

ETS Multi Axis

Electric Actuator Servo
Motor Compatible
Motorless Specification

Ball Screw Drive



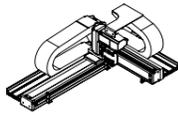
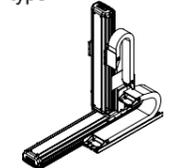
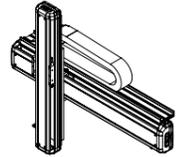
CONTENTS

Product Introduction	118
● 2-axis combination	172
● 2-axis combination load capacity table	173
● X-Y axis (A type)	174
● X-Z axis (P type)	194
● Y-Z axis (F type)	208
● Combination parts	214
▲ Precautions for Use	168
Model Selection Checklist	230

System Table

Combination of multiple axes *This will be a set model No. Please check the table below for the axis combination.

[2-Axis Combination]

Specifications	Set Model Number	Combination method	1st Axis	2nd Axis	1st Axis Stroke	2nd Axis Stroke	Page
X-Y 	ETS-650	A	ETS-14-20	ETS-13-20	100 to 1050	50 to 650	174
	ETS-760	A	ETS-17-20	ETS-14-20	100 to 1250	50 to 650	
	ETS-870	A	ETS-22-25	ETS-17-20	100 to 1500	50 to 750	
X-Z 	ETS-650	P	ETS-14-20	ETS-13-10	100 to 1050	50 to 550	194
	ETS-760	P	ETS-17-20	ETS-14-10	100 to 1250	50 to 650	
	ETS-880	P	ETS-22-25	ETS-22-05	100 to 1500	50 to 950	
Y-Z 	ETS-760	F	ETS-17-20	ETS-14-10	100 to 1250	50 to 550	208

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ETS-13/14 Series)	400 W (ETS-13/14/17 Series)	750 W *3 (ETS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT_23 W	HK-KT_43 W	HK-KT_7 M3 W
M	Delta Electronics, Inc.	ECMA-C *2	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Yaskawa Electric Corporation	Σ-7 *1	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X *1	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
O	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030

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

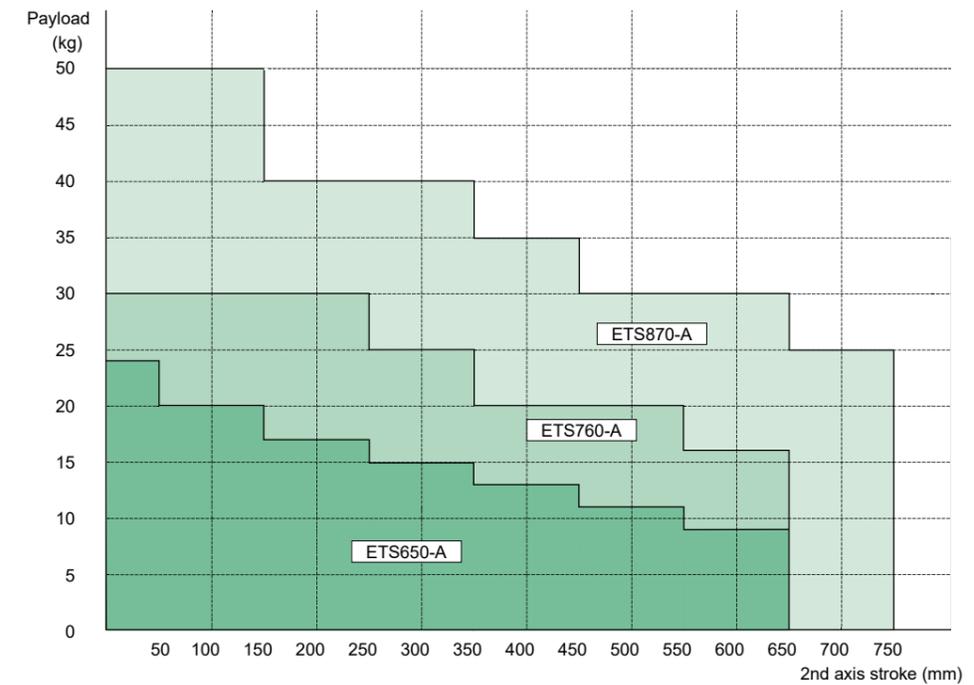
*1 "Built-in mounting" is not supported.

*2 The ECMA series (with brake) does not support "built-in mounting".

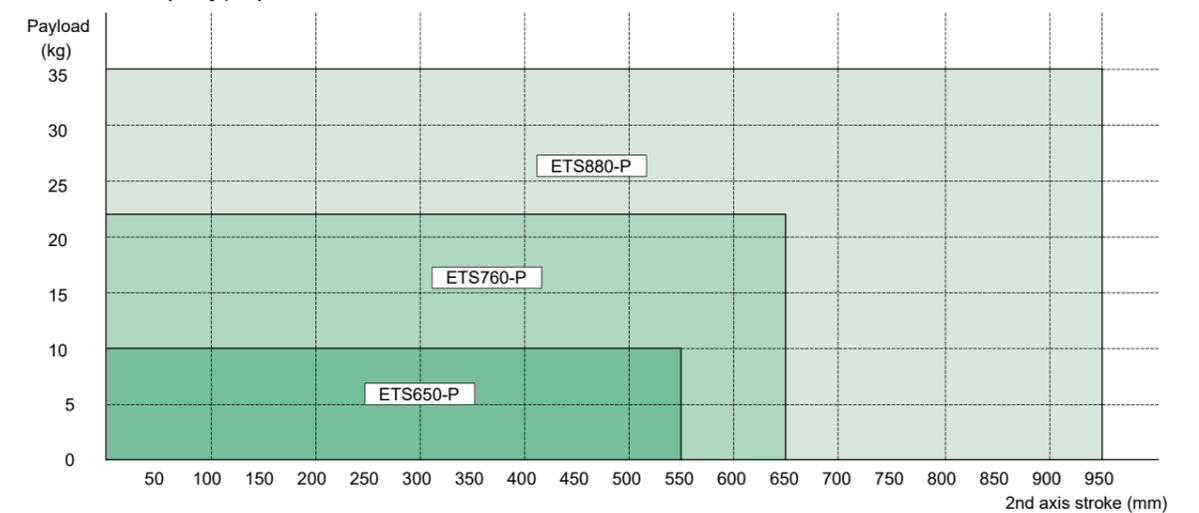
*3 "Built-in mounting" is not supported for the ETS-17 750 W.

2-Axis Combination Payload

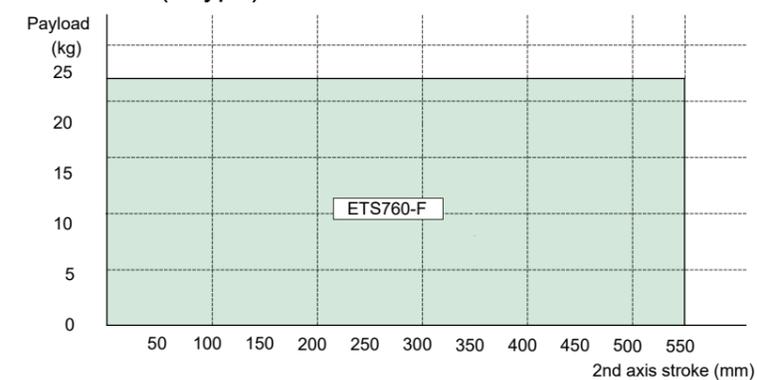
■ X-Y axis (A type)



■ X-Z axis (P type)



■ Y-Z axis (F type)



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



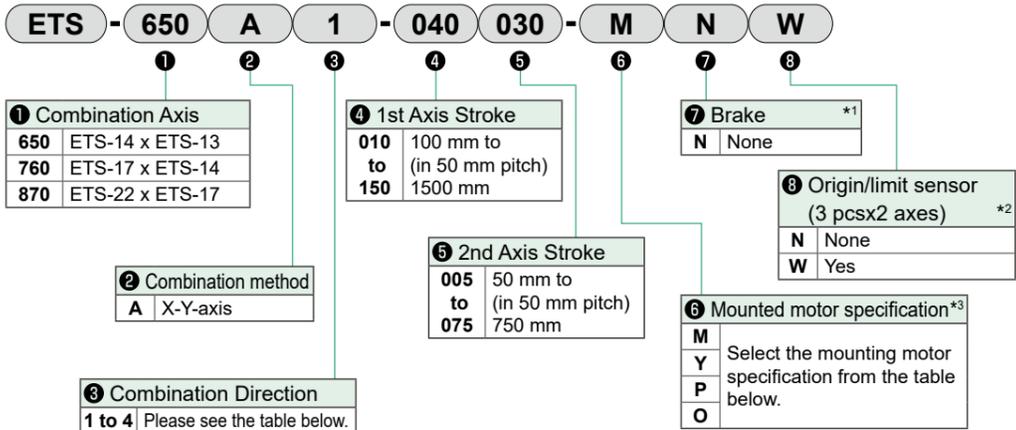
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 200 W / 400 W / 750 W
- 2-Axis Combination X-Y Axis (A-type)



Model No. Notation Method



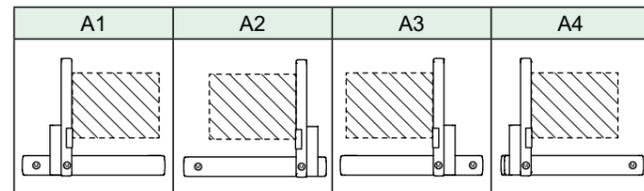
6 Mounting Motor Specifications

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	O	O	O

* Refer to P. 172 for motor model No.

*1 The brake is applicable to the 2nd axis.
 *2 The position of the sensor can be adjusted by the user. (Shipped included)
 *3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



Axis Combination Specifications

3 Combination direction and motor mounting direction

Combination Axis	Combination System	Combination Direction	Motor Mounting Direction and Motor Capacity					
			1st Axis			2nd Axis		
			Model	400 W	750 W	Model	200 W	400 W
ETS-650	A	1 to 4	ETS-14	B	-	ETS-13	B	-
ETS-760	A	1 to 4	ETS-17	B	-	ETS-14	B	-
ETS-870	A	1 to 4	ETS-22	-	B	ETS-17	-	B

* B: Built-in Mounting
 * The motor mounting direction is determined by the combination direction.

4 5 Stroke

Combination Axis	Combination System	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650
ETS-760		ETS-17	20	100 to 1250	ETS-14	20	50 to 650
ETS-870		ETS-22	25	100 to 1500	ETS-17	20	50 to 750

About Grease Nipples

Combination Axis	Combination System	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	A	1 to 4	ETS-14	L	ETS-13	R
				L		L
				R		L
				R		R
ETS-760	A	1 to 4	ETS-17	L	ETS-14	R
				L		L
				R		L
				R		R
ETS-870	A	1 to 4	ETS-22	L	ETS-17	R
				L		L
				R		L
				R		R

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 Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W / 200 W
- 2-axis combination X-Y axes (A type)



Model No. Notation Method

ETS - 650 A 1 - 040 030 - M N W

1 Combination Axis
650 ETS-14 x ETS-13

2 Combination method
A X-Y-axis

3 Combination Direction
1 to 4 Please see the table below.

4 1st Axis Stroke
010 100 mm to (50 mm pitch)
105 1050 mm

5 2nd Axis Stroke
005 50 mm to (50 mm pitch)
065 650 mm

7 Brake *1
N None

8 Origin/limit sensor (3 pcsx2 axes) *2
N None
W Yes

6 Mounted motor specification *3
M Select the mounting motor specification from the table below.
Y
P
O

6 Mounted Motor Specification

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

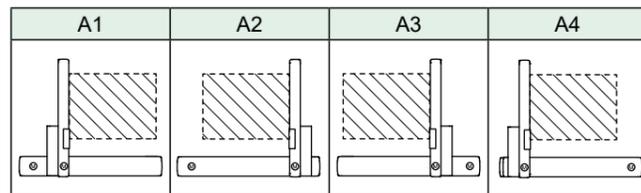
* For recommended motor model Nos., please refer to P. 172.

*1 The brake is applicable to the 2nd axis.

*2 The position of the sensor can be adjusted by the user. (Shipped included)

*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-650	A	1	ETS-14	B	ETS-13	B
		2		B		B
		3		B		B
		4		B		B

* B : Built-in Mounting

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650

About Grease Nipples

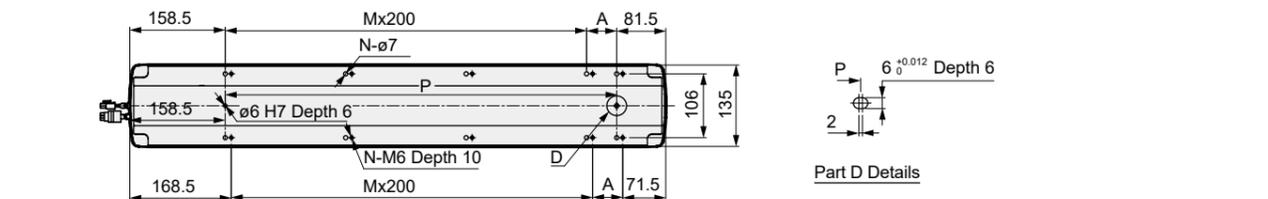
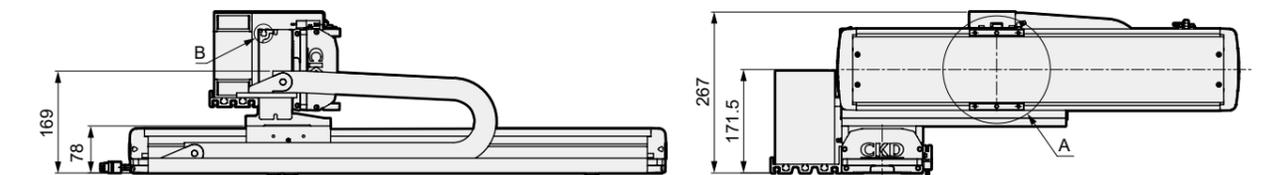
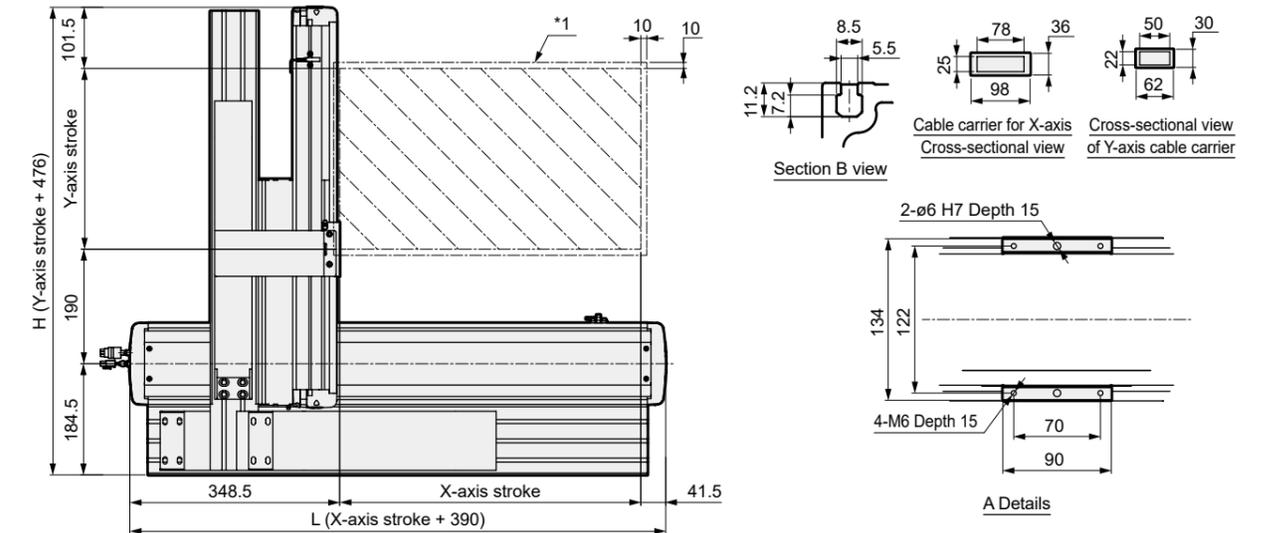
Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	A	1	ETS-14	L	R	
		2		L	L	
		3		R	L	
		4		R	R	

ETS Multi-Axis Series

External Dimension Drawing (X-Y Axis)

External Dimension Drawings

ETS-650 A1



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	
Max. operating speed (mm/s)	1000															900	800	700	600	500	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	24	20	17	15	13	11	9						

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-14	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-13	Y				M5 4	
	P				M4 4	

