

SCARA ROBOTS

YK-X

SERIES



APPLICATION	Linear conveyor modules LCM100
TRANSEURO	Compact single-axis robots
FLIP-X	Single-axis robots
PHASER	Linear motor single-axis robots
XY-X	Cartesian robots
YK-X	SCARA robots
YK-X	Pick & place robots
CLEAN	
CONTROLLER	
INFORMATION	
Orbit / Tiny type	
Small / Medium type	
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Wall-mount / Inverse type	
Dust-proof & drip-proof type	

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YK-X SPECIFICATION SHEET

Type	Model	Arm length (mm) and XY axis resultant maximum speed (m/s)														Standard cycle time (sec) <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.338		
	YK500TW	6.8														0.29	5	0.005 (Rated) 0.05 (Maximum)			P.340		
Standard	Tiny type	YK120XG	3.3														0.33	1	0.01	●	●	P.342	
		YK150XG	3.4														0.33	1	0.01	●	●	P.343	
		YK180XG	3.3														0.33	1	0.01	●	●	P.344	
		YK180X	3.3														0.39	1	0.01	●	●	P.345	
		YK220X	3.4														0.42	1	0.01	●	●	P.346	
	Small type	YK250XG	4.5														0.49	5	0.05	●	●	P.347	
		YK350XG	5.6														0.49	5	0.05	●	●	P.349	
		YK400XG	6.1														0.49	5	0.05	●	●	P.351	
		YK400XR	6														0.45	3	0.05			P.353	
	Medium type	YK500XGL	5.1														0.59	5	0.05	●	●	P.354	
		YK500XG	7.6														0.45	10	0.30	●	●	P.356	
		YK600XGL	4.9														0.63	5	0.05	●	●	P.357	
		YK600XG	8.4														0.46	10	0.30	●	●	P.359	
	Large type	YK600XGH	7.7														0.47	20	1.0	●	●	P.360	
		YK700XGL	9.2															0.50	10	0.30	●	●	P.361
		YK700XG	8.4															0.42	20	1.0	●	●	P.362
		YK800XG	9.2															0.48	20	1.0	●	●	P.363
		YK900XG	9.9															0.49	20	1.0	●	●	P.364
YK1000XG		10.6															0.49	20	1.0	●	●	P.365	
Wall-mount / inverse type	YK1200X	7.4														0.91	50	2.45		●	P.366		
	YK300XGS	4.4															0.49	5	0.05	●	●	P.367	
	YK400XGS	6.1															0.49	5	0.05	●	●	P.369	
	YK500XGS	7.6															0.45	10	0.3	●	●	P.371	
	YK600XGS	8.4															0.46	10	0.3	●	●	P.372	
	YK700XGS	8.4															0.42	20	1.0	●	●	P.373	
	YK800XGS	9.2															0.48	20	1.0	●	●	P.374	
	YK900XGS	9.9															0.49	20	1.0	●	●	P.375	
	YK1000XGS	10.6															0.49	20	1.0	●	●	P.376	
Dust-proof & drip-proof type	YK250XGP	4.5															0.57	4	0.05	●	●	P.377	
	YK350XGP	5.6															0.57	4	0.05	●	●	P.379	
	YK400XGP	6.1															0.57	4	0.05	●	●	P.381	
	YK500XGLP	5.1															0.74	4	0.05	●	●	P.383	
	YK500XGP	7.6															0.55	8	0.3	●	●	P.385	
	YK600XGLP	4.9															0.74	4	0.05	●	●	P.386	
	YK600XGP	8.4															0.56	8	0.3	●	●	P.388	
	YK600XGHP	7.7															0.57	18	1.0	●	●	P.389	
	YK700XGP	8.4															0.52	18	1.0	●	●	P.390	
	YK800XGP	9.2															0.58	18	1.0	●	●	P.391	
	YK900XGP	9.9															0.59	18	1.0	●	●	P.392	
	YK1000XGP	10.6															0.59	18	1.0	●	●	P.393	

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.495, **RCX340 ▶ P.508**

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.

APPLICATION

Linear conveyor modules
LCM100

Compact single-axis robots
TRANSEVO

Single-axis robots
FLIP-X

Linear motor single-axis robots
PHASER

Cartesian robots
XX-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

YK500TW

Orbit type

● Arm length 500mm

● Maximum payload 5kg

Ordering method

YK500TW - 130

Model

Z axis stroke

130: 130mm

Tool flange

No entry: None

F: With tool flange

Hollow shaft

No entry: None

S: With hollow shaft

Cable

3L: 3.5m

5L: 5m

10L: 10m

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.508**
RCX240

Controller

CE Marking

Regenerative unit

Expansion I/O

Network option

IVY System

Gripper

Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	250 mm	250 mm	130 mm	-
		+/-225 °	+/-225 °	-	+/-720 °
AC servo motor output		750 W	400 W	200 W	105 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Belt speed reduction
	Transmission method	Timing belt	Direct-coupled	Timing belt	
	Motor to speed reducer				
	Speed reducer to output		Direct-coupled		
Repeatability	Note 1	+/-0.015 mm		+/-0.01 mm	+/-0.01 °
Maximum speed		6.8 m/sec		1.5 m/sec	3000 °/sec
Maximum payload	Note 2	5 kg (RCX340), 4 kg (RCX240)			
Standard cycle time: with 1kg payload	Note 3	0.29 sec			
R-axis tolerable moment of inertia	Note 4	Rated		0.005 kgm ²	
		Maximum		0.05 kgm ²	
User wiring		0.15 sq × 8 wires			
User tubing (Outer diameter)		φ 6 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		27 kg			

Note 1. This is the value at a constant ambient temperature.

Note 2. For the option specifications (tool flange mount type), the maximum payload becomes 4 kg (RCX340) or 3 kg (RCX240).

Note 3. When moving a 1 kg load back and forth 300 mm horizontally and 25 mm vertically (rough positioning arch motion).

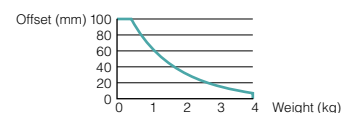
Note 4. Limits must be placed on parameters such as acceleration according to the moment of inertia being used. See P.536.

Controller

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

R-axis moment of inertia (load inertia)

Recommended positional relationship between the load weight and the offset amount from the center of the R-axis (center of gravity position)

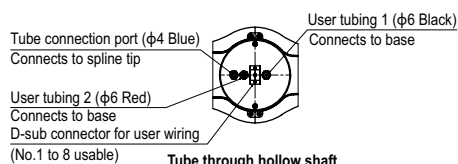
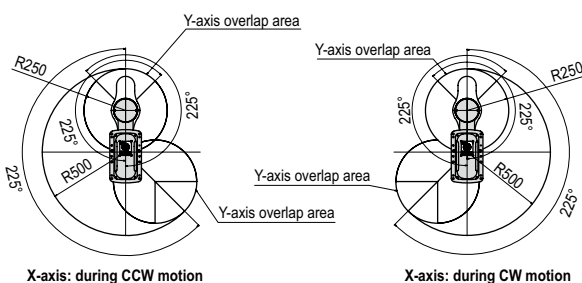
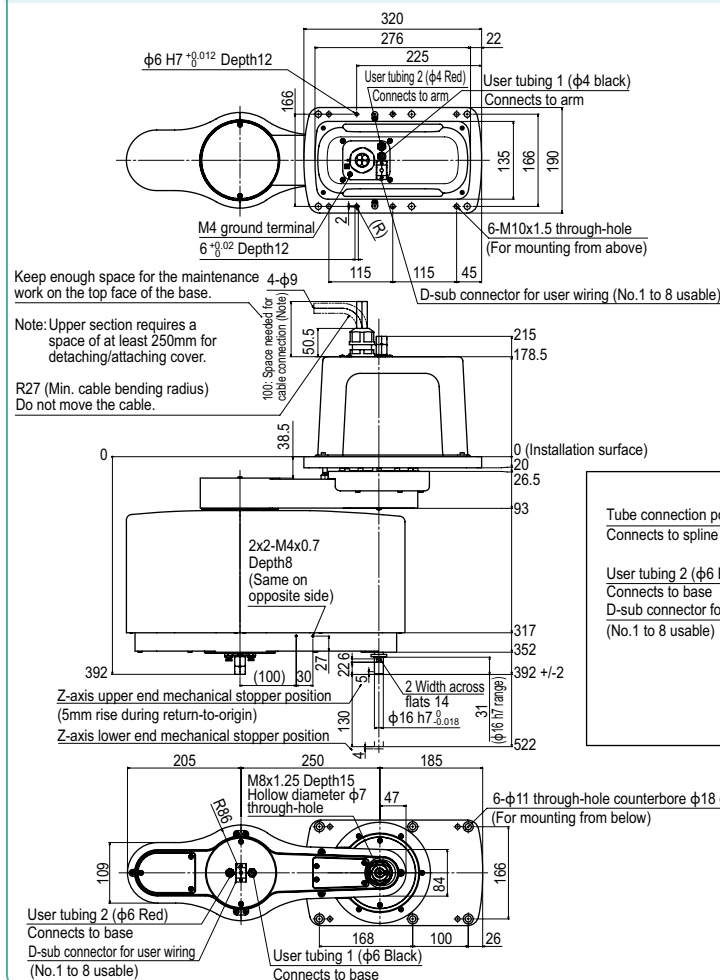


Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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/>

YK500TW

* Tube (φ4) through hollow shaft protrudes about 300mm from the spline tip.
* Tube through hollow shaft does not rotate with spline during R-axis rotation.

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 (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.508**

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.495

■ Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		45 mm	75 mm	50 mm	–
	Rotation angle		+/-125 °	+/-145 °	–	+/-360 °
AC servo motor output			30 W	30 W	30 W	30 W
Deceleration mechanism	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}			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.536.

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

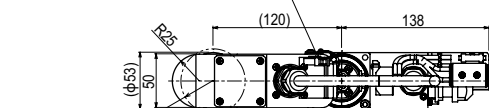
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

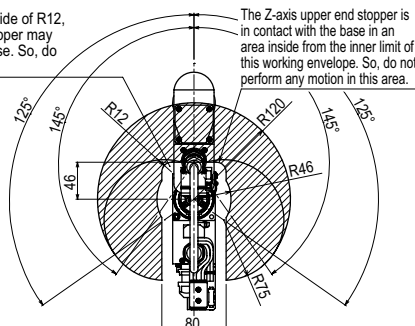
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

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.



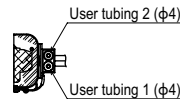
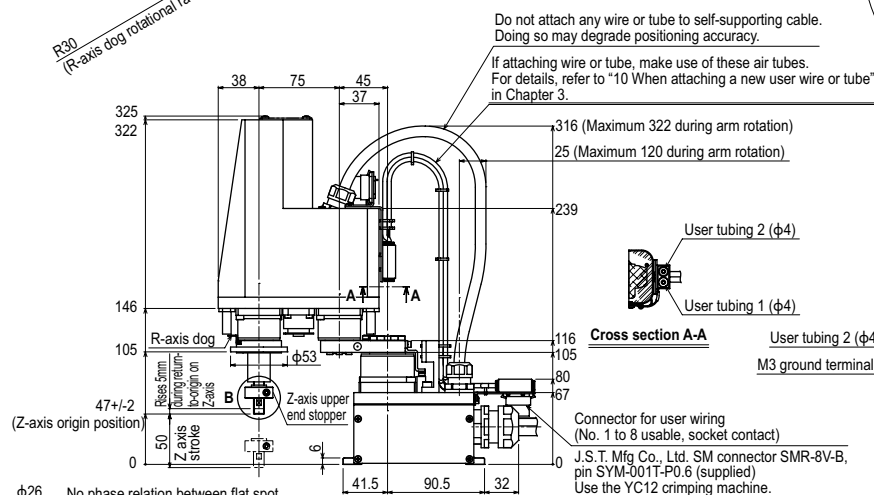
If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.



Working envelope

X, Y-axis origin is at $\pm 5^\circ$ with respect to front of robot base

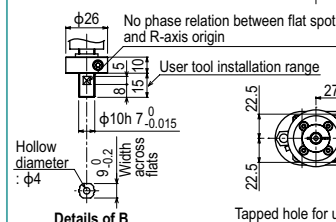
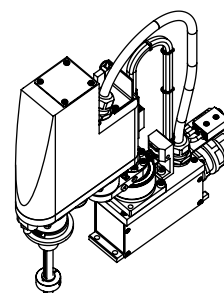
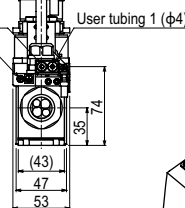
When performing return-to-origin, move the axes counterclockwise in advance from the position shown above.



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.



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

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

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.508**

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.495**

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	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.536.

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

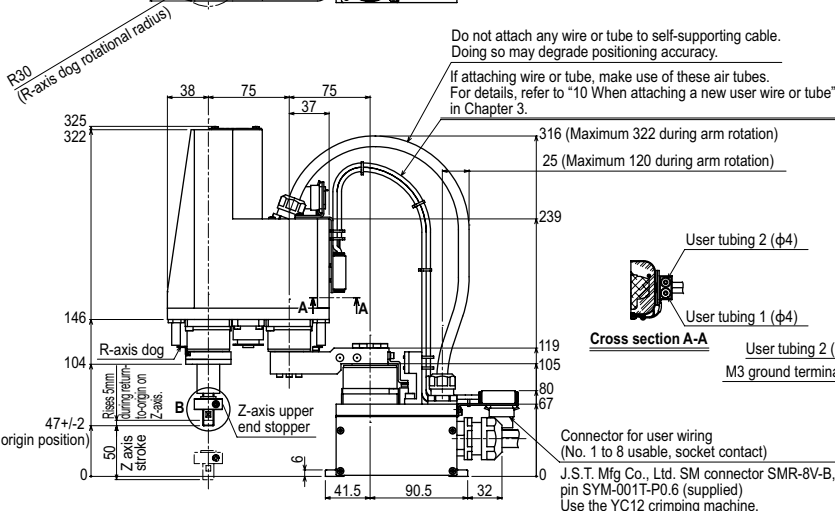
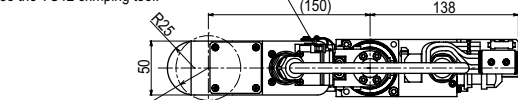
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Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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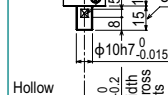
YK150XG

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.

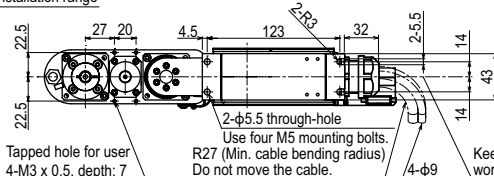


No phase relation between flat spot and R-axis origin

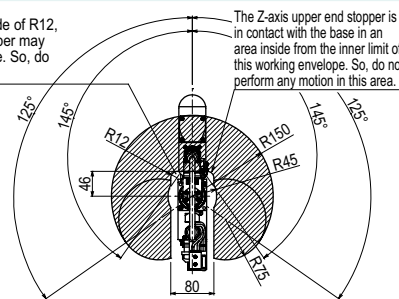
User tool installation range



Details of B



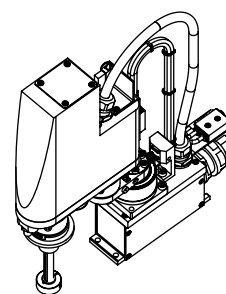
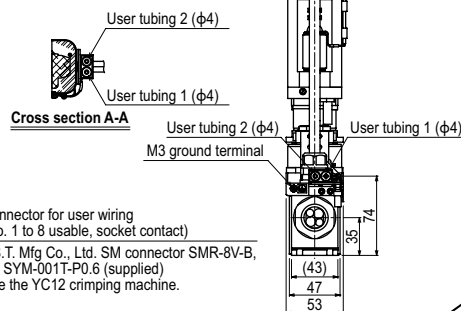
If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.



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.



Controller

RCX340 ▶ 508 RCX240S ▶ 495

YK180XG

Standard type: Tiny type

● Arm length 180mm

● Maximum payload 1kg

Ordering method

YK180XG - 50

Model

Z axis stroke

50 : 50mm

Cable

2L: 2m

3L: 3.5m

5L: 5m

10L: 10m

RCX340-4

Controller /

Number of controllable axes

Safety

standard

Option A

(OP.A)

Option B

(OP.B)

Option C

(OP.C)

Option D

(OP.D)

Option E

(OP.E)

Absolute

battery

Specify various controller setting items. RCX340 ▶ **P.508**

RCX240S

Controller

CE Marking

Expansion I/O

Network option

IVY System

Gripper

Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

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.536.

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

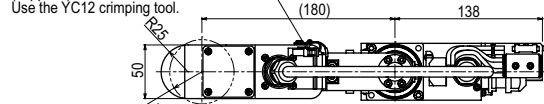
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.



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

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

316 (Maximum 322 during arm rotation)

10 (Maximum 120 during arm rotation)

239

119

105

80

67

41.5

90.5

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

14

4-φ9

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

2-φ5.5 through-hole
(Use four M5 mounting bolts.)
R27 (Min. cable bending radius)
Do not move the cable.

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

Hollow diameter : φ4

Width across flats

φ10h 7⁰_{-0.015}

User tool installation range

No phase relation between flat spot and R-axis origin

φ26

8

15

10

22.5

27

20

4.5

123

32

2.5

14

43

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.508

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ P.495

■ Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		71 mm	109 mm	100 mm	–
	Rotation angle		+/-120 °	+/-140 °	–	+/-360 °
AC servo motor output			50 W	30 W	30 W	30 W
Deceleration mechanism	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		0.7 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.536.

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

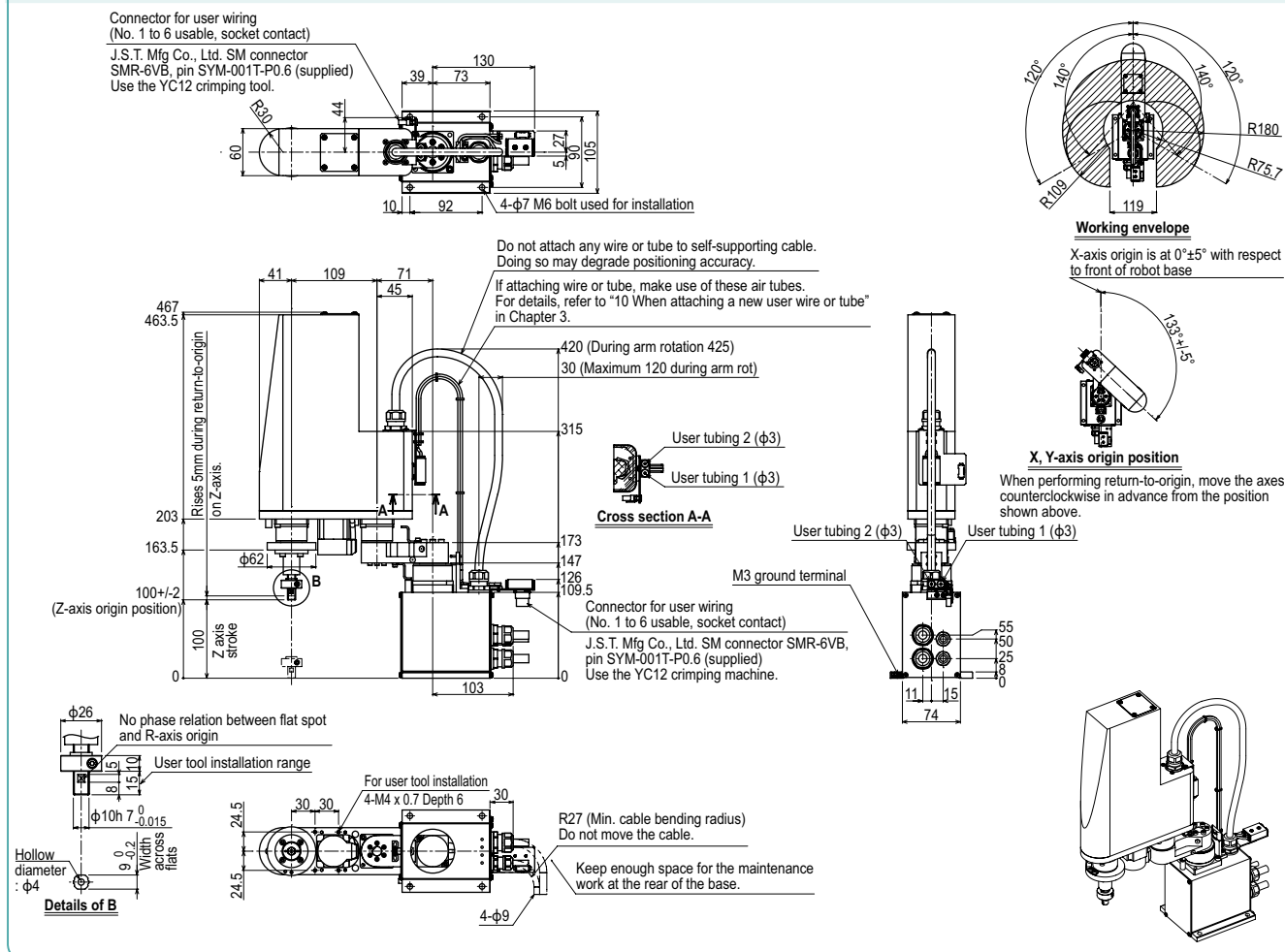
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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



Controller

RCX340 ▶ 508 **RCX240S ▶ 495**

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

Specify various controller setting items. RCX340 ▶ P.508
RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ P.495

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.536.

