

ETV

Slider Type (Belt Drive)

Electric Actuator Servo
Motor Compatible
Motorless Specification



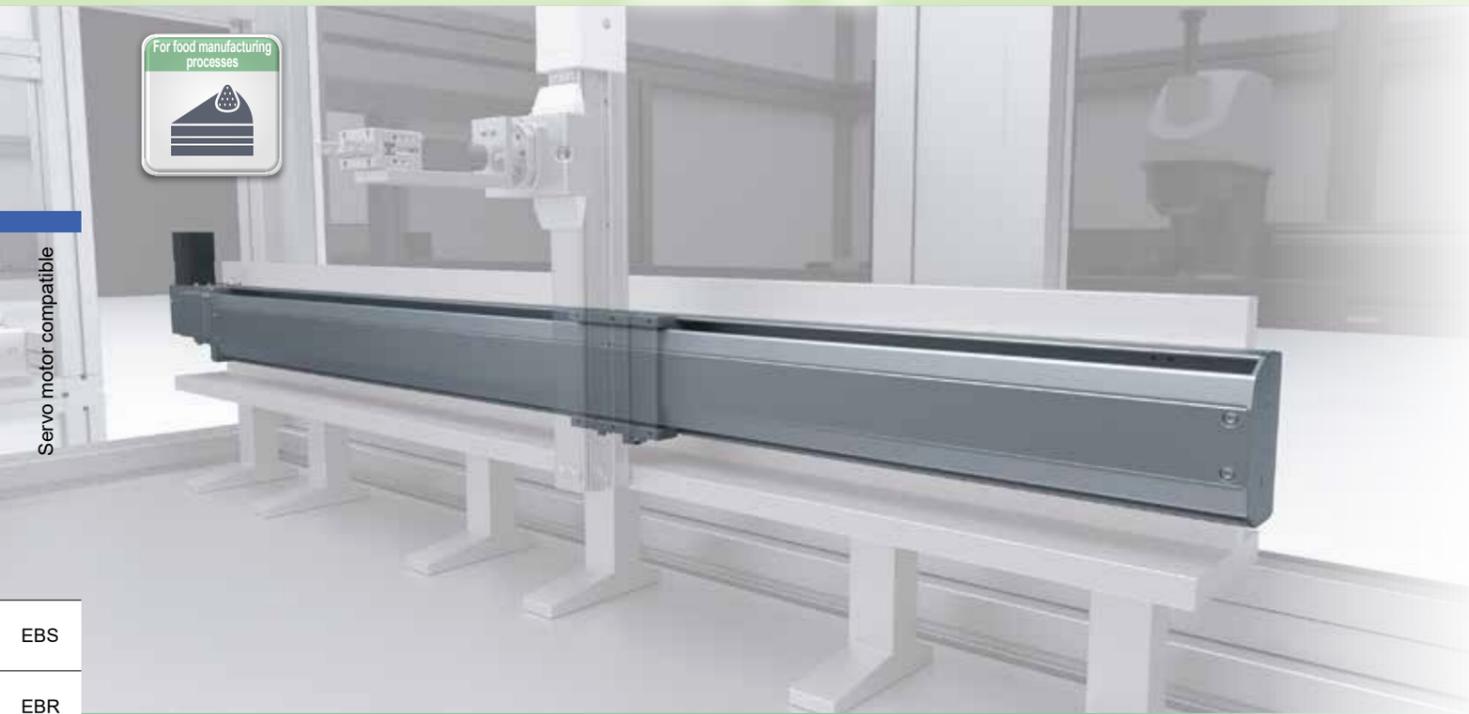
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Slider type (belt drive)
Servo motor compatible

ETV Series

Motorless Specification **ROBODEX Std.**



Long Stroke & High-Speed Transport

Line-up	Body Size	14	17	22	Catalog page
	Motor capacity	200 W	400 W	750 W	
ETV		●	●	●	284
ETV-FP1		●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

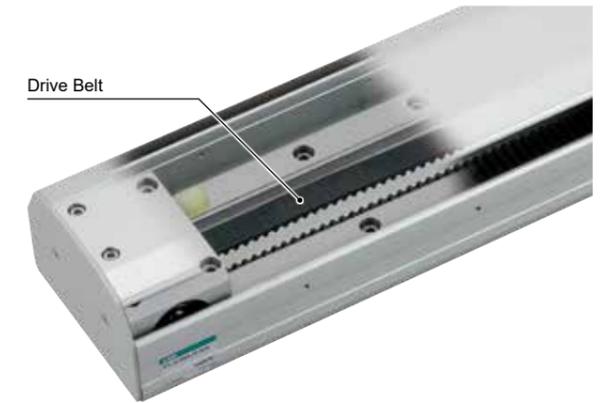
Servo Motor

Mitsubishi Electric Corporation Delta Electronics Co., Ltd. Sanyo Denki Co., Ltd. Mitsubishi Electric Corporation Keyence Corporation Panasonic Corporation
OMRON Corporation Fuji Electric Corporation FANUC CORPORATION Bosch Rexroth AG Rockwell Automation, Inc. SIEMENS AG

Long Stroke & High-Speed Transport with Belt Drive

Belt drive supports strokes up to 3500 mm. Max. speed is up to 2000 mm/s.

Max. Supported **3500 mm**
Max. Speed Supported **2000 mm/s**



Achieves high rigidity

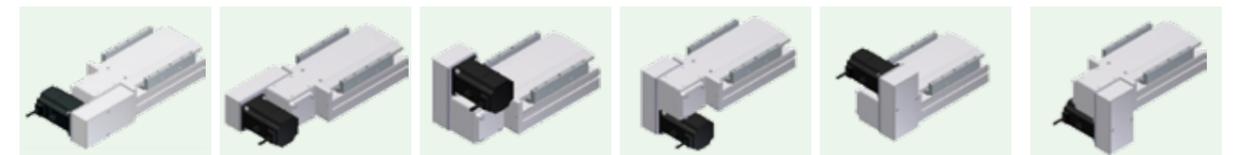
It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.



*Select by model No.

Motor fold-back variations

We have prepared a total of 6 motor fold-back variations that can be selected according to the equipment.



Right Side Return Mount Left Side Fold-back Mounting Top Left Fold-back Mounting Bottom Left Fold-back Mounting Top Right Fold-back Mounting Bottom Right Fold-back Mounting



Servo motor compatible

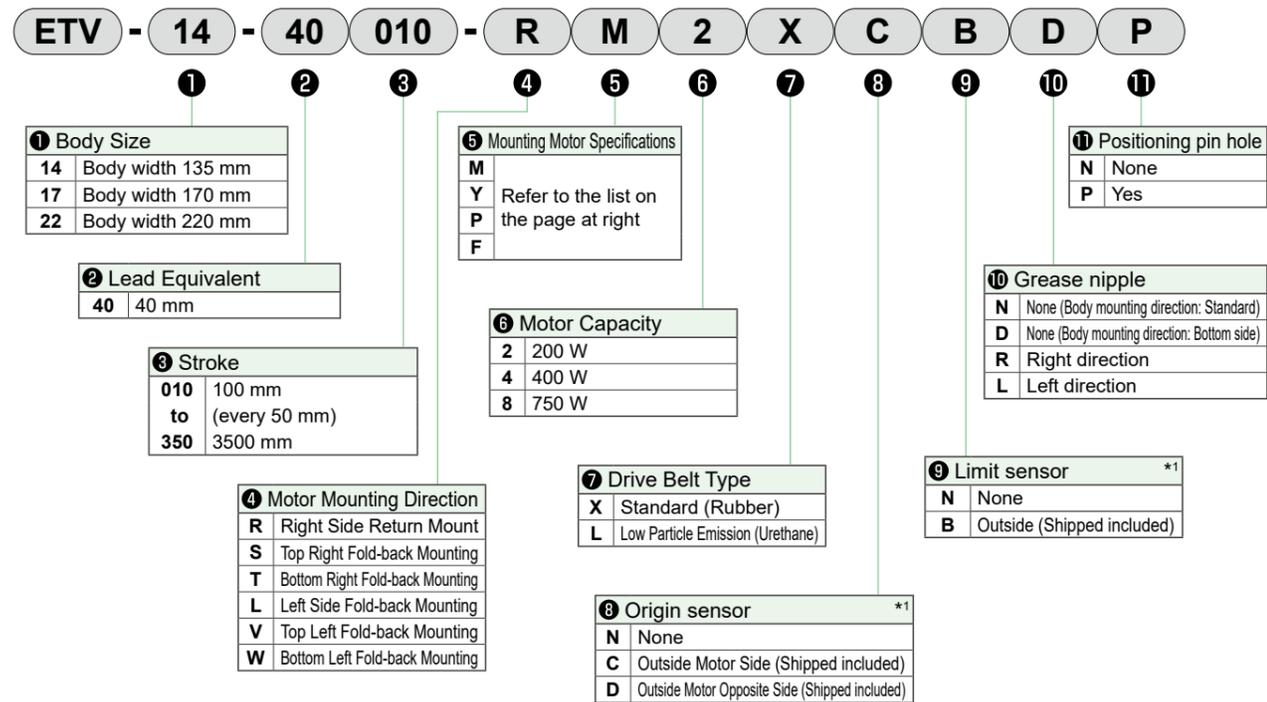
Servo motor compatible

EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM

EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM

Model Number Configuration

Model No. Notation Method



Screw Lead / Stroke Compatibility Table by Body Size

① Body Size	② Screw Lead	③ Stroke
14	40	010 to 305 (100 mm to 3500 mm)
17		010 to 350 (100 mm to 3500 mm)
22		010 to 350 (100 mm to 3500 mm)

*1 Sensor dogs will be assembled and shipped regardless of the presence of sensors.

