

# YK500XG

Standard type: Medium type



- Arm length 500mm
- Maximum payload 10kg

## Ordering method

<b>YK500XG</b>				<b>RCX340-4</b>								
<b>Model</b>	<b>Z axis stroke</b> 200: 200mm 300: 300mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Cable</b> 3L: 3.5m 5L: 5m 10L: 10m	<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A (OP.A)</b>	<b>Option B (OP.B)</b>	<b>Option C (OP.C)</b>	<b>Option D (OP.D)</b>	<b>Option E (OP.E)</b>	<b>Absolute battery</b>	

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

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	200 mm	300 mm	200 mm 300 mm	-
	<b>Rotation angle</b>	+/-130 °	+/-145 °	-	+/-360 °
<b>AC servo motor output</b>		400 W	200 W	200 W	200 W
<b>Deceleration mechanism</b>	<b>Transmission method</b>	Direct-coupled			
	<b>Motor to speed reducer</b>	Direct-coupled			
<b>Speed reducer to output</b>		Direct-coupled			
<b>Repeatability</b> <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>		7.6 m/sec	2.3 m/sec	1.7 m/sec	1700 °/sec
<b>Maximum payload</b>		10 kg (Standard type), 9 kg (Tool flange mount type)			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.42 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.30 kgm <sup>2</sup>			
<b>User wiring</b>		0.2 sq × 20 wires			
<b>User tubing (Outer diameter)</b>		φ 6 × 3			
<b>Travel limit</b>		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
<b>Robot cable length</b>		Standard: 3.5 m Option: 5 m, 10 m			
<b>Weight</b>		30 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.

## Controller

Controller	Power capacity (VA)	Operation method
RCX340	1700	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.

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## YK500XG

**Dimensions and Components:**

- 71, 300, 200, 194, 120, 150, 79, 178, 100, 40, 120, 60, 140, 200 (base size), 4-φ11, M10 bolt for installation, 4bolts used.
- User tubing 1 (φ6 Black), User tubing 2 (φ6 Red), User tubing 3 (φ6 Blue).
- D-sub connector for user wiring (No.1 to 20 usable).
- Ball screw greasing hole, Machine harness.
- 652 (Maximum 660 during arm rotation), 4-φ5.5 through-hole, Hollow diameter φ14, φ5 H7 <sup>+0.012</sup> through-hole, 20, 30, 28, 30, 30, 90°.
- View of B: φ50, 194, 148, 131.1 <sup>+/-</sup>, 2, 200, φ70, 16.5, 67, 47, 27, 15, 0, φ34 h7 <sup>-0.025</sup>, M4 ground terminal, 39, 40, 46, 10, 140, 260, 165(185), 114°.
- 775 Z300mm Stroke, 675 Z200mm Stroke, 54, 113, 89, 373, 259, 351, 283, 253, 242, 213, 204, 16, 137.6 +/-, φ20h7 <sup>0</sup> -0.021, φ50, Flat surface has no phase relation to R-axis origin, 8mm seal ring, Z-axis limit stop, 71, 81, 187, 158.5, 0, 0, 10, 300 Z axis stroke, 200 Z axis stroke, Z-axis lower end mechanical stopper position, Width across Mark: 10, Hollow diameter: φ14, 4-M4 x 0.7 through-hole for tool attachment. Four M4 x 10L binding screws are supplied. Do not screw the screws in deeper than 10mm from bottom surface of arm. R27 (Min. cable bending radius) Do not move the cable. Keep enough space for the maintenance work at the rear of the base. 4-φ9.

**Working envelope of left-handed system:**

- Values shown in ( ) For tool flange specifications.
- If the robot enters the inside of R25 and corner of dimensions 50 and 260, the Z-axis upper end stopper or tool flange may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.
- Angles: 130°, 165(185)°, 114°, 130°, 165(185)°, 114°, 130°.

**Working envelope of right-handed system:**

- Values shown in ( ) For tool flange specifications.
- If the robot enters the inside of R25 and corner of dimensions 50 and 260, the Z-axis upper end stopper or tool flange may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.
- Angles: 130°, 165(185)°, 114°, 130°, 165(185)°, 114°, 130°.

**Option: Tool flange mount type:**

- 4-M4 x 0.7 through-hole for tool attachment. Four M4 x 10L binding screws are supplied. Do not screw the screws in deeper than 10mm from bottom surface of arm.
- R27 (Min. cable bending radius) Do not move the cable.
- Keep enough space for the maintenance work at the rear of the base.
- 4-φ9.