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

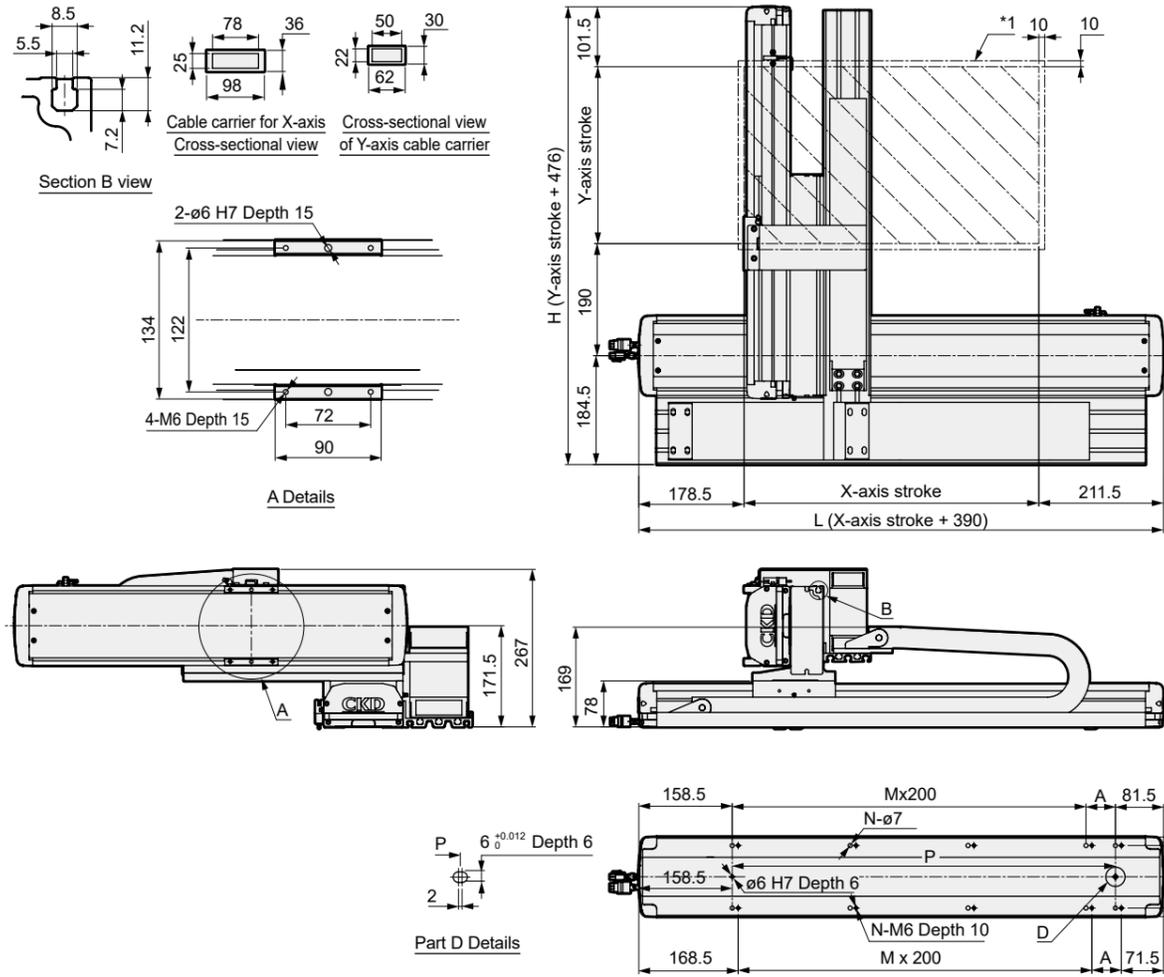
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

● ETS-650 A2



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050		
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200		
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5		
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14		
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200		
Max. operating speed (mm/s)	1000																900	800	700	600	500	400
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650									
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126									
Max. operating speed (mm/s)	1000																					
Max. Payload (kg)	24	20	17	15	13	11	9															

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-14	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-13	Y					M5 4
	P					M4 4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

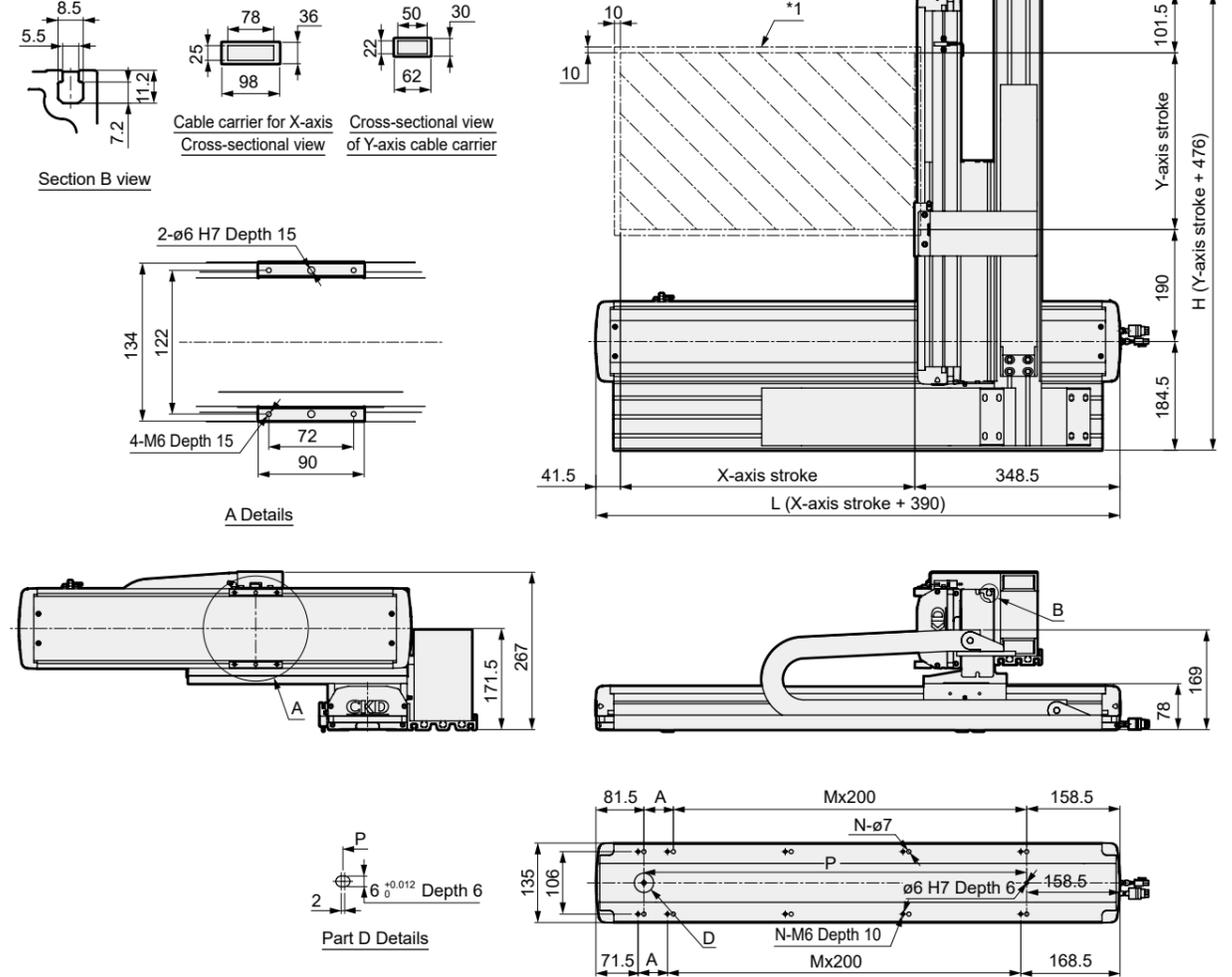
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

External Dimension Drawings

● ETS-650 A3



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050		
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440		
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200		
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5		
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14		
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200		
Max. operating speed (mm/s)	1000																900	800	700	600	500	400
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650									
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126									
Max. operating speed (mm/s)	1000																					
Max. Payload (kg)	24	20	17	15	13	11	9															

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-14	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-13	Y					M5 4
	P					M4 4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

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

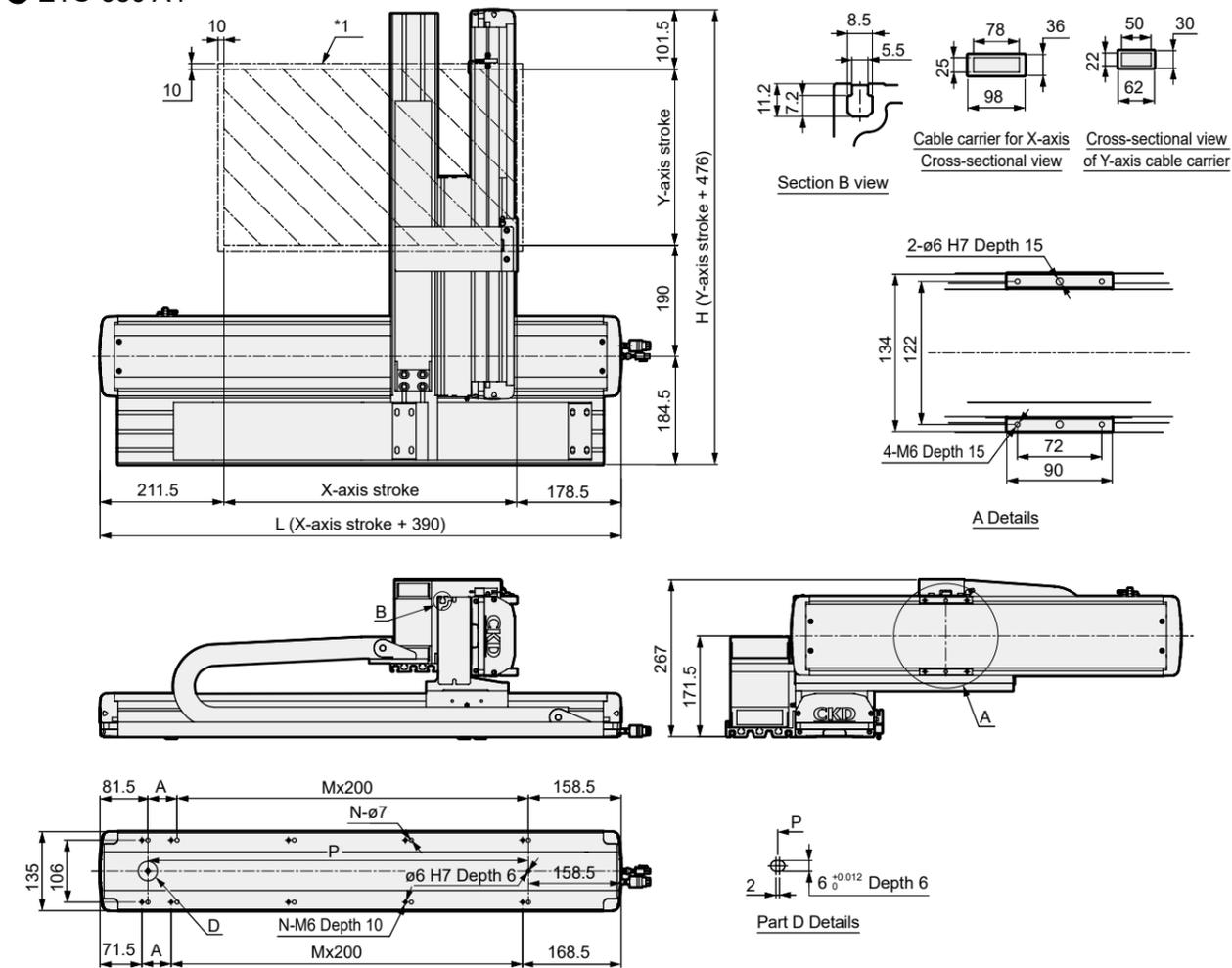
Ending

Ending

ETS Multi-Axis Series

External Dimension Drawings

● ETS-650 A4



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	
Max. operating speed (mm/s)	1000															900	800	700	600	500	400
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650								
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126								
Max. operating speed (mm/s)	1000																				
Max. Payload (kg)	24	20	17	15	13	11	9														

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-14	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-13	Y					M5 4
	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending



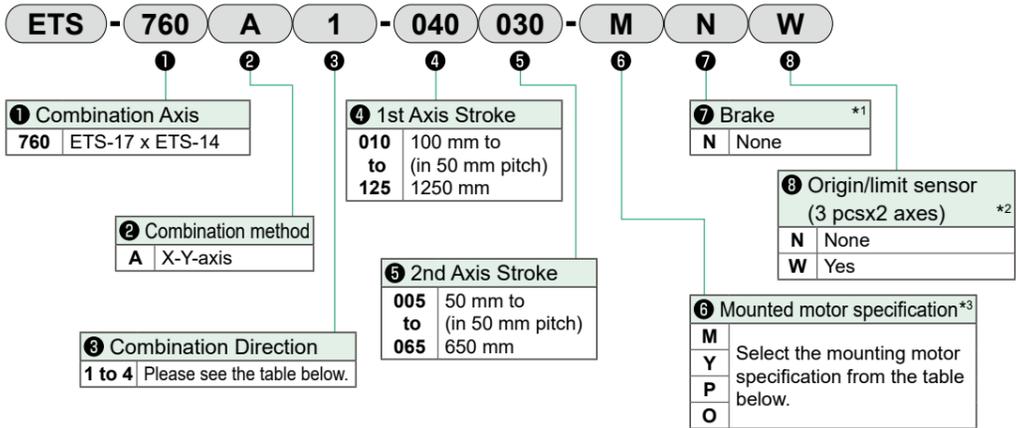
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W, 200 W
- 2-axis combination X-Y axes (A type)

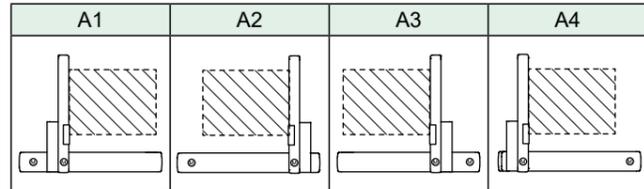


Model No. Notation Method



- *1 The brake is applicable to the 2nd axis.
- *2 The position of the sensor can be adjusted by the user. (Shipped included)
- *3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-760	A	1	ETS-17	B	ETS-14	B
		2		B		B
		3		B		B
		4		B		B

* B : Built-in Mounting

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-760	A	ETS-17	20	100 to 1250	ETS-14	20	50 to 650

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	A	1	ETS-17	L	ETS-14	R
		2		L		L
		3		R		L
		4		R		R

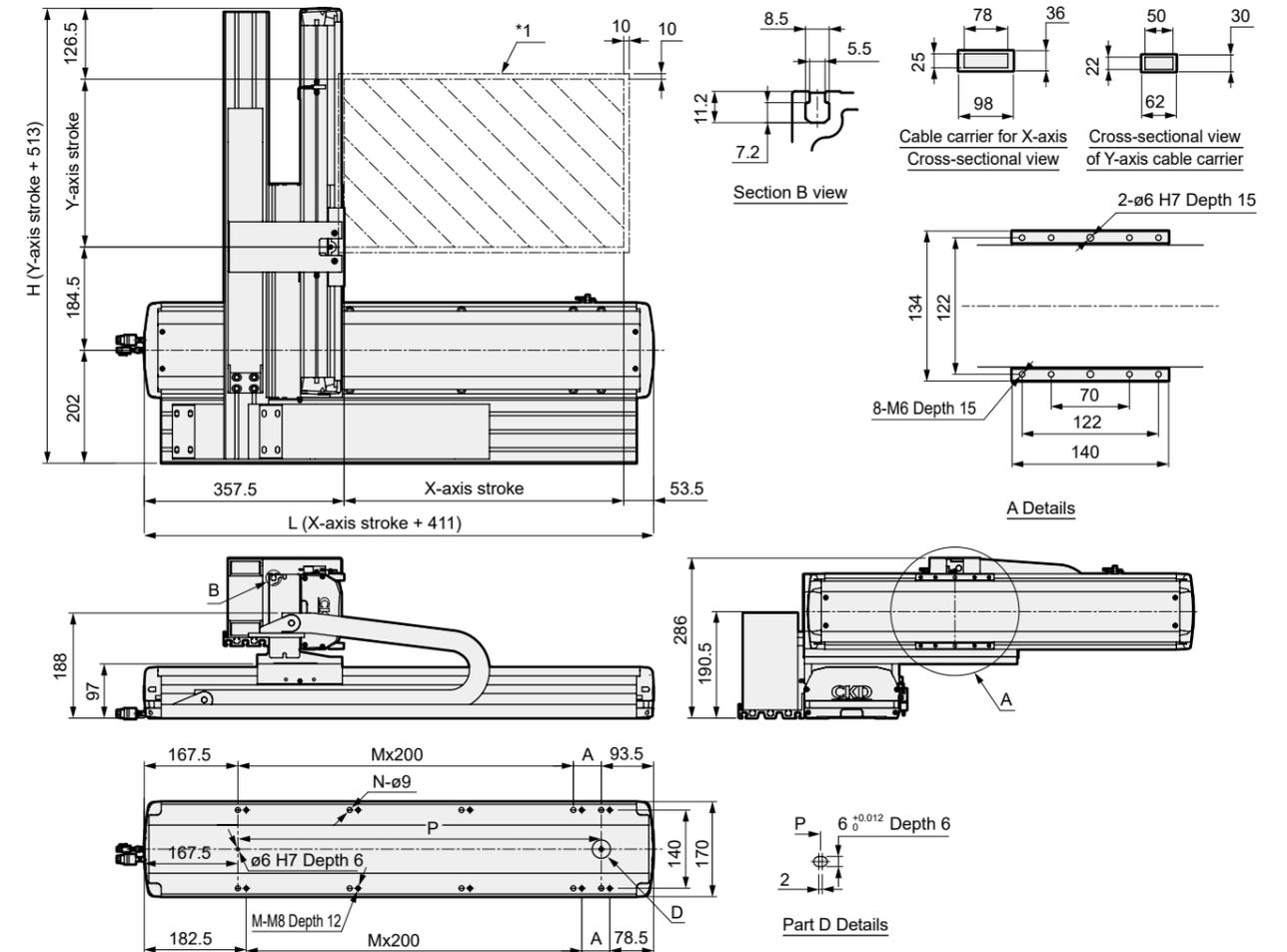
* R : Right side L : Left side

ETS Multi-Axis Series

External Dimension Drawing (X-Y Axis)

