starting torque (N·cm)	12				

Accuracy grade	Item	Stroke[8] 800	900	1000	1100	1200
High accuracy grade (H)	Positioning repeatability (mm)	±0.005				
	Positioning accuracy (mm)	0.18		0.25		
	Running parallelism (vertical direction) (mm)	0.05				
	Backlash (mm)	0.05				
	Starting torque (N·cm)	12				

Accuracy grade	Item	Stroke[8] 800	900	1000
Precision grade (P)	Positioning repeatability (mm)	±0.005		
	Positioning accuracy (mm)	0.035		0.04
	Running parallelism (vertical direction) (mm)	0.025		0.03
	Backlash (mm)	0.003		
	Starting torque (N·cm)	17		20

[8] Stroke with 1 block (A type, without QZ).

Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

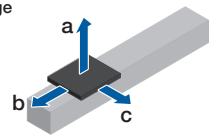
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
800 to 1200	980 to 1380	A type 1.8 B type 3.6	A type 1.9 B type 3.8	A type 3.7 B type 7.4	8.8	20	1054 to 1454	ϕ12h7	1.432

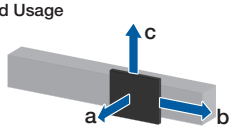
[1] Stroke with 1 block (A type, without QZ).
[2] Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 137 for applicable couplings.

Permissible Overhang Length[3]

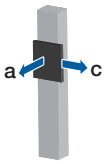
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	20	11	1000	560	580
			22	930	270	290
			44	440	130	140
	B type	20	10	1000	1000	1000
			20	1000	1000	640
			40.5	1000	810	310
Wrap	A type	20	6.5	1000	960	990
			13	1000	470	490
			26	780	230	240
	B type	20	7	1000	1000	1000
			14.5	1000	1000	890
			29.5	1000	1000	430

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	20	11	530	490	1000
			22	240	240	810
			44	90	110	400
	B type	20	10	1000	1000	1000
			20	590	1000	1000
			40.5	260	520	1000
Wrap	A type	20	6.5	940	830	1000
			13	440	410	1000
			26	190	200	690
	B type	20	7	1000	1000	1000
			14.5	830	1000	1000
			29.5	380	710	1000

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	20	4	1000	1000
			8.5	530	480
			17	240	240
	B type	20	4	1000	1000
			8.5	1000	1000
			17	1000	950
Wrap	A type	20	2.5	1000	1000
			5.5	850	750
			11.5	380	360
	B type	20	2.5	1000	1000
			5.5	1000	1000
			11.5	1000	1000

Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	20	21	970	290	300
			42	460	130	150
			84	200	60	70
	B type	20	23.5	1000	1000	550
			47	1000	700	270
			94.5	1000	340	130
Wrap	A type	20	18.5	1000	330	340
			37	530	160	170
			74	240	70	80
	B type	20	20.5	1000	1000	630
			41.5	1000	790	310
			83.5	1000	390	150

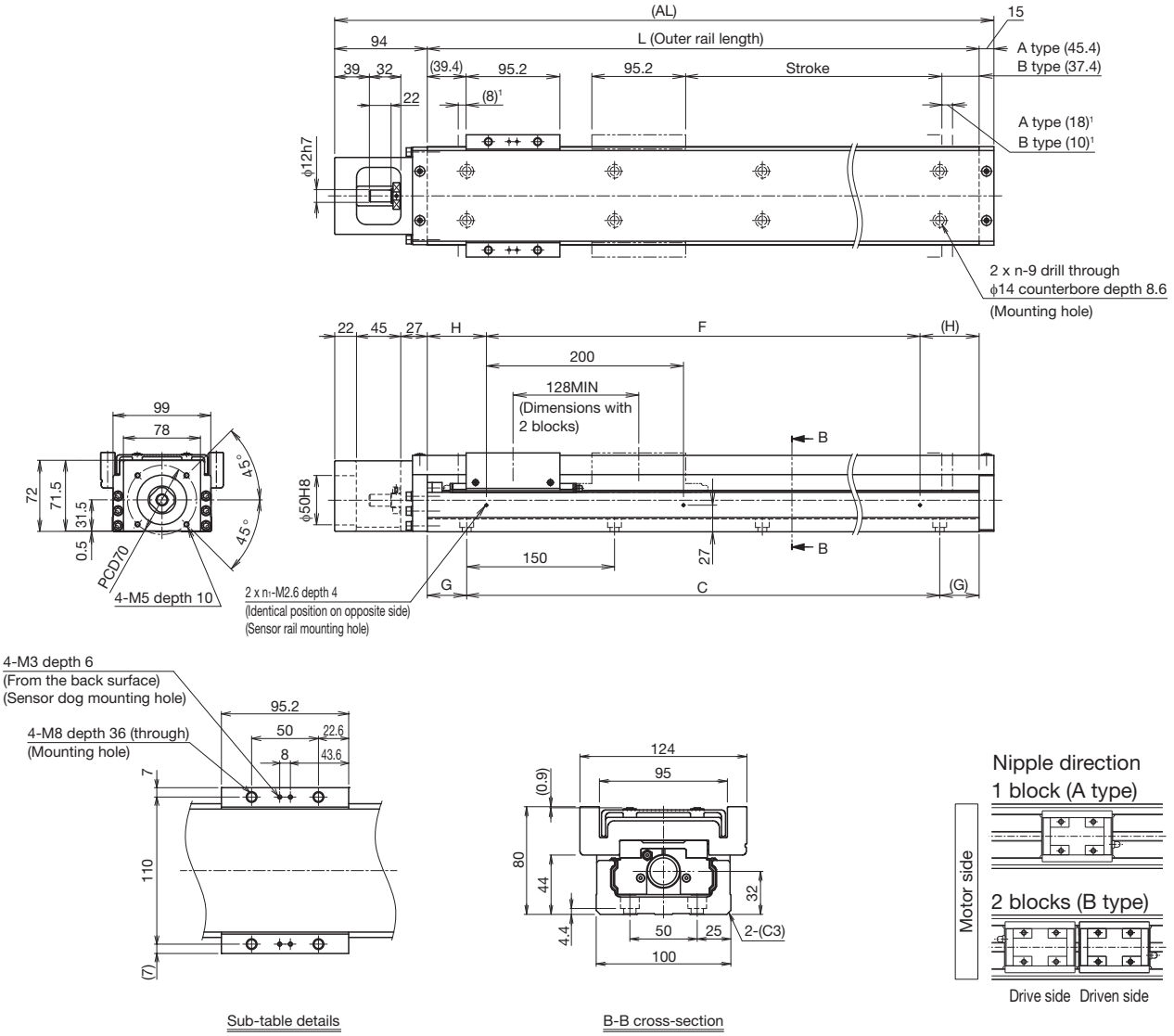
Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	20	18.5	290	290	970
			37.5	110	130	480
			75	30	50	240
	B type	20	23.5	490	900	1000
			47	220	450	1000
			94.5	80	220	740
Wrap	A type	20	18.5	290	290	970
			37	120	140	480
			74	30	50	240
	B type	20	20.5	570	1000	1000
			41.5	250	510	1000
			83.5	100	250	840

Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	20	8	570	520
			16	260	260
			32.5	100	120
	B type	20	7	1000	1000
			14.5	1000	1000
			29	820	560
Wrap	A type	20	8	570	520
			16	260	260
			32.5	100	120
	B type	20	7	1000	1000
			14.5	1000	1000
			29	820	560

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 1000 mm (A type), 880 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 800 mm/s (for 20 mm lead). Overhang direction: Load in one direction only. Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



Sub-table details

B-B cross-section

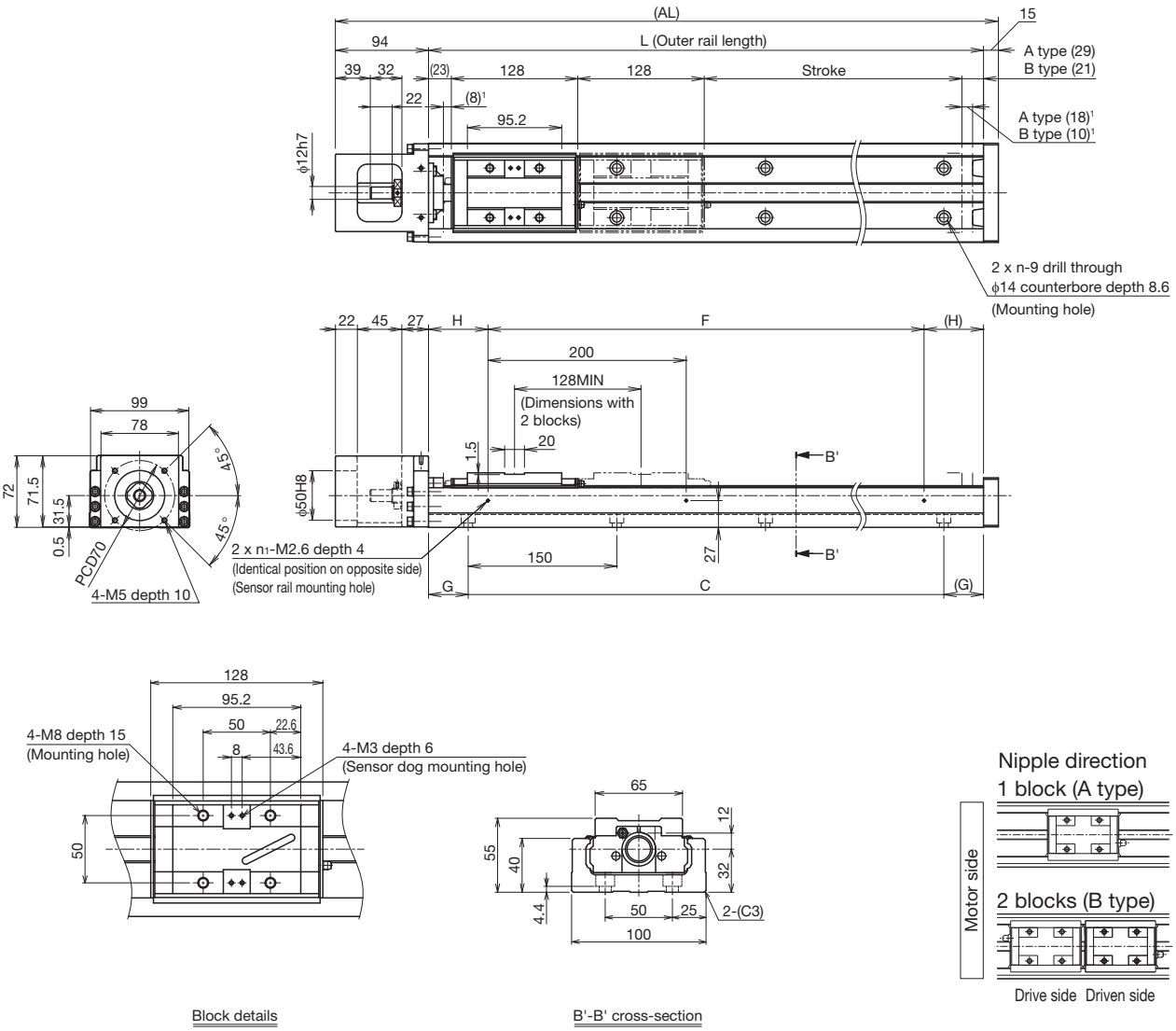
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1089	1189	1289	1389	1489
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			24.1	25.9	27.7	29.6	31.4

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 3.7 kg added.

Without cover
Direct motor coupling

Dimensions



Block details

B'-B' cross-section

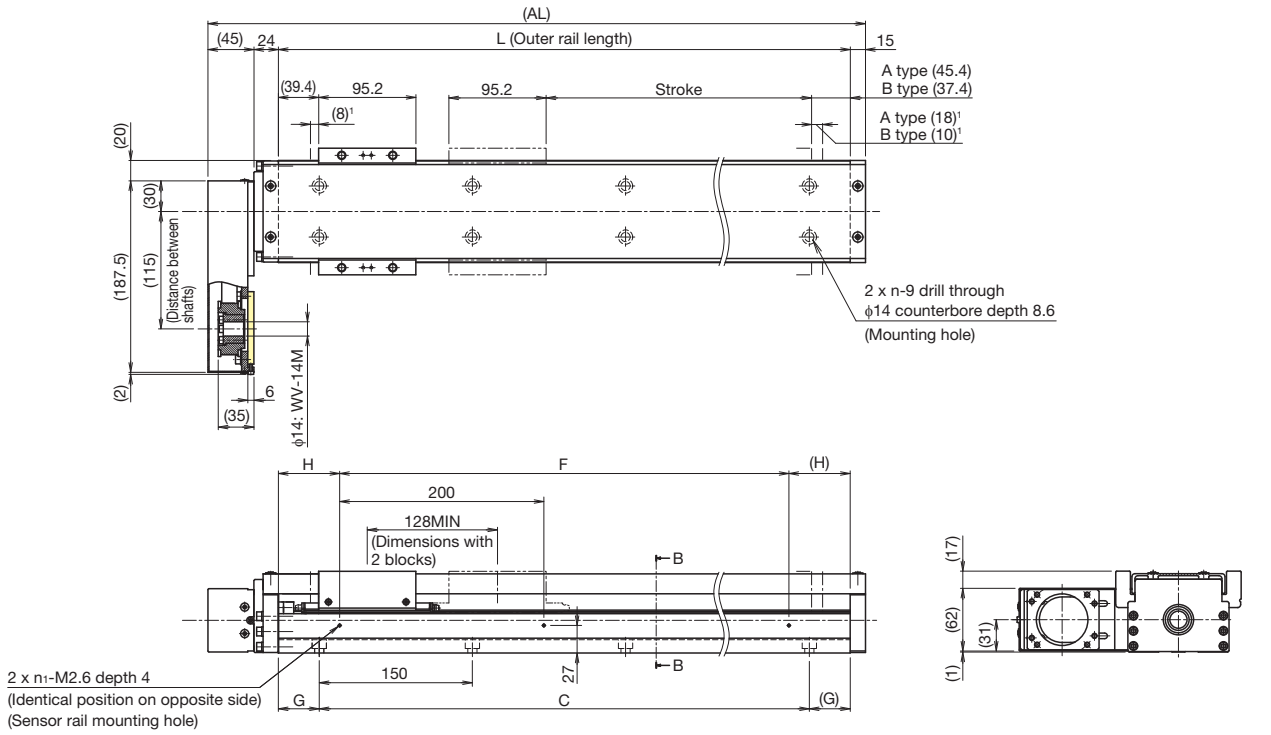
[1] Dimensions from the mechanical stopper to the stroke start position.

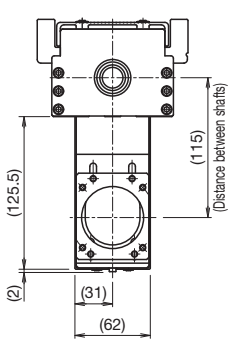
Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1089	1189	1289	1389	1489
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			20.2	21.9	23.6	25.4	27.1

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.8 kg added.

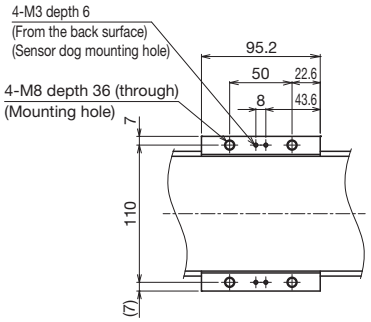
With cover Motor flange angle □60
Motor wrap

Dimensions

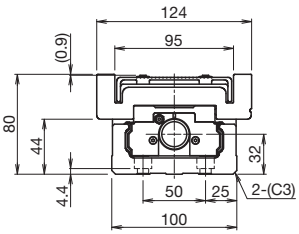




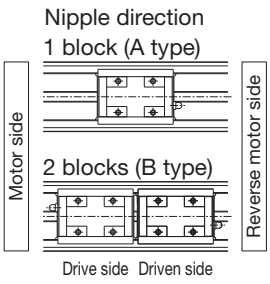
With bottom side wrap selected



Sub-table details



B-B cross-section



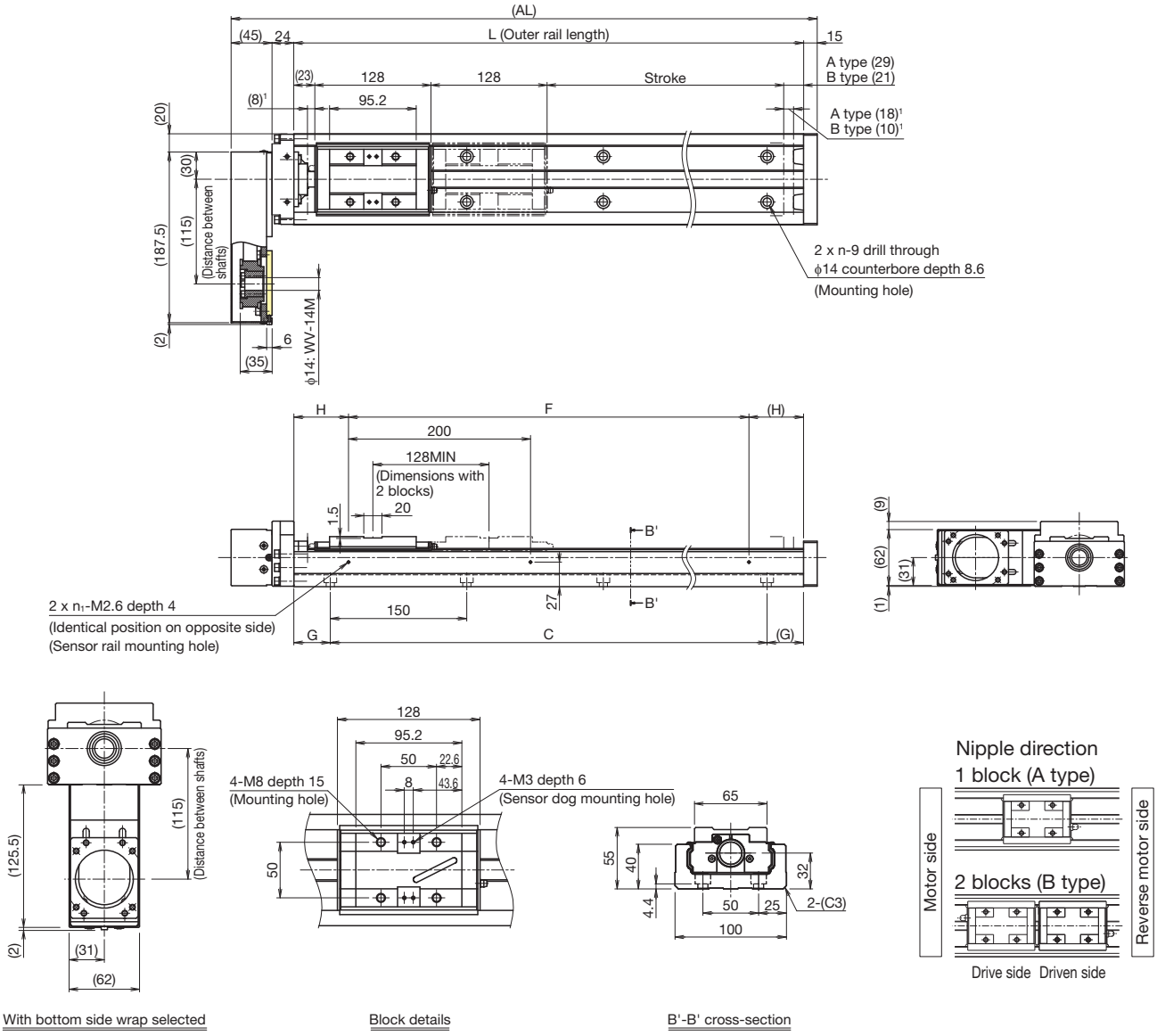
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1064	1164	1264	1364	1464
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			25	26.8	28.6	30.5	32.3

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 3.7 kg added.

