



Caged Ball LM Guide Actuator **SKR**



Modularized to reduce work hours
and make moving parts more compact.
Long service life and long-term maintenance-free operation.

Global Standard

SKR

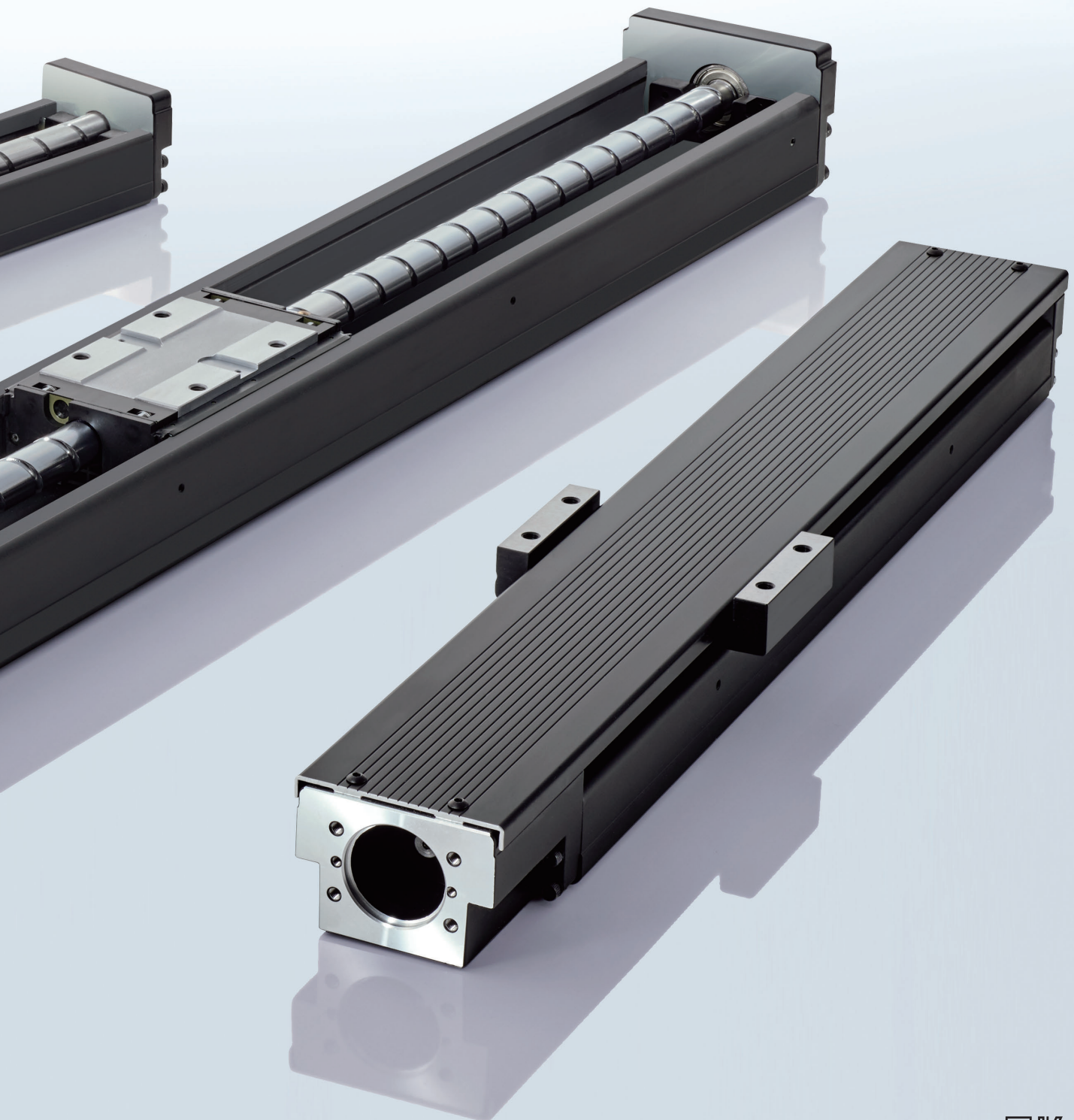
Caged Ball LM Guide Actuator

THK has sold LM Guide actuators for use in various applications for over 20 years in more than 40 countries worldwide.

The SKR is a high-performance device that is modularized to reduce work hours and make the moving parts more compact than ever before.

A consistent seller and global standard actuator, it continues to help customers solve problems in a wide variety of fields, such as transport, inspections, and assembly.



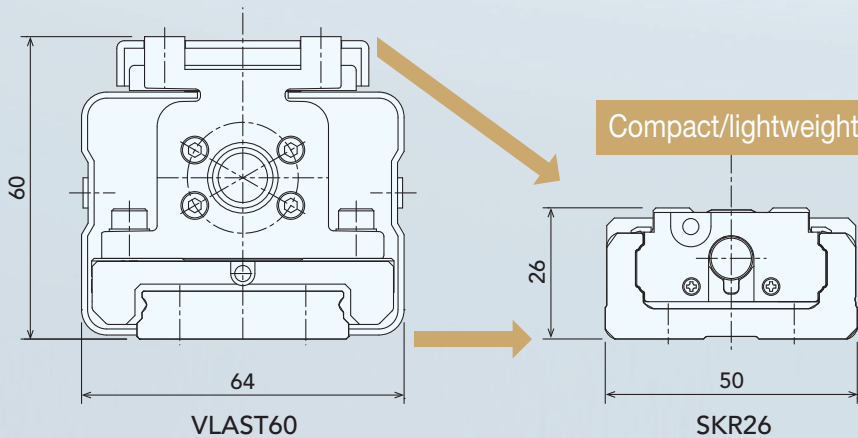


The many advantages of

THK Technology 1

Compact Structure (Combined Modules)

SKR 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

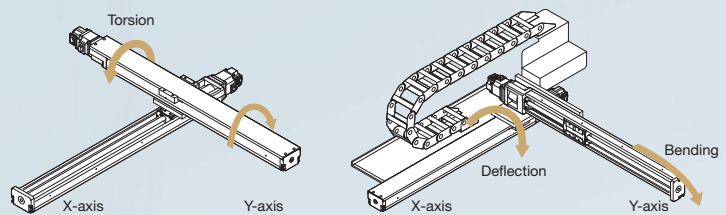
31%

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.

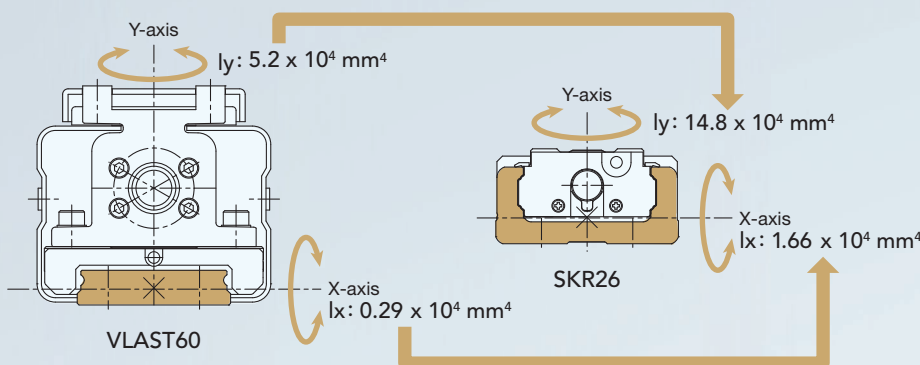


Geometrical moment of inertia around the Y-axis

Approx. 2.8x

Geometrical moment of inertia around the X-axis

Approx. 5.7x

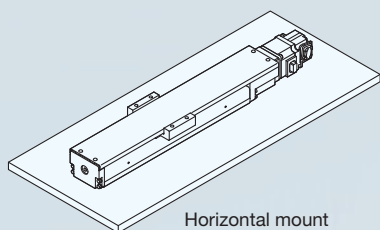
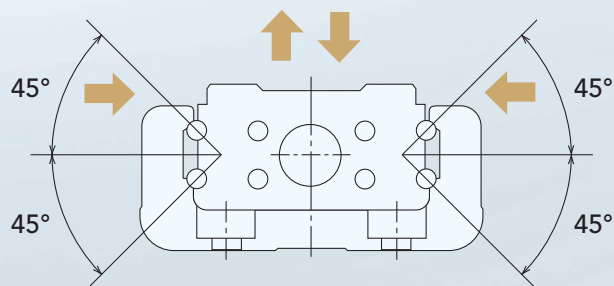


THK's original structure

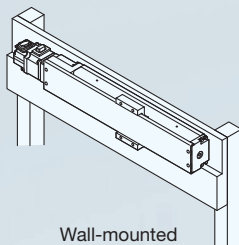
THK Technology 3

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

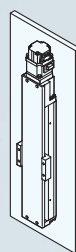
Each row of balls in the linear guide is arranged at a 45° contact angle, achieving the same rated load performance for each of the 4 directions (radial, reverse-radial, and horizontal directions) acting on the inner block. It can be used in any orientation.



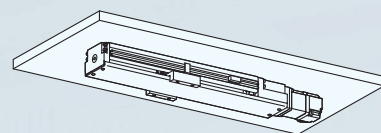
Horizontal mount



Wall-mounted



Vertical mount

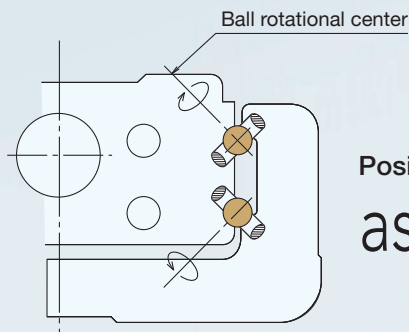


Hanging (upside-down)

THK Technology 4

High Followability (Circular Arc Groove)

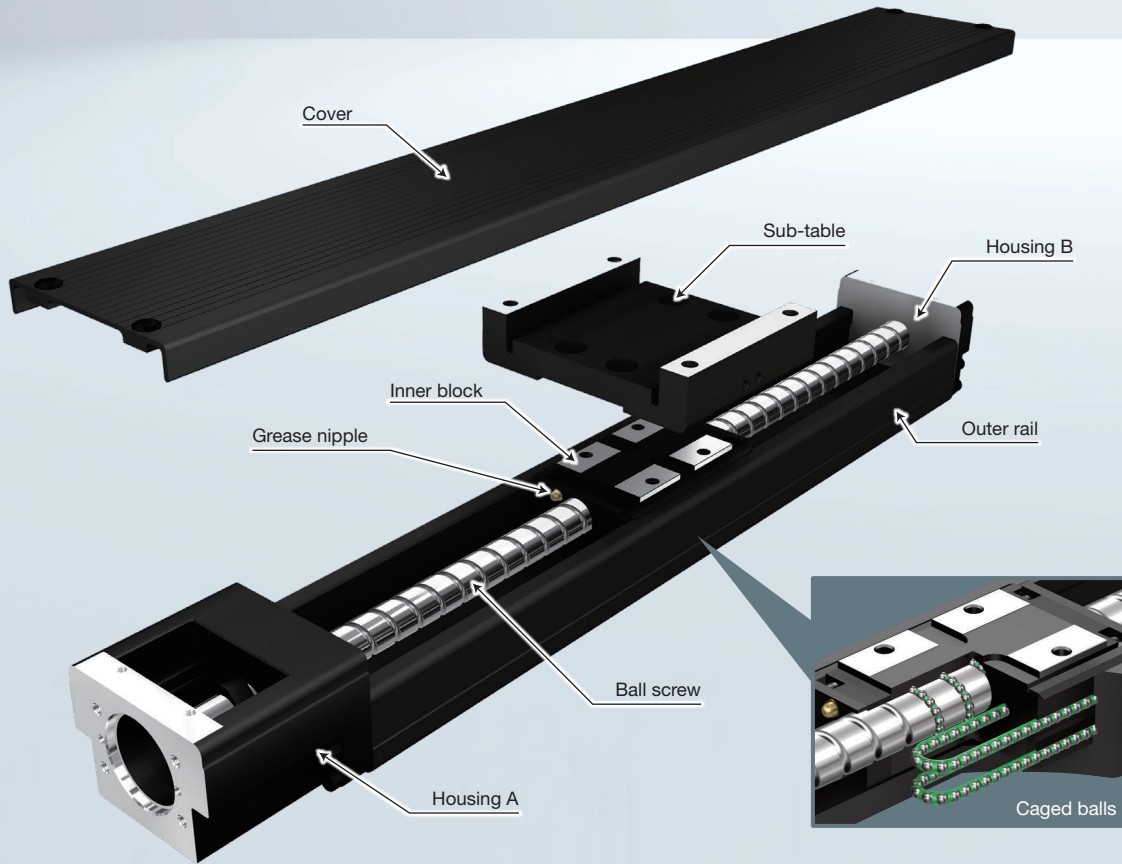
The linear guide has a circular arc groove that moves lightly and without clearance. As such, it can be easily used as a high-precision feed. It achieves precision grade positioning for all types of devices, contributing to improved high-precision and high-quality performance.



Positioning repeatability

as precise as ± 0.003 mm!!
(Precision grade)

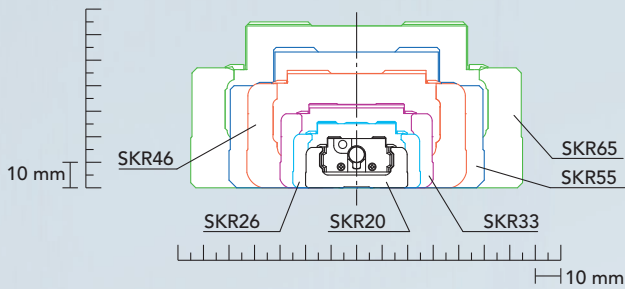
Modular structure with integrated



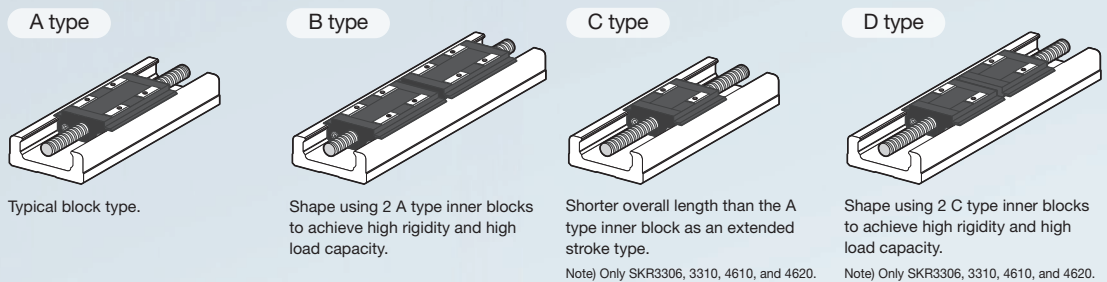
Select the Optimal Model

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.

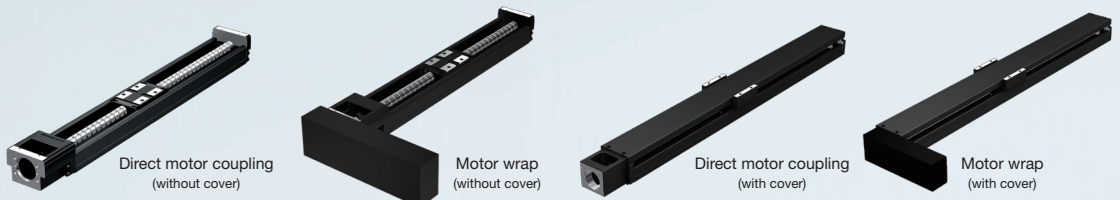
Size Lineup



Block Types



Shape Lineup

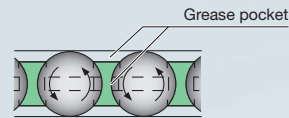
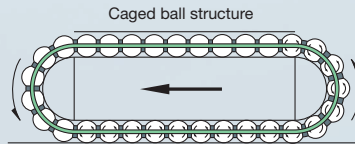


LM Guide and ball screw

THK Technology

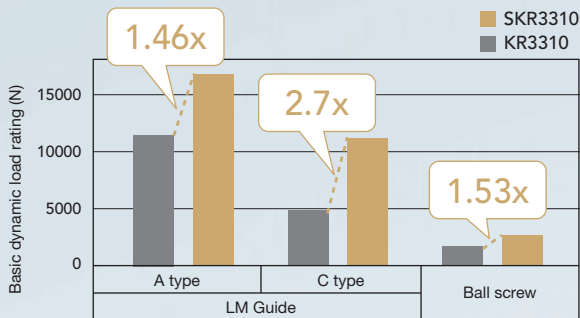
Caged Ball Technology

The structure rotates with the balls held within ball cages. This eliminates friction between balls, enabling motion with uniform alignment of the balls. Also, the spaces between the ball circulation parts and the ball cages (grease pockets) are filled with grease that covers the contact surfaces of the balls and ball cages as the balls rotate, continuously maintaining an oil film on the surfaces of the balls. This makes insufficient lubrication unlikely to occur. SKR also provides the following advantages.



Long Service Life

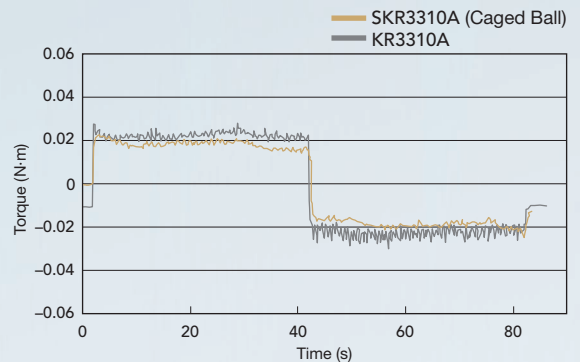
The SKR's functions have been further enhanced compared to the KR type. The basic dynamic load rating of the LM Guide and ball screw portion has been increased, and an even longer service life has been achieved.



SKR and KR basic dynamic load rating comparison

Exceptional Sliding Performance

The Caged Ball SKR type suppresses torque fluctuations.



SKR and KR torque fluctuation comparison

Maintenance-Free

Grease is held within the ball cage, achieving long-term maintenance-free operation.

Note) For SKR20/26, caged balls are adopted only for the LM Guide, while the ball screw portion is equipped with a QZ Lubricator.

High-Speed Performance

Supports high rotation speeds of 6000 min⁻¹.* The high lead type lineup has been increased with the addition of SKR33/55/65.

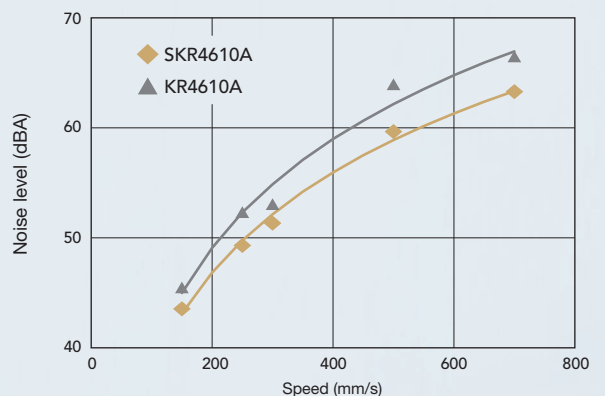
*Excludes some models.

Unit: mm

Model	Lead	
	SKR	KR
33	6, 10, 20	6, 10
55	20, 30 , 40	20
65	20 , 25, 30 , 50	25

Low Noise/Acceptable Running Sound

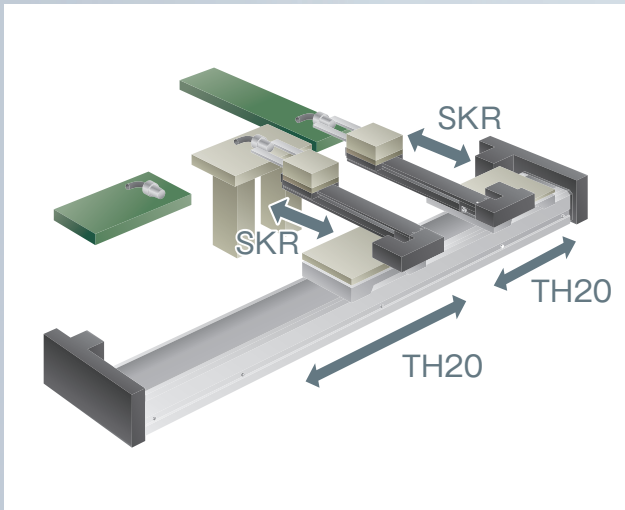
Noise from impacts between balls is eliminated, achieving low noise and acceptable running sound even at high speeds.



SKR and KR torque noise comparison

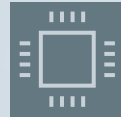


Automotive industry
Inter-process Conveyance System

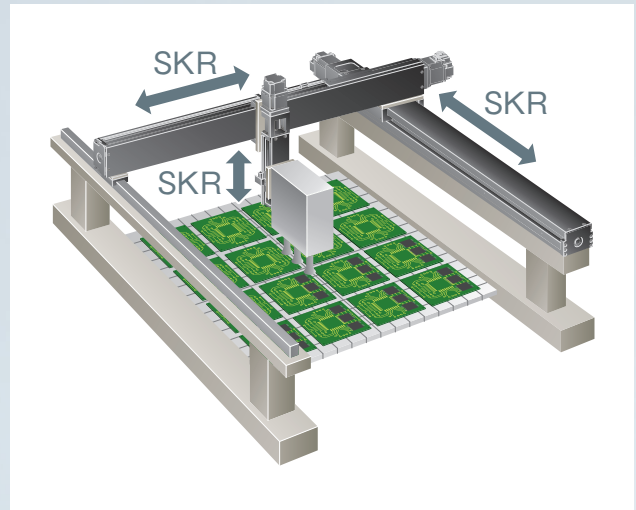


The top axis of automotive component workpiece conveyor parts uses SKR, while the lower axis uses TH (special). Installation space is more compact and faster takt time operation is made possible when used to replace conventional rack & pinion drives.

Model used Top axis: SKR3320A wrap
Lower axis: Special TH20

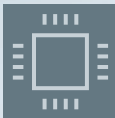


Electronic components industry
PCB Mounting Device

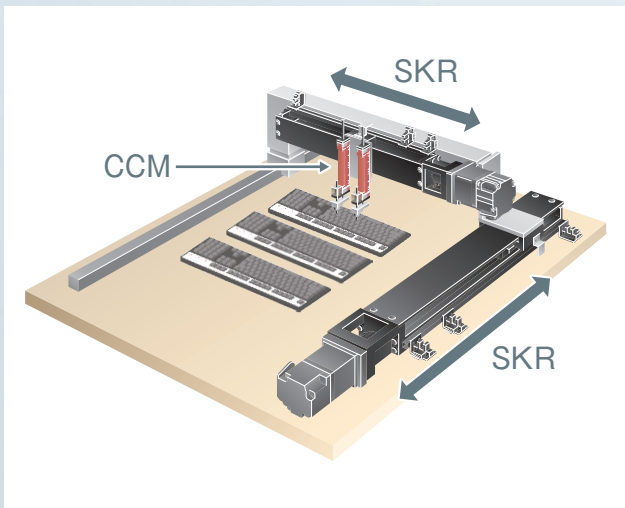


The SKR is used in the moving parts of board mounting devices. The high-lead ball screw provides excellent high-speed performance and accurately positions circuit boards, with high rigidity for dramatically improved mounting precision.

Model used X-axis: SKR5540
Y-axis: SKR4620
Z-axis: SKR2606

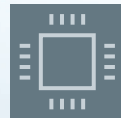


Electronic components industry
Push Button Inspection Equipment

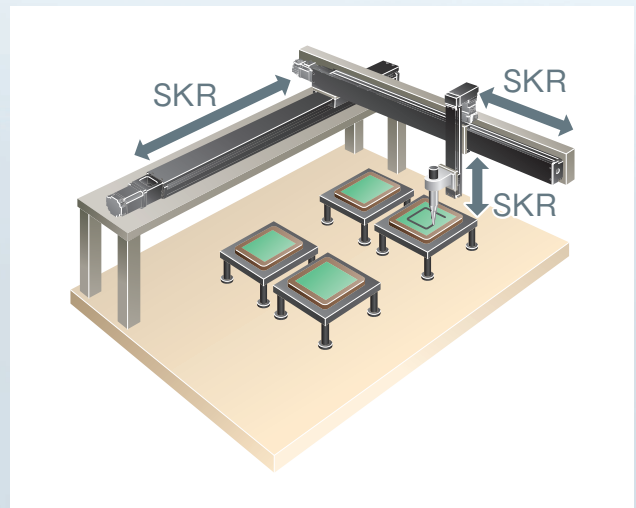


The SKR and CCM are used in inspection equipment. The Z-axis was moved from the air cylinder to the linear motor, allowing all of the axes to be motorized. This improves the positioning accuracy compared to SKR high accuracy/high speed conventional models and enables operations with rapid takt times.

Model used X-axis: SKR3310A
Y-axis: SKR2606A
Z-axis: CCM05



Electronic components industry
Sealing Equipment

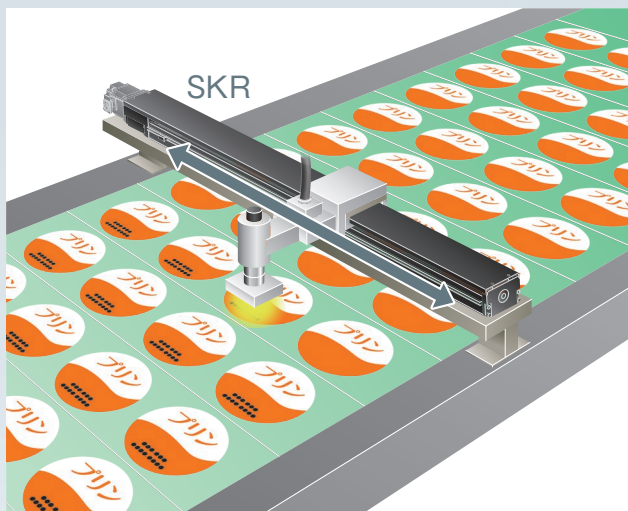


The SKR is used for the moving nozzle section of sealing equipment. The SKR has excellent rigidity to suppress vibrations at the overhang and nozzle tip, contributing to improved productivity.

Model used X-axis: SKR5530
Y-axis: SKR3320
Z-axis: SKR2006



Pharmaceuticals/food industry
Printing Device

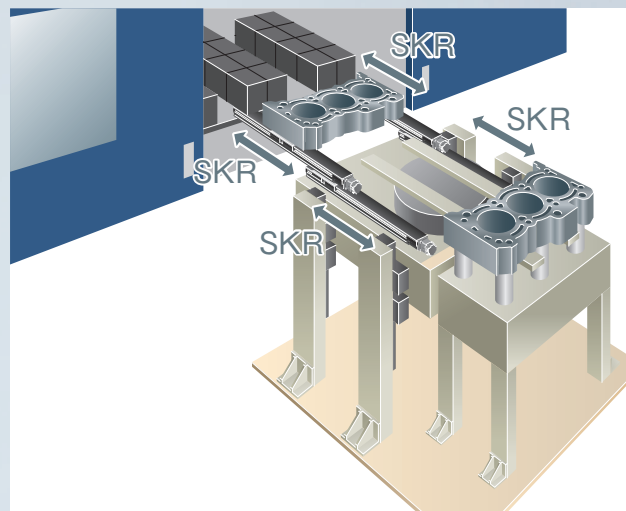


The SKR is used in the device that prints the date onto cup seals. The production quantity per day is large, but daily production capacity increased by 2.5 times compared to conventional air cylinders by replacing them with the SKR.

Model used SKR4620



Machine tool industry
Pallet Changer

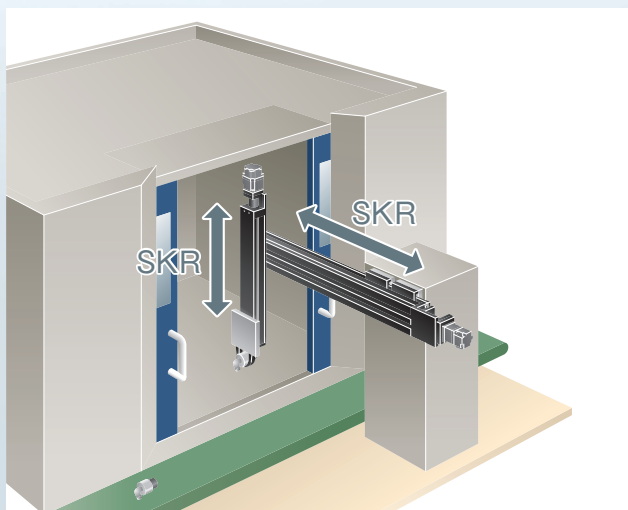


Two 2-block SKRs are stacked in the changer. A high rigidity SKR unit is used to carry the load of the large overhang. This also takes up less space than conventional multi-jointed robots.

Model used Lower axis: SKR4620B
Upper axis: SKR4620B



Machine tool industry
Workpiece Inserter

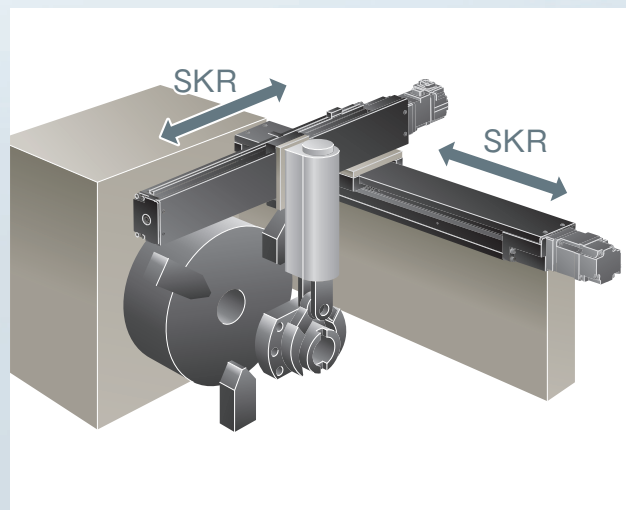


The SKR is used in the workpiece inserter axis. The SKR outer rail can move to insert items into the opening/closing part. The SKR has high rigidity to support large loads.

Model used Horizontal axis: SKR4620A
Lifting axis: SKR3310B



Machine tool industry
Loader for Automated Lathes



The SKR is used in the workpiece travel part. The SKR is used with a cover, as it is installed so close to the machined section that it is exposed to cutting dust. It achieves a compact size through modularization, and its high rigidity enables accurate positioning.

Model used Lower axis: SKR3310
Upper axis: SKR3310

Series Lineup

Model	Ball screw lead (mm)	Stroke ¹ (mm)	Hypothetical motor capacity (W)	Maximum load capacity ^{2,3} (kg)		
				Horizontal	Wall-mounted	Vertical
SKR20	1	30 to 130	50	12.5	10	3
	6			12.5	10	6
SKR26	2	60 to 210	50	27.5	22	14
	6			27.5	22	7
SKR33	6	45 to 595	100	43.5	35	19
	10			34.5	30	12 (11.5)
	20			21 (18.5)	21 (18.5)	6 (5.5)
SKR46	10	190 to 790	200	77	77	18 (16)
	20			42 (31)	42 (31)	8
	10		400	96	77	23 (16)
	20			90 (75)	57.5	18 (16.5)
SKR55	20	800 to 1200	400	66	66	17
	30			27	27	9
	40			13	13	5
	20		750	118	90	37 (31.5)
	30			80	79.5	23
	40			43	43	15
SKR65	20	790 to 1490	750	147	133.5	29
	25			93	93	24
	30			62	62	19
	50			18	18	7

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 (note that SKR6550 is 0.3 G)

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 SKR33/46 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)
SKR46	10	A	QZA	0675
SKR20	01: 1 mm	A: x 1	No symbol: Without QZ	0020: 20 mm
SKR26	02: 2 mm	B: x 2	QZ	0030: 30 mm
SKR33	06: 6 mm	C: x 1	QZA	0035: 35 mm
SKR46	10: 10 mm	D: x 2	QZB	0060: 60 mm
SKR55	20: 20 mm		QZAD	0110: 110 mm
SKR65	25: 25 mm			0550: 550 mm
	30: 30 mm			0590: 590 mm
	40: 40 mm			to
	50: 50 mm			1490: 1490 mm

Ball screw leads that can be selected differ depending on the model.
 SKR20: "01," "06"
 SKR26: "02," "06"
 SKR33: "06," "10," "20"
 (20 mm is block type A and B only)
 SKR46: "10," "20"
 SKR55: "20," "30," "40"
 SKR65: "20," "25," "30," "50"

The following models allow selection of (4) QZ specifications.
 SKR33 → p. 35
 SKR46 → p. 59
 * Selection is not possible for SKR20, SKR26, SKR55, and SKR65.

When selecting "QZ," "QZA," "QZB," or "QZAD" for (4) QZ specification, specify the stroke with QZ.
 SKR33 → p. 53 to p. 58
 SKR46 → p. 77 to p. 82
 When selecting 2: With bellows for (8) Cover: Specify the stroke with bellows.
 → p. 109 to p. 112

	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	
100																p. 11
600																
200																p. 23
600																
	600			550	390											p. 35
	1000			920	650											
	2000			1780	1270											
	1000			730	550	430										p. 59
	2000			1980	1430	1080	840									
	1000			730	550	430										
	2000			1980	1430	1080	840									
			1100				880	730	610	520						p. 83
			1650				1330	1100	920	780						
			2160				1750	1440	1210	1030						
			1100				880	730	610	520						
			1650				1330	1100	920	780						
			2160				1750	1440	1210	1030						
			1470				970	690	450							p. 97
			1810				1200	850	550							
			2210				1460	1030	670							
			3000				2350	1680	1100							

Accuracy grade (6)	With/without motor (7)	Cover (8)	Sensors (9)	Housing A/Intermediate flange (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
				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) 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.

SKR20 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)
SKR20	01	A	0030	P	0	1	2	AQ
SKR20	01: 1 mm 06: 6 mm	A: x 1 B: x 2	0030: 30 mm to 0130: 130 mm	No symbol: Normal grade H: High accuracy grade P: Precision grade	For direct coupling 0: Direct coupling (without motor) 1: Direct coupling (Specified motor prepared and mounted by THK) For wrap R1: Non-standard side wrap (without motor) R2: Standard side wrap (without motor) R3: Bottom side wrap (without motor) R4: Non-standard side wrap (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)	0: Without cover 1: With cover 2: With bellows	0 1 2 6 7 B E H L J M Sensor details → p. 17	For direct coupling A0 AN AP AQ AR AS 20 For wrap WN-05D WP-08D WP-08K WQ-08D WQ-08K

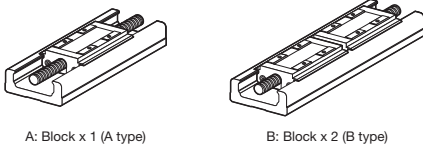
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 109 to p. 110

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

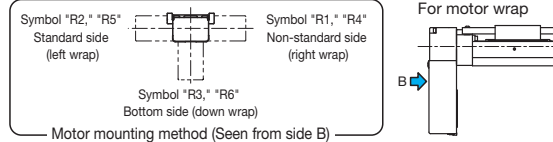
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

For direct coupling → p. 19
For wrap → p. 21

(3) Block type



(6) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		6010
	Basic static load rating C ₀ (N)		8030
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to 0
		Precision grade (P)	-0.006 to -0.004
Geometrical moment of inertia	I _x ¹ (mm ⁴)	6 × 10 ³	
	I _y ² (mm ⁴)	6.14 × 10 ⁴	
	Weight (kg/m)	2.6	
Ball screw	Ball screw lead (mm)		1 6
	Basic dynamic load rating C _a (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 C _a (N)	1150
		Static permissible load P _{0a} (N)	735
Permissible input torque (N·m)	Direct coupling	0.12 0.42	
	Wrap	0.40	
Static permissible moment ^{4,5} (N·m)		M _A : 38 (207), M _B : 38 (207), M _C : 98 (197)	
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 116 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 1 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		
		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.

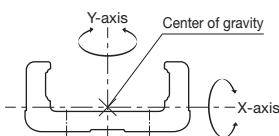
Note 3) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

Note 4) The starting torque represents the value when containing THK AFA Grease.

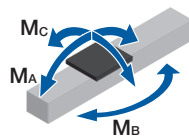
Note 5) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

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·m ²)
30 to 130	100 to 200	A type 0.07 B type 0.14	A type 0.05 B type 0.1	A type 0.12 B type 0.24	4.8	1, 6	133 to 233	φ4h7	0.013

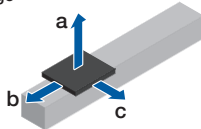
¹ Stroke with 1 block (A type).

² Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.

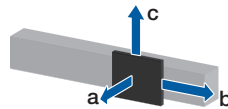
Note) Refer to page 19 for applicable couplings.

Permissible Overhang Length³

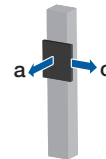
Horizontal Usage



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	110	160
			6	160	50	80
			12.5	70	20	40
		6	3	350	110	160
			6	160	50	80
			12.5	70	20	40
	B type	1	4	400	370	250
			8.5	400	170	110
			17.5	260	80	50
		6	4	400	370	250
			8.5	400	170	110
			17.5	260	80	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	2.5	170	110	360	
			5	70	50	180	
			10	20	20	90	
	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	2.5	170	110	360
				5	70	50	180
				10	20	20	90
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	

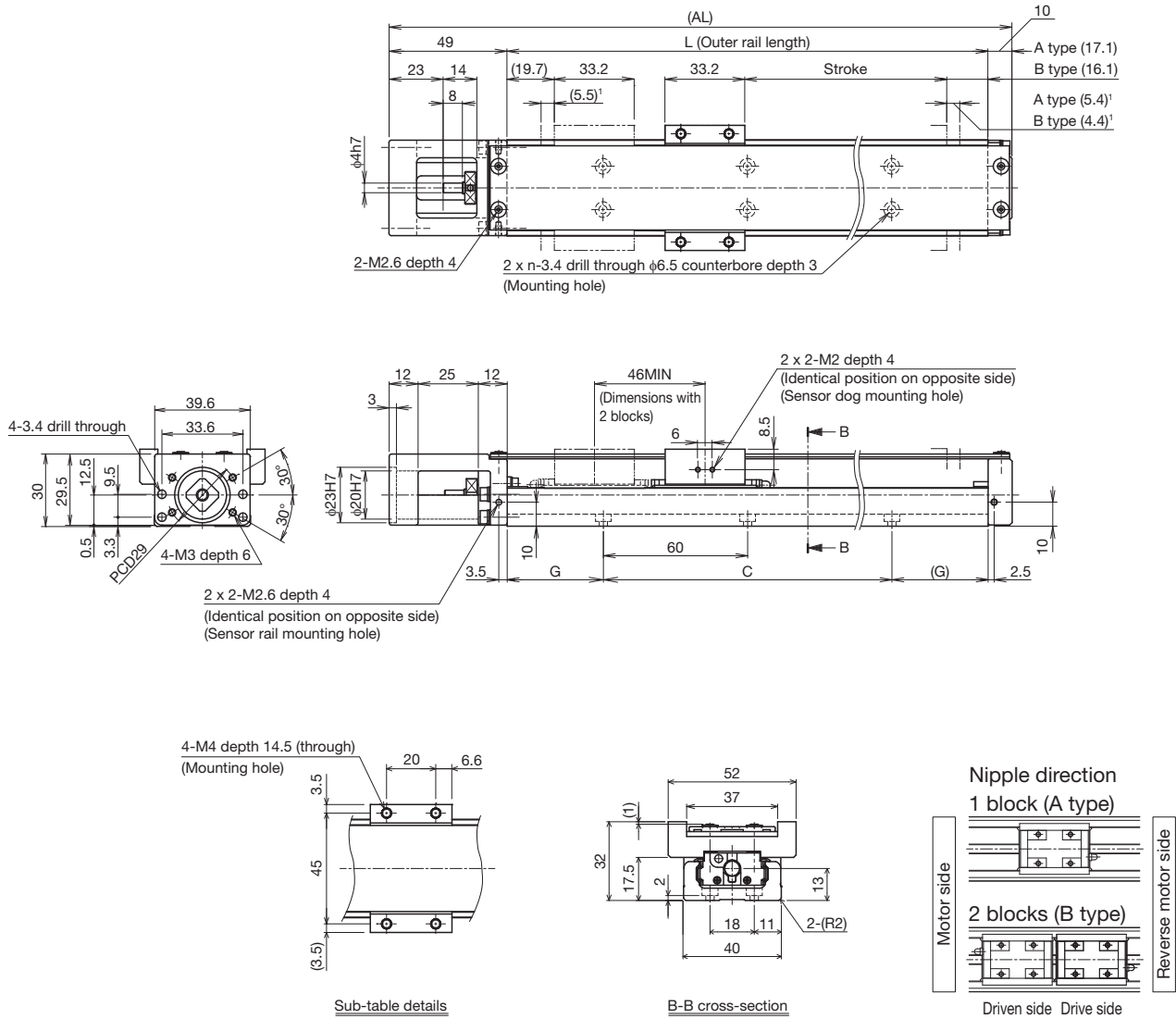
Hypothetical motor capacity 50 W	Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)	
Direct coupling	A type	1	0.5	400	400
			1.5	150	140
			3	60	70
		6	1.5	150	140
			3	60	70
			6	20	30
	B type	1	0.5	400	400
			1.5	400	400
			3	360	260
		6	1.5	400	400
			3.5	310	230
			7	140	110
Wrap	A type	1	0.5	400	400
			1.5	150	140
			3	60	70
		6	1.5	150	140
			3	60	70
			6	20	30
	B type	1	0.5	400	400
			1.5	400	400
			3	360	260
		6	1.5	400	400
			3.5	310	230
			7	140	110

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



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

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (40.9)	80 (90.9)	130 (140.9)
	B type ²	-	35 (44.9)	85 (94.9)
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)		0.55	0.69	0.84

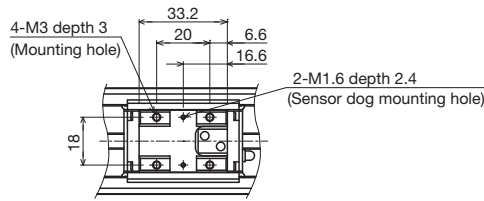
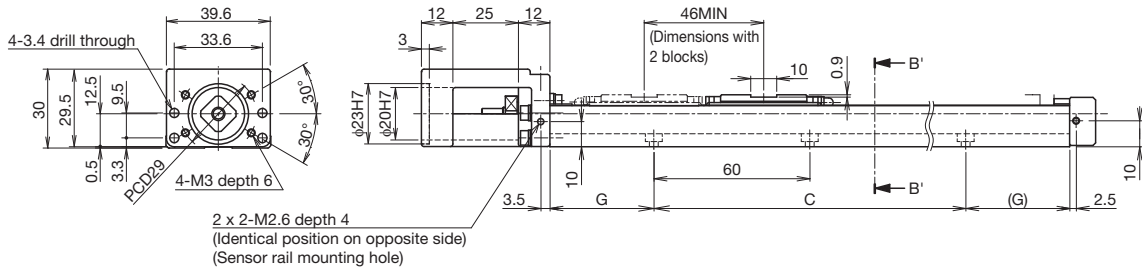
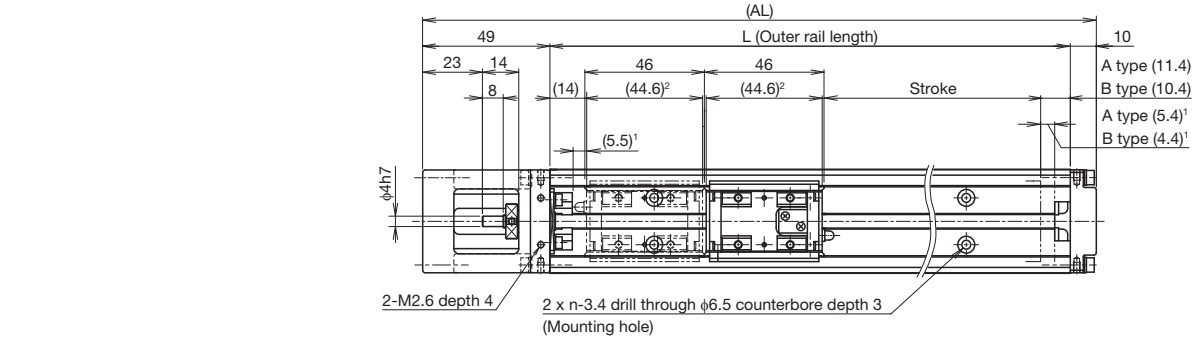
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

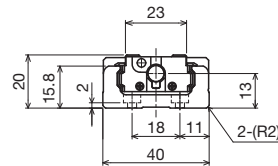
⁴ The weight with 2 blocks (B type) has 0.12 kg added.