External Dimension Drawings

● ETS-760 A1



6 Mounting Motor Specifications

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																	900	800	

X-axis stroke (mm)	1100	1150	1200	1250	Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	
L	1511	1561	1611	1661	H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163	
A	50	100	150	200	Max. operating speed (mm/s)	1000													
M	6	6	6	6	Max. Payload (kg)	30			25			20			16				
N	16	16	16	16															
P	1250	1300	1350	1400															
Max. operating speed (mm/s)	700				600														

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-14	Y				M5 4	
	P				M4 4	

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

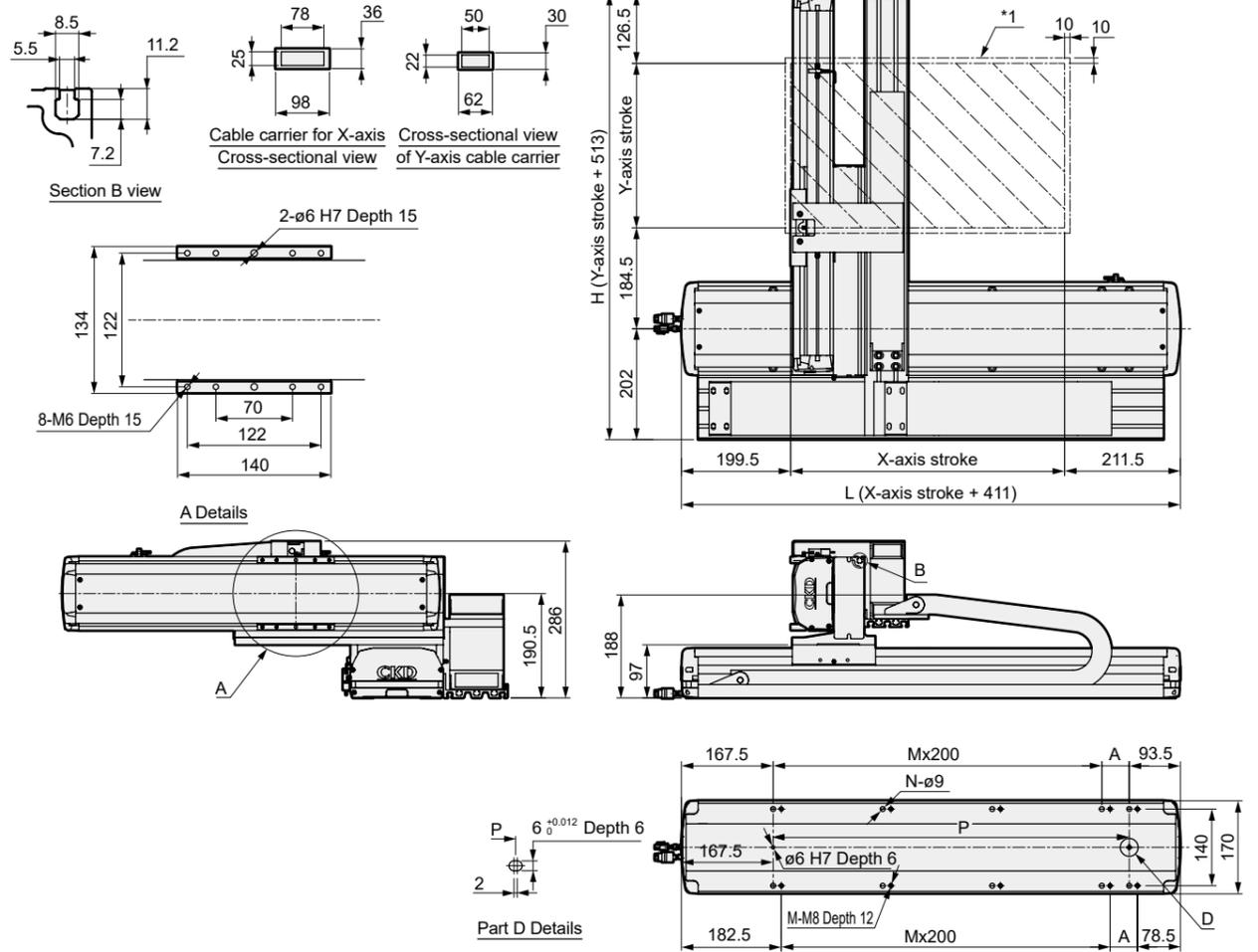
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

External Dimension Drawings

● ETS-760 A2



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250	Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	1511	1561	1611	1661	H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
A	50	100	150	200	Max. operating speed (mm/s)	1000												
M	6	6	6	6	Max. Payload (kg)	30				25				20				16
N	16	16	16	16														
P	1250	1300	1350	1400														
Max. operating speed (mm/s)	700		600															

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-14	Y					M5 4
ETS-14	P					M4 4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

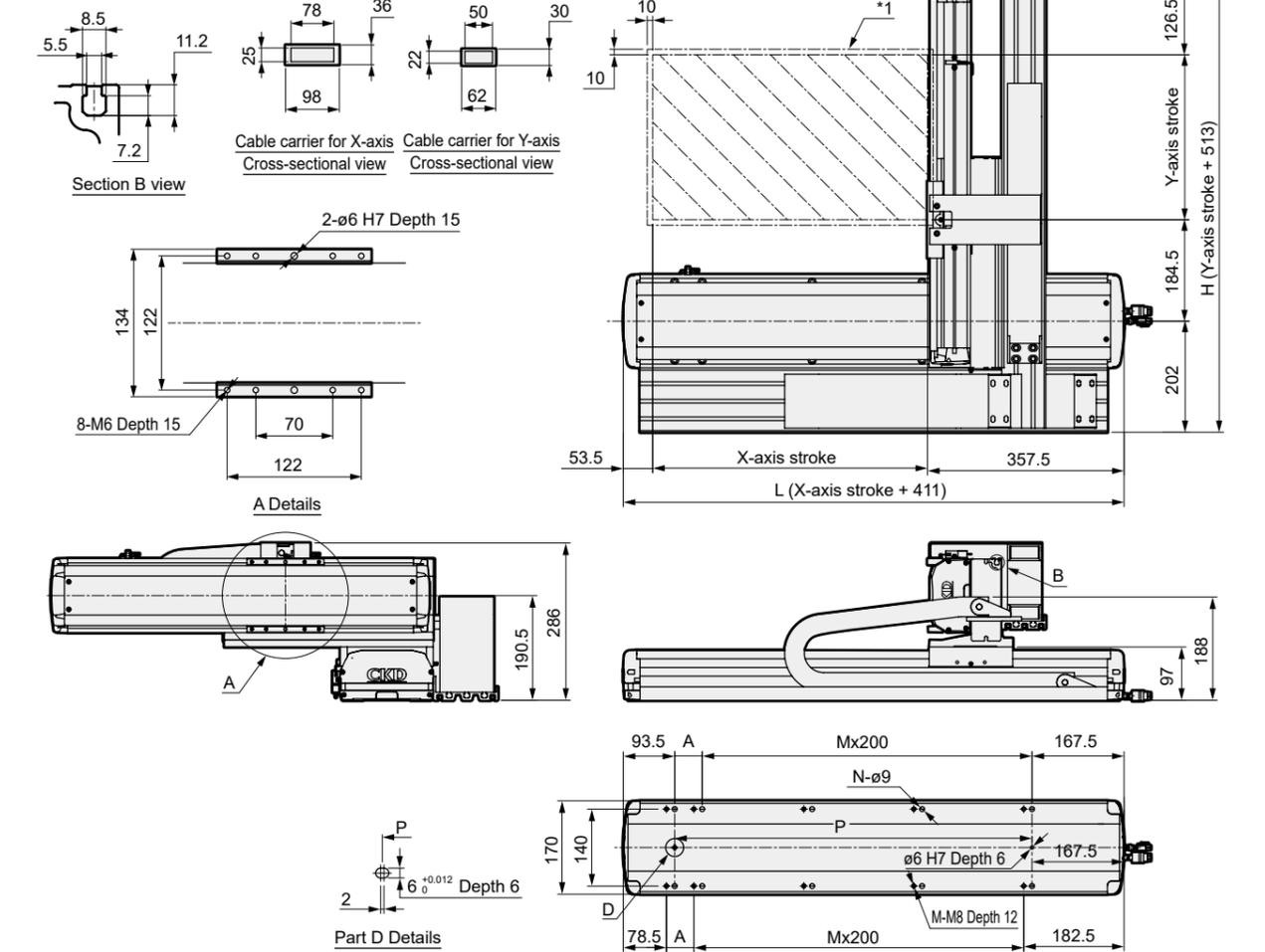
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

External Dimension Drawings

● ETS-760 A3



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250	Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	1511	1561	1611	1661	H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
A	50	100	150	200	Max. operating speed (mm/s)	1000												
M	6	6	6	6	Max. Payload (kg)	30				25				20				16
N	16	16	16	16														
P	1250	1300	1350	1400														
Max. operating speed (mm/s)	700		600															

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-14	Y					M5 4
ETS-14	P					M4 4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

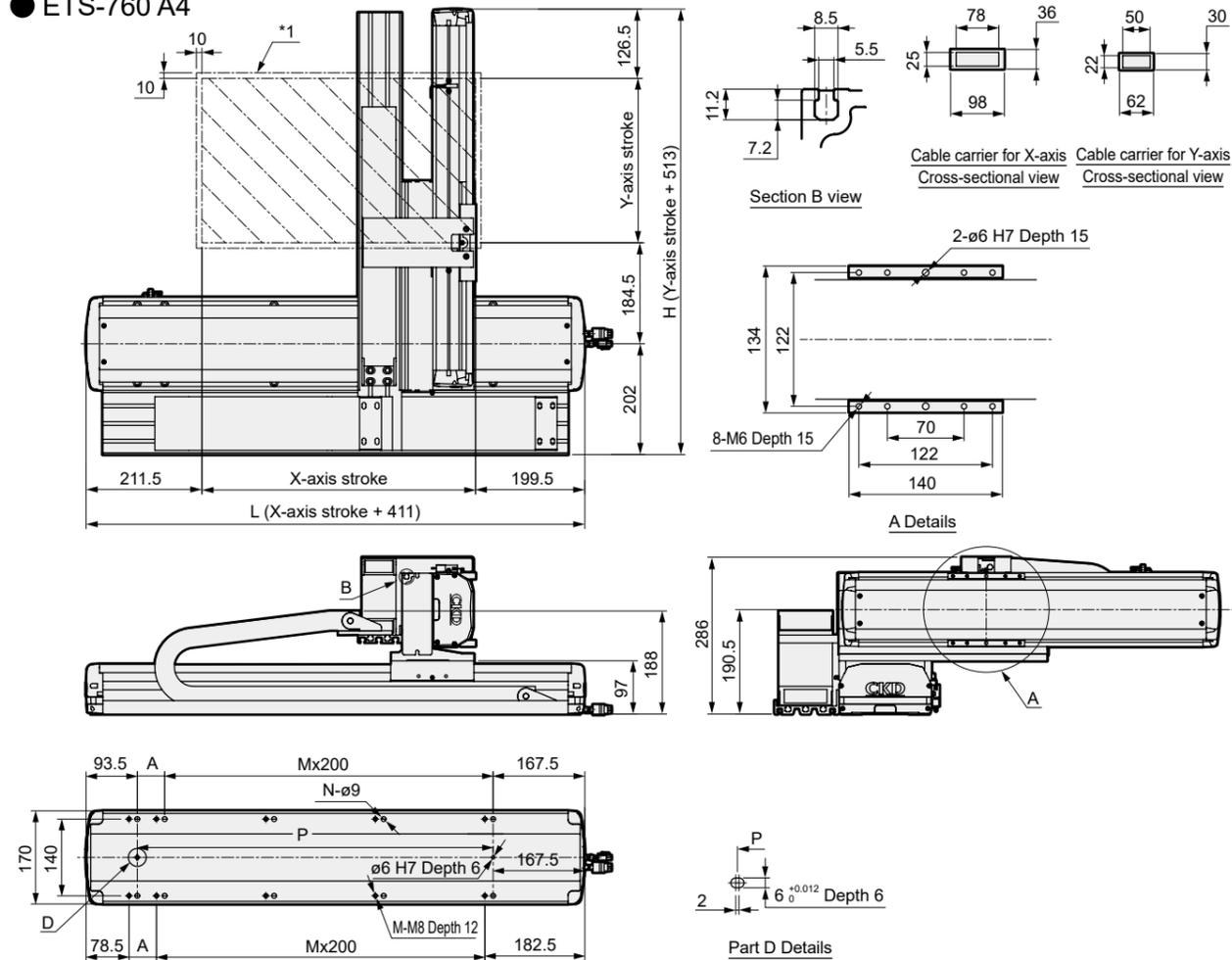
Cable carrier, bracket for axis combination

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

ETS Multi-Axis Series

External Dimension Drawings

● ETS-760 A4



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900	800		

X-axis stroke (mm)	1100	1150	1200	1250	Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650				
L	1511	1561	1611	1661	H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163				
A	50	100	150	200	Max. operating speed (mm/s)	1000																
M	6	6	6	6	Max. Payload (kg)	30				25				20				16				
N	16	16	16	16																		
P	1250	1300	1350	1400																		
Max. operating speed (mm/s)	700				600																	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped attached	400 W	M5 4
ETS-14	Y					M5 4
	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending



Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity: 750 W, 400 W
- 2-axis combination X-Y axes (A type)



Model No. Notation Method

ETS - 870 A 1 - 040 030 - M N W

1 Combination Axis
870 ETS-22 x ETS-17

2 Combination method
A X-Y-axis

3 Combination Direction
1 to 4 Please see the table below.

4 1st Axis Stroke
010 100 mm to (in 50 mm pitch)
150 1500 mm

5 2nd Axis Stroke
005 50 mm to (50 mm pitch)
075 750 mm

7 Brake *1
N None

8 Origin/limit sensor (3 pcsx2 axes) *2
N None
W Yes

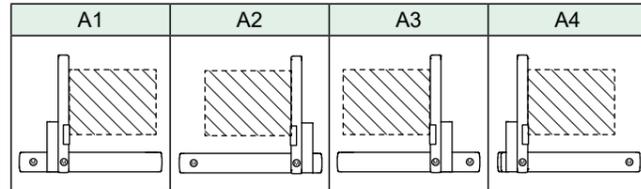
6 Mounted motor specification *3
M Select the mounting motor specification from the table below.
Y
P
O

*1 The brake is applicable to the 2nd axis.

