

Electric actuator Belt ECV-14 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 200 W

How to order

ECV - 14 - 40 010 - R M 2 X N N N N

A Body size

14	Body width 135 mm
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B Lead equivalent

40	40 mm
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C Stroke length

010	100 mm
to	(In 50 mm increments)
305	3050 mm

D Motor mounting direction *5

R	Right mounting
S	Right top mounting
T	Right bottom mounting
L	Left mounting
V	Left top mounting
W	Left bottom mounting

E Mounted motor specification

M	Select the mounted motor specification from the table below.
Y	
P	
F	

F Motor capacity

2	200 W
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G Driving belt

X	Standard (rubber)
L	Low dust generation (urethane)

H Origin sensor (1 pc) *1 *2 *3

N	None
C	Outside motor side
D	Outside motor opposite side

K Positioning pin hole

N	None
P	Yes

J Grease nipple *3 *4 *5

N	None (Body mounting direction: Standard)
R	Right
L	Left

I Limit sensor (2 pcs) *1 *2 *3

N	None
B	Outside

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*Refer to page 403 for the motor model No.

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*4: "Body mounting direction: Standard" here refers to mounting from the bottom side.

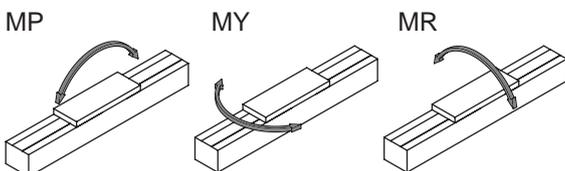
*5: When selecting motor mounting direction R, S, or T, grease nipple R cannot be selected. When selecting L, V, or W, grease nipple L cannot be selected.

Specifications

Applicable motor capacity	200 W servo motor
Drive method	Belt width 22 mm
Stroke length mm	100 to 3050
Lead equivalent mm	40
Max. load capacity Horizontal kg	25
*1 Vertical kg	-
Max. speed mm/s	2000
Rated thrust *1 N	100
Repeatability mm	±0.04
Lost motion	0.1 mm or less
Dynamic allowable load N	6566.9
Static allowable moment N·m	MP: 552, MY: 551, MR: 485
Dynamic allowable moment N·m	MP: 262.7, MY: 262.7, MR: 261.0
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)
Atmosphere	No corrosive gas, explosive gas, or dust

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and max. speed

		(mm/s)
Stroke length	100 to 3050	
	Lead equivalent	2000
40		

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

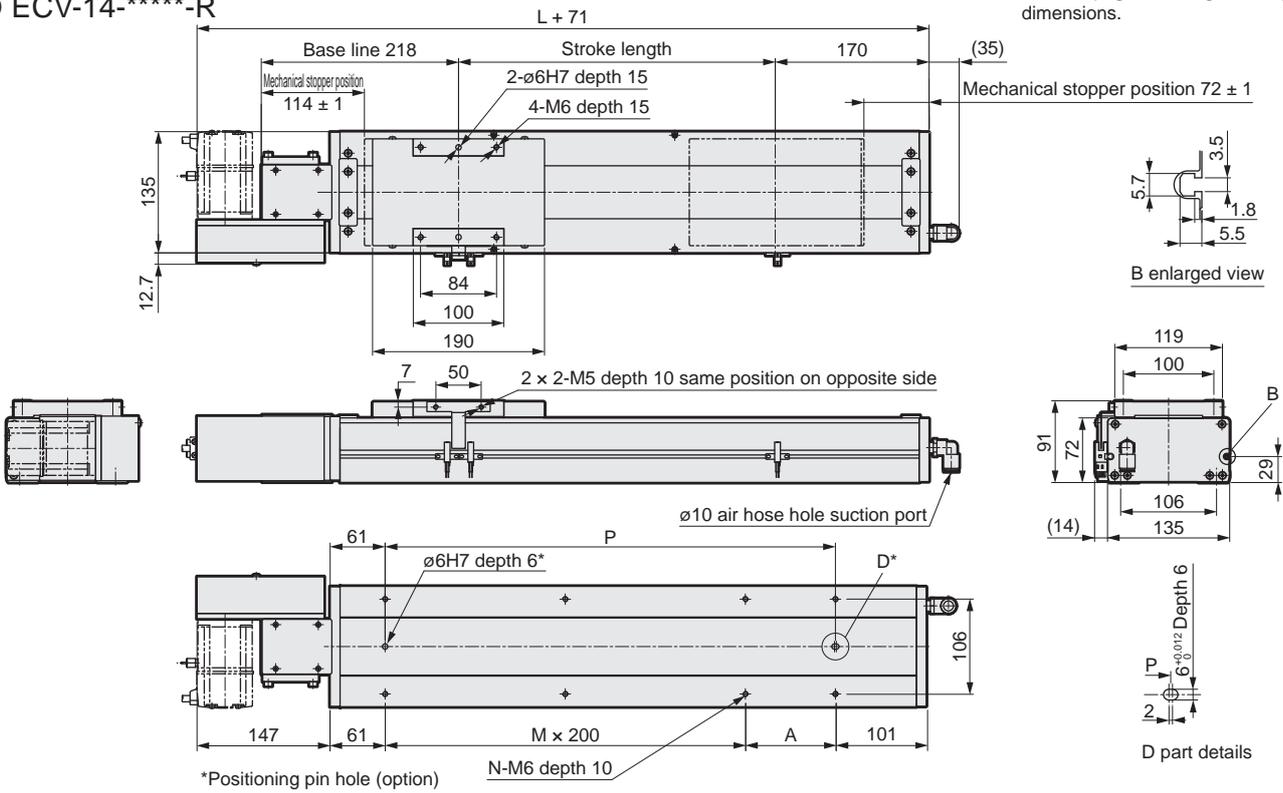
Allowable overhang length

*Refer to page 446 for details.

Dimensions Motor right-side mounting

● ECV-14-*****-R

· Refer to page 450 for grease nipple dimensions.

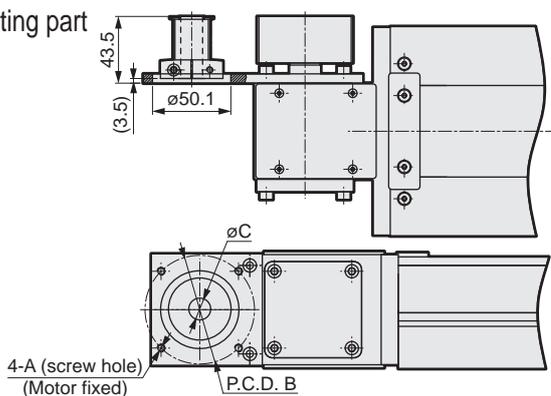


*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

*Refer to page 452 for fitting details.

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 448 for sensor specifications.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

ECV

EKS

EBS

EBR

ETS

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ETV

ECV

EKS

EBS

EBR

ETS

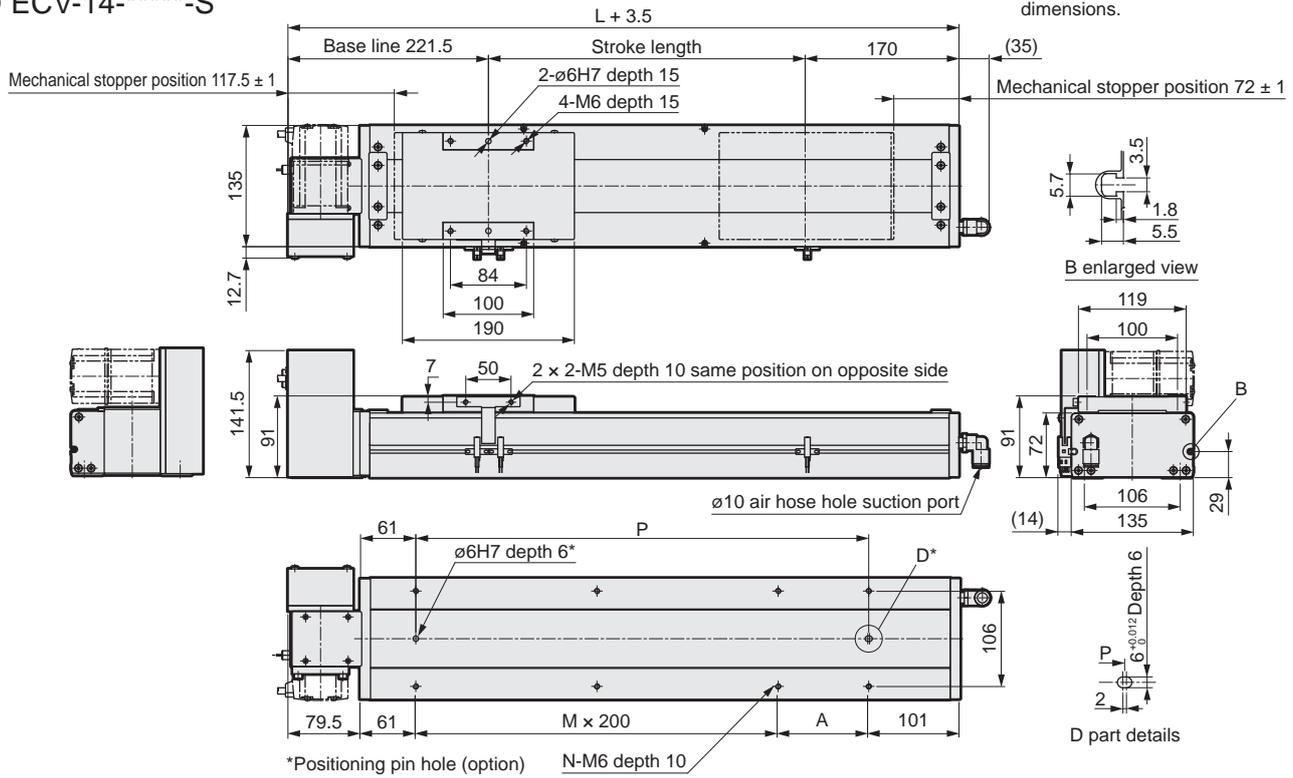
ECS

ECV-14 Series

Dimensions Motor right top mounting

● ECV-14-*****-S

Refer to page 450 for grease nipple dimensions.



