YK250XGP

Dust-proof & drip-proof type

● Arm length 250mm　● Maximum payload 4kg

■ Ordering method

YK250XGP - **150** - ☐ - **S** - ☐ - **RCX340-4** - ☐ ☐ ☐ ☐ ☐ ☐ ☐

| Model | Z axis stroke | Tool flange | Hollow shaft | Cable | 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 |

- Z axis stroke: 150: 150mm
- Tool flange: No entry: None / F: With tool flange
- Hollow shaft: S: With hollow shaft
- Cable: 3L: 3.5m / 5L: 5m / 10L: 10m

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

■ Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	100 mm	150 mm	150 mm	–
	Rotation angle	+/-129 °	+/-134 °	–	+/-360 °
AC servo motor output		200 W	150 W	50 W	100 W
Deceleration mechanism	Transmission method — Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability Note 1		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		4.5 m/sec		1.1 m/sec	1020 °/sec
Maximum payload		4 kg			
Standard cycle time: with 2kg payload Note 2		0.50 sec			
R-axis tolerable moment of inertia Note 3		0.05 kgm²			
Protection class Note 4		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq × 10 wires			
User tubing (Outer diameter)		φ 4 × 4			
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		21.5 kg			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)
Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).
Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.
Note 4. Do not use robots where the bellows section is directly exposed to water jet. Contact our distributor for information on drip-proof structure preventing liquid other than water.

■ Controller

Controller	Power capacity (VA)	Operation method
RCX340	1000	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.
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.
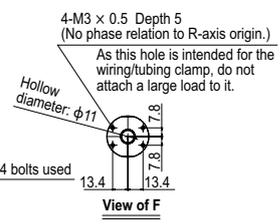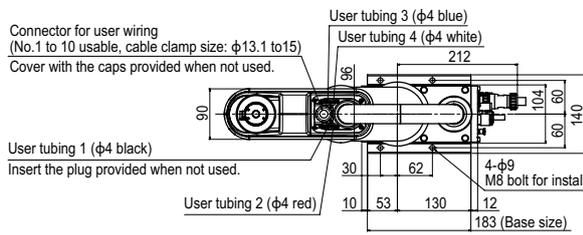
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
https://global.yamaha-motor.com/business/robot/