*2 The position of the sensor can be adjusted by the user. (Shipped included)

*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	750 W	Model	400 W
ETS-870	A	1	ETS-22	B	ETS-17	B
		2		B		B
		3		B		B
		4		B		B

* B: Built-in Mounting

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-870	A	ETS-22	25	100 to 1500	ETS-17	20	50 to 750

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-870	A	1	ETS-22	L	ETS-17	R
		2		L		L
		3		R		L
		4		R		R

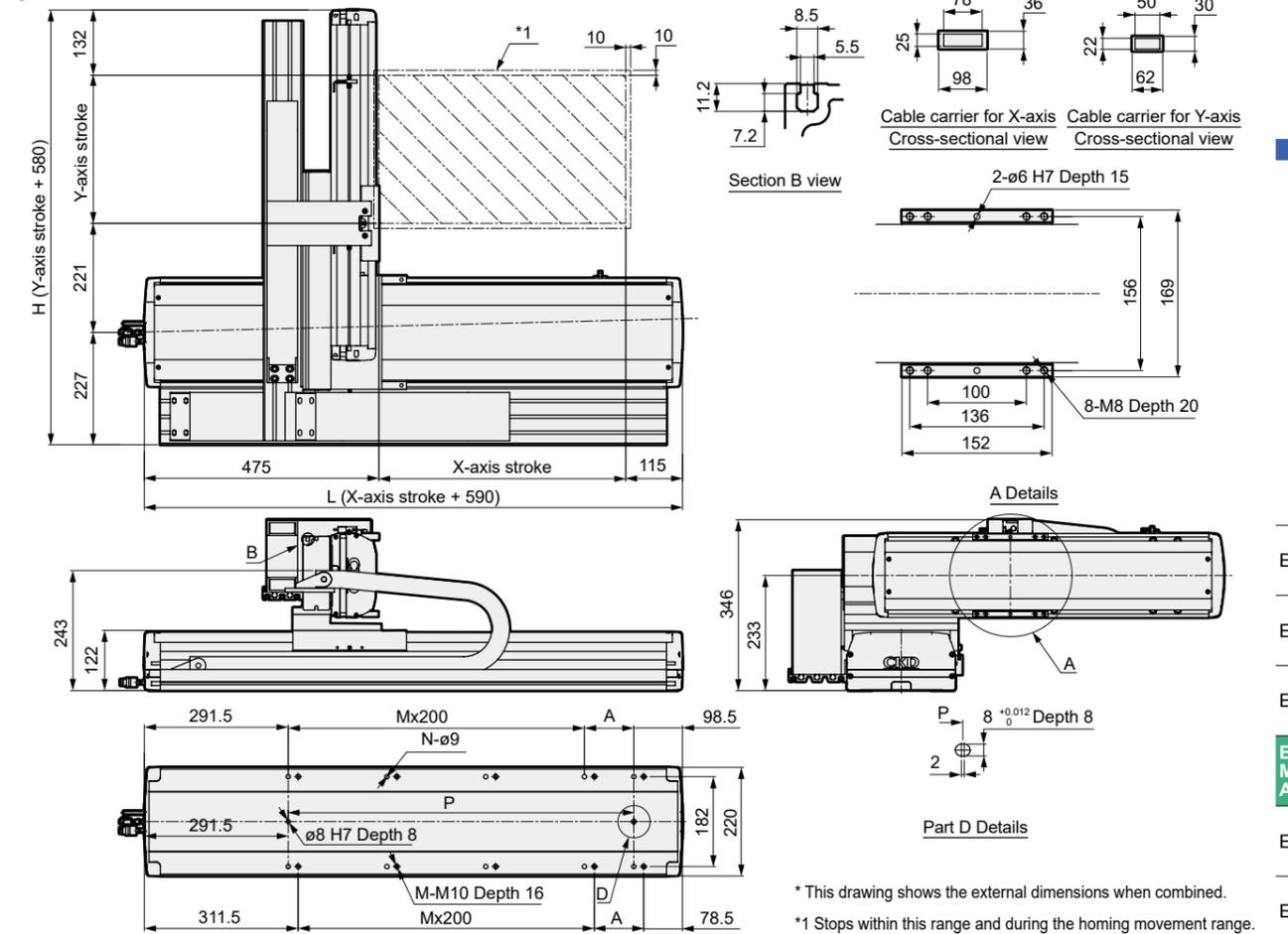
* R : Right side L : Left side

ETS Multi-Axis Series

External Dimension Drawing (X-Y Axis)

External Dimension Drawings

ETS-870 A1



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	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
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																		

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000									

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50			40			35			30			25		

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5 4
ETS-17	Y					M6/M5 4
	P					M5/M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

Servo motor compatible

Servo motor compatible

EBS

EBS

EBR

EBR

ETS

ETS

ETS Multi Axis

ETS Multi Axis

ECS

ECS

ETV

ETV

ECV

ECV

EKS

EKS

ESM

ESM

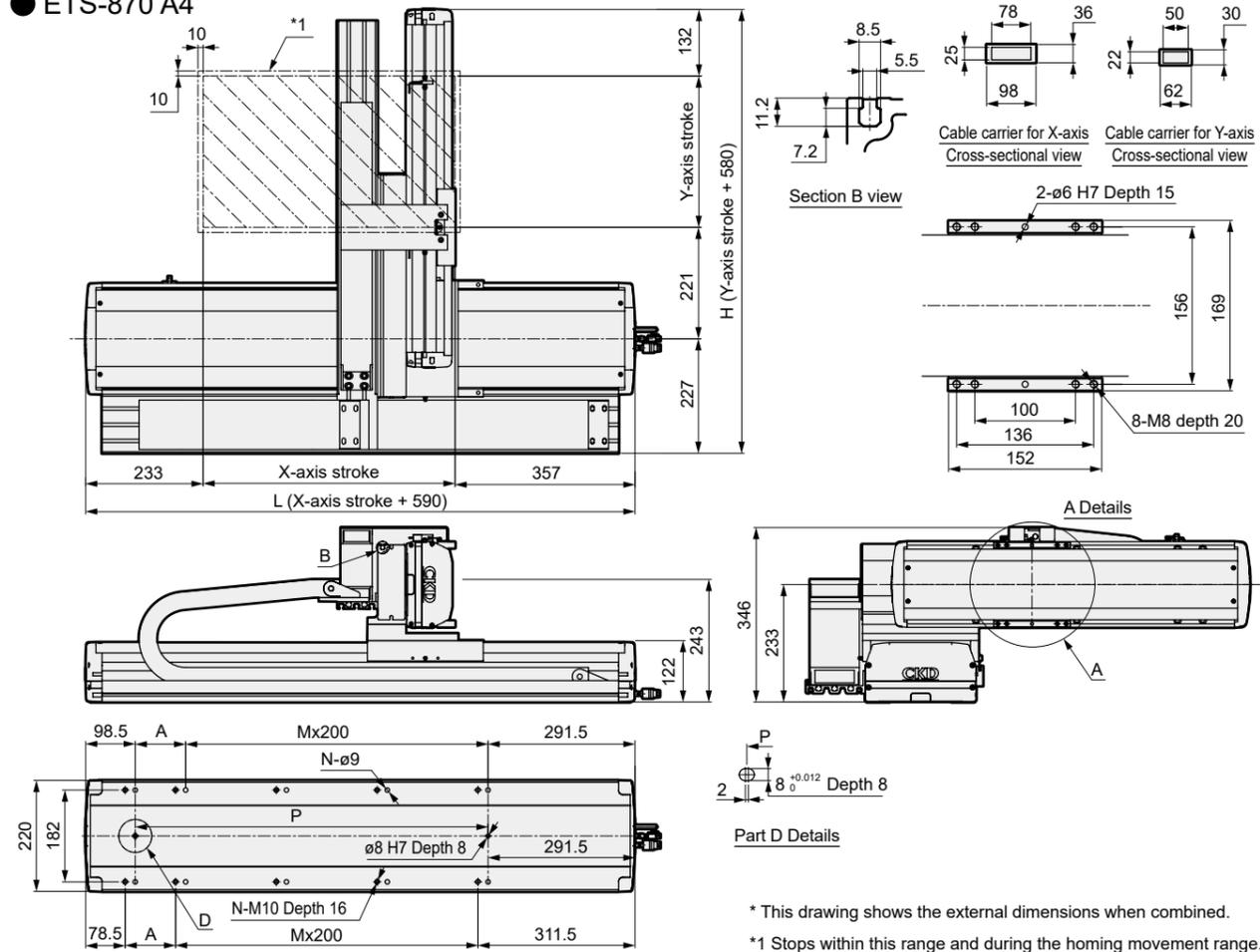
Ending

Ending

ETS Multi-Axis Series

External Dimension Drawings

● ETS-870 A4



* This drawing shows the external dimensions when combined.
 *1 Stops within this range and during the homing movement range.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	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
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																		

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50			40			35			30			25		

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5 4
ETS-17	Y					M6/M5 4
	P					M5/M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending



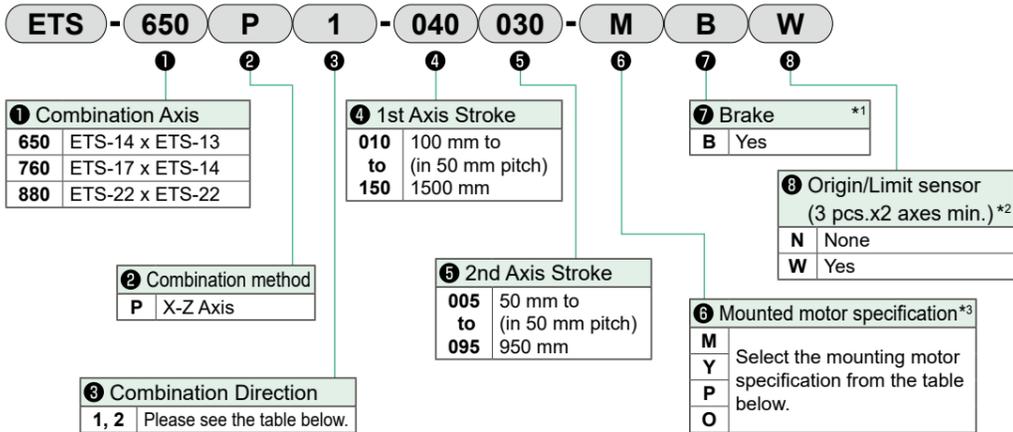
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 200 W, 400 W, 750 W
- 2-axis combination X-Z axes (P type)



Model No. Notation Method



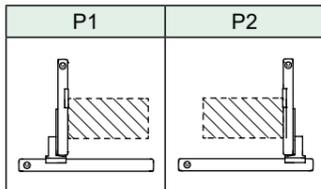
6 Mounting Motor Specifications

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	O	O	O

* For recommended motor model Nos., please refer to P. 172.

*1 The brake applies to the 2nd axis.
 *2 The customer can adjust the sensor position. (Shipped included)
 *3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



Axis Combination Specifications

3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity							
			1st Axis				2nd Axis			
			Model	200 W	400 W	750 W	Model	200 W	400 W	750 W
ETS-650	P	1,2	ETS-14	-	B	-	ETS-13	B (With brake)	-	-
ETS-760	P	1,2	ETS-17	-	B	-	ETS-14	-	B (With brake)	-
ETS-880	P	1,2	ETS-22	-	-	B	ETS-22	-	-	B (With brake)

* B: Built-in Mounting

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550
ETS-760		ETS-17	20	100 to 1250	ETS-14	10	50 to 650
ETS-880		ETS-22	25	100 to 1500	ETS-22	15	50 to 950

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	P	1	ETS-14	L	ETS-13	L
				R		L
ETS-760	P	1	ETS-17	L	ETS-14	L
				R		L
ETS-880	P	1	ETS-22	L	ETS-22	L
				R		L

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



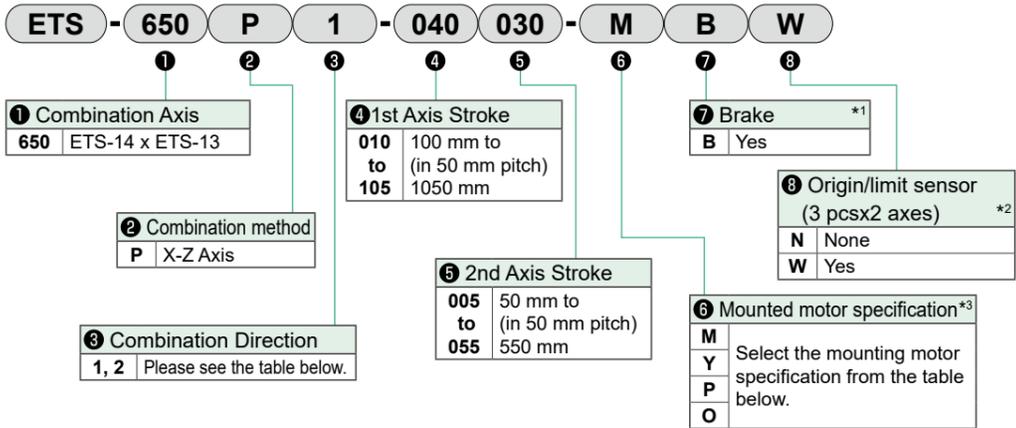
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W, 200 W
- 2-axis combination X-Z axes (P type)



Model No. Notation Method

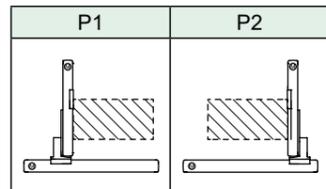


6 Mounting Motor Specifications

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-650	P	1	B	ETS-13	B (With brake)	
		2	B		B (With brake)	

* B : Built-in Mounting

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	P	1	ETS-14	L	ETS-13	L
		2		R		L

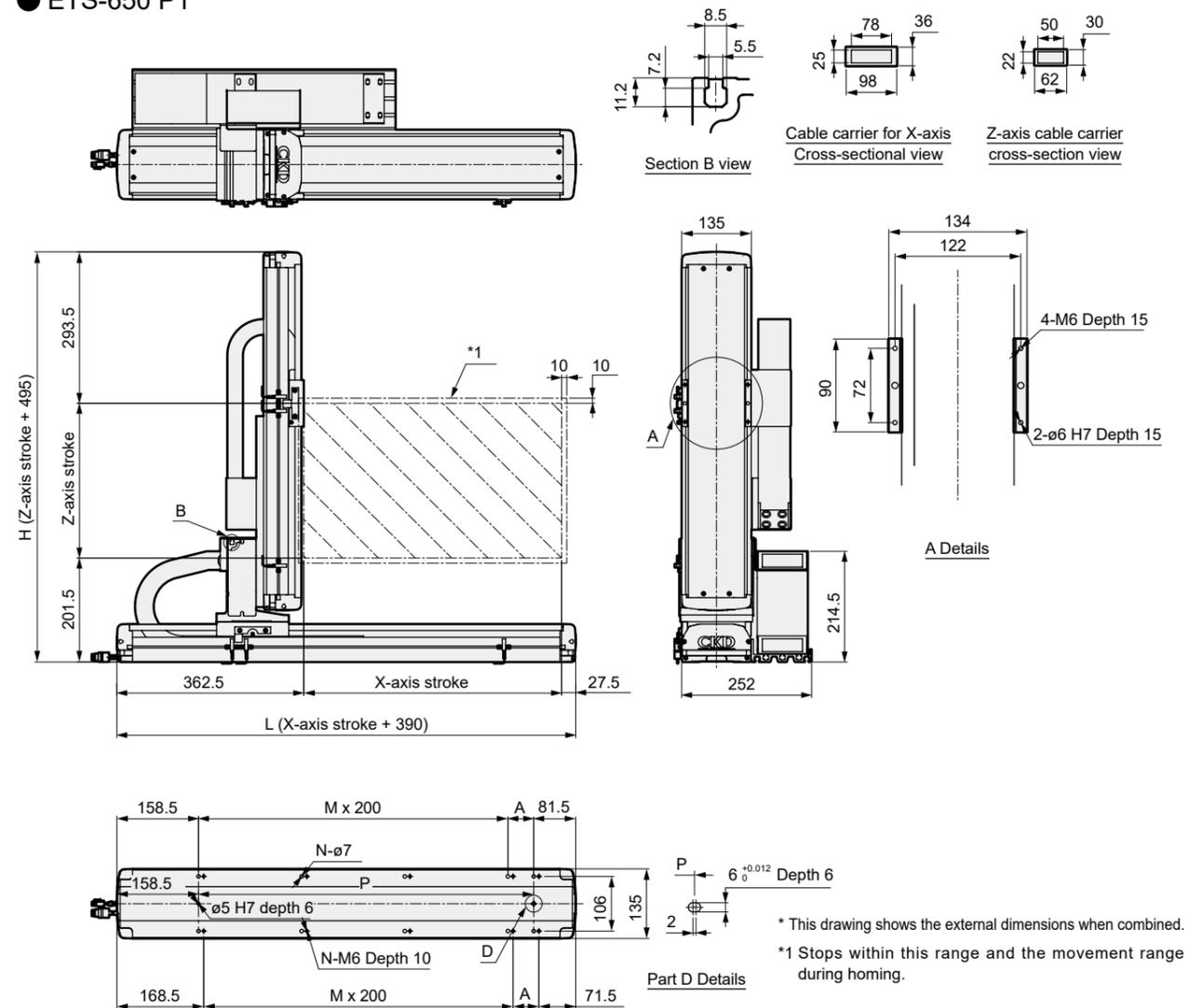
* R : Right side L : Left side

ETS Multi-Axis Series

External Dimension Drawing (X-Z Axis)

External Dimension Drawings

ETS-650 P1



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	
Max. operating speed (mm/s)	1000															900	800	700	600	500	400

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	545	595	645	695	745	795	845	895	945	995	1045
Max. operating speed (mm/s)	500										
Max. Payload (kg)	10										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-13	P				M4	4	

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

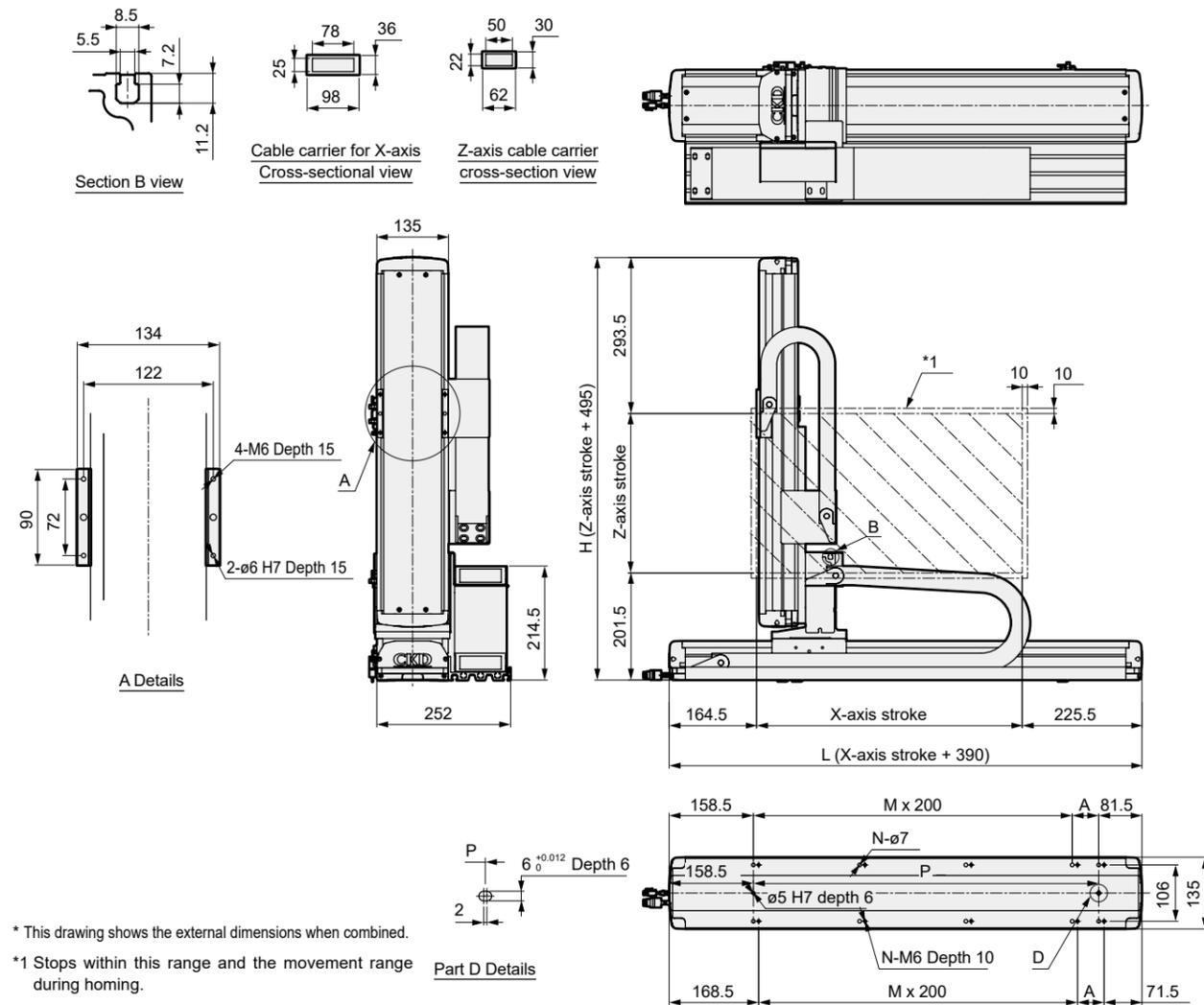
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

ETS Multi-Axis series

External Dimension Drawings

● ETS-650 P2



X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	
Max. operating speed (mm/s)	1000															900	800	700	600	500	400

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	545	595	645	695	745	795	845	895	945	995	1045
Max. operating speed (mm/s)	500										
Max. Payload (kg)	10										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-14	M	B	Coupling	Shipped Included	400 W	M5 4
ETS-13	Y					M5 4
	P					M4 4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."