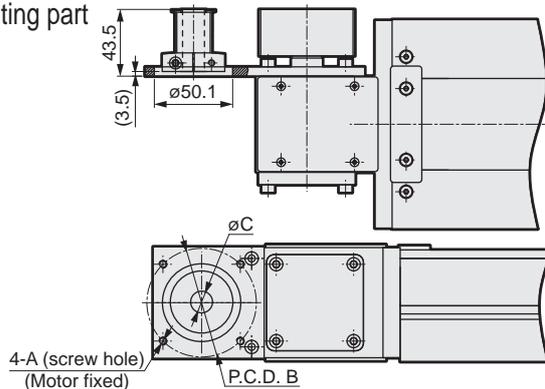
*Positioning pin hole (option)

N-M6 depth 10

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 200 W	M5	ø70	ø14	4-M5 x L12
Y 200 W	M5	ø70	ø14	4-M5 x L12
P 200 W	M4	ø70	ø11	4-M4 x L12
F 200 W	M5	ø70	ø9	4-M5 x L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

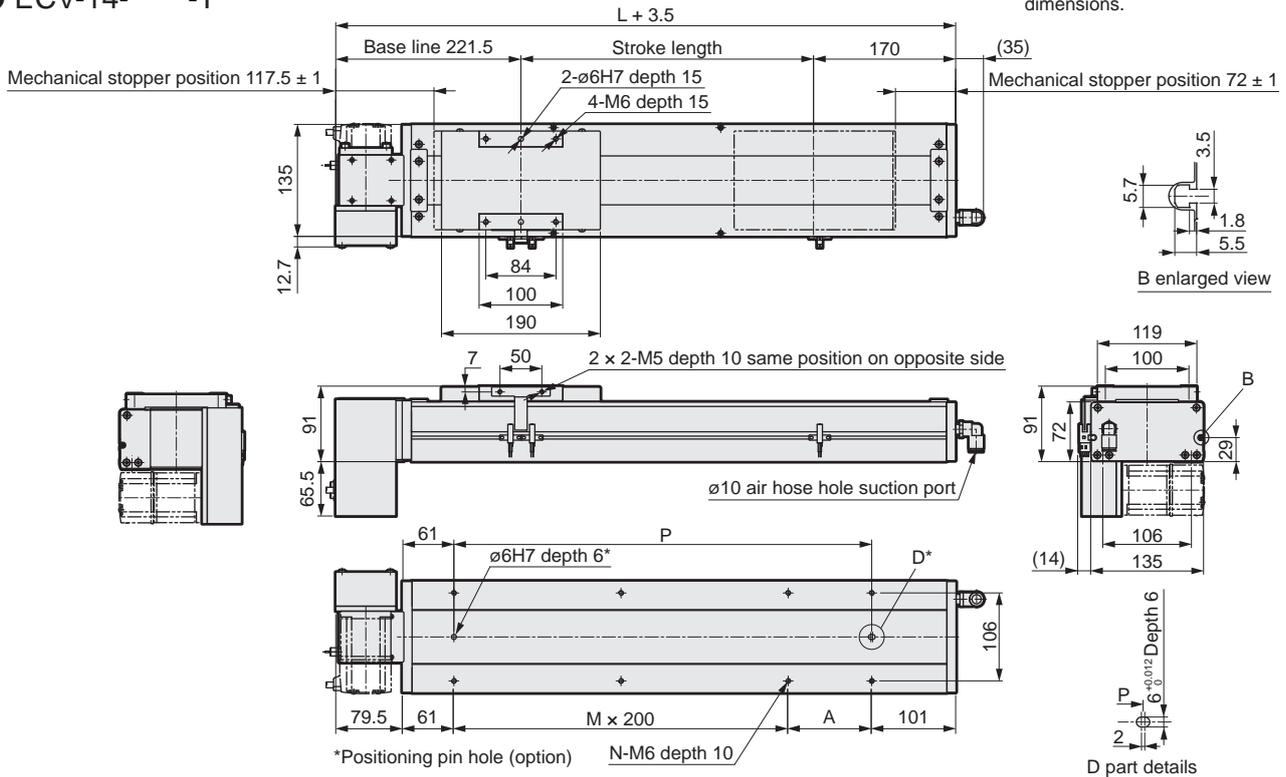
*Refer to page 448 for sensor specifications.

*Refer to page 452 for fitting details.

Dimensions Motor right bottom mounting

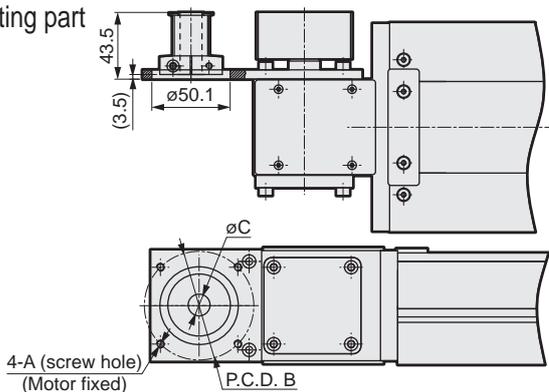
● ECV-14-*****-T

· Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9
Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M 200 W	M5	ø70	ø14		4-M5 x L12
Y 200 W	M5	ø70	ø14		4-M5 x L12
P 200 W	M4	ø70	ø11		4-M4 x L12
F 200 W	M5	ø70	ø9		4-M5 x L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

*Refer to page 452 for fitting details.

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 448 for sensor specifications.

EBS

EBR

ETS

Servo motor compatible
ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

Stepper motor compatible
EBR

ETS

ECS

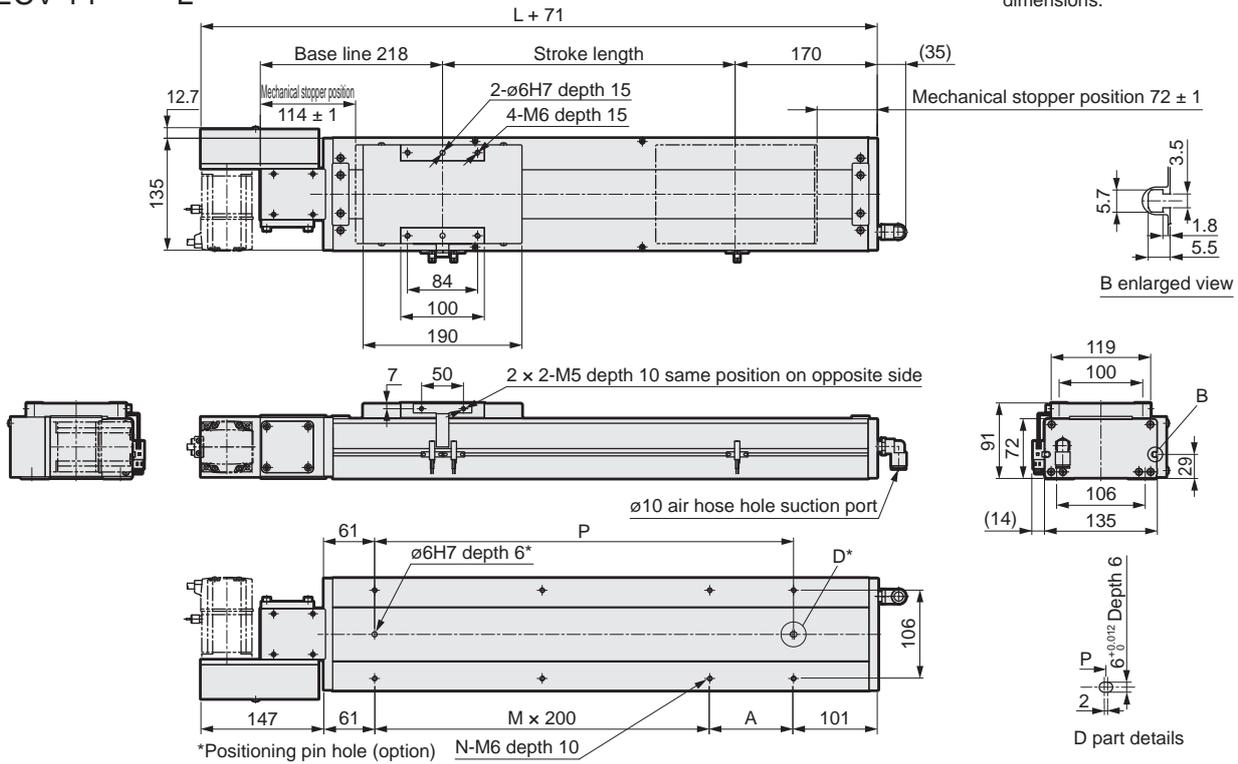
Safety
precautions

ECV-14 Series

Dimensions Motor left-side mounting

● ECV-14-*****-L

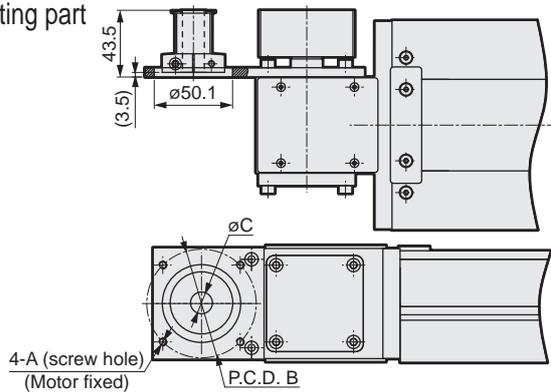
Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	14	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 200 W	M5	ø70	ø14	4-M5 × L12
Y 200 W	M5	ø70	ø14	4-M5 × L12
P 200 W	M4	ø70	ø11	4-M4 × L12
F 200 W	M5	ø70	ø9	4-M5 × L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