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

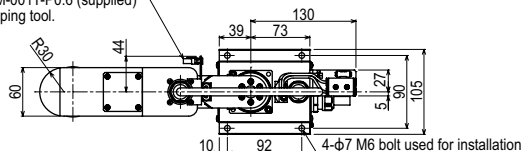
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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/>

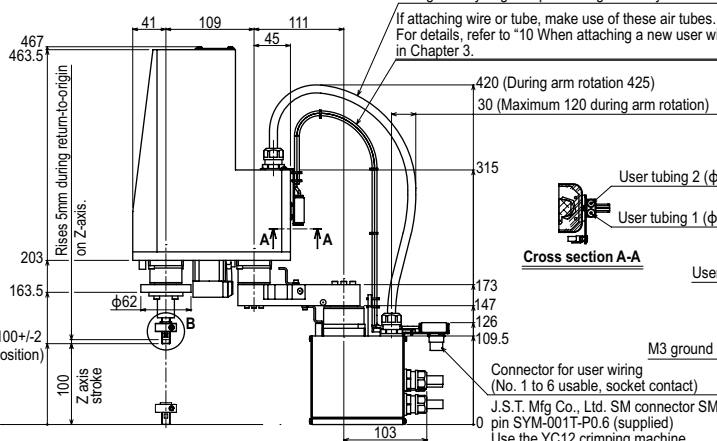
YK220X

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.



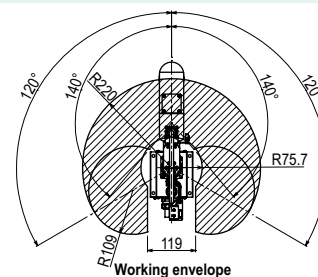
Do not attach any wire or tube to self-supporting cable.
Doing so may degrade positioning accuracy.

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.



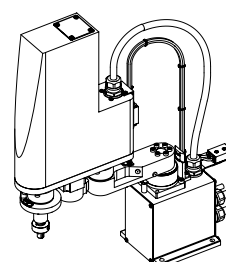
Working envelope

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

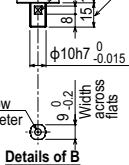


X, Y-axis origin position

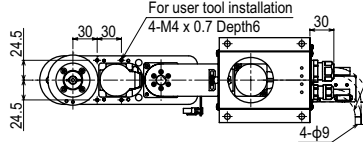
When performing return-to-origin, move the
axes counterclockwise in advance from the
position shown above.



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.

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 (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.508**

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

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 x 10 wires			
User tubing (Outer diameter)		φ 4 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		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.537.

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.

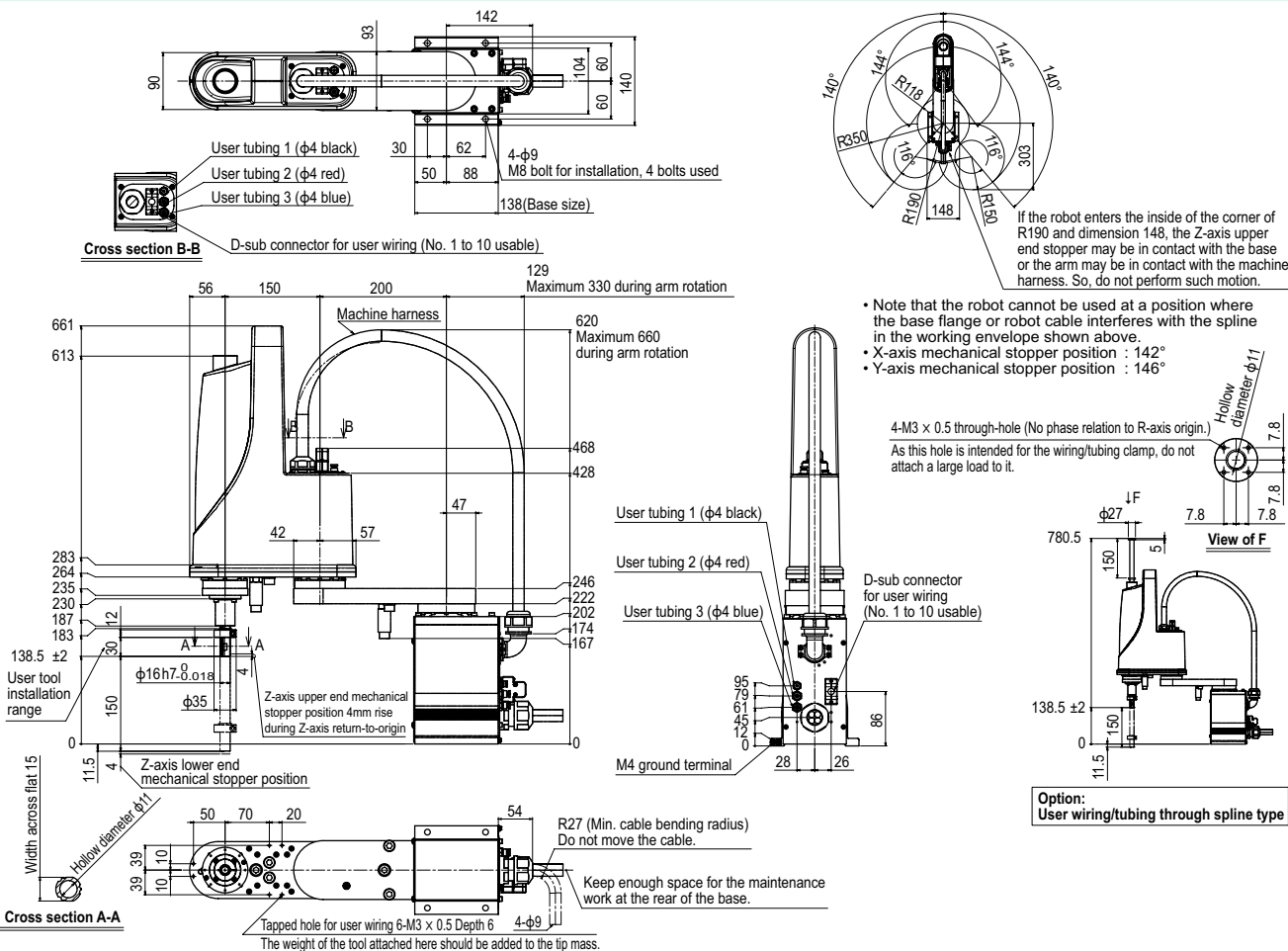
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

YK350XG



Controller

RCX340 ▶ 508 RCX240S ▶ 495

YK400XG

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
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Specify various controller setting items. RCX340 ▶ **P.508**

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	250 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		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 x 10 wires			
User tubing (Outer diameter)		φ 4 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		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.538.

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

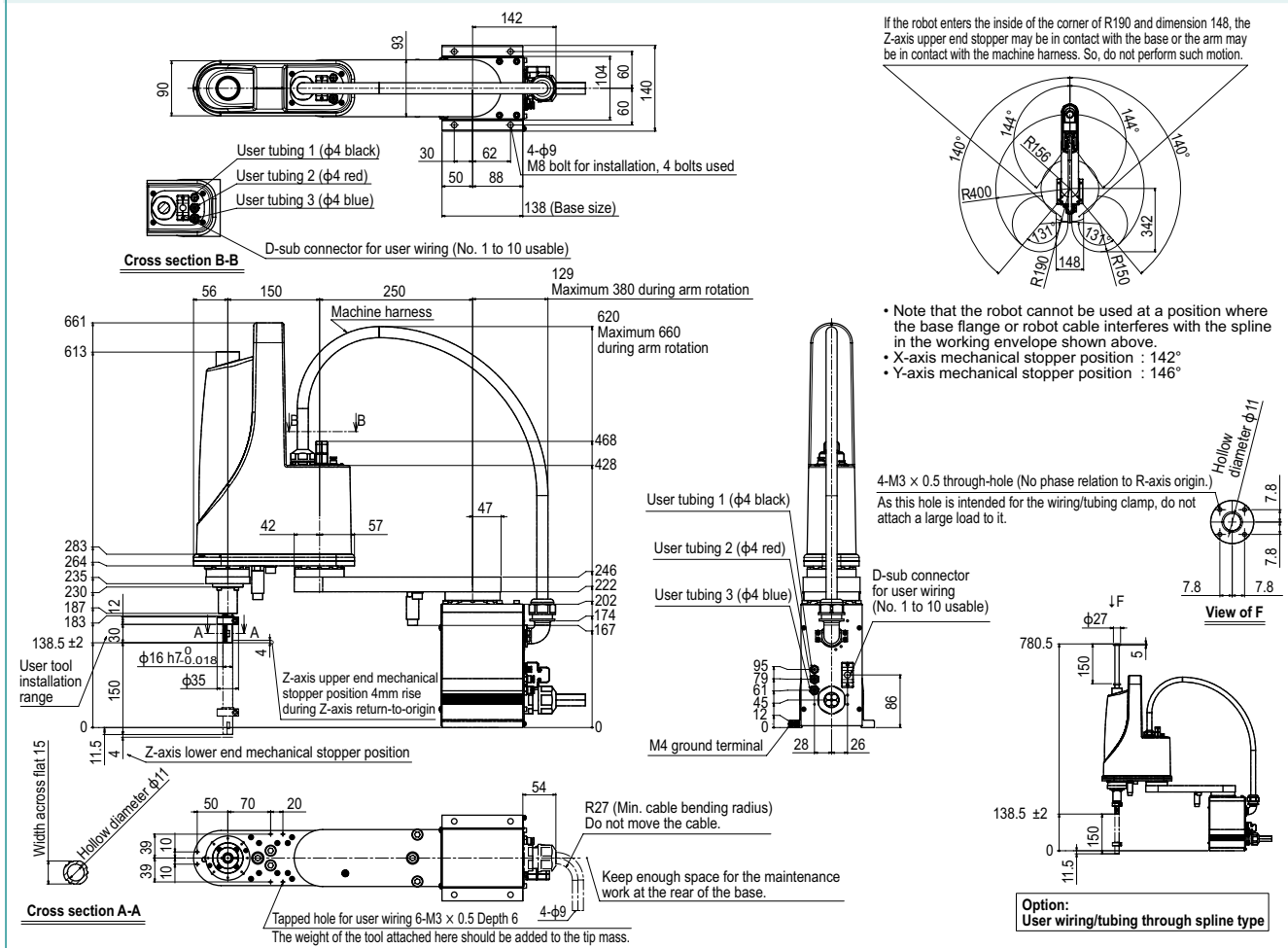
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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

YK400XG



Controller

RCX340 ▶ 508 RCX240S ▶ 495

View of E

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.508**

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 shaft) 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.

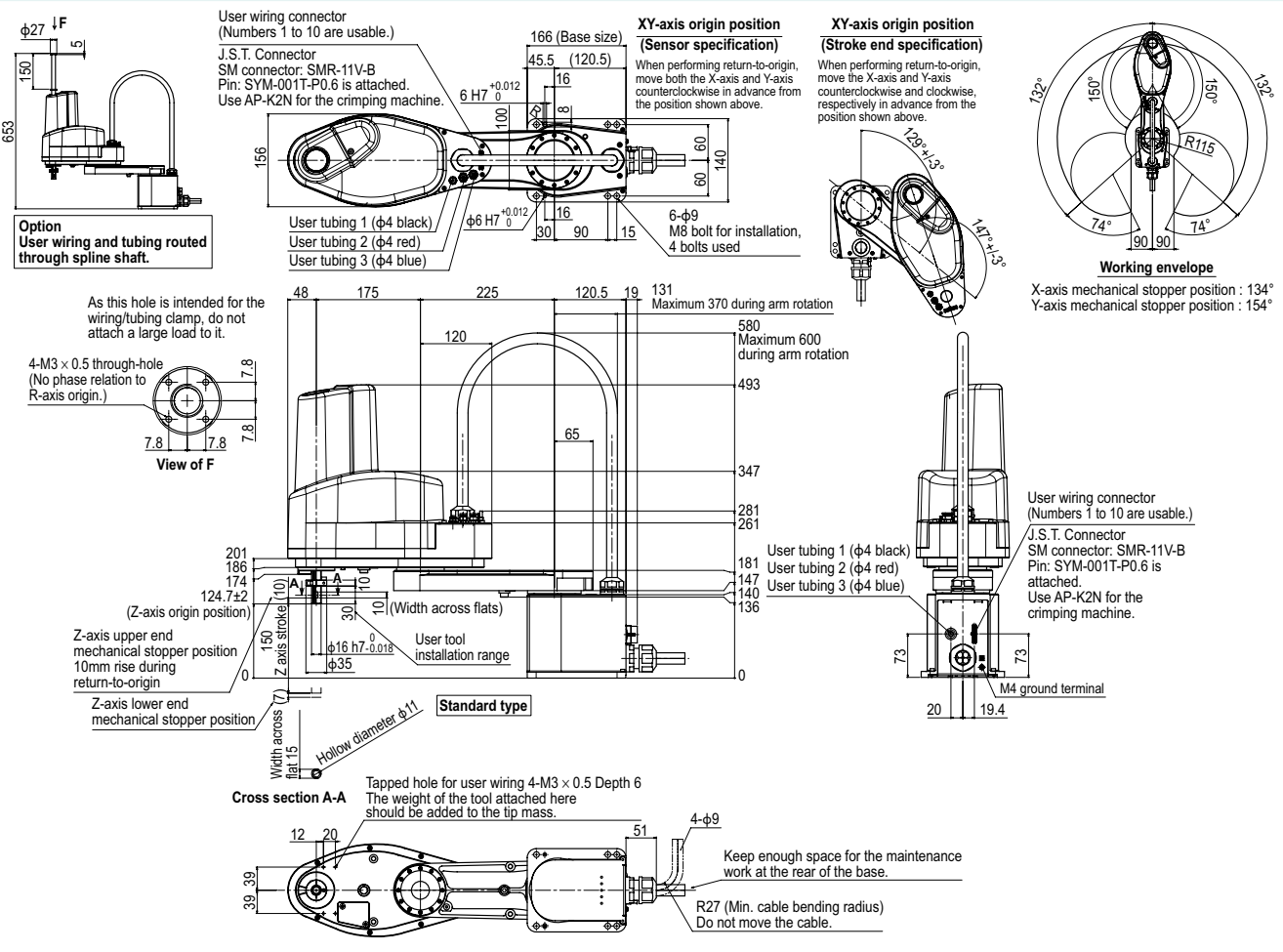
Note. The movement range can be restricted by adding the X- and Y-axis mechanical stoppers. (The maximum movement range was set at shipment.)

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

YK400XR



YK500XGL

Standard type: Medium type



- Arm length 500mm
- Maximum payload 5kg

Ordering method

YK500XGL-150

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
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Specify various controller setting items. RCX340 ▶ **P.508**

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.495

■ Specifications

			X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length		250 mm	250 mm	150 mm	-
	Rotation angle		+/-140 °	+/-144 °	-	+/-360 °
AC servo motor output			200 W	150 W	50 W	100 W
Deceleration mechanism	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			5.1 m/sec		1.1 m/sec	1020 °/sec
Maximum payload			5 kg (Standard specification), 4 kg (Option specifications ^{Note 4})			
Standard cycle time: with 2kg payload ^{Note 2}			0.59 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			21 kg			

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

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

Note 3. There are limits to acceleration coefficient settings. See P.538.

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.

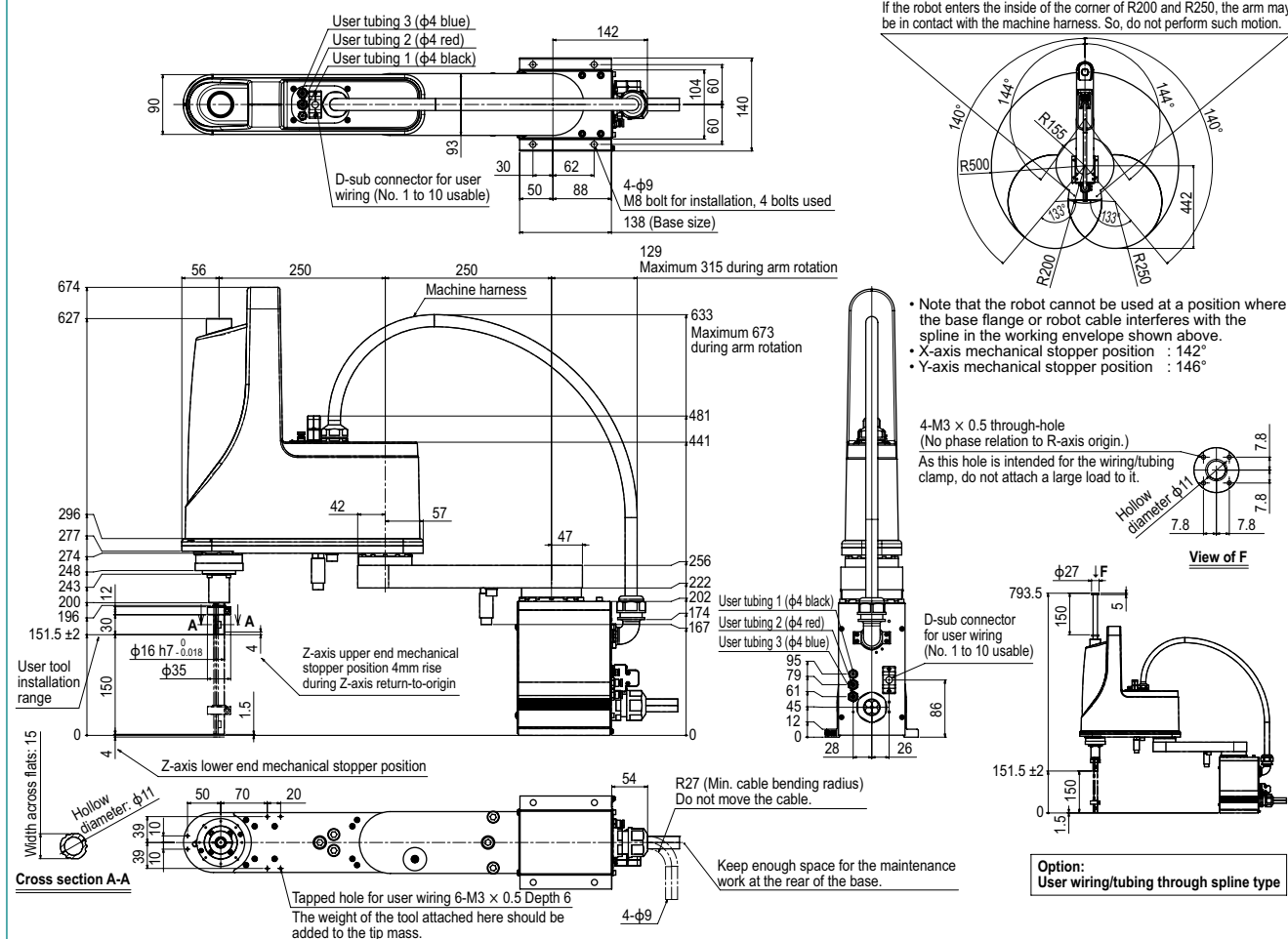
Note: The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

