

## YK-X Series

Product Lineup

YK-TW	Orbit type
YK-XG/YK-X	Completely beltless model <sup>Note</sup>
YK-XE	Low cost high performance model
YK-XGS	Wall mount/inverse model
YK-XGP	Dust-proof & drip-proof model

Note. Except for YK1200X

# SCARA ROBOTS

Arm length of 120 mm to 1200 mm, full-selection of the lineup is top in the world.



Low cost high performance model  
YK400XE-4

### History of 45 years

The first YAMAHA robots were SCARA robots. Since the first SCARA robot called "CAME" was produced in 1979, some 45 years of SCARA robot innovations have continually appeared. These SCARA robots have undergone countless modifications in an ever changing marketplace and amassed a hefty record of successful products making them an essential part of the YAMAHA robot lineup.



1979  
<YK7000>

# Comprehensive line of YAMAHA SCARA robots

## Orbit type

- Arm length 350 mm / 500 mm
- Maximum payload 5 kg



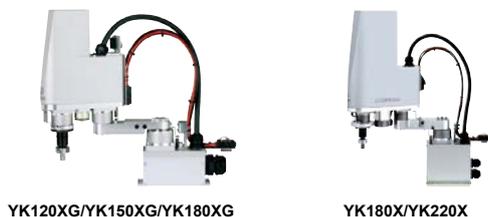
## Low cost high performance model

- Arm length 400 mm to 710 mm
- Maximum payload 4 kg to 10 kg



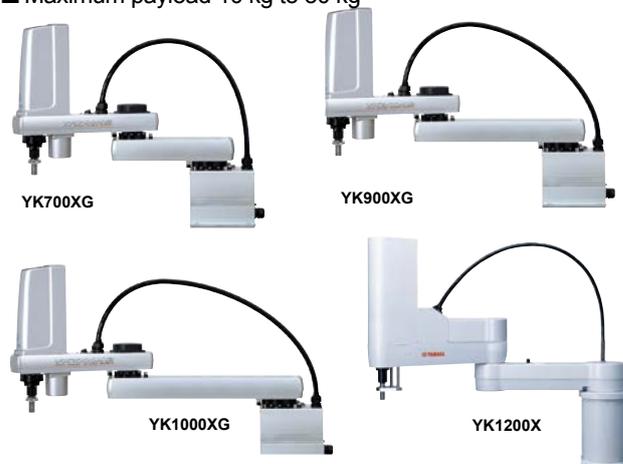
## Extra small type

- Arm length 120 mm to 220 mm
- Maximum payload 1 kg



## Large type

- Arm length 700 mm to 1200 mm
- Maximum payload 10 kg to 50 kg



## Small type

- Arm length 250 mm to 400 mm
- Maximum payload 5 kg



## Wall mount/inverse model

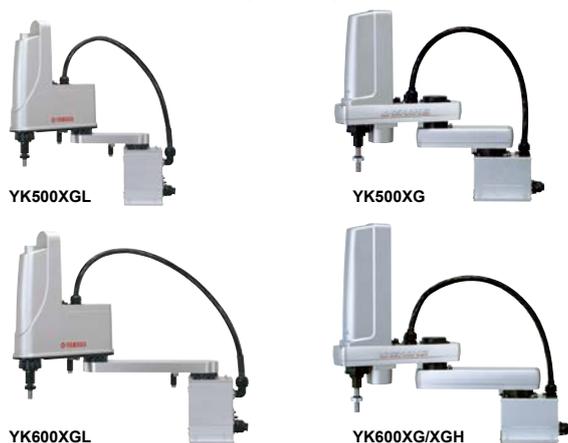
YK300XGS to YK1000XGS



- Wall mount type  
Type where the robot body is installed in the wall.
- Inverse type  
Type where the wall mount type is installed upside down.

## Medium type

- Arm length 500 mm to 600 mm
- Maximum payload 5 kg to 20 kg



## Dust-proof & drip-proof model



- Plays active part in the working environment with a large amount of water or dust (protection class equivalent to IP65).
- Please consult YAMAHA for anti-droplet protection for fluids other than water.

LCMR200 Linear conveyor modules

GX Single-axis robots

YHX Controller

LCM100 Linear conveyor modules

YK-X SCARA robots

RCX iV2+ Robot Vision

Robonity Single-axis robots

PHASER Linear motor single-axis robots

FLIP-X Single-axis robots

TRANSERVO Compact single-axis robots

XY-X Cartesian robots

YP-X Pick & place robots

CLEAN

CONTROLLER

YRG Electric Gripper

APPLICATION

SERVICE PERIOD

## YK-TW Orbit type

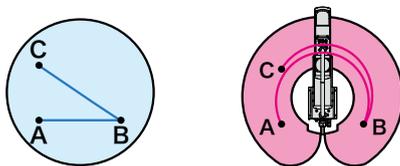
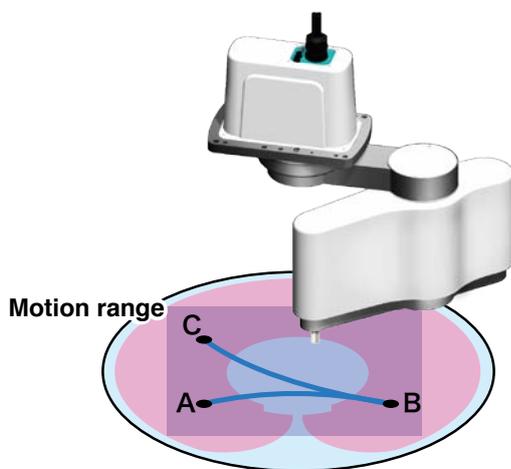
### YK-TW POINT 1

#### Layout design freedom

User: We want a smaller equipment footprint.

**YK-TW can move anywhere through the full  $\phi$  1000 mm <sup>Note 2</sup> work envelope.**

Featuring a ceiling-mount configuration with a wide arm rotation angle, the YK-TW can access any point within the full  $\phi$  1000 mm downward range. This eliminates all motion-related restrictions with regard to pallet and conveyor placement operations, while dramatically reducing the equipment footprint.



Orbit type SCARA robot    Standard type SCARA robot

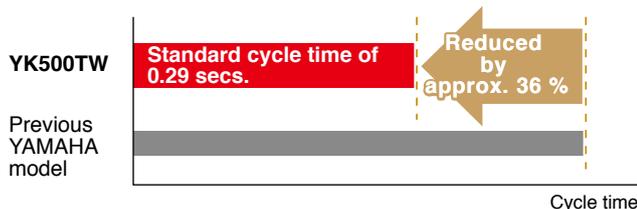
### YK-TW POINT 2

#### Higher productivity

User: We need to reduce cycle time.

**Standard cycle time of 0.29 secs. <sup>Note 2</sup>**

Y-axis (arm 2) passes beneath the X-axis (arm 1) and it has a horizontal articulated structure, allowing it to move along the optimal path between points. Moreover, the optimized weight balance of the internal components reduces the cycle time by 36 % as compared to previous models.



The standard cycle time for moving a 1-kg load horizontally 300 mm and up/down 25 mm is shortened by approximately 36 % compared to existing YAMAHA models.

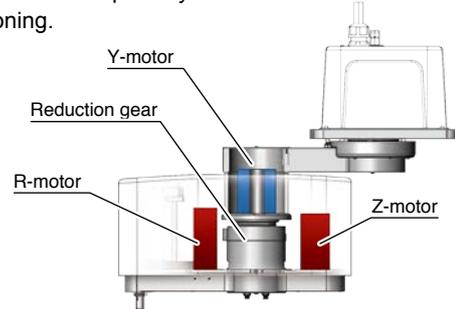
### YK-TW POINT 3

#### High quality

User: We want a high precision assembly system.

**YK-TW offers a repeated positioning accuracy of  $\pm 0.01$  mm <sup>Note 1</sup> (XY axes).**

Higher repeated positioning accuracy than that offered by a parallel-link robot. This was accomplished by optimizing the robot's weight balance through an extensive re-design of its internal construction. The lightweight yet highly rigid arm has also been fitted with optimally tuned motors to enable high accuracy positioning.



#### Hollow construction

Y-motor and reduction gear feature a hollow construction which allows them to be housed inside the harness arm.

**360° Rotation.**

#### Optimized rotation center of gravity moment

Weight balance was optimized by placing the R-motor and Z-motor at the left and right sides respectively.

**Reduced inertia enables high-speed motion.**

### YK-TW POINT 4

#### Suitable for a wide range of applications

User: We need to move heavy workpieces at high speeds.

**YK-TW handles payloads up to 5 kg.**

Handles loads up to 5 kg. Also accommodates arm-end tools which tend to be heavy, making it highly adaptable to various applications.

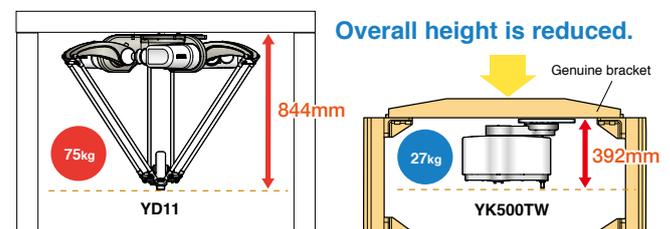
### YK-TW POINT 5

#### Smaller equipment footprint

User: We want to reduce the height of our equipment.

**YK-TW offers both a lower height and a smaller footprint.**

YK-TW height is only 392 mm. This compact size enables more freedom in the equipment layout design.



Note 1. Applies to the YK350TW    Note 2. Applies to the YK500TW

## YK-TW POINT 6

### Easy installation

User: Parallel-link robots require large frames which complicates installation...

YK-TW has a total height of only 392 mm, and weighs only 27 kg.

Lower inertia = Lighter frame

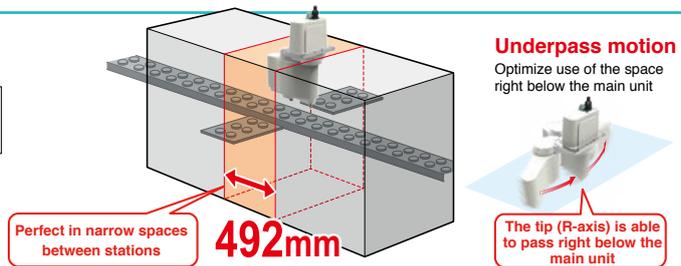


## YK-TW POINT 8

### Ideal for narrow space applications

User: We need to install in limited space, such as between equipment.

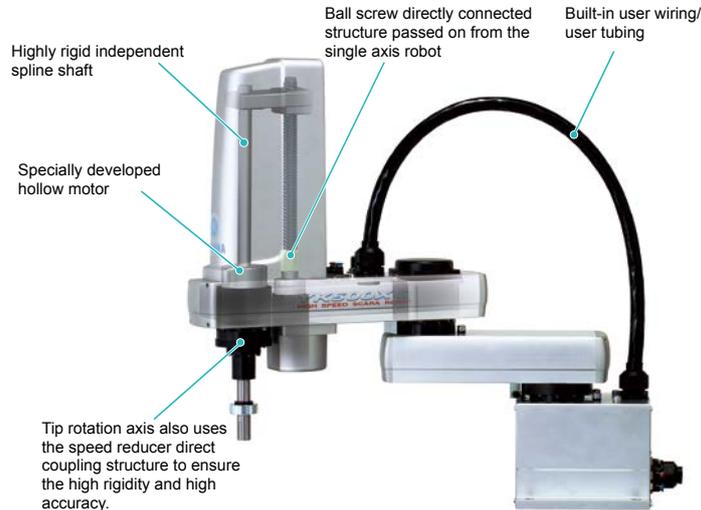
Minimum installation width 492mm <sup>Note 1</sup>



## YK-XG Completely beltless type

### Integral structure designed for optimal operation

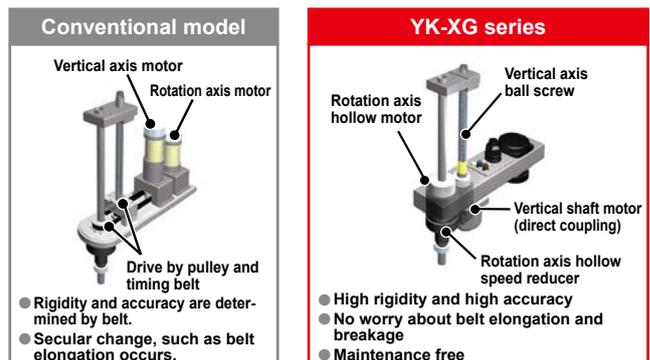
Note. The following shows an example of YK500XG.



## YK-XG POINT 1

### Completely beltless structure

A completely beltless structure was achieved using a ZR-axis direct coupling structure. This completely beltless structure greatly reduces waste motion. This structure also maintains high accuracy for an extended period of time. Additionally, this structure ensures maintenance-free operation for an extended period of time without worrying about belt breakage, elongation, or secular deterioration (except for Orbit type and large type).



YK-XG POINT 2

**Resolver is used for position detector.**

As the resolver uses a simple and rigid structure without using electronic components and optical elements, it features high environment resistance and low failure ratio. Detection problems due to electronic component breakdown, dew condensation on or oil sticking to the disk that may occur in optical encoders do not occur in the resolver due to its structure. Additionally, as **the absolute specifications and incremental specifications use the same mechanical specifications and common controller**, the specifications can be changed only by setting parameters. Furthermore, even when the absolute battery is consumed completely, the robot can still operate as the incremental specifications. So, even if a trouble occurs, the line stop is not needed to ensure the safe production line. The backup circuit has been completely renovated and now has a backup period of one year in the non-energizing state.

Note. The resolver has a simple structure without using electronic components. So, the resolver is highly resistant to low and high temperatures, impacts, electrical noise, dust particles, and oil, etc., and is used in automobiles, trains, and aircrafts that particularly require the reliability.

Optical encoder	Resolver
 <ul style="list-style-type: none"> <li>● Optical type</li> <li>● Electronic components are required and structure is complicated.</li> <li>● Electronic component malfunction, or dew condensation on or oily content sticking to disk may occur easily.</li> </ul> <p style="text-align: center;">▼</p> <p style="text-align: center;"><b>Detection failure</b></p>	 <ul style="list-style-type: none"> <li>● Magnetic type</li> <li>● Simple structure only with iron core and winding has less potential failure factors.</li> <li>● Immune to shock and electric noise.</li> </ul> <p style="text-align: center;">▼</p> <p style="text-align: center;"><b>High reliability</b></p>

YK-XG POINT 3

**Excellent maintenance ability**

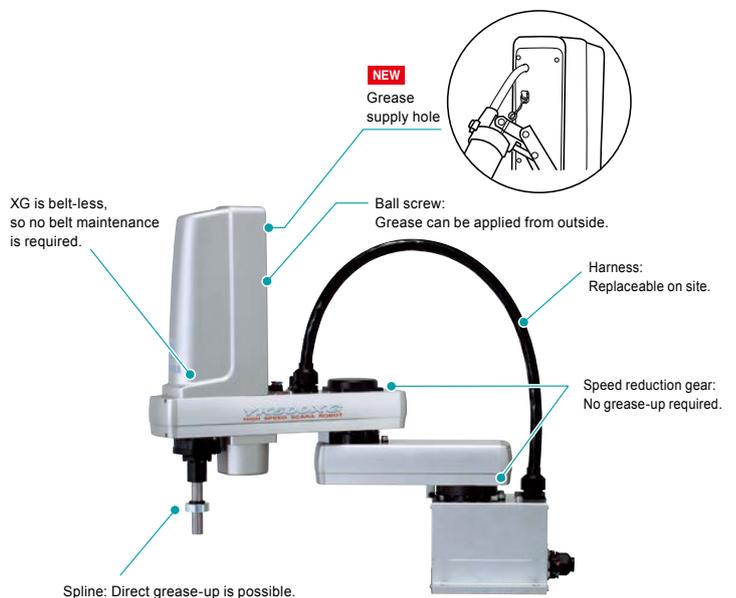
The covers of YAMAHA SCARA robot YK-XG series can be removed forward or upward. The cover is separated from the cable, so the maintenance work is easy. Additionally, the grease replacement of the speed reducer needs many steps to disassemble the gear and may cause positional deviation. However, since the speed reducer of the YAMAHA SCARA robot uses long-life grease, the grease replacement is not needed.

**NEW**

A grease supply hole is provided in the back of the cover. Even when greasing is required, the cover does not need to be removed for easy maintenance.

\* The covers of the products shipped before March 2020 do not have grease supply holes, but can be replaced with covers that have grease supply holes. (Installation compatible. Please order a cover with grease supply hole separately.)

Target product: YK600XGH, YK700XG, YK800XG, YK900XG, YK1000X



YK-XG POINT 4

**User can replace the motor and ball screw, etc.**

In the case of other companies' SCARA robots, replacing motors and ball screws is time-consuming and in some cases difficult for customers to replace.

In this respect, YAMAHA SCARA robots are easy to replace these parts, so they can be replaced by the customer.

## YK-XG POINT 5

### High-speed transfer is possible even with heavy workpieces and large offsets.

The SCARA robot performance cannot be expressed only by the standard cycle time. In actual operating environments, there are various workpieces, such as heavy workpiece or workpiece with large offset. At this time, since the robot with low R-axis tolerable moment of inertia needs to decrease the speed during operation, the cycle time decreases greatly. All YAMAHA SCARA robot YK-XG types have the tip rotation axis directly coupled to the speed reducer. Since the R-axis tolerable moment of inertia is very high when compared to a general structure in which the moment of inertia is transmitted by a belt after decelerating, the robot can operate at a high speed even with workpieces that have been offset.

#### YK180XG

(R-axis tolerable moment of inertia: 0.01 kgfcm<sup>2</sup>)

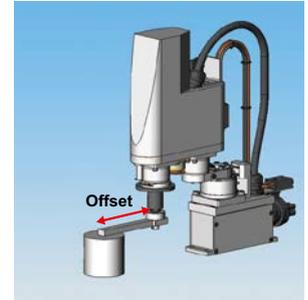
When the tip load weight is 1 kg, it is possible to operate at **approx. 100 mm** offset.



#### Optimal acceleration and deceleration are set automatically.

The moment of inertia varies depending on the shape of the workpiece and the offset distance from the R-axis tip to the load center of gravity. When the offset is large even with the same payload, this value increases. So, the acceleration during operation needs to be reduced.

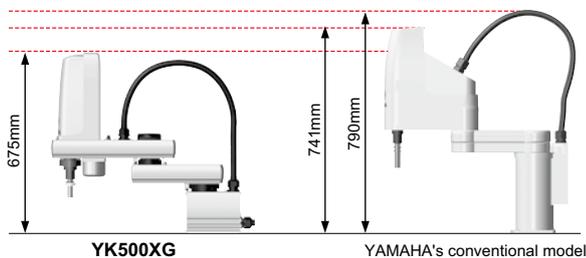
With the RCX340, the optimum acceleration is automatically set by simply setting the moment of inertia value, so there is no need for troublesome settings.



## YK-XG POINT 6

### Compact

As the cable layout is changed, the cable height becomes lower than the main body cover. Additionally, use of extruded material base and motor with low overall height achieves the lowest overall height in the same class.



## YK-XG POINT 7

### Hollow shaft and tool flange options are selectable.

Hollow shaft that allows easy wiring to the tip tool and tool flange for tool mounting are provided as options.



Hollow shaft option convenient for routing of air tubes and harness wires  
Note: YK250XG to YK400XG  
YK500XGL/YK600XGL



Tool flange option for easy mounting of a tool to the tip  
Note: YK250XG to YK1000XG

## YK-XG POINT 8

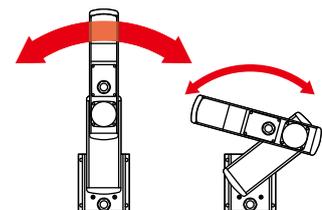
### Zone control (= Optimal acceleration/deceleration automatic setting) function

In the SCARA robot, the load applied to the motor and speed reducer in the arm folded state greatly differs from that in the arm extended state. YAMAHA SCARA robot **automatically selects** optimal acceleration and deceleration from the arm postures at operation start and operation end. Therefore, the robot does not exceed the tolerance value of **the motor peak torque** or **speed reducer allowable peak torque** only by entering the initial payload. So, full power can be extracted from the motor whenever needed and high acceleration/deceleration are maintained.

#### For X-axis of YK500XG

The torque in the arm folded state is 5 or more times different from that in the arm extended state.

This may greatly affect the service life, vibration during operation, and controllability.



If the motor torque exceeds the peak value

→ This may adversely affect the controllability and mechanical vibration, etc.

If the torque exceeds the tolerable peak torque value of the speed reducer

→ This may cause early breakage or extremely shorten the service life.

**Robot stops at a desired position accurately to ensure long service life.**

Linear conveyor modules	LCMR200
Single-axis robots	GX
Controller	YHX
Linear conveyor modules	LCM100
SCARA robots	YK-X
Robot Vision	RCX iV2+
Single-axis robots	Robonity
Linear motor single-axis robots	PHASER
Single-axis robots	FLIP-X
Compact single-axis robots	TRANSERVO
Cartesian robots	XY-X
Pick & place robots	YP-X
CLEAN	CLEAN
CONTROLLER	CONTROLLER
Electric Gripper	YRG
APPLICATION	APPLICATION
SERVICE PERIOD	SERVICE PERIOD

## YK-XE Low cost high performance model

### YK-XE POINT 1

#### Both the high operation performance and low-price are provided.

Both the high operation performance and low-price are provided.  
Production equipment with high cost performance can be constructed.



YK400XE-4



YK510XE-10



YK610XE-10

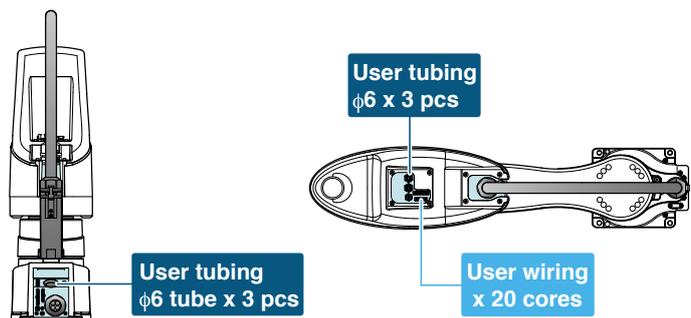


YK710XE-10

### YK-XE POINT 2

#### Improved User Interface

Enhanced size and numbers of air tubes and user I/O for end effectors.  
Tubes and wires are positioned for easy layout and reduced risk of disconnection.  
(YK510XE-10, YK610XE-10, YK710XE-10)



Note. YK400XE-4 provides the user wiring  $\times 10$  cores and the User tubing  $\phi 4 \times 3$  pcs.

### YK-XE POINT 3

#### Option specifications

#### Through-shaft and through-cap have been added.

“Through-shaft” or “through-cap” option for wiring and tubing that is convenient to run the air tubing and wiring can be selected. The wiring and tubing routes can be investigated easily without designing and manufacturing a stay for installing the wiring and tubing. In addition, by passing the wiring and tubing through the inside of the main body, worries about wire breakage or disconnection are reduced during operation.  
(Through-shaft is only available with the YK400XE-4.)

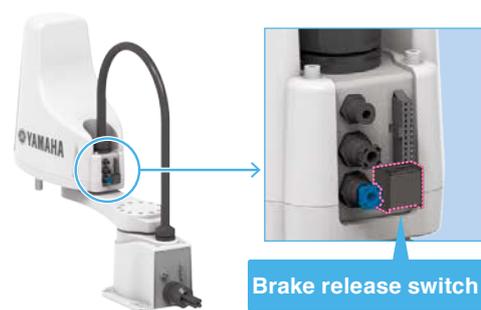


### YK-XE POINT 4

#### Option specifications

#### Brake release switch is selectable.

In the emergency stop state, the Z-axis brake is released and the Z-axis can be moved up or down while the brake release switch is held down. Releasing the switch applies the brake to the Z-axis. This improves the convenience during installation adjustment.



## YK-XGS Wall mount/inverse model

### Hanging type is renewed. Completely beltless structure and high rigidity

As the conventional hanging type is changed to the wall mount type, the flexibility of the system design is improved. The production equipment can be downsized. Additionally, as an inverse type that allows upward operation is also added to the product lineup, the flexibility of the working direction is widened. Furthermore, use of a completely beltless structure achieves a maximum payload of 20 kg and a R-axis tolerable moment of inertia of 1 kgm<sup>2</sup>Note that are the top in the class. A large hand can also be installed. So, this robot is suitable for heavy load work.

Note. YK700XGS to YK1000XGS



Inverse type

## YK-XGP Dust-proof & drip-proof model

### Up/down bellows structure improves the dust-proof and drip-proof performance.

The dust-proof and drip-proof type that can be operated even in a work environment where water or particle dust scatters was renewed to a completely beltless structure. The belt does not deteriorate and poor environment resistance is improved. Additionally, an up/down bellows structure is used to improve the dust-proof and drip-proof performance.

Note. YK250XGP to YK600XGLP



### Protection class equivalent to IP65 (IEC60529)

Seals are added to the joints to maintain the dust-proof and drip-proof performance without air purging. The robot conforms to the protection class equivalent to IP65 (IEC60529).

**IP 65** Class of protection against invasion of water: 5  
 Water injected from any direction does not affect adversely.  
 The standard pressure of the injected water is 30 KPa (30 KN/m<sup>2</sup>, 0.3 kgf/cm).  
 The injection speed is 12.5 liters/min. and the injection time is 3 min.  
 Note. The water injected under conditions exceeding those shown above may enter the unit.  
 Class of protection against solid objects: 6  
 No invasion of particle dust.

### Dust-proof and drip-proof connector for user wiring is provided as standard.



YK250XGP to 600XGLP (arm part)



YK250XGP to 600XGLP (base part)

## SCARA robot / Single-axis robot / Cartesian robot / Pick and place robot Various targets

### Food grade grease can be used.

The grease used in our robots can be changed to food grade grease.

- Unless otherwise specified, the grease specified by YAMAHA is used.
- It is possible to change to grease other than our specified grease.  
 (At this time, please supply the grease from the customer.)

For details, contact YAMAHA sales representative.

**Bellows can also be added by special order!**

\* For use outside Japan, please contact YAMAHA.



Linear conveyor modules	LCMR200
Single-axis robots	GX
Controller	YHX
Linear conveyor modules	LCM100
SCARA robots	YK-X
Robot Vision	RCX iV2+
Single-axis robots	Robonity
Linear motor single-axis robots	PHASER
Single-axis robots	FLIP-X
Compact single-axis robots	TRANSERO
Cartesian robots	XY-X
Pick & place robots	YP-X
CLEAN	CLEAN
CONTROLLER	CONTROLLER
Electric Gripper	YRG
APPLICATION	APPLICATION
SERVICE PERIOD	SERVICE PERIOD

Model/Type	Model	Arm length (mm)	Z-axis stroke (mm)	Maximum payload (kg)	Standard cycle time (sec.) <sup>Note 1</sup>	
Orbit type	YK350TW	350	130	5.0	0.32	
	YK500TW	500	130	5.0 (4.0) <sup>Note 3</sup>	0.29	
Standard	Extra small type	YK120XG	120	50	1.0	0.33
		YK150XG	150	50	1.0	0.33
		YK180XG	180	50	1.0	0.33
		YK180X	180	100	1.0	0.39
		YK220X	220	100	1.0	0.42
	Small type	YK250XG	250	150	5.0 (4.0) <sup>Note 3</sup>	0.43
		YK350XG	350	150	5.0 (4.0) <sup>Note 3</sup>	0.44
		YK400XE-4	400	150	4.0 (3.0) <sup>Note 3</sup>	0.41
		YK400XG	400	150	5.0 (4.0) <sup>Note 3</sup>	0.45
	Medium type	YK500XGL	500	150	5.0 (4.0) <sup>Note 3</sup>	0.48
		YK500XG	500	200/300	10.0	0.42
		YK510XE-10	510	200	10.0 (9.0) <sup>Note 3</sup>	0.38
		YK600XGL	600	150	5.0 (4.0) <sup>Note 3</sup>	0.54
		YK600XG	600	200/300	10.0	0.43
		YK610XE-10	610	200	10.0 (9.0) <sup>Note 3</sup>	0.39
	Large type	YK600XGH	600	200/400	20.0 (19.0) <sup>Note 3</sup>	0.47
		YK700XGL	700	200/300	10.0 (9.0) <sup>Note 3</sup>	0.50
		YK710XE-10	710	200	10.0 (9.0) <sup>Note 3</sup>	0.42
		YK700XG	700	200/400	20.0 (19.0) <sup>Note 3</sup>	0.42
		YK800XG	800	200/400	20.0 (19.0) <sup>Note 3</sup>	0.48
YK900XG		900	200/400	20.0 (19.0) <sup>Note 3</sup>	0.49	
Wall mount/inverse model	YK1000XG	1000	200/400	20.0 (19.0) <sup>Note 3</sup>	0.49	
	YK1200X	1200	400	50.0	0.91	
	YK300XGS <sup>Note 2</sup>	300	150	5.0 (4.0) <sup>Note 3</sup>	0.49	
	YK400XGS <sup>Note 2</sup>	400	150	5.0 (4.0) <sup>Note 3</sup>	0.49	
	YK500XGS	500	200/300	10.0	0.45	
	YK600XGS	600	200/300	10.0	0.46	
	YK700XGS	700	200/400	20.0	0.42	
	YK800XGS	800	200/400	20.0	0.48	
Dust-proof & drip-proof model	YK900XGS	900	200/400	20.0	0.49	
	YK1000XGS	1000	200/400	20.0	0.49	
	YK250XGP	250	150	4.0	0.50	
	YK350XGP	350	150	4.0	0.52	
	YK400XGP	400	150	4.0	0.50	
	YK500XGLP	500	150	4.0	0.66	
	YK500XGP	500	200/300	10.0	0.55	
	YK600XGLP	600	150	4.0	0.71	
	YK600XGP	600	200/300	10.0	0.56	
	YK600XGHP	600	200/400	18.0	0.57	
	YK700XGP	700	200/400	20.0	0.52	
YK800XGP	800	200/400	20.0	0.58		
YK900XGP	900	200/400	20.0	0.59		
YK1000XGP	1000	200/400	20.0	0.59		
Clean model	See P.103					

Note 1. The standard cycle time is measured under the following conditions.

