

EC-TW4

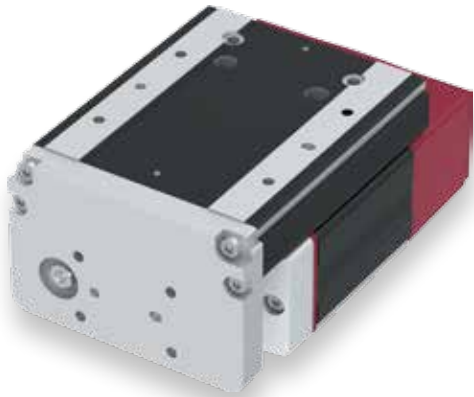
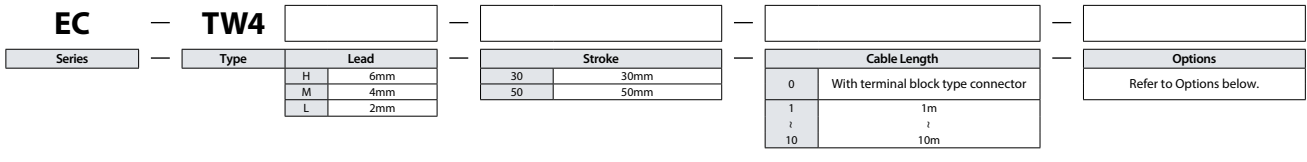
Mini

Side-mounted
Motor

Body width
78
mm

24v
Stepper
motor

■ Model Specification Items



POINT
Selection
Notes

- (1) The actuator specifications display the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to "Table of Payload by Speed/Acceleration" for more details.
- (2) When performing a push-motion operation, please refer to the "Correlation between push force and current limit value." Push force is only a guide. Please refer to P115 for cautions.
- (3) Reference value of the overhang load length is under 100mm in the Ma direction of the table top direction, under 50mm in the table front direction and under 120mm in the Mb and Mc directions.
- (4) Special attention needs to be paid to the mounting orientation. Please refer to P33 for details.

Stroke	
Stroke (mm)	EC-TW4
30	○
50	○

Options		
Name	Option code	Reference page
Brake	B	See P.101
Non-motor end specification	NM	See P.108
PNP specification	PN	See P.108
Split motor and controller power supply specification	TMD2	See P.109
Battery-less Absolute Encoder specification	WA	See P.109
Wireless communication specification	WL	See P.109
Wireless axis-operation specification	WL2	See P.109

Cable Length	
Cable code	Cable length
0	No cable (with connector)
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 10	6 ~ 10m

(Note) Robot cables.

Main specifications					
Item		Description			
Lead	Ball screw lead (mm)	6	4	2	
Horizontal	Payload	Max. payload (kg)	2.5	4	8
		Max. speed (mm/s)	300	200	100
	Speed/acceleration/deceleration	Min. speed (mm/s)	7.5	5	2.5
		Rated acceleration/deceleration (G)	0.3	0.3	0.3
		Max. acceleration/deceleration (G)	0.5	0.5	0.3
Vertical	Payload	Max. payload (kg)	1	1.5	2.5
		Max. speed (mm/s)	300	200	100
	Speed/acceleration/deceleration	Min. speed (mm/s)	7.5	5	2.5
		Rated acceleration/deceleration (G)	0.3	0.3	0.3
		Max. acceleration/deceleration (G)	0.5	0.5	0.3
Push force	Pushing max. thrust force (N)*	30	45	90	
	Pushing max. speed (mm/s)	20	20	20	
Brake	Brake holding specification	Non-excitation actuating solenoid brake			
	Brake holding force (kgf)	1	1.5	2.5	
Stroke	Min. stroke (mm)	30	30	30	
	Max. stroke (mm)	50	50	50	
	Stroke pitch (mm)	20	20	20	

* Speed limitation applies to push motion. See the manual or contact IAI.

Item	Description
Driving system	Ball screw ϕ 6mm, Rolling C10
Positioning repeatability	\pm 0.05mm
Lost motion	-
Static allowable moment	Ma: 8N·m
	Mb: 8N·m
	Mc: 26N·m
Dynamic allowable moment (Note 1)	Ma: 5N·m
	Mb: 5N·m
	Mc: 17N·m
Operational service life	5,000km or 50 million reciprocating motions
Ambient operation temperature/humidity	0~40°C, 85%RH or less (Non-condensing)
Degree of protection	-
Vibration & shock resistance	4.9m/s ² 100Hz or less
Overseas standards	CE marking, RoHS (Restriction of Hazardous Substances)
Motor type	Stepper motor
Encoder type	Incremental / battery-less absolute
Number of encoder pulses	800 pulse/rev

(Note 1) Based on the standard rated operation life of 5,000 km. Operation life varies according to operating and mounting conditions. Confirm the operation life on P36.

■ Direction of moment for the Table type

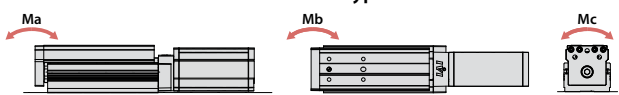


Table of Payload by Speed/Acceleration

Unit for payload is kg.