Without cover
Direct motor coupling

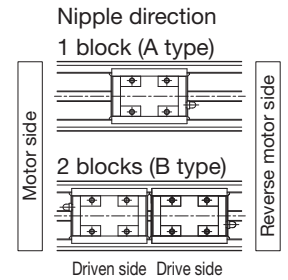
Dimensions



Block details



B'-B' cross-section



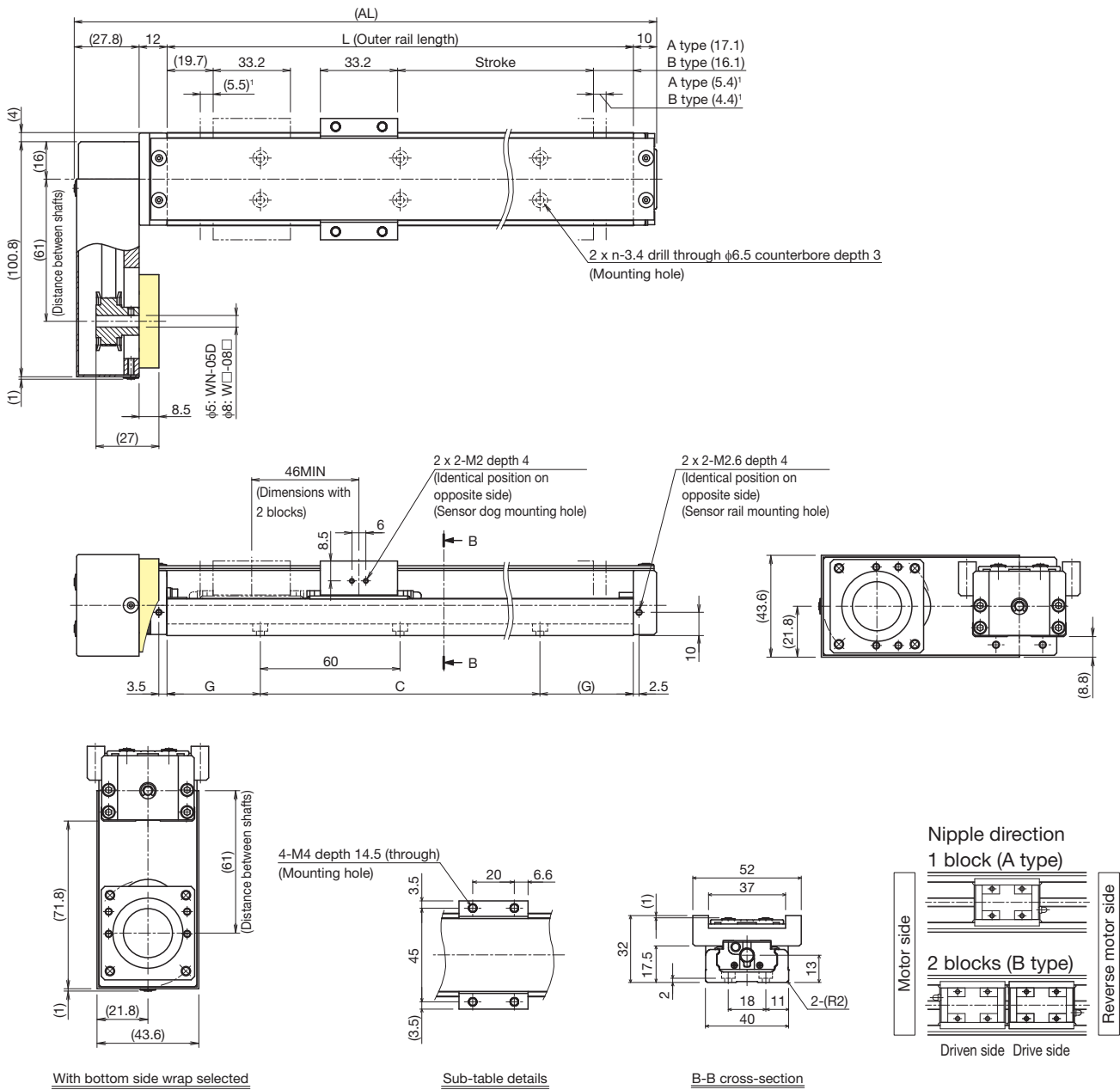
¹ Dimensions from the mechanical stopper to the stroke start position.
² Shows the block length when calculating the enabled stroke range. 90.6 mm (2 pcs total) for SKR20 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (40.9)	80 (90.9)	130 (140.9)
	B type ³	-	35 (44.9)	85 (94.9)
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)		0.47	0.6	0.74

³ The value with 2 blocks (B type) attached.
⁴ Maximum speed is limited by the actuator's permissible speed.
⁵ The weight with 2 blocks (B type) has 0.07 kg added.

With cover
Motor wrap

Dimensions



With bottom side wrap selected

Sub-table details

B-B cross-section

Nipple direction
1 block (A type)
2 blocks (B type)
Driven side Drive side
Motor side Reverse motor side

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

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (40.9)	80 (90.9)	130 (140.9)
	B type ²	-	35 (44.9)	85 (94.9)
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)		0.81	0.95	1.09

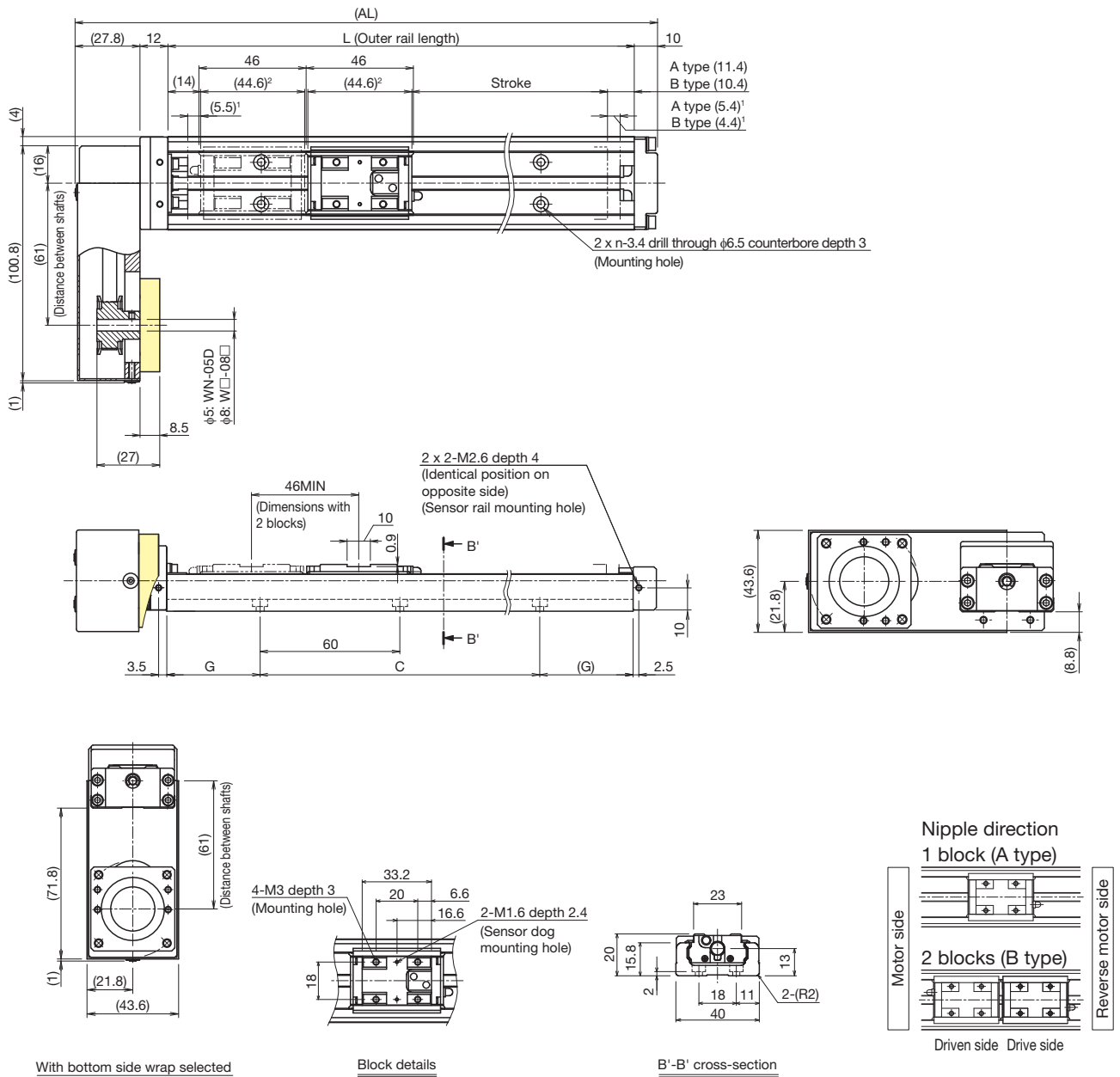
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 0.12 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. 90.6 mm (2 pcs total) for SKR20 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	30 (40.9)	80 (90.9)	130 (140.9)
	B type ³	-	35 (44.9)	85 (94.9)
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)		0.72	0.86	0.99

³ The value with 2 blocks (B type) attached.
⁴ Maximum speed is limited by the actuator's permissible speed.
⁵ The weight with 2 blocks (B type) has 0.07 kg added.

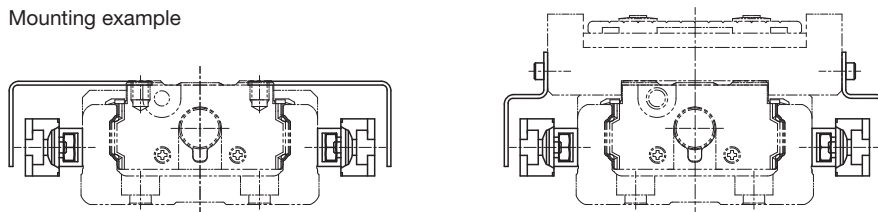
Options

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

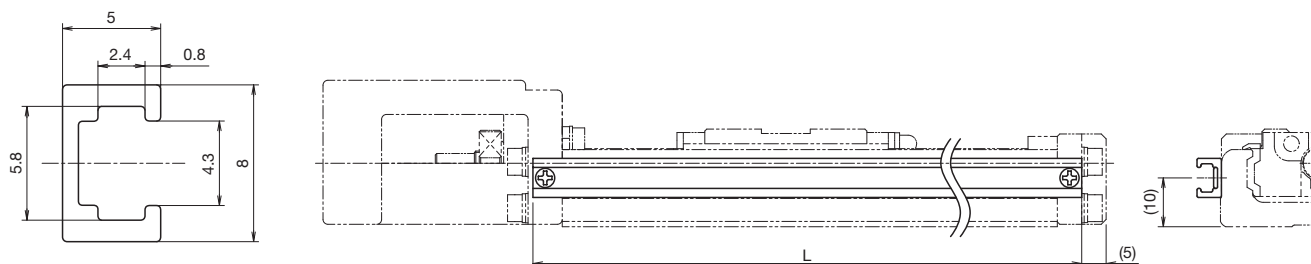
³ NC contact: Normally closed contact point

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.



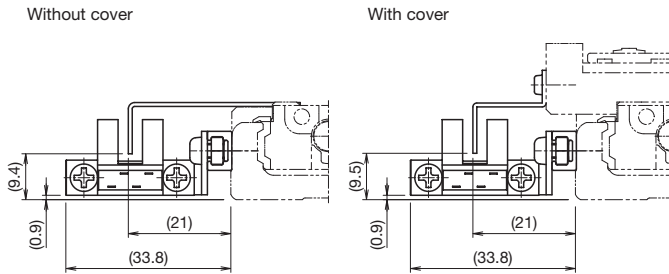
Sensor rail details

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).

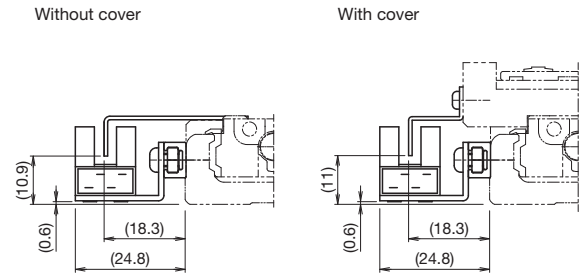
Photo Sensor Mounting Dimensions

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



Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

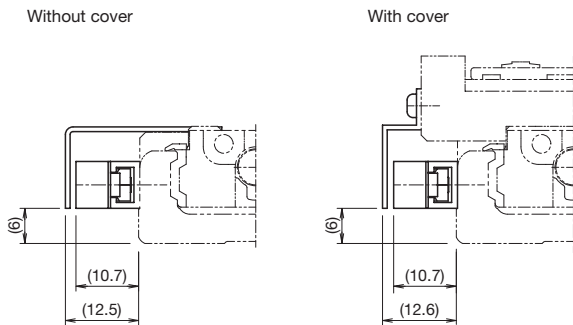
Sensor dog width: 10 mm



Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

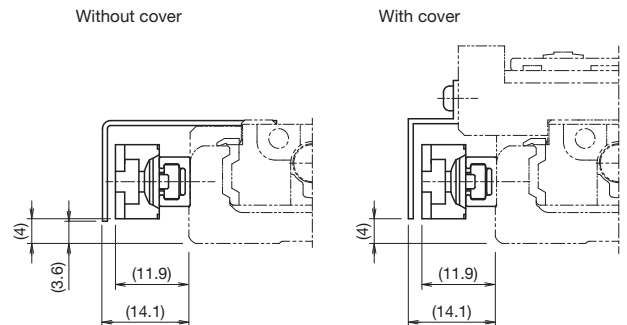
Sensor dog width: 10 mm

Proximity Sensor Mounting Dimensions



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

Sensor dog width: 10 mm



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						
			SGM7J-A5						
	Σ-7	SGM7A-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				
			JN	HG-KR053	50	□40	AQ	SFC-010DA2-4B-8B	XGT2-19C-4-8
				HG-MR053					
	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					
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	β is 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
			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	
	FAF/FDF52*			□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5	
	5-phase		FAF54*/FDF54*/FA511M42/FB511M42	□42	AR	SFC-010DA2-4B-6B	XGT2-15C-4-6	
			D*14S28*	□28	AS	SFC-010DA2-4B-5B-L32	XGT2-15C-4-5	
	2-phase		DB14H52*	□42	AR	SFC-010DA2-4B-5B	XGT2-15C-4-5	
			DU15H52*					

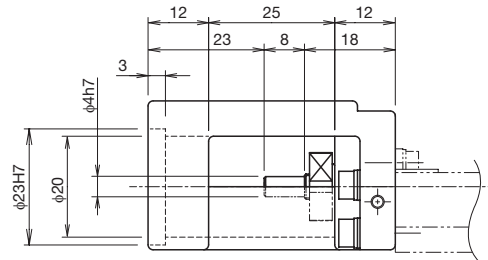
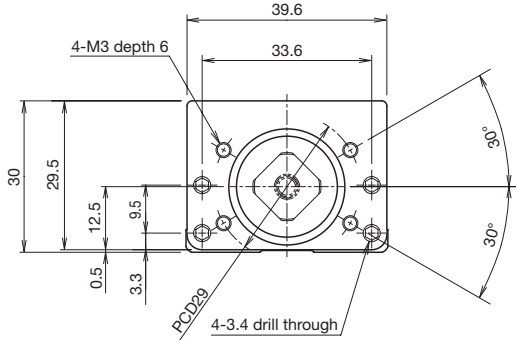
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 11), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

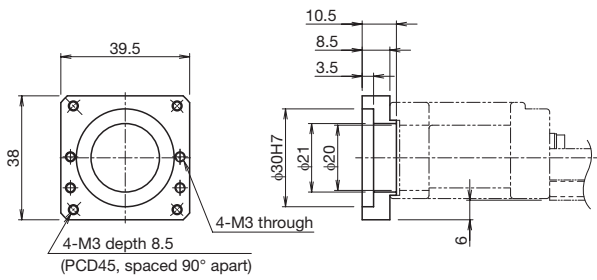
SKR20
A0



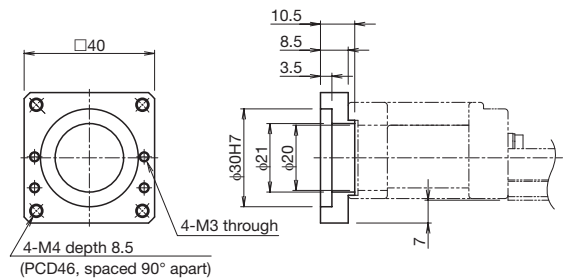
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Intermediate flange

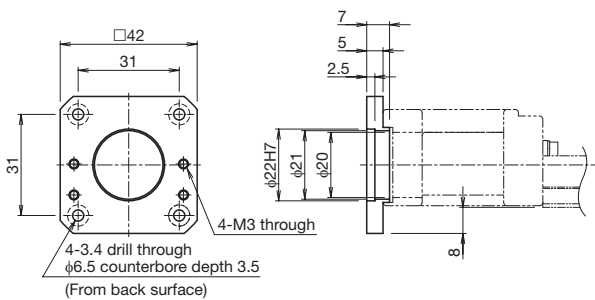
SKR20
AP



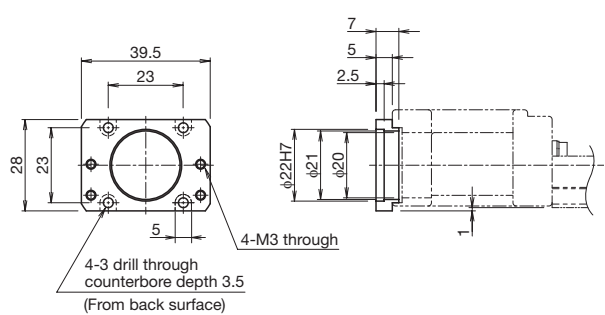
SKR20
AQ



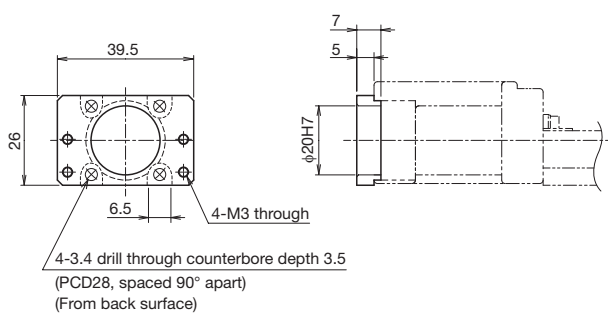
SKR20
AR



SKR20
AS



SKR20
AN



Options

Intermediate Flange (wrap)

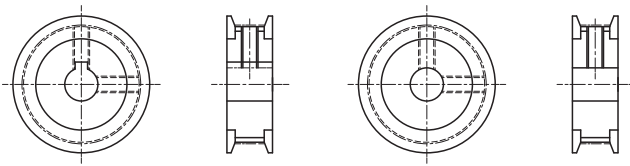
Intermediate flanges are available to mount various kinds of motors.

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		
			JN	HG-MR053	50	□40	WQ-08D
				HG-KR053			
			HF-KN053	50	□40	WQ-08D	
	Tamagawa Seiki Co., Ltd.	TBL-iii		TS4602	50	□40	WQ-08D
		TBL-iv	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	β is Series	βis0.2/5000	50	□40	WQ-08K		

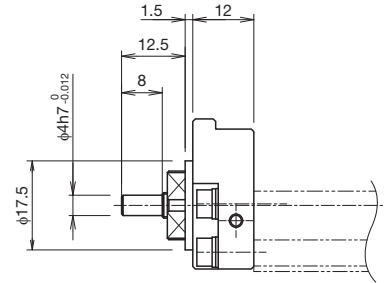
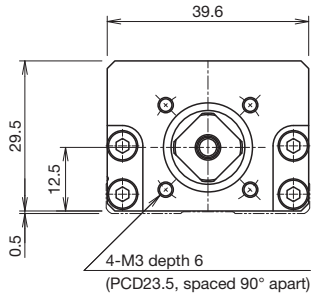
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 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

SKR20
20

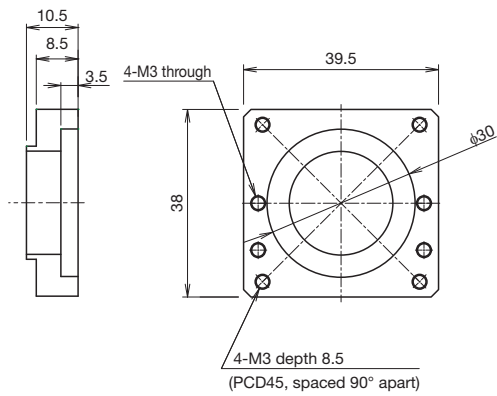


Note) Shaft end must be considered separately for motor wrap types. Contact THK for details.

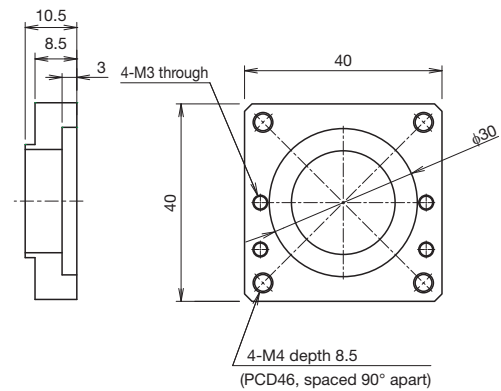
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Wrap specification (intermediate flange)

SKR20
WP

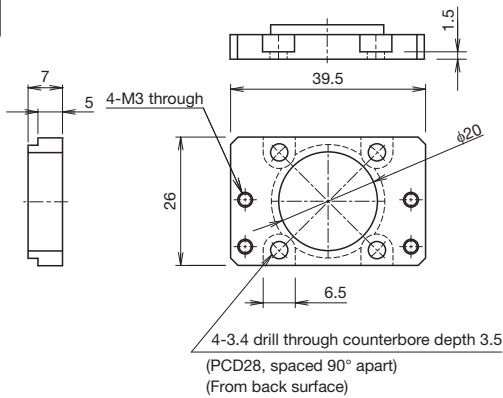


SKR20
WQ



SKR**	Actuator model
W□	□: Intermediate flange

SKR20
WN



SKR26 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)
SKR26	02	A	0060	P	0	1	2	AQ
SKR26	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
							Sensor details	WP-08K
							→ p. 29	WQ-08D
								WQ-08K

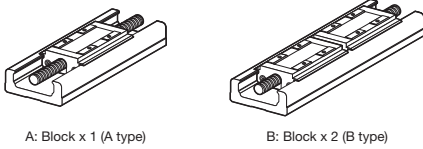
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows.
→ p. 109 to p. 110

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

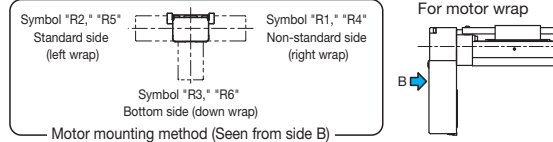
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

For direct coupling → p. 31
For wrap → p. 33

(3) Block type



(6) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		13000
	Basic static load rating C ₀ (N)		16500
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to 0
		Precision grade (P)	-0.007 to -0.006
	Geometrical moment of inertia	I _x ¹ (mm ⁴)	1.66 × 10 ⁴
I _y ² (mm ⁴)		1.48 × 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	
	Precision grade (P)		
Bearing (Fixed side)	Axial direction	Basic dynamic load rating Ca (N)	2000
		Static permissible load P _{0a} (N)	1230
Permissible input torque (N·m)	Direct coupling	0.43 0.80	
	Wrap	0.40	
Static permissible moment ^{4,5} (N·m)		M _A : 117 (589), M _B : 117 (589) M _C : 265 (530)	
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 116 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.

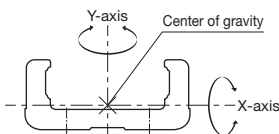
Note 3) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

Note 4) The starting torque represents the value when containing THK AFA Grease.

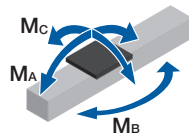
Note 5) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

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·m ²)
60 to 210	150 to 300	A type 0.17 B type 0.34	A type 0.08 B type 0.16	A type 0.25 B type 0.5	5.7	2, 6	190 to 340	φ5h7	0.013

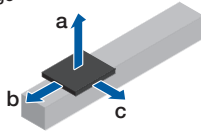
¹ Stroke with 1 block (A type).

² Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.

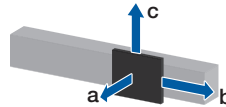
Note) Refer to page 31 for applicable couplings.

Permissible Overhang Length³

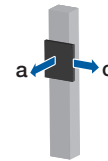
Horizontal Usage



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	180	170
			13.5	270	80	80
			27.5	120	40	40
		6	6.5	500	180	170
			13.5	270	80	80
			27.5	120	0	40
	B type	2	9.5	500	500	230
			19	500	300	110
			38.5	470	150	50
		6	9.5	500	500	230
			19	500	300	110
			38.5	470	150	50

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	5.5	170	110	390
			11	70	50	190
			22	20	20	90
	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

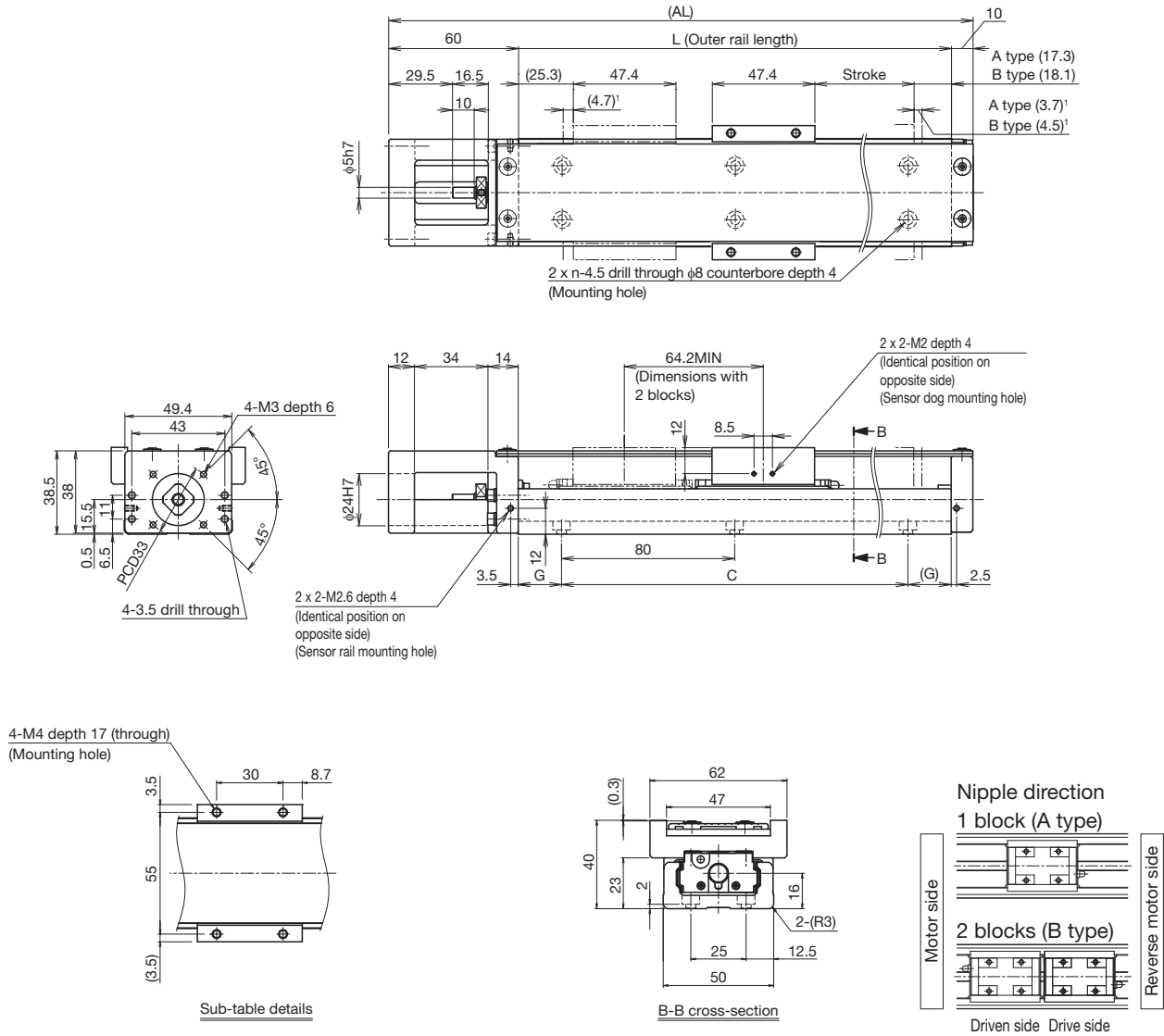
Hypothetical motor capacity 50 W	Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)	
Direct coupling	A type	2	3.5	230	140
			7	100	70
			14	40	30
		6	1.5	500	330
			3.5	230	140
			7	100	70
	B type	2	3.5	500	390
			7	500	190
			14	290	90
		6	2	500	500
			4.5	500	310
			9.5	440	140

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 (68.4)	110 (118.4)	160 (168.4)	210 (218.4)
	B type ²	-	45 (54.2)	95 (104.2)	145 (154.2)
Maximum speed ³ (mm/s)	Ball screw lead: 2 mm	200			
	Ball screw lead: 6 mm	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)		1.17	1.39	1.61	1.83

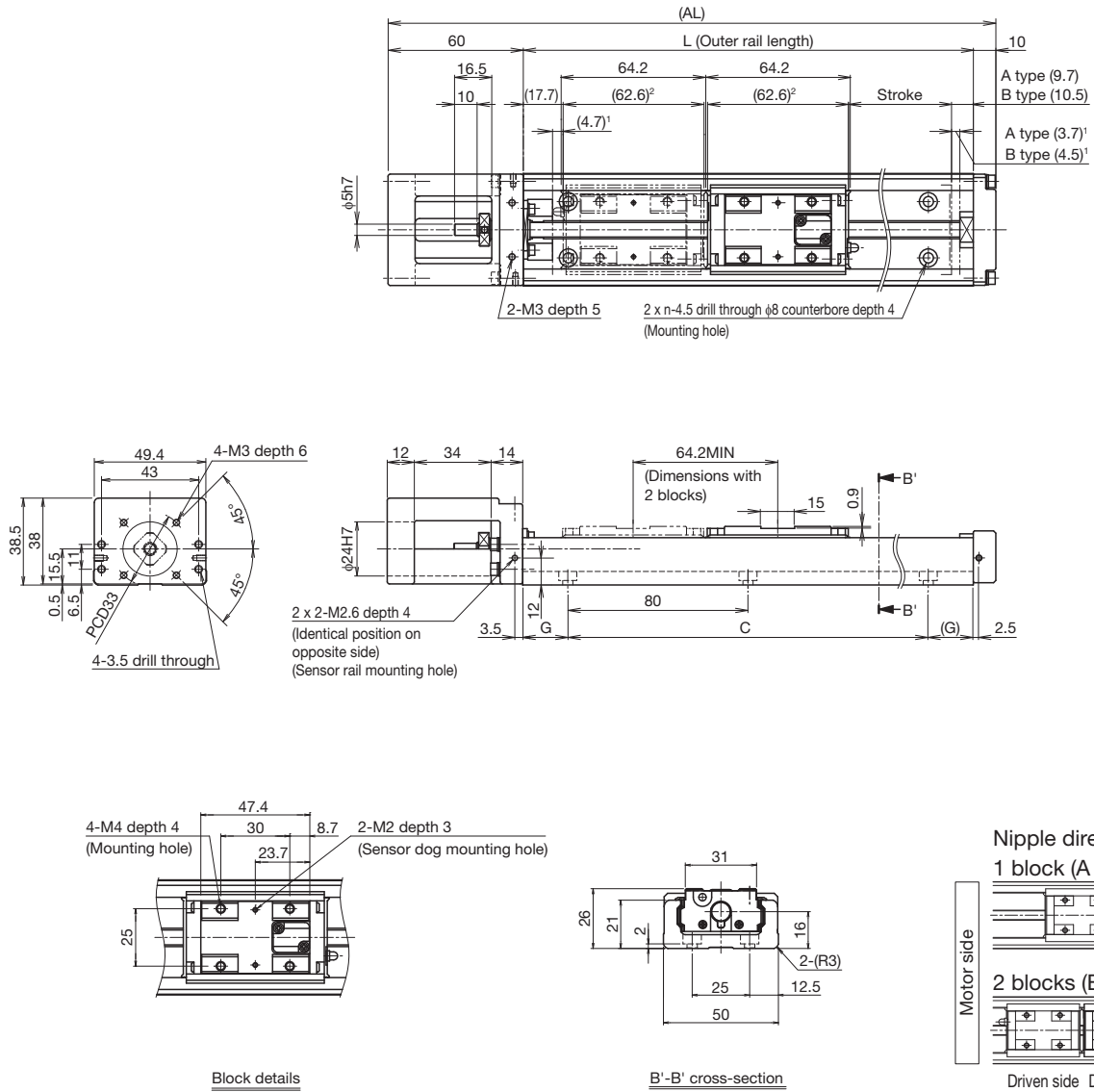
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 0.25 kg added.

Without cover
Direct motor coupling

Dimensions



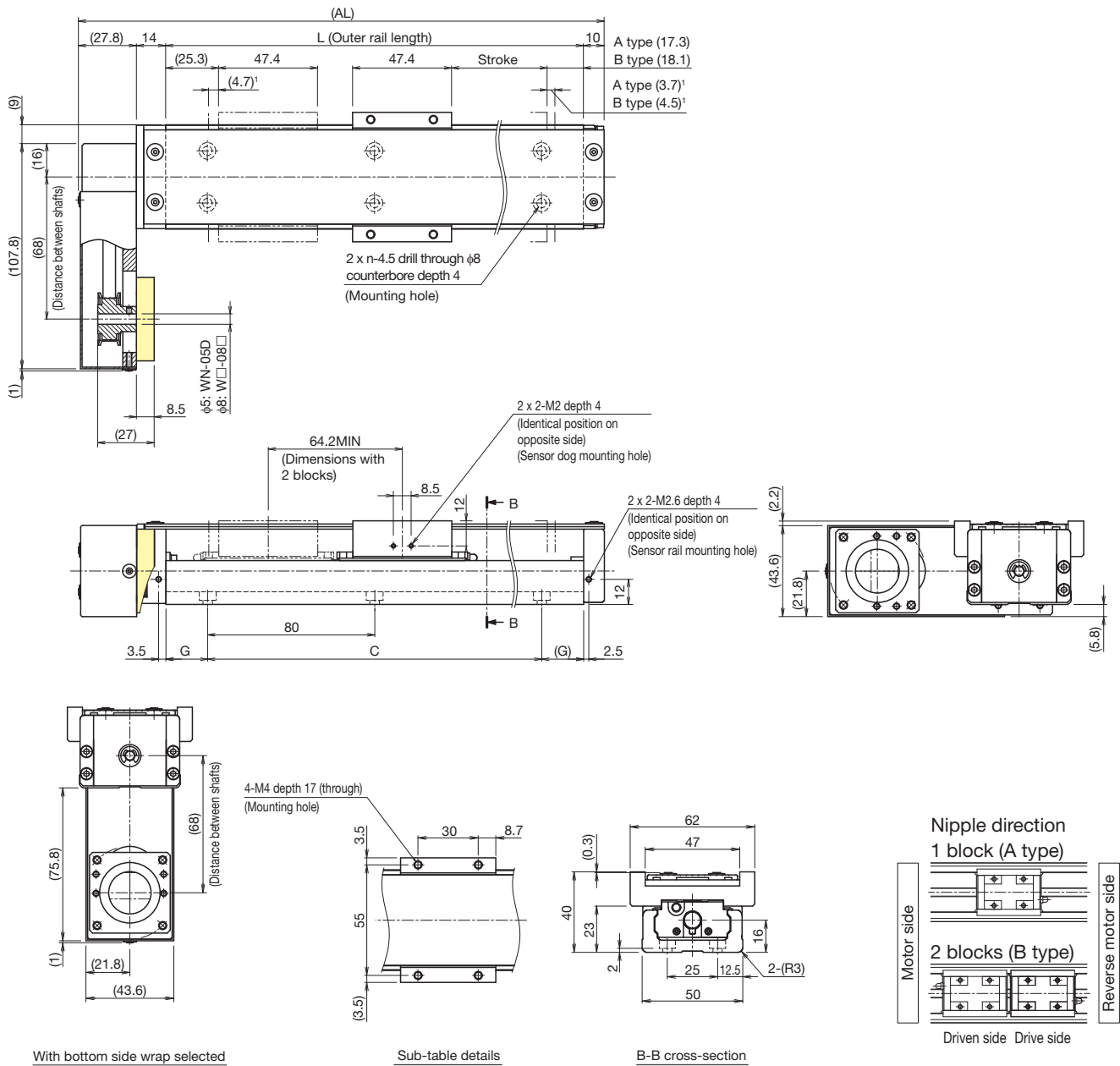
¹ Dimensions from the mechanical stopper to the stroke start position.
² Shows the block length when calculating the enabled stroke range. 126.8 mm (2 pcs total) for SKR26 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	60 (68.4)	110 (118.4)	160 (168.4)	210 (218.4)
	B type ³	-	45 (54.2)	95 (104.2)	145 (154.2)
Maximum speed ⁴ (mm/s)	Ball screw lead: 2 mm	200			
	Ball screw lead: 6 mm	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)		1.01	1.22	1.43	1.64

³ The value with 2 blocks (B type) attached.
⁴ Maximum speed is limited by the actuator's permissible speed.
⁵ The weight with 2 blocks (B type) has 0.17 kg added.

With cover
Motor wrap

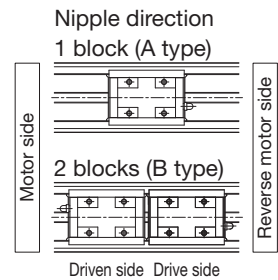
Dimensions



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 (68.4)	110 (118.4)	160 (168.4)	210 (218.4)
	B type ²	-	45 (54.2)	95 (104.2)	145 (154.2)
Maximum speed ³ (mm/s)	Ball screw lead: 2 mm	200			
	Ball screw lead: 6 mm	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)		1.39	1.61	1.84	2.06

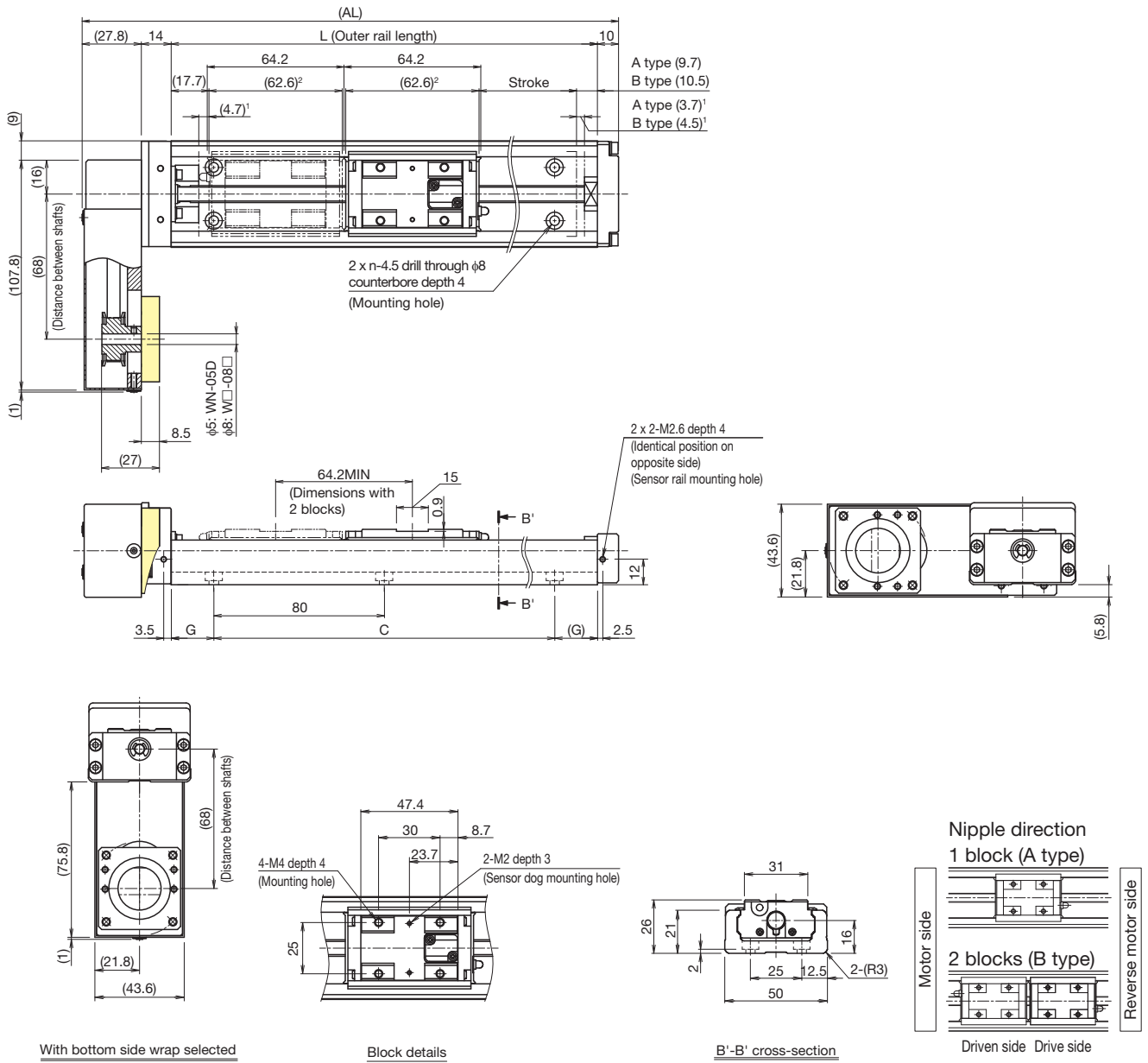
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 0.25 kg added.

Without cover
Motor wrap

Dimensions



With bottom side wrap selected

Block details

B'-B' cross-section

Driven side Drive side

¹ Dimensions from the mechanical stopper to the stroke start position.
² Shows the block length when calculating the enabled stroke range.
126.8 mm (2 pcs total) for SKR26 with 2 blocks (B type).

Stroke (mm) (Stroke between mechanical stoppers)	A type	60 (68.4)	110 (118.4)	160 (168.4)	210 (218.4)
	B type ³	-	45 (54.2)	95 (104.2)	145 (154.2)
Maximum speed ⁴ (mm/s)	Ball screw lead: 2 mm	200			
	Ball screw lead: 6 mm	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)		1.24	1.45	1.66	1.87

³ The value with 2 blocks (B type) attached.

⁴ Maximum speed is limited by the actuator's permissible speed.

⁵ The weight with 2 blocks (B type) has 0.17 kg added.

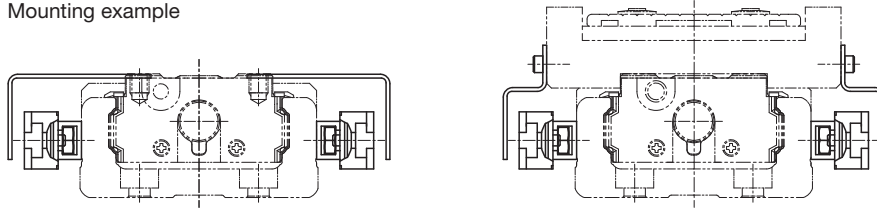
Options

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

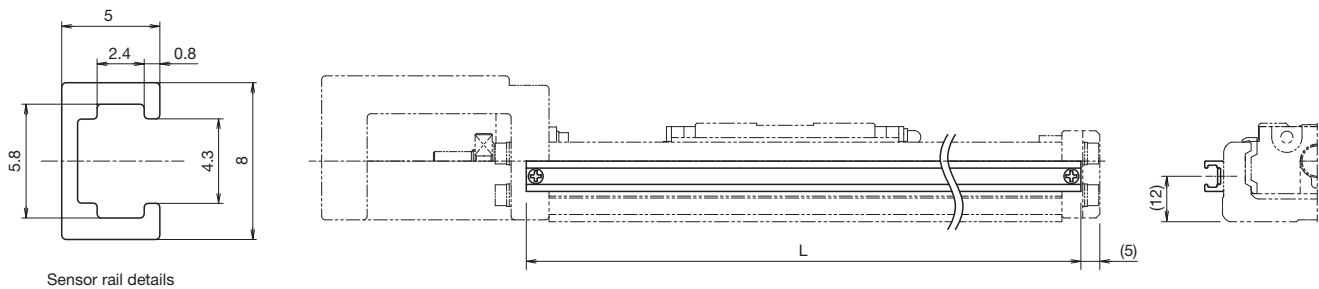
³ NC contact: Normally closed contact point

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.



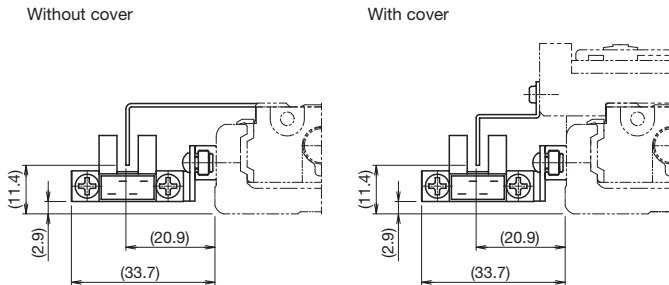
Sensor rail details

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).

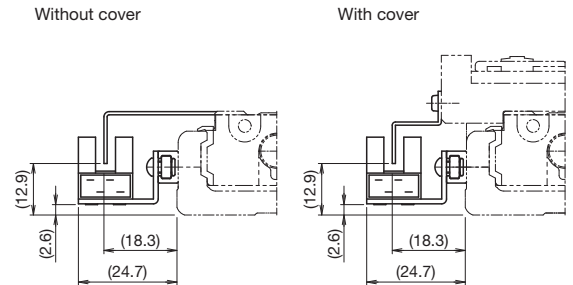
Photo Sensor Mounting Dimensions

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



Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 15 mm

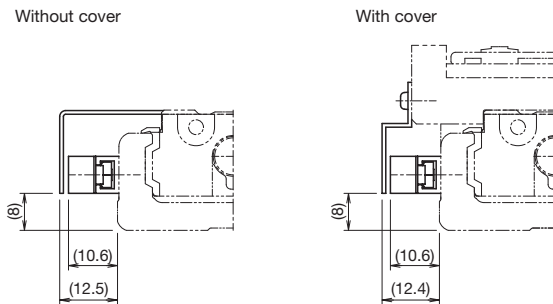


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

Sensor dog width: 15 mm

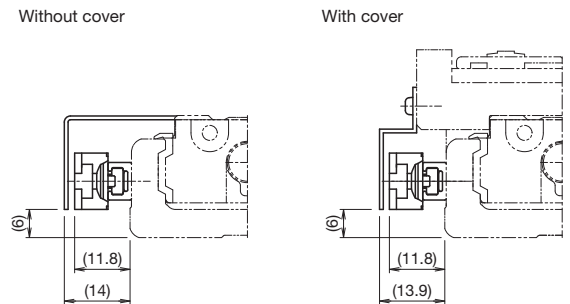
Note) When selecting "2" for Model Configuration (7) Cover, the above dimensions will differ. Contact THK for details.