- During back and forth movement 25mm vertically and 100mm horizontally (extra small type)
- During back and forth movement 25mm vertically and 300mm horizontally (small type / medium type / large type)

Note 2 The YK300XGS and YK400XGS are custom-order products. For details about the delivery time, please contact YAMAHA.

Note 3. For the option specifications (tool flange mount type and user wiring/tubing through spline type), the maximum payload becomes the value in ( ).

# SCARA ROBOTS

# YK-X

## SERIES



- Linear conveyor modules  
LCMR200
- Single-axis robots  
GX
- Linear conveyor modules  
LCM100
- SCARA robots  
YK-X
- Single-axis robots  
Robonity
- Linear motor single-axis robots  
PHASER
- Single-axis robots  
FLIP-X
- Compact single-axis robots  
TRANSERO
- Cartesian robots  
XX-X
- Pick & place robots  
YP-X
- CLEAN
- CONTROLLER
- INFORMATION
- Orbit/Extra small type
- Small / Medium type
- Large type
- Wall mount / Inverse type
- Dust-proof & drip-proof type

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# YK-X SPECIFICATION SHEET

Type	Model	Arm length (mm) and XY axis resultant maximum speed (m/s)												Standard cycle time (sec) <sup>Note 1</sup>	Maximum payload (kg)	R-axis tolerable moment of inertia (kgm <sup>2</sup> )	Completely beltless structure <sup>Note 2</sup>	Detailed info page			
		120	150	180	220	250	300	350	400	500	600	700	800						900	1000	1200
Orbit type	YK350TW	5.6												0.32	5.0	0.005 (Rated) 0.05 (Maximum)		<a href="#">P.72</a>			
	YK500TW	6.8												0.29	5.0	0.005 (Rated) 0.05 (Maximum)		<a href="#">P.74</a>			
Extra small type	YK120XG	3.3															0.33	1.0	0.01	●	<a href="#">P.76</a>
	YK150XG	3.4															0.33	1.0	0.01	●	<a href="#">P.77</a>
	YK180XG	3.3															0.33	1.0	0.01	●	<a href="#">P.78</a>
	YK180X	3.3															0.39	1.0	0.01	●	<a href="#">P.79</a>
	YK220X	3.4															0.42	1.0	0.01	●	<a href="#">P.80</a>
	YK250XG	4.5															0.43	5.0	0.05	●	<a href="#">P.81</a>
	YK350XG	5.6															0.44	5.0	0.05	●	<a href="#">P.83</a>
	YK400XE-4	6.0															0.41	4.0	0.05	●	<a href="#">P.86</a>
	YK400XG	6.1															0.45	5.0	0.05	●	<a href="#">P.88</a>
	Standard	YK500XGL	5.1															0.48	5.0	0.05	●
YK500XG		7.6															0.42	10.0	0.30	●	<a href="#">P.92</a>
YK510XE-10		7.8															0.38	10.0	0.30	●	<a href="#">P.93</a>
YK600XGL		4.9															0.54	5.0	0.05	●	<a href="#">P.94</a>
YK600XG		8.4															0.43	10.0	0.30	●	<a href="#">P.96</a>
YK610XE-10		8.6															0.39	10.0	0.30	●	<a href="#">P.97</a>
YK600XGH		7.7															0.47	20.0	1.0	●	<a href="#">P.98</a>
YK700XGL		9.2															0.50	10.0	0.30	●	<a href="#">P.99</a>
YK710XE-10		9.5															0.42	10.0	0.30	●	<a href="#">P.100</a>
YK700XG		8.4															0.42	20.0	1.0	●	<a href="#">P.101</a>
Large type	YK800XG	9.2															0.48	20.0	1.0	●	<a href="#">P.102</a>
	YK900XG	9.9															0.49	20.0	1.0	●	<a href="#">P.103</a>
	YK1000XG	10.6															0.49	20.0	1.0	●	<a href="#">P.104</a>
	YK1200X	7.4															0.91	50.0	2.45	●	<a href="#">P.105</a>
	YK1200XG	7.7															0.61	50.0	2.45	●	<a href="#">P.106</a>
	YK300XGS	4.4															0.49	5.0	0.05	●	<a href="#">P.107</a>
	YK400XGS	6.1															0.49	5.0	0.05	●	<a href="#">P.109</a>
	YK500XGS	7.6															0.45	10.0	0.3	●	<a href="#">P.111</a>
	YK600XGS	8.4															0.46	10.0	0.3	●	<a href="#">P.112</a>
	YK700XGS	8.4															0.42	20.0	1.0	●	<a href="#">P.113</a>
Wall mount / inverse type	YK800XGS	9.2															0.48	20.0	1.0	●	<a href="#">P.114</a>
	YK900XGS	9.9															0.49	20.0	1.0	●	<a href="#">P.115</a>
	YK1000XGS	10.6															0.49	20.0	1.0	●	<a href="#">P.116</a>
	YK250XGP	4.5															0.50	4.0	0.05	●	<a href="#">P.117</a>
	YK350XGP	5.6															0.52	4.0	0.05	●	<a href="#">P.119</a>
	YK400XGP	6.1															0.50	4.0	0.05	●	<a href="#">P.121</a>
	YK500XGLP	5.1															0.66	4.0	0.05	●	<a href="#">P.123</a>
	YK500XGP	7.6															0.55	10.0	0.3	●	<a href="#">P.125</a>
	YK600XGLP	4.9															0.71	4.0	0.05	●	<a href="#">P.126</a>
	YK600XGP	8.4															0.56	10.0	0.3	●	<a href="#">P.128</a>
Dust-proof & drip-proof type	YK600XGHP	7.7															0.57	20.0	1.0	●	<a href="#">P.129</a>
	YK700XGP	8.4															0.52	20.0	1.0	●	<a href="#">P.130</a>
	YK800XGP	9.2															0.58	20.0	1.0	●	<a href="#">P.131</a>
	YK900XGP	9.9															0.59	20.0	1.0	●	<a href="#">P.132</a>
	YK1000XGP	10.6															0.59	20.0	1.0	●	<a href="#">P.133</a>

Note 1. The standard cycle time is measured under the following conditions.

- During back and forth movement 25mm vertically and 100mm horizontally (extra small type)
- During back and forth movement 25mm vertically and 300mm horizontally (small type / large type)

Note 2. Maintains high accuracy over long periods because the beltless structure drastically cuts down on wasted motion.

Operation is also nearly maintenance-free for long periods with no worries about belt breakage, stretching or deterioration over time.

# Robot ordering method description

In the order format for the YAMAHA SCARA robots YK-X series, the notation (letters/numbers) for the mechanical section is shown linked to the controller section notation.

## [Example]

- **Mechanical ▶ YK250XG**
  - Z-axis stroke ▶ 150mm
  - Tool flange ▶ With tool flange
  - Hollow shaft ▶ With hollow shaft
  - Cable length ▶ 3.5m
- **Controller ▶ RCX340**

### ● Ordering method

**YK250XG-150-F-S-3L-RCX340**

Mechanical section

Controller section

To find detailed controller information see the controller page. **RCX340 ▶ P.636**

① Model	② Z-axis stroke	③ Tool flange		④ Hollow shaft		⑤ Cable		⑥ Controller
YK***	50 50mm 100 100mm 150 150mm 200 200mm 300 300mm 400 400mm	No entry F	None With tool flange	No entry S	None With hollow shaft	2L 2m 3L 3.5m 5L 5m 10L 10m		<b>RCX340</b>

Note 1. Available only for the master.

# Robot ordering method terminology

Note. The selection items available for ordering method may vary depending on the model. Note. The selection items available for ordering method may vary depending on the model.

① <b>Model</b>	Enter the robot unit model.
② <b>Return-to-origin method (YK400XE-4 only)</b>	Select the return-to-origin method. <b>S:</b> Sensor <b>T:</b> Stroke end
③ <b>Z-axis stroke</b>	Select the Z axis stroke. The stroke varies with the model you select so see that model's page to confirm the specifications.
④ <b>Tool flange</b>	Tool flange option for easy mounting of a tool to the tip. <b>No entry:</b> None <b>F:</b> With tool flange
⑤ <b>Hollow shaft</b>	Hollow shaft option for easy routing of air tubes and harness wires. <b>No entry:</b> None <b>S:</b> With hollow shaft <b>C:</b> With hollow cap
⑥ <b>Brake release switch</b>	Select whether a brake release switch is present. <b>No entry:</b> None <b>BS:</b> With tool flange
⑦ <b>Cable</b>	Select the length of the robot cable connecting the robot and controller. <b>2L:</b> 2m <sup>(Note 1)</sup> <b>3L:</b> 3.5m <b>5L:</b> 5m <b>10L:</b> 10m <small>Note 1. Only selectable for YK120XG, YK150XG, YK180XG.</small>
⑧ <b>Controller</b>	Select the RCX340.

Linear conveyor modules  
LCMR200

Single-axis robots  
GX

Linear conveyor modules  
LCM100

SCARA robots  
YK-X

Single-axis robots  
Robonity

Linear motor single-axis robots  
PHASER

Single-axis robots  
FLIP-X

Compact single-axis robots  
TRANSERO

Cartesian robots  
XX-X

Pick & place robots  
YP-X

CLEAN

CONTROLLER INFORMATION

Orbit/Extra small type

Small / Medium type

Large type

Wall mount / Inverse type

Dust-proof & drip-proof type

# YK350TW

Orbit type



- Arm length 350mm
- Maximum payload 5kg

## Ordering method

YK350TW-130

RCX340-4

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	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.636**

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	175 mm	175 mm	175 mm	130 mm	-
	Rotation angle	+/-225 °	+/-225 °	-	+/-720 °
	AC servo motor output	750 W	400 W	200 W	105 W
Deceleration mechanism	Transmission method	Timing belt	Direct-coupled	Timing belt	Timing belt
	Motor to speed reducer	Timing belt	Direct-coupled	Timing belt	
Speed reducer to output	Direct-coupled				
Repeatability	+/-0.01 mm		+/-0.01 mm		+/-0.01 °
Maximum speed	5.6 m/sec		1.5 m/sec		3000 °/sec
Maximum payload	5 kg				
Standard cycle time: with 1kg payload	0.32 sec				
R-axis tolerable moment of inertia	Rated	0.005 kgm <sup>2</sup>			
	Maximum	0.05 kgm <sup>2</sup>			
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	26 kg				

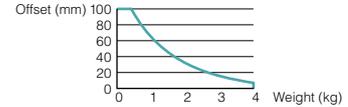
Note 1. This is the value at a constant ambient temperature.  
 Note 2. Tool flange specifications (option) are 4 kg.  
 Note 3. When moving a 1 kg load back and forth 300mm horizontally and 25mm vertically (rough positioning arch motion).  
 Note 4. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.

## Controller

Controller	Power capacity (VA)	Operation method
RCX340	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)

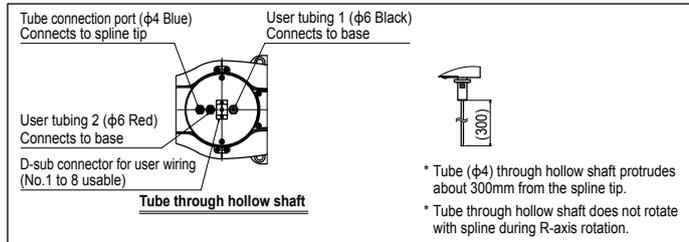
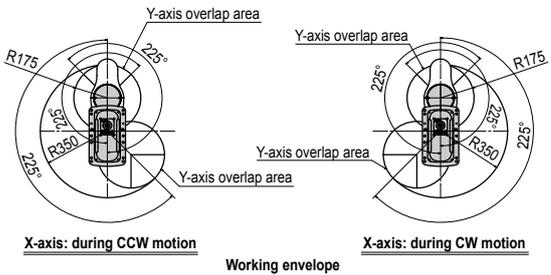
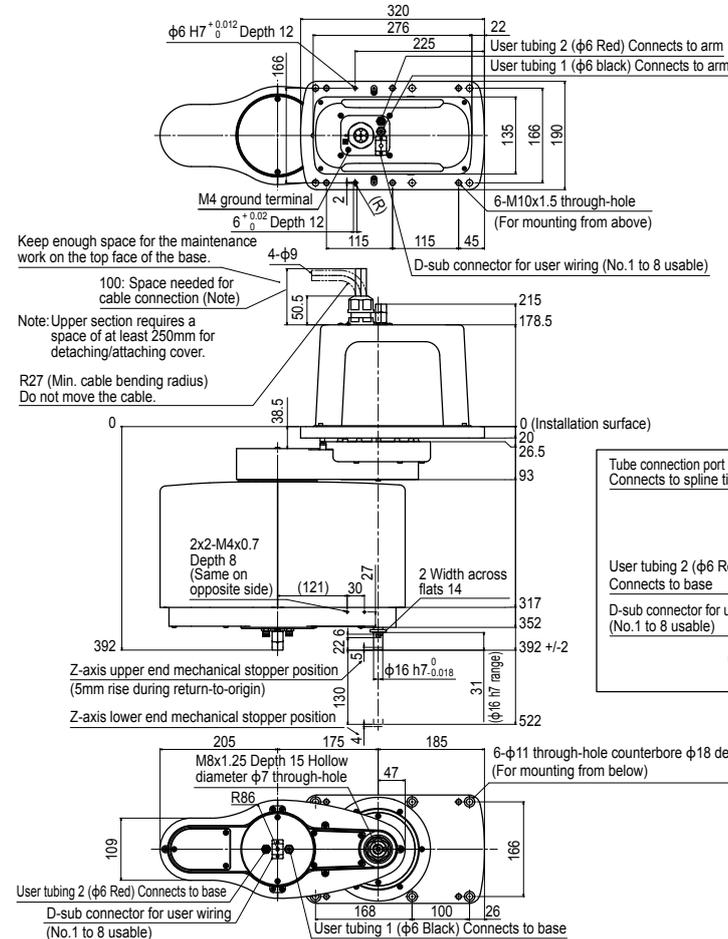


Note. When the payload exceeds 4kg, it is predicted that the R-axis moment of inertia may exceed the rated value. So, make proper parameter setting.

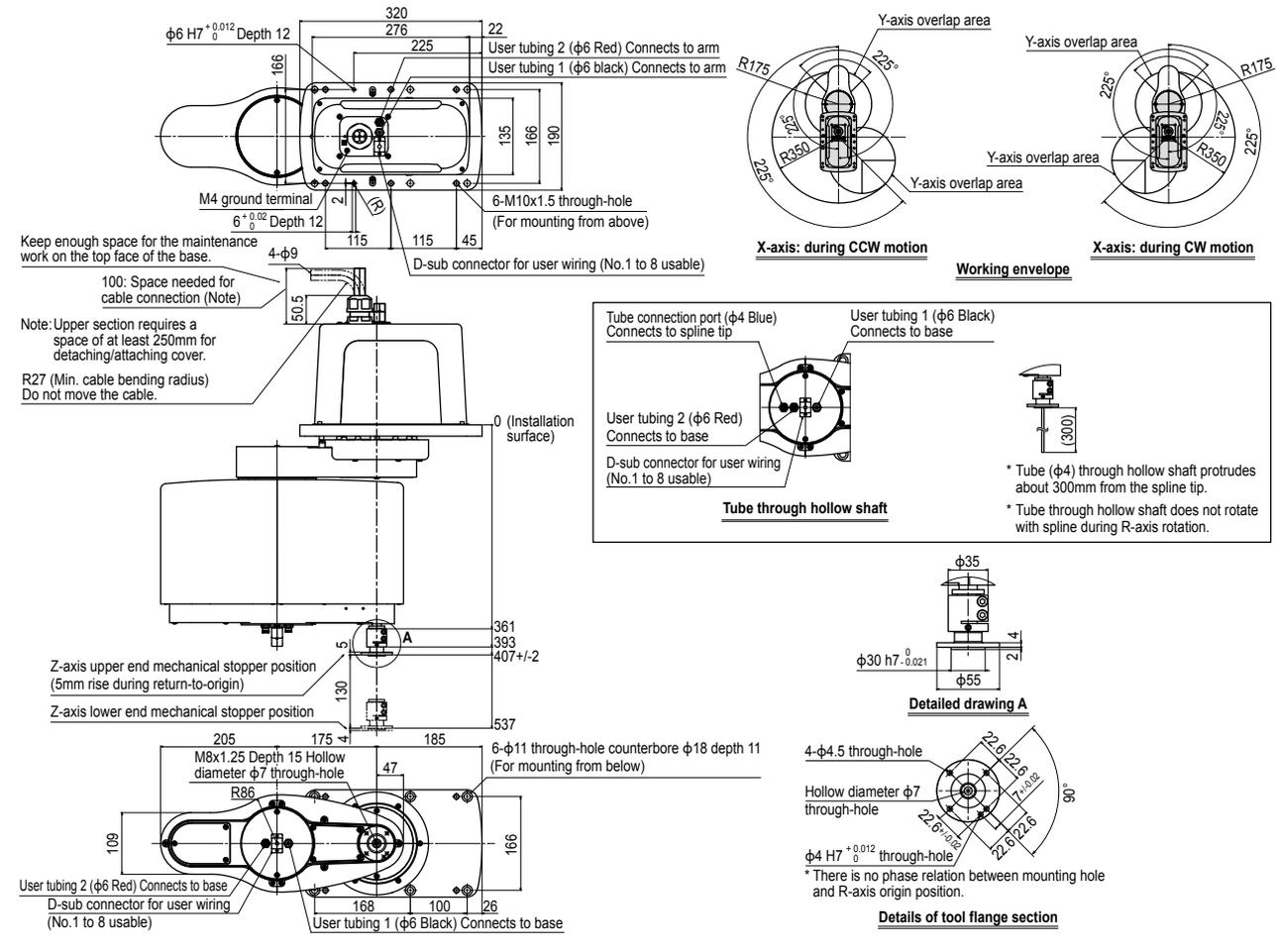
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

## YK350TW



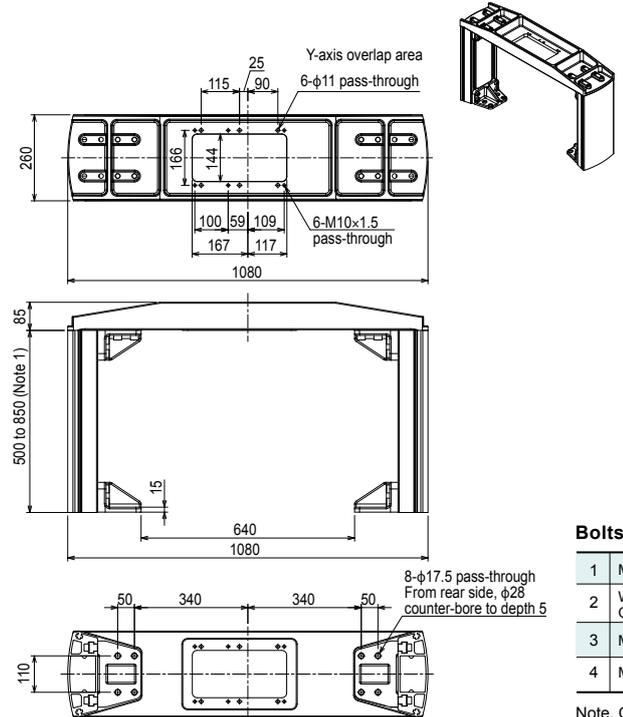
YK350TW Tool flange mount type



Dedicated mounting bracket for the YK-TW <BASE POST ASSY.>

The YK-TW can be easily installed on top of a customer-provided stand.

External diagram for the YK350TW



The mounting bracket is assembled by the customer. Refer to the included assembly diagram for assembly.

Note 1. Identical to the height of the robot mounting surface. The height of the stand can be selected at a 50 mm pitch.

Height (mm)	Model	Unit weight (kg)
500	KDU-M6100-P0	46
550	KDU-M6100-50	48
600	KDU-M6100-R0	50
650	KDU-M6100-60	51
700	KDU-M6100-S0	54
750	KDU-M6100-70	55
800	KDU-M6100-T0	57
850	KDU-M6100-80	59

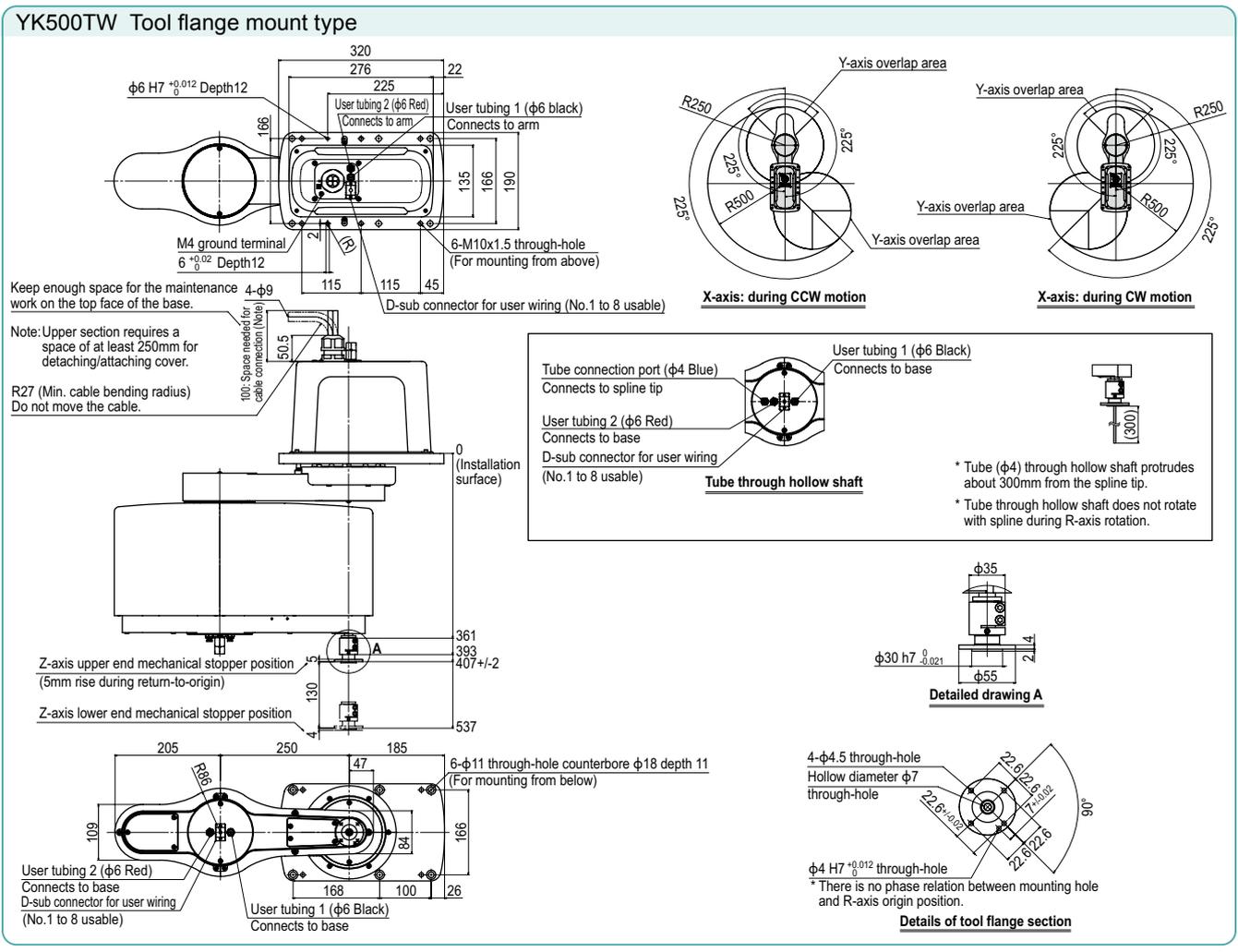
Note. YK350TW and YK500TW are parts in common. Note. The top plate by itself weighs 19 kg.

Bolts supplied with the controller

No.	Part	Quantity
1	M16 x Pitch 2.0 x Length 45 [Hexagonal socket head bolt]	8 pcs. (For securing the installation base)
2	Washer for M16 bolt [Plate thickness 3 mm, Outside diameter φ26, Inside diameter φ16]	8 pcs.
3	M10 x Pitch 1.5 x Length 30	6 pcs. (Bolts used to secure the SCARA main body from the bottom surface.)
4	M10 x Pitch 1.5 x Length 40	6 pcs. (Bolts used to secure the SCARA main body from the top surface.)

Note. Only either 3 or 4 is used.

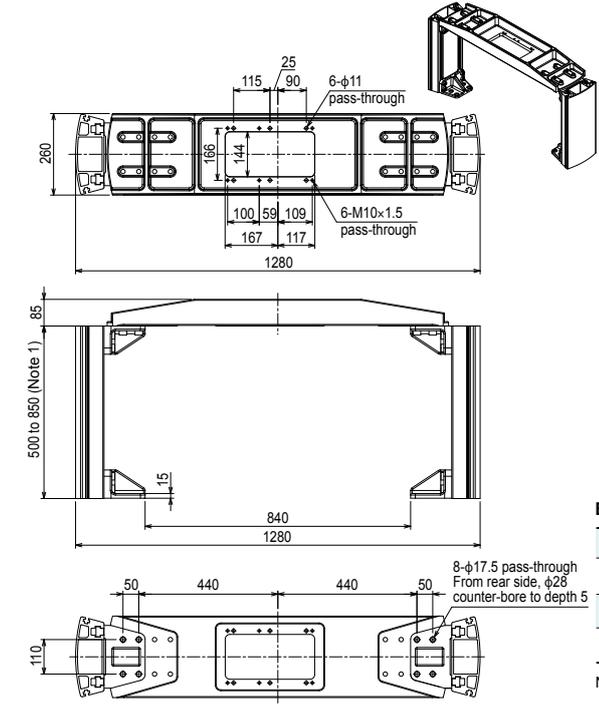




**Dedicated mounting bracket for the YK-TW <BASE POST ASSY.>**

The YK-TW can be easily installed on top of a customer-provided stand.

● External diagram for the YK500TW



The mounting bracket is assembled by the customer. Refer to the included assembly diagram for assembly.

Note 1. Identical to the height of the robot mounting surface. The height of the stand can be selected at a 50 mm pitch.

Height (mm)	Model	Unit weight (kg)
500	KDU-M6100-P0	46
550	KDU-M6100-50	48
600	KDU-M6100-R0	50
650	KDU-M6100-60	51
700	KDU-M6100-S0	54
750	KDU-M6100-70	55
800	KDU-M6100-T0	57
850	KDU-M6100-80	59

Note. YK350TW and YK500TW are parts in common. Note. The top plate by itself weighs 19 kg.

