

**ACTUATOR
UNITS**

NEW

Compact series

KRF



For details, visit THK at www.thk.com

* Product information is updated regularly on the THK website.

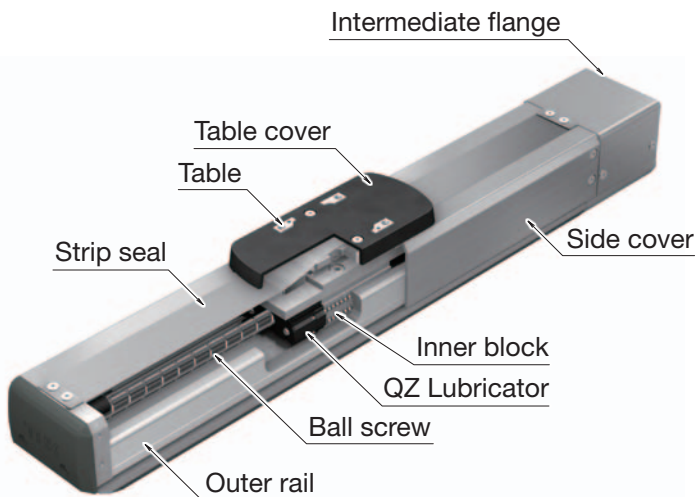
THK CO., LTD.
TOKYO, JAPAN

CATALOG No.375-5E

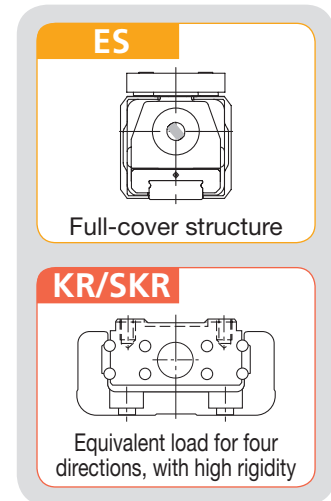
Compact Series

KRF

High rigidity fully enclosed actuator



- √ Outer rail of KR/SKR with proven history adopted
- √ Single axis actuator with high moment rigidity



Supported size (guideline)

KR/SKR	15	20	26	33
KRF	3	4	5	6

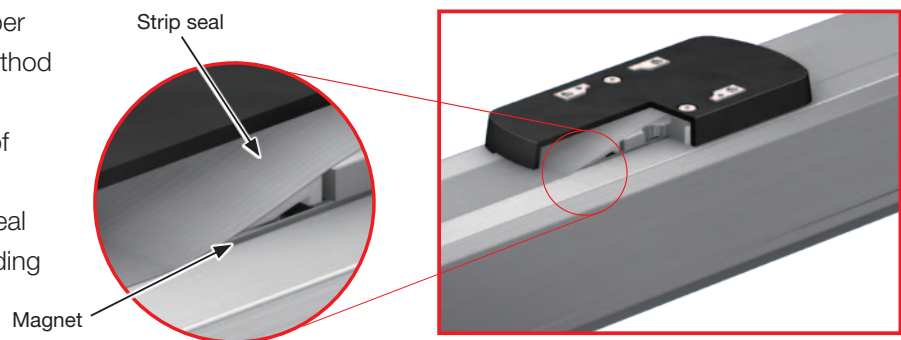
Features

1 Fully enclosed design

Strip seals on the side cover and upper surface using magnetic attraction method provide a fully enclosed structure.

It prevents any damage by entering of foreign materials from outside.

As well, the top surface of the strip seal is less likely to generate dust by avoiding the contact. (Excluding KRF3)

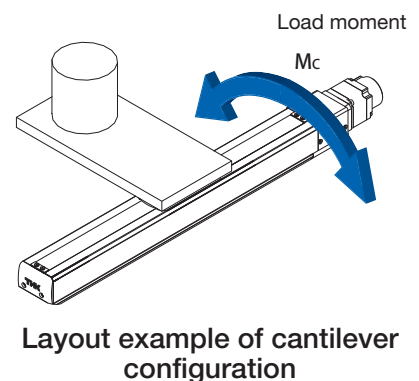
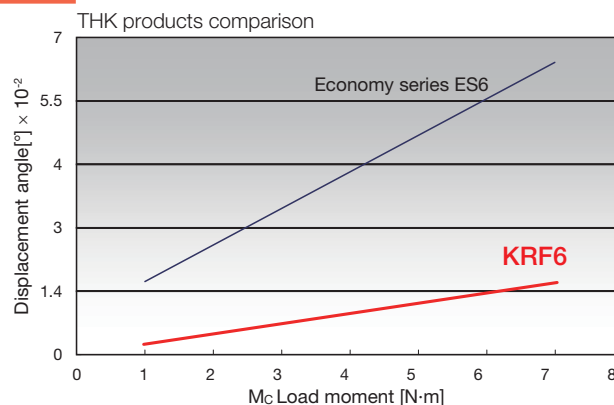


Magnetic attraction method

The magnet built in the side cover attracts the strip seal and prevents it from lifting, reducing the development of clearance.

2 High rigidity

The KRF series employs an outer rail with a U-shaped cross section, enabling it to accommodate a sizable moment load. The actuator body's high rigidity allows for a compact, space-saving design.



Model configuration

KRF (type without motor)

In the case of actuator main unit only, or when the motor specified by the customer is installed



Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Method for fixing the motor shaft	Option
KRF4R	06	0050	A	0	WN	D	MR-SB
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
KRF3	06: 6mm	0050: 50mm	A	0: Without motor	A0	No symbol: Select for direct coupling	No symbol: None
KRF4	10: 10mm	0100: 100mm		1: With motor* (Prepared by THK)	AN	D: D-cut	MR: Motor right return*
KRF5	KRF3, KRF4, and KRF4R have ball screw lead of 6mm only.	0150: 150mm		When selecting "0", for motor direct coupling specification, a coupling is not provided. For return specifications, a timing pulley and timing belt are provided. When selecting "1", the motor you specify will be installed. *Specify the motor cable orientation separately.	AQ	K: Key	ML: Motor left return*
KRF6		0200: 200mm			AM	M: Friction tightening	MD: Motor down return*
KRF4R		0250: 250mm			AP	Selectable motor shaft fixing methods differ depending on models. KRF4R: "D", "K" KRF5R: "D", "K" KRF6R: "D", "K", "M"	GR: Gray cover
KRF5R		0300: 300mm			AS		SB: Slider base
KRF6R		0350: 350mm			AR		<input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor
		0400: 400mm			AU		Specify the option symbol by writing in the order of description from left adding "-". * This is valid only when selecting KRF□R for model (1).
		0450: 450mm			AT		
	0500: 500mm		WM				
	0550: 550mm		WN				
	0600: 600mm		WP				
	0650: 650mm		WQ	Change the cover color to gray You can change the color of housing cover to gray. Standard: red When GR is selected: gray			
	0700: 700mm						
	0750: 750mm						
	0800: 800mm						

Sample model configuration

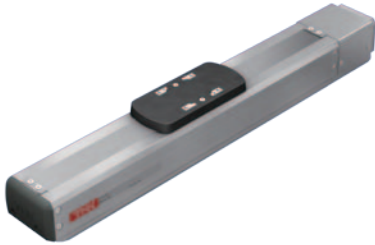
Main unit only (without motor type)	KRF3-06-0150A-0-AM-GR-L1
Main unit only (when the motor specified by the customer is installed)	KRF5-10-0500A-1-AQ-L6

Pages for detailed description

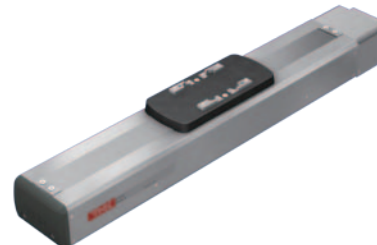
(6) Intermediate flange	→ P.16
(7) Option	SB: With slider base → P.13
	<input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor → P.14
	GR: Change the cover color to gray → P.15

Series Specifications

[KRF3, 4, 5]



[KRF6]



Model	Ball screw lead [mm]	Stroke [mm]	Motor capacity [W]		Maximum load capacity *1 [kg]		
			Stepper motor	Servo motor [W]	Horizontal	Wall mount	Vertical
KRF3	6	50 to 300	□28	-	3	3	1.5
KRF4	6	50 to 300	-	50	6	5.5	4
KRF5	6	50 to 550	-	50	19	14	6
	10				15	12.5	3.5
KRF6	6	50 to 800	-	100	35	24	10
	10				30	22	5

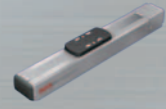
*1 The maximum load capacity indicates the capacity at the rated speed under 0.5 G for horizontal and wall mount and 0.3 G for vertical.

*2 The maximum speed indicates the speed at the revolution of the motor ($3,000 \text{ min}^{-1}$) or the speed restricted by the permissible revolution of the ball screw.



	Maximum speed for each stroke *2 [mm/s]															
	Stroke [mm]															
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
			300													
			300													
					300					250						
					500					430						
						300					260	220	200	170	150	
						500					440	380	330	290	260	

KRF3 without motor



Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Option
KRF3	06	0050	A	0	AN	GR-SB

KRF3	06: 6mm	0050: 50mm to 0300: 300mm	A	0: Without motor 1: With motor (Prepared by THK)	A0: Without intermediate flange AN AM AS	No symbol: Red cover GR: Gray cover SB: Slider base □1□2: Sensor
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Note: If the GR is not included in the model configuration, cover will be red.

Basic Specifications

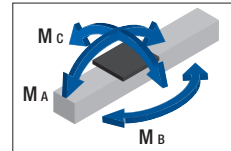
LM guide portion	Basic dynamic load rating C [N]		1930
	Basic Static Load Rating Co [N]		3450
Ball screw portion	Basic dynamic load rating Ca [N]		220
	Basic Static Load Rating Coa [N]		410
	Screw shaft diameter [mm]		φ5
Ball screw lead [mm]		6	
Bearing portion (Fixed side)	Axial direction	Basic dynamic load rating Ca [N]	590
		Static Permissible Load P _{0a} [N]	290
Permissible rotational speed [min ⁻¹]			3000
Starting torque *1 [N·m]			0.006
Positioning repeatability *2 [mm]			±0.020
Lost motion *2 [mm]			0.1
Permissible input torque [N·m]			0.154
Static permissible moment *3 [N·m]			MA:12.1 MB:12.1 MC:32.3

*1 The starting torque represents values when the standard grease is filled.

*2 These represent values when measured using a motor provided by THK.

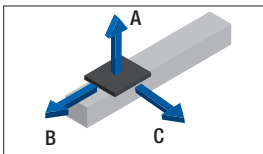
*3 Moment standards for MA and Mc are the top face of the table, and that for MB is the center of the table.

Static permissible moment

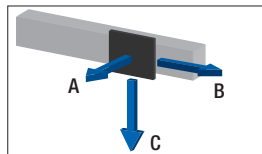


Reference Permissible Overhang Length*

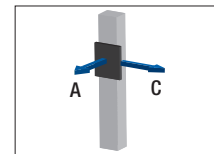
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	1.5	290	50	150
	3	130	20	60

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	1.5	120	40	310
	3	40	10	100

Vertical mount

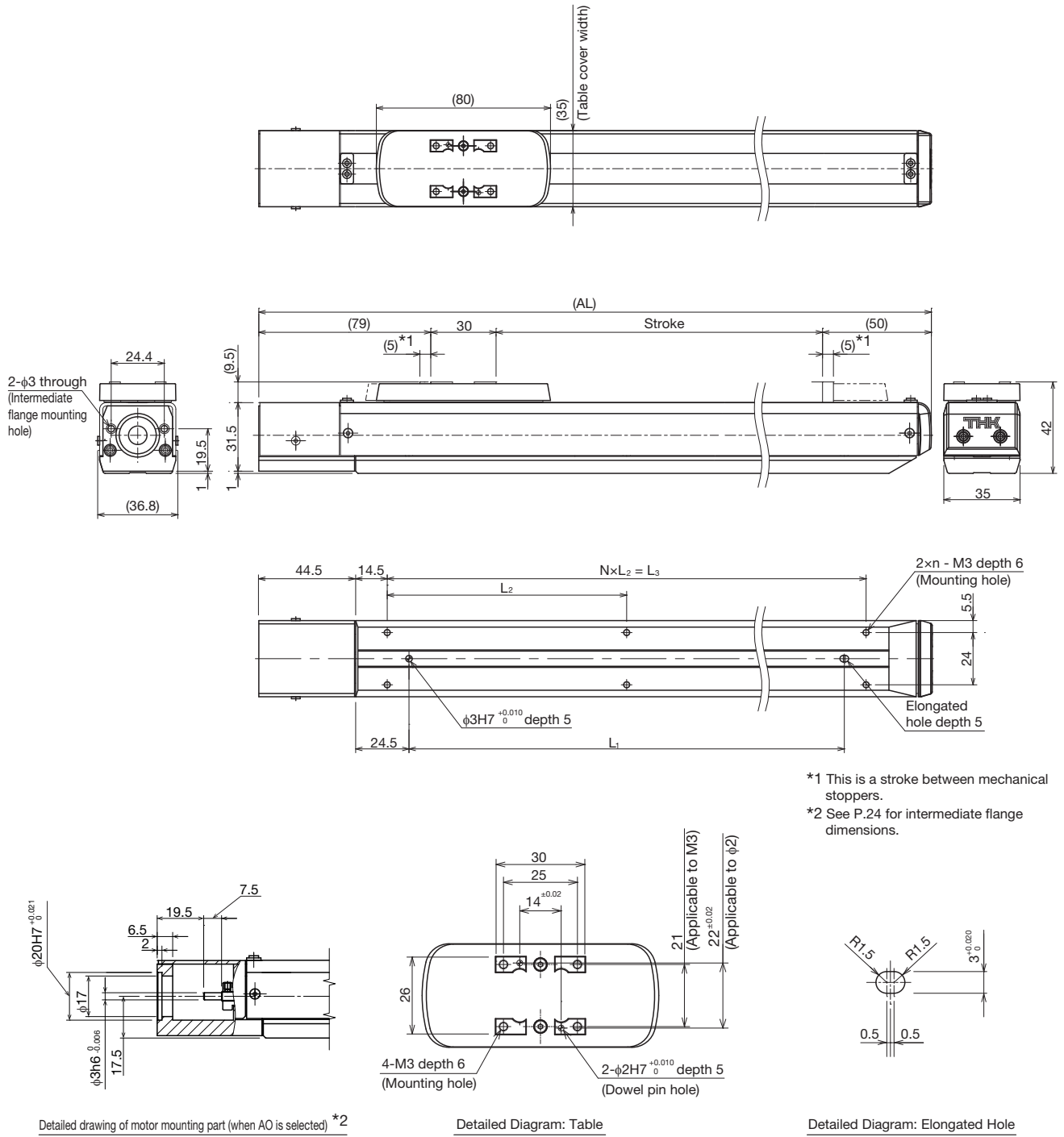
[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	0.5	110	110
	1.5	40	40

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction.