Proximity Sensor Mounting Dimensions



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

Sensor dog width: 15 mm



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								
			SGM7J-A5								
	Σ-7	SGM7A-A5	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8				
		SGM7A-A5									
		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						
			JN	HG-KR053	50	□40	AQ	SFC-010DA2-5B-8B-L32	XGT2-19C-5-8		
				HG-MR053							
	TAMAGAWA	JN	HF-KN053	50	□40	AQ	SFC-010DA2-5B-8B-L32			XGT2-19C-5-8	
		TBL-III	TS4602	50	□40	AQ	SFC-010DA2-5B-8B-L32			XGT2-19C-5-8	
	TBL-IV	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											
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	β is Series	β is 0.2/5000	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
				RKS54*	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6
			CVK	PKA544	□42	AR	SFC-010DA2-5B-5B-L37	XGL2-15C-5-5
				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	
			FAF/DF52*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5	
		5-phase	FAF54*/DF54*/FA511M42/FB511M42	□42	AR	SFC-010DA2-5B-6B-L37	XGL2-15C-5-6	
			D*14S28*	□28	AS	SFC-010DA2-5B-5B-L39	XGL2-15C-5-5	
2-phase			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.

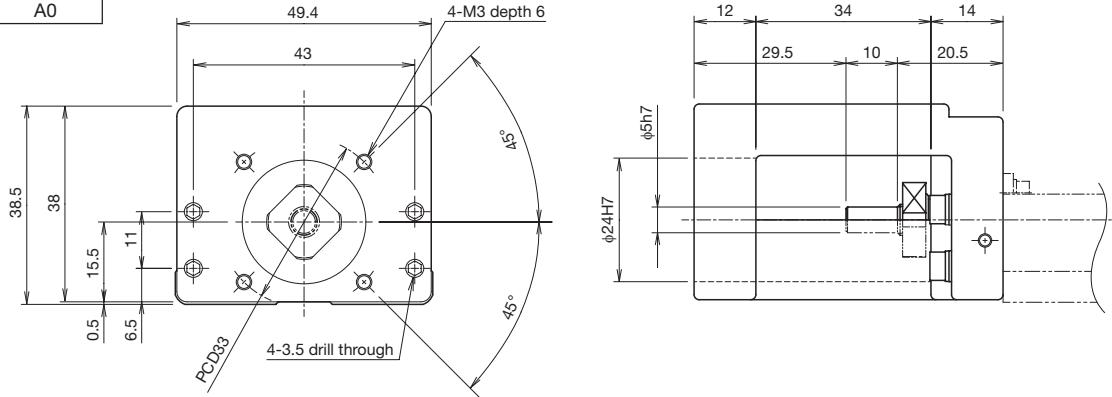
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 23), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

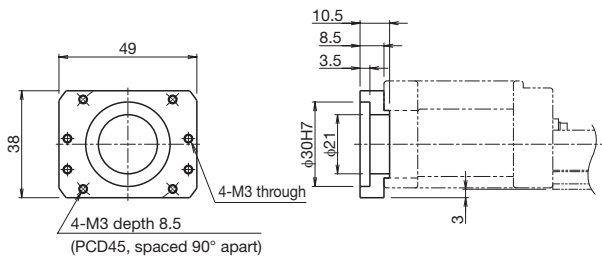
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

SKR26
A0

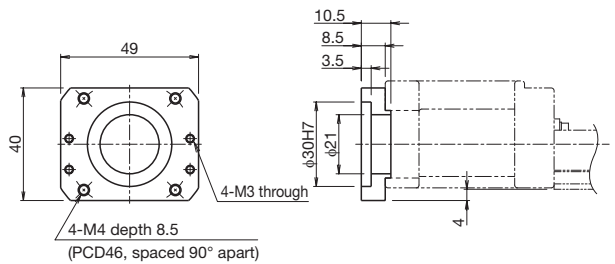


Intermediate flange

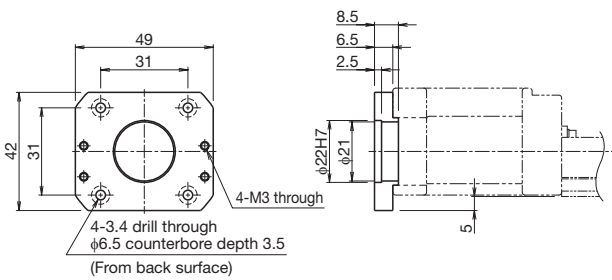
SKR26
AP



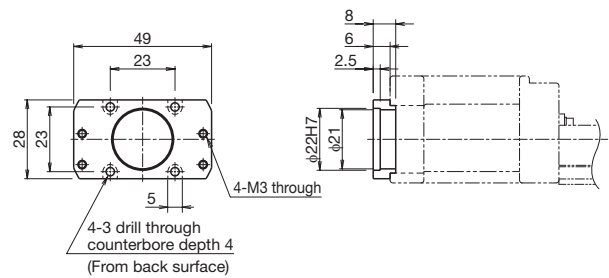
SKR26
AQ



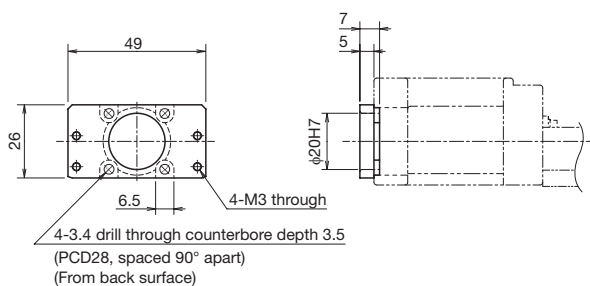
SKR26
AR



SKR26
AS



SKR26
AN



Options

Intermediate Flange (wrap)

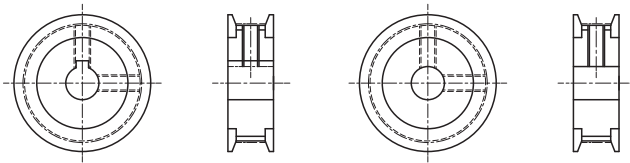
Intermediate flanges are available to mount various kinds of motors.

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-MR053	50		
			HG-KR053				
			JN	HF-KN053	50	□40	WQ-08D
	Tamagawa Seiki Co., Ltd.	TBL-iii	TS4602	50	□40	WQ-08D	
		TBL-iv	TSM3102				
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	WP-08D, WP-08K
				MSME5A			
A6			MSMF5A	50	□38	WP-08K	
			MHMF5A		□40		
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	β is 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.

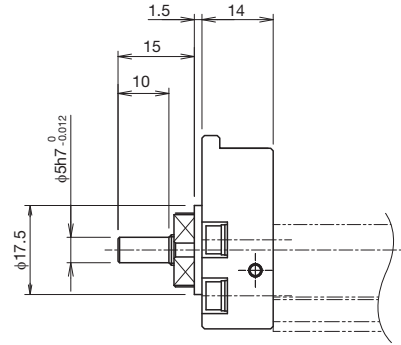
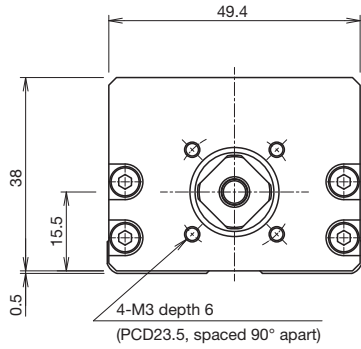
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 23), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

SKR26
20

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

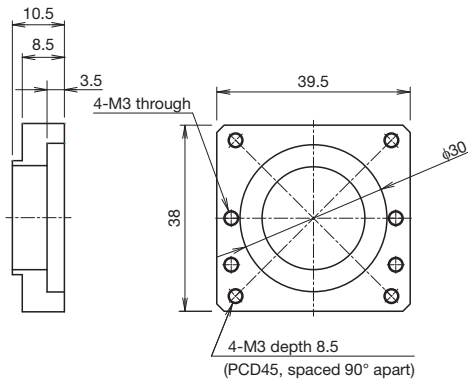


Note) Shaft end must be considered separately for motor wrap types.
Contact THK for details.

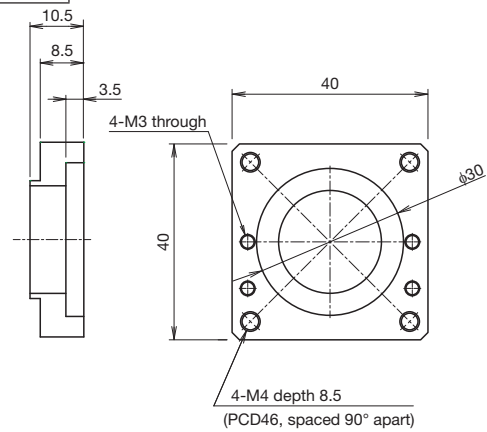
Wrap specification (intermediate flange)

SKR26
WP

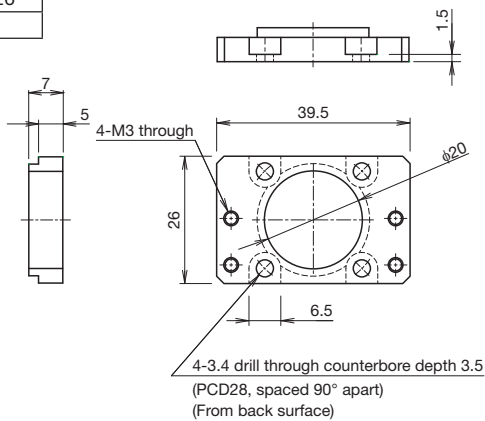
SKR**	Actuator model
W□	□: Intermediate flange



SKR26
WQ



SKR26
WN



SKR33 A/B

Direct Motor Coupling

Motor Wrap

Main Unit Width 60 mm

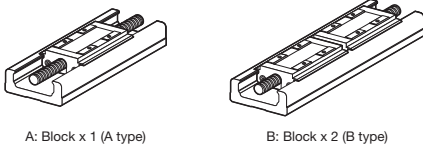
Main Unit Height 33 mm

Stroke Max. 595 mm

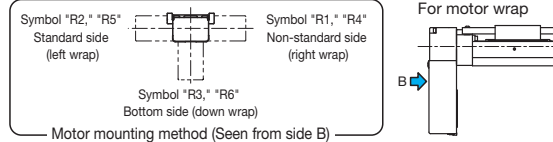
Model Configuration

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)
SKR33	06	A	QZA	0280	P	0	1	2	AQ
SKR33	06: 6 mm 10: 10 mm 20: 20 mm	A: x 1 B: x 2	No symbol: Without QZ QZ QZA QZB QZAD	0045: 45 mm to 0595: 595 mm	No symbol: Normal grade H: High accuracy grade P: Precision grade	For direct coupling 0: Direct coupling (without motor) 1: Direct coupling (Specified motor prepared and mounted by THK) For wrap R1: Non-standard side wrap (without motor) R2: Standard side wrap (without motor) R3: Bottom side wrap (without motor) R4: Non-standard side wrap (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)	0: Without cover 1: With cover 2: With bellows	0 1 2 6 7 B E H L J M	For direct coupling A0 AP AQ AR AT AU 40 For wrap WP-08D WP-08K WP-08M WQ-08D WQ-08K WQ-08M
<p>Check the stroke for type with QZ when selecting anything other than "No symbol." → p. 53 to p. 58</p>				<p>When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.</p> <p>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.</p>		<p>Sensor details → p. 47</p> <p>For direct coupling → p. 49 For wrap → p. 51</p>			

(3) Block type



(7) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		17000
	Basic static load rating C ₀ (N)		20400
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to 0
		Precision grade (P)	-0.012 to -0.004
	Geometrical moment of inertia	I _x ¹ (mm ⁴)	5.35 × 10 ⁴
I _y ² (mm ⁴)		3.52 × 10 ⁵	
Weight (kg/m)		6.1	
Ball screw	Ball screw lead (mm)		6 10 20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	4400 2700 2620
		Precision grade (P)	
	Basic static load rating C _{0a} (N)	Normal grade/High accuracy grade (H)	6290 3780 3770
		Precision grade (P)	
	Screw shaft diameter (mm)		φ13
	Thread minor diameter (mm)		φ10.8
Ball center-to-center diameter (mm)		φ13.5	
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)	6250
		Static permissible load P _{0a} (N)	2700
Permissible input torque (N·m)	Direct coupling	2.8	3.2
	Wrap		0.98
Static permissible moment ^{4,5} (N·m)		M _A : 173 (990), M _B : 173 (990), M _C : 424 (848)	
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 116 for the values if "1" or "2" is selected for item (8) in the model configuration.

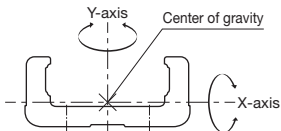
⁶ The conditions for calculation are as follows:

Stroke: 395 mm (A type), 320 mm (B type). Speed: 300 mm/s (for 6 mm lead), 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.

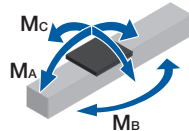
Note 1) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating Ca). Consult with THK.

Note 2) LM Guide load rating is the load rating per block.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke ⁷						
		45	95	195	295	395	495	595
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						
		45	95	195	295	395	495	595
High accuracy grade (H)	Positioning repeatability (mm)	±0.005						
	Positioning accuracy (mm)	0.06		0.1		0.12		
	Running parallelism (vertical direction) (mm)	0.025		0.035		0.04		
	Backlash (mm)	0.02						
	Starting torque (N·cm)	7						

Accuracy grade	Item	Stroke ⁷						
		45	95	195	295	395	495	595
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		0.02		
	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·m ²)
45 to 595	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	4.7	6, 10, 20	198 to 748	φ8h7	0.041

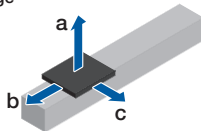
¹ Stroke with 1 block (A type, without QZ).

² Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.

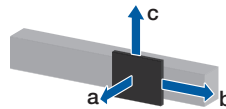
Note) Refer to page 49 for applicable couplings.

Permissible Overhang Length³

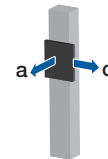
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 100 W	Ball screw lead (mm)	Load mass (kg)	a	b	c	
			(mm)	(mm)	(mm)	
Direct coupling	A type	6	10.5	430	130	180
			21.5	190	60	90
			43.5	80	30	40
		10	8.5	540	170	230
			17	250	80	110
			34.5	110	40	50
	B type	6	3	600	430	600
			6	600	210	320
			12.5	360	100	150
		10	15	600	430	260
			30.5	600	210	120
			61.5	330	100	60
Wrap	A type	6	8.5	600	600	460
			17	600	380	230
			34	600	190	110
		10	2.5	600	600	600
			5.5	600	240	350
			11	410	110	170
	B type	6	15	600	430	260
			30.5	600	210	120
			61.5	330	100	60
		10	8.5	600	600	460
			17	600	380	230
			34	600	190	110
20	2.5	600	600	600		
		5.5	600	600	600	
		11	600	590	350	

Hypothetical motor capacity 100 W	Ball screw lead (mm)	Load mass (kg)	a	b	c	
			(mm)	(mm)	(mm)	
Direct coupling	A type	6	8.5	200	150	500
			17.5	80	70	240
			35	20	30	120
		10	7.5	230	170	560
			15	100	80	280
			30	30	30	140
	B type	6	3	600	420	600
			6	290	200	600
			12.5	120	90	340
		10	12	290	290	600
			24.5	130	140	480
			49	40	70	240
Wrap	A type	6	8.5	430	420	600
			17	200	210	600
			34	80	100	350
		10	2.5	600	600	600
			5.5	600	600	600
			11	320	320	600
	B type	6	8.5	200	150	500
			17.5	80	70	240
			35	20	30	120
		10	7.5	230	170	560
			15	100	80	280
			30	30	30	140
20	2.5	600	480	600		
		5.5	320	230	600	
		11	140	110	380	
	10	12	290	290	600	
		24.5	130	140	170	
		49	40	70	80	
20	8.5	430	420	600		
		17	200	210	600	
		34	80	100	350	
	2.5	600	600	600		
		5.5	600	600	600	
		11	320	320	600	

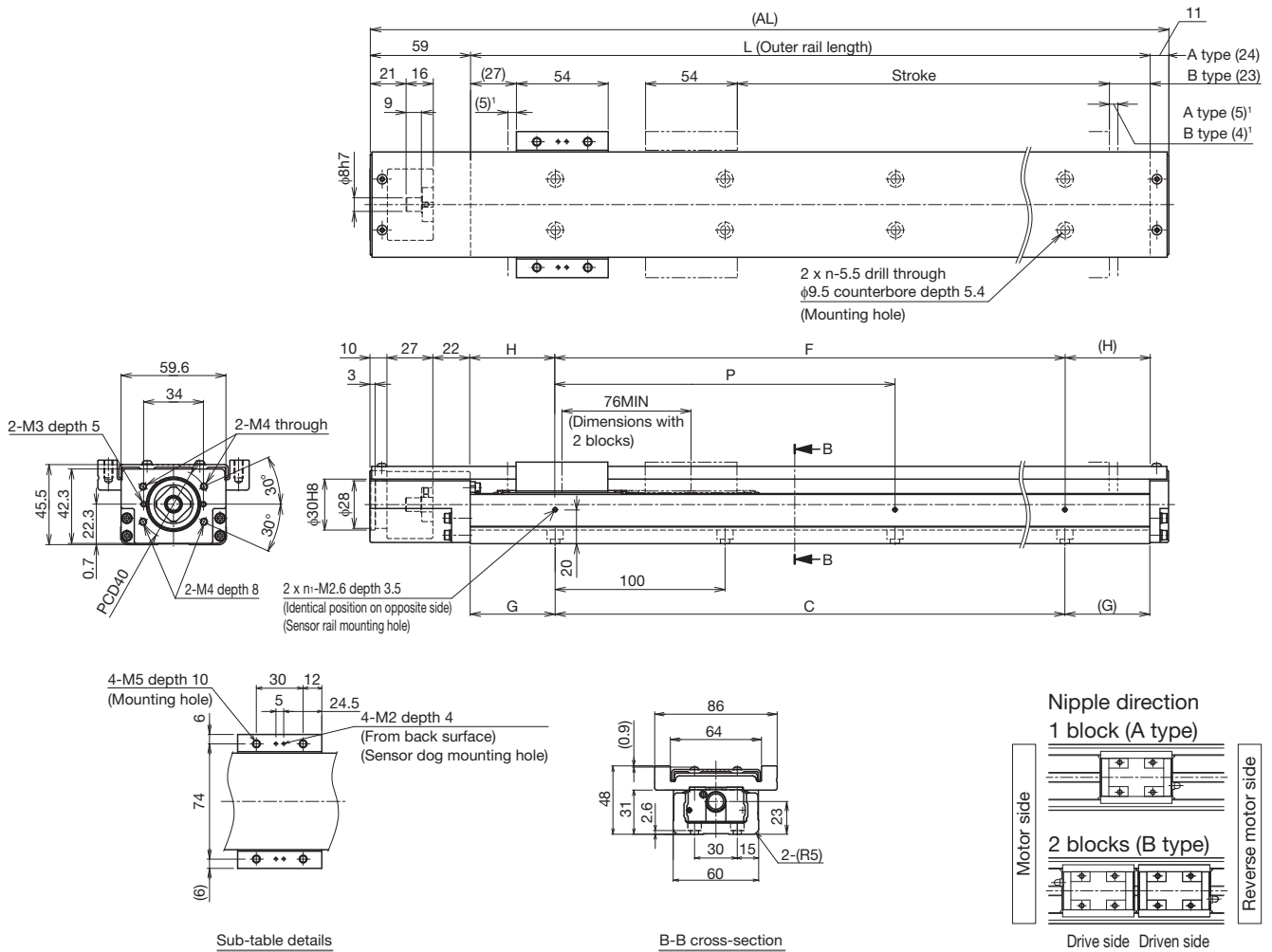
Hypothetical motor capacity 100 W	Ball screw lead (mm)	Load mass (kg)	a	c	
			(mm)	(mm)	
Direct coupling	A type	6	4.5	220	210
			9.5	90	100
			19	30	50
		10	3	340	320
			6	160	160
			12	60	80
	B type	6	1	600	600
			2.5	420	390
			5.5	170	170
		10	5.5	600	490
			11	430	240
			22	200	120
Wrap	A type	6	3	600	600
			6	600	450
			12.5	380	210
		10	1	600	600
			2	530	490
			4.5	220	210
	B type	6	5.5	600	490
			11	430	240
			22	200	120
		10	3	600	600
			6	600	450
			12.5	380	210
20	1	600	600		
		2.5	600	600	
		5	600	540	

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: 320 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), 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	45 (55)	95 (105)	195 (205)	295 (305)	395 (405)	495 (505)	595 (605)
	B type ²	-	-	120 (129)	220 (229)	320 (329)	420 (429)	520 (529)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm	600					550	390
	Ball screw lead: 10 mm	1000					920	650
	Ball screw lead: 20 mm	2000					1780	1270
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 _i	2	2	2	2	3	3	4
Weight ⁴ (kg)		2.3	2.6	3.4	4.2	4.9	5.7	6.4

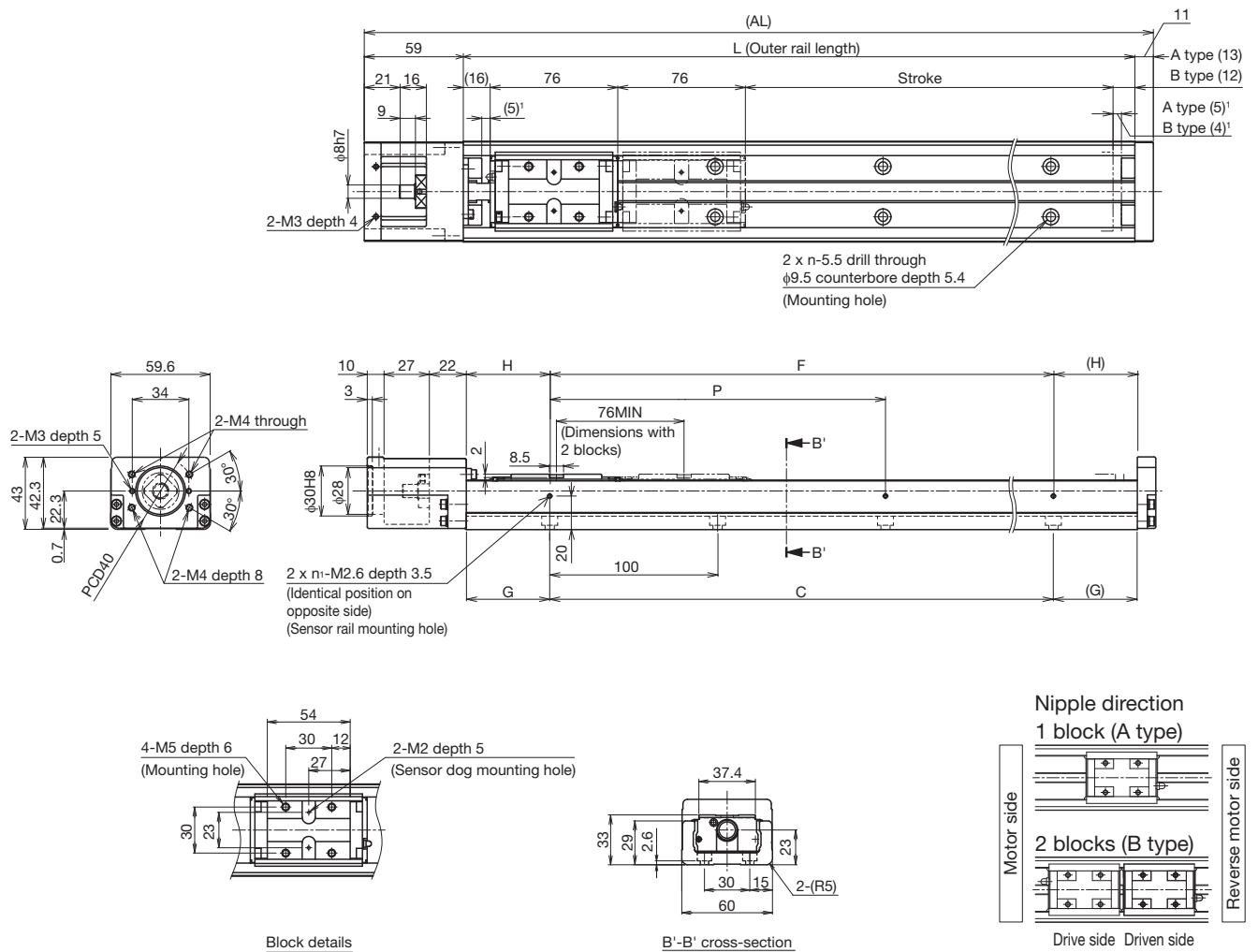
² The value with 2 blocks (B type, without QZ) attached.

³ 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.

Stroke (mm) (Stroke between mechanical stoppers)	A type	45 (55)	95 (105)	195 (205)	295 (305)	395 (405)	495 (505)	595 (605)	
	B type ²	-	-	120 (129)	220 (229)	320 (329)	420 (429)	520 (529)	
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm	600						550	390
	Ball screw lead: 10 mm	1000						920	650
	Ball screw lead: 20 mm	2000						1780	1270
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	3.7	4.5	5.2	5.9	

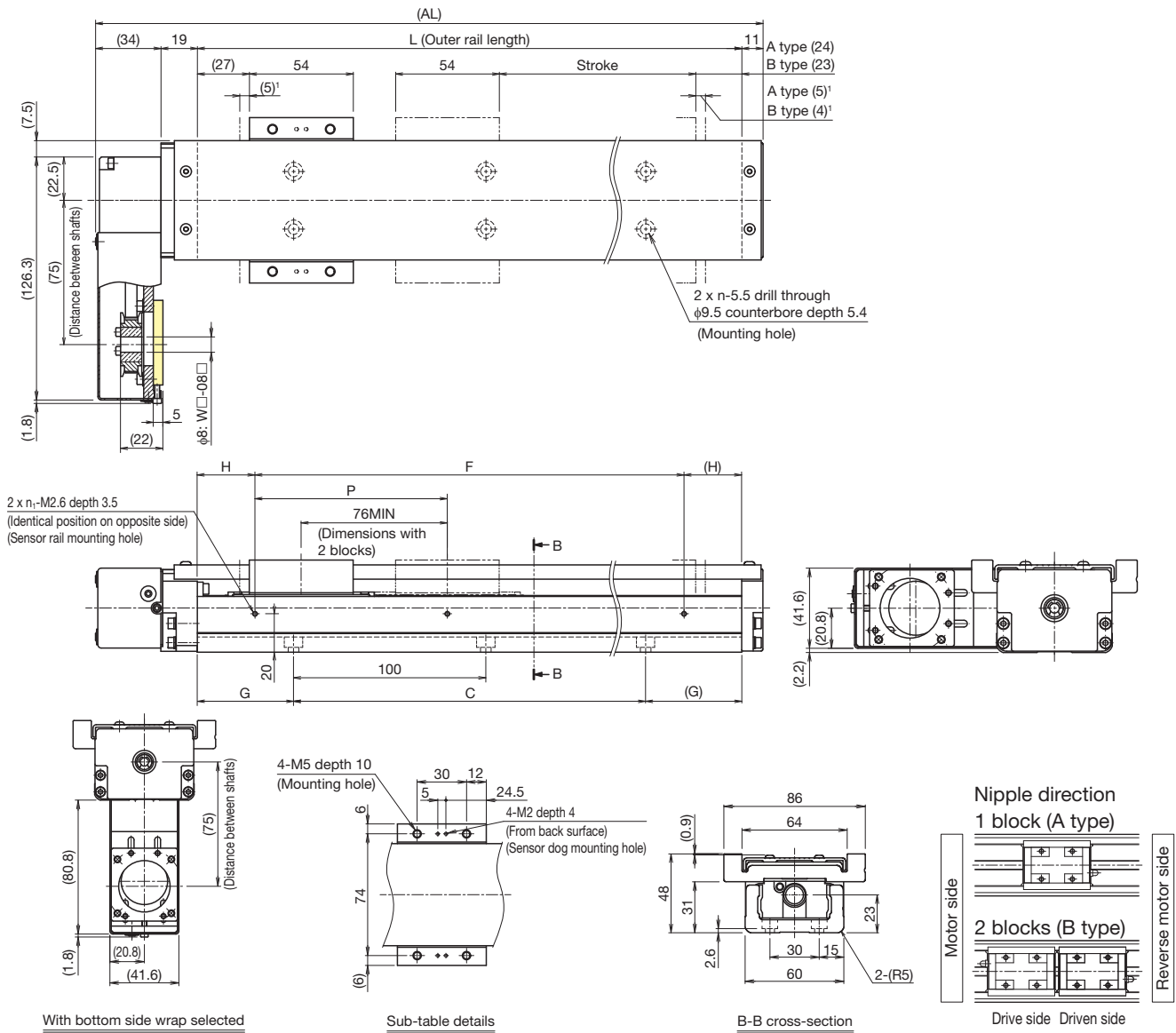
² The value with 2 blocks (B type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ 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	45 (55)	95 (105)	195 (205)	295 (305)	395 (405)	495 (505)	595 (605)
	B type ²	-	-	120 (129)	220 (229)	320 (329)	420 (429)	520 (529)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm			600			550	390
	Ball screw lead: 10 mm			1000			920	650
	Ball screw lead: 20 mm			2000			1780	1270
Dimensions (mm)	AL	214	264	364	464	564	664	764
	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
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	3.7	4.4	5.2	6	6.7

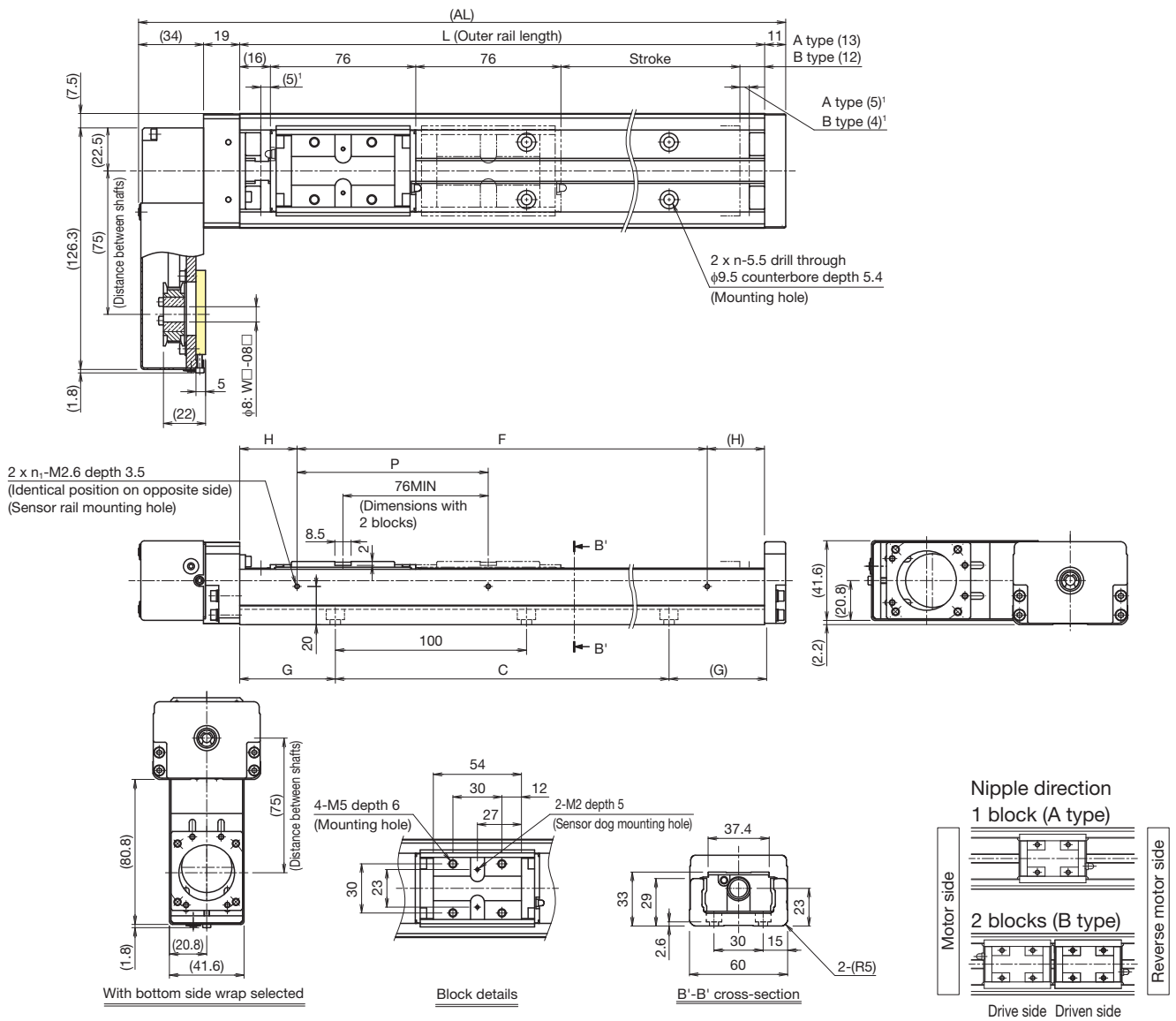
² The value with 2 blocks (B type, without QZ) attached.

³ 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



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

Stroke (mm) (Stroke between mechanical stoppers)	A type	45 (55)	95 (105)	195 (205)	295 (305)	395 (405)	495 (505)	595 (605)
	B type ²	-	-	120 (129)	220 (229)	320 (329)	420 (429)	520 (529)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm			600			550	390
	Ball screw lead: 10 mm			1000			920	650
	Ball screw lead: 20 mm			2000			1780	1270
Dimensions (mm)	AL	214	264	364	464	564	664	764
	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
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	4.8	5.5	6.2

² The value with 2 blocks (B type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 0.4 kg added.

SKR33 C/D

Direct Motor Coupling

Motor Wrap

Main Unit Width 60 mm

Main Unit Height 33 mm

Stroke Max. 620 mm

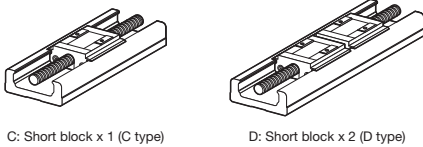
Model Configuration

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)
SKR33	06	C	QZA	0305	P	0	1	2	AQ
SKR33	06: 6 mm 10: 10 mm	C: x 1 D: x 2	No symbol: Without QZ QZ QZA QZB QZAD	0020: 20 mm to 0620: 620 mm <small>When selecting 2: With bellows for (8) Cover, specify the stroke with bellows. → p. 111 to p. 112</small>	No symbol: Normal grade H: High accuracy grade P: Precision grade	For direct coupling 0: Direct coupling (without motor) 1: Direct coupling (Specified motor prepared and mounted by THK) For wrap R1: Non-standard side wrap (without motor) R2: Standard side wrap (without motor) R3: Bottom side wrap (without motor) R4: Non-standard side wrap (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) <small>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.</small>	0: Without cover 1: With cover 2: With bellows	0 1 2 6 7 B E H L J M <small>Sensor details → p. 47</small> WP-08M WQ-08D WQ-08K WQ-08M	For direct coupling A0 AP AQ AR AT AU 40 For wrap WP-08D WP-08K WP-08M WQ-08D WQ-08K WQ-08M

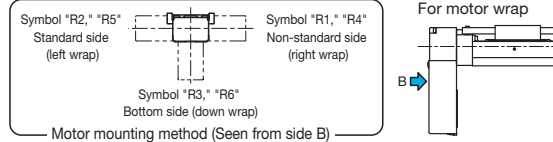
Check the stroke for type with QZ when selecting anything other than "No symbol."
→ p. 53 to p. 58

For direct coupling → p. 49
For wrap → p. 51

(3) Block type



(7) Motor mounting method



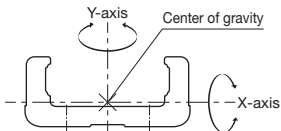
Selection Materials

Basic Specifications

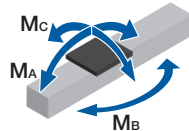
LM Guide	Basic dynamic load rating C (N)		11300
	Basic static load rating C ₀ (N)		11500
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.004 to 0
		Precision grade (P)	-0.012 to -0.004
	Geometrical moment of inertia	I _x ¹ (mm ⁴)	5.35 × 10 ⁴
I _y ² (mm ⁴)		3.52 × 10 ⁵	
Weight (kg/m)		6.1	
Ball screw	Ball screw lead (mm)		6 10
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	4400 2700
		Precision grade (P)	
	Basic static load rating C _{0a} (N)	Normal grade/High accuracy grade (H)	6290 3780
		Precision grade (P)	
	Screw shaft diameter (mm)		φ13
	Thread minor diameter (mm)		φ10.8
Ball center-to-center diameter (mm)		φ13.5	
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)	6250
		Static permissible load P _{0a} (N)	2700
Permissible input torque (N·m)	Direct coupling	2.8 3.2	
	Wrap	0.98	
Static permissible moment ^{4,5} (N·m)		M _A : 58 (390), M _B : 58 (390), M _C : 240 (480)	
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 116 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: 420 mm (C type), 370 mm (D type). Speed: 300 mm/s (for 6 mm lead), 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) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating Ca). Consult with THK.
 Note 2) LM Guide load rating is the load rating per short block.

Geometrical moment of inertia



Static permissible moment



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					
High accuracy grade (H)	Positioning repeatability (mm)	±0.005					
	Positioning accuracy (mm)	0.06		0.1		0.12	
	Running parallelism (vertical direction) (mm)	0.025		0.035		0.04	
	Backlash (mm)	0.02					
	Starting torque (N·cm)	7					
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		0.02	
	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·m ²)
70 to 620	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	3.8	6, 10	198 to 748	φ8h7	0.041

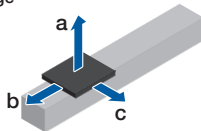
¹ Stroke with 1 short block (C type, without QZ).

² Value with 1 short block (C type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.

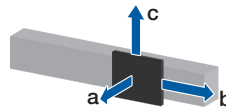
Note) Refer to page 49 for applicable couplings.

Permissible Overhang Length³

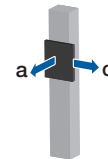
Horizontal Usage



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	7.5	110	40	80
			15.5	40	10	40
			31.5	0	0	20
		10	6.5	130	40	100
			13.5	50	20	40
			27	10	10	20
	D type	6	11	600	190	170
			22	290	90	80
			44.5	130	40	40
		10	8.5	600	240	230
			17	390	120	110
			34.5	180	60	50
Wrap	C type	6	7.5	110	40	80
			15.5	40	10	40
			31.5	0	0	20
		10	6.5	130	40	100
			13.5	50	20	40
			27	10	10	20
	D type	6	11	600	190	170
			22	290	90	80
			44.5	130	40	40
		10	8.5	600	240	230
			17	390	120	110
			34.5	180	60	50

Hypothetical motor capacity 100 W	Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)		
Direct coupling	C type	6	6	70	70	240	
			12.5	20	30	110	
			25	0	10	50	
		10	5	90	80	290	
			10	30	40	140	
			20.5	0	20	70	
	D type	6	8.5	200	170	570	
			17.5	80	80	270	
			35.5	20	40	130	
		10	7.5	230	190	600	
			15	100	90	320	
			30.5	30	40	160	
	Wrap	C type	6	6	70	70	240
				12.5	20	30	110
				25	0	10	50
			10	5	90	80	290
				10	30	40	140
				20.5	0	20	70
D type		6	8.5	200	170	570	
			17.5	80	80	270	
			35.5	20	40	130	
		10	7.5	230	190	600	
			15	100	90	320	
			30.5	30	40	160	

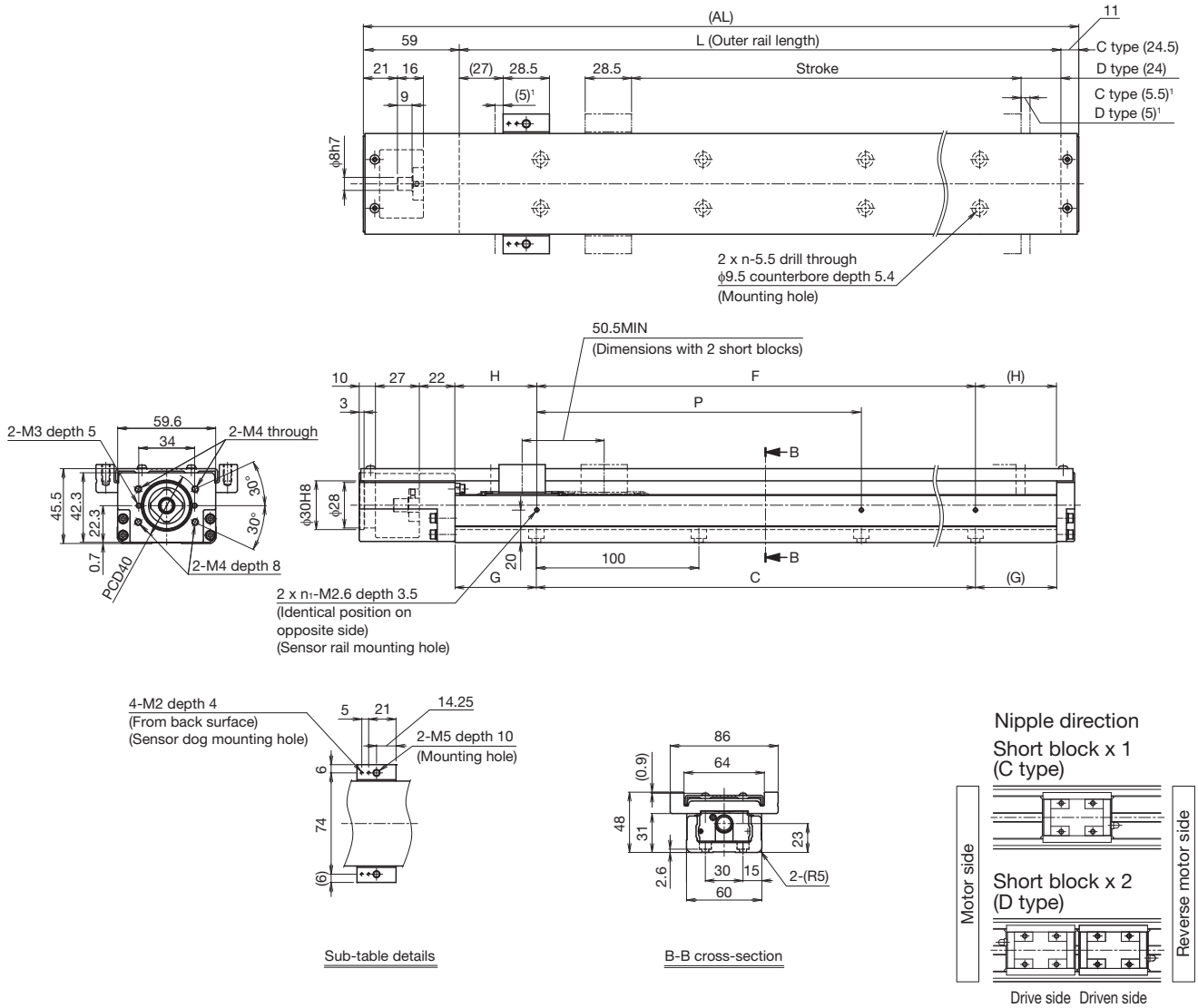
Hypothetical motor capacity 100 W	Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)	
Direct coupling	C type	6	2.5	60	130
			5	20	60
			10.5	0	30
		10	2	90	170
			4	30	80
			8.5	0	40
	D type	6	4.5	330	250
			9.5	140	110
			19	60	50
		10	3	510	370
			6	240	180
			12	110	90
Wrap	C type	6	2.5	60	130
			5	20	60
			10.5	0	30
		10	2	90	170
			4	30	80
			8.5	0	40
	D type	6	4.5	330	250
			9.5	140	110
			19	60	50
		10	3	510	370
			6	240	180
			12	110	90

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: 345 mm (C type), 295 mm (D type). Acceleration/deceleration rate: 0.3 G. Speed: 300 mm/s (for 6 mm lead), 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	70 (80.5)	120 (130.5)	220 (230.5)	320 (330.5)	420 (430.5)	520 (530.5)	620 (630.5)
	D type ²	20 (30)	70 (80)	170 (180)	270 (280)	370 (380)	470 (480)	570 (580)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm			600			500	360
	Ball screw lead: 10 mm			1000			830	600
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	2.3	3.1	3.9	4.6	5.4	6.1

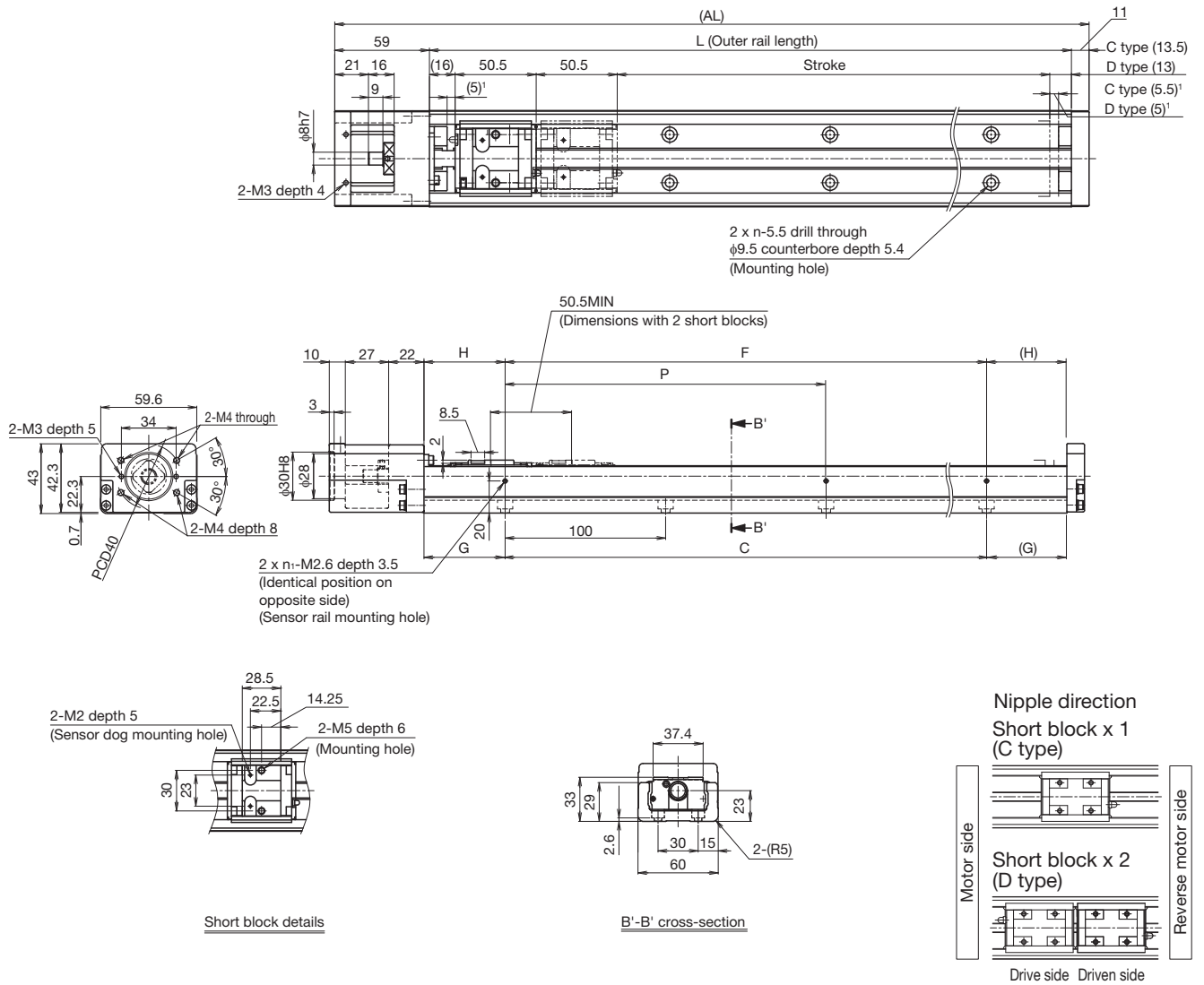
² The value with 2 short blocks (D type, without QZ) attached.