**Bolts supplied with the controller**

1	M16 x Pitch 2.0 x Length 45 [Hexagonal socket head bolt]	8 pcs. (For securing the installation base)
2	Washer for M16 bolt [Plate thickness 3 mm, Outside diameter φ26, Inside diameter φ16]	8 pcs.
3	M10 x Pitch 1.5 x Length 30	6 pcs. (Bolts used to secure the SCARA main body from the bottom surface.)
4	M10 x Pitch 1.5 x Length 40	6 pcs. (Bolts used to secure the SCARA main body from the top surface.)

Note. Only either 3 or 4 is used.

# YK120XG

Standard type: Extra small type

- Arm length 120mm
- Maximum payload 1kg

## Ordering method

**YK120XG - 50**

Model	Z axis stroke	Cable
	50: 50mm	2L: 2m 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

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	45 mm	75 mm	50 mm	-
	Rotation angle	+/-125 °	+/-145 °	-	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
Repeatability	Speed reducer to output	Direct-coupled			
	Note 1	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		3.3 m/sec	0.9 m/sec	1700 °/sec	
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload		0.33 sec			
R-axis tolerable moment of inertia		0.01 kgm <sup>2</sup>			
User wiring		0.1 sq × 8 wires			
User tubing (Outer diameter)		φ 4 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 2 m Option: 3.5 m, 5 m, 10 m			
Weight (Excluding robot cable)		3.9 kg			
Robot cable weight		0.9 kg (2 m) 1.5 kg (3.5 m) 2.1 kg (5 m) 4.2 kg (10 m)			

Note 1. This is the value at a constant ambient temperature. (X,Y axes)

Note 2. When moving 25mm in vertical direction and 100mm in horizontal direction reciprocally.

Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.

Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

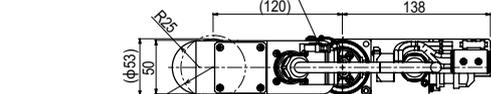
Controller	Power capacity (VA)	Operation method
RCX340	300	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

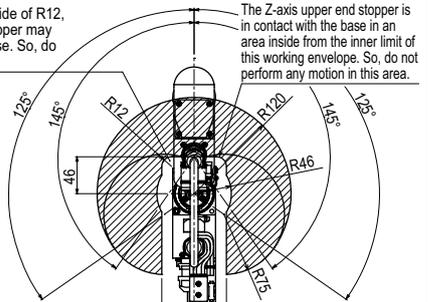
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<https://global.yamaha-motor.com/business/robot/>

## YK120XG

Connector for user wiring (No. 1 to 8 usable, socket contact)  
J.S.T. Mfg Co., Ltd. SM connector SMR-8V-B, pin SYM-001T-P0.6 (supplied)  
Use the YC12 crimping tool.



If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.

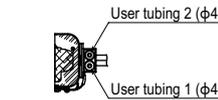
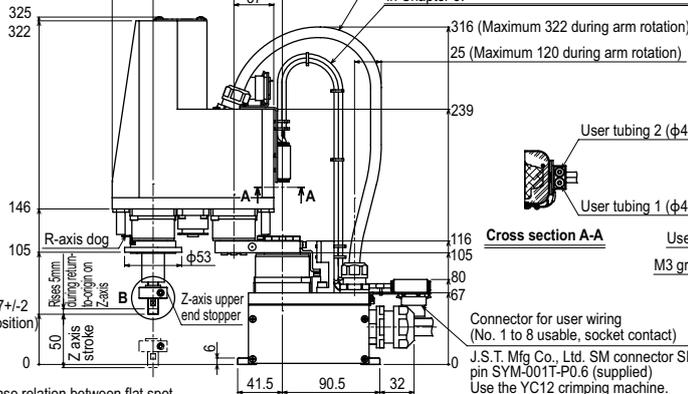


### Working envelope

X, Y-axis origin is at +/-5° with respect to front of robot base

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

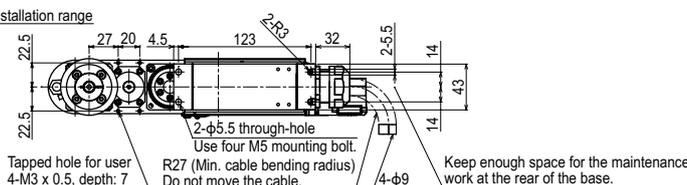
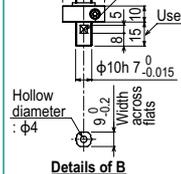
Do not attach any wire or tube to self-supporting cable. Doing so may degrade positioning accuracy.  
If attaching wire or tube, make use of these air tubes. For details, refer to "10 When attaching a new user wire or tube" in Chapter 3.



Connector for user wiring (No. 1 to 8 usable, socket contact)  
J.S.T. Mfg Co., Ltd. SM connector SMR-8V-B, pin SYM-001T-P0.6 (supplied)  
Use the YC12 crimping machine.

No phase relation between flat spot and R-axis origin

User tool installation range



Tapped hole for user 4-M3 x 0.5, depth: 7

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

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

# YK150XG

Standard type: Extra small type

- Arm length 150mm
- Maximum payload 1kg

## Ordering method

**YK150XG - 50**

Model	Z axis stroke
	50: 50mm

Cable
2L: 2m
3L: 3.5m
5L: 5m
10L: 10m

**RCX340-4**

Controller / Number of controllable axes
RCX340-4

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.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	75 mm	75 mm	50 mm	-
	Rotation angle	+/-125 °	+/-145 °	-	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		3.4 m/sec	0.9 m/sec	1700 °/sec	
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload <sup>Note 2</sup>		0.33 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.01 kgm <sup>2</sup>			
User wiring		0.1 sq × 8 wires			
User tubing (Outer diameter)		φ 4 × 2			
Travel limit		1. Soft limit 2. Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 2 m Option: 3.5 m, 5 m, 10 m			
Weight (Excluding robot cable) <sup>Note 4</sup>		4.0 kg			
Robot cable weight		0.9 kg (2 m)	1.5 kg (3.5 m)	2.1 kg (5 m)	4.2 kg (10 m)

- Note 1. This is the value at a constant ambient temperature. (X,Y axes)  
 Note 2. When moving 25mm in vertical direction and 100mm in horizontal direction reciprocally.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.  
 Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

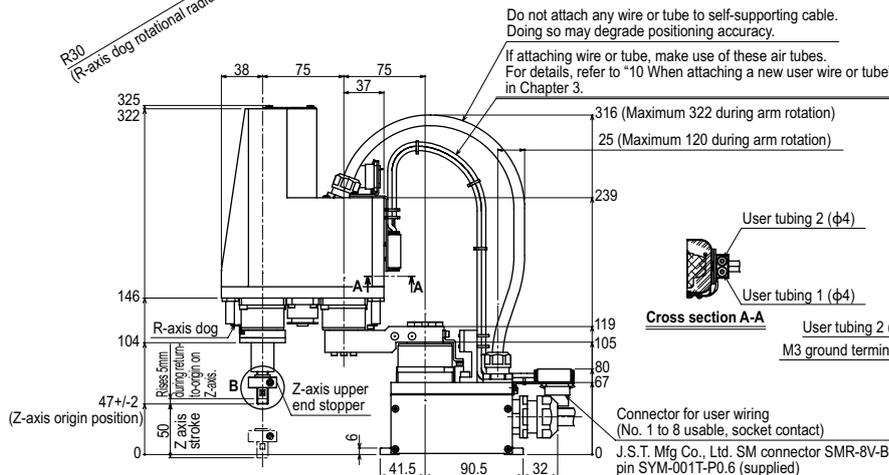
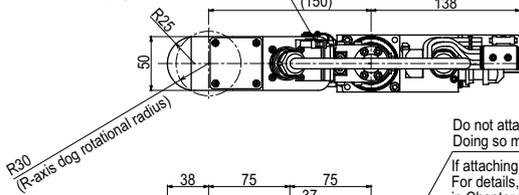
Controller	Power capacity (VA)	Operation method
RCX340	300	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

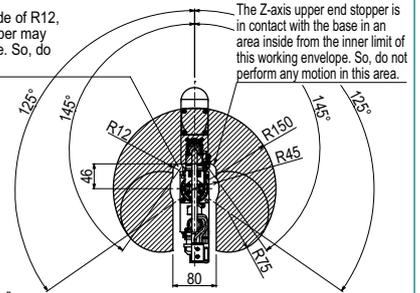
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<https://global.yamaha-motor.com/business/robot/>

## YK150XG

Connector for user wiring (No. 1 to 8 usable, socket contact)  
 J.S.T. Mfg Co., Ltd. SM connector SMR-8V-B, pin SYM-001T-P0.6 (supplied)  
 Use the YC12 crimping tool.



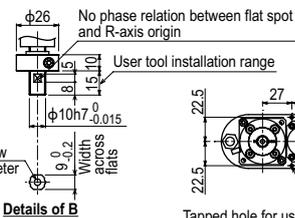
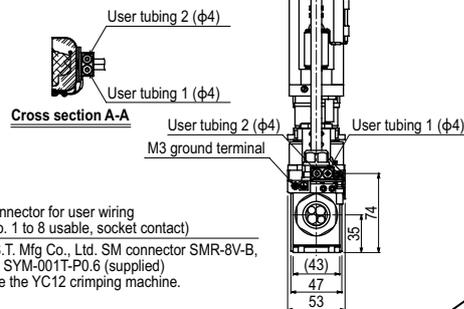
If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.



### Working envelope

X, Y-axis origin is at +/-5° with respect to front of robot base

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



# YK180XG

Standard type: Extra small type



- Arm length 180mm
- Maximum payload 1kg

## Ordering method

**YK180XG - 50**

Model	Z axis stroke	Cable
	50: 50mm	2L: 2m 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

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	105 mm	75 mm	50 mm	-
	Rotation angle	+/-125 °	+/-145 °	-	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
Repeatability	Speed reducer to output	Direct-coupled			
	Note 1	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		3.3 m/sec	0.9 m/sec	1700 °/sec	
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload		0.33 sec			
R-axis tolerable moment of inertia		0.01 kgm <sup>2</sup>			
User wiring		0.1 sq × 8 wires			
User tubing (Outer diameter)		φ 4 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 2 m Option: 3.5 m, 5 m, 10 m			
Weight (Excluding robot cable)		4.1 kg			
Robot cable weight		0.9 kg (2 m)	1.5 kg (3.5 m)	2.1 kg (5 m)	4.2 kg (10 m)

Note 1. This is the value at a constant ambient temperature. (X,Y axes)

Note 2. When moving 25mm in vertical direction and 100mm in horizontal direction reciprocally.

Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.

Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

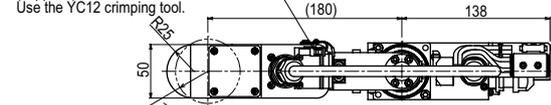
Controller	Power capacity (VA)	Operation method
RCX340	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

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

## YK180XG

Connector for user wiring  
(No. 1 to 8 usable, socket contact)  
J.S.T. Mfg Co., Ltd. SM connector  
SMR-8V-B, pin SYM-001T-P0.6  
(supplied)  
Use the YC12 crimping tool.



Do not attach any wire or tube to self-supporting cable. Doing so may degrade positioning accuracy.

If attaching wire or tube, make use of these air tubes. For details, refer to "10 When attaching a new user wire or tube" in Chapter 3.

316 (Maximum 322 during arm rotation)  
10 (Maximum 120 during arm rotation)

239  
119  
105  
80  
67

146  
104  
47+/-2 (Z-axis origin position)

50  
41.5  
90.5  
32

38  
75  
105

325  
322

R-axis dog  
Z-axis upper end stopper

50  
41.5  
90.5  
32

50  
41.5  
90.5  
32

50  
41.5  
90.5  
32

50  
41.5  
90.5  
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50  
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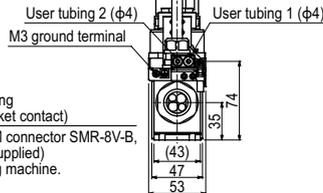
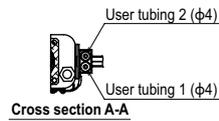
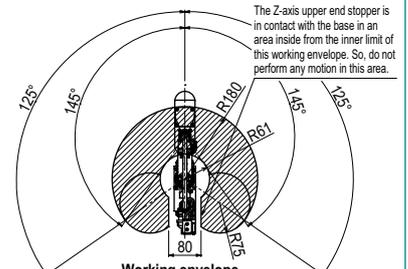
50  
41.5  
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50  
41.5  
90.5  
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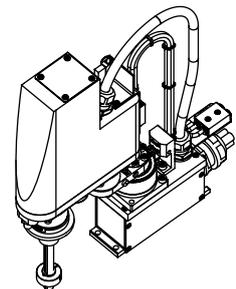
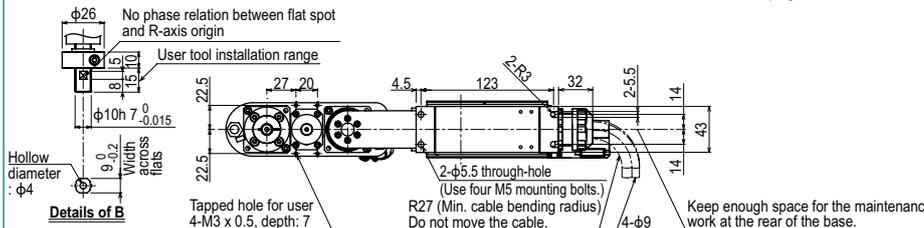
50  
41.5  
90.5  
32

50  
41.5  
90.5  
32

50  
41.5  
90.5  
32



Connector for user wiring  
(No. 1 to 8 usable, socket contact)  
J.S.T. Mfg Co., Ltd. SM connector SMR-8V-B,  
pin SYM-001T-P0.6 (supplied)  
Use the YC12 crimping machine.



# YK180X

Standard type: Extra small type



- Arm length 180mm
- Maximum payload 1kg

## Ordering method

**YK180X - 100**

**RCX340-4**

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

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	71 mm	109 mm	100 mm	-
	Rotation angle	+/-120 °	+/-140 °	-	+/-360 °
AC servo motor output		50 W	30 W	30 W	30 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		3.3 m/sec	0.7 m/sec	1700 °/sec	
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload <sup>Note 2</sup>		0.39 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.01 kgm <sup>2</sup>			
User wiring		0.1 sq × 6 wires			
User tubing (Outer diameter)		φ 3 × 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 (Excluding robot cable) <sup>Note 4</sup>		5.5 kg			
Robot cable weight		1.5 kg (3.5 m)	2.1 kg (5 m)	4.2 kg (10 m)	

- 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. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.  
 Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

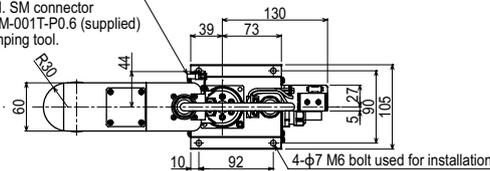
Controller	Power capacity (VA)	Operation method
RCX340	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

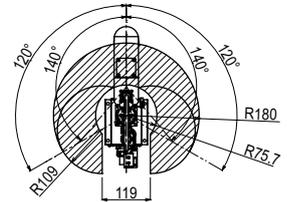
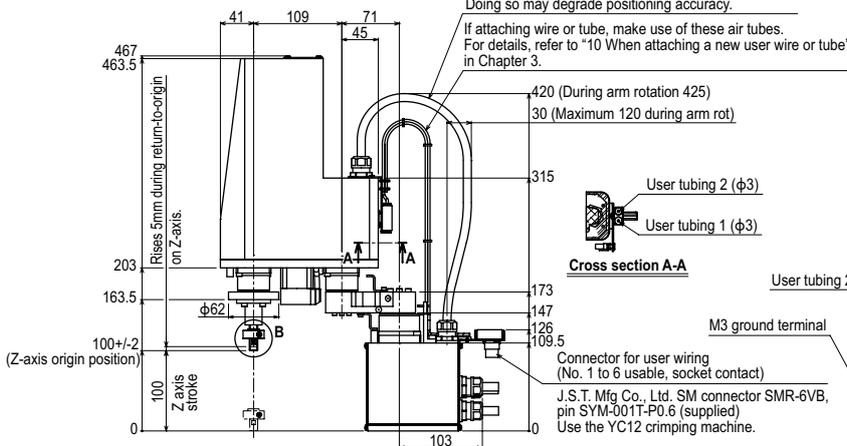
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<https://global.yamaha-motor.com/business/robot/>

## YK180X

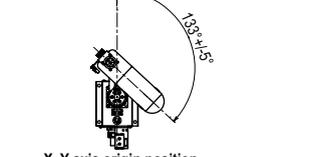
Connector for user wiring  
 (No. 1 to 6 usable, socket contact)  
 J.S.T. Mfg Co., Ltd. SM connector  
 SMR-6VB, pin SYM-001T-P0.6 (supplied)  
 Use the YC12 crimping tool.



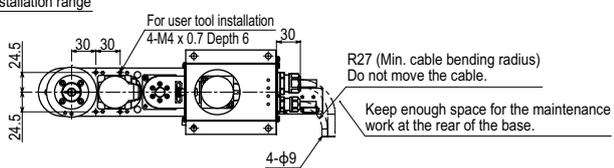
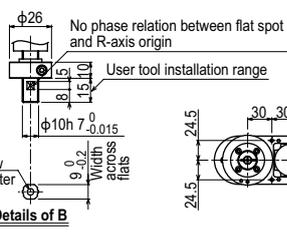
Do not attach any wire or tube to self-supporting cable. Doing so may degrade positioning accuracy.  
 If attaching wire or tube, make use of these air tubes. For details, refer to "10 When attaching a new user wire or tube" in Chapter 3.



**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.



- Linear conveyor modules LCMR200
- Single-axis robots GX
- Linear conveyor modules LCM100
- SCARA robots YK-X
- Single-axis robots Robonity
- Linear motor single-axis robots PHASER
- Single-axis robots FLIP-X
- single-axis robots TRANSERO
- Compact Cartesian robots XX-X
- Pick & place robots YP-X
- CLEAN
- CONTROLLER INFORMATION
- Extra small type
- Small / Medium type
- Large type
- Wall mount / Inverse type
- Dust-proof & drip-proof type

# YK220X

Standard type: Extra small type



- Arm length 220mm
- Maximum payload 1kg

## Ordering method

**YK220X - 100**

**RCX340-4**

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

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	111 mm	109 mm	100 mm	-
	Rotation angle	+/-120 °	+/-140 °	-	+/-360 °
AC servo motor output		50 W	30 W	30 W	30 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
Repeatability	Speed reducer to output	Direct-coupled			
	Note 1	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		3.4 m/sec	0.7 m/sec	1700 °/sec	
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload		0.42 sec			
R-axis tolerable moment of inertia		0.01 kgm <sup>2</sup>			
User wiring		0.1 sq × 6 wires			
User tubing (Outer diameter)		φ 3 × 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 (Excluding robot cable)		5.5 kg			
Robot cable weight		1.5 kg (3.5 m)	2.1 kg (5 m)	4.2 kg (10 m)	

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. The acceleration coefficient is set automatically in accordance with the tip weight and R-axis moment of inertia settings.  
 Note 4. The total robot weight is the sum of the robot body weight and the cable weight.

## Controller

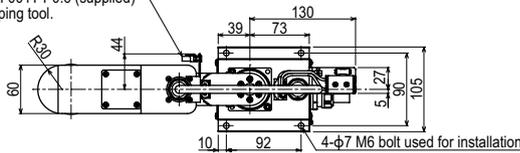
Controller	Power capacity (VA)	Operation method
RCX340	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
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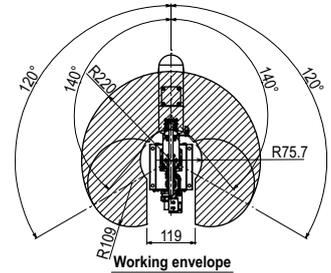
## YK220X

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.

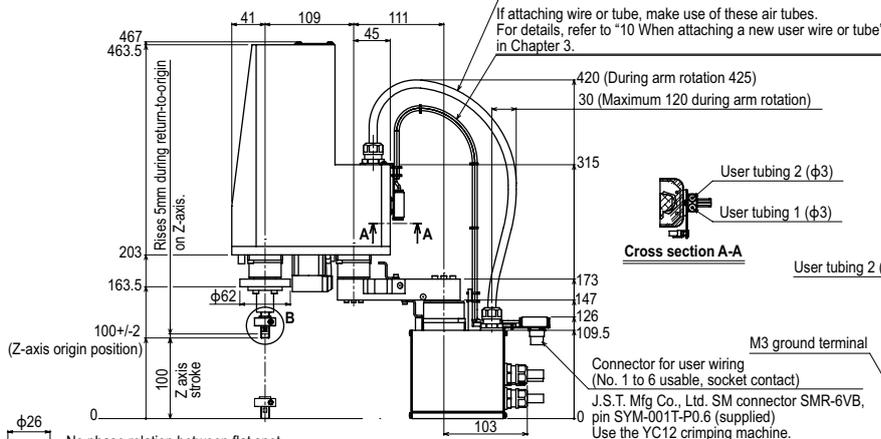


Do not attach any wire or tube to self-supporting cable. Doing so may degrade positioning accuracy.

If attaching wire or tube, make use of these air tubes. For details, refer to "10 When attaching a new user wire or tube" in Chapter 3.

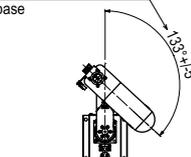


Working envelope



Cross section A-A

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

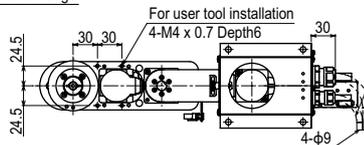
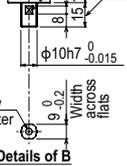


X, Y-axis origin position

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

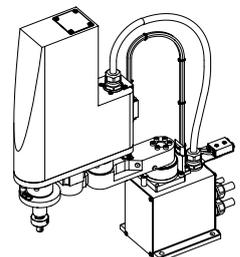
No phase relation between flat spot and R-axis origin

User tool installation range



For user tool installation  
 4-M4 x 0.7 Depth6  
 R27 (Min. cable bending radius)  
 Do not move the cable.

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



# YK250XG

Standard type: Small type

- Arm length 250mm
- Maximum payload 5kg

## Ordering method

**YK250XG - 150**

<b>Model</b>	<b>Z axis stroke</b> 150: 150mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Hollow shaft</b> No entry: None S: With hollow shaft	<b>Cable</b> 3L: 3.5m 5L: 5m 10L: 10m
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**RCX340-4**

<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.636**

## Specifications

	X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>				
<b>Arm length</b>	100 mm	150 mm	150 mm	-
<b>Rotation angle</b>	+/-140 °	+/-144 °	-	+/-360 °
<b>AC servo motor output</b>	200 W	150 W	50 W	100 W
<b>Deceleration mechanism</b>	Direct-coupled			
<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>	4.5 m/sec	1.1 m/sec	1020 °/sec	
<b>Maximum payload</b>	5 kg (Standard specification), 4 kg (Option specifications <sup>Note 4</sup> )			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>	0.43 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>	0.05 kgm <sup>2</sup> (0.5 kgfcm <sup>2</sup> )			
<b>User wiring</b>	0.2 sq x 10 wires			
<b>User tubing (Outer diameter)</b>	φ 4 x 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>	18.5 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

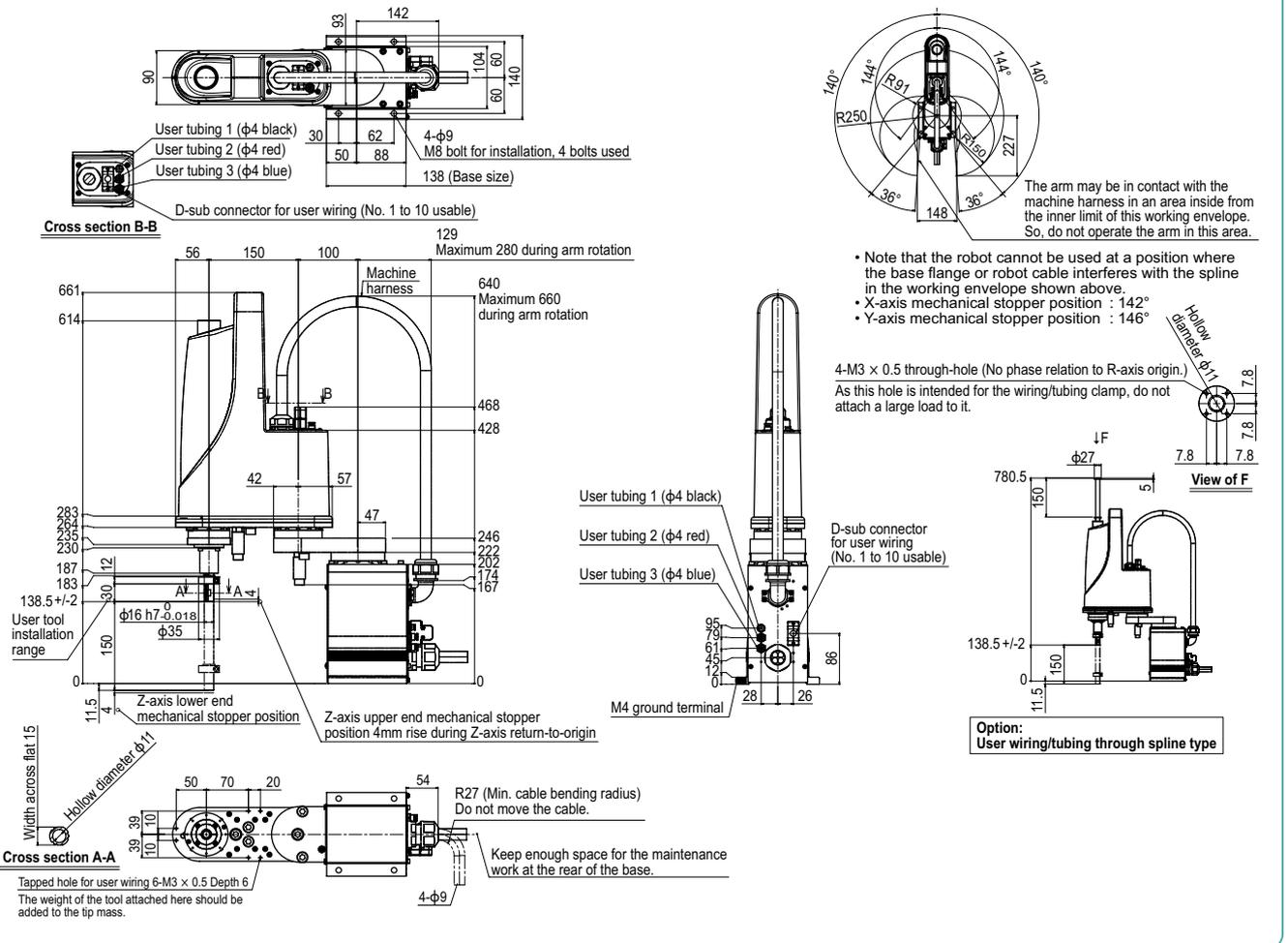
Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

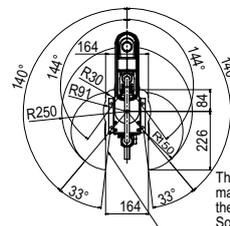
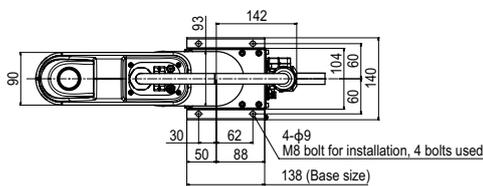
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
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## YK250XG

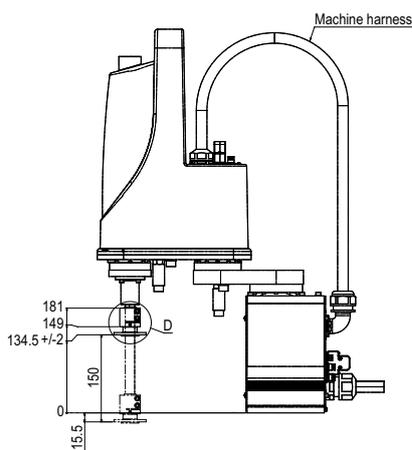


- Linear conveyor modules LCMR200
- Single-axis robots GX
- Linear conveyor modules LCM100
- SCARA robots YK-X
- Single-axis robots Robonity
- Linear motor single-axis robots PHASER
- Single-axis robots FLIP-X
- Compact single-axis robots TRANSERO
- Cartesian robots XY-X
- Pick & place robots YP-X
- CLEAN
- CONTROLLER INFORMATION
- Oh!h/ Extra small type
- Small type
- Large type
- Wall mount / Inverse type
- Dust-proof & drip-proof type

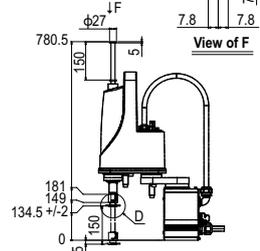
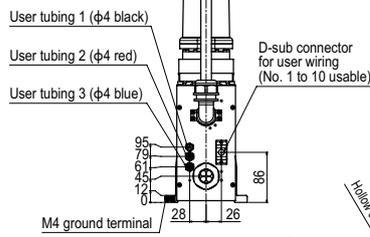
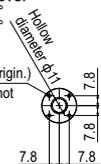
## YK250XG Tool flange mount type



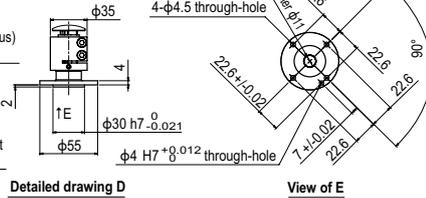
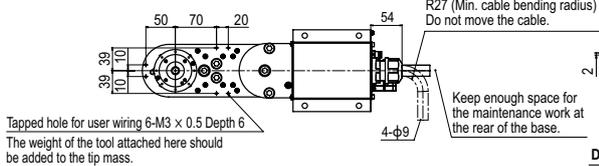
- Note that the robot cannot be used at a position where the base flange or robot cable interferes with the tool flange in the working envelope shown above.
- X-axis mechanical stopper position : 142°
- Y-axis mechanical stopper position : 146°



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



# YK350XG

Standard type: Small type

- Arm length 350mm
- Maximum payload 5kg

## Ordering method

**YK350XG - 150**

<b>Model</b>	<b>Z axis stroke</b> 150: 150mm	<b>Tool flange</b> No entry: None F: With tool flange	<b>Hollow shaft</b> No entry: None S: With hollow shaft	<b>Cable</b> 3L: 3.5m 5L: 5m 10L: 10m
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**RCX340-4**

<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>
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Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	200 mm	150 mm	150 mm	-
	<b>Rotation angle</b>	+/-140 °	+/-144 °	-	+/-360 °
<b>AC servo motor output</b>		200 W	150 W	50 W	100 W
<b>Deceleration mechanism</b>	<b>Transmission method</b>	Direct-coupled			
	<b>Motor to speed reducer</b> <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>		5.6 m/sec	1.1 m/sec	1020 °/sec	
<b>Maximum payload</b>		5 kg (Standard specification), 4 kg (Option specifications <sup>Note 4</sup> )			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.44 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.05 kgm <sup>2</sup> (0.5 kgfcm <sup>2</sup> )			
<b>User wiring</b>		0.2 sq × 10 wires			
<b>User tubing (Outer diameter)</b>		φ 4 × 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>		19 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.