A permissible value of the applied load in each direction.

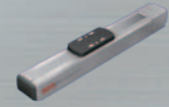
Dimensions



Stroke [mm]		50	100	150	200	250	300
(Stroke between mechanical stoppers)		(60)	(110)	(160)	(210)	(260)	(310)
Maximum speed *1, *2 [mm/s]	Ball screw lead: 6mm	300					
Dimensions [mm]	AL	209	259	309	359	409	459
	L1	100	150	200	250	300	350
	L2	120	85	110	135	105	120
Mounting pitch count	N	1	2	2	2	3	3
Mounting hole count	n	2	3	3	3	4	4
Weight [kg]		0.6	0.7	0.8	1	1.1	1.2

*1 The maximum speed varies depending on the motor used.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.



KRF4 without motor

Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Option
KRF4	06	0150	A	0	AN	GR-SB

KRF4	06: 6mm	0050: 50mm to 0300: 300mm	A	0: Without motor 1: With motor (Prepared by THK)	A0: Without intermediate flange AN AQ AM AP AS AR	No symbol: Red cover GR: Gray cover SB: Slider base <input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor Note: If the GR is not included in the model configuration, cover will be red.
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Basic Specifications

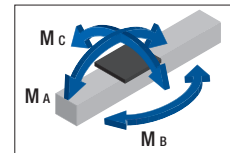
LM guide portion	Basic dynamic load rating C [N]	3590	
	Basic Static Load Rating Co [N]	6300	
Ball screw portion	Basic dynamic load rating Ca [N]	860	
	Basic Static Load Rating Coa [N]	1450	
	Screw shaft diameter [mm]	φ6	
	Ball screw lead [mm]	6	
Bearing portion (Fixed side)	Axial direction	Basic dynamic load rating Ca [N]	1150
		Static Permissible Load Poa [N]	735
Permissible rotational speed [min ⁻¹]		3000	
Starting torque *1 [N·m]		0.008	
Positioning repeatability *2 [mm]		±0.020	
Lost motion *2 [mm]		0.1	
Permissible input torque [N·m]		0.355	
Static permissible moment *3 [N·m]		MA: 31 MB: 21.2 MC: 52.7	

*1 The starting torque represents values when the standard grease is filled.

*2 These represent values when measured using a motor provided by THK.

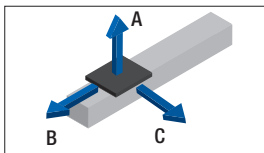
*3 Moment standards for MA and MC are the top face of the table, and that for MB is the center of the table.

Static permissible moment

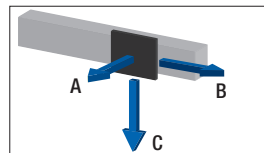


Reference Permissible Overhang Length*

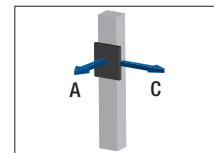
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	3	250	60	160
	6	110	20	60

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	2.5	140	60	280
	5.5	50	20	100

Vertical mount

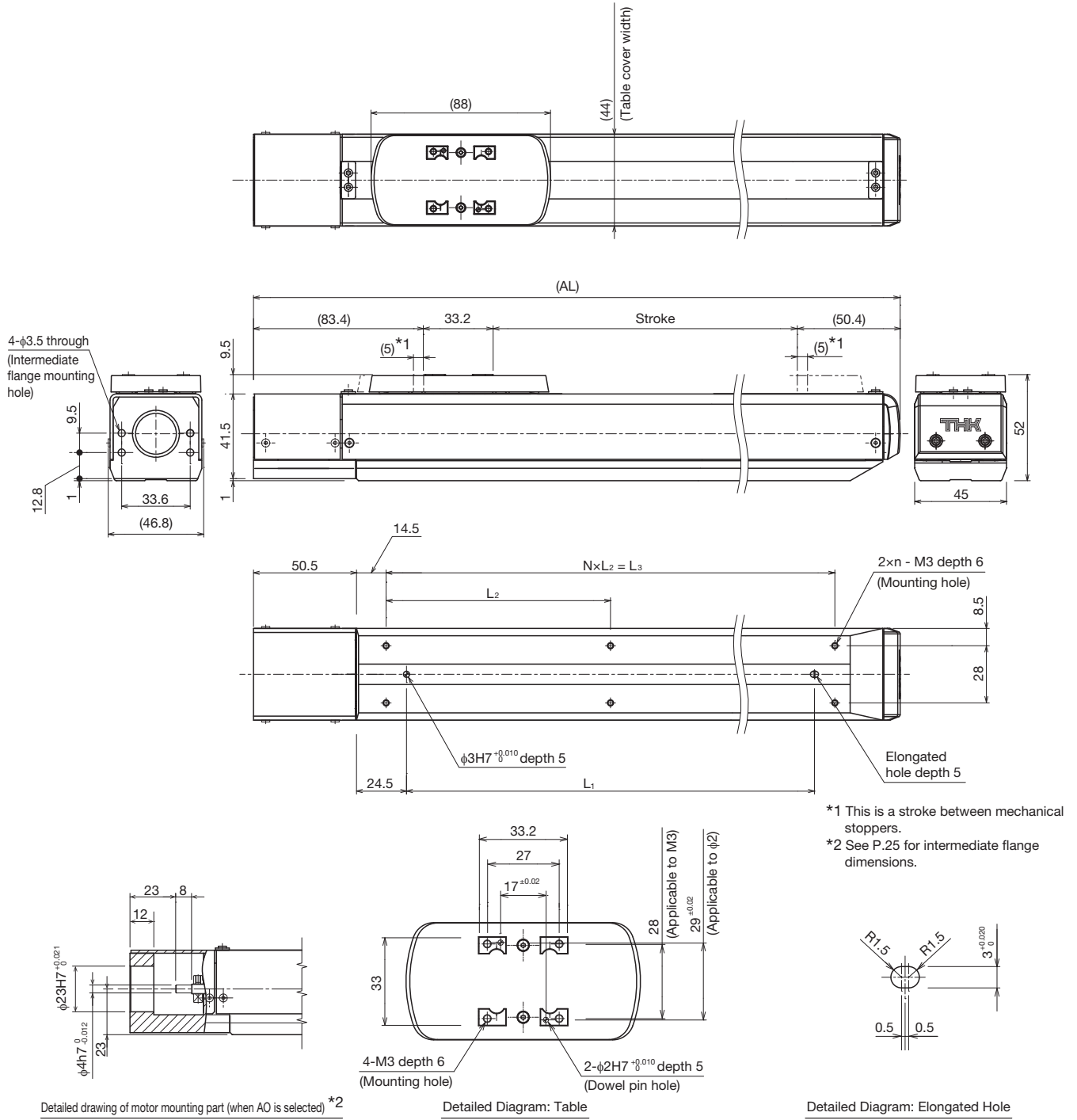
[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	2	100	100
	4	30	30

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction. A permissible value of the applied load in each direction.

KRF4

Dimensions



Stroke [mm] (Stroke between mechanical stoppers)		50 (60)	100 (110)	150 (160)	200 (210)	250 (260)	300 (310)
Dimensions [mm]	Maximum speed *1,*2 [mm/s]	300					
	Ball screw lead: 6mm	300					
	AL	217	267	317	367	417	467
	L ₁	100	150	200	250	300	350
Mounting pitch count	L ₂	120	85	110	90	105	120
	L ₃	120	170	220	270	315	360
	N	1	2	2	3	3	3
Mounting hole count	n	2	3	3	4	4	4
Weight [kg]		1.1	1.3	1.5	1.7	1.9	2.1

*1 The maximum speed varies depending on the motor used.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.



KRF4R without motor

Model Configuration

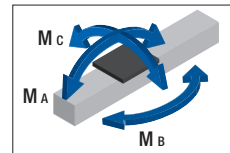
Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Method for fixing the motor shaft	Option
KRF4R	06	0150	A	1	WN	D	MR-GR
KRF4R	06 : 6mm	0050 : 50mm to 0300 : 300mm	A	0 : Without motor 1 : With motor (Prepared by THK)	WM WN WP WQ	D : D-cut K : Key	MR : Motor right return ML : Motor left return MD : Motor down return GR : Gray cover SB : Slider base □1□2 : Sensor

Basic Specifications

LM guide portion	Basic dynamic load rating C [N]	3590	
	Basic Static Load Rating Co [N]	6300	
Ball screw portion	Basic dynamic load rating Ca [N]	860	
	Basic Static Load Rating Coa [N]	1450	
	Screw shaft diameter [mm]	φ6	
	Ball screw lead [mm]	6	
Bearing portion (Fixed side)	Axial direction		
		Basic dynamic load rating Ca [N]	1150
		Static Permissible Load Poa [N]	735
	Permissible rotational speed [min ⁻¹]	3000	
	Starting torque *1 [N·m]	0.008	
	Positioning repeatability *2 [mm]	±0.020	
	Lost motion *2 [mm]	0.1	
	Permissible input torque [N·m]	0.355	
	Static permissible moment *3 [N·m]	MA: 31 Mb: 21.2 Mc: 52.7	

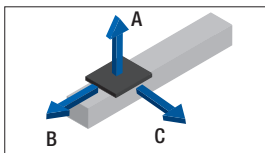
- *1 The starting torque represents values when the standard grease is filled.
 *2 These represent values when measured using a motor provided by THK.
 *3 Moment standards for MA and Mc are the top face of the table, and that for Mb is the center of the table.

Static permissible moment

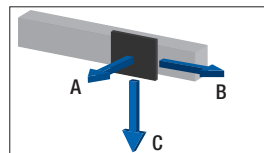


Reference Permissible Overhang Length*

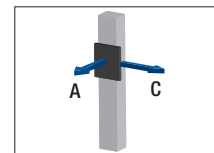
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	3	250	60	160
	6	110	20	60

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	2.5	140	60	280
	5.5	50	20	100

Vertical mount

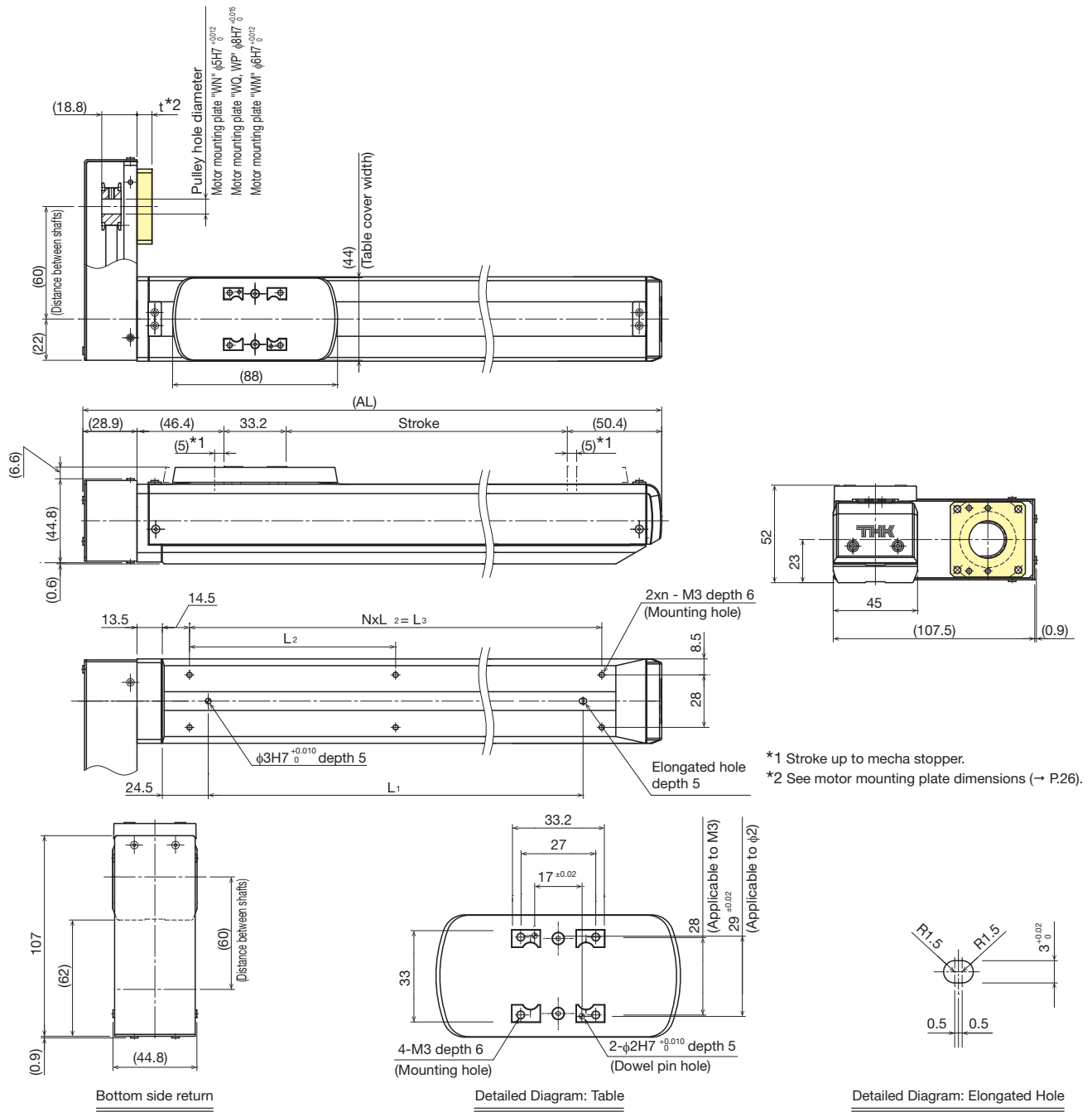
[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	2	100	100
	4	30	30

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction.
 A permissible value of the applied load in each direction.