³ 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.

Stroke (mm) (Stroke between mechanical stoppers)	C type	70 (80.5)	120 (130.5)	220 (230.5)	320 (330.5)	420 (430.5)	520 (530.5)	620 (630.5)	
		D type ²	20 (30)	70 (80)	170 (180)	270 (280)	370 (380)	470 (480)	570 (580)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm	600						500	360
	Ball screw lead: 10 mm	1000						830	600
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)		1.7	2.1	2.8	3.5	4.3	5	5.7	

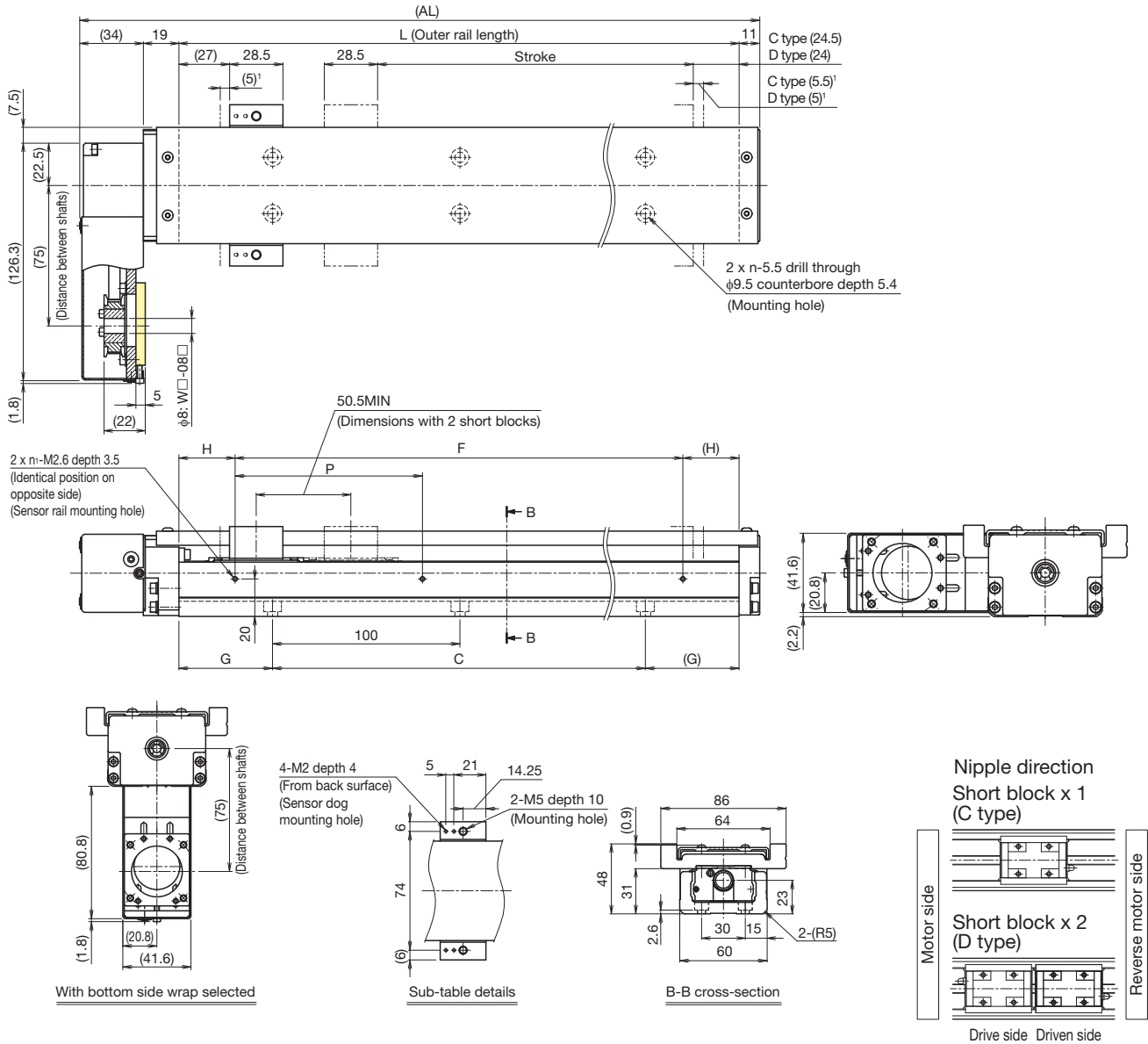
² The value with 2 short blocks (D type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 short blocks (D type) has 0.2 kg added.

With cover
Motor wrap

Dimensions



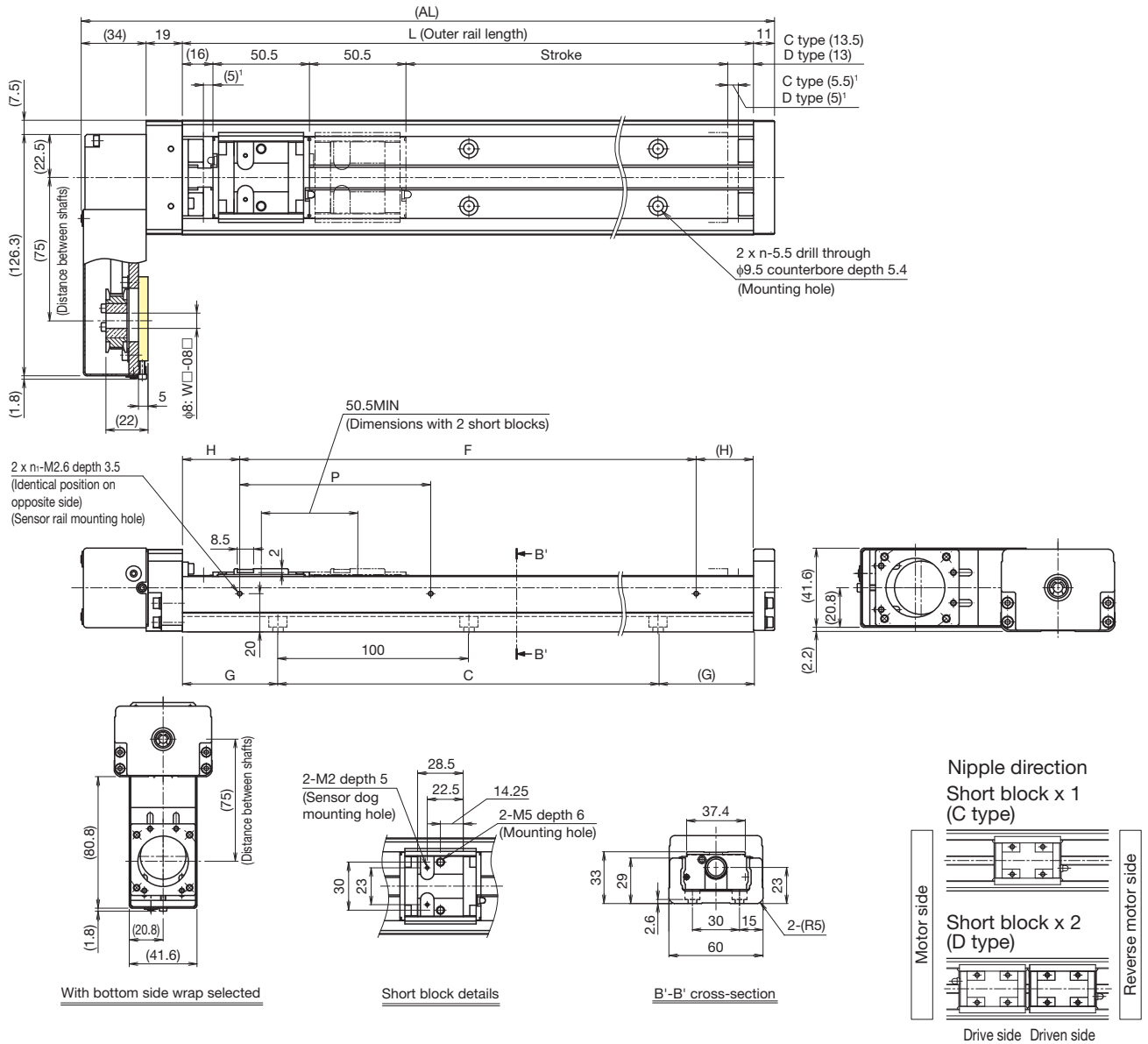
¹ Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	C type	70 (80.5)	120 (130.5)	220 (230.5)	320 (330.5)	420 (430.5)	520 (530.5)	620 (630.5)
	D type ²	20 (30)	70 (80)	170 (180)	270 (280)	370 (380)	470 (480)	570 (580)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm			600			500	360
	Ball screw lead: 10 mm			1000			830	600
Dimensions (mm)	AL	214	264	364	464	564	664	764
	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
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	3.4	4.1	4.9	5.7	6.4

² The value with 2 short blocks (D type, without QZ) attached.
³ 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



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

Stroke (mm) (Stroke between mechanical stoppers)	C type	70 (80.5)	120 (130.5)	220 (230.5)	320 (330.5)	420 (430.5)	520 (530.5)	620 (630.5)
	D type ²	20 (30)	70 (80)	170 (180)	270 (280)	370 (380)	470 (480)	570 (580)
Maximum speed ³ (mm/s)	Ball screw lead: 6 mm			600			500	360
	Ball screw lead: 10 mm			1000			830	600
Dimensions (mm)	AL	214	264	364	464	564	664	764
	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
Mounting hole count	n	2	2	3	4	5	6	7
	n ₁	2	2	2	2	3	3	4
Weight ⁴ (kg)		2	2.4	3.1	3.8	4.6	5.3	6

² The value with 2 short blocks (D type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 short blocks (D type) has 0.2 kg added.

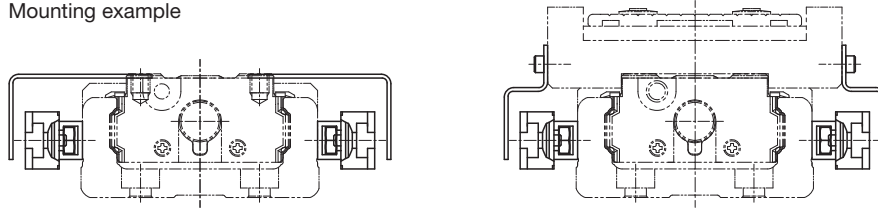
Options

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

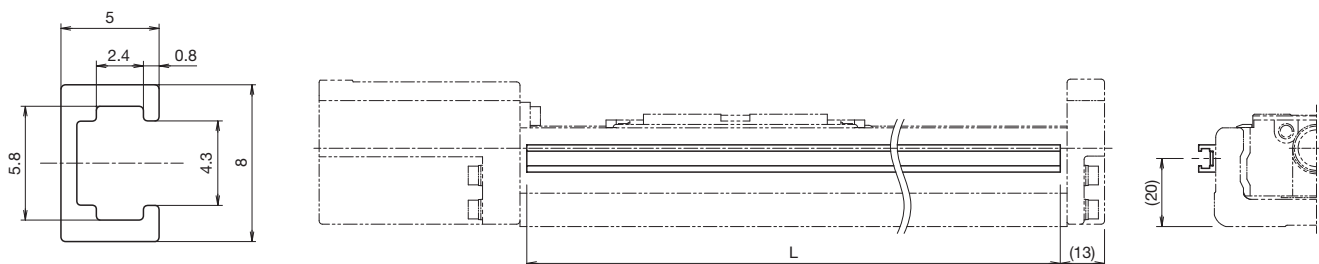
³ NC contact: Normally closed contact point

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.



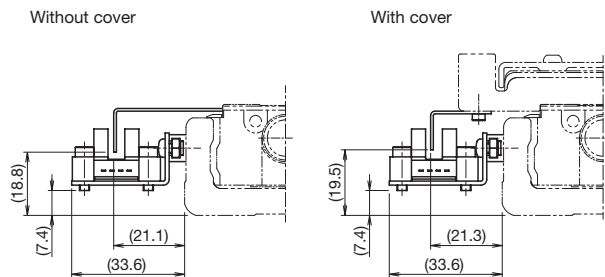
Sensor rail details

Stroke ⁴ (mm)	Outer rail length (mm)	L (mm)
45	150	146
95	200	196
195	300	296
295	400	396
395	500	496
495	600	596
595	700	696

⁴ Stroke with 1 block (A type).

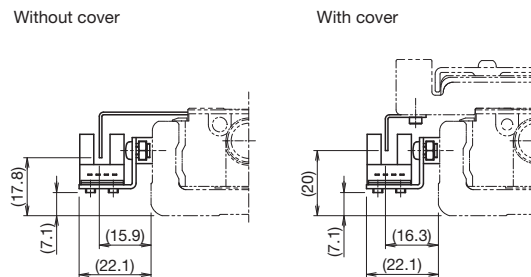
Photo Sensor Mounting Dimensions

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



Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

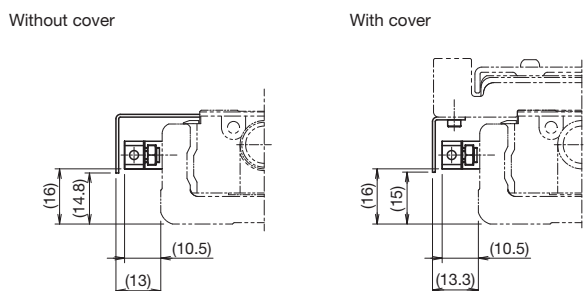
Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm



Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

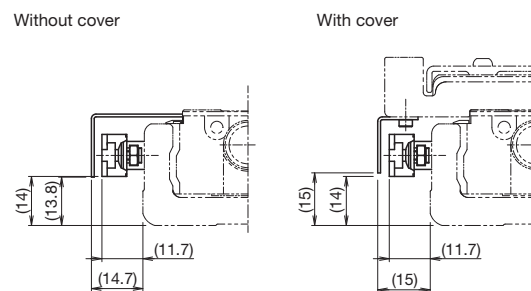
Sensor dog width (without cover): 8.5 mm
Sensor dog width (with cover): 10 mm

Proximity Sensor Mounting Dimensions



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

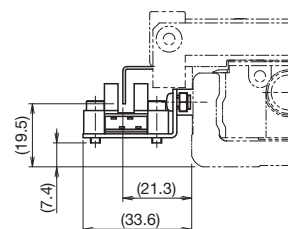


Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

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

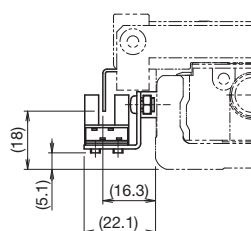
Mounting Dimensions with Bellows

Photo sensor



Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

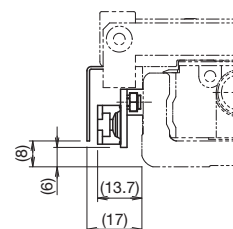
Sensor dog width: 10 mm



Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

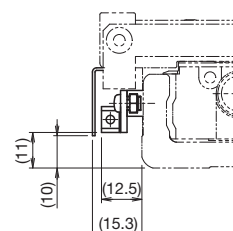
Sensor dog width: 10 mm

Proximity sensor



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

Sensor dog width: 10 mm



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 (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-020DA2-8B-8B	XGT2-19C-8-8					
			SGMAV-A5										
			SGMJV-01	100									
		SGMAV-01											
		SGMJV-C2	150										
		Σ-7	SGM7J-A5	50					□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8	
	SGM7A-A5												
	SGM7J-01		100										
	SGM7A-01												
	SGM7J-C2	150											
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-KR053	50	□40	AQ	SFC-020DA2-8B-8B					XGT2-19C-8-8
				HG-MR053									
				HG-KR13	100								
			HG-MR13										
			JN	HF-KN053	50				□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8	
				HF-KN13	100								
	Tamagawa Seiki Co., Ltd.	TBL-III	TS4602	50	□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8					
			TS4603	100									
			TS4604	150									
		TBL-IV	TSM3102	50					□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8	
			TSM3104	100									
	Panasonic Corporation	MINAS	A5	MSMD5A	50	□38	AP	SFC-020DA2-8B-8B	XGT2-19C-8-8				
				MSME5A									
MSMD01				100									
MSME01													
A6		MHMF5A	50	□38	AP					SFC-020DA2-8B-8B	XGT2-19C-8-8		
		MHMF01	100	□40	AQ					SFC-020DA2-8B-8B	XGT2-19C-8-8		
		MHMF01		□38	AP					SFC-020DA2-8B-8B	XGT2-19C-8-8		
		MHMF01	□40	AQ	SFC-020DA2-8B-8B					XGT2-19C-8-8			
Keyence Corporation	SV	SV-M005	50	□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8						
		SV-M010	100										
	SV2	SV2-M005	50					□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8		
		SV2-M010	100										
Sanyo Denki Co., Ltd.	SANMOTION R	R2□A04005	50	□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8						
		R2EA04008	80										
		R2□A04010	100										
OMRON Corporation	OMNUC G5	R88M-K05030	50	□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8						
		R88M-K10030	100										
	1S	R88M-1M10030	100					□40	AQ	SFC-020DA2-8B-8B	XGT2-19C-8-8		
Fanuc Corporation	β is Series	βis0.2/5000	50	□40	AQ	SFC-010DA2-8B-8B	XGT2-19C-8-8						
		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-8B-L29	XGT2-19C-6-8	
			AZM48	□42	AR	SFC-010DA2-6B-8B-L29	XGT2-19C-8-8	
			AZ6*, AR6*	□60	AU	SFC-020DA2-8B-10B	XGT2-25C-8-10	
		5-phase	CRK'	CRK54*	□42	AR	SFC-010DA2-5B-8B-L29	XGT2-19C-5-8
				CRK56* (CRK569PM*)	□60	AU	SFC-020DA2-8B-8B (SFC-020DA2-8B-10B)	XGT2-25C-8-8 (XGT2-25C-8-10)
				RKS54*	□42	AR	SFC-010DA2-6B-8B-L29	XGT2-19C-6-8
			RK II	RKS56*	□60	AU	SFC-020DA2-8B-10B	XGT2-25C-8-10
				PKA	PKA544	□42	AR	SFC-010DA2-5B-8B-L29
			PKA566	□60	AU	SFC-020DA2-8B-8B	XGT2-19C-8-8	
		CVK'	PKP54*	□42	AR	SFC-010DA2-5B-8B-L29	XGT2-19C-5-8	
			PKP56*	□56.4	AT	SFC-020DA2-8B-8B	XGT2-25C-8-8	
			PKP56* (PKP569FM*)	□60	AU	SFC-020DA2-8B-8B (SFC-020DA2-8B-10B)	XGT2-25C-8-8 (XGT2-25C-8-10)	
		2-phase	CVK	PKP24*	□42	AR	SFC-010DA2-5B-8B-L29	XGT2-19C-5-8
				PKP26*	□56.4	AT	SFC-020DA2-8B-8B	XGT2-25C-8-8
		Keyence Corporation	2-phase	QS-M42	□42	AR	SFC-010DA2-5B-8B-L29	XGT2-19C-5-8
				QS-M60	□60	AU	SFC-020DA2-8B-8B	XGT2-25C-8-8
		Sanyo Denki Co., Ltd.	PB	PBDM423, PBA**423	□42	AR	SFC-010DA2-6B-8B-L29	XGT2-19C-6-8
				PBDM60*, PBA**60*	□60	AU	SFC-020DA2-8B-10B	XGT2-25C-8-10
	5-phase		FAF54*/FDF54*/FA511M42/FB511M42	□42	AR	SFC-010DA2-6B-8B-L29	XGT2-19C-6-8	
			FAM56*/FDM56*/FA512M60/FB512M60	□60	AU	SFC-020DA2-8B-10B	XGT2-25C-8-10	
			DB14H52*	□42	AR	SFC-010DA2-5B-8B-L29	XGT2-19C-5-8	
	DU15H52*		AR		SFC-010DA2-5B-8B-L29	XGT2-19C-5-8		
	2-phase		D*16H71*	□56	AT	SFC-020DA2-6.35B-8B	XGT2-19C-6.35-8	
			DB16H78*	□60	AU	SFC-020DA2-8B-8B	XGT2-25C-8-8	

* Items in parentheses have different motor shaft diameters and require a coupling to be specified.

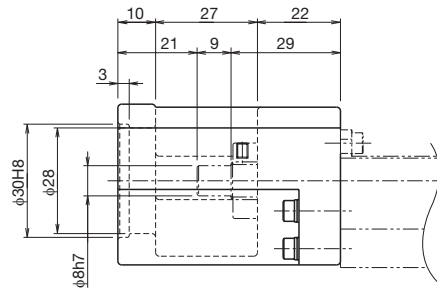
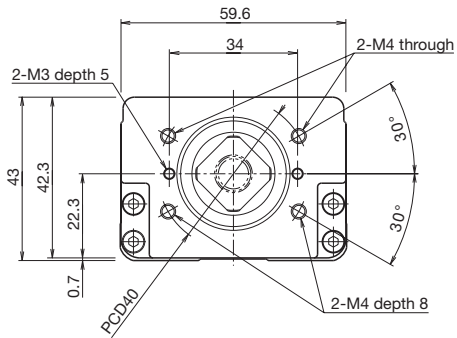
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 35, C/D → p. 41), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

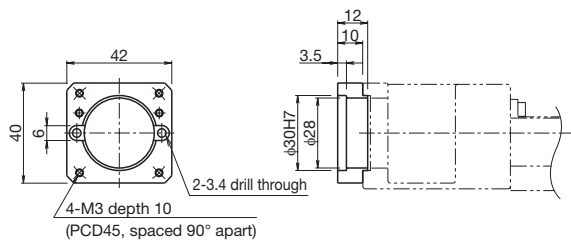
SKR33
A0



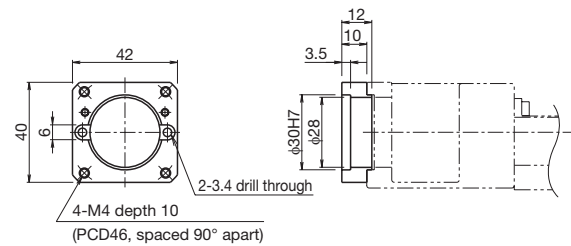
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Intermediate flange

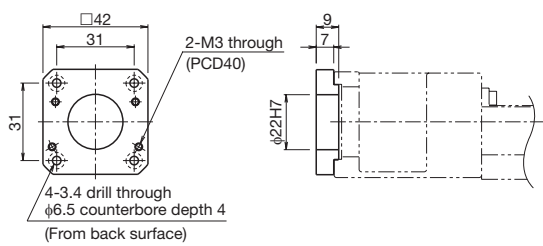
SKR33
AP



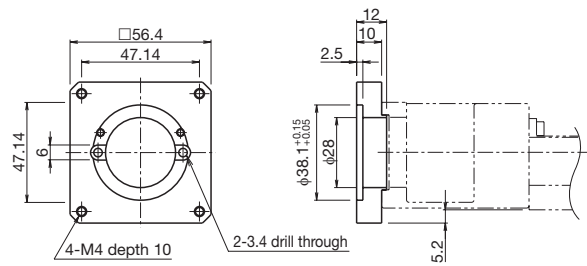
SKR33
AQ



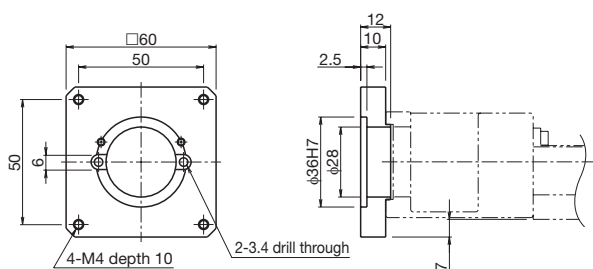
SKR33
AR



SKR33
AT



SKR33
AU



Options

Intermediate Flange (wrap)

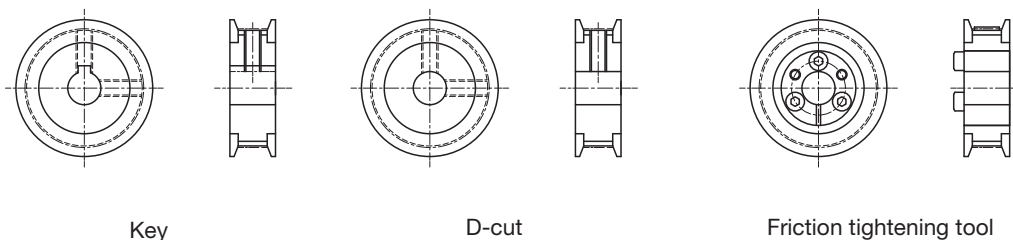
Intermediate flanges are available to mount various kinds of motors.

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



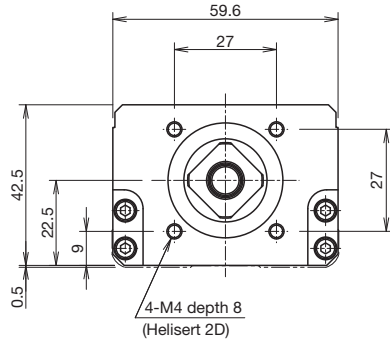
Compatibility Table: Motors used, wrap symbols

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-MR053	50	□40	WQ-08D, WQ-08M		
				HG-KR053					
				HG-MR13	100				
			HG-KR13						
			JN	HF-KN053	50			□40	WQ-08D, WQ-08M
				HF-KN13					
	Tamagawa Seiki Co., Ltd.	TBL-III	TS4602	50	□40	WQ-08D, WQ-08M			
			TS4603	100					
			TS4604	150					
		TBL-IV	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	

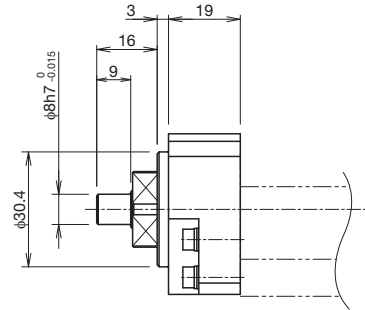
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.
 Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 35, C/D → p. 41), establish safety measures to limit torque.
 Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

SKR33
40



SKR**	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)

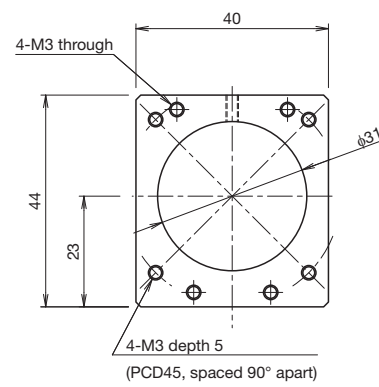
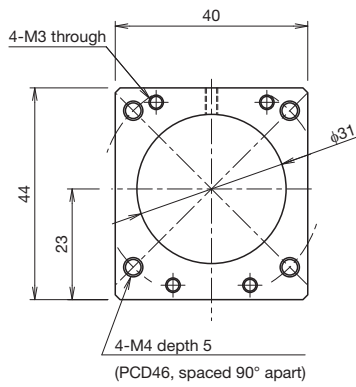
SKR33
WQ

Thickness: 5 mm

SKR33
WP

Thickness: 5 mm

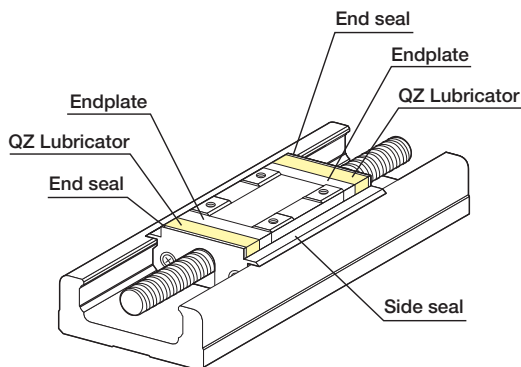
SKR**	Actuator model
W□	□: Intermediate flange



Options

QZ Lubricator

The QZ Lubricator for SKR 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

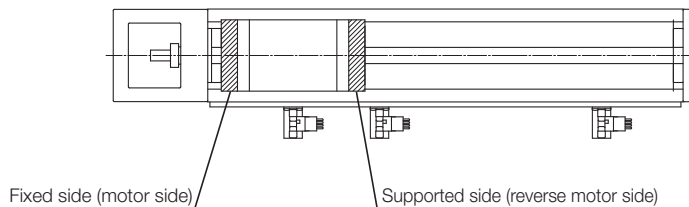
Features

- 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.

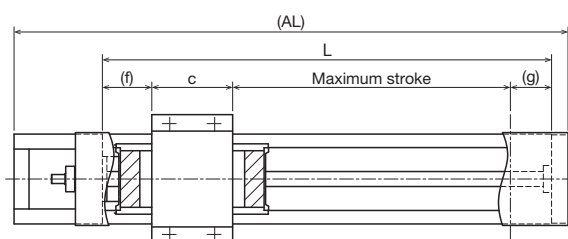


Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side Supported side	 Fixed side Supported side	 Fixed side Supported side	-
B type (block x 2)	 Fixed side Supported side	-	-	 Fixed side Supported side
C type (short block x 1)	 Fixed side Supported side	 Fixed side Supported side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

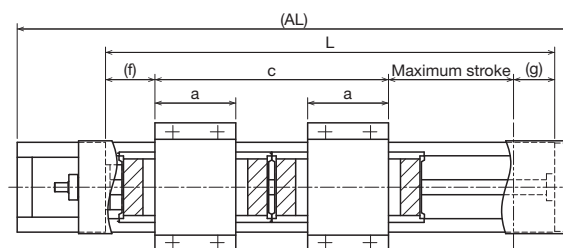
Dimensions with QZ Lubricator

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 (3306) (3310)	270	200	70	79	-	54	35	32
	370	300	170	179				
	470	400	270	279				
	570	500	370	379				
	670	600	470	479				
A (3320)	370	300	155	168.6	-	54	45.4	32
	470	400	255	268.6				
	570	500	355	368.6				
	670	600	455	468.6				
	770	700	555	568.6				
B (3306) (3310)	370	300	65	77	54	156	35	32
	470	400	165	177				
	570	500	265	277				
	670	600	365	377				
	770	700	465	477				
B (3320)	470	400	155	166.6	54	156	45.4	32
	570	500	255	266.6				
	670	600	355	366.6				
	770	700	455	466.6				
C	220	150	45	54.5	-	28.5	35	32
	270	200	95	104.5				
	370	300	195	204.5				
	470	400	295	304.5				
	570	500	395	404.5				
	670	600	495	504.5				
	770	700	595	604.5				
D	370	300	115	128	28.5	105	35	32
	470	400	215	228				
	570	500	315	328				
	670	600	415	428				
	770	700	515	528				

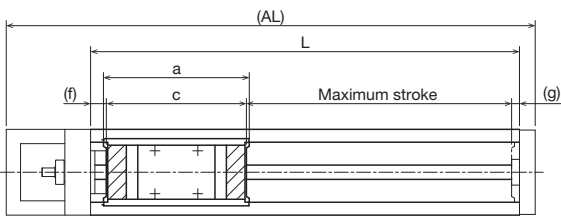
¹ The value for B/D block types is with 2 blocks attached.

Options

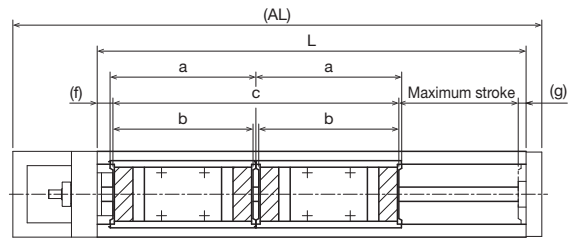
Dimensions with QZ Lubricator

QZ (without cover)

Block type: A/B/C/D



Block type A/C



Block type B/D

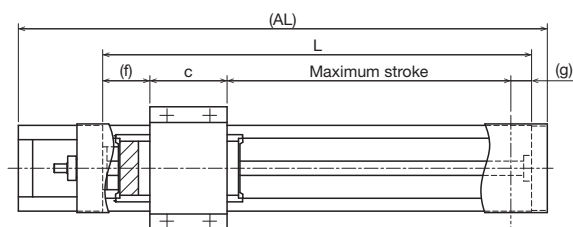
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke ¹	Maximum stroke ¹	a, b	c	f	g
A (3306) (3310)	270	200	70	79	102	102	11	8
	370	300	170	179				
	470	400	270	279				
	570	500	370	379				
	670	600	470	479				
A (3320)	370	300	155	168.6	112.4	112.4	11	8
	470	400	255	268.6				
	570	500	355	368.6				
	670	600	455	468.6				
	770	700	555	568.6				
B (3306) (3310)	370	300	65	77	102	204	11	8
	470	400	165	177				
	570	500	265	277				
	670	600	365	377				
B (3320)	470	400	155	166.6	112.4	214.4	11	8
	570	500	255	266.6				
	670	600	355	366.6				
	770	700	455	466.6				
C	220	150	45	54.5	76.5	76.5	11	8
	270	200	95	104.5				
	370	300	195	204.5				
	470	400	295	304.5				
	570	500	395	404.5				
	670	600	495	504.5				
D	370	300	115	128	76.5	153	11	8
	470	400	215	228				
	570	500	315	328				
	670	600	415	428				
	770	700	515	528				

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

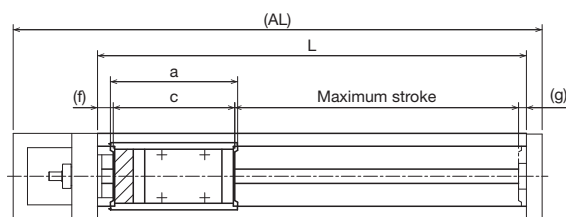
Dimensions with QZ Lubricator

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 (3306) (3310)	270	200	80	92	54	35	19
	370	300	180	192			
	470	400	280	292			
	570	500	380	392			
	670	600	480	492			
	770	700	580	592			
A (3320)	370	300	170	181.6	54	45.4	19
	470	400	270	281.6			
	570	500	370	381.6			
	670	600	470	481.6			
	770	700	570	581.6			
C	220	150	55	67.5	28.5	35	19
	270	200	105	117.5			
	370	300	205	217.5			
	470	400	305	317.5			
	570	500	405	417.5			
	670	600	505	517.5			
	770	700	605	617.5			

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

QZA (without cover)

Unit: mm

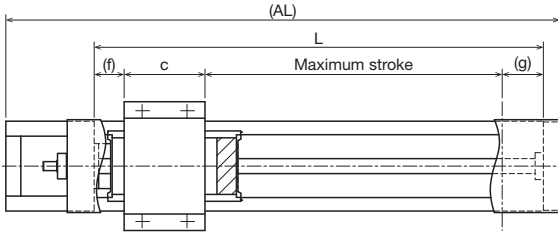
Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A (3306) (3310)	270	200	80	92	89	89	11	8
	370	300	180	192				
	470	400	280	292				
	570	500	380	392				
	670	600	480	492				
	770	700	580	592				
A (3320)	370	300	170	181.6	99.4	99.4	11	8
	470	400	270	281.6				
	570	500	370	381.6				
	670	600	470	481.6				
	770	700	570	581.6				
C	220	150	55	67.5	63.5	63.5	11	8
	270	200	105	117.5				
	370	300	205	217.5				
	470	400	305	317.5				
	570	500	405	417.5				
	670	600	505	517.5				
	770	700	605	617.5				

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

Options

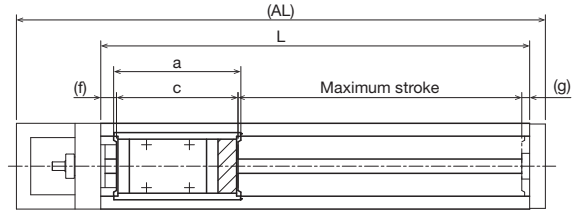
Dimensions with QZ Lubricator

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 (3306) (3310)	270	200	80	92	54	22	32
	370	300	180	192			
	470	400	280	292			
	570	500	380	392			
	670	600	480	492			
A (3320)	270	200	80	92	54	22	32
	370	300	180	192			
	470	400	280	292			
	570	500	380	392			
	670	600	480	492			
C	220	150	55	67.5	28.5	22	32
	270	200	105	117.5			
	370	300	205	217.5			
	470	400	305	317.5			
	570	500	405	417.5			
	670	600	505	517.5			
770	700	605	617.5				

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

QZB (without cover)

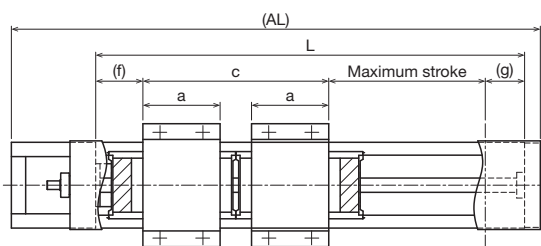
Unit: mm

Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A (3306) (3310)	270	200	80	92	89	89	11	8
	370	300	180	192				
	470	400	280	292				
	570	500	380	392				
	670	600	480	492				
A (3320)	270	200	80	92	89	89	11	8
	370	300	180	192				
	470	400	280	292				
	570	500	380	392				
	670	600	480	492				
C	220	150	55	67.5	63.5	63.5	11	8
	270	200	105	117.5				
	370	300	205	217.5				
	470	400	305	317.5				
	570	500	405	417.5				
	670	600	505	517.5				
770	700	605	617.5					

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

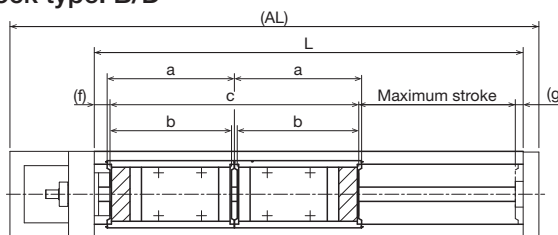
Dimensions with QZ Lubricator

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 (3306) (3310)	370	300	95	103	54	130	35	32
	470	400	195	203				
	570	500	295	303				
	670	600	395	403				
	770	700	495	503				
B (3320)	370	300	80	92.6	54	130	45.4	32
	470	400	180	192.6				
	570	500	280	292.6				
	670	600	380	392.6				
	770	700	480	492.6				
D	270	200	45	54	28.5	79	35	32
	370	300	145	154				
	470	400	245	254				
	570	500	345	354				
	670	600	445	454				
	770	700	545	554				

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 (3306) (3310)	370	300	95	103	89	178	11	8
	470	400	195	203				
	570	500	295	303				
	670	600	395	403				
	770	700	495	503				
B (3320)	370	300	80	92.6	99.4	188.4	11	8
	470	400	180	192.6				
	570	500	280	292.6				
	670	600	380	392.6				
	770	700	480	492.6				
D	270	200	45	54	63.5	127	11	8
	370	300	145	154				
	470	400	245	254				
	570	500	345	354				
	670	600	445	454				
	770	700	545	554				

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

Note 2) A/C block types cannot be selected for QZAD.

SKR46 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)
SKR46	10	A	QZA	0175	P	0	1	2	AV
SKR46	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	AU
			QZB			For wrap		6	AV
			QZD			R1: Non-standard side wrap (without motor)		7	AY
			QZAD			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. 73

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

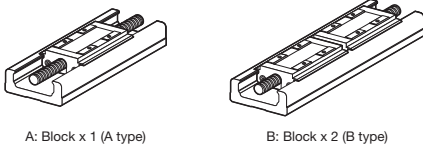
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (10) Intermediate flange to match the specified motor.

When selecting "2":
With bellows for (8) Cover, specify the stroke with bellows. → p. 109 to p. 110

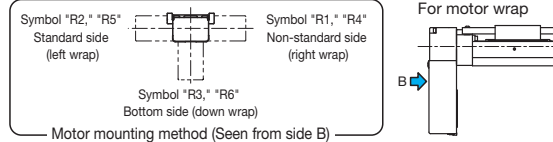
Check the stroke for type with QZ when selecting anything other than "No symbol."
→ p. 77 to p. 82

Sensor details → p. 71

(3) Block type



(7) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		39500
	Basic static load rating C_0 (N)		45900
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to 0
		Precision grade (P)	-0.016 to -0.006
	Geometrical moment of inertia	I_x^1 (mm ⁴)	2.05×10^6
I_y^2 (mm ⁴)		1.45×10^6	
Weight (kg/m)		12.6	
Ball screw	Ball screw lead (mm)		10 20
	Basic dynamic load rating C_a (N)	Normal grade/High accuracy grade (H)	4350 4240
		Precision grade (P)	
	Basic static load rating C_{0a} (N)	Normal grade/High accuracy grade (H)	6990 7040
		Precision grade (P)	
	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 C_a (N)	6700
		Static permissible load P_{0a} (N)	3330
Permissible input torque (N·m)	Wrap	Direct coupling	5.3
		Wrap	4.5
Static permissible moment ^{4,5} (N·m)		M_A : 579 (3240), M_B : 579 (3240), M_C : 1390 (2780)	
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 116 for the values if "1" or "2" is selected for item (8) in the model configuration.

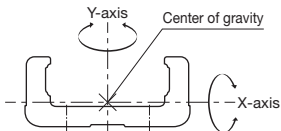
⁶ The conditions for calculation are as follows:

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.

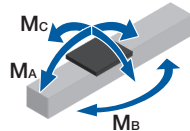
Note 1) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating C_a). Consult with THK.

Note 2) LM Guide load rating is the load rating per block.

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
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, 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·m ²)
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	8.1	10, 20	405 to 1005	φ10h7	0.86

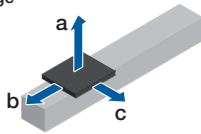
¹ Stroke with 1 block (A type, without QZ).

² Value with 1 block (A type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.

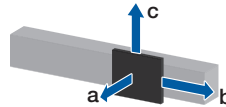
Note) Refer to page 73 for applicable couplings.