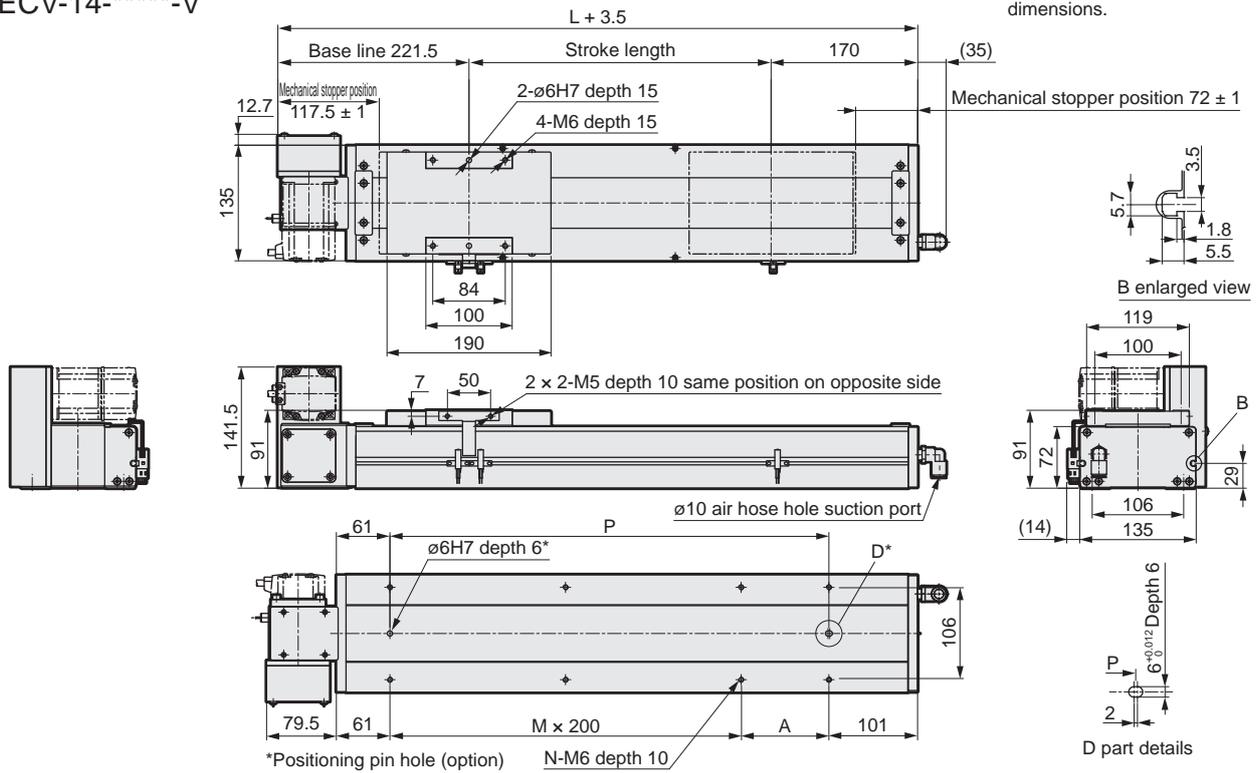
*Refer to page 448 for sensor specifications.

*Refer to page 452 for fitting details.

Dimensions Motor left top mounting

● ECV-14-****-V

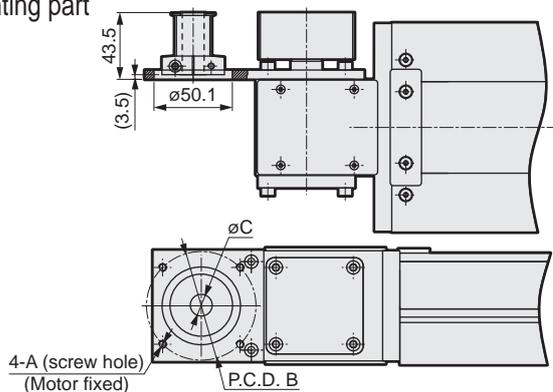
· Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

*Refer to page 452 for fitting details.

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 448 for sensor specifications.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

ECV

EKS

EBS

EBR

ETS

ECS

ETV

ECV

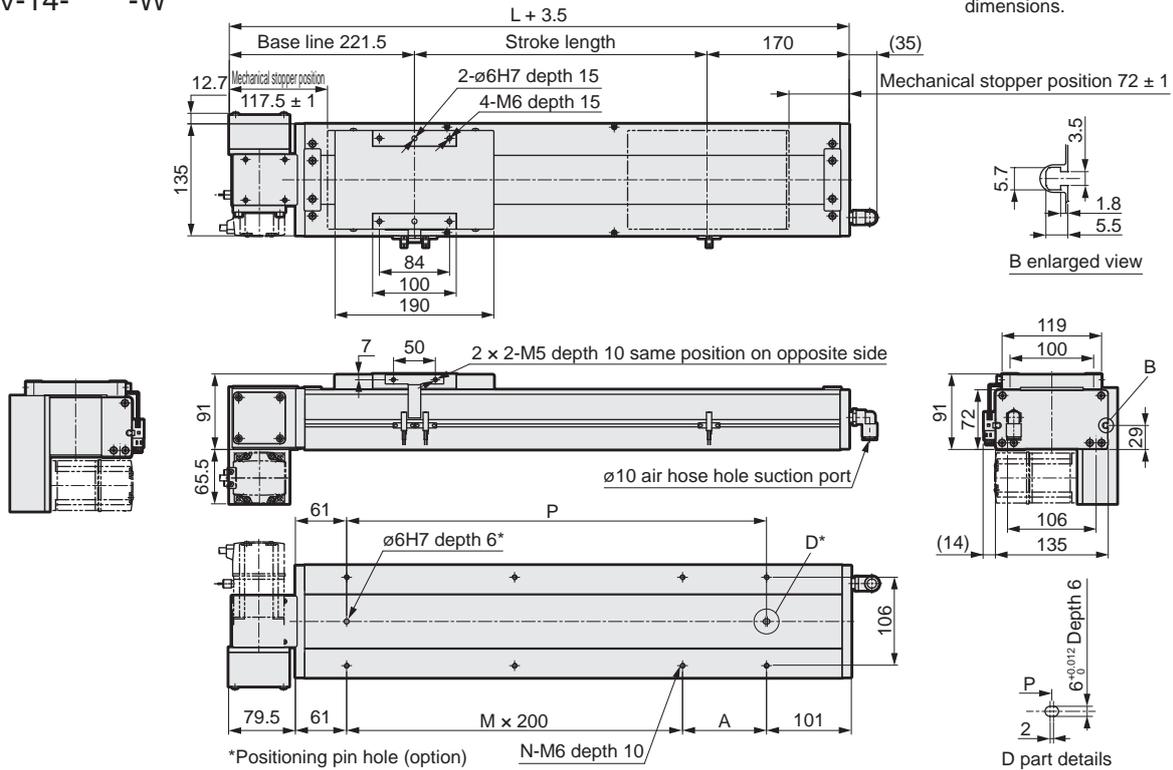
EKS

ECV-14 Series

Dimensions Motor left bottom mounting

● ECV-14-****-W

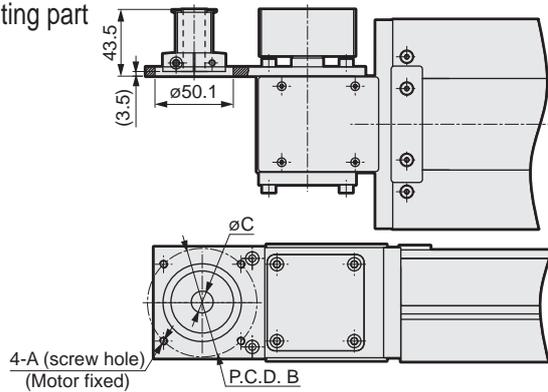
Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke length (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	13	14	14	14	14	15	15	15
N	20	20	22	22	22	24	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	30	32	32	32	32	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9	42.5	43.1	43.7	44.3	44.9

Motor mounting part



Mounted motor specification		A	B	C	Motor mounting bolt
M	200 W	M5	ø70	ø14	4-M5 × L12
Y	200 W	M5	ø70	ø14	4-M5 × L12
P	200 W	M4	ø70	ø11	4-M4 × L12
F	200 W	M5	ø70	ø9	4-M5 × L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

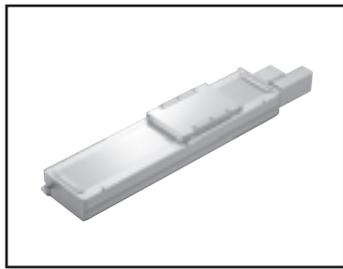
*Refer to page 448 for sensor specifications.