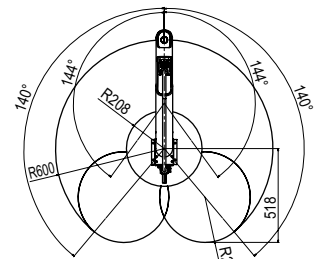
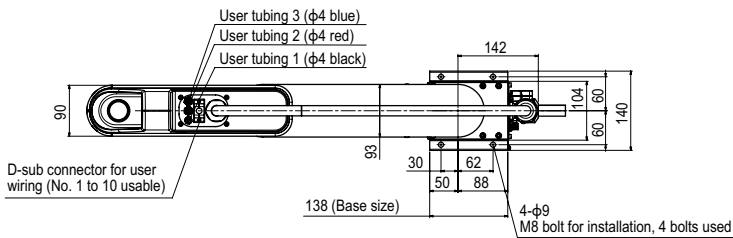
**Stroke Specifications:**

- Z200mm Stroke specification:** YK500XG
- Z300mm Stroke specification:** YK500XG

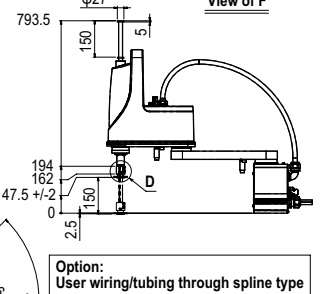
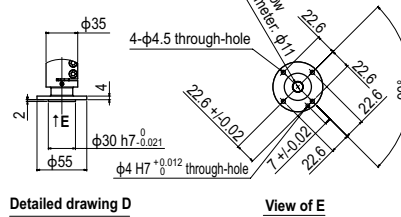
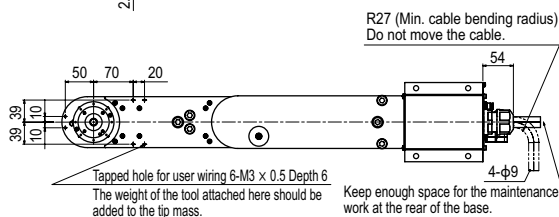
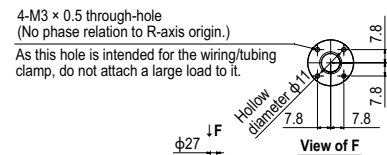
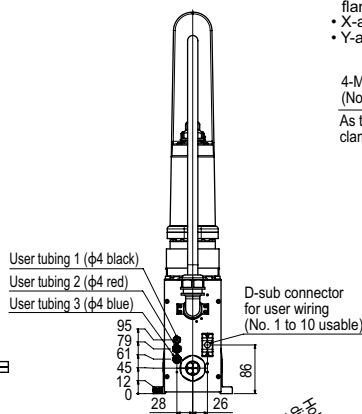
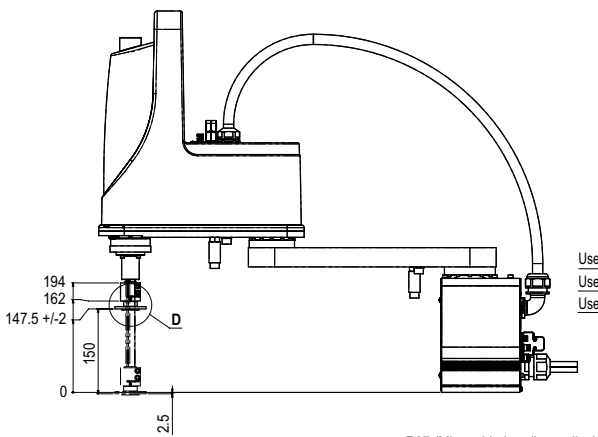


YA	Articulated robots
LCM	Linear conveyor modules
CX	Single-axis robots
Robonity	Motor-less single axis actuator
TRANSERO	Compact single-axis robots
FLIP-X	Single-axis robots
PHASER	Linear motor single-axis robots
XY-X	Cartesian robots
YK-X	SCARA robots
YP-X	Pick & place robots
CLEAN	CLEAN
CONTROLLER	CONTROLLER
INFORMATION	INFORMATION
Orbit/Extra small type	Orbit/Extra small type
Medium type	Medium type
Large type	Large type
Wall mount/Inverse type	Wall mount/Inverse type
Dust-proof & drip-proof type	Dust-proof & drip-proof type