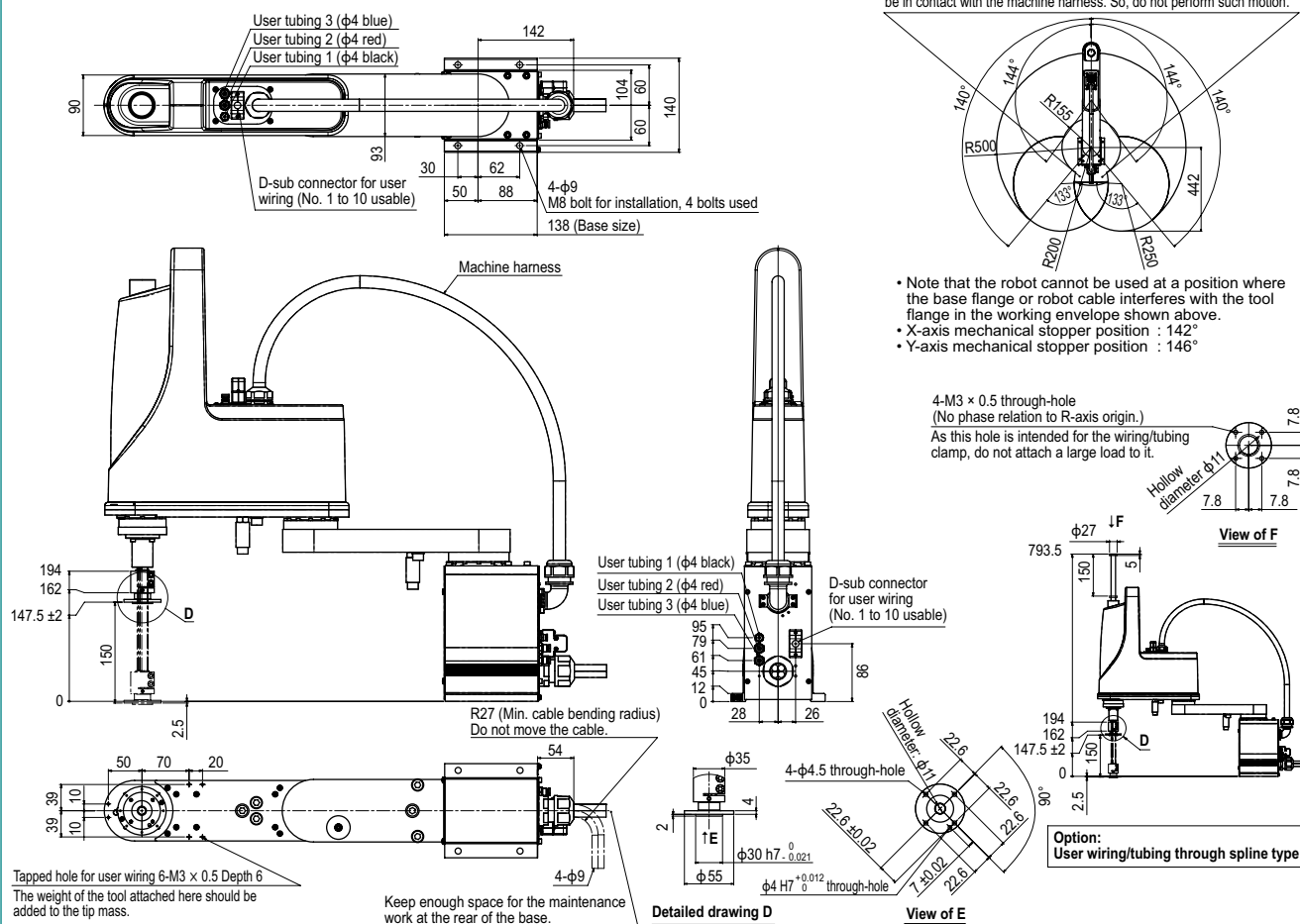
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

YK500XGL



YK500XGL Tool flange mount type



YK500XG

Standard type: Medium type
● Arm length 500mm
● Maximum payload 10kg

Ordering method

YK500XG
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

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.508**
RCX240
Controller
CE Marking
Regenerative unit
Expansion I/O
Network option
iVY System
Gripper
Battery

 Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

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	+/-0.01 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.539.

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.

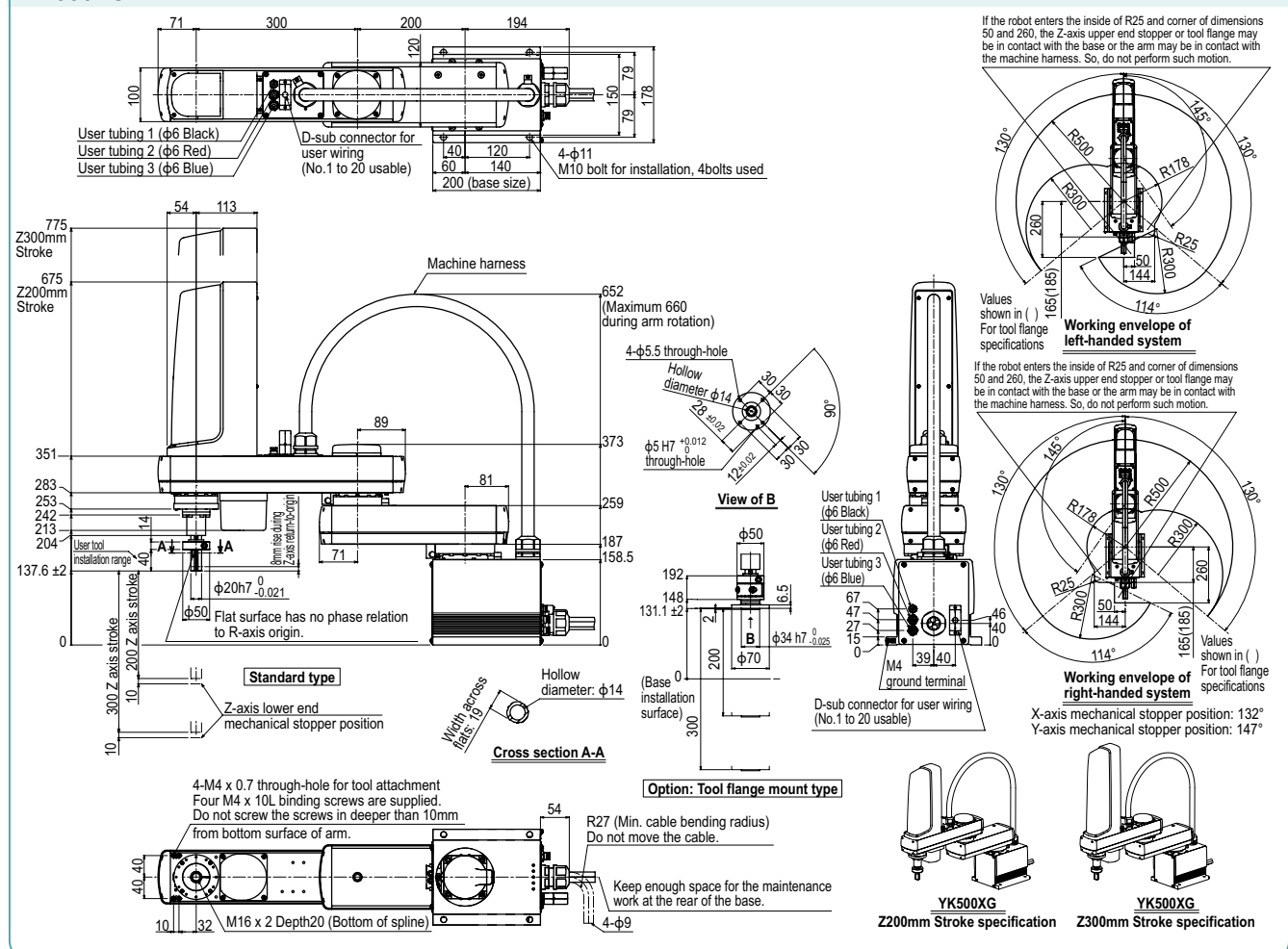
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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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YK500XG



Standard type: Medium type

- Arm length 600mm
- Maximum payload 5kg



Ordering method

YK600XGL-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.508**

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.495

■ 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.538.

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.

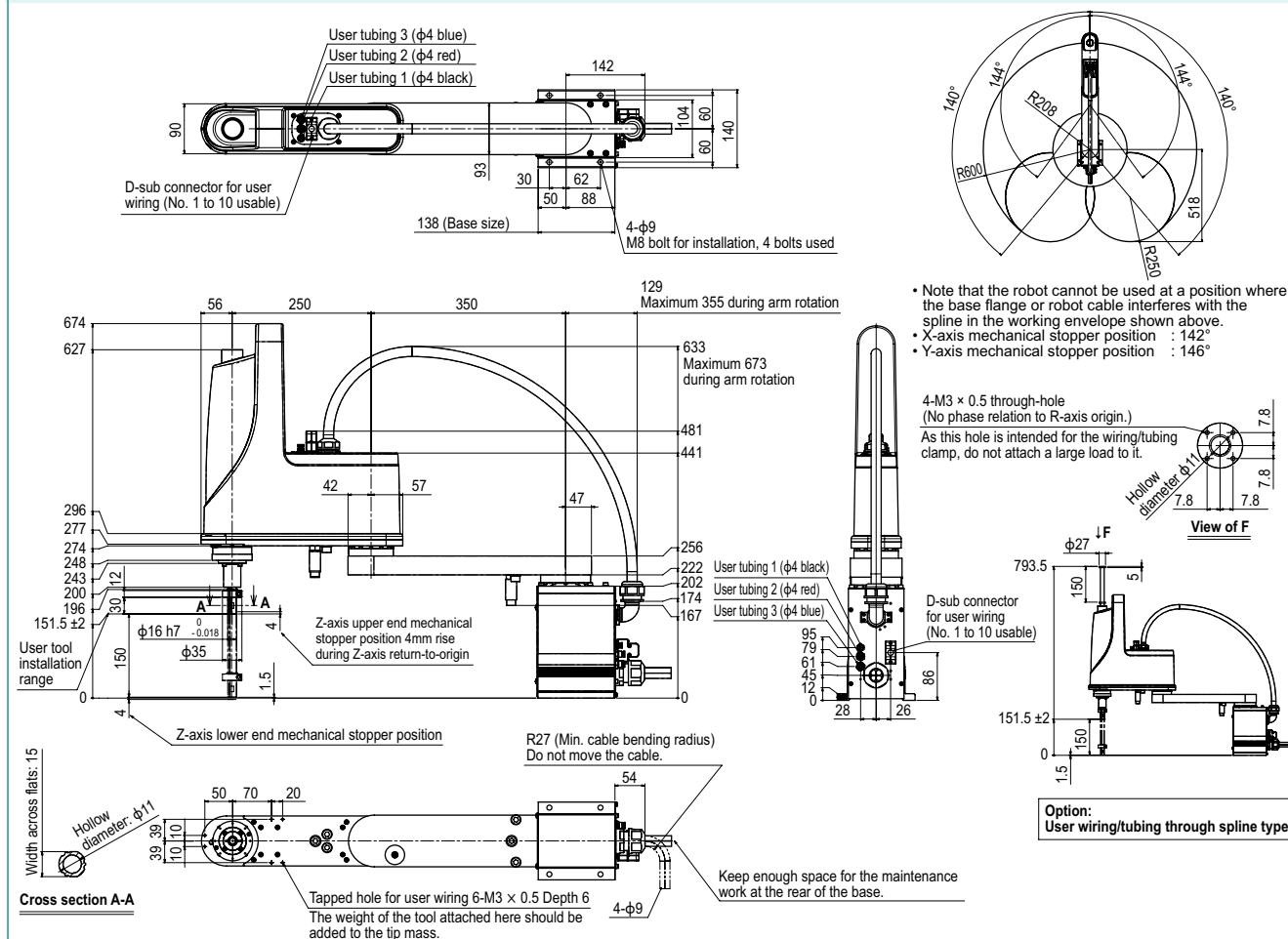
Note: The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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.

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YK600XGL



Controller

RCX340 ▶ 508 **RCX240S ▶ 495**

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

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.508**

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.495

■ 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.539.

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.

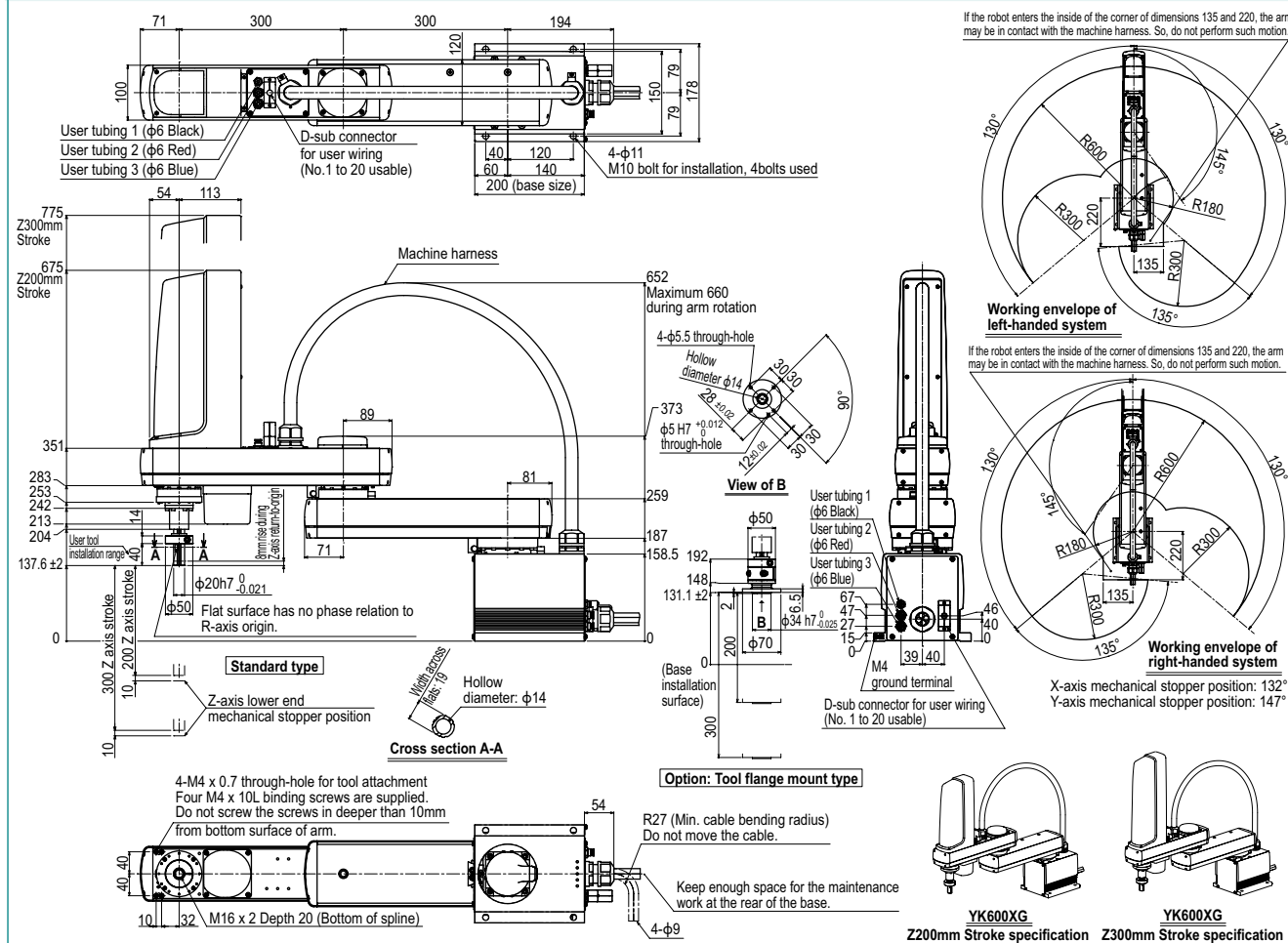
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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:
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YK600XG



Controller

RCX340 ▶ 508	RCX240 ▶ 495
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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.508**

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.

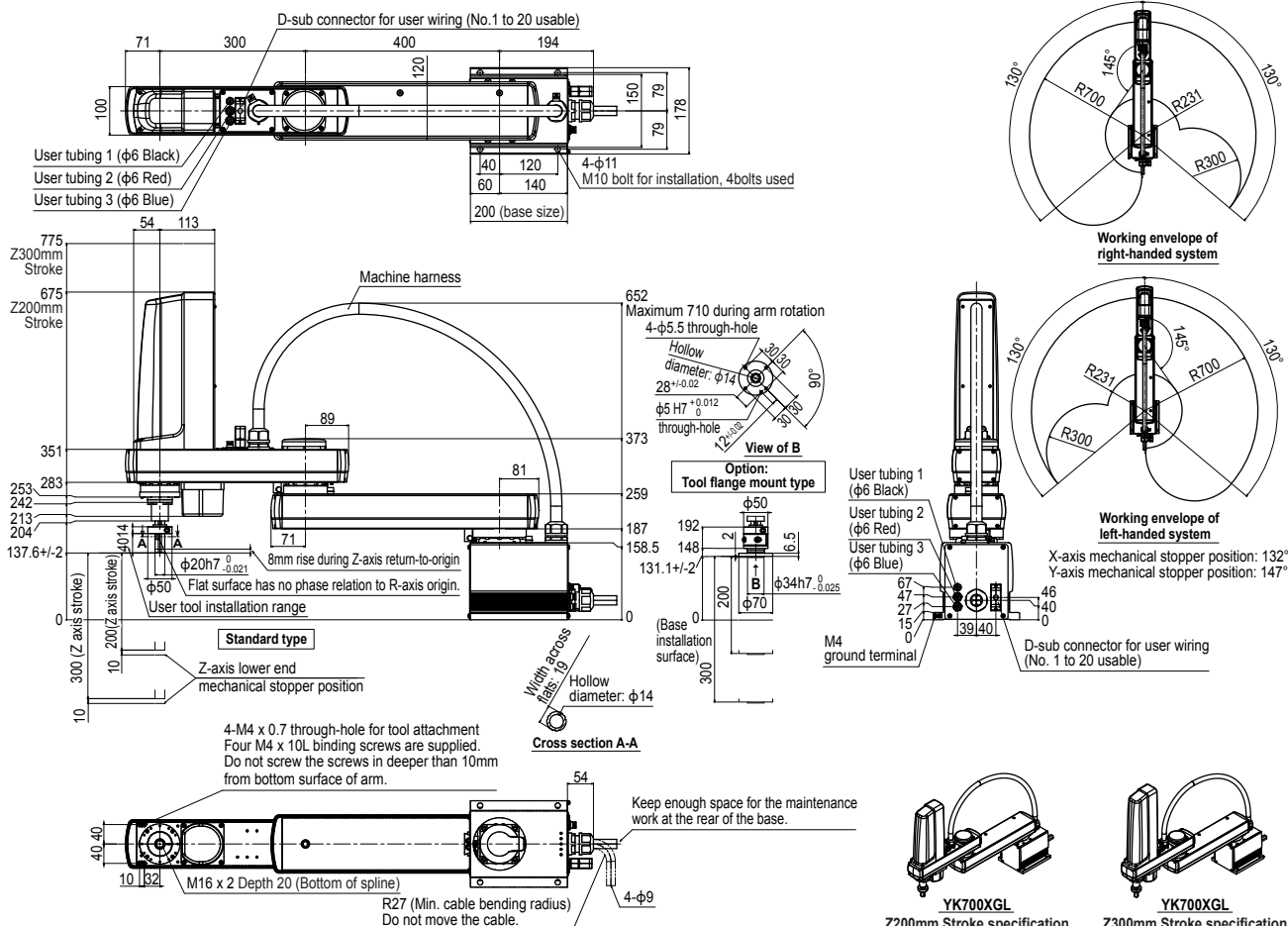
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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.

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YK700XGL



YK700XG

Standard type: Large type
● Arm length 700mm
● Maximum payload 20kg

Ordering method

YK700XG

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 ▶ P.508
RCX240
R3
BB

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.495

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	300 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			
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.539.

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.