KRF4R

Dimensions

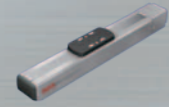


*1 Stroke up to mecha stopper.
*2 See motor mounting plate dimensions (→ P.26).

Stroke [mm] (Stroke between mecha stoppers)	50 (60)	100 (110)	150 (160)	200 (210)	250 (260)	300 (310)	
Maximum speed ^{*1,*2} [mm/s] Ball screw lead: 6mm	300						
Dimensions [mm]	AL	209	259	309	359	409	459
	L ₁	100	150	200	250	300	350
	L ₂	120	85	110	90	105	120
Mounting pitch count	N	1	2	2	3	3	3
Mounting hole count	n	2	3	3	4	4	4
Weight [kg]	1.2	1.4	1.6	1.8	2.0	2.2	

*1 The maximum speed varies depending on the motor you use.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.



KRF5 without motor

Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Option
KRF5	06	0150	A	0	AN	GR-SB

KRF5	06: 6mm 10: 10mm	0050: 50mm to 0550: 550mm	A	0: Without motor 1: With motor (Prepared by THK)	A0: Without intermediate flange AN AQ AM AP AS AR	No symbol: Red cover GR: Gray cover SB: Slider base <input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor Note: If the GR is not included in the model configuration, cover will be red.
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Basic Specifications

LM guide portion	Basic dynamic load rating C [N]	7240	
	Basic Static Load Rating C ₀ [N]	12150	
Ball screw portion	Basic dynamic load rating C _a [N]	1950	1120
	Basic Static Load Rating C _{0a} [N]	3510	1740
	Screw shaft diameter [mm]	φ8	
	Ball screw lead [mm]	6	10
	Bearing portion (Fixed side)	Axial direction	Basic dynamic load rating C _a [N]
Static Permissible Load P _{0a} [N]			1830
Permissible rotational speed *1 [min ⁻¹]		3000	
Starting torque *2 [N·m]		0.01	0.012
Positioning repeatability *3 [mm]		±0.020	
Lost motion *3 [mm]		0.1	
Permissible input torque [N·m]		0.671	
Static permissible moment *4 [N·m]		M _A : 84 M _B : 48.4 M _C : 105.8	

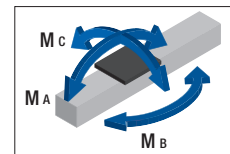
*1 Dependent on the stroke.

*2 The starting torque represents values when the standard grease is filled.

*3 These represent values when measured using a motor provided by THK.

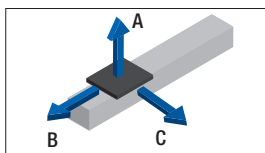
*4 Moment standards for M_A and M_C are the top face of the table, and that for M_B is the center of the table.

Static permissible moment

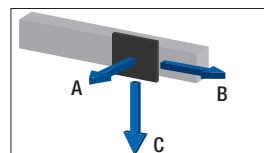


Reference Permissible Overhang Length*

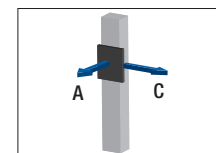
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	9.5	350	50	150
	19	150	20	60
10	7.5	310	70	180
	15	130	20	60

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	7	180	60	500
	14	60	20	130
10	6	170	70	390
	12.5	60	20	120

Vertical mount

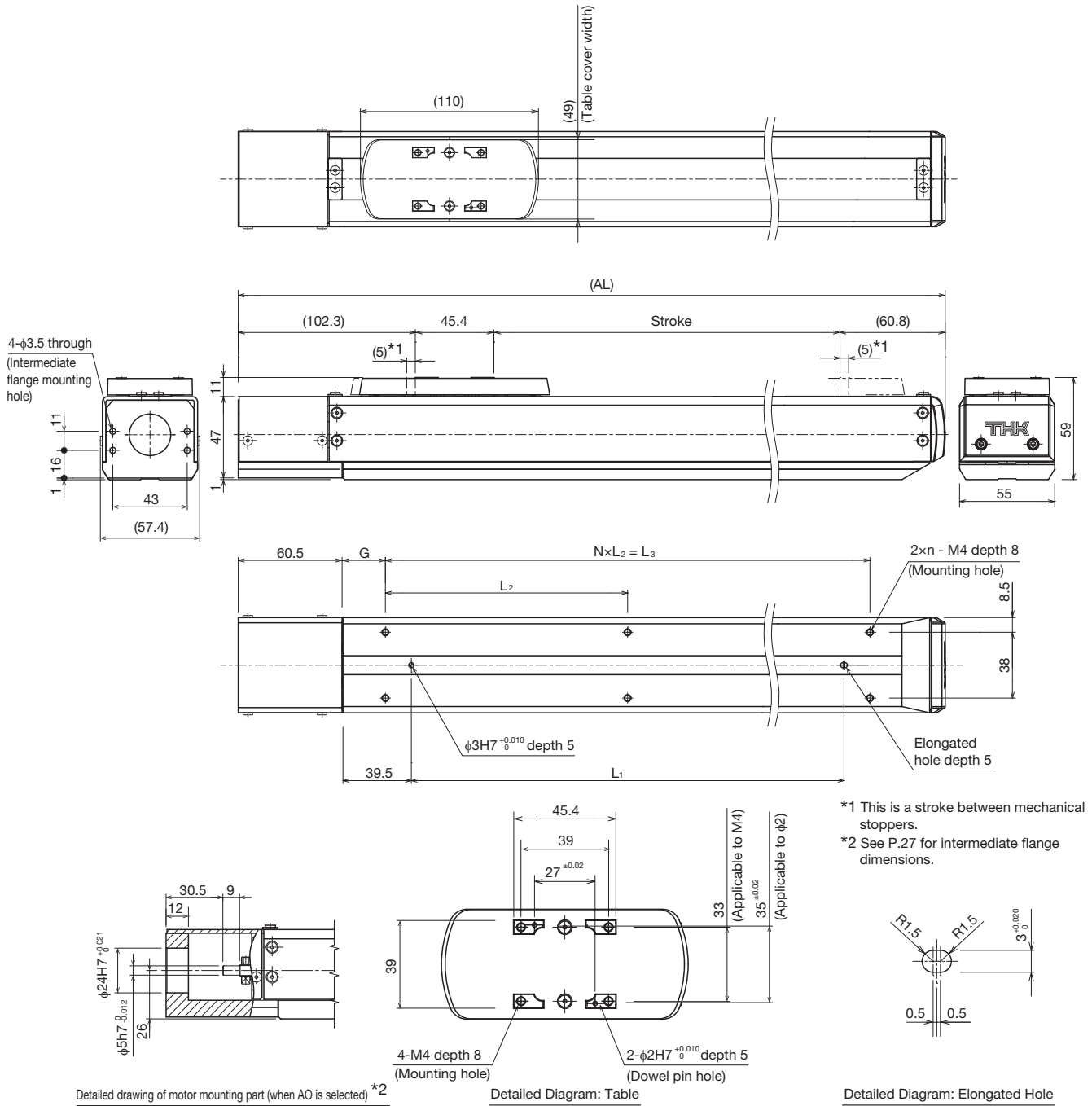
[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	3	210	210
	6	90	90
10	1.5	390	390
	3.5	180	180

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction. A permissible value of the applied load in each direction.

KRF5

Dimensions



Stroke [mm] (Stroke between mechanical stoppers)	50 (60)	100 (110)	150 (160)	200 (210)	250 (260)	300 (310)	350 (360)	400 (410)	450 (460)	500 (510)	550 (560)	
Maximum speed ^{*1,*2} [mm/s]	Ball screw lead: 6mm										250	
	Ball screw lead: 10mm										430	
Dimensions [mm]	AL	259	309	359	409	459	509	559	609	659	709	759
	L ₁	100	150	200	250	300	350	400	450	500	550	600
	L ₂	140	100	120	140	115	130	110	120	135	120	130
	L ₃	140	200	240	280	345	390	440	480	540	600	650
	G	19.5	14.5	19.5	24.5	17	19.5	19.5	24.5	19.5	14.5	14.5
Mounting pitch count	N	1	2	2	2	3	3	4	4	4	5	5
Mounting hole count	n	2	3	3	3	4	4	5	5	5	6	6
Weight [kg]	2.0	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	

^{*1} The maximum speed varies depending on the motor used.

^{*2} The maximum speed is the value restricted by the permissible rotational speed of the ball screw.

KRF5R without motor



Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Method for fixing the motor shaft	Option
KRF5R	06	0150	A	1	WN	D	MR-GR

KRF5R	06: 6mm	0050: 50mm	A	0: Without motor 1: With motor (Prepared by THK)	WM	D: D-cut K: Key	MR: Motor right return
	10: 10mm	to 0550: 550mm					ML: Motor left return
							MD: Motor down return
							GR: Gray cover
							SB: Slider base
							<input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor

Basic Specifications

LM guide portion	Basic dynamic load rating C [N]	7240	
	Basic Static Load Rating Co [N]	12150	
Ball screw portion	Basic dynamic load rating Ca [N]	1950	1120
	Basic Static Load Rating Coa [N]	3510	1740
	Screw shaft diameter [mm]	φ8	
	Ball screw lead [mm]	6	10
Bearing portion (Fixed side)	Axial direction	Basic dynamic load rating Ca [N]	2050
		Static Permissible Load Poa [N]	1830
	Permissible rotational speed *1 [min ⁻¹]	3000	
	Starting torque *2 [N·m]	0.01	0.012
	Positioning repeatability *3 [mm]	±0.020	
	Lost motion *3 [mm]	0.1	
	Permissible input torque [N·m]	0.671	
	Static permissible moment *4 [N·m]	Ma: 84 Mb: 48.4 Mc: 105.8	

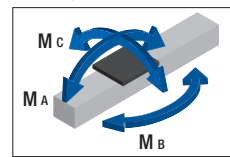
*1 Dependent on the stroke.

*2 The starting torque represents values when the standard grease is filled.

*3 These represent values when measured using a motor provided by THK.

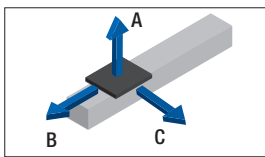
*4 Moment standards for Ma and Mc are the top face of the table, and that for Mb is the center of the table.

Static permissible moment

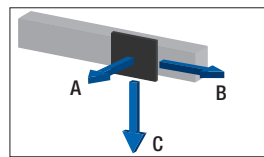


Reference Permissible Overhang Length*

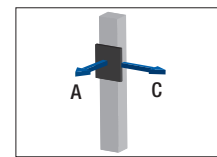
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	9.5	350	50	150
	19	150	20	60
10	7.5	310	70	180
	15	130	20	60

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	7	180	60	500
	14	60	20	130
10	6	170	70	390
	12.5	60	20	120