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	P	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

Model Number Display Example

ETV-14-40010-RM2XCBDP

- ① Body Size : 14 Series
- ② Lead Equivalent : 40 mm
- ③ Stroke : 100 mm
- ④ Motor Mounting Direction : Right Side Return Mount
- ⑤ Mounting motor specification : M (Refer to the table on the page at right)
- ⑥ Motor Capacity : 200 W
- ⑦ Drive Belt Type : Standard (rubber)
- ⑧ Origin sensor : Outside motor side
- ⑨ Limit sensor : Outside
- ⑩ Grease nipple : None (Main body mounting direction: Bottom side)
- ⑪ Locating pin hole : Yes

* This product is provided as an actuator (and motor mounting parts) only; the motor is not included. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ETV-14 Series)	400 W (ETV-17 Series)	750 W (ETV-22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Mitsubishi Electric Corporation	Σ-7	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X	SGMJ-02	SGMJ-04	SGMJ-08
Y	Keyence Corporation	SV	SV□020	SV□040	SV□075
		SV2	SV2□020	SV2□040	SV2□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7□B2□	GYS401 D7□B2□	-
		ALPHA7 GYB	GYB201 D7□B2□	GYB401 D7□B2□	GYB751 D7□B2□
F	FANUC CORPORATION	βiS-B	A06 B-2115-B1	A06 B-2116-B1	A06 B-2063-B1
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG	1 FK2	*1 1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* For mounting motors other than the above and products from other motor manufacturers, please contact us.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (As of January 2021)

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM



Electric Actuator Belt Type

ETV-14 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W

ETV-14 Series

Dimensions / List of attachments

Model No. Notation Method

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

1 Body Size
14 Body width 135 mm

2 Lead Equivalent
40 40 mm

3 Stroke
010 100 mm
to (every 50 mm)
305 3050 mm

4 Motor mounting direction *5
R Right Side Return Mount
S Top Right Fold-back Mounting
T Bottom Right Fold-back Mounting
L Left Side Fold-back Mounting
V Top Left Fold-back Mounting
W Bottom Left Fold-back Mounting

5 Mounting Motor Specifications
M Select the mounting motor specification from the table below.
Y
P
F

6 Motor Capacity
2 200 W

7 Drive Belt Type
X Standard (rubber)
L Low Particle Emission (Urethane)

8 Origin sensor (1 pc)
*1, *2, *3
N None
C Outside, motor side
D Outside, opposite motor side

9 Limit sensor (2 pcs)
*1, *2, *3
N None
B Outside

10 Positioning pin hole
N None
P Yes

10 Grease nipple *3, *4, *5
N None (Body mounting direction: Standard)
R Right direction
L Left direction

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	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 P. 287 for motor model No.

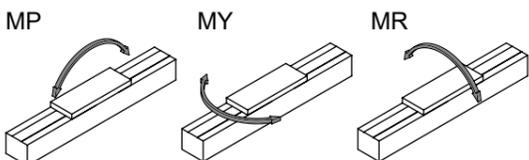
*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R," "S," or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L," "V," or "W" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity	200 W Servo Motor
Drive Method	Belt width 22 mm
Stroke	mm 100 to 3050
Lead equivalent	mm 40
Max. payload *1	Horizontal kg 25 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 maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction



Stroke and Max. Speed

Stroke	Max. Speed (mm/s)
Lead Equivalent	100 to 3050
40	2000

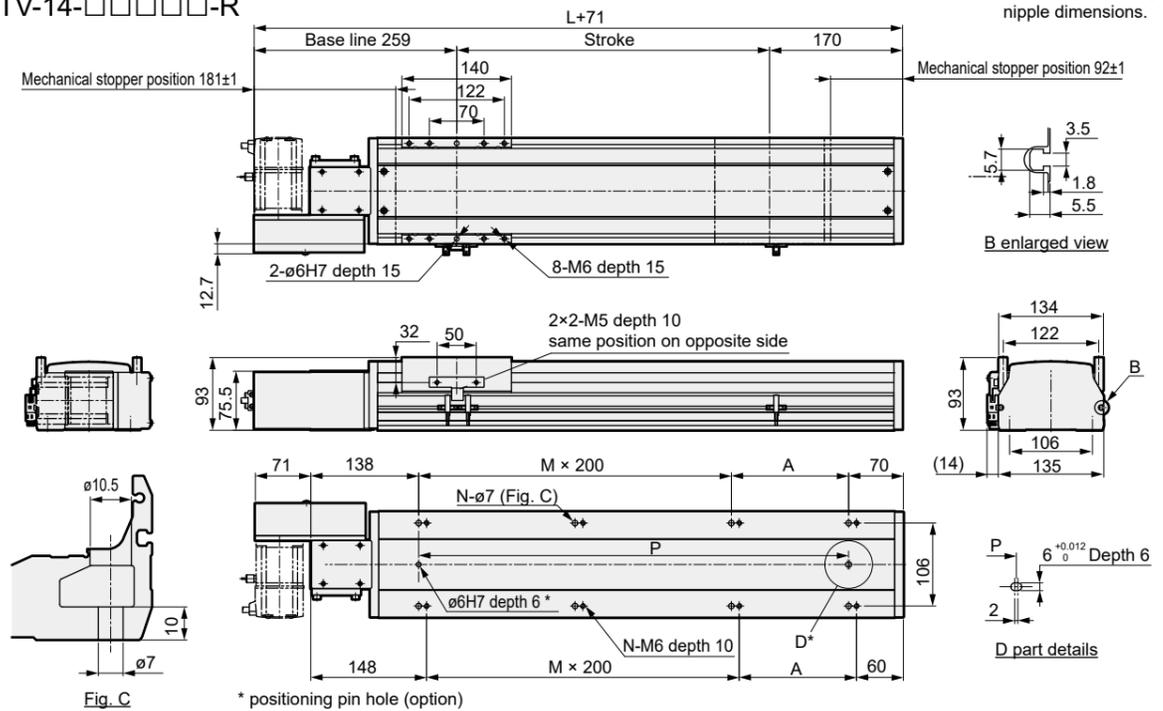
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 314 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-14-□□□□□-R

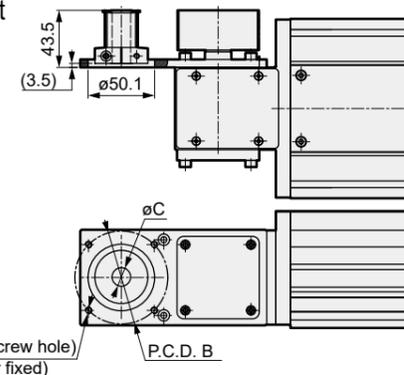


● Refer to P. 318 for grease nipple dimensions.

Stroke (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	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
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	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)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (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	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
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	24	24	24	24	26	26	26	26	28	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)	24.5	25.1	25.7	26.3	26.9	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

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
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 Accessories

(Motor Mounting Parts)

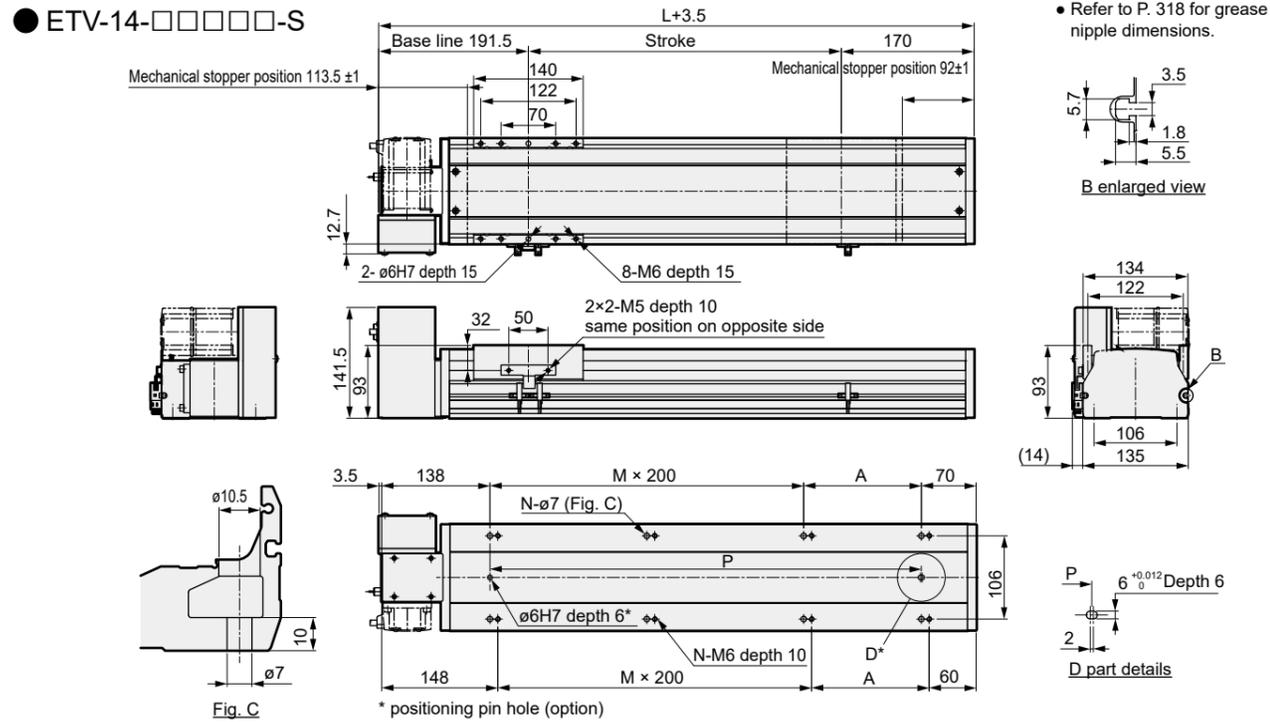
Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

(Home Sensor / Limit Sensor)

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

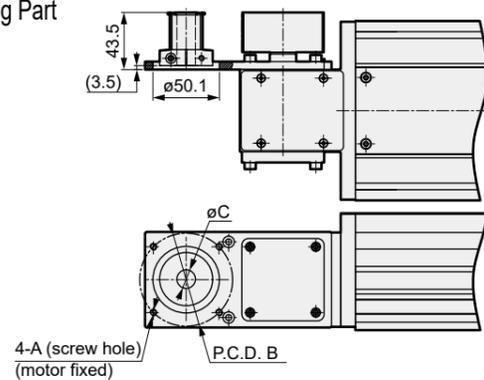
External Dimension Drawing: Top Right Fold-back Motor Mounting