Without cover Motor flange angle □60
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

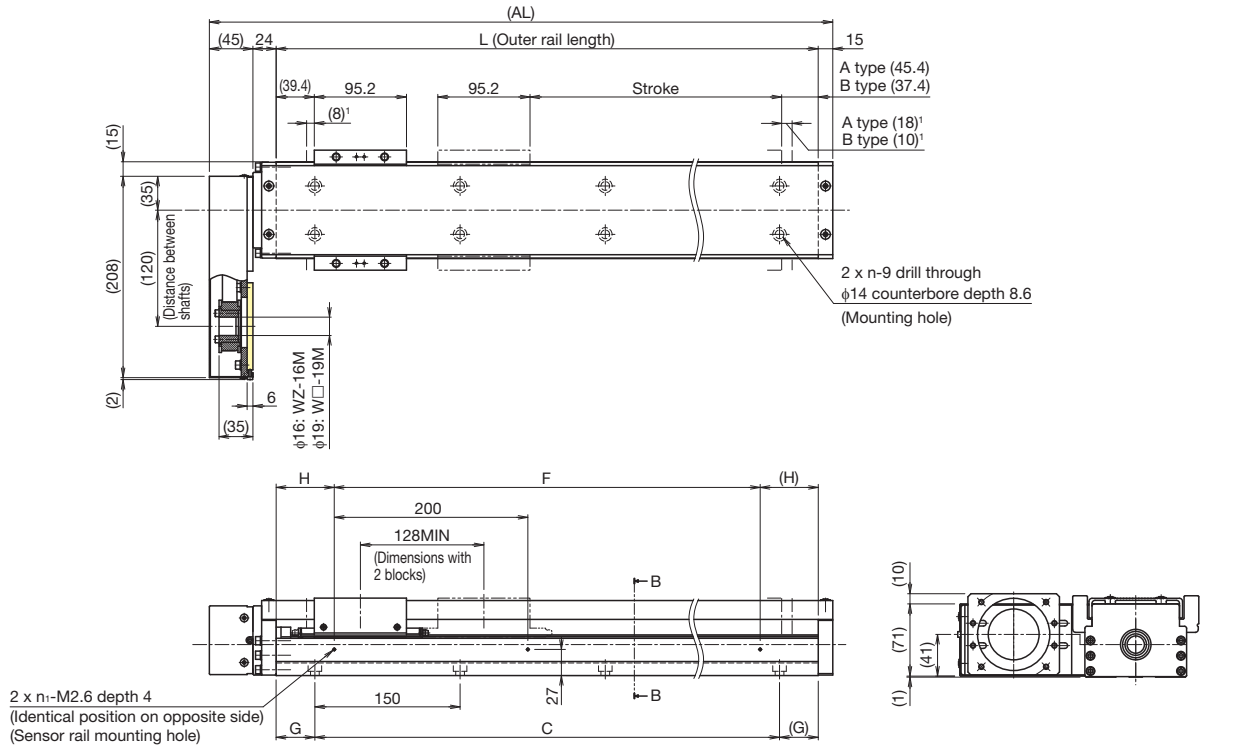
[1] Dimensions from the mechanical stopper to the stroke start position.

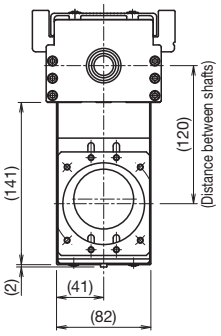
Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1064	1164	1264	1364	1464
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			21.1	22.8	24.5	26.3	28

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.8 kg added.

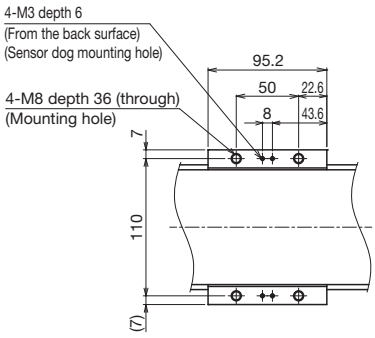
With cover Motor flange angle □80
Motor wrap

Dimensions

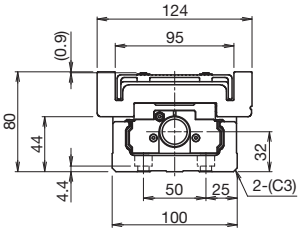




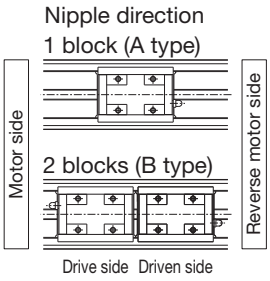
With bottom side wrap selected



Sub-table details



B-B cross-section



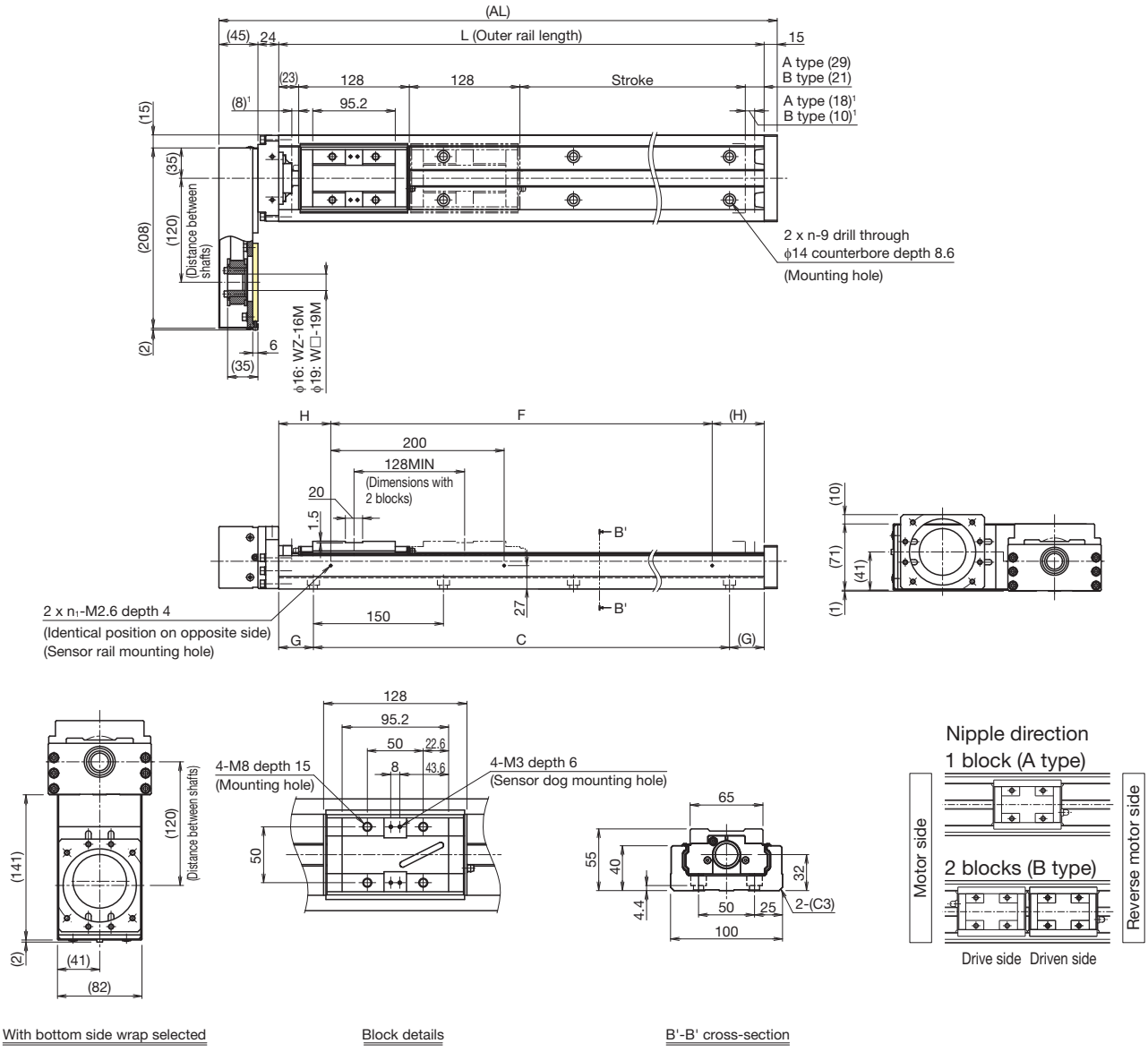
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1064	1164	1264	1364	1464
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			25	26.8	28.6	30.5	32.3

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 3.7 kg added.

Without cover Motor flange angle □80
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		800 (826)	900 (926)	1000 (1026)	1100 (1126)	1200 (1226)
	B type[2]		680 (698)	780 (798)	880 (898)	980 (998)	1080 (1098)
Maximum speed[3] (mm/s)	Ball screw lead: 20 mm	Normal grade/high accuracy grade	800		740	620	530
		Precision grade	1120	900	740	-	-
Dimensions (mm)	AL		1064	1164	1264	1364	1464
	L		980	1080	1180	1280	1380
	C		900	1050	1050	1200	1350
	G		40	15	65	40	15
	F		800	1000	1000	1200	1200
	H		90	40	90	40	90
Mounting hole count	n		7	8	8	9	10
	n_1		5	6	6	7	7
Weight[4] (kg)			21.1	22.8	24.5	26.3	28

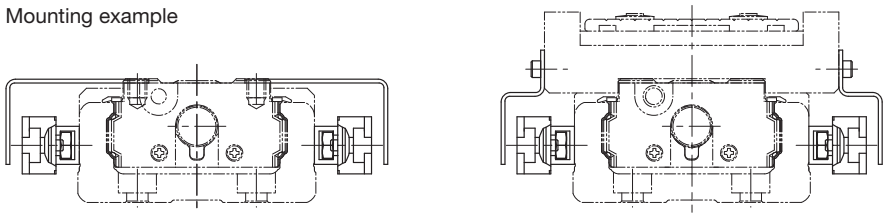
[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 1.8 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

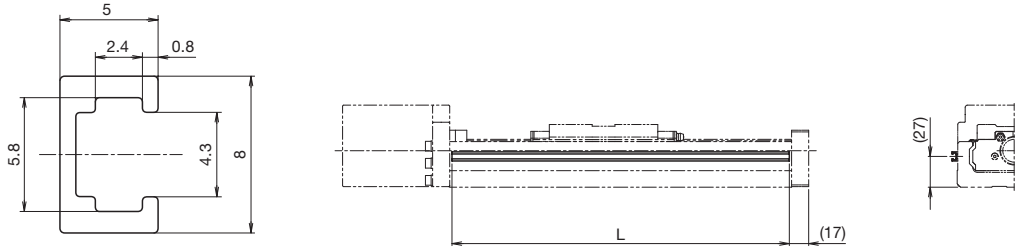


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details

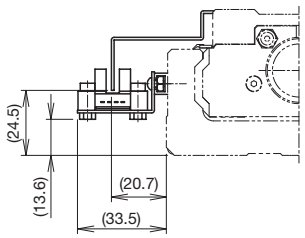
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
800	980	976
900	1080	1076
1000	1180	1176
1100	1280	1276
1200	1380	1376

[4] Stroke with 1 block (A type).

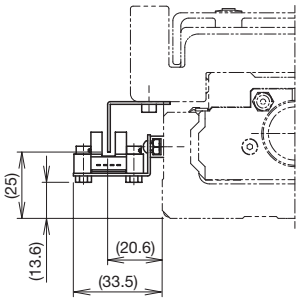
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



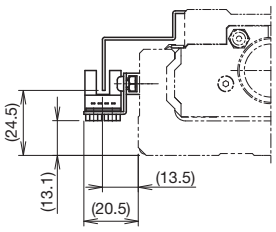
With cover



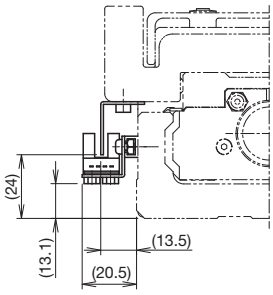
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 20 mm

Without cover



With cover

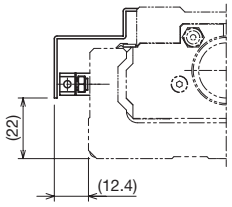


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

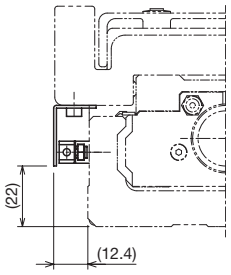
Sensor dog width: 20 mm

Proximity Sensor Mounting Dimensions

Without cover



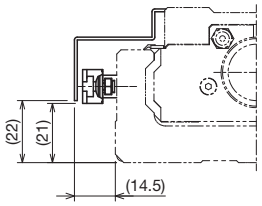
With cover



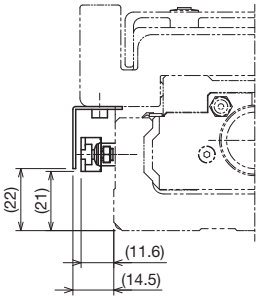
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 20 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 20 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				SGMAV-02					
				SGMJV-04	400		A0	SFC-035DA2-12B-14B	XGT2-30C-12-14
				SGMAV-04					
				SGMJV-06	600		A0	SFC-035DA2-12B-14B	XGT2-34C-12-14
				SGMJV-08	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
				SGMAV-08					
		Σ-7		SGM7J-02	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				SGM7A-02					
				SGM7J-04	400		A0	SFC-035DA2-12B-14B	XGT2-30C-12-14
				SGM7A-04					
				SGM7J-06	600		A0	SFC-035DA2-12B-14B	XGT2-34C-12-14
				SGM7J-08	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
				SGM7A-08					
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				HG-MR23					
				HG-KR43	400		A0	SFC-035DA2-12B-14B	XGT2-30C-12-14
				HG-MR43					
				HG-KR73	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
				HG-MR73					
			JN	HF-KN23	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				HF-KN43	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				TS4609	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
				TS4614	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
		TBL-iIV		TSM3202	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				TSM3204	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
				TSM3303	600	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
				TSM3304	750				
	Panasonic Corporation	MINAS	A5	MSMD08	750	□80	A5	SFC-040DA2-12B-19B	XGT2-39C-12-19
				MSME08					
			A6	MSMF08	750	□80	A5	SFC-040DA2-12B-19B	XGT2-39C-12-19
				MHMF08					
	Keyence Corporation	SV		SV-M020	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				SV-M040	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
				SV-M075	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
		SV2		SV2-M020	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				SV2-M040	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
				SV2-M075	750	□80	AZ	SFC-040DA2-12B-19B	XGT2-39C-12-19
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14
				R2AA06040	400			SFC-035DA2-12B-14B	XGT2-30C-12-14
				R2AA08075	750	□80	AZ	SFC-040DA2-12B-16B	XGT2-39C-12-16
	OMRON Corporation	OMNUC G5		R88M-K75030	750	□80	A5	SFC-040DA2-12B-19B	XGT2-39C-12-19
		1S		R88M-1M75030	750	□80			

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ9*, AR9*	□85	A6	SFC-035DA2-12B-14B	XGT2-34C-12-14
		5-phase	RK II	RKS59*	□85	A6	SFC-035DA2-12B-14B	XGT2-34C-12-14

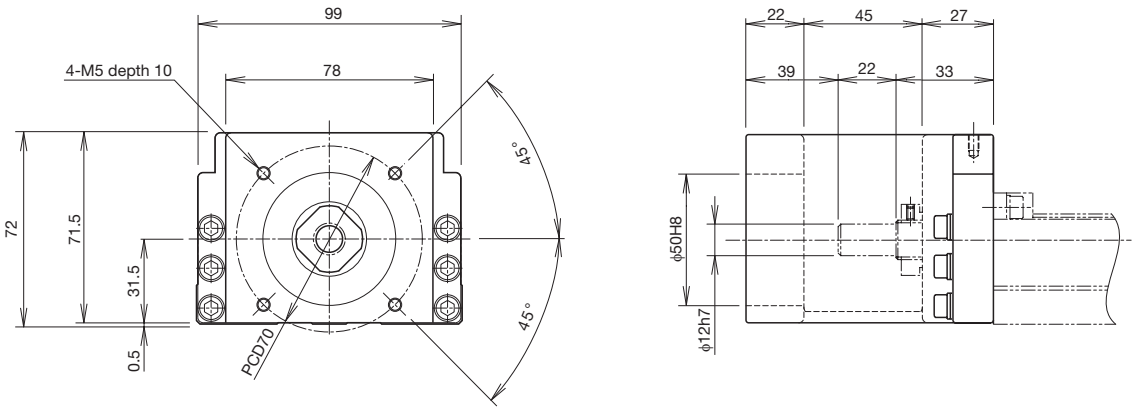
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 127), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

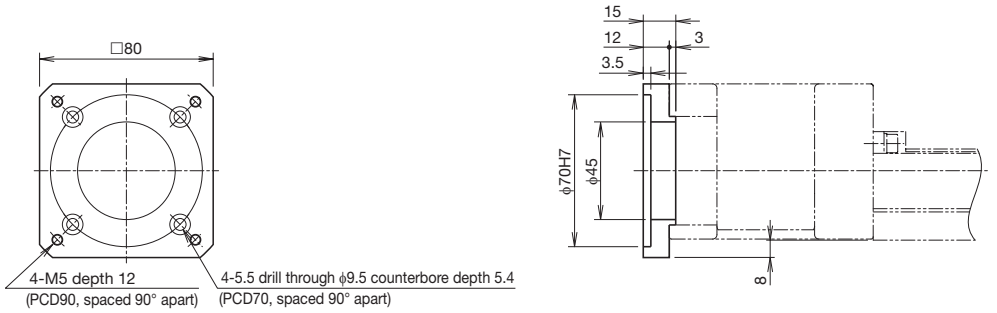
Housing A

KR55
A0

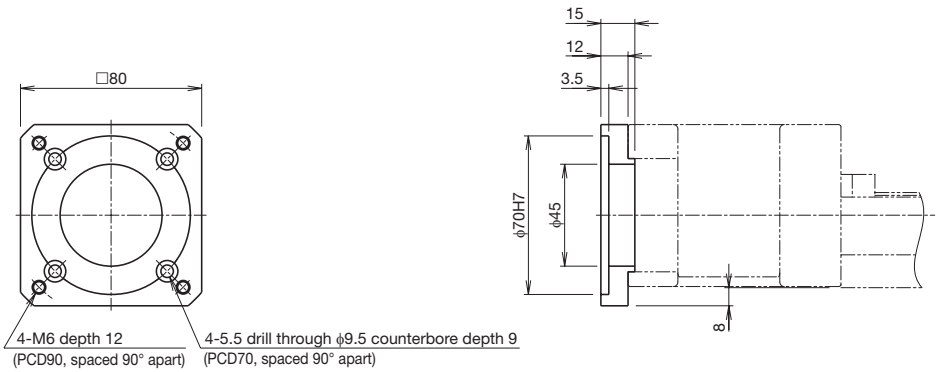


Intermediate flange

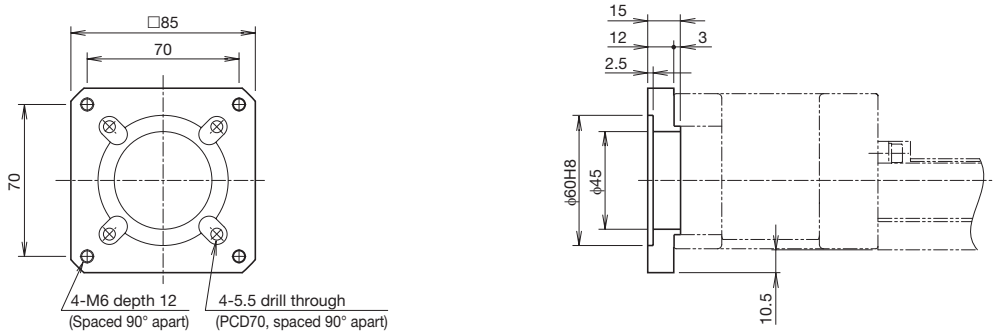
KR55
A5



KR55
AZ



KR55
A6



Options

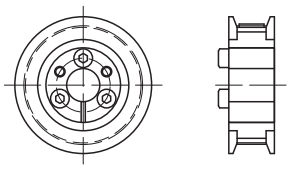
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	V	-	14	M
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	M: Friction tightening tool