YK600XGL Tool flange mount type



- 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°





# YK600XGH

Standard type: Medium type



- Arm length 600mm
- Maximum payload 20kg

## Ordering method

<b>YK600XGH</b>				<b>RCX340-4</b>							
<b>Model</b>	<b>Z axis stroke</b> 200: 200mm 400: 400mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Cable</b> 3L: 3.5m 5L: 5m 10L: 10m	<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A (OP.A)</b>	<b>Option B (OP.B)</b>	<b>Option C (OP.C)</b>	<b>Option D (OP.D)</b>	<b>Option E (OP.E)</b>	<b>Absolute battery</b>

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

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	200 mm	400 mm	200 mm / 400 mm	-
	<b>Rotation angle</b>	+/-130 °	+/-150 °	-	+/-360 °
<b>AC servo motor output</b>		750 W	400 W	400 W	200 W
<b>Deceleration mechanism</b>	<b>Transmission method</b>	Direct-coupled			
	<b>Motor to speed reducer</b> Speed reducer to output	Direct-coupled			
<b>Repeatability</b> <small>Note 1</small>		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>		7.7 m/sec	2.3 m/sec / 1.7 m/sec	920 °/sec	
<b>Maximum payload</b>		20 kg (Standard type), 19 kg (Tool flange mount type)			
<b>Standard cycle time: with 2kg payload</b> <small>Note 2</small>		0.47 sec			
<b>R-axis tolerable moment of inertia</b> <small>Note 3</small>		1.0 kgm <sup>2</sup>			
<b>User wiring</b>		0.2 sq × 20 wires			
<b>User tubing (Outer diameter)</b>		φ 6 × 3			
<b>Travel limit</b>		1. Soft limit 2. Mechanical stopper (X,Y,Z axis)			
<b>Robot cable length</b>		Standard: 3.5 m Option: 5 m, 10 m			
<b>Weight</b>		Z axis 200 mm: 48 kg Z axis 400 mm: 50 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. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