Stroke (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	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
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	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)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (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	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
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	24	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)	24.5	25.1	25.7	26.3	26.9	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

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
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 Accessories

[Motor Mounting Parts]

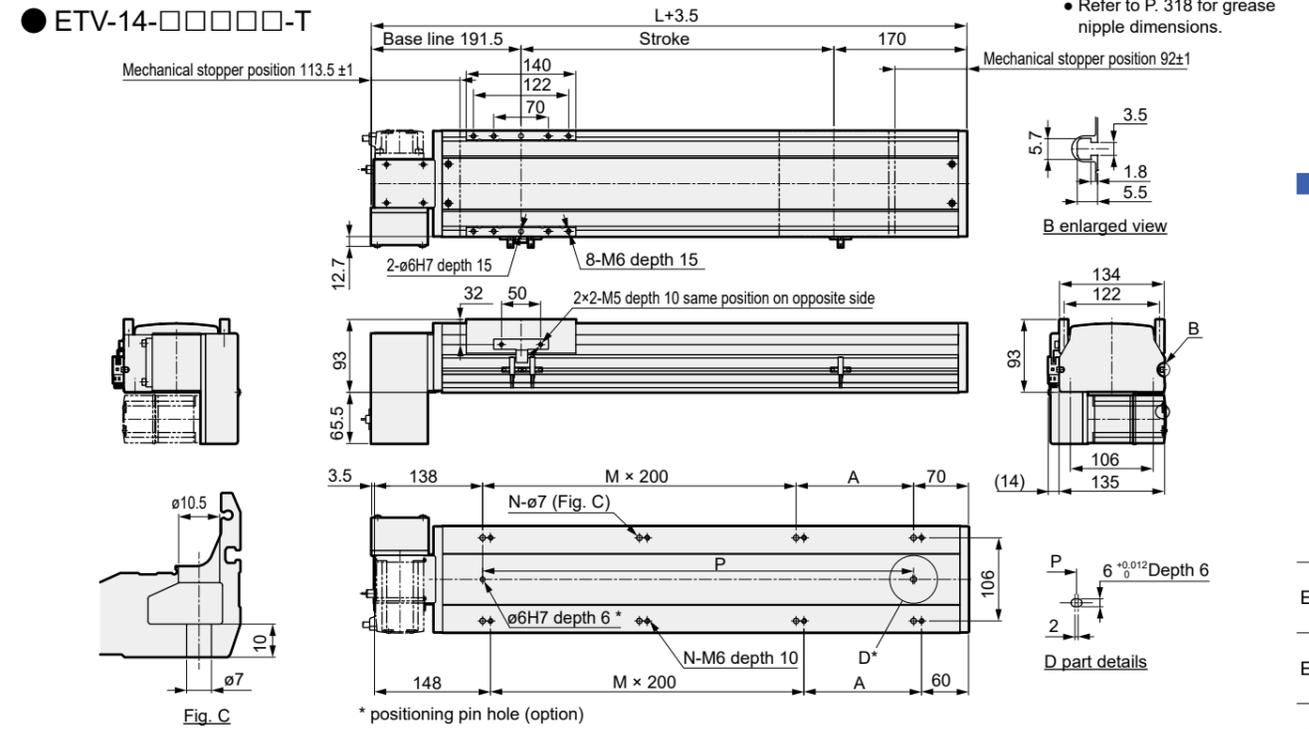
Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

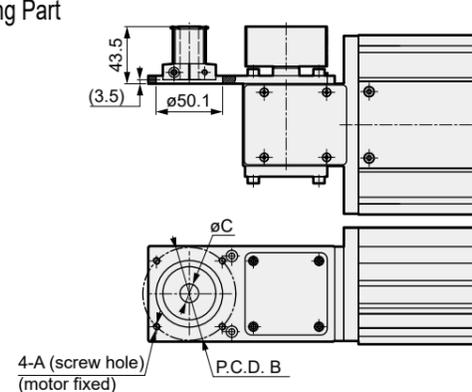
External Dimension Drawing: Bottom Right Fold-back Motor Mounting



Stroke (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	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
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	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)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (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	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
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	24	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)	24.5	25.1	25.7	26.3	26.9	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

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
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 Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

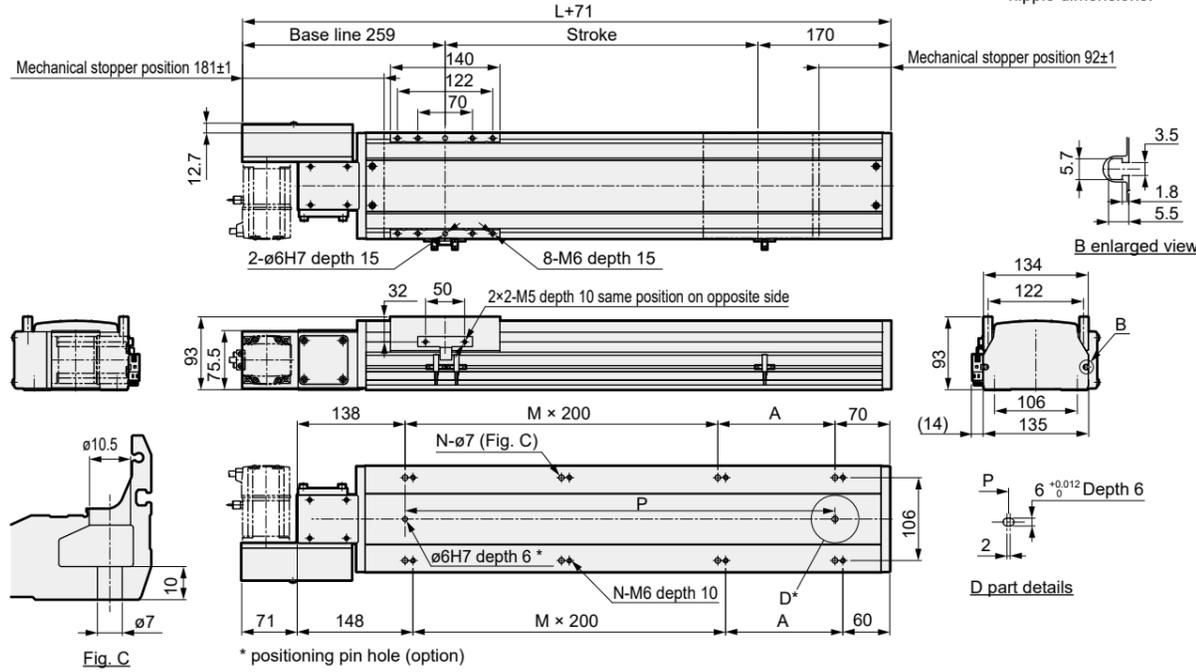
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-14-□□□□□-L

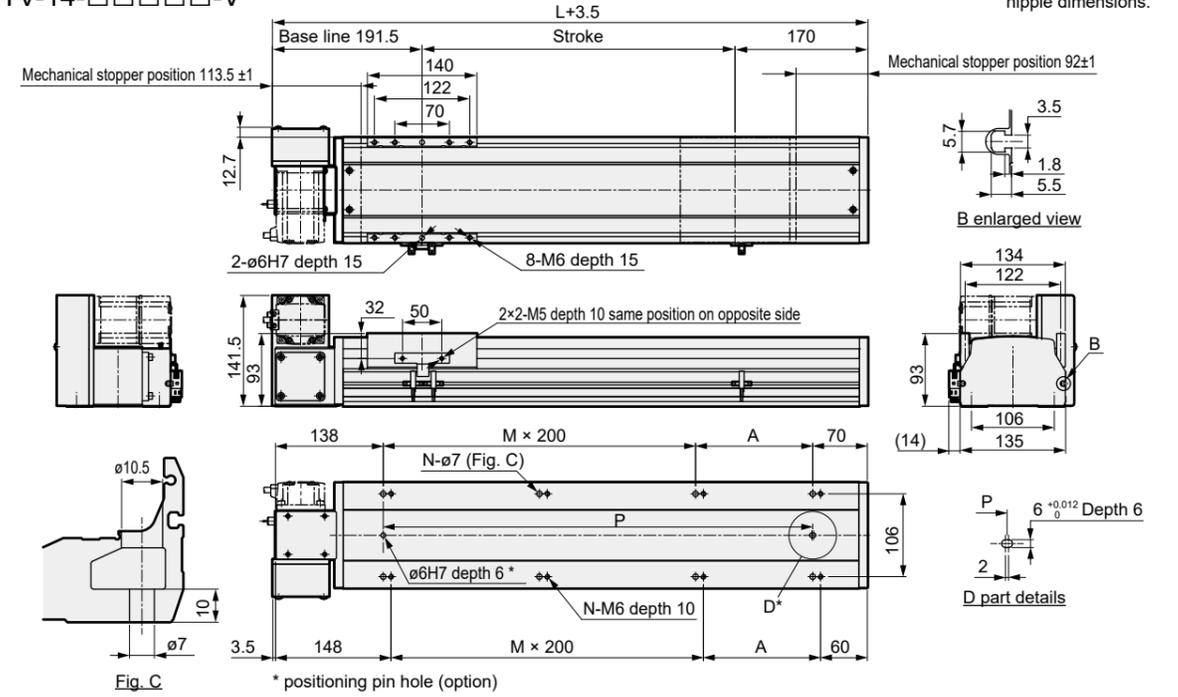
• Refer to P. 318 for grease nipple dimensions.



External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-14-□□□□□-V

• Refer to P. 318 for grease nipple dimensions.