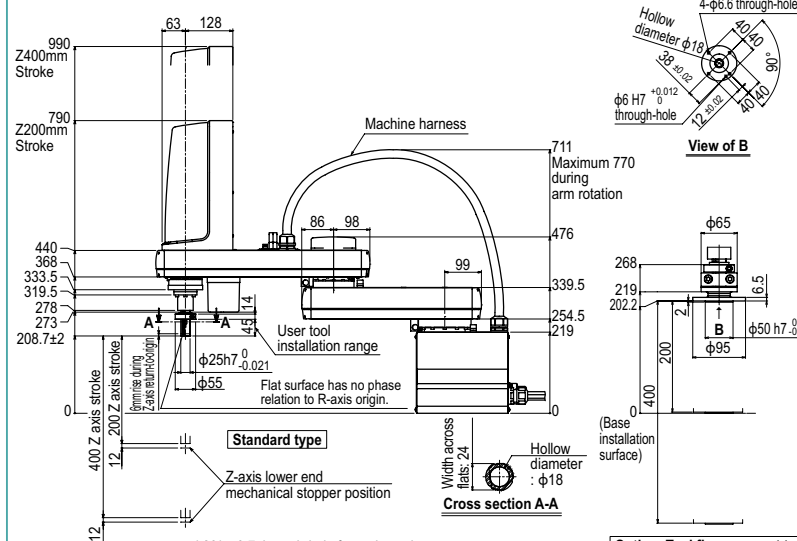
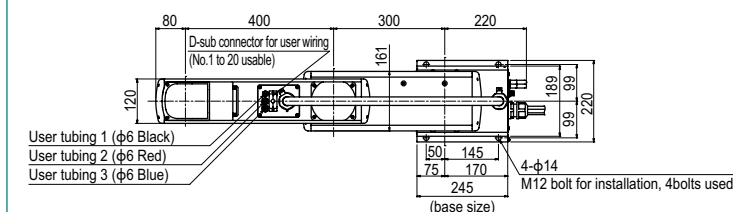
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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

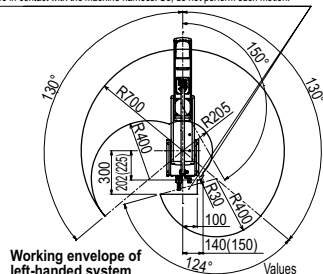
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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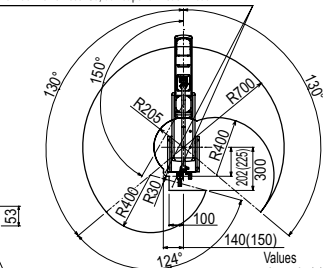
YK700XG



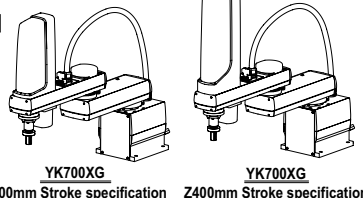
If the robot enters the inside of R30 and corner of dimensions 100 and 300, the Z-axis upper end stopper or tool flange may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.



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.

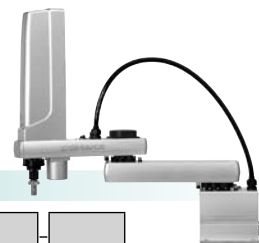


X-axis mechanical stopper position: 132°
Y-axis mechanical stopper position: 152°



Standard type: Large type

- Arm length 800mm
- Maximum payload 20kg



Ordering method

YK800XG

Model	Z axis stroke	Tool flange	Cable
200: 200mm	No entry: None	3L: 3.5m	
400: 400mm	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.508**

RCX240

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

Specify various controller setting items. RCX240/RCX240S ▶ P.495

■ 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			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.539.

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.

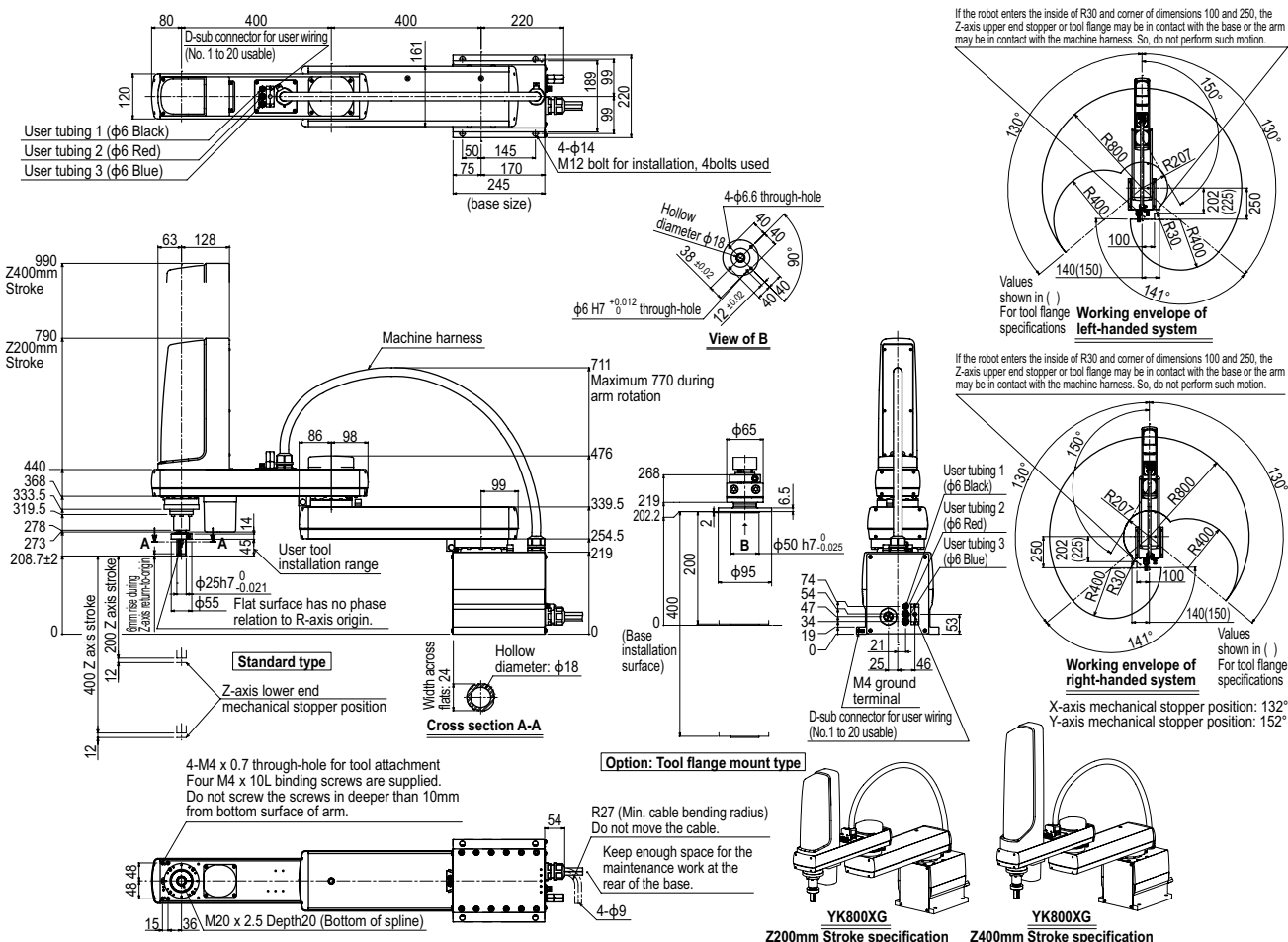
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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>

YK800XG



Controller

RCX340 ▶ 508	RCX240 ▶ 495
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Standard type: Large type

- Arm length 1000mm
- Maximum payload 20kg



Ordering method

YK1000XG

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

Specify various controller setting items. RCX340 ▶ **P.508**

Specify various controller setting items. RCX340 ▶ **P.508**

RCX240

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

Specify various controller setting items. RCX240/RCX240S ▶ P.495

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			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 × 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.539.

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.

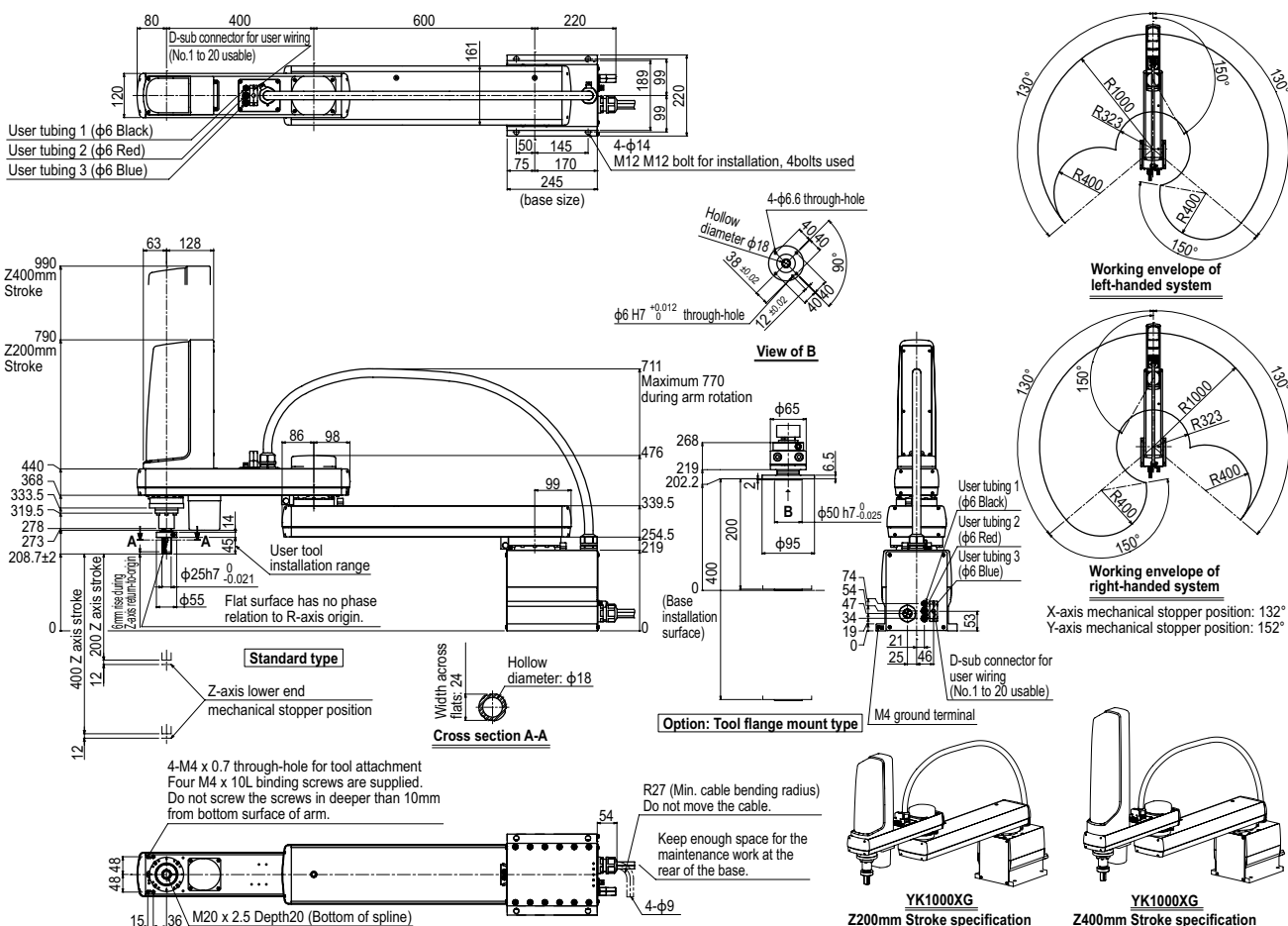
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)

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 ▶ 508	RCX240 ▶ 495
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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
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Specify various controller setting items. RCX340 ▶ P.508
RCX240
R
BB

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.495

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	600 mm	600 mm	400 mm	—
		+/-125 °	+/-150 °	—	+/-360 °
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	Direct-coupled	Direct-coupled	Timing belt transmission	Timing belt transmission
	Motor to speed reducer	Direct-coupled	Direct-coupled	Direct-coupled	Direct-coupled
	Speed reducer to output	Direct-coupled	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.540.

Controller

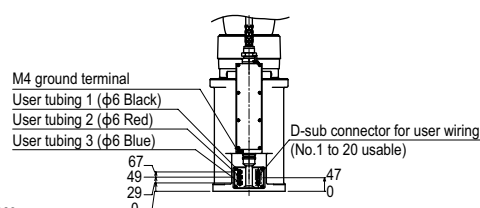
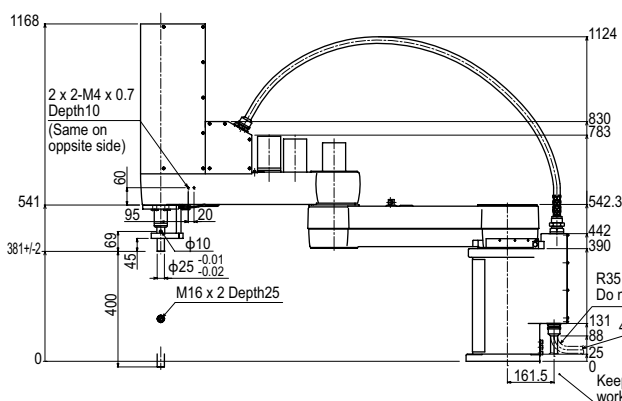
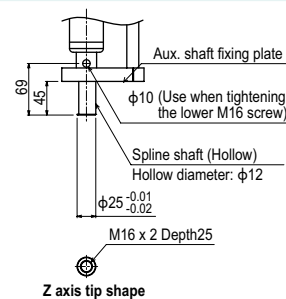
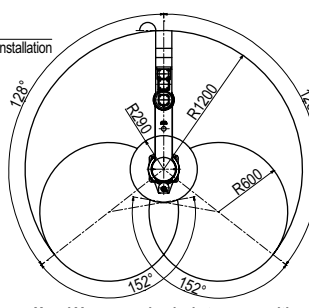
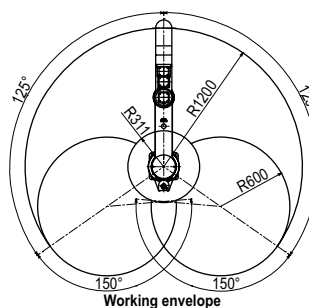
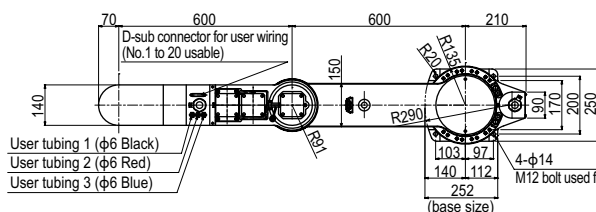
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.

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YK1200X



YK300XGS

Wall-mount / inverse type

● Arm length 300mm ● Maximum payload 5kg

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

Ordering method

YK300XGS	150					RCX340-4						
Model	Installation method W: Wall-mount (same as per external view) U: Inverse wall-mount (upside down)	Z axis stroke 150: 150mm	Tool flange No entry: None F: With tool flange	Hollow shaft No entry: None S: With hollow shaft	Cable 3L: 3.5m 5L: 5m 10L: 10m	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)
						Specify various controller setting items. RCX340 ▶ P.508						
						RCX240S						BB
						Controller	CE Marking	Expansion I/O	Network option	IVY System	Gripper	Battery
						Specify various controller setting items. RCX240/RCX240S ▶ P.495						

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	150 mm	150 mm	150 mm	—
		+/-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	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		4.4 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)			
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 x 10 wires			
User tubing (Outer diameter)		φ 4 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		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.537.

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

Controller

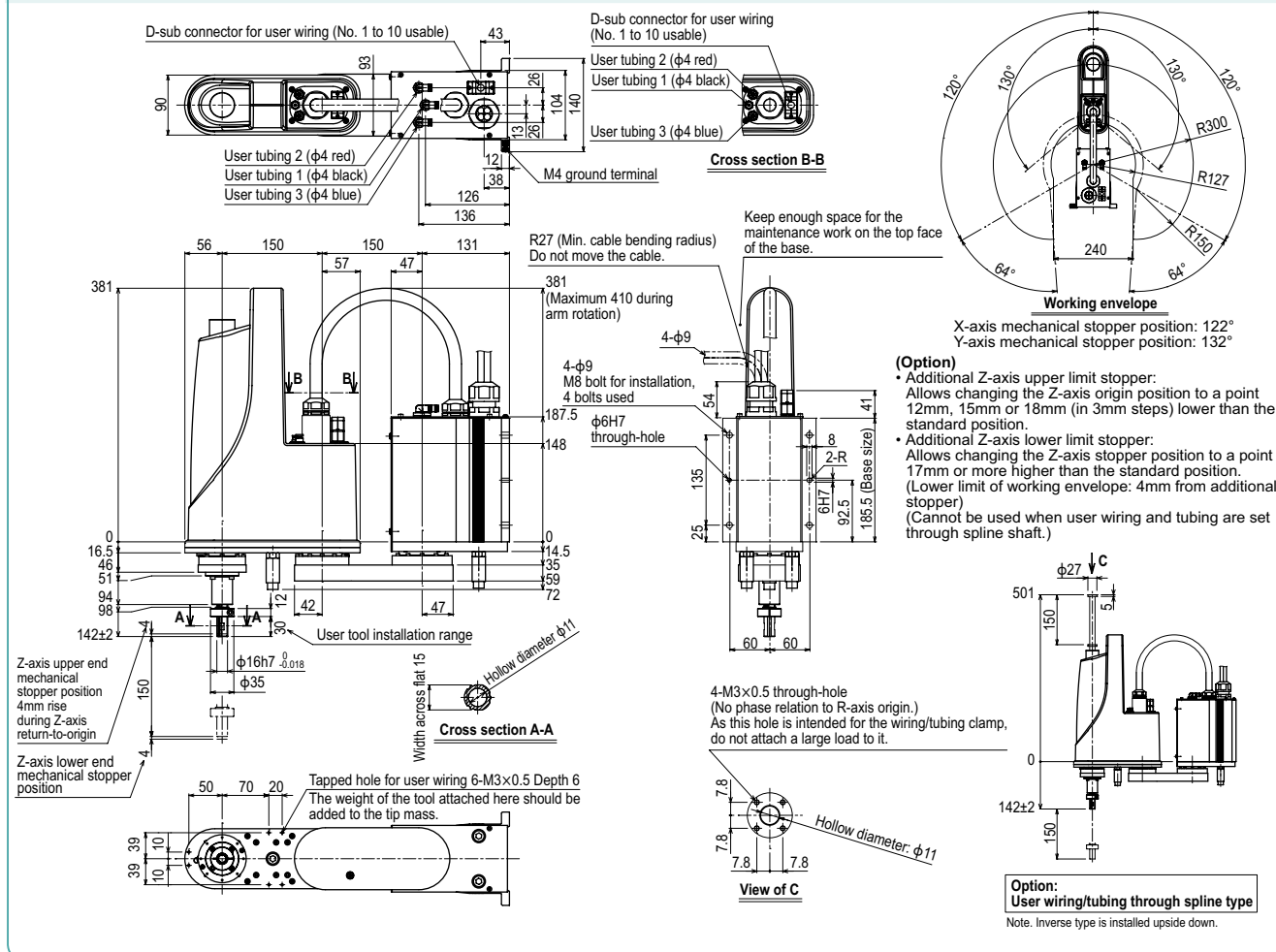
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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/>

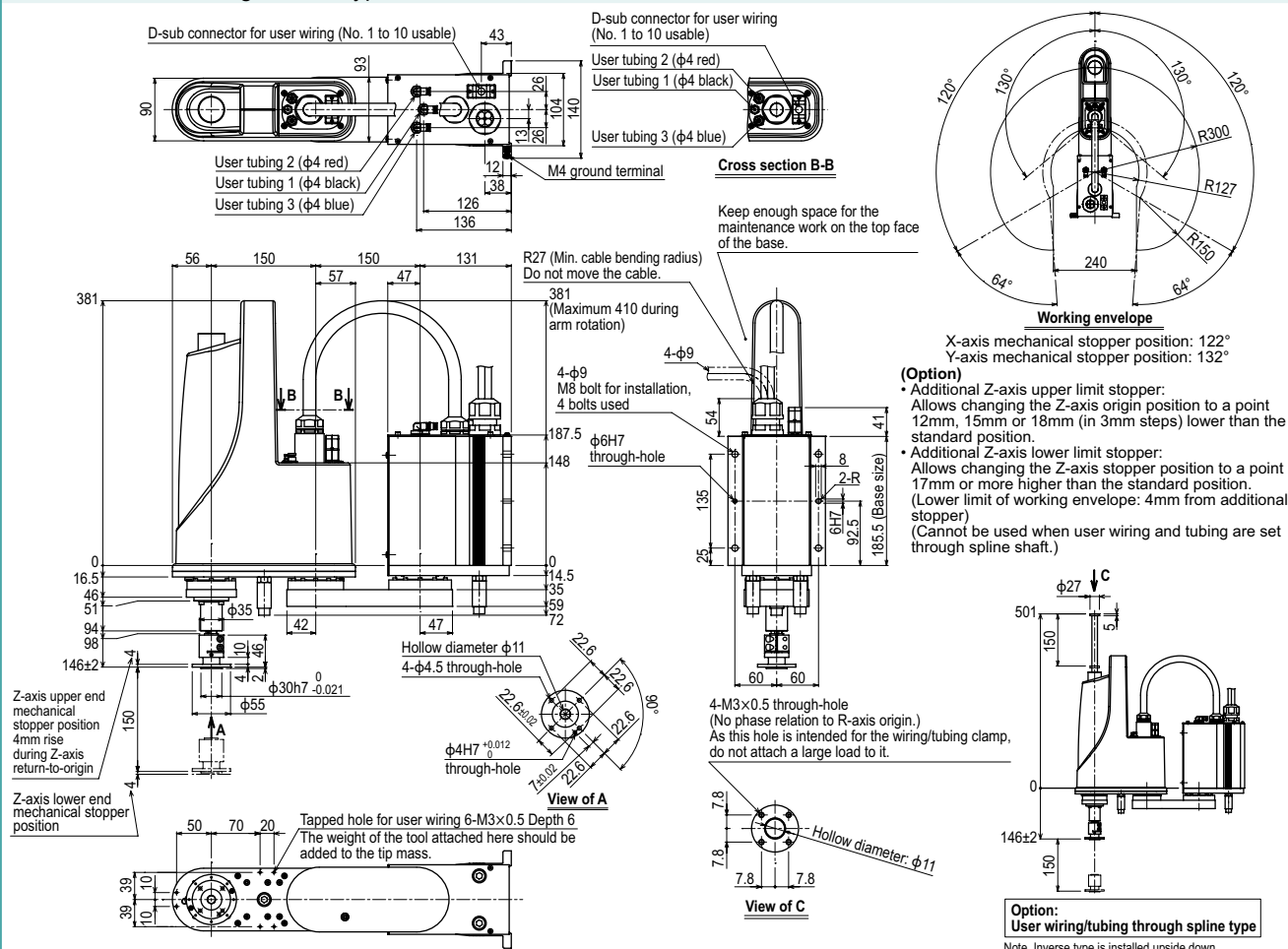
YK300XGS



Controller

RCX340 ▶ 508 RCX240S ▶ 495

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 <small>Note1)</small>	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
	W: Wall-mount (same as per external view) U: Inverse wall-mount (upside down)				

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.508

RCX240S

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

Specify various controller setting items. RCX240/RCX240S ▶ P.495

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		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.538.