Vertical mount

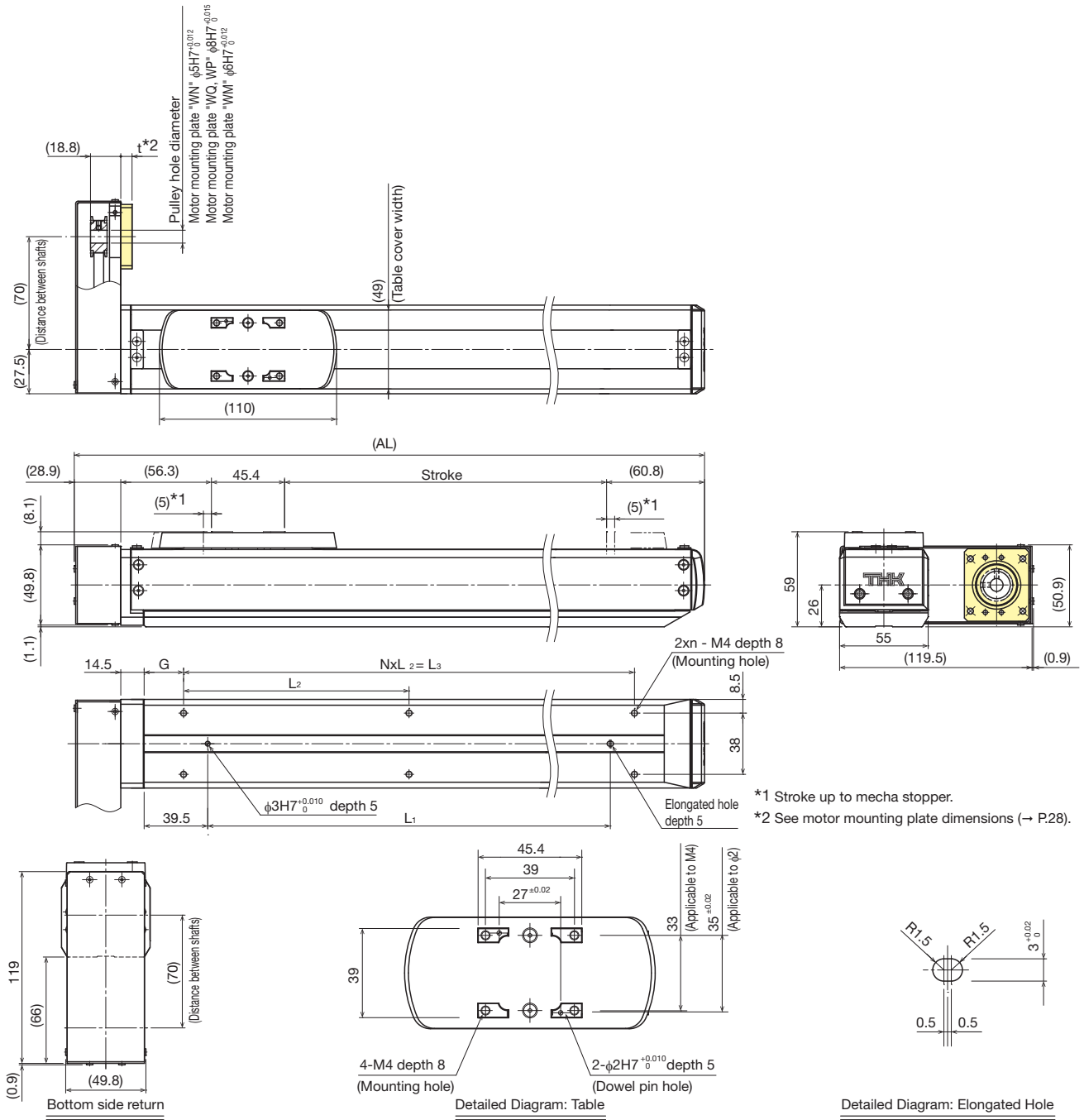
[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	3	210	210
	6	90	90
10	1.5	390	390
	3.5	180	180

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction. A permissible value of the applied load in each direction.

KRF5R

Dimensions



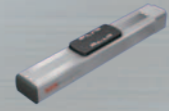
*1 Stroke up to mecha stopper.
*2 See motor mounting plate dimensions (→ P.28).

Stroke [mm]		50	100	150	200	250	300	350	400	450	500	550
(Stroke between mecha stoppers)		(60)	(110)	(160)	(210)	(260)	(310)	(360)	(410)	(460)	(510)	(560)
Maximum speed *1,*2 [mm/s]	Ball screw lead: 6mm	300										250
	Ball screw lead: 10mm	500										430
Dimensions [mm]	AL	241.5	291.5	341.5	391.5	441.5	491.5	541.5	591.5	641.5	691.5	741.5
	L1	100	150	200	250	300	350	400	450	500	550	600
	L2	140	100	120	140	115	130	110	120	135	120	130
	L3	140	200	240	280	345	390	440	480	540	600	650
	G	19.5	14.5	19.5	24.5	17	19.5	19.5	24.5	19.5	14.5	14.5
Mounting pitch count	N	1	2	2	2	3	3	4	4	4	5	5
Mounting hole count	n	2	3	3	3	4	4	5	5	5	6	6
Weight [kg]		2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.6	4.9	5.2

*1 The maximum speed varies depending on the motor you use.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.

KRF6 without motor



Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Option
KRF6	06	0150	A	0	AQ	GR-SB

KRF6	06: 6mm	0050: 50mm	A	0: Without motor	A0: Without intermediate flange	No symbol: Red cover
	10: 10mm	to				1: With motor (Prepared by THK)
		0800: 800mm			AP	SB: Slider base
					AR	□1□2: Sensor
					AU	Note: If the GR is not included in the model configuration, cover will be red.
					AT	

Basic Specifications

LM guide portion	Basic dynamic load rating C [N]	11600	
	Basic Static Load Rating Co [N]	20200	
Ball screw portion	Basic dynamic load rating Ca [N]	2840	1760
	Basic Static Load Rating Coa [N]	4900	2840
	Screw shaft diameter [mm]	φ10	
Bearing portion (Fixed side)	Ball screw lead [mm]	6	10
	Basic dynamic load rating Ca [N]	2930	
	Static Permissible Load Poa [N]	2150	
Permissible rotational speed *1 [min ⁻¹]		3000	
Starting torque *2 [N·m]		0.014	0.02
Positioning repeatability *3 [mm]		±0.020	
Lost motion *3 [mm]		0.1	
Permissible input torque [N·m]		1.035	
Static permissible moment *4 [N·m]		MA: 166 MB: 103.8 MC: 179.5	

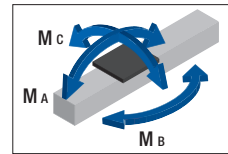
*1 Dependent on the stroke.

*2 The starting torque represents values when the standard grease is filled.

*3 These represent values when measured using a motor provided by THK.

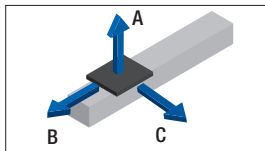
*4 Moment standards for MA and Mc are the top face of the table, and that for MB is the center of the table.

Static permissible moment

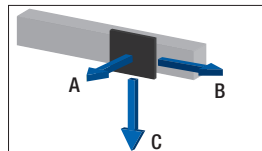


Reference Permissible Overhang Length*

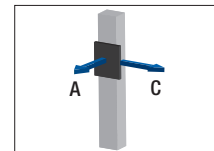
Horizontal use



Wall use



Vertical use



Horizontal mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	17.5	390	50	160
	35	170	10	60
10	15	320	60	170
	30	130	10	50

Wall mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	B	C
6	12	200	70	600
	24	70	20	140
10	11	200	80	460
	22	70	30	120

Vertical mount

[mm]

Ball screw lead [mm]	Load mass [kg]	A	C
6	5	240	240
	10	100	100
10	2.5	510	510
	5	230	230

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction.

A permissible value of the applied load in each direction.

Dimensions

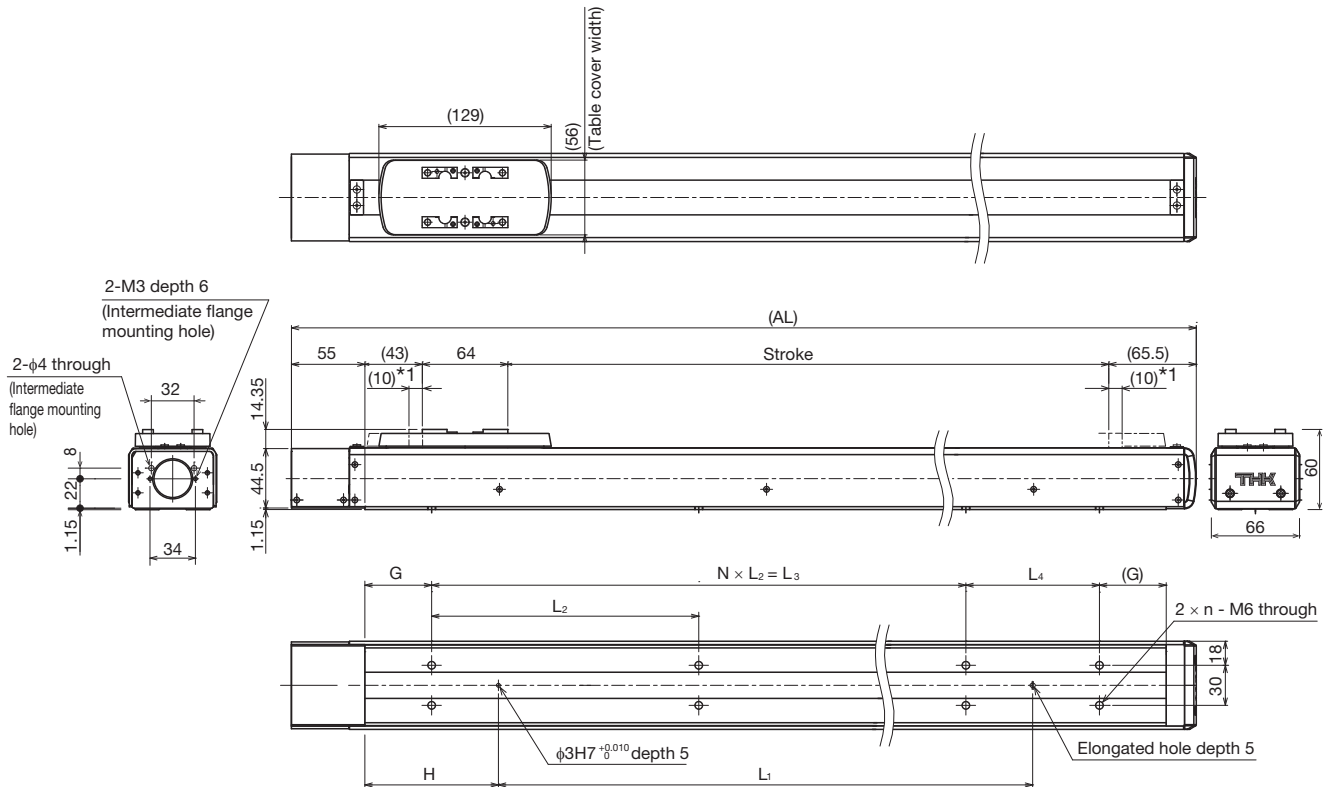
Stroke [mm] (Stroke between mechanical stoppers)	50 (70)	100 (120)	150 (170)	200 (220)	250 (270)	300 (320)	350 (370)	400 (420)	
Maximum speed *1,*2 [mm/s]	Ball screw lead: 6mm		300						
	Ball screw lead: 10mm		500						
Dimensions [mm]	AL	277.5	327.5	377.5	427.5	477.5	527.5	577.5	627.5
	L1	100	150	200	200	250	250	300	350
	L2	100	200	200	200	200	200	200	200
	L3	100	200	200	200	200	400	400	400
	L4	-	-	-	-	100	-	-	-
	G	50	25	50	75	50	25	50	75
H	50	50	50	75	75	100	100	100	
Mounting pitch count	N	1	1	1	1	2	2	2	
Mounting hole count	n	2	2	2	2	3	3	3	
Weight [kg]	2.7	3.1	3.5	3.9	4.3	4.8	5.2	5.6	

*1 The maximum speed varies depending on the motor used.

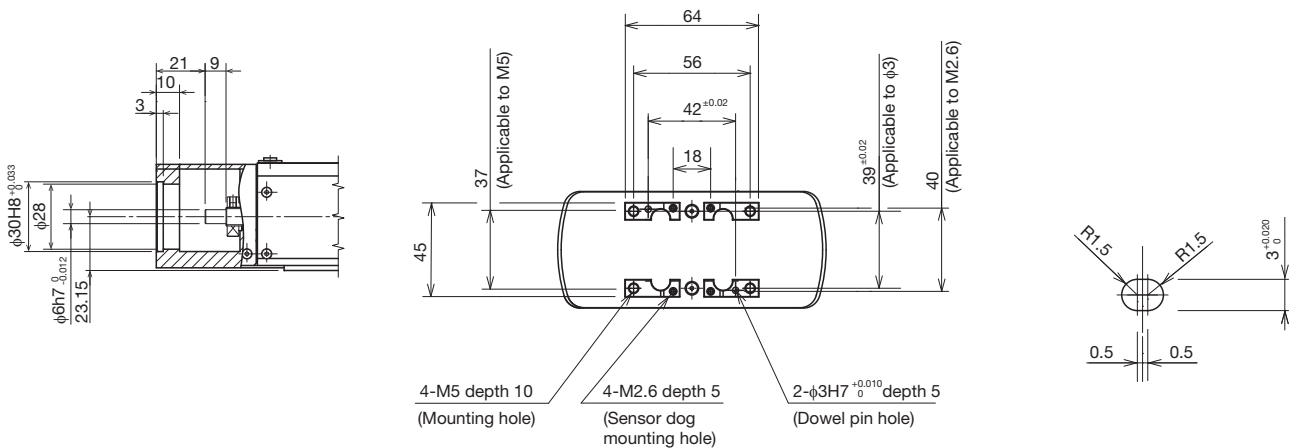
*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.

KRF6

Dimensions



*1 This is a stroke between mechanical stoppers.
*2 See P.29 for intermediate flange dimensions.



Detailed drawing of motor mounting part (when A0 is selected) *2

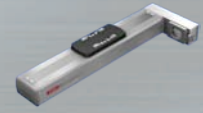
Detailed Diagram: Table

Detailed Diagram: Elongated Hole

Stroke [mm] (Stroke between mechanical stoppers)		450 (470)	500 (520)	550 (570)	600 (620)	650 (670)	700 (720)	750 (770)	800 (820)
Maximum speed *1,*2 [mm/s]	Ball screw lead: 6mm	300		275	250	200	175	150	150
	Ball screw lead: 10mm	500		450	400	350	300	275	250
Dimensions [mm]	AL	677.5	727.5	777.5	827.5	877.5	927.5	977.5	1027.5
	L1	400	450	500	550	600	650	700	750
	L2	200	200	200	200	200	200	200	200
	L3	400	600	600	600	600	800	800	800
	L4	100	-	-	-	100	-	-	-
	G	50	25	50	75	50	25	50	75
	H	100	100	100	100	100	100	100	100
Mounting pitch count	N	2	3	3	3	3	4	4	4
Mounting hole count	n	4	4	4	4	5	5	5	5
Weight [kg]		6.0	6.4	6.8	7.2	7.6	8.0	8.4	8.8

*1 The maximum speed varies depending on the motor used.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.



