

# YK180X

Standard type: Extra Small

● Arm length 180mm

● Maximum payload 1kg



## Ordering method

YK180X - 100			RCX240					BB
<b>Model</b>	<b>Z axis stroke</b>	<b>Cable length</b>	<b>Controller</b>	<b>Usable for CE</b>	<b>Expansion I/O</b>	<b>Network option</b>	<b>Battery</b>	
	100: 100mm	3L: 3.5m (Standard) 5L: 5m 10L: 10m		No entry: Standard E: CE marking	N, P: Standard I/O 16/8 N1, P1: 40/24 N2, P2: 64/40 N3, P3: 88/56 N4, P4: 112/72	No entry: None CC: CC-Link DN: DeviceNet PB: Profibus EN: Ethernet YC: YC-Link	BB: 4 pcs	

Note 1. Use N to N4 when NPN is selected on the I/O board, and P to P4 when PNP is selected.  
Note 2. Available only for the master.

## Specifications

Axis specifications	Arm length (mm)	X-axis	Y-axis	Z-axis	R-axis
Rotation angle (°)		+/-120	+/-140	-	+/-360
AC servo motor output (W)		50	30	30	30
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup> (XYZ: mm) (R: °)		+/-0.01		+/-0.01	+/-0.004
Maximum speed (XYZ: m/sec) (R: °/sec)		3.3		0.7	1700
Maximum payload (kg)		1.0			
Standard cycle time: with 0.1kg payload <sup>Note 2</sup> (sec)		0.39			
R-axis tolerable moment of inertia <sup>Note 3</sup> (kgm <sup>2</sup> )		0.01			
User wiring (sq × wires)		0.1 × 6			
User tubing (Outer diameter)		φ3 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length (m)		Standard: 3.5 Option: 5,10			
Weight (kg) (Excluding robot cable) <sup>Note 4</sup>		5.5			
Robot cable weight		1.5kg (3.5m)	2.1kg (5m)	4.2kg (10m)	

## Controller

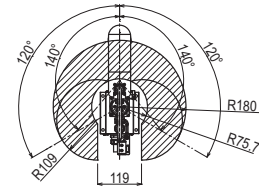
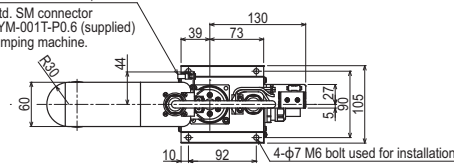
Controller	Power capacity (VA)	Operation method
RCX240	500	Programming / I/O point trace (BCD) / Remote command / Operation using RS-232C communication

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. There are limits to acceleration coefficient settings.  
Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## 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 machine.

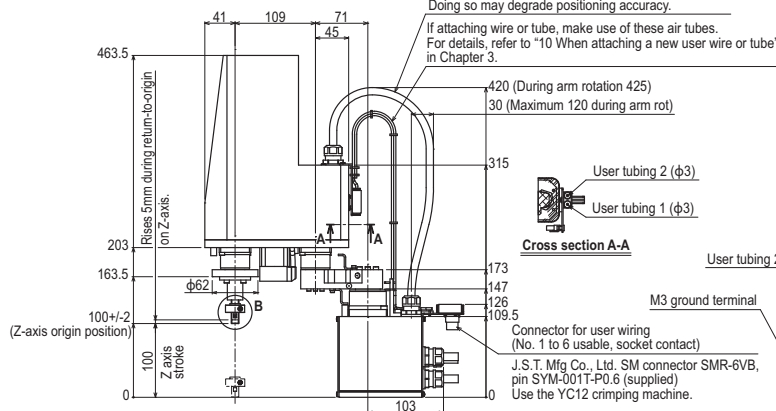


### Working envelope

X-axis origin is at 0° ±15° with respect to front of robot base

Do not attach any wire or tube to self-supporting cable. Doing so may degrade positioning accuracy.

If attaching wire or tube, make use of these air tubes. For details, refer to "10 When attaching a new user wire or tube" in Chapter 3.

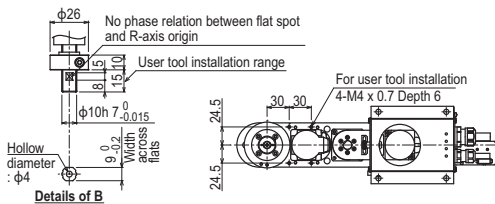


### Cross section A-A

### X, Y-axis origin position

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

No phase relation between flat spot and R-axis origin  
User tool installation range



### Details of B