Motor shaft fixing method



Friction tightening tool

Compatibility Table: Motors used, wrap symbols

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	WV-14M
				SGMAV-02			
				SGMJV-04	400		
				SGMAV-04			
				SGMJV-06	600		
				SGMJV-08	750	□80	WZ-19M
				SGMAV-08			
		Σ-7		SGM7J-02	200	□60	WV-14M
				SGM7A-02			
				SGM7J-04	400		
				SGM7A-04			
				SGM7J-06	600		
				SGM7J-08	750	□80	WZ-19M
				SGM7A-08			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	WV-14M
				HG-MR23			
				HG-KR43	400		
				HG-MR43			
				HG-KR73	750	□80	WZ-19M
				HG-MR73			
			JN	HF-KN23	200	□60	WV-14M
				HF-KN43	400		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	WV-14M
				TS4609	400		
				TS4614	750	□80	WZ-19M
		TBL-iIV		TSM3202	200	□60	WV-14M
				TSM3204	400		
				TSM3303	600	□80	WZ-19M
				TSM3304	750		
	Panasonic Corporation	MINAS	A5	MSMD08	750	□80	W5-19M
				MSME08			
			A6	MSMF08			
				MHMF08			
	Keyence Corporation	SV		SV-M020	200	□60	WV-14M
				SV-M040	400		
				SV-M075	750	□80	WZ-19M
		SV2		SV2-M020	200	□60	WV-14M
				SV2-M040	400		
				SV2-M075	750	□80	WZ-19M
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	WV-14M
				R2AA06040	400		
				R2AA08075	750	□80	WZ-16M
	OMRON Corporation	OMNUC G5		R88M-K75030	750	□80	W5-19M
		1S		R88M-1M75030			

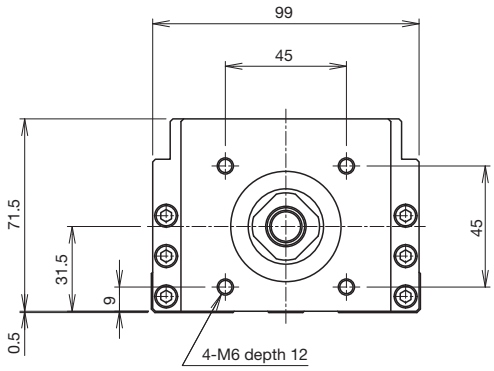
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 127), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

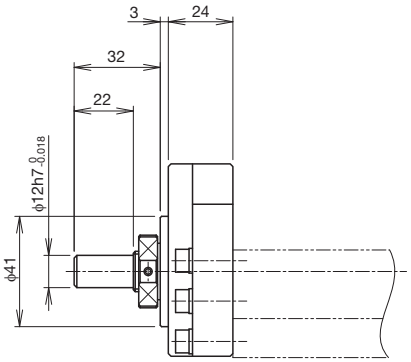
Wrap housing A

KR**
●◇

Actuator model
●: Housing A
◇: Intermediate flange

KR55
20





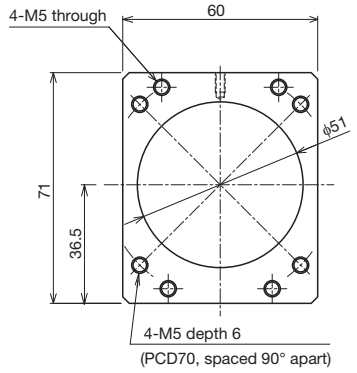
Wrap specification (intermediate flange)

KR**
W□

Actuator model
□: Intermediate flange

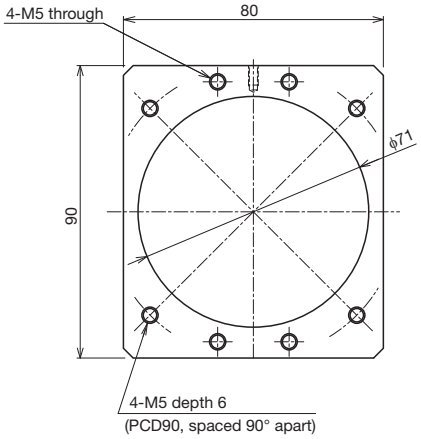
KR55
WV

Thickness: 6 mm



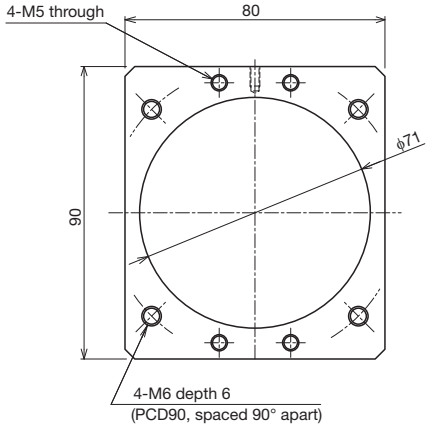
KR55
W5

Thickness: 6 mm



KR55
WZ

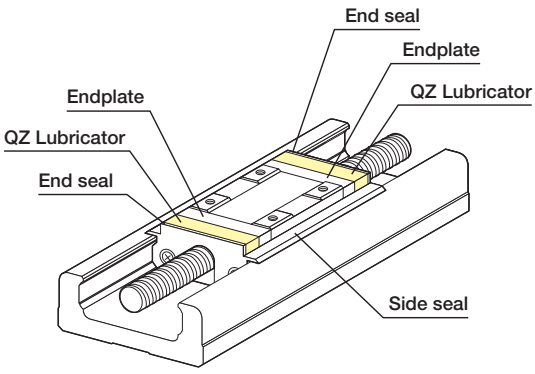
Thickness: 6 mm



Options

QZ Lubricator

The QZ Lubricator for KR feeds the right amount of lubricant to the outer rail and ball screw shaft raceways. This allows an oil film to be constantly formed between the balls and the raceway, and it significantly extends the lubrication maintenance interval.



Appearance

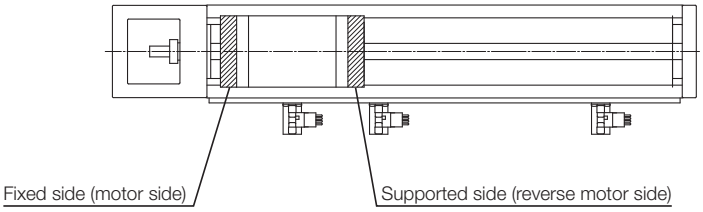
Features

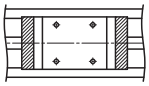
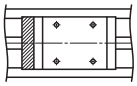
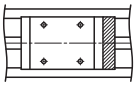
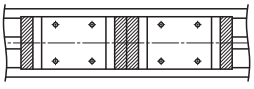
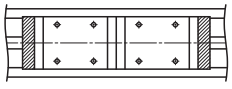
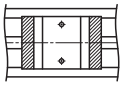
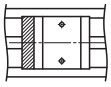
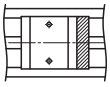
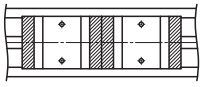
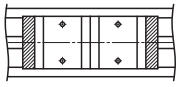
- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- It is an eco-friendly lubrication system that does not contaminate the surrounding area, as it feeds the right amount of lubricant to the ball raceway.

QZ Configuration

Symbol	Block type	Description
QZ	A/B/C/D	QZ all-block double-sided specification
QZA	A/C	QZ fixed side specification
QZB	A/C	QZ supported side specification
QZAD	B/D	QZ fixed side (drive side block) + QZ supported side (driven side block) specification

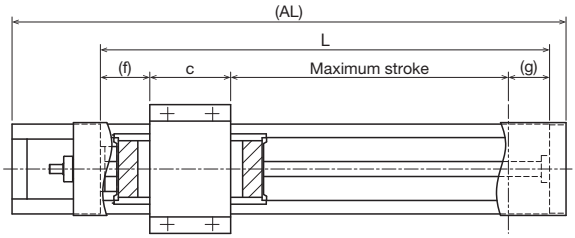
Note) QZ specification types do not have a grease nipple mounted. Contact THK if a grease nipple is required.



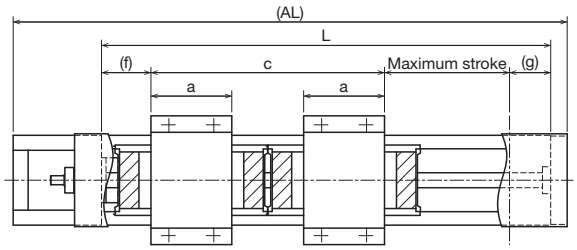
Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
B type (block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side
C type (short block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
D type (short block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side

Dimensions with QZ Lubricator

QZ (with cover)
Block type: A/B/C/D



Block type A/C



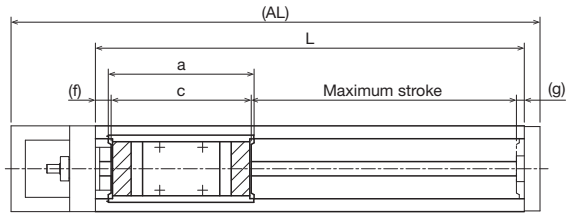
Block type B/D

Unit: mm

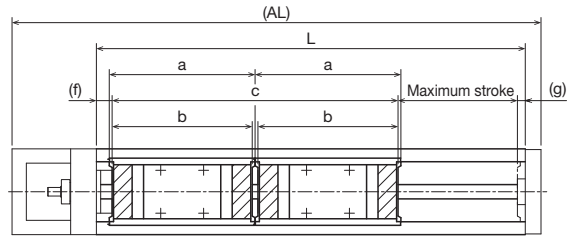
Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
A	1089	980	770	794	-	95.2	47.4	43.4
	1189	1080	870	894				
	1289	1180	970	994				
	1389	1280	1070	1094				
	1489	1380	1170	1194				
B	1089	980	615	634	95.2	255.2	47.4	43.4
	1189	1080	715	734				
	1289	1180	815	834				
	1389	1280	915	934				
	1489	1380	1015	1034				

[1] The value for B/D block types is with 2 blocks attached.

QZ (without cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

Unit: mm

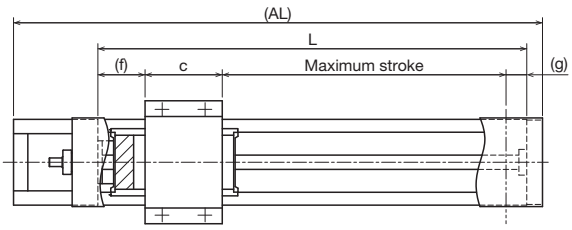
Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
A	1089	980	770	794	160	-	160	15	11
	1189	1080	870	894					
	1289	1180	970	994					
	1389	1280	1070	1094					
	1489	1380	1170	1194					
B	1089	980	615	634	160	160	320	15	11
	1189	1080	715	734					
	1289	1180	815	834					
	1389	1280	915	934					
	1489	1380	1015	1034					

[2] The value for B/D block types is with 2 blocks attached.

Options

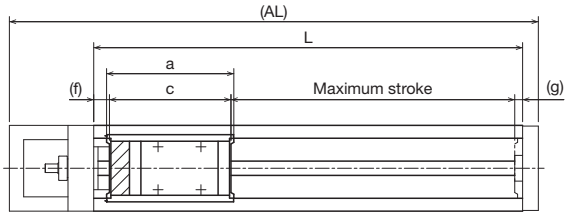
Dimensions with QZ Lubricator

QZA (with cover)
Block type: A/C



Block type A/C

QZA (without cover)
Block type: A/C



Block type A/C

QZA (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	1089	980	785	810	95.2	47.4	27.4
	1189	1080	885	910			
	1289	1180	985	1010			
	1389	1280	1085	1110			
	1489	1380	1185	1210			

Note 1) B/D block types cannot be selected for QZA.

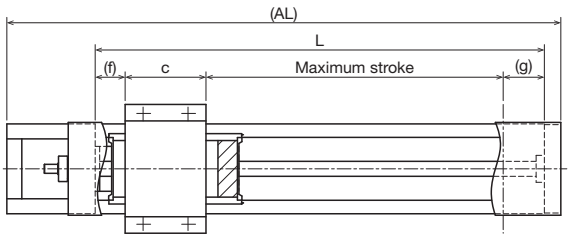
QZA (without cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	1089	980	785	810	144	144	15	11
	1189	1080	885	910				
	1289	1180	985	1010				
	1389	1280	1085	1110				
	1489	1380	1185	1210				

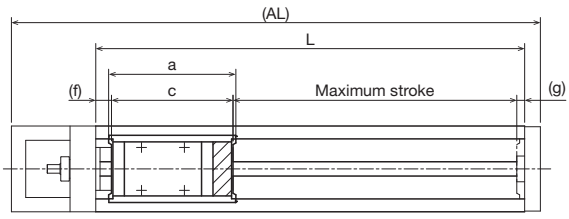
Note 2) B/D block types cannot be selected for QZA.

QZB (with cover)
Block type: A/C



Block type A/C

QZB (without cover)
Block type: A/C



Block type A/C

QZB (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	1089	980	785	810	95.2	31.4	43.4
	1189	1080	885	910			
	1289	1180	985	1010			
	1389	1280	1085	1110			
	1489	1380	1185	1210			

Note 3) B/D block types cannot be selected for QZB.

QZB (without cover)

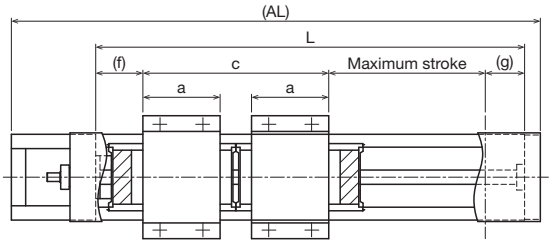
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	1089	980	785	810	144	144	15	11
	1189	1080	885	910				
	1289	1180	985	1010				
	1389	1280	1085	1110				
	1489	1380	1185	1210				

Note 4) B/D block types cannot be selected for QZB.

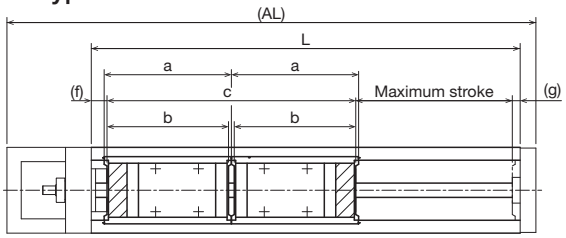
Dimensions with QZ Lubricator

QZAD (with cover)
Block type: B/D



Block type B/D

QZAD (without cover)
Block type: B/D



Block type B/D

QZAD (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
B	1089	980	650	666	95.2	223.2	47.4	43.4
	1189	1080	750	766				
	1289	1180	850	866				
	1389	1280	950	966				
	1489	1380	1050	1066				

[1] The value for B/D block types is with 2 blocks attached.
Note 1) A/C block types cannot be selected for QZAD.

QZAD (without cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
B	1089	980	650	666	144	144	288	15	11
	1189	1080	750	766					
	1289	1180	850	866					
	1389	1280	950	966					
	1489	1380	1050	1066					

[2] The value for B/D block types is with 2 blocks attached.
Note 2) A/C block types cannot be selected for QZAD.

KR65 A/B

Direct Motor Coupling | Motor Wrap | Main Unit Width 130 mm | Main Unit Height 65 mm | Stroke Max. 1490 mm

Model Configuration

Model (1)	Ball screw lead (2)	Block type (3)	QZ specification (4)	Stroke (5)	Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/ Intermediate flange (10)
KR65	25	A	QZA	0775	P	0	1	2	AZ
KR65	25: 25 mm	A: x 1	No symbol: Without QZ	0640: 640 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
		B: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
			QZA	1490: 1490 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AV
			QZB			For wrap		6	AZ
			QZAD			R1: Non-standard side wrap (without motor)		7	A5
						R2: Standard side wrap (without motor)		B	A6
						R3: Bottom side wrap (without motor)		E	30
						R4: Non-standard side wrap (Specified motor prepared and mounted by THK)		H	For wrap
						R5: Standard side wrap (Specified motor prepared and mounted by THK)		L	WV-14M
						R6: Bottom side wrap (Specified motor prepared and mounted by THK)		J	WZ-16M
								M	WZ-19M
									W5-19M

Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 157 to p. 160

When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 161 to p. 162

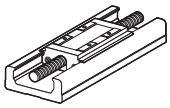
When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.

When selecting "1," "R4," "R5," or "R6": The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

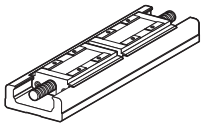
Sensor details → p. 151

For direct coupling → p. 153
For wrap → p. 155

(3) Block type

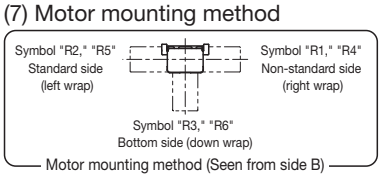


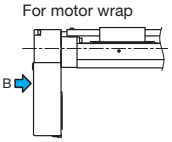
A: Block x 1 (A type)



B: Block x 2 (B type)

(7) Motor mounting method





Selection Materials

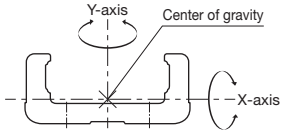
Basic Specifications

LM Guide	Basic dynamic load rating C (N)		50900
	Basic static load rating C_0 (N)		80900
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.008 to +0.004
		Precision grade (P)	-0.022 to -0.008
	Geometrical moment of inertia	I_X[1] (mm^4)	4.6×10^5
		I_Y[2] (mm^4)	5.9×10^6
		Weight (kg/m)	23.1
Ball screw	Ball screw lead (mm)		25
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	5680
		Precision grade (P)	5950
	Basic static load rating C_0a (N)	Normal grade/High accuracy grade (H)	14500
		Precision grade (P)	10700
	Screw shaft diameter (mm)		ϕ25
	Thread minor diameter (mm)		ϕ22
	Ball center-to-center diameter (mm)		ϕ26
	Permissible rotational speed[3] (min^{-1})	Normal grade/High accuracy grade (H)	1920
		Precision grade (P)	2690
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	13700
		Static permissible load P_0a (N)	5830
Permissible input torque (N·m)		Direct coupling	18.5
		Wrap[4]	7.2 (6.7)
Static permissible moment[5, 6] (N·m)			M_A: 1300 (7230), M_B: 1300 (7230), M_C: 3920 (7840)
Running life[7] (km)			10,000
Standard grease/Grease nipple used			THK AFB-LF Grease/A-M6F

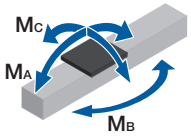
[1] I_X = Geometrical moment of inertia of area around the X-axis.
[2] I_Y = Geometrical moment of inertia of area around the Y-axis.
[3] Permissible rotational speed may decrease if the stroke is lengthened.
[4] The values in parentheses are for precision grade.
[5] The value in parentheses is with 2 blocks (B type) attached.
[6] See page 168 for the values if "1" or "2" is selected for item (8) in the model configuration.
[7] The conditions for calculation are as follows:
Stroke: 1190 mm (A type), 1040 mm (B type). Speed: 800 mm/s (for 25 mm lead). Load mass: maximum load capacity (see p. 9). Acceleration and deceleration rate: acceleration and deceleration rate when maximum load capacity is set (see p. 9). Center of gravity: center of the table upper surface.

Note 1) LM Guide load rating is the load rating per block.
Note 2) Precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke[8] 790	990	1190	1490
Normal grade (no symbol)	Positioning repeatability (mm)	±0.01			±0.012
	Positioning accuracy (mm)	Not specified			
	Running parallelism (vertical direction) (mm)	Not specified			
	Backlash (mm)	0.05			
	Starting torque (N·cm)	12			15

Accuracy grade	Item	Stroke[8] 790	990	1190	1490
High accuracy grade (H)	Positioning repeatability (mm)	±0.008			
	Positioning accuracy (mm)	0.18	0.2		0.28
	Running parallelism (vertical direction) (mm)	0.05			0.055
	Backlash (mm)	0.05			
	Starting torque (N·cm)	12			15

Accuracy grade	Item	Stroke[8] 790	990	1190
Precision grade (P)	Positioning repeatability (mm)	±0.005		
	Positioning accuracy (mm)	0.035		0.04
	Running parallelism (vertical direction) (mm)	0.025		0.03
	Backlash (mm)	0.005		
	Starting torque (N·cm)	20		22

[8] Stroke with 1 block (A type, without QZ).