KRF6R without motor

Model Configuration

Model	Ball screw lead	Stroke	Design symbol	With/without motor	Intermediate flange	Method for fixing the motor shaft	Option
KRF6R	06	0150	A	1	WQ	D	MR-GR

KRF6R	06: 6mm 10: 10mm	0050: 50mm to 0800: 800mm	A	0: Without motor 1: With motor (Prepared by THK)	N: None WP WQ	No symbol: Select for direct coupling D: D-cut K: Key M: Friction tightening	MR: Motor right return ML: Motor left return MD: Motor down return GR: Gray cover SB: Slider base <input type="checkbox"/> 1 <input type="checkbox"/> 2: Sensor
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Basic Specifications

LM guide portion	Basic dynamic load rating C [N]	11600	
	Basic Static Load Rating Co [N]	20200	
Ball screw portion	Basic dynamic load rating Ca [N]	2840	1760
	Basic Static Load Rating Coa [N]	4900	2840
	Screw shaft diameter [mm]	φ10	
Bearing portion (Fixed side)	Ball screw lead [mm]	6	10
	Axial direction	Basic dynamic load rating Ca [N]	2930
		Static Permissible Load Poa [N]	2150
	Permissible rotational speed *1 [min ⁻¹]	3000	
	Starting torque *2 [N·m]	0.014	0.02
	Positioning repeatability *3 [mm]	±0.020	
	Lost motion *3 [mm]	0.1	
	Permissible input torque [N·m]	1.035	
	Static permissible moment *4 [N·m]	MA: 166 MB: 103.8 MC: 179.5	

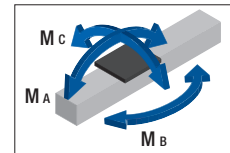
*1 Dependent on the stroke.

*2 The starting torque represents values when the standard grease is filled.

*3 These represent values when measured using a motor provided by THK.

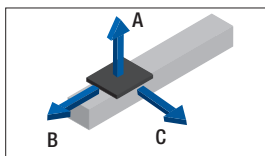
*4 Moment standards for MA and Mc are the top face of the table, and that for MB is the center of the table.

Static permissible moment



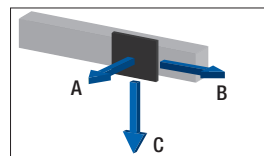
Reference Permissible Overhang Length*

Horizontal use



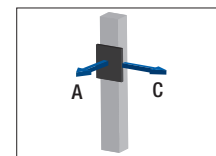
Ball screw lead [mm]	Load mass [kg]	A	B	C
6	17.5	390	50	160
	35	170	10	60
10	15	320	60	170
	30	130	10	50

Wall use



Ball screw lead [mm]	Load mass [kg]	A	B	C
6	12	200	70	600
	24	70	20	140
10	11	200	80	460
	22	70	30	120

Vertical use



Ball screw lead [mm]	Load mass [kg]	A	C
6	5	240	240
	10	100	100
10	2.5	510	510
	5	230	230

* This value is the overhang length whose running life is 10,000 km for horizontal and wall mount, and 5,000 km for vertical direction.

A permissible value of the applied load in each direction.

Dimensions

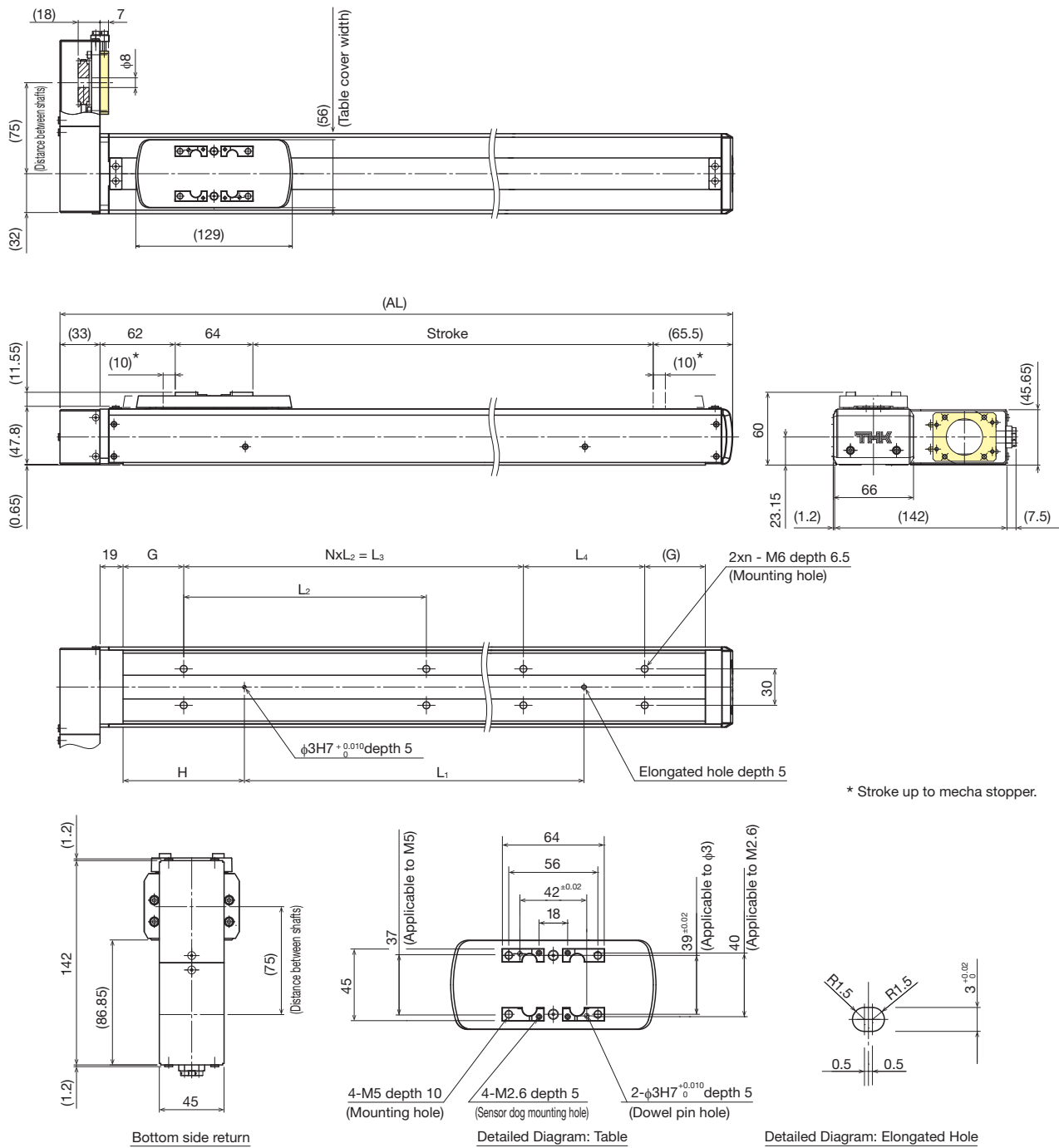
Stroke [mm] (Stroke between mecha stoppers)	50 (70)	100 (120)	150 (170)	200 (220)	250 (270)	300 (320)	350 (370)	400 (420)	
Maximum speed *1, *2 [mm/s]	Ball screw lead: 6mm	300							
	Ball screw lead: 10mm	500							
Dimensions [mm]	AL	276	326	376	426	476	526	576	626
	L1	100	150	200	200	250	250	300	350
	L2	100	200	200	200	200	200	200	200
	L3	100	200	200	200	200	400	400	400
	L4	-	-	-	-	100	-	-	-
	G	50	25	50	75	50	25	50	75
H	50	50	50	75	75	100	100	100	
Mounting pitch count	N	1	1	1	1	2	2	2	
Mounting hole count	n	2	2	2	2	3	3	3	
Weight [kg]	3.5	3.9	4.3	4.7	5.1	5.5	5.9	6.3	

*1 The maximum speed varies depending on the motor used.

*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.

KRF6R

Dimensions



* Stroke up to mecha stopper.

Stroke [mm] (Stroke between mecha stoppers)		450 (470)	500 (520)	550 (570)	600 (620)	650 (670)	700 (720)	750 (770)	800 (820)
Maximum speed *1,*2 [mm/s]	Ball screw lead: 6mm		300		260	220	200	170	150
	Ball screw lead: 10mm		500		440	380	330	290	260
Dimensions [mm]	AL	676	726	776	826	876	926	976	1026
	L1	400	450	500	550	600	650	700	750
	L2	200	200	200	200	200	200	200	200
	L3	400	600	600	600	600	800	800	800
	L4	100	-	-	-	100	-	-	-
	G	50	25	50	75	50	25	50	75
Mounting pitch count	N	2	3	3	3	3	4	4	4
Mounting hole count	n	4	4	4	4	5	5	5	5
Weight [kg]		6.7	7.1	7.5	7.9	8.3	8.7	9.1	9.5

*1 The maximum speed varies depending on the motor you use.

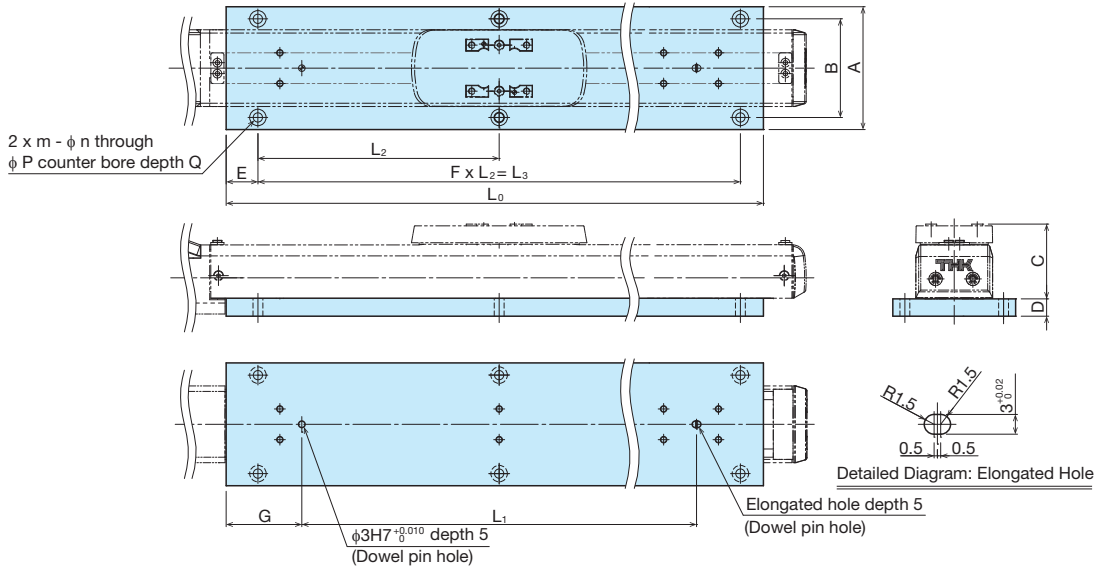
*2 The maximum speed is the value restricted by the permissible rotational speed of the ball screw.

Options

SB: Slider base

THK provides slider bases for installing the KRF main unit from the top face.

* The product is shipped with this optional assembled.



Unit: mm

Model	A	B	C	D
KRF3	56	45	34.1	7.9
KRF4 / KRF4R	70	55	42.1	9.9
KRF5 / KRF5R	80	65	49.1	9.9
KRF6 / KRF6R	90	78	60	10

Note) When the slider base is mounted on KRF6, the height of KRF6 will be 10mm higher than the standard product due to the thickness of slider base.

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
KRF3	L ₀	145	195	245	295	345	395	-	-	-	-	-	-	-	-	-	
	L ₁	100	150	200	250	300	350	-	-	-	-	-	-	-	-	-	
	L ₂	120	85	110	135	105	120	-	-	-	-	-	-	-	-	-	
	L ₃	120	170	220	270	315	360	-	-	-	-	-	-	-	-	-	
	E	14.5						-	-	-	-	-	-	-	-	-	
	F	1	2	2	2	3	3	-	-	-	-	-	-	-	-	-	
	G	24.5						-	-	-	-	-	-	-	-	-	
	m	2	3	3	3	4	4	-	-	-	-	-	-	-	-	-	
	n	4.5						-	-	-	-	-	-	-	-	-	
	P	8						-	-	-	-	-	-	-	-	-	
KRF4 KRF4R	Q	4.4						-	-	-	-	-	-	-	-	-	
	L ₀	142	192	242	292	342	392	-	-	-	-	-	-	-	-	-	
	L ₁	100	150	200	250	300	350	-	-	-	-	-	-	-	-	-	
	L ₂	120	85	110	90	105	120	-	-	-	-	-	-	-	-	-	
	L ₃	120	170	220	270	315	360	-	-	-	-	-	-	-	-	-	
	E	14.5						-	-	-	-	-	-	-	-	-	
	F	1	2	2	2	3	3	-	-	-	-	-	-	-	-	-	
	G	24.5						-	-	-	-	-	-	-	-	-	
	m	2	3	3	3	4	4	-	-	-	-	-	-	-	-	-	
	n	4.5						-	-	-	-	-	-	-	-	-	
KRF5 KRF5R	P	8						-	-	-	-	-	-	-	-	-	
	Q	4.4						-	-	-	-	-	-	-	-	-	
	L ₀	180	230	280	330	380	430	480	530	580	630	680	-	-	-	-	
	L ₁	100	150	200	250	300	350	400	450	500	550	600	-	-	-	-	
	L ₂	140	100	120	140	115	130	110	120	135	120	130	-	-	-	-	
	L ₃	140	200	240	280	345	390	440	480	540	600	650	-	-	-	-	
	E	19.5	15	19.5	24.5	17	19.5	19.5	24.5	19.5	14.5	14.5	-	-	-	-	
	F	1	2	2	2	3	3	4	4	4	5	5	-	-	-	-	
	G	39.5						-	-	-	-	-	-	-	-	-	
	m	2	3	3	3	4	4	5	5	5	6	6	-	-	-	-	
KRF6 KRF6R	n	4.5						-	-	-	-	-	-	-	-	-	
	P	8						-	-	-	-	-	-	-	-	-	
	Q	4.4						-	-	-	-	-	-	-	-	-	
	L ₀	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	
	L ₁	100	150	200	200	250	250	300	350	400	450	500	550	600	650	700	
	L ₂	100	200	130	150	170	140	150	160	170	140	160	170	180	150	170	
	L ₃	100	200	260	300	340	420	450	480	510	560	640	680	720	750	850	
	E	50	25	20	25	30	15	25	35	45	45	30	35	40	50	25	
	F	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5	
	G	50	50	50	75	75	100	100	100	100	100	100	100	100	100	100	
m	2	2	3	3	3	4	4	4	4	5	5	5	5	6	6		
n							5.5										
P							9.5										
Q							5.4										

□1□2: Sensors

Optional proximity sensors and photo sensors are available for KRF. Models equipped with a sensor are also provided with a dedicated sensor rail. Please use the sensor with the following precautions (Notes 1 to 6) in mind.

