

YK-X Series

Product Lineup

YK-TW	Omni directional model
YK-XG/YK-X	Completely beltless model ^{Note}
YK-XR	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 lineup is top in the world. Completely beltless structure pursues the features of SCARA robots to their utmost limits.



Low cost high performance model
YK400XR

History of 30 years

The first YAMAHA robots were SCARA robots. Since the first SCARA robot called "CAME" was produced in 1979, some 30 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.



Comprehensive line of YAMAHA SCARA robots

Orbit type

P.372

- Arm length 350 mm / 500 mm
- Maximum payload 4 kg



YK500TW

Extra small type

P.376

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



YK120XG/YK150XG/YK180XG



YK180X/YK220X

Small type

P.381

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

Low cost high performance model
YK400XR



YK400XR



YK250XG/YK350XG/YK400XG

Medium type

P.388

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



YK500XGL



YK500XG



YK600XGL



YK600XG/XGH

Large type

P.395

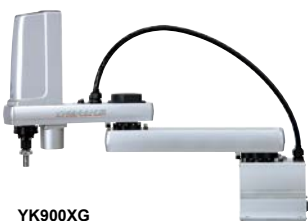
- Arm length 700 mm to 1200 mm
- Maximum payload 20 kg to 50 kg



YK700XG



YK800XG



YK900XG



YK1000XG



YK1200X

Wall mount/inverse model

P.401

YK300XGS to YK1000XGS



Wall mount type



Inverse type

- 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.

Dust-proof & drip-proof model

P.411



YK250XGP/YK350XGP/YK400XGP
YK500XGLP/YK600XGLP



YK500XGP to YK1000XGP

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.

YK-TW Orbit type

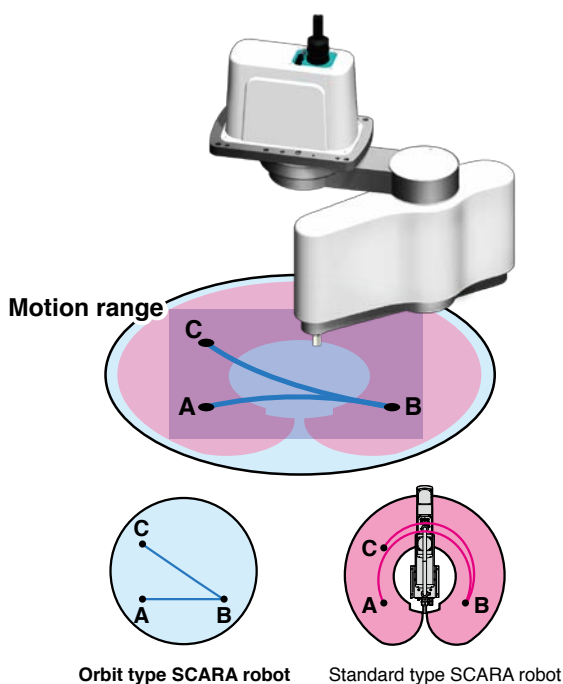
YK-TW POINT 1

Layout design freedom

User: We want a smaller equipment footprint.

YK-TW can move anywhere through the full ϕ 1000 mm ^{Note 2} work envelope.

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



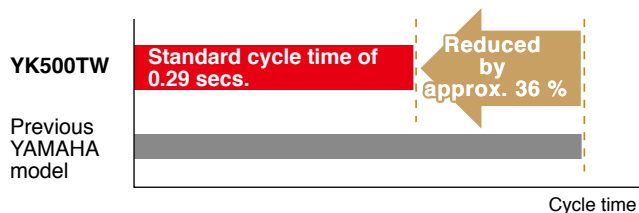
YK-TW POINT 2

Higher productivity

User: We need to reduce cycle time.

Standard cycle time of 0.29 secs. ^{Note 2}

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.

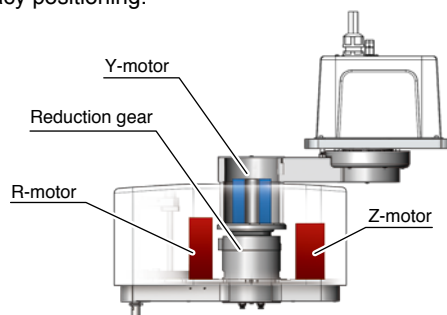
YK-TW POINT 3

High quality

User: We want a high precision assembly system.

YK-TW offers a repeated positioning accuracy of ± 0.01 mm ^{Note 1} (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.

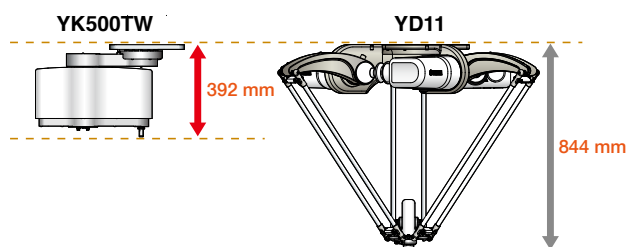
YK-TW POINT 5

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^{Note 2}.

Lower inertia = Lighter frame



YK-TW POINT 7

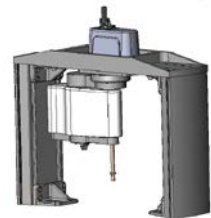
Reduce the number of steps

User: Preparing the frame is extra work.

We can optionally provide a dedicated frame for the YK-TW.

With no need for complex calculations of strength, startup steps can be reduced.

Note. For details on dimensions and price, please contact Yamaha.

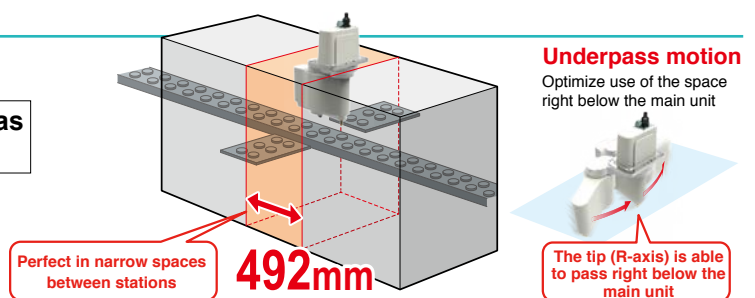


YK-TW POINT 8

Ideal for narrow space applications

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

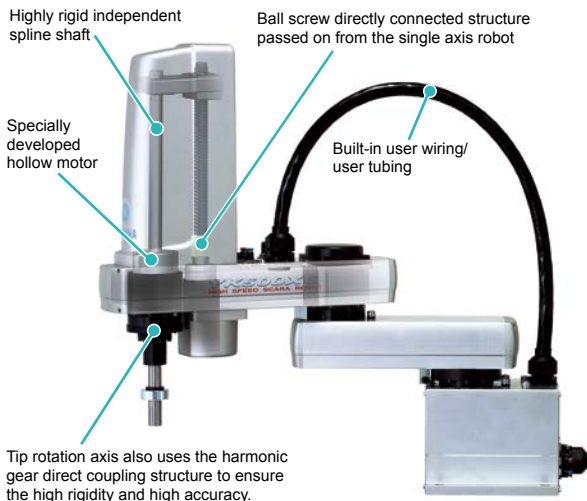
Minimum installation width 492mm^{Note 1}



YK-XG Completely beltless type

Integral structure designed for optimal operation

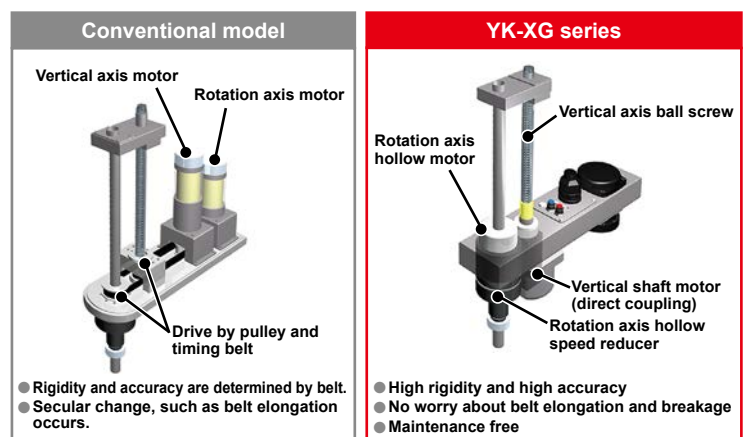
Note. The following shows an example of YK500XG.



YK-XG POINT 1

Completely beltless structure

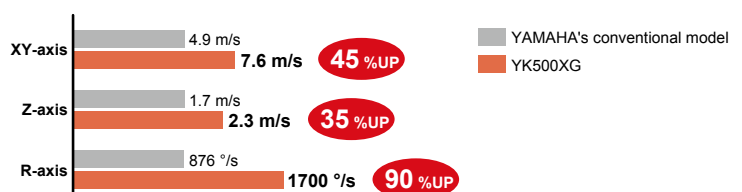
A completely beltless structure was achieved using a ZR-axis direct coupling structure. This completely beltless structure greatly reduces waste motion. This structure also maintains high accuracy for an extended period of time. Additionally, this structure ensures maintenance-free operation for an extended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



YK-XG POINT 2

High speed

The standard cycle time is fast. Additionally, YAMAHA also places special emphasis on the tact time in the practical working area. The speed reduction ratio or maximum motor RPM was reviewed to greatly improve the maximum speed. This contributes to improvement of the tact time.



YK-XG POINT 3

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

- Optical type
- Electronic components are required and structure is complicated.
- Electronic component malfunction, or dew condensation on or oily content sticking to disk may occur easily.

Detection failure**Resolver**

- Magnetic type
- Simple structure only with iron core and winding has less potential failure factors.
- Immune to shock and electric noise.

High reliability

YK-XG POINT 4

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 harmonic gear needs many steps to disassemble the gear and may cause positional deviation. However, since the harmonic gear of the YAMAHA SCARA robot uses long-life grease, the grease replacement is not needed.

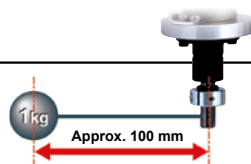
YK-XG POINT 5

Surprising R-axis tolerable moment of inertia

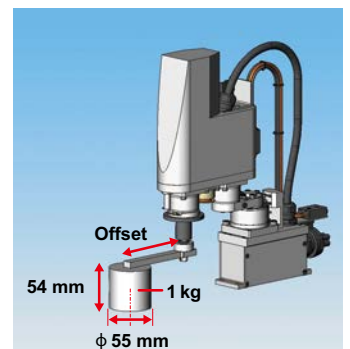
The SCARA robot performance cannot be expressed only by the standard cycle time. In actual operating environments, there are various workpieces, such as heavy workpiece or workpiece with large offset. At this time, since the robot with low R-axis tolerable moment of inertia needs to decrease the speed 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.

YK120XG(R-axis tolerable moment of inertia: 0.1 kgfcm²)

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

**R-axis tolerable moment of inertia: Comparison between YK120XG and other company's model**

When the offset from the R-axis to the center of gravity of the load is large, the inertia becomes large and the acceleration during operation is restricted. The R-axis tolerable moment of inertia of YAMAHA XG series is exceedingly large when compared to other company's SCARA robots in the similar class, so it can operate at a high speed even in the offset state.

**When the load weight is 1 kg (refer to the right in the figure.)**

Offset (mm)	Inertia (kgfcm ²)	Operation	
		YK120XG	Company A
0	0.0039	○	○
45	0.025	○	×
97	0.1	○	×

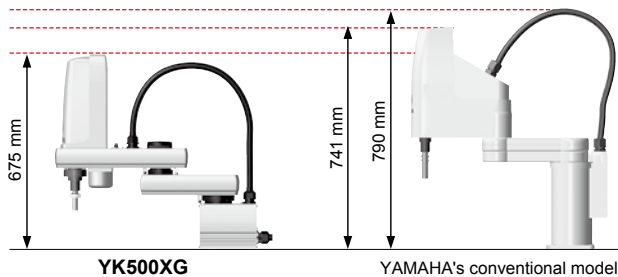
○: Operable ×: Out of catalog value tolerance range

◆ R-axis tolerable moment of inertia: YK120XG..... 0.1 kgfcm²Company A..... 0.0039 kgfcm²

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.

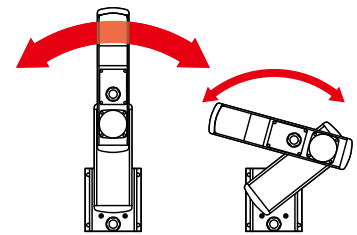
This may greatly affect the service life, vibration during operation, and controllability.

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

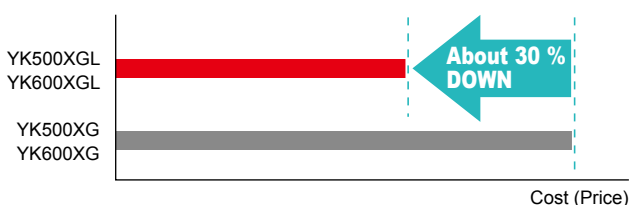
→ **This may cause early breakage or shorten the service life extremely.**



YK-XG POINT 9

Low price models with the arm length 500 mm/600 mm specifications are also added to the product lineup.

The customers require to use SCARA robots at a more affordable price. Models YK500XGL/YK600XGL were developed to meet these customer's requests. About 30 %-cost reduction was achieved when compared to the conventional models YK500XG/600XG.



YK-XR Low cost high performance model YK400XR

YK-XR POINT 1

Shortest cycle time in this class

A standard cycle time of 0.45 sec. is achieved by drawing out the robot performance to its maximum level.

YK-XR POINT 2

Superior cost performance

Most economical price in YAMAHA's similar robot class without sacrificing its existing features.

YK-XR POINT 3

With versatile and high performance controller RCX340.

Combination of YK400XR robot and new RCX340 controller enable operation up to 16 axes with simple easy networking.

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 kgm² 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



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/m², 0.3 kgf/cm²).
 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)

Model/Type		Model	Arm length (mm)	Maximum payload (kg)	Standard cycle time (sec.)	Page
Omni directional model		YK350TW	350	5.0	0.32 (RCX340) 0.38 (RCX240)	P.372
		YK500TW	500	4.0 (3.0) ^{Note 2}	0.29	P.374
Completely beltless model	Micro-mini type (Tiny)	YK120XG	120	1.0	0.33	P.376
		YK150XG	150			P.377
		YK180XG	180			P.378
		YK180X	180		0.39	P.379
		YK220X	220		0.42	P.380
	Small type	YK250XG	250	5.0 (4.0) ^{Note 2}	0.49	P.381
		YK350XG	350			P.383
		YK400XG	400			P.385
Low cost high performance model		YK400XR	400	3.0 (2.0) ^{Note 2}	0.45	P.387
Completely beltless model	Medium type	YK500XGL	500	5.0 (4.0) ^{Note 2}	0.59	P.388
		YK500XG	500	10.0	0.45	P.390
		YK600XGL	600	5.0 (4.0) ^{Note 2}	0.63	P.391
		YK600XG	600	10.0	0.46	P.393
		YK600XGH	600	20.0 (19.0)	0.47	P.394
	Large type	YK700XGL	700	10.0 (9.0)	0.50	P.395
		YK700XG	700	20.0 (19.0)	0.42	P.396
		YK800XG	800		0.48	P.397
		YK900XG	900		0.49	P.398
		YK1000XG	1000			P.399
—		YK1200X	1200	50	0.91	P.400
Wall mount/inverse model		YK300XGS ^{Note 1}	300	5.0 (4.0) ^{Note 2}	0.49	P.401
		YK400XGS ^{Note 1}	400			P.403
		YK500XGS	500	10.0	0.45	P.405
		YK600XGS	600		0.46	P.406
		YK700XGS	700	20.0	0.42	P.407
		YK800XGS	800		0.48	P.408
		YK900XGS	900		0.49	P.409
		YK1000XGS	1000		0.6	P.410
Dust-proof & drip-proof model		YK250XGP	250	5.0	0.49	P.411
		YK350XGP	350			P.413
		YK400XGP	400			P.415
		YK500XGLP	500	4.0	0.74	P.417
		YK500XGP	500	8.0	0.55	P.419
		YK600XGLP	600	4.0	0.74	P.420
		YK600XGP	600	8.0	0.56	P.422
		YK600XGHP	600	18.0	0.57	P.423
		YK700XGP	700		0.52	P.424
		YK800XGP	800		0.58	P.425
		YK900XGP	900		0.59	P.426
		YK1000XGP	1000			P.427

Note 1. The YK300XGS and YK400XGS are custom-order products. For details about the delivery time, please contact YAMAHA.

Note 2. 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



Articulated robots
YA

Linear conveyor
modules
LCM100

Compact
single-axis robots
TRANSERO

Single-axis robots
FLIP-X

Linear motor
single-axis robots
PHASER

Cartesian
robots
XY-X

SCARA
robots
YK-X

Pick & place
robots
YP-X

CLEAN

CONTROLLER

INFORMATION

Orbit / Tiny
type

Small /
Medium type

Large type

Wall-mount /
inverse type

Dust-proof
& drip-proof
type

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TINY TYPE

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SMALL TYPE

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YK350XG 383

YK400XG 385

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MEDIUM TYPE

YK500XGL 388

YK500XG 390

YK600XGL 391

YK600XG 393

YK600XGH 394

LARGE TYPE

YK700XGL 395

YK700XG 396

YK800XG 397

YK900XG 398

YK1000XG 399

YK1200X 400

WALL-MOUNT / INVERSE TYPE

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YK400XGS 403

YK500XGS 405

YK600XGS 406

YK700XGS 407

YK800XGS 408

YK900XGS 409

YK1000XGS 410

DUST-PROOF & DRIP-PROOF TYPE

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YK350XGP 413

YK400XGP 415

YK500XGLP 417

YK500XGP 419

YK600XGLP 420

YK600XGP 422

YK600XGHP 423

YK700XGP 424

YK800XGP 425

YK900XGP 426

YK1000XGP 427

YK-X SPECIFICATION SHEET

Type	Model	Arm length (mm) and XY axis resultant maximum speed (m/s)														Standard cycle time (sec) <small>Note 1</small>	Maximum payload (kg)	R-axis tolerable moment of inertia (kgm ²) <small>0.005 (Rated) 0.05 (Maximum)</small>	Completely beltless structure <small>Note 2</small>	R-axis harmonic drive <small>Note 3</small>	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 (RCX340) 0.38 (RCX240)	5	0.005 (Rated) 0.05 (Maximum)			P.372
	YK500TW	6.8																0.29	5 (RCX340) 4 (RCX240)	0.005 (Rated) 0.05 (Maximum)			P.374
Standard	Tiny type	YK120XG	3.3														0.33	1	0.01	●	●	P.376	
		YK150XG	3.4														0.33	1	0.01	●	●	P.377	
		YK180XG	3.3														0.33	1	0.01	●	●	P.378	
		YK180X	3.3														0.39	1	0.01	●	●	P.379	
		YK220X	3.4														0.42	1	0.01	●	●	P.380	
	Small type	YK250XG	4.5														0.49	5	0.05	●	●	P.381	
		YK350XG	5.6														0.49	5	0.05	●	●	P.383	
		YK400XG	6.1														0.49	5	0.05	●	●	P.385	
		YK400XR	6														0.45	3	0.05			P.387	
	Medium type	YK500XGL	5.1														0.59	5	0.05	●	●	P.388	
		YK500XG	7.6														0.45	10	0.30	●	●	P.390	
		YK600XGL	4.9														0.63	5	0.05	●	●	P.391	
		YK600XG	8.4														0.46	10	0.30	●	●	P.393	
	Large type	YK600XGH	7.7														0.47	20	1.0	●	●	P.394	
		YK700XGL	9.2														0.50	10	0.30	●	●	P.395	
		YK700XG	8.4														0.42	20	1.0	●	●	P.396	
		YK800XG	9.2														0.48	20	1.0	●	●	P.397	
		YK900XG	9.9														0.49	20	1.0	●	●	P.398	
		YK1000XG	10.6														0.49	20	1.0	●	●	P.399	
	YK1200X	7.4														0.91	50	2.45		●	P.400		
Wall-mount / inverse type	YK300XGS	4.4														0.49	5	0.05	●	●	P.401		
	YK400XGS	6.1														0.49	5	0.05	●	●	P.403		
	YK500XGS	7.6														0.45	10	0.3	●	●	P.405		
	YK600XGS	8.4														0.46	10	0.3	●	●	P.406		
	YK700XGS	8.4														0.42	20	1.0	●	●	P.407		
	YK800XGS	9.2														0.48	20	1.0	●	●	P.408		
	YK900XGS	9.9														0.49	20	1.0	●	●	P.409		
	YK1000XGS	10.6														0.49	20	1.0	●	●	P.410		
Dust-proof & drip-proof type	YK250XGP	4.5														0.57	4	0.05	●	●	P.411		
	YK350XGP	5.6														0.57	4	0.05	●	●	P.413		
	YK400XGP	6.1														0.57	4	0.05	●	●	P.415		
	YK500XGLP	5.1														0.74	4	0.05	●	●	P.417		
	YK500XGP	7.6														0.55	8	0.3	●	●	P.419		
	YK600XGLP	4.9														0.74	4	0.05	●	●	P.420		
	YK600XGP	8.4														0.56	8	0.3	●	●	P.422		
	YK600XGHP	7.7														0.57	18	1.0	●	●	P.423		
	YK700XGP	8.4														0.52	18	1.0	●	●	P.424		
	YK800XGP	9.2														0.58	18	1.0	●	●	P.425		
	YK900XGP	9.9														0.59	18	1.0	●	●	P.426		
	YK1000XGP	10.6														0.59	18	1.0	●	●	P.427		

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

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

Note 3. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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 ▶ RCX240S

● Ordering method

YK250XG-150-F-S-3L-RCX240S

Mechanical section

Controller section

To find detailed controller information see the controller page.