Note 3) Precision evaluation in accordance with THK standards.
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.
Note 5) The starting torque represents the value when containing THK AFB-LF Grease.
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.
Note 7) Contact THK for accuracy higher than the standard stroke.

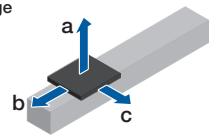
Motor Selection Specifications

Stroke[1] (mm)	Outer rail length (mm)	LM Guide				Ball screw		Motor mounting part	
		Weight of moving element (kg)			Sliding resistance value[2] (N)	Lead (mm)	Shaft length (mm)	Direct coupling	Wrap
		Block weight	Sub-table weight	Total weight				Shaft end diameter (mm)	Timing pulley (2 pieces total) Inertial moment x 10^{-4} (kg·m²)
790 to 1490	980 to 1680	A type 3.3 B type 6.6	A type 3.3 B type 6.6	A type 6.6 B type 13.2	10.1	25	1062 to 1762	ϕ15h7	2.081

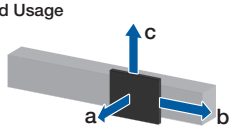
[1] Stroke with 1 block (A type, without QZ).
[2] Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.
Note) Refer to page 153 for applicable couplings.

Permissible Overhang Length[3]

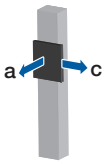
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	25	15	1300	430	830
			30.5	660	210	400
			61	300	100	200
	B type	25	13.5	1300	1300	1300
			27	1300	1300	920
			54.5	1300	690	450
Wrap	A type	25	9.5	1300	680	1300
			19.5	1060	330	640
			39.5	490	160	310
	B type	25	10.5	1300	1300	1300
			21.5	1300	1300	1160
			43.5	1300	860	570

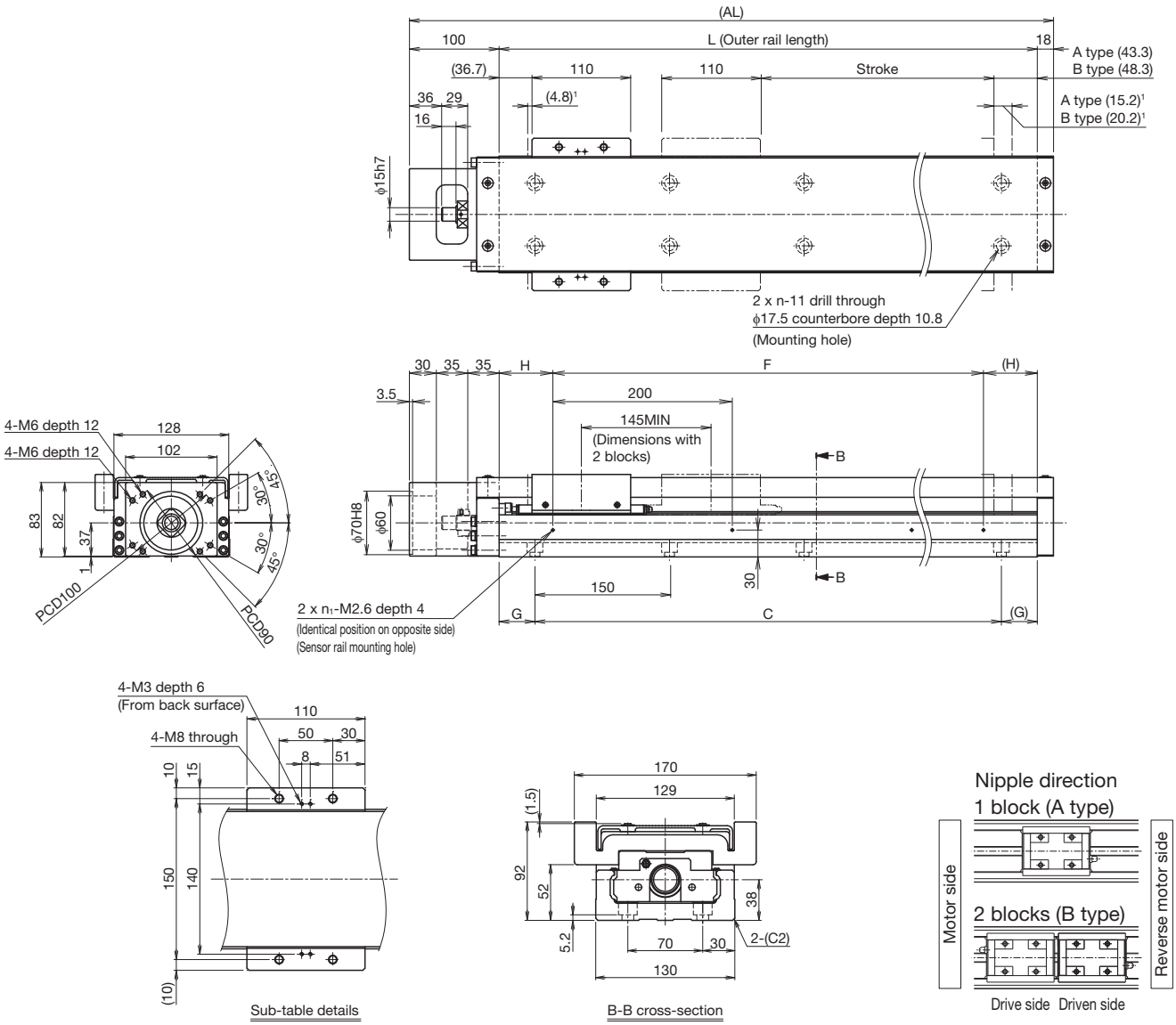
Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type	25	15	770	590	1300
			30.5	340	280	1280
			61	140	120	640
	B type	25	13.5	1300	1300	1300
			27	860	1190	1300
			54.5	390	590	1300
Wrap	A type	25	9.5	1260	940	1300
			19.5	570	450	1300
			39.5	250	210	980
	B type	25	10.5	1300	1300	1300
			21.5	1100	1300	1300
			43.5	510	740	1300

Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type	25	6	780	1300
			12	360	710
			24	150	330
	B type	25	5	1300	1300
			10.5	1300	1300
			21	1300	1180
Wrap	A type	25	4	1200	1300
			8	570	1060
			16.5	250	500
	B type	25	3.5	1300	1300
			7.5	1300	1300
			15.5	1300	1300

[3] Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.
Stroke: 1140 mm (A type), 990 mm (B type). Acceleration/deceleration rate: 0.3 G. Speed: 800 mm/s (for 25 mm lead). Overhang direction: Load in one direction only. Dimensions a, b, and c are the dimensions from the center of the table upper surface.

With cover
Direct motor coupling

Dimensions



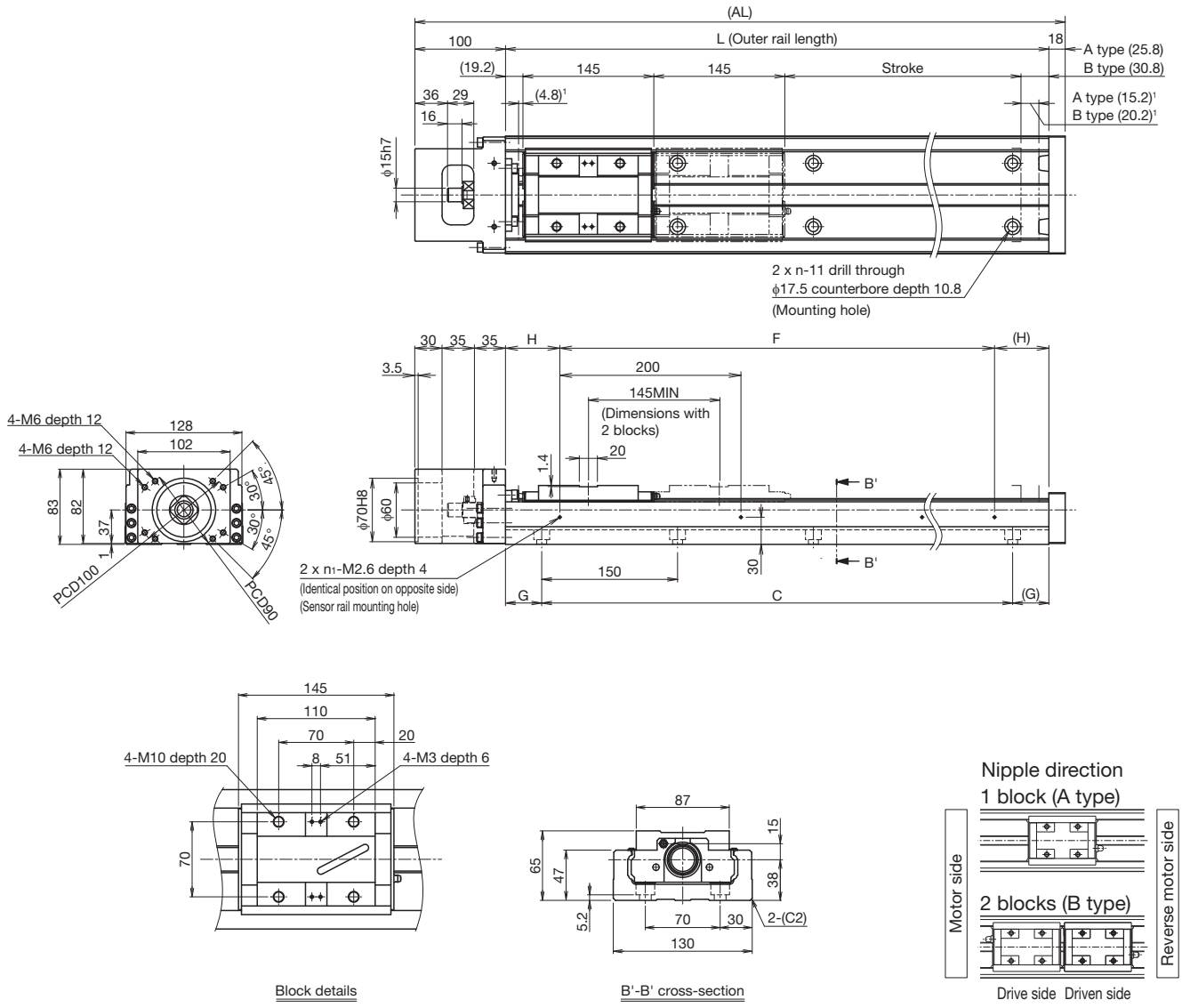
[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)						
	A type		790 (810)	990 (1010)	1190 (1210)	1490 (1510)
	B type[2]		640 (665)	840 (865)	1040 (1065)	1340 (1365)
Maximum speed[3] (mm/s)	Ball screw lead: 25 mm	Normal grade/high accuracy grade	800			550
		Precision grade	1120		840	-
Dimensions (mm)	AL		1098	1298	1498	1798
	L		980	1180	1380	1680
	C		900	1050	1200	1500
	G		40	65	90	90
	F		800	1000	1200	1600
	H		90	90	90	40
Mounting hole count	n		7	8	9	11
	n_1		5	6	7	9
Weight[4] (kg)			38.6	44.3	50	58.5

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 6.6 kg added.

Without cover
Direct motor coupling

Dimensions



Block details

B'-B' cross-section

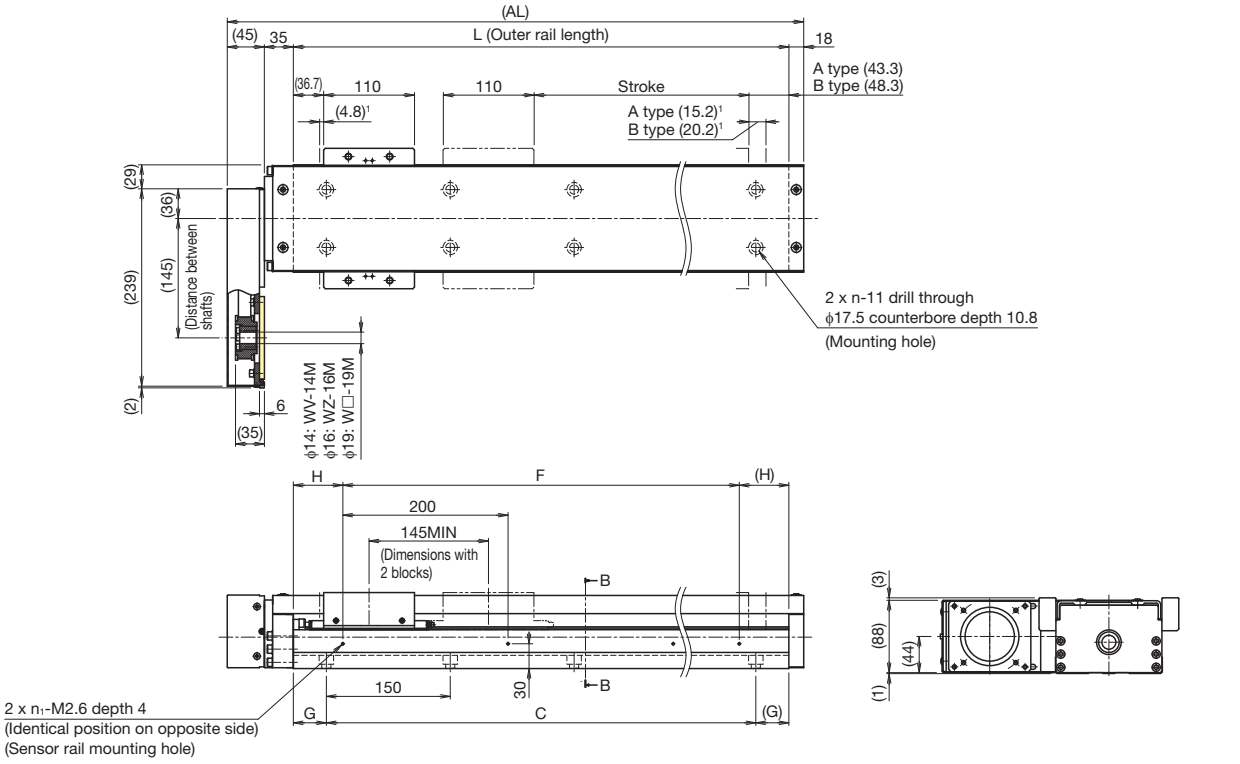
[1] Dimensions from the mechanical stopper to the stroke start position.

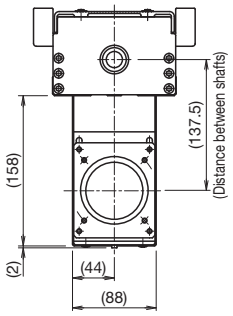
Stroke (mm) (Stroke between mechanical stoppers)	A type		790 (810)	990 (1010)	1190 (1210)	1490 (1510)
	B type[2]		640 (665)	840 (865)	1040 (1065)	1340 (1365)
Maximum speed[3] (mm/s)	Ball screw lead: 25 mm	Normal grade/high accuracy grade	800			550
		Precision grade	1120		840	-
Dimensions (mm)	AL		1098	1298	1498	1798
	L		980	1180	1380	1680
	C		900	1050	1200	1500
	G		40	65	90	90
	F		800	1000	1200	1600
	H		90	90	90	40
Mounting hole count	n		7	8	9	11
	n_1		5	6	7	9
Weight[4] (kg)			32.2	37.6	43	51.1

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 3.3 kg added.

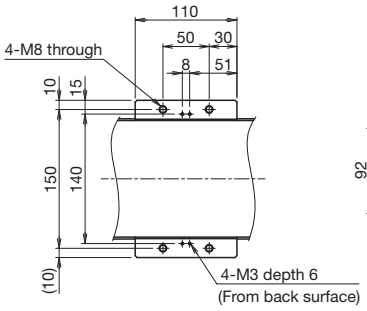
With cover
Motor wrap

Dimensions

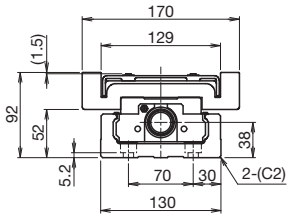




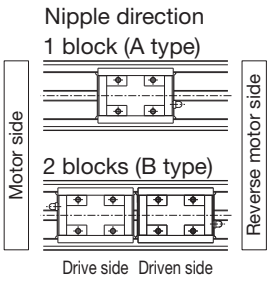
With bottom side wrap selected



Sub-table details



B-B cross-section



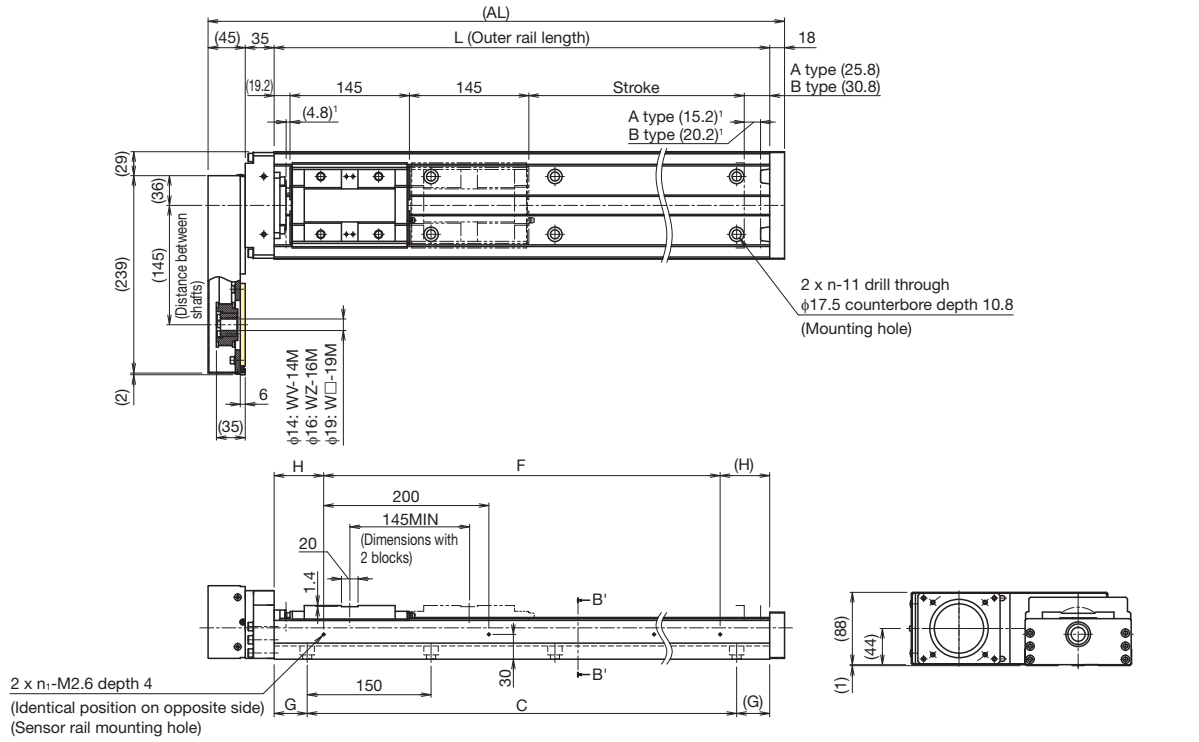
[1] Dimensions from the mechanical stopper to the stroke start position.

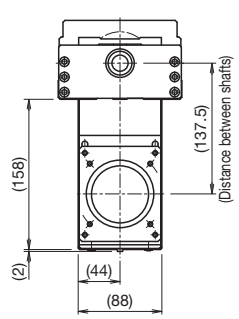
Stroke (mm) (Stroke between mechanical stoppers)	A type		790 (810)	990 (1010)	1190 (1210)	1490 (1510)
	B type[2]		640 (665)	840 (865)	1040 (1065)	1340 (1365)
Maximum speed[3] (mm/s)	Ball screw lead: 25 mm	Normal grade/high accuracy grade	800			550
		Precision grade	1120		840	-
Dimensions (mm)	AL		1078	1278	1478	1778
	L		980	1180	1380	1680
	C		900	1050	1200	1500
	G		40	65	90	90
	F		800	1000	1200	1600
	H		90	90	90	40
Mounting hole count	n		7	8	9	11
	n_1		5	6	7	9
Weight[4] (kg)			40.3	46	51.7	60.2

[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 6.6 kg added.

