

YK500TW

Orbit type



- Arm length 500mm
- Maximum payload 5kg

Ordering method

YK500TW-130

Model	Z axis stroke 130: 130mm	Tool flange No entry: None F: With tool flange	Hollow shaft No entry: None S: With hollow shaft	Cable 3L: 3.5m 5L: 5m 10L: 10m
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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.494

RCX240

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery
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R3

BB

Specify various controller setting items. RCX240/RCX240S ▶ P.481

Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	250 mm	250 mm	130 mm	-
	Rotation angle	+/-225 °	+/-225 °	-	+/-720 °
AC servo motor output		750 W	400 W	200 W	105 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Belt speed reduction
	Transmission method	Timing belt	Direct-coupled	Timing belt	Timing belt
	Motor to speed reducer			Direct-coupled	
Speed reducer to output					
Repeatability ^{Note 1}		+/-0.015 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 °
Maximum speed		6.8 m/sec	1.5 m/sec	3000 °/sec	
Maximum payload ^{Note 2}		5 kg (RCX340), 4 kg (RCX240)			
Standard cycle time: with 1kg payload ^{Note 3}		0.29 sec			
R-axis tolerable moment of inertia ^{Note 4}	Rated	0.005 kgm ²			
	Maximum	0.05 kgm ²			
User wiring		0.15 sq × 8 wires			
User tubing (Outer diameter)		φ 6 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		27 kg			

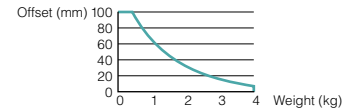
Note 1. This is the value at a constant ambient temperature.
 Note 2. For the option specifications (tool flange mount type), the maximum payload becomes 4 kg (RCX340) or 3 kg (RCX240).
 Note 3. When moving a 1 kg load back and forth 300 mm horizontally and 25 mm vertically (rough positioning arch motion).
 Note 4. Limits must be placed on parameters such as acceleration according to the moment of inertia being used. See P.522.

Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

R-axis moment of inertia (load inertia)

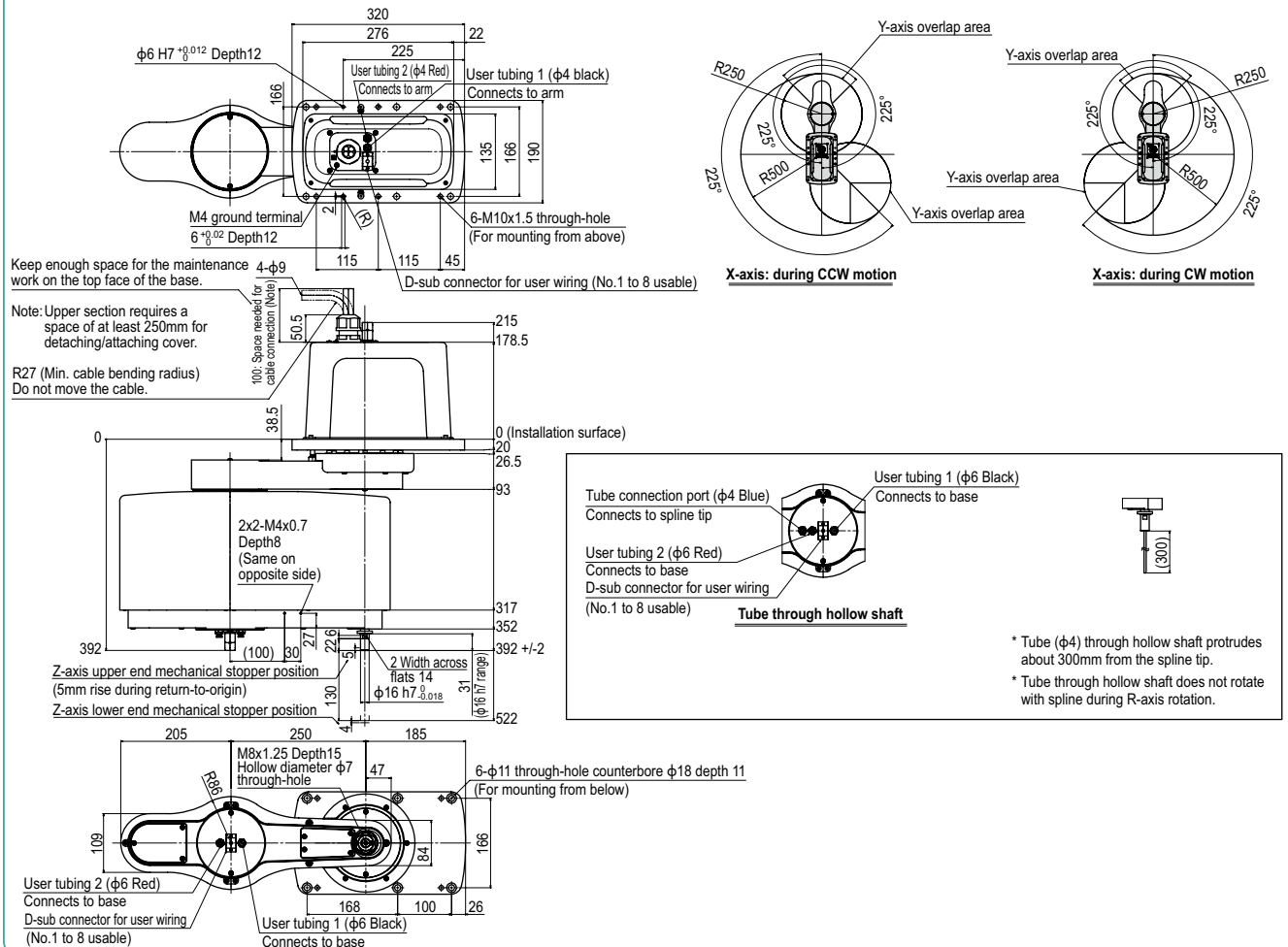
Recommended positional relationship between the load weight and the offset amount from the center of the R-axis (center of gravity position)