RCX240 ▶ P.534, **RCX340 ▶ P.544**

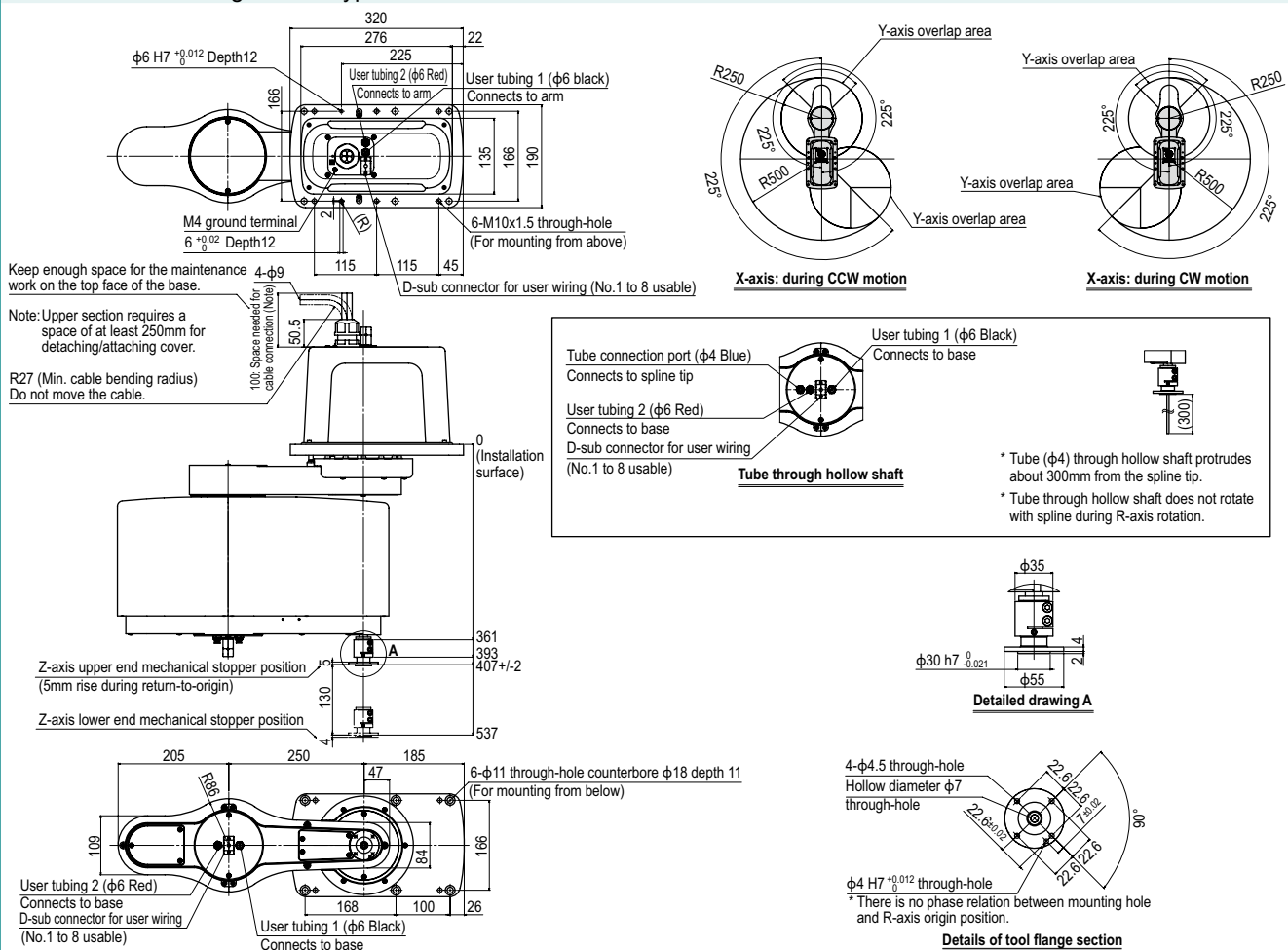
① Model	② Z-axis stroke	③ Tool flange	④ Hollow shaft	⑤ Cable	⑥ Controller
YK***	50 50mm 100 100mm 150 150mm 200 200mm 300 300mm 400 400mm	No entry None F With tool flange	No entry None S With hollow shaft	2L 2m 3L 3.5m 5L 5m 10L 10m	RCX240 RCX240S RCX340

Note 1. Available only for the master.

Robot ordering method terminology

① Model	Enter the robot unit model.
② Z-axis stroke	Select the Z axis stroke. The stroke varies with the model you select so see that model's page to confirm the specifications.
③ Tool flange	Tool flange option for easy mounting of a tool to the tip. No entry: None F: With tool flange
④ Hollow shaft	Hollow shaft option for easy routing of air tubes and harness wires. No entry: None S: With hollow shaft
⑤ Cable	Select the length of the robot cable connecting the robot and controller. 2L: 2m ^(Note 1) 3L: 3.5m 5L: 5m 10L: 10m <small>Note 1. Only selectable for YK120XG, YK150XG, YK180XG.</small>
⑥ Controller	Select either the RCX240 (RCX240S) or RCX340.

YK500TW Tool flange mount type



YK120XG

Standard type: Tiny 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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	45 mm	75 mm	50 mm	—
		+/-125 °	+/-145 °	—	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		3.3 m/sec		0.9 m/sec	1700 °/sec
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}		0.33 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.01 kgm ²			
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) ^{Note 4}		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. There are limits to acceleration coefficient settings. See P.608.

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 RCX240S	300	Programming / I/O point trace / Remote command / Operation using RS-232C communication

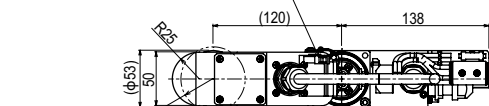
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

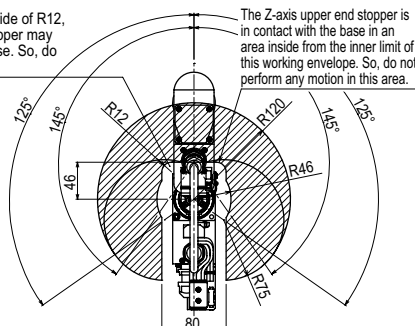
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

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.

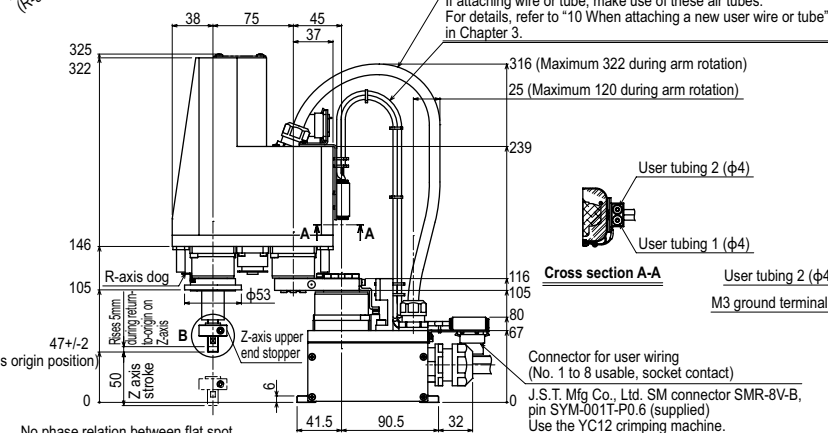


Working envelope

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

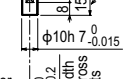
When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.

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.



No phase relation between flat spot and R-axis origin

User tool installation range



Details of B

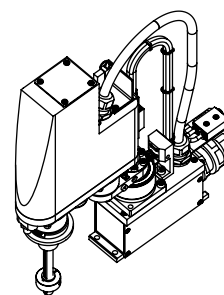
Hollow diameter: φ4

2-φ5.5 through-hole Use four M5 mounting bolt

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

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

4-φ9 Keep enough space for the maintenance work at the rear of the base.



YK150XG

Standard type: Tiny type

- Arm length 150mm
- Maximum payload 1kg

Ordering method

YK150XG - 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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	75 mm	75 mm	50 mm	—
		+/-125 °	+/-145 °	—	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		3.4 m/sec		0.9 m/sec	1700 °/sec
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}		0.33 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.01 kgm ²			
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) ^{Note 4}		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. There are limits to acceleration coefficient settings. See P.608.

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 RCX240S	300	Programming / I/O point trace / Remote command / Operation using RS-232C communication

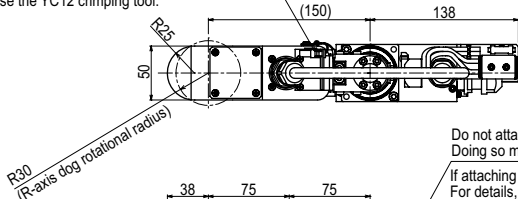
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

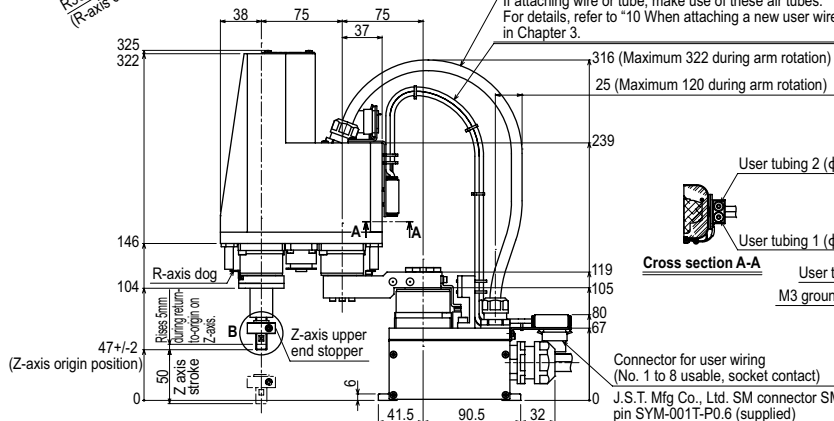
YK150XG

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.



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.



No phase relation between flat spot and R-axis origin

User tool installation range

φ26
φ10h7.0/0.015
9.0
Width across flats

Hollow diameter : φ4

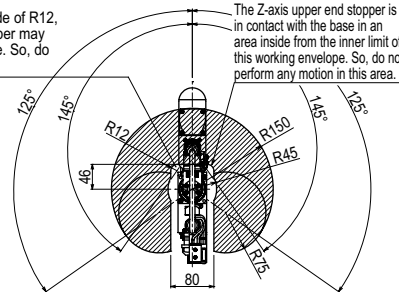
Details of B

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

Use four M5 mounting bolts. R27 (Min. cable bending radius) Do not move the cable.

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

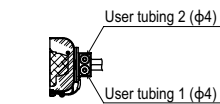
If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.



Working envelope

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

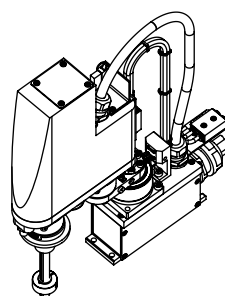
When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.



Cross section A-A

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.



Controller

RCX340 ▶ 544 RCX240S ▶ 534

YK180XG

Standard type: Tiny 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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			3.3 m/sec		0.9 m/sec	1700 °/sec
Maximum payload			1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}			0.33 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.01 kgm ²			
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) ^{Note 4}			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. There are limits to acceleration coefficient settings. See P.608.

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 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

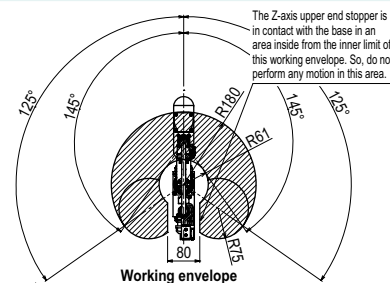
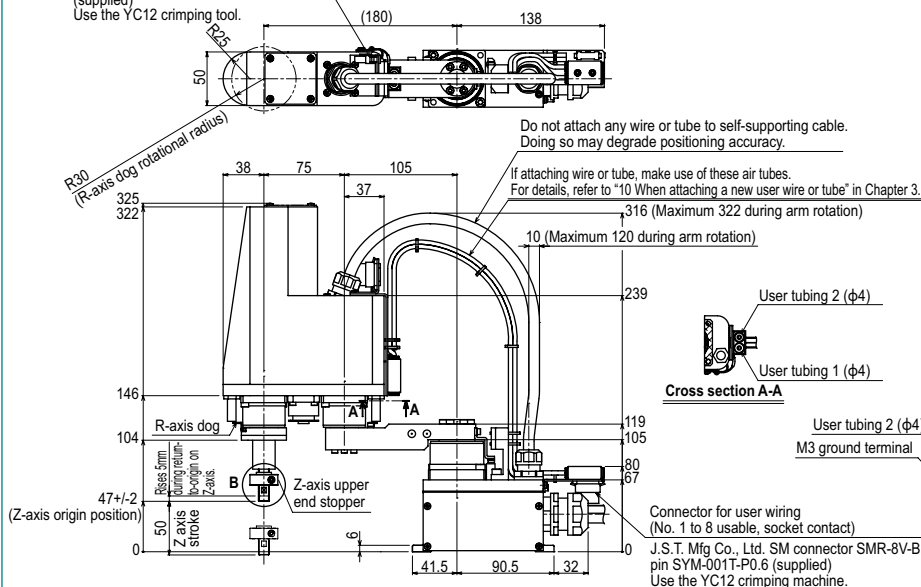
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

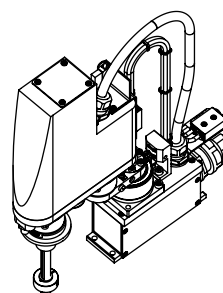
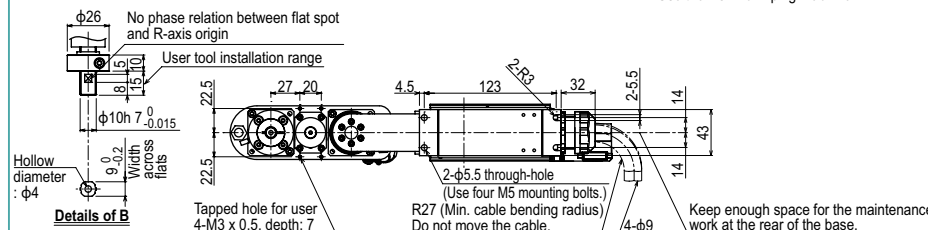
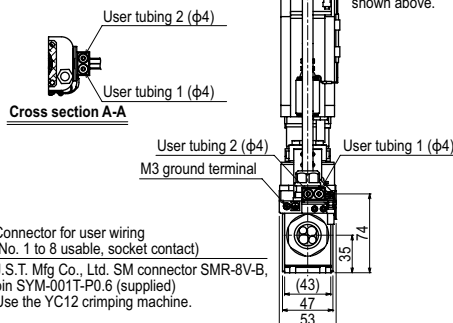
YK180XG

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.



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.



YK180X

Standard type: Tiny type

- Arm length 180mm
- Maximum payload 1kg

Ordering method

YK180X - 100

Model	Z axis stroke	Cable
	100: 100mm	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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	71 mm	109 mm	100 mm	—
		+/-120 °	+/-140 °	—	+/-360 °
AC servo motor output		50 W	30 W	30 W	30 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		3.3 m/sec		0.7 m/sec	1700 °/sec
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}		0.39 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.01 kgm ²			
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) ^{Note 4}		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. There are limits to acceleration coefficient settings. See P.609.

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 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

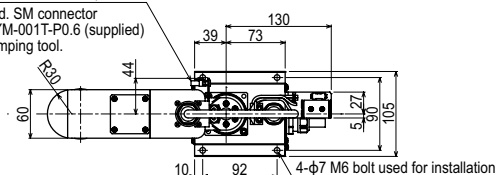
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

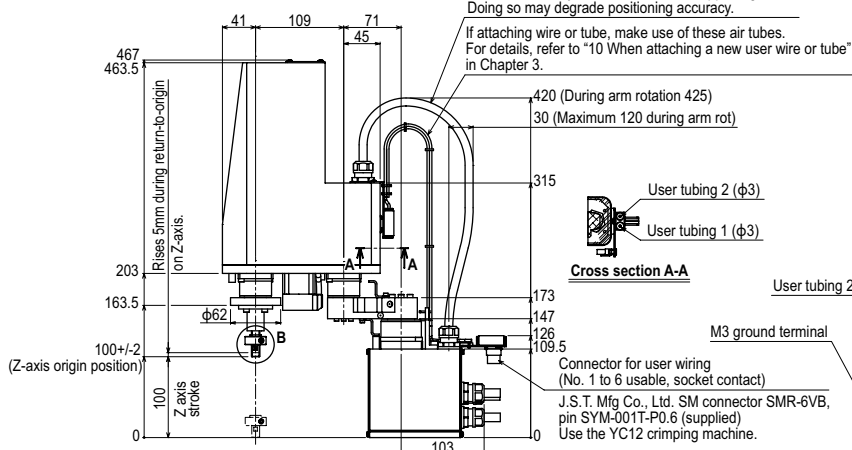
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

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.



Cross section A-A

User tubing 2 (φ3)

User tubing 1 (φ3)

M3 ground terminal

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 machine.

4-φ9

24.5

30

For user tool installation
4-M4 x 0.7 Depth 6

24.5

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24.5

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24.5

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24.5

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24.5

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24.5

30

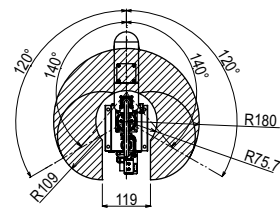
24.5

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24.5

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24.5



Working envelope

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

133±15°

X, Y-axis origin position

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

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Controller

RCX340 ▶ 544 RCX240S ▶ 534

YK220X

Standard type: Tiny type

● Arm length 220mm

● Maximum payload 1kg



Ordering method

YK220X - 100

Model	Z axis stroke	Cable
	100: 100mm	SL: 3.5m SL: 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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
------------	------------	---------------	----------------	------------	---------	---------

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			3.4 m/sec		0.7 m/sec	1700 °/sec
Maximum payload			1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}			0.42 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.01 kgm ²			
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) ^{Note 4}			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. There are limits to acceleration coefficient settings. See P.609.

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 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

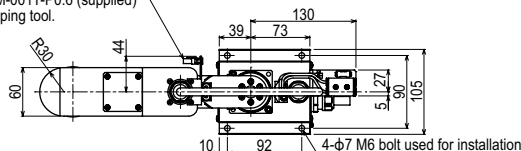
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

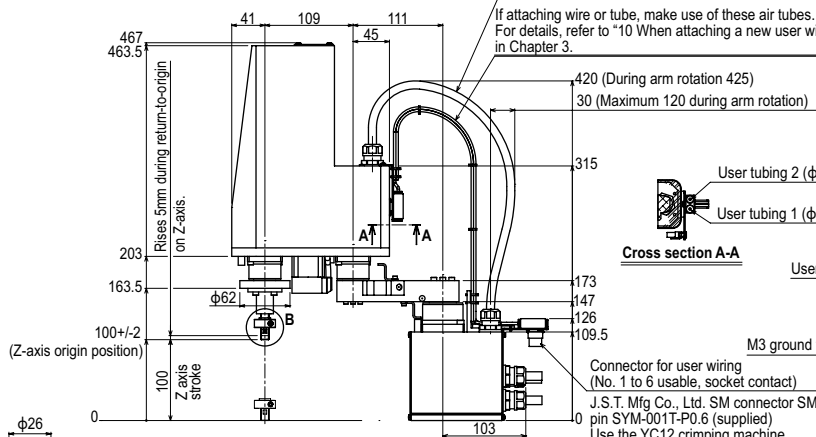
YK220X

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.



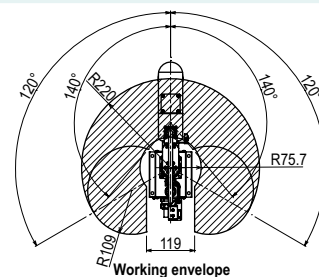
Do not attach any wire or tube to self-supporting cable.
Doing so may degrade positioning accuracy.

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.



Cross section A-A

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 machine.



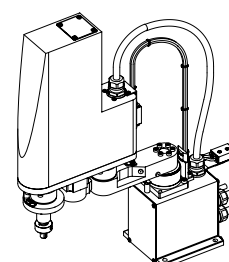
Working envelope

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

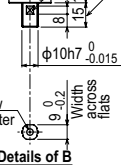


X, Y-axis origin position

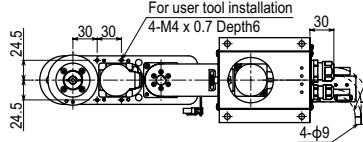
When performing return-to-origin, move the
axes counterclockwise in advance from the
position shown above.



No phase relation between flat spot
and R-axis origin
User tool installation range



Details of B



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

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

Standard type: Small type

- Arm length 250mm
- Maximum payload 5kg

Ordering method

YK250XG - 150

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

RCX340-4

Controller / Number of controllable axes	Safety standard	Option A (OPA)	Option B (OPB)	Option C (OPC)	Option D (OPD)	Option E (OPE)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	iVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ P.534

Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		100 mm	150 mm	150 mm	-
	Rotation angle		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output			200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			4.5 m/sec		1.1 m/sec	1020 °/sec
Maximum payload			5 kg (Standard specification), 4 kg (Option specifications ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.49 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ² (0.5 kgfcm ²)			
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			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: There are limits to acceleration coefficient settings. See P 609

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

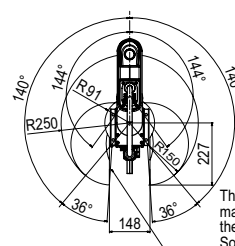
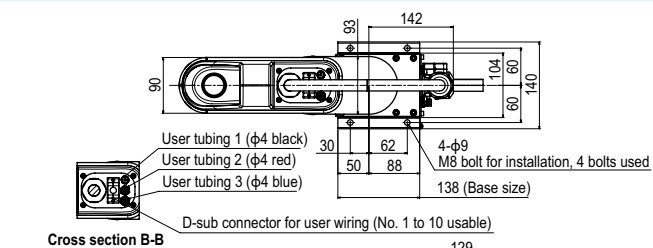
Note: The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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.

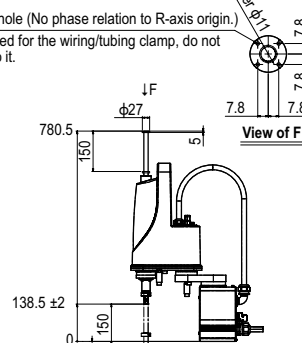
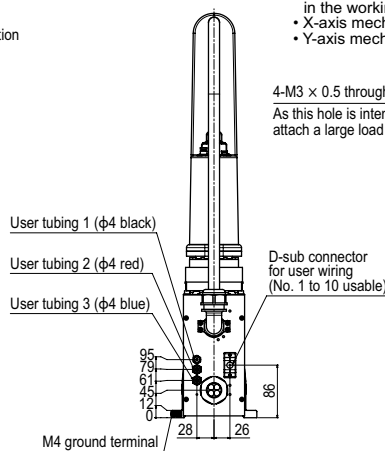
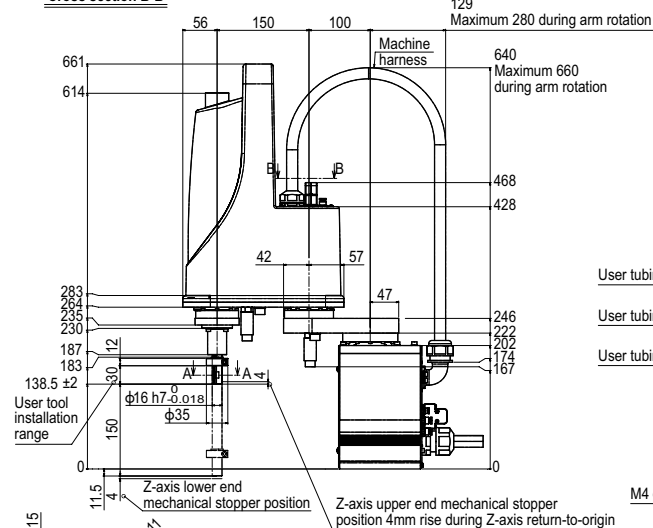
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
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YK250XG

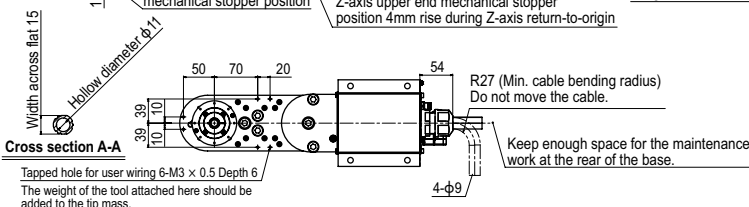


The arm may be in contact with the machine harness in an area inside from the inner limit of this working envelope. So, do not operate the arm in this area.