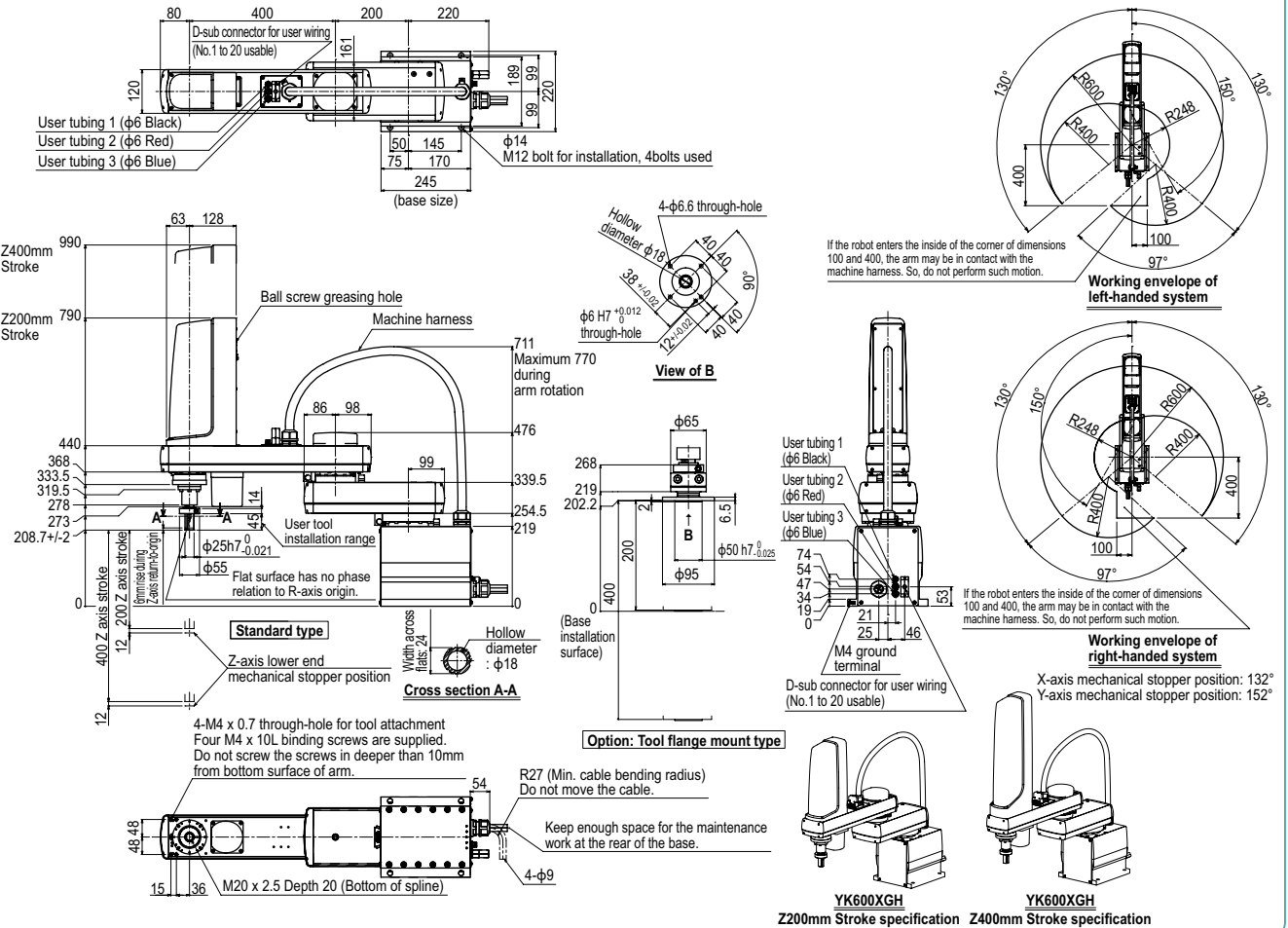
## Controller

Controller	Power capacity (VA)	Operation method
RCX340	2500	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.

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## YK600XGH



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

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	250 mm	250 mm	150 mm	-
		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output		200 W	150 W	50 W	100 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability		+/-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 <sup>Note 4</sup> )			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.48 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <sup>2</sup> (0.5 kgfcm <sup>2</sup> )			
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.

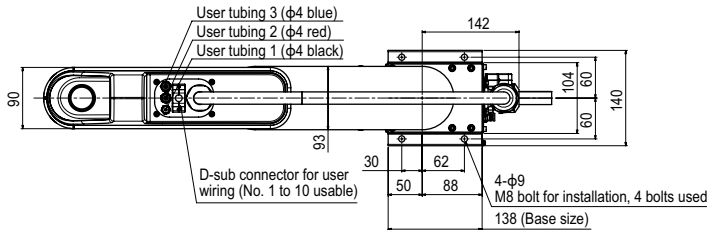
## Controller

Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

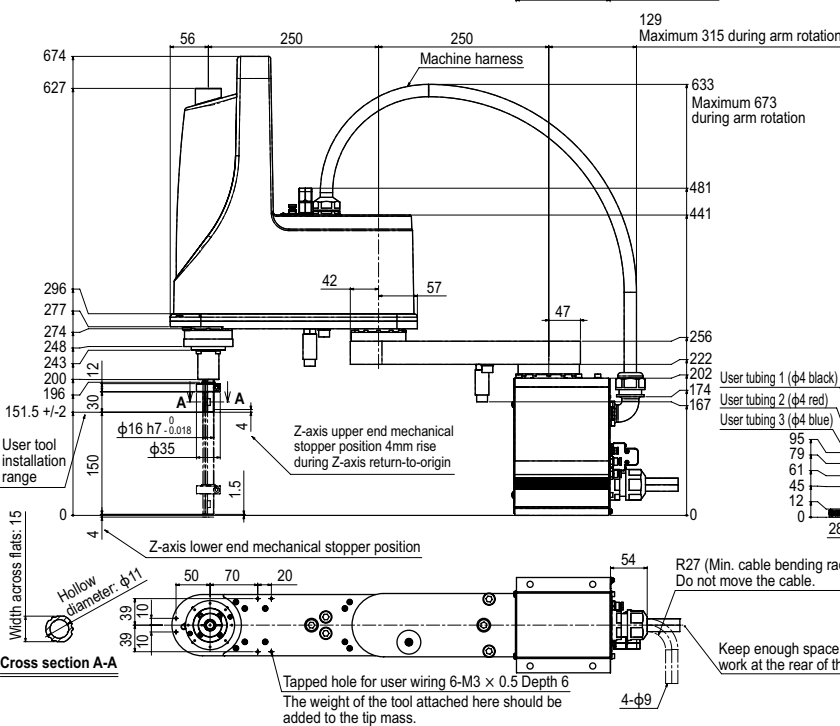
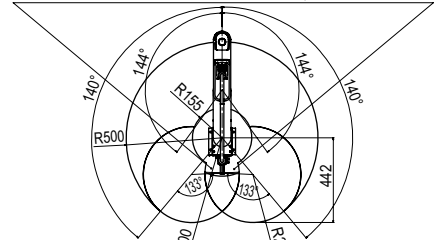
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
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## YK500XGL

