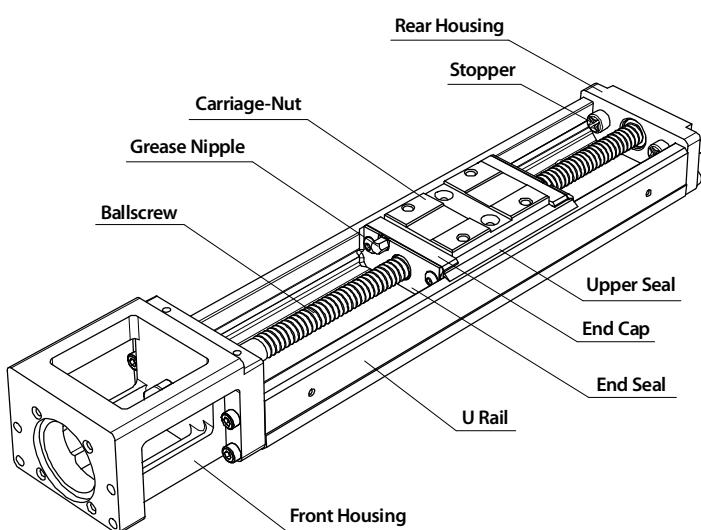


1

KM Series

A. Construction

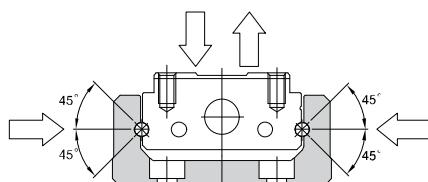


B. Characteristics

KM series consist of linear guideway unit and ballscrew unit. For saving space, PMI combine the carriage of linear guideway and nut of ballscrew to a integral Carriage-Nut. The carriage-nut cooperate with the U rail designed for high rigidity to achieve the high rigidity and high accuracy in the minimal space, especially to saving time of installation. Moreover, the design of two rows with Gothic-arch groove and contact angle of 45° can bear four directional loading.

Four Directional Equal Load

KM series are applied two rows with Gothic-arch groove and designed to contact angle of 45° which enables it to carry an equal load in radial, reversed radial and lateral directions to suit to any mounting orientation.



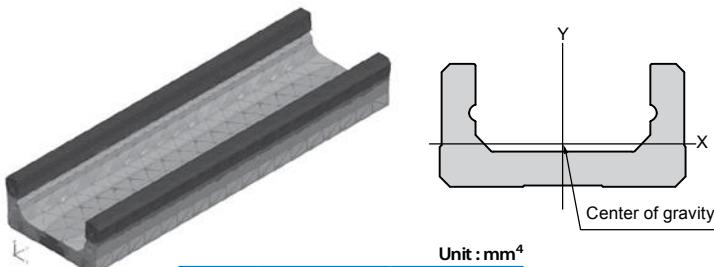
Saving Space

Combine the carriage of linear guideway and nut of ballscrew to a carriage-nut, KM series can achieve the best use of space.

Unit : mm		
Model	H	W
KM26	26	50
KM30	30	60
KM 33	33	60
KM 45	45	80
KM 46	46	86
KM 55	55	100
KM 65	65	130

High Rigidity

Base on the optimal analysis of FEM for the shape of U rail, it has the balance between light weight and high rigidity.



Unit : mm ⁴		
Model	I _x	I _y
KM26	1.6×10 ⁴	1.5×10 ⁵
KM30	4.4×10 ⁴	3.3×10 ⁵
KM 33	6.1×10 ⁴	3.8×10 ⁵
KM 45	1.5×10 ⁵	1.1×10 ⁶
KM 46	2.5×10 ⁵	1.6×10 ⁶
KM 55	2.3×10 ⁵	2.3×10 ⁶
KM 65	4.7×10 ⁵	5.9×10 ⁶

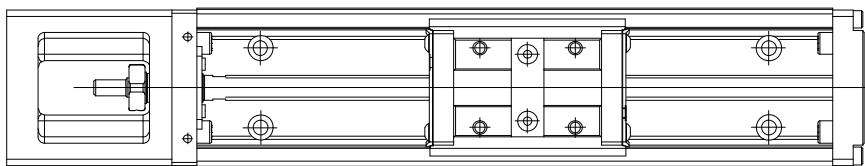
Note* I_x : Geometrical moment of inertia around X axis
I_y : Geometrical moment of inertia around Y axis

High Accuracy

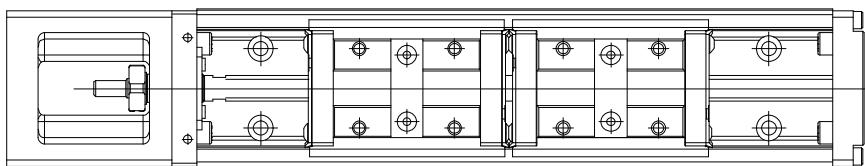
The design of two rows with Gothic-arch groove and stable manufacturing technology can control the variation by load at the minimum. It can provide the smooth feed with high accuracy.

C. Carriage-Nut Type

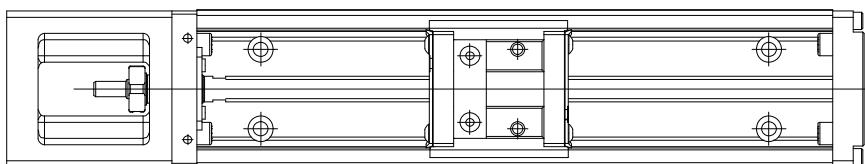
A Type : A single carriage-nut with standard length



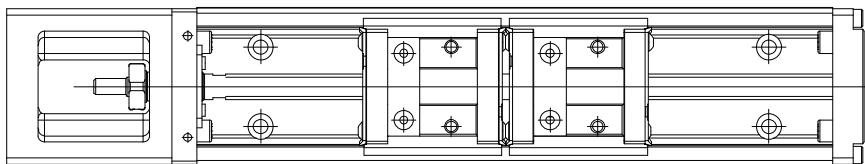
B Type : Two carriage-nuts with standard length



C Type^{*} : A single carriage-nut with short length

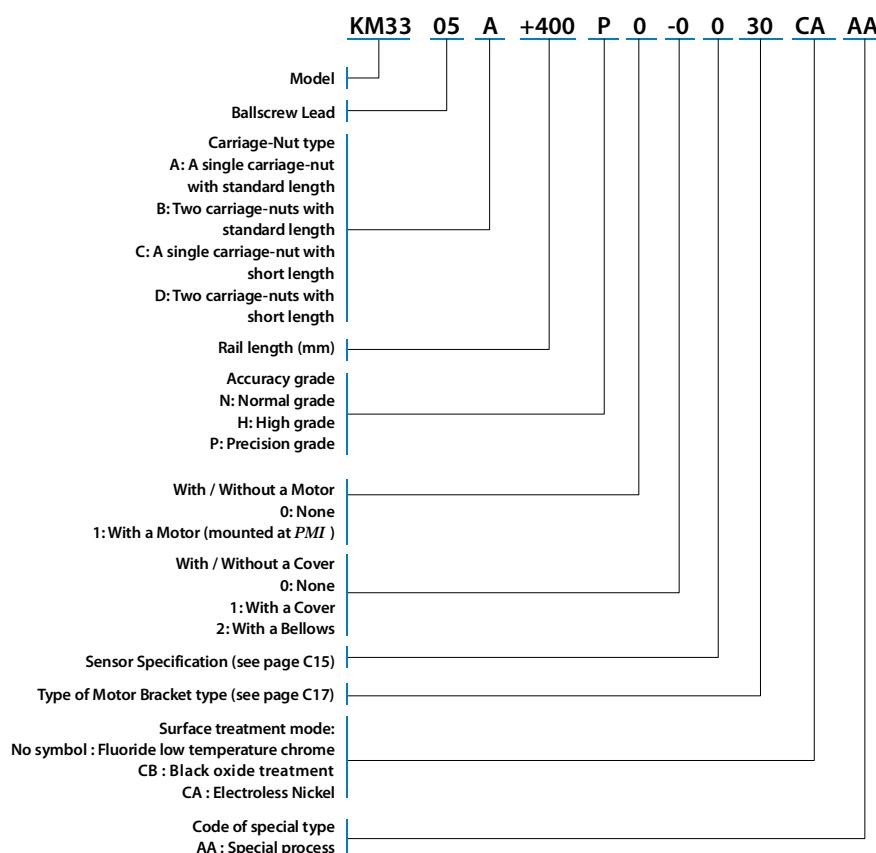


D Type^{*} : Two carriage-nuts with short length



* C and D type are only optional for KM30, KM33, KM4510 and KM4610 model.

D. Description of Specification

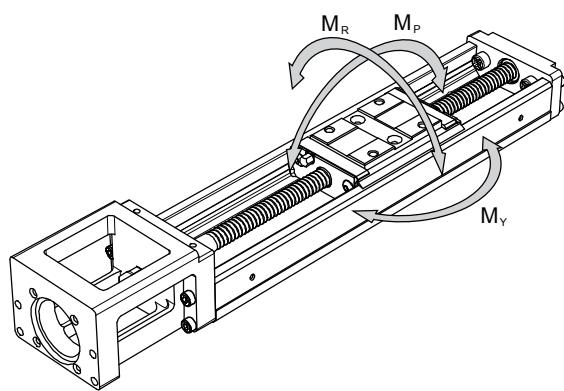


E. Load Ratings

The load ratings of KM series are divided to linear guideway and ballscrew, the load ratings of each part are shown below.

Model	Linear Guideway				Ballscrew								
	Basic dynamic load rating C (kN)		Basic static load rating C ₀ (kN)		Basic dynamic load rating C _a (kN)		Basic static load rating C _{qa} (kN)		Ballscrew diameter (mm)	Lead (mm)	Thread minor diameter (mm)	Ball center to center diameter (mm)	
	A √ B	C √ D	A √ B	C √ D	Normal N	High, Precision H √ P	Normal N	High, Precision H √ P					
KM 26	KM 26 02	7.99	-	15.23	-	1.79	2.50	2.94	4.02	8	2	6.6	8.3
	KM 26 06					0.88	1.18	1.18	1.67		6	6.6	8.3
KM 30	KM 30 05	12.21	7.91	22.11	11.90	2.25	2.94	4.31	5.10	12	5	10.3	12.4
	KM 30 10					2.16	2.84	3.72	4.51		10	9.9	12.4
KM 33	KM 33 05	12.21	7.91	22.11	11.90	2.25	2.94	4.31	5.10	12	5	10.3	12.4
	KM 33 10					2.16	2.84	3.72	4.51		10	9.9	12.4
KM 45	KM 45 10	16.26		23.33	5.00	6.66	8.92	11.86		15	10	12.3	15.6
	KM 45 20	26.35	16.26	46.65	23.33	3.72	5.00	6.37	8.53		20	12.3	15.6
KM 46	KM 46 10	16.26		23.33	5.00	6.66	8.92	11.86		15	10	12.3	15.6
	KM 46 20	26.35	16.26	46.65	23.33	3.72	5.00	6.37	8.53		20	12.3	15.6
KM 55 20		36.73	-	65.29	-	4.61	6.08	9.11	12.15	20	20	17.3	20.6
KM 65 25		50.75	-	81.62	-	6.72	9.02	17.32	18.91	25	25	21.6	25.7

F. Static Permissible Moments



Unit : N·m

Model	Static Permissible Moments												
	M _P				M _Y				M _R				
	A	B	C	D	A	B	C	D	A	B	C	D	
KM 26	KM 26 02	107.3	501.8	-	-	107.3	501.8	-	-	278.6	557.3	-	-
	KM 26 06												
KM 30	KM 30 05	156.6	858.5	43.8	326.4	156.6	858.5	43.8	326.4	462.0	924.0	248.8	497.6
	KM 30 10												
KM 33	KM 33 05	156.6	858.5	43.8	326.4	156.6	858.5	43.8	326.4	462.0	924.0	248.8	497.6
	KM 33 10												
KM 45	KM 45 10	575.0	2678.0	120.0	1245.6	575.0	2678.0	120.0	1245.6	1334.2	2668.5	762.4	1524.8
	KM 45 20			-	-			-	-				
KM 46	KM 46 10	575.0	2678.0	120.0	1245.6	575.0	2678.0	120.0	1245.6	1397.9	2795.8	798.8	1597.6
	KM 46 20			-	-			-	-				
KM 55	KM 55 20	858.4	4617.2	-	-	858.4	4617.2	-	-	2347.2	4694.4	-	-
KM 65	KM 65 25	1299.6	7001.3	-	-	1299.6	7001.3	-	-	3917.9	7835.8	-	-

Note*: The static permissible moments of B and D type are base on two carriage nuts used in closed contact with each other.

