YK500XGL   Standard type: Medium type

● Arm length 500mm   ● Maximum payload 5kg

■ Ordering method

YK500XGL - 150 - [ ] - [ ] - [ ] - RCX340-4 [ ] [ ] [ ] [ ] [ ] [ ] [ ]

| Model | Z axis stroke 150: 150mm | 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 | 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 |

Specify various controller setting items. RCX340 ▶ P.566

■ Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	250 mm	250 mm	150 mm	-
	Rotation angle	+/-140 °	+/-144 °	-	+/-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		5.1 m/sec		1.1 m/sec	1020 °/sec
Maximum payload		5 kg (Standard specification), 4 kg (Option specifications Note 4)			
Standard cycle time: with 2kg payload Note 2		0.48 sec			
R-axis tolerable moment of inertia Note 3		0.05 kgm² (0.5 kgfcms²)			
User wiring		0.2 sq × 10 wires			
User tubing (Outer diameter)		φ 4 × 3			
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 kg			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)
Note 2. When reciprocating 300mm 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. Maximum payload of option specifications (with tool flange attached or with user wiring and tubing routed through spline shaft) is 4kg.

■ 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.)
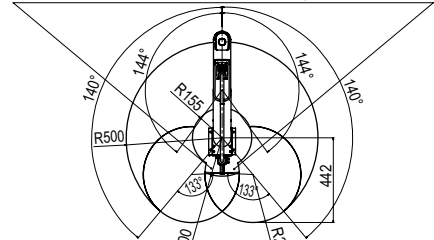See our robot manuals (installation manuals) for detailed information.

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/
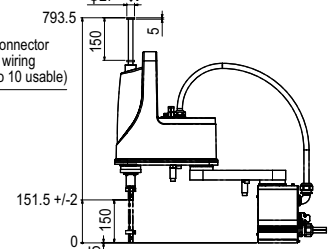
YK500XGL
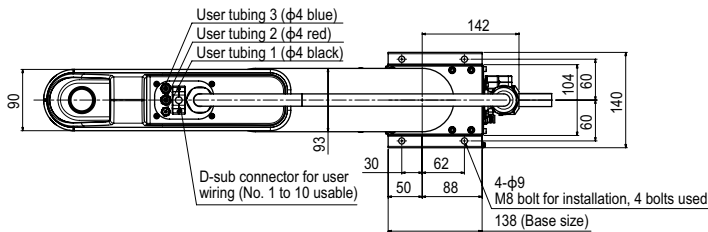
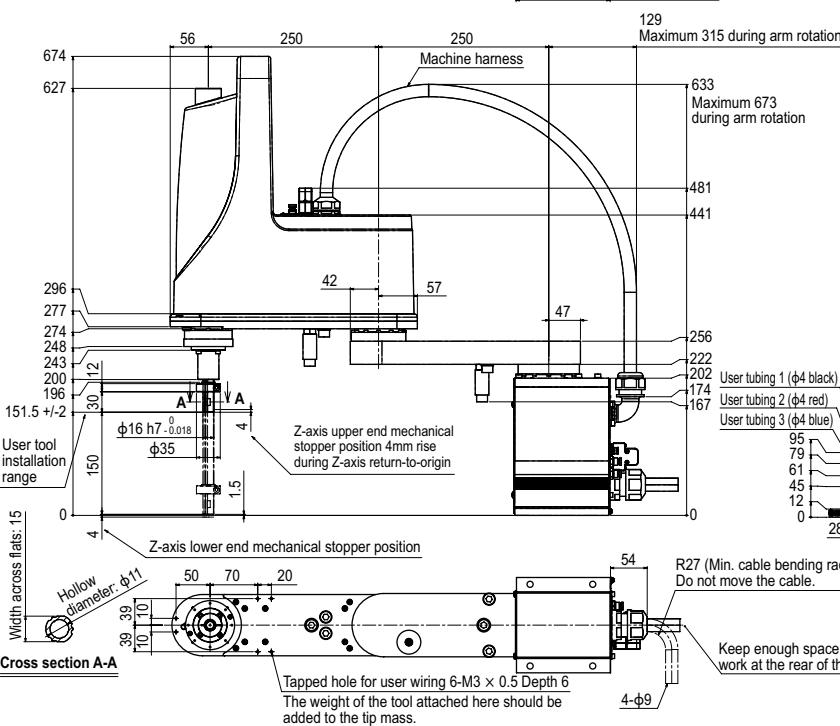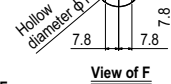

If the robot enters the inside of the corner of R200 and R250, the arm may be in contact with the machine harness. So, do not perform such motion.

User tubing 3 (φ4 blue)
User tubing 2 (φ4 red)
User tubing 1 (φ4 black)
D-sub connector for user wiring (No. 1 to 10 usable)
4-φ9 M8 bolt for installation, 4 bolts used
138 (Base size)

• Note that the robot cannot be used at a position where the base flange or robot cable interferes with the spline in the working envelope shown above.
• X-axis mechanical stopper position : 142°
• Y-axis mechanical stopper position : 146°

Maximum 315 during arm rotation
Machine harness
Maximum 673 during arm rotation

4-M3 × 0.5 through-hole (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
View of F

User tool installation range
φ16 h7 ⁻⁰·⁰¹⁸
φ35
Z-axis upper end mechanical stopper position 4mm rise during Z-axis return-to-origin
User tubing 1 (φ4 black)
User tubing 2 (φ4 red)
User tubing 3 (φ4 blue)
D-sub connector for user wiring (No. 1 to 10 usable)