- 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°



Option:
User wiring/tubing through spline type



Controller

RCX340 ▶ 544	RCX240S ▶ 534
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YK350XG

Standard type: Small type

● Arm length 350mm ● Maximum payload 5kg

Ordering method

YK350XG - 150

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

RCX340-4

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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	200 mm	150 mm	150 mm	-
		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output		200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability	Note 1	+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		5.6 m/sec		1.1 m/sec	1020 °/sec
Maximum payload		5 kg (Standard specification), 4 kg (Option specifications Note 4)			
Standard cycle time: with 2kg payload	Note 2	0.49 sec			
R-axis tolerable moment of inertia	Note 3	0.05 kgm ² (0.5 kgfcm ²)			
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 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. There are limits to acceleration coefficient settings. See P.609.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

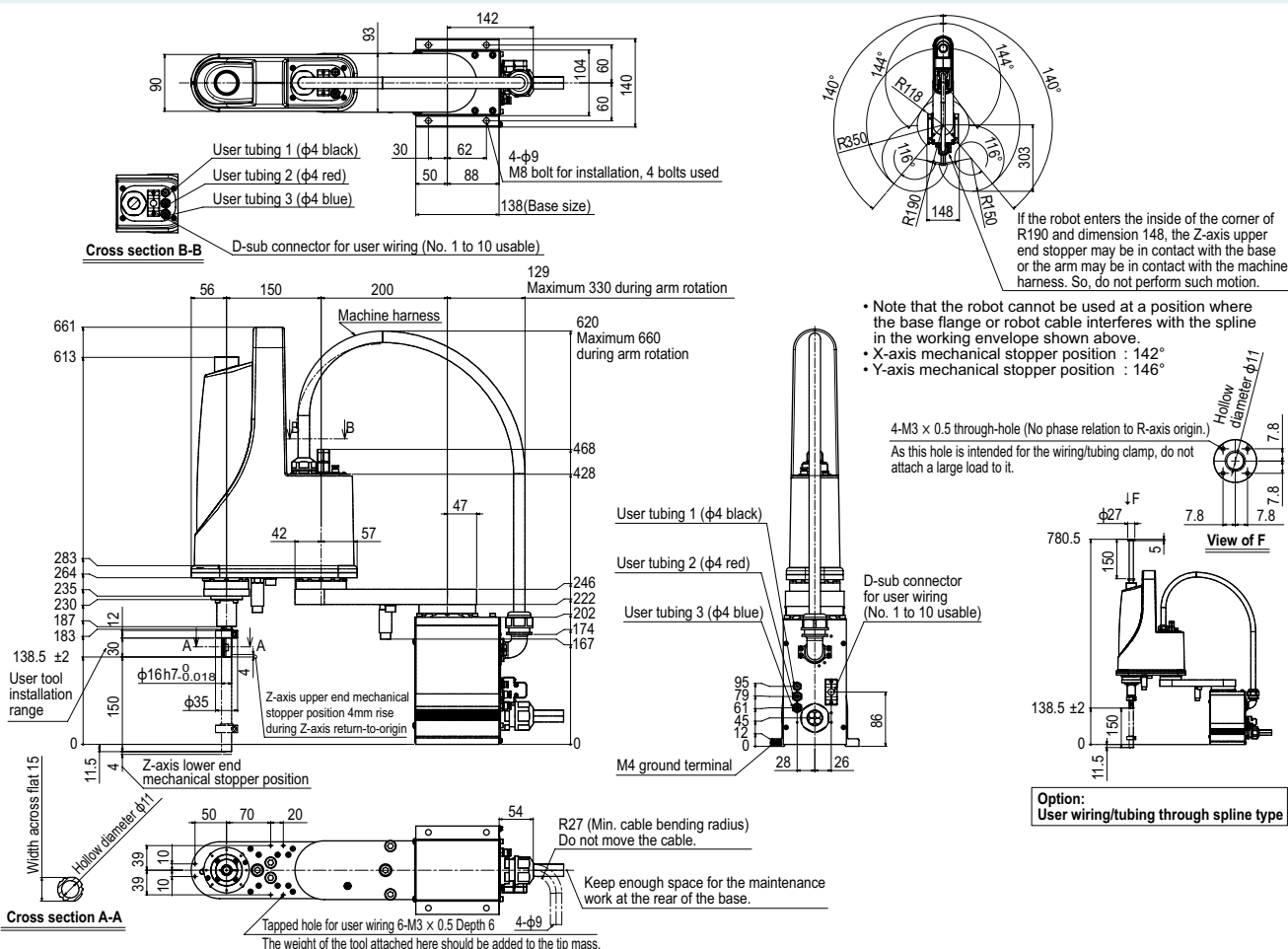
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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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YK350XG



Controller

RCX340 ▶ 544 RCX240S ▶ 534

Standard type: Small type

- Arm length 400mm
- Maximum payload 5kg

Ordering method

YK400XG - 150

Model	Z axis stroke	Tool flange	Hollow shaft	Cable
	150: 150mm	No entry: None F: With tool flange	No entry: None S: With hollow shaft	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.544**

Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller – CE Marking – Expansion I/O – Network option – iVY System – Gripper – Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

■ Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		250 mm	150 mm	150 mm	-
	Rotation angle		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output			200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			6.1 m/sec		1.1 m/sec	1020 °/sec
Maximum payload			5 kg (Standard specification), 4 kg (Option specifications ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.49 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ² (0.5 kgfcm ²)			
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. (X,Y axes)

Note 2. When reciprocating 300mm in horizontal and 25mm in vertical directions.

Note 3. There are limits to acceleration coefficient settings. See P.610.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

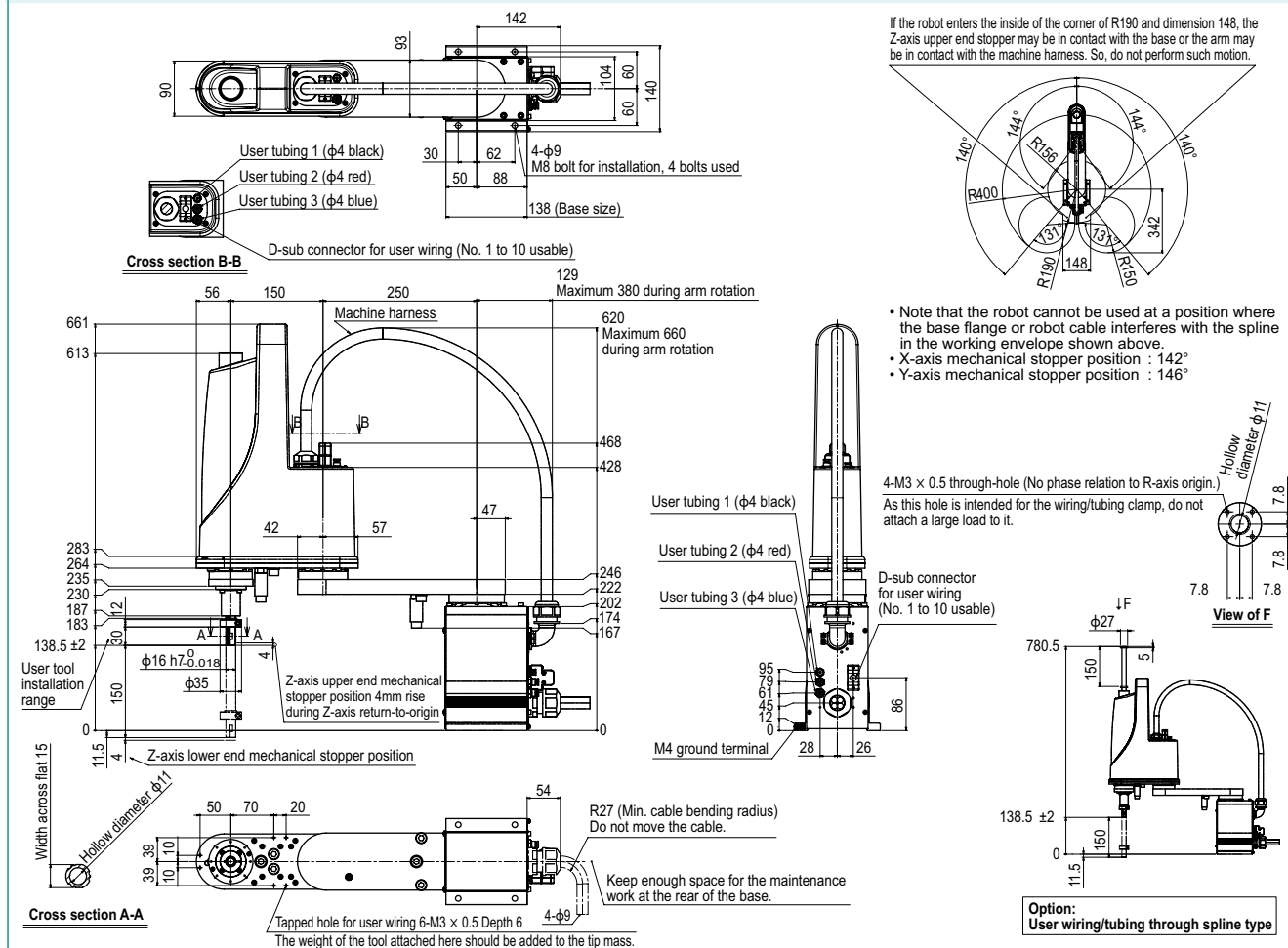
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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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YK400XG



Controller

RCX340 ▶ 544 **RCX240S ▶ 534**

YK400XR

Standard type: Small type

● LOW COST HIGH PERFORMANCE MODEL

● Arm length 400mm ● Maximum payload 3kg



Ordering method

YK400XR		150			RCX340-4								
Model	Return-to-origin method S: Sensor T: Stroke end	Z axis stroke	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 4: 4 pcs. 3: 3 pcs. 2: 2 pcs. 1: 1 pc. 0: 0 pc.	

Specify various controller setting items. RCX340 ▶ **P.544**

Specify various controller setting items. RCX340 ▶ **P.544**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	225 mm	175 mm	150 mm	-
		+/-132 °	+/-150 °	-	+/-360 °
AC servo motor output		200 W	100 W	100 W	100 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Belt speed reduction
	Transmission method	Direct-coupled	Direct-coupled	Timing belt	Timing belt
	Motor to speed reducer				
	Speed reducer to output				
Repeatability ^{Note 1}		+/-0.01 mm	+/-0.01 mm	+/-0.01 mm	+/-0.01 °
Maximum speed		6 m/sec	1.1 m/sec	2600 °/sec	
Maximum payload		3 kg (Standard specification), 2 kg (Option specifications) ^{Note 4}			
Standard cycle time: with 2kg payload ^{Note 2}		0.45 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.05 kgm ² (0.5 kgfcm ²)			
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. It is necessary to input the moment of inertia in the actual operating environment.

Note 4. Maximum payload of option specifications (with user wiring/tubing through spline type) is 2kg.

Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

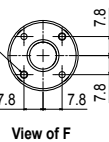
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:
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YK400XR

4-M3 × 0.5 through-hole
(No phase relation to R-axis origin.)

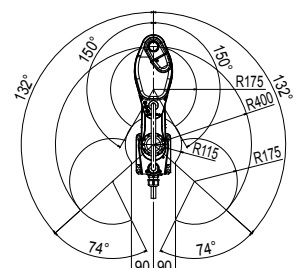
As this hole is intended for the wiring/tubing clamp, do not attach a large load to it.



User wiring connector
(Numbers 1 to 10 are usable.)
J.S.T. Connector
SM connector: SMR-11V-B
Pin: SYM-001T-P0.6 is attached.
Use AP-K2N for the crimping machine.

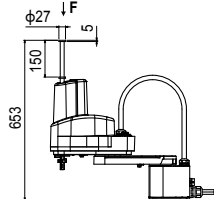
**XY-axis origin position
(Sensor specification)**

When performing return-to-origin, move both the X-axis and Y-axis counterclockwise in advance from the position shown above.

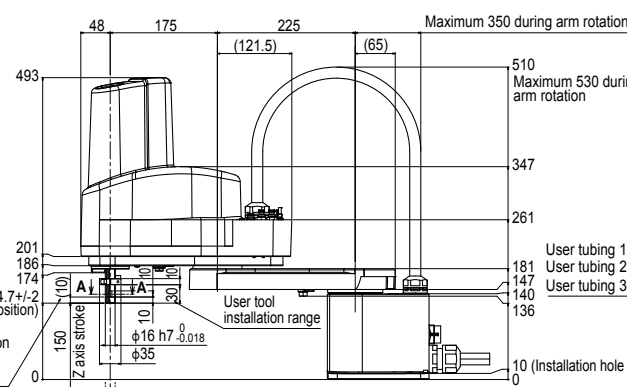
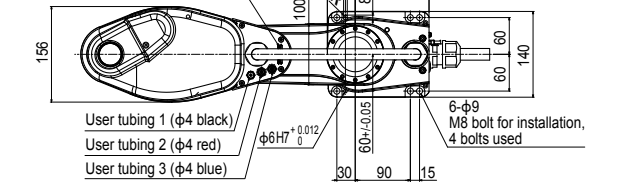


Working envelope

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

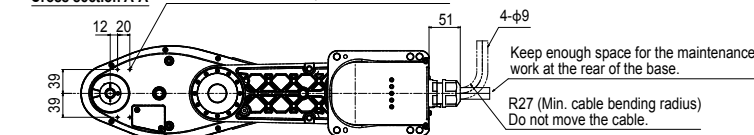


Option
User wiring and tubing routed through spline shaft.



Standard type

Tapped hole for user wiring 4-M3 × 0.5 Depth 6
The weight of the tool attached here should be added to the tip mass.



**XY-axis origin position
(Stroke end specification)**

When performing return-to-origin, move the X-axis and Y-axis counterclockwise and clockwise, respectively in advance from the position shown above.

YK500XG

Standard type: Medium type

- Arm length 500mm
- Maximum payload 10kg

Ordering method

YK500XG

Model	Z axis stroke	Tool flange	Cable
	200: 200mm 300: 300mm	No entry: None F: With tool flange	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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240

R3

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	200 mm	300 mm	200 mm 300 mm	—
		+/-130 °	+/-145 °	—	+/-360 °
AC servo motor output		400 W	200 W	200 W	200 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability	Note 1	+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		7.6 m/sec	2.3 m/sec 1.7 m/sec	1700 °/sec	
Maximum payload		10 kg			
Standard cycle time: with 2kg payload	Note 2	0.45 sec			
R-axis tolerable moment of inertia	Note 3	0.30 kgm ²			
User wiring		0.2 sq × 20 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		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. There are limits to acceleration coefficient settings. See P.611.

Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

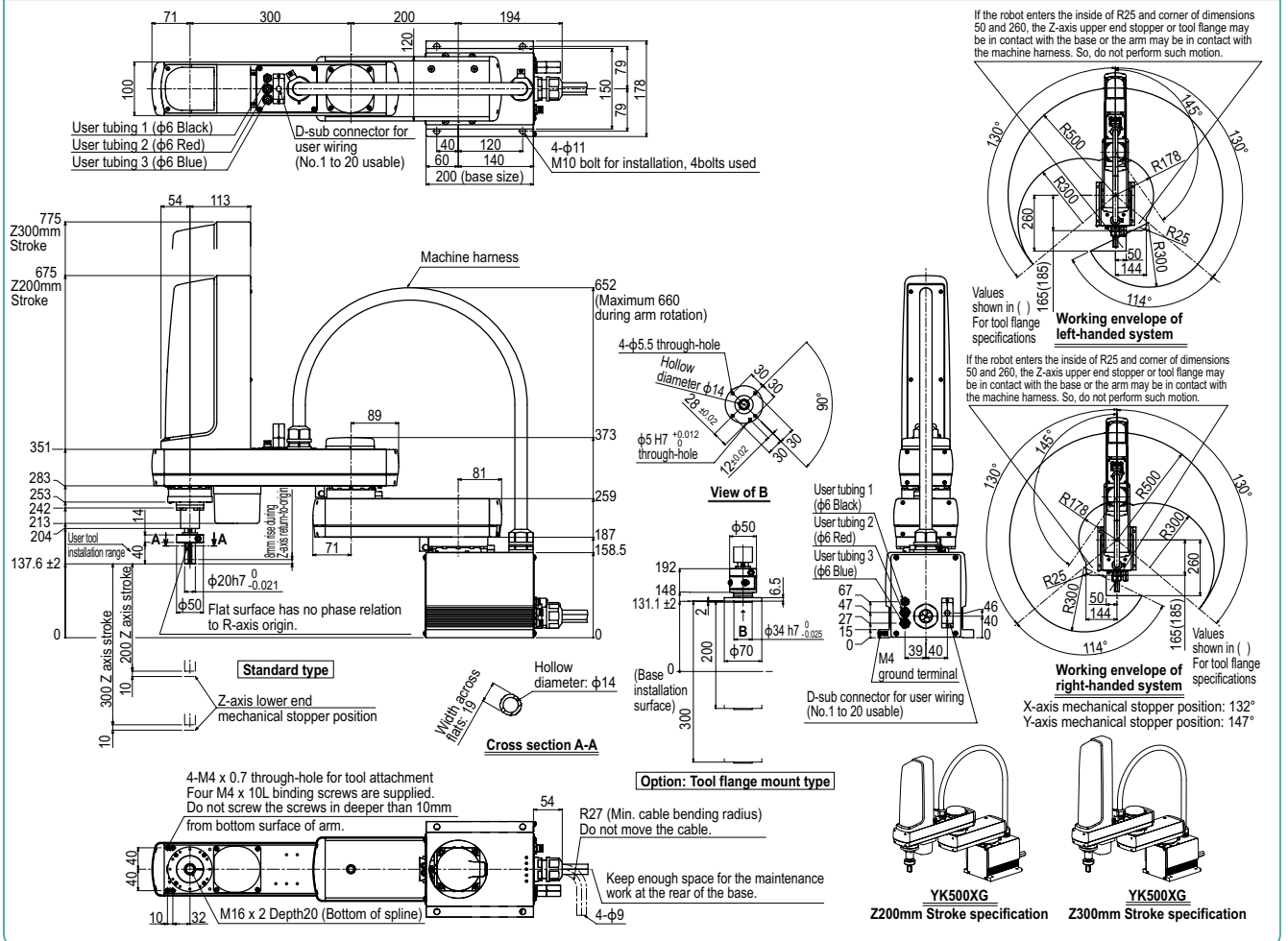
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

YK500XG



Standard type: Medium type

- Arm length 600mm
- Maximum payload 5kg



Ordering method

YK600XGL-150

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

Controller / Number of controllable axes	Safety standard	Option A (OP A)	Option B (OP B)	Option C (OP C)	Option D (OP D)	Option E (OP E)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240S

Controller	CE Marking	Expansion I/O	Network option	iVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

■ Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		350 mm	250 mm	150 mm	-
	Rotation angle		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output			200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			4.9 m/sec		1.1 m/sec	1020 °/sec
Maximum payload			5 kg (Standard specification), 4 kg (Option specifications ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.63 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ² (0.5 kgfcm ²)			
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			22 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. There are limits to acceleration coefficient settings. See P.610.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

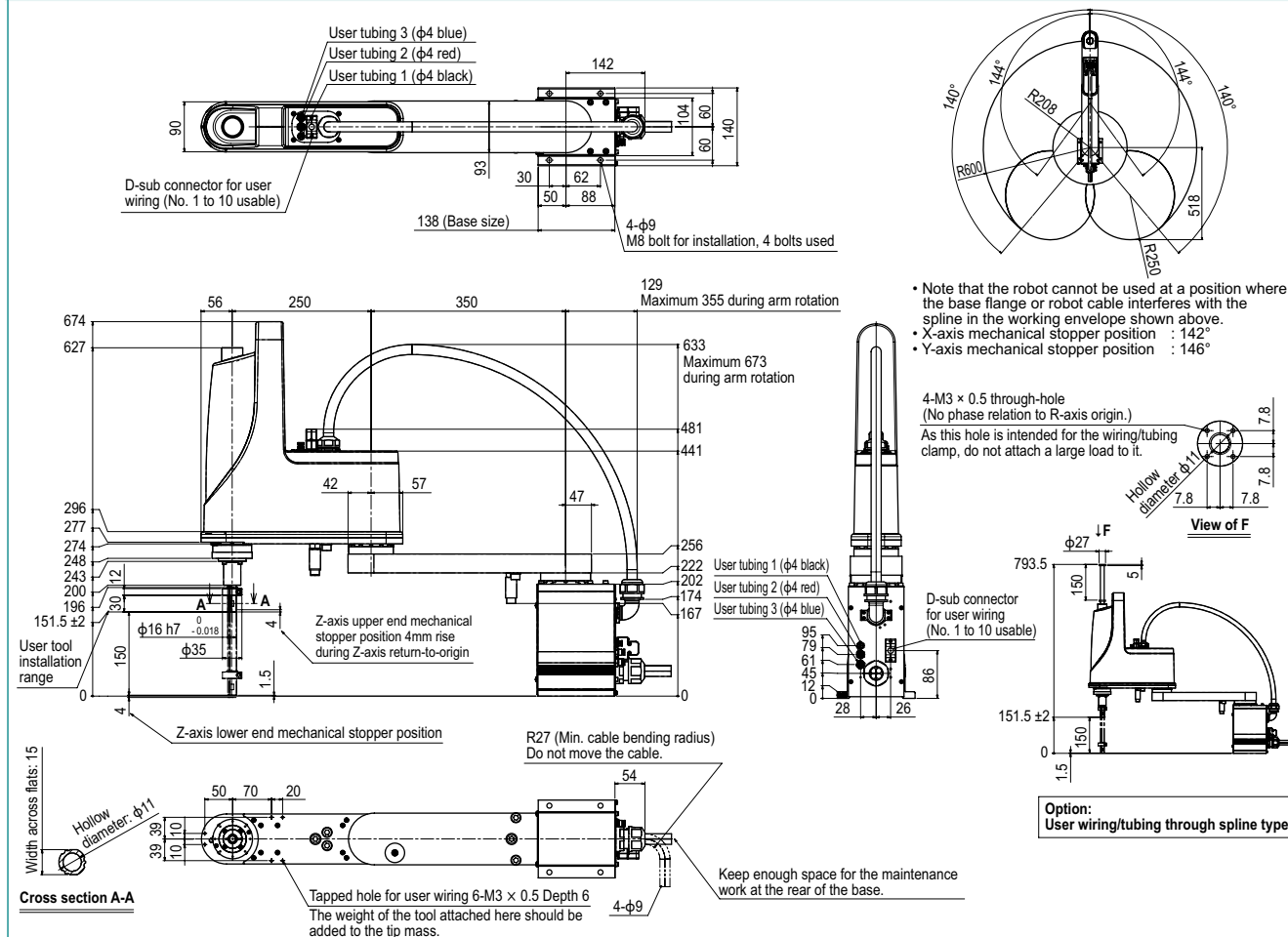
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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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YK600XGL



Controller

RCX340 ▶ 544 **RCX240S ▶ 534**

Standard type: Medium type

- Arm length 600mm
- Maximum payload 10kg



Ordering method

YK600XG

Model	Z axis stroke	Tool flange	Cable
	200: 200mm	No entry: None	3L: 3.5m
	300: 300mm	F: With tool flange	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
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	iVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

■ 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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw		Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled				
		Speed reducer to output	Direct-coupled				
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm		+/-0.004 °
Maximum speed			8.4 m/sec		2.3 m/sec	1.7 m/sec	1700 °/sec
Maximum payload			10 kg				
Standard cycle time: with 2kg payload ^{Note 2}			0.46 sec				
R-axis tolerable moment of inertia ^{Note 3}			0.30 kgm ²				
User wiring			0.2 sq × 20 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			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: There are limits to acceleration coefficient settings. See P.611

Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

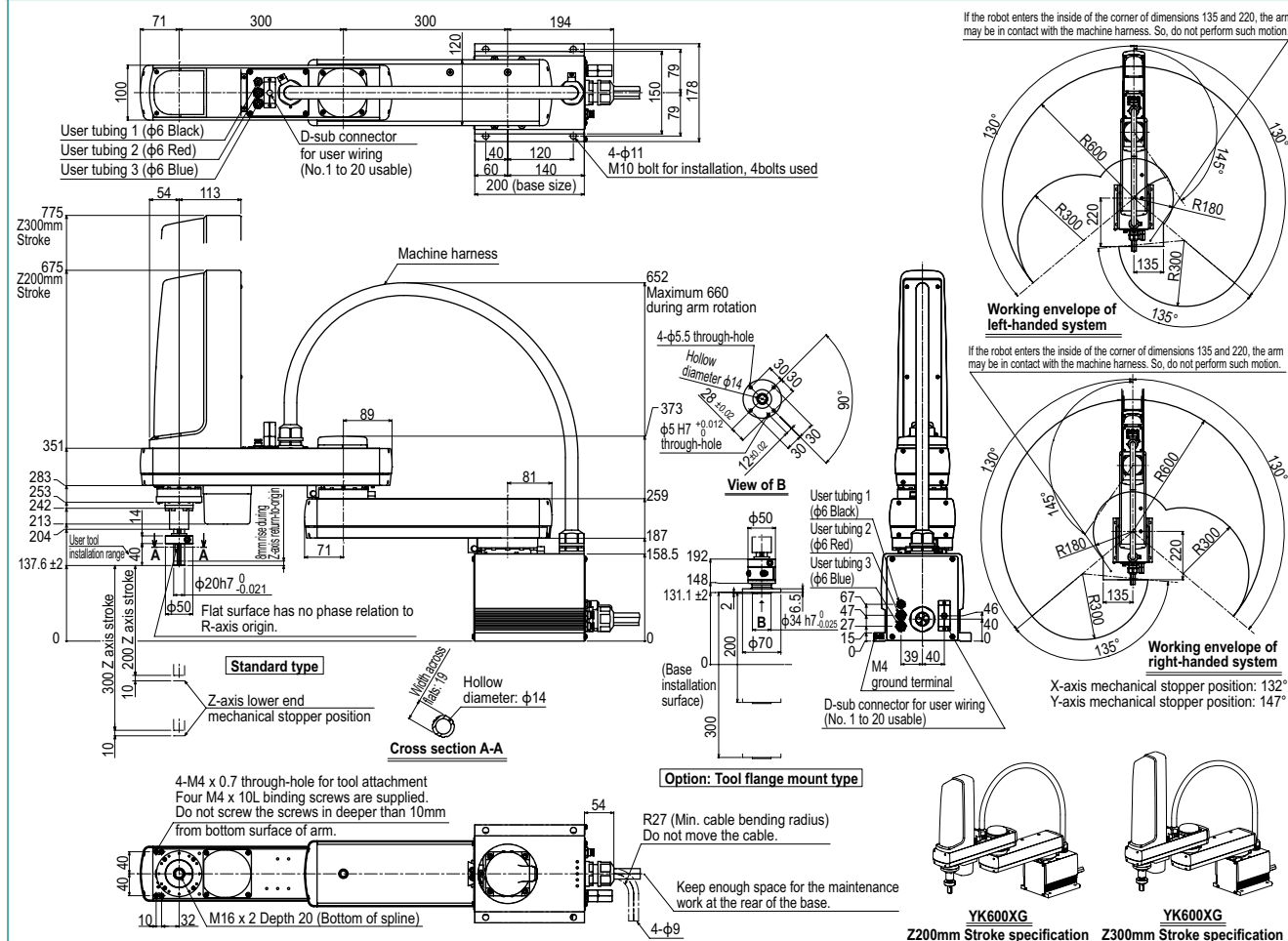
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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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YK600XG



Controller

RCX340 ▶ 544 | **RCX240 ▶ 534**

Compact
single-axis robots
TRANSERVOC

SCARA
robots
YK-X

CLEAN

CONTR

INFOR

Z

Medium

of
of

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 200: 200mm 300: 300mm	Tool flange No entry: None F: With tool flange	Cable 3L: 3.5m 5L: 5m 10L: 10m	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery

Specify various controller setting items. RCX340 ▶ **P.544**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	400 mm	300 mm	200 mm	300 mm
		+/-130 °	+/-145 °	-	+/-360 °
AC servo motor output		400 W	200 W	200 W	200 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability	Note 1	+/-0.01 mm		+/-0.01 mm	+/-0.005 °
Maximum speed		9.2 m/sec		2.3 m/sec	1700 °/sec
Maximum payload		10 kg (Standard type), 9 kg (Option: Tool flange mount type)			
Standard cycle time: with 2kg payload	Note 2	0.50 sec			
R-axis tolerable moment of inertia	Note 3	0.30 kgm ²			
User wiring		0.2 sq × 20 wires			
User tubing (Outer diameter)		φ6 × 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. There are limits to acceleration coefficient settings.

Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

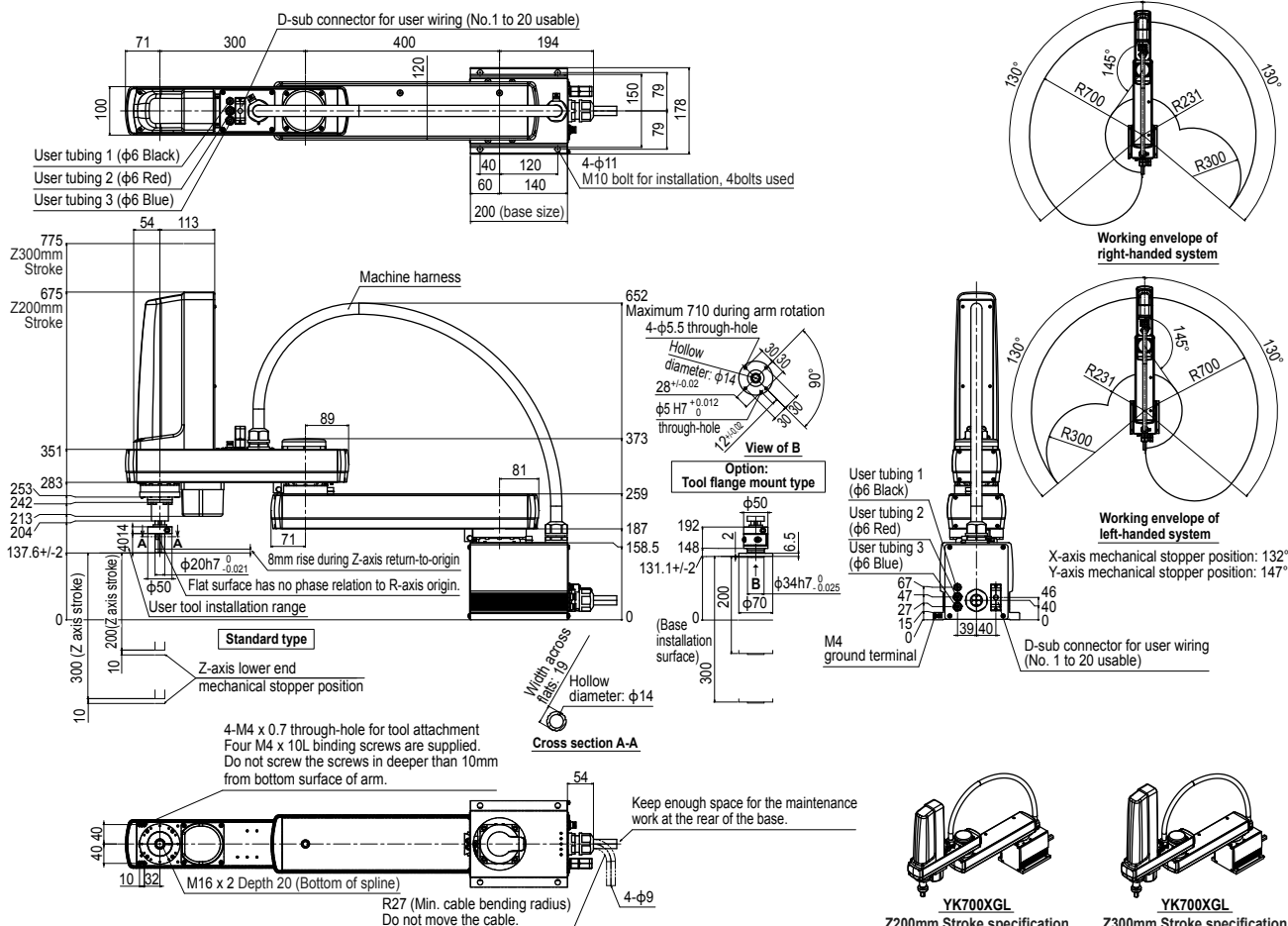
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

YK700XGL



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.544**

RCX240 **R3**

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

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

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	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
Repeatability ^{Note 1}		+/-0.02 mm			
Maximum speed		8.4 m/sec			
Maximum payload		20 kg			
Standard cycle time: with 2kg payload ^{Note 2}		0.42 sec			
R-axis tolerable moment of inertia ^{Note 3}		1.0 kgm ²			
User wiring		0.2 sq × 20 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		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. There are limits to acceleration coefficient settings. See P.611.

Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

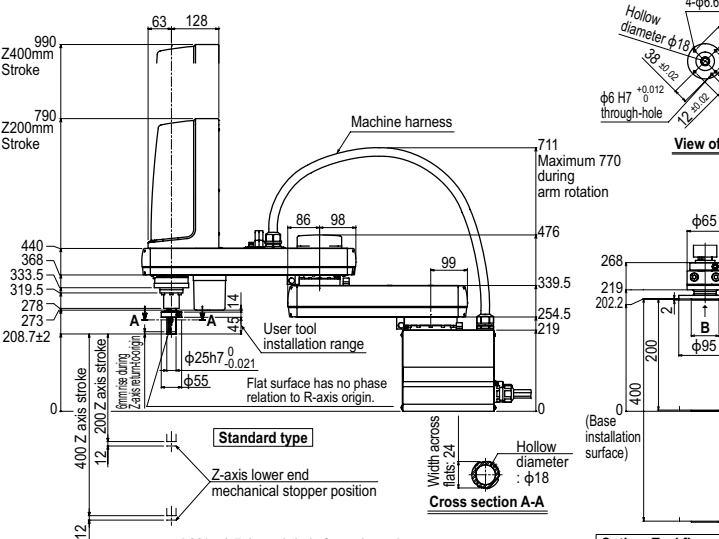
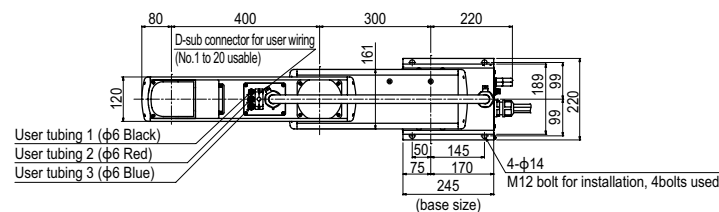
Note. The movement range can be limited by changing the positions of X and Y-axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

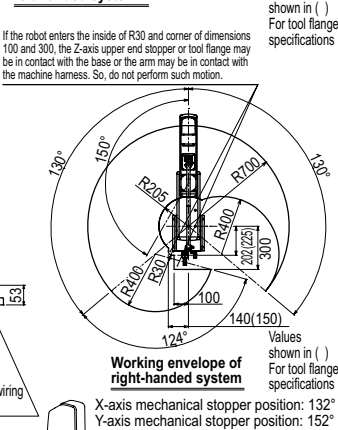
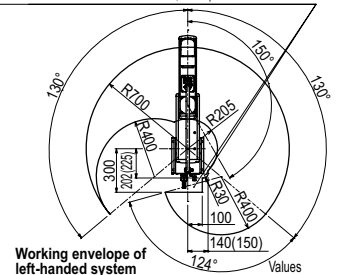
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (opt). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:
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YK700XG



If the robot enters the inside of R30 and corner of dimensions 100 and 300, the Z-axis upper end stopper or tool flange may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

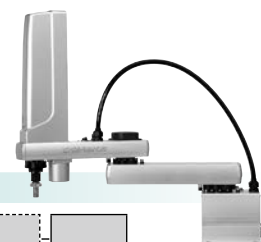


YK700XG Z200mm Stroke specification YK700XG Z400mm Stroke specification

YK800XG

Standard type: Large type

● Arm length 800mm ● Maximum payload 20kg



Ordering method

YK800XG

Model	Z axis stroke	Tool flange	Cable
	200: 200mm 400: 400mm	No entry: None F: With tool flange	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
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Specify various controller setting items. RCX340 ▶ **P544**

RCX240

R3

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	400 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	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.02 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		9.2 m/sec		2.3 m/sec 1.7 m/sec	920 °/sec
Maximum payload		20 kg			
Standard cycle time: with 2kg payload ^{Note 2}		0.48 sec			
R-axis tolerable moment of inertia ^{Note 3}		1.0 kgm ²			
User wiring		0.2 sq × 20 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		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. There are limits to acceleration coefficient settings. See P.611.

Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

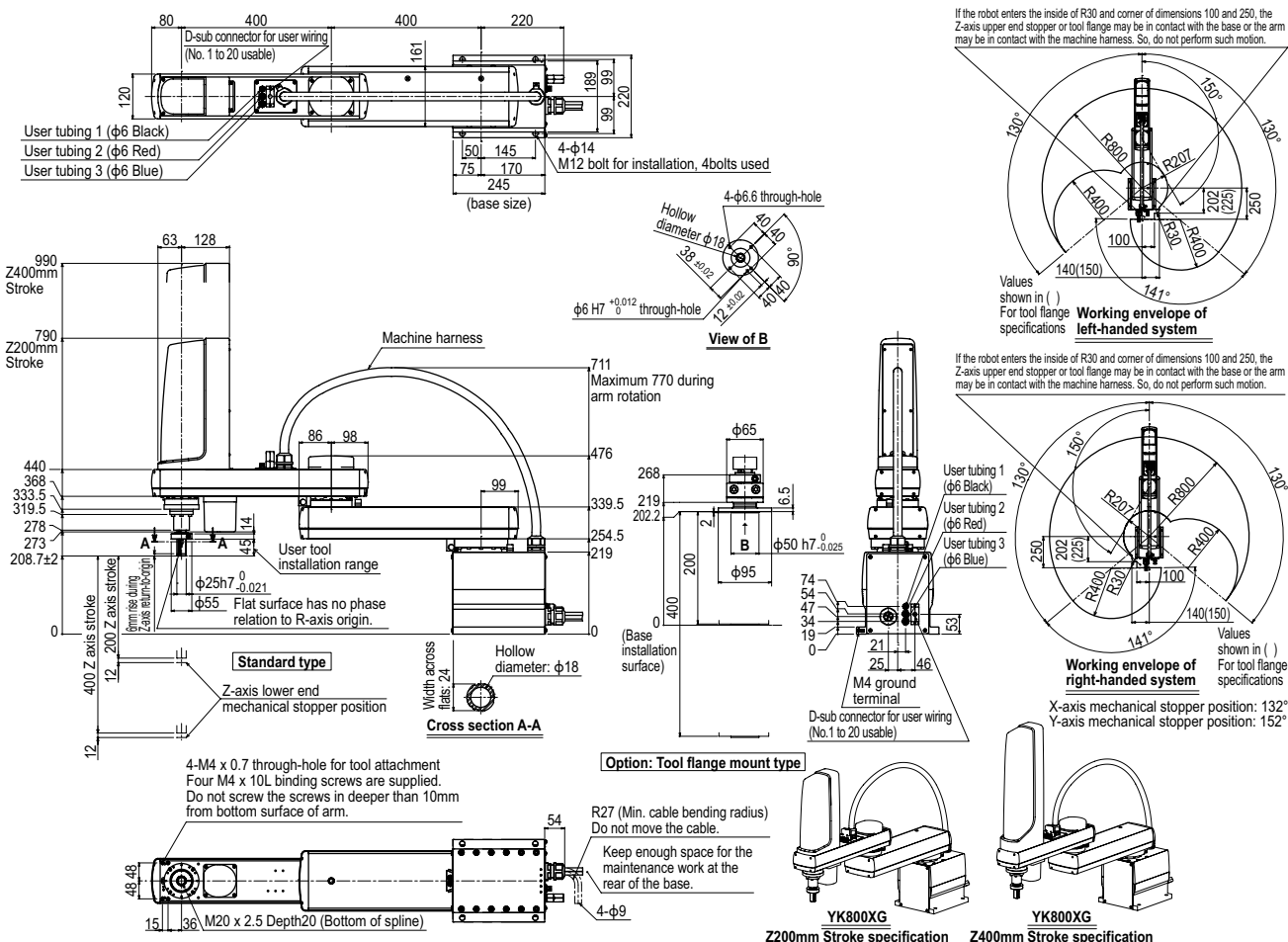
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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



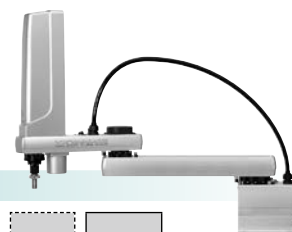
Controller

RCX340 ▶ 544 RCX240 ▶ 534

YK1000XG

Standard type: Large type

● Arm length 1000mm ● Maximum payload 20kg



Ordering method

YK1000XG

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	RCX340-4							
				RCX240		R3					
				Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery

Specify various controller setting items. RCX340 ▶ **P544**

Specify various controller setting items. RCX240/RCX240S ▶ **P534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	600 mm	400 mm	200 mm	400 mm
		+/-130 °	+/-150 °	—	+/-360 °
AC servo motor output		750 W	400 W	400 W	200 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability	Note 1	+/-0.02 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		10.6 m/sec		2.3 m/sec	1.7 m/sec
Maximum payload		20 kg			
Standard cycle time: with 2kg payload	Note 2	0.49 sec			
R-axis tolerable moment of inertia	Note 3	1.0 kgm ²			
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: 56 kg Z axis 400 mm: 58 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. There are limits to acceleration coefficient settings. See P.611.

Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

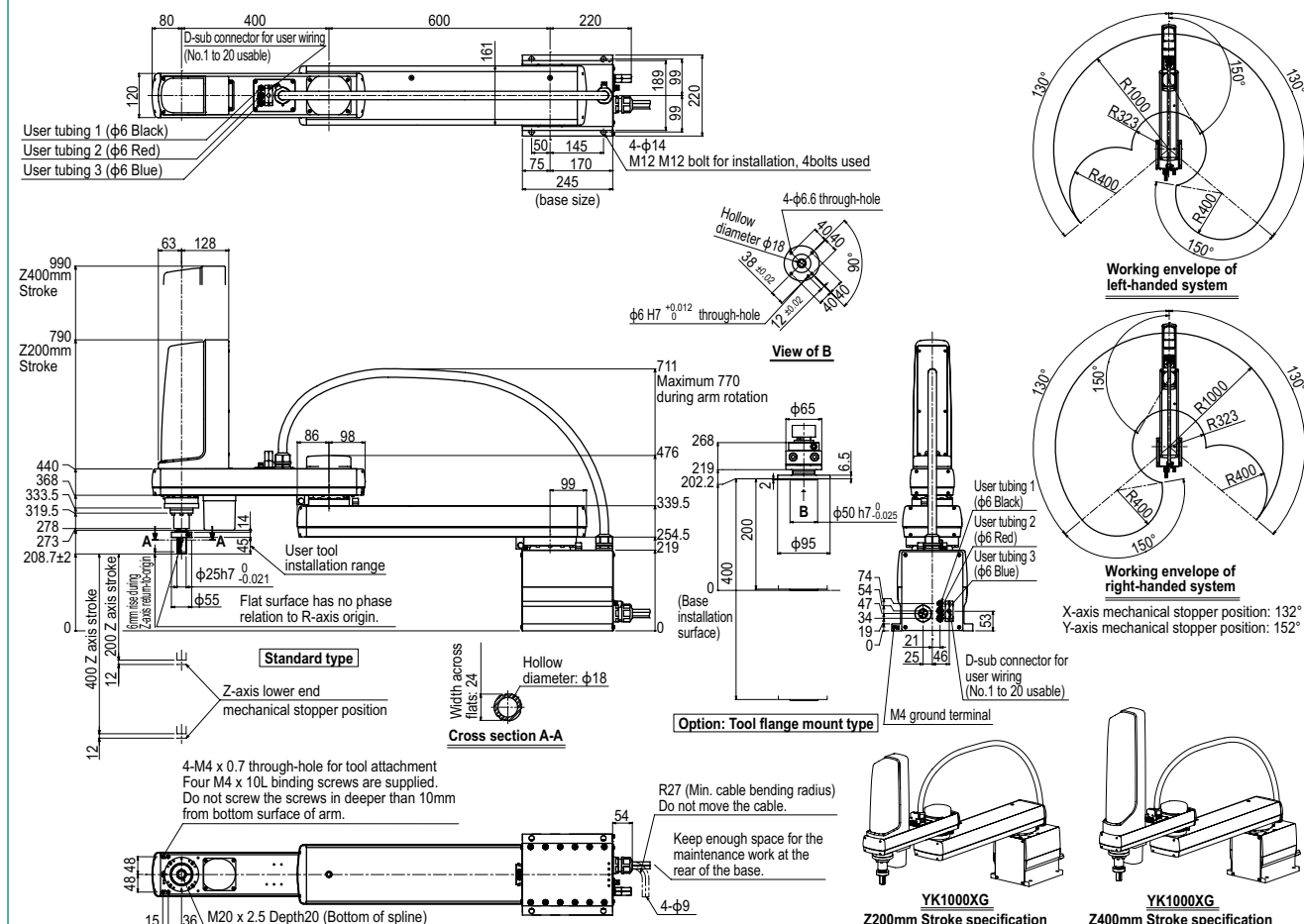
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

YK1000XG



Controller

RCX340 ▶ 544 RCX240 ▶ 534

YK1200X

Standard type: Large type
● Arm length 1200mm
● Maximum payload 50kg

Ordering method

YK1200X - 400

Model	Z axis stroke	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.544**
RCX240
R

Controller

CE Marking

Regenerative unit

Expansion I/O

Network option

IVY System

Gripper

Battery

 Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

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	Speed reducer	Planetary gear	Planetary gear	Ball screw	Harmonic drive
	Transmission method				
	Motor to speed reducer	Direct-coupled		Timing belt transmission	Timing belt transmission
	Speed reducer to output	Direct-coupled		Direct-coupled	Direct-coupled
Repeatability ^{Note 1}		+/-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 ^{Note 2}			0.91 sec		
R-axis tolerable moment of inertia ^{Note 3}			2.45 kgm ²		
User wiring			0.2 sq × 20 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			124 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. There are limits to acceleration coefficient settings. See P.612.