*Refer to page 452 for fitting details.

MEMO

Servo motor compatible						Stepper motor compatible					
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Safety precautions



Electric actuator Belt ECV-17 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 400 W

How to order

ECV - 17 - 40 - 010 - R M 4 X N N N N

A Body size

17	Body width 170 mm
----	-------------------

B Lead equivalent

40	40 mm
----	-------

C Stroke length

010	100 mm
to	(In 50 mm increments)
350	3500 mm

D Motor mounting direction *5

R	Right mounting
S	Right top mounting
T	Right bottom mounting
L	Left mounting
V	Left top mounting
W	Left bottom mounting

E Mounted motor specification

M	Select the mounted motor specification from the table below.
Y	
P	
F	

F Motor capacity

4	400 W
---	-------

G Driving belt

X	Standard (rubber)
L	Low dust generation (urethane)

H Origin sensor (1 pc) *1 *2 *3

N	None
C	Outside motor side
D	Outside motor opposite side

K Positioning pin hole

N	None
P	Yes

I Grease nipple *3 *4 *5

N	None (Body mounting direction: Standard)
R	Right
L	Left

J Limit sensor (2 pcs) *1 *2 *3

N	None
B	Outside

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*Refer to page 403 for the motor model No.

*1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

*2: The user can adjust the sensor position. (Included at shipment)

*3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.

*4: "Body mounting direction: Standard" here refers to mounting from the bottom side.

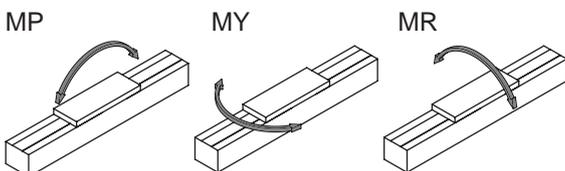
*5: When selecting motor mounting direction R, S, or T, grease nipple R cannot be selected. When selecting L, V, or W, grease nipple L cannot be selected.

Specifications

Applicable motor capacity	400 W servo motor
Drive method	Belt width 30 mm
Stroke length	mm 100 to 3500
Lead equivalent	mm 40
Max. load capacity	Horizontal kg 45
*1	Vertical kg -
Max. speed	mm/s 2000
Rated thrust *1	N 204
Repeatability	mm ±0.04
Lost motion	0.1 mm or less
Dynamic allowable load	N 10102.1
Static allowable moment	N·m MP: 1034, MY: 1032, MR: 908
Dynamic allowable moment	N·m MP: 424.3, MY: 424.3, MR: 520.3
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)
Atmosphere	No corrosive gas, explosive gas, or dust

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and max. speed

		(mm/s)
Stroke length	40	100 to 3500
Lead equivalent		2000

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

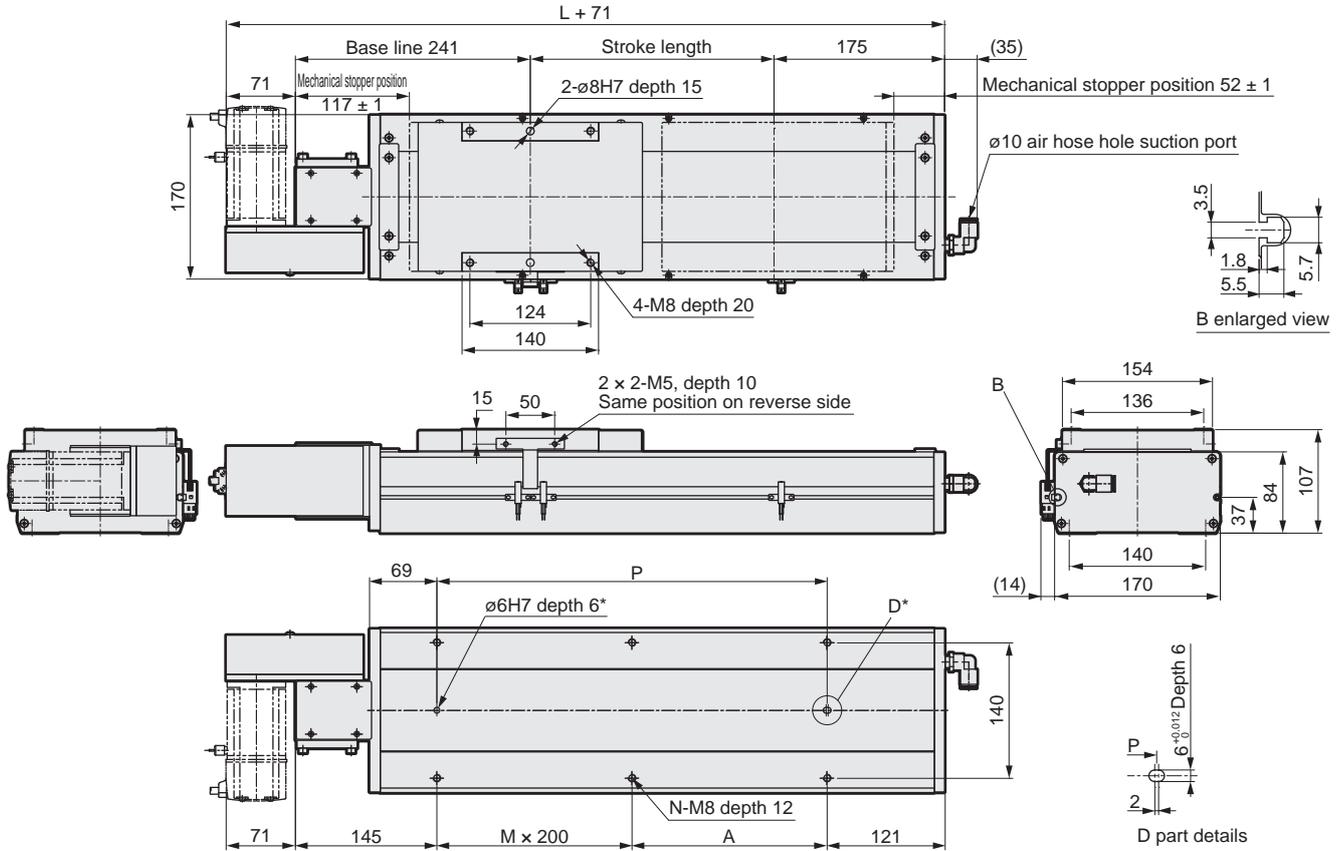
Allowable overhang length

*Refer to page 446 for details.

Dimensions Motor right-side mounting

● ECV-17-****-R

Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

*Refer to page 435 for motor mounting part dimensions and list of attachments.

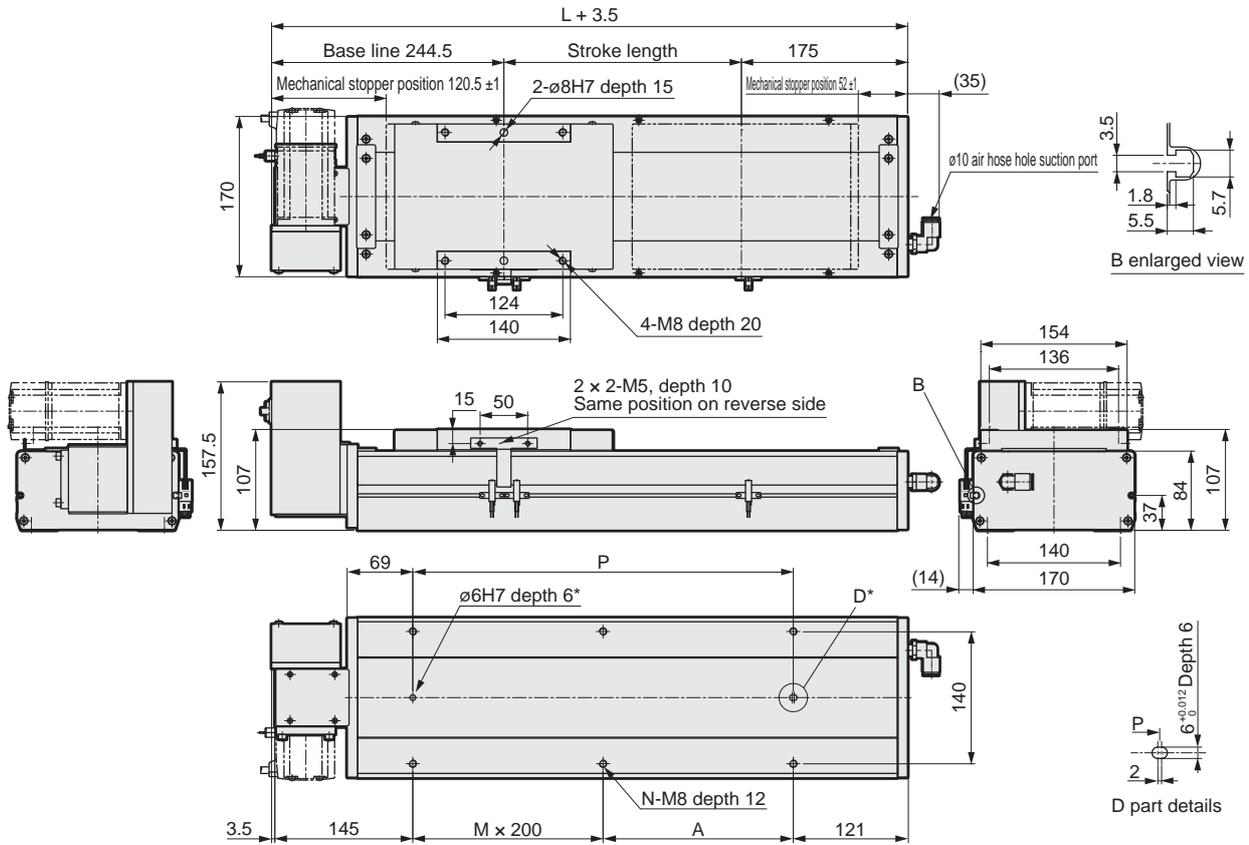
EBS
EBR
ETS
ETS Multi-Axis
ECS
ETV
ECV
EKS
EBS
EBR
ETS
ECS
Safety Precautions

ECV-17 Series

Dimensions Motor right top mounting

● ECV-17-*****-S

· Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

*Refer to page 435 for motor mounting part dimensions and list of attachments.