G. Accuracy Grade

KM series is classified into normal grade (N) , high (H) and precision grade (P), the standards are shown below.

Model	Rail Length (mm)	Positioning Repeatability (mm)			Positioning Accuracy (mm)			Running of Parallelism(mm)			Backlash (mm)			Starting Torque (N-cm)		
		Nomal N	High H	Precision P	Nomal N	High H	Precision P	Nomal N	High H	Precision P	Nomal N	High H	Precision P	Nomal N	High H	Precision P
KM 26	150															
	200	± 0.01	± 0.005	± 0.003	-	0.06	0.02	-	0.025	0.01	0.02	0.01	0.003	2	1.5	4
	250															
	300															
KM 30	150															
	200															
	300	± 0.01	± 0.005	± 0.003	-	0.06	0.02	-	0.025	0.01	0.02	0.02	0.003	7	7	15
	400															
	500															
	600															
KM 33	150															
	200															
	300	± 0.01	± 0.005	± 0.003	-	0.06	0.02	-	0.025	0.01	0.02	0.02	0.003	7	7	15
	400															
	500															
	600															
KM 45	340															
	440															
	540	± 0.01	± 0.005	± 0.003	-	0.1	0.025	-	0.035	0.015	0.02	0.02	0.003	10	10	15
	640															
	740															
	940															
KM 46	340															
	440															
	540	± 0.01	± 0.005	± 0.003	-	0.1	0.025	-	0.035	0.015	0.02	0.02	0.003	10	10	15
	640															
	740															
	940															
KM 55	980															
	1080															
	1180	± 0.01	± 0.005		-	0.25	0.04	-	0.05	0.03	0.05	0.05	0.003	12	12	17
	1280															
	1380															
	1680	± 0.012														
KM 65	980															
	1180	± 0.01	± 0.008	± 0.005	-	0.2	0.035	-	0.05	0.025	0.05	0.05	0.005	12	12	20
	1380															
	1680														15	15

H. Maximum Travel Speed and the Maximum Length

KM series is limited by the dangerous speed of the ballscrew and the DN value regardless, the maximum travel speed and the maximum length are shown below.

Model	Ballscrew Lead	Rail Length	Maximum Travel Speed (mm/s)			Maximum Length			Unit : mm
			Normal N	High H	Precision P	Normal N	High H	Precision P	
KM 26	2	150							
		200	280	280	280	300	300	300	
		250							
		300							
	6	150							
		200							
		250							
		300							
KM 30	5	150							
		200							
		300	390	390	550	600	600	600	
		400							
		500							
		600	340	340	340				
	10	150							
		200							
		300	790	790	1100	600	600	600	
		400							
		500							
		600	650	650	650				
KM 33	5	150							
		200							
		300	390	390	550	600	600	600	
		400							
		500							
	10	600	340	340	340				
		150							
		200							
		300	790	790	1100	600	600	600	
		400							
		500				980			
		600	650	650	650				

Model	Ballscrew Lead	Rail Length	Maximum Travel Speed (mm/s)			Maximum Length		
			Normal N	High H	Precision P	Normal N	High H	Precision P
KM 45	10	340						
		440						
		540						
		640						
		740	520	520	740	940	940	740
	20	940	430	430	-			
		340						
		440						
		540	1050	1050	1480	940	940	740
		640						
KM 46	10	740						
		940	840	840	-			
		340						
		440						
		540	520	520	740	940	940	740
	20	640						
		740						
		940	430	430	-			
		340						
		440						
KM 55	20	540	1050	1050	1480	940	940	740
		640						
		740						
		940	840	840	-			
		980	800	800	1120			
KM 65	25	1080			900			
		1180	740	740	740	1380	1380	1180
		1280	620	620	-			
		1380	530	530	-			
		980						
		1180	800	800	1120	1680	1680	1380
		1380			830			
		1680	550	500	-			

I. Life Calculation

KM series consists of a linear guideway, a ballscrew and a support bearing. The calculation of nominal life of each component is shown below. The nominal life is defined as the total running distance that 90% of identical linear guideways or ballscrew in a group, when they are applied under the same conditions, can work without developing flaking.

Linear Guideway

$$L \otimes \left(\frac{f_c}{f_w} \cdot \frac{C}{P} \right)^3 \otimes 50 \text{ km}$$

L : Nominal life (km)
 f_c: Contact factor (see Table 1)
 f_w: Load factor (see Table 2)
 C: Basic dynamic load rating (N)
 P: Calculated applied load (N)

Carriage-Nut Type	Contact factor f _c
A ∨ C	1.00
B ∨ D	0.81

Ballscrew and Bearing

$$L \otimes \left(\frac{1}{f_w} \cdot \frac{C_a}{P_a} \right)^3 \otimes 10^6 \text{ rev}$$

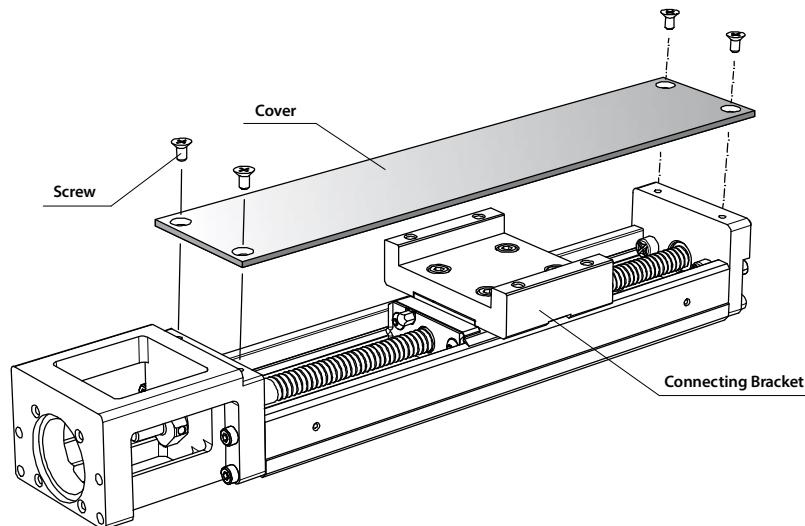
L: Nominal life (rev)
 f_w: Load factor (see Table 2)
 C_a: Basic dynamic load rating (N)
 P_a: Applied axial load (N)

Motion Condition	Operating Speed	Load factor f _w
No Impact & Vibration	V ≤ 15m/min	1.0 ∙ 1.2
Slight Impact & Vibration	15 < V ≤ 60m/min	1.2 ∙ 1.5
Moderate Impact & Vibration	60 < V ≤ 120m/min	1.5 ∙ 2.0
Strong Impact & Vibration	V ≥ 120m/min	2.0 ∙ 3.5

J. Options

Cover

KM series provides cover and transfer seat option. The detail size could be refered by specification tables of product, please.



Bellows

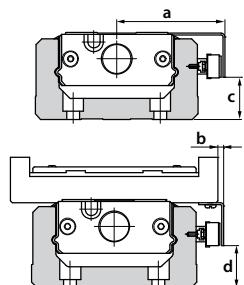
For KM series, a bellows is available for option. Please contact PMI .

Sensor

For KM series, optional proximity sensors and photo sensors are available as an option. Models equipped with a sensor are provided with a dedicated sensor rail / detecting plate. Please see the table below.

Symbol	Description	Type	Accessory
0	None	-	-
1	with Sensor rail (3 units)	-	Mounting Screw
2	Photo sensor (3 units)	EE-SX671 (Omron)	Mounting Screw / Nut, Detecting Plate, Sensor Rail, Mounting Plate, Connector (EE-1001)
3	Photo sensor (3 units)	EE-SX674 (Omron)	Mounting Screw / Nut, Detecting Plate, Sensor Rail, Mounting Plate, Connector (EE-1001)
4	Proximity sensor a-contact (On when close, 3 units)	GX-F12A(Panasonic)	Mounting Screw/Nut \ Detecting Plate \ Sensor Rail
7	Proximity sensor b-contact (On when away, 3 units)	GX-F12B(Panasonic)	Mounting Screw/Nut \ Detecting Plate \ Sensor Rail
A	Proximity sensor a-contact (Single) b-contact (Double)	GX-F12A(Single) \ GX-F12B(Double)	Mounting Screw/Nut \ Detecting Plate \ Sensor Rail

The dimension of installation for sensor:

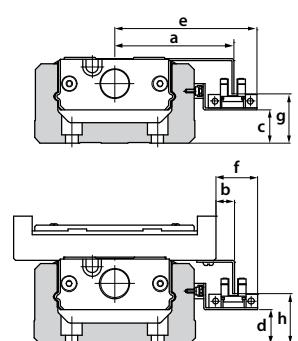


Panasonic GX-F12A \ GX-F12B

Model	a	b	c	d
KM 26	38.9	7.9	6.2	6.2
KM 30	44	4	8.2	8.2
KM 33	44	1	9.2	10
KM 45	54.0	2.0	13.2	13
KM 46	57.0	1.0	22.2	23
KM 55	64	2	21.2	22.7
KM 65	79.0	-6.0	23.3	23.3

Unit : mm

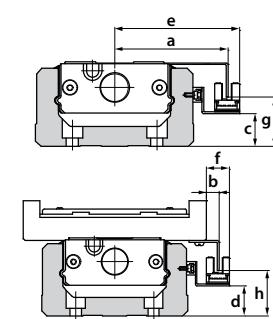
Omron EE-SX671



Model	a	b	c	d	e	f	g	h
KM 26	46.0	15.0	2.0	2.0	58.5	27.5	10.5	10.5
KM 30	50.9	10.9	3.8	3.8	63.4	23.4	12.8	14
KM 33	50.9	7.9	5.0	5.0	63.4	20.4	13.8	15
KM 45	60.5	8.9	8.8	8.8	73.4	21.4	17.7	19
KM 46	63.9	7.9	18.0	18.0	76.4	20.4	26.5	28
KM 55	72	8.8	17.0	17.0	83.3	21.3	25.5	27
KM 65	85.8	0.8	19.0	19.0	98.3	13.3	27.7	27.7

Unit : mm

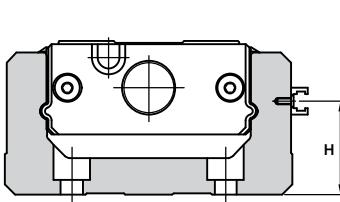
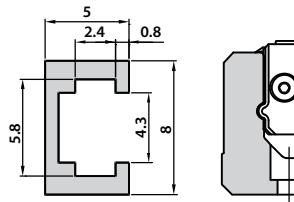
Omron EE-SX674



Model	a	b	c	d	e	f	g	h
KM 26	43.7	12.7	1.8	1.8	50.0	19.0	10.8	10.8
KM 30	48.6	8.6	3.6	3.6	54.9	14.9	12.8	12.6
KM 33	48.6	5.6	4.8	4.8	54.9	11.9	13.8	14
KM 45	58.6	6.6	8.8	8.8	64.9	12.9	18.2	19.3
KM 46	61.6	5.6	17.8	17.8	67.9	11.9	26.8	28.1
KM 55	68.5	6.9	16.8	16.8	74.8	12.8	26.8	27.5
KM 65	83.5	-1.5	19.0	19.0	89.8	4.8	28.3	28.3

Unit : mm

The dimension of sensor rail:



Model	H
KM 26	12
KM 30	14
KM 33	15
KM 45	19
KM 46	28
KM 55	27
KM 65	30

Intermediate Flange

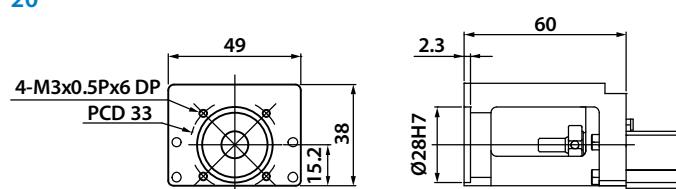
KM series allow different motors to be attached by intermediate flange. Please see the table below when ordering.