YK250XGP

Controller　**RCX340 ▶ 678**
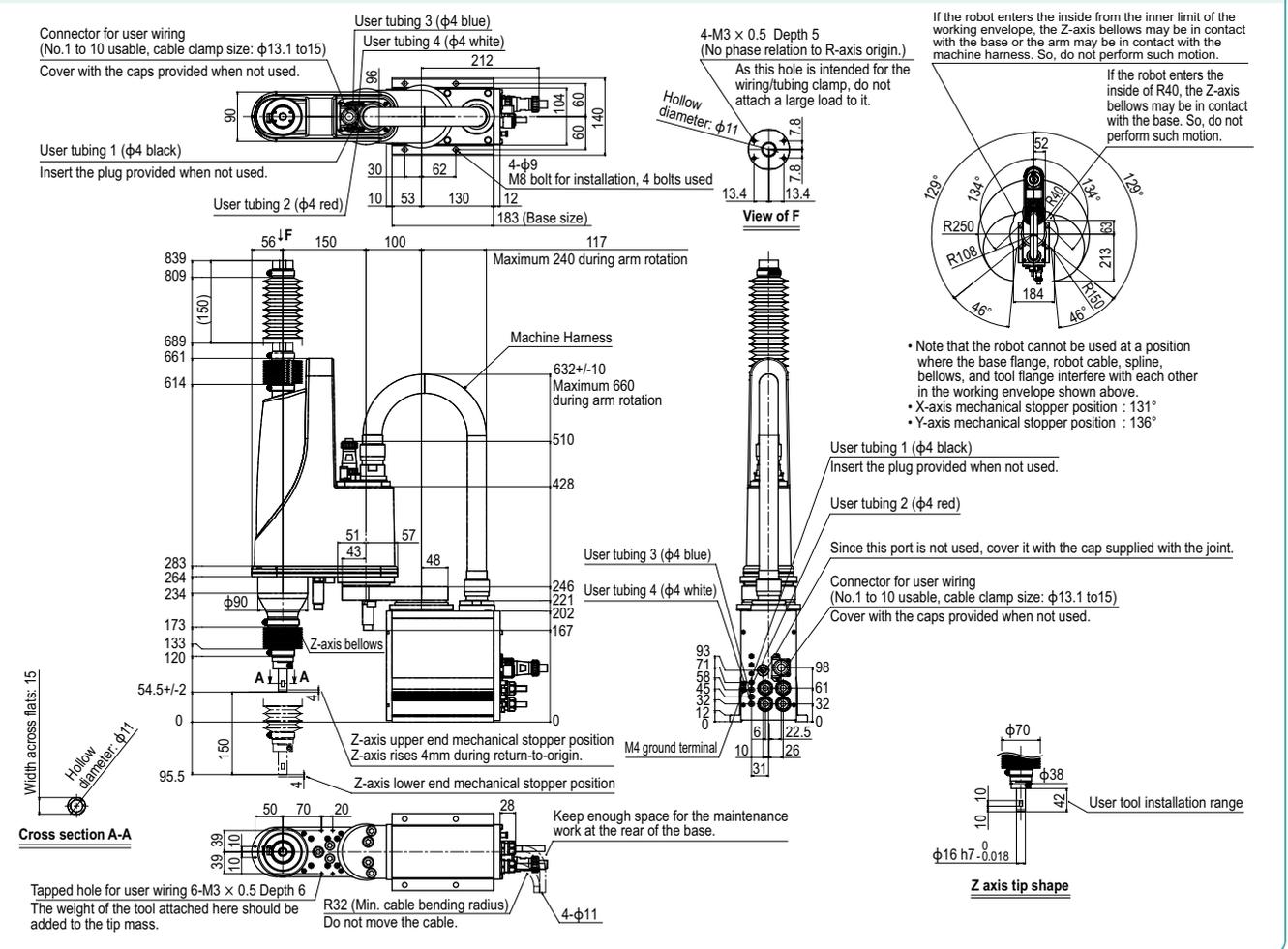
YA — Articulated robots
LCM — Linear conveyor modules
GX — Single-axis robots
Robonity — Motor-less single axis actuator
TRANSERVO — Compact single-axis robots
FLIP-X — Single-axis robots
PHASER — Linear motor single-axis robots
XY-X — Cartesian robots
YK-X — SCARA robots
YP-X — Pick & place robots
CLEAN
CONTROLLER
INFORMATION
Orbit / Extra small type
Small / Medium type
Large type
Wall mount / inverse type
Dust-proof & drip-proof type

YK250XGP Tool flange mount type

Connector for user wiring
(No.1 to 10 usable, cable clamp size: φ13.1 to15)
Cover with the caps provided when not used.

User tubing 3 (φ4 blue)
User tubing 4 (φ4 white)

212
96
104 60
60
140
60
90

User tubing 1 (φ4 black)
Insert the plug provided when not used.

User tubing 2 (φ4 red)

30
62
10 53 130 12
183 (Base size)

4-φ9
M8 bolt for installation, 4 bolts used

4-M3 × 0.5 Depth 5
(No phase relation to R-axis origin.)
As this hole is intended for the
wiring/tubing clamp, do not
attach a large load to it.