Servo motor compatible

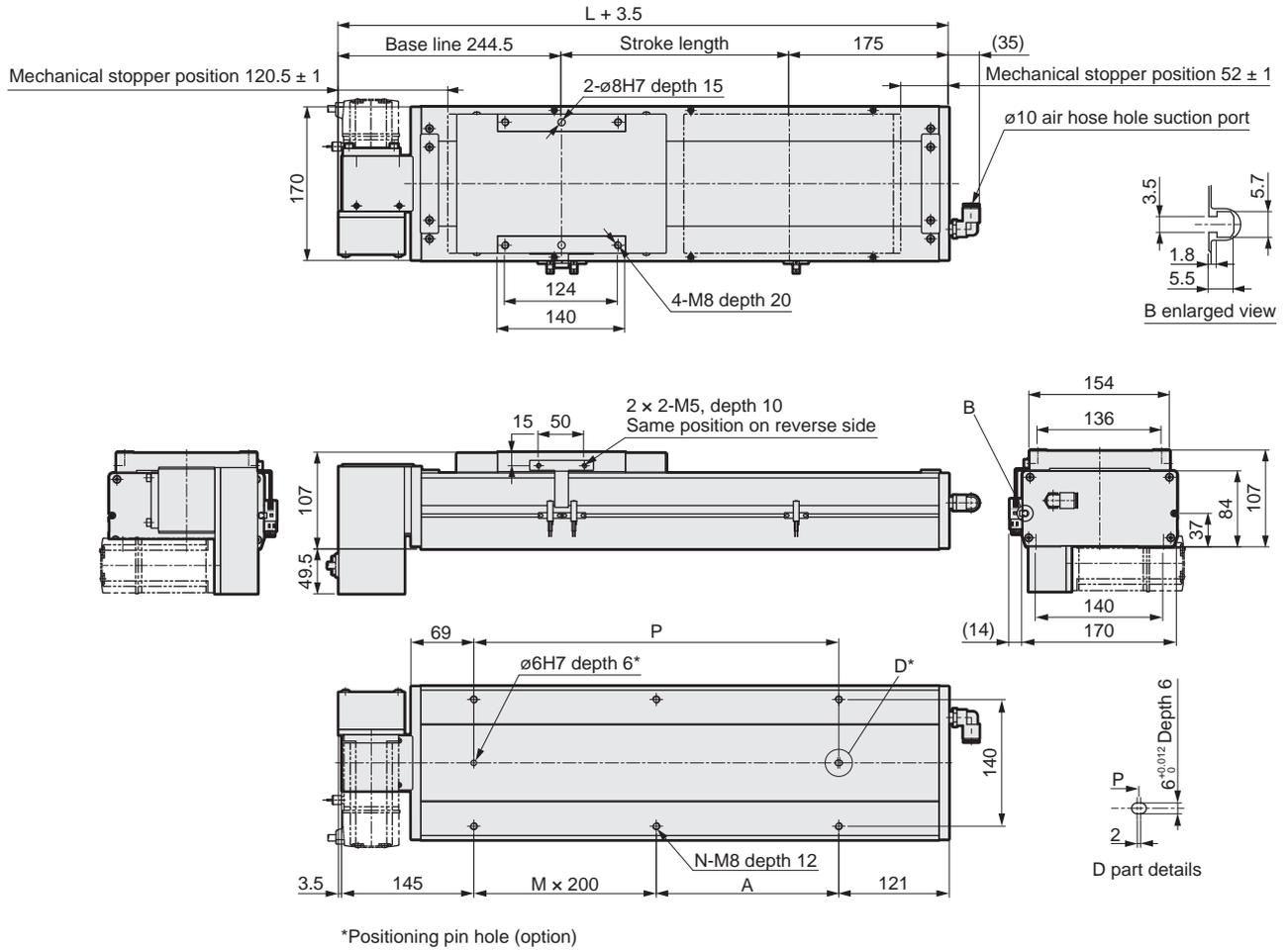
Stepper motor compatible

Safety precautions

Dimensions Motor right bottom mounting

● ECV-17-****-T

· Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

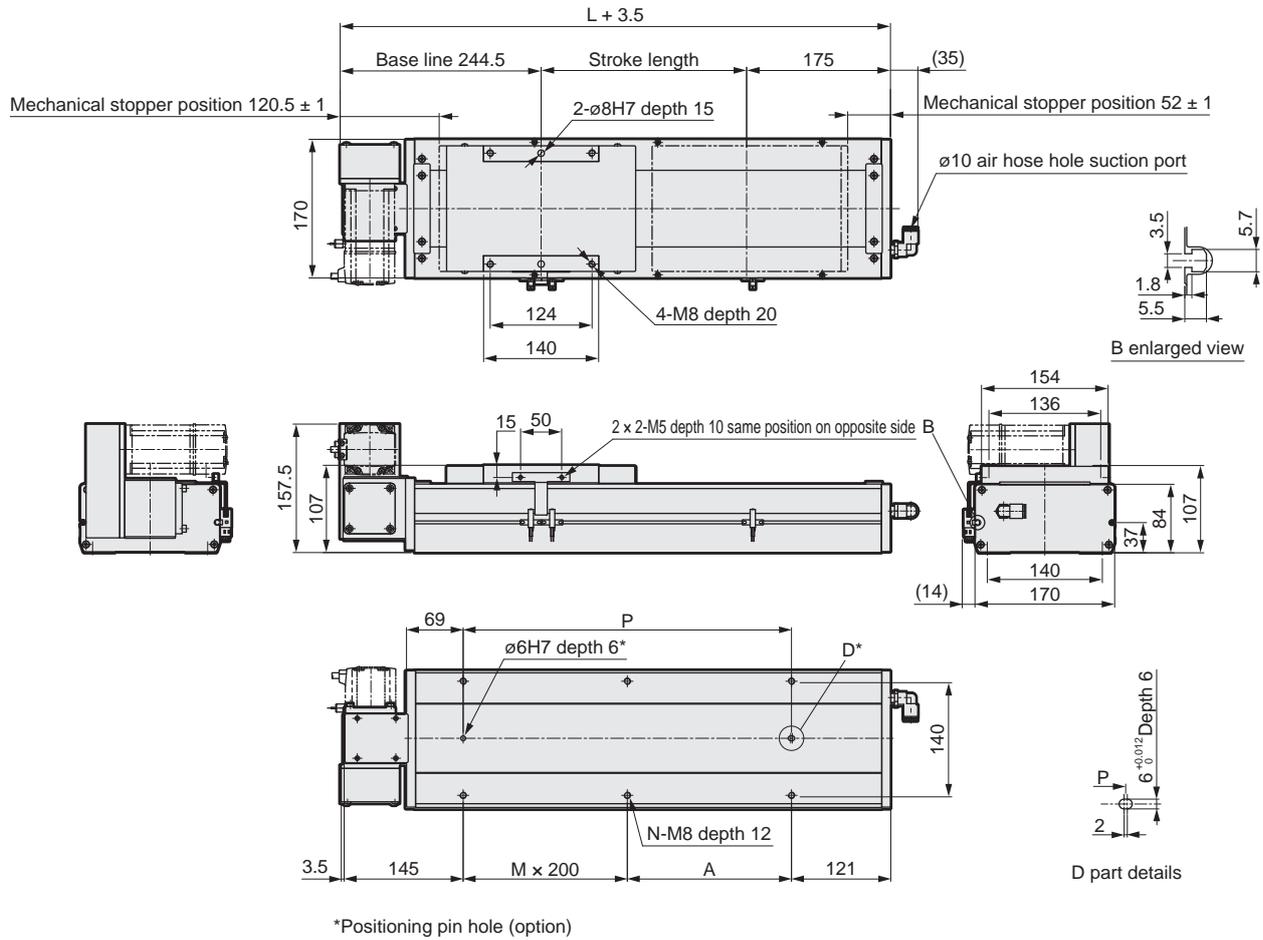
*Refer to page 435 for motor mounting part dimensions and list of attachments.

EBS
EBR
ETS
ETS Multi-Axis
ECS
ETV
ECV
EKS
EBS
EBR
ETS
ECS
Safety Precautions

Dimensions Motor left top mounting

● ECV-17-****-V

Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

*Refer to page 435 for motor mounting part dimensions and list of attachments.