- Note 1) The customer should provide a sensor target since it cannot be installed onto the actuator main unit. (Excluding KRF6)
- Note 2) Sensor target for KRF6 to be shipped loose.
- Note 3) Sensor rails are pre-mounted, and sensors are provided with the product.
- Note 4) When optional sensor is used, note the home position may differ from the position indicated by the dimension in this catalog, in considering using them.
- Note 5) Proximity sensors placed too close to each other may not work properly. In such a case, the customer should provide a different frequency type of sensor.
(For specifications, contact each manufacturer.)
- Note 6) Mount the sensor/sensor rail on both sides if the stroke is not more than 100 mm.

Description	Model	Accessory	Symbol	
			□1	□2
With sensor rail	-	-	L/R	1
Photo sensor * [3 units]	EE-SX674 (OMRON Corporation)	Mounting screw, nuts, sensor rail (x 1 or 2), mounting plates (x 3), connectors (EE-1001, x 3)	L/R	6
Sensor N.O. contact [x 1] N.C. contact [x 2]	GX-F12A (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screw, nuts, sensor rail (x 1 or 2)	L/R	J
Sensor N.O. contact [x 1] (PNP output) N.C. contact [x 2] (PNP output)	GX-F12A-P (Panasonic Industrial Devices SUNX Co., Ltd.) GX-F12B-P (Panasonic Industrial Devices SUNX Co., Ltd.)	Mounting screw, nuts, sensor rail (x 1 or 2)	L/R	M

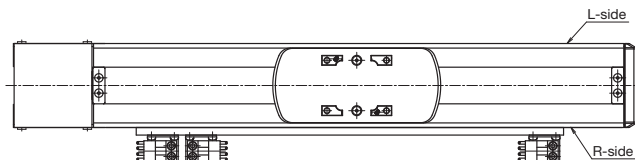
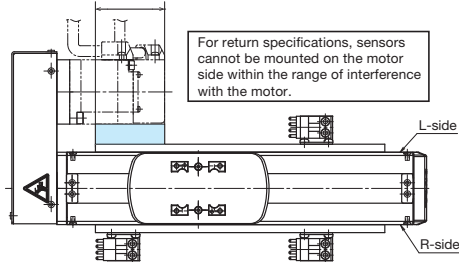
N.O. contact: Normally open contact point

N.C. contact: Normally closed contact point

Sensors marked with a symbol "M", if combined with our controller, cannot be used as a home position sensor.

* The photo sensors can be switched between ON when lit and ON when unlit.

The range of interference with the motor



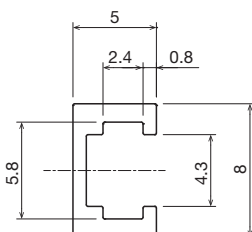
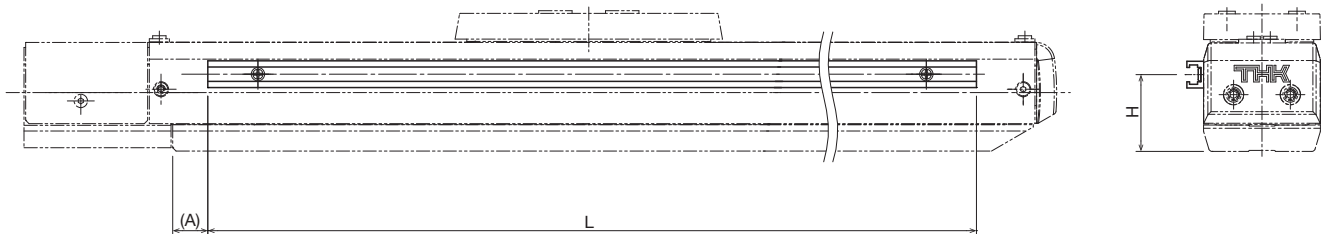
Optional: Sensor symbol

Symbol	
□1	□2
R	6

* Symbol □1 represents the mounting position for sensor rail and sensor. No symbol is given for the case of stroke 100mm or shorter.

Symbol □2 represents the types of sensors.

Symbol 1: Sensor rail

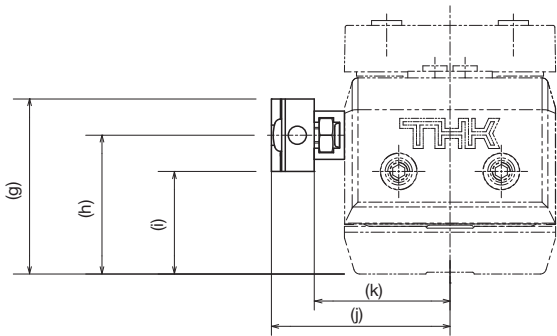


Unit: mm

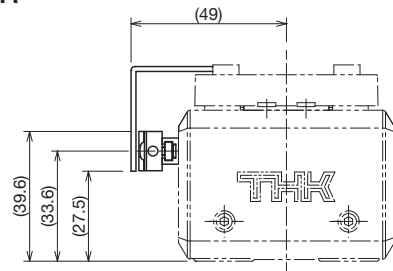
Model	H	(A)	L
KRF3	23	10.5	Stroke +80
KRF4 / KRF4R	32.5	10.5	
KRF5 / KRF5R	37.5	26	
KRF6 / KRF6R	33.7	35	

Symbols J, M: Proximity sensor GX-F12* (Panasonic Industrial Devices SUNX Co., Ltd.)

KRF3/4/4R/5/5R



KRF6/6R



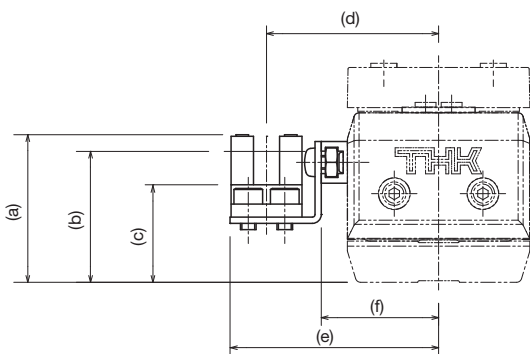
Sensor dog width: 26mm

Unit: mm

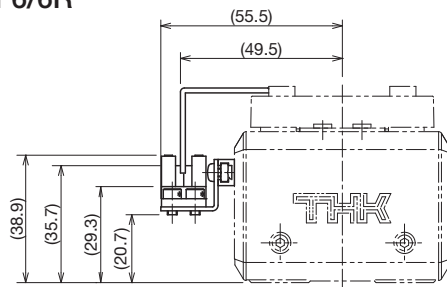
Model	g	h	i	j	k
KRF3	29	23	17	29.6	22.5
KRF4 / KRF4R	38.5	32.5	26.5	34.6	27.5
KRF5 / KRF5R	43.5	37.5	31.5	39.6	32.5

Symbol 6: Photo sensor EE-SX674 (OMRON Corporation)

KRF3/4/4R/5/5R



KRF6/6R



Sensor dog width: 26mm

Unit: mm

Model	a	b	c	d	e	f
KRF3	28.3	25.1	18.7	33	40	22.5
KRF4 / KRF4R	37.8	34.6	28.2	38	45	27.5
KRF5 / KRF5R	42.8	39.6	33.2	43	50	32.5

GR: Change the cover color to gray

As an option for KRF, the cover color can be changed from red to gray.



If the GR is not included in the model configuration, cover will be red.

Intermediate flange

Several types of intermediate flanges for mounting motors are available.

If choosing "0" or "1" as with/without motor for model of type without motor, specify an intermediate flange that matches the motor used.

Table: Table of Motors Used and Corresponding Intermediate Flanges

Motor type			Rated output	Flange angle	KRF3	KRF4	KRF5	KRF6				
AC servo motor	Yaskawa Electric Corporation	Σ-Vmini	SGMMV-A1	10W	□25	AN	AN	AN	-			
			SGMMV-A2	20W		AN	AN	AN	-			
			SGMMV-A3	30W		-	AN	AN	-			
		Σ-V	50W	SGMJV-A5	□40	-	AQ	AQ	AQ			
				SGMAV-A5		-	AQ	AQ	AQ			
				SGMJV-01		-	-	-	AQ			
			100W	SGMAV-01	-	-	-	AQ				
				Mitsubishi Electric Corporation	J2-Jr	□28	HC-AQ013	10W	AM	AM	AM	-
							HC-AQ023	20W	AM	AM	AM	-
	HC-AQ033	30W	-				AM	AM	-			
	J3	□25	HG-AK0136		10W	AN	AN	AN	-			
			HG-AK0236		20W	AN	AN	AN	-			
			HG-AK0336		30W	-	AN	AN	-			
		50W	□40	HF-MP053	-	AQ	AQ	AQ				
				HF-KP053	-	AQ	AQ	AQ				
				HF-MP13	-	-	-	AQ				
	100W	□40	HF-KP13	-	-	-	AQ					
			J4	□40	HG-MR053	50W	-	AQ	AQ	AQ		
					HG-KR053	-	AQ	AQ	AQ			
	HG-MR13	100W			-	-	-	AQ				
	HG-KR13	-			-	-	AQ					
	Tamagawa Seiki Co., Ltd.	TBL-III	□40	TS4602	50W	-	AQ	AQ	AQ			
				TS4603	100W	-	-	-	AQ			
	Panasonic Corporation	MINAS A5	□38	MSMD5A	50W	-	AP	AP	AP			
				MSMD01	100W	-	-	-	AP			
				MSME5A	50W	-	AP	AP	AP			
				MSME01	100W	-	-	-	AP			
		MINAS A4	□38	MSMD5A	50W	-	AP	AP	AP			
				MSMD01	100W	-	-	-	AP			
	Sanyo Denki Co., Ltd.	SANMOTION R	□40	R2AA04003	30W	-	AQ	AQ	AQ			
				R2AA04005	50W	-	AQ	AQ	AQ			
				R2AA04010	100W	-	-	-	AQ			
	OMRON Corporation	OMNUC G5	□40	R88M-K05030	50W	-	AQ	AQ	AQ			
				R88M-K10030	100W	-	-	-	AQ			
	Fanuc Corporation	β is series	□40	β is 0.2/5000	50W	-	AQ	AQ	AQ			
				β is 0.3/5000	100W	-	-	-	AQ			
Keyence Corporation	SV	□40	SV-M05	50W	-	AQ	AQ	AQ				
			SV-M10	100W	-	-	-	AQ				
	MV	□40	MV-M05	50W	-	AQ	AQ	AQ				
			MV-M10	100W	-	-	-	AQ				
Stepper motor	Oriental Motor Co. Ltd.	α step	□28	AR2*	AS	-	-	-				
				AR46, ARL46, AZ46	-	AR	AR	-				
				AR6*, ARL6*, AZ6*	-	-	-	AU				
		5-phase	CVK	□28	CVK52*	AS	AS	AS	-			
					CVK54*	-	AR	AR	AR			
					CVK56*	-	-	-	AU			
	2-phase	CMK	□28	CMK22*	AS	AS	AS	-				
				CMK24*	-	AR	AR	-				
				CMK26*	-	-	-	AT				
		CVK	□28	CVK22*	AS	AS	AS	-				
				CVK24*	-	AR	AR	-				
				CVK26*	-	-	-	AT				

Note 1) The symbols in the table indicate the housing A and intermediate flange.

Note 2) For motor coupling, contact THK.

Note 3) If the motor's maximum torque mounted exceeds the permissible input torque (refer to P.5, 7, 11 15), take safety measures, such as torque restrictions.

Motor mounting plate for return

Return symbol configuration

Several types of motor mounting plates are available.

Specify the return symbol corresponding to the motor used.

$$\frac{\text{WQ}}{(1)} - \frac{\text{M}}{(2)}$$

(1) Motor mounting plate type

Refer to the table below "Return symbols corresponding to motors used".