Note 4. Maximum payload of option specifications (with tool flange attached or with user wiring and tubing routed through spline shaft) is 4kg.

## Controller

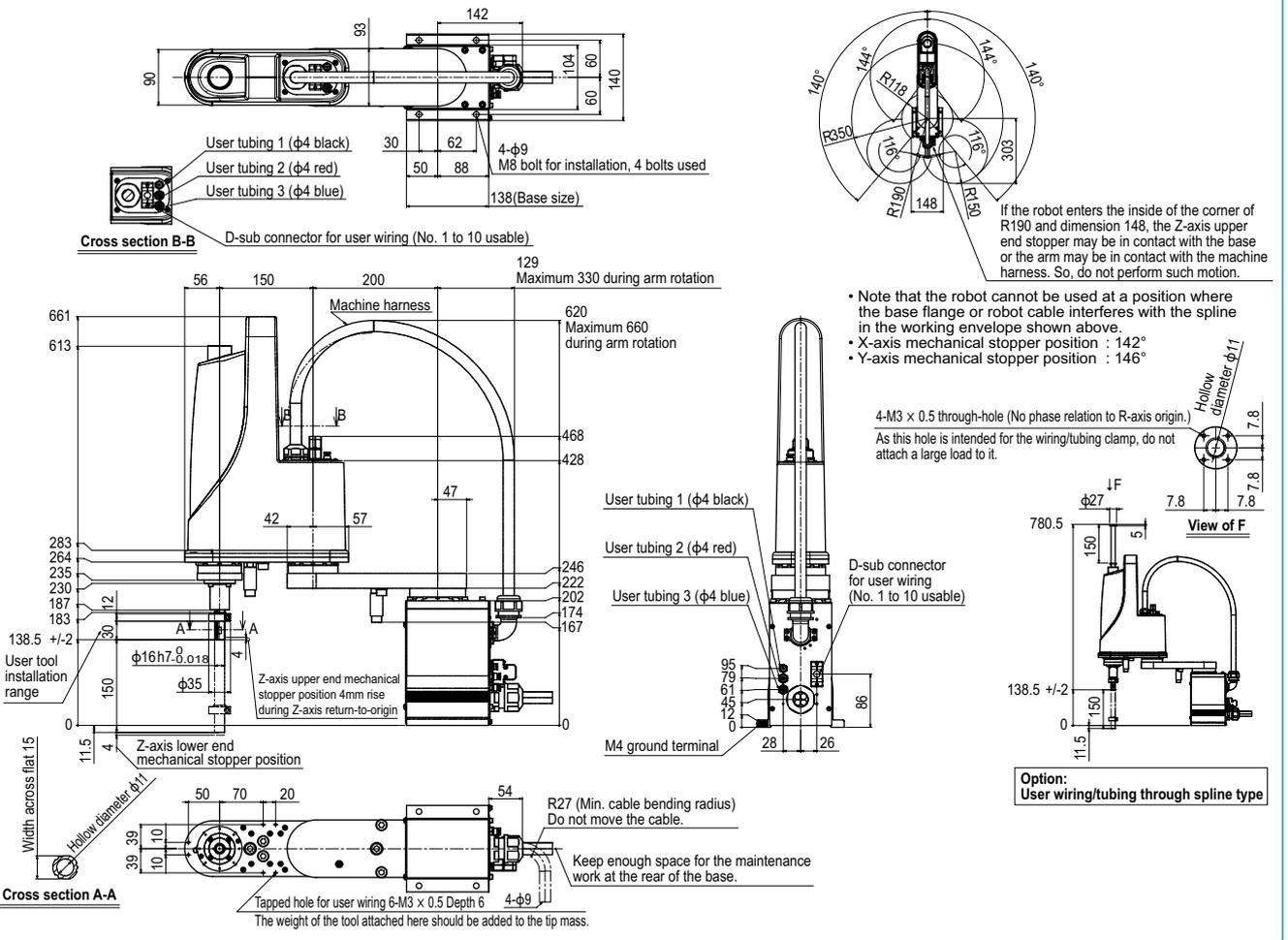
Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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/>

## YK350XG





Linear conveyor  
modules  
**LCMR200**

Single-axis robots  
**GX**

Linear conveyor  
modules  
**LCM100**

SCARA robots  
**YK-X**

Single-axis robots  
**Robonity**

Linear motor  
single-axis robots  
**PHASER**

Single-axis robots  
**FLIP-X**

Compact  
single-axis robots  
**TRANSERVO**

Cartesian robots  
**XY-X**

Pick & place  
robots  
**YP-X**

**CLEAN**

**CONTROLLER**

**INFORMATION**

Orbit/  
Extra small  
type

Small type

Large type

Wall mount /  
inverse type

Dust-proof  
& drip-proof  
type

# YK400XE-4

Standard type: Small type

● LOW COST HIGH PERFORMANCE MODEL



- Arm length 400mm
- Maximum payload 4kg

## Ordering method

**YK400XE - 4** 150         **RCX340-4**          

Model	Maximum payload	Return-to-origin method	Z axis stroke	Hollow shaft	Brake release switch	Cable	Controller / Number of controllable axes	Safety standard	Option A to E (OP.A to E)	Absolute battery
		S: Sensor T: Stroke end		No entry: None S: With hollow shaft	No entry: None BS: With brake release switch	3L: 3.5m 5L: 5m 10L: 10m				

Specify various controller setting items.  
RCX340 ▶ **P.636**

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	+/-132°	+/-150°	-	+/-360°
	AC servo motor output	200 W	100 W	100 W	100 W
Deceleration mechanism	Transmission method	Direct-coupled		Timing belt	
	Motor to speed reducer	Direct-coupled		Timing belt	
	Speed reducer to output	Direct-coupled		Timing belt	
Repeatability <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.01°	
Maximum speed		6 m/sec	1.1 m/sec	2600 °/sec	
Maximum payload		4 kg (Standard specification, Option specifications <sup>Note 4</sup> ), 3 kg (Option specifications <sup>Note 5</sup> )			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.41 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kg <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		17 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 and performing the coarse positioning arch operation.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and offset amount for R-axis moment of inertia settings.  
 Note 4. Maximum payload of the standard or option specifications (brake release switch type) is 4 kg.  
 Note 5. Maximum payload of the option specifications (user wiring/tubing through shaft type) is 3 kg.

## 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 restricted by adding the X- and Y-axis mechanical stoppers. (The maximum movement range was set at 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/>

## YK400XE-4 Shipment on February 2025 or later

4-M3x0.5 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.

Cap hole diameter φ24  
Spline shaft diameter φ11

View of B  
View of C

Cap φ45.5  
Base mounting surface  
Optional User wiring/tubing through cap type

188(Base size) (49)  
6H7<sup>+0.012</sup>  
60  
60  
140  
60  
60  
φ6 H7<sup>+0.012</sup>  
16<sup>+0.05</sup>  
30  
90  
15  
6-φ9 M8 bolt for installation, 4 bolts used

Working envelope  
X-axis mechanical stopper position : 134°  
Y-axis mechanical stopper position : 154°

Maximum 350 during arm rotation  
512  
Maximum 530 during arm rotation

User wiring connector (No. 1 to 10 usable)<sup>Note 1</sup>  
Brake release switch  
Optional Brake release switch type  
User wiring connector (No. 1 to 10 usable)<sup>Note 1</sup>  
M4 ground terminal

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

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

10(Mounting hole bearing surface)  
75  
35  
20  
20

Z-axis upper end mechanical stopper position 187.8  
174.8  
10mm rise during return-to-origin 174.3

124.7+/-2 (Z-axis origin position)  
Z-axis lower end mechanical stopper position

Width across flats 15  
Hollow diameter φ11  
Cross section A-A

Standard type  
Tapped hole for user wiring 6-M4 × 0.7 Depth 8  
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.

4-φ9/R27 (Min. cable bending radius)  
Do not move the cable.

XY-axis origin position (Stroke end type)  
When performing return-to-origin, move the X-axis counterclockwise and Y-axis clockwise, respectively in advance from the position shown above.

Note 1: J.S.T. Mfg. Co., Ltd.  
SM connector: SMR-11V-B  
Pin: SYM-001T-P0.6 is attached.  
Use AP-K2N for the crimping machine.







# YK500XGL

Standard type: Medium type



- Arm length 500mm
- Maximum payload 5kg

## Ordering method

**YK500XGL - 150**

**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
	150: 150mm	No entry: None F: With tool flange	No entry: None S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## 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	Direct-coupled			
Speed reducer to output	Direct-coupled				
	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.

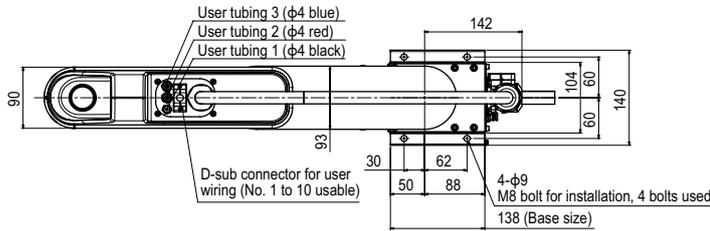
## Controller

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

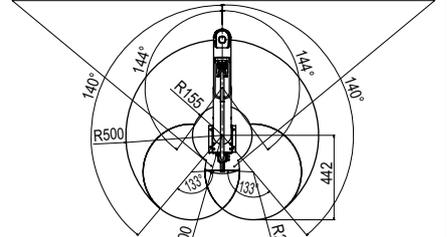
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.  
 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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## YK500XGL

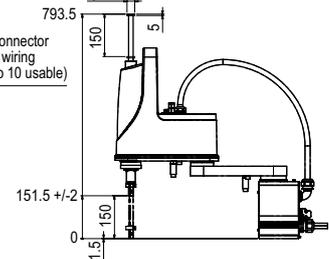
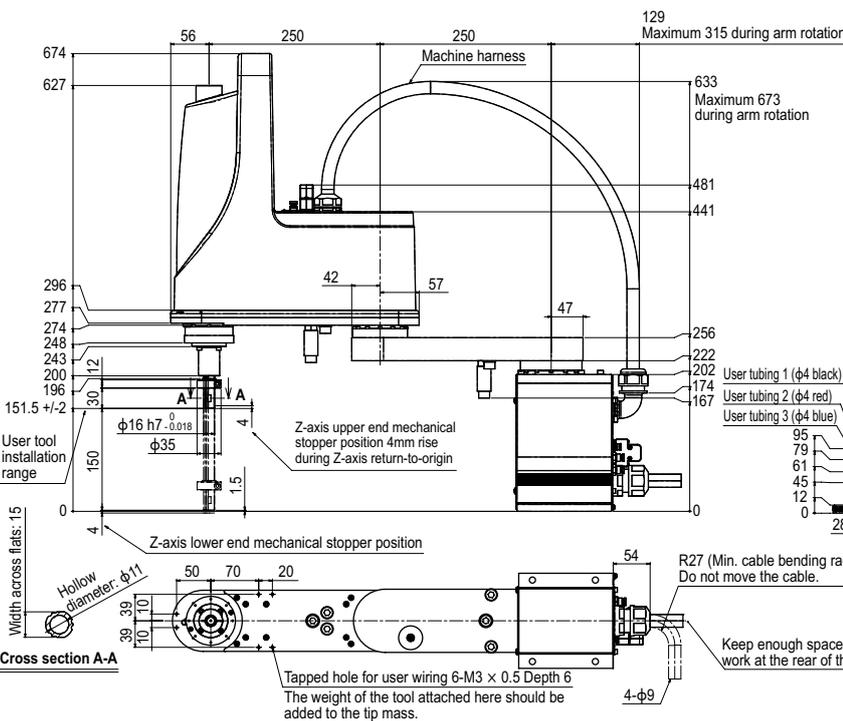
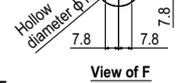


If the robot enters the inside of the corner of R200 and R250, the arm may be in contact with the machine harness. So, do not perform such motion.



- 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°

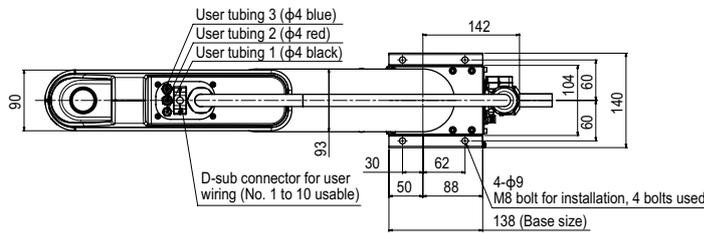
4-M3 × 0.5 through-hole  
 (No phase relation to R-axis origin.)  
 As this hole is intended for the wiring/tubing clamp, do not attach a large load to it.



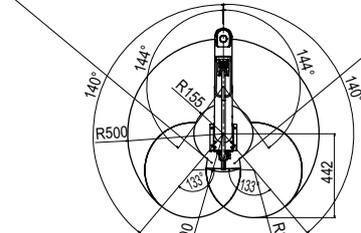
Option:  
 User wiring/tubing through spline type

Linear conveyor modules	LCMR200
Single-axis robots	GX
Linear conveyor modules	LCM100
SCARA robots	YK-X
Single-axis robots	Robonity
Linear motor single-axis robots	PHASER
Single-axis robots	FLIP-X
Compact single-axis robots	TRANSERO
Cartesian robots	XX-X
Pick & place robots	YP-X
CLEAN	
CONTROLLER	
INFORMATION	
Oh!ti/Extra small type	
Medium type	
Large type	
Wall mount/Inverse type	
Dust-proof & drip-proof type	

YK500XGL Tool flange mount type

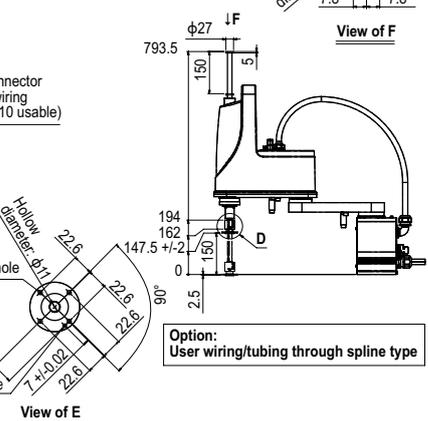
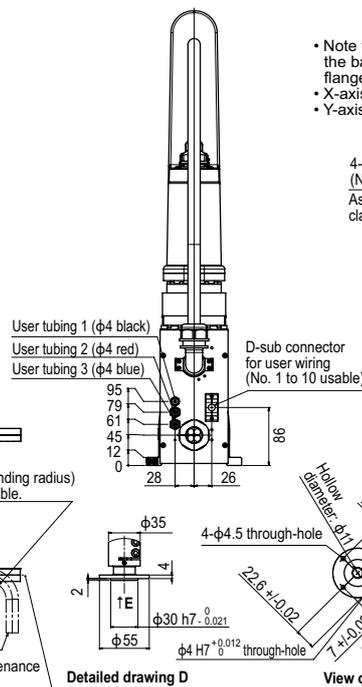
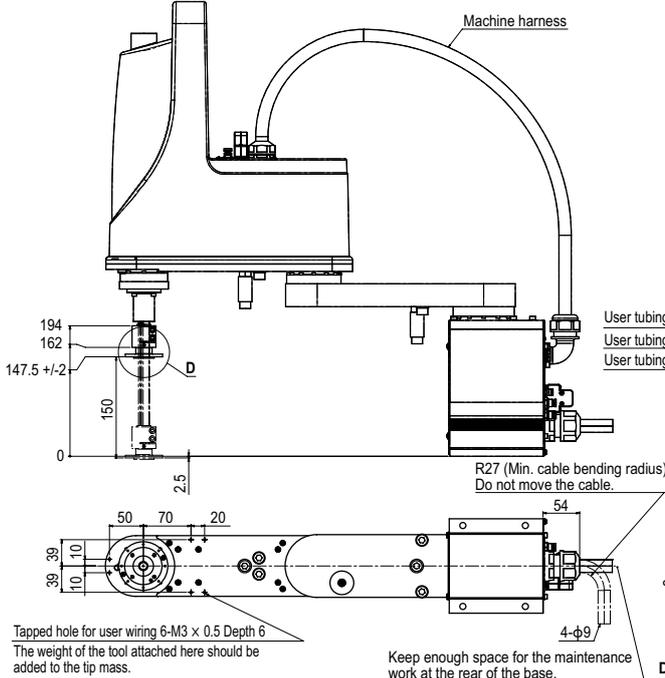
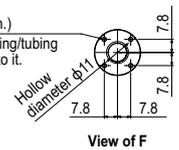


If the robot enters the inside of corners of R200 and R250, the arm may be in contact with the machine harness. So, do not perform such motion.



- 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 × 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.



# 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.636**

## 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> <small>Note 1</small>		+/-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> <small>Note 2</small>		0.42 sec			
<b>R-axis tolerable moment of inertia</b> <small>Note 3</small>		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

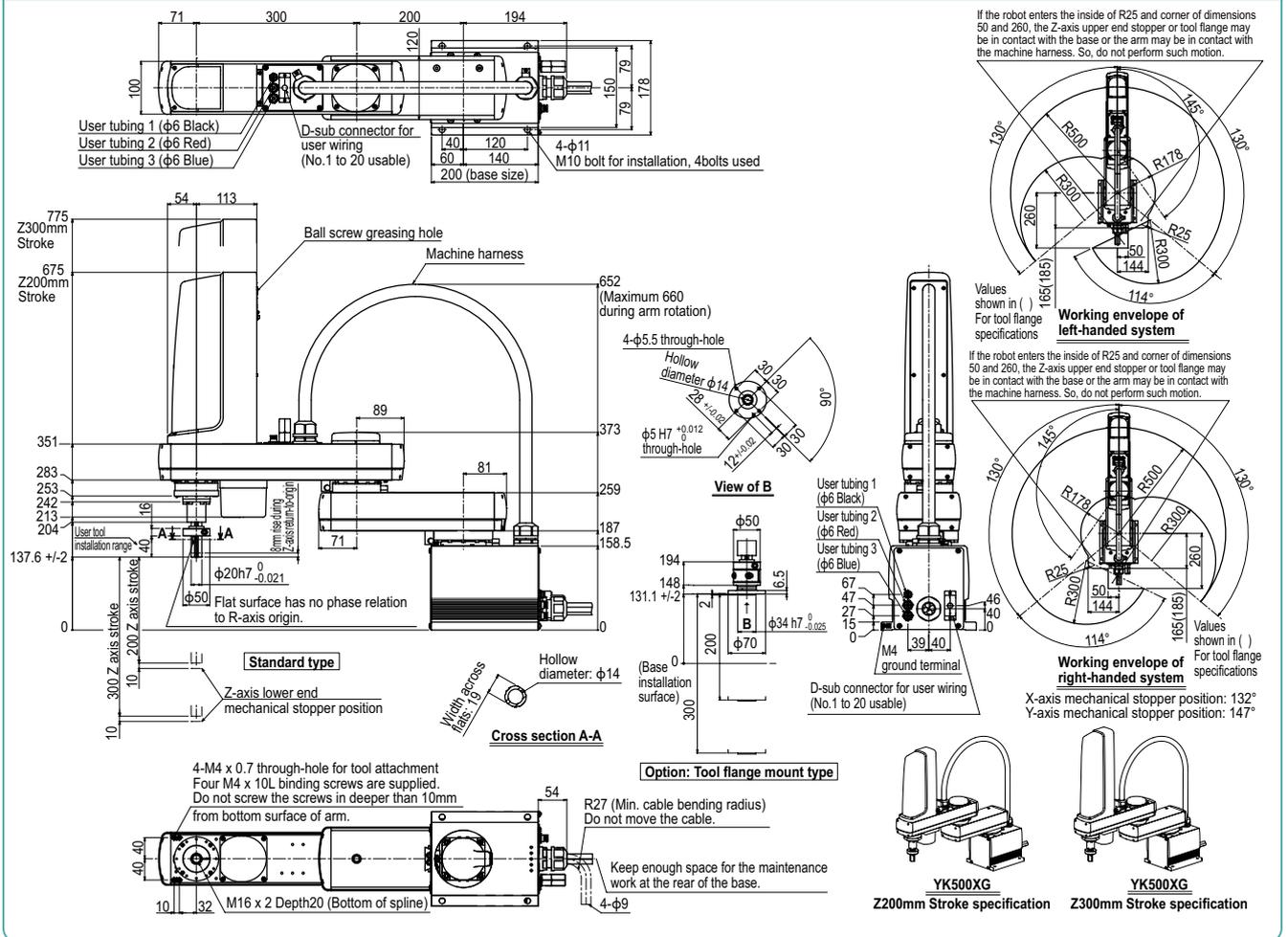
Controller	Power capacity (VA)	Operation method
RCX340	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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



# YK510XE-10

Standard type: Medium type

● LOW COST HIGH PERFORMANCE MODEL



- Arm length 510mm
- Maximum payload 10kg

## Ordering method

**YK510XE-10-200**

<b>Model</b>	<b>Maximum payload</b>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Hollow shaft/cap</b>	<b>Brake release switch</b>	<b>Cable</b>	<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A to E (OP.A to E)</b>	<b>Absolute battery</b>
			No entry: None F: With tool flange	No entry: None S: With hollow shaft C: With hollow cap	No entry: None BS: With brake release switch	3L: 3.5m 5L: 5m 10L: 10m	<b>RCX340-4</b>			

Specify various controller setting items.  
RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	235 mm	275 mm	200 mm	-
	<b>Rotation angle</b>	+/-134 °	+/-152 °	-	+/-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		Timing belt	
	<b>Motor to speed reducer</b>	Direct-coupled		Timing belt	
<b>Speed reducer to output</b>		Direct-coupled		Timing belt	
		Direct-coupled		Timing belt	
<b>Repeatability</b> <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.01 °	
<b>Maximum speed</b>		7.8 m/sec	2 m/sec	2600 °/sec	
<b>Maximum payload</b>		10 kg (Standard specification, Option specifications <sup>Note 4</sup> ), 9 kg (Option specifications <sup>Note 5</sup> )			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.38 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.3 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>		25 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 and performing the coarse positioning arch operation.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and offset amount for R-axis moment of inertia settings.  
 Note 4. Maximum payload of the standard or option specifications (brake release switch type, user wiring/tubing through cap type) is 10 kg.  
 Note 5. Maximum payload of the option specifications (tool flange mount type, user wiring/tubing through shaft type) is 9 kg.

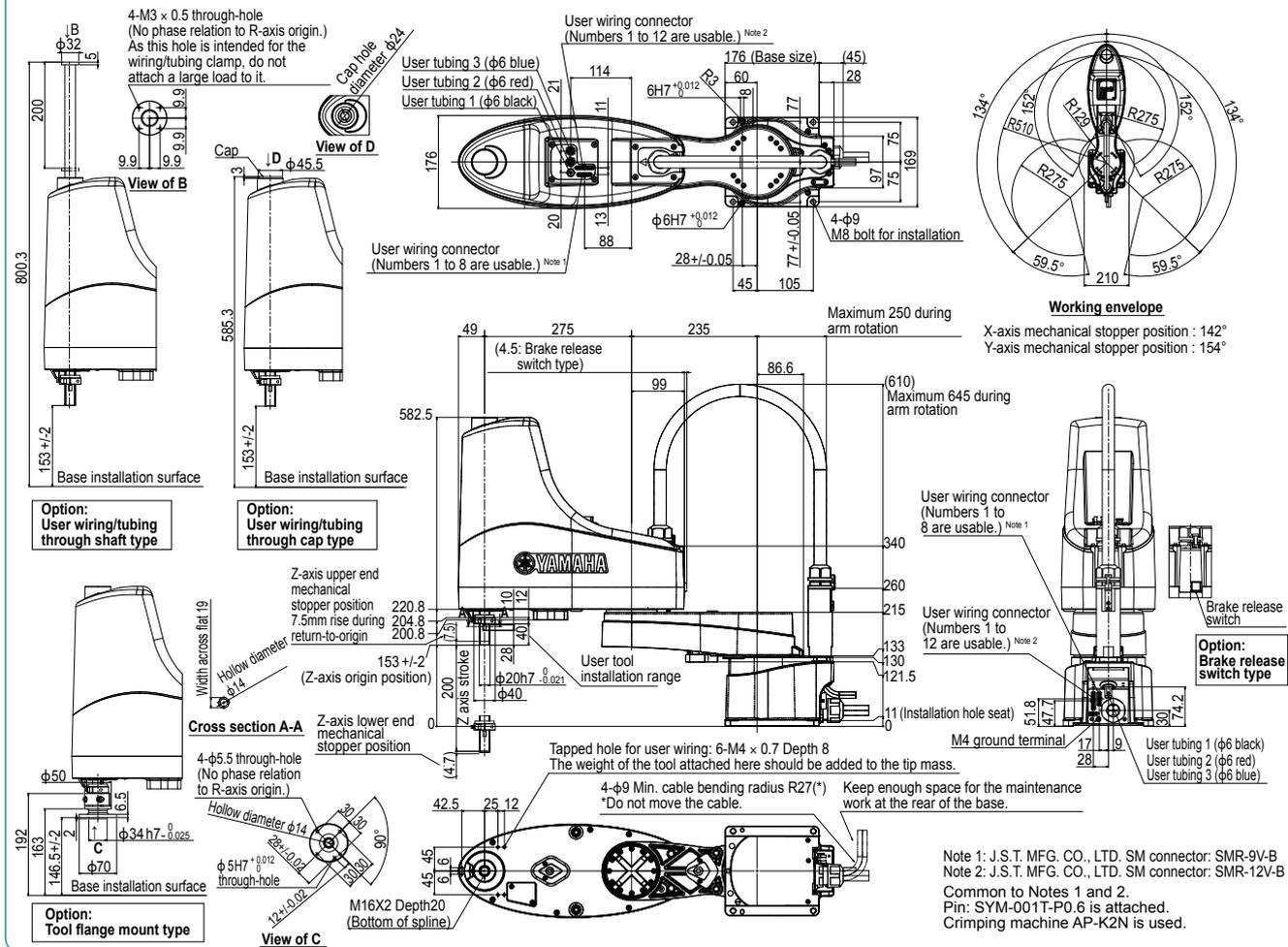
## Controller

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 restricted by adding the X- and Y-axis mechanical stoppers. (The maximum movement range was set at 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.