EBS

EBR

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ETS Multi-Axis

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EBS

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Safety Precautions

Servo motor compatible

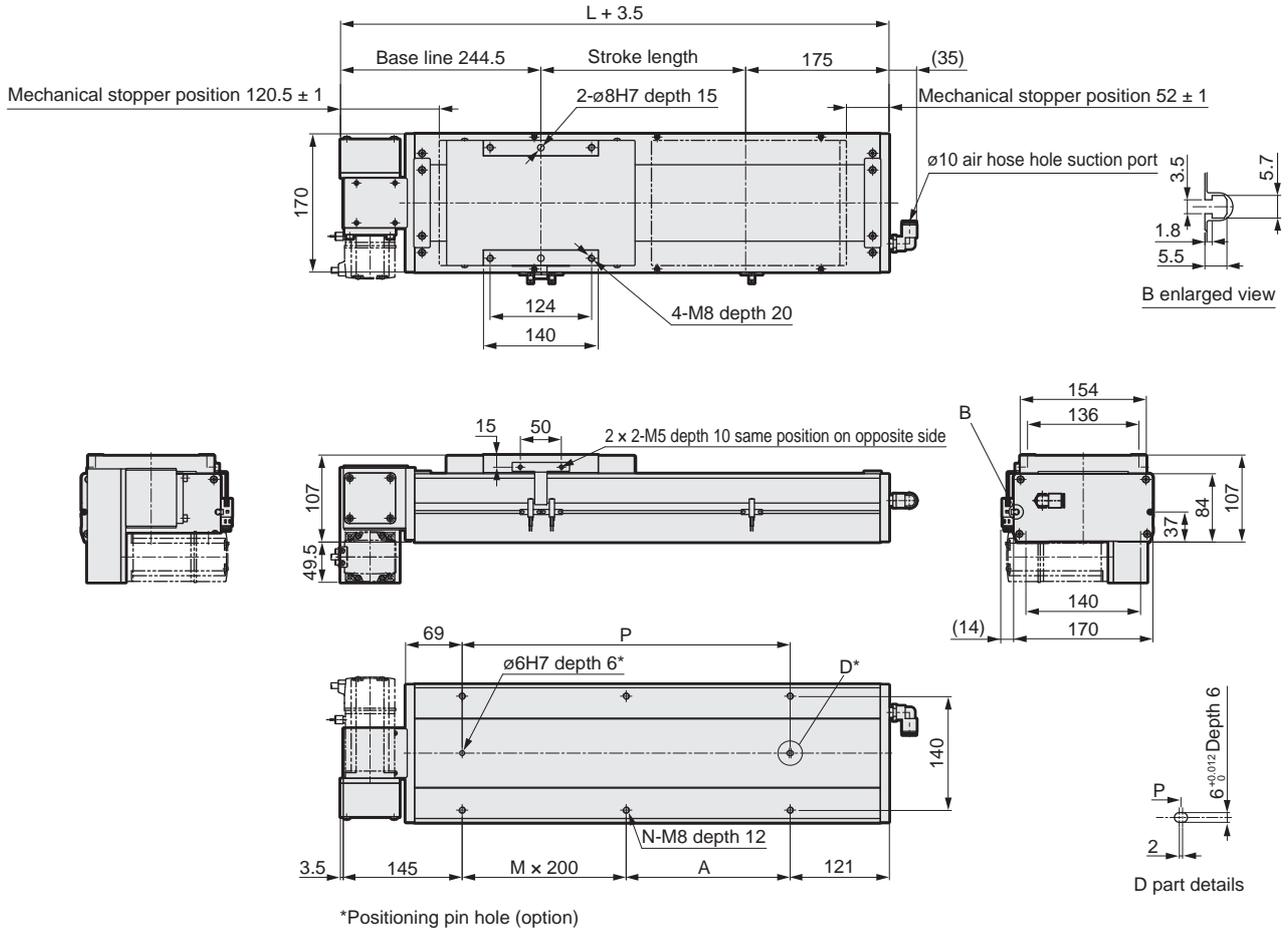
Stepper motor compatible

ECV-17 Series

Dimensions Motor left bottom mounting

● ECV-17-*****-W

· Refer to page 450 for grease nipple dimensions.

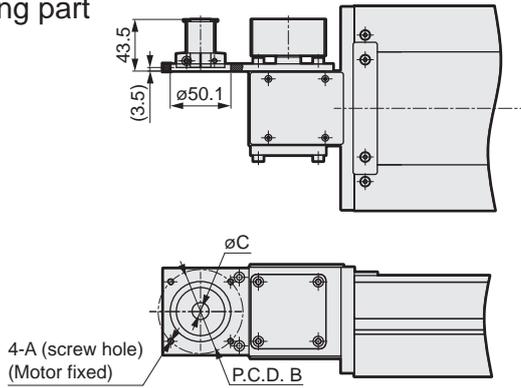


*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

*Refer to page 435 for motor mounting part dimensions and list of attachments.

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 400 W	M5	ø70	ø14	4-M5 × L12
Y 400 W	M5	ø70	ø14	4-M5 × L12
P 400 W	M4	ø70	ø14	4-M4 × L12
F 400 W	M5	ø70	ø14	4-M5 × L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

*Refer to page 452 for fitting details.

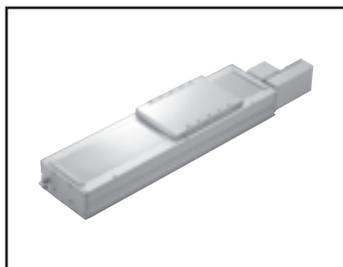
[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 448 for sensor specifications.

MEMO

Servo motor compatible: EBS, EBR, ETS, ETS Multi-Axis, ECS, ETV, ECV, EKS
 Stepper motor compatible: EBS, EBR, ETS, ECS
 Safety precautions



Electric actuator Belt ECV-22 Series

Motor side mounting (left, right, bottom)

● Servo motor capacity: 750 W

How to order

ECV - 22 - 40 010 - R M 8 X N N N N

A Body size

22	Body width 220 mm
----	-------------------

B Lead equivalent

40	40 mm
----	-------

C Stroke length

010	100 mm
to	(In 50 mm increments)
340	3400 mm

D Motor mounting direction *5

R	Right mounting
S	Right top mounting
T	Right bottom mounting
L	Left mounting
V	Left top mounting
W	Left bottom mounting

E Mounted motor specification

M	Select the mounted motor specification from the table below.
Y	
P	
F	

F Motor capacity

8	750 W
---	-------

G Driving belt

X	Standard (rubber)
L	Low dust generation (urethane)

H Origin sensor (1 pc) *1 *2 *3

N	None
C	Outside motor side
D	Outside motor opposite side

K Positioning pin hole

N	None
P	Yes

J Grease nipple *3 *4 *5

N	None (Body mounting direction: Bottom side)
R	Right
L	Left

I Limit sensor (2 pcs) *1 *2 *3

N	None
B	Outside

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	-
YASKAWA Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*Refer to page 403 for the motor model No.

- *1: Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.
- *2: The user can adjust the sensor position. (Included at shipment)
- *3: Contact CKD to use the origin sensor, limit sensor and grease nipple in the same direction.
- *4: "Body mounting direction: Standard" here refers to mounting from the bottom side.
- *5: When selecting motor mounting direction R, S, or T, grease nipple R cannot be selected. When selecting L, V, or W, grease nipple L cannot be selected.

Specifications

Applicable motor capacity	750 W servo motor
Drive method	Belt width 50 mm
Stroke length	mm 100 to 3400
Lead equivalent	mm 40
Max. load capacity	Horizontal kg 85
*1	Vertical kg -
Max. speed	mm/s 2000
Rated thrust *1	N 367
Repeatability	mm ±0.04
Lost motion	0.1 mm or less
Dynamic allowable load	N 14174.2
Static allowable moment	N·m MP: 2052, MY: 2052, MR: 1810
Dynamic allowable moment	N·m MP: 1098.5, MY: 1098.5, MR: 999.3
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)
Atmosphere	No corrosive gas, explosive gas, or dust

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

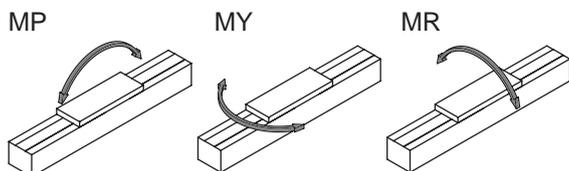
		(mm/s)
Stroke length	100 to 3400	
Lead equivalent	40	2000

*The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable overhang length

*Refer to page 446 for details.