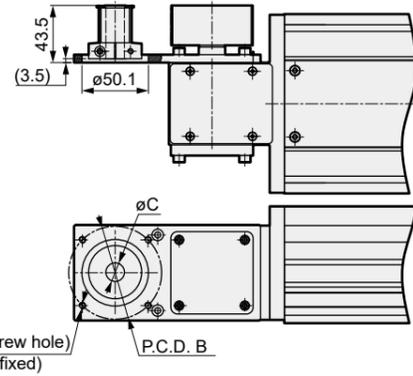
Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	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	3	3	3	3	4	4	4	4	5	5	5	6	6	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)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (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	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
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)	24.5	25.1	25.7	26.3	26.9	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

Stroke (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	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
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	3	3	3	3	4	4	4	4	5	5	5	6	6	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)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

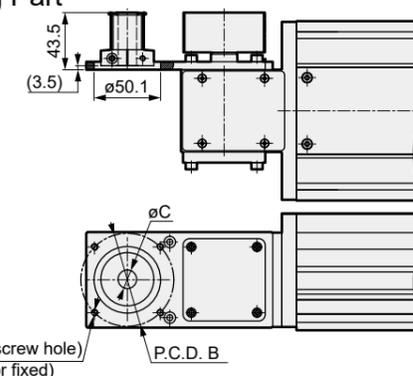
Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
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)	24.5	25.1	25.7	26.3	26.9	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

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
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

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
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 Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.



Electric Actuator Belt Type

ETV-17 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W

ETV-17 Series

External Dimension Drawings

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-17-□□□□□-R

● Refer to P. 318 for grease nipple dimensions.

Model No. Notation Method

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

① Body Size
17 Body width 170 mm

② Lead Equivalent
40 40 mm

③ Stroke
010 100 mm (every 50 mm)
350 3500 mm

④ Motor mounting direction *5
R Right Side Return Mount
S Top Right Fold-back Mounting
T Bottom Right Fold-back Mounting
L Left Side Fold-back Mounting
V Top Left Fold-back Mounting
W Bottom Left Fold-back Mounting

⑤ Mounting Motor Specifications
M Select the mounting motor specification from the table below.
Y
P
F

⑥ Motor Capacity
4 400 W

⑦ Drive Belt Type
X Standard (rubber)
L Low Particle Emission (Urethane)

⑧ Origin sensor (1 pc) *1, *2, *3
N None
C Outside, motor side
D Outside, opposite motor side

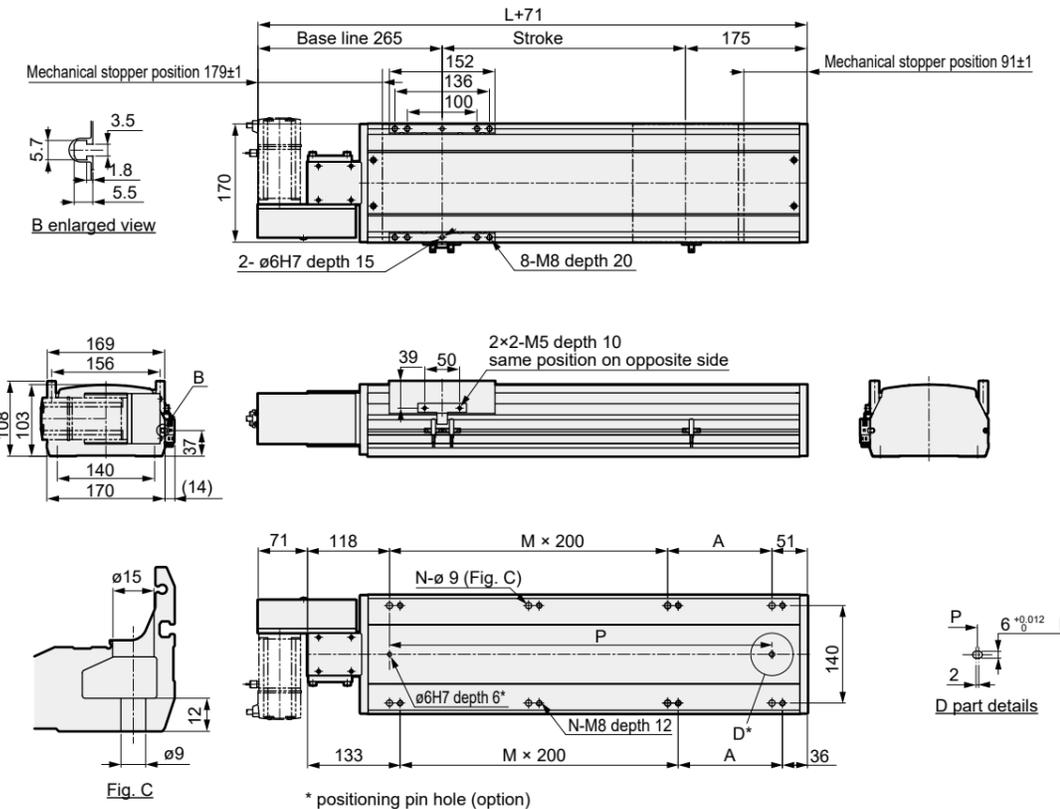
⑨ Limit sensor (2 pcs) *1, *2, *3
N None
B Outside

⑩ Grease nipple *3, *4, *5
N None (Body mounting direction: Standard)
R Right direction
L Left direction

⑪ Positioning pin hole
N None
P Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	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

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

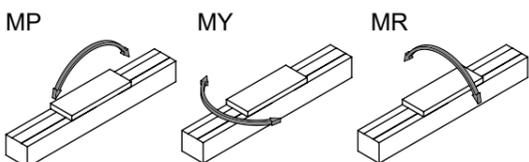


Specifications

Applicable Motor Capacity	400 W Servo Motor
Drive Method	Belt width 30 mm
Stroke	mm 100 to 3500
Lead equivalent	mm 40
Max. payload *1	Horizontal kg 45 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 maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction



Stroke and Max. Speed

Stroke	Max. Speed (mm/s)
Lead Equivalent	100 to 3500
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 P. 314 for details.

Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

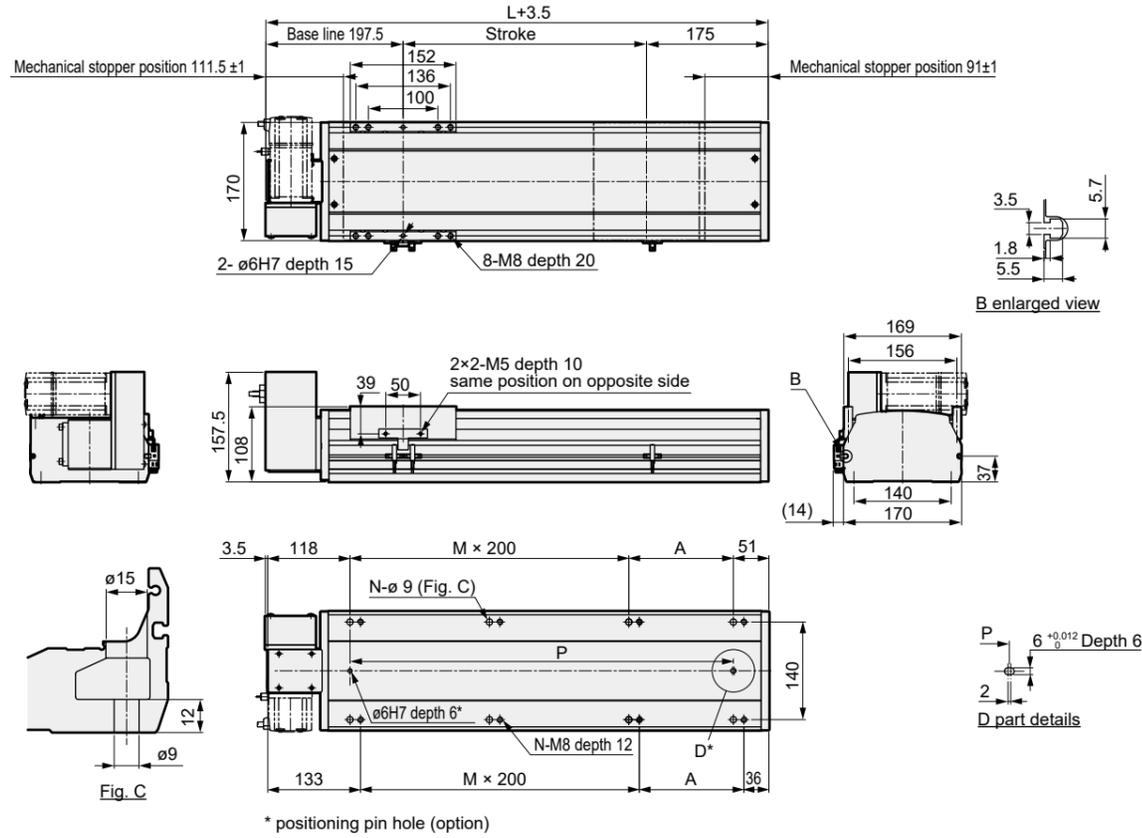
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ETV-17-□□□□□-S

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

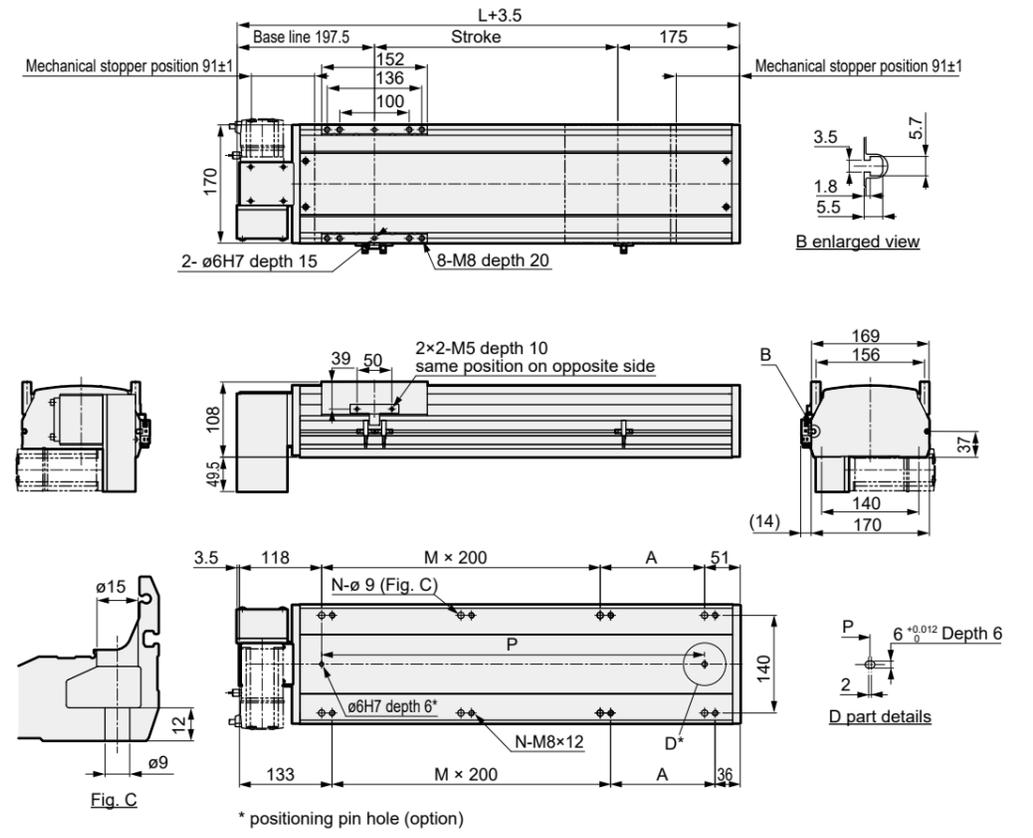
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ETV-17-□□□□□-T