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

Controller

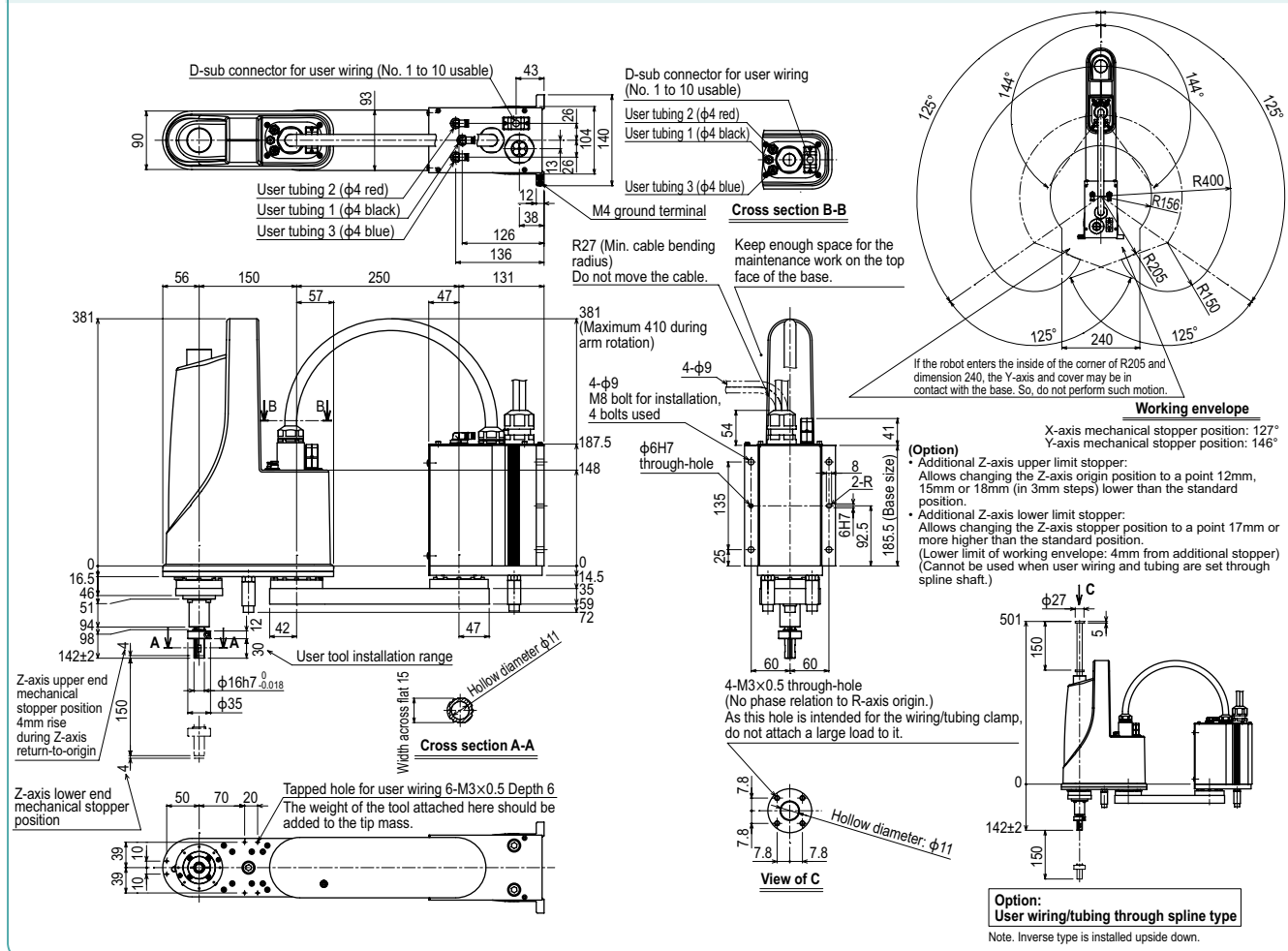
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	1000	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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:
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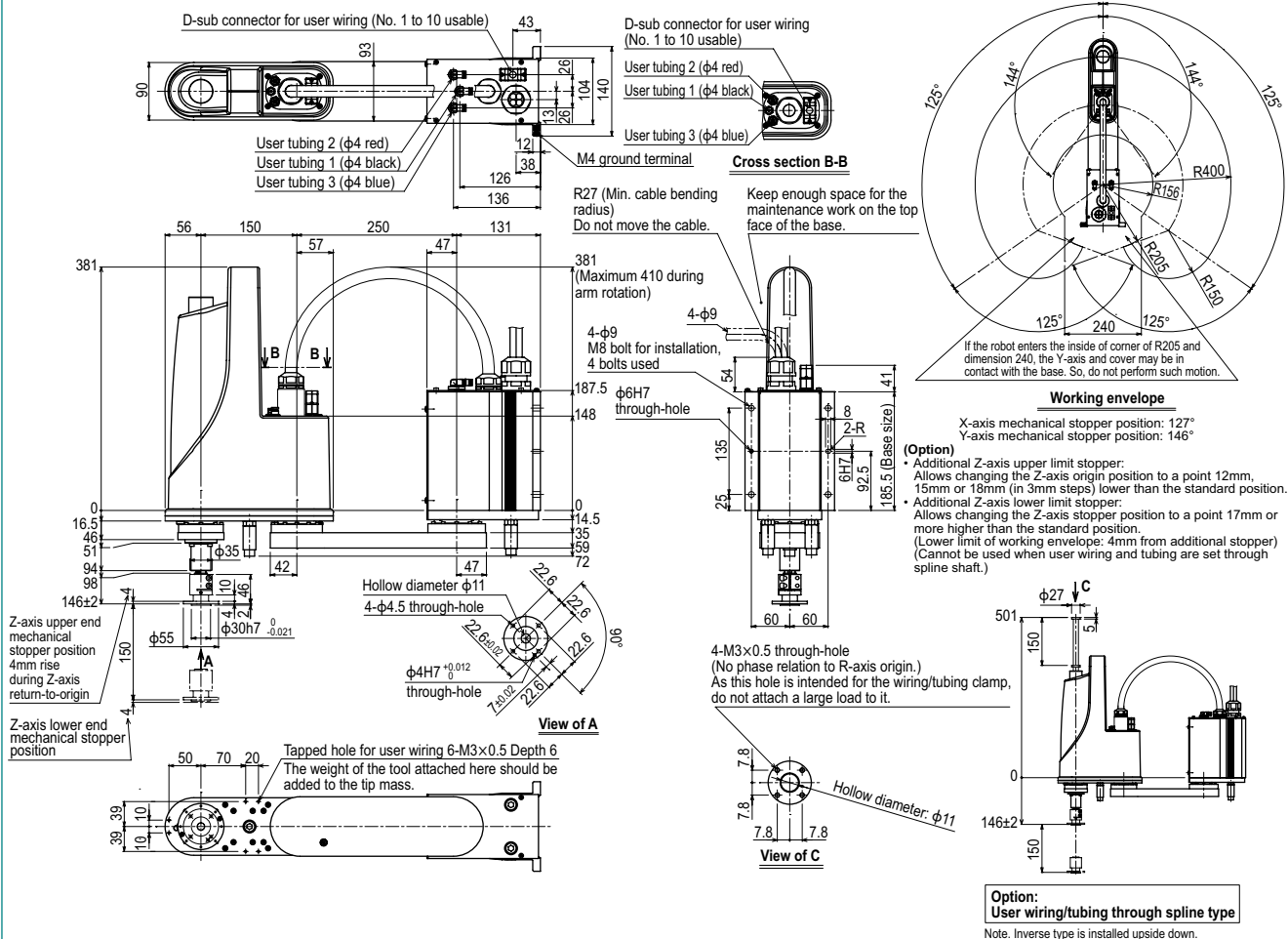
YK400XGS



Controller

RCX340 ▶ 508 **RCX240S ▶ 495**

YK400XGS Tool flange mount type



Wall-mount / inverse type

- Arm length 500mm
- Maximum payload 10kg



Ordering method

YK500XGS

Model

Installation method Note 1

W: Wall-mount
(same as per external view)

U: Inverse wall-mount
(upside down)

Z axis stroke

200: 200mm

300: 300mm

Tool flange

No entry: None

F: With tool flange

Cable

3L: 3.5m

5L: 5m

10L: 10m

RCX340-4

Controller /
Number of controllable axes

Safety
standard

Option A
(OP.A)

Option B
(OP.B)

Option C
(OP.C)

Option D
(OP.D)

Option E
(OP.E)

Absolute
battery

Specify various controller setting items. RCX340 ▶ P.508

RCX240

R3

BB

Controller

CE Marking

Regenerative unit

Expansion I/O

Network option

IVY System

Gripper

Battery

Specify various controller setting items. RCX240/RCX240S ▶ P.495

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) 800 °/sec (inverse wall-mount)
Maximum payload			10 kg (Standard specification), 9 kg (Option specifications)			
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.539.

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

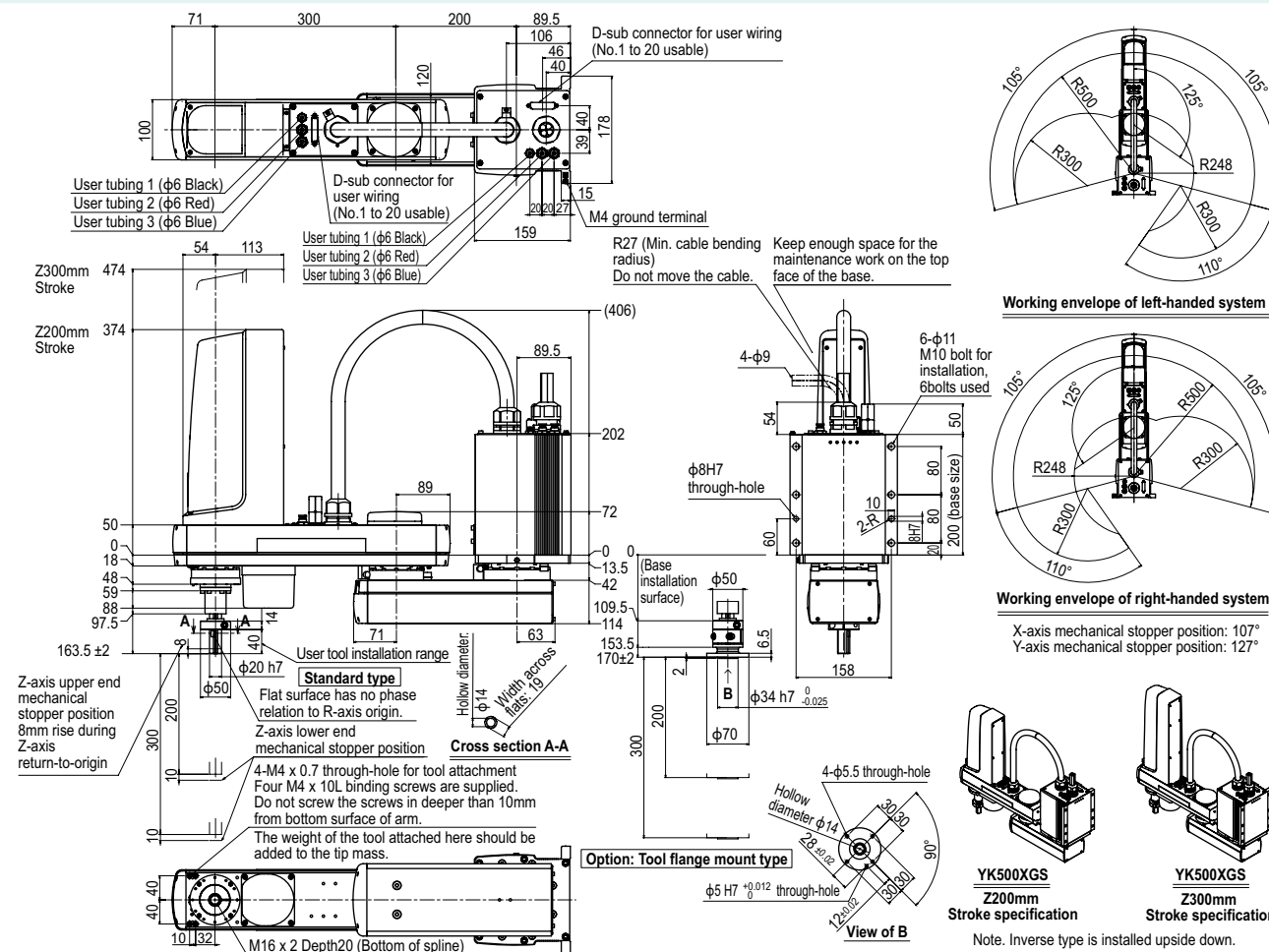
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

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YK500XGS



Note. Inverse type is installed upside down.

Note. Inverse type is installed upside down.

Controller

RCX340 ▶ 508	RCX240 ▶ 495
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YK600XGS

Wall-mount / inverse type

- Arm length 600mm
- Maximum payload 10kg



Ordering method

YK600XGS

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
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Specify various controller setting items. RCX340 ▶ P.508
RCX240
R3
BB

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.495

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
	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	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		8.4 m/sec	2.3 m/sec	1.7 m/sec	1700°/sec (wall-mount) 800°/sec (inverse wall-mount)
Maximum payload		10 kg (Standard specification), 9 kg (Option specifications)			
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.539.

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

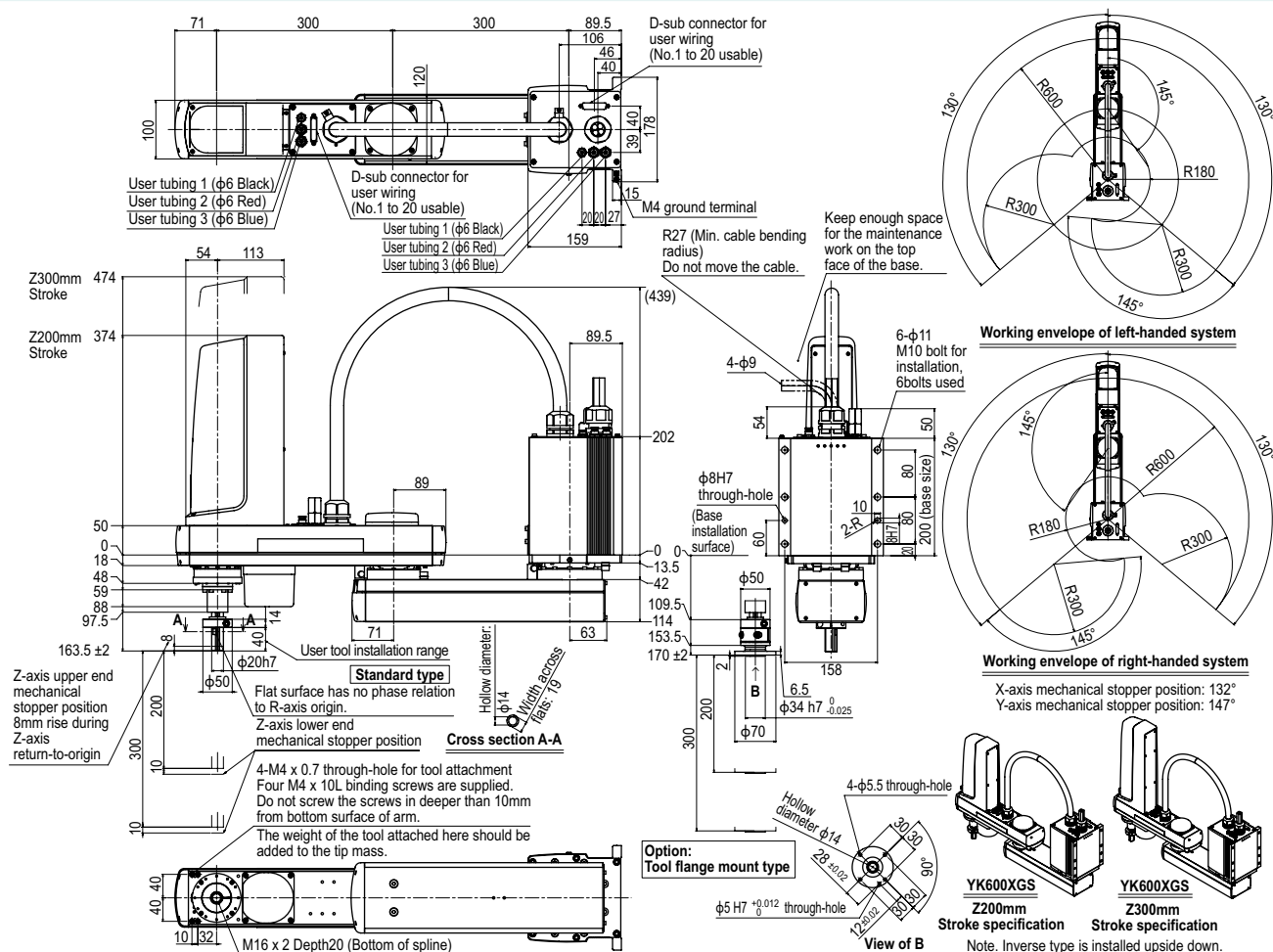
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.)

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YK600XGS



YK700XGS

Wall-mount / inverse type

- Arm length 700mm
- Maximum payload 20kg

Ordering method

YK700XGS

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 ▶ **P508**

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 ▶ **P495**

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	300 mm	400 mm	200 mm/400 mm	—
	AC servo motor output	+/-130 °	+/-130 °	—	+/-360 °
	Speed reducer	750 W	400 W	400 W	200 W
	Transmission method	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Motor to speed reducer	Direct-coupled	Direct-coupled	Direct-coupled	Direct-coupled
	Speed reducer to output	Direct-coupled	Direct-coupled	Direct-coupled	Direct-coupled
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
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.539.