(2) Method for fixing the motor shaft

K: Key

D: D-cut

M: Friction tightening

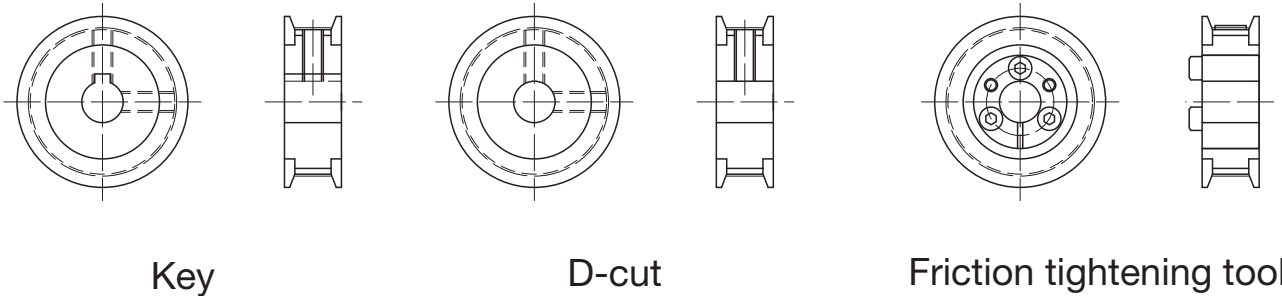


Figure: Method for fixing the motor shaft

Table: Return symbols corresponding to motors used

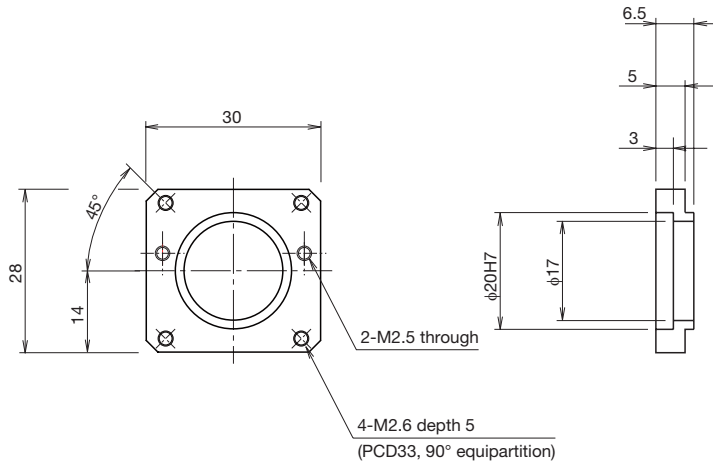
Motor type		Rated output	Flange angle	KRF4R	KRF5R	KRF6R		
AC servo motor	Yaskawa Electric Corporation	Σ-V mini	SGMMV-A2	20W	□25	WN-D	WN-D	-
			SGMMV-A3	30W		WN-D	WN-D	-
		Σ-V	SGMJV-A5A	50W	□40	WQ-K	WQ-K	WQ-K,WQ-M
						SGMAV-A5A	WQ-K	WQ-K
			SGMJV-01A	100W		-	-	WQ-K,WQ-M
						SGMAV-01A	-	-
	Mitsubishi Electric Corporation	J2-Jr	HC-AQ023	20W	□28	WM-D	WM-D	-
			HC-AQ033	30W		WM-D	WM-D	-
		J3	HF-MP053	50W	□40	WQ-D	WQ-D	WQ-D,WQ-M
						HF-KP053	WQ-D	WQ-D
			HF-MP13	100W		-	-	WQ-D,WQ-M
						HF-KP13	-	-
		J4	HG-MR053	50W	□40	WQ-D	WQ-D	WQ-D,WQ-M
						HG-KR053	WQ-D	WQ-D
			HC-MR13	100W		-	-	WQ-D,WQ-M
						HC-KR13	-	-
	Tamagawa Seiki Co., Ltd.	TBL-i II	TS4602	50W	□40	WQ-D	WQ-D	WQ-D,WQ-M
			TS4603	100W		-	-	WQ-D,WQ-M
	Panasonic Corporation	MINAS A4	MSMD5A	50W	□38	WP-K	WP-K	WP-K,WP-M
			MSMD01	100W		-	-	WP-K,WP-M
MINAS A5		MSMD5A	50W	□38	WP-K	WP-K	WP-K,WP-M	
					MSMD01	100W	-	-
		MSME5A	50W		□38	WP-K	WP-K	WP-K,WP-M
						MSME01	100W	-
Sanyo Denki Co., Ltd.	SANMOTION R	RAA04005	50W	□40	-	-	WQ-M	
		RAA04010	100W		-	-	WQ-M	
OMRON Corporation	OMNUC G5	R88M-K05030	50W	□40	WQ-K	WQ-K	-	
Keyence Corporation	SV	SV-M05	50W	□40	WQ-K	WQ-K	WQ-K,WQ-M	
		SV-M10	100W		-	-	WQ-K,WQ-M	
	MV	MV-M05	50W	□40	WQ-D	WQ-D	WQ-D,WQ-M	
		MV-M10	100W		-	-	WQ-D,WQ-M	

For KRF3

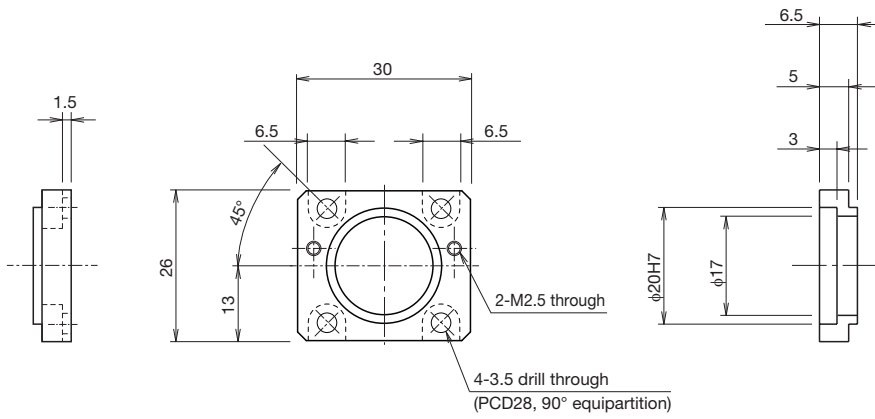
KRF*	··· Actuator model
●	··· Housing A
◇	··· Intermediate flange

Intermediate flange

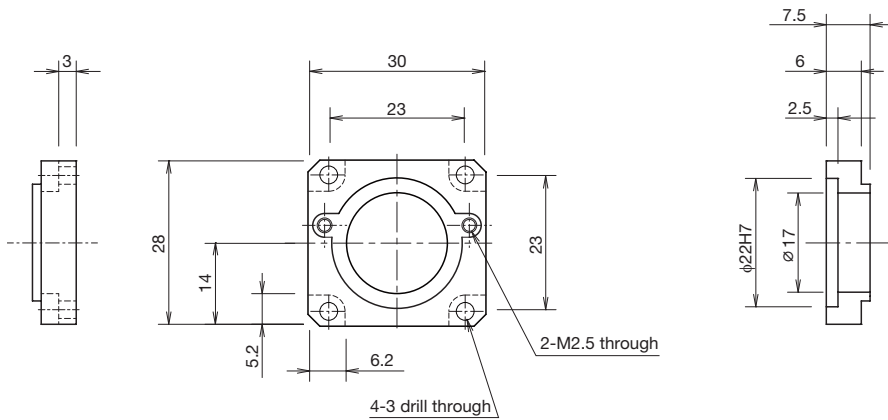
KRF3
AM



KRF3
AN



KRF3
AS



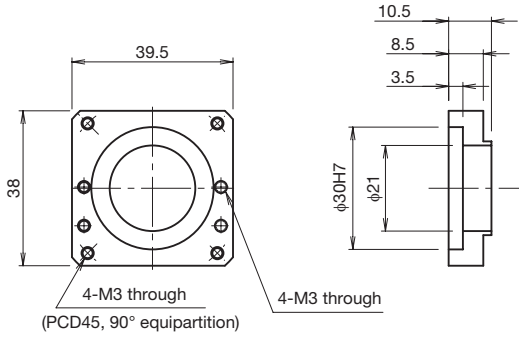
Note) For dimension of A0, see P.6.

For KRF4

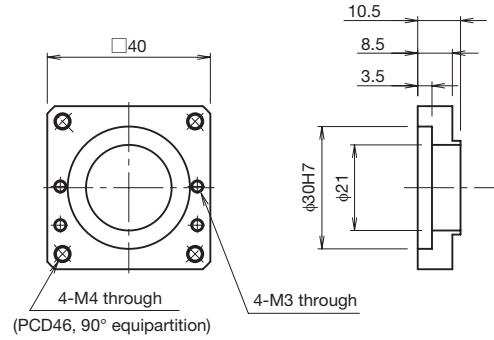
KRF*	··· Actuator model
●◇	··· ●: Housing A ◇: Intermediate flange

Intermediate flange

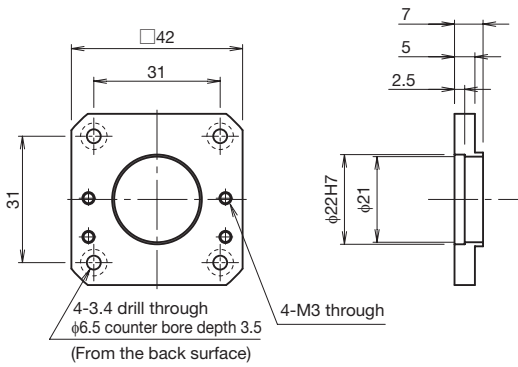
KRF4
AP



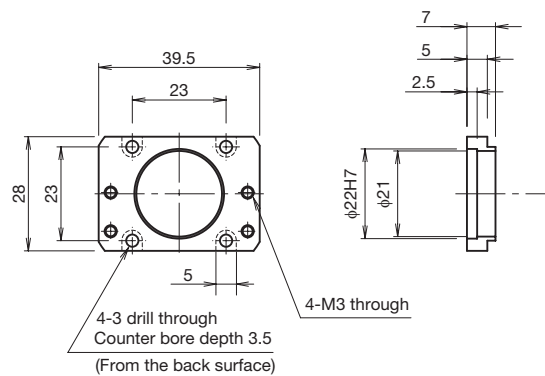
KRF4
AQ



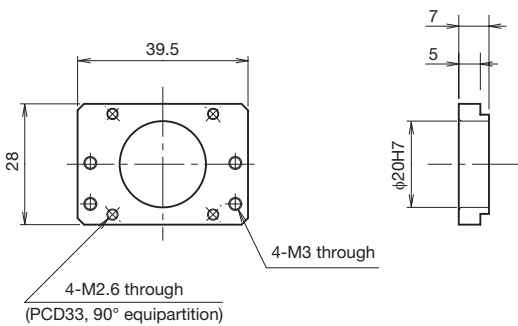
KRF4
AR



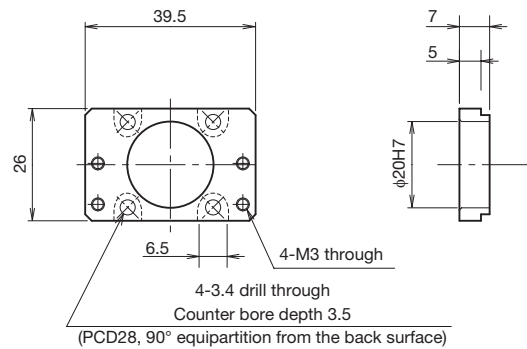
KRF4
AS



KRF4
AM



KRF4
AN

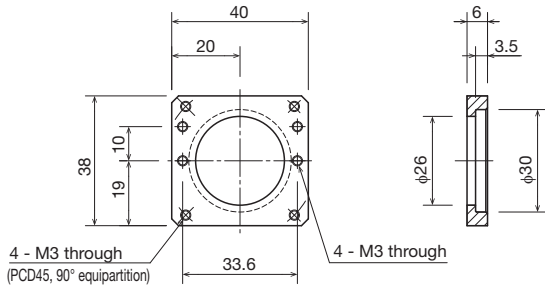


Note) For dimension of A0, see P.8.