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

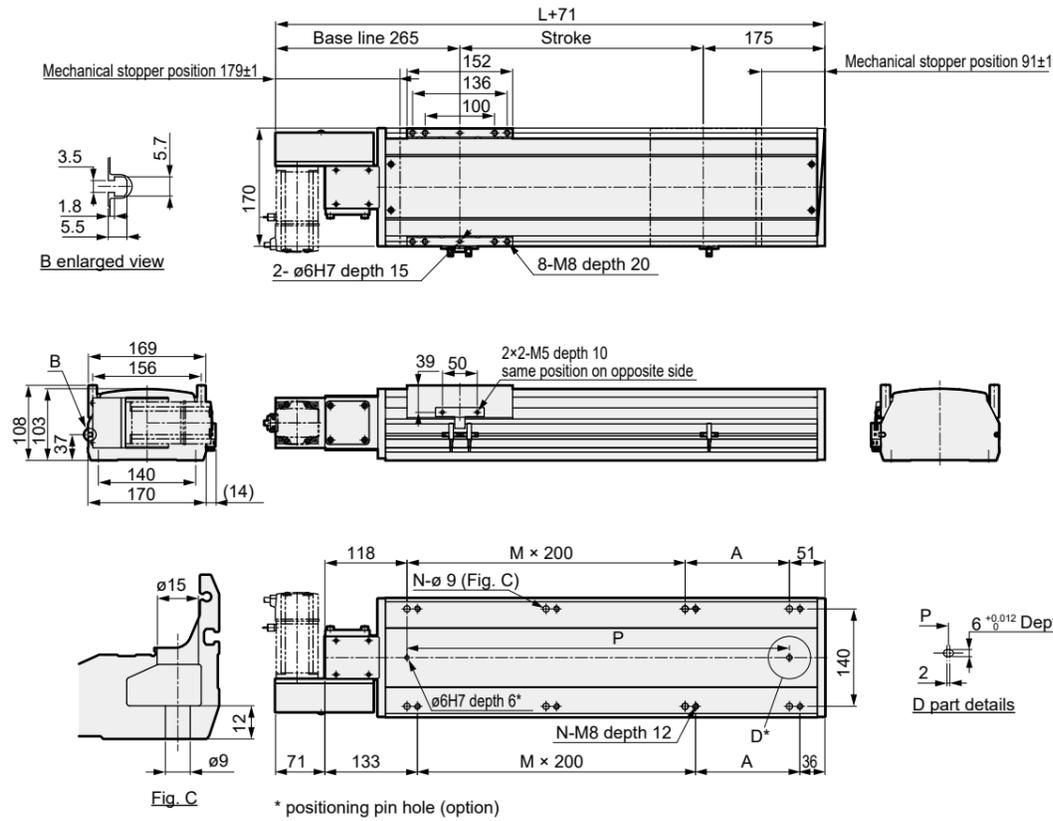
ESM

Ending

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-17-□□□□□-L

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2
Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

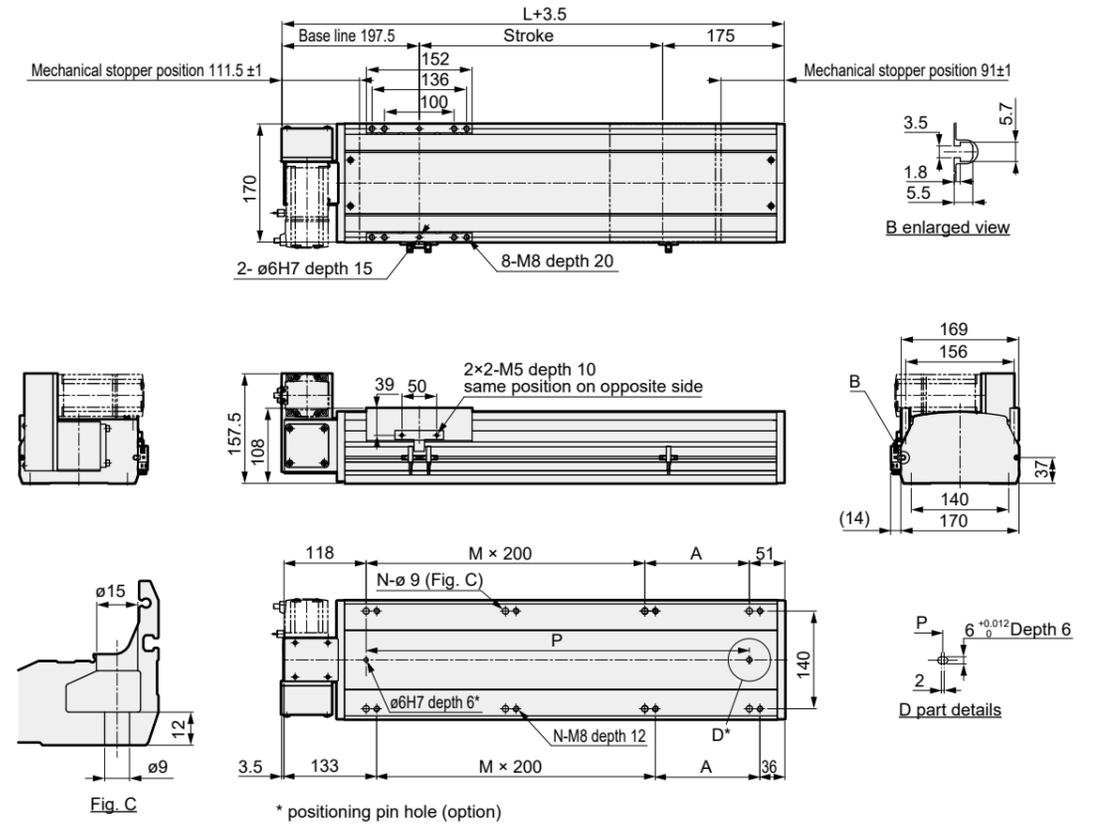
* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawings

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-17-□□□□□-V

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2
Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

Servo motor compatible

EBS

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ETS Multi Axis

ECS

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ECV

EKS

ESM

Ending

Servo motor compatible

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EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

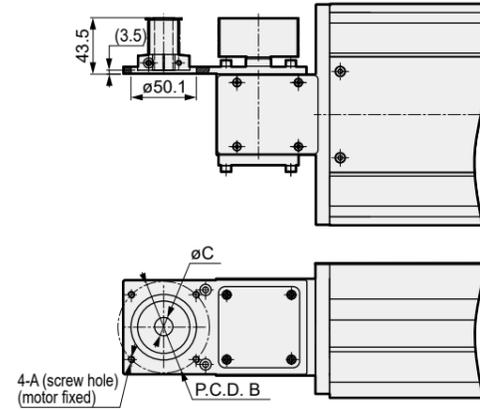
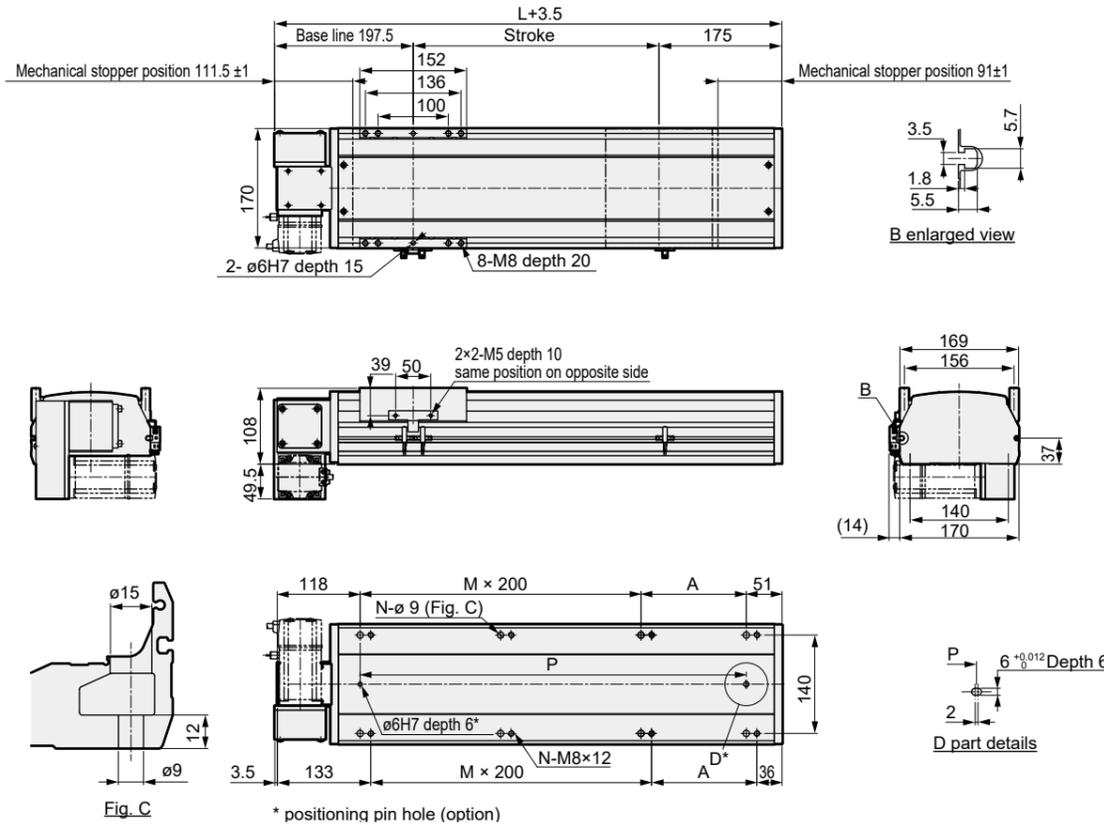
External Dimension Drawing: Bottom Left Fold-back Motor Mounting

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ETV-17-□□□□□-W

● Refer to P. 318 for grease nipple dimensions.