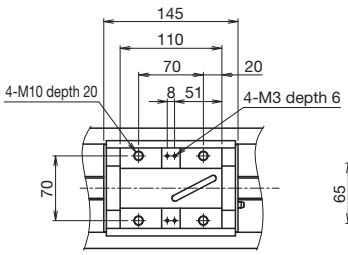
Without cover
Motor wrap

Dimensions

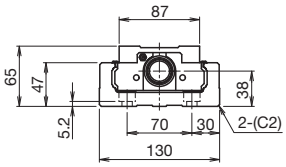




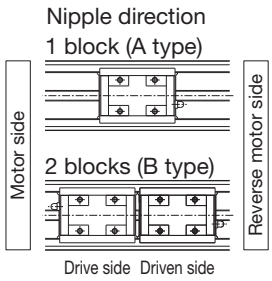
With bottom side wrap selected



Block details



B'-B' cross-section



[1] Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type		790 (810)	990 (1010)	1190 (1210)	1490 (1510)
	B type[2]		640 (665)	840 (865)	1040 (1065)	1340 (1365)
Maximum speed[3] (mm/s)	Ball screw lead: 25 mm	Normal grade/high accuracy grade	800			550
		Precision grade	1120		840	-
Dimensions (mm)	AL		1078	1278	1478	1778
	L		980	1180	1380	1680
	C		900	1050	1200	1500
	G		40	65	90	90
	F		800	1000	1200	1600
	H		90	90	90	40
Mounting hole count	n		7	8	9	11
	n_1		5	6	7	9
Weight[4] (kg)			33.9	39.3	44.7	52.7

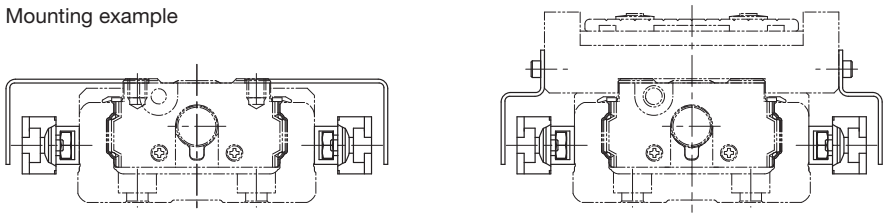
[2] The value with 2 blocks (B type, without QZ) attached.
[3] The maximum speed is limited by the actuator's permissible speed.
[4] The weight with 2 blocks (B type) has 3.3 kg added.

Options

Sensors

Optional photo sensors and proximity sensors are available. Sensor-equipped models also feature a dedicated sensor rail and sensor dog.
Sensors, sensor rails, and sensor dogs can be mounted on both sides when the stroke is less than 70 mm.

Mounting example

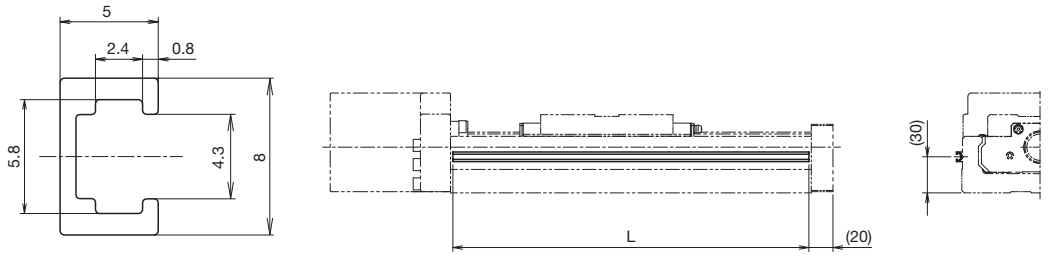


Symbol	Description	Model	Accessories
0	None	-	-
1	With sensor rail	-	Mounting screws, sensor rail (x1 or 2)
2	Photo sensor[1] (x3)	EE-SX671 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
6	Photo sensor[1] (x3)	EE-SX674 (OMRON Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2), mounting plates (x3), connectors (EE-1001 x3)
7	Proximity sensor NO contact[2] (x3)	APM-D3A1-001 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
B	Proximity sensor NC contact[3] (x3)	APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
E	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	APM-D3A1-001 (Azbil Corporation) APM-D3B1-003 (Azbil Corporation)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
H	Proximity sensor NO contact[2] (x3)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
L	Proximity sensor NC contact[3] (x3)	GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
J	Proximity sensor NO contact[2] (x1) NC contact[3] (x2)	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)
M	Proximity sensor NO contact[2] (x1) (PNP output) NC contact[3] (x2) (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screws, nuts, sensor dog (x1 or 2), sensor rail (x1 or 2)

[1] The photo sensors can be switched between ON when lit and ON when unlit.
[2] NO contact: Normally open contact point
[3] NC contact: Normally closed contact point
Note 1) If proximity sensors are placed too close to each other, they may not work properly. In this case, provide sensors with variant frequencies.
Note 2) Mounting of sensors other than those in the table above is possible. Contact THK for details.

Sensor Rail Mounting Dimensions

Mounting only a sensor rail is also possible.



Sensor rail details

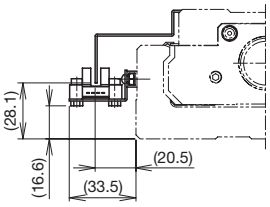
Stroke[4] (mm)	Outer rail length (mm)	L (mm)
790	980	976
990	1180	1176
1190	1380	1376
1490	1680	1676

[4] Stroke with 1 block (A type).

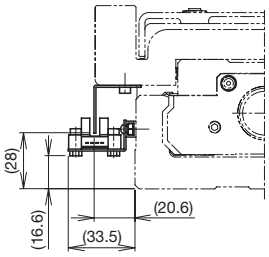
Photo Sensor Mounting Dimensions

Connector: EE-1001 (OMRON Corporation) x 3 pcs included.
To be mounted by the customer.

Without cover



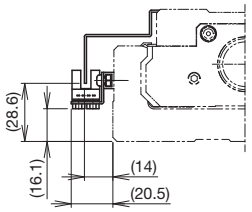
With cover



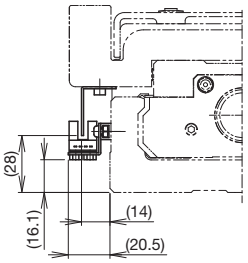
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 20 mm

Without cover



With cover

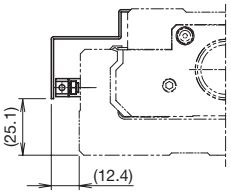


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

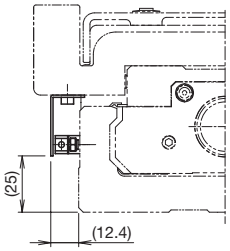
Sensor dog width: 20 mm

Proximity Sensor Mounting Dimensions

Without cover



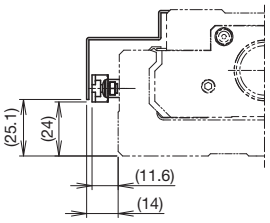
With cover



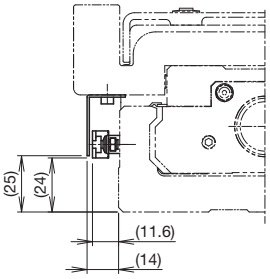
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 20 mm

Without cover



With cover



Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 20 mm

Options

Intermediate Flange (direct coupling)

Intermediate flanges are available to mount various kinds of motors.
When selecting "0" or "1" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Compatibility Table: Motors used, intermediate flanges, and couplings

Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Housing A Intermediate flange	Applicable coupling model	
								Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				SGMAV-02					
				SGMJV-04	400				
				SGMAV-04					
				SGMJV-06	600				XGT2-34C-14-15
				SGMJV-08	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
				SGMAV-08					
		Σ-7		SGM7J-02	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				SGM7A-02					
				SGM7J-04	400				
				SGM7A-04					
				SGM7J-06	600				XGT2-34C-14-15
				SGM7J-08	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
				SGM7A-08					
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				HG-MR23					
				HG-KR43	400				
				HG-MR43					
				HG-KR73	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
				HG-MR73					
			JN	HF-KN23	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				HF-KN43	400				
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				TS4609	400				
				TS4614	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
		TBL-iIV		TSM3202	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				TSM3204	400				
				TSM3303	600	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
				TSM3304	750				
	Panasonic Corporation	MINAS	A5	MSMD08	750	□80	A5	SFC-040DA2-15B-19B	XGT2-39C-15-19
				MSME08					
			A6	MSMF08	750	□80	A5	SFC-040DA2-15B-19B	XGT2-39C-15-19
				MHMF08					
	Keyence Corporation	SV		SV-M020	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				SV-M040	400				
				SV-M075	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
		SV2		SV2-M020	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				SV2-M040	400				
				SV2-M075	750	□80	AZ	SFC-040DA2-15B-19B	XGT2-39C-15-19
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				R2AA06040	400				
				R2AA08075	750	□80	AZ	SFC-040DA2-15B-16B	XGT2-39C-15-16
	OMRON Corporation	OMNUC G5		R88M-K75030	750	□80	A5	SFC-040DA2-15B-19B	XGT2-39C-15-19
		1S		R88M-1M75030	750	□80			

Motor type	Manufacturer	Series		Motor model	Flange angle	Housing A Intermediate flange	Applicable coupling model	
							Miki Pulley Co., Ltd.	Nabeya Bi-tech Kaisha (NBK)
Stepper motor	Oriental Motor Co. Ltd.	α step		AZ9*, AR9*	□85	A6	SFC-035DA2-14B-15B	XGT2-34C-14-15
		5-phase	RK II	RKS59*	□85	A6	SFC-035DA2-14B-15B	XGT2-34C-14-15

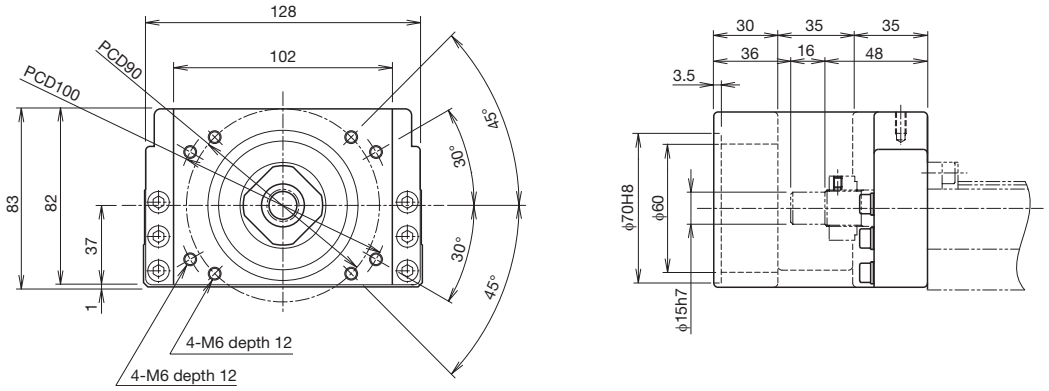
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 145), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

KR**
●◇

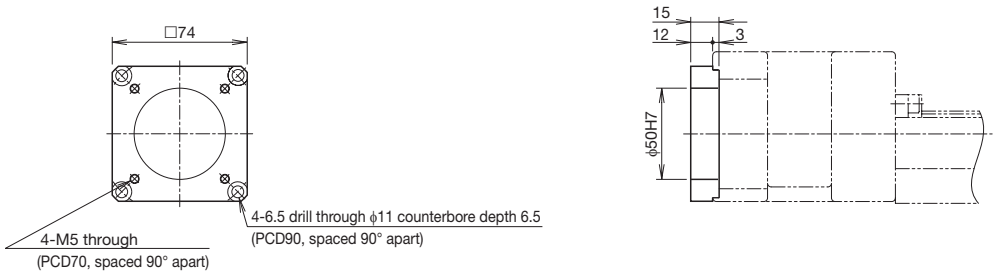
Actuator model
●: Housing A
◇: Intermediate flange

KR65
A0

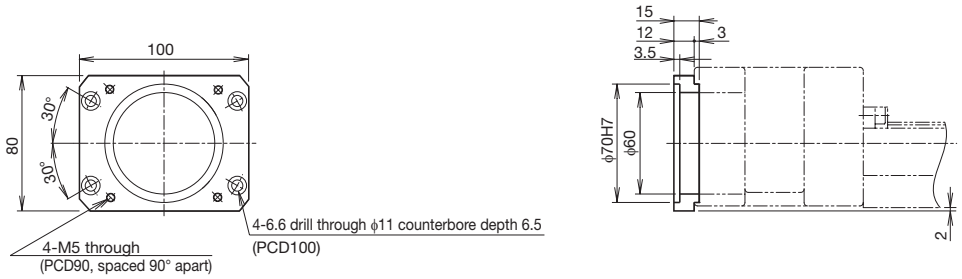


Intermediate flange

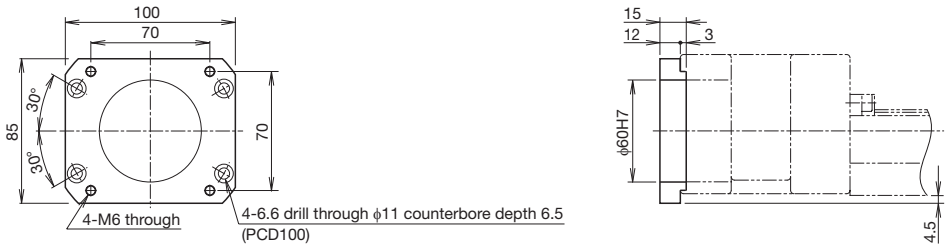
KR65
AV



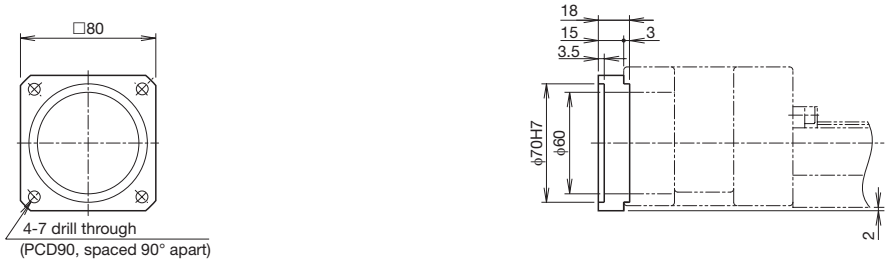
KR65
A5



KR65
A6



KR65
AZ



Options

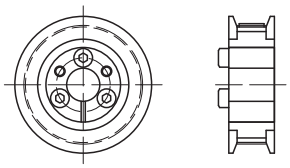
Intermediate Flange (wrap)

Intermediate flanges are available to mount various kinds of motors.
When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (7) With/without motor, specify the intermediate flange suited to your motor.

Symbol configuration

Wrap symbol (1)	Intermediate flange (2)		Motor shaft diameter (mm) (3)	Motor shaft fixing method (4)
W	Z	-	19	M
W	Refer to the Compatibility Table: Motors used, wrap symbols below.		Specify a motor shaft diameter. (Refer to the Compatibility Table: Motors used, wrap symbols below.)	M: Friction tightening tool

Motor shaft fixing method



Friction tightening tool

Compatibility Table: Motors used, wrap symbols

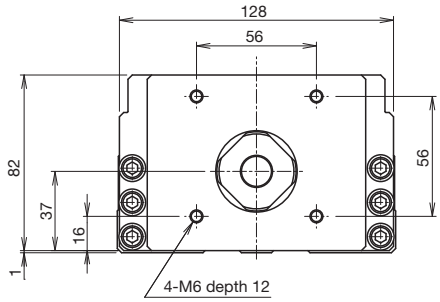
Motor type	Manufacturer	Series		Motor model	Motor rated output (W)	Flange angle	Wrap symbol
AC servo motor	Yaskawa Electric Corporation	Σ-V		SGMJV-02	200	□60	WV-14M
				SGMAV-02			
				SGMJV-04	400		
				SGMAV-04			
				SGMJV-06	600		
				SGMJV-08	750	□80	WZ-19M
				SGMAV-08			
		Σ-7		SGM7J-02	200	□60	WV-14M
				SGM7A-02			
				SGM7J-04	400		
				SGM7A-04			
				SGM7J-06	600		
				SGM7J-08	750	□80	WZ-19M
				SGM7A-08			
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR23	200	□60	WV-14M
				HG-MR23			
				HG-KR43	400		
				HG-MR43			
				HG-KR73	750	□80	WZ-19M
				HG-MR73			
			JN	HF-KN23	200	□60	WV-14M
				HF-KN43	400		
	Tamagawa Seiki Co., Ltd.	TBL-iII		TS4607	200	□60	WV-14M
				TS4609	400		
				TS4614	750	□80	WZ-19M
		TBL-iIV		TSM3202	200	□60	WV-14M
				TSM3204	400		
				TSM3303	600	□80	WZ-19M
				TSM3304	750		
	Panasonic Corporation	MINAS	A5	MSMD08	750	□80	W5-19M
				MSME08			
			A6	MSMF08			
				MHMF08			
	Keyence Corporation	SV		SV-M020	200	□60	WV-14M
				SV-M040	400		
				SV-M075	750	□80	WZ-19M
		SV2		SV2-M020	200	□60	WV-14M
				SV2-M040	400		
				SV2-M075	750	□80	WZ-19M
	Sanyo Denki Co., Ltd.	SANMOTION R		R2□A06020	200	□60	WV-14M
				R2AA06040	400		
				R2AA08075	750	□80	WZ-16M
	OMRON Corporation	OMNUC G5		R88M-K75030	750	□80	W5-19M
		1S		R88M-1M75030			

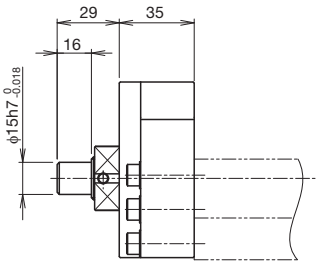
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 145), establish safety measures to limit torque.
Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

KR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Wrap housing A

KR65
30



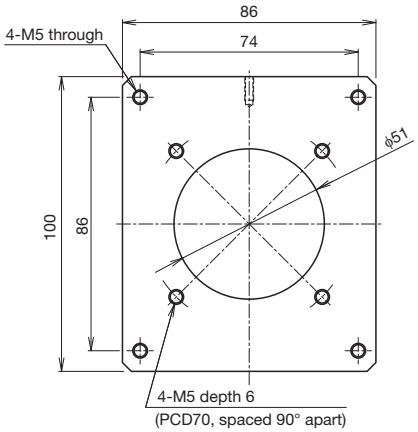


KR**	Actuator model
W□	□: Intermediate flange

Wrap specification (intermediate flange)

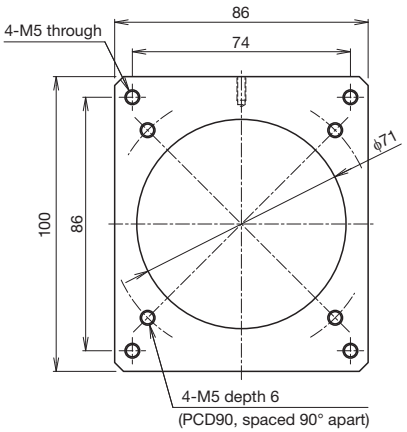
KR65
WV

Thickness: 6 mm



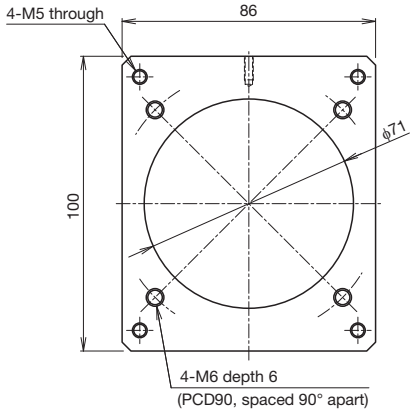
KR65
W5

Thickness: 6 mm



KR65
WZ

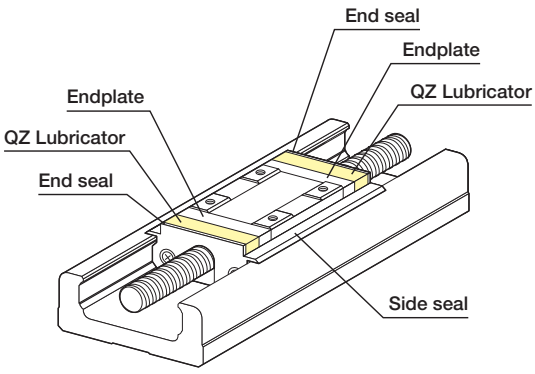
Thickness: 6 mm



Options

QZ Lubricator

The QZ Lubricator for KR feeds the right amount of lubricant to the outer rail and ball screw shaft raceways. This allows an oil film to be constantly formed between the balls and the raceway, and it significantly extends the lubrication maintenance interval.