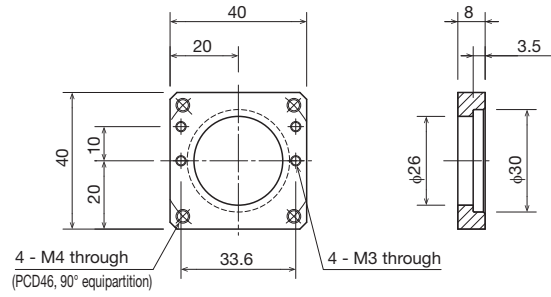
For KRF4R

Return specification (motor mounting plate)

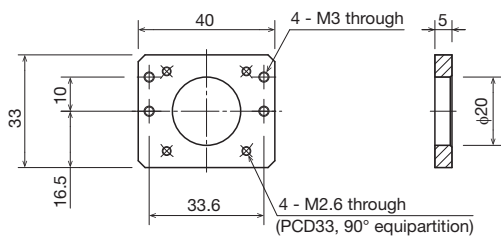
KRF4R
WP



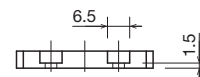
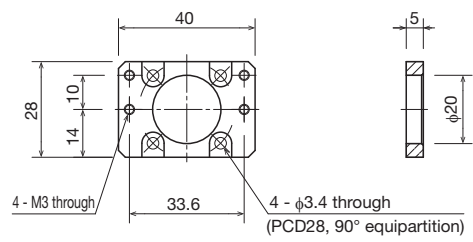
KRF4R
WQ



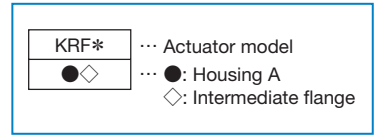
KRF4R
WM



KRF4R
WN

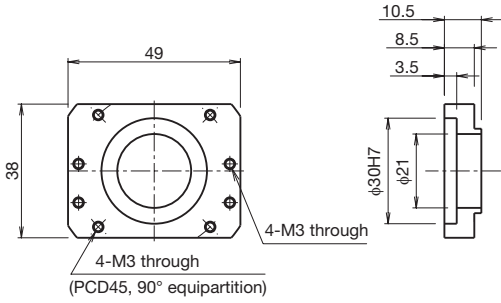


For KRF5

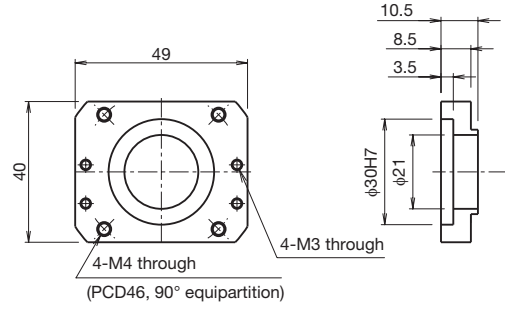


Intermediate flange

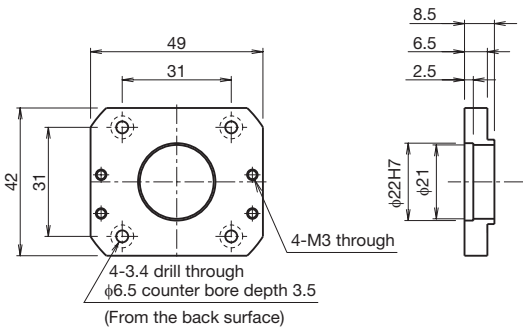
KRF5
AP



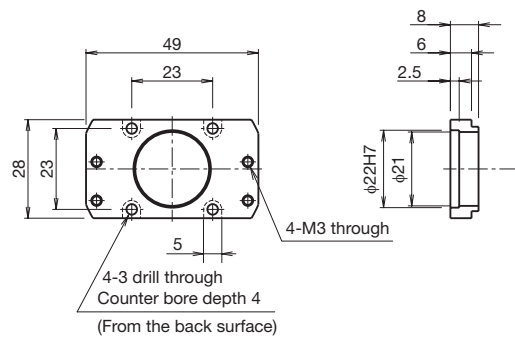
KRF5
AQ



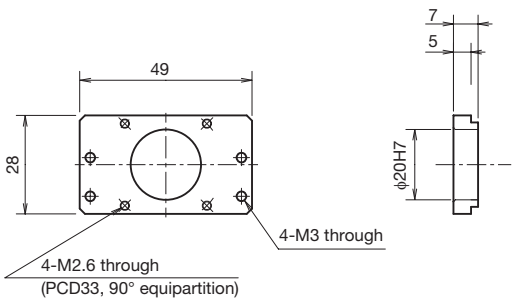
KRF5
AR



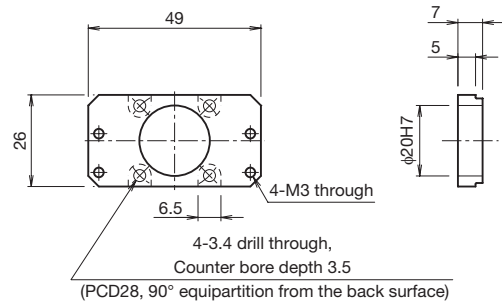
KRF5
AS



KRF5
AM



KRF5
AN

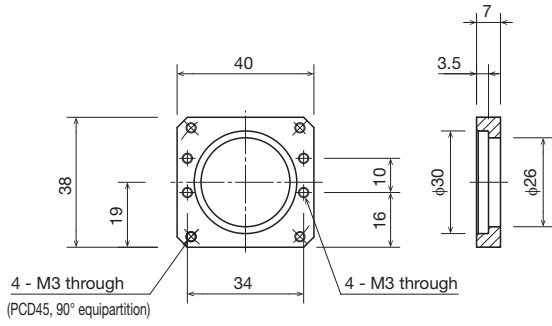


Note) For dimension of A0, see P.10.

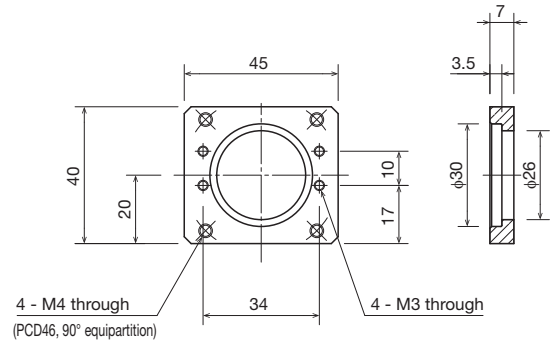
For KRF5R

Return specification (motor mounting plate)

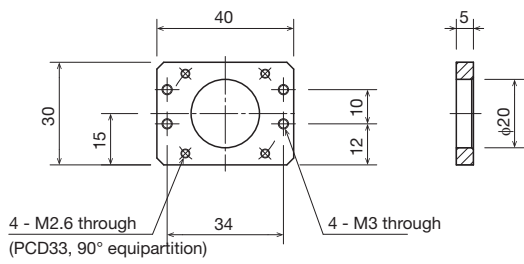
KRF5R
WP



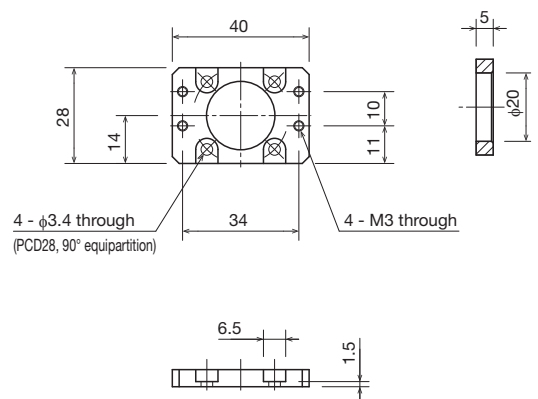
KRF5R
WQ



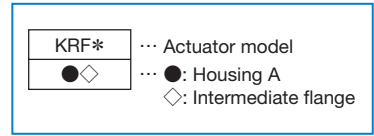
KRF5R
WM



KRF5R
WN

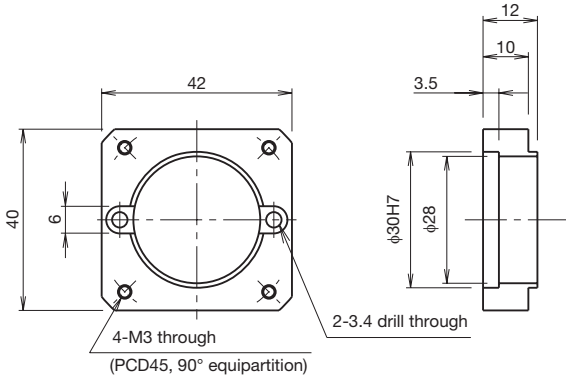


For KRF6

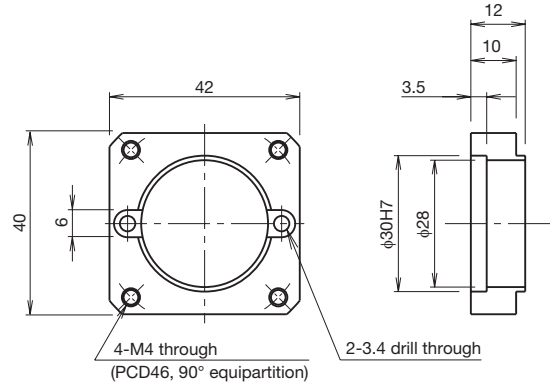


Intermediate flange

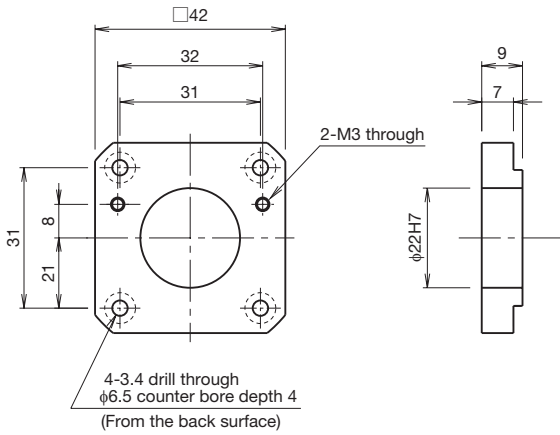
KRF6
AP



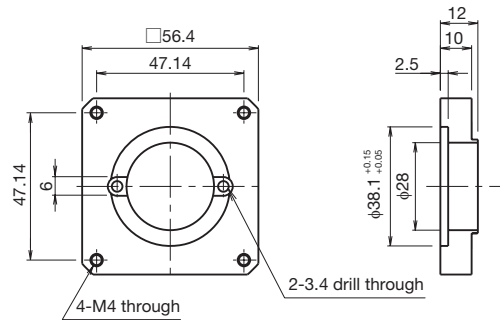
KRF6
AQ



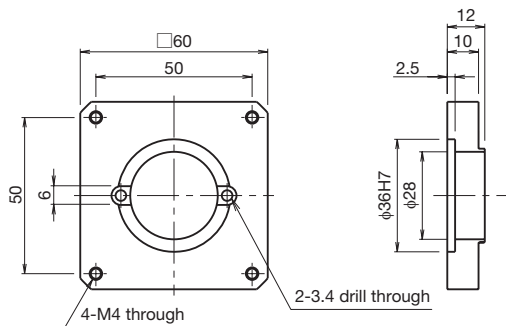
KRF6
AR



KRF6
AT



KRF6
AU

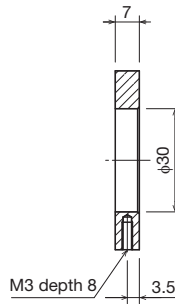
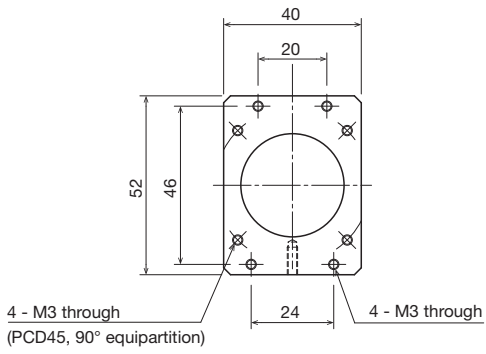


Note) For dimension of A0, see P.12.

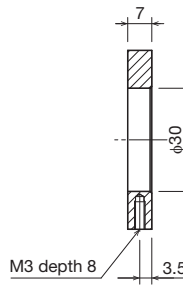
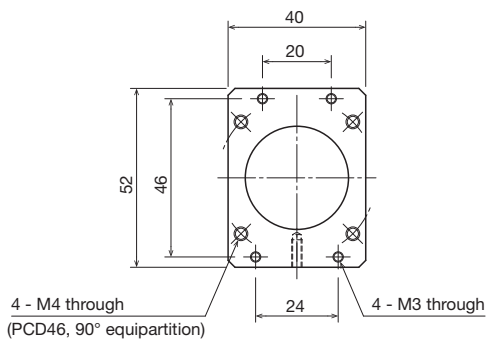
For KRF6R

Return specification (motor mounting plate)

KRF6R
WP



KRF6R
WQ



MEMO

MEMO

MEMO



Precautions on Use

● Operation

- Do not unnecessarily disassemble the actuator or control device. Doing so may allow foreign objects to enter or reduce functionality.
- Do not drop or knock the actuator or control device. Doing so may cause injury or damage the unit. If the product is dropped or impacted, functionality may be reduced even if there is no surface damage.

● Environment

Wrong environment can cause failures of the actuator and control devices. The best place to use the product is as follows:

- Actuator: A place with an ambient temperature from 0 to 40°C and humidity of 80% RH or lower that will not expose the product to freezing or condensation.
- A place free from corrosive gas and flammable gas.
- A place free from electrically conductive powder (such as iron powder), dust, oil mist, cutting fluid, moisture, salt, and organic solvent.
- A place free from direct sunlight and radiant heat.
- A place free from strong electric and magnetic fields.
- A place where vibration or impact is not transmitted to the unit.
- A place that is easily accessible for service and cleaning purposes.

● Safety Precautions

- When the actuator is in motion or about to be in motion, do not touch any moving parts. Do not go near the actuator when it is in motion.
- Before performing installation, adjustment, checking, or services regarding and the connected peripherals, ensure that all power is disconnected. In addition, take countermeasures to prevent anyone other than the operator from turning on the power.
- If two or more people are involved in the operation, confirm the procedures such as sequences, signs, and abnormalities in advance, and appoint another person for monitoring the operation.
- Before operation, please read thoroughly and obey "Manipulating industrial robots - Safety" (JIS B8433) and "Ordinance on Industrial Safety and Health" (Ministry of Health, Labor and Welfare).
- Operation of the actuator over the torque limit value leads to damage of parts or injury. Please keep the torque limit settings of parameters within THK specifications.
- Although a stopper is installed inside the product, it is intended to limit the stroke and therefore may be damaged in case of a hard collision.

● Lubrication

- Thoroughly remove anti-rust oil and feed lubricant before using the product.
- In order to effectively use the actuator, lubrication is required. Insufficient lubrication may increase abrasion on the rolling part and shorten service life.
- Do not use a mix of lubricants with different physical properties.
- Please contact THK if using special lubricants.
- When adopting oil lubrication, contact THK for details.
- The greasing interval may vary depending on the usage conditions, so THK recommends determining a greasing interval during the initial inspection.

● Storage

- When storing the actuator, enclose it in a package designated by THK and store it in a horizontal orientation while avoiding high temperature, low temperature and high humidity.



Compact Series KRF

- The actual products may differ from the pictures and photographs in this catalog.
- Outward appearances and specifications are subject to change without notification for the purpose of improvement.
- Although great care has been taken in the production of this catalog, THK will not take any responsibility for damage resulting from typographical errors or omissions.
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