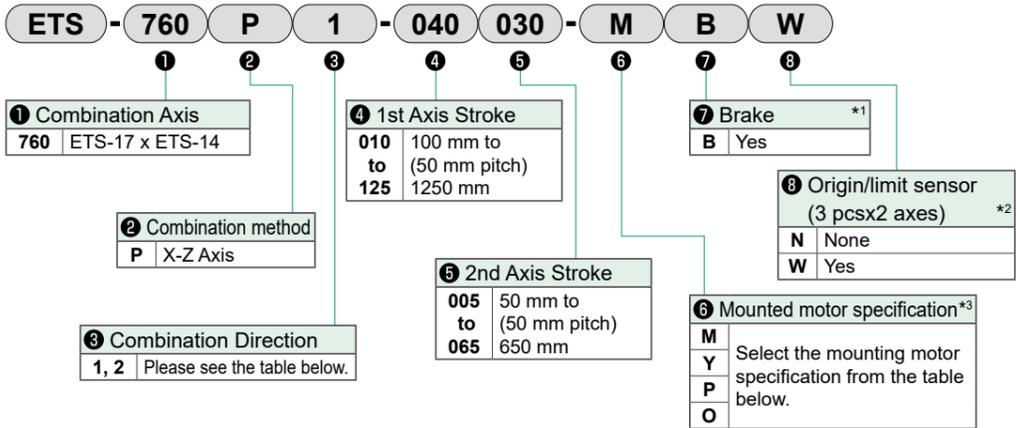
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination X-Z axes (P type)

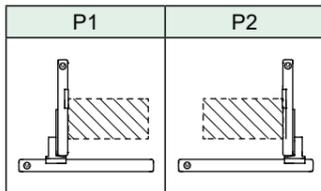


Model No. Notation Method



- *1 The brake applies to the 2nd axis.
- *2 The customer can adjust the sensor position. (Shipped included)
- *3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	400 W
ETS-760	P	1	ETS-17	B	ETS-14	B (With brake)
		2	ETS-17	B	ETS-14	B (With brake)

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	P	ETS-17	20	100 to 1250	ETS-14	10	50 to 650

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	P	1	ETS-17	L	ETS-14	L
		2		R		L

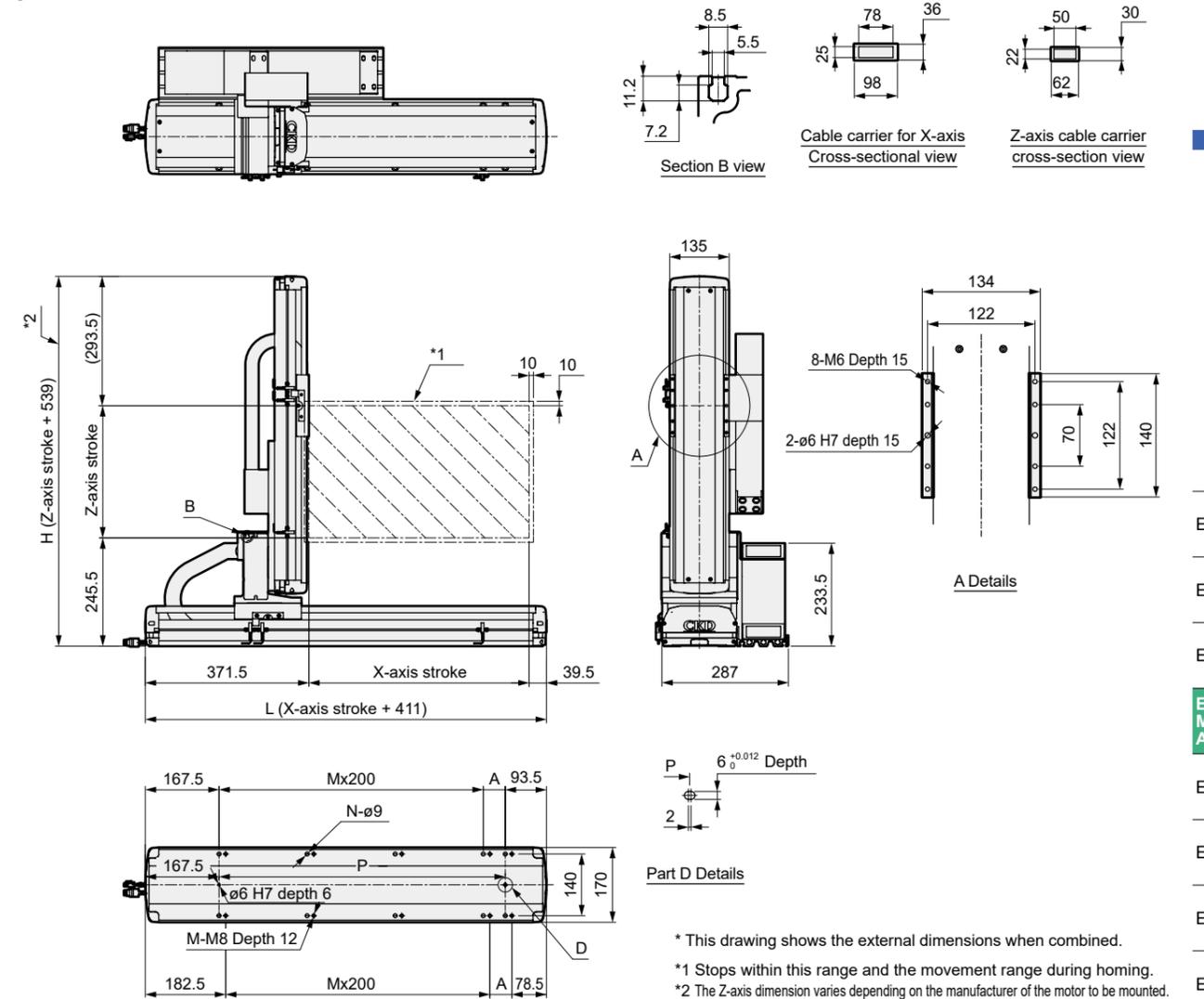
* R : Right side L : Left side

ETS Multi-Axis Series

External Dimension Drawing (X-Z Axis)

External Dimension Drawings

ETS-760 P1



- * This drawing shows the external dimensions when combined.
- *1 Stops within this range and the movement range during homing.
- *2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis 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
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
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
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
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
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
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
Max. operating speed (mm/s)	500												
Max. Payload (kg)	22												

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped Included	400 W	M5 4
ETS-14	Y					M5 4
	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

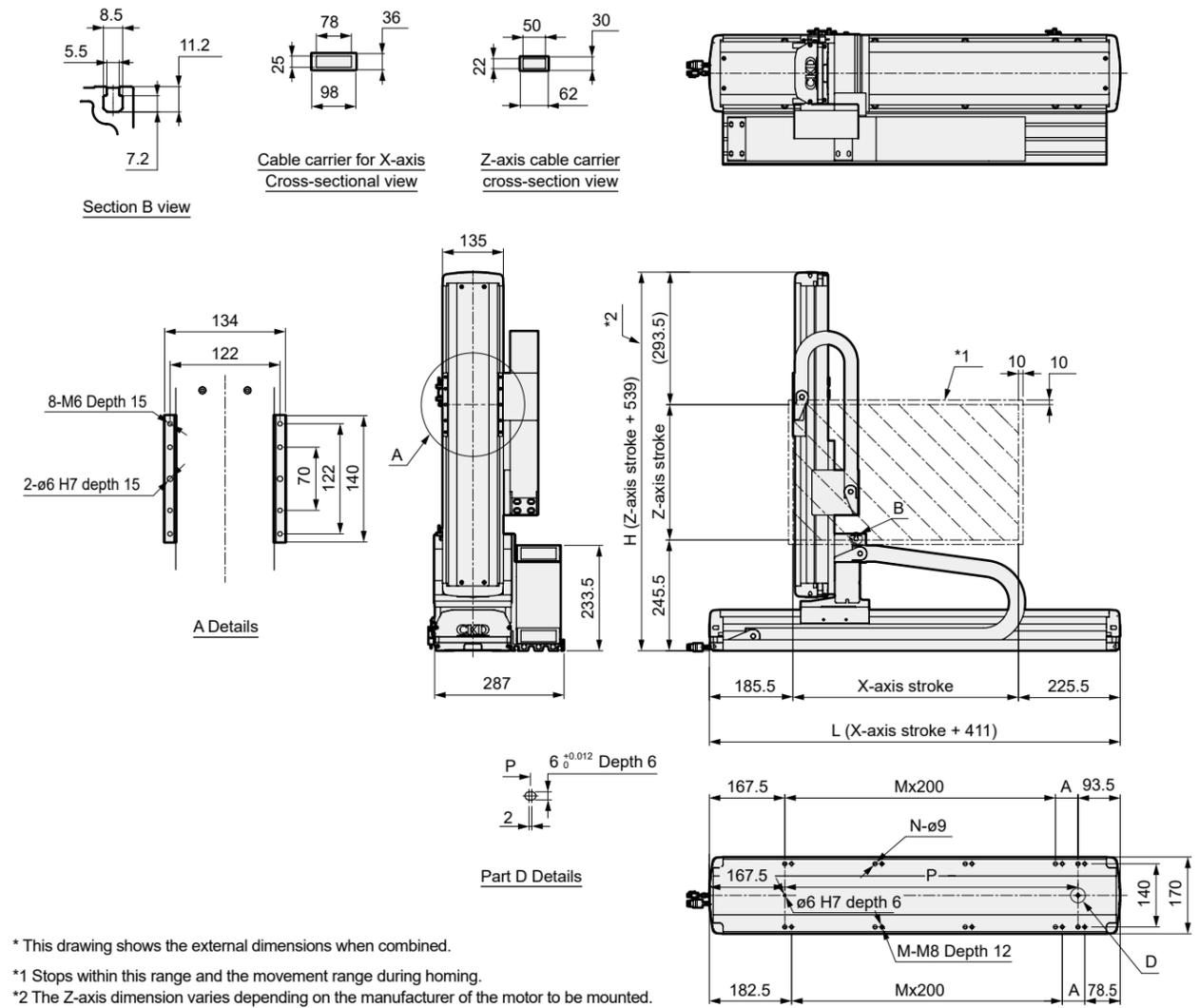
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

ETS Multi-Axis series

External Dimension Drawings

● ETS-760 P2



* This drawing shows the external dimensions when combined.

*1 Stops within this range and the movement range during homing.

*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis 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
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
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
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
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
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
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
Max. operating speed (mm/s)	500												
Max. Payload (kg)	22												

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped Included	400 W	M5 4
	Y					M5 4
ETS-14	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending



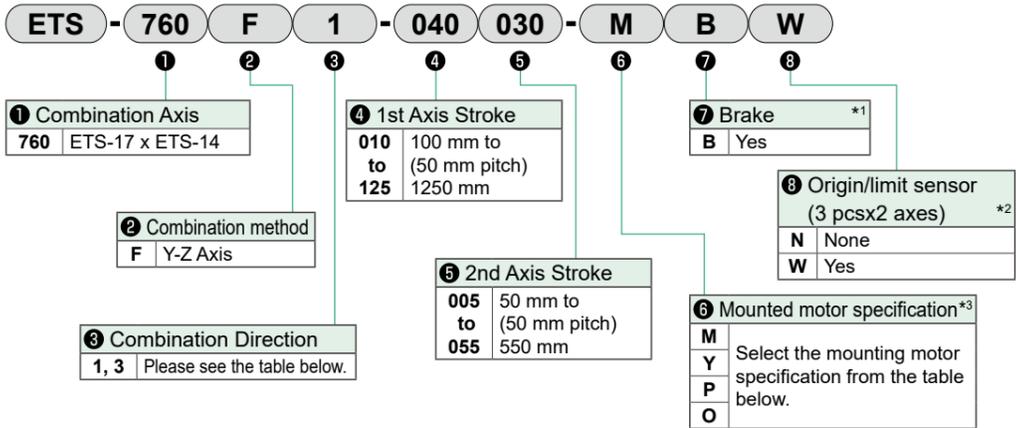
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination Y-Z axes (F type)



Model No. Notation Method



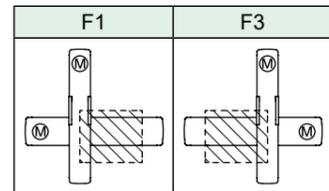
6 Mounting Motor Specifications

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	O

* For recommended motor model Nos., please refer to P. 172.

*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



ETS Multi-Axis Series

Specifications (Y-Z axes)

Axis Combination Specifications

3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity							
			1st Axis				2nd Axis ^{*1}			
			Model	100 W	200 W	400 W	Model	100 W	200 W	400 W
ETS-760	F	1,3	ETS-17	-	-	B	ETS-14	-	-	B (With brake)

* E: Straight mounting B: Built-in Mounting
* Please contact us if you are using an OMRON motor.