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

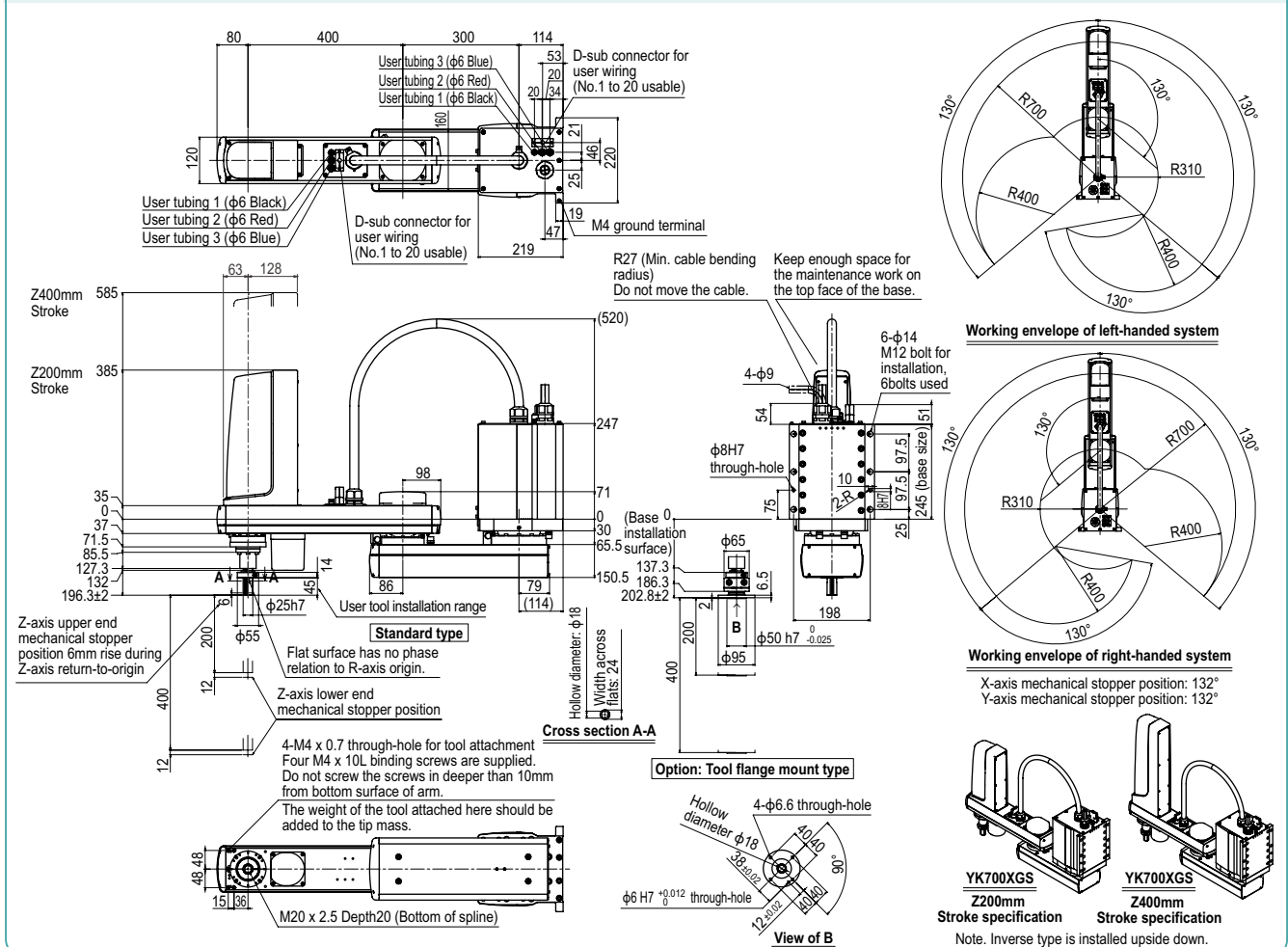
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.)

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YK700XGS



Controller

RCX340 ▶ 508 RCX240 ▶ 495

YK800XGS

Wall-mount / inverse type
● Arm length 800mm
● Maximum payload 20kg

Ordering method

YK800XGS

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.508
RCX240
R3
BB

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.495

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	400 mm	400 mm	200 mm/400 mm	—
	AC servo motor output	+/-130 °	+/-145 °	—	+/-360 °
	Speed reducer	750 W	400 W	400 W	200 W
Deceleration mechanism	Transmission method	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	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 (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}		0.48 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.539.

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

Controller

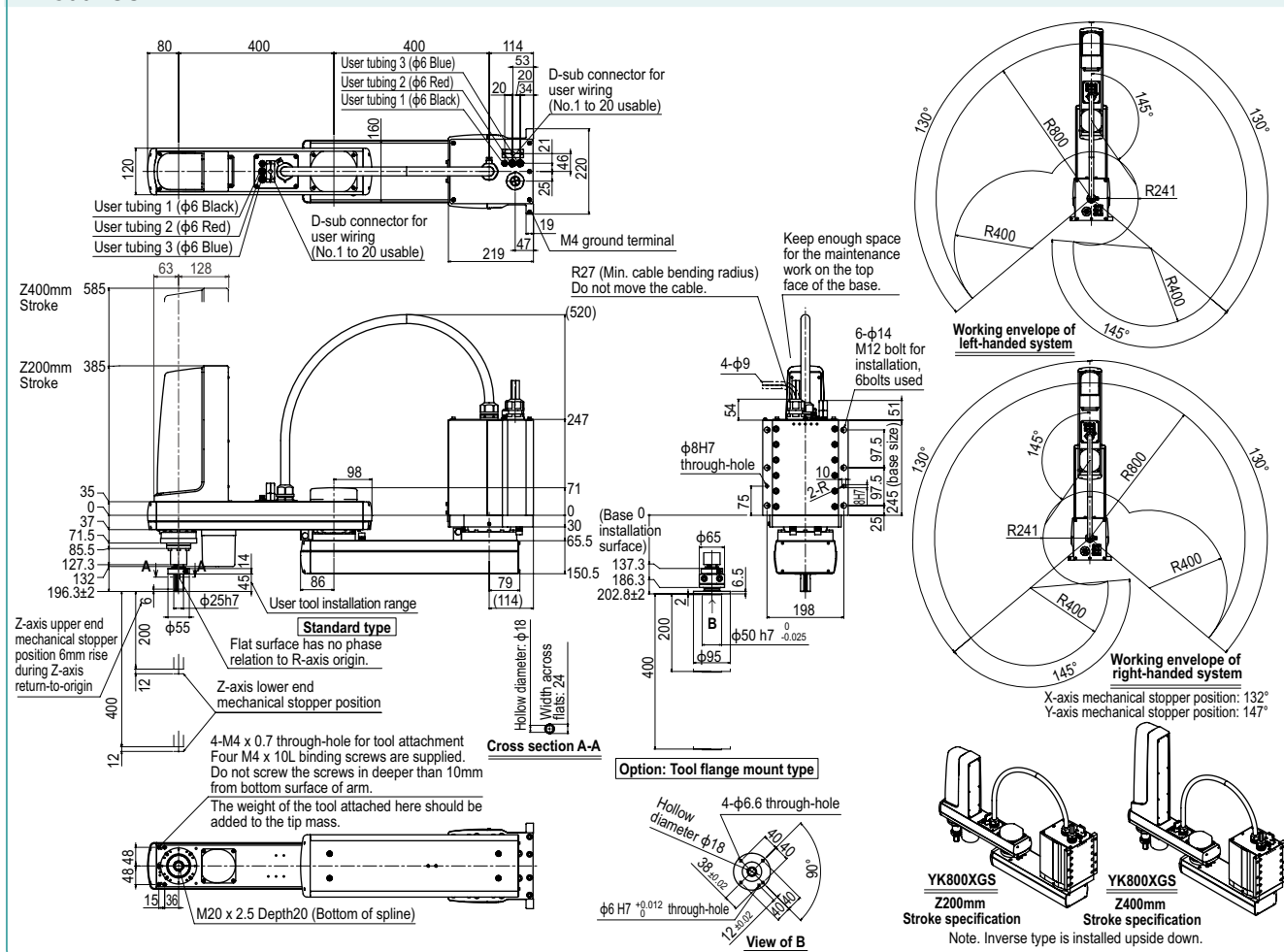
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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.)
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YK800XGS



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 ▶ **P508**

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 ▶ **P495**

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	—
		+/-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		9.9 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.539.

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

Controller

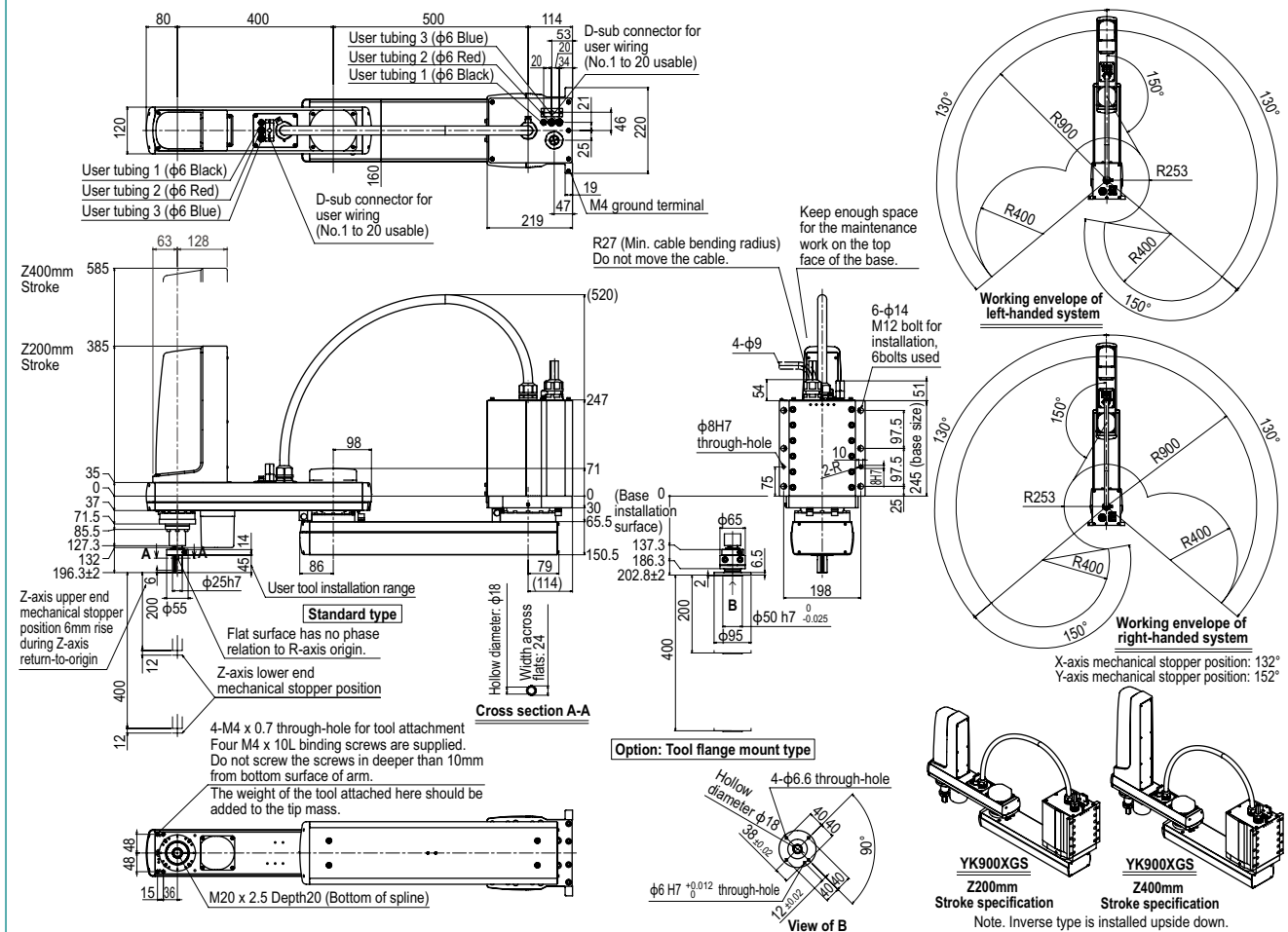
Controller	Power capacity (VA)	Operation method
RCX340 RCX240-R3	2500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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



Controller

RCX340 ▶ **508** RCX240 ▶ **495**

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 ▶ **P508**

RCX240S

Specify various controller setting items. RCX240/RCX240S ▶ **P495**

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 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		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.537.

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

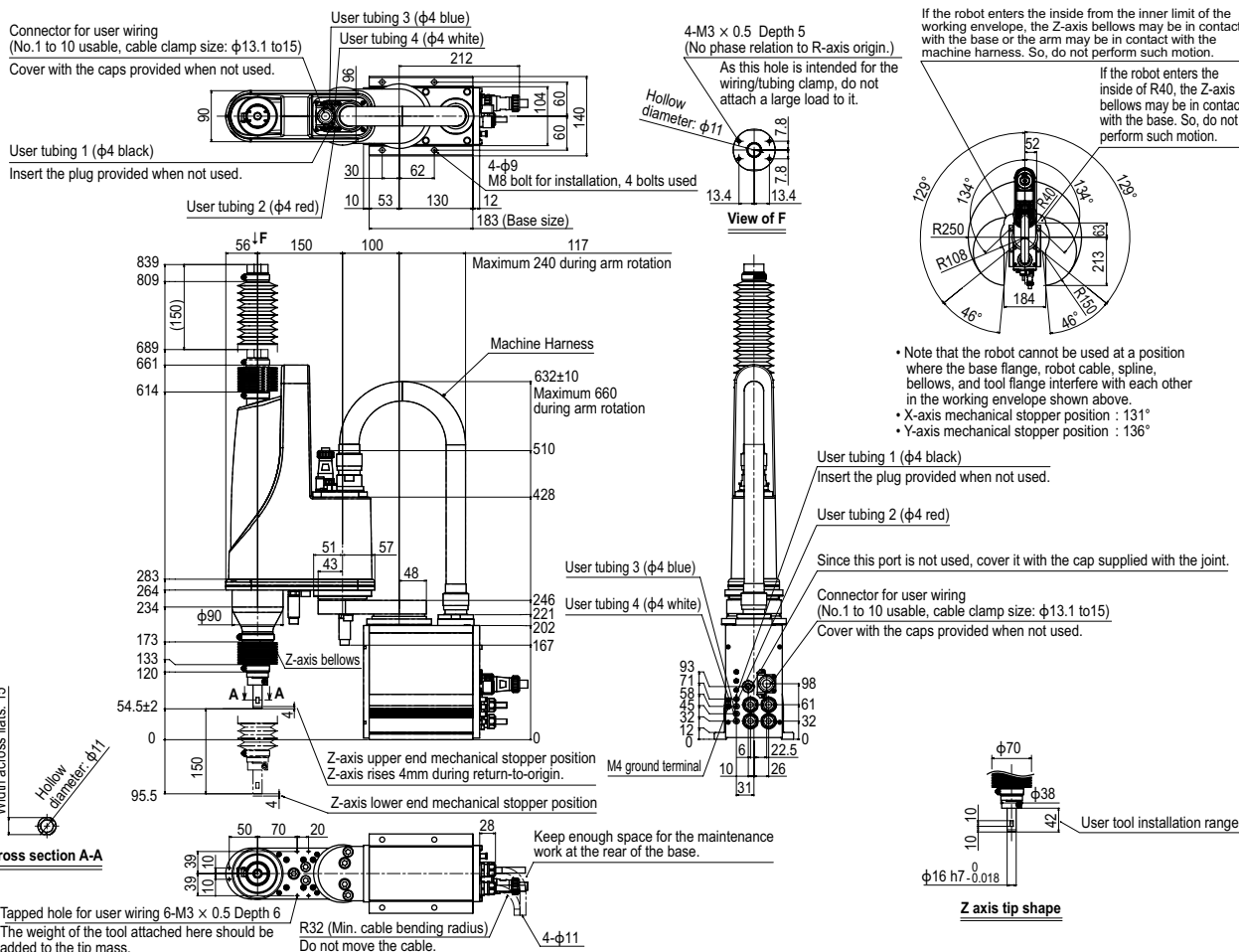
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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/>

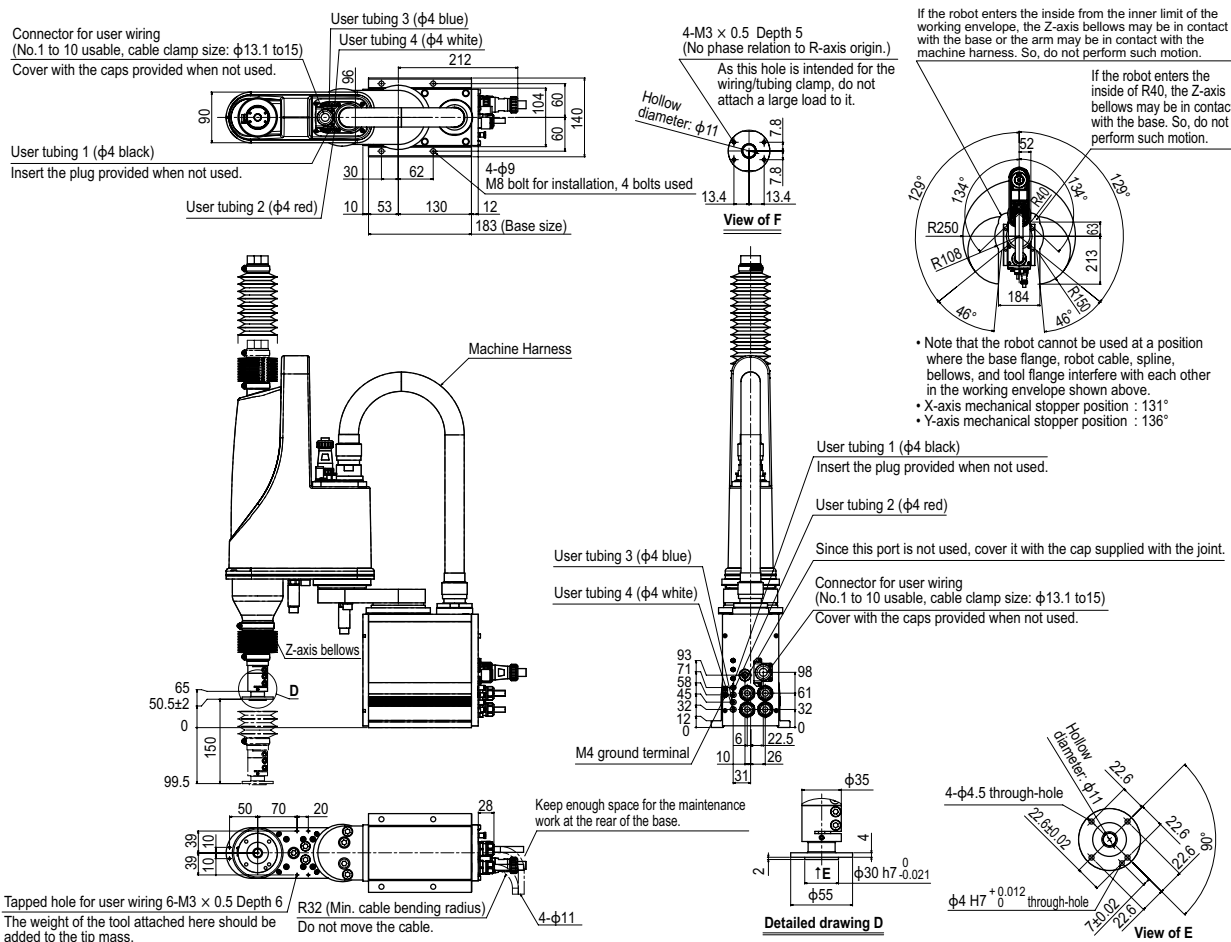
YK250XGP



Controller

RCX340 ▶ 508 RCX240S ▶ 495

YK250XGP Tool flange mount type



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.508**

RCX240S

BB

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

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

Specifications

Axis specifications	Arm length	X-axis	Y-axis	Z-axis	R-axis
	Rotation angle	200 mm	150 mm	150 mm	—
		+/-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	+/-0.004 °
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 × 10 wires			
User tubing (Outer diameter)		φ 4 × 4			
Travel limit		1. Soft limit 2. Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		22 kg			

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

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

Note 3. There are limits to acceleration coefficient settings. See P.537.