Hollow
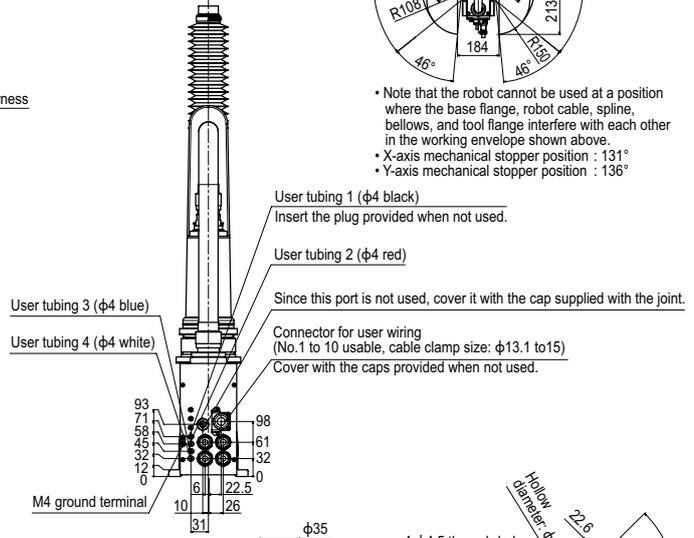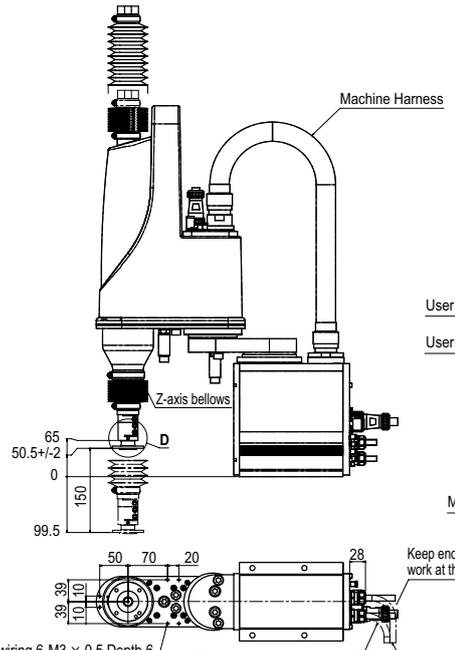diameter: φ11

7.8
7.8
13.4 13.4

View of F

If the robot enters the inside from the inner limit of the working envelope, the Z-axis bellows may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

If the robot enters the inside of R40, the Z-axis bellows may be in contact with the base. So, do not perform such motion.

129°
134°
52
40°
134°
129°
R250
R108
63
213
184
R150
46°
46°
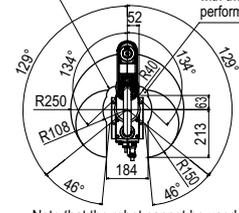
• Note that the robot cannot be used at a position where the base flange, robot cable, spline, bellows, and tool flange interfere with each other in the working envelope shown above.
• X-axis mechanical stopper position : 131°
• Y-axis mechanical stopper position : 136°

Machine Harness

Z-axis bellows

65
50.5+/-2
0
150
99.5

D

User tubing 1 (φ4 black)
Insert the plug provided when not used.

User tubing 2 (φ4 red)

Since this port is not used, cover it with the cap supplied with the joint.

User tubing 3 (φ4 blue)
User tubing 4 (φ4 white)

Connector for user wiring
(No.1 to 10 usable, cable clamp size: φ13.1 to15)
Cover with the caps provided when not used.

93
71
58
45
32
12
0

98
61
32
0

M4 ground terminal

6
10 26
22.5
31

50 70 20
39 39
10
10

28

Keep enough space for the maintenance work at the rear of the base.

Tapped hole for user wiring 6-M3 × 0.5 Depth 6
The weight of the tool attached here should be added to the tip mass.

R32 (Min. cable bending radius)
Do not move the cable.

4-φ11

φ35
4
2
↑E
φ30 h7 -0.021
φ55

Detailed drawing D

Hollow diameter: φ11

22.6
22.6
22.6
22.6+/-0.02
22.6
90°
22.6+/-0.02
7+/-0.02
22.6

4-φ4.5 through-hole

φ4 H7 +0.012 / 0 through-hole

View of E