Permissible Overhang Length³

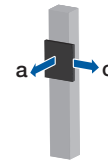
Horizontal Usage



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
		38.5	70		30	30
		77	20		10	10
		20	6	680	210	210
			12	320	100	100
	B type	10	24	140	50	50
			26.5	740	230	90
			53	350	110	40
		20	106	150	50	20
			4.5	860	860	570
Wrap	A type	10	9.5	860	650	270
			19.5	860	310	130
			17.5	210	70	70
		20	35	80	30	30
			70	20	10	10
	B type	10	3.5	860	370	370
			7.5	530	170	170
			15	250	80	80
		20	20.5	860	300	120
			41.5	460	140	60
Direct coupling	A type	10	83	210	70	30
			3	860	860	860
			6.5	860	860	400
		20	13.5	860	460	190

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type			10	19	20
		38.5	0		60	220
		77	0		30	110
		20	6	170	430	860
			12	60	210	720
	B type	10	24	10	100	360
			26.5	50	270	860
			53	0	130	450
		20	106	0	60	220
			4.5	530	860	570
Wrap	A type	10	9.5	230	750	860
			19.5	90	360	1230
			17.5	30	140	490
		20	35	0	70	240
			70	0	30	120
	B type	10	3.5	320	740	860
			7.5	130	340	860
			15	40	170	570
		20	20.5	80	350	860
			41.5	20	170	570
Direct coupling	A type	10	83	0	80	280
			3	820	860	860
			6.5	350	860	860
		20	13.5	150	530	860

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type			10	4.5
		9	70		220
		18	10		110
		20	2	460	860
			4	210	500
	B type	10	8	80	250
			5.5	830	860
			11.5	370	480
		20	23.5	160	230
			2	860	860
Wrap	A type	10	4	210	500
			8	80	250
			16	20	120
		20	1.5	620	860
			3.5	240	570
	B type	10	7	100	280
			3.5	860	860
			7	640	860
		20	14.5	290	380
			1.5	860	860
Direct coupling	A type	10	3	860	860
			6.5	690	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	190
		48	70		30	30
		96	20		10	10
		20	13.5	680	210	210
			27.5	320	100	100
	B type	10	55.5	140	50	50
			34	740	230	90
			68	350	110	40
		20	136	150	50	20
			12	860	860	570
Wrap	A type	10	24	860	650	270
			48	860	310	130
			24	210	70	70
		20	48	80	30	30
			96	20	10	10
	B type	10	10.5	860	370	370
			21.5	530	170	170
			43	250	80	80
		20	34	860	300	120
			68	460	140	60
Direct coupling	A type	10	136	210	70	30
			10.5	860	860	860
			21	860	860	400
		20	42	860	460	190

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type			10	19	20
		38.5	0		60	220
		77	0		30	110
		20	12.5	170	430	860
			25	60	210	720
	B type	10	50	10	100	360
			27	50	270	860
			54	0	130	450
		20	108.5	0	60	220
			12	530	860	860
Wrap	A type	10	24	230	750	860
			48	90	360	1230
			19	30	140	490
		20	38.5	0	70	240
			77	0	30	120
	B type	10	10.5	320	740	860
			21.5	130	340	860
			43	40	170	570
		20	27	80	350	860
			54	20	170	570
Direct coupling	A type	10	108.5	0	80	280
			10.5	820	860	860
			21	350	860	860
		20	42	150	530	860

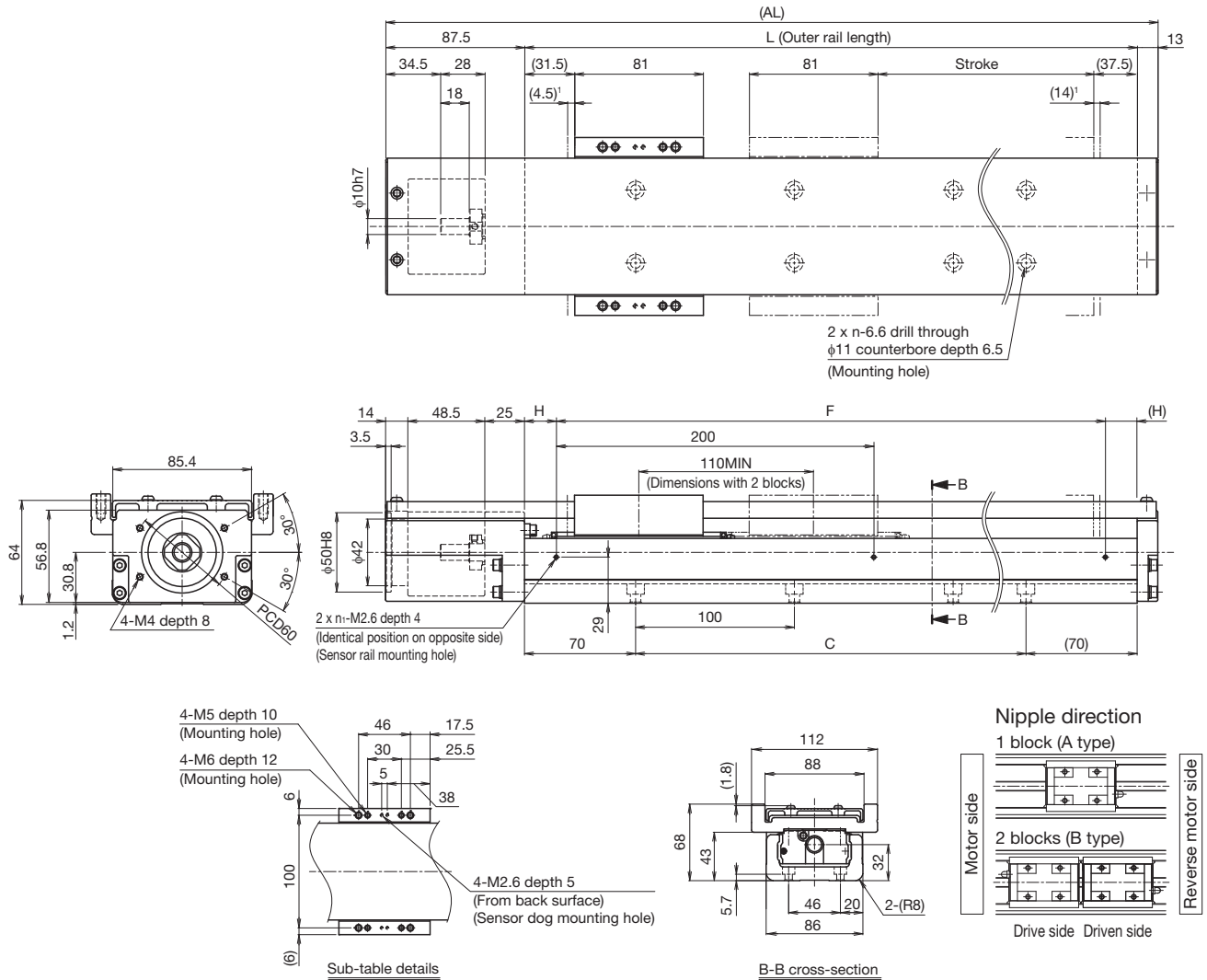
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type			10	5.5
		11.5	70		220
		23	10		110
		20	4.5	460	860
			9	210	500
	B type	10	18	80	250
			8	830	860
			16	370	480
		20	32.5	160	230
			5	860	860
Wrap	A type	10	4	210	500
			8	80	250
			16	20	120
		20	4	620	860
			8	240	570
	B type	10	7	100	280
			3.5	860	860
			7	640	860
		20	14.5	290	380
			3.5	860	860
Direct coupling	A type	10	7	860	860
			14.5	690	860

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 (208.5)	290 (308.5)	390 (408.5)	490 (508.5)	590 (608.5)	690 (708.5)	790 (808.5)
	B type ²	80 (98.5)	180 (198.5)	280 (298.5)	380 (398.5)	480 (498.5)	580 (598.5)	680 (698.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000				730	550	430
	Ball screw lead: 20 mm	2000			1980	1430	1080	840
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 _i	2	3	3	4	4	5	5
Weight ⁴ (kg)		7.7	9.2	10.7	12.2	13.7	15.2	16.7

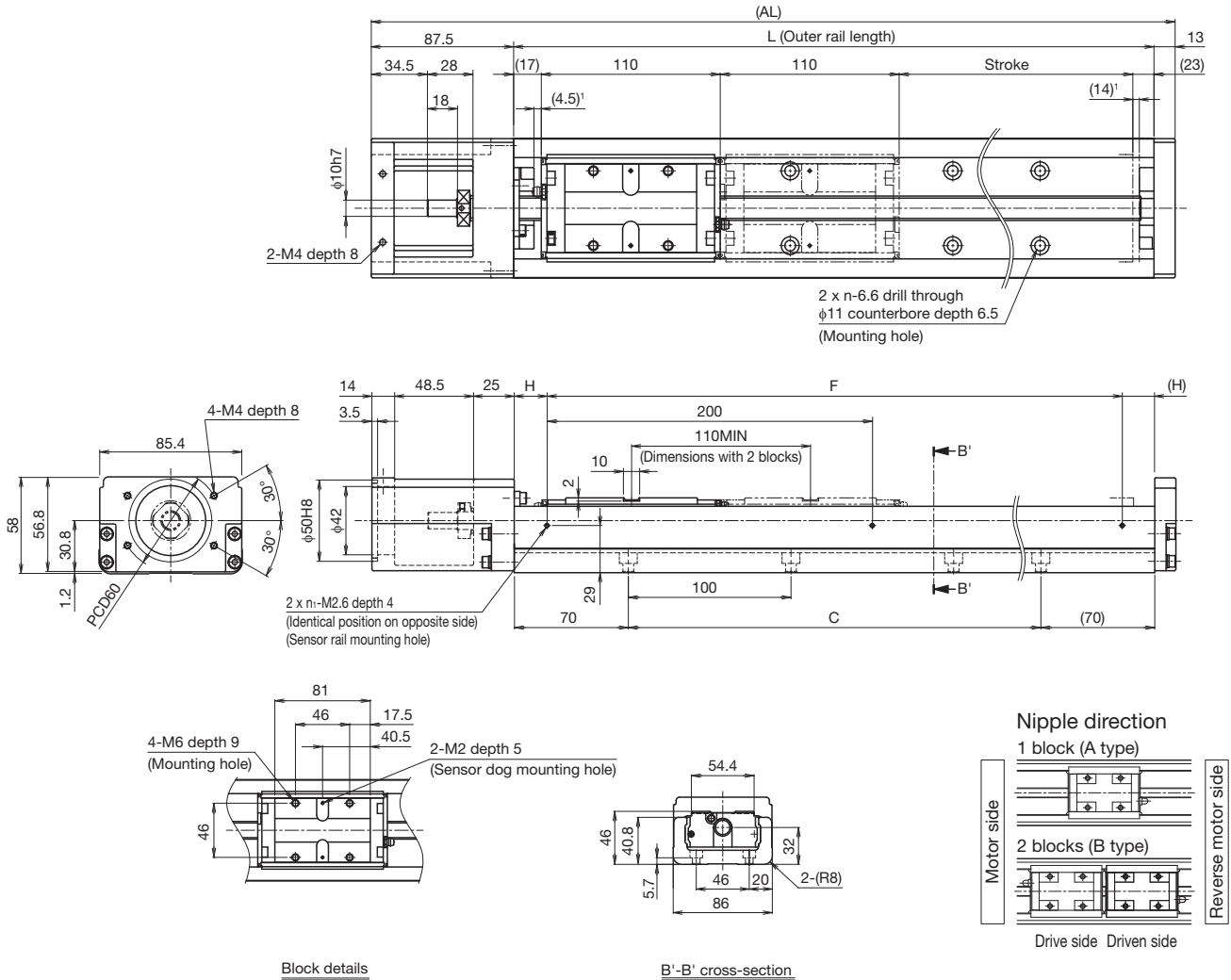
² The value with 2 blocks (B type, without QZ) attached.

³ 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



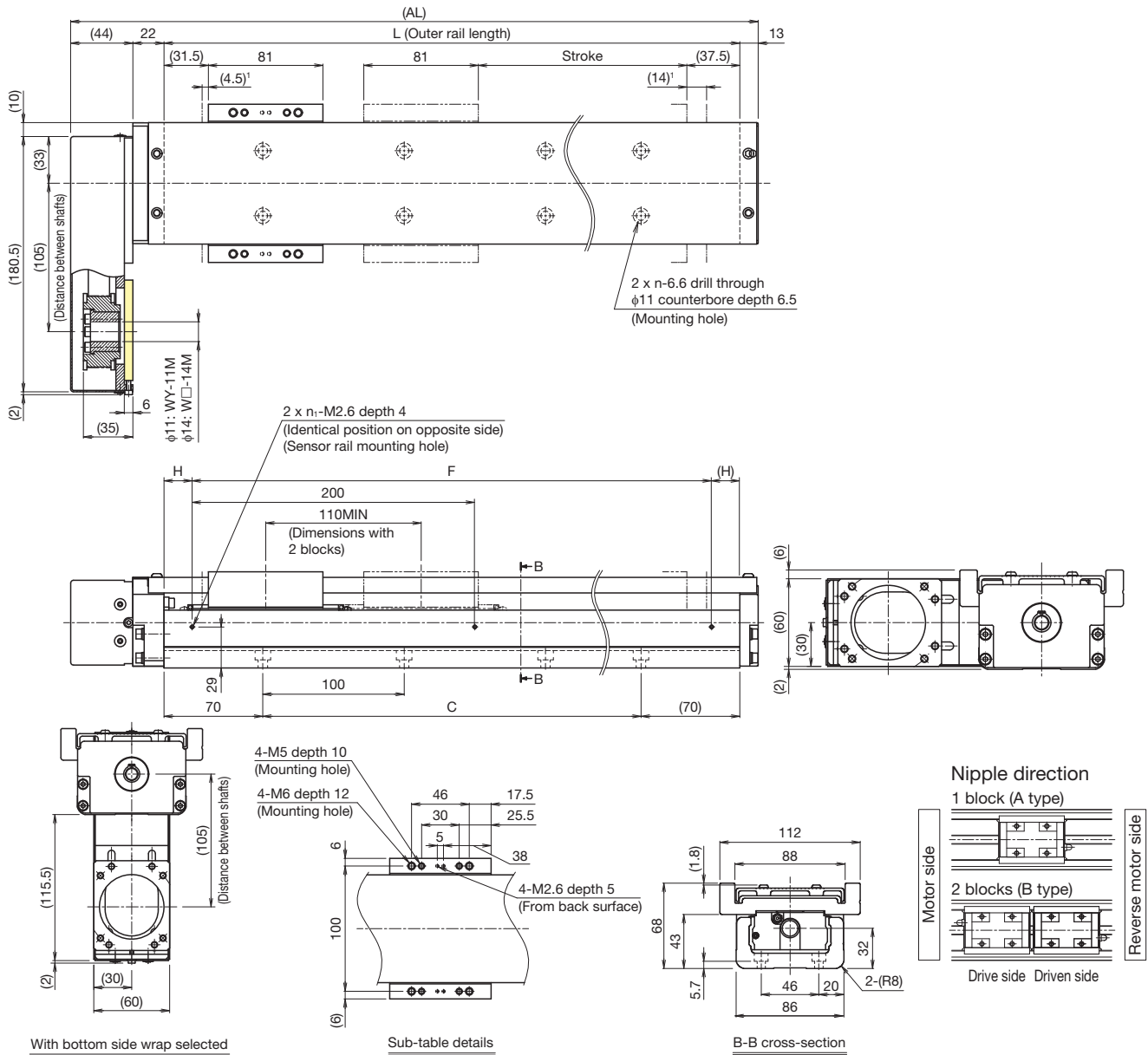
¹ Dimensions from the mechanical stopper to the stroke start position.

Stroke (mm) (Stroke between mechanical stoppers)	A type	190 (208.5)	290 (308.5)	390 (408.5)	490 (508.5)	590 (608.5)	690 (708.5)	790 (808.5)
	B type ²	80 (98.5)	180 (198.5)	280 (298.5)	380 (398.5)	480 (498.5)	580 (598.5)	680 (698.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000				730	550	430
	Ball screw lead: 20 mm	2000				1980	1430	1080
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)		6.7	8.1	9.5	10.9	12.3	13.8	15.2

² The value with 2 blocks (B type, without QZ) attached.
³ Maximum speed is limited by the actuator's permissible speed.
⁴ 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 (208.5)	290 (308.5)	390 (408.5)	490 (508.5)	590 (608.5)	690 (708.5)	790 (808.5)
	B type ²	80 (98.5)	180 (198.5)	280 (298.5)	380 (398.5)	480 (498.5)	580 (598.5)	680 (698.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000				730	550	430
	Ball screw lead: 20 mm		2000		1980	1430	1080	840
Dimensions (mm)	AL	419	519	619	719	819	919	1019
	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	10.1	11.6	13.1	14.6	16.1	17.6

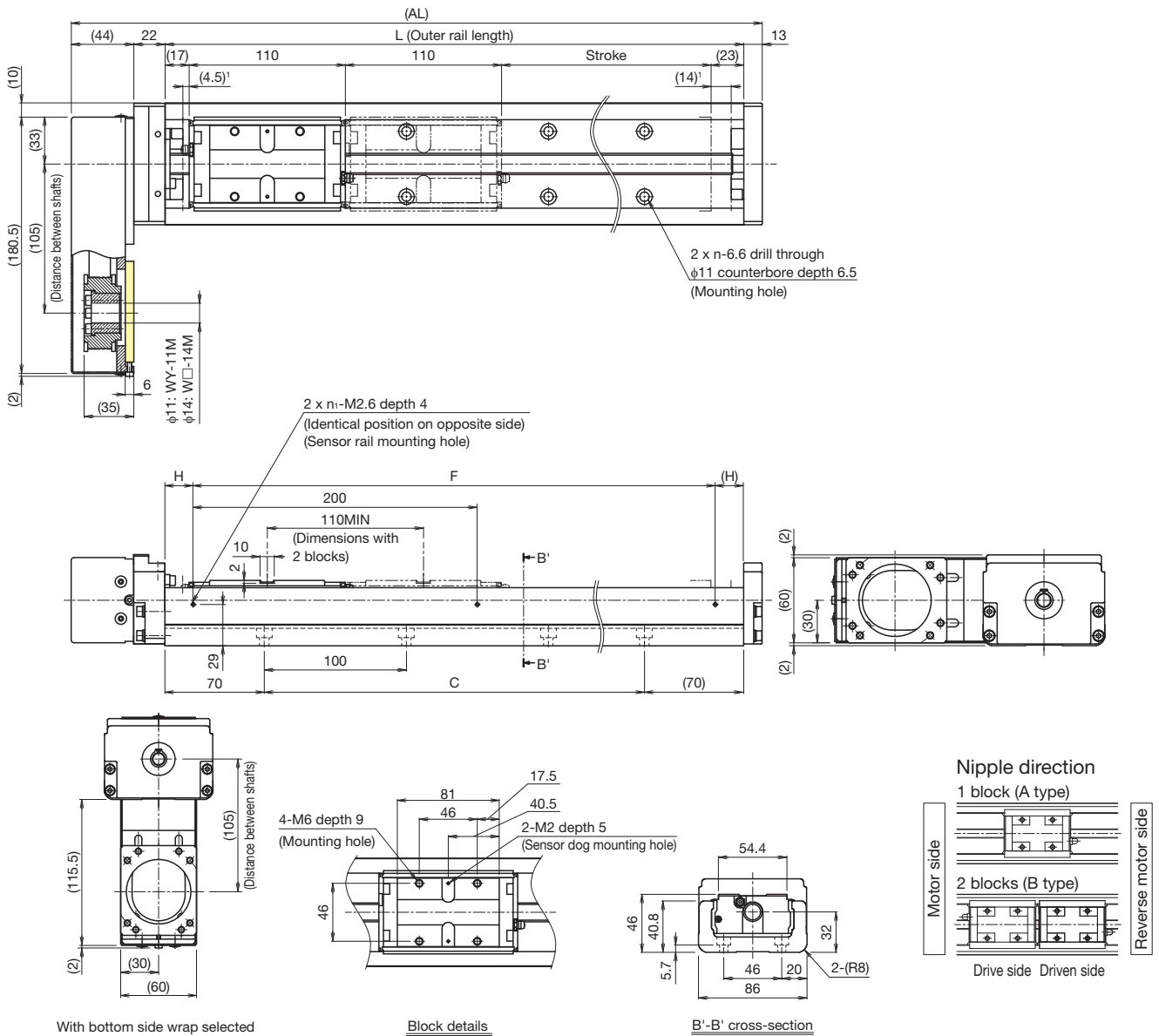
² The value with 2 blocks (B type, without QZ) attached.

³ 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



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

Stroke (mm) (Stroke between mechanical stoppers)	A type	190 (208.5)	290 (308.5)	390 (408.5)	490 (508.5)	590 (608.5)	690 (708.5)	790 (808.5)
	B type ²	80 (98.5)	180 (198.5)	280 (298.5)	380 (398.5)	480 (498.5)	580 (598.5)	680 (698.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000				730	550	430
	Ball screw lead: 20 mm				1980	1430	1080	840
Dimensions (mm)	AL	419	519	619	719	819	919	1019
	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)		7.7	9.1	10.5	11.9	13.3	14.7	16.1

² The value with 2 blocks (B type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 1 kg added.

SKR46 C/D

Direct Motor Coupling

Motor Wrap

Main Unit Width 86 mm

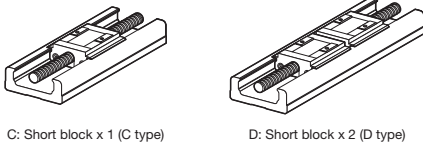
Main Unit Height 46 mm

Stroke Max. 820 mm

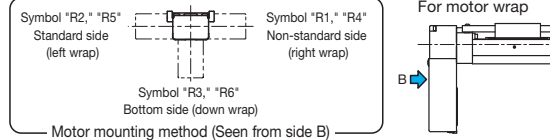
Model Configuration

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)
SKR46	10	C	QZA	0205	P	0	1	2	AV
SKR46	10: 10 mm	C: x 1	No symbol: Without QZ	0145: 145 mm	No symbol: Normal grade	For direct coupling			
	20: 20 mm	D: x 2	QZ	to	H: High accuracy grade	0: Direct coupling (without motor)			
			QZA	0820: 820 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)			
			QZB			For wrap			
		QZAD				R1: Non-standard side wrap (without motor)			
						R2: Standard side wrap (without motor)			
						R3: Bottom side wrap (without motor)			
						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)			
<p>When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.</p> <p>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.</p>									
<p>When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.</p> <p>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.</p>									
<p>When selecting "0": A coupling is not provided. Indicate when placing an order if a coupling is required.</p> <p>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.</p>									

(3) Block type



(7) Motor mounting method



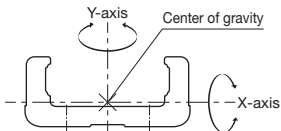
Selection Materials

Basic Specifications

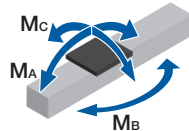
LM Guide	Basic dynamic load rating C (N)		28400
	Basic static load rating C ₀ (N)		28700
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.006 to 0
		Precision grade (P)	-0.016 to -0.006
	Geometrical moment of inertia	I _x ¹ (mm ⁴)	2.05 x 10 ⁶
I _y ² (mm ⁴)		1.45 x 10 ⁶	
Weight (kg/m)		12.6	
Ball screw	Ball screw lead (mm)		10 20
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	4350 4240
		Precision grade (P)	
	Basic static load rating C _{0a} (N)	Normal grade/High accuracy grade (H)	6990 7040
		Precision grade (P)	
	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)	6700
		Static permissible load P _{0a} (N)	3330
Permissible input torque (N·m)	Wrap	Direct coupling	5.3
		Wrap	4.5
Static permissible moment ^{4,5} (N·m)		M _A : 236 (1460), M _B : 236 (1460), M _C : 870 (1740)	
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 116 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), 445 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) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating Ca). Consult with THK.
 Note 2) LM Guide load rating is the load rating per short block.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke ⁷					
		220	320	420	520	620	720
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
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
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, 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·m ²)
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	4.1	10, 20	405 to 1005	φ10h7	0.86

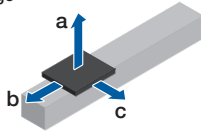
¹ Stroke with 1 short block (C type, without QZ).

² Value with 1 short block (C type, without QZ). This value is the sum of the rolling resistance value and seal resistance value.

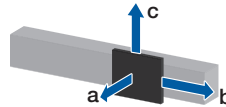
Note) Refer to page 73 for applicable couplings.

Permissible Overhang Length³

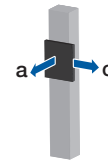
Horizontal Usage



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					
		27.5	40	20	20	
		55.5	0	10	10	
		6	330	110	100	
	D type	20	12.5	140	50	50
			25.5	50	20	20
			19.5	330	110	60
		20	10	39.5	140	50
79	50			20	10	
5.5	0			390	230	
20	10		11	620	190	110
		22.5	280	90	50	
		13.5	130	40	40	
	Wrap	C type	10	27.5	40	20
55.5				0	10	10
4				520	160	160
20			10	8	240	80
		16		100	40	40
		19.5		330	110	60
		D type	10	39.5	140	50
79				50	20	10
4	860			540	320	
20	10		8	860	270	160
		16.5	400	130	70	

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type					
		27.5	0	30	110	
		55.5	0	10	50	
		6	60	160	540	
	D type	20	12.5	0	70	260
			25.5	0	30	120
			19.5	20	150	510
		20	10	39.5	0	70
79	0			30	120	
5.5	190			540	860	
20	10		11	70	270	860
		22.5	10	130	440	
		13.5	0	70	240	
	Wrap	C type	10	27.5	0	30
55.5				0	10	50
4				110	240	810
20			10	8	30	120
		16		0	60	200
		19.5		20	150	510
		D type	10	39.5	0	70
79				0	30	120
4	280			740	860	
20	10		8	120	370	860
		16.5	30	180	600	

Hypothetical motor capacity 200 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type				
		6.5	40	110	
		13	0	50	
		20	10	1	480
	2.5			170	300
	5.5			50	130
	20		10	4.5	330
		9		140	250
18		50		120	
20		10	2	790	860
	4		380	570	
	8		170	280	
	Wrap	C type	10	3	130
6.5				40	110
13				0	50
20			10	1	480
		2.5		170	300
		5.5		50	130
		20	10	7.5	440
3.5				180	300
15.5	70			140	
20	10		2	790	860
		4	380	570	
		8	170	280	

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	C type					
		34.5	20	10	10	
		69.5	0	0	0	
		20	10	9.5	200	70
	19			80	30	30
	38			20	10	10
	20		10	24.5	250	80
		49		110	40	20
98.5		30		20	10	
20		10	13	520	160	90
	26		240	80	40	
	52.5		100	40	20	
	Wrap	C type	10	17	90	30
34.5				20	10	10
69.5				0	0	0
20			10	9.5	200	70
		19		80	30	30
		38		20	10	10
		20	10	24.5	250	80
49				110	40	20
98.5	30			20	10	
20	10		11.5	590	180	110
		23.5	270	90	50	
		47	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					
		27.5	0	30	110	
		55.5	0	10	50	
		20	10	7.5	40	130
	15.5			0	60	210
	31			0	30	100
	20		10	19.5	20	150
		39.5		0	70	250
79		0		30	120	
20		10	13	50	220	760
	26		0	110	380	
	52.5		0	50	180	
	Wrap	C type	10	13.5	0	70
27.5				0	30	110
55.5				0	10	50
20			10	7.5	40	130
		15.5		0	60	210
		31		0	30	100
		20	10	19.5	20	150
39.5				0	70	250
79	0			30	120	
20	10		11.5	70	250	860
		23.5	10	120	420	
		47	0	60	210	

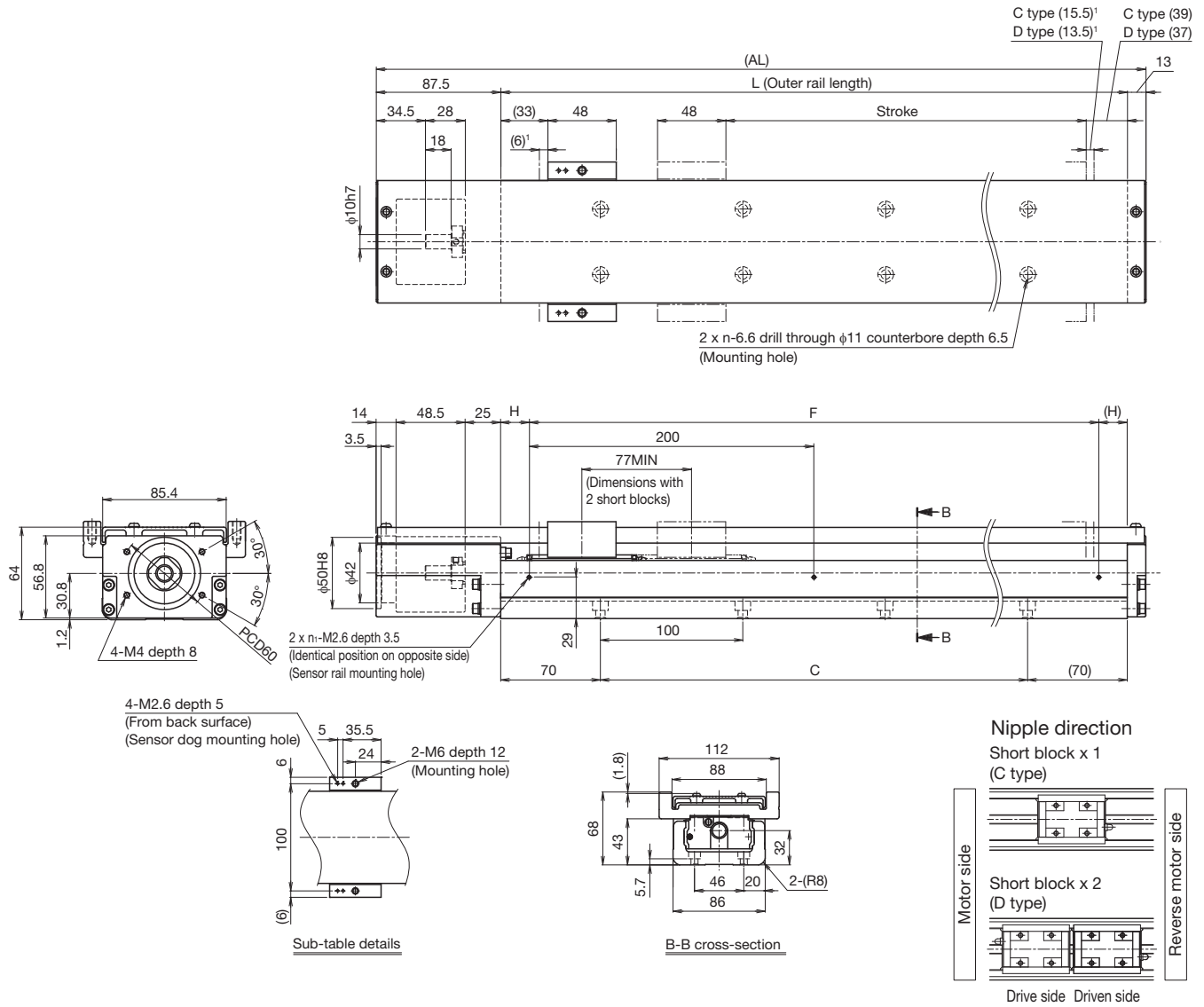
Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	C type				
		8	20	90	
		16.5	0	40	
		20	10	3	130
	6.5			40	110
	13			0	50
	20		10	5.5	260
		11.5		100	190
23.5		30		90	
20		10	4.5	330	510
	9		140	250	
	18		50	120	
	Wrap	C type	10	4	90
8				20	90
16.5				0	40
20			10	3	130
		6.5		40	110
		13		20	50
		20	10	3.5	440
7.5				180	300
15.5	70			140	
20	10		3.5	440	650
		7.5	180	300	
		15.5	70	140	

³ Value when LM Guide running life is restricted to 10,000 km. The calculation conditions are as follows.

Stroke: 520 mm (C type), 445 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 (241.5)	320 (341.5)	420 (441.5)	520 (541.5)	620 (641.5)	720 (741.5)	820 (841.5)
	D type ²	145 (164.5)	245 (264.5)	345 (364.5)	445 (464.5)	545 (564.5)	645 (664.5)	745 (764.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm		1000		910	660	500	400
	Ball screw lead: 20 mm		2000		1770	1300	990	780
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)		7.1	8.6	10.1	11.6	13.1	14.6	16.1

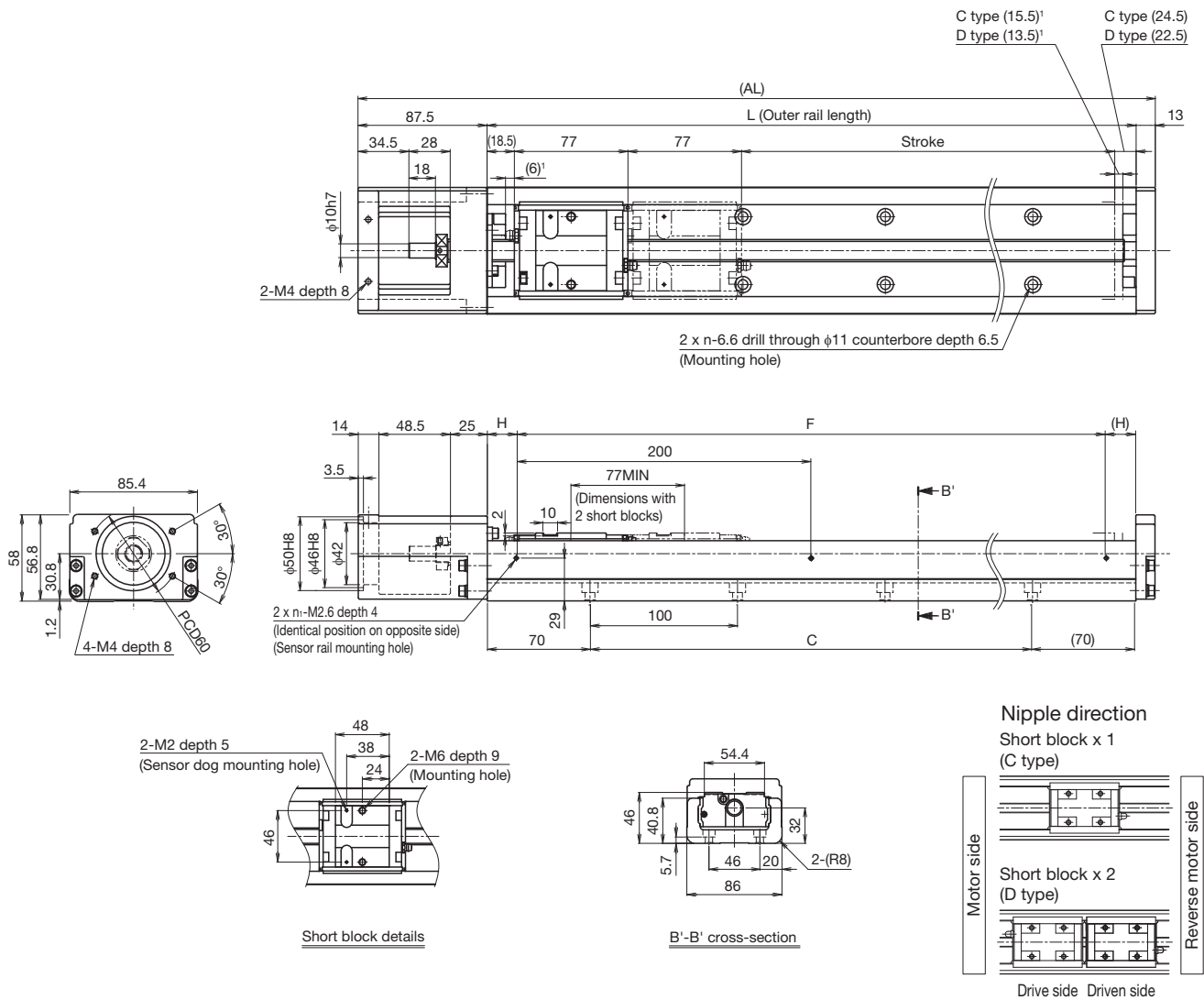
² The value with 2 short blocks (D type, without QZ) attached.

³ 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.

Stroke (mm) (Stroke between mechanical stoppers)	C type	220 (241.5)	320 (341.5)	420 (441.5)	520 (541.5)	620 (641.5)	720 (741.5)	820 (841.5)
	D type ²	145 (164.5)	245 (264.5)	345 (364.5)	445 (464.5)	545 (564.5)	645 (664.5)	745 (764.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm		1000		910	660	500	400
	Ball screw lead: 20 mm		2000		1770	1300	990	780
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)		6.3	7.7	9.1	10.5	11.9	13.4	14.8

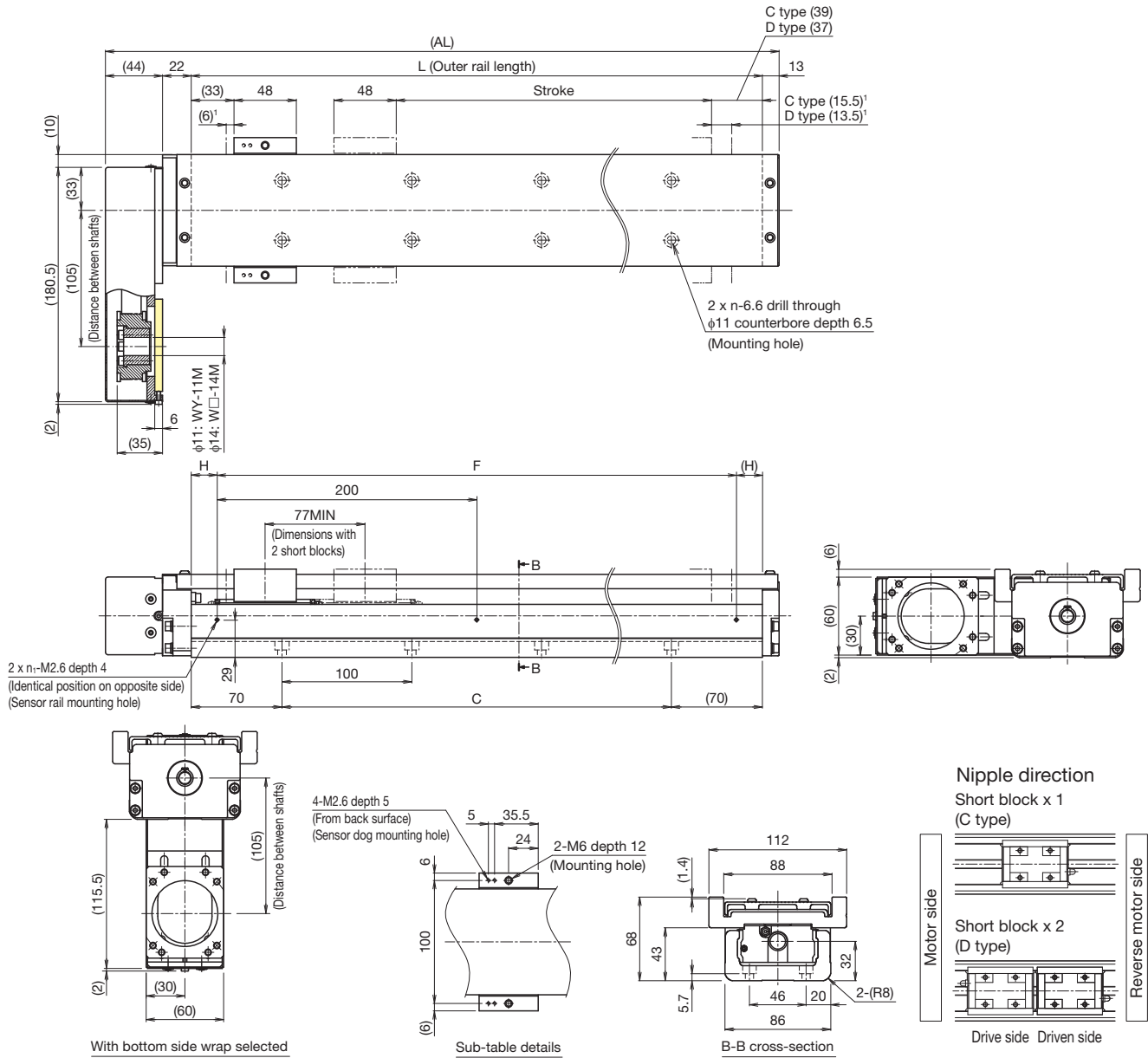
² The value with 2 short blocks (D type, without QZ) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ 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 (241.5)	320 (341.5)	420 (441.5)	520 (541.5)	620 (641.5)	720 (741.5)	820 (841.5)
	D type ²	145 (164.5)	245 (264.5)	345 (364.5)	445 (464.5)	545 (564.5)	645 (664.5)	745 (764.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000			910	660	500	400
	Ball screw lead: 20 mm	2000			1770	1300	990	780
Dimensions (mm)	AL	419	519	619	719	819	919	1019
	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	9.5	11	12.5	14	15.5	17

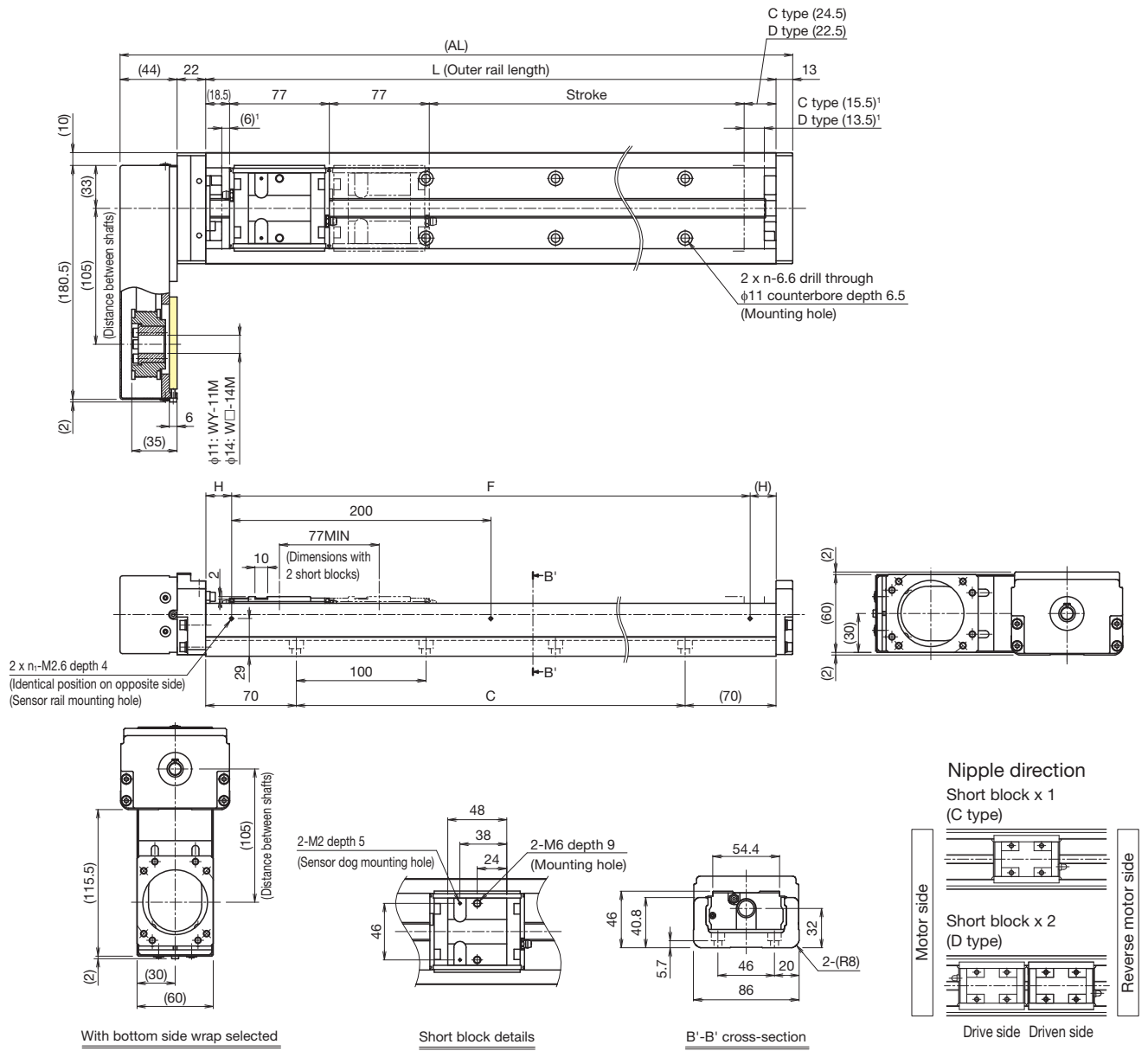
² The value with 2 short blocks (D type, without QZ) attached.

³ 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.

Stroke (mm) (Stroke between mechanical stoppers)	C type	220 (241.5)	320 (341.5)	420 (441.5)	520 (541.5)	620 (641.5)	720 (741.5)	820 (841.5)
	D type ²	145 (164.5)	245 (264.5)	345 (364.5)	445 (464.5)	545 (564.5)	645 (664.5)	745 (764.5)
Maximum speed ³ (mm/s)	Ball screw lead: 10 mm	1000			910	660	500	400
	Ball screw lead: 20 mm	2000			1770	1300	990	780
Dimensions (mm)	AL	419	519	619	719	819	919	1019
	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)		7.3	8.7	10.1	11.5	12.9	14.3	15.7

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

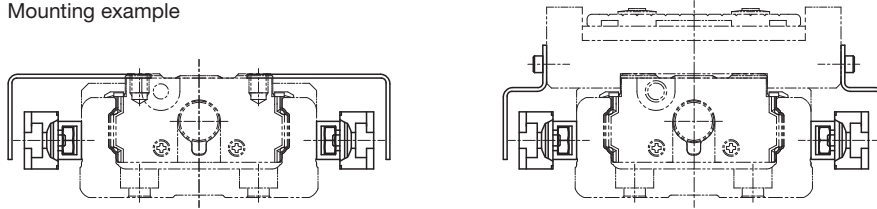
Options

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

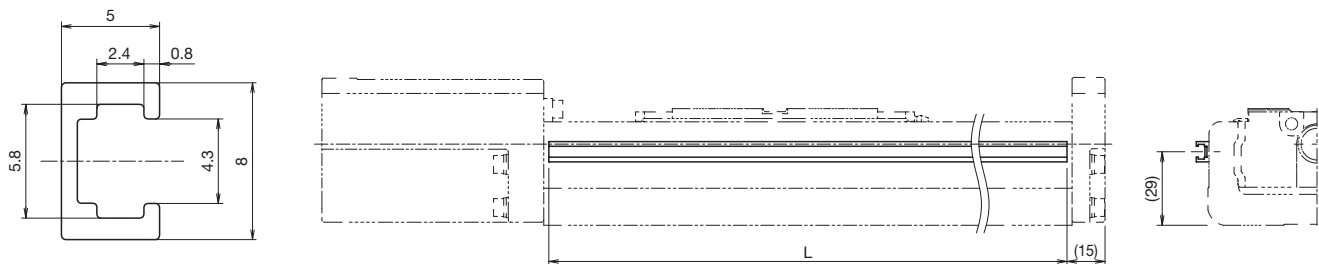
³ NC contact: Normally closed contact point

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

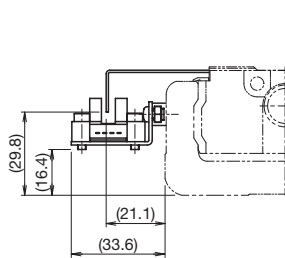
Stroke ⁴ (mm)	Outer rail length (mm)	L (mm)
190	340	336
290	440	436
390	540	536
490	640	636
590	740	736
690	840	836
790	940	936

⁴ Stroke with 1 block (A type).