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

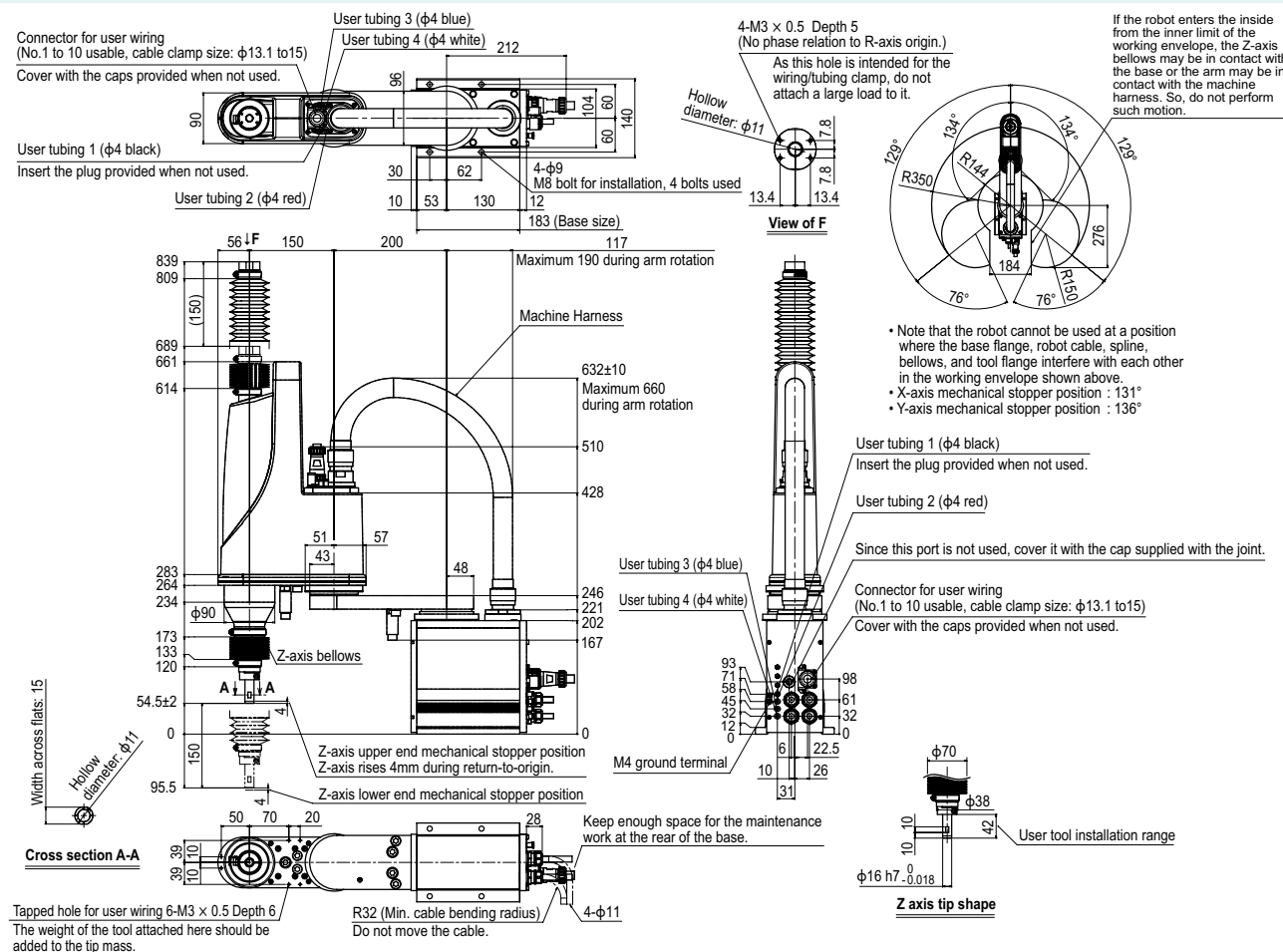
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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/>

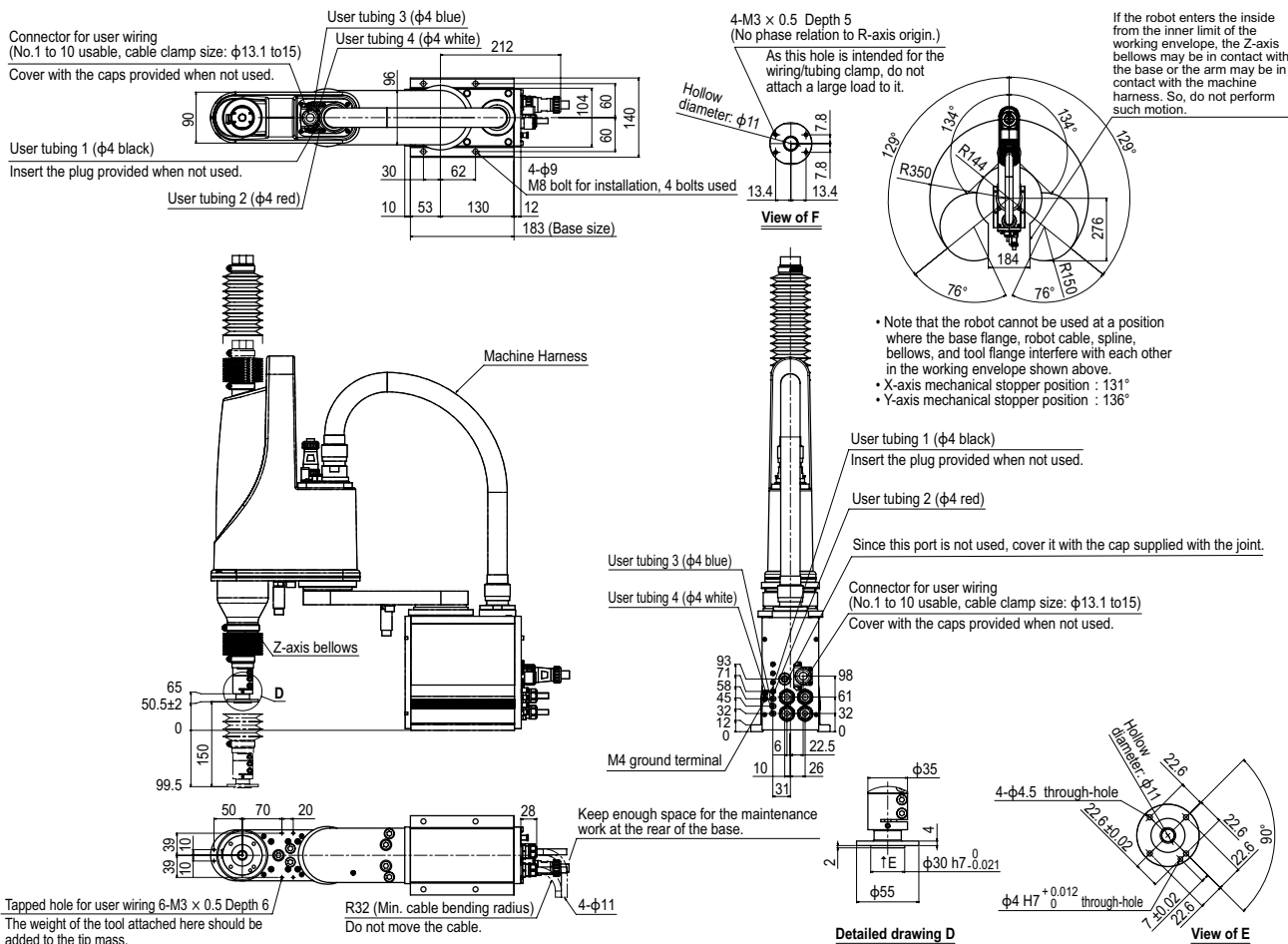
YK350XGP



Controller

RCX340 ▶ 508 RCX240S ▶ 495

YK350XGP Tool flange mount type



YK400XGP

Dust-proof & drip-proof type

- Arm length 400mm
- Maximum payload 4kg

Ordering method

YK400XGP-150 **S** **RCX340-4**

Model	Z axis stroke	Tool flange	Hollow shaft	Cable	Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	3L: 3.5m 5L: 5m 10L: 10m								

RCX240S **BB**

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

Specify various controller setting items. RCX340 ▶ **P.508**

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

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	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability <small>Note 1</small>		+/-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 <small>Note 2</small>		0.57 sec			
R-axis tolerable moment of inertia <small>Note 3</small>		0.05 kgm ²			
Protection class <small>Note 4</small>		Equivalent to IP65 (IEC 60529)			
User wiring		0.2 sq x 10 wires			
User tubing (Outer diameter)		φ 4 x 4			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 3.5 m Option: 5 m, 10 m			
Weight		22.5 kg			

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

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

Note 3. There are limits to acceleration coefficient settings. See P.538.

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

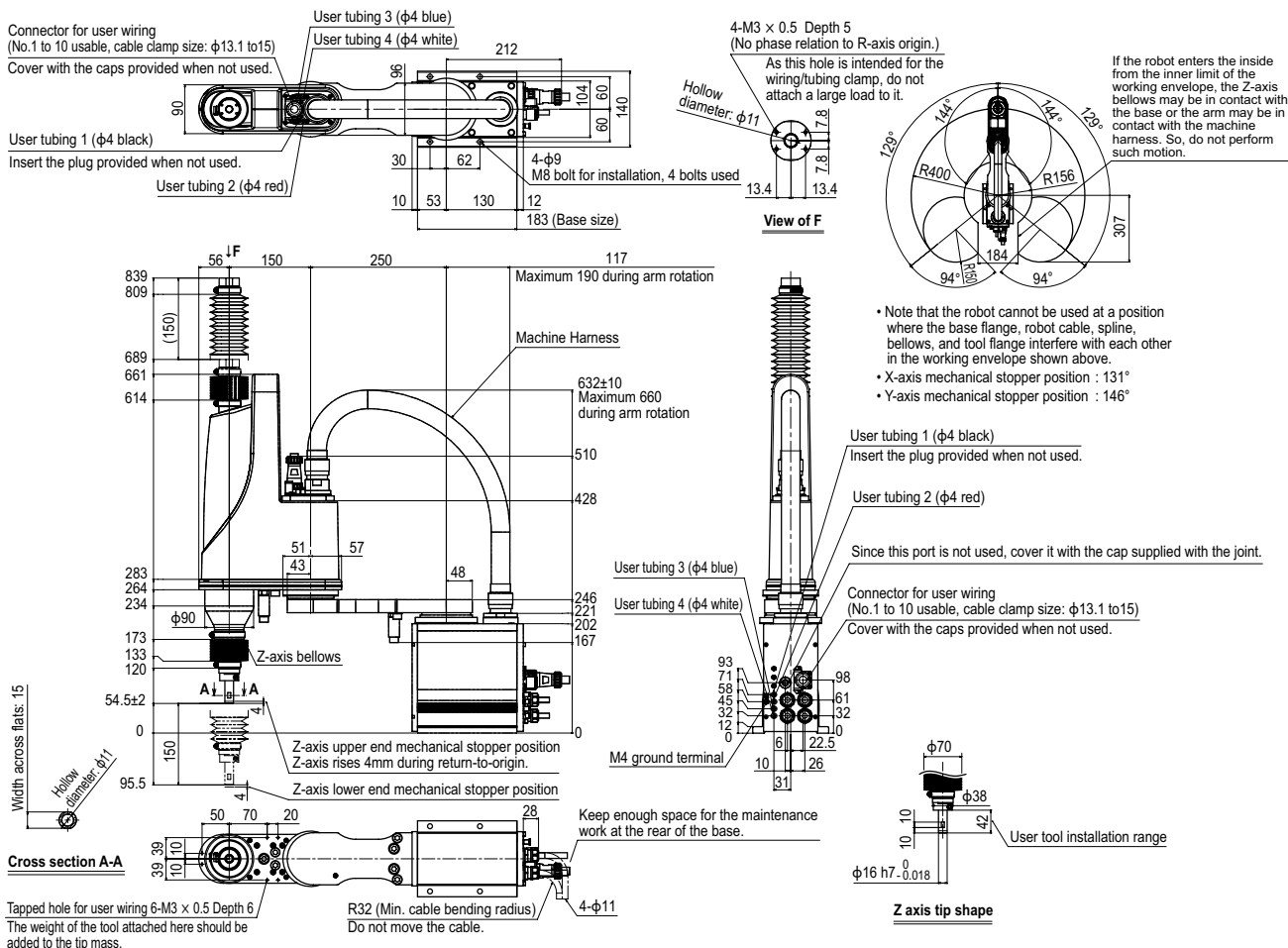
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

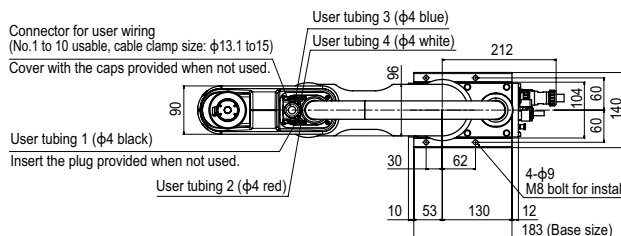
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:
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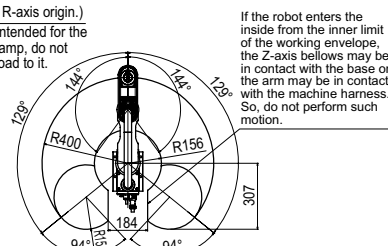
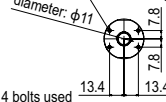
YK400XGP



YK400XGP Tool flange mount type

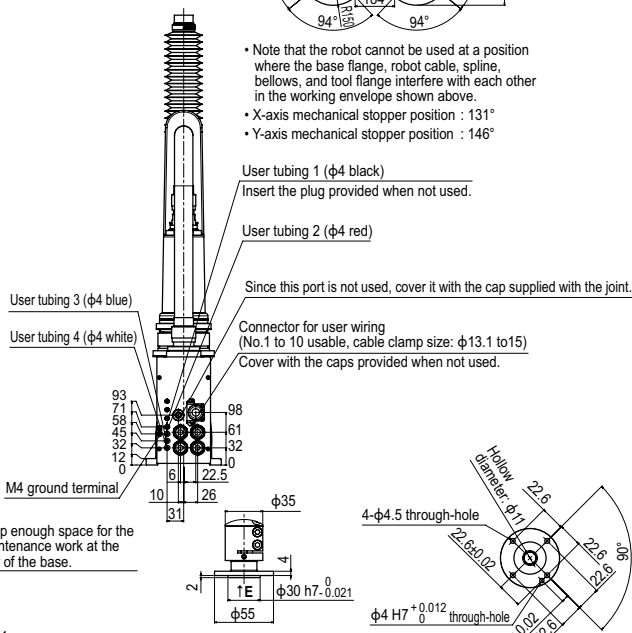
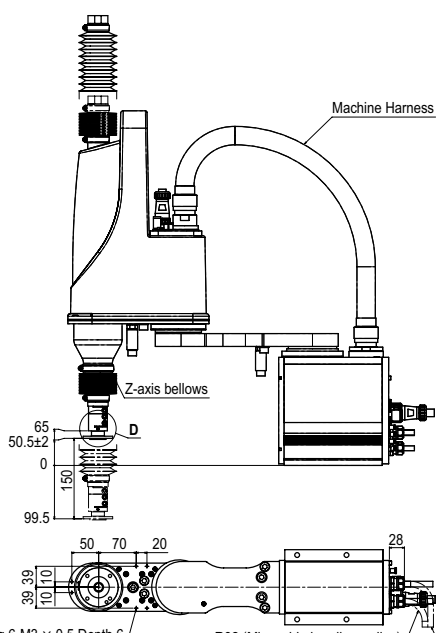


4-M3 x 0.5 Depth 5
(No phase relation to R-axis origin.)
As this hole is intended for the
wiring/tubing clamp, do not
attach a large load to it.



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°



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 **BB**

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

Specify various controller setting items. RCX340 ▶ **P508**

Specify various controller setting items. RCX240/RCX240S ▶ **P495**

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.538.

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

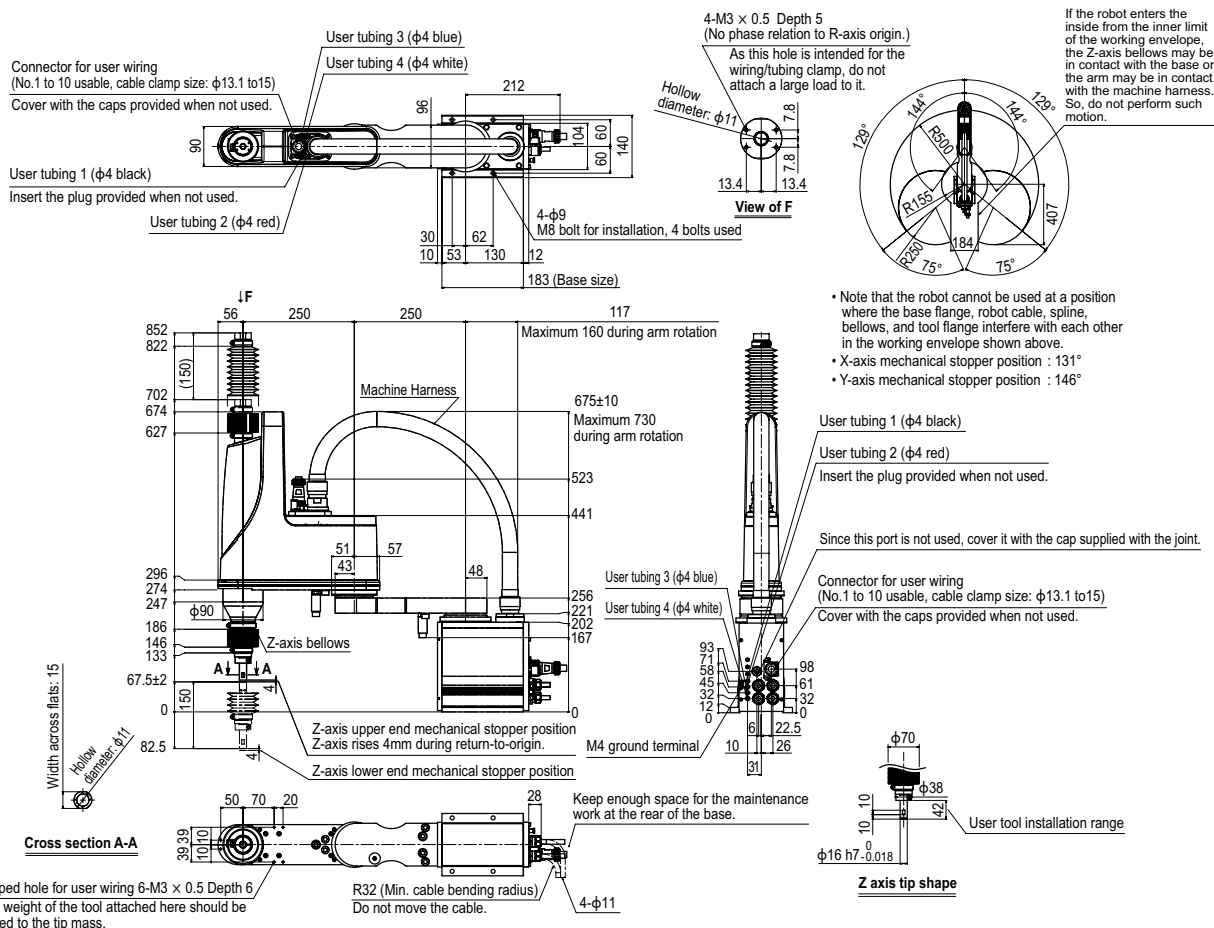
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

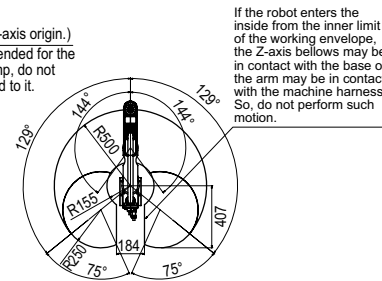
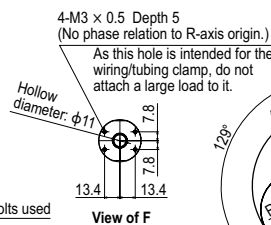
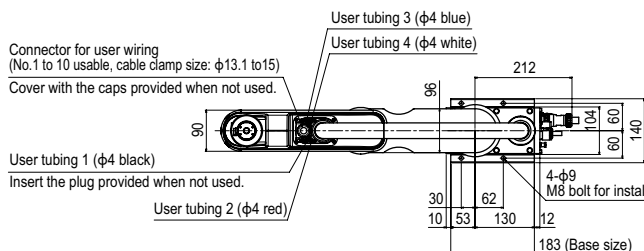
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

Our robot manuals (installation manuals) can be downloaded from our website at the address below:
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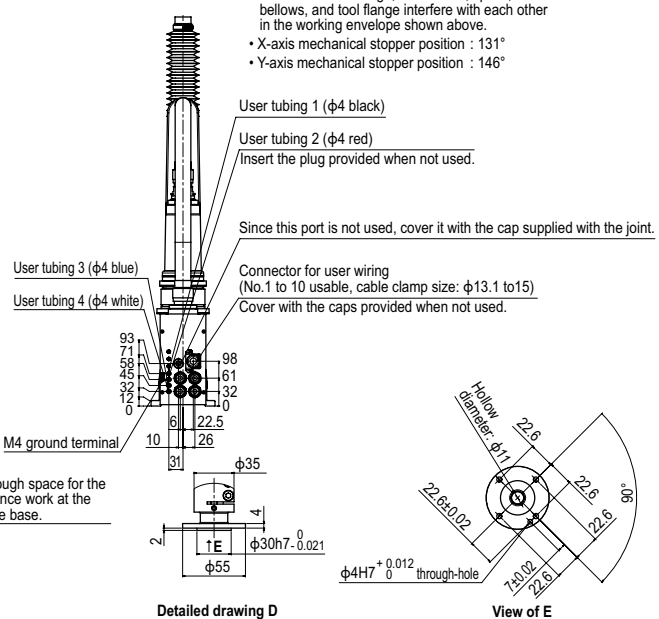
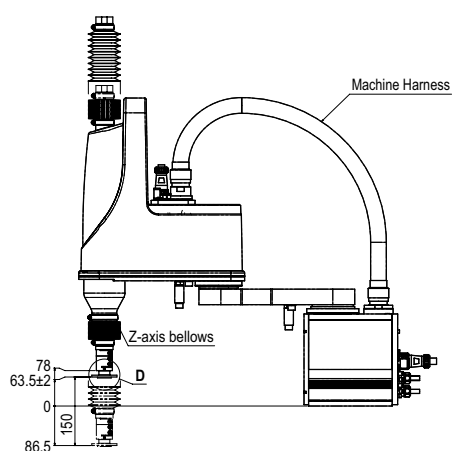
YK500XGLP



YK500XGLP Tool flange mount type



- 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°



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

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

4- $\phi 11$

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

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
	150: 150mm	No entry: None F: With tool flange	S: With hollow shaft	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.508
RCX240S
Controller
CE Marking
Expansion I/O
Network option
IVY System
Gripper
Battery
Specify various controller setting items. RCX240/RCX240S ▶ P.495

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	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		4.9 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.538.