Motor Mounting Part



Mounting Motor Specification	A	B	C	Motor mounting bolts
M 400 W	M5	ø70	ø14	4-M5 x L12
Y 400 W	M5	ø70	ø14	4-M5 x L12
P 400 W	M4	ø70	ø14	4-M4 x L12
F 400 W	M5	ø70	ø14	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

MEMO

Stroke (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	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (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	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

Servo motor compatible

EBS

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ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

Ending

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

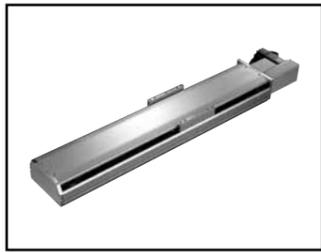
ETV

ECV

EKS

ESM

Ending



Electric Actuator Belt Type
ETV-22 Series
 Motor Fold-back Mounting Type
 ● Servo Motor Capacity : 750 W

ETV-22 Series
 External Dimension Drawings

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-22-□□□□□-R

● Refer to P. 318 for grease nipple dimensions.

Model No. Notation Method

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

1 Body Size
 22 Body width 220 mm

2 Lead Equivalent
 40 40 mm

3 Stroke *1, *2
 010 100 mm (every 50 mm)
 350 3500 mm

4 Motor mounting direction *5
 R Right Side Return Mount
 S Top Right Fold-back Mounting
 T Bottom Right Fold-back Mounting
 L Left Side Fold-back Mounting
 V Top Left Fold-back Mounting
 W Bottom Left Fold-back Mounting

5 Mounting Motor Specifications
 M Select the mounting motor specification from the table below.

6 Motor Capacity
 8 750 W

7 Drive Belt Type
 X Standard (rubber)
 L Low Particle Emission (Urethane)

8 Origin sensor (1 pc) *1, *2, *3
 N None
 C Outside, motor side
 D Outside, opposite motor side

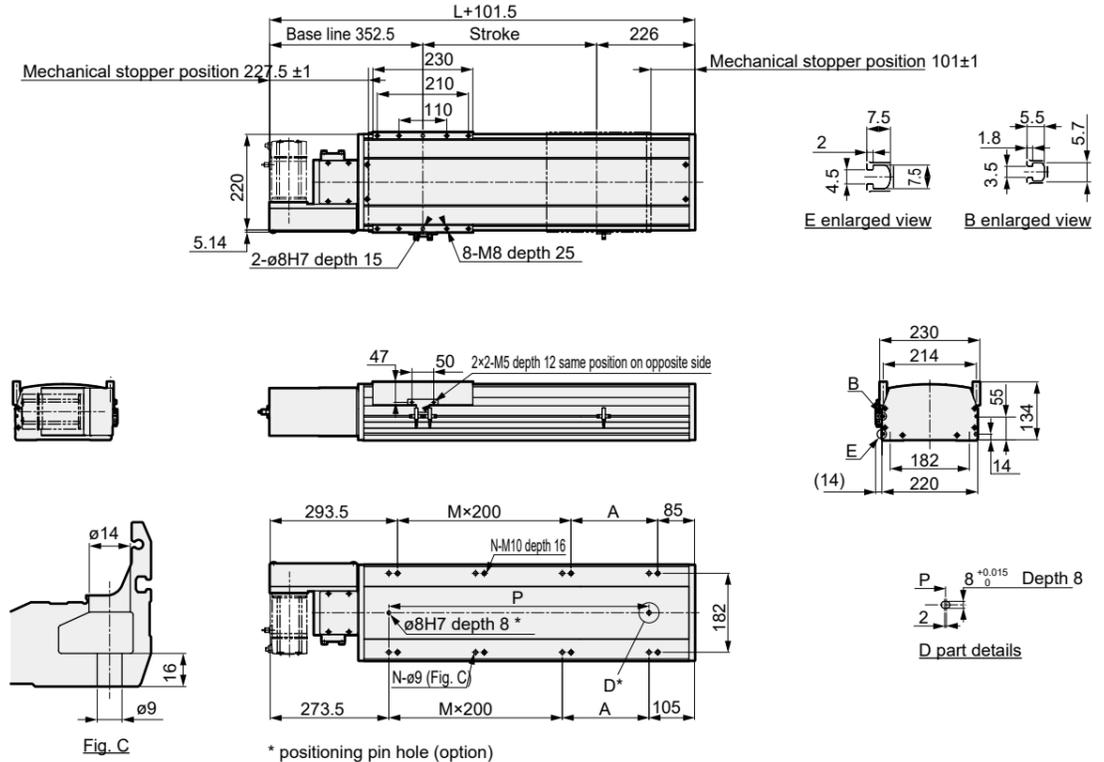
9 Limit sensor (2 pcs) *1, *2, *3
 N None
 B Outside

10 Grease nipple *3, *4, *5
 N None (Body mounting direction: Standard)
 R Right direction
 L Left direction

11 Positioning pin hole
 N None
 P Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	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

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
 *2 The customer can adjust the sensor position. (Shipped included)
 *3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
 *4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
 *5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
 If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.



Stroke (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	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (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	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

Specifications

Applicable Motor Capacity	750 W Servo Motor
Drive Method	Belt width 50 mm
Stroke	mm 100 to 3500
Lead equivalent	mm 40
Max. Payload *1	Horizontal kg 85 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 maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

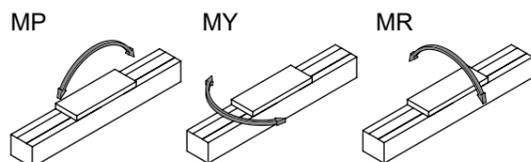
Stroke	Lead Equivalent	Max. Speed (mm/s)
100 to 3500	40	2000

* 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 P. 314 for details.

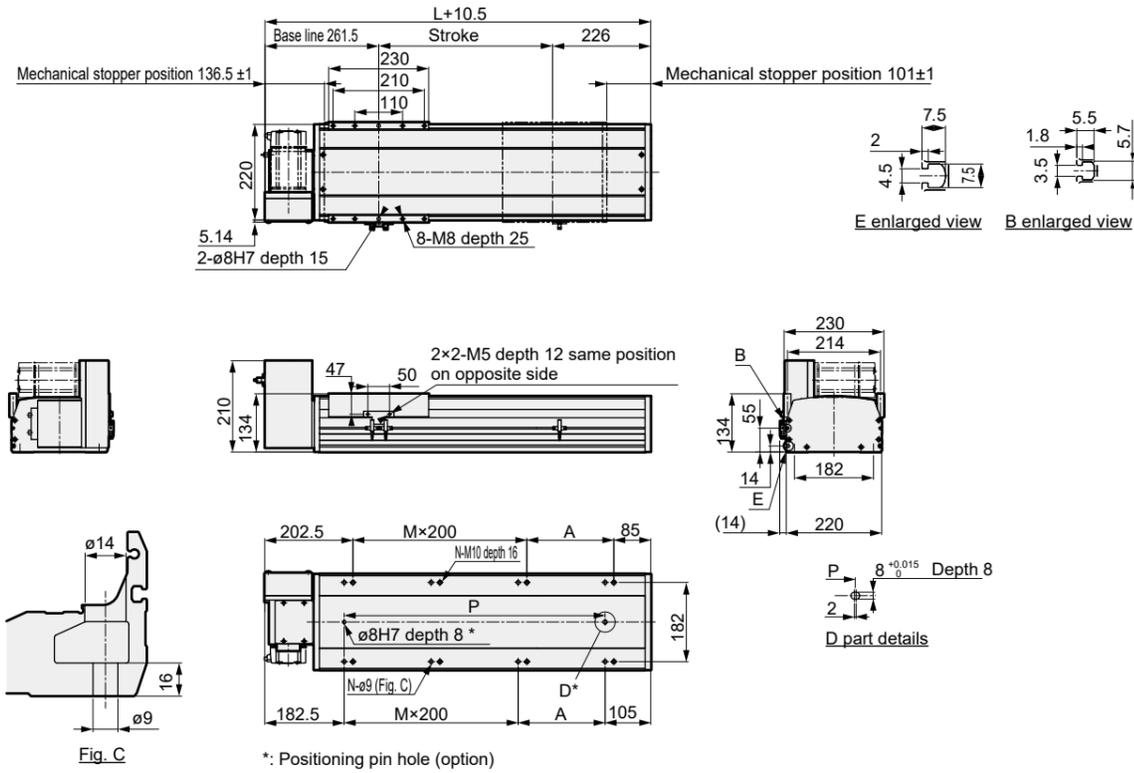
Moment Direction



External Dimension Drawing: Top Right Fold-back Motor Mounting

● ETV-22-□□□□□-S

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (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	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