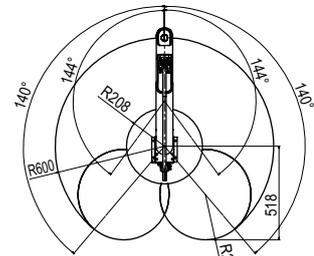
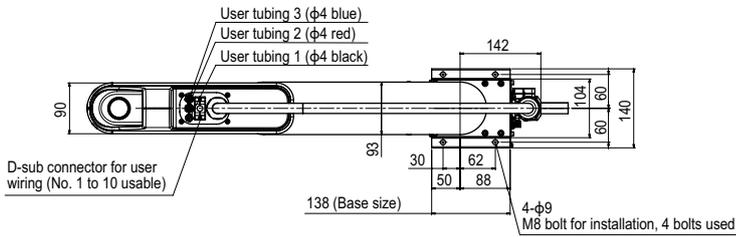
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
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## YK510XE-10

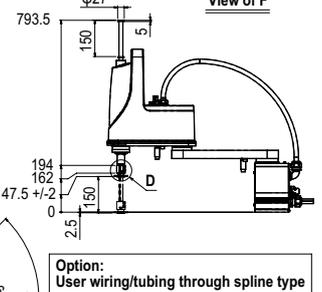
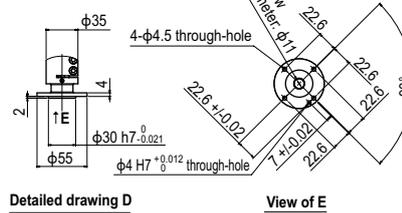
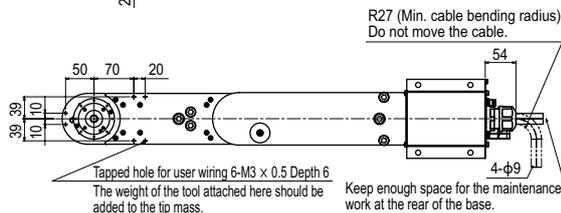
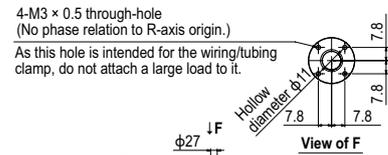
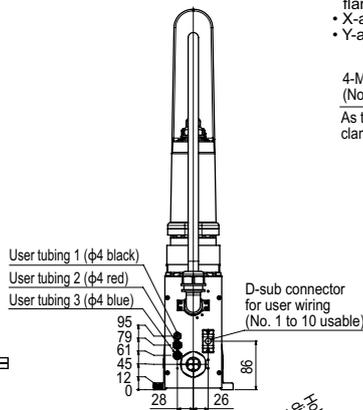
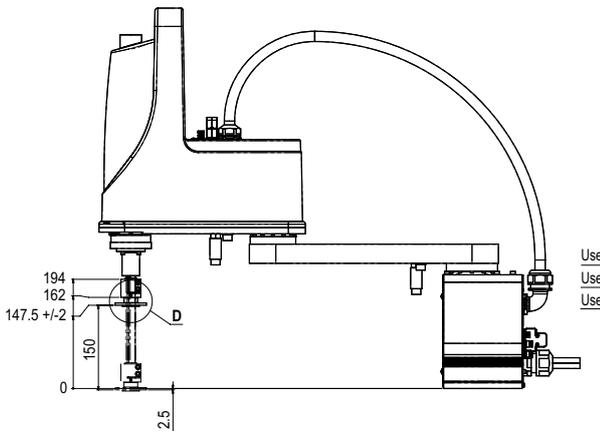




YK600XGL Tool flange mount type



- 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°





# YK610XE-10

Standard type: Medium type

● LOW COST HIGH PERFORMANCE MODEL



- Arm length 610mm
- Maximum payload 10kg

## Ordering method

**YK610XE-10-200**

<b>Model</b>	<b>Maximum payload</b>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Hollow shaft/cap</b>	<b>Brake release switch</b>	<b>Cable</b>	<b>Controller / Number of controllable axes</b>	<b>Safety standard</b>	<b>Option A to E (OP.A to E)</b>	<b>Absolute battery</b>
			No entry: None F: With tool flange	No entry: None S: With hollow shaft C: With hollow cap	No entry: None BS: With brake release switch	3L: 3.5m 5L: 5m 10L: 10m	<b>RCX340-4</b>			

Specify various controller setting items.  
RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	335 mm	275 mm	200 mm	-
	<b>Rotation angle</b>	+/-134°	+/-152°	-	+/-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		Timing belt	
	<b>Motor to speed reducer</b>	Direct-coupled		Timing belt	
<b>Speed reducer to output</b>		Direct-coupled		Timing belt	
	<b>Repeatability</b> <sup>Note 1</sup>	+/-0.01 mm	+/-0.01 mm	+/-0.01°	
<b>Maximum speed</b>		8.6 m/sec	2 m/sec	2600 °/sec	
<b>Maximum payload</b>		10 kg (Standard specification, Option specifications <sup>Note 4</sup> ), 9 kg (Option specifications <sup>Note 5</sup> )			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.39 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.3 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>		25 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 and performing the coarse positioning arch operation.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and offset amount for R-axis moment of inertia settings.  
 Note 4. Maximum payload of the standard or option specifications (brake release switch type, user wiring/tubing through cap type) is 10 kg.  
 Note 5. Maximum payload of the option specifications (tool flange mount type, user wiring/tubing through shaft type) is 9 kg.

## Controller

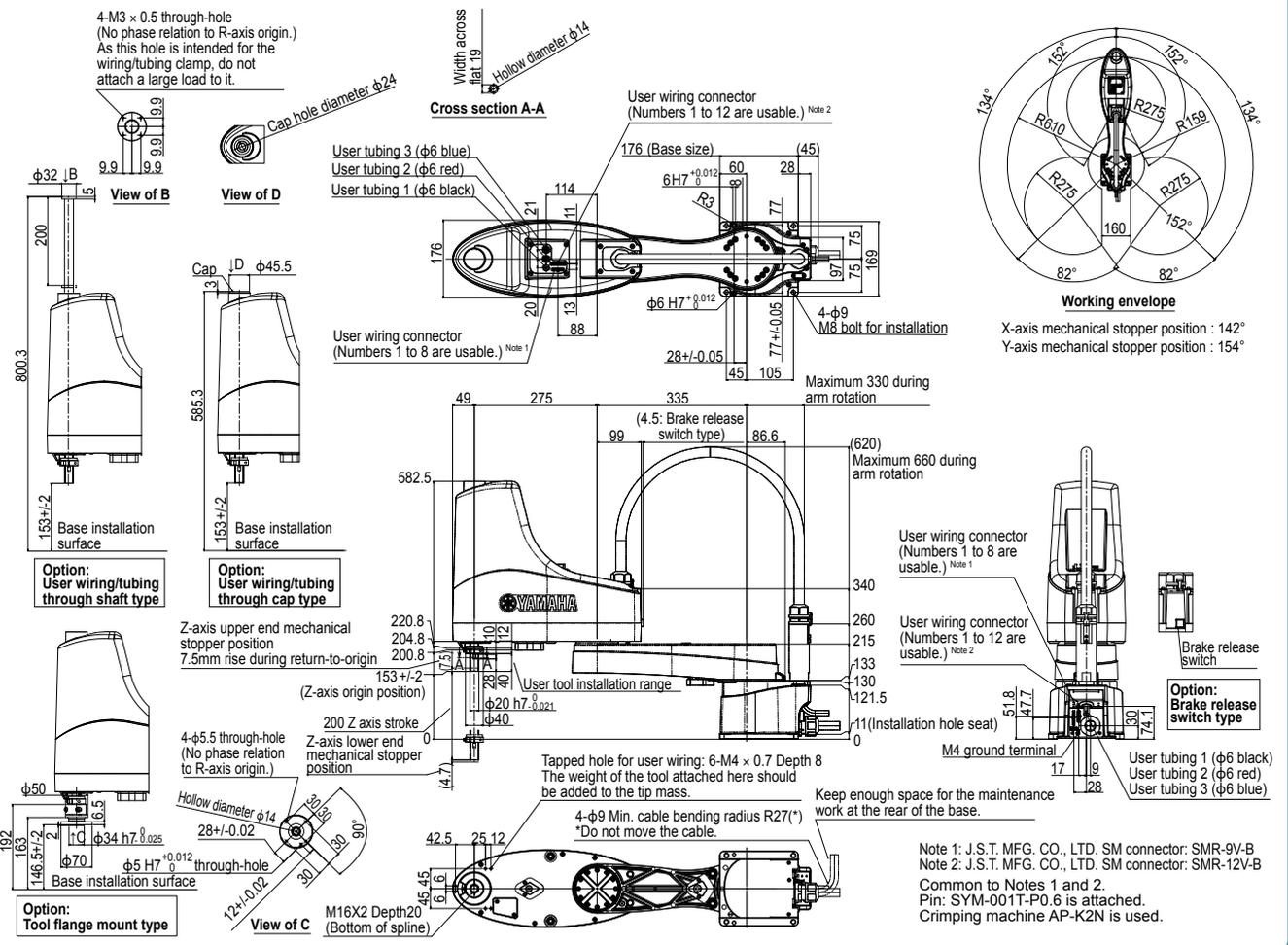
Controller	Power capacity (VA)	Operation method
RCX340	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. The movement range can be restricted by adding the X- and Y-axis mechanical stoppers. (The maximum movement range was set at 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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## YK610XE-10



# 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.636**

## 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> <sup>Note 1</sup>		+/-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> <sup>Note 2</sup>		0.47 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		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.

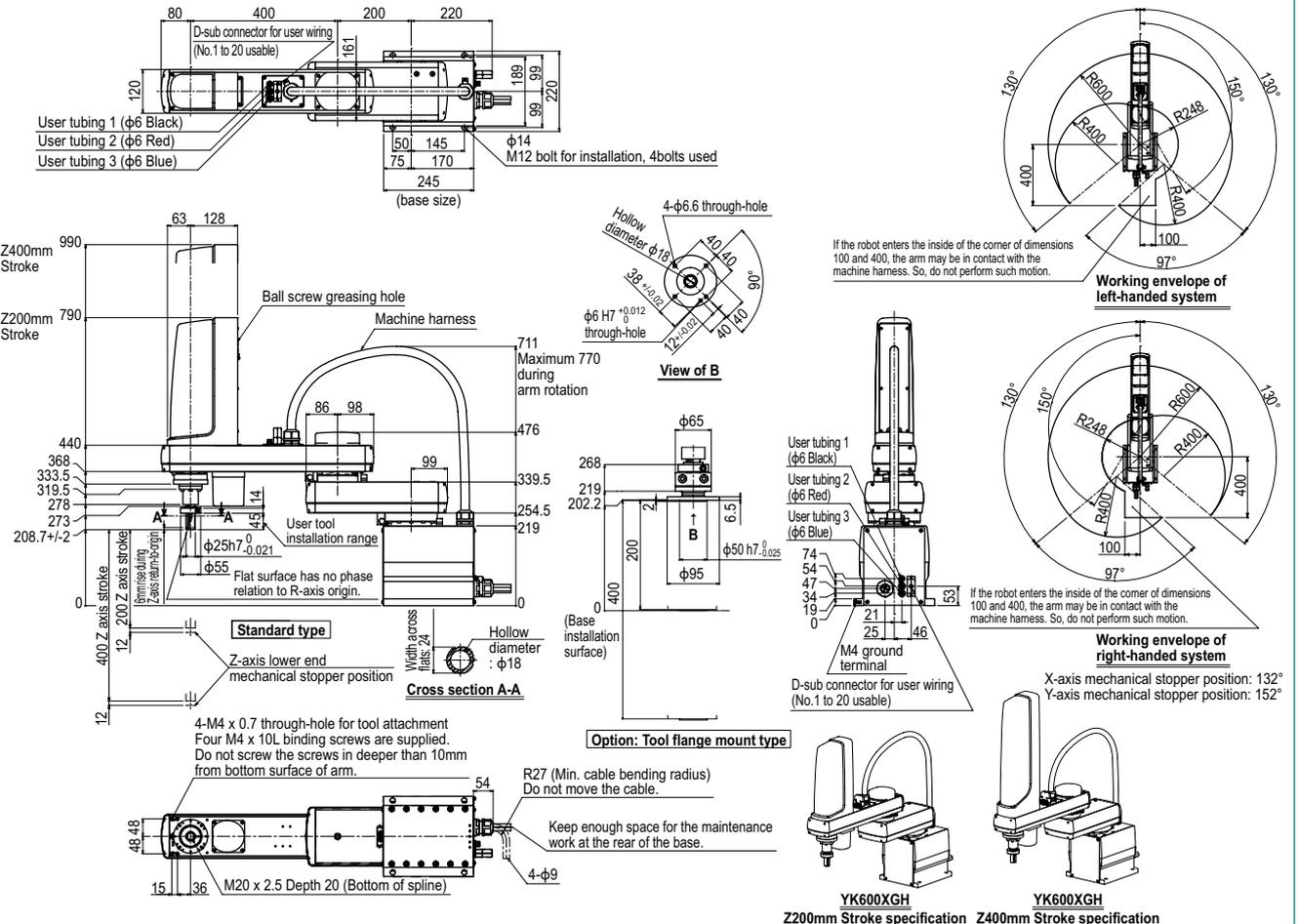
## Controller

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



# YK700XGL

Standard type: Large type

- Arm length 700mm
- Maximum payload 10kg

Note. This model is a special order product. Please consult us for delivery time.

## Ordering method

**YK700XGL**       **RCX340-4**                  

Model	Z axis stroke	Tool flange	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
	200: 200mm 300: 300mm	No entry: None F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	400 mm	300 mm	200 mm   300 mm	-
	Rotation angle	+/-130 °	+/-145 °	-	+/-360 °
AC servo motor output		400 W	200 W	200 W	200 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability		+/-0.01 mm	+/-0.01 mm	+/-0.005 °	
Maximum speed		9.2 m/sec	2.3 m/sec   1.7 m/sec	1700 °/sec	
Maximum payload		10 kg (Standard type), 9 kg (Tool flange mount type)			
Standard cycle time: with 2kg payload		0.50 sec			
R-axis tolerable moment of inertia		0.30 kgm <sup>2</sup>			
User wiring		0.2 sq x 20 wires			
User tubing (Outer diameter)		φ6 x 3			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5, 10 m			
Weight		32 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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## YK700XGL

**Working envelope of right-handed system**

**Working envelope of left-handed system**

**View of B**

**Cross section A-A**

**Standard type**

**Option: Tool flange mount type**

**2200mm Stroke specification**

**300 (Z axis stroke)**

**200 (Z axis stroke)**

**Z-axis lower end mechanical stopper position**

**4-M4 x 0.7 through-hole for tool attachment**

**4-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.**

**M4 ground terminal**

**D-sub connector for user wiring (No. 1 to 20 usable)**

**YK700XGL 2200mm Stroke specification**

**YK700XGL 300mm Stroke specification**

# YK710XE-10

Standard type: Large type

● LOW COST HIGH PERFORMANCE MODEL



- Arm length 710mm
- Maximum payload 10kg

## Ordering method

**YK710XE-10-200**

Model	Maximum payload	Z axis stroke	Tool flange	Hollow shaft/cap	Brake release switch	Cable
			No entry: None F: With tool flange	No entry: None S: With hollow shaft C: With hollow cap	No entry: None BS: With brake release switch	3L: 3.5m 5L: 5m 10L: 10m

**RCX340-4**

Controller / Number of controllable axes	Safety standard	Option A to E (OP.A to E)	Absolute battery

Specify various controller setting items.

RCX340 ▶ **P.636**

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	435 mm	275 mm	200 mm	-
		+/-134°	+/-152°	-	+/-360°
	AC servo motor output	400 W	200 W	200 W	200 W
Deceleration mechanism	Transmission method	Direct-coupled		Timing belt	
	Motor to speed reducer	Direct-coupled		Timing belt	
	Speed reducer to output	Direct-coupled		Timing belt	
Repeatability <sup>Note 1</sup>		+/-0.02 mm		+/-0.01 mm	+/-0.01°
Maximum speed		9.5 m/sec		2 m/sec	2600 °/sec
Maximum payload		10 kg (Standard specification, Option specifications <sup>Note 4</sup> ), 9 kg (Option specifications <sup>Note 5</sup> )			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.42 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.3 kgm <sup>2</sup>			
User wiring		0.2 sq x 20 wires			
User tubing (Outer diameter)		φ 6 x 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		26 kg			

## Controller

Controller	Power capacity (VA)	Operation method
RCX340	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

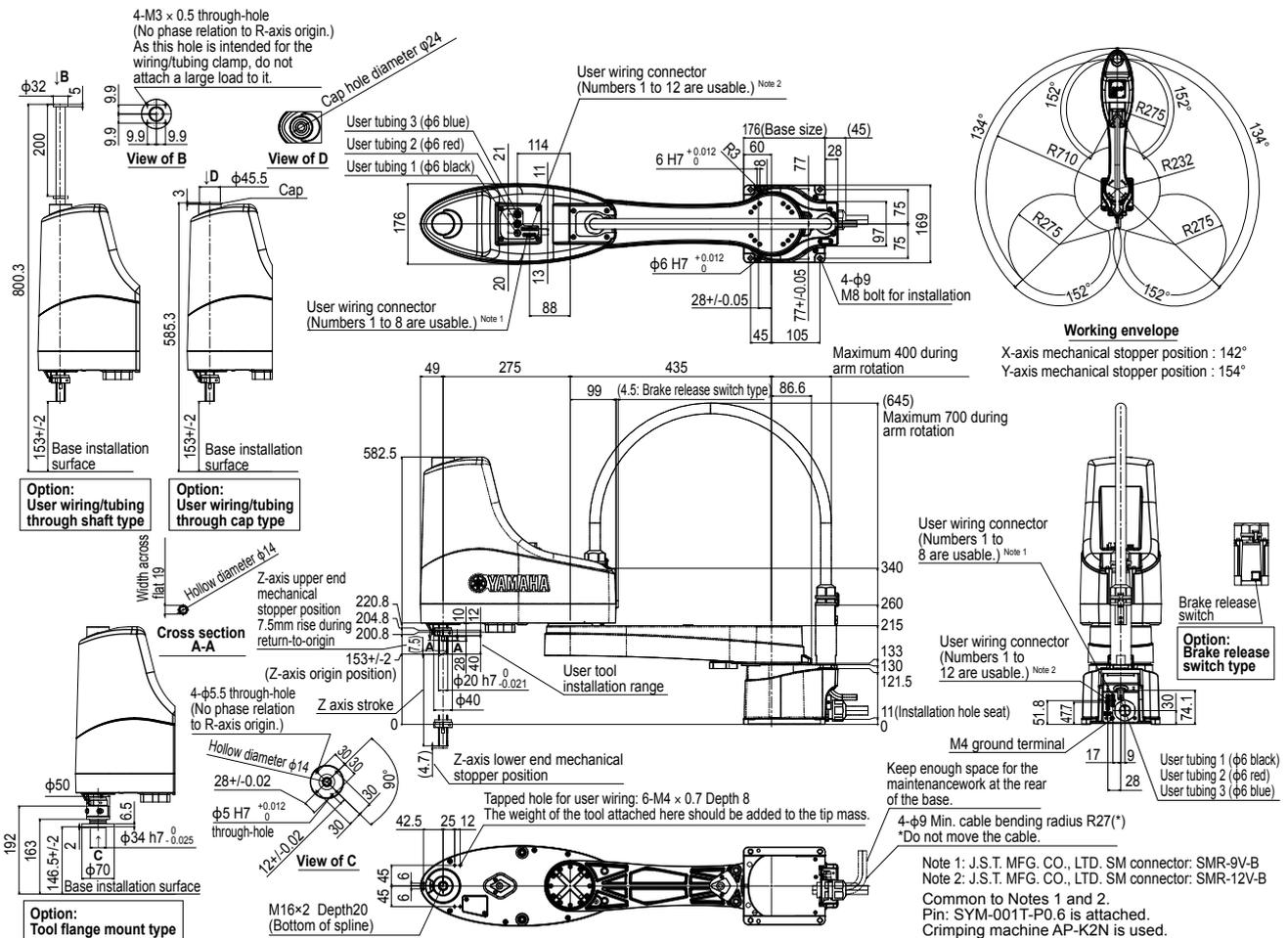
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
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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 and performing the coarse positioning arch operation.  
 Note 3. The acceleration coefficient is set automatically in accordance with the tip weight and offset amount for R-axis moment of inertia settings.  
 Note 4. Maximum payload of the standard or option specifications (brake release switch type, user wiring/tubing through cap type) is 10 kg.  
 Note 5. Maximum payload of the option specifications (tool flange mount type, user wiring/tubing through shaft type) is 9 kg.

## YK710XE-10



# YK700XG

Standard type: Large type



- Arm length 700mm
- Maximum payload 20kg

## Ordering method

**YK700XG**       **RCX340-4**                      

Model	Z axis stroke	Tool flange	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
	200: 200mm 400: 400mm	No entry: None F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	300 mm	400 mm	200 mm	400 mm
	Rotation angle	+/-130 °	+/-150 °	-	+/-360 °
AC servo motor output		750 W	400 W	400 W	200 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		8.4 m/sec	2.3 m/sec	1.7 m/sec	920 °/sec
Maximum payload		20 kg (Standard type), 19 kg (Tool flange mount type)			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.42 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		1.0 kgm <sup>2</sup>			
User wiring		0.2 sq x 20 wires			
User tubing (Outer diameter)		φ 6 x 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		Z axis 200 mm: 50 kg Z axis 400 mm: 52 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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## YK700XG

**Working envelope of left-handed system**

**Working envelope of right-handed system**

**Option: Tool flange mount type**

**YK700XG Z200mm Stroke specification**

**YK700XG Z400mm Stroke specification**

# YK800XG

Standard type: Large type



- Arm length 800mm
- Maximum payload 20kg

## Ordering method

<b>YK800XG</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 (O.P.A)</b>	<b>Option B (O.P.B)</b>	<b>Option C (O.P.C)</b>	<b>Option D (O.P.D)</b>	<b>Option E (O.P.E)</b>	<b>Absolute battery</b>	

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	400 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>	Direct-coupled			
<b>Repeatability</b> <small>Note 1</small>	<b>Speed reducer to output</b>	Direct-coupled			
		+/-0.02 mm		+/-0.01 mm	+/-0.004 °
<b>Maximum speed</b>		9.2 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>		0.48 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: 52 kg Z axis 400 mm: 54 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.

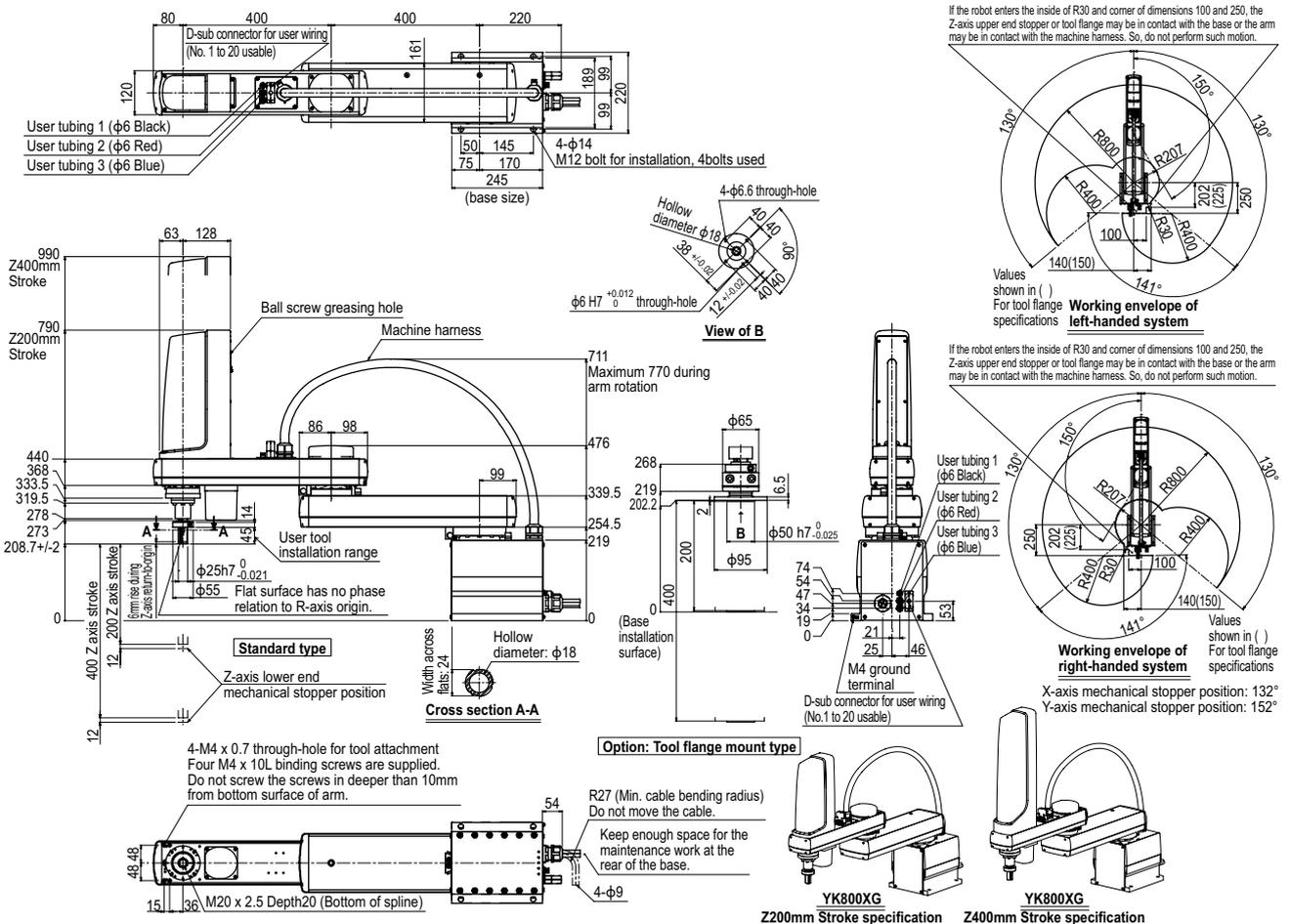
## Controller

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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## YK800XG



# YK900XG

Standard type: Large type

- Arm length 900mm
- Maximum payload 20kg



## Ordering method

<b>YK900XG</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.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	500 mm	400 mm	200 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> <b>Speed reducer to output</b>	Direct-coupled			
<b>Repeatability</b> <sup>Note 1</sup>		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>		9.9 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> <sup>Note 2</sup>		0.49 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		1.0 kgm <sup>2</sup>			
<b>User wiring</b>		0.2 sq x 20 wires			
<b>User tubing (Outer diameter)</b>		φ 6 x 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: 54 kg Z axis 400 mm: 56 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