Brand of Motor	Model	Unit : mm						
		KM 26	KM 30	KM 33	KM 45	KM 46	KM 55	KM 65
Yaskawa Electric AC servomotor	SGMAH-A3(30W)	2A	3A	3A	4A	4A		
	SGMAH-A5(50W)	2A	3A	3A	4A	4A		
	SGMAH-01(100W)	3A	3A	4A	4A			
	SGMPH-01(100W)				40	40	50	6C
	SGMAH-02(200W)				40	40	50	6C
	SGMAH-04(400W)				40	40	50	6C
	SGMPH-02(200W)					5C	60	
	SGMPH-04(400W)					5C	60	
	SGMAH-08(750W)					5C	6G	
Mitsubishi Electric AC servomotor	HC-MFS053(50W)	2A	3A	3A	4A	4A		
	HC-MFS13(100W)	3A	3A	4A	4A			
	HC-KF523(200W)				40	40	50	6C
	HC-KF523(200W)				40	40	50	6C
	HC-MFS43(400W)				40	40	50	6C
	HC-KF543(400W)				40	40	50	6C
	HC-MFS73(750W)					5C	6G	
	HC-KF573(750W)					5C	6G	
Matsushita Electric AC servomotor	MSMD5A(50W)	2D	3D	3D	4D	4D		
	MSMD01(100W)		3D	3D	4D	4D		
	MQMA01(100W)					40		
	MSMD02(200W)					40		
	MSMD04(400W)					40		
	MSMD08(750W)						5F	6F
Fastech Stepping motor	EzM-28	2G						
	EzM-42	2H	3H	3H	4H	4H		
	EzM-56		3I	3I	4I	4I		
	EzM-60		3J	3J	4J	4J		
Oriental Motor Stepping motor	PK22	2G						
	PK24	2H	3H	3H	4H	4H		
	PK26(Standard)		3I	3I	4I	4I		
	RK54	2H	3H	3H	4H	4H		
	RK56		3J	3J	4J	4J		
	RK59						5K	6K

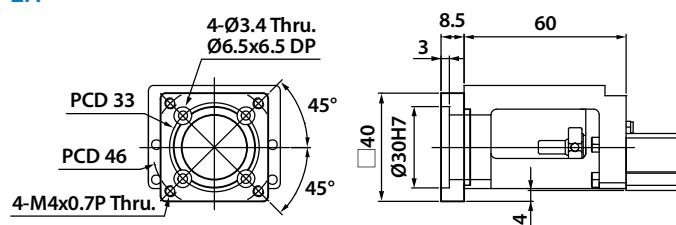
The dimension of intermediate flange:

[KM26](#)

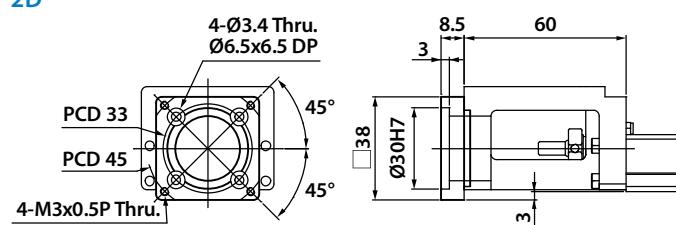
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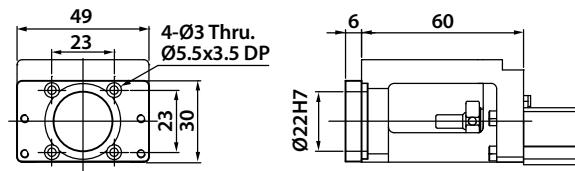
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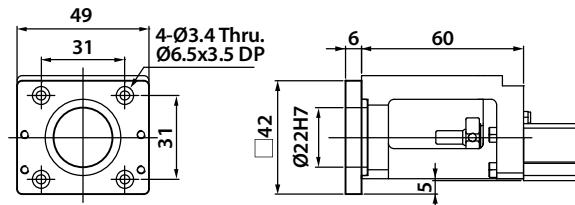
2D



2G

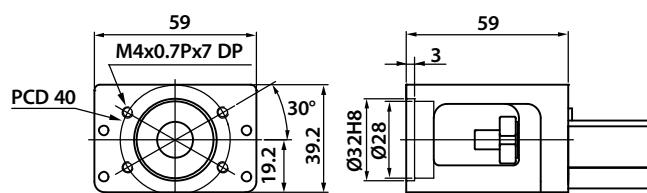


2H

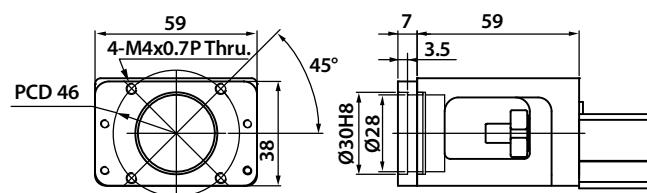


KM30

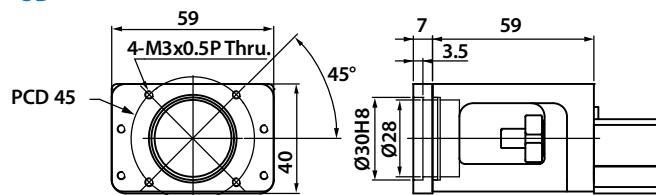
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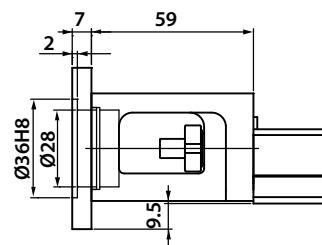
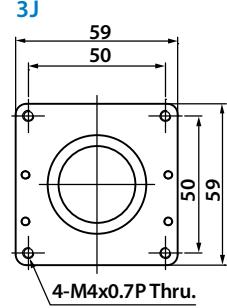
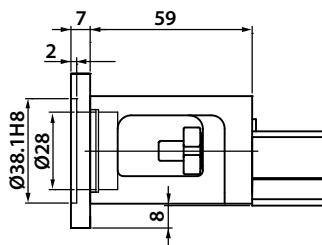
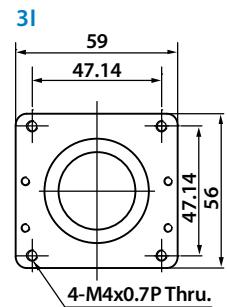
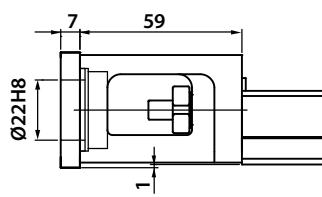
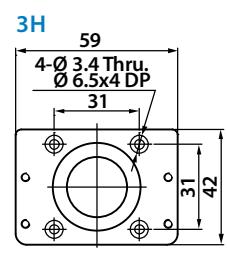
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3D

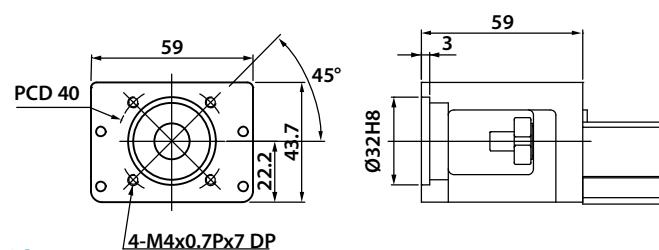


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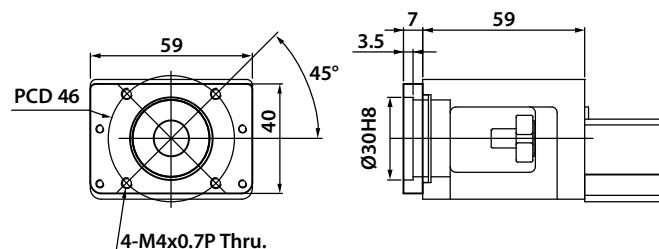


KM33

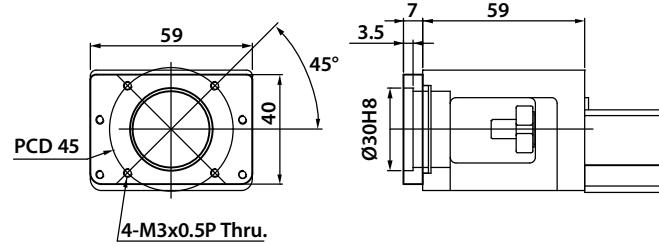
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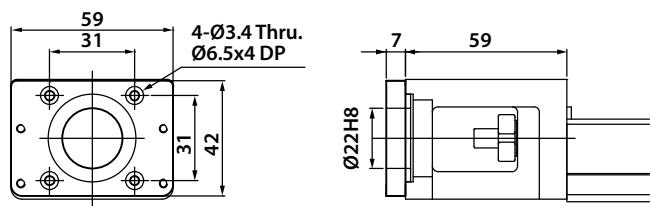
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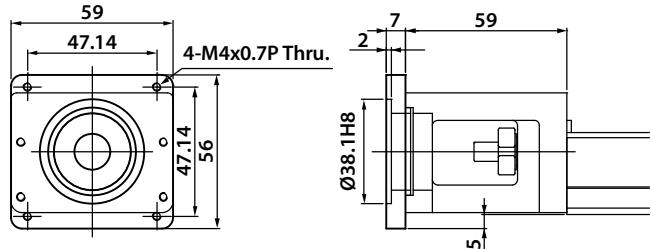
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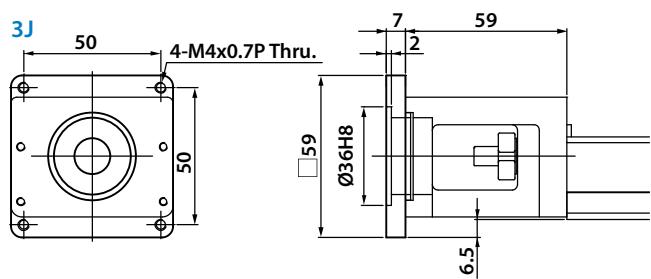
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3I

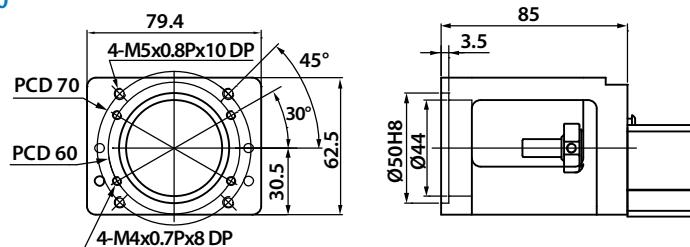


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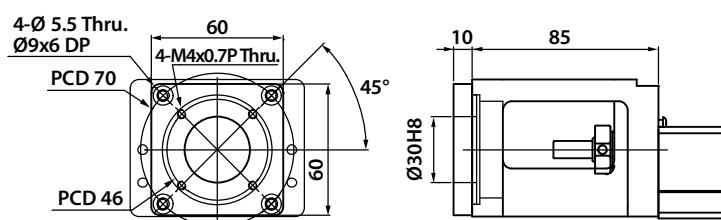


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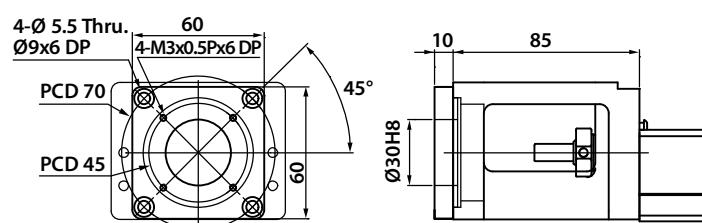
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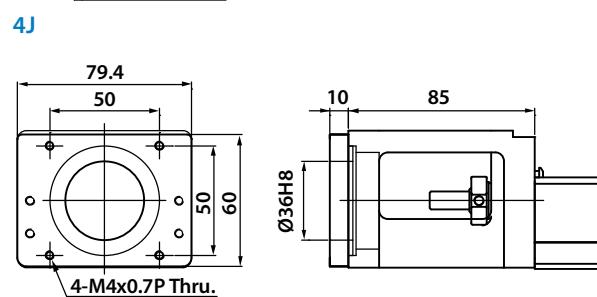
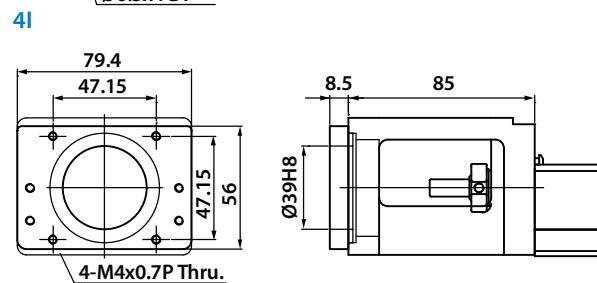
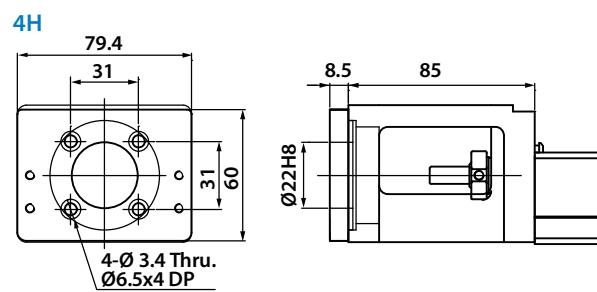