4 5 Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-760	F	ETS-17	25	100 to 1250	ETS-14	10	50 to 550

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	F	1	ETS-17	R	ETS-14	R
		3		L		L

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



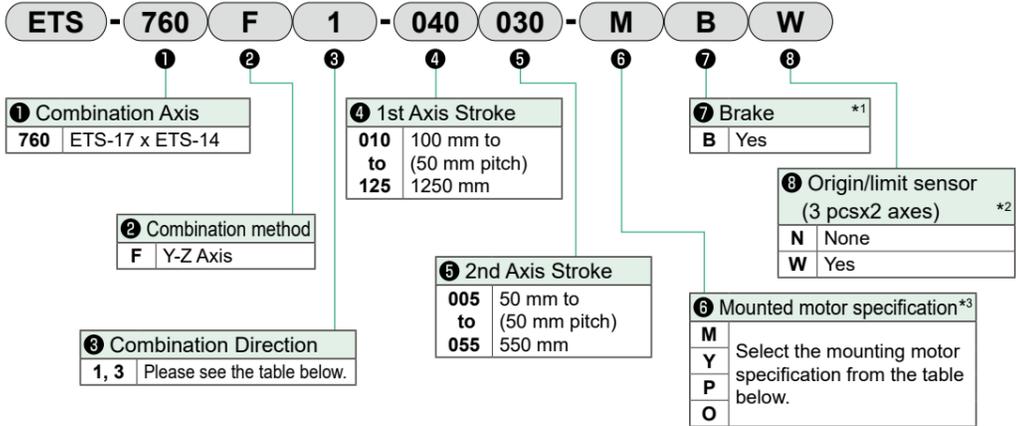
Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination Y-Z axes (F type)

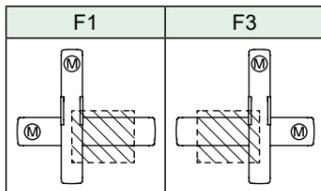


Model No. Notation Method



- *1 The brake applies to the 2nd axis.
- *2 The customer can adjust the sensor position. (Shipped included)
- *3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

3 Combination direction



3 Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	400 W
ETS-760	F	1	ETS-17	B	ETS-14	B (With brake)
		3		B		B (With brake)

* B: Built-in Mounting

4 About Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	F	ETS-17	20	100 to 1250	ETS-14	10	50 to 550

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	F	1	ETS-17	R	ETS-14	R
		3		L		L

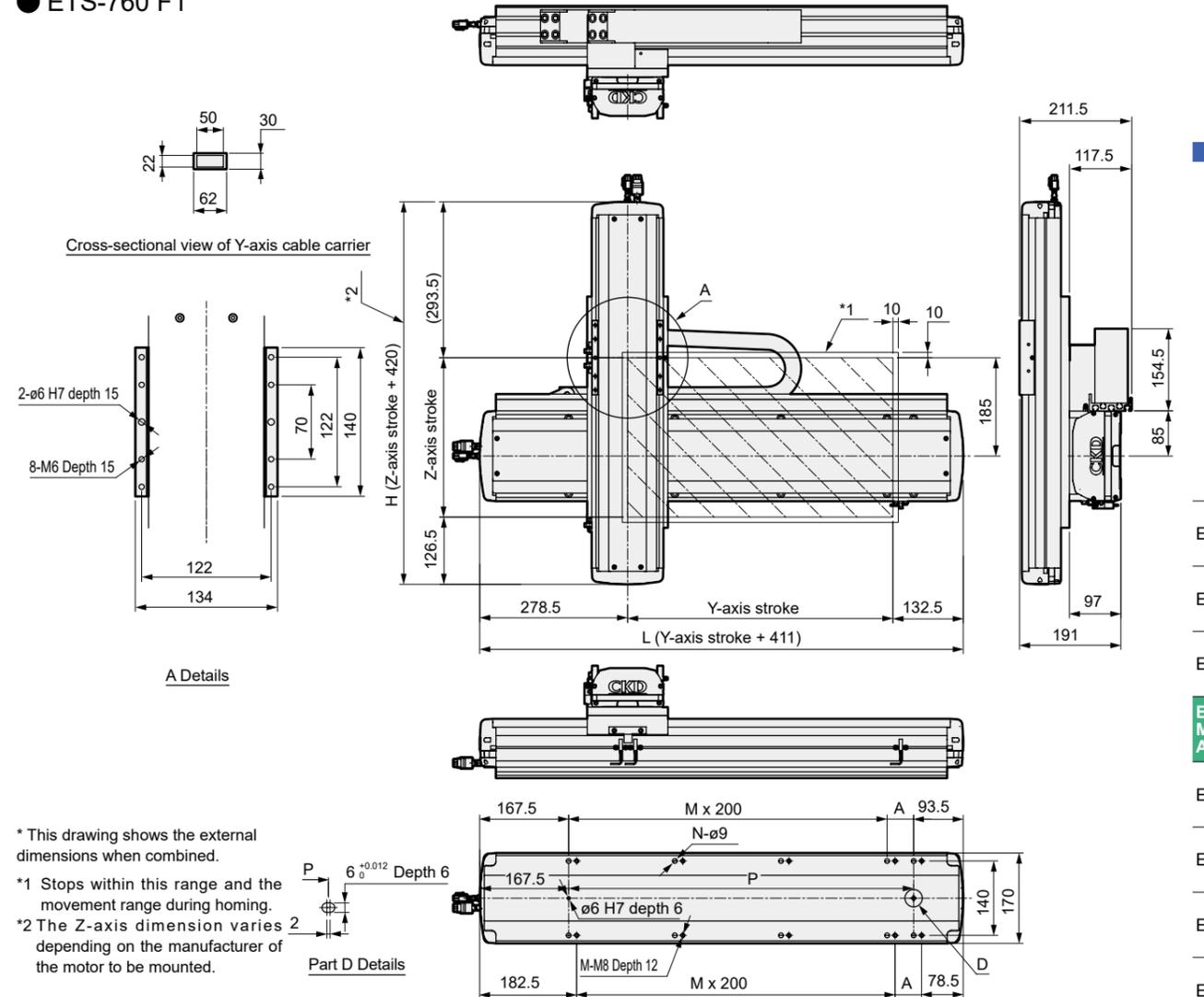
* R: Right side L: Left side

ETS Multi-Axis Series

External Dimension Drawing (Y-Z Axis)

External Dimension Drawings

ETS-760 F1



* This drawing shows the external dimensions when combined.

*1 Stops within this range and the movement range during homing.

*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

Y-axis 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	
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661	
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	
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	
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	
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	
Max. operating speed (mm/s)	1000																900			800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	470	520	570	620	670	720	770	820	870	920	970
Max. operating speed (mm/s)	500										
Max. Payload (kg)	22										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped Included	400 W	M5 4
ETS-14	Y					M5 4
	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

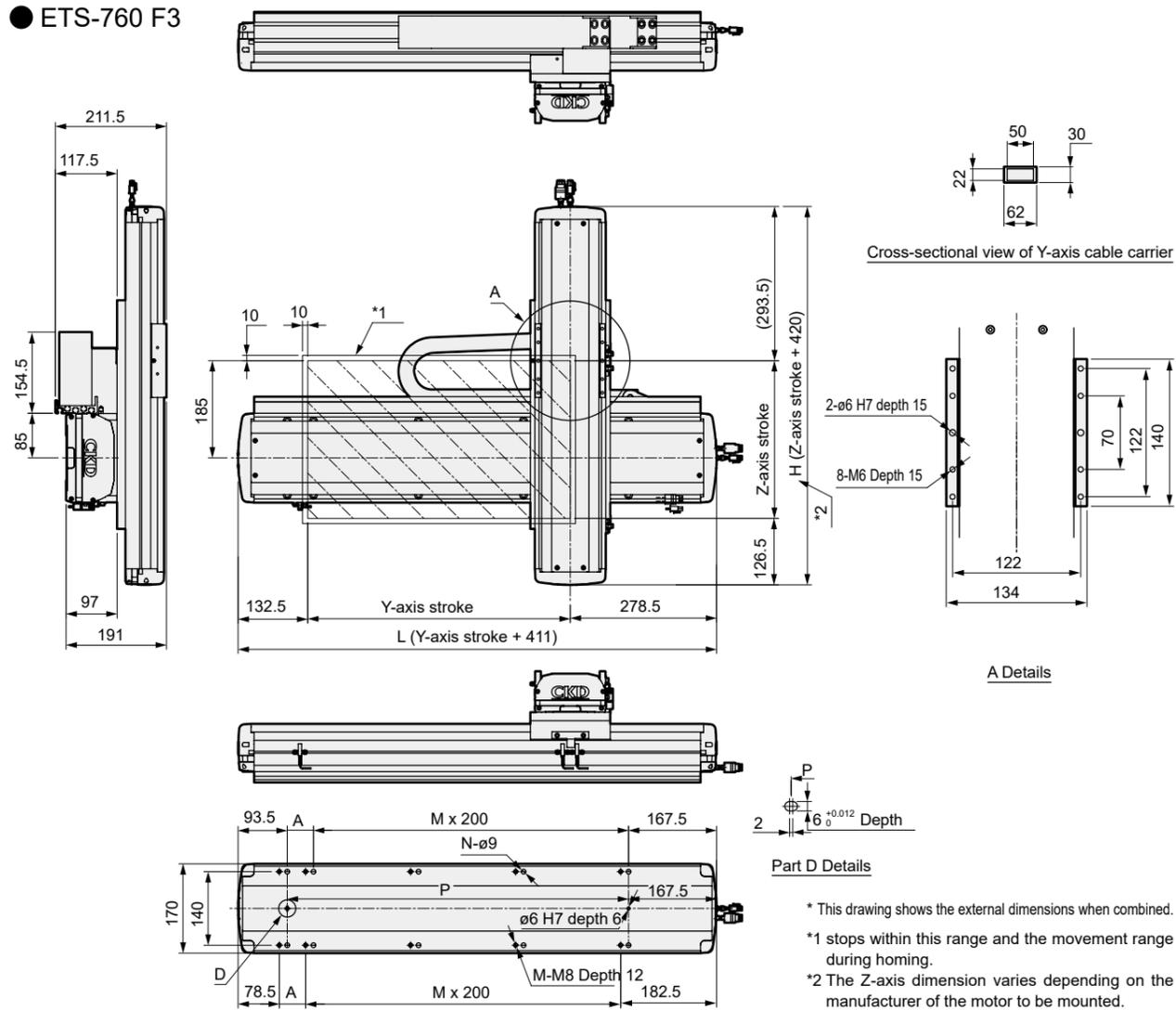
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

ETS Multi-Axis Series

External Dimension Drawings

● ETS-760 F3



Y-axis 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
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
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
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
N	6	6	6	6	8	8	8	8	8	10	10	10	12	12	12	12	14	14	14	14	16	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	1400
Max. operating speed (mm/s)	1000																900	800	700	600				
Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550													
H	470	520	570	620	670	720	770	820	870	920	970													
Max. operating speed (mm/s)	500																							
Max. Payload (kg)	22																							

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts
ETS-17	M	B	Coupling	Shipped Included	400 W	M5 4
	Y					M5 4
ETS-14	P					M4 4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible

EBS

EBR

ETS

ETS Multi Axis

ECS

ETV

ECV

EKS

ESM

Ending

ETS Multi-Axis Series

Combination parts: Cable Carrier Assy



Model No. Notation Method

ETS - 650 A - CABC 13 - X 030

1 Combination Axis

650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
870	ETS-22 x ETS-17
880	ETS-22 x ETS-22

2 Combination method

A	X-Y-axis
P	X-Z Axis
F	Y-Z Axis

3 Combination Direction

00	Parts with no combination direction restrictions
01	Parts dedicated to combination direction 1
02	Parts dedicated to combination direction 2
13	Parts dedicated to combination directions 1 and 3
14	Parts dedicated to combination directions 1 and 4
23	Parts dedicated to combination directions 2 and 3
24	Parts dedicated to combination directions 2 and 4

4 Axis Related to Part Specification

X	X-axis
Y	Y-axis
Z	Z-axis

5 4 Axis Stroke

000	0 mm
to	1500 mm
150	(every 50 mm)

Single Part

ETS - TKP0450 W78 R75 30

2 Link count

01 to 99	1 link to 99 links
----------	--------------------

1 Cableveyor (type)

TKP0450 W78 R75	Cable carrier (inner dim: 78 x 25) <outer dim: 98 x 36>
TKP0450 W78 R50	Cable carrier (inner dim: 78 x 25) <outer dim: 98 x 36>
TKP0350 W50 R50	Cable carrier (inner dim: 50 x 22) <outer dim: 62 x 30>

ETS Multi-Axis Series

Combination parts: Cable Carrier Assy

Combination Table

1 Combination Axis	2 Combination method	3 Combination Direction (Restriction)	1st Axis		2nd Axis		Parts Cable Carrier (Type)
			4 Axis Related to Part Specification	5 4 Axis Stroke	4 Axis Related to Part Specification	5 4 Axis Stroke	
ETS-650	A	13	X	100 to 1050	-	-	TKP0450W78R50
		24			-	-	
		14			-	-	
ETS-760	A	13	X	100 to 1250	-	-	TKP0450W78R50
		24			-	-	
		14			Y	50 to 650	
ETS-870	A	13	X	100 to 1500	-	-	TKP0450W78R75
		24			-	-	
		14			Y	50 to 750	
ETS-650	P	01	X	100 to 1050	-	-	TKP0450W78R75
		02			-	-	
ETS-760	P	00 *1	-	-	Z	50 to 650	TKP0350W50R50
		01	X	100 to 1250	-	-	
		02					
ETS-880	P	00	-	-	Z	50 to 950	TKP0350W50R50
		01	X	100 to 1500	-	-	
		02					
ETS-760	F	00	Y	100 to 1250	-	-	TKP0350W50R50

*1 Common parts with ETS-650 P

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

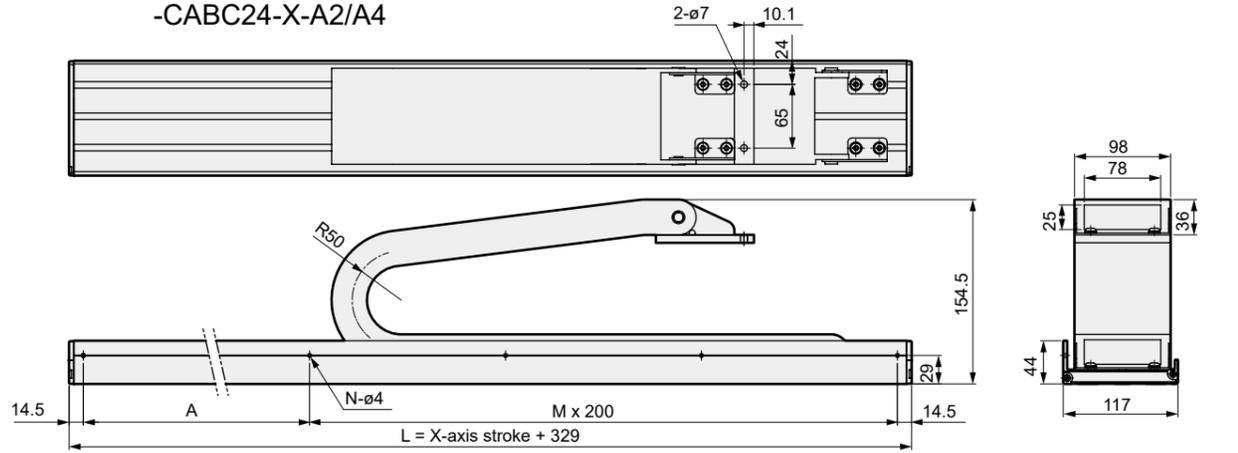
ECV

EKS

ESM

Cable Carrier External Dimension Drawing

● ETS-650 A-CABC13-X-A1/A3 -CABC24-X-A2/A4



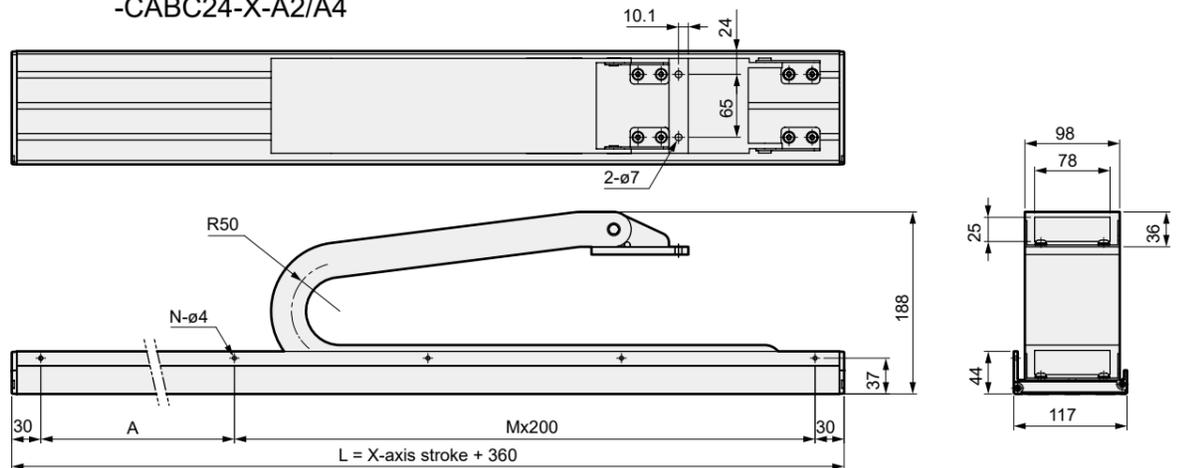
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
A1/A3	250	50	45
A2/A4	416	50	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

● ETS-760 A-CABC13-X-A1/A3 -CABC24-X-A2/A4



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

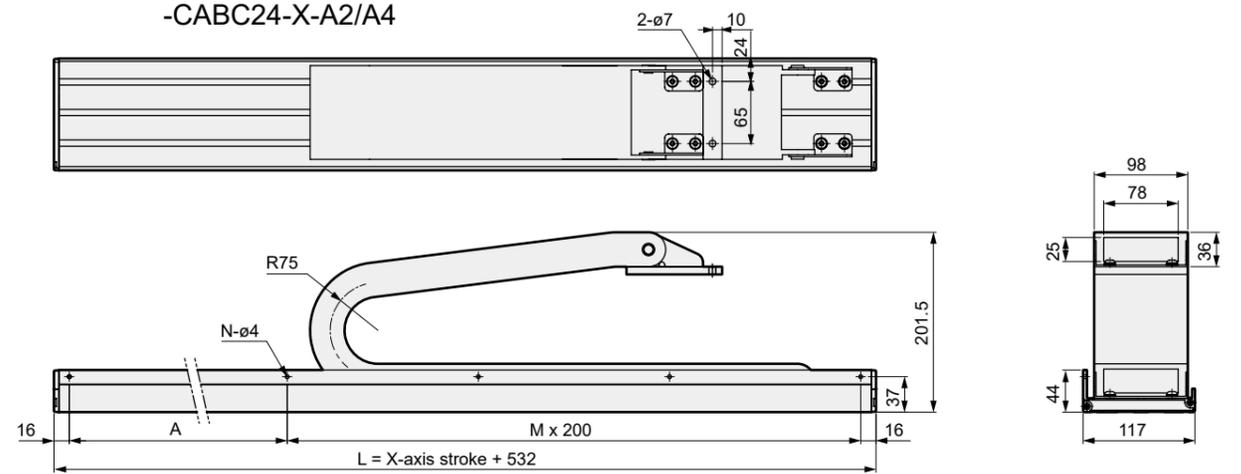
X Cable Carrier			
Connection Direction	A	R	S
A1/A3	265	50	45
A2/A4	421	50	45