Appearance

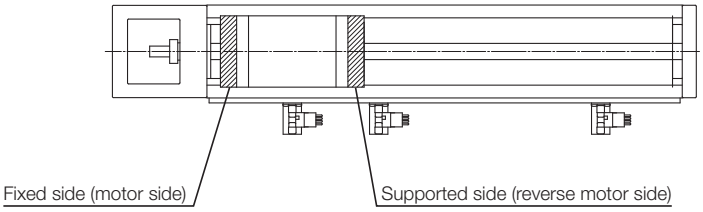
Features

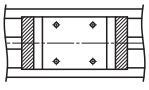
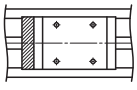
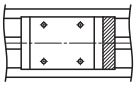
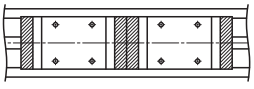
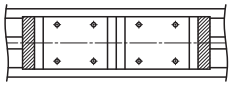
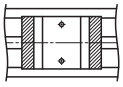
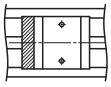
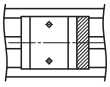
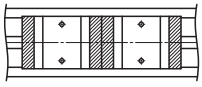
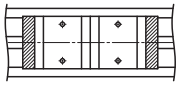
- Since it compensates for oil loss, the lubrication maintenance interval can be significantly extended.
- It is an eco-friendly lubrication system that does not contaminate the surrounding area, as it feeds the right amount of lubricant to the ball raceway.

QZ Configuration

Symbol	Block type	Description
QZ	A/B/C/D	QZ all-block double-sided specification
QZA	A/C	QZ fixed side specification
QZB	A/C	QZ supported side specification
QZAD	B/D	QZ fixed side (drive side block) + QZ supported side (driven side block) specification

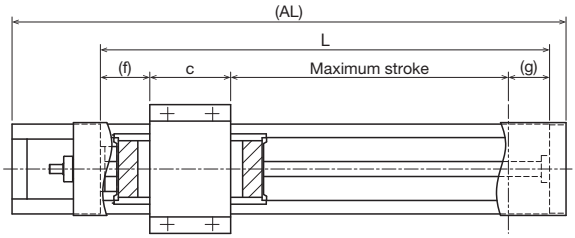
Note) QZ specification types do not have a grease nipple mounted. Contact THK if a grease nipple is required.



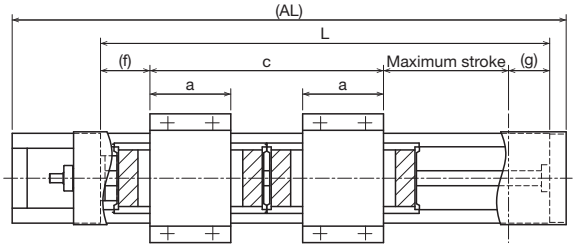
Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
B type (block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side
C type (short block x 1)	 Fixed side / Supported side	 Fixed side / Supported side	 Fixed side / Supported side	-
D type (short block x 2)	 Fixed side / Supported side	-	-	 Fixed side / Supported side

Dimensions with QZ Lubricator

QZ (with cover)
Block type: A/B/C/D



Block type A/C



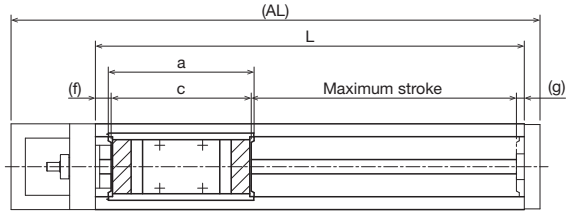
Block type B/D

Unit: mm

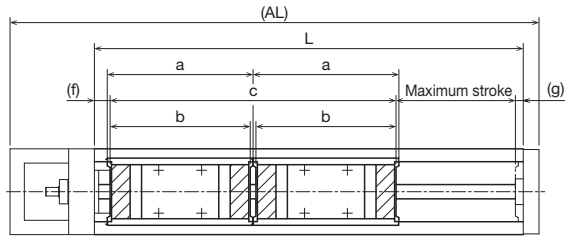
Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
A	1098	980	760	778	-	110	47.9	44.1
	1298	1180	960	978				
	1498	1380	1160	1178				
	1798	1680	1460	1478				
B	1098	980	580	601	110	287	47.9	44.1
	1298	1180	780	801				
	1498	1380	980	1001				
	1798	1680	1280	1301				

[1] The value for B/D block types is with 2 blocks attached.

QZ (without cover)
Block type: A/B/C/D



Block type A/C



Block type B/D

Unit: mm

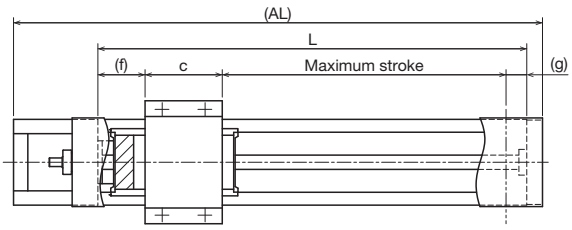
Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
A	1098	980	760	778	177	-	177	14.4	10.6
	1298	1180	960	978					
	1498	1380	1160	1178					
	1798	1680	1460	1478					
B	1098	980	580	601	177	177	354	14.4	10.6
	1298	1180	780	801					
	1498	1380	980	1001					
	1798	1680	1280	1301					

[2] The value for B/D block types is with 2 blocks attached.

Options

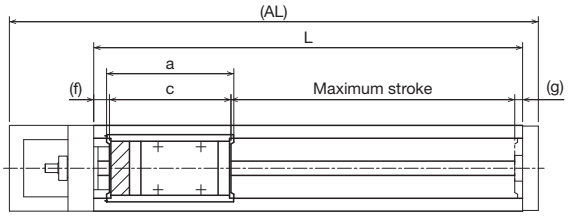
Dimensions with QZ Lubricator

QZA (with cover)
Block type: A/C



Block type A/C

QZA (without cover)
Block type: A/C



Block type A/C

QZA (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	1098	980	775	794	110	47.9	28.1
	1298	1180	975	994			
	1498	1380	1175	1194			
	1798	1680	1475	1494			

Note 1) B/D block types cannot be selected for QZA.

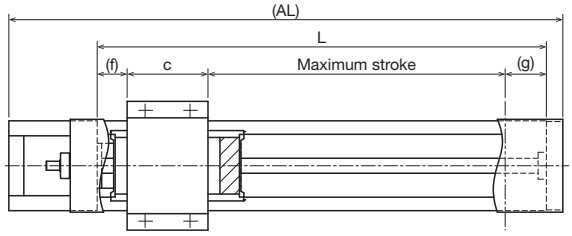
QZA (without cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	1098	980	775	794	161	161	14.4	10.6
	1298	1180	975	994				
	1498	1380	1175	1194				
	1798	1680	1475	1494				

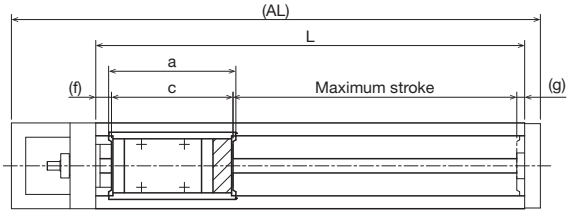
Note 2) B/D block types cannot be selected for QZA.

QZB (with cover)
Block type: A/C



Block type A/C

QZB (without cover)
Block type: A/C



Block type A/C

QZB (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	c	f	g
A	1098	980	775	794	110	31.9	44.1
	1298	1180	975	994			
	1498	1380	1175	1194			
	1798	1680	1475	1494			

Note 3) B/D block types cannot be selected for QZB.

QZB (without cover)

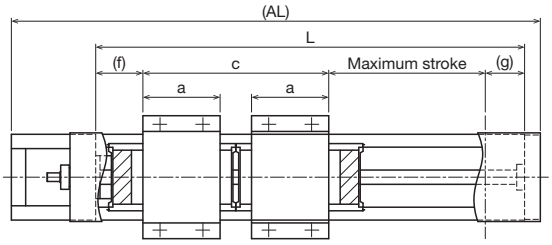
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	1098	980	775	794	161	161	14.4	10.6
	1298	1180	975	994				
	1498	1380	1175	1194				
	1798	1680	1475	1494				

Note 4) B/D block types cannot be selected for QZB.

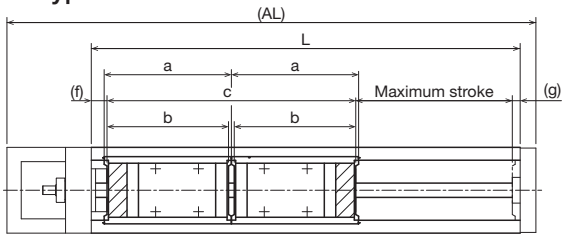
Dimensions with QZ Lubricator

QZAD (with cover)
Block type: B/D



Block type B/D

QZAD (without cover)
Block type: B/D



Block type B/D

QZAD (with cover)

Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke[1]	Maximum stroke[1]	a	c	f	g
B	1098	980	610	633	110	255	47.9	44.1
	1298	1180	810	833				
	1498	1380	1010	1033				
	1798	1680	1310	1333				

[1] The value for B/D block types is with 2 blocks attached.
Note 1) A/C block types cannot be selected for QZAD.

QZAD (without cover)

Unit: mm

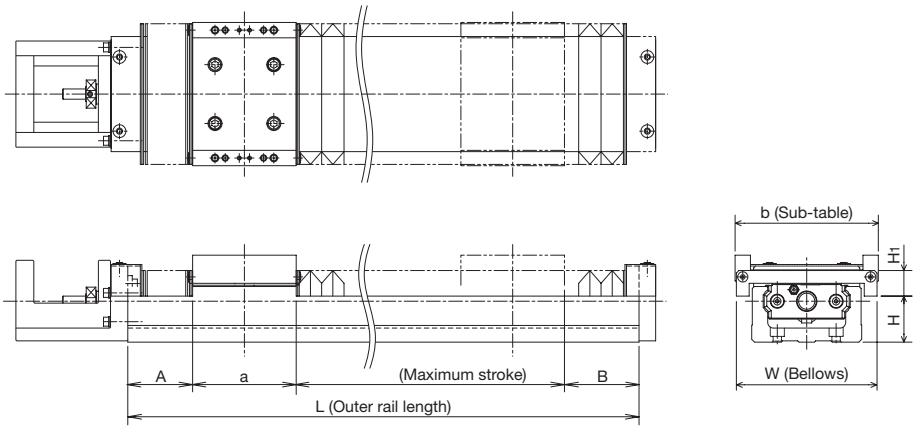
Block type	Overall length AL	Outer rail length L	Stroke[2]	Maximum stroke[2]	a	b	c	f	g
B	1098	980	610	633	161	161	322	14.4	10.6
	1298	1180	810	833					
	1498	1380	1010	1033					
	1798	1680	1310	1333					

[2] The value for B/D block types is with 2 blocks attached.
Note 2) A/C block types cannot be selected for QZAD.

Bellows

In addition to a cover, bellows are available for the KR for dust-proofing purposes.

KR-A (block x 1)

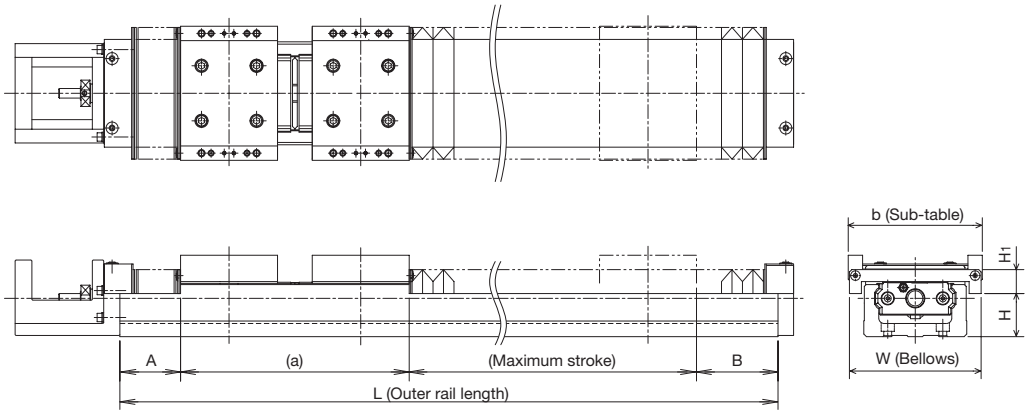


Unit: mm

Model	Stroke	Maximum stroke	Outer rail length L	A	B	a	b	W	H	H_1
KR15	15	22.2	75	15.8	14	23	44	49	8	15.5
	30	37.2	100	20.8	19					
	45	52.2	125	25.8	24					
	60	67.2	150	30.8	29					
	75	82.2	175	35.8	34					
	90	97.2	200	40.8	39					
KR20	20	30.8	100	18.8	17.2	33.2	52	60	10	20
	55	67.8	150	25.3	23.7					
	80	93.6	200	37	36.2					
KR26	50	61.3	150	23.7	17.6	47.4	62	74	18	20
	80	91.6	200	32.8	28.2					
	110	125.6	250	40.8	36.2					
	160	175.6	300	40.8	36.2					
KR30H	30	42	150	28.5	25.5	54	80	80	21.5	17.5
	60	72	200	38.5	35.5					
	130	142	300	53.5	50.5					
	200	212	400	68.5	65.5					
	270	282	500	83.5	80.5					
	340	352	600	98.5	95.5					
KR33	30	42	150	28.4	25.6	54	86	84	24.5	20
	70	82	200	33.4	30.6					
	150	162	300	43.4	40.6					
	220	232	400	58.4	55.6					
	300	312	500	68.4	65.6					
	370	382	600	83.4	80.6					
	450	462	700	93.4	90.6					
KR45H	160	177	340	41.1	40.9	81	104	104	28	28
	240	255	440	52.1	51.9					
	320	339	540	60.1	59.9					
	400	423	640	68.1	67.9					
	470	491	740	84.1	83.9					
	550	575	840	92.1	91.9					
	640	659	940	100.1	99.9					
KR46	140	155	340	52.9	51.1	81	112	110	36	20
	210	225	440	67.9	66.1					
	290	305	540	77.9	76.1					
	360	375	640	92.9	91.1					
	440	455	740	102.9	101.1					
	510	525	840	117.9	116.1					
	590	605	940	127.9	126.1					
KR55[1]	700	719.6	980	84.6	80.6	95.2	124	154	37	40
	790	809.6	1080	89.6	85.6					
	870	889.6	1180	99.6	95.6					
	960	979.6	1280	104.6	100.6					
	1050	1069.6	1380	109.6	105.6					
KR65[1]	680	703.2	980	85.1	81.7	110	170	184	40	47
	860	883.2	1180	95.1	91.7					
	1030	1053.2	1380	110.1	106.7					
	1290	1313.2	1680	130.1	126.7					

[1] KR55/65 bellows are only supported in a horizontal orientation. Contact THK if using in an orientation other than horizontal (vertical or wall-mounted).

KR-B (block x 2)

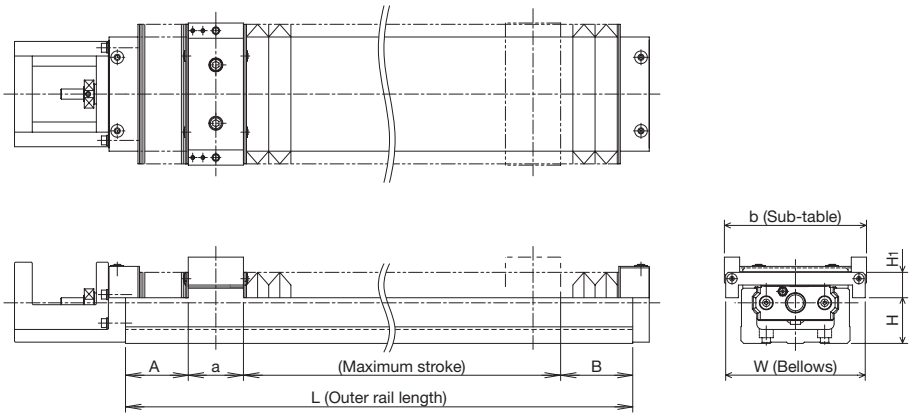


Unit: mm

Model	Stroke[1]	Maximum stroke[1]	Outer rail length L	A	B	a[1]	b	W	H	H_1
KR15	20	29.2	125	20.8	19	56	44	49	8	15.5
	35	44.2	150	25.8	24					
	50	59.2	175	30.8	29					
	65	74.2	200	35.8	34					
KR20	25	34.8	150	18.8	17.2	79.2	52	60	10	20
	60	71.8	200	25.3	23.7					
KR26	35	47.3	200	23.7	17.6	111.4	62	74	18	20
	65	77.6	250	32.8	28.2					
	115	127.6	300	32.8	28.2					
KR30H	85	97.6	300	38.5	35.5	128.4	80	80	21.5	17.5
	155	167.6	400	53.5	50.5					
	225	237.6	500	68.5	65.5					
	295	307.6	600	83.5	80.5					
KR33	80	96	300	38.4	35.6	130	86	84	24.5	20
	160	176	400	48.4	45.6					
	240	256	500	58.4	55.6					
	310	326	600	73.4	70.6					
	390	406	700	83.4	80.6					
KR45H	80	95	340	28.1	27.9	189	104	104	28	28
	155	170.5	440	41.1	39.4					
	230	247	540	52.1	51.9					
	310	331	640	60.1	59.9					
	400	415	740	68.1	67.9					
	465	483	840	84.1	83.9					
	550	567	940	92.1	91.9					
KR46	60	75	340	37.9	36.1	191	112	110	36	20
	130	145	440	52.9	51.1					
	210	225	540	62.9	61.1					
	280	295	640	77.9	76.1					
	360	375	740	87.9	86.1					
	430	445	840	102.9	101.1					
	510	525	940	112.9	111.1					
KR55[2]	590	612	980	74.6	70.6	222.8	124	154	37	40
	670	692	1080	84.6	80.6					
	760	782	1180	89.6	85.6					
	850	872	1280	94.6	90.6					
	930	952	1380	104.6	100.6					
KR65[2]	550	578.6	980	75.1	71.7	254.6	170	184	40	47
	720	748.6	1180	90.1	86.7					
	900	928.6	1380	100.1	96.7					
	1160	1188.6	1680	120.1	116.7					

[1] The value with 2 blocks (B type) attached.
[2] KR55/65 bellows are only supported in a horizontal orientation. Contact THK if using in an orientation other than horizontal (vertical or wall-mounted).
Note) Bellows cannot be attached between sub-tables.