Controller

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

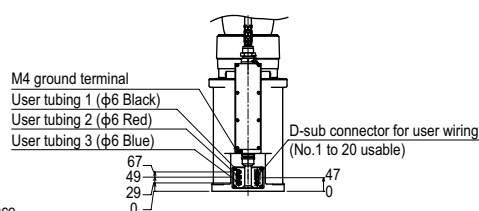
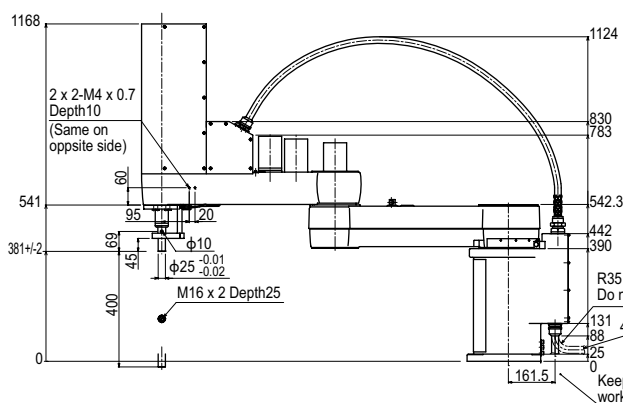
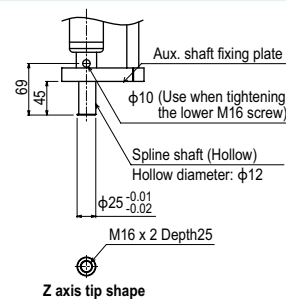
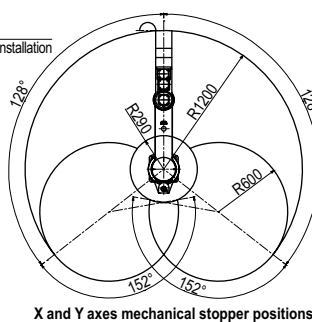
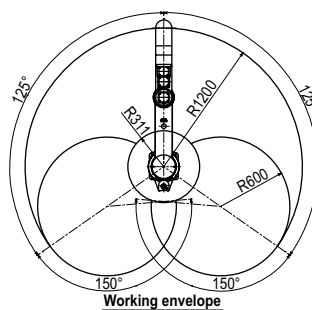
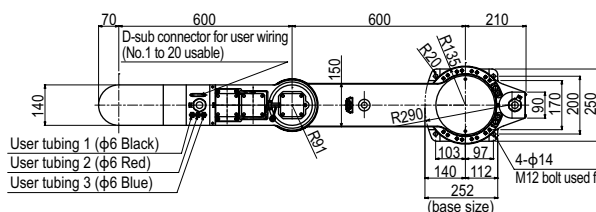
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK1200X



Wall-mount / inverse type

● Arm length 300mm

- **Maximum payload 5kg**

Note. Built-to-order product. Contact us for the delivery period.

Ordering method

YK300XGS

Model	Installation method <small>Note1</small>	Z axis stroke	Tool flange	Hollow shaft	Cable
	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

RCX340-4

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
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Specify various controller setting items. RCX340 ▶ P544

RCX240S

Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ P534

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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed			4.4 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 ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.49 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ²			
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. There are limits to acceleration coefficient settings. See P.609.

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

Controller

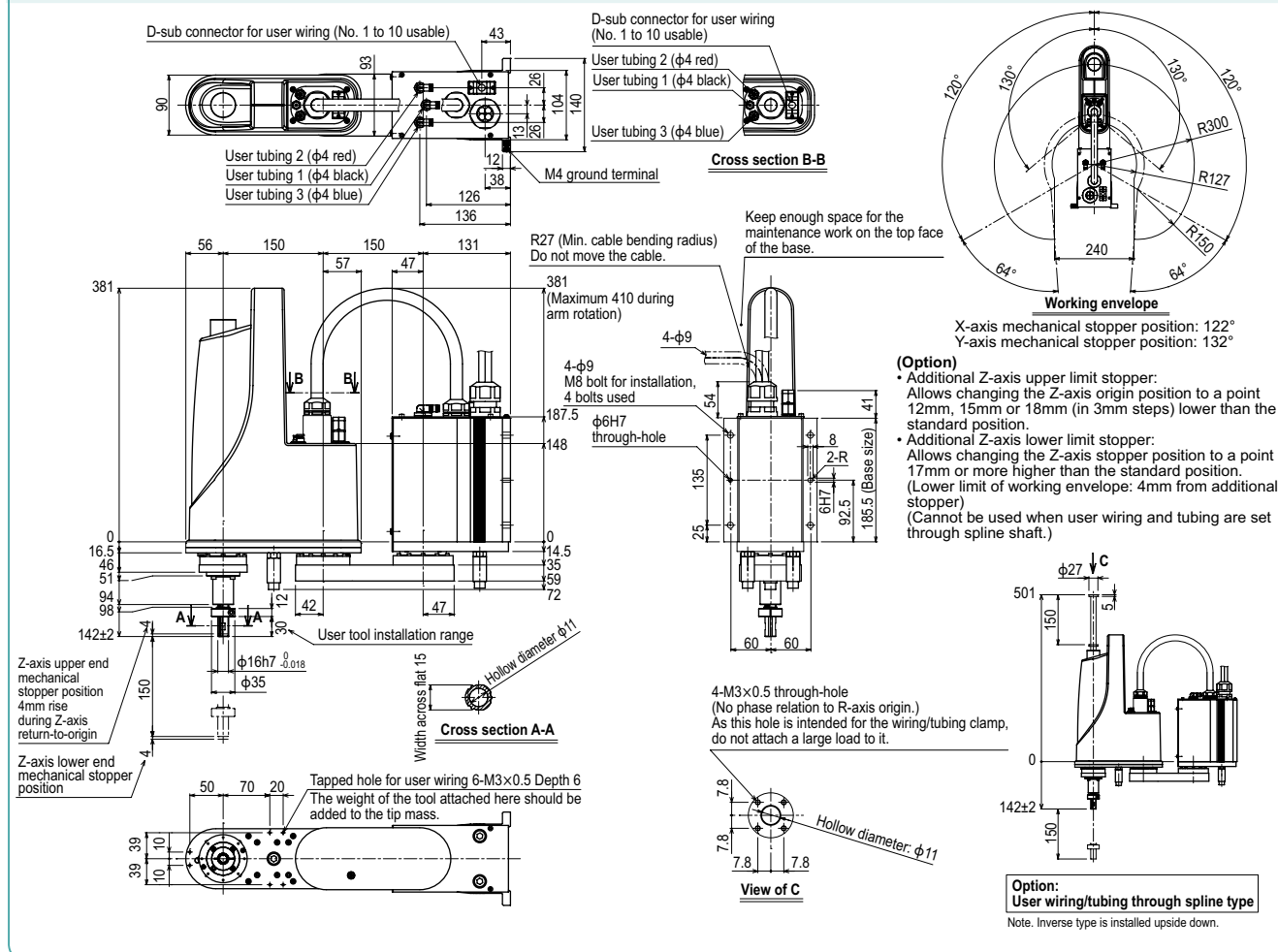
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

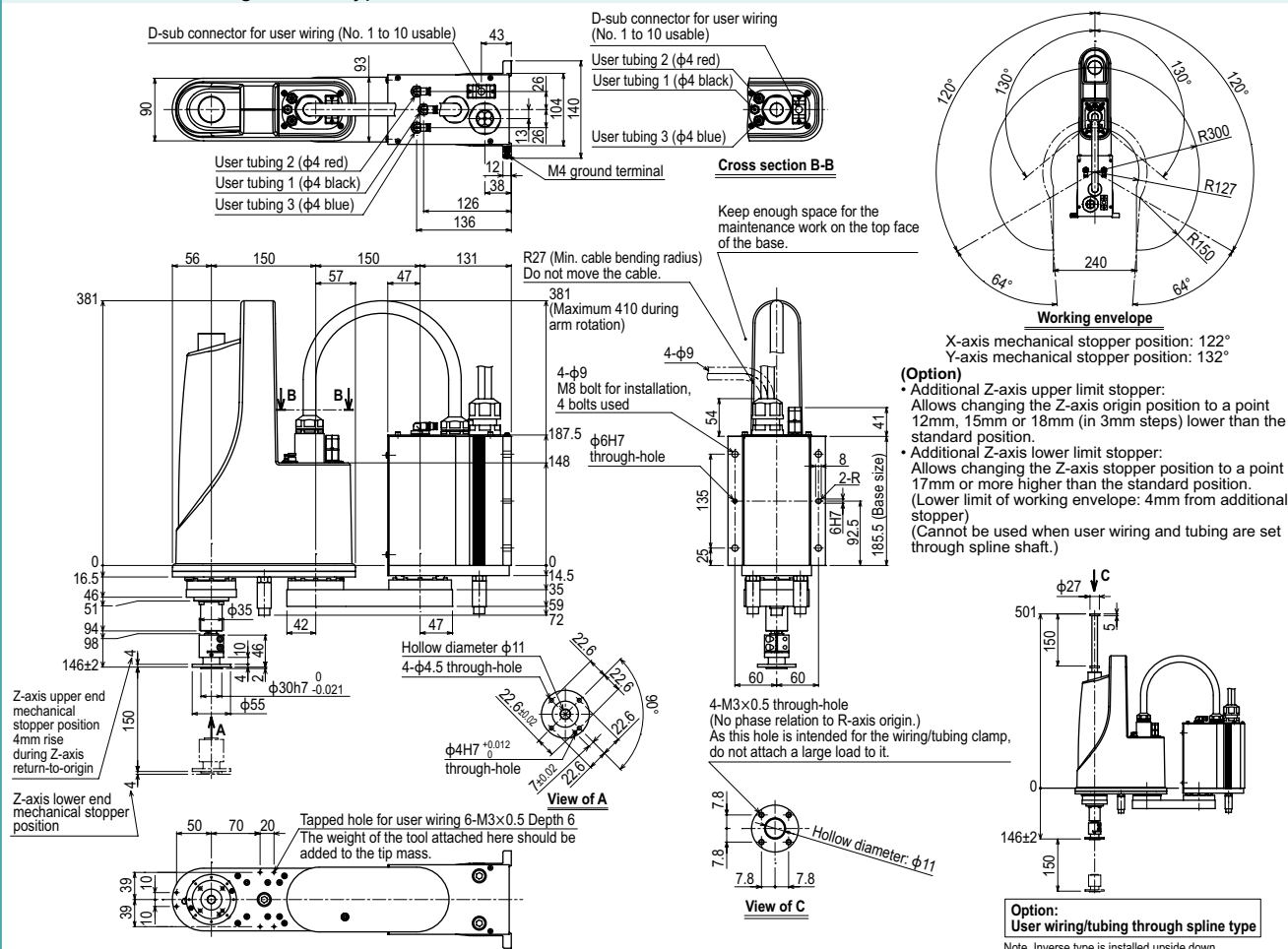
YK300XGS



Controller

RCX340 ▶ 544 **RCX240S ▶ 534**

YK300XGS Tool flange mount type



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** - - - - -

Model - **Installation method** Note1) - **Z axis stroke** (150: 150mm) - **Tool flange** No entry: None
F: With tool flange - **Hollow shaft** No entry: None
S: With hollow shaft - **Cable** 3L: 3.5m
5L: 5m
10L: 10m

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.544

RCX240S - - - - -

Controller - **CE Marking** - **Expansion I/O** - **Network option** - **IVY System** - **Gripper** - **Battery**

Specify various controller setting items. RCX240/RCX240S ▶ P.534

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.

Do not install the ceiling-mount robot upside down or at an angle.
Incorrect installation can cause trouble or malfunction.

Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		250 mm	150 mm	150 mm	—
	Rotation angle		+/-125 °	+/-144 °	—	+/-360 °
AC servo motor output			200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed			6.1 m/sec		1.1 m/sec	1020 °/sec (wall-mount) 720 °/sec (inverse wall-mount)
Maximum payload			5 kg (Standard specification), 4 kg (Option specifications ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.49 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ²			
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			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. There are limits to acceleration coefficient settings. See P.610.

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

Controller

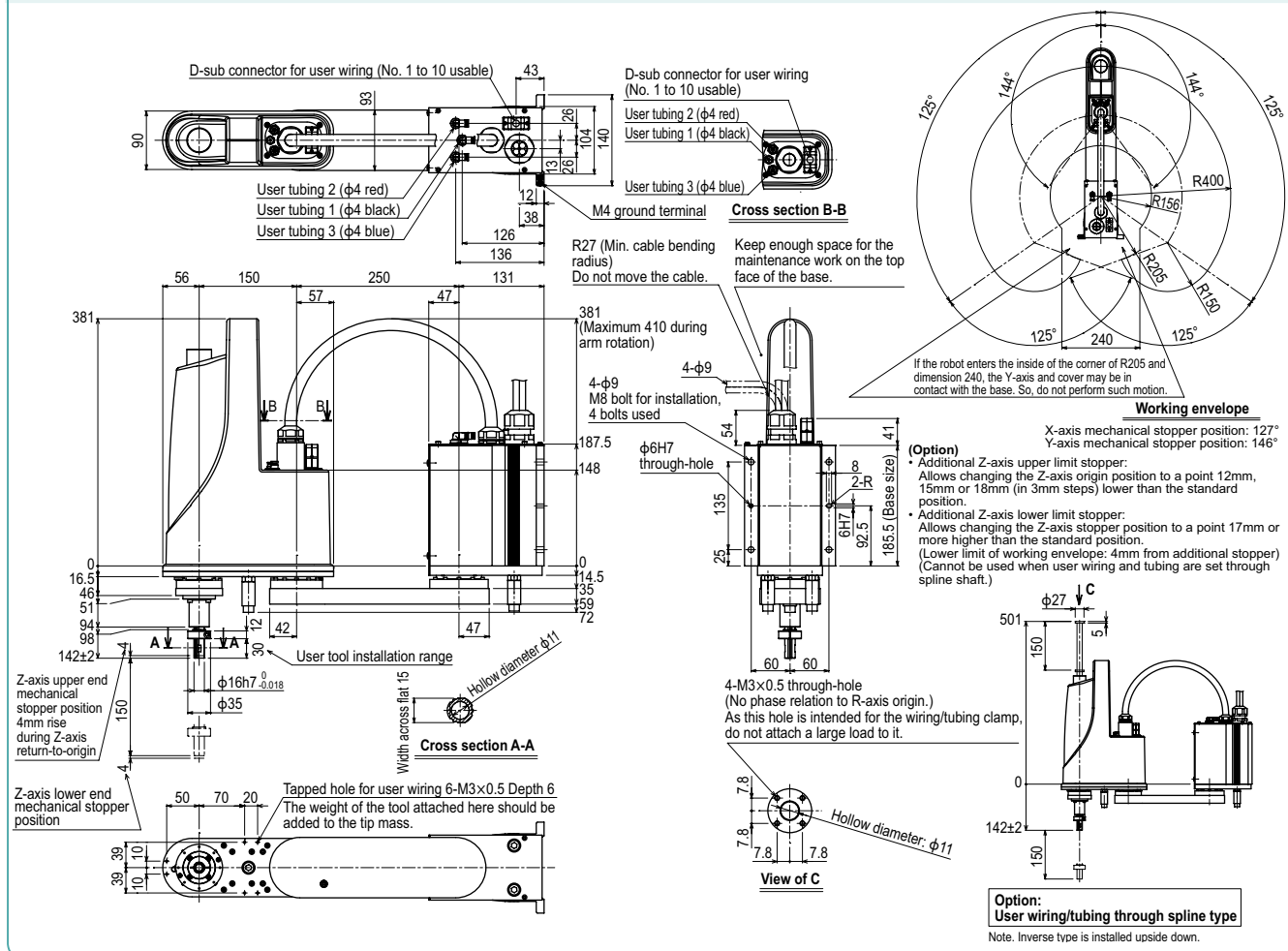
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

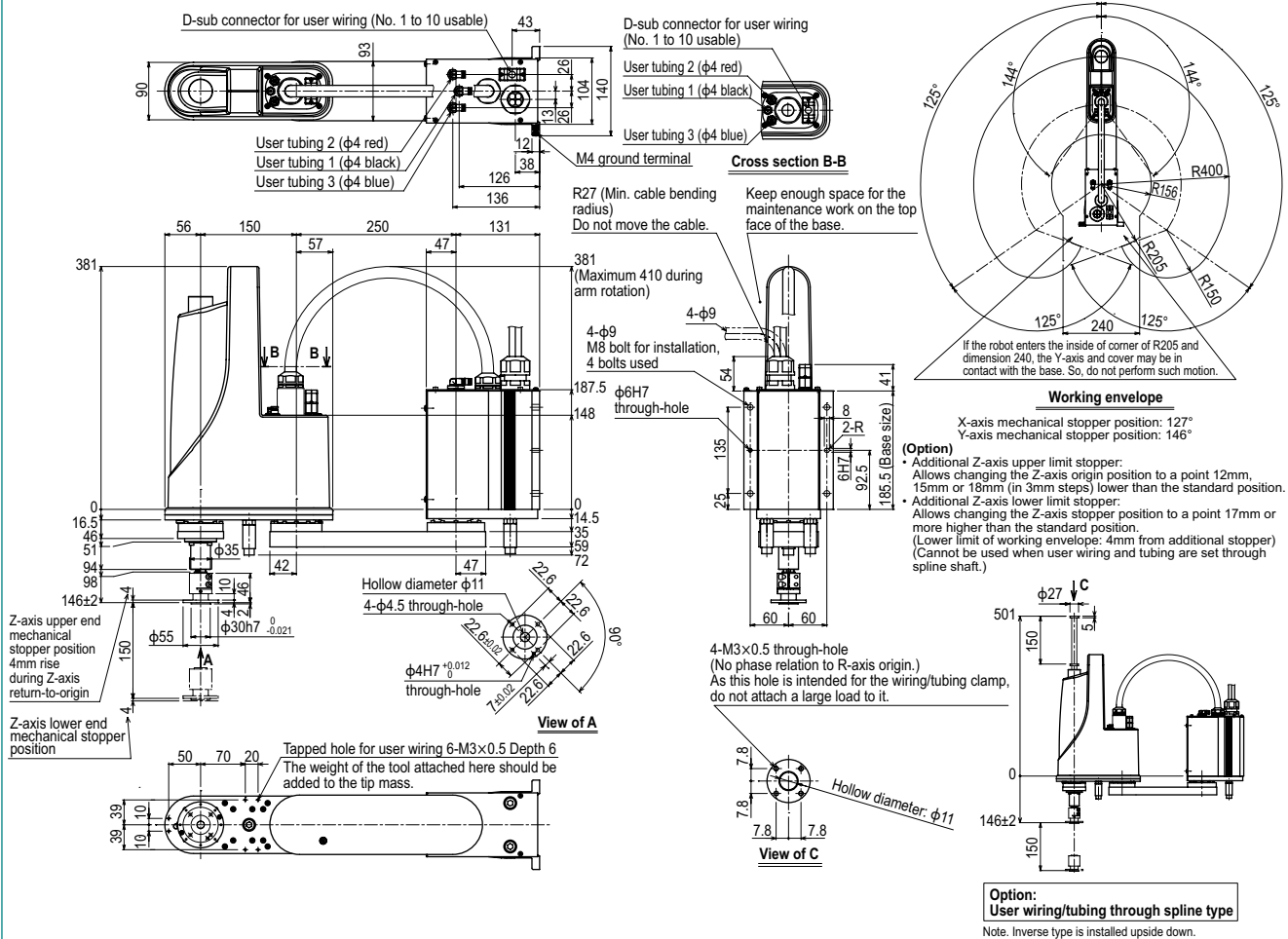
YK400XGS



Controller

RCX340 ▶ 544 **RCX240S ▶ 534**

YK400XGS Tool flange mount type



Wall-mount / inverse type

- Arm length 500mm
- Maximum payload 10kg



Ordering method

YK500XS

Model

Installation method Note 1

Z axis stroke

Tool flange

Cable

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

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.544

RCX240

R3

Controller

CE Marking

Regenerative unit

Expansion I/O

Network option

iVY System

Gripper

Battery

Specify various controller setting items. RCX240/RCX240S ▶

P.534

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		200 mm	300 mm	200 mm 300 mm	–
	Rotation angle		+/-105 °	+/-125 °	–	+/-360 °
AC servo motor output			400 W	200 W	200 W	200 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed			7.6 m/sec		2.3 m/sec	1.7 m/sec 1700 °/sec (wall-mount)
Maximum payload			1700 °/sec (inverse wall-mount)			
Standard cycle time: with 2kg payload ^{Note 2}			10 kg (Standard specification), 9 kg (Option specifications)			
R-axis tolerable moment of inertia ^{Note 3}			0.45 sec			
User wiring			0.30 kgm ²			
User tubing (Outer diameter)			0.2 sq × 20 wires			
Travel limit			φ 6 × 3			
Robot cable length			1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Weight			Standard: 3.5 m Option: 5 m, 10 m			
			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. There are limits to acceleration coefficient settings. See P.611.
 Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

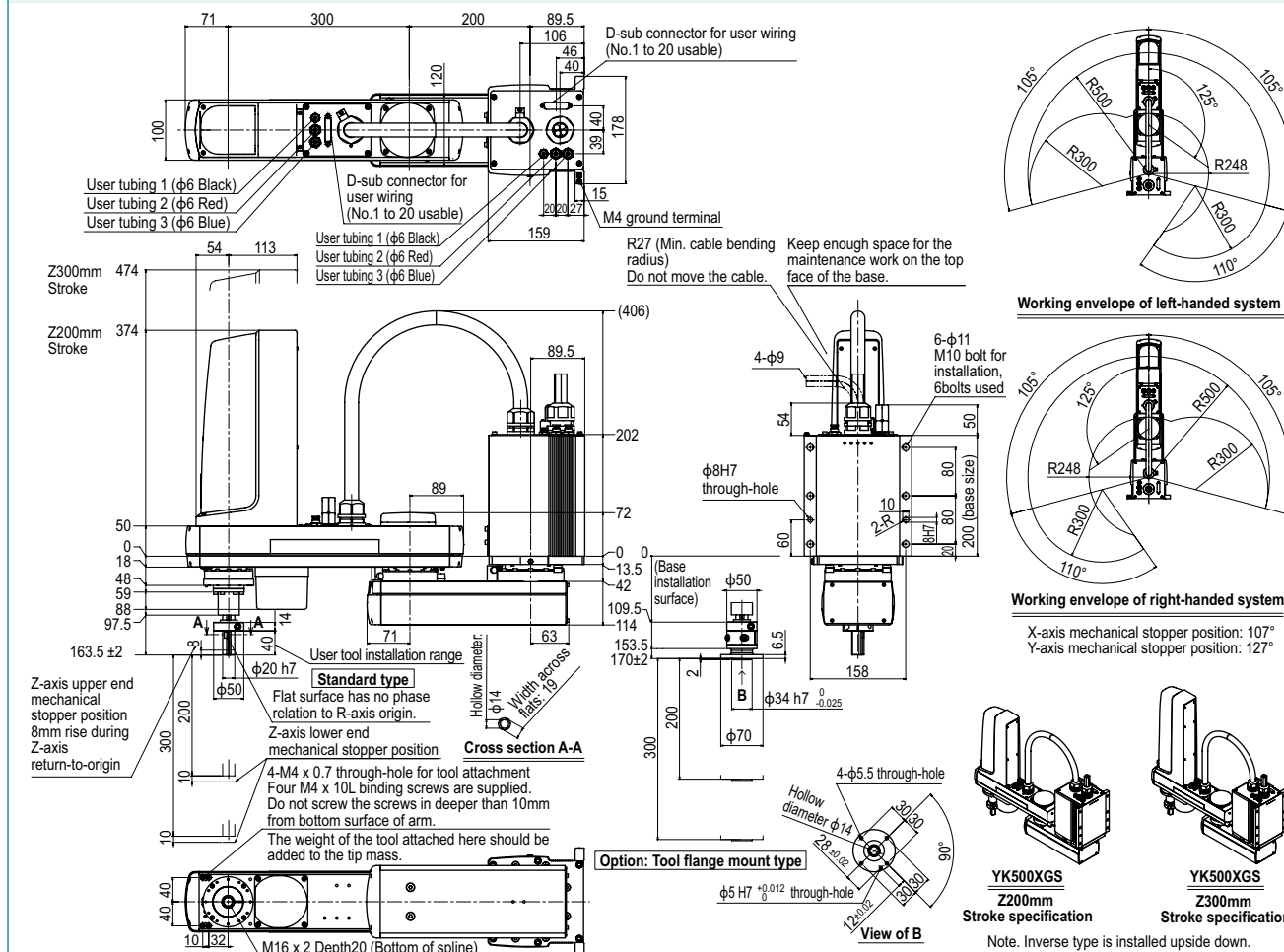
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	1700	Programming / I/O point trace / Remote command Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK500XGS