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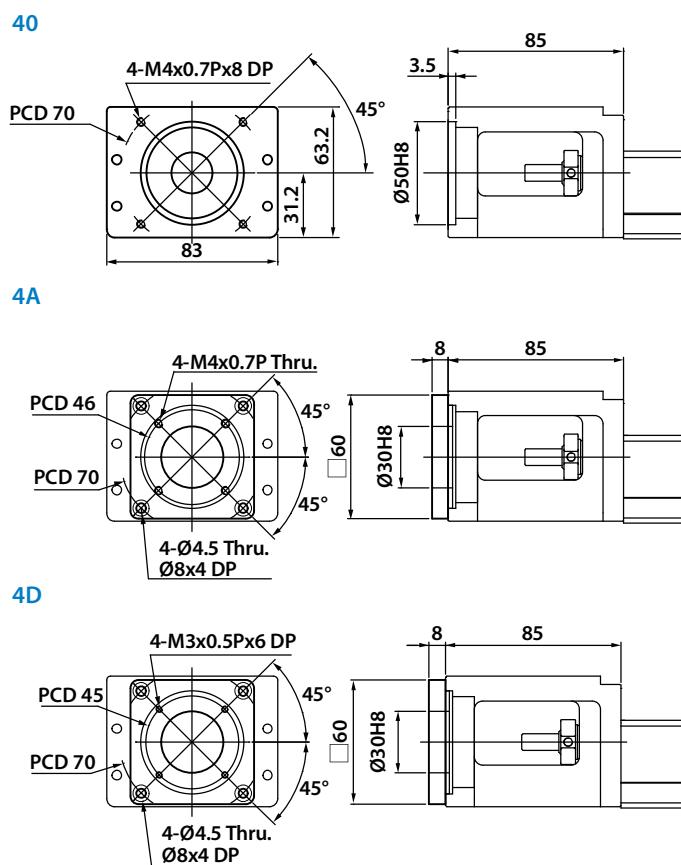


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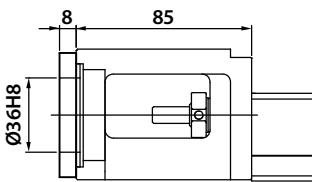
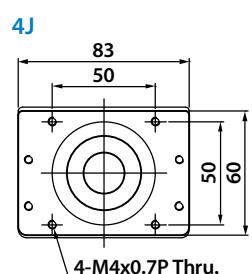
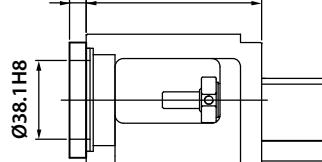
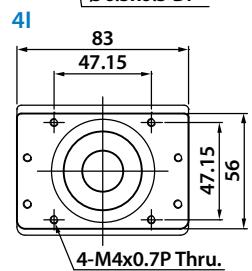
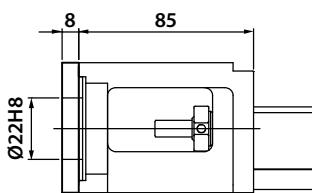
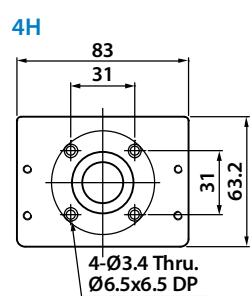




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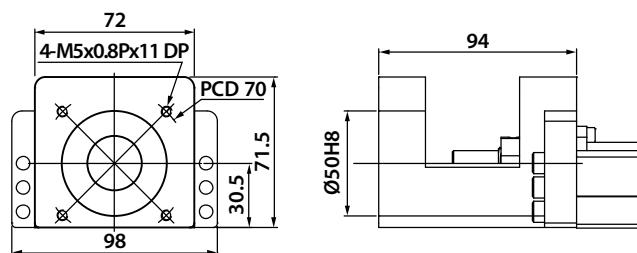


C26

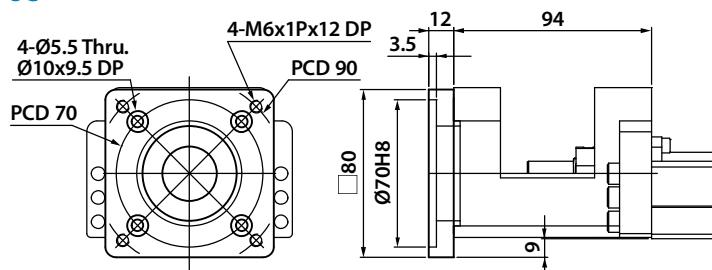


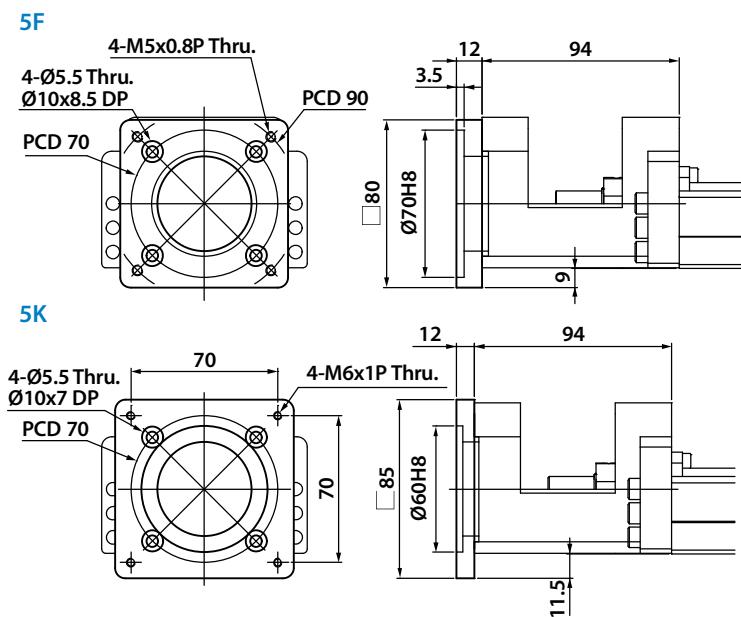
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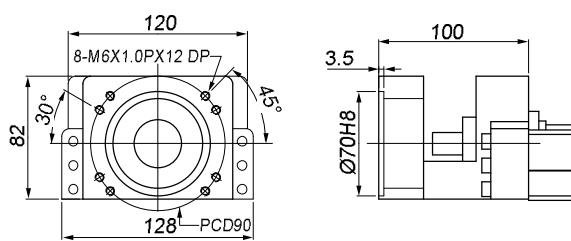
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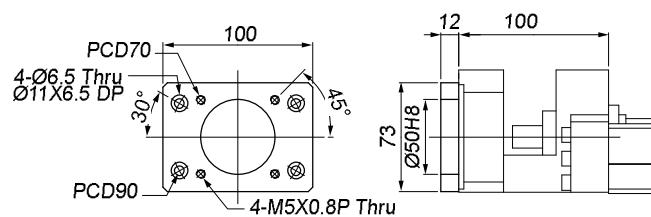


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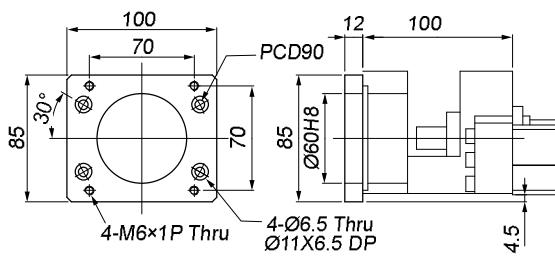
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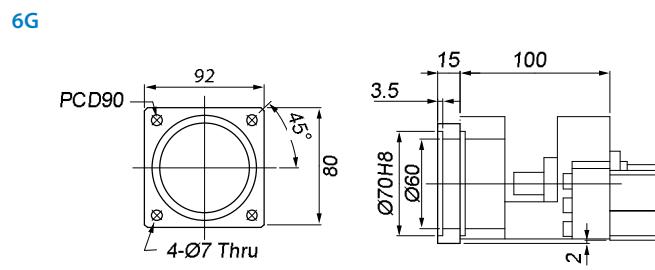
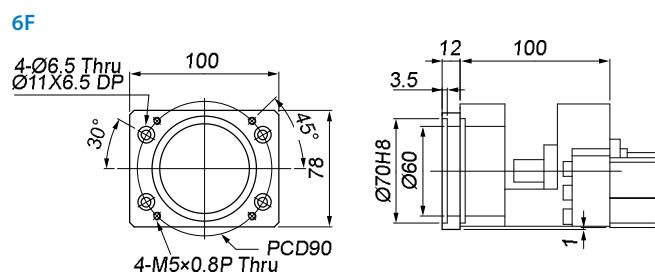
6C



6K



C30

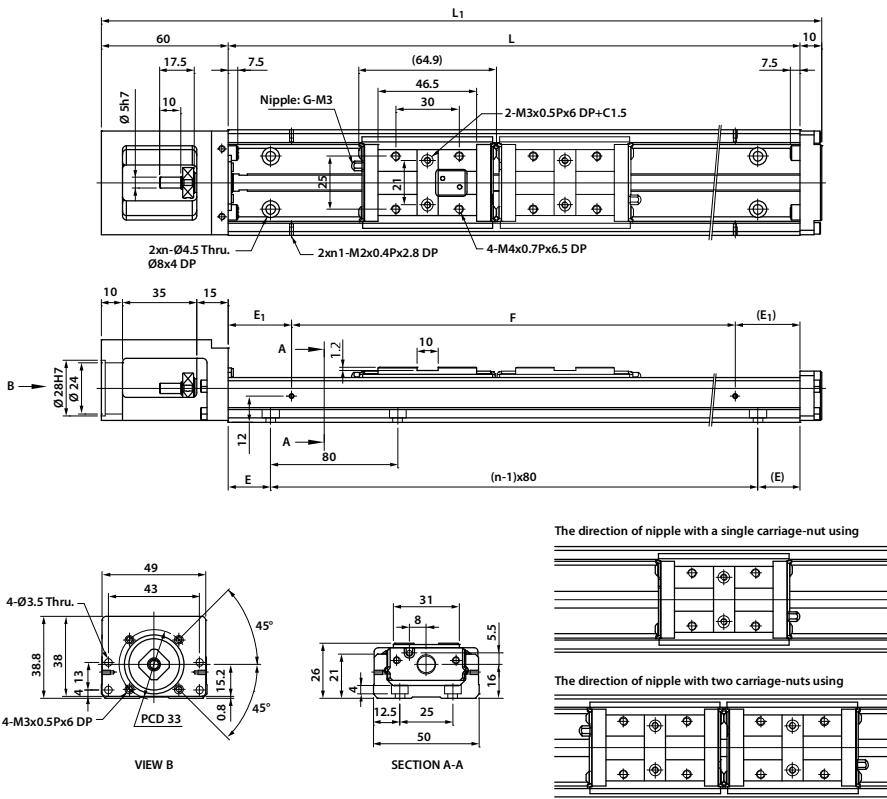


■ Mono Stage KM Series



KM26 Standard Type

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length



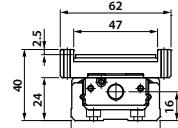
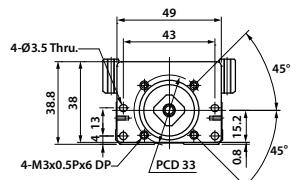
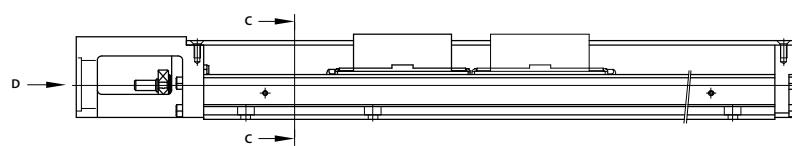
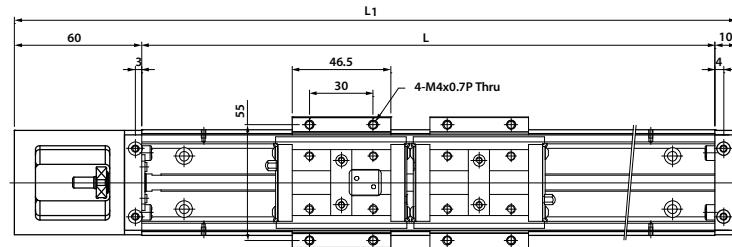
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	F	Weight (kg)	
		A Type	B Type					A Type	B Type
150	220	70	-	35	2	35	80	0.98	-
200	270	120	55	20	3	20	160	1.18	1.37
250	320	170	105	45	3	45	160	1.38	1.57
300	370	220	155	30	4	30	240	1.59	1.78