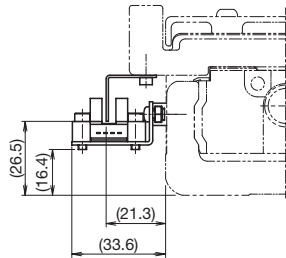
Photo Sensor Mounting Dimensions

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

Without cover



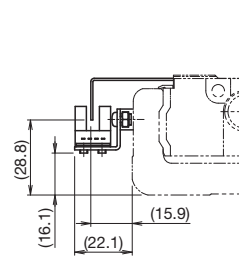
With cover



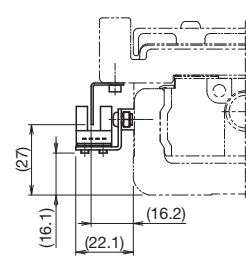
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 10 mm

Without cover



With cover

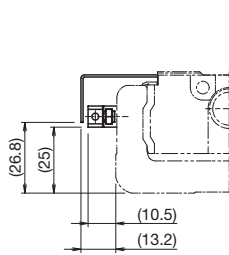


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

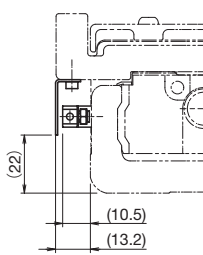
Sensor dog width: 10 mm

Proximity Sensor Mounting Dimensions

Without cover



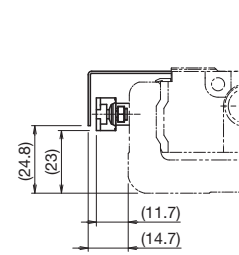
With cover



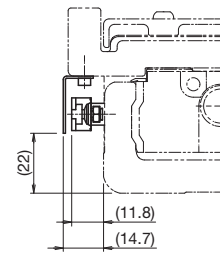
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

Sensor dog width: 10 mm

Without cover



With cover

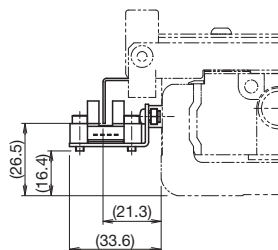


Symbol	Model	Manufacturer
H, L, J	GX-F12A	Panasonic Industrial Devices SUNX Co., Ltd.
	GX-F12B	
M	GX-F12A-P	
	GX-F12B-P	

Sensor dog width: 10 mm

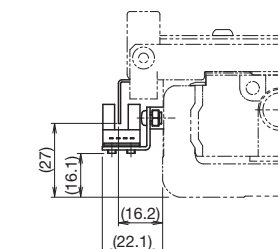
Mounting Dimensions with Bellows

Photo sensor



Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

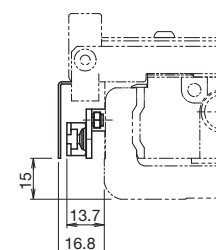
Sensor dog width: 10 mm



Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

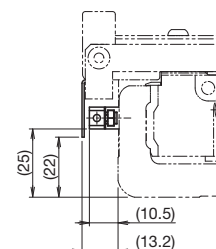
Sensor dog width: 10 mm

Proximity sensor



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

Sensor dog width: 10 mm



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 (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-030DA2-10B-14B	XGT2-27C-10-14			
			SGMAV-02								
			SGMJV-04	400					SFC-035DA2-10B-14B	XGT2-30C-10-14	
		SGMAV-04									
		Σ-7	SGM7J-02	200			□60	AV			SFC-030DA2-10B-14B
			SGM7A-02								
	SGM7J-04		400	SFC-035DA2-10B-14B	XGT2-30C-10-14						
	SGM7A-04										
	Mitsubishi Electric Corporation	MELSERVO	J4			HG-KR23	200	□60	AV	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	AV
				HF-KN43	400	SFC-035DA2-10B-14B	XGT2-30C-10-14				
	Tamagawa Seiki Co., Ltd.	TBL-III	TS4607	200	□60	AV	SFC-030DA2-10B-14B	XGT2-27C-10-14			
			TS4609	400			SFC-035DA2-10B-14B	XGT2-30C-10-14			
		TBL-IIV	TSM3202	200			□60	AV	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	AV	SFC-030DA2-10B-14B	XGT2-27C-10-14			
			SV-M040	400			SFC-035DA2-10B-14B	XGT2-30C-10-14			
		SV2	SV2-M020	200			□60	AV	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	AV	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.

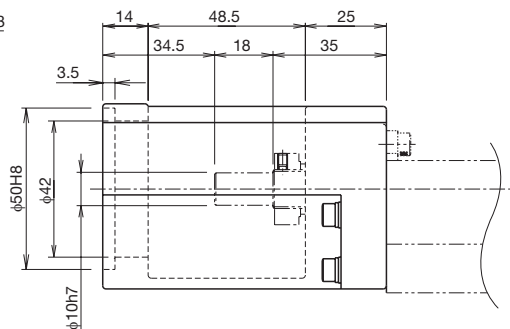
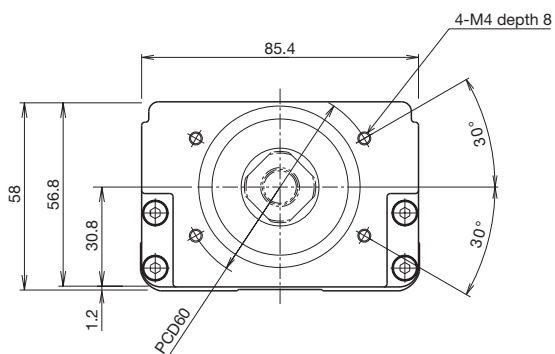
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 59, C/D → p. 65), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

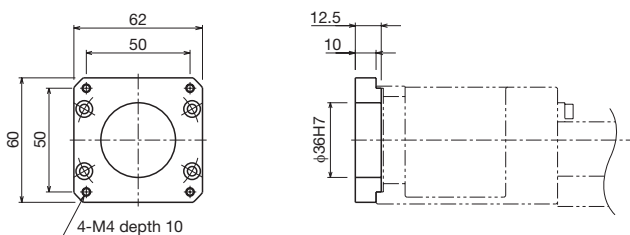
SKR46
A0



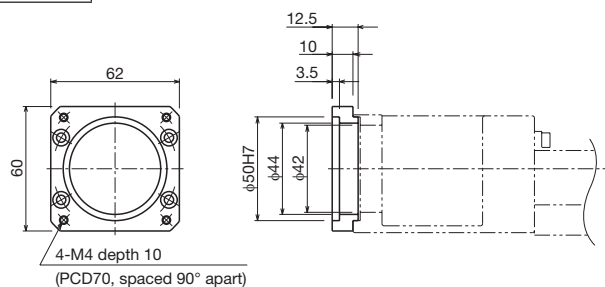
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Intermediate flange

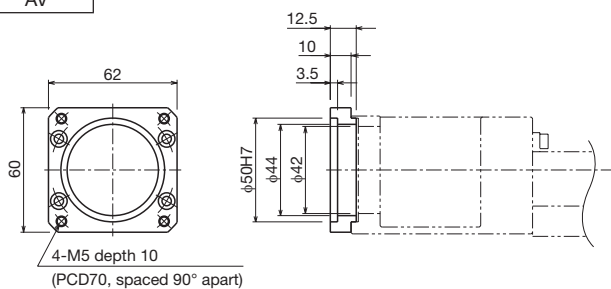
SKR46
AU



SKR46
AY



SKR46
AV



Options

Intermediate Flange (wrap)

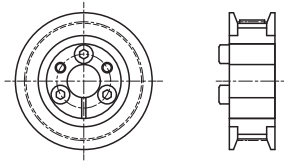
Intermediate flanges are available to mount various kinds of motors.

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-MR23	200	□60			WV-14M	
				HG-KR23						
				HG-MR43	400					
			HG-KR43							
			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		□60		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					
		R88M-1M20030	200		WY-11M					
	1S	R88M-1M40030	400	□60	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.

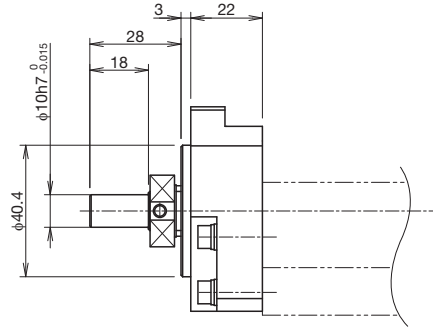
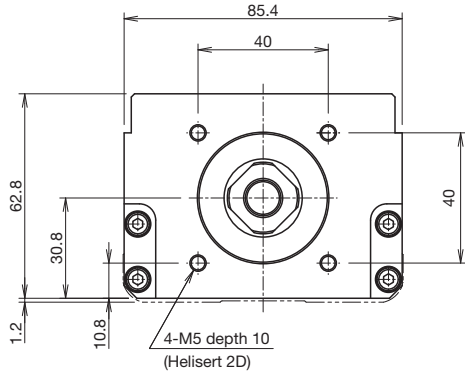
Note 2) If the maximum torque for motors exceeds the permissible input torque (A/B → p. 59, C/D → p. 65), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

SKR46
60

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



Wrap specification (intermediate flange)

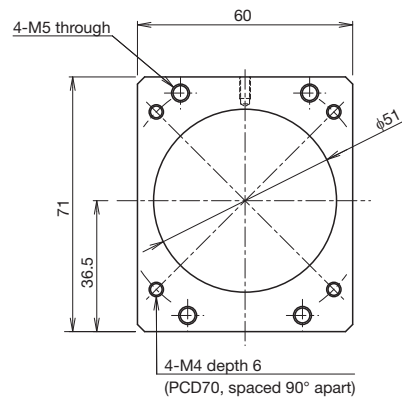
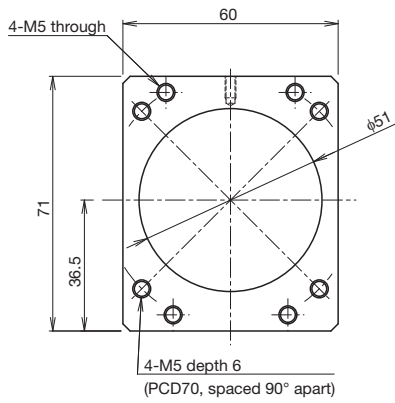
SKR46
WV

Thickness: 6 mm

SKR46
WY

Thickness: 6 mm

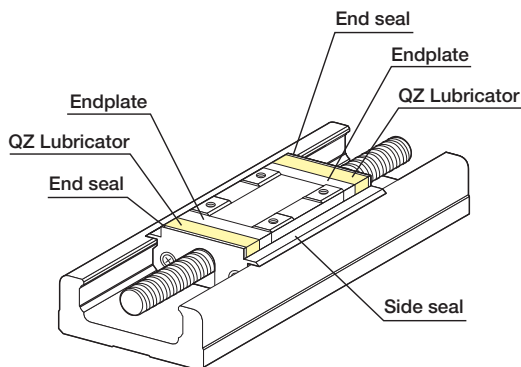
SKR**	Actuator model
W□	□: Intermediate flange



Options

QZ Lubricator

The QZ Lubricator for SKR 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

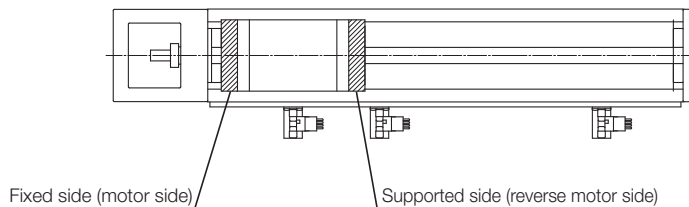
Features

- 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.

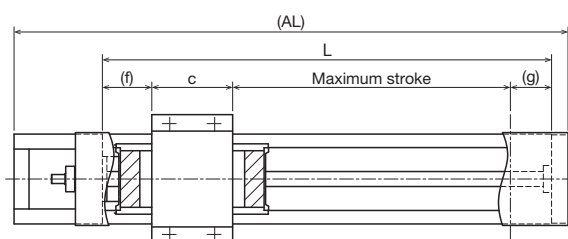


Block type \ QZ configuration	QZ	QZA	QZB	QZAD
A type (block x 1)	 Fixed side Supported side	 Fixed side Supported side	 Fixed side Supported side	-
B type (block x 2)	 Fixed side Supported side	-	-	 Fixed side Supported side
C type (short block x 1)	 Fixed side Supported side	 Fixed side Supported side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

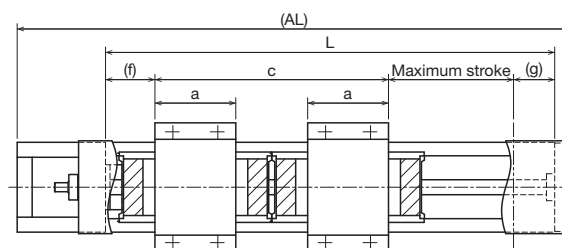
Dimensions with QZ Lubricator

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	178.5	-	81	42	38.5
	540.5	440	260	278.5				
	640.5	540	360	378.5				
	740.5	640	460	478.5				
	840.5	740	560	578.5				
	940.5	840	660	678.5				
1040.5	940	760	778.5					
B	540.5	440	120	138.5	81	221	42	38.5
	640.5	540	220	238.5				
	740.5	640	320	338.5				
	840.5	740	420	438.5				
	940.5	840	520	538.5				
1040.5	940	620	638.5					
C	440.5	340	190	211.5	-	48	42	38.5
	540.5	440	290	311.5				
	640.5	540	390	411.5				
	740.5	640	490	511.5				
	840.5	740	590	611.5				
	940.5	840	690	711.5				
1040.5	940	790	811.5					
D	440.5	340	85	104.5	48	155	42	38.5
	540.5	440	185	204.5				
	640.5	540	285	304.5				
	740.5	640	385	404.5				
	840.5	740	485	504.5				
	940.5	840	585	604.5				
	1040.5	940	685	704.5				

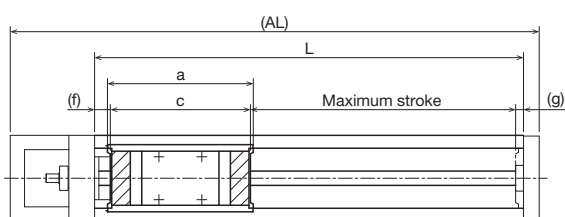
¹ The value for B/D block types is with 2 blocks attached.

Options

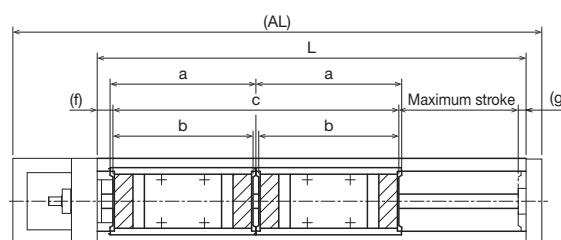
Dimensions with QZ Lubricator

QZ (without cover)

Block type: A/B/C/D



Block type A/C



Block type B/D

Unit: mm

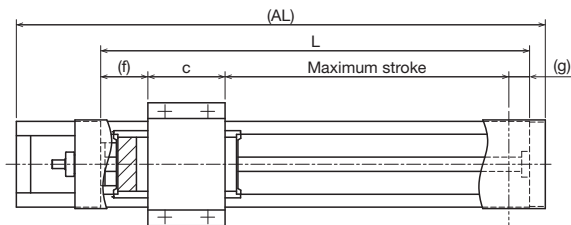
Block type	Overall length AL	Outer rail length L	Stroke ¹	Maximum stroke ¹	a, b	c	f	g
A	440.5	340	160	178.5	140	140	12.5	9
	540.5	440	260	278.5				
	640.5	540	360	378.5				
	740.5	640	460	478.5				
	840.5	740	560	578.5				
	940.5	840	660	678.5				
B	1040.5	940	760	778.5	140	280	12.5	9
	540.5	440	120	138.5				
	640.5	540	220	238.5				
	740.5	640	320	338.5				
	840.5	740	420	438.5				
C	940.5	840	520	538.5	107	107	12.5	9
	1040.5	940	620	638.5				
	440.5	340	190	211.5				
	540.5	440	290	311.5				
	640.5	540	390	411.5				
	740.5	640	490	511.5				
D	840.5	740	590	611.5	107	214	12.5	9
	940.5	840	690	711.5				
	1040.5	940	790	811.5				
	440.5	340	85	104.5				
	540.5	440	185	204.5				
	640.5	540	285	304.5				
	740.5	640	385	404.5				
840.5	740	485	504.5					
940.5	840	585	604.5					
1040.5	940	685	704.5					

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

Dimensions with QZ Lubricator

QZA (with cover)

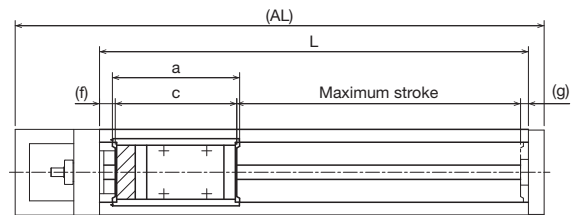
Block type: A/C



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	440.5	340	175	193.5	81	42	23.5
	540.5	440	275	293.5			
	640.5	540	375	393.5			
	740.5	640	475	493.5			
	840.5	740	575	593.5			
	940.5	840	675	693.5			
	1040.5	940	775	793.5			
C	440.5	340	205	226.5	48	42	23.5
	540.5	440	305	326.5			
	640.5	540	405	426.5			
	740.5	640	505	526.5			
	840.5	740	605	626.5			
	940.5	840	705	726.5			
	1040.5	940	805	826.5			

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

QZA (without cover)

Unit: mm

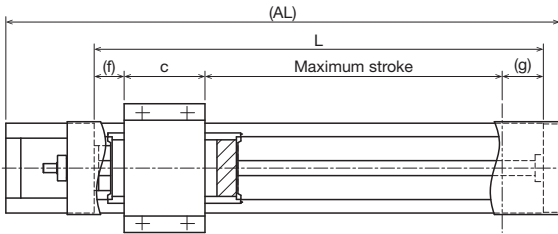
Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	440.5	340	175	193.5	125	125	12.5	9
	540.5	440	275	293.5				
	640.5	540	375	393.5				
	740.5	640	475	493.5				
	840.5	740	575	593.5				
	940.5	840	675	693.5				
	1040.5	940	775	793.5				
C	440.5	340	205	226.5	92	92	12.5	9
	540.5	440	305	326.5				
	640.5	540	405	426.5				
	740.5	640	505	526.5				
	840.5	740	605	626.5				
	940.5	840	705	726.5				
	1040.5	940	805	826.5				

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

Options

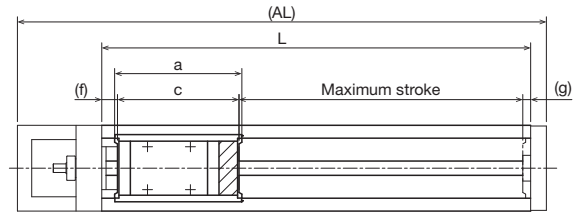
Dimensions with QZ Lubricator

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	193.5	81	27	38.5
	540.5	440	275	293.5			
	640.5	540	375	393.5			
	740.5	640	475	493.5			
	840.5	740	575	593.5			
	940.5	840	675	693.5			
	1040.5	940	775	793.5			
C	440.5	340	205	226.5	48	27	38.5
	540.5	440	305	326.5			
	640.5	540	405	426.5			
	740.5	640	505	526.5			
	840.5	740	605	626.5			
	940.5	840	705	726.5			
	1040.5	940	805	826.5			

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

QZB (without cover)

Unit: mm

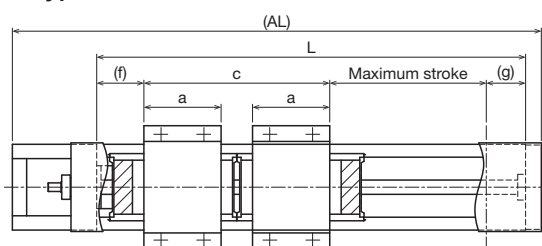
Block type	Overall length AL	Outer rail length L	Stroke	Maximum stroke	a	c	f	g
A	440.5	340	175	193.5	125	125	12.5	9
	540.5	440	275	293.5				
	640.5	540	375	393.5				
	740.5	640	475	493.5				
	840.5	740	575	593.5				
	940.5	840	675	693.5				
	1040.5	940	775	793.5				
C	440.5	340	205	226.5	92	92	12.5	9
	540.5	440	305	326.5				
	640.5	540	405	426.5				
	740.5	640	505	526.5				
	840.5	740	605	626.5				
	940.5	840	705	726.5				
	1040.5	940	805	826.5				

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

Dimensions with QZ Lubricator

QZAD (with cover)

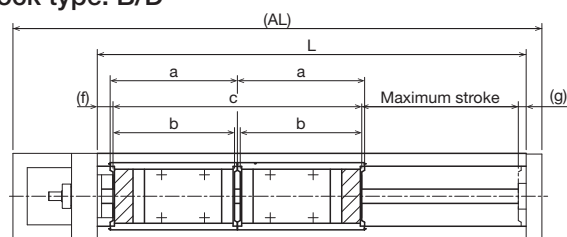
Block type: B/D



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	168.5	81	191	42	38.5
	640.5	540	250	268.5				
	740.5	640	350	368.5				
	840.5	740	450	468.5				
	940.5	840	550	568.5				
	1040.5	940	650	668.5				
D	440.5	340	115	134.5	48	125	42	38.5
	540.5	440	215	234.5				
	640.5	540	315	334.5				
	740.5	640	415	434.5				
	840.5	740	515	534.5				
	940.5	840	615	634.5				
1040.5	940	715	734.5					

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	540.5	440	150	168.5	125	250	12.5	9
	640.5	540	250	268.5				
	740.5	640	350	368.5				
	840.5	740	450	468.5				
	940.5	840	550	568.5				
	1040.5	940	650	668.5				
D	440.5	340	115	134.5	92	184	12.5	9
	540.5	440	215	234.5				
	640.5	540	315	334.5				
	740.5	640	415	434.5				
	840.5	740	515	534.5				
	940.5	840	615	634.5				
1040.5	940	715	734.5					

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

Note 2) A/C block types cannot be selected for QZAD.

SKR55 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)	Stroke (4)	Accuracy grade (5)	With/without motor (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
SKR55	20	A	0800	P	0	1	2	A0
SKR55	20: 20 mm 30: 30 mm 40: 40 mm	A: x 1 B: x 2	0680: 680 mm to 1200: 1200 mm	No symbol: Normal grade H: High accuracy grade P: Precision grade	For direct coupling 0: Direct coupling (without motor) 1: Direct coupling (Specified motor prepared and mounted by THK) For wrap R1: Non-standard side wrap (without motor) R2: Standard side wrap (without motor) R3: Bottom side wrap (without motor) R4: Non-standard side wrap (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)	0: Without cover 1: With cover 2: With bellows	0 1 2 6 7 B E H L J M	For direct coupling A0 AZ A5 A6 20 For wrap WV-14M WZ-16M WZ-19M W5-19M

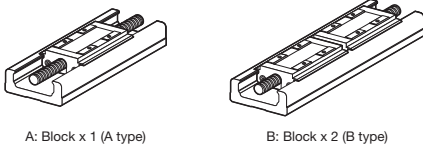
When selecting 2: With bellows for (7) Cover, specify the stroke with bellows. → p. 109 to p. 110

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

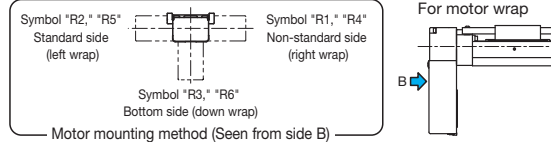
When selecting "1," "R4," "R5," or "R6":
The specified motor will be installed. Indicate the motor cable direction separately. Select (9) Intermediate flange to match the specified motor.

Sensor details → p. 91 For direct coupling → p. 93 For wrap → p. 95

(3) Block type



(6) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		55400		
	Basic static load rating C_0 (N)		62500		
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.007 to 0		
		Precision grade (P)	-0.019 to -0.007		
Geometrical moment of inertia	I_x (mm ⁴)	2.07 × 10 ⁵			
	I_y (mm ⁴)	2.09 × 10 ⁵			
	Weight (kg/m)	13.2			
Ball screw	Ball screw lead (mm)		20	30	40
	Basic dynamic load rating C_a (N)	Normal grade/High accuracy grade (H)	10900	7000	6800
		Precision grade (P)			
	Basic static load rating C_{0a} (N)	Normal grade/High accuracy grade (H)	17600	11500	9900
		Precision grade (P)			
	Screw shaft diameter (mm)		φ20		
	Thread minor diameter (mm)		φ17.1		
Ball center-to-center diameter (mm)		φ20.75			
Permissible rotational speed ⁵ (min ⁻¹)	Normal grade/High accuracy grade (H)	5000	4500		
	Precision grade (P)				
Bearing (Fixed side)	Axial direction	Basic dynamic load rating C_a (N)	7600		
		Static permissible load P_{0a} (N)	3990		
Permissible input torque (N·m)	Wrap	Direct coupling	8.5		
		Wrap	6.4		
Static permissible moment ^{4,5} (N·m)		M_A : 923 (5125), M_B : 923 (5125), M_C : 2276 (4552)			
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 116 for the values if "1" or "2" is selected for item (7) in the model configuration.

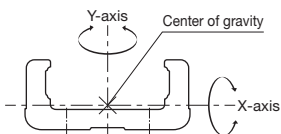
⁶ The conditions for calculation are as follows:

Stroke: 1000 mm (A type), 880 mm (B type). Speed: 1000 mm/s (for 20 mm lead), 1500 mm/s (for 30 mm lead), 2000 mm/s (for 40 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.

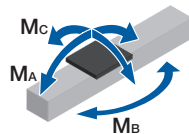
Note 1) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating C_a). Consult with THK.

Note 2) LM Guide load rating is the load rating per block.

Geometrical moment of inertia



Static permissible moment



Precision

Accuracy grade	Item	Stroke ⁷				
		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 ⁷				
		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 ⁷		
		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	

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.

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)
800 to 1200	980 to 1380	A type 1.9 B type 3.8	A type 1.9 B type 3.8	A type 3.8 B type 7.6	17.8	20, 30, 40	1053 to 1453	φ12h7	1.42

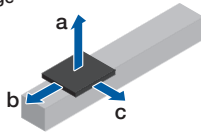
¹ Stroke with 1 block (A type).

² Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.

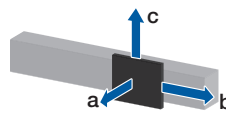
Note) Refer to page 93 for applicable couplings.

Permissible Overhang Length³

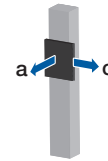
Horizontal Usage



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					
		Direct coupling	A type	20	10.5	1000
21	970				300	300
42.5	450				150	150
30	6.5			1000	990	990
	13.5			1000	470	470
	27			750	230	230
B type	20		3	1000	1000	1000
			6.5	1000	890	990
			13	1000	440	490
	30		9.5	1000	1000	1000
			19.5	1000	1000	660
			39	1000	840	330
40	20	5.5	1000	1000	1000	
		11	1000	1000	1000	
		22.5	1000	1000	570	
	30	2.5	1000	1000	1000	
		5.5	1000	1000	1000	
		11	1000	1000	1000	

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type					
		Direct coupling	A type	20	10.5	560
21	250				250	850
42.5	90				120	420
30	6.5			940	830	1000
	13.5			420	400	1000
	27			180	200	660
B type	20		3	1000	1000	1000
			6.5	940	830	1000
			13	440	410	1000
	30		9.5	1000	1000	1000
			19.5	600	1000	1000
			39	270	540	1000
40	20	5.5	1000	1000	1000	
		11	1000	1000	1000	
		22.5	520	940	1000	
	30	2.5	1000	1000	1000	
		5.5	1000	1000	1000	
		11	1000	1000	1000	

Hypothetical motor capacity 400 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type				
		Direct coupling	A type	20	4
8.5	530				480
17	240				240
30	2			1000	1000
	4.5			1000	920
	9			500	460
B type	20		1	1000	1000
			2.5	1000	1000
			5	940	830
	30		4	1000	1000
			8	1000	1000
			16	1000	1000

Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type					
		Direct coupling	A type	20	24	850
48	400				130	130
96.5	170				60	60
30	15.5			1000	410	410
	31			640	200	200
	62			290	100	100
B type	20		9	1000	630	710
			18	1000	310	350
			36.5	540	140	170
	30		23	1000	1000	560
			46.5	1000	710	270
			93	1000	350	130

Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	b (mm)	c (mm)
Direct coupling	A type					
		Direct coupling	A type	20	20	260
40	100				130	450
80.5	20				60	220
30	15.5			360	340	1000
	31			150	170	580
	62			50	80	290
B type	20		9	660	600	1000
			18	300	280	1000
			36.5	120	120	490
	30		23	500	920	1000
			46.5	220	450	1000
			93	80	220	750

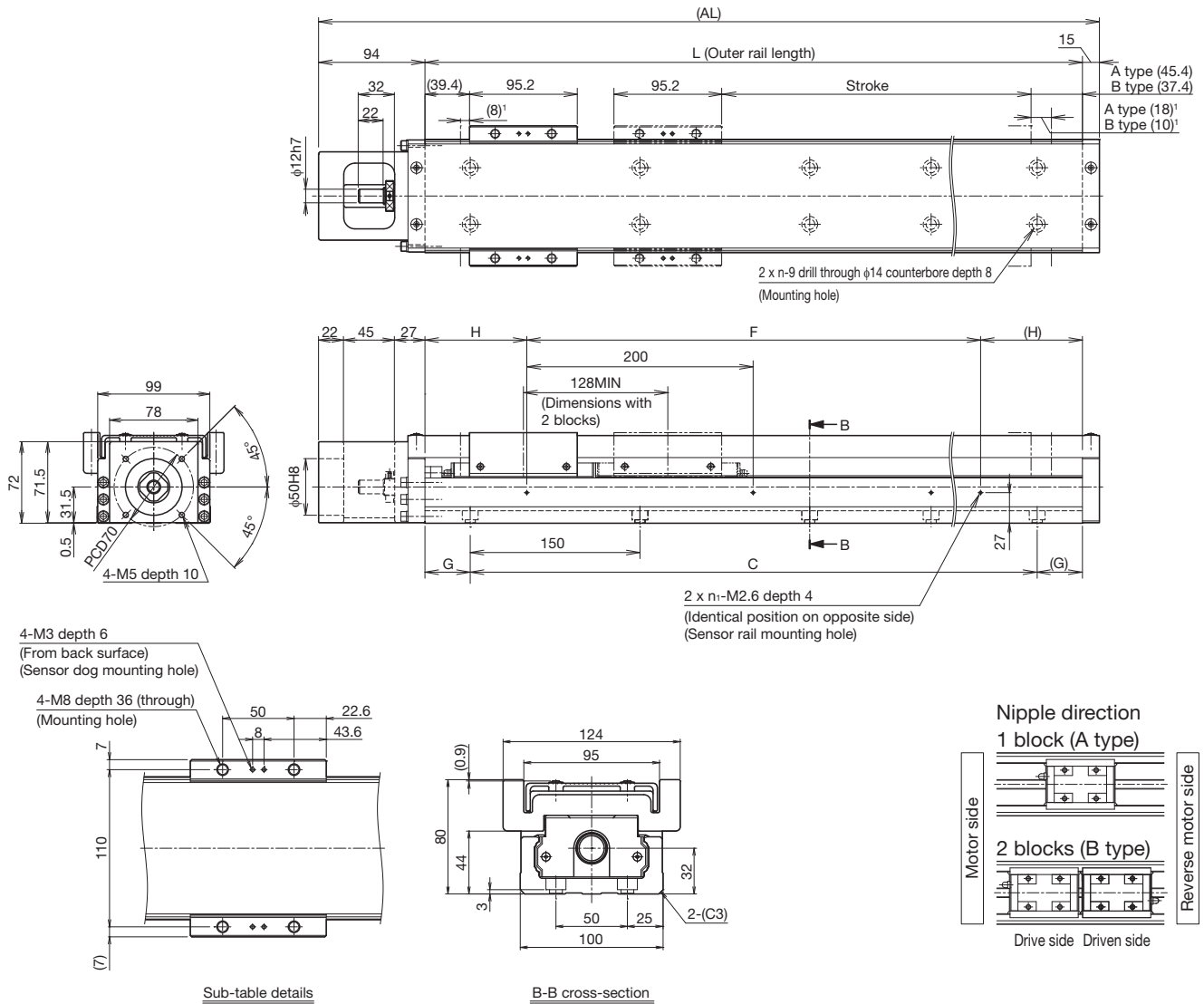
Hypothetical motor capacity 750 W		Ball screw lead (mm)	Load mass (kg)	a (mm)	c (mm)
Direct coupling	A type				
		Direct coupling	A type	20	9
18.5	220				220
37	80				110
30	5.5			850	750
	11.5			380	360
	23			160	180
B type	20		3.5	1000	1000
			7.5	610	550
			15	280	270
	30		9.5	1000	1000
			19	1000	850
			38.5	610	420

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: 1000 mm/s (for 20 mm lead), 1500 mm/s (for 30 mm lead), 2000 mm/s (for 40 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	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	1100	880	730	610	520
		Precision grade	-	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	1650	1330	1100	920	780
		Precision grade	-	-	-	-	-
Ball screw lead: 40 mm	Normal grade/High accuracy grade	2160	1750	1440	1210	1030	
	Precision grade	-	-	-	-	-	
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)		23.8	25.7	27.6	29.5	31.4	

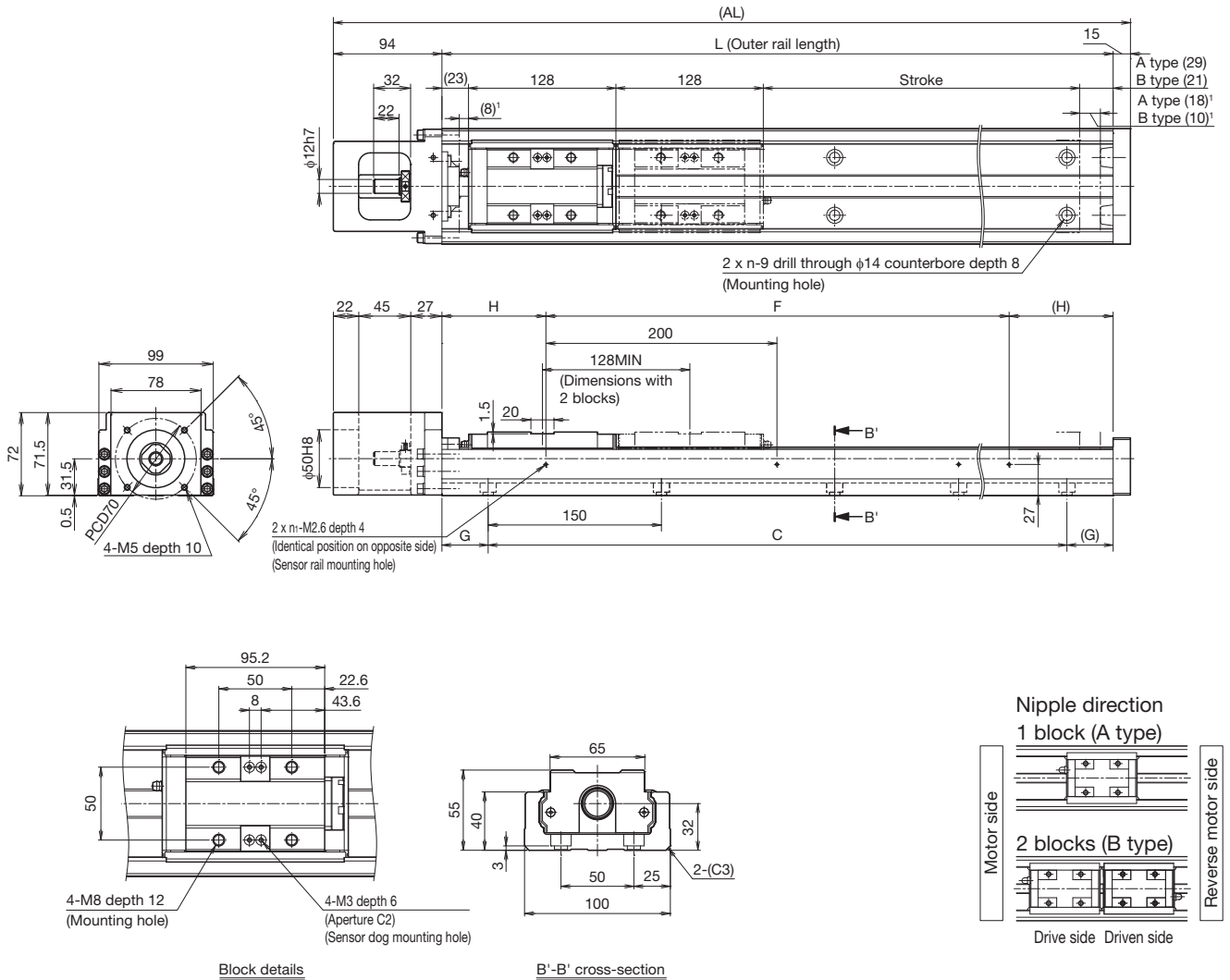
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 3.8 kg added.

Without cover
Direct motor coupling

Dimensions



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	1100	880	730	610	520
		Precision grade	-	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	1650	1330	1100	920	780
		Precision grade	-	-	-	-	-
Ball screw lead: 40 mm	Normal grade/High accuracy grade	2160	1750	1440	1210	1030	
	Precision grade	-	-	-	-	-	
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)	20.9	22.6	24.4	26.2	27.9	

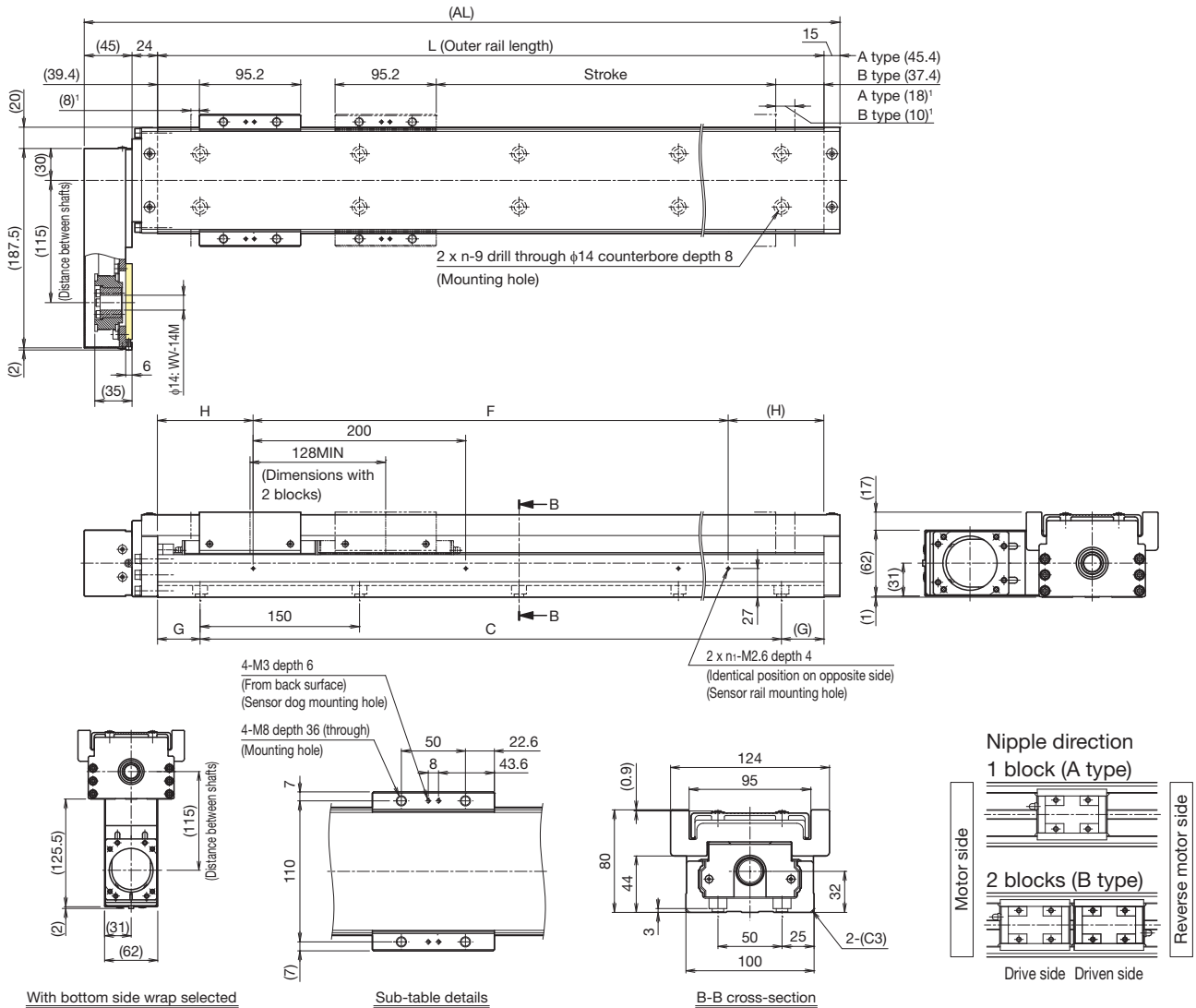
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 1.9 kg added.

With cover Motor flange angle $\square 60$
 Motor wrap

Dimensions



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	1100	880	730	610	520
		Precision grade	-	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	1650	1330	1100	920	780
	Precision grade	-	-	-	-	-	
Ball screw lead: 40 mm	Normal grade/High accuracy grade	2160	1750	1440	1210	1030	
	Precision grade	-	-	-	-	-	
Dimensions (mm)	AL	1064	1164	1264	1364	1464	
	L	980	1080	1180	1280	1380	
	C	900	1050	1200	1200	1350	
	G	40	15	65	40	15	
	F	800	1000	1000	1200	1200	
Mounting hole count	n	7	8	8	9	10	
	n ₁	5	6	6	7	7	
Weight ⁴ (kg)		24.8	26.7	28.6	30.5	32.4	

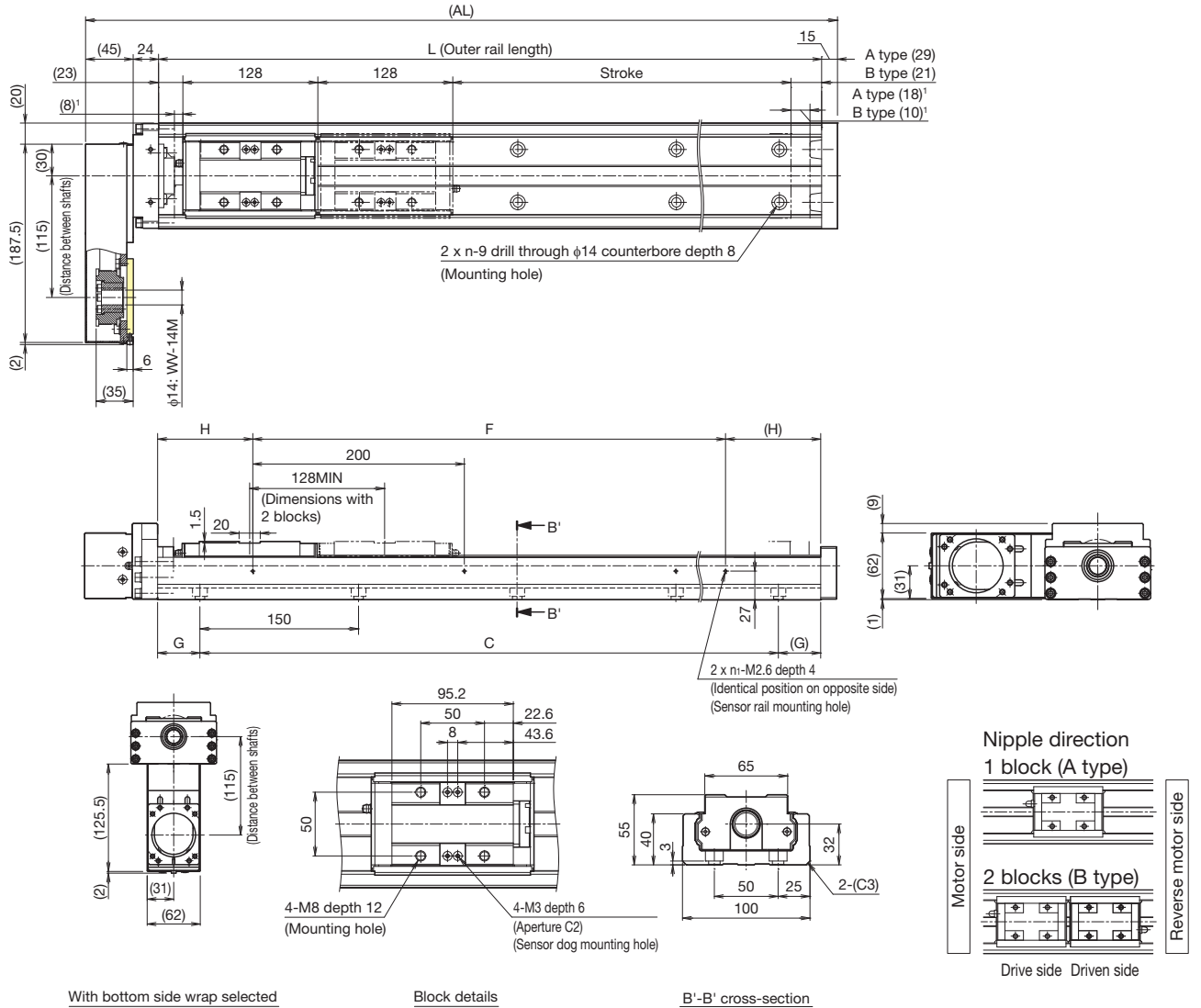
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 3.8 kg added.