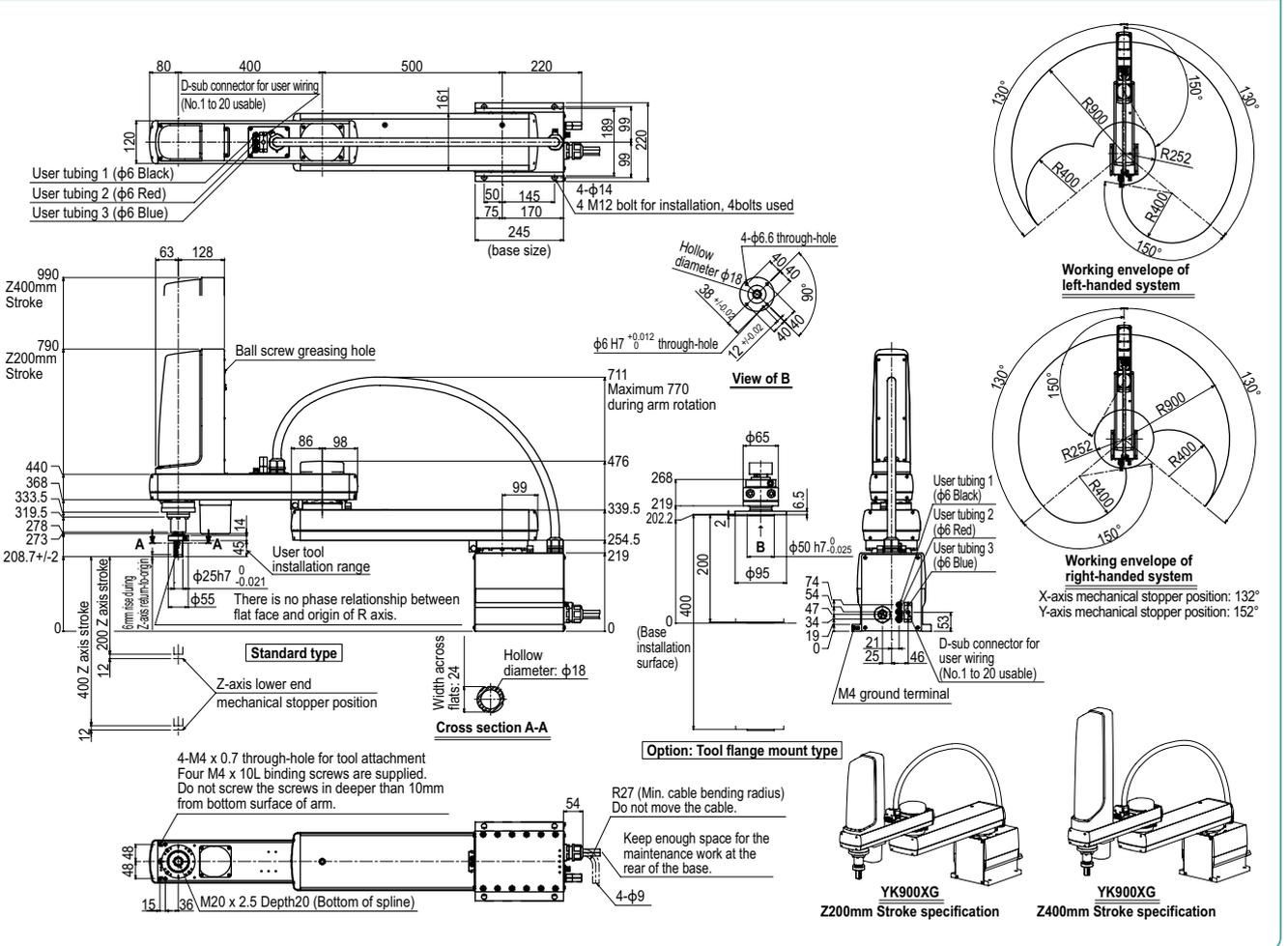
Controller	Power capacity (VA)	Operation method
RCX340	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

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

## YK900XG





# YK1200X

Standard type: Large type

- Arm length 1200mm
- Maximum payload 50kg



## Ordering method

**YK1200X - 400**

**RCX340-4**

Model	Z axis stroke	Cable	Controller / Number of controllable axes	Safety standard	Option A (O.P.A)	Option B (O.P.B)	Option C (O.P.C)	Option D (O.P.D)	Option E (O.P.E)	Absolute battery
		3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	600 mm	600 mm	400 mm	-
	Rotation angle	+/-125 °	+/-150 °	-	+/-180 °
AC servo motor output		900 W	800 W	600 W	400 W
Deceleration mechanism	Transmission method	Direct-coupled		Timing belt transmission	Timing belt transmission
	Motor to speed reducer Speed reducer to output	Direct-coupled		Direct-coupled	Direct-coupled
Repeatability <sup>Note 1</sup>		+/-0.05 mm		+/-0.02 mm	+/-0.005 °
Maximum speed		7.4 m/sec		0.75 m/sec	600 °/sec
Maximum payload		50 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.91 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		2.45 kgm <sup>2</sup>			
User wiring		0.2 sq x 20 wires			
User tubing (Outer diameter)		φ 6 x 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		124 kg			

Note 1. This is the value at a constant ambient temperature. (X,Y axis)

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.

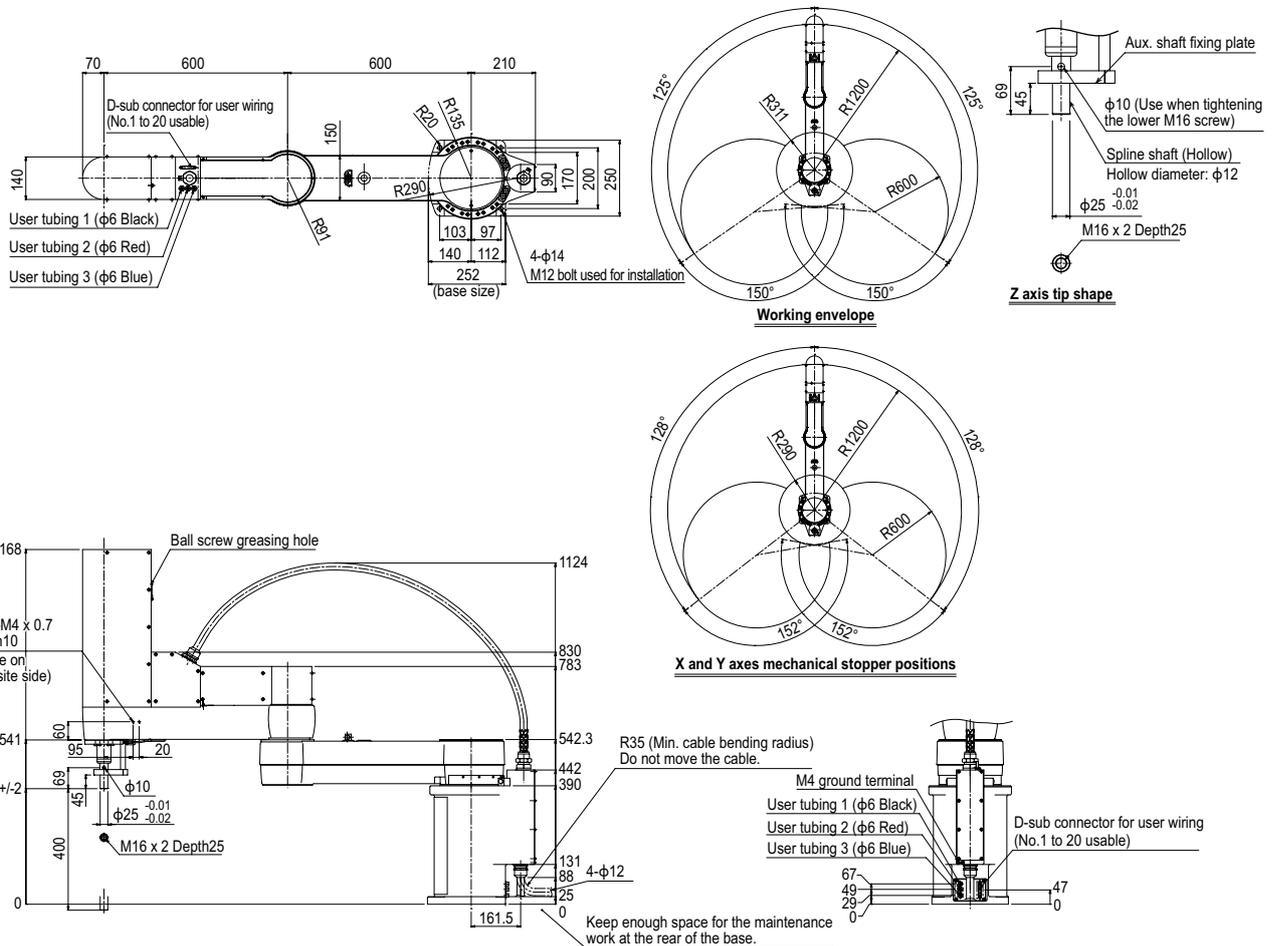
## Controller

Controller	Power capacity (VA)	Operation method
RCX340	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.

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

## YK1200X



# YK1200XG

Standard type: Large type



- Arm length 1200mm
- Maximum payload 50kg

## Ordering method

<b>YK1200XG - 400</b>				<b>RCX341-4</b>		<b>R</b>								
Model	Z axis stroke	Tool flange No entry: None F: With tool flange	User Wiring No entry: None UW: User Wiring <sup>Note 4</sup>	Cable 3L: 3.5m 5L: 5m 10L: 10m	Controller / Number of controllable axes	Safety standard	Regenerative unit	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.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	600 mm	600 mm	400 mm	-
	Rotation angle	+/-130 °	+/-150 °	+/-360 °	+/-360 °
AC servo motor output		950 W	400 W	750 W	400 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.05 mm		+/-0.02 mm	+/-0.005 °
Maximum speed		7.7 m/sec		1.6 m/sec	600 °/sec
Maximum payload		50 kg			
Standard cycle time: with 5kg payload <sup>Note 2</sup>		0.61 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		2.45 kgm <sup>2</sup>			
User wiring		0.2 sq × 12 wires			
User tubing (Outer diameter)		φ 6 × 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		96 kg			

## Controller

Controller	Power capacity (VA)	Operation method
RCX341	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.

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

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. User wiring stays (optional) are parts required for additional installation of user wiring. Installation on the robot must be performed by the customer.

## YK1200XG

**User wiring connector Cat5e RJ45**  
Tapped hole for user wiring: 12-M4 0.7 Depth 8  
The weight of the tool attached here should be added to the tip mass.

**User tubing 3-φ6**  
Tapped hole for user wiring: 8-M4 0.7 Depth 8

**User wiring connector (Numbers 1 to 12 are usable) <sup>Note 1</sup>**  
Brake release switch

**Note 1**  
HIROSE ELECTRIC CO., LTD.  
Housing: DF62B-13S-2.2C(11)  
Contact: DF62-2428SC included

**Working envelope(Standard)**  
X-axis mechanical stopper position:130°  
Y-axis mechanical stopper position:154°

**Working envelope(Additional stopper X-axis only)**  
X-axis mechanical stopper position:100°  
Y-axis mechanical stopper position:154°

**Working envelope(Additional stopper Y-axis only)**  
X-axis mechanical stopper position:130°  
Y-axis mechanical stopper position:133°

**Working envelope(Additional stopper X-axis, Y-axis)**  
X-axis mechanical stopper position:100°  
Y-axis mechanical stopper position:133°

**Option: Tool flange mount type**

**View of B**

**0(Base installation surface)**

# YK300XGS

Wall mount / inverse type

● Arm length 300mm ● Maximum payload 5kg Note. Built-to-order product. Contact us for the delivery period.

## Ordering method

**YK300XGS** **150** **RCX340-4**

Model	Installation method <sup>Note1</sup>	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
	W: Wall mount (same as per external view) U: Inverse wall mount (upside down)	150: 150mm	No entry: None F: With tool flange	No entry: None S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

Note 1. When installing the robot, always follow the specifications.  
Do not install the ceiling-mount robot upside down or do not install the inverse type robot to a ceiling.  
Incorrect installation can cause trouble or malfunction.

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	150 mm	150 mm	150 mm	-
	Rotation angle	+/-120 °	+/-130 °	-	+/-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 <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		4.4 m/sec		1.0 m/sec	1020 °/sec (wall mount) 720 °/sec (inverse wall mount)
Maximum payload		5 kg (Standard specification), 4 kg (Option specifications <sup>Note 4</sup> )			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.49 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <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		19.5 kg			

Note 1. This is the value at a constant ambient temperature.  
Note 2. When reciprocating 25mm horizontally and 300mm horizontally (with a 2kg payload in 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. Maximum payload of option specifications (with tool flange attached or with user wiring and tubing routed through spline shaft) is 4kg.

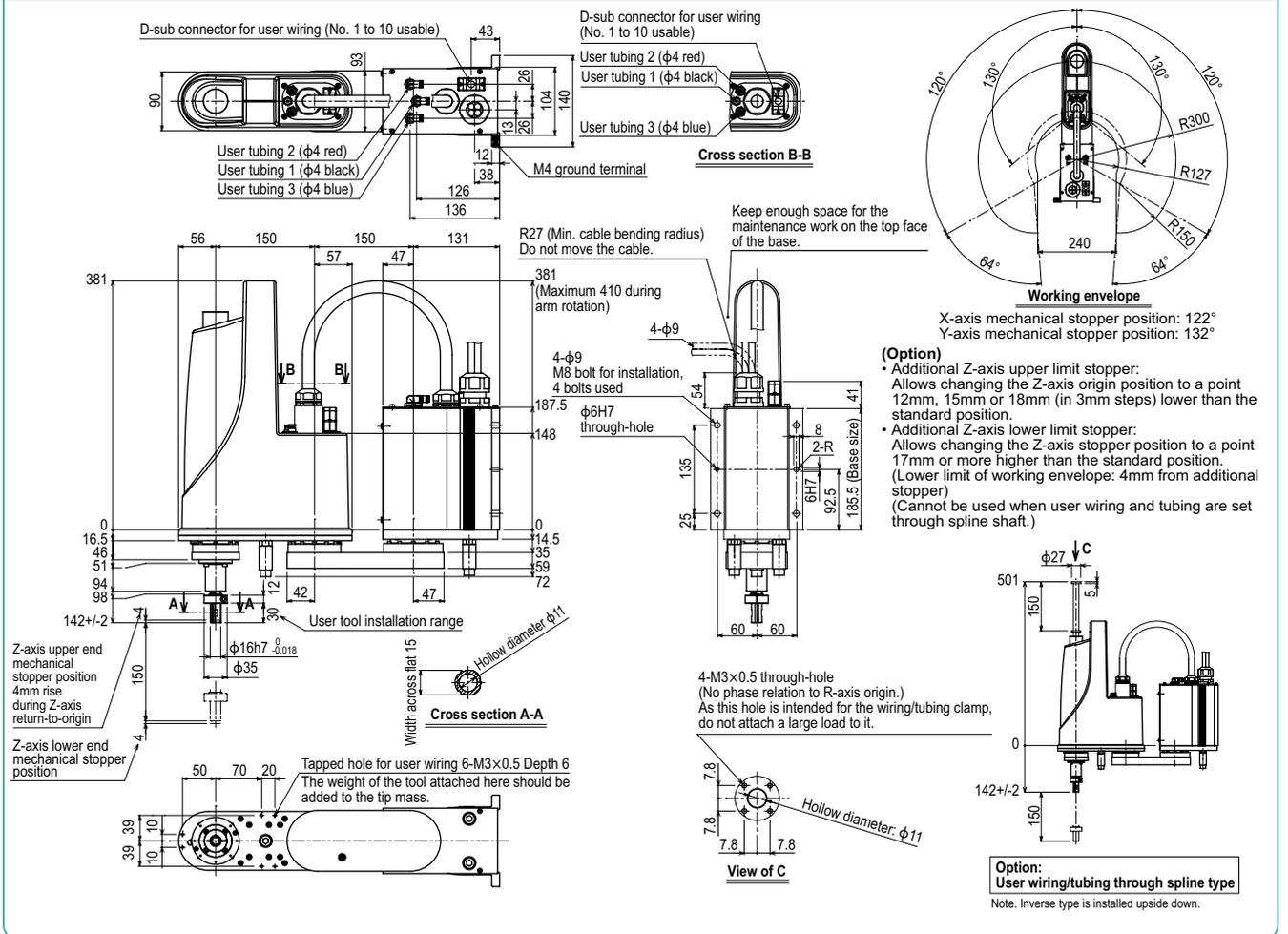
## Controller

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 position of Y axis mechanical stopper. (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:  
<https://global.yamaha-motor.com/business/robot/>

## YK300XGS





# YK400XGS

Wall mount / inverse type

● Arm length 400mm ● Maximum payload 5kg Note. Built-to-order product. Contact us for the delivery period.

## Ordering method

**YK400XGS** **150** **RCX340-4**

Model	Installation method <sup>Note1</sup>	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
	W: Wall mount (same as per external view) U: Inverse wall mount (upside down)	150: 150mm	No entry: None F: With tool flange	No entry: None S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

Note 1. When installing the robot, always follow the specifications.  
Do not install the ceiling-mount robot upside down or do not install the inverse type robot to a ceiling.  
Incorrect installation can cause trouble or malfunction.

## Specifications

	X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>				
Arm length	250 mm	150 mm	150 mm	-
Rotation angle	+/-125 °	+/-144 °	-	+/-360 °
<b>AC servo motor output</b>	200 W	150 W	50 W	100 W
<b>Deceleration mechanism</b>	Direct-coupled			
Transmission method	Direct-coupled			
Motor to speed reducer	Direct-coupled			
Speed reducer to output	Direct-coupled			
<b>Repeatability</b> <sup>Note 1</sup>	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>	6.1 m/sec	1.1 m/sec	1020 °/sec (wall mount) 720 °/sec (inverse wall mount)	
<b>Maximum payload</b>	5 kg (Standard specification), 4 kg (Option specifications <sup>Note 4</sup> )			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>	0.49 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>	0.05 kgm <sup>2</sup>			
<b>User wiring</b>	0.2 sq × 10 wires			
<b>User tubing (Outer diameter)</b>	φ 4 × 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>	20 kg			

Note 1. This is the value at a constant ambient temperature.  
Note 2. When reciprocating 25mm horizontally and 300mm horizontally (with a 2kg payload in 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. Maximum payload of option specifications (with tool flange attached or with user wiring and tubing routed through spline shaft) is 4kg.

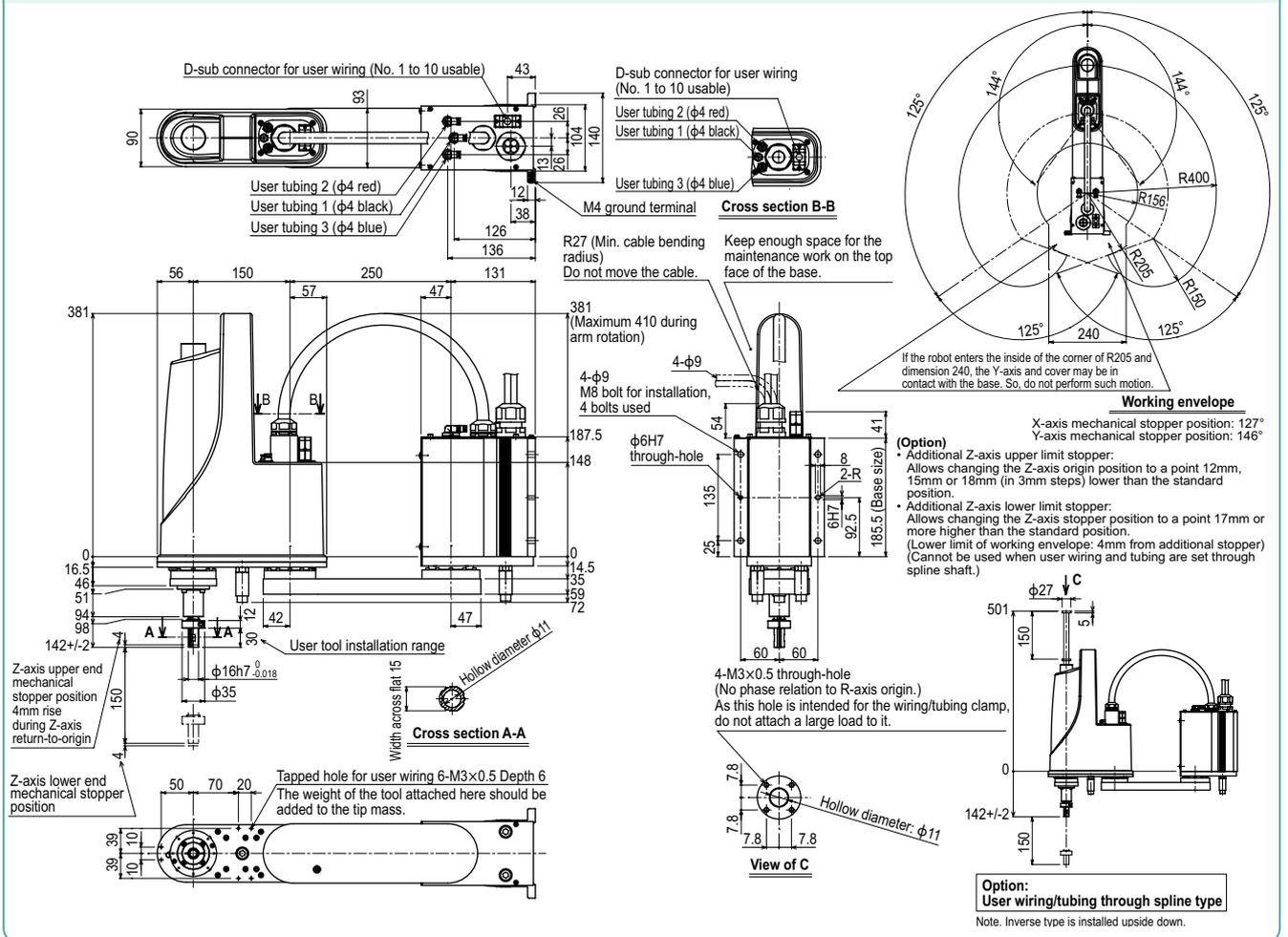
## Controller

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 position of Y axis mechanical stopper. (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:  
<https://global.yamaha-motor.com/business/robot/>

## YK400XGS







# YK600XGS

Wall mount / inverse type

- Arm length 600mm
- Maximum payload 10kg

## Ordering method

<b>YK600XGS</b>					<b>RCX340-4</b>										
<b>Model</b>	<b>Installation method</b> <small>Note 1</small>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Cable</b>	<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>			
	W: Wall mount (same as per external view) U: Inverse wall mount (upside down)	200: 200mm 300: 300mm	No entry: None F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m									Specify various controller setting items. RCX340 ▶ <b>P.636</b>		

Note 1. When installing the robot, always follow the specifications.  
Do not install the ceiling-mount robot upside down or do not install the inverse type robot to a ceiling.  
Incorrect installation can cause trouble or malfunction.

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	<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> <small>Note 1</small>		+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.004°
<b>Maximum speed</b>		8.4 m/sec	2.3 m/sec	1.7 m/sec	1700 °/sec (wall mount) 800 °/sec (inverse wall mount)
<b>Maximum payload</b>		10 kg (Standard type), 9 kg (Tool flange mount type)			
<b>Standard cycle time: with 2kg payload</b> <small>Note 2</small>		0.46 sec			
<b>R-axis tolerable moment of inertia</b> <small>Note 3</small>		0.30 kgm <sup>2</sup>			
<b>User wiring</b>		0.2 sq x 20 wires			
<b>User tubing (Outer diameter)</b>		φ 6 x 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>		31 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.

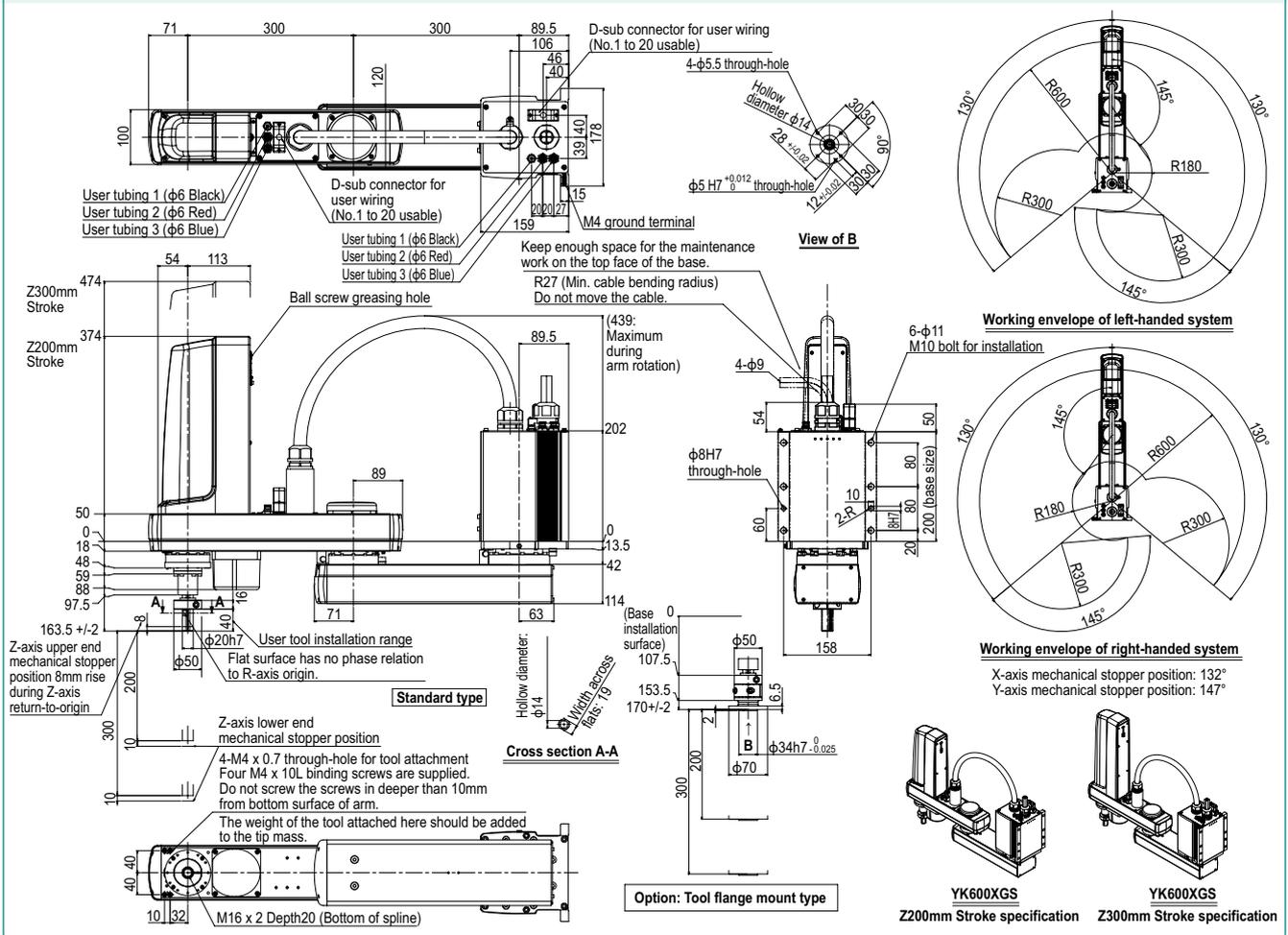
## Controller

Controller	Power capacity (VA)	Operation method
RCX340	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.

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

## YK600XGS





# YK800XGS

Wall mount / inverse type

- Arm length 800mm
- Maximum payload 20kg

## Ordering method

<b>YK800XGS</b>					<b>RCX340-4</b>										
<b>Model</b>	<b>Installation method</b> <small>Note 1</small>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Cable</b>	<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>			
	W: Wall mount (same as per external view) U: Inverse wall mount (upside down)	200: 200mm 400: 400mm	No entry: None F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m											

Specify various controller setting items. RCX340 ▶ **P.636**

Note 1. When installing the robot, always follow the specifications.  
Do not install the ceiling-mount robot upside down or do not install the inverse type robot to a ceiling.  
Incorrect installation can cause trouble or malfunction.

## Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
<b>Rotation angle</b>		400 mm	400 mm	200 mm/400 mm	-
<b>AC servo motor output</b>		+/-130 °	+/-145 °	-	+/-360 °
<b>Deceleration mechanism</b>	<b>Transmission method</b>	750 W	400 W	400 W	200 W
	<b>Motor to speed reducer</b>	Direct-coupled			
	<b>Speed reducer to output</b>	Direct-coupled			
<b>Repeatability</b> <small>Note 1</small>		+/-0.02 mm		+/-0.01 mm	+/-0.004 °
<b>Maximum speed</b>		9.2 m/sec		2.3 m/sec 1.7 m/sec	920 °/sec (wall mount) 480 °/sec (inverse wall mount)
<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>		0.48 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: 52 kg Z axis 400 mm: 54 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.