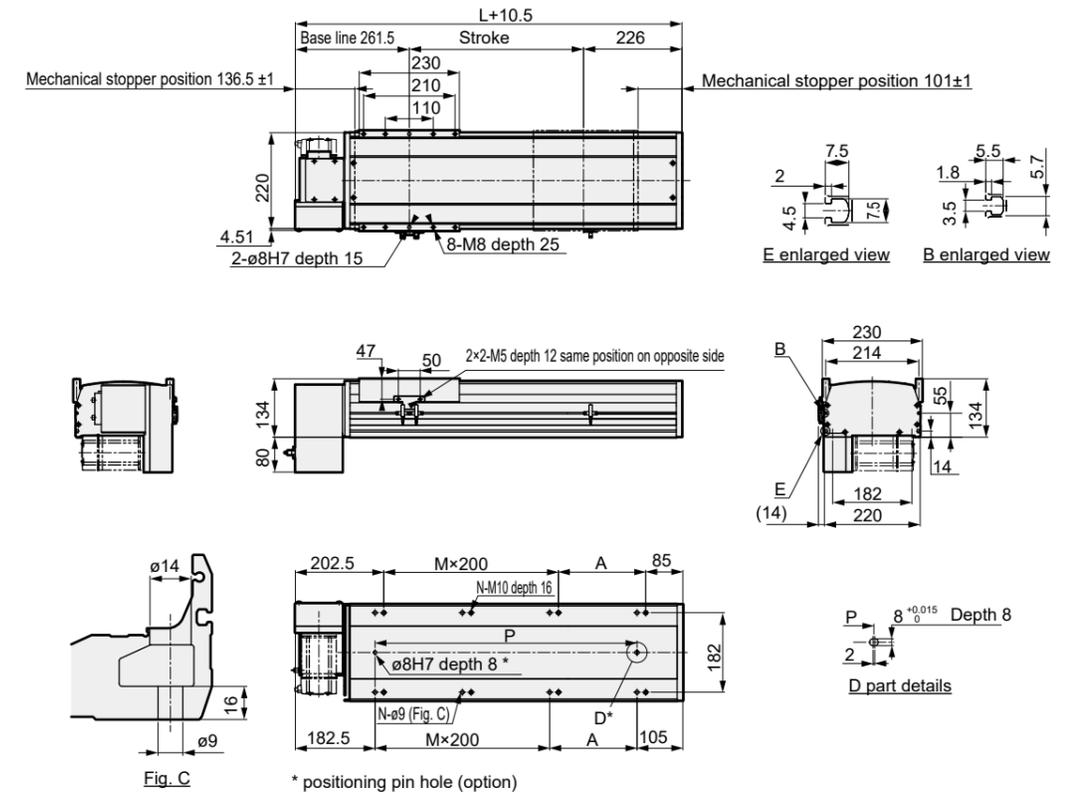
* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawings

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ETV-22-□□□□□-T

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (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	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

* For motor mounting dimensions and list of accessories, please refer to P. 311.

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

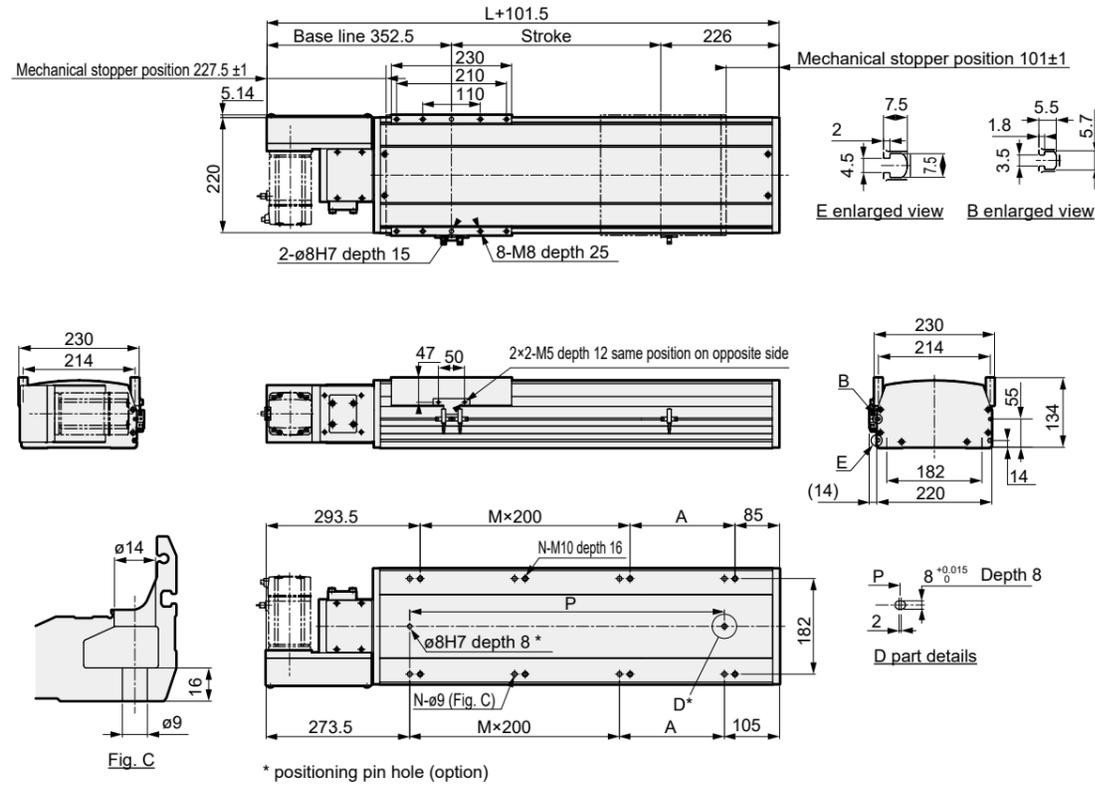
EKS

ESM

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-22-□□□□□-L

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (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	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

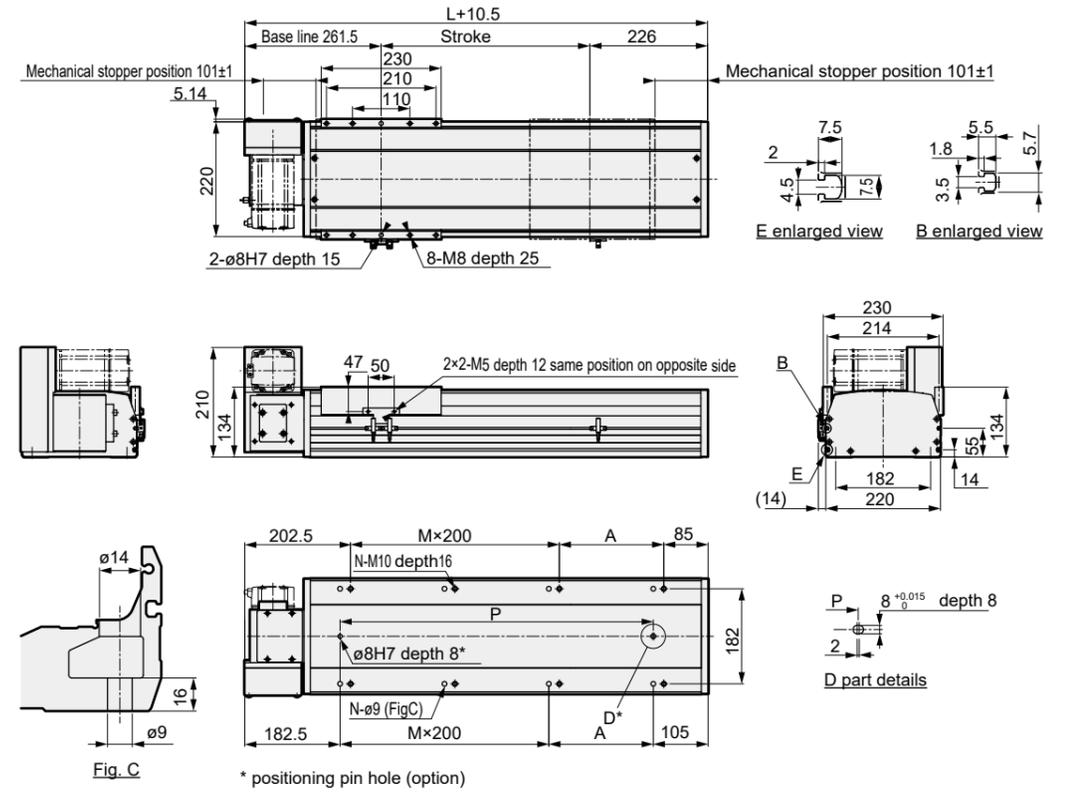
* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawings

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-22-□□□□□-V

● Refer to P. 318 for grease nipple dimensions.



Stroke (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	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
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	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (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	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
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	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
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	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

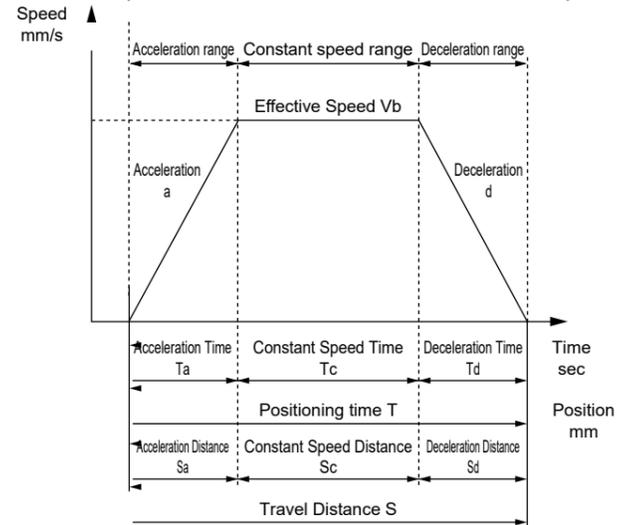
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead. Select the size and lead by referring to the selection table (P. 284) and the specification table for each model.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s ²	
	Set Deceleration	d	mm/s ²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a+d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	$= Vb/a$ [0.4 sec or more]
	Deceleration Time	Td	s	$= Vb/d$ [0.4 sec or more]
	Constant Speed Time	Tc	s	$= Sc / Vb$
	Acceleration Distance	Sa	mm	$= (a \times Ta^2) / 2$
	Deceleration Distance	Sd	mm	$= (d \times Td^2) / 2$
	Positioning Time	T	s	$= Ta + Tc + Td$

* Do not use at speeds exceeding the specifications.
 * The setting of acceleration/deceleration by acceleration/deceleration time varies depending on the set speed and stroke.
 * Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
 * Please use an acceleration/deceleration time of 0.4 sec or more.
 * 1 G = 9.8 m/s².

STEP-3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 314, 315).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]



*May not display correctly depending on the smartphone's usage environment.