Note. Inverse type is installed upside down

Controller

RCX340 ▶ 544	RCX240 ▶ 534
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Wall-mount / inverse type

- Arm length 700mm
- Maximum payload 20kg

Ordering method

YK700XGS

Model	Installation method <small>Note 1</small>	Z axis stroke	Tool flange	Cable
	W: Wall-mount (same as per external view) I: Inverse wall-mount (upside down)	200: 200mm 400: 400mm	No entry: None F: With tool flange	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.544

RCX240

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

R3

Specify various controller setting items. RCX240/RCX240S ▶ P.534

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		300 mm	400 mm	200 mm 400 mm	–
	Rotation angle		+/-130 °	+/-130 °	–	+/-360 °
AC servo motor output			750 W	400 W	400 W	200 W
Deceleration mechanism	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.02 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			8.4 m/sec		2.3 m/sec 1.7 m/sec	920 °/sec (wall-mount) 480 °/sec (inverse wall-mount)
Maximum payload			20 kg (Standard specification), 19 kg (Option specifications)			
Standard cycle time: with 2kg payload ^{Note 2}			0.42 sec			
R-axis tolerable moment of inertia ^{Note 3}			1.0 kgm ²			
User wiring			0.2 sq × 20 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			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. There are limits to acceleration coefficient settings. See P.611.
 Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

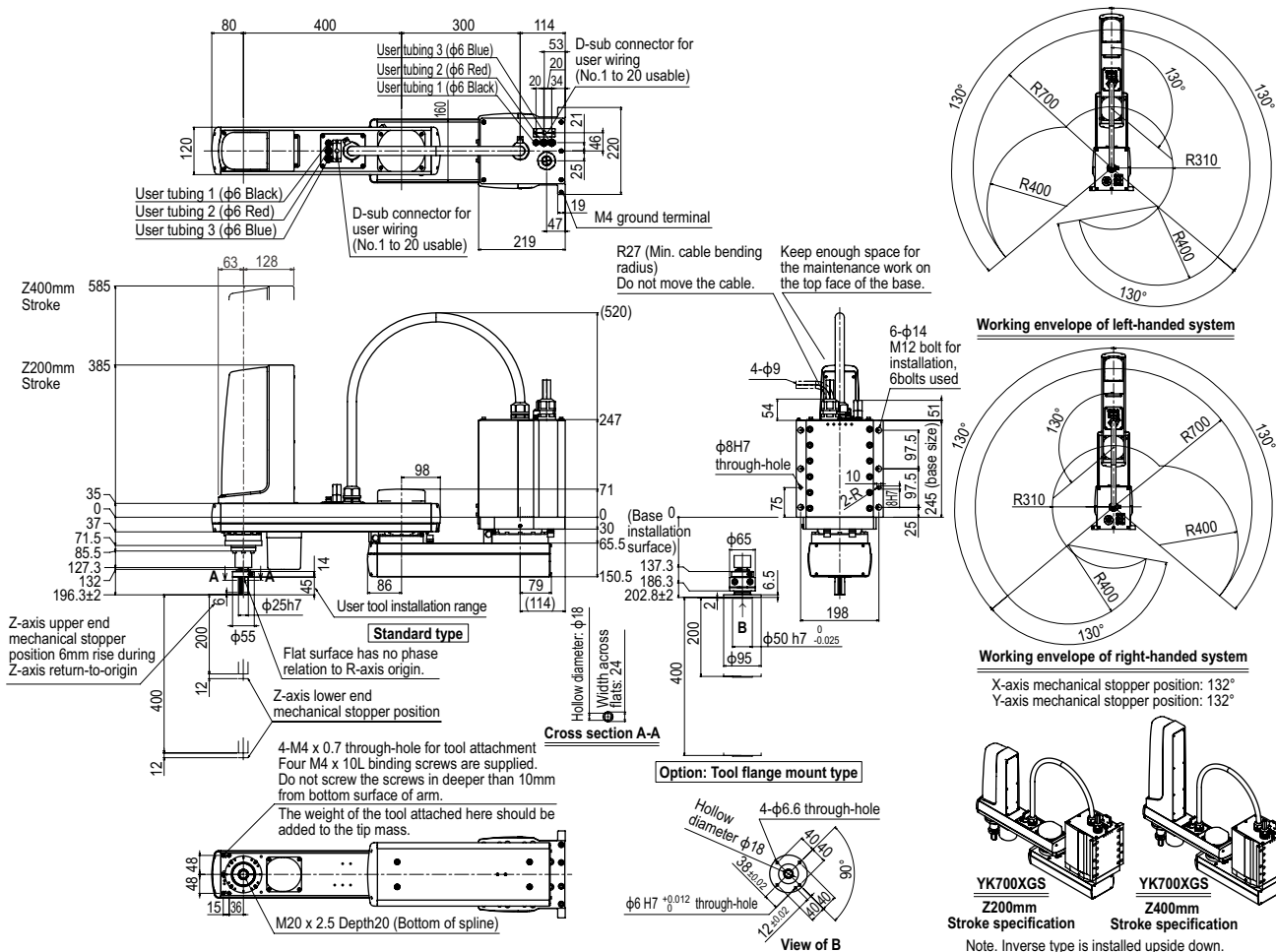
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK700XGS



Controller

RCX340 ▶ 544	RCX240 ▶ 534
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YK900XGS

Wall-mount / inverse type

● Arm length 900mm ● Maximum payload 20kg

Ordering method

YK900XGS

Model	Installation method ^{Note 1}	Z axis stroke	Tool flange	Cable
	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

RCX340-4

Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.544**

RCX240

Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery
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Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

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
	Rotation angle	500 mm	400 mm	200 mm/400 mm	—
	AC servo motor output	+/-130 °	+/-150 °	—	+/-360 °
		750 W	400 W	400 W	200 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		9.9 m/sec	2.3 m/sec	1.7 m/sec	920 °/sec (wall-mount) 480 °/sec (inverse wall-mount)
Maximum payload		20 kg (Standard specification), 19 kg (Option specifications)			
Standard cycle time: with 2kg payload ^{Note 2}		0.49 sec			
R-axis tolerable moment of inertia ^{Note 3}		1.0 kgm ²			
User wiring		0.2 sq × 20 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		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. There are limits to acceleration coefficient settings. See P.611.
Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

Controller

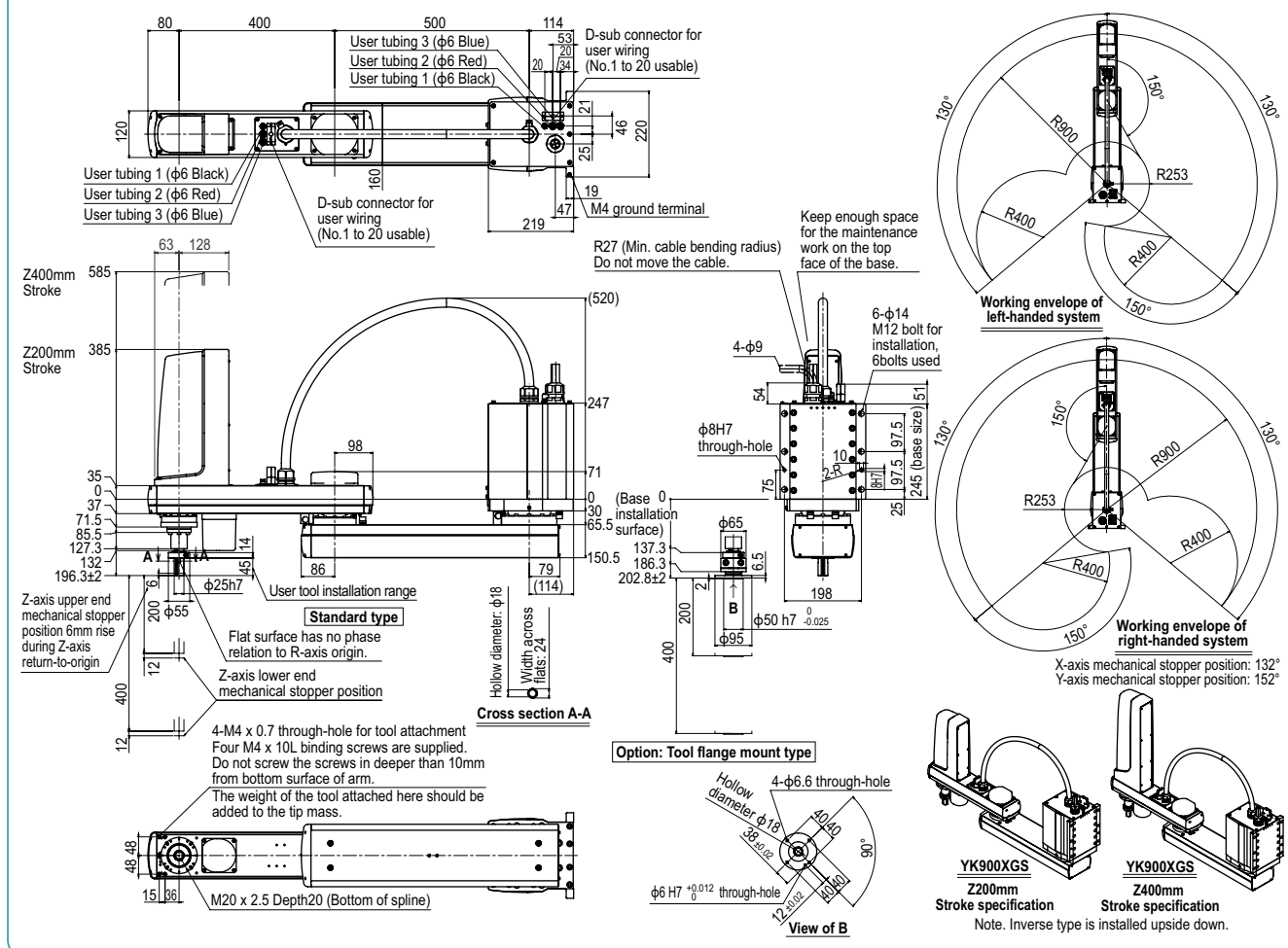
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK900XGS



YK1000XGS

Wall-mount / inverse type

- Arm length 1000mm
- Maximum payload 20kg

Ordering method

YK1000XGS					RCX340-4										
Model	Installation method <small>Note 1</small> W: Wall-mount (same as per external view) U: Inverse wall-mount (upside down)	Z axis stroke 200: 200mm 400: 400mm	Tool flange No entry: None F: With tool flange	Cable 3L: 3.5m 5L: 5m 10L: 10m	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery			
					Specify various controller setting items. RCX340 ▶ P.544										
					RCX240	R3									
					Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery			
					Specify various controller setting items. RCX240/RCX240S ▶ P.534										

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
	Rotation angle	600 mm	400 mm	200 mm/400 mm	—
	AC servo motor output	+/-130 °	+/-150 °	—	+/-360 °
		750 W	400 W	400 W	200 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability	<small>Note 1</small>	+/-0.02 mm	+/-0.01 mm	+/-0.004 °	
Maximum speed		10.6 m/sec	2.3 m/sec	1.7 m/sec	920 °/sec (wall-mount) 480 °/sec (inverse wall-mount)
Maximum payload		20 kg (Standard specification), 19 kg (Option specifications)			
Standard cycle time: with 2kg payload	<small>Note 2</small>	0.49 sec			
R-axis tolerable moment of inertia	<small>Note 3</small>	1.0 kgm ²			
User wiring		0.2 sq × 20 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		Z axis 200 mm: 56 kg Z axis 400 mm: 58 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. There are limits to acceleration coefficient settings. See P.611.
Note. Please consult YAMAHA when connecting other tubes and cables to the self-supporting machine harness.

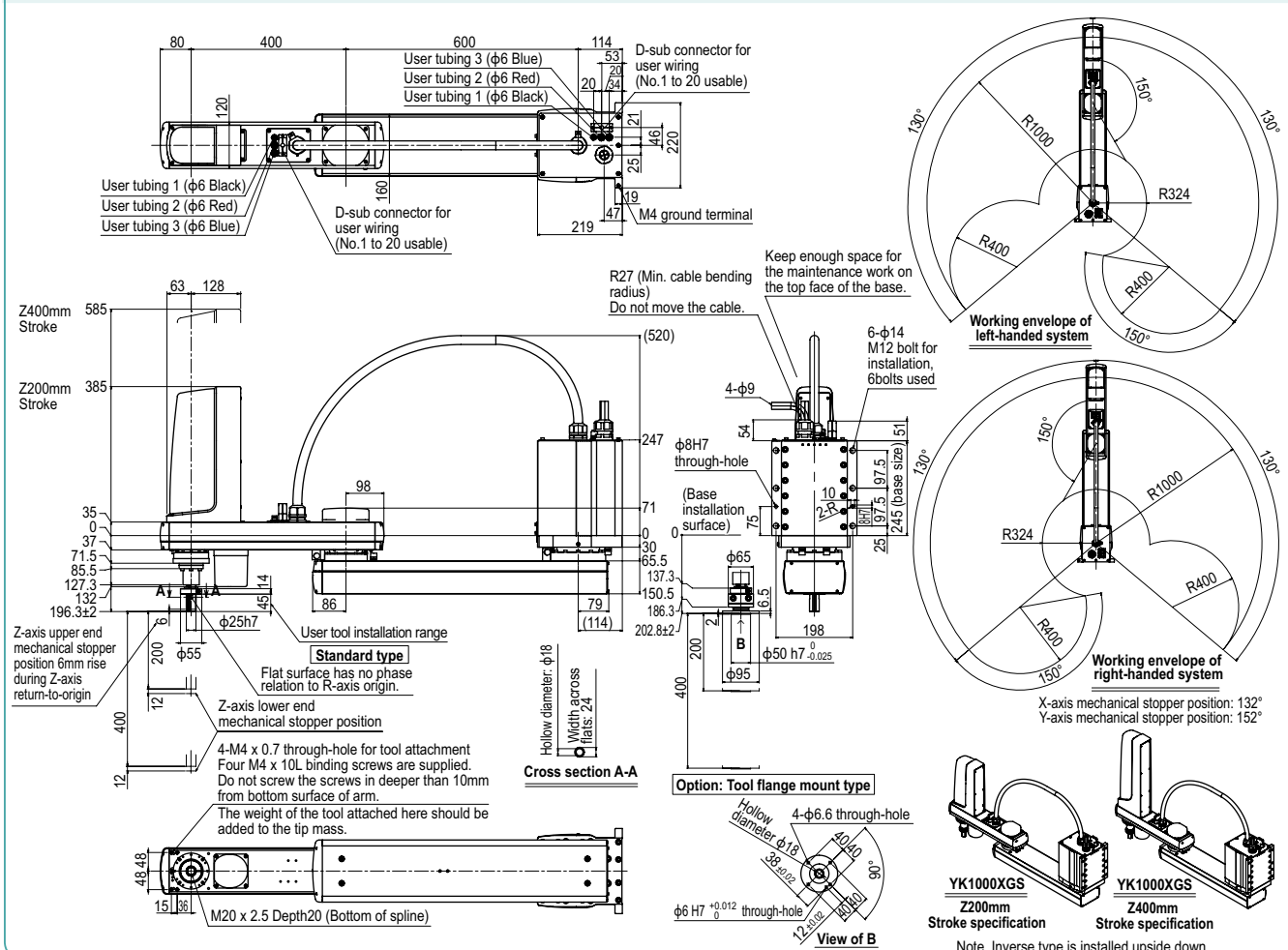
Controller

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

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.
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:
<http://global.yamaha-motor.com/business/robot/>

YK1000XGS



YK250XGP

Dust-proof & drip-proof type

- Arm length 250mm
- Maximum payload 4kg

Ordering method

YK250XGP-150

S

RCX340-4

Model	Z axis stroke	Tool flange	Hollow shaft	Cable	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
	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.544

RCX240S

Specify various controller setting items. RCX240/RCX240S ▶ P.534

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	100 mm	150 mm	150 mm	—
		+/-129 °	+/-134 °	—	+/-360 °
AC servo motor output (W)		200	150	50	100
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		4.5 m/sec		1.1 m/sec	1020 °/sec
Maximum payload		4 kg			
Standard cycle time: with 2kg payload ^{Note 2}		0.57 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.05 kgm ²			
Protection class ^{Note 4}		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq × 10 wires			
User tubing (Outer diameter)		φ 4 × 4			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		21.5 kg			

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

Note 2. When reciprocating 25mm in vertical direction and 300mm in horizontal direction (rough-positioning arch motion).

Note 3. There are limits to acceleration coefficient settings. See P.609.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

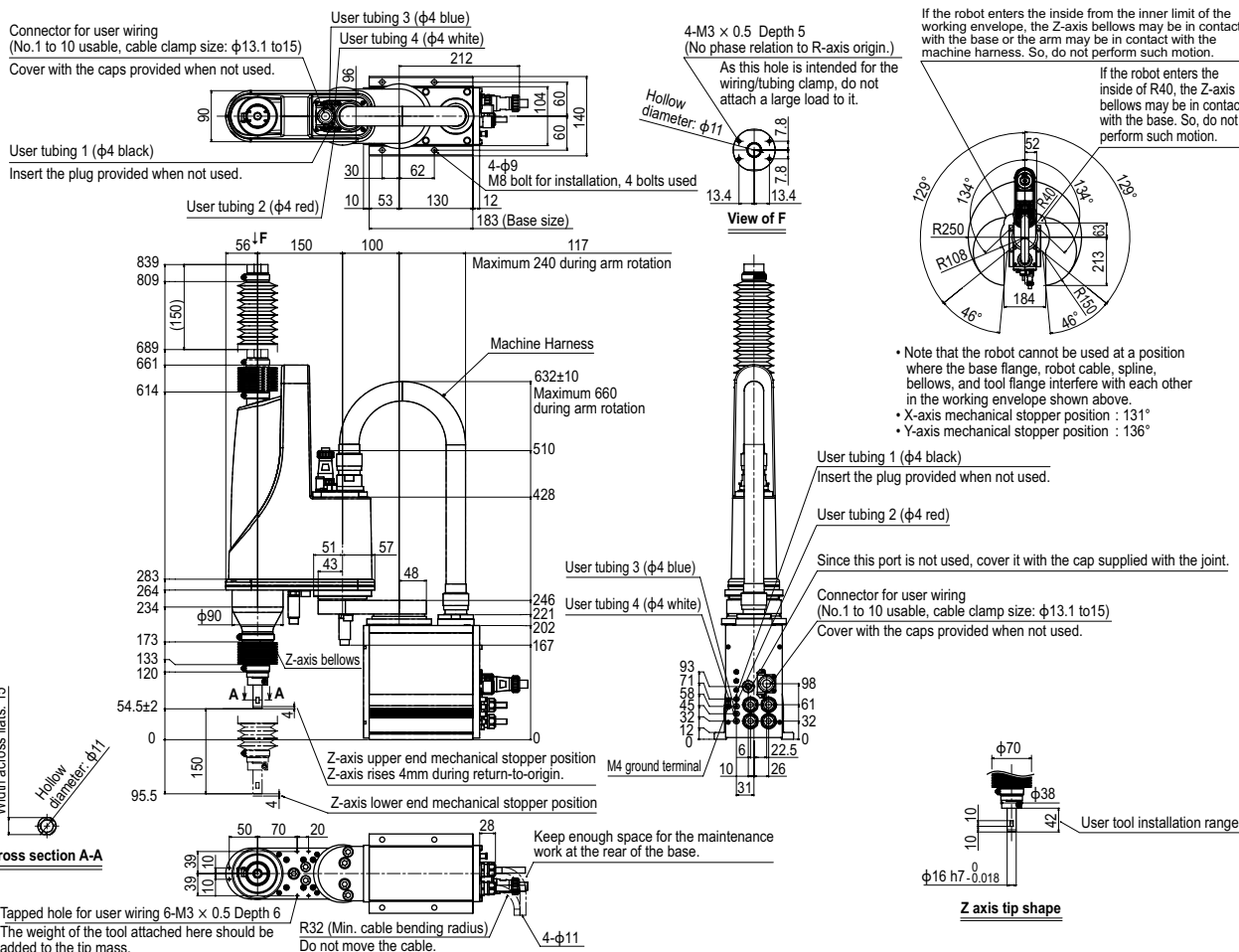
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK250XGP



Controller

RCX340 ▶ 544 RCX240S ▶ 534

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.544**

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ **P.534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	200 mm	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	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm	+/-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 ^{Note 2}		0.57 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.05 kgm ²			
Protection class ^{Note 4}		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 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. There are limits to acceleration coefficient settings. See P.609.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

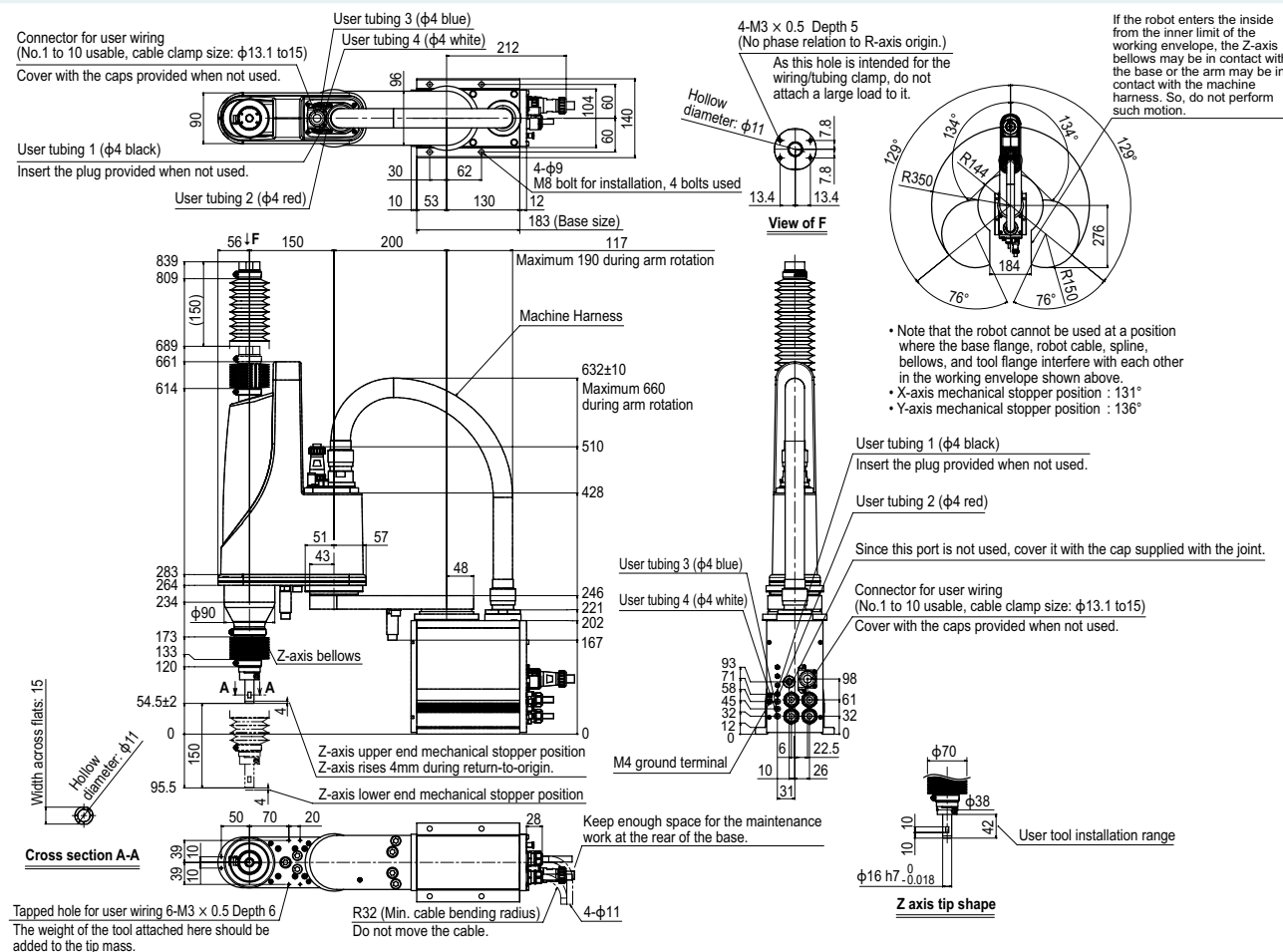
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK350XGP