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length

B type : Two carriage-nuts with standard length

KM26 Cover Type

VIEW D

SECTION C-C

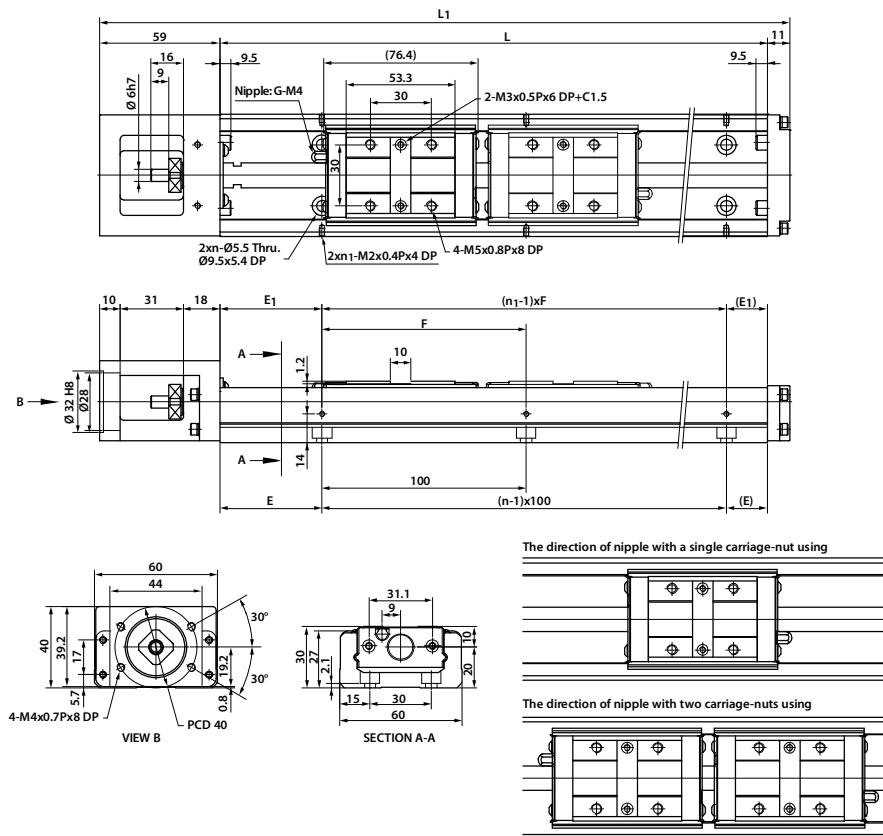
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
150	220	70	-	1.06	-
200	270	120	55	1.26	1.45
250	320	170	105	1.46	1.65
300	370	220	155	1.67	1.86

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM30 Standard Type

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length



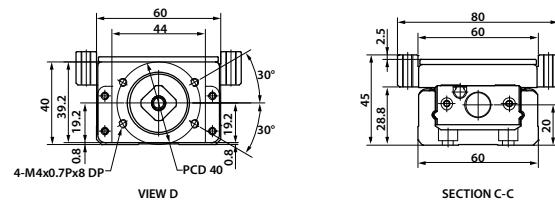
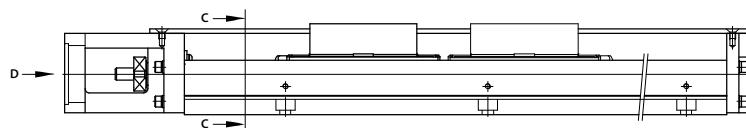
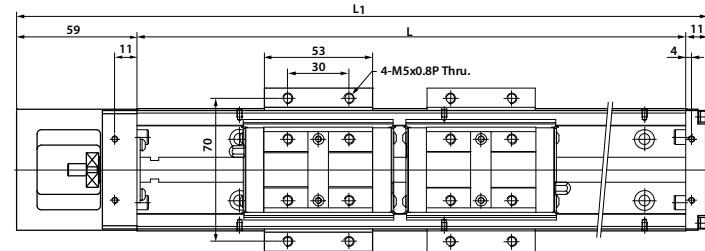
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	n ₁	F	Weight (kg)	
		A Type	B Type						A Type	B Type
150	220	54.5	-	25	2	25	2	100	1.5	-
200	270	104.5	-	50	2	50	2	100	1.81	-
300	370	204.5	128	50	3	50	2	200	2.39	2.74
400	470	304.5	228	50	4	100	2	200	2.98	3.33
500	570	404.5	328	50	5	50	3	200	3.68	4.03
600	670	504.5	428	50	6	100	3	200	4.29	4.64

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length
 B type : Two carriage-nuts with standard length

KM30 Cover Type



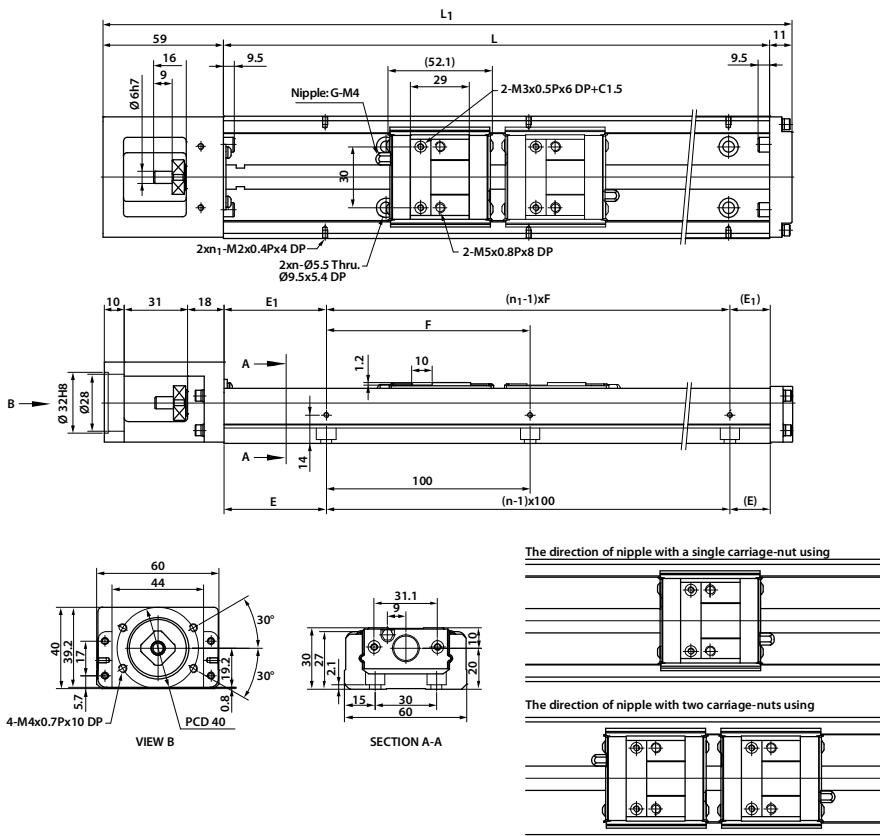
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
150	220	54.5	-	1.7	-
200	270	104.5	-	2.01	-
300	370	204.5	128	2.59	3.04
400	470	304.5	228	3.21	3.66
500	570	404.5	328	3.92	4.37
600	670	504.5	428	4.54	4.99

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM30 Standard Type

C type : A single carriage-nut with short length
D type : Two carriage-nuts with short length



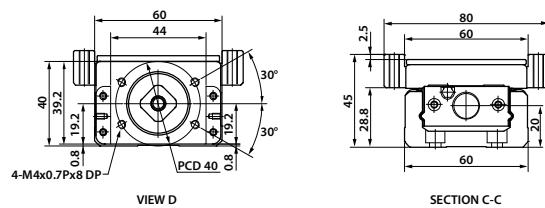
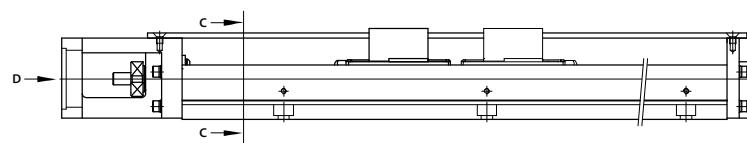
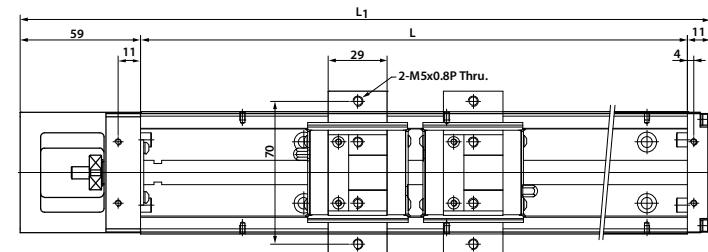
Unit : mm

Rail Length L	Overall Length L_1	Max. Stroke		E	n	E_1	n_1	F	Weight (kg)	
		C Type	D Type						C Type	D Type
150	220	78.8	26.6	25	2	25	2	100	1.4	1.63
200	270	128.8	76.6	50	2	50	2	100	1.69	1.92
300	370	228.8	176.6	50	3	50	2	200	2.28	2.51
400	470	328.8	276.6	50	4	100	2	200	2.88	3.11
500	570	428.8	376.6	50	5	50	3	200	3.56	3.79
600	670	528.8	476.6	50	6	100	3	200	4.17	4.4

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

C type : A single carriage-nut with short length
D type : Two carriage-nuts with short length

KM30 Cover Type



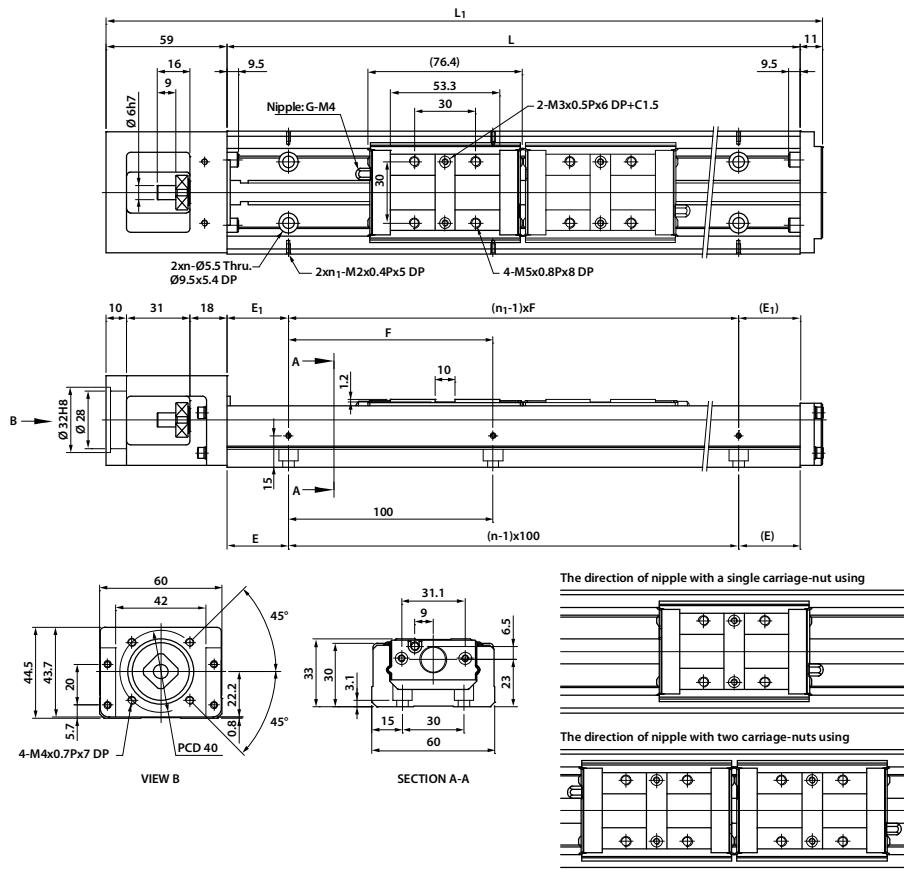
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		C Type	D Type	C Type	D Type
150	220	78.8	26.6	1.51	1.76
200	270	128.8	76.6	1.82	2.07
300	370	228.8	176.6	2.45	2.70
400	470	328.8	276.6	3.09	3.34
500	570	428.8	376.6	3.82	4.07
600	670	528.8	476.6	4.47	4.72