Z-axis lower end mechanical stopper position
Width across flats: 15
Hollow diameter: φ11
Cross section A-A
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.
4-φ9

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

Option: User wiring/tubing through spline type

YK500XGL

Articulated robots YA

Linear conveyor modules LCM100

Motor-less single axis actuator Robonity

Compact single-axis robots TRANSERVO

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

Orbit/ Extra small type

Medium type

Large type

Wall mount/ inverse type

Dust-proof & drip-proof type

YK500XGL Tool flange mount type

User tubing 3 (φ4 blue)
User tubing 2 (φ4 red)
User tubing 1 (φ4 black)

142

104
60
60
140

90

93

D-sub connector for user wiring (No. 1 to 10 usable)

30
50   88
62

4-φ9
M8 bolt for installation, 4 bolts used

138 (Base size)

Machine harness

194
162
147.5 +/-2

150

D

0

2.5

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

50   70   20

39 39
10
10   10

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.

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

54

4-φ9

User tubing 1 (φ4 black)
User tubing 2 (φ4 red)
User tubing 3 (φ4 blue)

D-sub connector for user wiring (No. 1 to 10 usable)

95
79
61
45
12
0

28   26

86

Detailed drawing D

φ35

4

2

↑E

φ30 h7 $_{-0.021}^{0}$

φ55

4-φ4.5 through-hole

φ4 H7 $_{0}^{+0.012}$ through-hole

View of E

Hollow diameter φ11

22.6
22.6
22.6 +/-0.02
22.6
22.6
7 +/-0.02
22.6

90°

If the robot enters the inside of corners of R200 and R250, the arm may be in contact with the machine harness. So, do not perform such motion.

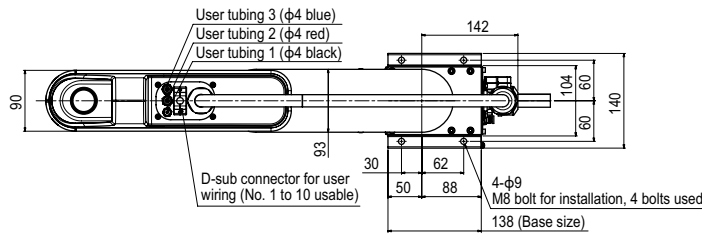144°   144°
140°   140°
R155
R500
133°   133°
442
R200   R250

• Note that the robot cannot be used at a position where the base flange or robot cable interferes with the tool flange in the working envelope shown above.
• X-axis mechanical stopper position : 142°
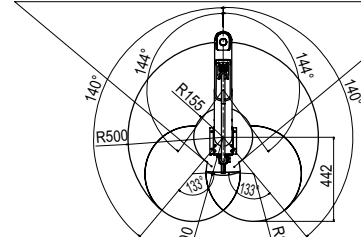• Y-axis mechanical stopper position : 146°

4-M3 × 0.5 through-hole
(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.
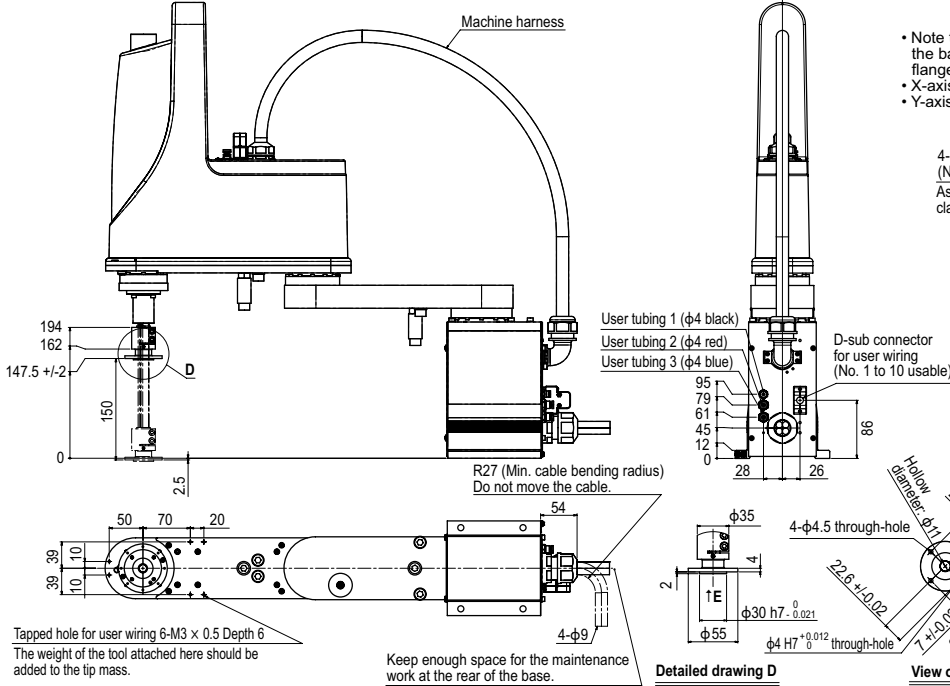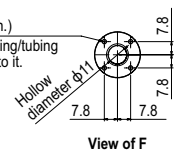
7.8
7.8
7.8
7.8   7.8

Hollow diameter φ11

View of F

φ27   ↓F

793.5

150
5

194
162
147.5 +/-2

150

D

0

2.5

90°

Option:
User wiring/tubing through spline type