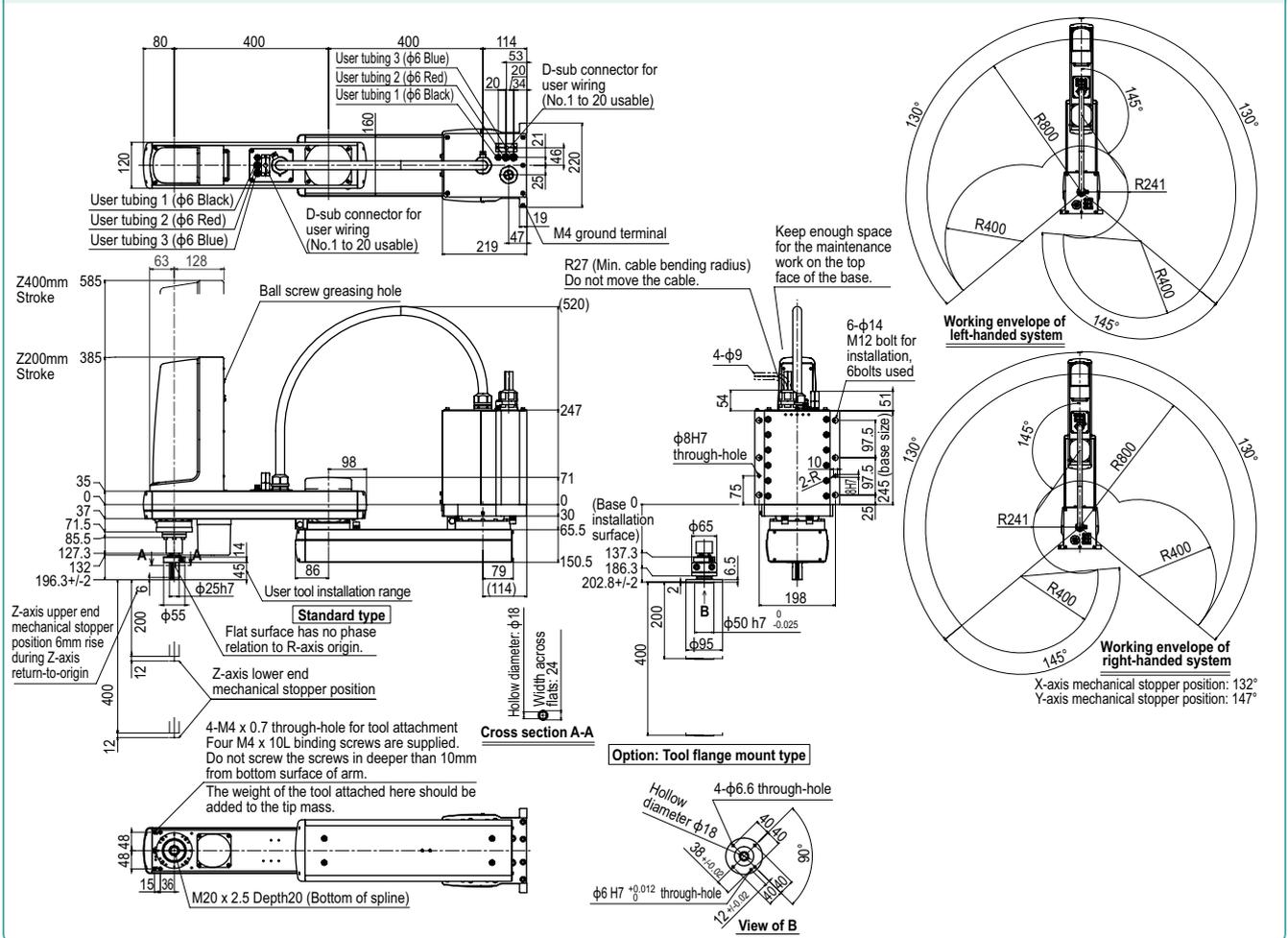
## Controller

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.

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

## YK800XGS



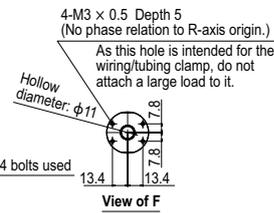
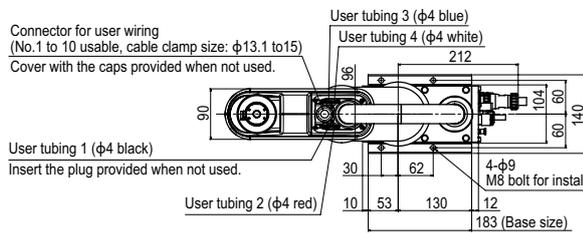






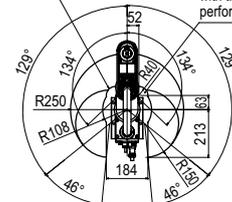
Linear conveyor modules	LCMR200
Single-axis robots	GX
Linear conveyor modules	LCM100
SCARA robots	YK-X
Single-axis robots	Robonity
Linear motor single-axis robots	PHASER
Single-axis robots	FLIP-X
Compact single-axis robots	TRANSERO
Cartesian robots	XY-X
Pick & place robots	YP-X
CLEAN	
CONTROLLER	
INFORMATION	
Oh!t/ Extra small type	
Small / Medium type	
Large type	
Wall mount / Inverse type	
Dust-proof & drip-proof type	

## YK250XGP Tool flange mount type

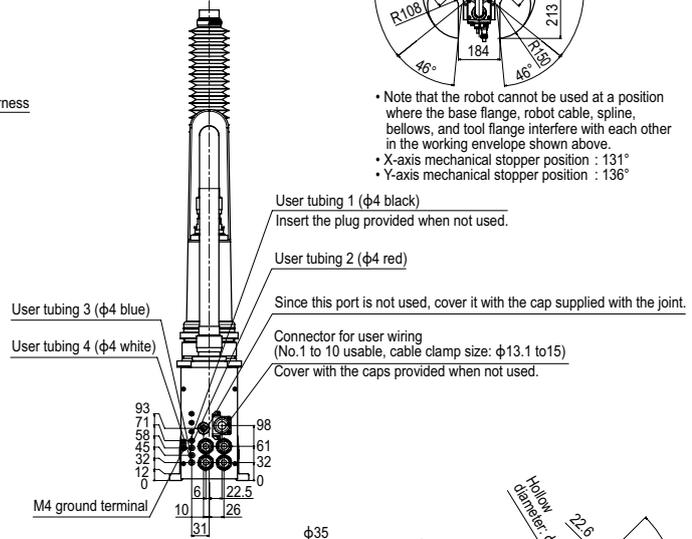
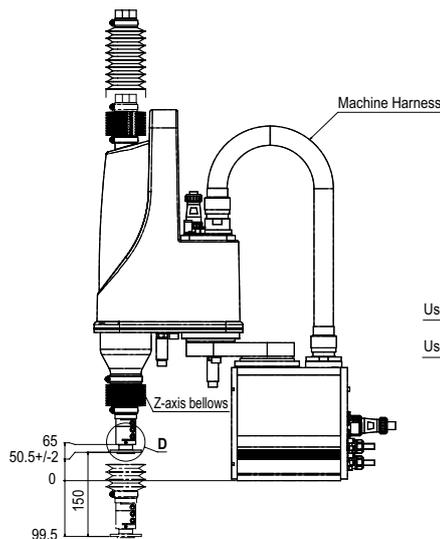


If the robot enters the inside from the inner limit of the working envelope, the Z-axis bellows may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

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.



- 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 :  $131^\circ$
- Y-axis mechanical stopper position :  $136^\circ$

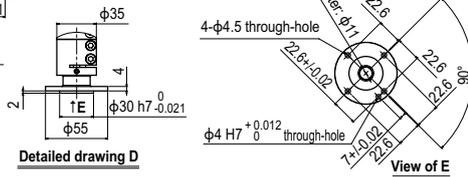


Keep enough space for the maintenance work at the rear of the base.

Tapped hole for user wiring 6-M3 x 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- $\phi 11$



# YK350XGP

Dust-proof & drip-proof type

- Arm length 350mm
- Maximum payload 4kg

## Ordering method

**YK350XGP - 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
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	200 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	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		5.6 m/sec	1.1 m/sec	1020 °/sec	
Maximum payload		4 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.52 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <sup>2</sup>			
Protection class <sup>Note 4</sup>		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		22 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

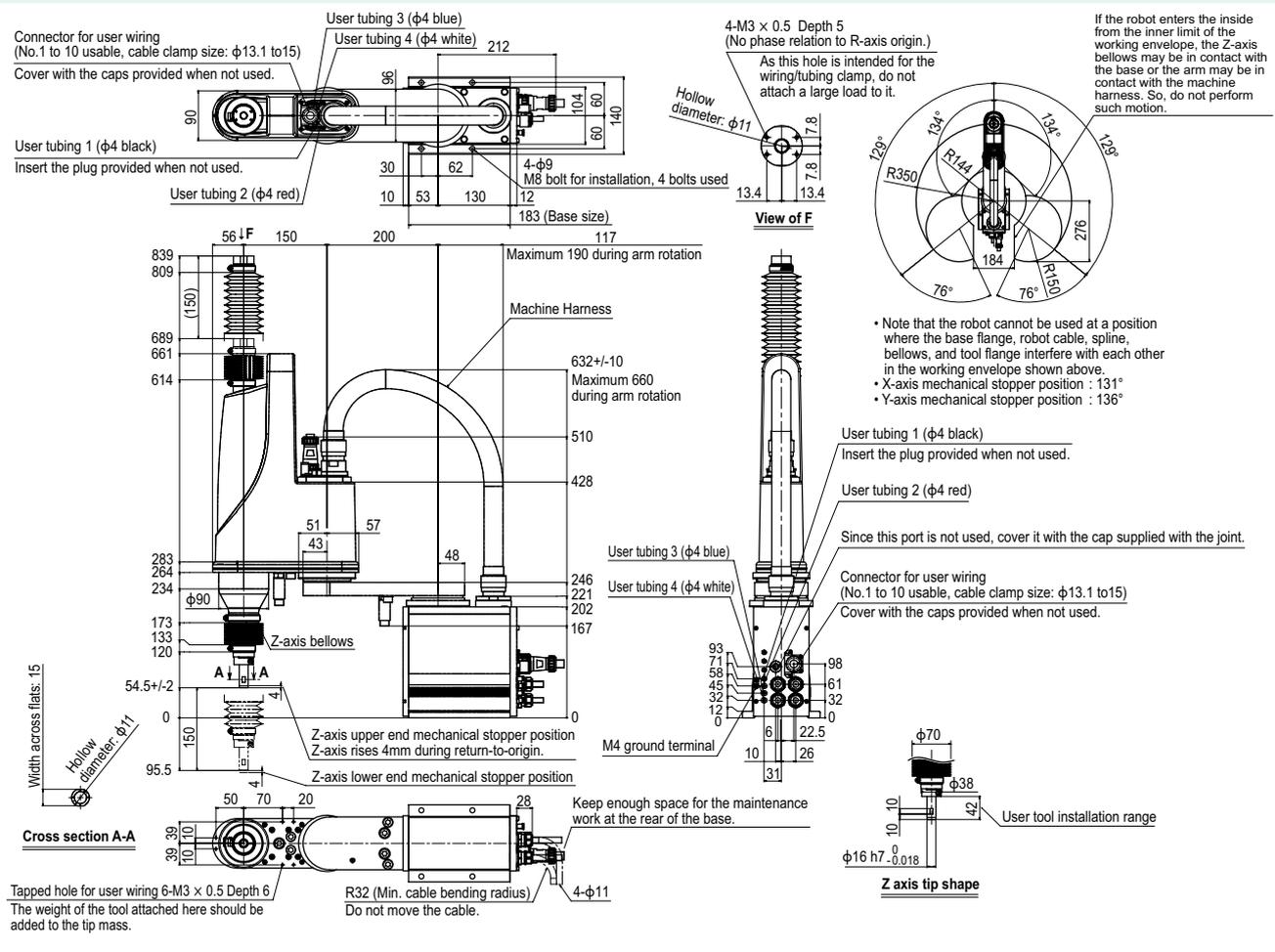
Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.)  
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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.

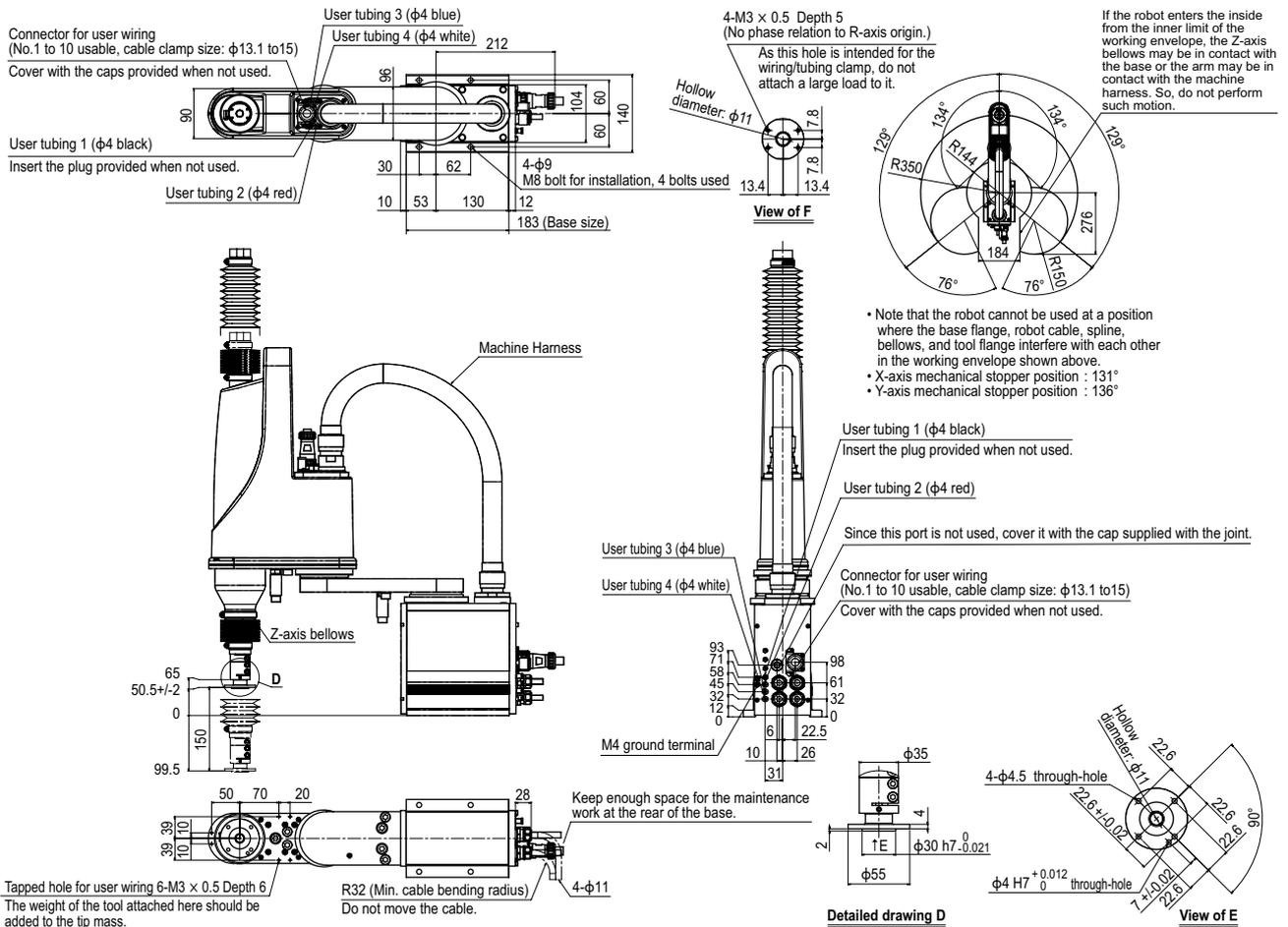
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## YK350XGP



- Linear conveyor modules LCMR200
- Single-axis robots GX
- Linear conveyor modules LCM100
- SCARA robots YK-X
- Single-axis robots Robonity
- Linear motor single-axis robots PHASER
- Single-axis robots FLIP-X
- Compact single-axis robots TRANSERO
- Cartesian robots XY-X
- Pick & place robots YP-X
- CLEAN
- CONTROLLER INFORMATION
- Oh!t/ Extra small type
- Small / Medium type
- Large type
- Wall mount / Inverse type
- Dust-proof & drip-proof type

## YK350XGP Tool flange mount type



# YK400XGP

Dust-proof & drip-proof type

- Arm length 400mm
- Maximum payload 4kg

## Ordering method

**YK400XGP - 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
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	250 mm	150 mm	150 mm	-
	Rotation angle	+/-129 °	+/-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 <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		6.1 m/sec	1.1 m/sec	1020 °/sec	
Maximum payload		4 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.50 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <sup>2</sup>			
Protection class <sup>Note 4</sup>		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq x 10 wires			
User tubing (Outer diameter)		φ 4 x 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		22.5 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

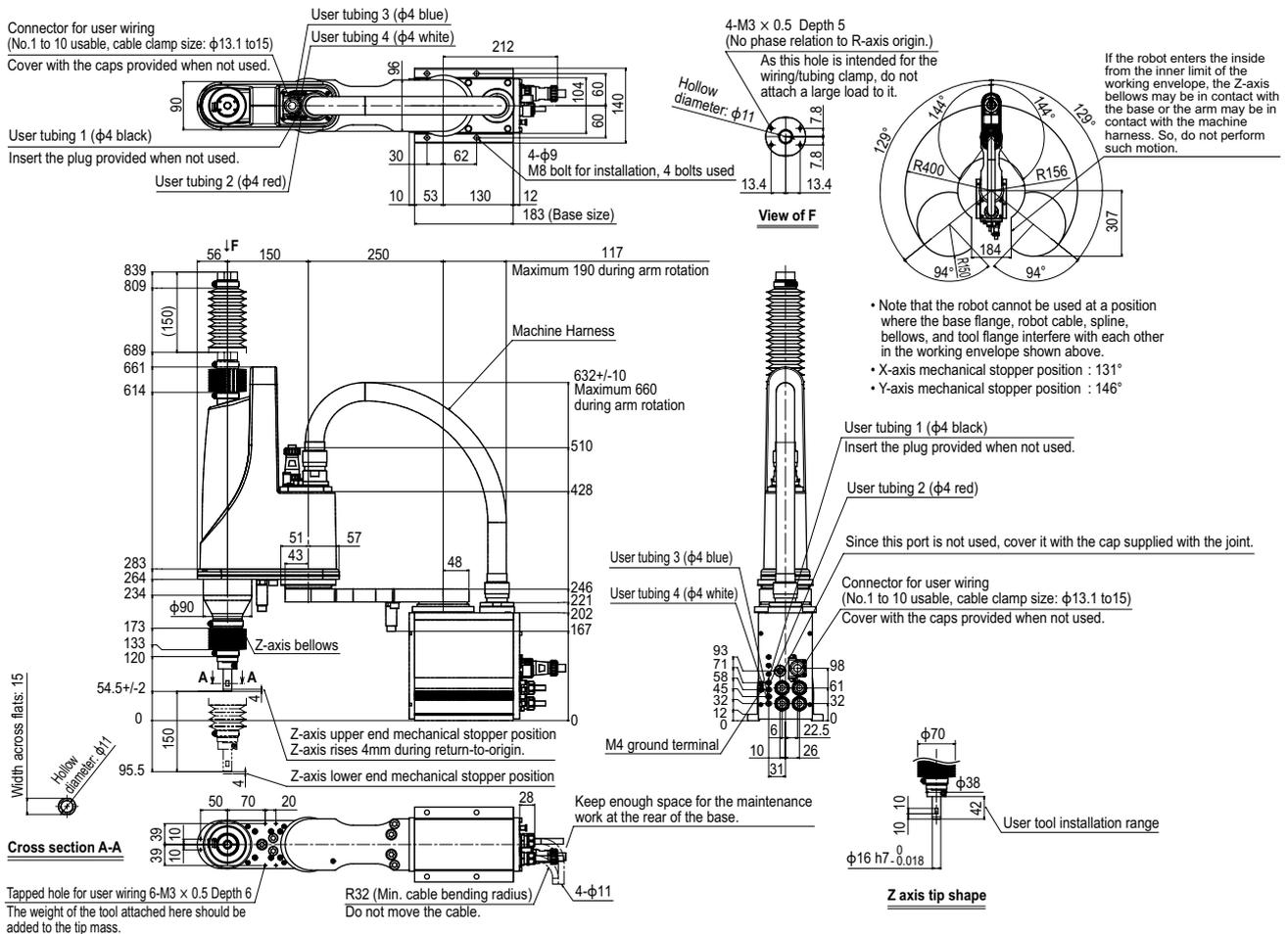
Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.)  
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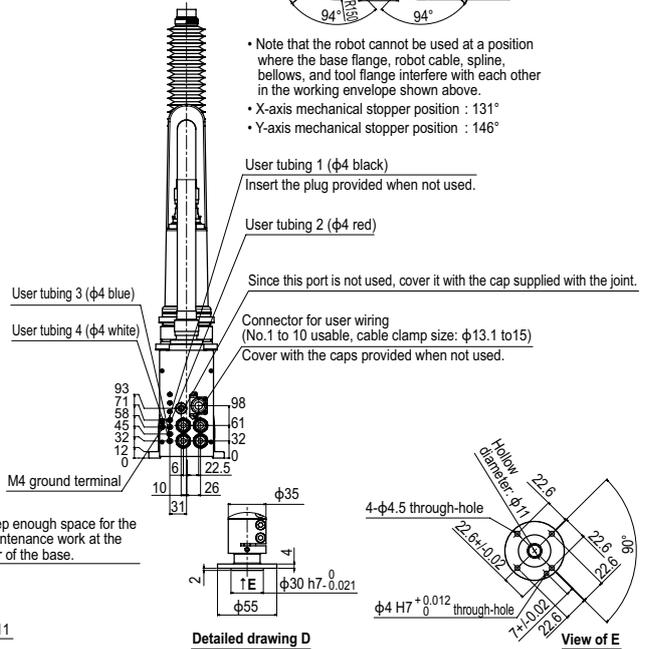
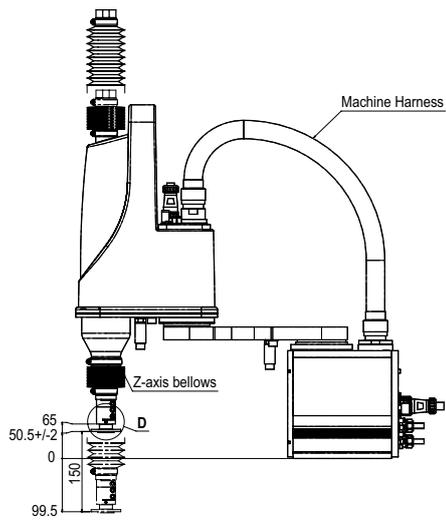
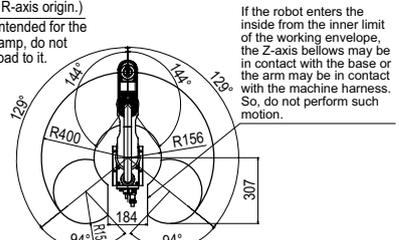
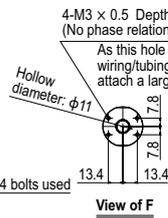
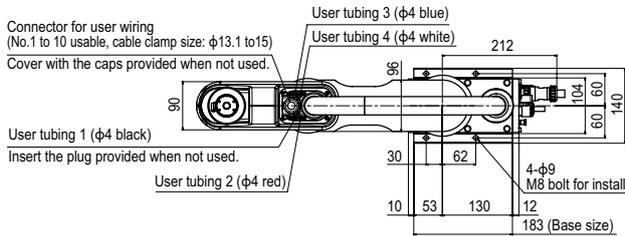
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## YK400XGP



## YK400XGP Tool flange mount type



Tapped hole for user wiring 6-M3 x 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- $\phi 11$

# YK500XGLP

Dust-proof & drip-proof type

- Arm length 500mm
- Maximum payload 4kg

## Ordering method

**YK500XGLP - 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
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 6L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	250 mm	250 mm	150 mm	-
	Rotation angle	+/-129 °	+/-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 <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		5.1 m/sec	1.1 m/sec	1020 °/sec	
Maximum payload		4 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.66 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <sup>2</sup>			
Protection class <sup>Note 4</sup>		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		25 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

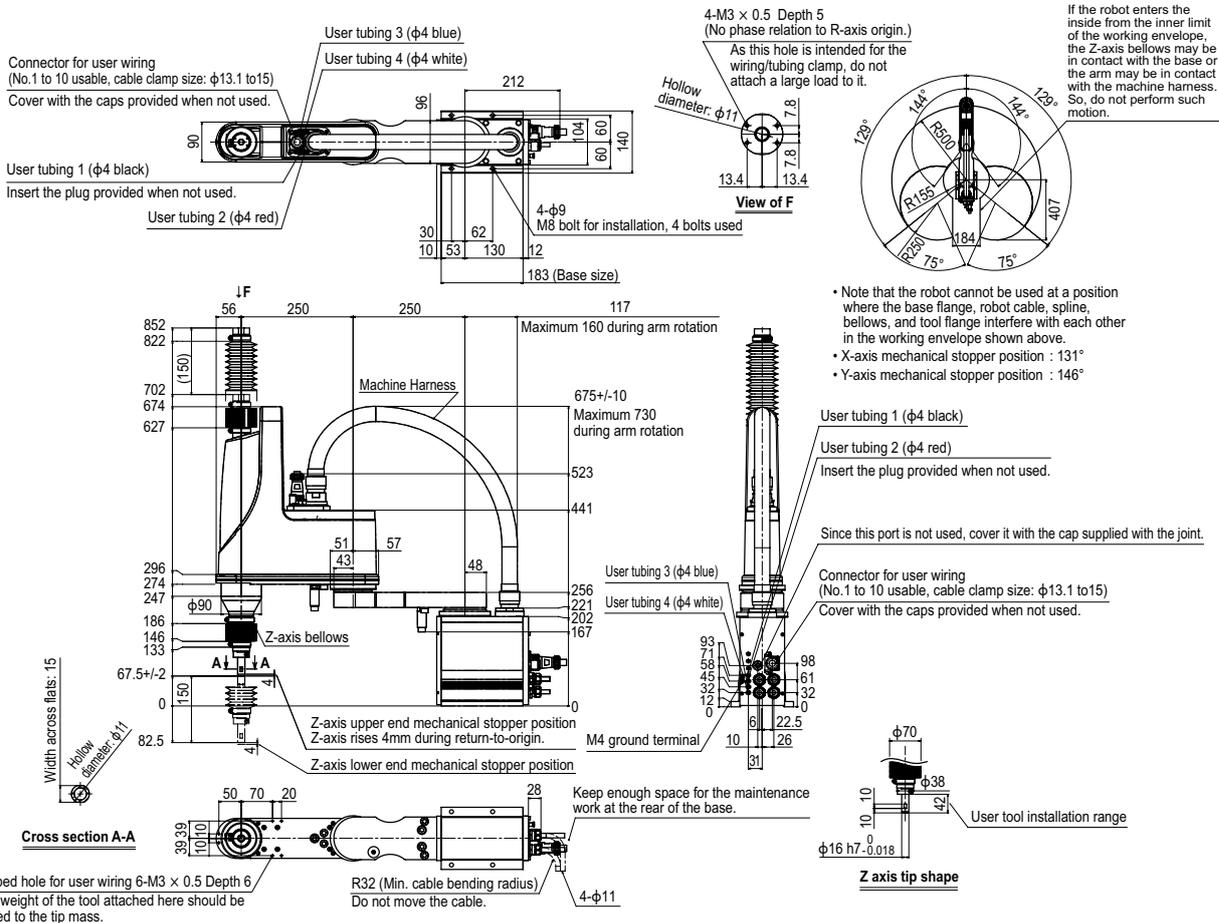
Controller	Power capacity (VA)	Operation method
RCX340	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

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## YK500XGLP



Linear conveyor modules  
LCMR200

Single-axis robots  
GX

Linear conveyor modules  
LCM100

SCARA robots  
YK-X

Single-axis robots  
Robonity

Linear motor single-axis robots  
PHASER

Single-axis robots  
FLIP-X

Compact single-axis robots  
TRANSERO

Cartesian robots  
XX-X

Pick & place robots  
YP-X

CLEAN CONTROLLER INFORMATION

Ortho/Extra small type

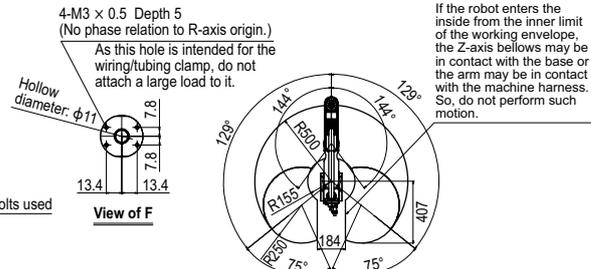
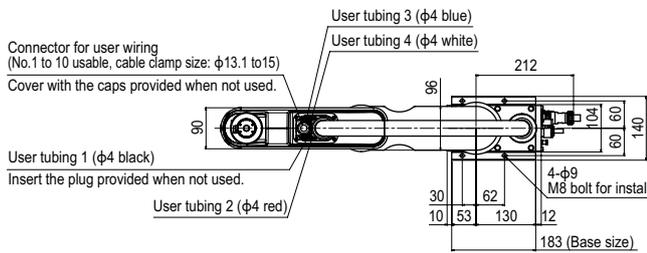
Small / Medium type

Large type

Wall mount / Inverse type

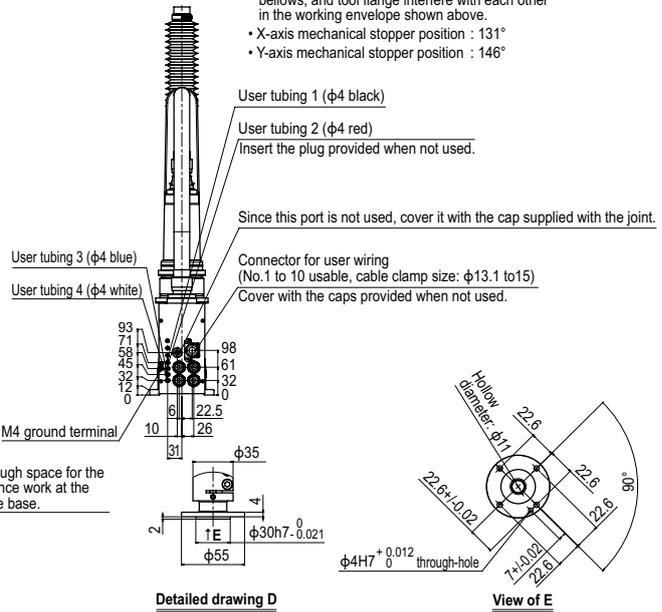
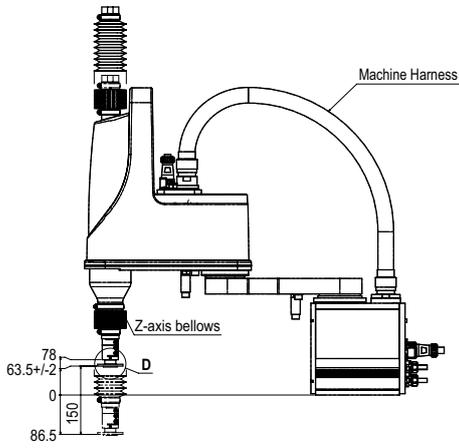
Dust-proof & drip-proof type

## YK500XGLP Tool flange mount type



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.