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

KM33 Standard Type

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length



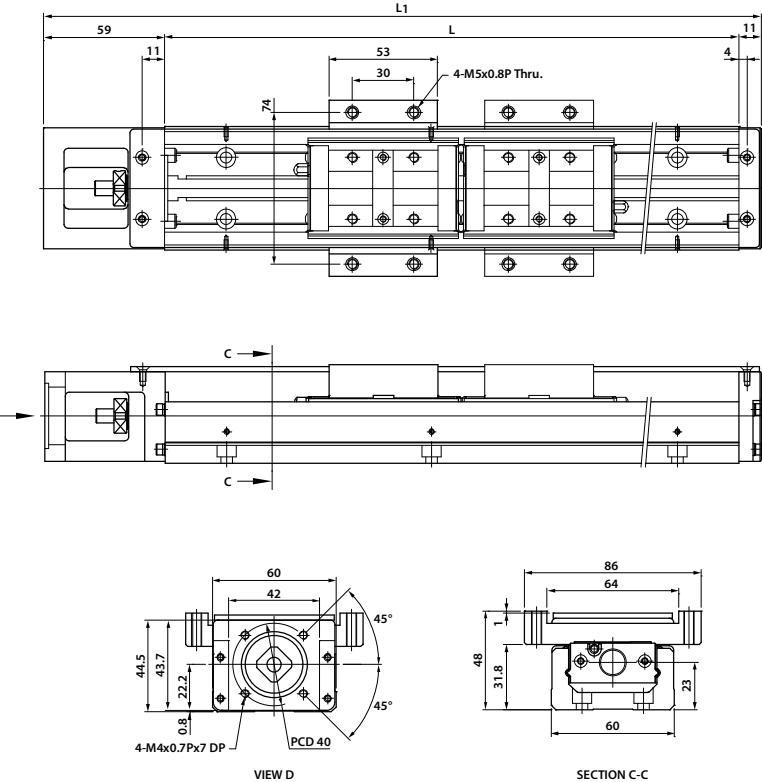
Unit : mm

Rail Length L	Overall Length L_1	Max. Stroke		E	n	E1	n_1	F	Weight (kg)	
		A Type	B Type						A Type	B Type
150	220	54.5	-	25	2	25	2	100	1.67	-
200	270	104.5	-	50	2	50	2	100	1.98	-
300	370	204.5	128	50	3	50	2	200	2.56	2.91
400	470	304.5	228	50	4	100	2	200	3.15	3.5
500	570	404.5	328	50	5	50	3	200	3.85	4.2
600	670	504.5	428	50	6	100	3	200	4.46	4.81

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length
 B type : Two carriage-nuts with standard length

KM33 Cover Type



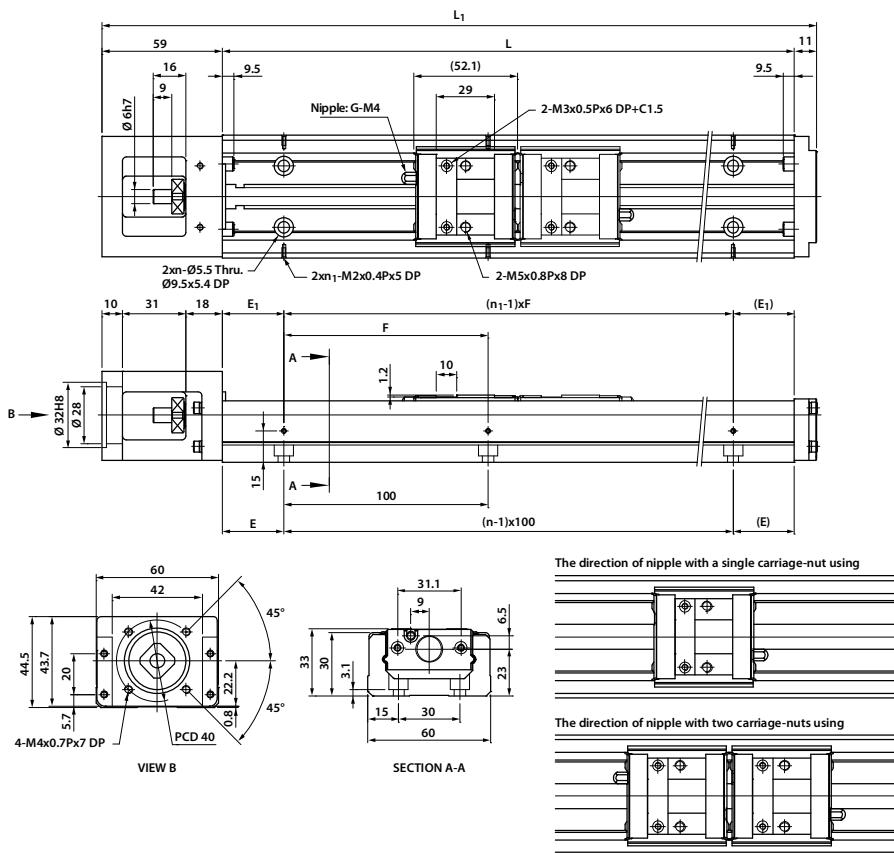
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
150	220	54.5	-	1.87	-
200	270	104.5	-	2.18	-
300	370	204.5	128	2.76	3.21
400	470	304.5	228	3.38	3.83
500	570	404.5	328	4.09	4.54
600	670	504.5	428	4.71	5.16

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM33 Standard Type

C type : A single carriage-nut with short length
D type : Two carriage-nuts with short length



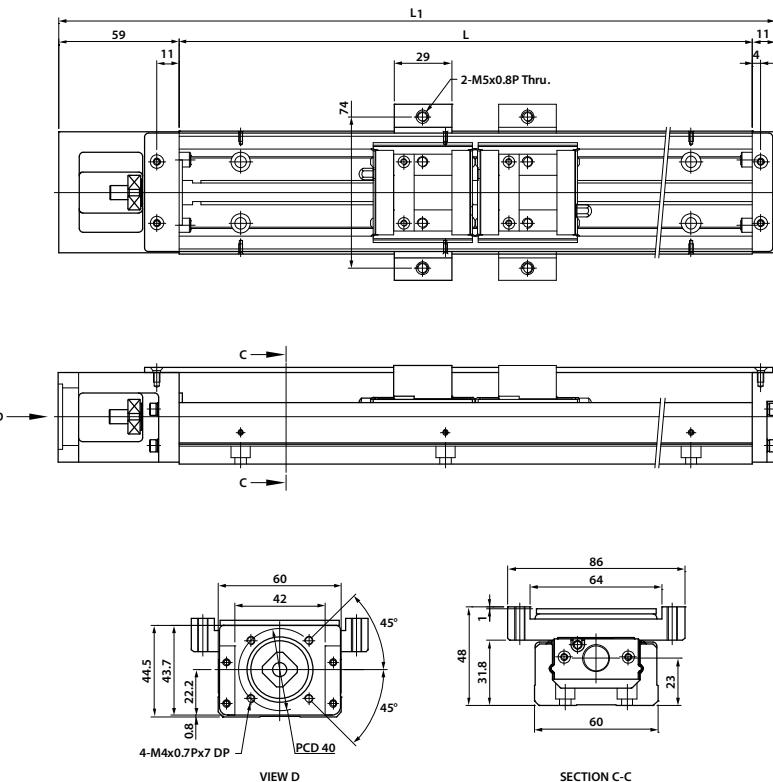
Unit : mm

Rail Length L	Overall Length L_1	Max. Stroke		E	n	E_1	n_1	F	Weight (kg)	
		C Type	D Type						C Type	D Type
150	220	78.8	26.6	25	2	25	2	100	1.57	1.8
200	270	128.8	76.6	50	2	50	2	100	1.86	2.09
300	370	228.8	176.6	50	3	50	2	200	2.45	2.68
400	470	328.8	276.6	50	4	100	2	200	3.05	3.28
500	570	428.8	376.6	50	5	50	3	200	3.73	3.96
600	670	528.8	476.6	50	6	100	3	200	4.34	4.57

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

C type : A single carriage-nut with short length
 D type : Two carriage-nuts with short length

KM33 Cover Type



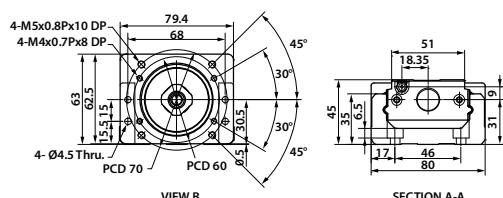
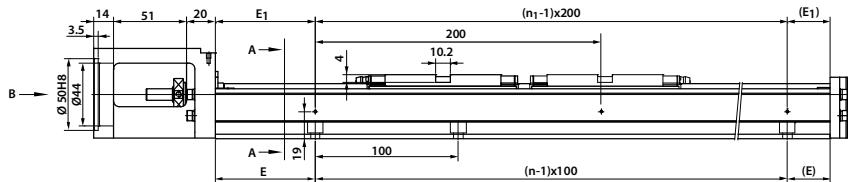
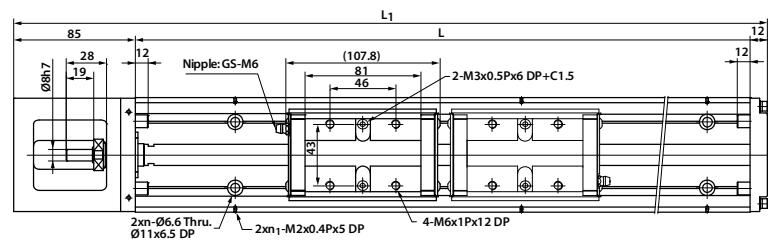
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		C Type	D Type	C Type	D Type
150	220	78.8	26.6	1.68	1.93
200	270	128.8	76.6	1.99	2.24
300	370	228.8	176.6	2.62	2.87
400	470	328.8	276.6	3.26	3.51
500	570	428.8	376.6	3.99	4.24
600	670	528.8	476.6	4.64	4.89

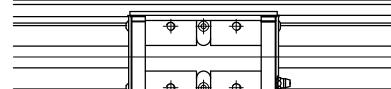
Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

KM45 Standard Type

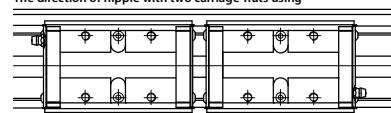
A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length



The direction of nipple with a single carriage-nut using



The direction of nipple with two carriage-nuts using

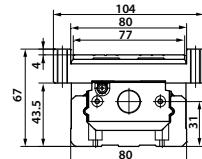
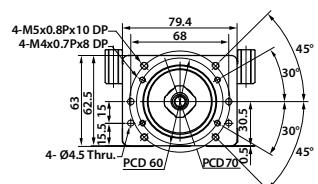
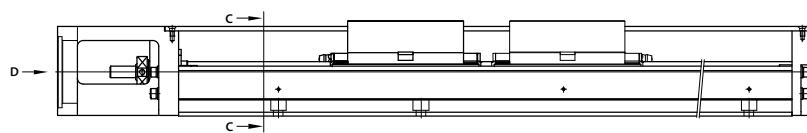
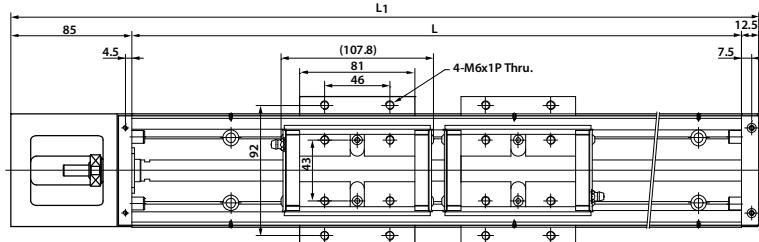


Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	n ₁	Weight (kg)	
		A Type	B Type					A Type	B Type
340	437	208.2	100.4	70	3	70	2	6.78	7.98
440	537	308.2	200.4	70	4	20	3	8.07	9.27
540	637	408.2	300.4	70	5	70	3	9.37	10.57
640	737	508.2	400.4	70	6	20	4	10.68	11.88
740	837	608.2	500.4	70	7	70	4	12.08	13.28
940	1037	808.2	700.4	70	9	70	5	14.37	15.57