Moment direction



Servo motor compatible

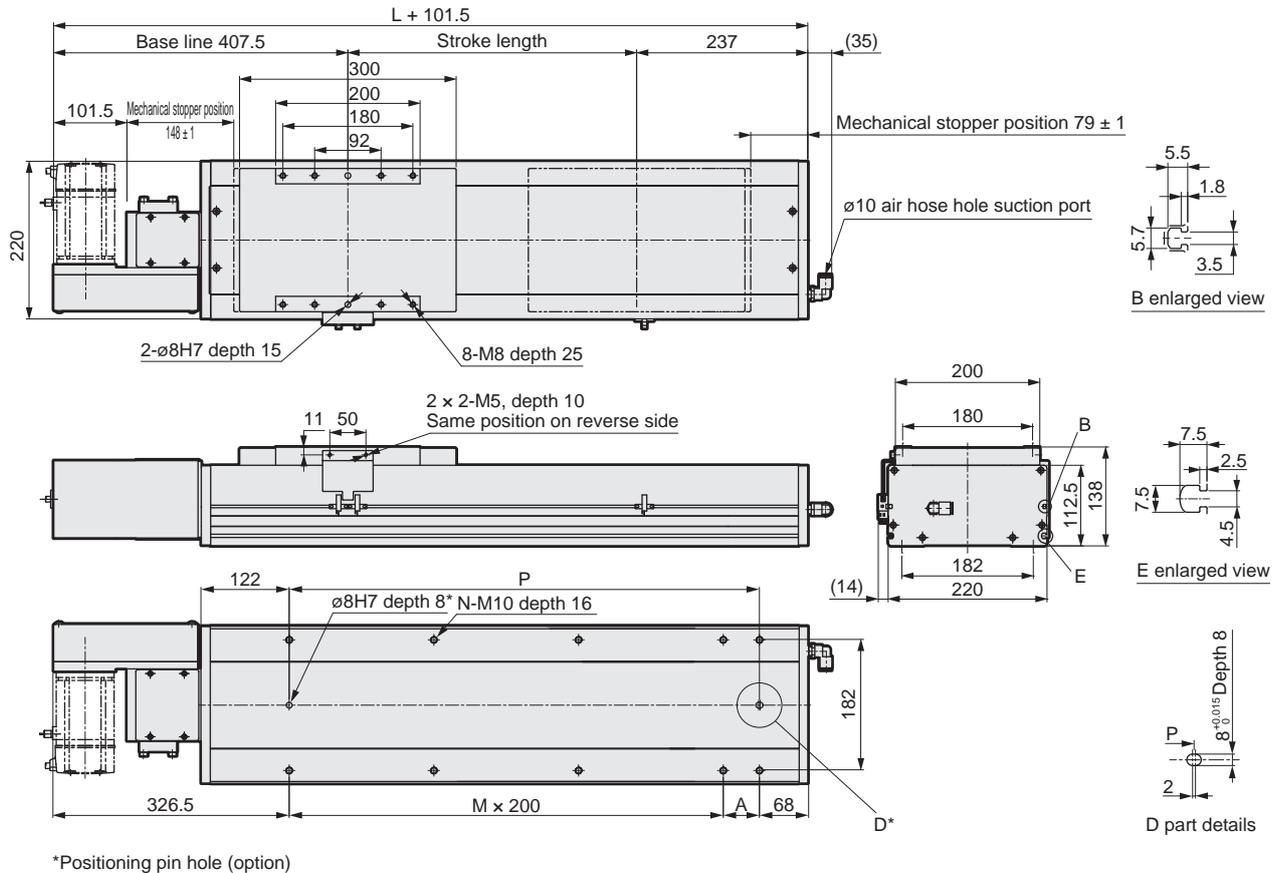
Stepper motor compatible

Safety precautions

Dimensions Motor right-side mounting

● ECV-22-****-R

· Refer to page 450 for grease nipple dimensions.



Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400		
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50		
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18		
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	36	38	38	38	40		
P	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650		
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2		

*Refer to page 443 for motor mounting part dimensions and list of attachments.

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

ETS

ECS

ECS

Safety Precautions

Servo motor compatible

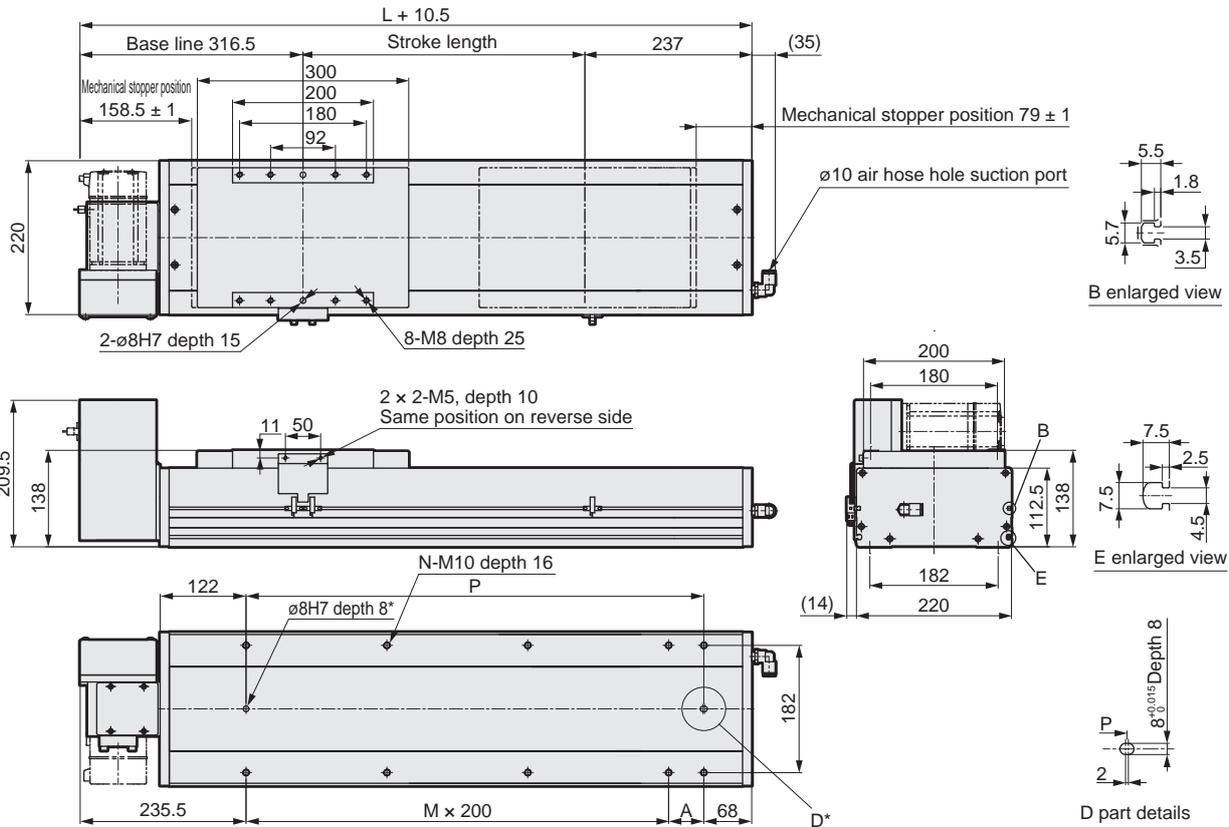
Stepper motor compatible

ECV-22 Series

Dimensions Motor right top mounting

● ECV-22-*****-S

Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

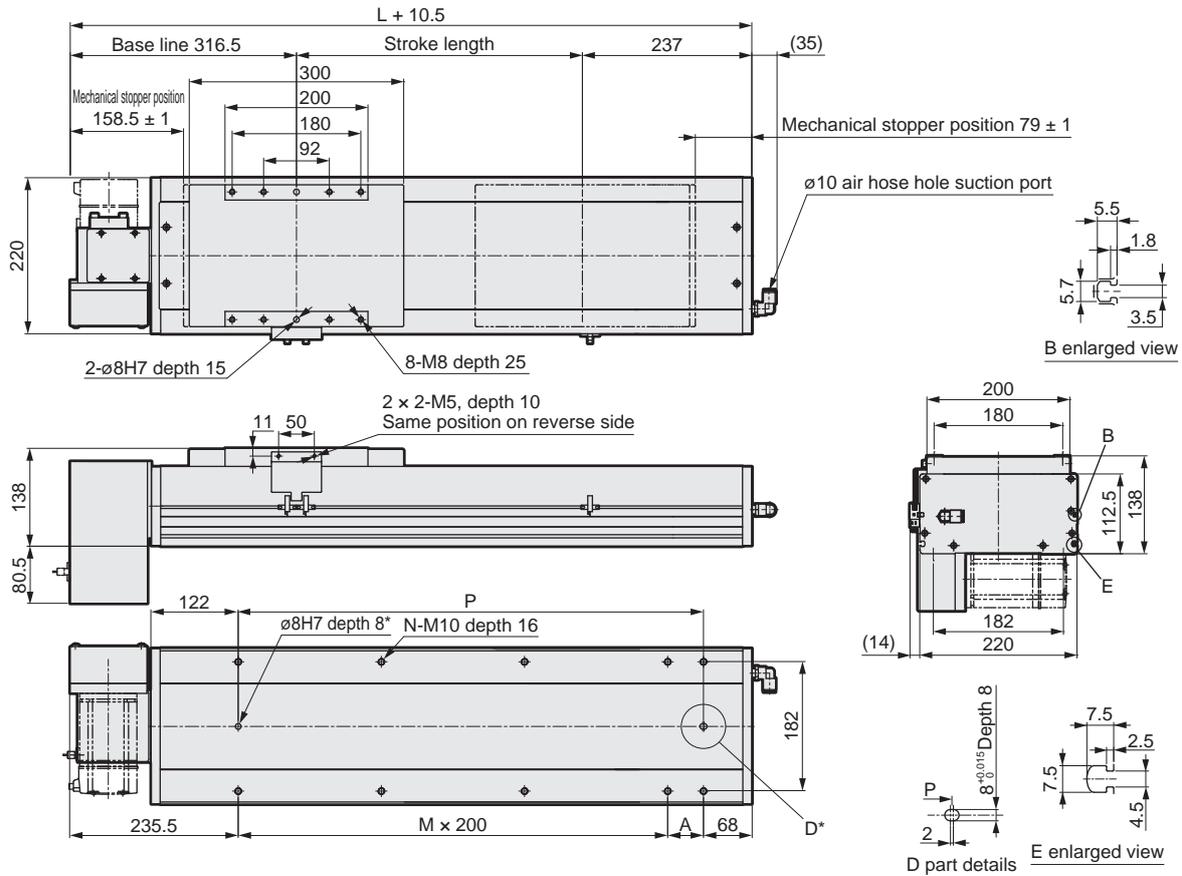
Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400		
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50		
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18		
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40		
P	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650		
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2		

*Refer to page 443 for motor mounting part dimensions and list of attachments.