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

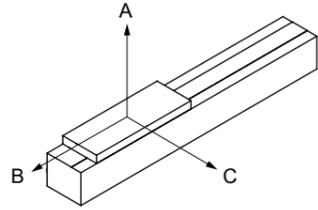
ETV

ECV

EKS

ESM

[Horizontal Installation]



[Allowable Overhang Length]

● ETV-14

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1800	700	550
			20	880	330	260
			25	700	260	200

● ETV-17

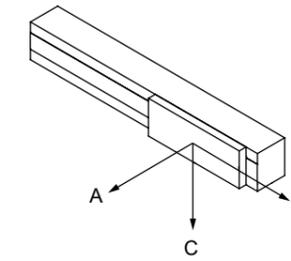
Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	3,000	1250	1150
			20	1600	600	550
			30	1050	400	360
			45	650	250	230

● ETV-22

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	1700	650	470
			65	1150	420	310
			85	850	310	225

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

[When Wall-Mounted]



● ETV-14

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	540	690	1800
			20	260	330	860
			25	200	255	680

● ETV-17

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1150	1250	2700
			20	550	600	1550
			30	350	390	1000
			45	220	230	630

● ETV-22

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	480	650	1700
			65	320	430	1150
			85	230	320	850

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

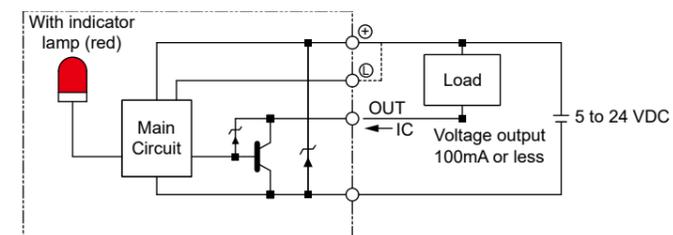
Sensor Specifications

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

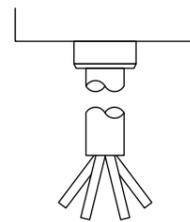
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC \pm 10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type: NPN open collector output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less, residual voltage 0.8 V or less (at load current 100 mA) Residual voltage: 0.4 V or less (with 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1000 lx or less
Ambient Temperature Range	Operating: -25 to +55°C Storage: -30 to +80°C (however, no freezing or condensation)
Ambient humidity range	Operating: 5 to 85%RH Storage: 5 to 95%RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog External Dimension Drawing

Body Size	Motor Mounting Direction
ETV-14	Fig. 1
ETV-17	Fig. 1
ETV-22	Fig. 2

Fig. 1

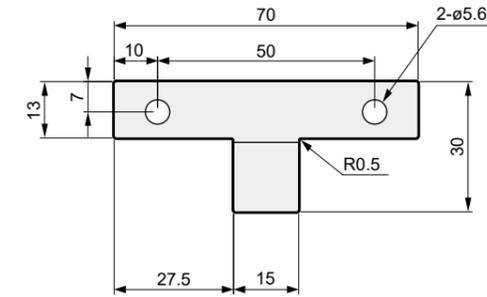
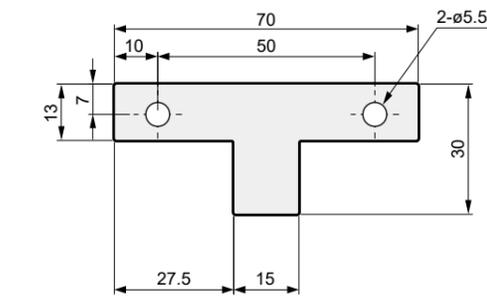


Fig. 2



Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

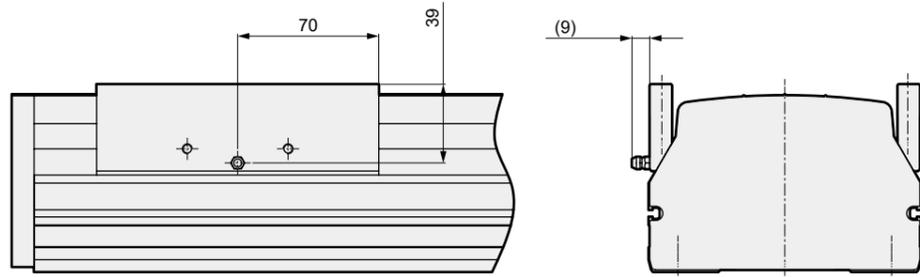
ECV

EKS

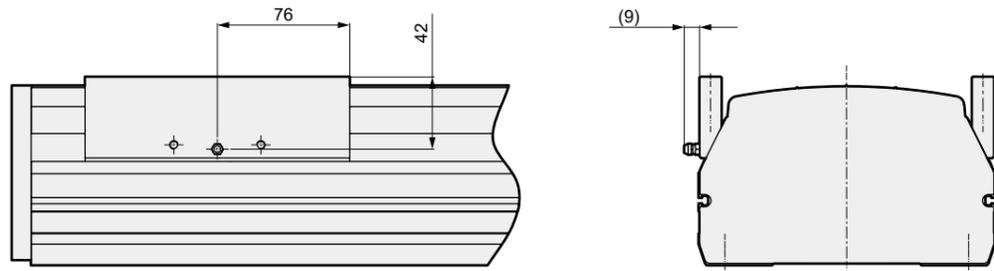
ESM

* Symmetrical with respect to the actuator.

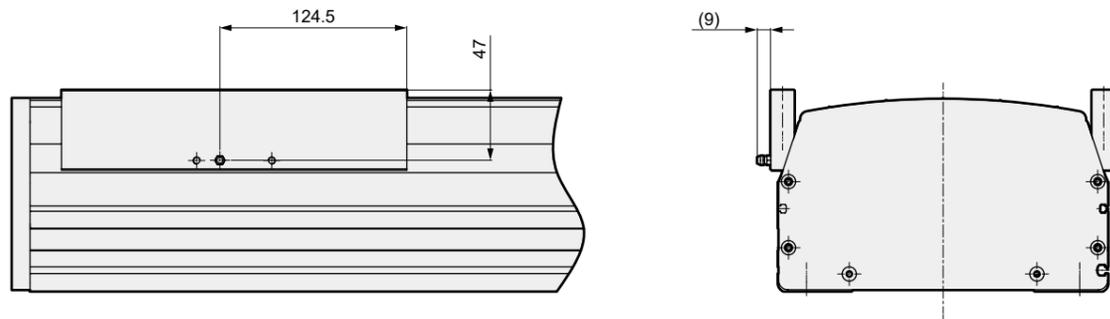
● ETV-14



● ETV-17



● ETV-22



Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
ETV-14	M	200 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETV-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETV-22	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4

By Motor Mounting Direction

Attached Part Name	Attached quantity
Timing Belt	1 pc.
Pulley	1 pc

When home / limit sensor is selected

Sensor mounting direction	Shipment Form	Quantity
Outer sensor	Shipped included *1	3 pcs. *2

*1 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".

*2 Sensor mounting screws are also attached.

Maintenance Parts

● Maintenance Parts Set

Model Number	Applicable Models	Component Parts		
		①	②	③
		Timing Belt 	Pulley 	Sensor Dog 
ETV-08 JP002-0025	ETV-14	○ (1 pc.)	○ (3 pcs.)	○ (1 pc.)
ETV-08 JP002-0026	ETV-17	○ (1 pc.)	○ (1 pc.)	○ (1 pc.)
ETV-08 JP002-0019	ETV-22	○ (2 pcs.)	○ (2 pcs.)	○ (1 pc.)

● Maintenance parts (external mounted sensor)

Model Number 	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

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To Use This Product Safely

Be sure to read this before use.

For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions : Electric Actuator ETV Series

During Design and Selection

Danger

- Do not use in locations where hazardous materials such as ignitable, flammable, or explosive substances are present. There is a possibility of ignition, fire, or explosion.
- Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.
- When mounting the product, be sure to securely hold and fix it (including the workpiece). There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

- Use within the product's specified operating range.
- If there is a risk of danger to the human body, install a protective cover.
 - If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

- Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

- Install indoors with low humidity. In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
 - Use in such environments can cause damage and malfunction.

- Use and store in accordance with the working/storage temperatures and where there is no condensation. (Storage temperature: -10°C to 50°C, Storage humidity: 35% to 80%, Operating Temperature: 0°C to 40°C, Operating humidity: 35% to 80%) This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

- Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance. This can cause failure, explosion, or fire.

- Use and store in a location free from strong electromagnetic waves, ultraviolet rays, and radiation. This can cause malfunction or failure.
- Consider the possibility of power source failure.
 - In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.
- Consider the operating state when restarting after an emergency stop or abnormal stop.
 - Design so that restarting does not cause harm to people or damage to the equipment. Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device. Consider the possibility of failure of the installed motor. Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

- Avoid using this product where vibration and impact are present.

- Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

- Do not use in a range where the moving table could collide with the stroke end and break.

- Clearly state the maintenance conditions in the equipment's instruction manual.
 - The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

- Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.

- The product is manufactured in conformity with the related standards. Never disassemble or modify.

- Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

- The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Equipment Product Site(<https://www.ckd.co.jp/kiki/en/>) → 'model No.' → [Instruction Manual](#).

ETV Model Selection Check Sheet → CKD (Contact)

Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

Customer:

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions:

Desired Model	ETV-		
Basic Specifications	Max. Stroke :	mm	Ball screw lead : mm
Operating Conditions	Moving stroke :	mm	travel time : s
	Set Speed :	mm/s	
	Set acceleration/deceleration :	mm/s ² (set acceleration/deceleration time :	s)
	Repeatability : ±	mm	
Load Conditions	Slider Type		
	Load weight :	kg	
	Mounting Orientation: Horizontal/Wall-mounted/Ceiling-mounted/Other		
	Distance from slider center to load's center of gravity		
	Direction A :	mm	
	Direction B :	mm	
Direction C :	mm		
Operating Environment	Pressing load :	None / Yes (N)	
		During operation / When stopped	
		Direction of force on slider center ()	
Motor Used	Ambient Temperature :	°C	Ambient Humidity : %
	Atmosphere :		
Special Notes	Manufacturer :	, Model No. :	
	Motor capacity, size :		

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