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length **KM45 Cover Type**



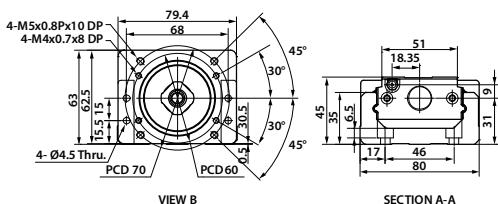
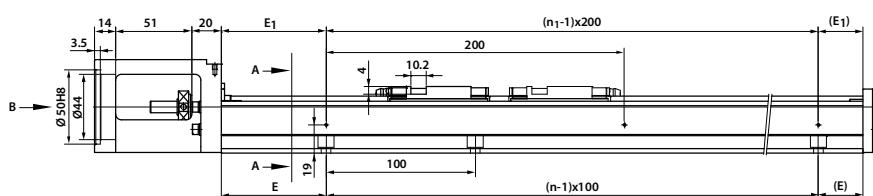
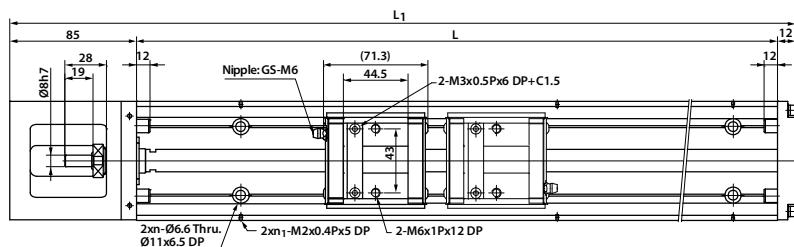
Unit : mm

Rail Length L	Overall Length L₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
340	437	208.2	100.4	7.38	8.78
440	537	308.2	200.4	8.67	10.07
540	637	408.2	300.4	9.97	11.37
640	737	508.2	400.4	11.28	12.68
740	837	608.2	500.4	12.68	14.08
940	1037	808.2	700.4	14.97	16.37

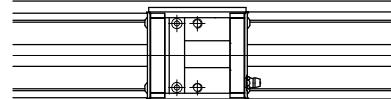
Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM45 Standard Type

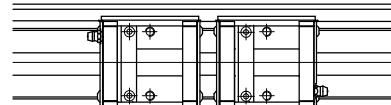
C type : A single carriage-nut with short length
D type : Two carriage-nuts with short length



The direction of nipple with a single carriage-nut using



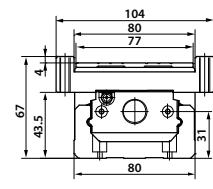
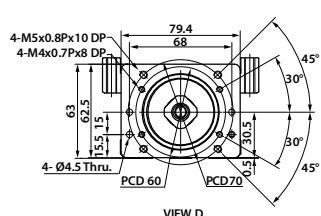
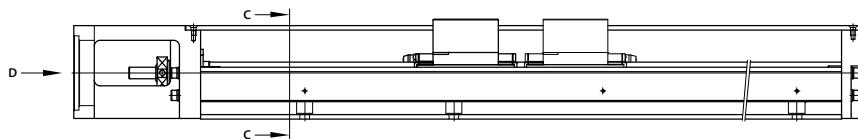
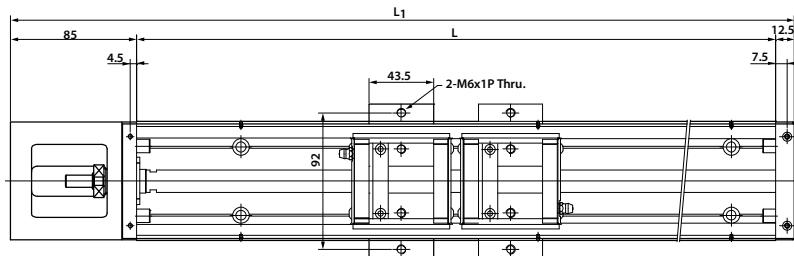
The direction of nipple with two carriage-nuts using



Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E1	n1	Weight (kg)	
		C Type	D Type					C Type	D Type
340	437	244.7	173.4	70	3	70	2	6.38	7.18
440	537	344.7	273.4	70	4	20	3	7.67	8.47
540	637	444.7	373.4	70	5	70	3	8.97	9.77
640	737	544.7	473.4	70	6	20	4	10.28	11.08
740	837	644.7	573.4	70	7	70	4	11.68	12.48
940	1037	844.7	773.4	70	9	70	5	13.97	14.77

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

C type : A single carriage-nut with short length**D type** : Two carriage-nuts with short length**KM45 Cover Type**

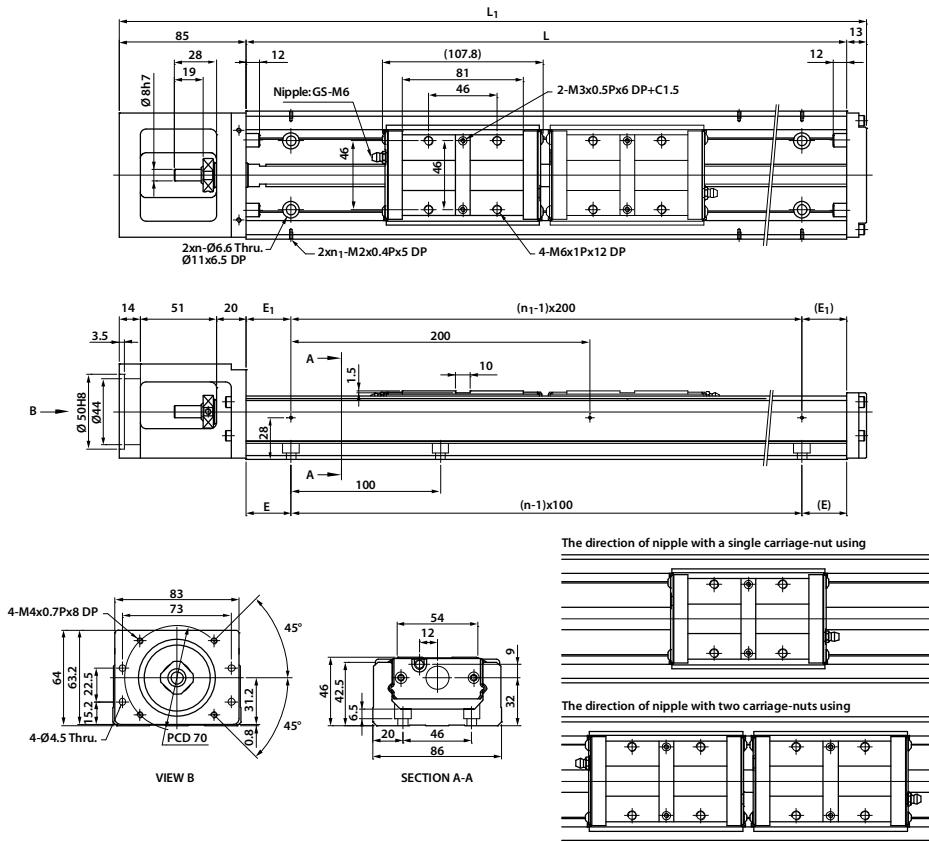
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		C Type	D Type	C Type	D Type
340	437	244.7	173.4	6.58	7.58
440	537	344.7	273.4	7.87	8.87
540	637	444.7	373.4	9.17	10.17
640	737	544.7	473.4	10.48	11.48
740	837	644.7	573.4	11.88	12.88
940	1037	844.7	773.4	14.17	15.17

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

KM46 Standard Type

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length



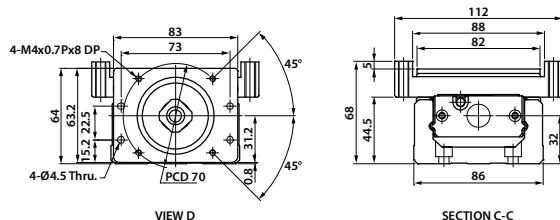
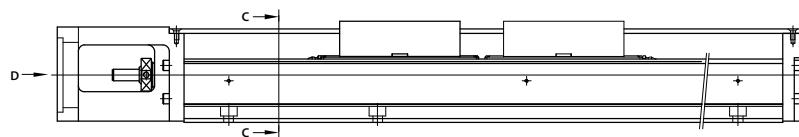
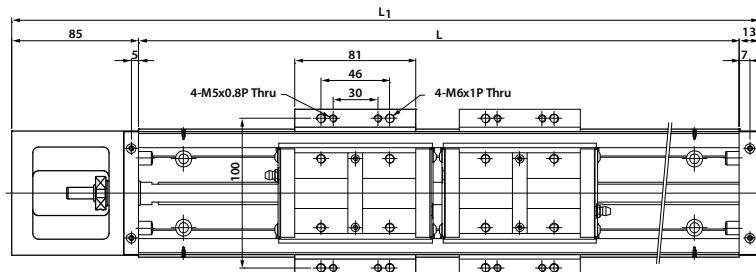
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	n ₁	Weight (kg)	
		A Type	B Type					A Type	B Type
340	438	208.2	100.4	70	3	70	2	7.65	8.85
440	538	308.2	200.4	70	4	20	3	8.94	10.14
540	638	408.2	300.4	70	5	70	3	10.24	11.44
640	738	508.2	400.4	70	6	20	4	11.55	12.75
740	838	608.2	500.4	70	7	70	4	12.95	14.15
940	1038	808.2	700.4	70	9	70	5	15.24	16.44

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length

B type : Two carriage-nuts with standard length

KM46 Cover Type

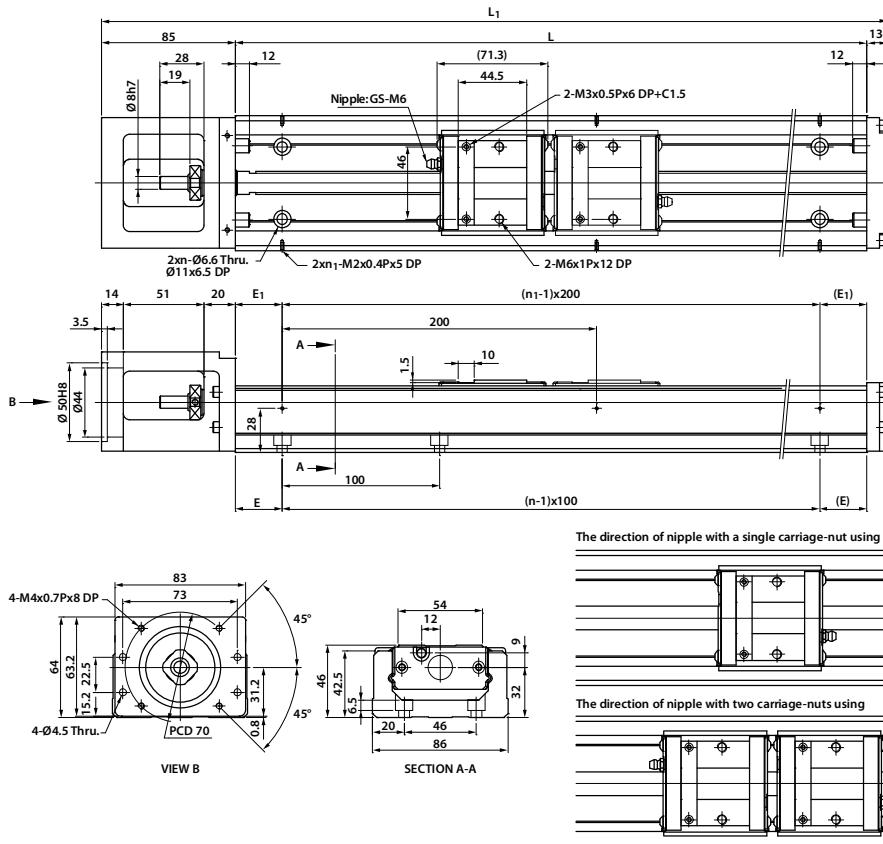
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
340	438	208.2	100.4	8.25	9.65
440	538	308.2	200.4	9.54	10.94
540	638	408.2	300.4	10.84	12.24
640	738	508.2	400.4	12.15	13.55
740	838	608.2	500.4	13.55	14.95
940	1038	808.2	700.4	15.84	17.24