A: Basic length R: Bending radius S: Link pitch

X-axis 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
L	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310	1360	1410	1460	1510	1560	1610
A	200	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	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9

Cable Carrier External Dimension Drawing

● ETS-870 A-CABC13-X-A1/A3 -CABC24-X-A2/A4



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
A1/A3	355	75	45
A2/A4	605	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1582	1632	1682	1732	1782	1832	1882	1932	1982	2032
A	150	200	50	100	150	200	50	100	150	200
M	7	7	8	8	8	8	9	9	9	9
N	9	9	10	10	10	10	11	11	11	11

Servo motor compatible

EBS
EBR

ETS
ETS Multi Axis

ECS
ETV
ECV
EKS
ESM

Ending

Servo motor compatible

EBS
EBR

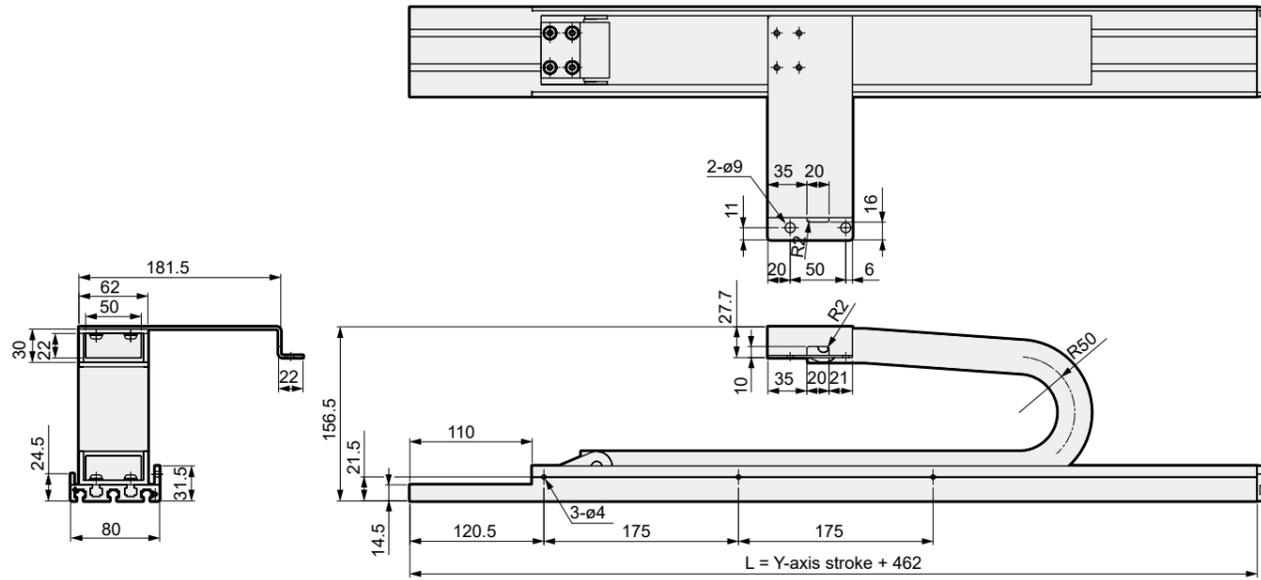
ETS
ETS Multi Axis

ECS
ETV
ECV
EKS
ESM

Ending

Cable Carrier External Dimension Drawing

● ETS-650 A-CABC14-Y



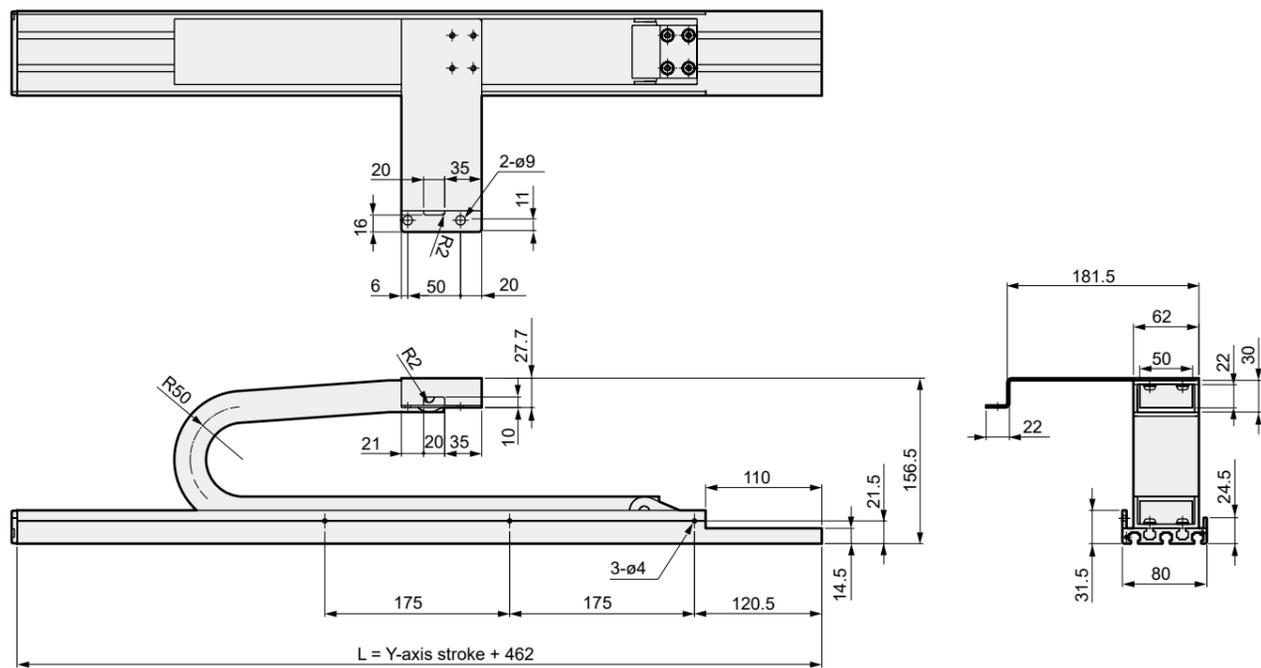
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Y Cable Carrier			
Connection Direction	A	R	S
A1/A4	284	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

● ETS-650 A-CABC23-Y



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Y Cable Carrier			
Connection Direction	A	R	S
A2/A3	284	50	35

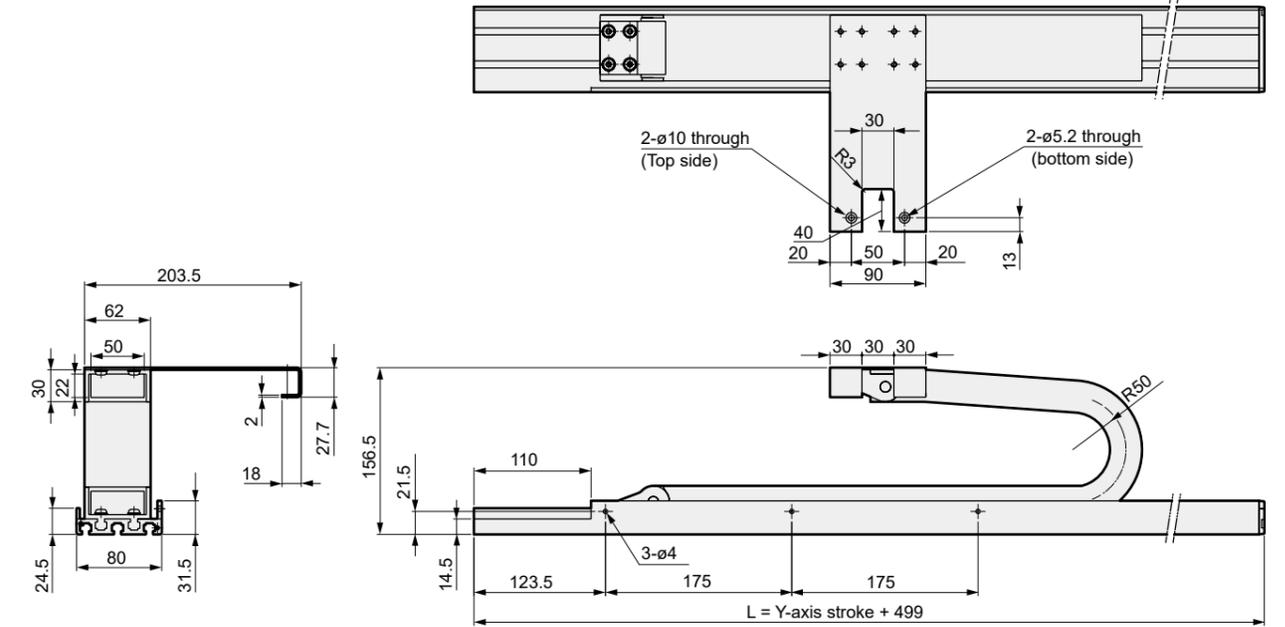
A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

Combination parts: Cable Carrier Assy

Cable Carrier External Dimension Drawing

● ETS-760 A-CABC14-Y



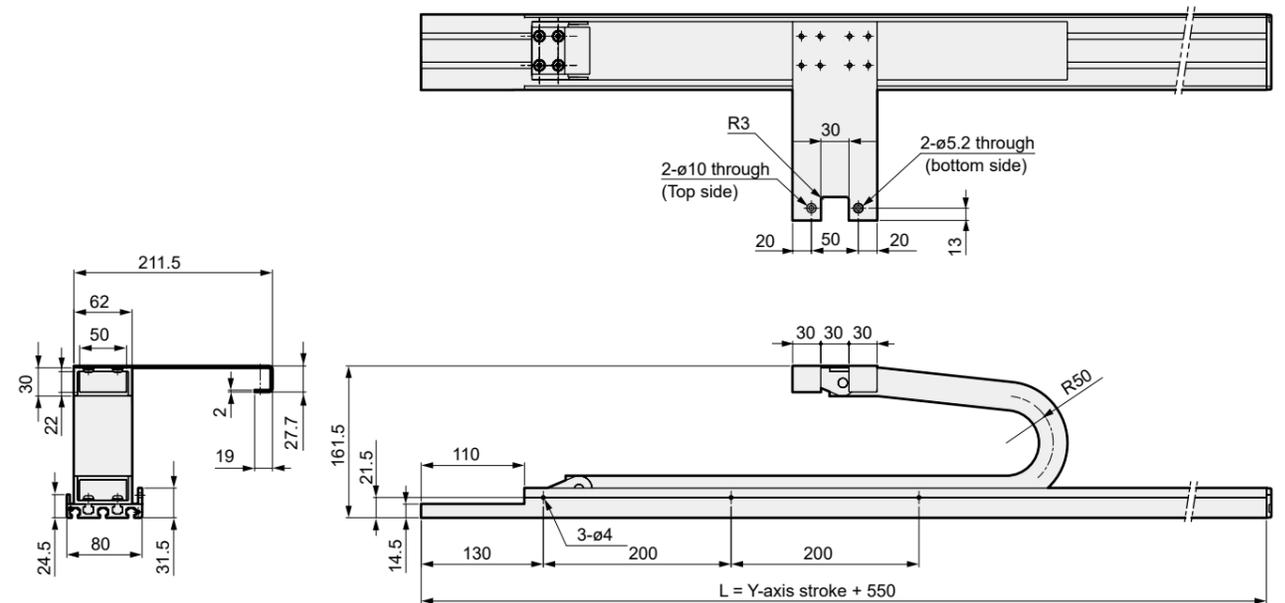
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Y Cable Carrier			
Connection Direction	A	R	S
A1/A4	298	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

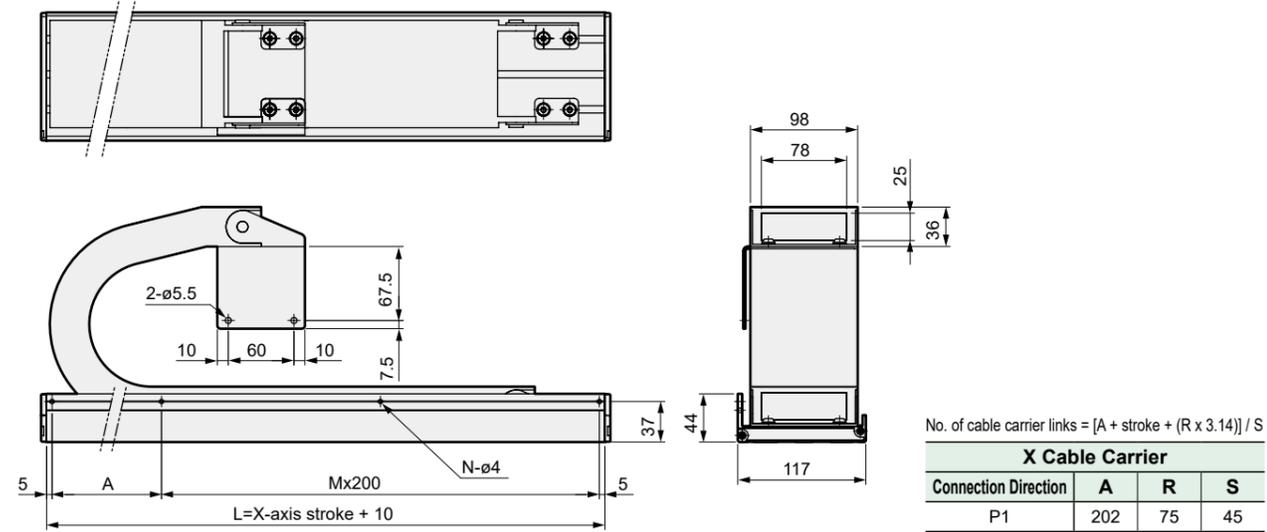
● ETS-870 A-CABC14-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
L	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300

Cable Carrier External Dimension Drawing

● ETS-880 P-CABC01-X



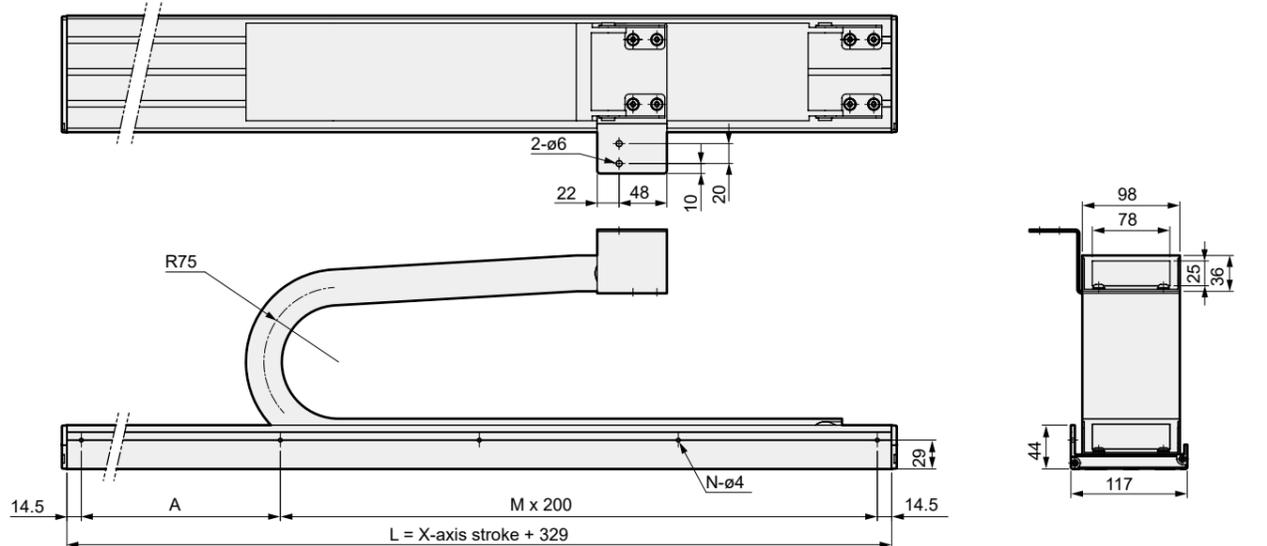
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
P1	202	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis 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
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785	810	835	860	885	910	935	960	985	1010
A	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	0	0	0	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
N	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	8	8	9	9

● ETS-650 P-CABC02-X



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
P2	296	75	45

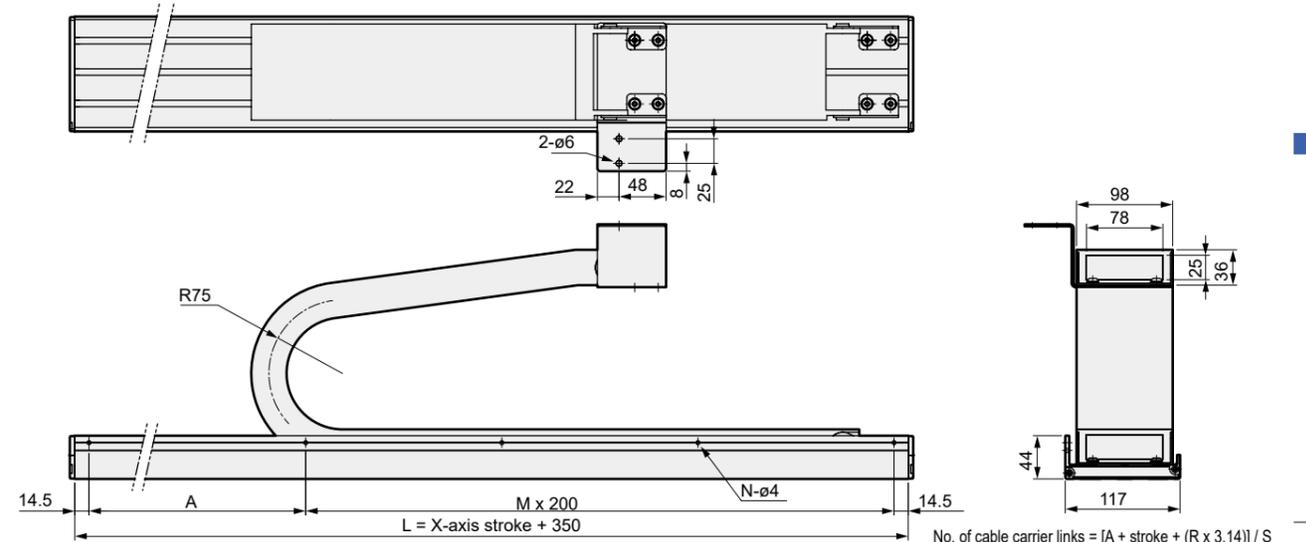
A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