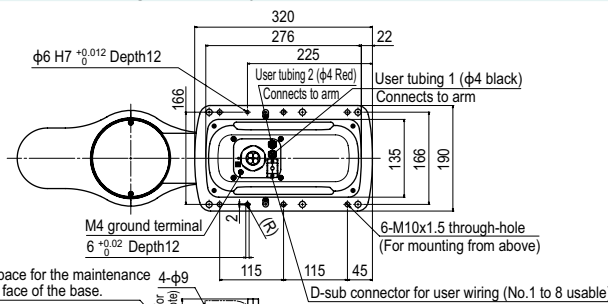
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.
 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

YK500TW



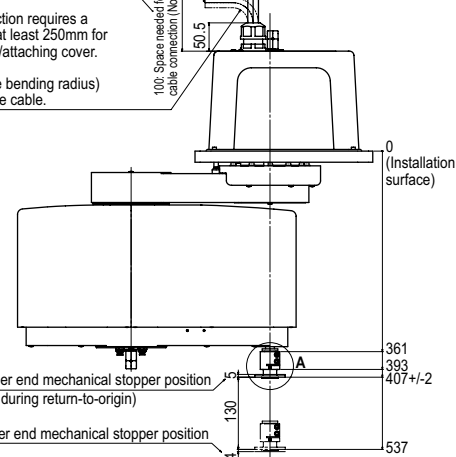
YK500TW Tool flange mount type



Keep enough space for the maintenance work on the top face of the base.

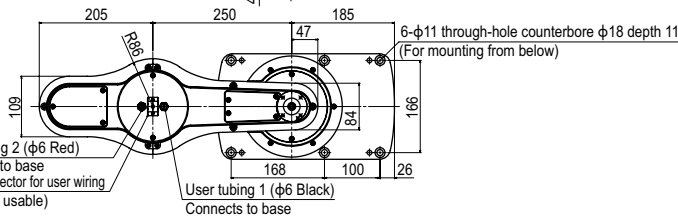
Note: Upper section requires a space of at least 250mm for detaching/attaching cover.

R27 (Min. cable bending radius) Do not move the cable.



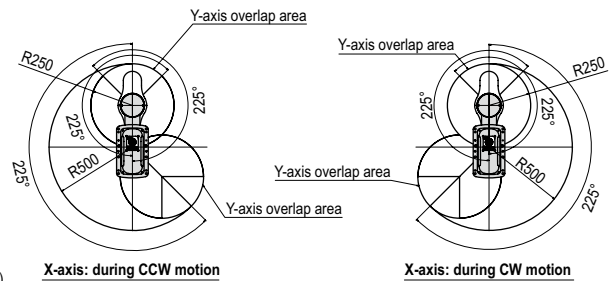
Z-axis upper end mechanical stopper position (5mm rise during return-to-origin)

Z-axis lower end mechanical stopper position



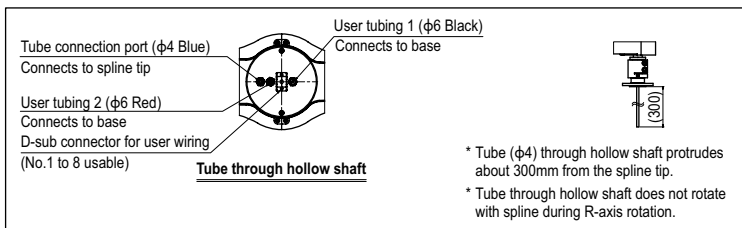
User tubing 2 ($\phi 6$ Red) Connects to base
D-sub connector for user wiring (No.1 to 8 usable)

User tubing 1 ($\phi 6$ Black) Connects to base



X-axis: during CCW motion

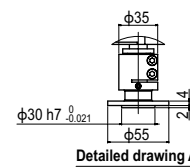
X-axis: during CW motion



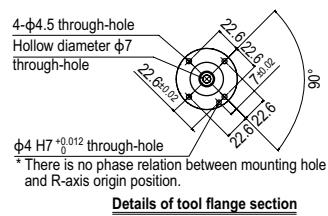
Tube connection port ($\phi 4$ Blue) Connects to spline tip
User tubing 2 ($\phi 6$ Red) Connects to base
D-sub connector for user wiring (No.1 to 8 usable)

User tubing 1 ($\phi 6$ Black) Connects to base
Tube through hollow shaft

* Tube ($\phi 4$) through hollow shaft protrudes about 300mm from the spline tip.
* Tube through hollow shaft does not rotate with spline during R-axis rotation.



Detailed drawing A



$\phi 4\ H7\ +0.012$ through-hole
* There is no phase relation between mounting hole and R-axis origin position.

Details of tool flange section