Controller

RCX340 ▶ 544 RCX240S ▶ 534

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.544

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ P.534

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	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-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 ^{Note 2}		0.57 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.05 kgm ²			
Protection class ^{Note 4}		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq × 10 wires			
User tubing (Outer diameter)		φ 4 × 4			
Travel limit		1. Soft limit 2. Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		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. There are limits to acceleration coefficient settings. See P.610.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

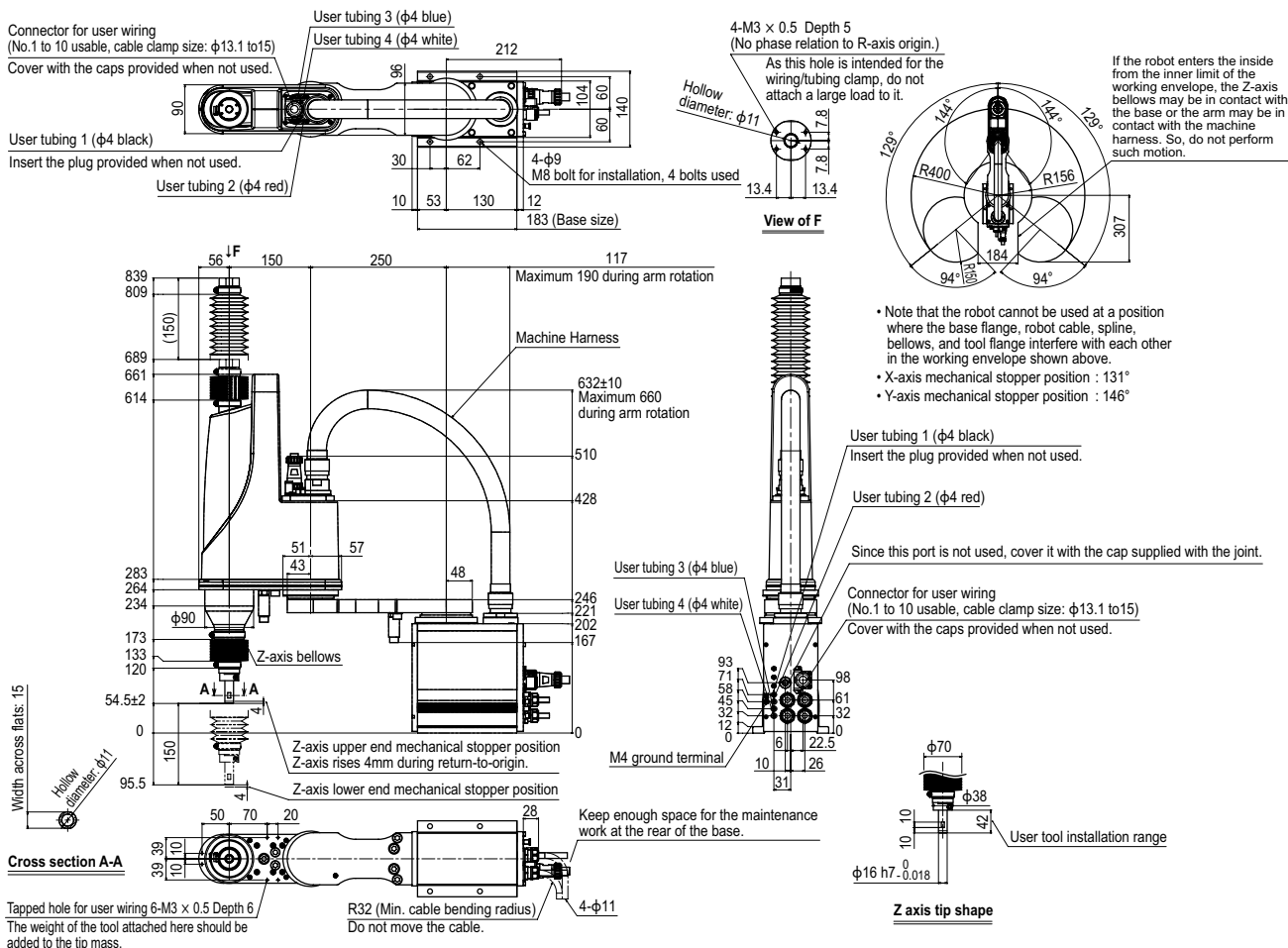
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

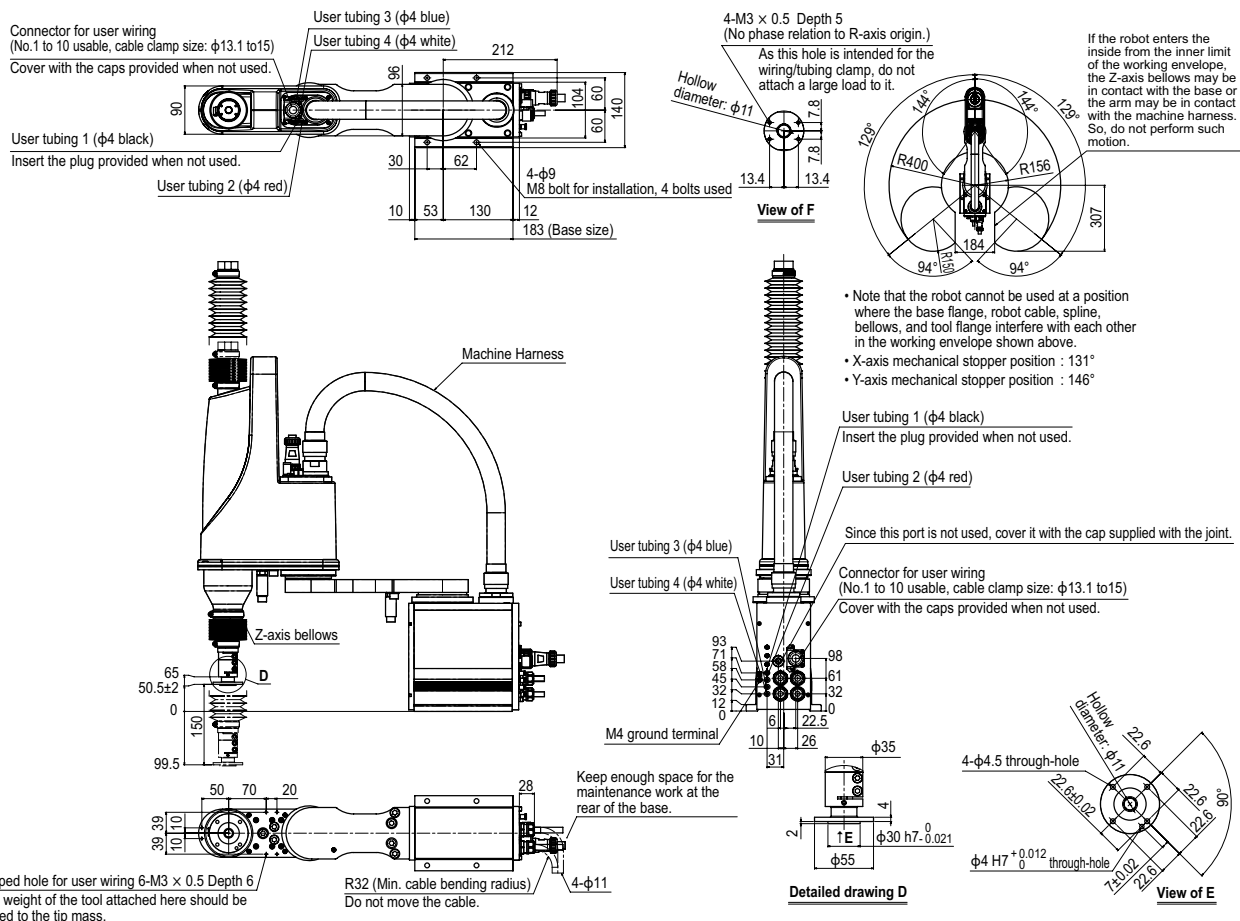
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

YK400XGP



YK400XGP Tool flange mount type



YK500XGLP

Dust-proof & drip-proof type

- Arm length 500mm
- Maximum payload 4kg

Ordering method

YK500XGLP-150 **S** **RCX340-4**

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

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

RCX240S

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

Specify various controller setting items. RCX340 ▶ **P544**

Specify various controller setting items. RCX240/RCX240S ▶ **P534**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	250 mm	250 mm	150 mm	—
		+/-129 °	+/-144 °	—	+/-360 °
AC servo motor output		200 W	150 W	50 W	100 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm	+/-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 ^{Note 2}		0.74 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.05 kgm ²			
Protection class ^{Note 4}		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq × 10 wires			
User tubing (Outer diameter)		φ 4 × 4			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		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. There are limits to acceleration coefficient settings. See P.610.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

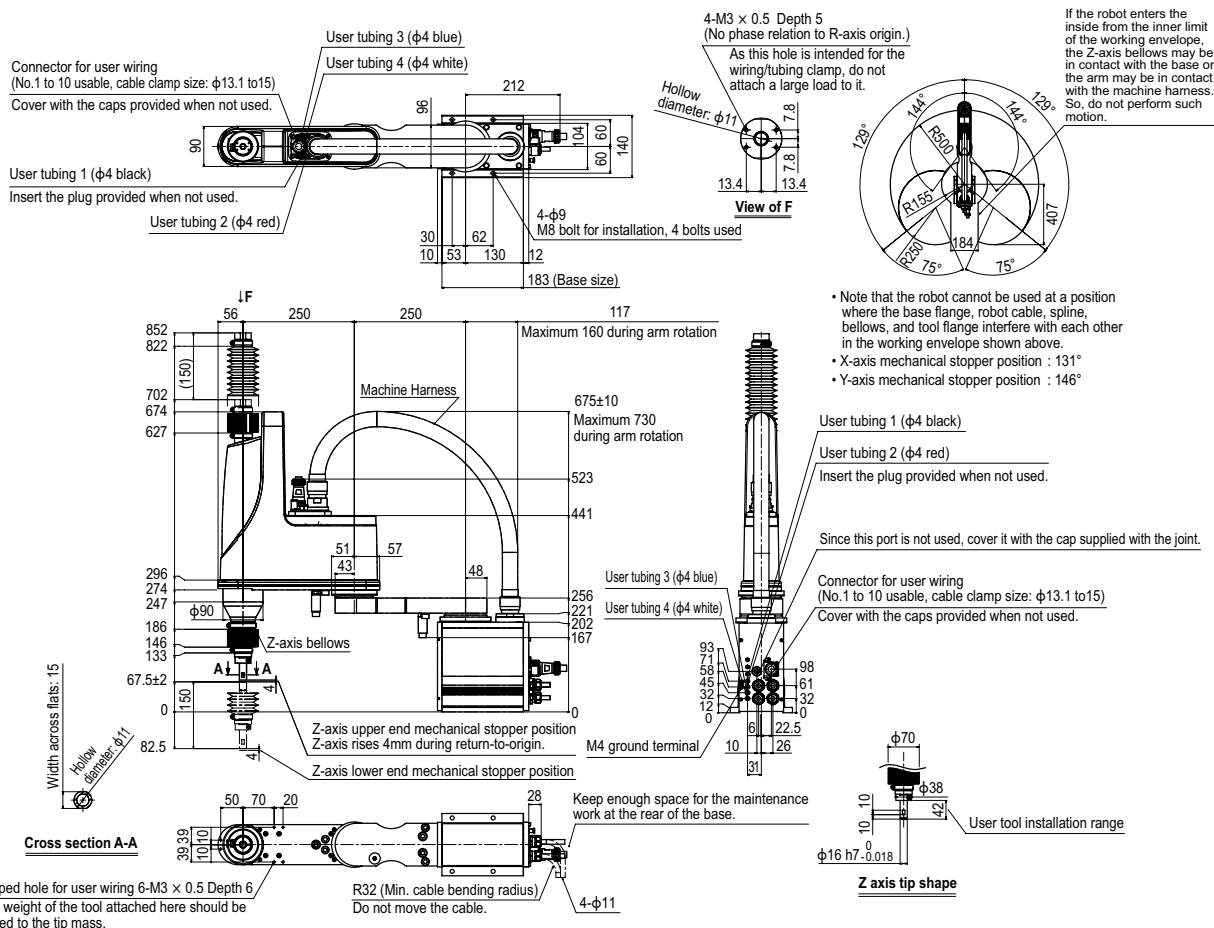
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

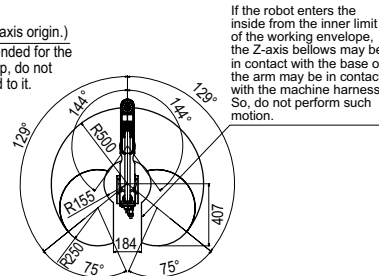
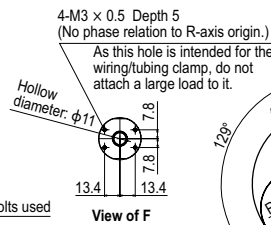
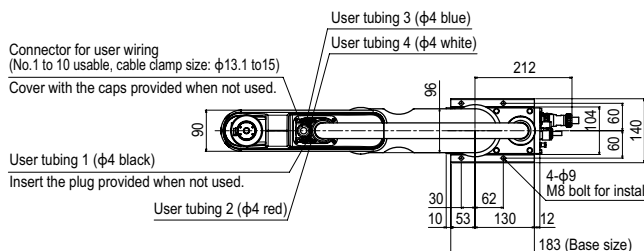
YK500XGLP



Controller

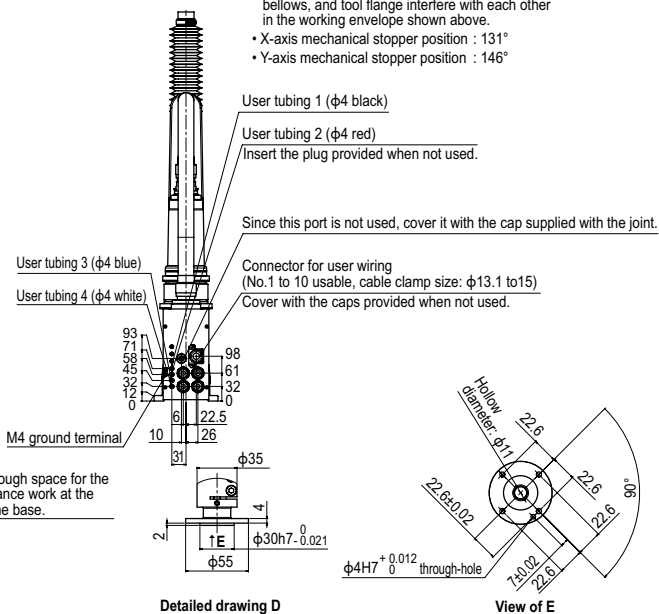
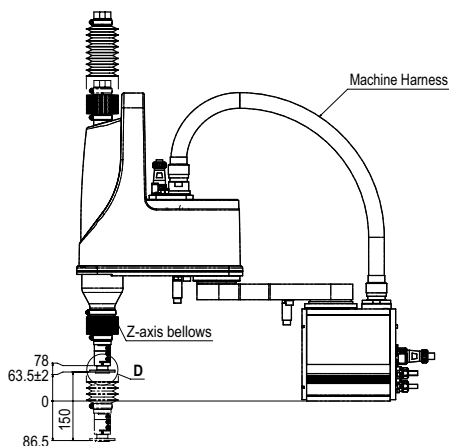
RCX340 ▶ 544 RCX240S ▶ 534

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.

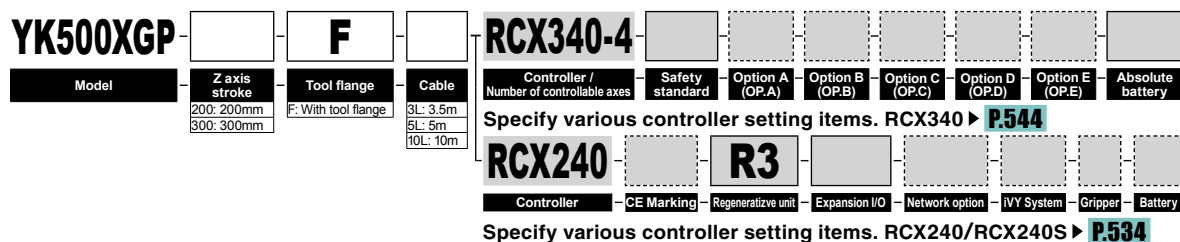
- Note that the robot cannot be used at a position where the base flange, robot cable, spline, bellows, and tool flange interfere with each other in the working envelope shown above.
- X-axis mechanical stopper position : 131°
- Y-axis mechanical stopper position : 146°



Dust-proof & drip-proof type

- Arm length 500mm
- Maximum payload 8kg

Ordering method



Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		200 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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			7.6 m/sec		2.3 m/sec 1.7 m/sec	1700 °/sec
Maximum payload			8 kg			
Standard cycle time: with 2kg payload ^{Note 2}			0.55 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.3 kgm ²			
Protection class ^{Note 4}			Equivalent to IP65 (IEC 60529)			
User wiring			0.2 sq × 20 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			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: There are limits to acceleration coefficient settings. See P.611

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 RCX240-R3	1700	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

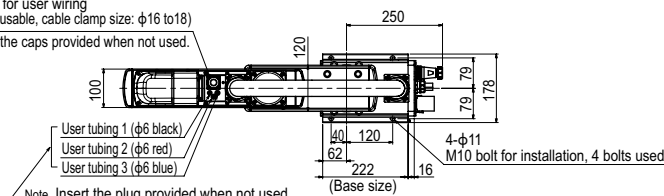
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

YK500XGP

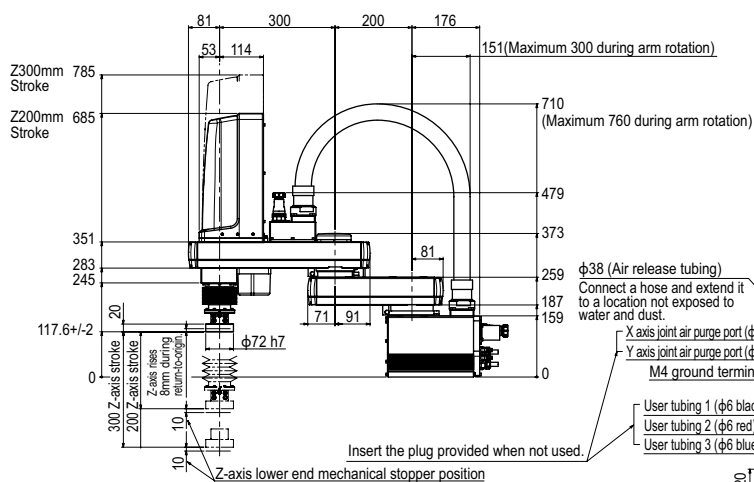
Connector for user wiring

(No.1 to 20 usable, cable clamp size: $\phi 16$ to 18)

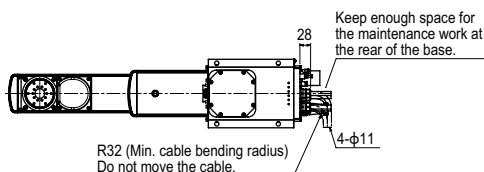
Cover with the caps provided when not used.



Note: Insert the plug provided when not used.

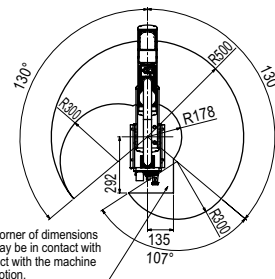


Insert the plug provided when not used
mechanical stopper position

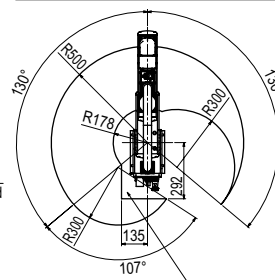


R32 (Min. cable bending radius)
Do not move the cable.

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.



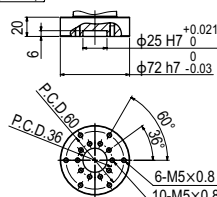
Working envelope of left-handed system



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°



Z axis tip shape

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

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.544

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ P.534

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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled			
		Speed reducer to output		Direct-coupled		
Repeatability ^{Note 1}			+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed			4.9 m/sec		1.1 m/sec	1020 °/sec
Maximum payload			4 kg			
Standard cycle time: with 2kg payload ^{Note 2}			0.74 sec			
R-axis tolerable moment of inertia ^{Note 3}			0.05 kgm ²			
Protection class ^{Note 4}			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. There are limits to acceleration coefficient settings. See P.610.