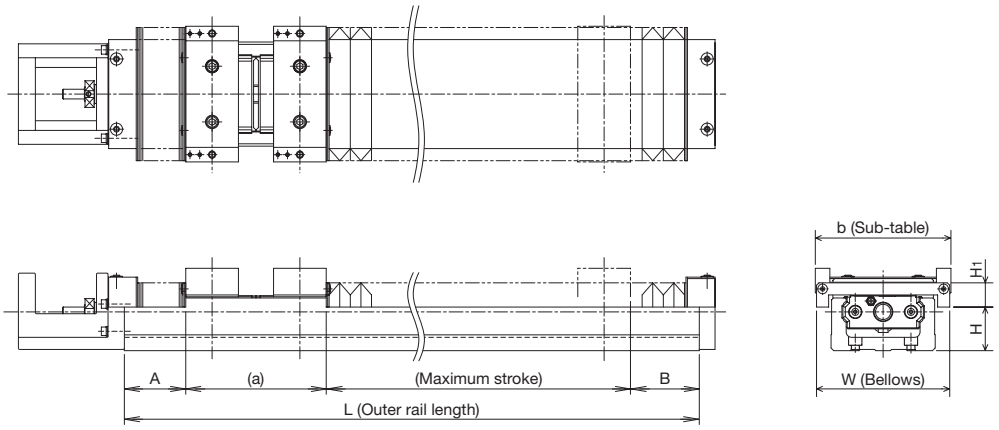
KR-C (short block x 1)



Unit: mm

Model	Stroke	Maximum stroke	Outer rail length L	A	B	a	b	W	H	H_1
KR30H	45	57.5	150	33.5	30.5	28.5	80	80	21.5	17.5
	85	97.5	200	38.5	35.5					
	155	167.5	300	53.5	50.5					
	225	237.5	400	68.5	65.5					
	295	307.5	500	83.5	80.5					
	365	377.5	600	98.5	95.5					
KR33	55	67.5	150	28.4	25.6	28.5	86	84	24.5	20
	95	107.5	200	33.4	30.6					
	165	177.5	300	48.4	45.6					
	245	257.5	400	58.4	55.6					
	315	327.5	500	73.4	70.6					
	395	407.5	600	83.4	80.6					
	465	477.5	700	98.4	95.6					
KR45H	190	208.5	340	44.1	43.9	43.5	104	104	28	28
	275	292.5	440	52.1	51.9					
	340	360.5	540	68.1	67.9					
	425	444.5	640	76.1	75.9					
	510	528.5	740	84.1	83.9					
	580	596.5	840	100.1	99.9					
	660	680.5	940	108.1	107.9					
KR46	170	182.5	340	57.9	56.1	43.5	112	110	36	20
	240	252.5	440	72.9	71.1					
	320	332.5	540	82.9	81.1					
	390	402.5	640	97.9	96.1					
	470	482.5	740	107.9	106.1					
	540	552.5	840	122.9	121.1					
	620	632.5	940	132.9	131.1					

KR-D (short block x 2)



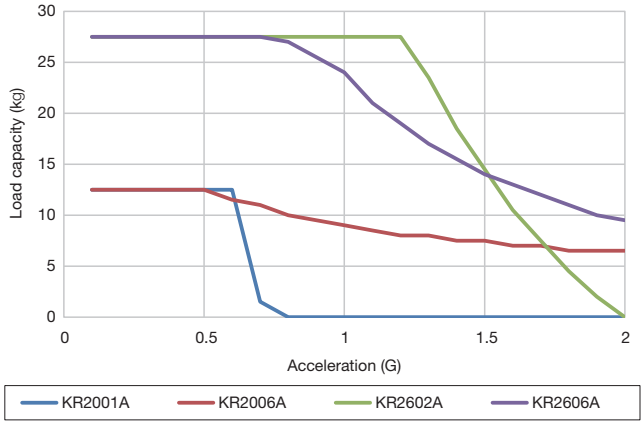
Unit: mm

Model	Stroke[1]	Maximum stroke[1]	Outer rail length L	A	B	a[1]	b	W	H	H_1
KR30H	15	28.6	150	23.5	20.5	77.4	80	80	21.5	17.5
	45	58.6	200	33.5	30.5					
	115	128.6	300	48.5	45.5					
	185	198.6	400	63.5	60.5					
	255	268.6	500	78.5	75.5					
	325	338.6	600	93.5	90.5					
KR33	55	67	200	28.4	25.6	79	86	84	24.5	20
	125	137	300	43.4	40.6					
	205	217	400	53.4	50.6					
	275	287	500	68.4	65.6					
	355	367	600	78.4	75.6					
	425	437	700	93.4	90.6					
KR45H	140	154	340	36.1	35.9	114	104	104	28	28
	220	238	440	44.1	43.9					
	290	306	540	60.1	59.9					
	370	390	640	68.1	67.9					
	455	474	740	76.1	75.9					
	525	542	840	92.1	91.9					
	605	626	940	100.1	99.9					
KR46	110	130	340	47.9	46.1	116	112	110	36	20
	180	200	440	62.9	61.1					
	260	280	540	72.9	71.1					
	330	350	640	87.9	86.1					
	410	430	740	97.9	96.1					
	480	500	840	112.9	111.1					
	560	580	940	122.9	121.1					

[1] The value with 2 short blocks (D type) attached.
Note) Bellows cannot be attached between sub-tables.

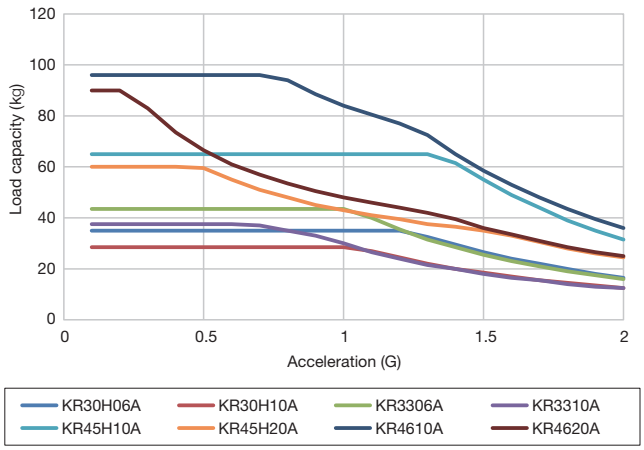
Maximum Load Capacity Guidelines by Acceleration

Horizontal



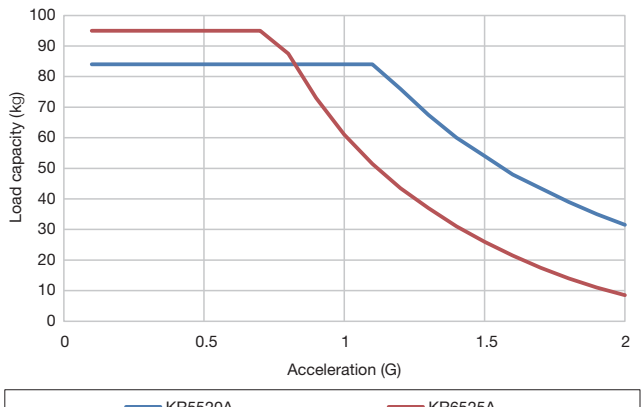
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR2001A	12.5	12.5	12.5	-	-	-
KR2006A	12.5	12.5	12.5	9	7.5	6.5
KR2602A	27.5	27.5	27.5	27.5	14.5	-
KR2606A	27.5	27.5	27.5	24	14	9.5



Unit: kg

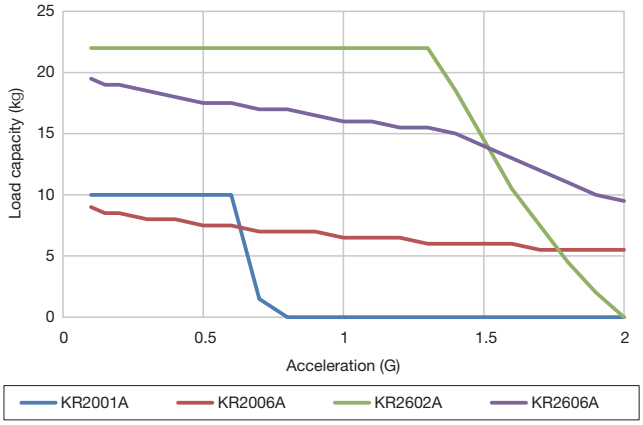
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR30H06A	35	35	35	35	26.5	16.5
KR30H10A	28.5	28.5	28.5	28.5	18.5	12.5
KR3306A	43.5	43.5	43.5	43.5	25.5	16
KR3310A	37.5	37.5	37.5	30	18	12.5
KR45H10A	65	65	65	65	55	31.5
KR45H20A	60	60	59.5	43	35	24.5
KR4610A	96	96	96	84	58.5	36
KR4620A	90	83	66.5	48	36	25



Unit: kg

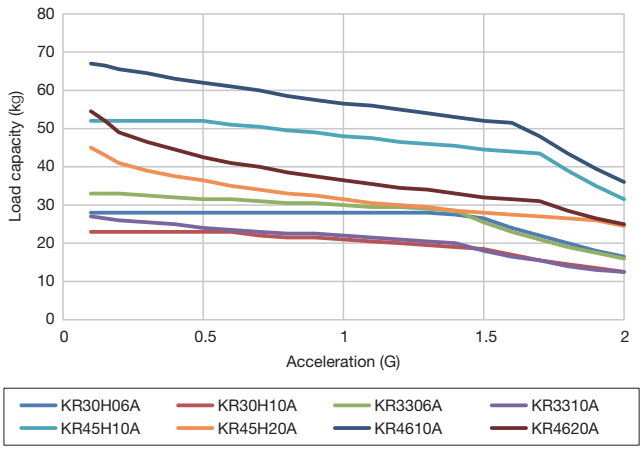
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR5520A	84	84	84	84	54	31.5
KR6525A	95	95	95	61	26	8.5

Wall-Mounted



Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR2001A	10	10	10	-	-	-
KR2006A	8.5	8	7.5	6.5	6	5.5
KR2602A	22	22	22	22	14.5	-
KR2606A	19	18.5	17.5	16	14	9.5



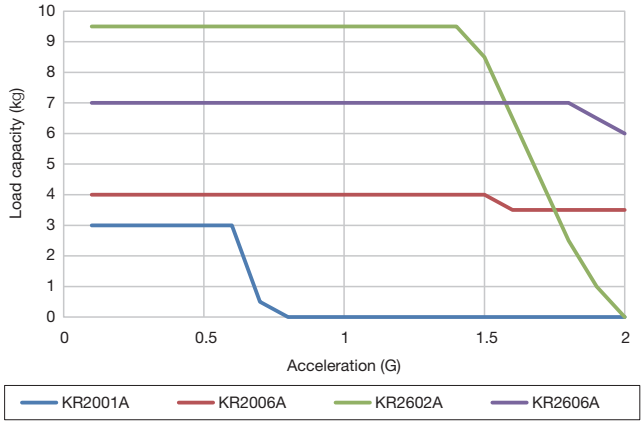
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR30H06A	28	28	28	28	26.5	16.5
KR30H10A	23	23	23	21	18.5	12.5
KR3306A	33	32.5	31.5	30	25.5	16
KR3310A	26.5	25.5	24	22	18	12.5
KR45H10A	52	52	52	48	44.5	31.5
KR45H20A	43	39	36.5	31.5	28	24.5
KR4610A	66.5	64.5	62	56.5	52	36
KR4620A	52	46.5	42.5	36.5	32	25

Unit: kg

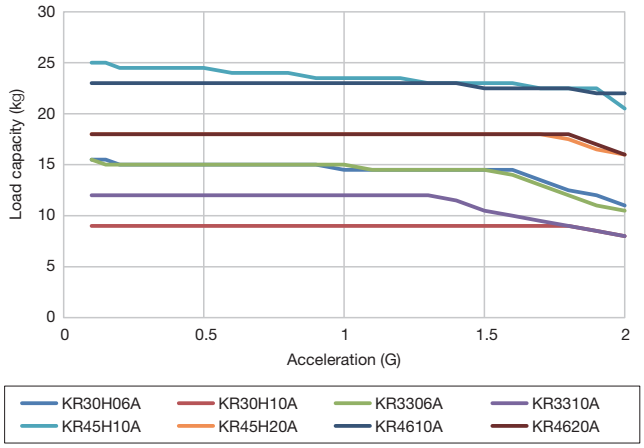
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR5520A	84	84	83	75	54	31.5
KR6525A	95	95	95	61	26	8.5

Vertical



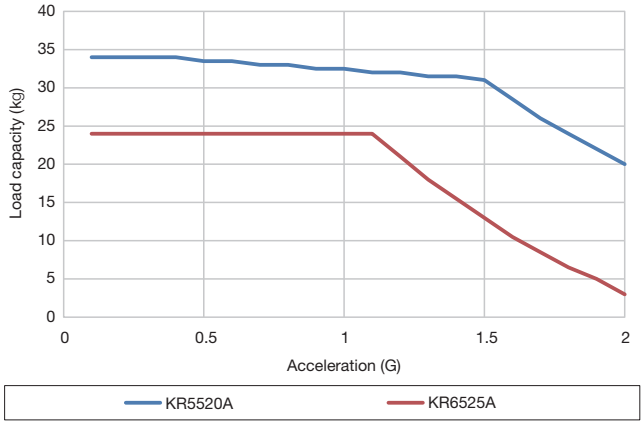
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR2001A	3	3	3	-	-	-
KR2006A	4	4	4	4	4	3.5
KR2602A	9.5	9.5	9.5	9.5	8.5	-
KR2606A	7	7	7	7	7	6



Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR30H06A	15.5	15	15	14.5	14.5	11
KR30H10A	9	9	9	9	9	8
KR3306A	15	15	15	15	14.5	10.5
KR3310A	12	12	12	12	10.5	8
KR45H10A	25	24.5	24.5	23.5	23	20.5
KR45H20A	18	18	18	18	18	16
KR4610A	23	23	23	23	22.5	22
KR4620A	18	18	18	18	18	16



Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
KR5520A	34	34	33.5	32.5	31	20
KR6525A	24	24	24	24	13	3

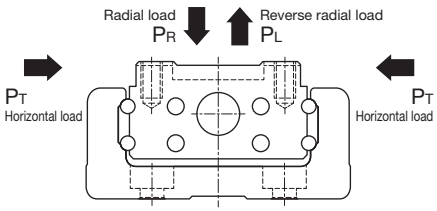
Calculation Conditions

Model	Lead (mm)	Stroke* (mm)	Hypothetical motor capacity (W)	Speed (mm/s)	Center of gravity
KR20	1	80	50	50	Center of table upper surface
	6			300	
KR26	2	160	50	100	
	6			300	
KR30H	6	300	100	300	
	10			500	
KR33	6	400	100	300	
	10			500	
KR45H	10	500	400	500	
	20			1000	
KR46	10	490	400	500	
	20			1000	
KR55	20	1000	750	800	
KR65	25	1190	750	800	

* Stroke with 1 block (A type).

Load Rating and Static Permissible Moment for Each Direction

Load rating



KR: 4-way loads

- LM Guide
  KR can receive loads in 4 directions (radial, reverse radial, and horizontal directions). The basic load rating is when each of the 4 directions is equal. These values are listed in Table: Load Rating below.
- Ball screw
  KR has a ball screw nut built into the inner block to enable axial loads to be applied. The basic load rating is listed in Table: Load Rating below.
- Bearing (fixed side)
  KR's housing A has an embedded angular bearing to enable axial loads to be applied. The basic load rating is listed in Table: Load Rating below.

Equivalent load (LM Guide)

The following formula can be used to calculate the equivalent load when a load is simultaneously applied to each direction of the LM Guide of the KR.

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

P_E: Equivalent load (N)
P_R: Radial load (N)
P_L: Reverse radial load (N)
P_T: Horizontal load (N)

Load Rating

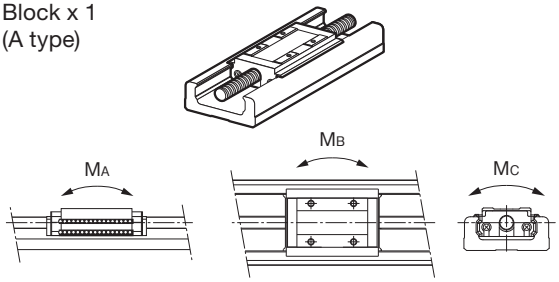
Model			KR15		KR20		KR26		KR30H		KR33		KR45H		KR46		KR55	KR65
			KR1501	KR1502	KR2001	KR2006	KR2602	KR2606	KR30H06	KR30H10	KR3306	KR3310	KR45H10	KR45H20	KR4610	KR4620		
LM Guide	Basic dynamic load rating C (N)	1 block (A type)	1930		3590		7240		11600		11600		23300		27400		38100	50900
		Short block x 1 (C type)	-		-		-		4900		4900		11900		14000		-	-
	Basic static load rating C_0 (N)	1 block (A type)	3450		6300		12150		20200		20200		39200		45500		61900	80900
		Short block x 1 (C type)	-		-		-		10000		10000		19600		22700		-	-
Ball screw	Ball screw lead (mm)		1	2	1	6	2	6	6	10	6	10	10	20	10	20	20	25
	Basic dynamic load rating Ca (N)	Normal grade/ High accuracy grade (H)	340	230	660	860	2350	1950	2840	1760	2840	1760	3140	3040	3140	3040	3620	5680
		Precision grade (P)				1060		2390	2250	1370	2250	1370	2940	3430	2940	3430	3980	5950
	Basic static load rating C_0a (N)	Normal grade/ High accuracy grade (H)	660	410	1170	1450	4020	3510	4900	2840	4900	2840	6760	7150	6760	7150	9290	14500
		Precision grade (P)				1600		3900	2740	1570	2740	1570	3720	5290	3720	5290	6850	10700
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	590		1000		1380		1790		1790		6660		6660		7600	13700
		Static permissible load P_0a (N)	290		1240		1760		2590		2590		3240		3240		3990	5830

Note 1) LM Guide load rating is the load rating per block.
Note 2) KR30H, KR33, KR45H10, KR4610 precision grade (P-grade) ball screws have integrated spacer balls with a 1:1 ratio.
Note 3) KR45H20, KR4620, KR55, KR65 precision grade (P-grade) ball screws have integrated spacer balls with a 2:1 ratio.

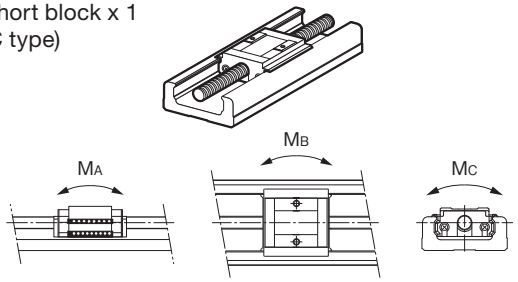
Static permissible moment (LM Guide)

The KR LM Guide supports moment loads in 3 directions with a single block.

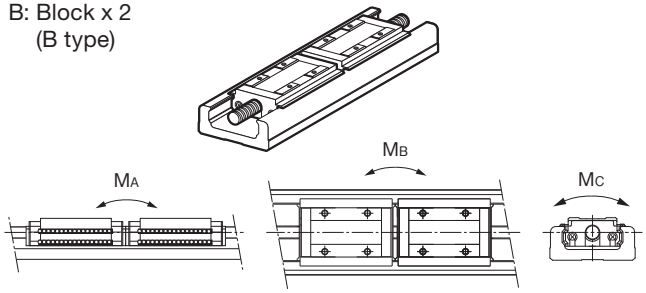
A: Block x 1
(A type)



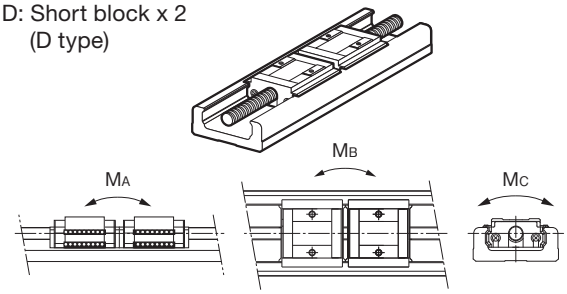
C: Short block x 1
(C type)



B: Block x 2
(B type)



D: Short block x 2
(D type)



Static Permissible Moment

Unit: N·m

Model	Static permissible moment		
	M_A	M_B	M_C
KR15-A	12.1 (5)	12.1 (5)	38 (5)
KR15-B	70.3 (16)	70.3 (22)	76 (18)
KR20-A	31 (9)	31 (8)	83 (13)
KR20-B	176 (39)	176 (32)	165 (27)
KR26-A	84 (31)	84 (22)	208 (30)
KR26-B	480 (154)	480 (78)	416 (60)
KR30H-A	166 (32)	166 (40)	428 (46)
KR30H-B	908 (256)	908 (155)	857 (103)
KR30H-C	44 (10)	44 (14)	214 (20)
KR30H-D	319 (84)	319 (55)	427 (51)
KR33-A	166 (53)	166 (40)	428 (53)
KR33-B	908 (271)	908 (158)	857 (107)
KR33-C	44 (7)	44 (14)	214 (26)
KR33-D	319 (90)	319 (56)	427 (53)
KR45H-A	486 (34)	486 (95)	925 (31)
KR45H-B	2732 (159)	2732 (355)	1850 (63)
KR45H-C	130 (16)	130 (32)	463 (15)
KR45H-D	994 (52)	994 (124)	925 (31)
KR46-A	547 (34)	547 (98)	1400 (34)
KR46-B	2940 (165)	2940 (364)	2800 (69)
KR46-C	149 (18)	149 (34)	700 (17)
KR46-D	1010 (54)	1010 (129)	1400 (34)
KR55-A	870 (169)	870 (212)	2280 (169)
KR55-B	4890 (863)	4890 (831)	4570 (338)
KR65-A	1300 (326)	1300 (448)	3920 (326)
KR65-B	7230 (1349)	7230 (1512)	7840 (653)

Note 1) The "A," "B," "C," or "D" at the end of the model number indicates the block type.
A: 1 block / B: 2 blocks / C: 1 short block / D: 2 short blocks
Note 2) The value for KR-B/D is with 2 blocks attached (without QZ).
Note 3) Static permissible moment is the maximum permissible moment when the unit is stationary.
Note 4) Values in parentheses are with a cover or bellows.