Without cover Motor flange angle $\square 60$
 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	1100	880	730	610	520
		Precision grade	-	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	1650	1330	1100	920	780
Precision grade		-	-	-	-	-	
Ball screw lead: 40 mm	Normal grade/High accuracy grade	2160	1750	1440	1210	1030	
	Precision grade	-	-	-	-	-	
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)			21.8	23.6	25.3	27.1	28.9

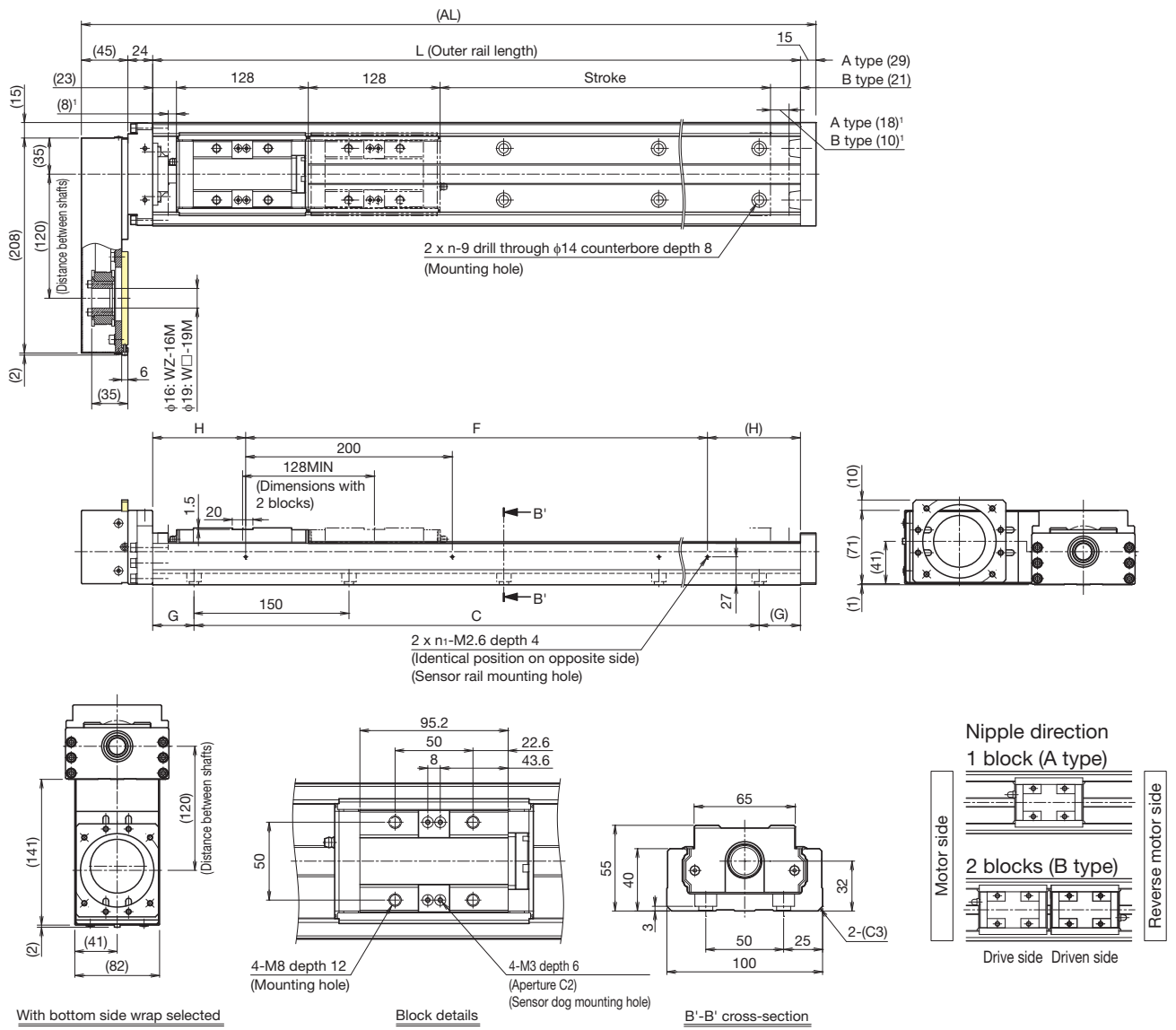
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 1.9 kg added.

Without cover Motor flange angle $\square 80$
 Motor wrap

Dimensions



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	1100	880	730	610	520
		Precision grade	-	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	1650	1330	1100	920	780
Precision grade		-	-	-	-	-	
Ball screw lead: 40 mm	Normal grade/High accuracy grade	2160	1750	1440	1210	1030	
	Precision grade	-	-	-	-	-	
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)			21.8	23.6	25.3	27.1	28.9

² The value with 2 blocks (B type) attached.
³ Maximum speed is limited by the actuator's permissible speed.
⁴ The weight with 2 blocks (B type) has 1.9 kg added.

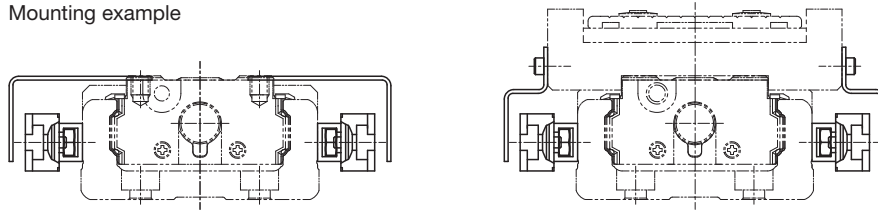
Options

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

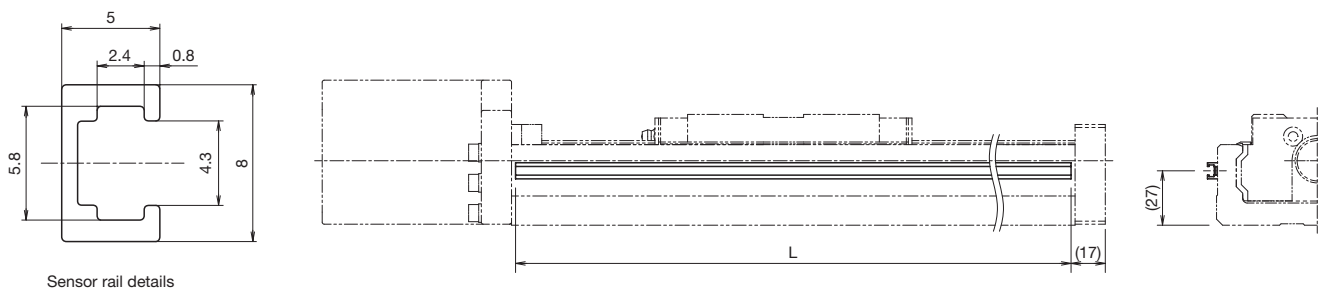
³ NC contact: Normally closed contact point

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.



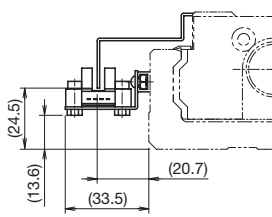
Stroke ⁴ (mm)	Outer rail length (mm)	L (mm)
800	980	976
900	1080	1076
1000	1180	1176
1100	1280	1276
1200	1380	1376

⁴ Stroke with 1 block (A type).

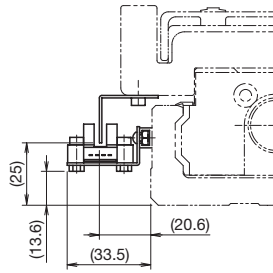
Photo Sensor Mounting Dimensions

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

Without cover



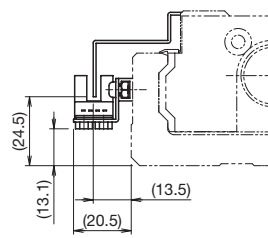
With cover



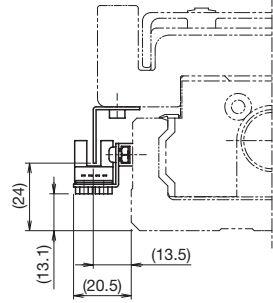
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 20 mm

Without cover



With cover

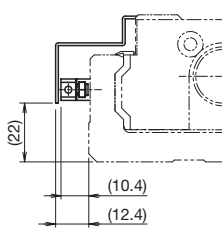


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

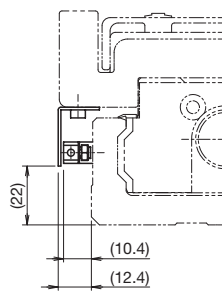
Sensor dog width: 20 mm

Proximity Sensor Mounting Dimensions

Without cover



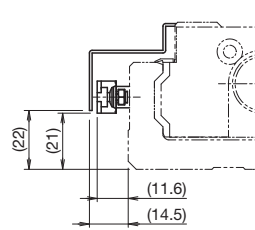
With cover



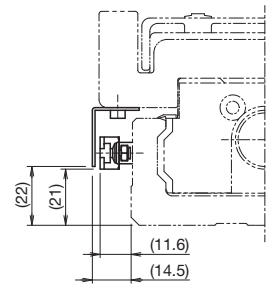
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

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 (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-030DA2-12B-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							
		SGMAV-08	750	□80	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							
	SGM7A-08	750	□80	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	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							
			HF-KN23	400		A0	SFC-035DA2-12B-14B	XGT2-30C-12-14		
			HF-KN43							
	Tamagawa Seiki Co., Ltd.		TBL-III			TS4607	200	□60	A0	SFC-030DA2-12B-14B
		TS4609								
		TS4614			750	□80	SFC-040DA2-12B-19B		XGT2-39C-12-19	
		TSM3202								
		TBL-IV			TSM3204	400	□60		A0	SFC-030DA2-12B-14B
			TSM3303							
			TSM3304	750	□80	SFC-040DA2-12B-19B		XGT2-39C-12-19		
			TSM3304							
			Panasonic Corporation	MINAS	A5	MSMD08		750	□80	A5
		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						
				SV-M075	750		□80	SFC-040DA2-12B-19B	XGT2-39C-12-19	
		SV2-M020								
SV2		SV2-M040	400	□60	A0	SFC-035DA2-12B-14B	XGT2-30C-12-14			
		SV2-M075								
	SV2-M075	750	□80		SFC-040DA2-12B-19B	XGT2-39C-12-19				
R2□A06020	200			□60			A0	SFC-030DA2-12B-14B	XGT2-27C-12-14	
R2AA06040										
R2AA08075	750	□80	SFC-040DA2-12B-16B		XGT2-39C-12-16					
R2AA08075										
Sanyo Denki Co., Ltd.	SANMOTION R		R2AA06020	200	□60	A0	SFC-030DA2-12B-14B	XGT2-27C-12-14		
			R2AA06040							
			R2AA08075	750		□80	SFC-040DA2-12B-16B	XGT2-39C-12-16		
R2AA08075										
OMRON Corporation	OMNUC G5	1S	R88M-K75030	750	□80	A5	SFC-040DA2-12B-19B	XGT2-39C-12-19		
			R88M-1M75030							

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

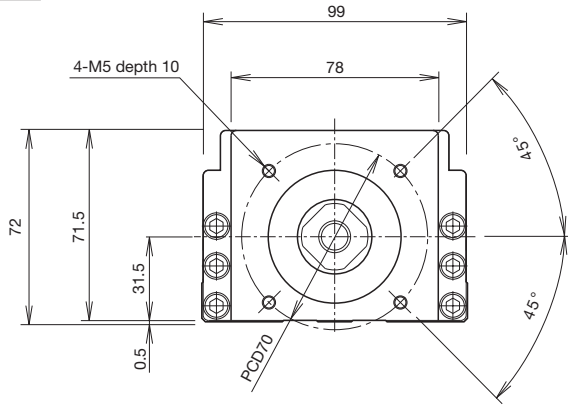
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 83), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

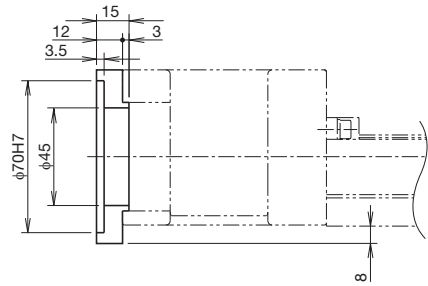
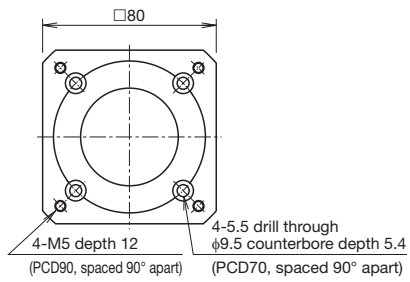
SKR55
A0



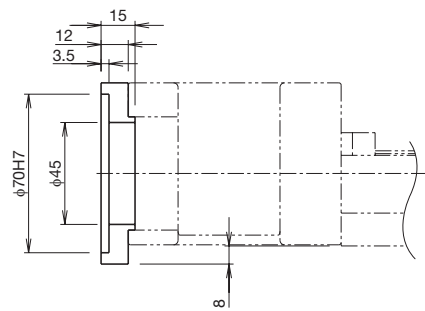
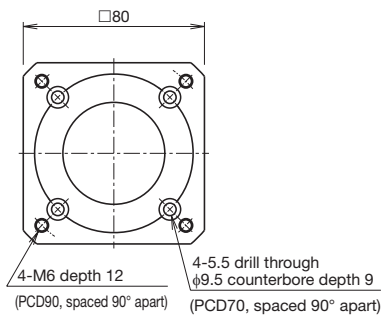
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Intermediate flange

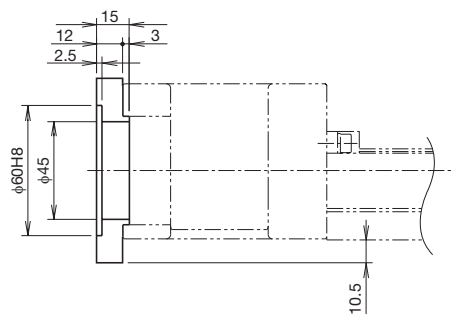
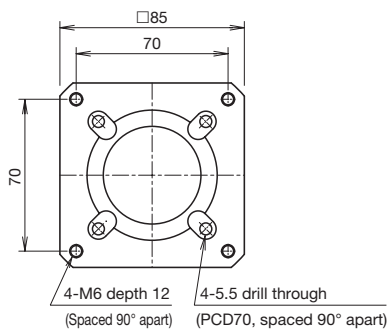
SKR55
A5



SKR55
AZ



SKR55
A6



Options

Intermediate Flange (wrap)

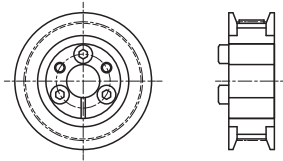
Intermediate flanges are available to mount various kinds of motors.

When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (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				
			SGMAV-06					
		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				
			SGM7A-06					
	SGM7J-08	750	□80	WZ-19M				
	SGM7A-08							
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-MR23	200	□60	WV-14M	
				HG-KR23				
				HG-MR43	400			
				HG-KR43				
		HG-MR73	750	□80	WZ-19M			
		HG-KR73						
		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-iv		TSM3202	200	□60	WV-14M			
		TSM3204	400					
		TSM3303	600					
		TSM3304	750				□80	WZ-19M
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.

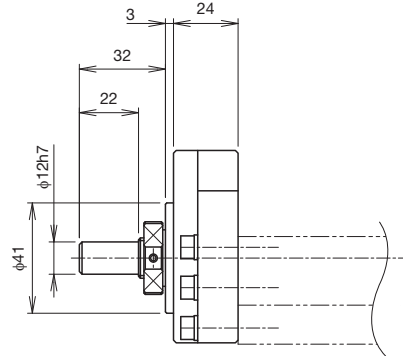
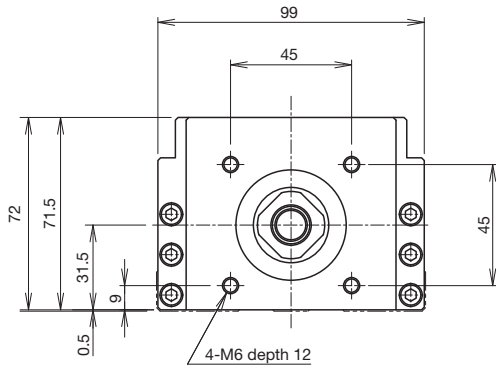
Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 83), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Wrap housing A

SKR55
20

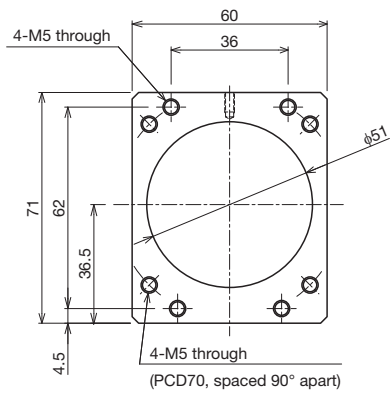
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange



Wrap specification (intermediate flange)

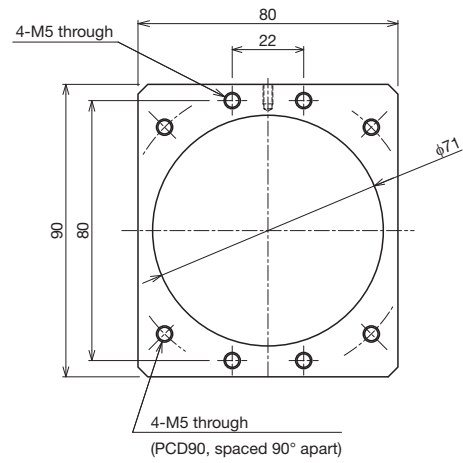
SKR55
WV

Thickness: 6 mm



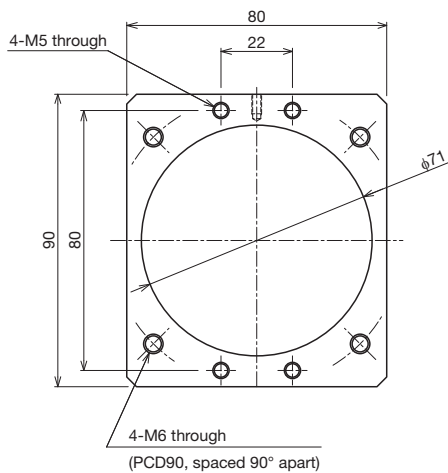
SKR55
W5

Thickness: 6 mm



SKR55
WZ

Thickness: 6 mm



SKR65 A/B

Direct Motor Coupling

Motor Wrap

Main Unit Width 130 mm

Main Unit Height 65 mm

Stroke Max. 1490 mm

Model Configuration

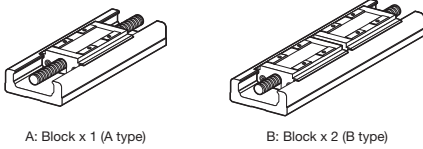
Model (1)	Ball screw lead (2)	Block type (3)	Stroke (4)	Accuracy grade (5)	With/without motor (6)	Cover (7)	Sensors (8)	Housing A/ Intermediate flange (9)
SKR65	25	A	0790	P	0	1	2	AZ
SKR65	20: 20 mm	A: x 1	0640: 640 mm	No symbol: Normal grade	For direct coupling	0: Without cover	0	For direct coupling
	25: 25 mm	B: x 2	to	H: High accuracy grade	0: Direct coupling (without motor)	1: With cover	1	A0
	30: 30 mm		1490: 1490 mm	P: Precision grade	1: Direct coupling (Specified motor prepared and mounted by THK)	2: With bellows	2	AV
	50: 50 mm				For wrap		6	AZ
					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
							Sensor details	W5 - 19M
							→ p. 103	For direct coupling → p. 105 For wrap → p. 107

When selecting 2: With bellows for (7) Cover, specify the stroke with bellows. → p. 109 to p. 110

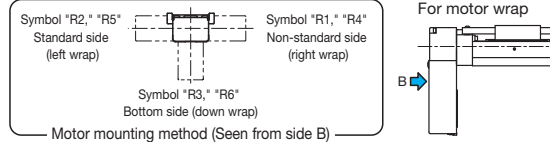
When selecting "0":
A coupling is not provided. Indicate when placing an order if a coupling is required.

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.

(3) Block type



(6) Motor mounting method



Selection Materials

Basic Specifications

LM Guide	Basic dynamic load rating C (N)		74400			
	Basic static load rating C ₀ (N)		81600			
	Radial clearance (mm)	Normal grade/High accuracy grade (H)	-0.008 to 0			
		Precision grade (P)	-0.022 to -0.008			
Geometrical moment of inertia	i _x ¹ (mm ⁴)	4.51 x 10 ⁵				
	i _y ² (mm ⁴)	5.73 x 10 ⁵				
	Weight (kg/m)	22.1				
Ball screw	Ball screw lead (mm)		20	25	30	50
	Basic dynamic load rating Ca (N)	Normal grade/High accuracy grade (H)	12100	12000	8200	7600
		Precision grade (P)				
	Basic static load rating C _{0a} (N)	Normal grade/High accuracy grade (H)	21600	22000	14500	12600
		Precision grade (P)				
	Screw shaft diameter (mm)		φ25			
	Thread minor diameter (mm)		φ22.1			
Ball center-to-center diameter (mm)		φ25.75				
Permissible rotational speed ³ (min ⁻¹)	Normal grade/High accuracy grade (H)	5000		3600		
	Precision grade (P)					
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	20.6				
	Wrap	6.4				
Static permissible moment ^{4,5} (N·m)		M _A : 1366 (7702), M _B : 1366 (7702)				
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 116 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: 1190 mm (A type), 1040 mm (B type). Speed: 1000 mm/s (for 20 mm lead), 1250 mm/s (for 25 mm lead), 1500 mm/s (for 30 mm lead), 2500 mm/s (for 50 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) Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating Ca). Consult with THK.

Note 2) LM Guide load rating is the load rating per block.

Precision

Accuracy grade	Item	Stroke ⁷			
		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 ⁷			
		790	990	1190	1490
High accuracy grade (H)	Positioning repeatability (mm)	±0.008			
	Positioning accuracy (mm)	0.18	0.20		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 ⁷		
		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	

⁷ Stroke with 1 block (A type).

Note 3) Precision evaluation in accordance with THK standards.

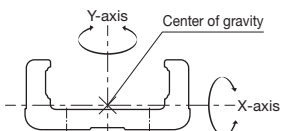
Note 4) Measured using a motor for inspection. For motor wrap specifications, measurements are not made in the completed motor wrap state.

Note 5) The starting torque represents the value when containing THK AFB-LF Grease.

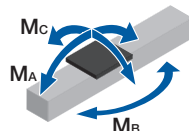
Note 6) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

Note 7) Contact THK for accuracy higher than the standard stroke.

Geometrical moment of inertia



Static permissible moment



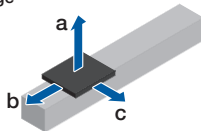
Motor Selection Specifications

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·m ²)
790 to 1490	980 to 1680	A type 3.0 B type 6.0	A type 3.7 B type 7.4	A type 6.7 B type 13.4	24.1	20, 25, 30, 50	1059 to 1759	φ15h7	2.065

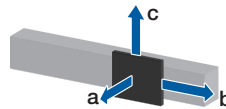
¹ Stroke with 1 block (A type).
² Value with 1 block (A type). This value is the sum of the rolling resistance value and seal resistance value.
 Note) Refer to page 105 for applicable couplings.

Permissible Overhang Length³

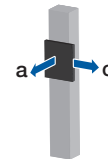
Horizontal Usage



Wall-Mounted Usage



Vertical Usage



Hypothetical motor capacity 750 W	Ball screw lead (mm)	Load mass (kg)	a	b	c		
			(mm)	(mm)	(mm)		
Direct coupling	A type	20	16	900	280	540	
			32.5	410	140	260	
			65.5	170	60	130	
		25	15	960	300	580	
			30	450	150	290	
			60	200	70	140	
		30	13	1120	350	670	
			26.5	520	170	320	
			53	230	80	160	
		50	4.5	1300	1010	1300	
			9	1300	500	970	
			18	790	250	480	
	B type		20	14.5	1300	1300	1200
				29.5	1300	890	590
				59	1300	440	290
	25	13	1300	1300	1300		
		26.5	1300	990	660		
		53.5	1300	490	320		
	30	10	1300	1300	1300		
		20.5	1300	1290	850		
		41.5	1300	630	420		
	50	6	1300	1300	1300		
		12.5	1300	1300	1300		
		25	1300	1050	700		

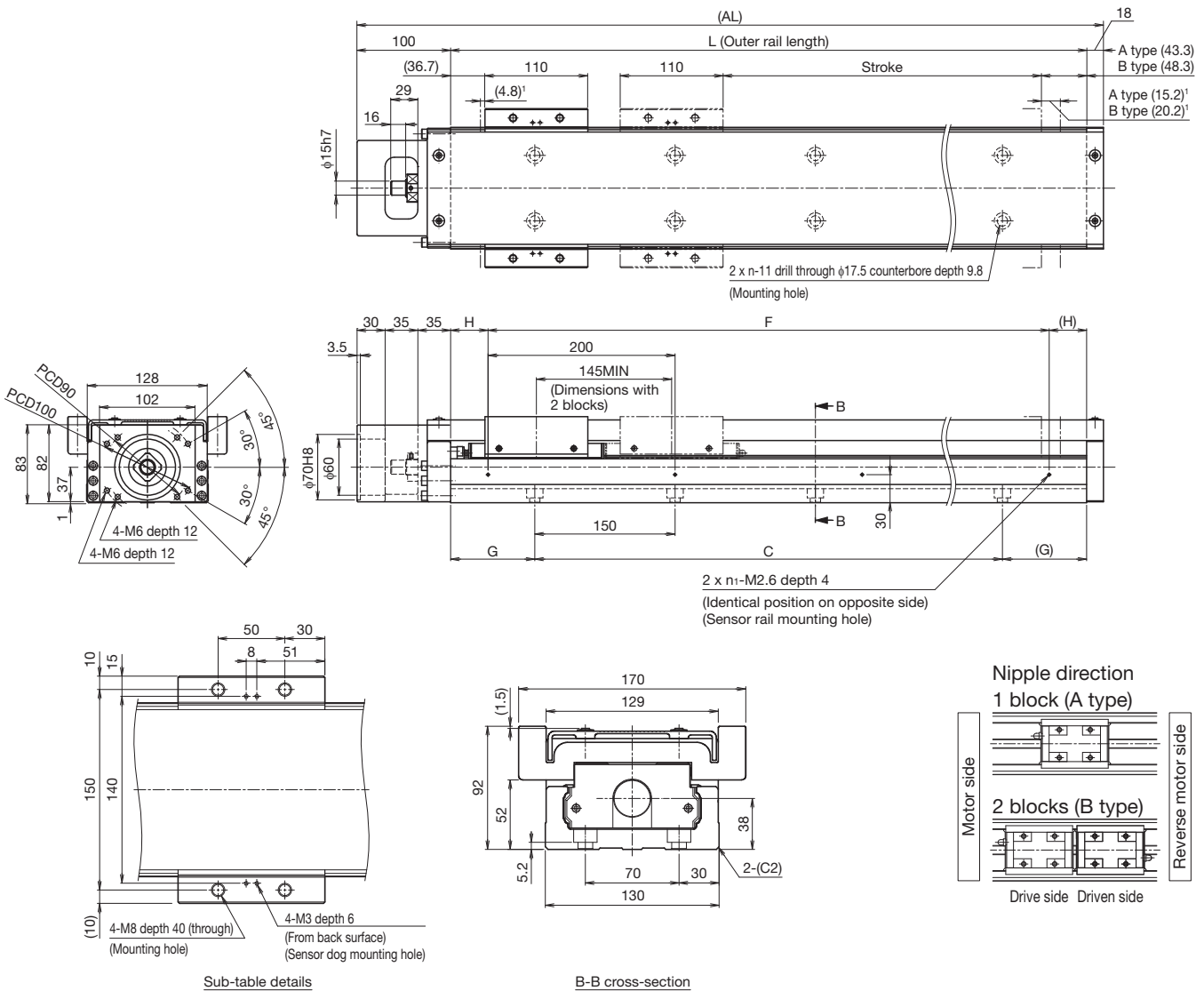
Hypothetical motor capacity 750 W	Ball screw lead (mm)	Load mass (kg)	a	b	c		
			(mm)	(mm)	(mm)		
Direct coupling	A type	20	16	480	510	1300	
			32.5	200	250	840	
			65.5	70	120	410	
		25	15	520	540	1300	
			30	230	270	910	
			60	80	130	450	
		30	13	610	630	1300	
			26.5	260	300	1030	
			53	100	150	510	
		50	4.5	1300	1300	1300	
			9	910	910	1300	
			18	420	450	1300	
	B type		20	14.5	1140	1300	1300
				29.5	530	760	1300
				59	230	380	970
	25	13	1280	1300	1300		
		26.5	590	850	1300		
		53.5	260	420	1300		
	30	10	1300	1300	1300		
		20.5	790	1100	1300		
		41.5	360	540	1300		
	50	6	1300	1300	1300		
		12.5	1300	1300	1300		
		25	630	900	1300		

Hypothetical motor capacity 750 W	Ball screw lead (mm)	Load mass (kg)	a	c		
			(mm)	(mm)		
Direct coupling	A type	20	7	440	900	
			14.5	180	430	
			29	60	210	
		25	6	530	1050	
			12	230	520	
			24	90	260	
		30	4.5	720	1300	
			9.5	310	660	
			19	130	330	
		50	1.5	1300	1300	
			3.5	950	1300	
			7	440	900	
	B type		20	5.5	1300	1300
				11.5	1300	1300
				23.5	810	740
	25	5	1300	1300		
		10	1300	1300		
		20	960	870		
	30	3.5	1300	1300		
		7	1300	1300		
		14	1300	1240		
	50	1.5	1300	1300		
		3	1300	1300		
		6	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: 1000 mm/s (for 20 mm lead), 1250 mm/s (for 25 mm lead), 1500 mm/s (for 30 mm lead), 2500 mm/s (for 50 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: 20 mm	Normal grade/High accuracy grade	1470	970	690	450
		Precision grade	-	-	-	-
	Ball screw lead: 25 mm	Normal grade/High accuracy grade	1810	1200	850	550
		Precision grade	-	-	-	-
Ball screw lead: 30 mm	Normal grade/High accuracy grade	2210	1460	1030	670	
	Precision grade	-	-	-	-	
Ball screw lead: 50 mm	Normal grade/High accuracy grade	3000	2350	1680	1100	
	Precision grade	-	-	-	-	
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)		33.5	38.9	44.3	52.4	

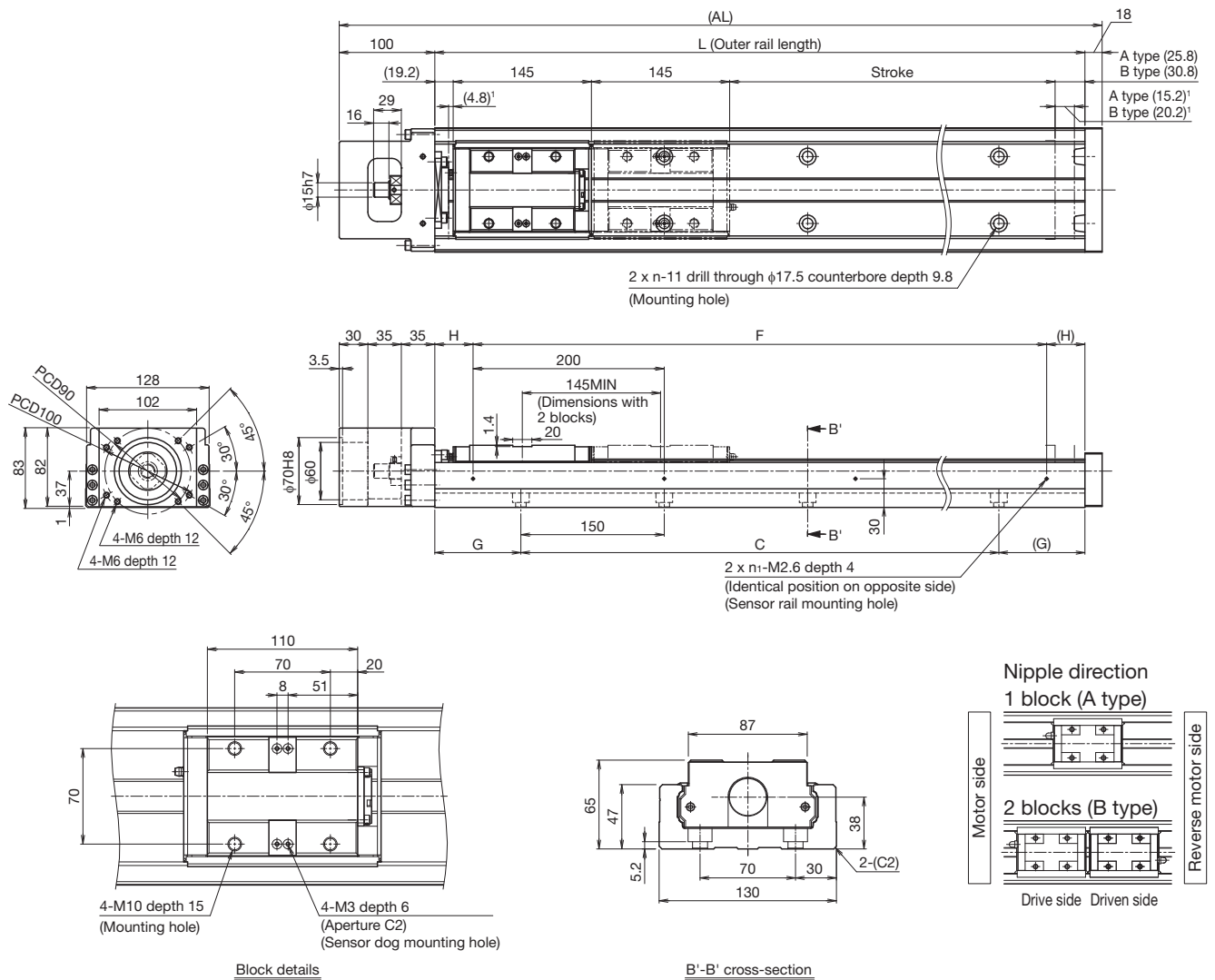
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 6.7 kg added.

Without 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: 20 mm	Normal grade/High accuracy grade	1470	970	690	450
		Precision grade	-	-	-	-
	Ball screw lead: 25 mm	Normal grade/High accuracy grade	1810	1200	850	550
		Precision grade	-	-	-	-
Ball screw lead: 30 mm	Normal grade/High accuracy grade	2210	1460	1030	670	
	Precision grade	-	-	-	-	
Ball screw lead: 50 mm	Normal grade/High accuracy grade	3000	2350	1680	1100	
	Precision grade	-	-	-	-	
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)		30.3	35.5	40.7	48.4	

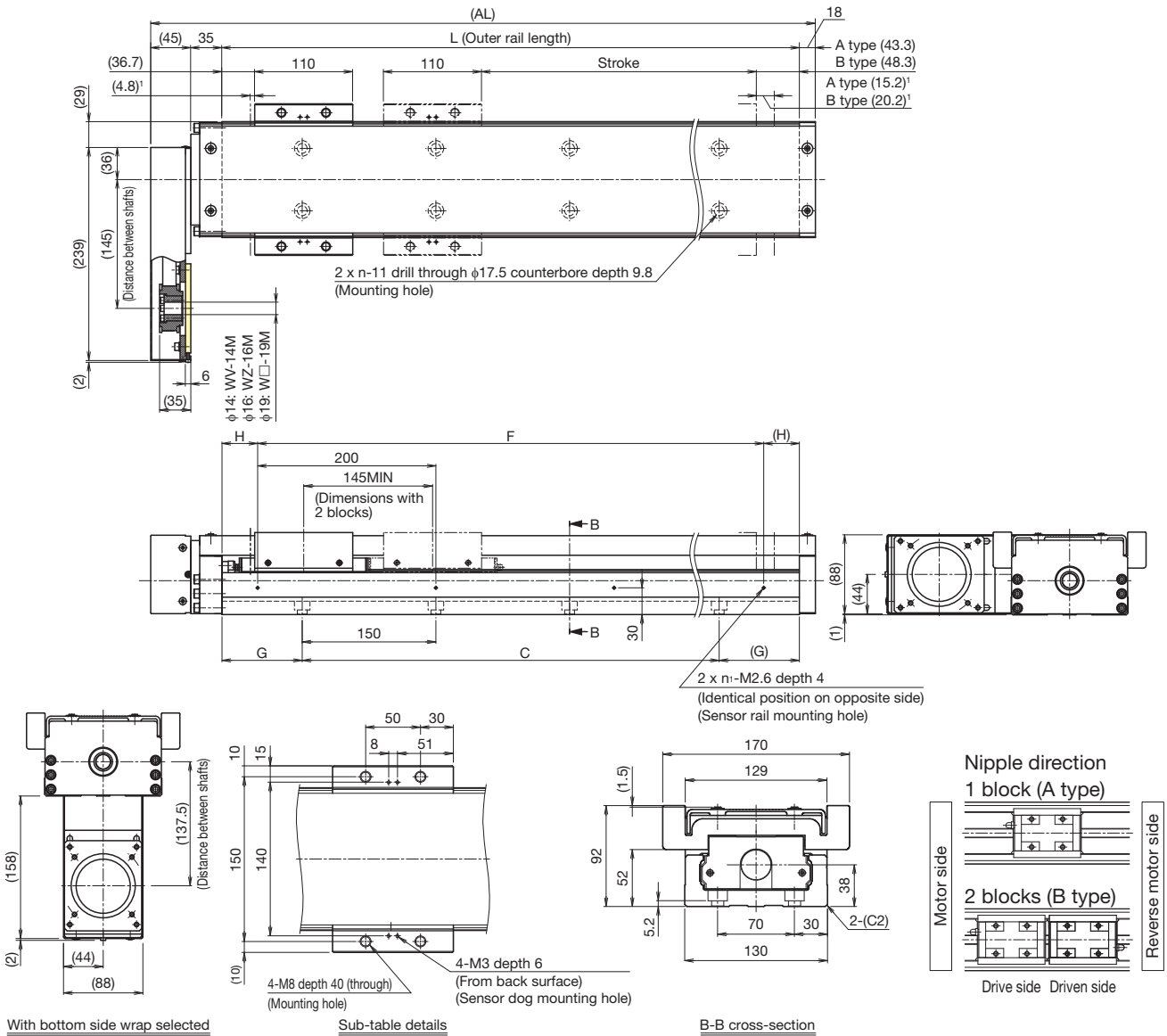
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 3 kg added.

With cover
Motor wrap

Dimensions



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

Stroke (mm)	A type	790 (810)	990 (1010)	1190 (1210)	1490 (1510)	
(Stroke between mechanical stoppers)	B type ²	640 (665)	840 (865)	1040 (1065)	1340 (1365)	
Maximum speed ³ (mm/s)	Ball screw lead: 20 mm	Normal grade/High accuracy grade	1470	970	690	450
		Precision grade	-	-	-	-
	Ball screw lead: 25 mm	Normal grade/High accuracy grade	1810	1200	850	550
		Precision grade	-	-	-	-
	Ball screw lead: 30 mm	Normal grade/High accuracy grade	2210	1460	1030	670
		Precision grade	-	-	-	-
Ball screw lead: 50 mm	Normal grade/High accuracy grade	3000	2350	1680	1100	
	Precision grade	-	-	-	-	
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)	35.1	40.5	45.9	54	

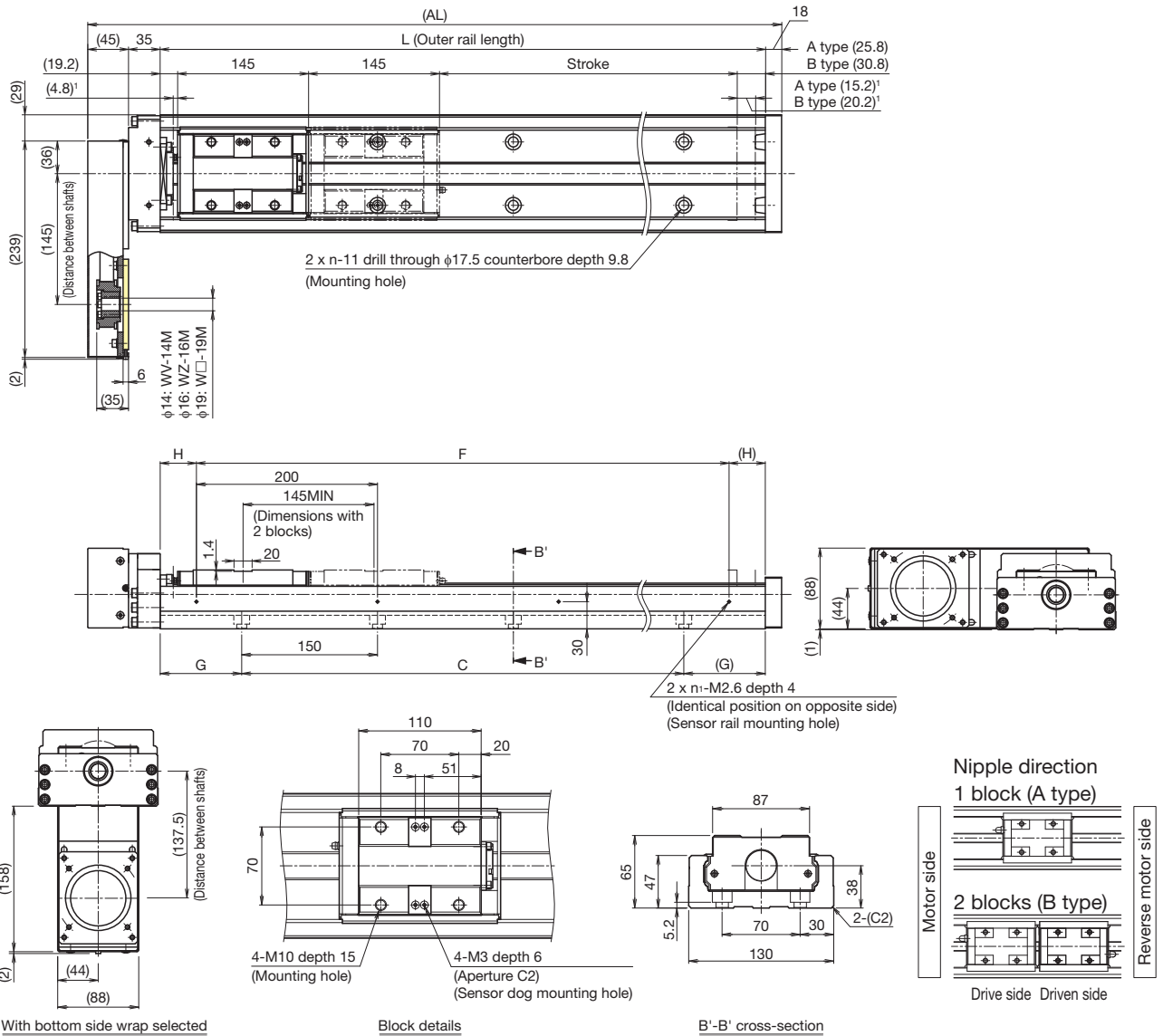
² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 6.7 kg added.

Without cover
Motor wrap

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: 20 mm	Normal grade/High accuracy grade	1470	970	690	450
		Precision grade	-	-	-	-
	Ball screw lead: 25 mm	Normal grade/High accuracy grade	1810	1200	850	550
		Precision grade	-	-	-	-
Maximum speed ³ (mm/s)	Ball screw lead: 30 mm	Normal grade/High accuracy grade	2210	1460	1030	670
		Precision grade	-	-	-	-
	Ball screw lead: 50 mm	Normal grade/High accuracy grade	3000	2350	1680	1100
		Precision grade	-	-	-	-
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)	31.9	37.1	42.3	50	

² The value with 2 blocks (B type) attached.

³ Maximum speed is limited by the actuator's permissible speed.

⁴ The weight with 2 blocks (B type) has 3 kg added.

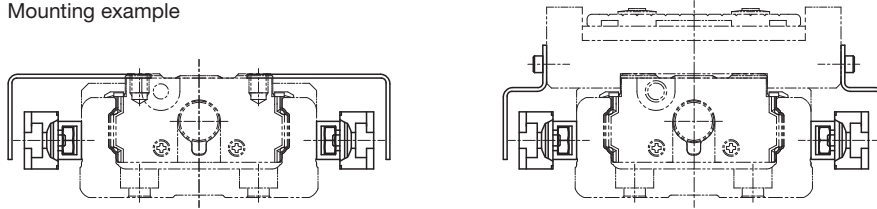
Options

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

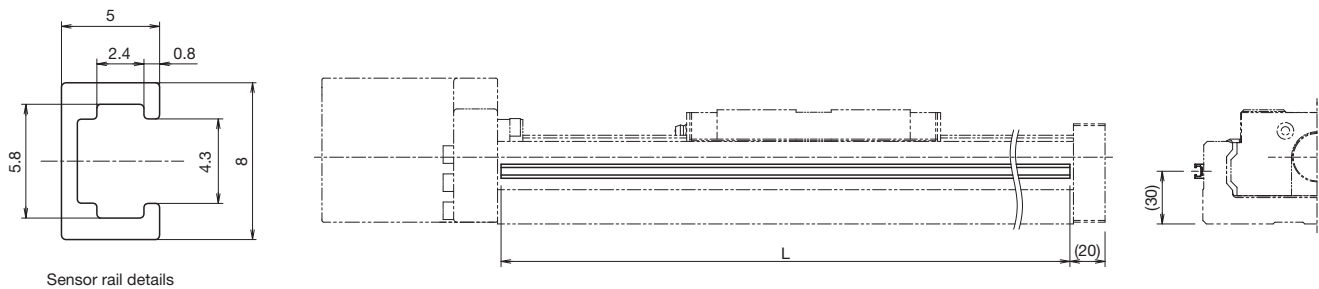
³ NC contact: Normally closed contact point

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

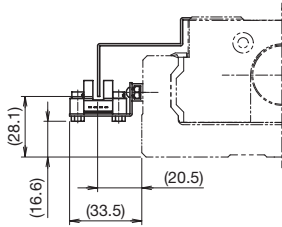
Stroke ⁴ (mm)	Outer rail length (mm)	L (mm)
790	980	976
990	1180	1176
1190	1380	1376
1490	1680	1676

⁴ Stroke with 1 block (A type).