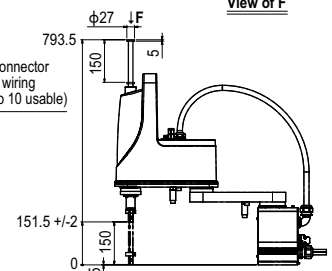
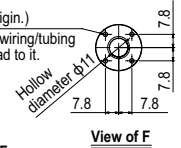


If the robot enters the inside of the corner of R200 and R250, the arm may be in contact with the machine harness. So, do not perform such motion.



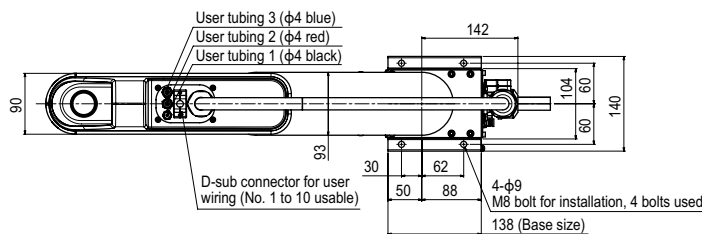
- Note that the robot cannot be used at a position where the base flange or robot cable interferes with the spline in the working envelope shown above.
- X-axis mechanical stopper position : 142°
- Y-axis mechanical stopper position : 146°

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.

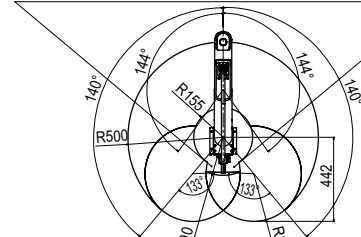


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CLEAN	CLEAN
CONTROLLER	CONTROLLER
INFORMATION	INFORMATION
Oh!v/ Extra small type	Oh!v/ Extra small type
Medium type	Medium type
Large type	Large type
Wall mount/ Inverse type	Wall mount/ Inverse type
Dust-proof & drip-proof type	Dust-proof & drip-proof type

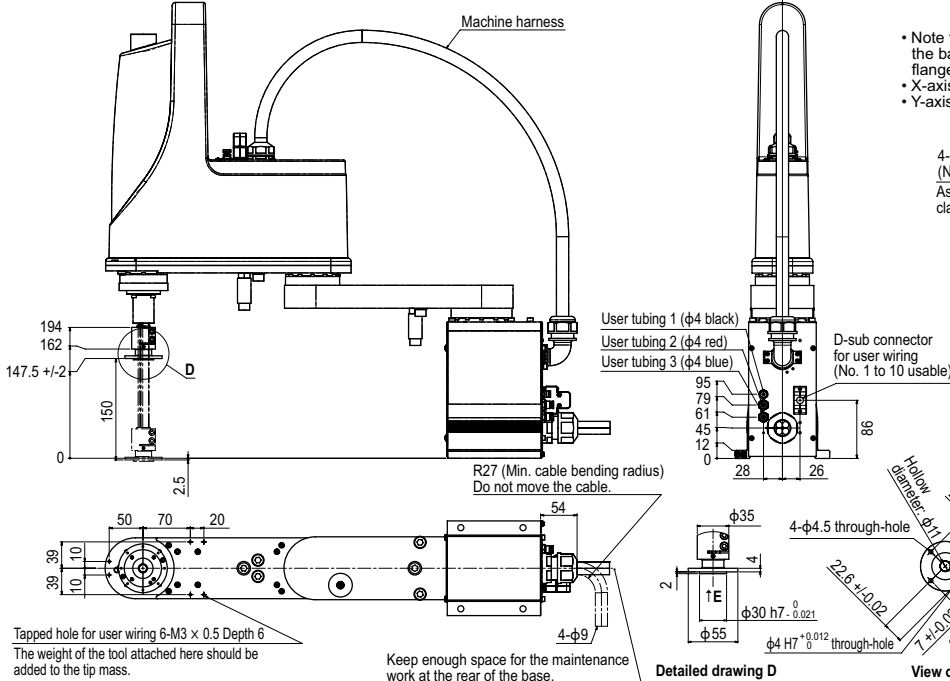
YK500XGL Tool flange mount type



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.



- 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 x 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.

Option: User wiring/tubing through spline type