Service Life

KR is composed of an LM Guide, ball screw, and support bearing. The service life of each structure can be calculated using the basic dynamic load rating described in Table: Load Rating on page 167.

LM Guide

Nominal life

$$L_{10} = \left(\frac{C}{P_C}\right)^3 \times 50$$

L_{10}: Nominal life (km)
(the total travel distance reachable without flaking by 90% of a group of identical LM Guide units when operated individually under the same conditions)
C : Basic dynamic load rating (N)
P_C: Calculated load (N)

- When moment is applied, multiply the applied moment by the equivalent factor shown in Table: Moment Equivalent Factors (K) on page 170 to calculate the equivalent load.

$$P_m = K \cdot M$$

P_m: Equivalent load (per block) (N)
K : Moment equivalent factor (Table: Moment Equivalent Factors (K) on page 170 serves as a reference)
M : Applied moment (N·mm)
(Please contact THK if the block span is to be removed for use.)

- When M_c moment is applied with KR-B/D

$$P_m = \frac{K_C \cdot M_C}{2}$$

- When simultaneously applying a radial load (P) and moment to the KR

$$P_E = P_m + P$$

P_E: Total equivalent radial load (N)
Use the above to calculate the service life.

Service life time

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

This formula can be used to calculate the service life time (L_h) (if the stroke length and return strokes per minute are constant).

L_h: Service life time (h)
ℓ_S: Stroke length (mm)
n_1: Strokes per minute (min^{-1})

Ball screw/Bearing (fixed side)

Nominal life

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

L_{10}: Nominal life (rev.)
(the total rotational speed reachable without flaking by 90% of a group of identical ball screws (bearings) when operated individually under the same conditions)
C_a: Basic dynamic load rating (N)
F_a : Axial load (N)

Service life time

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

This formula can be used to calculate the service life time (L_h) (if the stroke length and return strokes per minute are constant).

L_h: Service life time (h)
ℓ_S: Stroke length (mm)
n_1: Strokes per minute (min^{-1})
ℓ : Ball screw lead (mm)

f_C: Contact factor

When using 2 blocks with KR-B/D, multiply the basic load rating by the contact factor from the table on the right.

Contact Factors (f_C)

Block type	Contact factor (f_C)
KR-B	0.81
KR-D	

f_W: Load coefficient

Generally, reciprocating machinery causes vibrations and shocks during operation that make accurate calculations difficult, especially vibrations due to high-speed operation or shocks due to repetitive starting and stopping. Accordingly, if speed vibrations have a large effect, we suggest replacing the basic dynamic load rating coefficient (C) with a new one based on experience.

Load Coefficients (f_W)

Vibration/Impact	Velocity (V)	Load Coefficient (f_W)
Minute	For minute speeds V ≤ 0.25 m/s	1 to 1.2
Small	For low speeds 0.25 m/s < V ≤ 1 m/s	1.2 to 1.5
Medium	For medium speeds 1 m/s < V ≤ 2 m/s	1.5 to 2
Large	For high speeds V > 2 m/s	2 to 3.5

K: Moment equivalent factor (LM Guide)

If traveling with a moment applied, the LM Guide load distribution may become larger in some locations; therefore, use the moment equivalent factors shown in the table on the right multiplied by the moment value to calculate the equivalent load.
K_A, K_B, and K_C show the moment equivalent factors for M_A, M_B, and M_C directions respectively.

Moment Equivalent Factors (K)

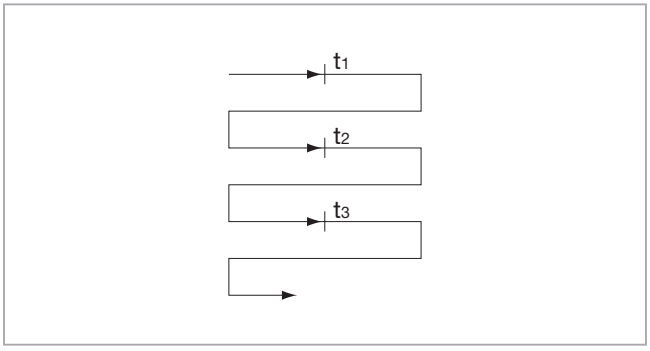
Model	K_A	K_B	K_C
KR15-A	3.2×10^{-1}	3.2×10^{-1}	9.09×10^{-2}
KR15-B	5.96×10^{-2}	5.96×10^{-2}	9.09×10^{-2}
KR20-A	2.4×10^{-1}	2.4×10^{-1}	7.69×10^{-2}
KR20-B	4.26×10^{-2}	4.26×10^{-2}	7.69×10^{-2}
KR26-A	1.73×10^{-1}	1.73×10^{-1}	5.88×10^{-2}
KR26-B	3.06×10^{-2}	3.06×10^{-2}	5.88×10^{-2}
KR30H-A	1.51×10^{-1}	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}

K_A: M_A direction moment equivalent factor.
K_B: M_B direction moment equivalent factor.
K_C: M_C direction moment equivalent factor.
Note) The value for KR-B/D is with 2 blocks attached.

Accuracy Standards

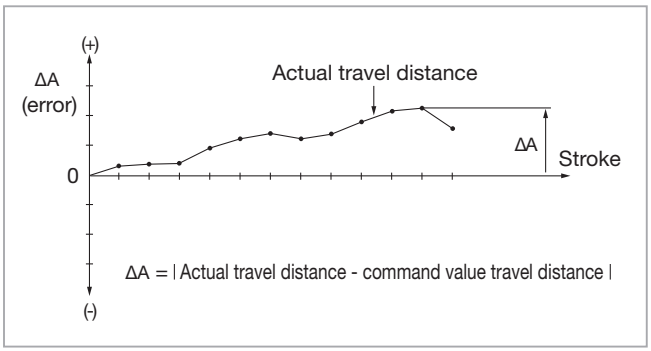
Positioning repeatability

Positioning is repeated 7 times in the same direction at a given point, the stop position is measured, and half of the read maximum difference is obtained. This measurement is made at the center of the travel distance and at each of the two ends. The largest of the obtained values is set as the measurement value, and a ± sign is added to half of that value for display.



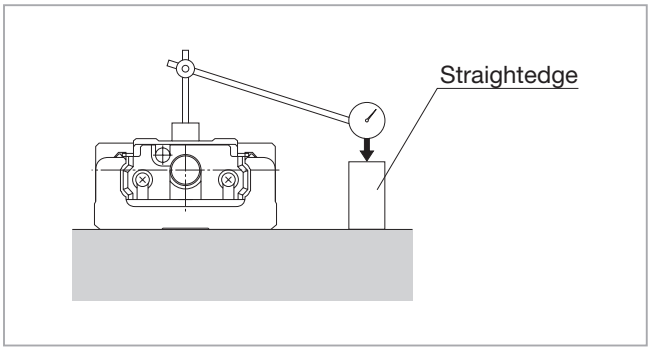
Positioning accuracy

With the maximum stroke as reference length, the maximum error between the command value and the actual travel distance from the stroke start position is displayed as an absolute value.



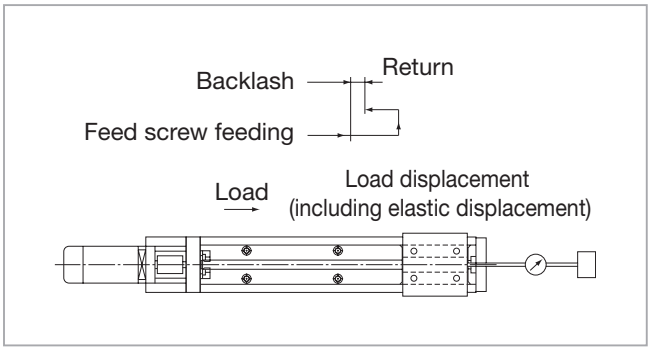
Running parallelism (vertical direction)

A straightedge is positioned on a surface plate with the KR mounted and the entire range of block movement is measured with a test indicator, taking the maximum difference in readings along the travel distance as the measured value.



Backlash

Using as a reference the test indicator reading with feeding applied to the block to move it slightly, a load is applied to the block from the same direction (table feed direction) in this state, without using the feed mechanism, and then the difference between the reference when opened and the return value is taken as the measured value. This measurement is made at the center of the travel distance and at each of the two ends; the largest of the obtained values is set as the measurement value.



Normal Grade (no symbol)

Unit: mm

Model	Stroke[1]	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical direction)	Backlash	Starting torque (N·cm)
KR20	30	100	±0.01	Not specified	Not specified	0.02	0.5
	80	150					
	130	200					
KR26	60	150	±0.01	Not specified	Not specified	0.02	1.5
	110	200					
	160	250					
	210	300					
KR30H	50	150	±0.01	Not specified	Not specified	0.02	7
	100	200					
	200	300					
	300	400					
	400	500					
	500	600					
KR33	50	150	±0.01	Not specified	Not specified	0.02	7
	100	200					
	200	300					
	300	400					
	400	500					
	500	600					
	600	700					
KR45H	200	340	±0.01	Not specified	Not specified	0.02	10
	300	440					
	400	540					
	500	640					
	600	740					
	700	840					
	800	940					
KR46	190	340	±0.01	Not specified	Not specified	0.02	10
	290	440					
	390	540					
	490	640					
	590	740					
	690	840					
	790	940					
KR55	800	980	±0.01	Not specified	Not specified	0.05	12
	900	1080					
	1000	1180					
	1100	1280					
	1200	1380					
KR65	790	980	±0.01	Not specified	Not specified	0.05	12
	990	1180					
	1190	1380					
	1490	1680	±0.012				15

[1] Stroke with 1 block (A type: Without QZ).

Note 1) Accuracy standard evaluation method in accordance with THK standards.

Note 2) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

Note 3) The starting torque represents the value when containing THK AFB-LF Grease.

Note 4) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

Note 5) Contact THK for accuracy higher than the standard stroke.

Note 6) KR15 is available only as high accuracy grade (H) or precision grade (P).

Accuracy Standards

High Accuracy Grade (H)

Unit: mm

Model	Stroke[1]	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					
	200	300					
	300	400					
	400	500		0.1	0.035		
	500	600					
KR33	50	150	±0.005	0.06	0.025	0.02	7
	100	200					
	200	300					
	300	400					
	400	500		0.1	0.035		
	500	600					
	600	700		0.14			
KR45H	200	340	±0.005	0.1	0.035	0.02	10
	300	440					
	400	540					
	500	640					
	600	740		0.12	0.04		
	700	840		0.15	0.05		
	800	940					
KR46	190	340	±0.005	0.1	0.035	0.02	10
	290	440					
	390	540					
	490	640					
	590	740		0.12	0.04		
	690	840		0.15	0.05		
	790	940					
KR55	800	980	±0.005	0.18	0.05	0.05	12
	900	1080					
	1000	1180		0.25			
	1100	1280					
	1200	1380					
KR65	790	980	±0.008	0.18	0.05	0.05	12
	990	1180		0.2			
	1190	1380					
	1490	1680		0.28	0.055		15

[1] Stroke with 1 block (A type: Without QZ).

Note 1) Accuracy standard evaluation method in accordance with THK standards.

Note 2) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

Note 3) The starting torque represents values when containing THK AFB-LF Grease. However, the value for KR15 is when using THK AFF Grease.

Note 4) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

Note 5) Contact THK for accuracy higher than the standard outer rail length.

Precision Grade (P)

Unit: mm

Model	Stroke[1]	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					
	150	200					
KR20	30	100	±0.003	0.02	0.01	0.003	1.2
	80	150					
	130	200					
KR26	60	150	±0.003	0.02	0.01	0.003	4
	110	200					
	160	250					
	210	300					
KR30H	50	150	±0.003	0.02	0.01	0.003	15
	100	200					
	200	300					
	300	400					
	400	500		0.025	0.015		
	500	600					
KR33	50	150	±0.003	0.02	0.01	0.003	15
	100	200					
	200	300					
	300	400					
	400	500		0.025	0.015		
	500	600					
	600	700		0.03			
KR45H	200	340	±0.003	0.025	0.015	0.003	15
	300	440					
	400	540					
	500	640					17
	600	740		0.03	0.02		
KR46	190	340	±0.003	0.025	0.015	0.003	15
	290	440					
	390	540					
	490	640					17
	590	740		0.03	0.02		
	690	840	±0.005	0.035	0.025		
	790	940					
KR55	800	980	±0.005	0.035	0.025	0.003	17
	900	1080					
	1000	1180		0.04	0.03		20
KR65	790	980	±0.005	0.035	0.025	0.005	20
	990	1180					
	1190	1380		0.04	0.03		22

[1] Stroke with 1 block (A type: Without QZ).

Note 1) Accuracy standard evaluation method in accordance with THK standards.

Note 2) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

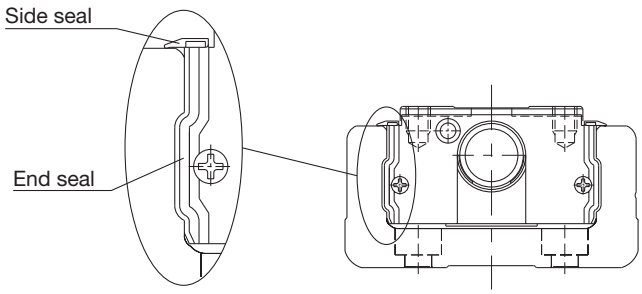
Note 3) The starting torque represents values when containing THK AFB-LF Grease. However, the value for KR15 is when using THK AFF Grease.

Note 4) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

Note 5) Contact THK for accuracy higher than the standard outer rail length.

Seals

End seals and side seals are attached as standard for dust-proofing.



Maximum Resistance Value

The following table shows the maximum resistance values for each model.

Units: N

Model	Maximum resistance value
KR15	0.9
KR20	1.2
KR26	1.4
KR30H	3.5
KR33	3.4
KR45H	5.1
KR46	5
KR55	8.8
KR65	10.1

Standard Grease

The following table shows the standard grease and grease nipple used.

Model	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

MEMO

MEMO

⚠ Precautions for Use

Application of These Products
· These products cannot be used for equipment or systems used in situations involving human life and limb.
· Be certain to contact THK in advance if considering utilizing for special applications, such as devices or systems used in passenger vehicles, medical equipment, aerospace, nuclear power, or electric power equipment.

Rotational motor drive products

Handling
· When using the product in locations exposed to constant vibrations or in special environments such as in clean rooms, vacuums, and low/high temperatures, contact THK.
· Tilting the table or the outer rail may cause them to fall due to their own weight.

Safety Precautions
· Before operation, thoroughly read and follow "Manipulating industrial robots - Safety" (JIS B 8433) and "Ordinance on Industrial Safety and Health" (Ministry of Health, Labour and Welfare of Japan).
· Be certain to read the instruction manual carefully, ensure you fully understand its contents, and observe precautions for safety.
· When installing, adjusting, inspecting, and maintaining the actuator body and related connected devices, be sure to unplug all plugs from outlets and lock them or prepare a safety plug so that the power cannot be turned on except by the operator. In a visible location, post a notice clearly stating that work is in progress.
· Never touch the operating parts of the actuator while it is live. Also, do not enter the operating range of the actuator while the product is in operation or a ready state.
· If multiple people are involved in the operation, confirm procedures such as work process, signs, and abnormalities in advance, and appoint a separate person for monitoring the operation.
· Do not disassemble these products unnecessarily. Doing so may lead to contamination by foreign materials or deterioration in accuracy.
· Take care not to drop or strike this product. Otherwise, it may cause injury or damage the unit. Even if there is no outward indication of damage, a sudden impact could prevent the unit from functioning properly.
· Do not exceed the permissible rotation speed when using the product. This could damage the product or otherwise cause it to malfunction. Please use the product within the range of speeds we have specified.
· Take care to avoid contamination of foreign material such as debris or cutting chips. This may result in damage to the ball circulation parts or decreased functionality.
· Contact THK regarding use in environments where coolant may enter the product.
· An impact-absorbing mechanism such as a shock absorber must be installed if there is a risk that the slider may collide with the stoppers attached to both ends of the movable range. The stoppers are not intended to absorb impacts during slider collision. Colliding with the stoppers during operation may result in damage or injury.
· Operation of the actuator over the torque limit value may lead to component damage or accidents.
· Keep the torque limit setting parameters within the allowable torque limit values.
· Motor wrap types do not include a safety device to protect users if the timing belt snaps. The customer must provide a safety device.
· Among these products are those with total body weight exceeding 20 kg. When transporting or assembling, always take safety into consideration to avoid injury or damage, and use appropriate conveying equipment.
· In applications where this product will be moved or transferred, the conditions of use may cause inertia from the motor's weight to result in damage to the motor attachment (Housing A) or other parts. Please contact THK before using in this manner.

Operating Environment
· Indoors, ambient temperature between 0°C to 40°C, and ambient humidity of 80% RH or less (no freezing or condensation).
· Places free from corrosive gas and flammable gas.
· Places where vibration or impacts are not transmitted to the unit.
· Places free from electrically conductive powder (such as iron powder), dust, oil mist, moisture, salt, and organic solvents.
· Places free from direct sunlight and radiant heat.
· Places free from strong electric and magnetic fields.
· Places that are easily accessible for maintenance and cleaning.
· When using the product in locations exposed to constant vibrations or in special environments such as in vacuums or low/high temperatures, contact THK.

Actuator Mounting Surface
· Mount to a flat surface suitable for mechanical machining or with comparable precision. Some products have regulated degrees of flatness.
· Mount to a base with sufficient rigidity.

Lubrication
· For effective use of the actuator's functions, lubrication is required. Insufficient lubrication may cause greater wear on moving parts, leading to premature damage.
· Do not use a mix of lubricants with different properties. Note that the encapsulated lubricant may differ depending on the product.
· Contact THK if using special lubricants.
· 100 km should be considered a guideline for greasing intervals. However, this may vary depending on the operating conditions, so THK recommends determining a greasing interval during the initial inspection.
· Regular lubricant may not be usable in special environments such as constantly vibrating locations, vacuums, high/low temperatures, or clean rooms. Contact THK in these cases.
· Contact THK if using oil lubrication.
· Thoroughly wipe off anti-rust oil and feed lubricant before using the product.

Storage
· When storing this actuator, pack it as designated by THK and store it in a horizontal position away from high or low temperatures and high humidity.
· When storing the controller, avoid high or low temperatures and high humidity.

Disposal
·The product should be treated as industrial waste and disposed of appropriately.

Other Recommended Products

Caged Ball LM Guide Actuator

SKR

- ○ Modular structure reduces the number of parts, design hours, and assembly hours
- ○ Caged ball effect gives long life and long-term maintenance-free operation
- ○ Ideal for high-precision positioning and orthogonal multi-axis design

LM Guide Actuator with Large-Diameter Ball Screw

KSF

Open cover/top cover/fully enclosed

- ○ Large-diameter ball screw enables high-speed and high-acceleration/deceleration operations
- ○ 3 types of cover options to choose from to suit the application
- ○ Supports long strokes up to 1500 mm

LM Guide Actuator **KR**

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- ● Outward appearances and specifications are subject to change without notice for the purpose of improvement. Please consult with THK before using.
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