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 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

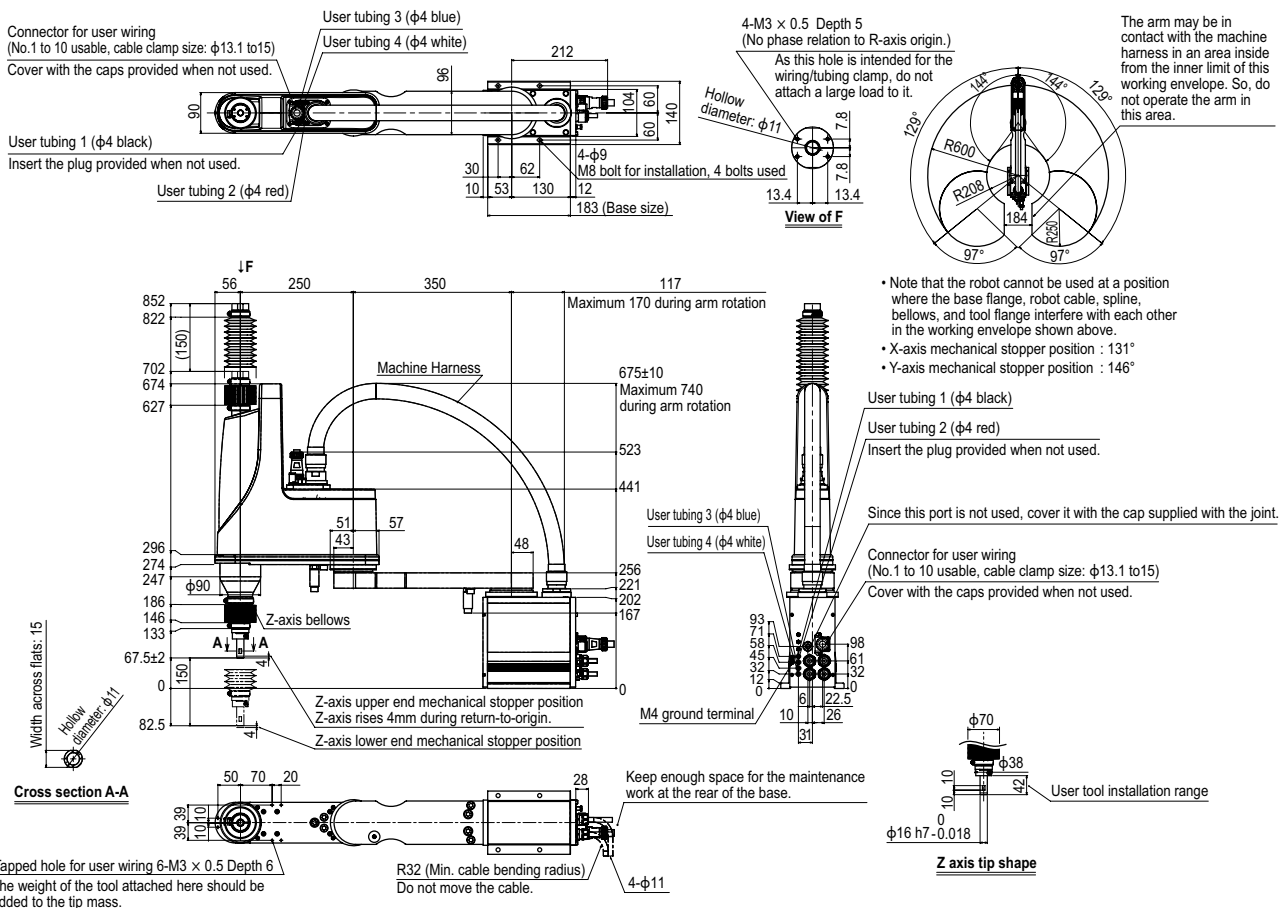
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

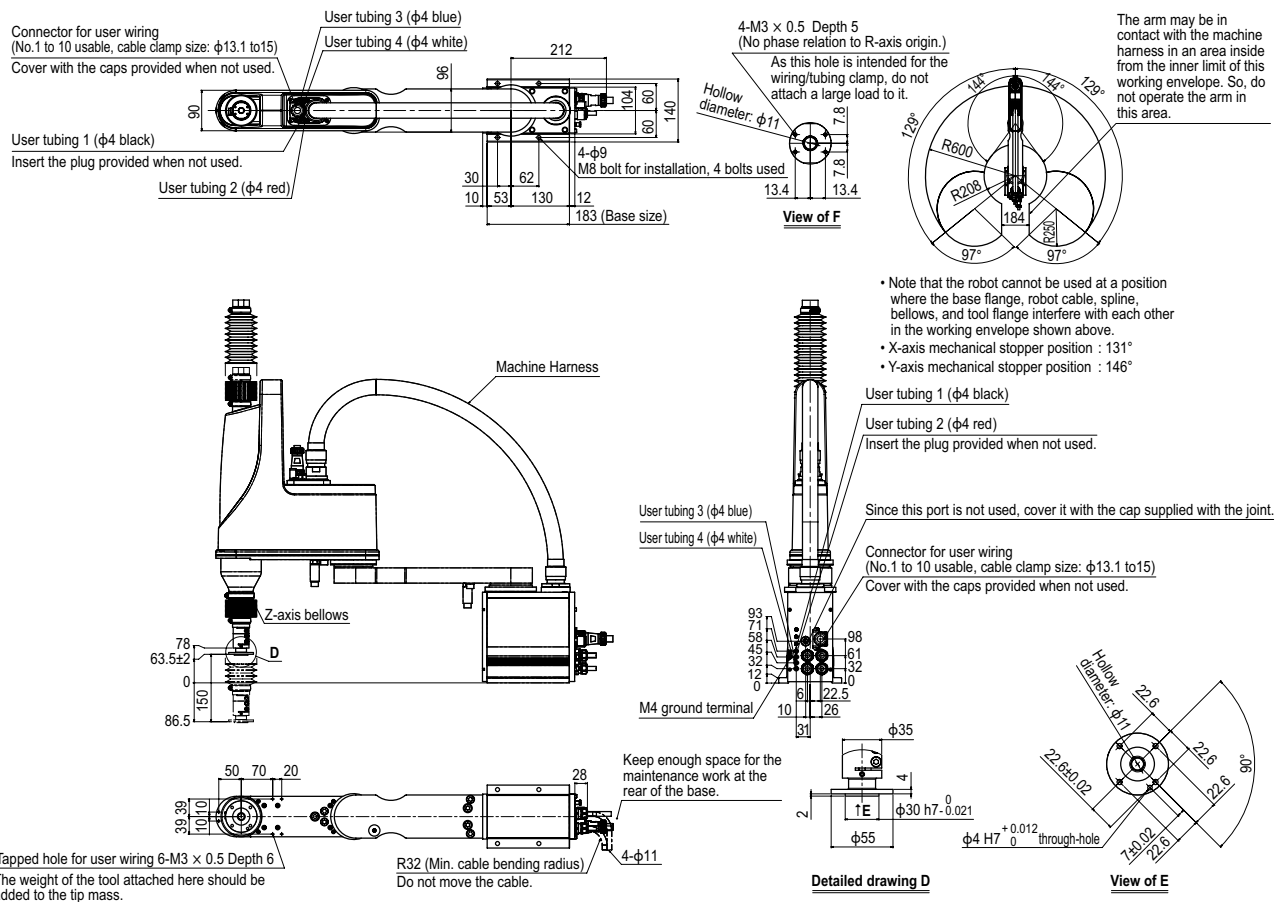
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

YK600XGLP



YK600XGLP Tool flange mount type



Dust-proof & drip-proof type

- Arm length 600mm
- Maximum payload 18kg

Ordering method

Model	Z axis stroke	Tool flange	Cable
	200: 200mm 400: 400mm	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m

Controller / Number of controllable axes: RCX340-4, RCX240, R3

Specify various controller setting items. RCX340 ▶ P.544

Specify various controller setting items. RCX240/RCX240S ▶ P.534

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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw		Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled				
		Speed reducer to output	Direct-coupled				
Repeatability ^{Note 1}			+/-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			18 kg				
Standard cycle time: with 2kg payload ^{Note 2}			0.57 sec				
R-axis tolerable moment of inertia ^{Note 3}			1.0 kgm ²				
Protection class ^{Note 4}			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. There are limits to acceleration coefficient settings. See P.611.

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 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

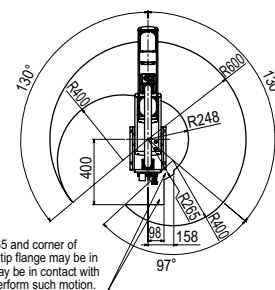
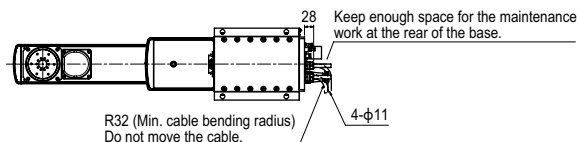
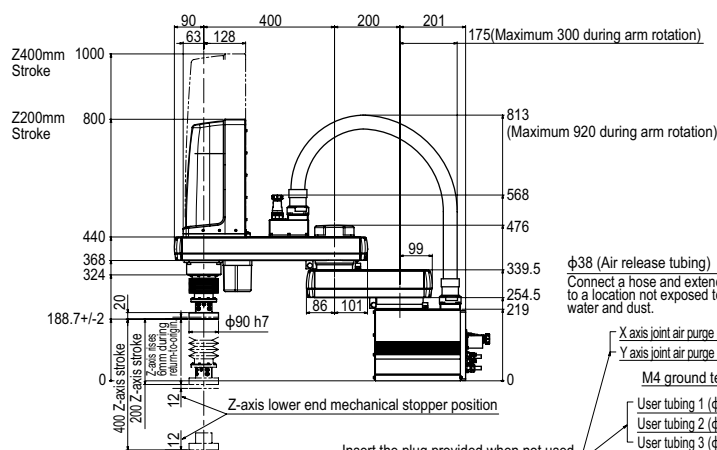
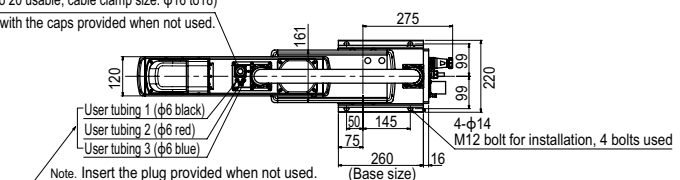
Note: The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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.

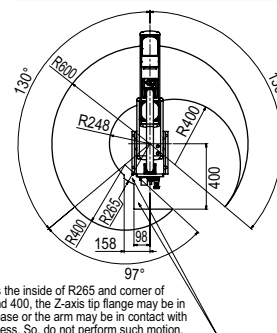
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

YK600XGHP

Connector for user wiring
(No.1 to 20 usable, cable clamp size: $\phi 16$ to 18)
Cover with the caps provided when not used.

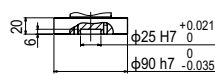


Working envelope of left-handed system



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°



Z axis tip shape

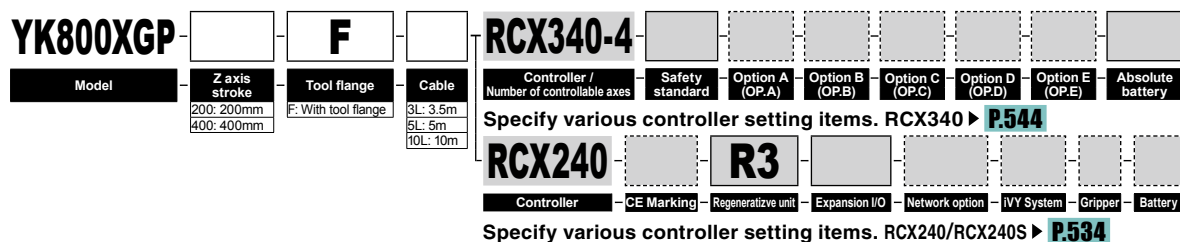
Controller

RCX340 ▶ 544	RCX240 ▶ 534
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Dust-proof & drip-proof type

- Arm length 800mm
- Maximum payload 18kg

Ordering method



Specifications

			X-axis	Y-axis	Z-axis		R-axis
Axis specifications	Arm length		400 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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw		Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled				
		Speed reducer to output	Direct-coupled				
Repeatability ^{Note 1}			+/-0.02 mm		+/-0.01 mm		+/-0.004 °
Maximum speed			9.2 m/sec		2.3 m/sec 1.7 m/sec		920 °/sec
Maximum payload			18 kg				
Standard cycle time: with 2kg payload ^{Note 2}			0.58 sec				
R-axis tolerable moment of inertia ^{Note 3}			1.0 kgm ²				
Protection class ^{Note 4}			Equivalent to IP65 (IEC 60529)				
User wiring			0.2 sq × 20 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			Z axis 200 mm: 56 kg		Z axis 400 mm: 58 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: There are limits to acceleration coefficient settings. See P.611

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 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

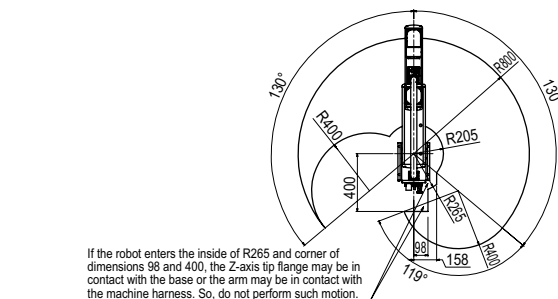
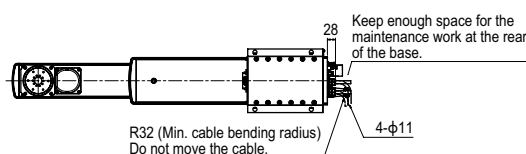
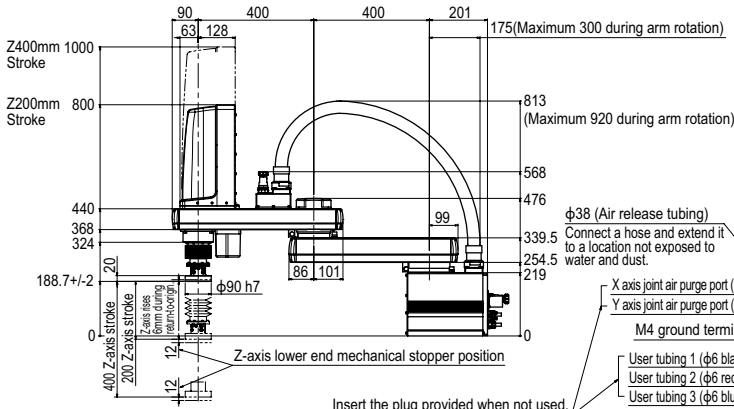
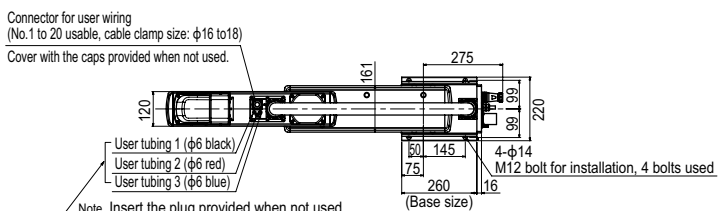
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

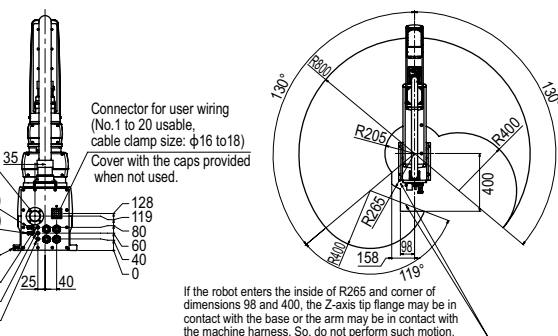
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

YK800XGP



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.

Z axis tip shape

Controller

RCX340 ▶ 544	RCX240 ▶ 534
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Compact
single-axis robots
TRANSERVOC

SCARA
robots
YK-X

CONTROLLER

INFORMATION

Dust-proof
& drip-proof
type

Dust-proof & drip-proof type

- Arm length 900mm
- Maximum payload 18kg

Ordering method

YK900XGP - **F** - **RCX340-4**

Model	Z axis stroke	Tool flange	Cable
	200: 200mm 400: 400mm	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m

Controller / Number of controllable axes **RCX340** **Specify various controller setting items. RCX340 ▶ P.544**

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**

RCX240 **R3**

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

■ Specifications

			X-axis	Y-axis	Z-axis		R-axis
Axis specifications	Arm length		500 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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw		Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled				
		Speed reducer to output	Direct-coupled				
Repeatability ^{Note 1}			+/-0.02 mm		+/-0.01 mm		+/-0.004 °
Maximum speed			9.9 m/sec		2.3 m/sec 1.7 m/sec		920 °/sec
Maximum payload			18 kg				
Standard cycle time: with 2kg payload ^{Note 2}			0.59 sec				
R-axis tolerable moment of inertia ^{Note 3}			1.0 kgm ²				
Protection class ^{Note 4}			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: 58 kg Z axis 400 mm: 60 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. There are limits to acceleration coefficient settings. See P.611.

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 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

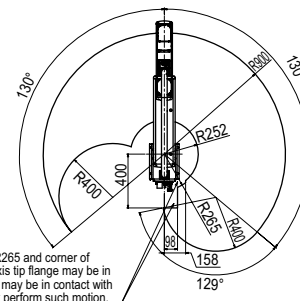
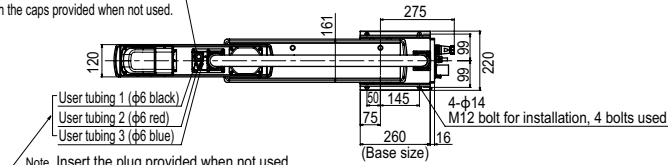
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)
See our robot manuals (installation manuals) for detailed information.

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.

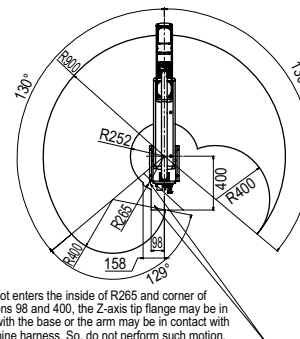
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

YK900XGP

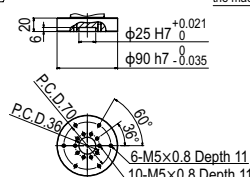
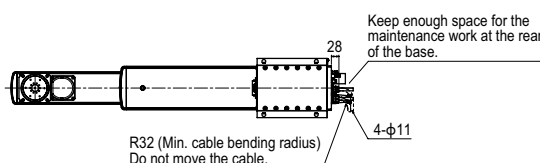
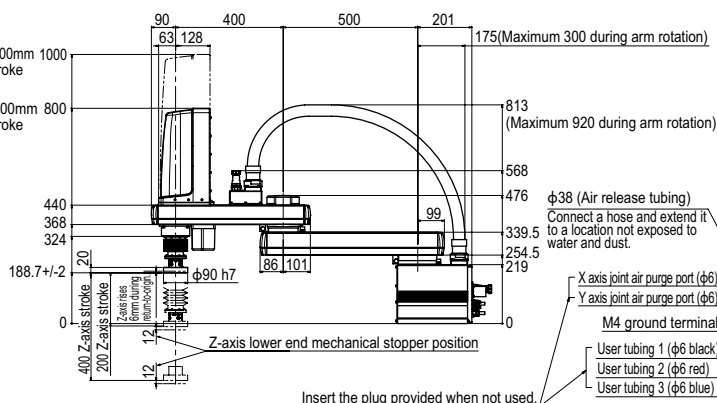
Connector for user wiring
(No.1 to 20 usable, cable clamp size: $\phi 16$ to 18)
Cover with the caps provided when not used.



Working envelope of left-handed system



Working envelope of right-handed system



Z axis tip shape

- 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.

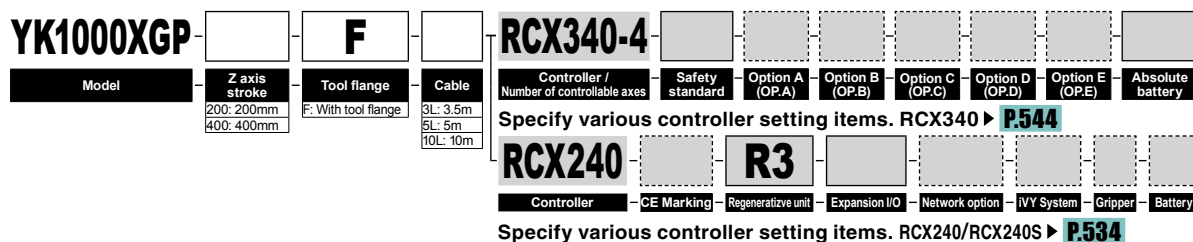
- X-axis mechanical stopper position : 132°
- Y-axis mechanical stopper position : 152°

relation between each position of M5 tapped holes position.

Dust-proof & drip-proof type

- Arm length 1000mm
- Maximum payload 18kg

Ordering method



Specifications

			X-axis	Y-axis	Z-axis		R-axis
Axis specifications	Arm length		600 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	Speed reducer		Harmonic drive	Harmonic drive	Ball screw		Harmonic drive
	Transmission method	Motor to speed reducer	Direct-coupled				
		Speed reducer to output	Direct-coupled				
Repeatability ^{Note 1}			+/-0.02 mm		+/-0.01 mm		+/-0.004 °
Maximum speed			10.6 m/sec		2.3 m/sec 1.7 m/sec		920 °/sec
Maximum payload			18 kg				
Standard cycle time: with 2kg payload ^{Note 2}			0.59 sec				
R-axis tolerable moment of inertia ^{Note 3}			1.0 kgm ²				
Protection class ^{Note 4}			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: 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: There are limits to acceleration coefficient settings. See P 611

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
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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.

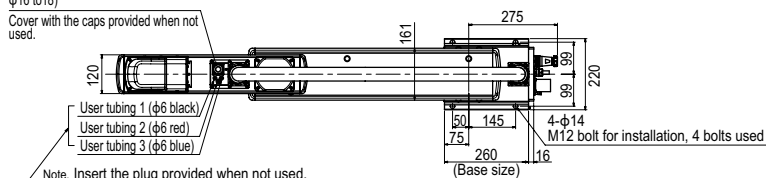
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

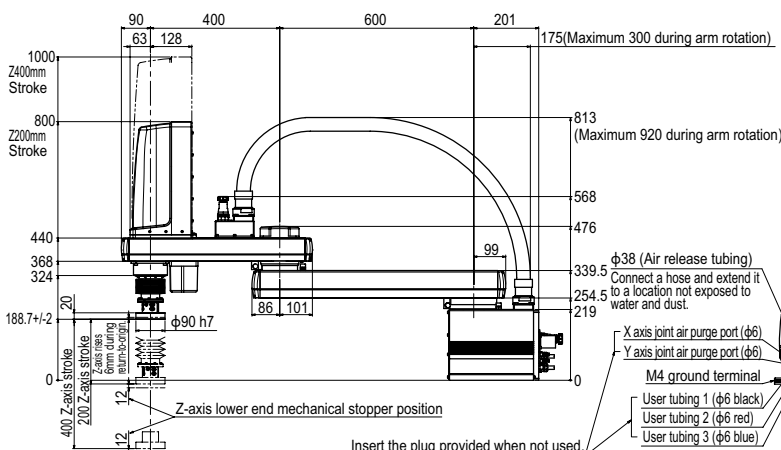
<http://global.yamaha-motor.com/business/robot/>

YK1000XGP

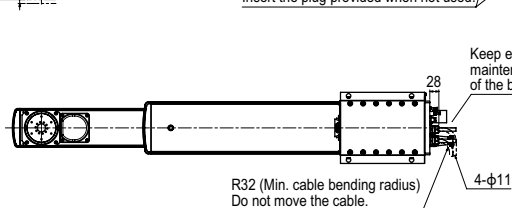
Connector for user wiring
(No.1 to 20 usable, cable clamp size:
φ16 to18)



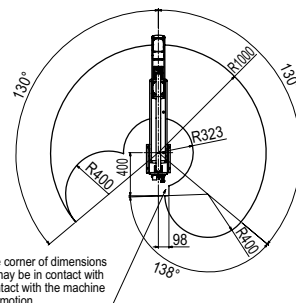
Note: Insert the plug provided when not used.



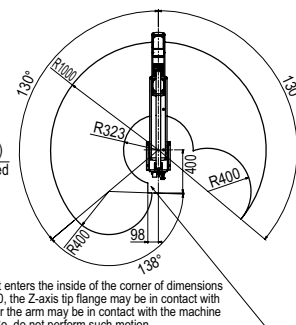
Insert the plug provided when not used.



Do not move the cable.



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°

relation between each position of M5 tapped holes position.