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

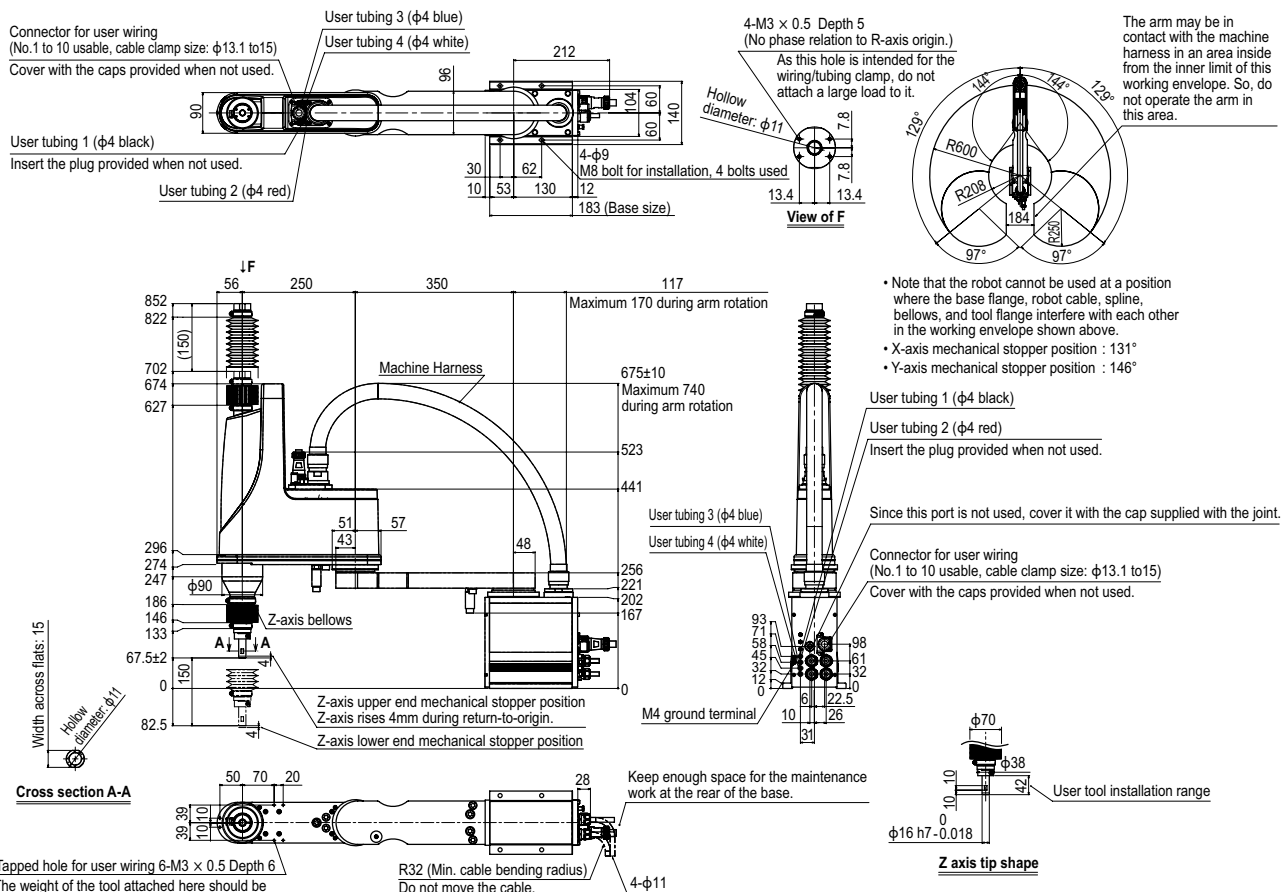
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

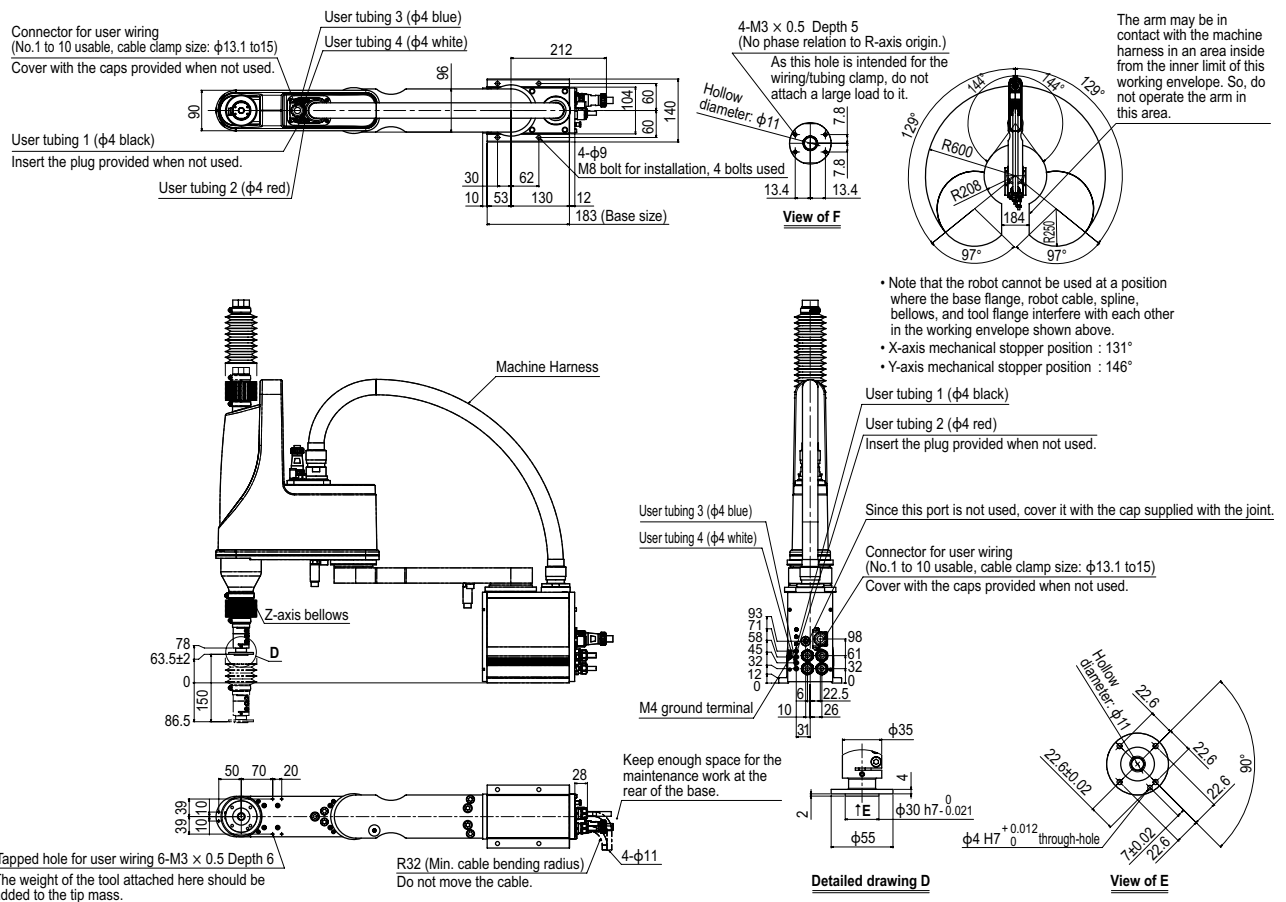
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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<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

YK600XGHP	[]	F	[]	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	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.508**

RCX240	[]	R3	[]	[]	[]	[]	[]	[]	BB
Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery		

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

■ 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 539.

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.

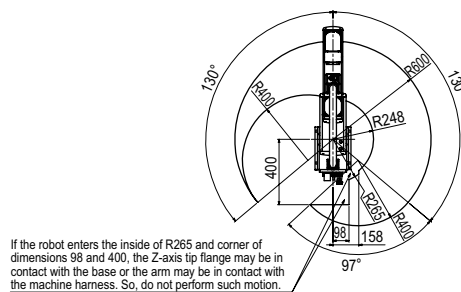
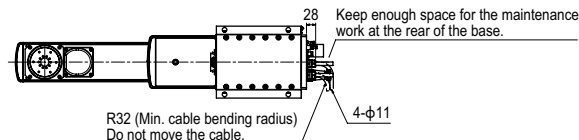
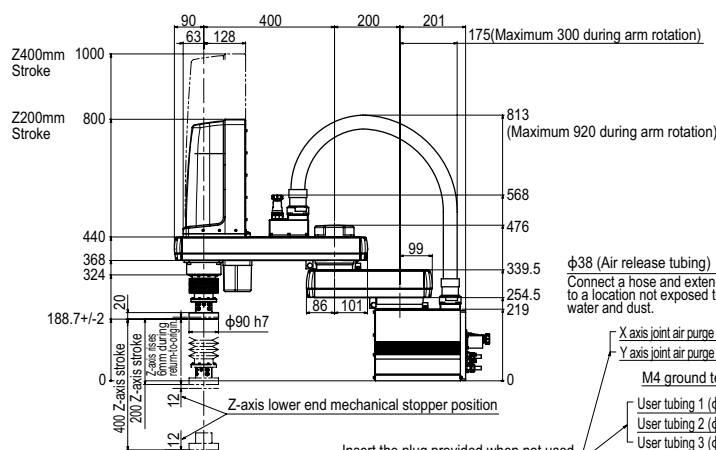
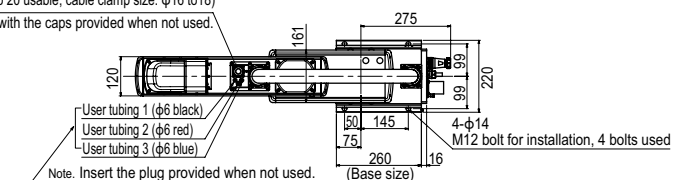
Note: The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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.

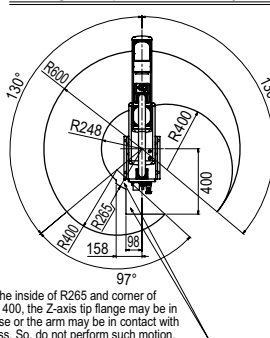
Our robot manuals (installation manuals) can be downloaded from our website at the address below:
<http://global.yamaha-motor.com/business/robot/>

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.



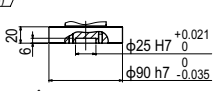
Working envelope of left-handed system



If the robot enters the inside of R265 and corner of dimensions 98 and 400, the Z-axis tip flange may be contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

If the robot enters the inside of R265 and corner of dimensions 98 and 400, the Z-axis tip flange may be in contact with the base or the arm may be in contact with the machine harness. So, do not perform such motion.

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



Z axis tip shape

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

Dust-proof & drip-proof type

- Arm length 800mm
- Maximum payload 18kg

Ordering method

YK800XGP	[]	F	[]	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	F: With tool flange	3L: 3.5m 5L: 5m 10L: 10m								

Specify various controller setting items. RCX340 ▶ **P.508**

RCX240	[]	R3	[]	[]	[]	[]	BB
Controller	CE Marking	Regenerative unit	Expansion I/O	Network option	IVY System	Gripper	Battery

Specify various controller setting items. RCX240/RCX240S ▶ **P.495**

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 539.

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

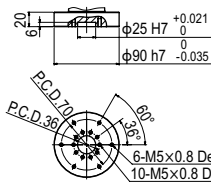
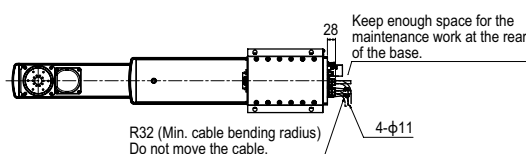
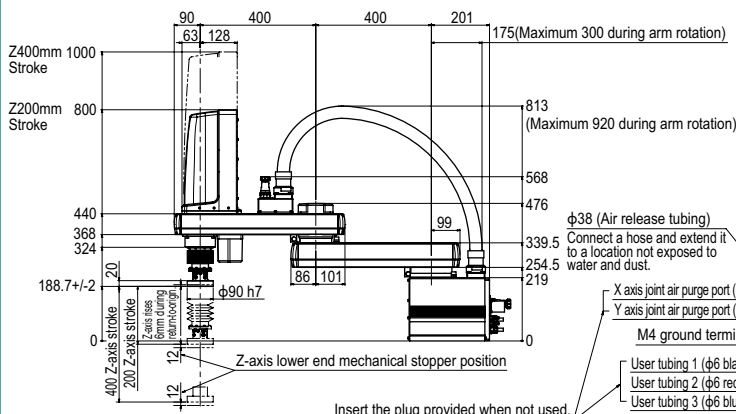
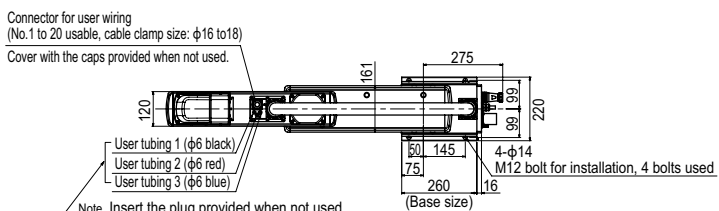
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.

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.

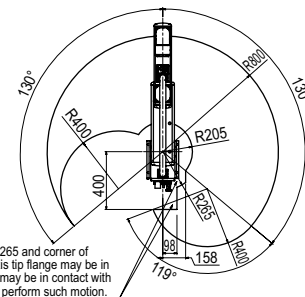
Note. To set the standard coordinates with high accuracy, use a standard coordinate setting jig (option). Refer to the user's manual (installation manual) for more details.

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

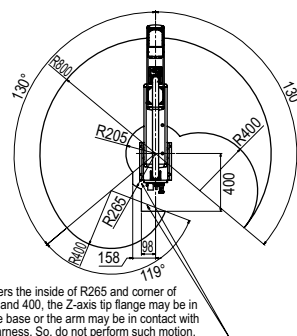
YK800XGP



Z axis tip shape



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°

is no phase relation between each position of M5 tapped holes
3-axis origin position.

Dust-proof & drip-proof type

- Arm length 1000mm
- Maximum payload 18kg

Ordering method

YK1000XGP — **F** — **RCX340-4** — **R3** — **Option A (OP.A)** — **Option B (OP.B)** — **Option C (OP.C)** — **Option D (OP.D)** — **Option E (OP.E)** — **Absolute battery**

Model — **Z axis stroke** — **Tool flange** — **Cable**

200: 200mm
400: 400mm

F: With tool flange

3L: 3.5m
5L: 5m
10L: 10m

Specify various controller setting items. RCX340 ▶ P.508

RCX240 — **CE Marking** — **Regenerative unit** — **Expansion I/O** — **Network option** — **IVY System** — **Gripper** — **Battery**

Specify various controller setting items. RCX240/RCX240S ▶ P.495

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
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 539.

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.

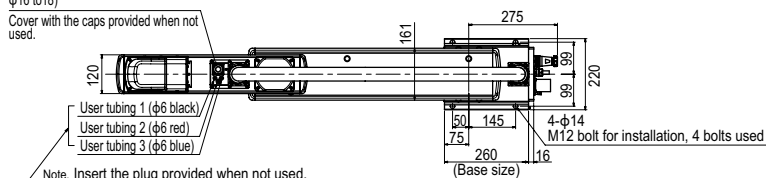
Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.) See our robot manuals (installation manuals) for detailed information.

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.

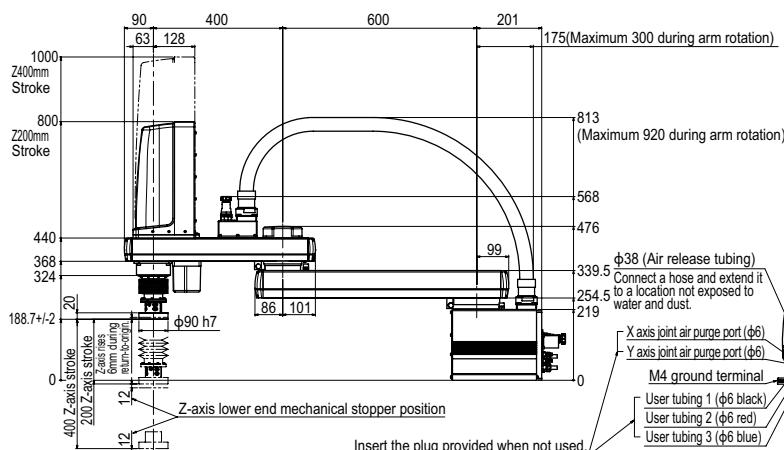
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YK1000XGP

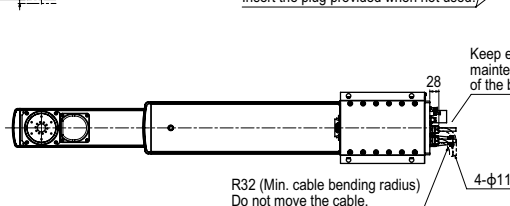
Connector for user wiring
(No.1 to 20 usable, cable clamp size:
φ16 to18)



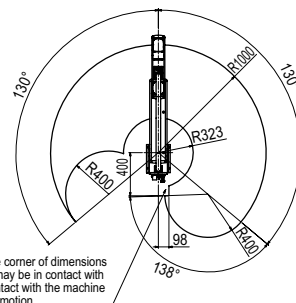
Note. Insert the plug provided when not used.



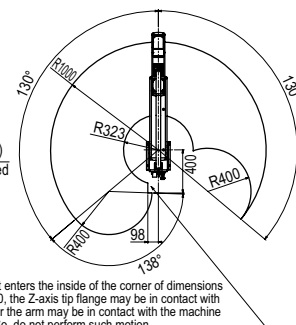
Insert the plug provided when not used.



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°

1
relation between each position of M5 tapped holes
position.