

YK180X

Standard type: Tiny type

- Arm length 180mm
- Maximum payload 1kg



Ordering method

YK180X - 100

Model	Z axis stroke	Cable
	100: 100mm	3L: 3.5m
		5L: 5m
		10L: 10m

RCX340-4

Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.502**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	iVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.489**

Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length (mm)	71	109	100	-
	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 ^{Note 1} (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 ^{Note 2} (sec)		0.39			
R-axis tolerable moment of inertia ^{Note 3} (kgm ²)		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) ^{Note 4}		5.5			
Robot cable weight		1.5kg (3.5m) 2.1kg (5m) 4.2kg (10m)			

- 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. See P.528.
 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 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

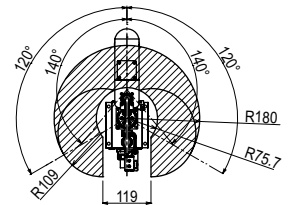
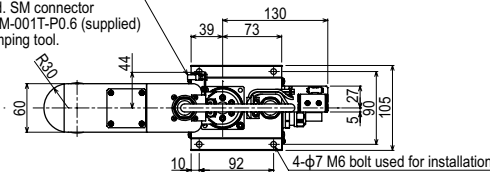
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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:
<http://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.

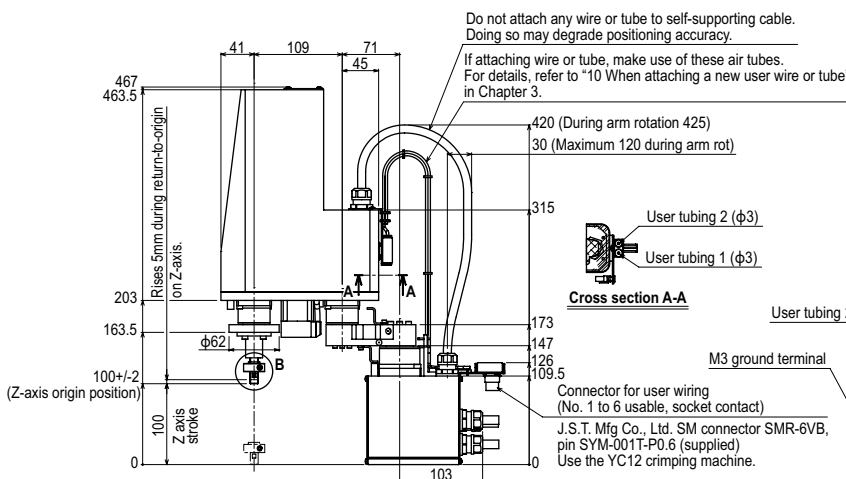


Working envelope

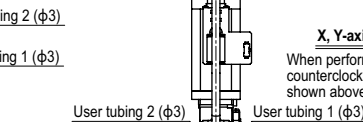
X-axis origin is at 0°±5° with respect to front of robot base

X, Y-axis origin position

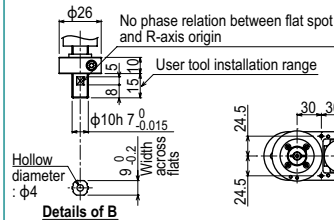
When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.



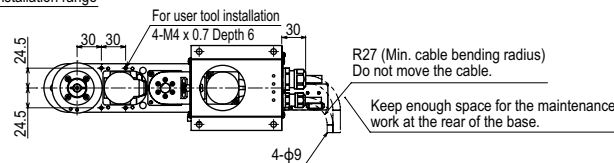
Cross section A-A



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.



Details of B



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

APPLICATION
 Linear conveyor modules
 LCM100

TRANSEURO
 Compact single-axis robots

FLIP-X
 Single-axis robots

PHASER
 Linear motor single-axis robots

XX-X
 Cartesian robots

YK-X
 SCA RA robots

YP-X
 Pick & place robots

CLEAN
 CONTROLLER INFORMATION

Orbit / Tiny type
 Small / Medium type
 Large type
 Walk-mount / Inverse type
 Dust-proof & drip-proof type