- 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 :  $131^\circ$
- Y-axis mechanical stopper position :  $146^\circ$



Tapped hole for user wiring 6-M3 x 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- $\phi 11$

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

# YK500XGP

Dust-proof & drip-proof type

- Arm length 500mm
- Maximum payload 10kg

## Ordering method

<b>YK500XGP</b>		<b>F</b>		<b>RCX340-4</b>							
<b>Model</b>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Cable</b>	<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>
	200: 200mm 300: 300mm	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## 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> <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			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.55 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		0.3 kgm <sup>2</sup>			
<b>Protection class</b> <sup>Note 4</sup>		Equivalent to IP65 (IEC 60529)			
<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: 32 kg Z axis 300 mm: 33 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	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

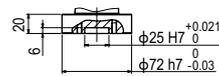
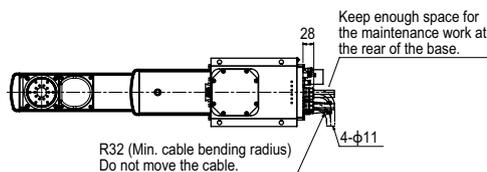
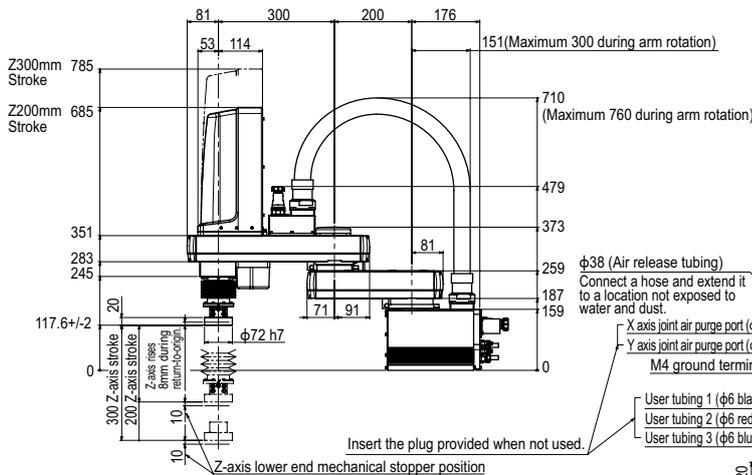
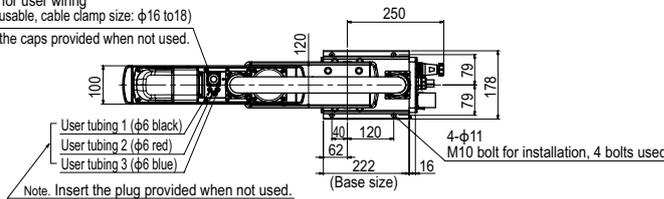
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
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Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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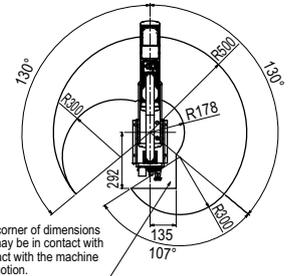
## YK500XGP

Connector for user wiring (No.1 to 20 usable, cable clamp size: φ16 to 18)  
 Cover with the caps provided when not used.

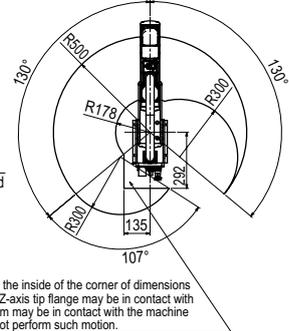


Z axis tip shape

If the robot enters the inside of the corner of dimensions 135 and 292, the Z-axis tip 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.



Working envelope of left-handed system



Working envelope of right-handed system

Note that the robot cannot be used at a position where the base flange, robot cable, spline, and bellows interfere with each other in the working envelope shown above.

- X-axis mechanical stopper position : 132°
- Y-axis mechanical stopper position : 147°

- 6-M5×0.8 Depth 11
- 10-M5×0.8 Depth 11

\* There is no phase relation between each position of M5 tapped holes and R-axis origin position.

Linear conveyer modules  
LCMR200

Single-axis robots  
GX

Linear conveyer modules  
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Compact single-axis robots  
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Cartesian robots  
XX-X

Pick & place robots  
YP-X

CLEAN

CONTROLLER INFORMATION

Ortho/Extra small type

Small / Medium type

Large type

Wall mount / Inverse type

Dust-proof & drip-proof type

# YK600XGLP

Dust-proof & drip-proof type

- Arm length 600mm
- Maximum payload 4kg

## Ordering method

**YK600XGLP-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
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	350 mm	250 mm	150 mm	-
	Rotation angle	+/-129 °	+/-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 <sup>Note 1</sup>		+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		4.9 m/sec	1.1 m/sec	1020 °/sec	
Maximum payload		4 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.71 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		0.05 kgm <sup>2</sup>			
Protection class <sup>Note 4</sup>		Equivalent to IP65 (IEC 60529)			
User wiring (sq × wires)		0.2 × 10			
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		26 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.

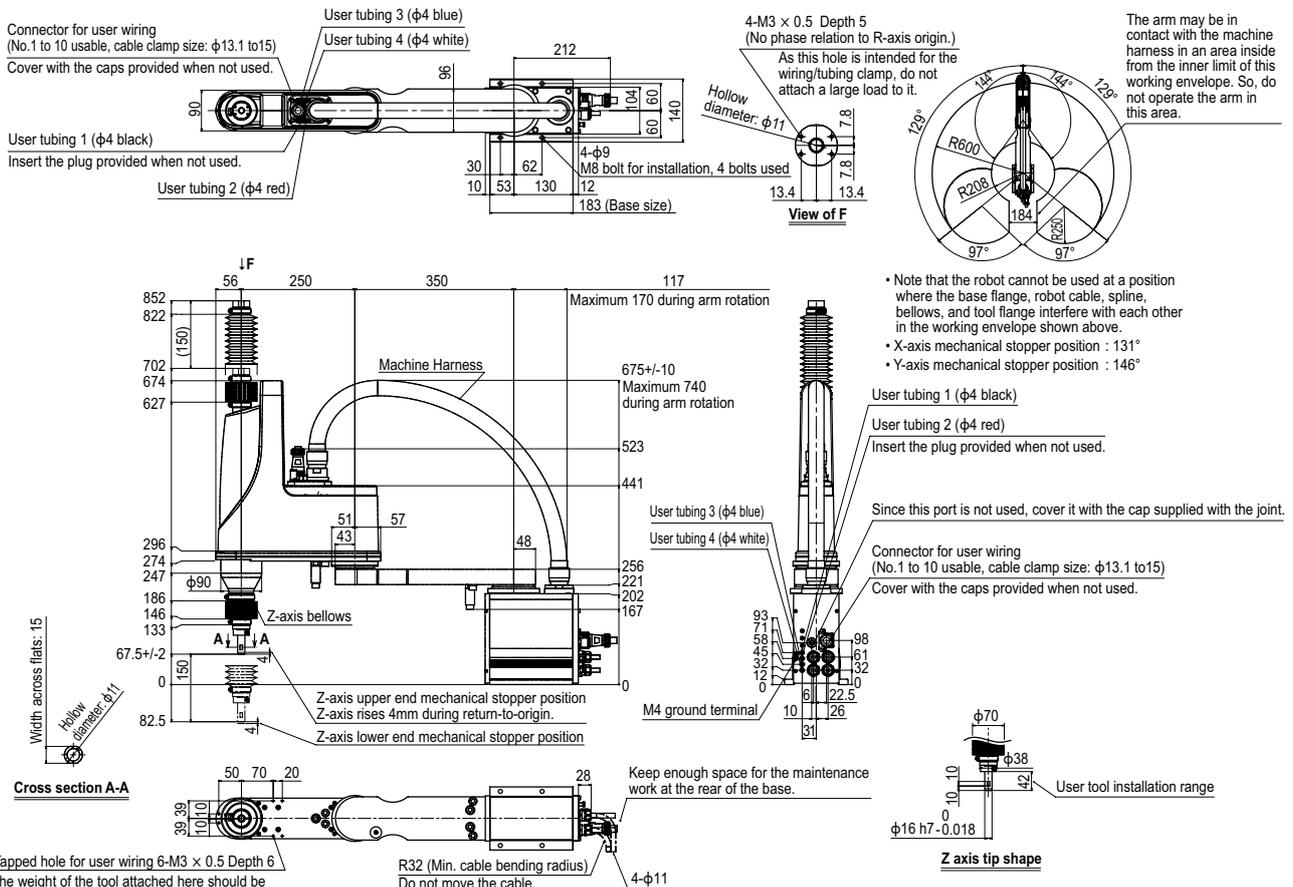
## Controller

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

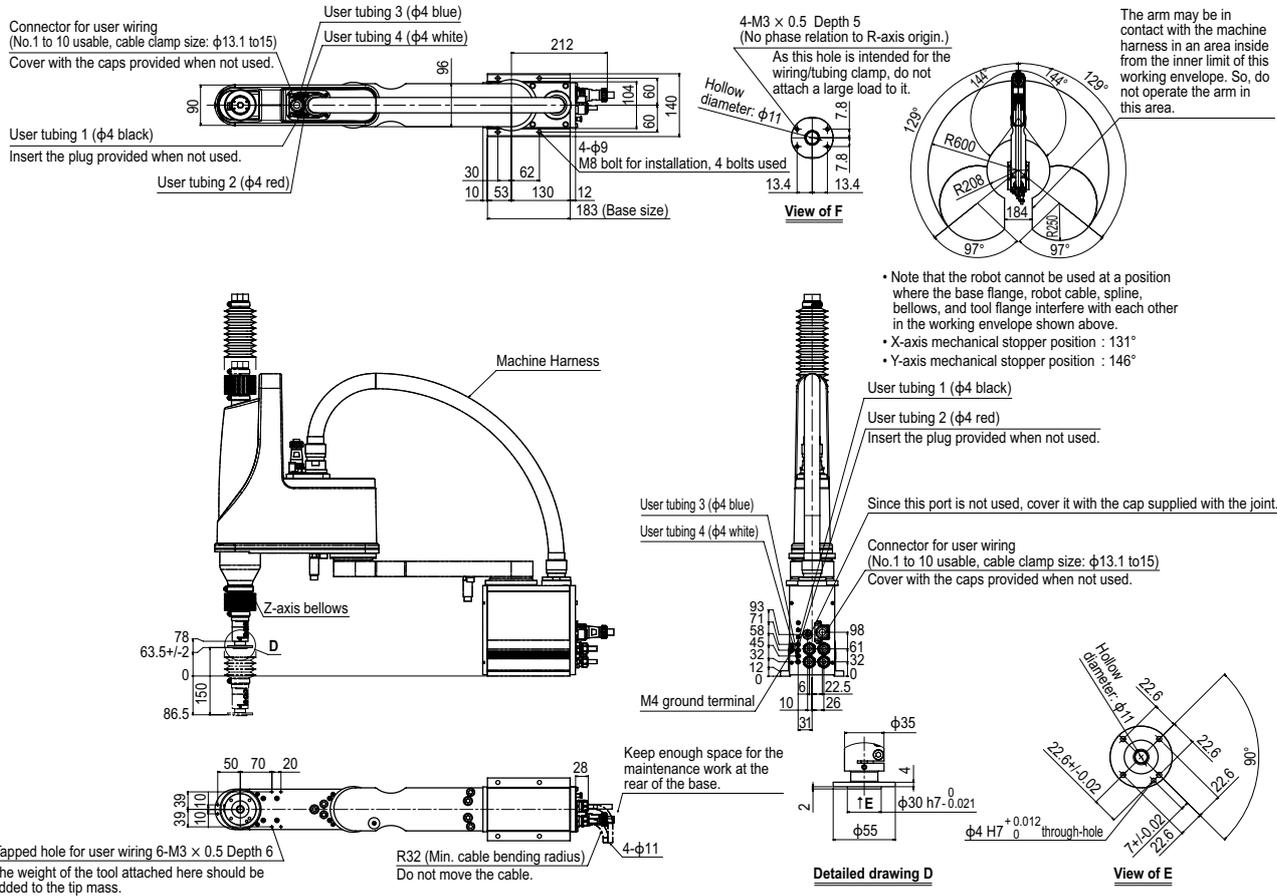
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
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 Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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## YK600XGLP



## YK600XGLP Tool flange mount type



# YK600XGP

Dust-proof & drip-proof type

- Arm length 600mm
- Maximum payload 10kg

## Ordering method

**YK600XGP**

Z axis stroke
200: 200mm
300: 300mm

Tool flange
F: With tool flange

Cable
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

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	300 mm	300 mm	200 mm   300 mm	-
	Rotation angle	+/-130 °	+/-145 °	-	+/-360 °
AC servo motor output		400 W	200 W	200 W	200 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
Repeatability	Speed reducer to output	Direct-coupled			
	Note 1	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		8.4 m/sec	2.3 m/sec	1.7 m/sec	1700 °/sec
Maximum payload		10 kg			
Standard cycle time: with 2kg payload		0.56 sec			
R-axis tolerable moment of inertia		0.3 kgm <sup>2</sup>			
Protection class		Equivalent to IP65 (IEC 60529)			
User wiring (sq × wires)		0.2 × 20			
User tubing (Outer diameter)		φ 6 × 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		Z axis 200 mm: 33 kg	Z axis 300 mm: 34 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

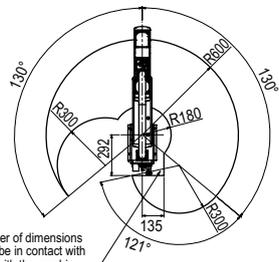
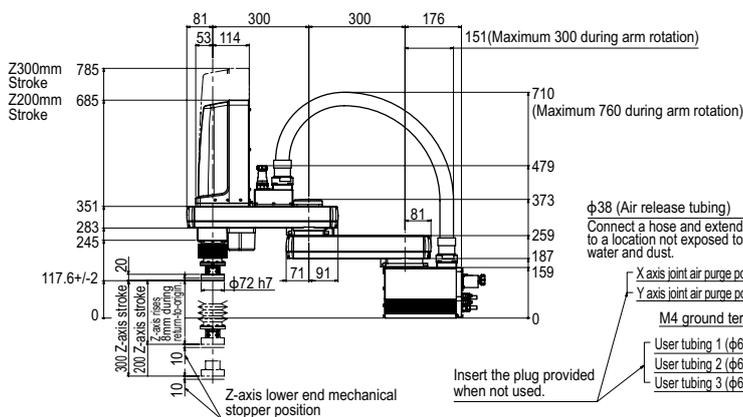
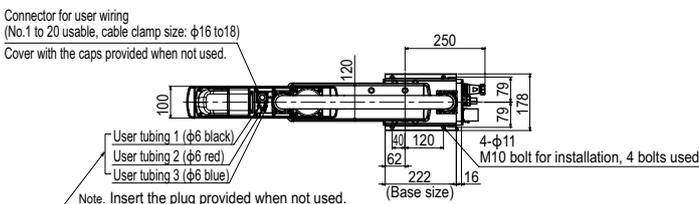
Controller	Power capacity (VA)	Operation method
RCX340	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.)  
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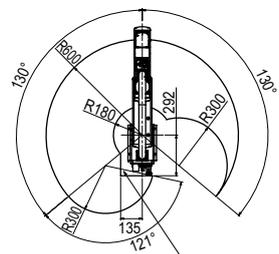
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## YK600XGP

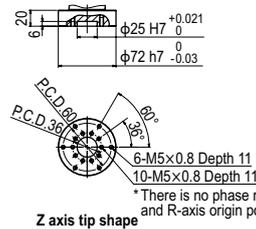


Working envelope of left-handed system



Working envelope of right-handed system

- Note that the robot cannot be used at a position where the base flange, robot cable, spline, and bellows interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 132°
- Y-axis mechanical stopper position : 147°



Z axis tip shape

# YK600XGHP

Dust-proof & drip-proof type

- Arm length 600mm
- Maximum payload 20kg

## Ordering method

<b>YK600XGHP</b>		<b>F</b>		<b>RCX340-4</b>							
Model	Z axis stroke	Tool flange	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
	200: 200mm 400: 400mm	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m	Specify various controller setting items. RCX340 ▶ <b>P.636</b>							

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	200 mm	400 mm	200 mm	400 mm
	Rotation angle	+/-130 °	+/-150 °	-	+/-360 °
AC servo motor output		750 W	400 W	400 W	200 W
Deceleration mechanism	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <sup>Note 1</sup>		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		7.7 m/sec	2.3 m/sec	1.7 m/sec	920 °/sec
Maximum payload		20 kg			
Standard cycle time: with 2kg payload <sup>Note 2</sup>		0.57 sec			
R-axis tolerable moment of inertia <sup>Note 3</sup>		1.0 kgm <sup>2</sup>			
Protection class <sup>Note 4</sup>		Equivalent to IP65 (IEC 60529)			
User wiring (sq × wires)		0.2 × 20			
User tubing (Outer diameter)		φ 6 × 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		Z axis 200 mm: 52 kg Z axis 400 mm: 54 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	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

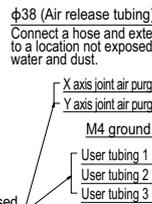
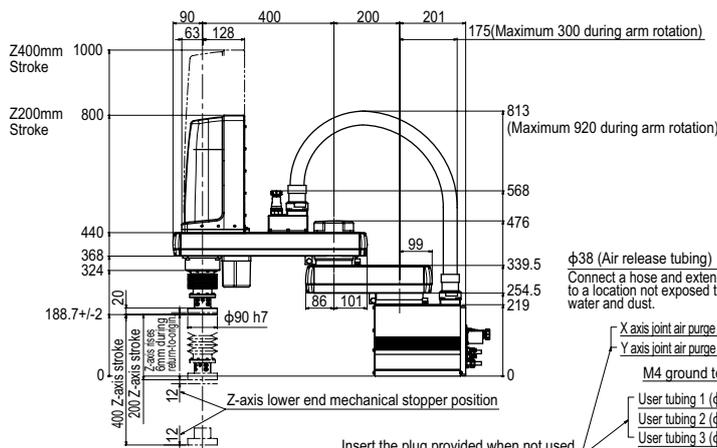
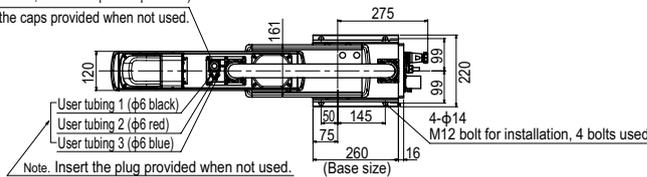
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)  
 See our robot manuals (installation manuals) for detailed information.

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.

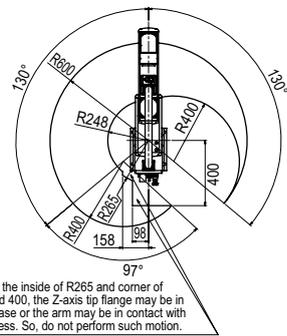
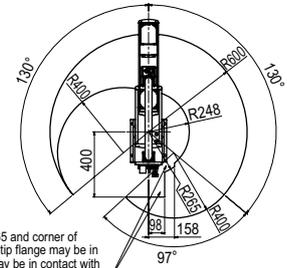
Our robot manuals (installation manuals) can be downloaded from our website at the address below:  
<https://global.yamaha-motor.com/business/robot/>

## YK600XGHP

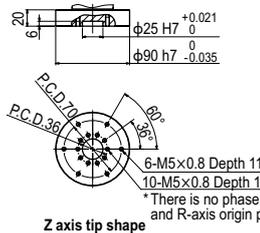
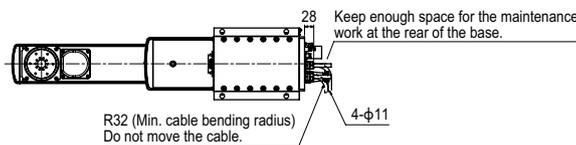
Connector for user wiring (No.1 to 20 usable, cable clamp size: φ16 to 18)  
 Cover with the caps provided when not used.



If the robot enters the inside of R265 and corner of dimensions 98 and 400, the Z-axis tip 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.



- Note that the robot cannot be used at a position where the base flange, robot cable, spline, and bellows interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 132°
- Y-axis mechanical stopper position : 152°









# YK1000XGP

Dust-proof & drip-proof type

- Arm length 1000mm
- Maximum payload 20kg

## Ordering method

<b>YK1000XGP</b>		<b>F</b>		<b>RCX340-4</b>							
<b>Model</b>	<b>Z axis stroke</b>	<b>Tool flange</b>	<b>Cable</b>	<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>
	200: 200mm 400: 400mm	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.636**

## Specifications

		X-axis	Y-axis	Z-axis	R-axis
<b>Axis specifications</b>	<b>Arm length</b>	600 mm	400 mm	200 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> <b>Speed reducer to output</b>	Direct-coupled			
<b>Repeatability</b> <sup>Note 1</sup>		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
<b>Maximum speed</b>		10.6 m/sec	2.3 m/sec	1.7 m/sec	920 °/sec
<b>Maximum payload</b>		20 kg			
<b>Standard cycle time: with 2kg payload</b> <sup>Note 2</sup>		0.59 sec			
<b>R-axis tolerable moment of inertia</b> <sup>Note 3</sup>		1.0 kgm <sup>2</sup>			
<b>Protection class</b> <sup>Note 4</sup>		Equivalent to IP65 (IEC 60529)			
<b>User wiring (sq × wires)</b>		0.2 × 20			
<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: 60 kg Z axis 400 mm: 62 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	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.

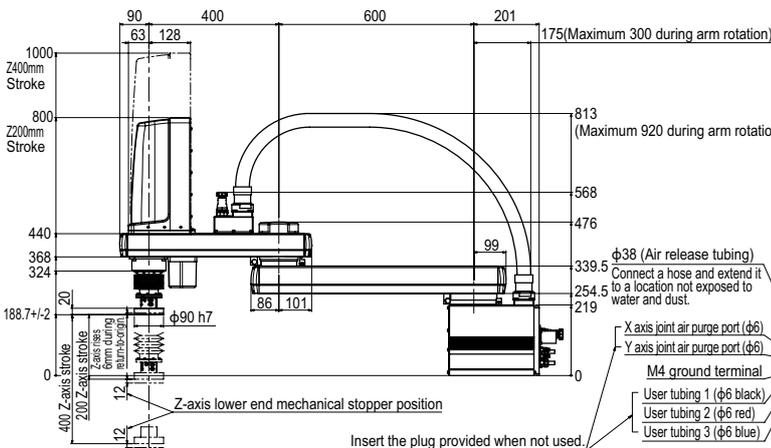
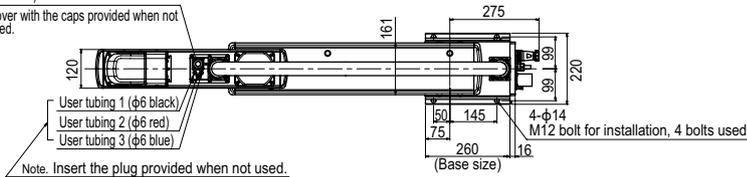
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

## YK1000XGP

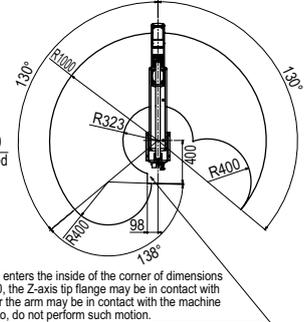
Connector for user wiring  
(No.1 to 20 usable, cable clamp size: φ16 to 18)

Cover with the caps provided when not used.



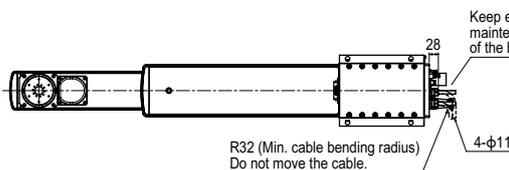
If the robot enters the inside of the corner of dimensions 98 and 400, the Z-axis tip flange may be in contact with the base of the arm may be in contact with the machine harness. So, do not perform such motion.

### Working envelope of left-handed system



### Working envelope of right-handed system

- Note that the robot cannot be used at a position where the base flange, robot cable, spline, and bellows interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 132°
- Y-axis mechanical stopper position : 152°



\* There is no phase relation between each position of M5 tapped holes and R-axis origin position.

Linear conveyor modules LCMR200  
Single-axis robots GX  
Linear conveyor modules LCM100  
SCARA robots YK-X  
Single-axis robots Robonity  
Single-axis robots PHASER  
Single-axis robots FLIP-X  
Compact single-axis robots TRANSERO  
Cartesian robots XX-X  
Pick & place robots YP-X  
CLEAN  
CONTROLLER INFORMATION  
Oht/Extra small type  
Small / Medium type  
Large type  
Wall mount / Inverse type  
Dust-proof & drip-proof type