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM46 Standard Type

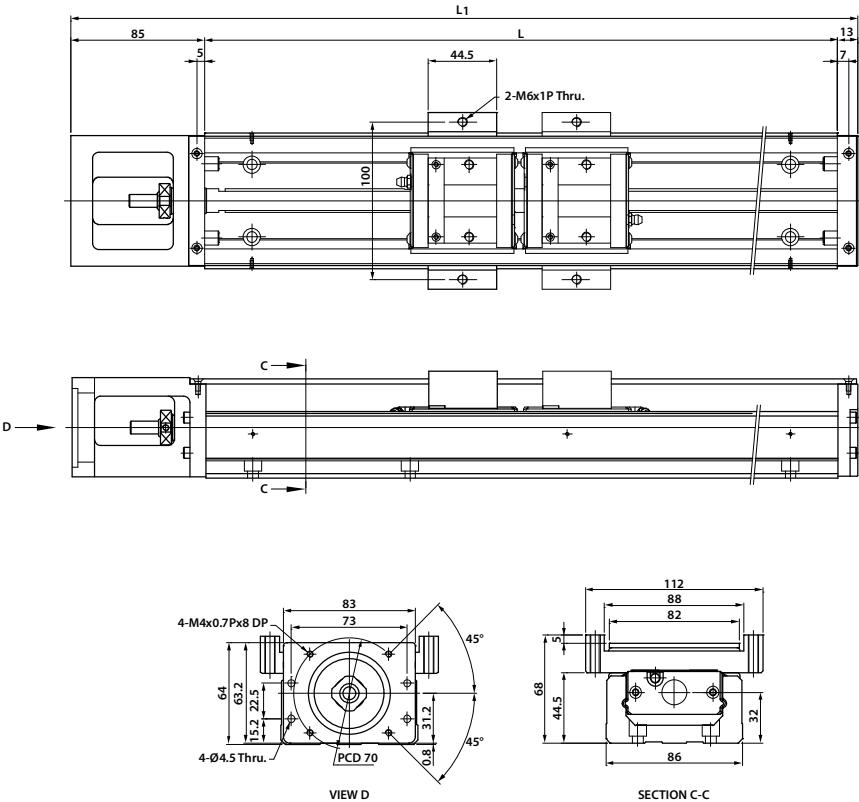
C type : A single carriage-nut with short length
D type : Two carriage-nuts with short length



Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	n ₁	Weight (kg)	
		C Type	D Type					C Type	D Type
340	438	244.7	173.4	70	3	70	2	7.25	8.05
440	538	344.7	273.4	70	4	20	3	8.54	9.34
540	638	444.7	373.4	70	5	70	3	9.84	10.64
640	738	544.7	473.4	70	6	20	4	11.15	11.95
740	838	644.7	573.4	70	7	70	4	12.55	13.35
940	1038	844.7	773.4	70	9	70	5	14.84	15.64

Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

C type : A single carriage-nut with short length**D type** : Two carriage-nuts with short length**KM46 Cover Type**

Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		C Type	D Type	C Type	D Type
340	438	244.7	173.4	7.45	8.45
440	538	344.7	273.4	8.74	9.74
540	638	444.7	373.4	10.04	11.04
640	738	544.7	473.4	11.35	12.35
740	838	644.7	573.4	12.75	13.75
940	1038	844.7	773.4	15.04	16.04

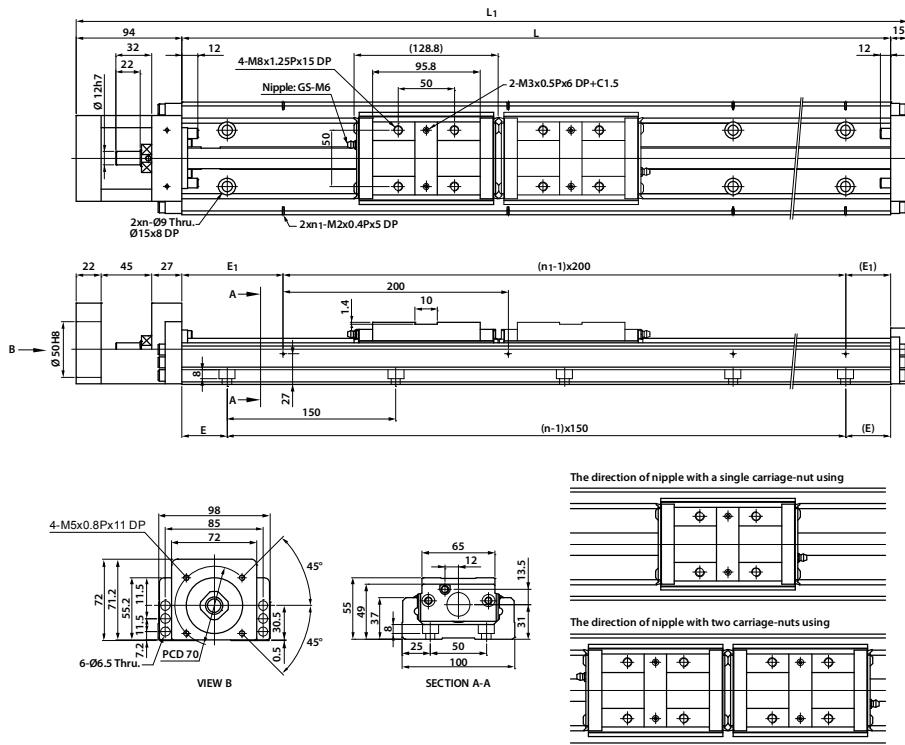
Note*: The max. stroke of D type is base on two carriage-nuts used in closed contact with each other.

Product

KM55 Standard Type

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length

MONOSTAGE Specifications | Dimensions of KM Series



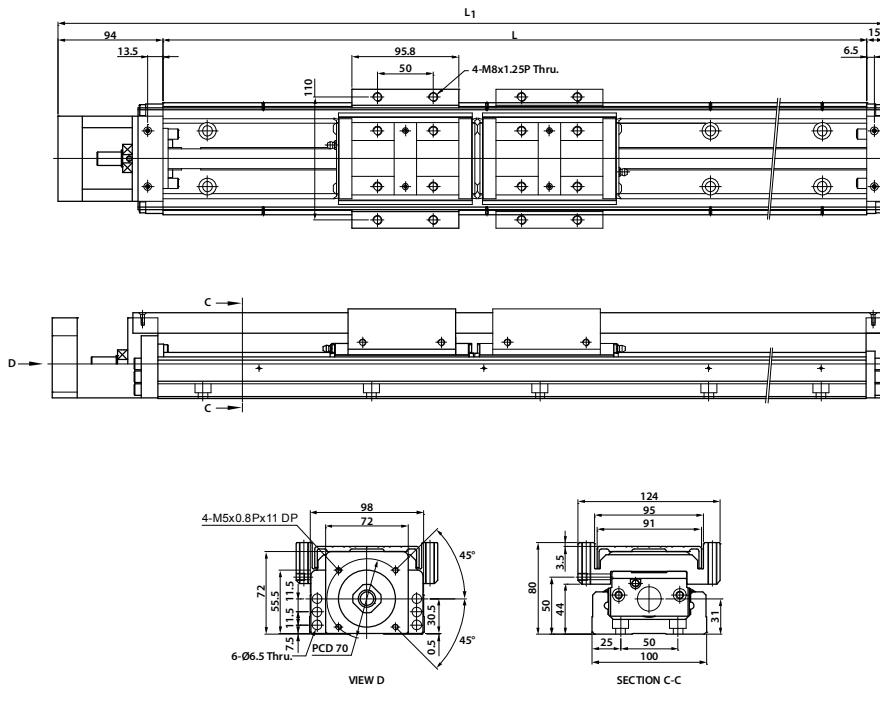
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E1	n1	Weight (kg)	
		A Type	B Type					A Type	B Type
980	1089	828	699	40	7	90	5	19.90	21.62
1080	1189	928	799	15	8	40	6	21.63	23.35
1180	1289	1028	899	65	8	90	6	23.36	25.08
1280	1389	1128	999	40	9	40	7	25.09	26.81
1380	1489	1228	1099	15	10	90	7	26.82	28.54

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length
 B type : Two carriage-nuts with standard length

KM55 Cover Type



Unit : mm

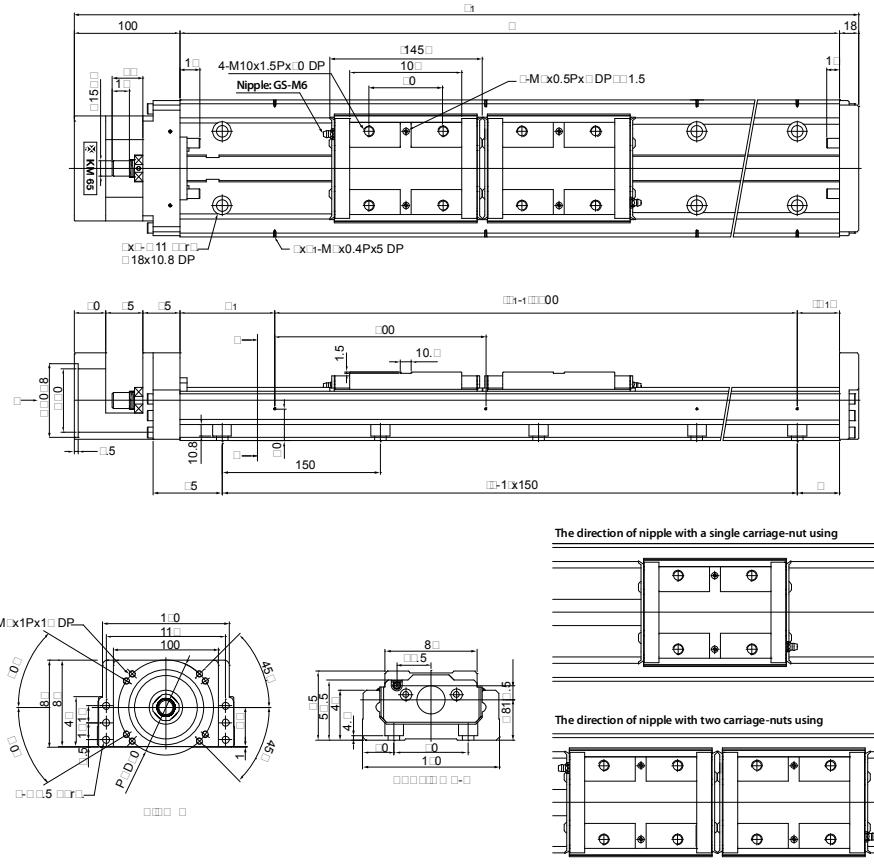
Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
980	1089	828	699	21.78	24.25
1080	1189	928	799	23.61	26.08
1180	1289	1028	899	25.44	27.91
1280	1389	1128	999	27.26	29.73
1380	1489	1228	1099	29.09	31.56

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

KM65 Standard Type

A type : A single carriage-nut with standard length

B type : Two carriage-nuts with standard length



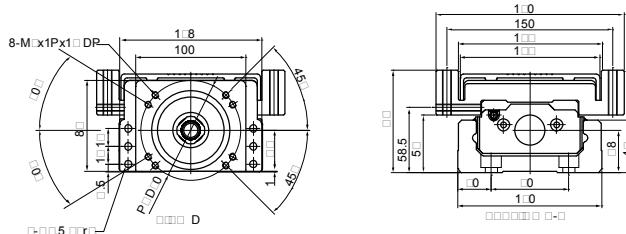
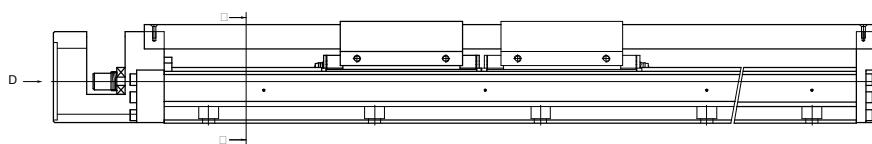
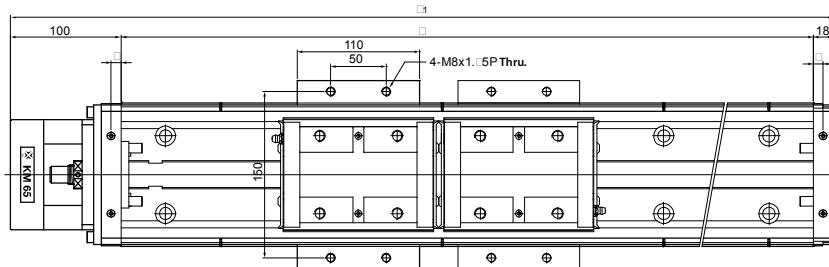
Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		E	n	E ₁	n ₁	Weight (kg)	
		A Type	B Type					A Type	B Type
980	1098	800	655	40	7	90	5	31.60	34.60
1180	1298	1000	855	65	8	90	6	67.00	40.00
1380	1498	1200	1055	90	9	90	7	42.40	45.40
1680	1798	1500	1355	90	11	40	9	50.50	53.50

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.

A type : A single carriage-nut with standard length
B type : Two carriage-nuts with standard length

KM65 Cover Type



Unit : mm

Rail Length L	Overall Length L ₁	Max. Stroke		Weight (kg)	
		A Type	B Type	A Type	B Type
980	1098	800	655	31.60	34.60
1180	1298	1000	855	67.00	40.00
1380	1498	1200	1055	42.40	45.40
1680	1798	1500	1355	50.50	53.50

Note*: The max. stroke of B type is base on two carriage-nuts used in closed contact with each other.