Dimensions Motor right bottom mounting

● ECV-22-****-T

· Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400		
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50		
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18		
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40		
P	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650		
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2		

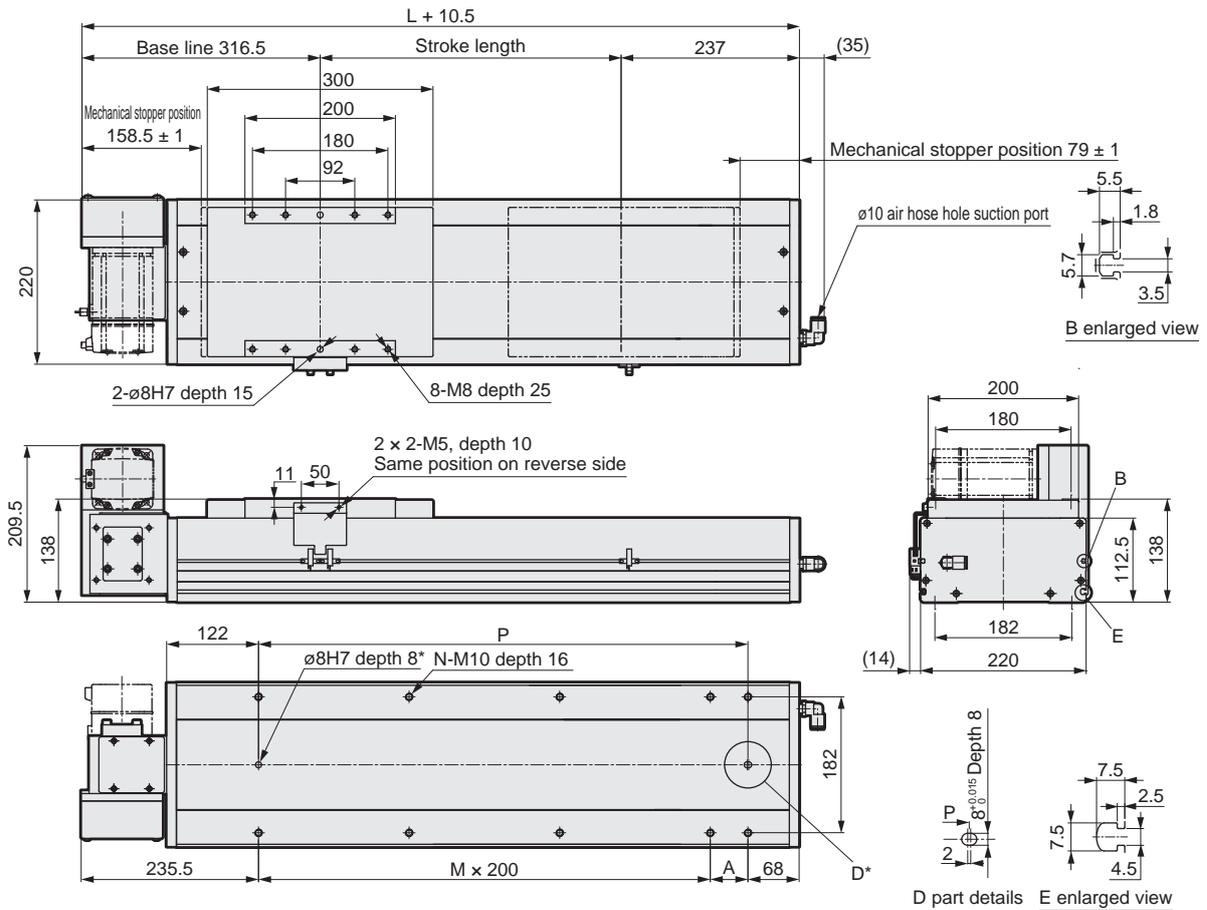
*Refer to page 443 for motor mounting part dimensions and list of attachments.

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Stepper motor compatible
Safety precautions

Dimensions Motor left top mounting

● ECV-22-****-V

· Refer to page 450 for grease nipple dimensions.



*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400		
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50		
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18		
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40		
P	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650		
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2		

*Refer to page 443 for motor mounting part dimensions and list of attachments.

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Safety Precautions

Servo motor compatible

Stepper motor compatible

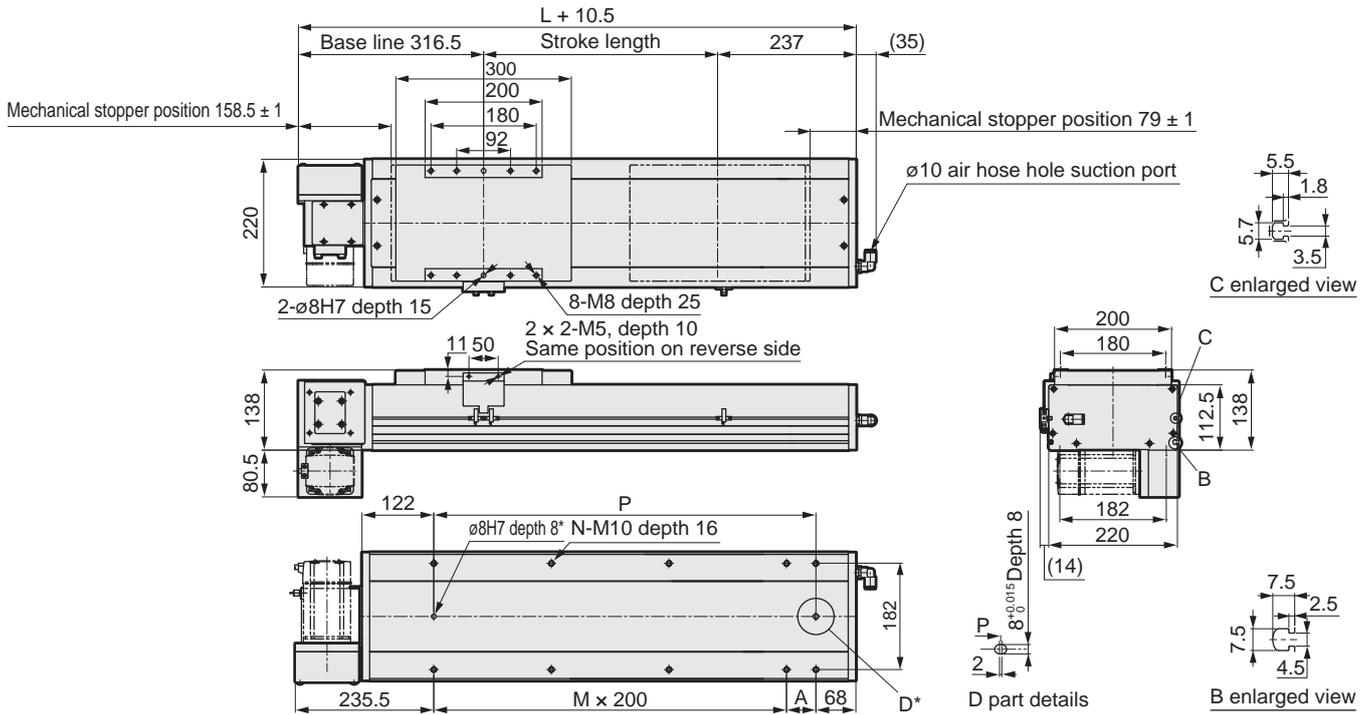
Safety Precautions

ECV-22 Series

Dimensions Motor left bottom mounting

● ECV-22-*****-W

· Refer to page 450 for grease nipple dimensions.

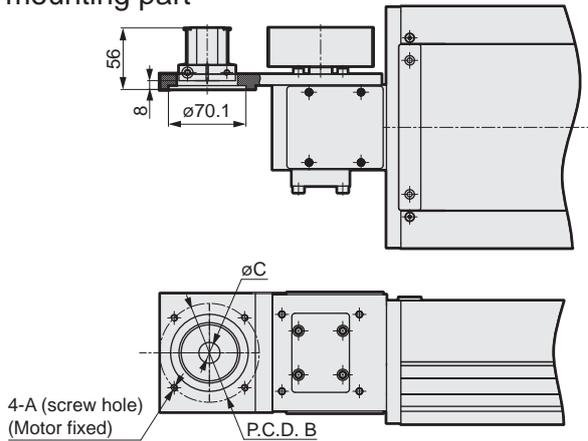


*Positioning pin hole (option)

Stroke length (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4
Stroke length (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0
Stroke length (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400		
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50		
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18		
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40		
P	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650		
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2		

*Refer to page 443 for motor mounting part dimensions and list of attachments.

Motor mounting part



Mounted motor specification	A	B	C	Motor mounting bolt
M 750 W	M6	ø90	ø19	4-M6 x L20
Y 750 W	M6	ø90	ø19	4-M6 x L20
P 750 W	M5	ø90	ø19	4-M5 x L20
F 750 W	M6	ø100	ø14	4-M6 x L20

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Fitting	Motor capacity	Motor mounting bolt	
				Size	Quantity
M	Included at shipment	Included at shipment	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

*Refer to page 452 for fitting details.

[Origin sensor/Limit sensor]

Manufacturer	Model	Quantity
OMRON Corporation	EE-SX672	3

*Refer to page 448 for sensor specifications.

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ETV

ECV

EKS

EBS

EBR

ETS

ECS

EBS

EBR

ETS

ECS

Servo motor compatible

Stepper motor compatible

Safety precautions