

# YK180X

Standard type: Extra small type



- Arm length 180mm
- Maximum payload 1kg

## Ordering method

**YK180X - 100**

**RCX340-4**

<b>Model</b>	<b>Z axis stroke</b> 100: 100mm	<b>Cable</b> 3L: 3.5m 5L: 5m 10L: 10m	<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A (OP.A)</b>	<b>Option B (OP.B)</b>	<b>Option C (OP.C)</b>	<b>Option D (OP.D)</b>	<b>Option E (OP.E)</b>	<b>Absolute battery</b>
--------------	------------------------------------	--	---	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

Specify various controller setting items. RCX340 ▶ **P.678**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	71 mm	109 mm	100 mm	-
	<b>Rotation angle</b>	+/-120 °	+/-140 °	-	+/-360 °
<b>AC servo motor output</b>		50 W	30 W	30 W	30 W
<b>Deceleration mechanism</b>	<b>Transmission method</b>	Direct-coupled			
	<b>Motor to speed reducer Speed reducer to output</b>	Direct-coupled			
<b>Repeatability</b> <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>		3.3 m/sec	0.7 m/sec	1700 °/sec	
<b>Maximum payload</b>		1.0 kg			
<b>Standard cycle time: with 0.1kg payload</b> <sup>Note 2</sup>		0.39 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.01 kgm <sup>2</sup>			
<b>User wiring</b>		0.1 sq × 6 wires			
<b>User tubing (Outer diameter)</b>		φ 3 × 2			
<b>Travel limit</b>		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
<b>Robot cable length</b>		Standard: 3.5 m Option: 5 m, 10 m			
<b>Weight (Excluding robot cable)</b> <sup>Note 4</sup>		5.5 kg			
<b>Robot cable weight</b>		1.5 kg (3.5 m)	2.1 kg (5 m)	4.2 kg (10 m)	

- Note 1. This is the value at a constant ambient temperature.  
 Note 2. When reciprocating 100mm in horizontal and 25mm in vertical directions.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.  
 Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

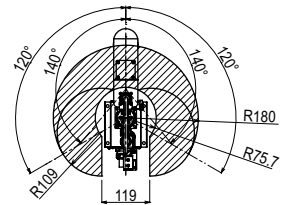
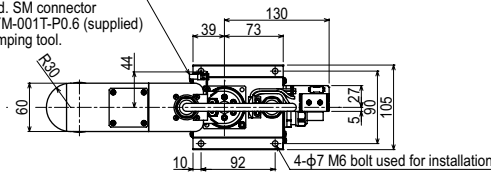
Controller	Power capacity (VA)	Operation method
RCX340	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<https://global.yamaha-motor.com/business/robot/>

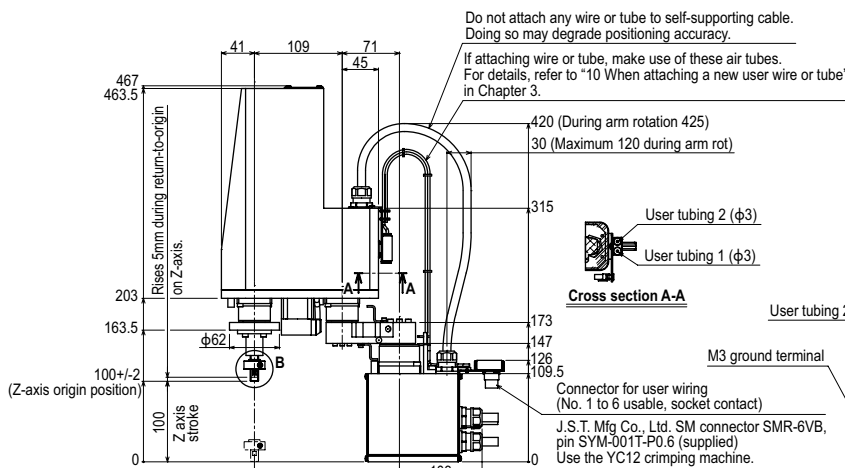
## YK180X

Connector for user wiring  
(No. 1 to 6 usable, socket contact)  
 J.S.T. Mfg Co., Ltd. SM connector  
 SMR-6VB, pin SYM-001T-P0.6 (supplied)  
 Use the YC12 crimping tool.



### Working envelope

X-axis origin is at 0° +/-5° with respect to front of robot base



### Cross section A-A

User tubing 2 (φ3)

User tubing 1 (φ3)

M3 ground terminal

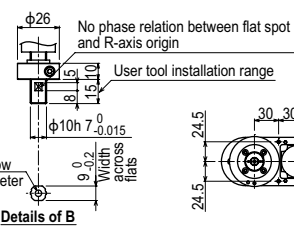
Connector for user wiring  
(No. 1 to 6 usable, socket contact)

J.S.T. Mfg Co., Ltd. SM connector SMR-6VB,  
 pin SYM-001T-P0.6 (supplied)

Use the YC12 crimping machine.

### X, Y-axis origin position

When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.



R27 (Min. cable bending radius)  
 Do not move the cable.  
 Keep enough space for the maintenance work at the rear of the base.

- Articulated robots YA
- Linear conveyor modules LCM
- Single-axis robots CX
- Motor-less single-axis actuator Robomity
- Compact single-axis robots TRANSEVO
- Single-axis robots FLIP-X
- Linear motor single-axis robots PHASER
- Cartesian robots XY-X
- SCARA robots YK-X
- Pick & place robots YP-X
- CLEAN
- CONTROLLER INFORMATION
- Extra small type
- Small / Medium type
- Large type
- Wall mount / Inverse type
- Dust-proof & drip-proof type