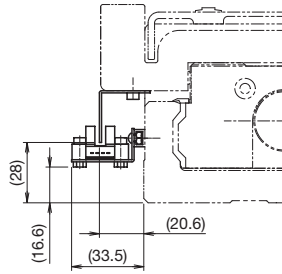
Photo Sensor Mounting Dimensions

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

Without cover



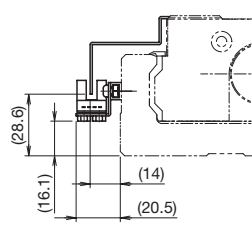
With cover



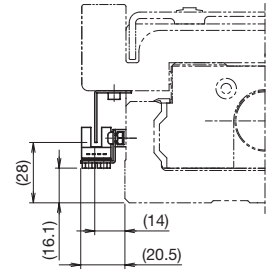
Symbol	Model	Manufacturer
2	EE-SX671	OMRON Corporation

Sensor dog width: 20 mm

Without cover



With cover

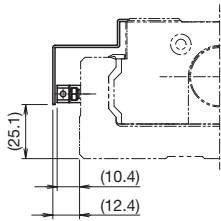


Symbol	Model	Manufacturer
6	EE-SX674	OMRON Corporation

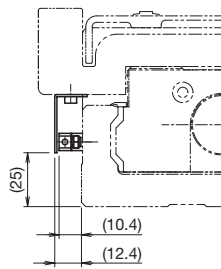
Sensor dog width: 20 mm

Proximity Sensor Mounting Dimensions

Without cover



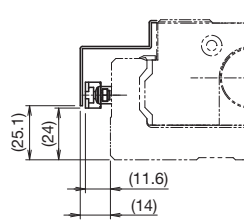
With cover



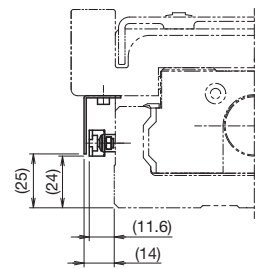
Symbol	Model	Manufacturer
7, B, E	APM-D3A1-001	Azbil Corporation
	APM-D3B1-003	

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 (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	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15	
			SGMAV-02						
			SGMJV-04	400					
			SGMAV-04						
			SGMJV-06	600					
			SGMJV-08						
		SGMAV-08	750						
		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					
			SGM7J-08						
	SGM7A-08	750							
	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				
			HG-MR73						
			JN	HF-KN23	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15
				HF-KN43					
				HF-KN23	400				
				HF-KN43					
	HF-KN43	400							
	Tamagawa Seiki Co., Ltd.	TBL-III	TS4607	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15	
			TS4609						
			TS4614	750					
			TS4614						
			TSM3202	200					□60
TSM3204									
TSM3303		600							
TSM3304									
TSM3304		750							
Panasonic Corporation		MINAS	A5	MSMD08	750	□80	A5	SFC-040DA2-15B-19B	XGT2-39C-15-19
	MSME08								
	A6		MSMF08	750					
			MHMF08						
Keyence Corporation	SV	SV-M020	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15		
		SV-M040							
		SV-M075	750						
	SV2-M020	200		□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15		
	SV2-M040								
	SV2-M075	750							
SV2-M075	750								
Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	200	□60	AV	SFC-035DA2-14B-15B	XGT2-30C-14-15		
		R2AA06040	400						
		R2AA08075	750						
OMRON Corporation	OMNUC G5	R88M-K75030	750	□80	A5	SFC-040DA2-15B-19B	XGT2-39C-15-19		
		1S	R88M-1M75030					750	

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

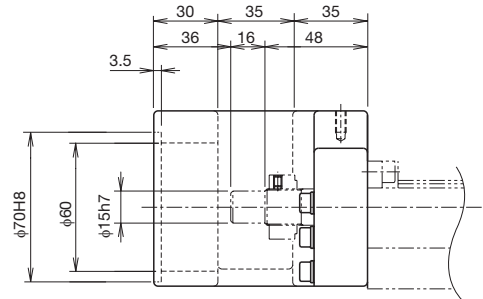
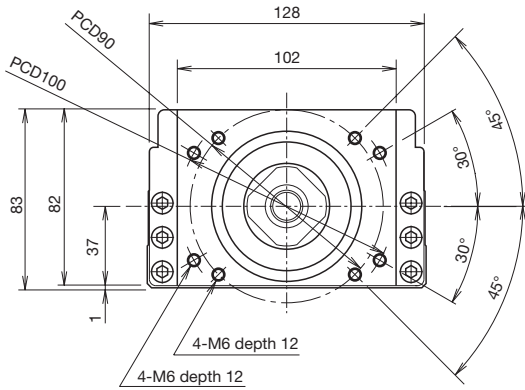
Note 1) Motor model number in the table shows the main part of the model number only. For details about models, please refer to the catalogs from each motor manufacturer.

Note 2) If the maximum torque for motors exceeds the permissible input torque (see page 97), establish safety measures to limit torque.

Note 3) When installing a motor other than the motor model numbers listed above, contact THK.

Housing A

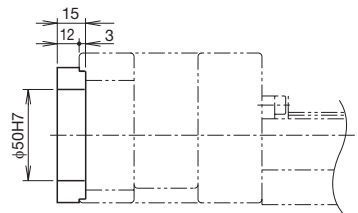
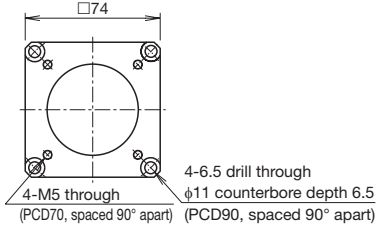
SKR65
A0



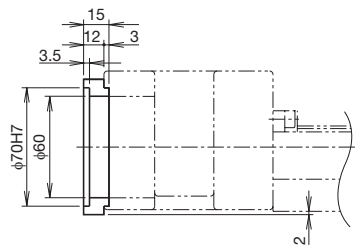
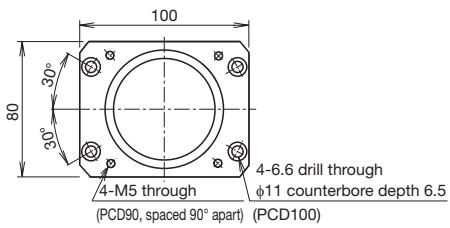
SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Intermediate flange

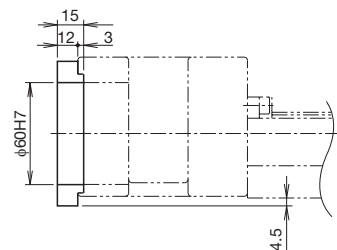
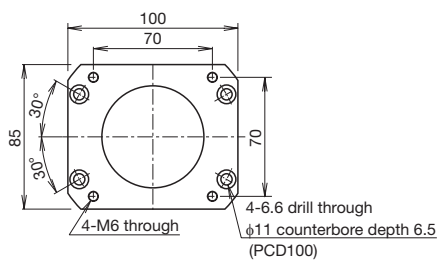
SKR65
AV



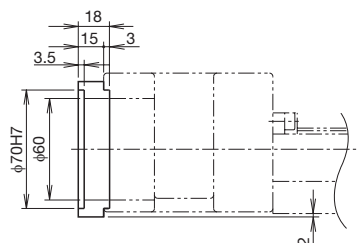
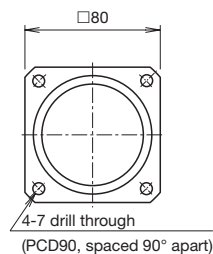
SKR65
A5



SKR65
A6



SKR65
AZ



Options

Intermediate Flange (wrap)

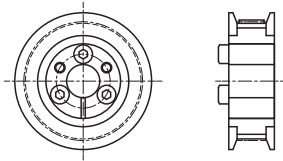
Intermediate flanges are available to mount various kinds of motors.

When selecting "R1," "R2," "R3," "R4," "R5," or "R6" for Model Configuration (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

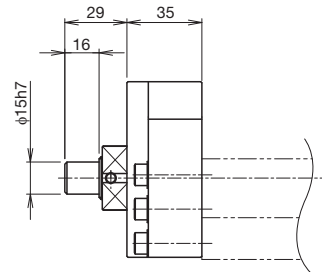
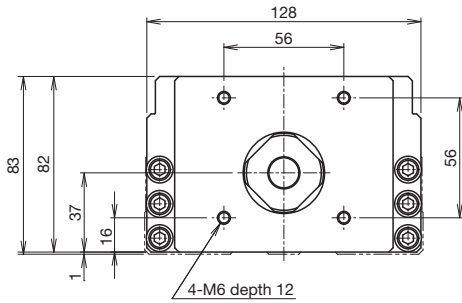
Compatibility Table: Motors used, wrap symbols

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						
			SGMAV-06							
		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						
			SGM7A-06							
	SGM7J-08	750	□80	WZ-19M						
	SGM7A-08									
	Mitsubishi Electric Corporation	MELSERVO	J4	HG-MR23	200	□60	WV-14M			
				HG-KR23						
				HG-MR43	400					
				HG-KR43						
				HG-MR73	750			□80	WZ-19M	
			HG-KR73							
			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					
	TS4614	750			□80	WZ-19M				
	TBL-iv	TSM3202		200	□60	WV-14M				
		TSM3204		400						
TSM3303		600								
TSM3304		750		□80			WZ-19M			
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 97), 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

SKR65
30

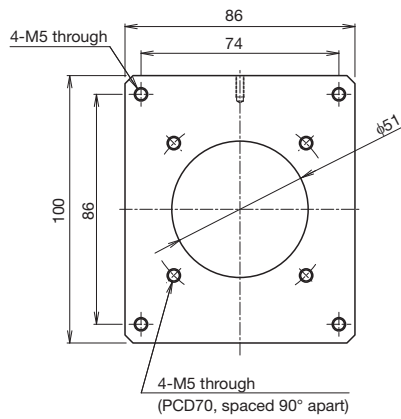


SKR**	Actuator model
●◇	●: Housing A ◇: Intermediate flange

Wrap specification (intermediate flange)

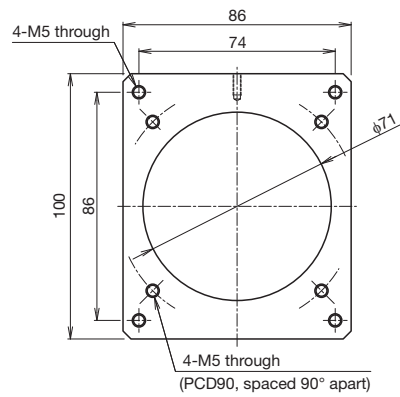
SKR65
WV

Thickness: 6 mm



SKR65
W5

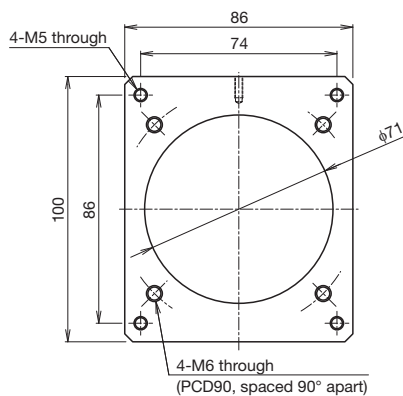
Thickness: 6 mm



SKR**	Actuator model
W□	□: Intermediate flange

SKR65
WZ

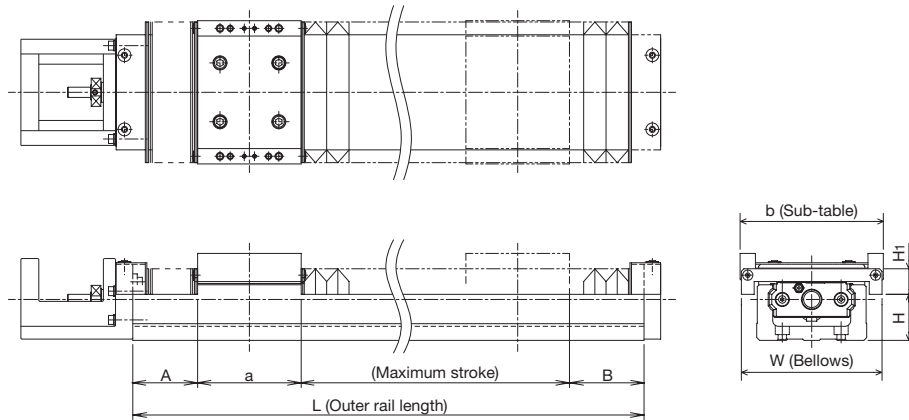
Thickness: 6 mm



Bellows

In addition to a cover, bellows are available for dustproofing purposes.

SKR-A (block x 1)

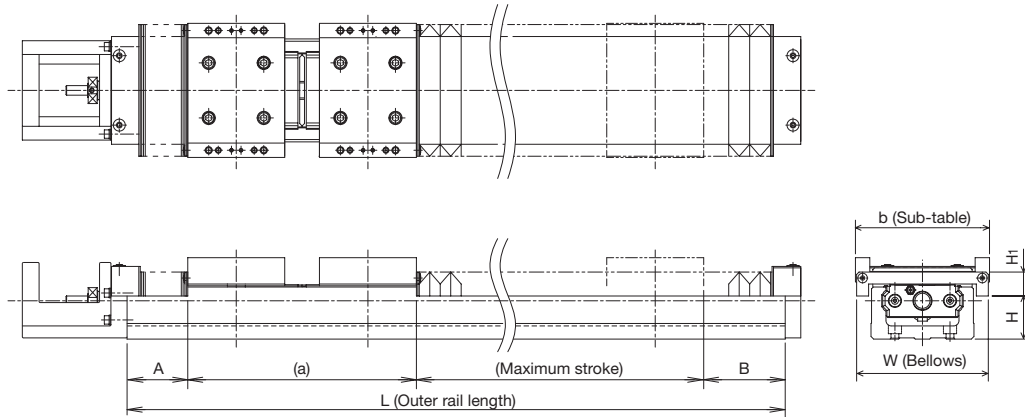


Unit: mm

Model	Stroke	Maximum stroke	Outer rail length L	A	B	a	b	W	H	H _i
SKR20	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					
SKR26	50	60.7	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					
SKR33	30	42.8	150	25.6	27.6	54	86	84	24.5	20
	60	72.8	200	35.6	37.6					
	140	152.8	300	45.6	47.6					
	210	222.8	400	60.6	62.6					
	290	302.8	500	70.6	72.6					
	360	372.8	600	85.6	87.6					
SKR46	140	155.8	340	52.1	51.1	81	112	110	36	20
	210	225.8	440	67.1	66.1					
	290	305.8	540	77.1	76.1					
	360	375.8	640	92.1	91.1					
	440	455.8	740	102.1	101.1					
	510	525.8	840	117.1	116.1					
	590	605.8	940	127.1	126.1					
SKR55 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					
SKR65 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 SKR55/65 bellows are only supported in a horizontal orientation. Contact THK if using in an orientation other than horizontal (vertical or wall-mounted).

SKR-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																																																																																																																																												
SKR20	25	34.8	150	18.8	17.2	79.2	52	60	10	20																																																																																																																																												
	60	71.8	200	25.3	23.7						SKR26	35	46.5	200	23.7	17.6	111.6	62	74	18	20	65	77.4	250	32.8	28.2	115	127.4	300	32.8	28.2	SKR33	80	96.8	300	35.6	37.6	130	86	84	24.5	20	150	166.8	400	50.6	52.6	230	246.8	500	60.6	62.6	300	316.8	600	75.6	77.6	SKR46	60	75.8	340	37.1	36.1	191	112	110	36	20	130	145.8	440	52.1	51.1	210	225.8	540	62.1	61.1	280	295.8	640	77.1	76.1	360	375.8	740	87.1	86.1	430	445.8	840	102.1	101.1	SKR55 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	SKR65 ²	930	952	1380	104.6	100.6	254.6	170	184	40	47	550	578.6	980	75.1	71.7	720	748.6	1180	90.1	86.7	900	928.6	1380	100.1	96.7		1160	1188.6	1680	120.1
SKR26	35	46.5	200	23.7	17.6	111.6	62	74	18	20																																																																																																																																												
	65	77.4	250	32.8	28.2																																																																																																																																																	
	115	127.4	300	32.8	28.2																																																																																																																																																	
SKR33	80	96.8	300	35.6	37.6	130	86	84	24.5	20																																																																																																																																												
	150	166.8	400	50.6	52.6																																																																																																																																																	
	230	246.8	500	60.6	62.6																																																																																																																																																	
	300	316.8	600	75.6	77.6																																																																																																																																																	
SKR46	60	75.8	340	37.1	36.1	191	112	110	36	20																																																																																																																																												
	130	145.8	440	52.1	51.1																																																																																																																																																	
	210	225.8	540	62.1	61.1																																																																																																																																																	
	280	295.8	640	77.1	76.1																																																																																																																																																	
	360	375.8	740	87.1	86.1																																																																																																																																																	
	430	445.8	840	102.1	101.1																																																																																																																																																	
SKR55 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																																																																																																																																																	
SKR65 ²	930	952	1380	104.6	100.6	254.6	170	184	40	47																																																																																																																																												
	550	578.6	980	75.1	71.7																																																																																																																																																	
	720	748.6	1180	90.1	86.7																																																																																																																																																	
	900	928.6	1380	100.1	96.7																																																																																																																																																	
	1160	1188.6	1680	120.1	116.7																																																																																																																																																	

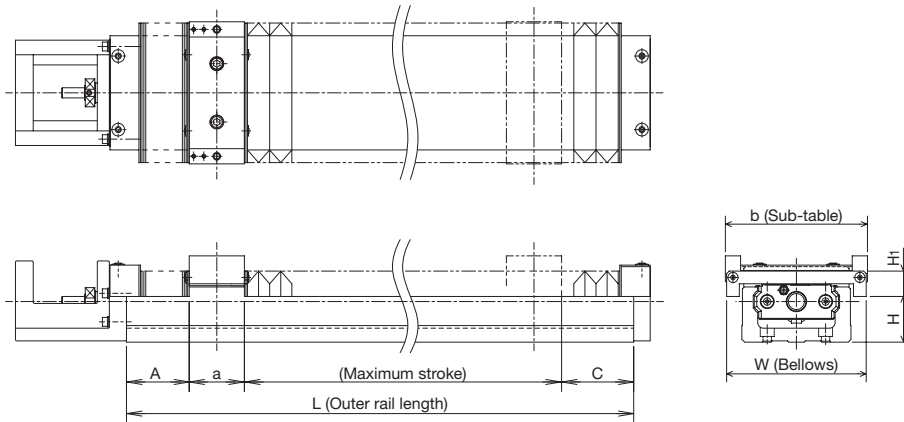
¹ The value with 2 blocks (B type) attached.

² SKR55/65 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.

Bellows

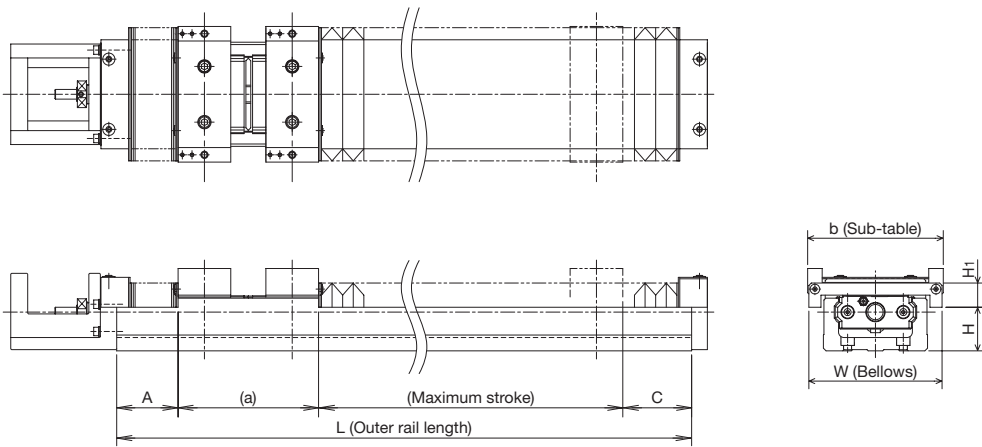
SKR-C (short block x 1)



Unit: mm

Model	Stroke	Maximum stroke	Outer rail length L	A	C	a	b	W	H	H ₁
SKR33	45	58.3	150	30.6	32.6	28.5	80	80	21.5	17.5
	85	98.3	200	35.6	37.6					
	155	168.3	300	50.6	52.6					
	235	248.3	400	60.6	62.6					
	305	318.3	500	75.6	77.6					
	385	398.3	600	85.6	87.6					
SKR46	160	178.8	340	57.1	56.1	48	112	110	36	20
	230	248.8	440	72.1	71.1					
	310	328.8	540	82.1	81.1					
	380	398.8	640	97.1	96.1					
	460	478.8	740	107.1	106.1					
	530	548.8	840	122.1	121.1					
	610	628.8	940	132.1	131.1					

SKR-D (short block x 2)



Unit: mm

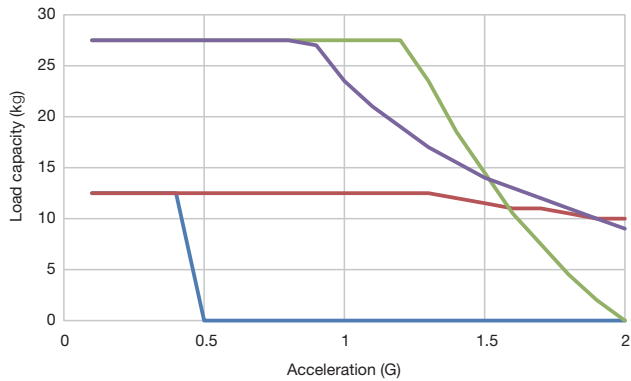
Model	Stroke ¹	Maximum stroke ¹	Outer rail length L	A	C	a ¹	b	W	H	H ₁
SKR33	45	57.8	200	30.6	32.6	79	86	84	24.5	20
	125	137.8	300	40.6	42.6					
	195	207.8	400	55.6	57.6					
	275	287.8	500	65.6	67.6					
	345	357.8	600	80.6	82.6					
SKR46	110	121.8	340	47.1	46.1	125	112	110	36	20
	180	191.8	440	62.1	61.1					
	260	271.8	540	72.1	71.1					
	330	341.8	640	87.1	86.1					
	410	421.8	740	97.1	96.1					
	480	491.8	840	112.1	111.1					
	560	571.8	940	122.1	121.1					

¹ The value with 2 short blocks (D type) attached.

Note) Bellows cannot be attached between sub-tables.

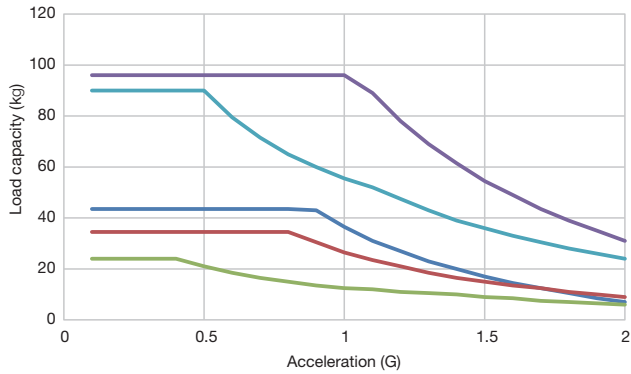
Maximum Load Capacity Guidelines by Acceleration

Horizontal



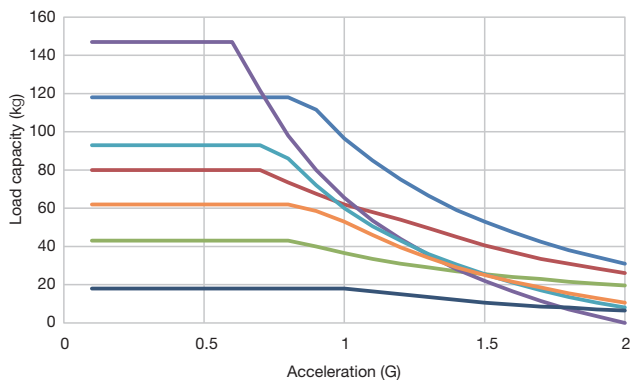
— SKR2001A — SKR2006A — SKR2602A — SKR2606A
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR2001A	12.5	12.5	-	-	-	-
SKR2006A	12.5	12.5	12.5	12.5	11.5	10
SKR2602A	27.5	27.5	27.5	27.5	14.5	-
SKR2606A	27.5	27.5	27.5	23.5	14	9



— SKR3306A — SKR3310A — SKR3320A — SKR4610A — SKR4620A
Unit: kg

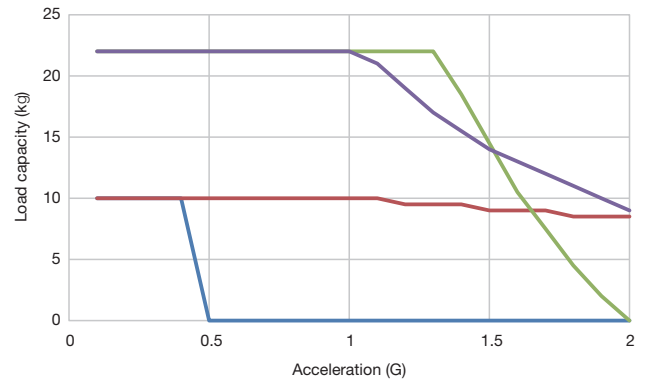
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR3306A	43.5	43.5	43.5	36.5	17	7
SKR3310A	34.5	34.5	34.5	26.5	15	9
SKR3320A	24	24	21	12.5	9	6
SKR4610A	96	96	96	96	54.5	31
SKR4620A	90	90	90	55.5	36	24



— SKR5520A — SKR5530A — SKR5540A — SKR5550A — SKR6520A — SKR6525A
Unit: kg

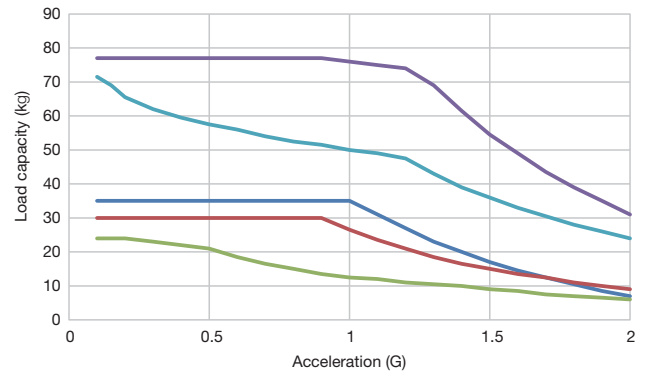
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR5520A	118	118	118	96.5	53	31
SKR5530A	80	80	80	62	40.5	26
SKR5540A	43	43	43	36.5	25.5	19.5
SKR5550A	147	147	147	65.5	22	-
SKR6520A	93	93	93	60	25.5	8
SKR6525A	93	93	93	60	25.5	8
SKR6530A	62	62	62	53	25	10.5
SKR6550A	18	18	18	18	10.5	6.5

Wall-Mounted



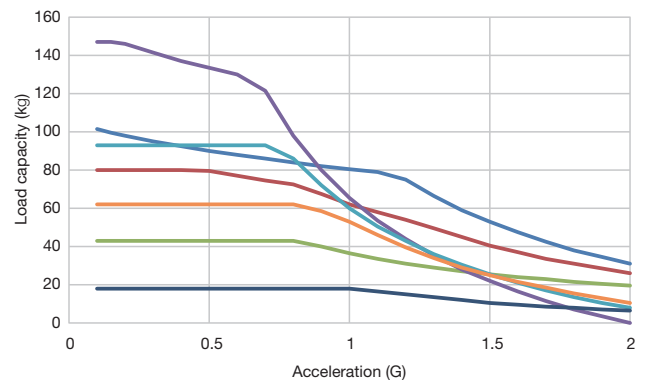
— SKR2001A — SKR2006A — SKR2602A — SKR2606A
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR2001A	10	10	-	-	-	-
SKR2006A	10	10	10	10	9	8.5
SKR2602A	22	22	22	22	14.5	-
SKR2606A	22	22	22	22	14	9



— SKR3306A — SKR3310A — SKR3320A — SKR4610A — SKR4620A
Unit: kg

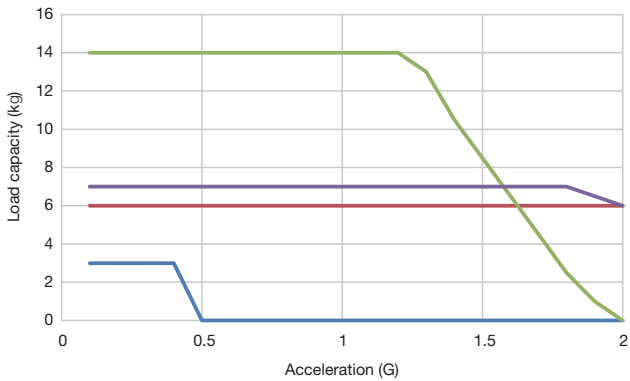
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR3306A	35	35	35	35	17	7
SKR3310A	30	30	30	26.5	15	9
SKR3320A	24	23	21	12.5	9	6
SKR4610A	77	77	77	76	54.5	31
SKR4620A	69	62	57.5	50	36	24



— SKR5520A — SKR5530A — SKR5540A — SKR5550A — SKR6520A — SKR6525A
Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR5520A	99.5	95	90	80.5	53	31
SKR5530A	80	80	79.5	62	40.5	26
SKR5540A	43	43	43	36.5	25.5	19.5
SKR5550A	147	141.5	133.5	65.5	22	-
SKR6520A	93	93	93	60	25.5	8
SKR6525A	93	93	93	60	25.5	8
SKR6530A	62	62	62	53	25	10.5
SKR6550A	18	18	18	18	10.5	6.5

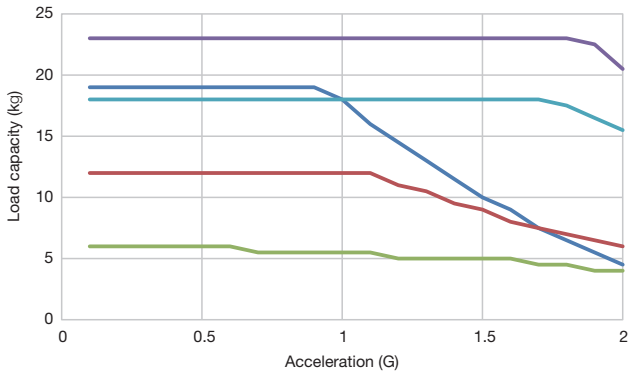
Vertical



— SKR2001A — SKR2006A — SKR2602A — SKR2606A

Unit: kg

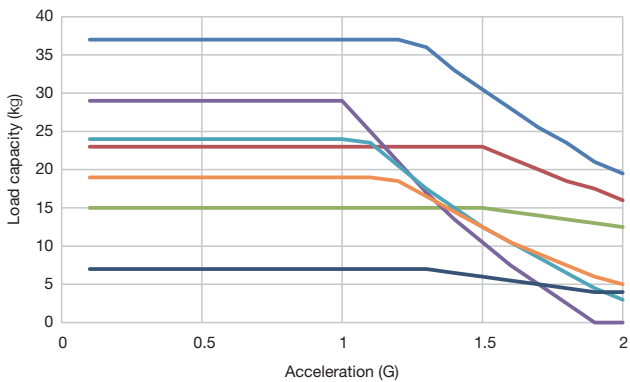
	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR2001A	3	3	-	-	-	-
SKR2006A	6	6	6	6	6	6
SKR2602A	14	14	14	14	8.5	-
SKR2606A	7	7	7	7	7	6



— SKR3306A — SKR3310A — SKR3320A — SKR4610A — SKR4620A

Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR3306A	19	19	19	18	10	4.5
SKR3310A	12	12	12	12	9	6
SKR3320A	6	6	6	5.5	5	4
SKR4610A	23	23	23	23	23	20.5
SKR4620A	18	18	18	18	18	15.5



— SKR5520A — SKR5530A — SKR5540A — SKR6520A — SKR6525A — SKR6530A — SKR6550A

Unit: kg

	0.15 (G)	0.3 (G)	0.5 (G)	1 (G)	1.5 (G)	2 (G)
SKR5520A	37	37	37	37	30.5	19.5
SKR5530A	23	23	23	23	23	16
SKR5540A	15	15	15	15	15	12.5
SKR6520A	29	29	29	29	10.5	-
SKR6525A	24	24	24	24	12.5	3
SKR6530A	19	19	19	19	12.5	5
SKR6550A	7	7	7	7	6	4

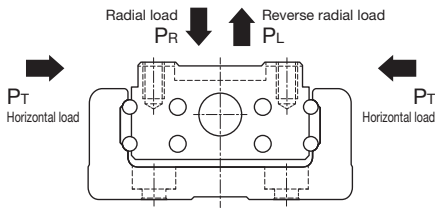
Calculation Conditions

Model	Lead (mm)	Stroke* (mm)	Hypothetical motor capacity (W)	Speed (mm/s)	Center of gravity
SKR20	1	80	50	50	Center of table upper surface
	6			300	
SKR26	2	160	50	100	
	6			300	
SKR33	6	395	100	300	
	10			500	
	20			1000	
SKR46	10	490	400	500	
	20			1000	
SKR55	20	1000	750	1000	
	30			1500	
	40			2000	
SKR65	20	1190	750	1000	
	25			1250	
	30			1500	
	50			2500	

* Stroke with 1 block (A type).

Load Rating and Static Permissible Moment for Each Direction

Load rating



SKR: 4-way loads

- **LM Guide**
SKR 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**
SKR 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)**
SKR'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 SKR.

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

P_E : Equivalent load (N)
 P_R : Radial load (N)

P_L : Reverse radial load (N)
 P_T : Horizontal load (N)

Load Rating

Model			SKR20		SKR26		SKR33 ¹			SKR46 ¹		SKR55			SKR65			
			SKR2001	SKR2006	SKR2602	SKR2606	SKR3306	SKR3310	SKR3320	SKR4610	SKR4620	SKR5520	SKR5530	SKR5540	SKR6520	SKR6525	SKR6530	SKR6550
LM Guide	Basic dynamic load rating C_d (N)	1 block (A type)	6010	13000	17000			39500		55400			74400					
		Short block x 1 (C type)	-	-	11300	-	28400	-			-							
	Basic static load rating C_0 (N)	1 block (A type)	8030	16500	20400			45900		62500			81600					
		Short block x 1 (C type)	-	-	11500	-	28700	-			-							
Ball screw	Ball screw lead (mm)		1	6	2	6	6	10	20	10	20	20	30	40	20	25	30	50
	Basic dynamic load rating C_a (N)	Normal grade/High accuracy grade (H)	660	860	2350	1950	4400	2700	2620	4350	4240	10900	7000	6800	12100	12000	8200	7600
		Precision grade (P)		1060		2390												
	Basic static load rating C_{0a} (N)	Normal grade/High accuracy grade (H)	1170	1450	4020	3510	6290	3780	3770	6990	7040	17600	11500	9900	21600	22000	14500	12600
Precision grade (P)		1600		3900														
Bearing (Fixed side)	Axial direction	Basic dynamic load rating C_a (N)	1150	2000	6250			6700		7600			13700					
		Static permissible load P_{0a} (N)	735	1230	2700			3330		3990			5830					

¹ Customized products can also be made to handle special environments or large axial loads (25% or more of the basic dynamic load rating C_a). Consult with THK.

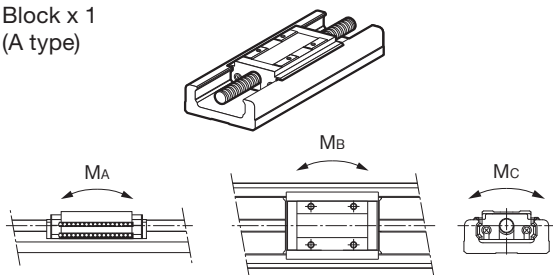
Note 1) LM Guide load rating is the load rating per block.

Note 2) SKR3320 does not have short blocks.

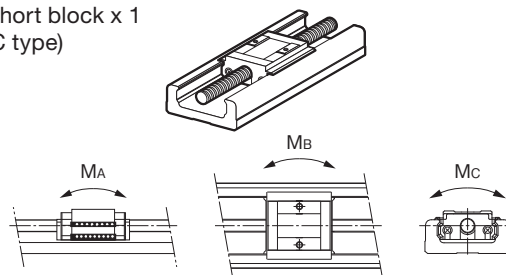
Static permissible moment (LM Guide)

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

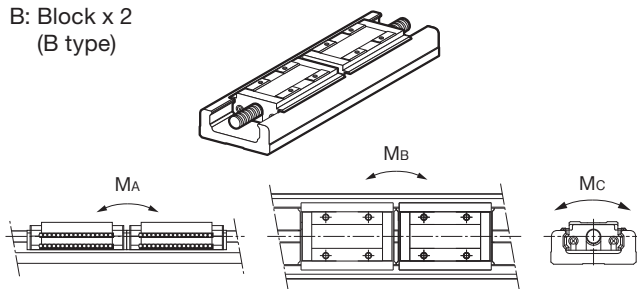
A: Block x 1
(A type)



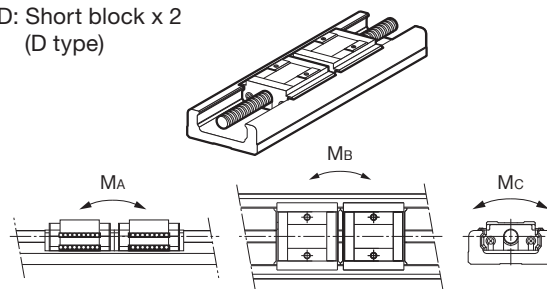
C: Short block x 1
(C type)



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
SKR20-A	38 (9)	38 (8)	98 (13)
SKR20-B	207 (39)	207 (32)	197 (27)
SKR26-A	117 (31)	117 (22)	265 (30)
SKR26-B	589 (154)	589 (78)	530 (60)
SKR33-A	173 (38)	173 (40)	424 (51)
SKR33-B	990 (172)	990 (158)	848 (103)
SKR33-C	58 (8)	58 (14)	240 (17)
SKR33-D	390 (55)	390 (56)	480 (51)
SKR46-A	579 (34)	579 (98)	1390 (34)
SKR46-B	3240 (162)	3240 (364)	2780 (68)
SKR46-C	236 (17)	236 (34)	870 (17)
SKR46-D	1460 (56)	1460 (135)	1740 (34)
SKR55-A	923 (169)	923 (212)	2276 (169)
SKR55-B	5125 (863)	5125 (831)	4552 (338)
SKR65-A	1366 (326)	1366 (448)	3868 (326)
SKR65-B	7702 (1349)	7702 (1512)	7736 (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 SKR-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

SKR 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 115.

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 118 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 118 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 SKR-B/D

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

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

$$P_E = P_m + P$$

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 SKR-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)
SKR-B	0.81
SKR-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 $V \leq 0.25$ m/s	1 to 1.2
Small	For low speeds 0.25 m/s $< V \leq 1$ m/s	1.2 to 1.5
Medium	For medium speeds 1 m/s $< V \leq 2$ 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
SKR20-A	2.34×10^{-1}	2.34×10^{-1}	8.07×10^{-2}
SKR20-B	4.38×10^{-2}	4.38×10^{-2}	8.07×10^{-2}
SKR26-A	1.59×10^{-1}	1.59×10^{-1}	6.17×10^{-2}
SKR26-B	3.18×10^{-2}	3.18×10^{-2}	6.17×10^{-2}
SKR33-A	1.42×10^{-1}	1.42×10^{-1}	5.05×10^{-2}
SKR33-B	2.47×10^{-2}	2.47×10^{-2}	5.05×10^{-2}
SKR33-C	2.39×10^{-1}	2.39×10^{-1}	5.05×10^{-2}
SKR33-D	3.54×10^{-2}	3.54×10^{-2}	5.05×10^{-2}
SKR46-A	9.51×10^{-2}	9.51×10^{-2}	3.46×10^{-2}
SKR46-B	1.70×10^{-2}	1.70×10^{-2}	3.46×10^{-2}
SKR46-C	1.46×10^{-1}	1.46×10^{-1}	3.46×10^{-2}
SKR46-D	2.36×10^{-2}	2.36×10^{-2}	3.46×10^{-2}
SKR55-A	8.12×10^{-2}	8.12×10^{-2}	2.88×10^{-2}
SKR55-B	1.46×10^{-2}	1.46×10^{-2}	2.88×10^{-2}
SKR65-A	7.16×10^{-2}	7.16×10^{-2}	2.21×10^{-2}
SKR65-B	1.27×10^{-2}	1.27×10^{-2}	2.21×10^{-2}

K_A : M_A direction moment equivalent factor.

K_B : M_B direction moment equivalent factor.

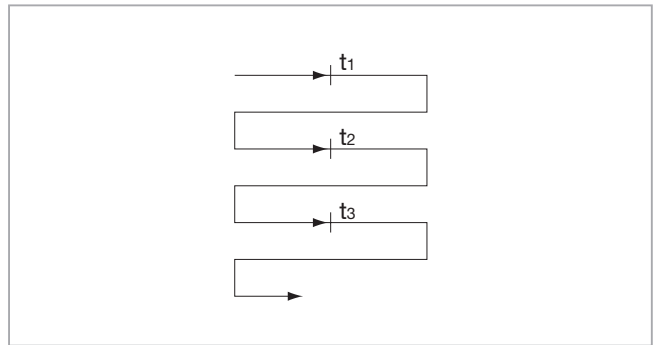
K_C : M_C direction moment equivalent factor.

Note) The value for SKR-B/D is with 2 blocks attached.

Accuracy Standards

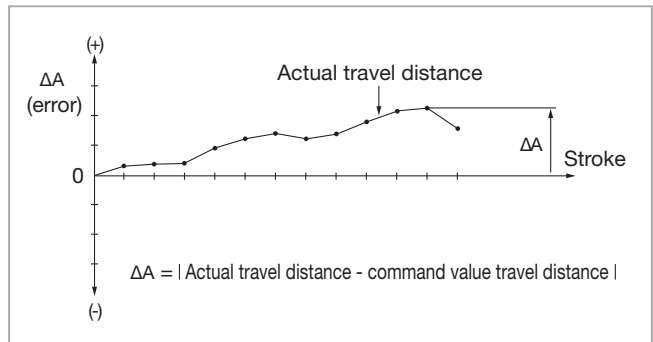
Positioning repeatability

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 \pm sign is added to half of that value for display.



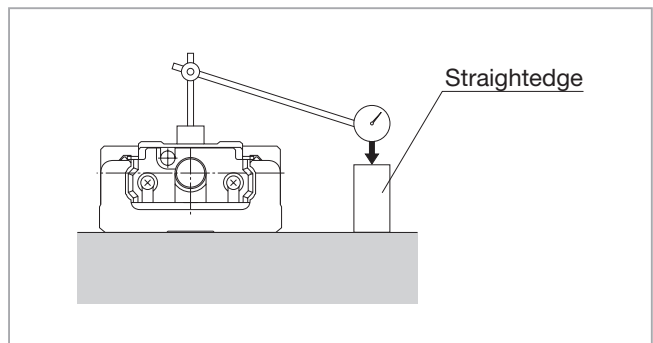
Positioning accuracy

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.



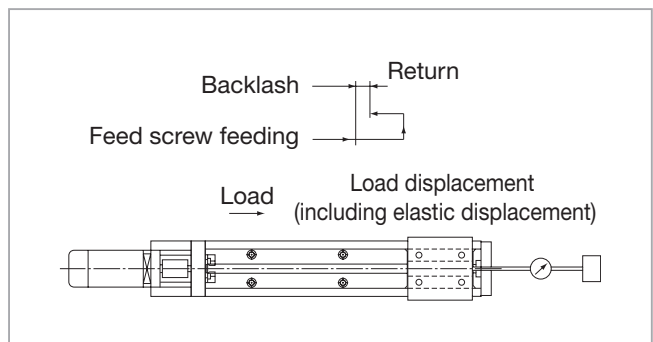
Running parallelism (vertical direction)

A straightedge is positioned on a surface plate with the SKR 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)
SKR20	30	100	±0.01	Not specified	Not specified	0.02	0.5
	80	150					
	130	200					
SKR26	60	150	±0.01	Not specified	Not specified	0.02	1.5
	110	200					
	160	250					
	210	300					
SKR33	45	150	±0.01	Not specified	Not specified	0.02	7
	95	200					
	195	300					
	295	400					
	395	500					
	495	600					
SKR46	190	340	±0.01	Not specified	Not specified	0.02	10
	290	440					
	390	540					
	490	640					
	590	740					
	690	840					
SKR55	790	940	±0.01	Not specified	Not specified	0.05	12
	800	980					
	900	1080					
	1000	1180					
	1100	1280					
SKR65	1200	1380	±0.01	Not specified	Not specified	0.05	12
	790	980					
	990	1180					
	1190	1380					
	1490	1680					
			±0.012				15

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)
SKR20	30	100	±0.005	0.06	0.025	0.01	0.5
	80	150					
	130	200					
SKR26	60	150	±0.005	0.06	0.025	0.01	1.5
	110	200					
	160	250					
	210	300					
SKR33	45	150	±0.005	0.06	0.025	0.02	7
	95	200					
	195	300					
	295	400		0.1	0.035		
	395	500					
	495	600					
SKR46	595	700	±0.005	0.1	0.035	0.02	10
	190	340					
	290	440					
	390	540		0.12	0.04		
	490	640					
	590	740					
SKR55	690	840	±0.005	0.18	0.05	0.05	12
	790	940					
	800	980					
	900	1080					
	1000	1180					
SKR65	1100	1280	±0.008	0.25	0.05	0.05	12
	1200	1380					
	790	980					
	990	1180					
	1190	1380					
	1490	1680		0.28	0.055		15

Precision Grade (P)

Unit: mm

Model	Stroke ¹	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical direction)	Backlash	Starting torque (N-cm)
SKR20	30	100	±0.003	0.02	0.01	0.003	1.2
	80	150					
	130	200					
SKR26	60	150	±0.003	0.02	0.01	0.003	4
	110	200					
	160	250					
	210	300					
SKR33	45	150	±0.003	0.02	0.01	0.003	15
	95	200					
	195	300					
	295	400		0.025	0.015		
	395	500					
	495	600					
SKR46	595	700	±0.003	0.03	0.02	0.003	15
	190	340					
	290	440					
	390	540		0.03	0.02		
	490	640					
	590	740					
SKR55	790	940	±0.005	0.035	0.025	0.003	17
	800	980					
	900	1080					
SKR65	1000	1180	±0.005	0.04	0.03	0.005	20
	790	980					
	990	1180					
	1190	1380		0.035	0.025		20
				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 SKR20/26 is when using THK AFA Grease.

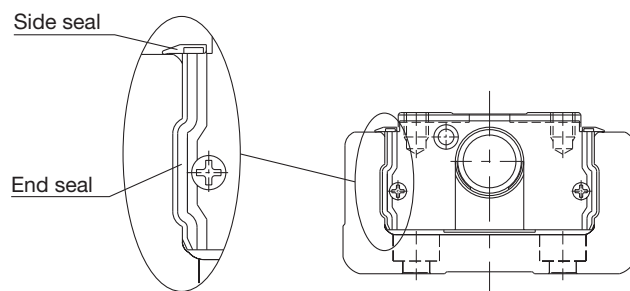
Note 4) The starting torque may exceed standards if using vacuum grease, clean room grease, or other high-viscosity greases, so care should be taken when selecting a motor.

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

Note 6) 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
SKR20	4.8
SKR26	5.7
SKR33	4.7
SKR46	8.1
SKR55	17.8
SKR65	24.1

Standard Grease

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

Model	Standard grease	Grease nipple used
SKR20	THK AFA Grease	PB107
SKR26	THK AFA Grease	PB107
SKR33	THK AFB-LF Grease	PB107
SKR46	THK AFB-LF Grease	A-M6F
SKR55	THK AFB-LF Grease	A-M6F
SKR65	THK AFB-LF Grease	A-M6F

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

LM Guide Actuator

KR

- Modular structure reduces the number of parts, design hours, and assembly hours
- Can be used in various orientations, including horizontal, wall-mounted, vertical, and hanging
- Abundant size lineup of 9 sizes



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



Caged Ball LM Guide Actuator SKR

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