Combination parts: Cable Carrier Assy

Cable Carrier External Dimension Drawing

● ETS-760 P-CABC02-X



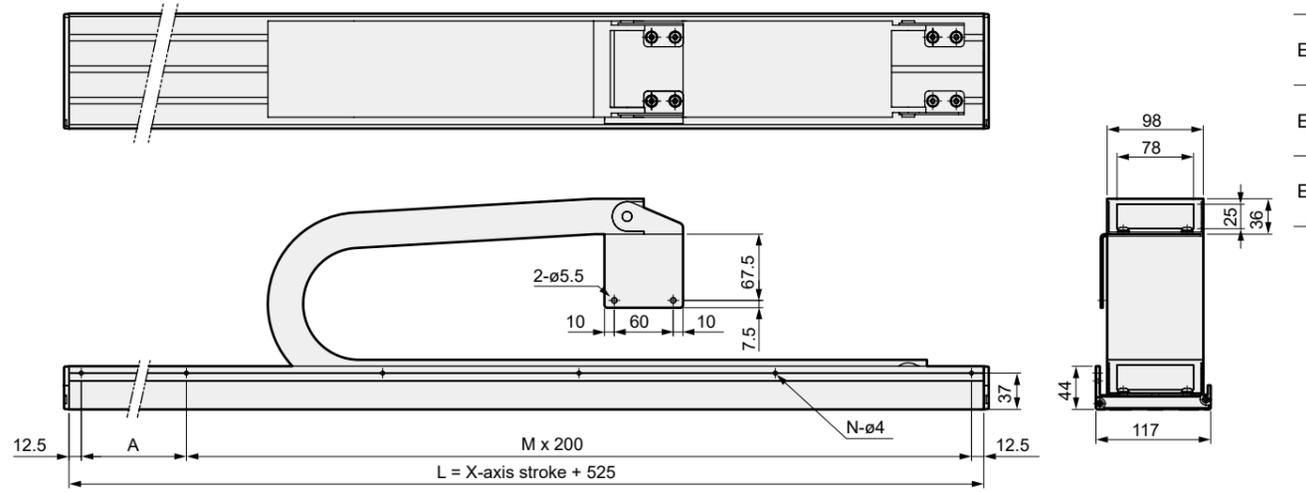
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
P2	317	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis 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
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
A	200	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	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9

● ETS-880 P-CABC02-X



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

X Cable Carrier			
Connection Direction	A	R	S
P1/P2	368	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis 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
L	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025
A	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	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11

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

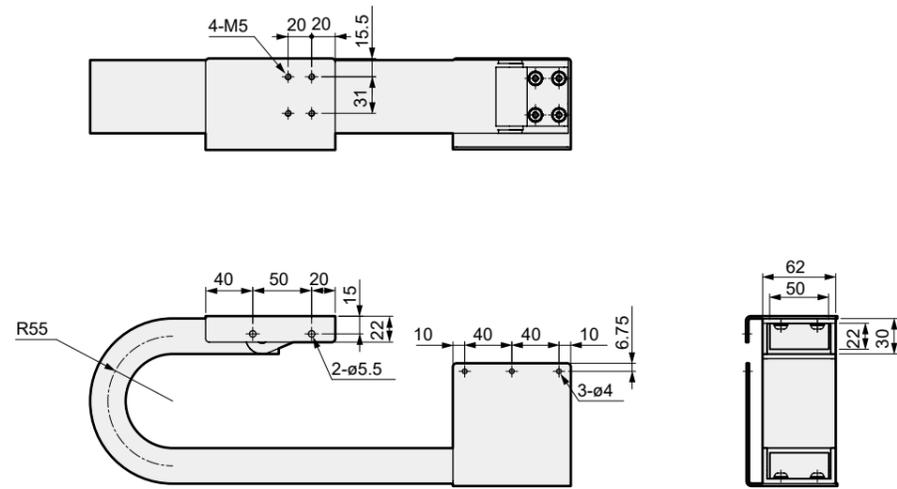
EKS

ESM

Ending

Cable Carrier External Dimension Drawing

● ETS-650 P/760 P-CABC00-Z

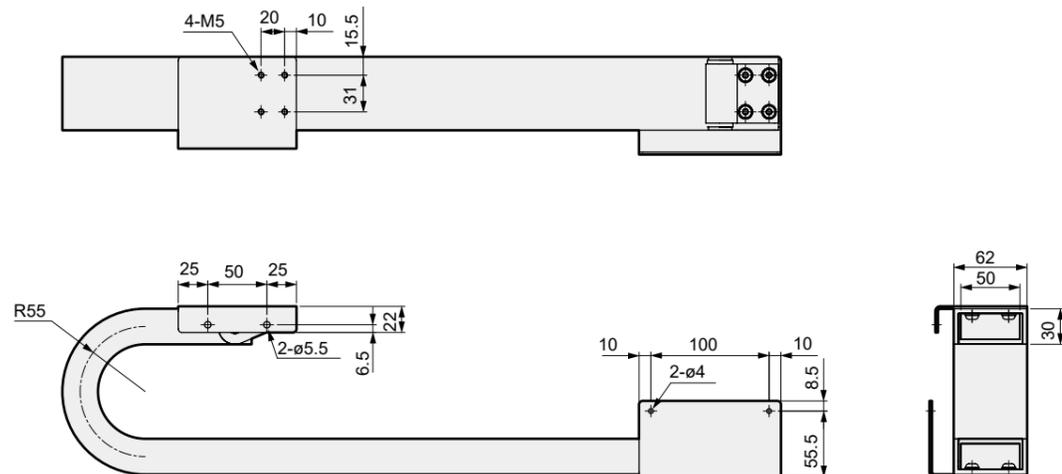


No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Z Cable Carrier			
Connection Direction	A	R	S
F1/F3	100	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-880 P-CABC00-Z



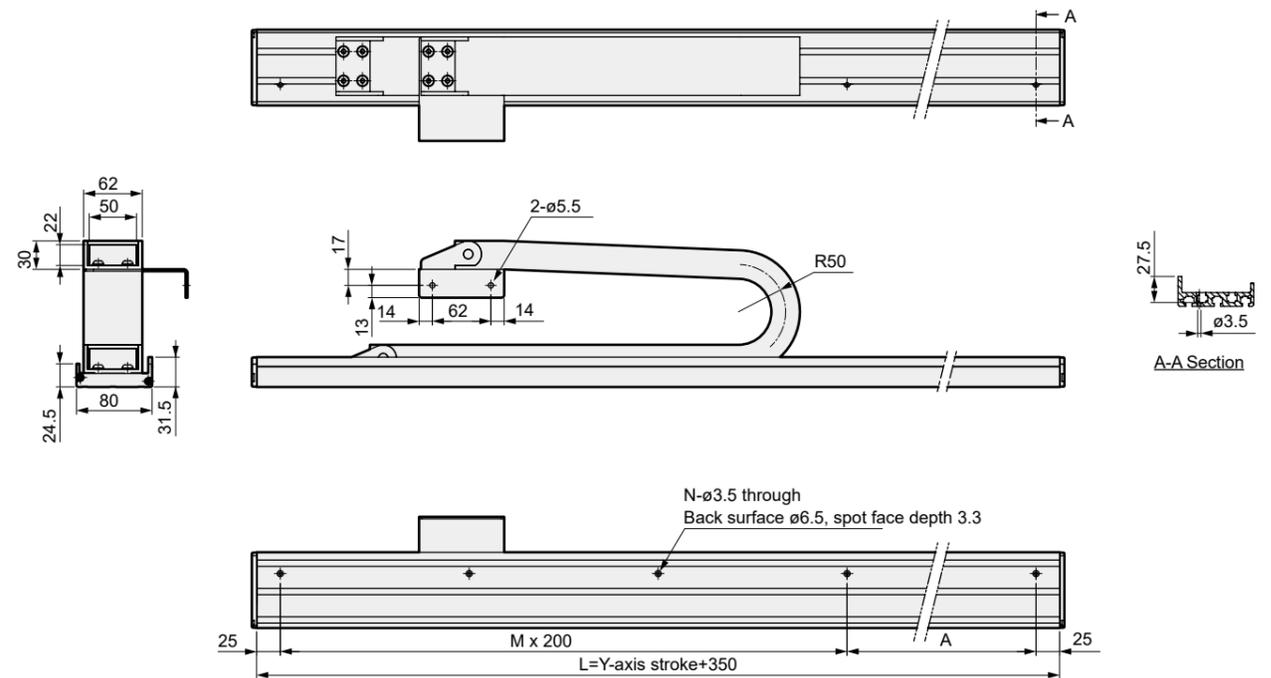
No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Z Cable Carrier			
Connection Direction	A	R	S
P1/P2	250	50	35

A: Basic length R: Bending radius S: Link pitch

Cable Carrier External Dimension Drawing

● ETS-760 F-CABC00-Y



No. of cable carrier links = $[A + \text{stroke} + (R \times 3.14)] / S$

Y Cable Carrier			
Connection Direction	A	R	S
F1/F3	190	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

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

ETS Multi-Axis Series

Combination parts: Bracket for Axis Combination



Model No. Notation Method

ETS - 650 A - BKTC 14 - Y 000

1 Combination Axis

650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
870	ETS-22 x ETS-17
880	ETS-22 x ETS-22

4 Axis Related to Part Specification

Y	Y-axis
Z	Z-axis

3 Combination Direction

00	Parts with no combination direction restrictions
14	Parts dedicated to combination directions 1 and 4
23	Parts dedicated to combination directions 2 and 3

2 Combination method

A	X-Y-axis
P	X-Z Axis
F	Y-Z Axis

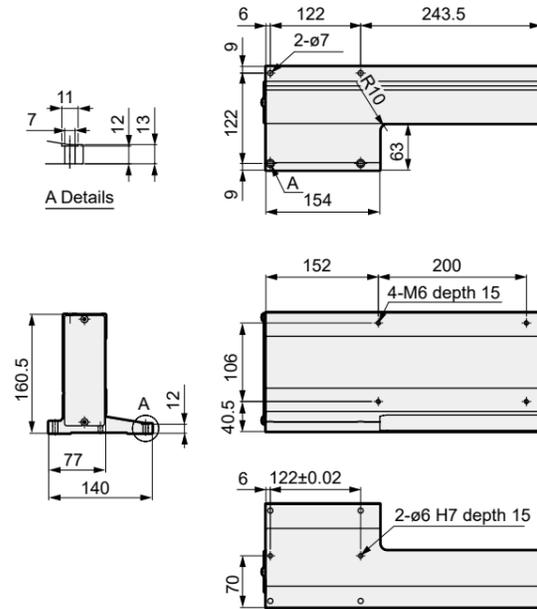
Combination Table

1 Combination Axis	2 Combination method	3 Combination Direction (Restriction)	4 Axis Related to Part Specification
ETS-650	A	14	Y
		23	
ETS-760	A	14	Y
		23	
ETS-870	A	14	Y
		23	
ETS-650	P	00	Z
ETS-760	P	00	Z
ETS-880	P	00	Z
ETS-760	F	00	Z

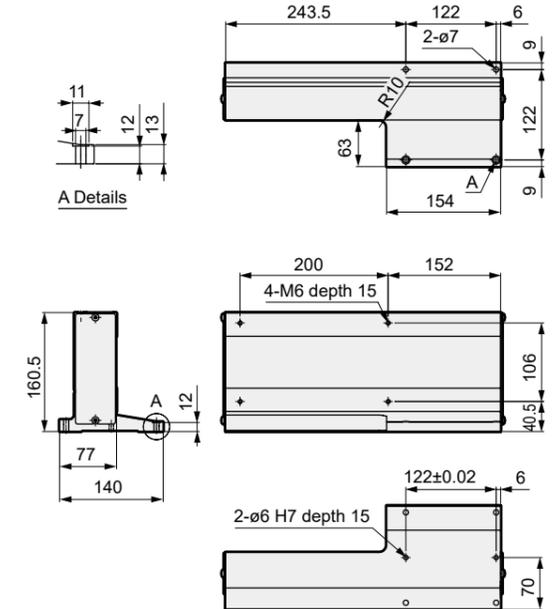
Combination parts: Bracket

Bracket External Dimension Drawing

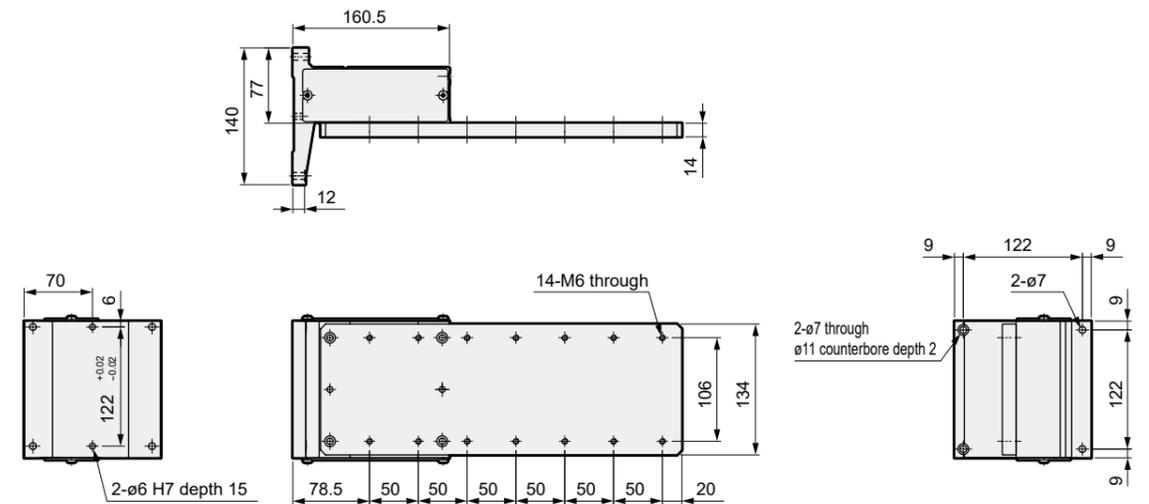
● ETS-650 A-BKTC14-Y000



● ETS-650 A-BKTC23-Y000



● ETS-650 P-BKTC00-Z000



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

Model Selection Check Sheet → CKD (Contact)

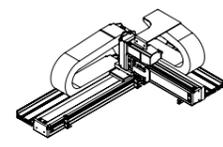
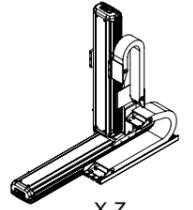
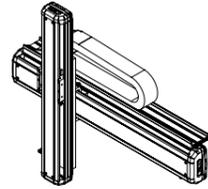
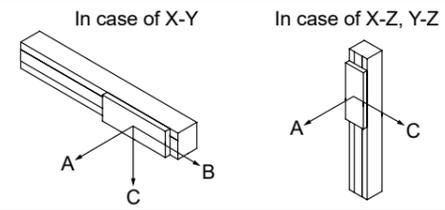
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions:

Combination	 X-Y		 X-Z		 Y-Z			
	1st Axis			2nd Axis				
Basic Specifications	Combination direction :							
	Maximum Stroke			mm	Maximum Stroke			mm
	Repeatability : ±			mm	Repeatability : ±			mm
Operating Conditions	Travel stroke :			mm	Travel stroke :			mm
	Speed Setting :			mm/s	Speed Setting :			mm/s
	Travel time :			s	Travel time :			s
	Set acceleration/deceleration :			mm/s ²	Set acceleration/deceleration :			mm/s ²
	Set acceleration/deceleration time :			s	Set acceleration/deceleration time :			s
Load Conditions	Payload :						kg	
	Distance from center of 2nd axis slider to center of gravity of load							
	In case of X-Y			In case of X-Z, Y-Z				
								
	A direction :			mm	A direction :			mm
	B direction :			mm	B direction :			mm
	C direction :			mm	C direction :			mm
Special notes regarding load :								
Pressing Load	Pressing load : None / Yes () N							
	During operation / When stopped							
Direction of force on slider center ()								
Operating Environment	Ambient Temperature :			°C	Ambient Humidity :			%
	Atmosphere :							
Motor Used	Manufacturer :							
	Motor capacity :			W	Motor capacity :			W
	Model Number :				Model Number :			
	Model Number :				Model Number :			
Special Notes								

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