Lead 6

Orientation	Horizontal		Vertical	
	Acceleration (G)			
Speed (mm/s)	0.3	0.5	0.3	0.5
0	2.5	2.5	1	1
300	2.5	2.5	1	1

Lead 4

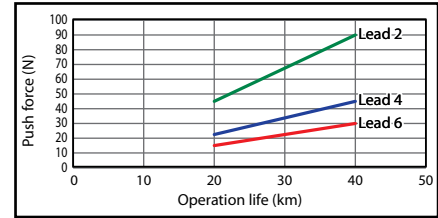
Orientation	Horizontal		Vertical	
	Acceleration (G)			
Speed (mm/s)	0.3	0.5	0.3	0.5
0	4	4	1.5	1.5
200	4	4	1.5	1.5

Stroke and maximum speed

Lead (mm)	30 (mm)	50 (mm)
6	300	
4	200	
2	100	

(Unit is mm/s)

Correlation between push force and current limit value



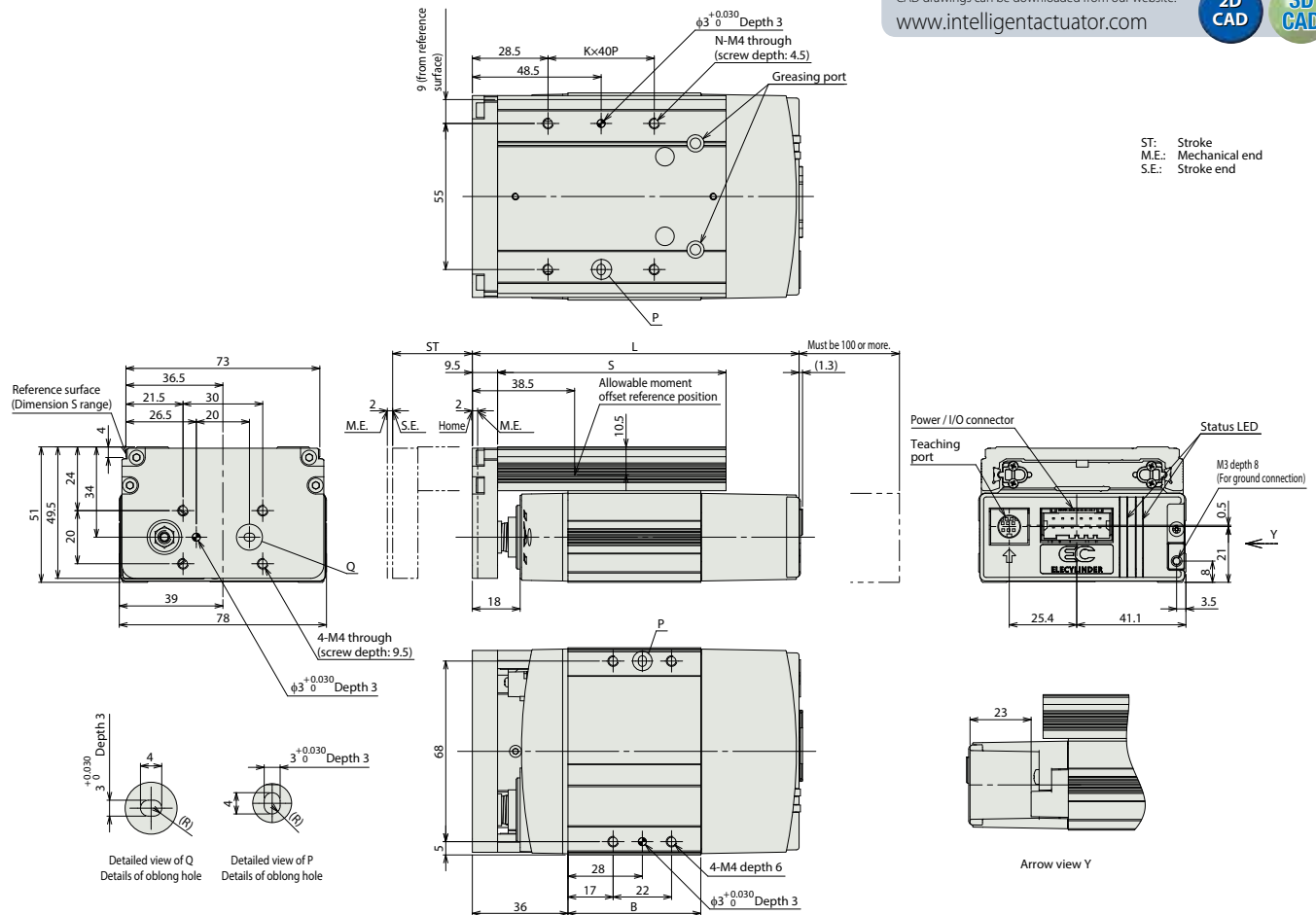
Dimensions

(Note) When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

CAD drawings can be downloaded from our website.
www.intelligentactuator.com



ST: Stroke
M.E.: Mechanical end
S.E.: Stroke end



Dimensions by stroke

Encoder type	Stroke	Incremental		Battery-less absolute	
		30	50	30	50
L	Without brake	123	143	143	143
	With brake	153	153	173	173
B	Without brake	50	70	70	70
	With brake	80	80	100	100
S		86	106	86	106
K		1	2	1	2
N		4	6	4	6

Mass by stroke

Encoder type	Stroke	Incremental		Battery-less absolute	
		30	50	30	50
Weight (kg)	Without brake	0.8	0.9	0.8	0.9
	With brake	0.9	1.0	1.0	1.0

Applicable controller

(Note) The EC series is equipped with a built-in controller. Please refer to P116 for details.