

YK120XG

Standard type: Tiny type

- Arm length 120mm
- Maximum payload 1kg

Ordering method

YK120XG - 50

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
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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	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		3.3 m/sec		0.9 m/sec	1700 °/sec
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload <small>Note 2</small>		0.33 sec			
R-axis tolerable moment of inertia <small>Note 3</small>		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) <small>Note 4</small>		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.

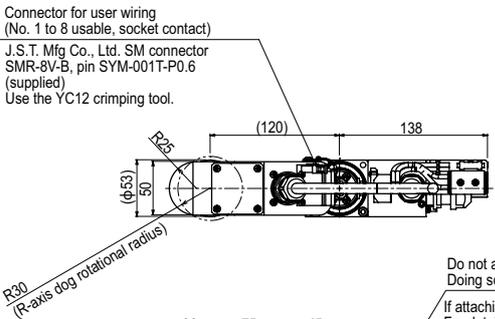
Controller

Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	300	Programming / I/O point trace / Remote command / Operation using RS-232C communication

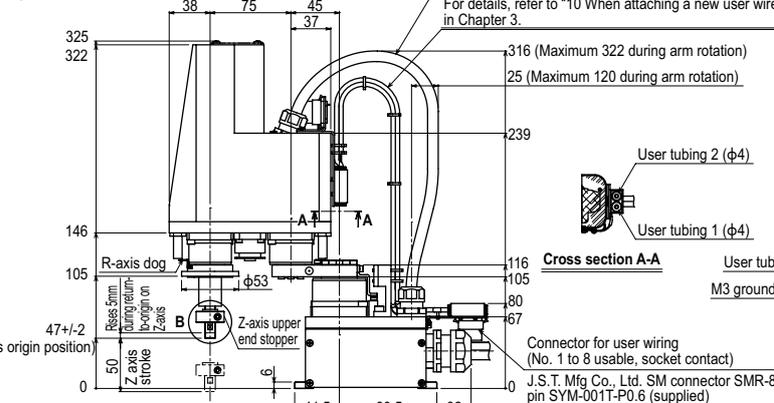
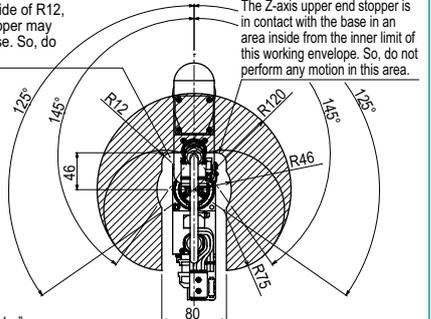
Note. "Harmonic" and "Harmonic drive" are the registered trademarks of Harmonic Drive Systems Inc.
 Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)
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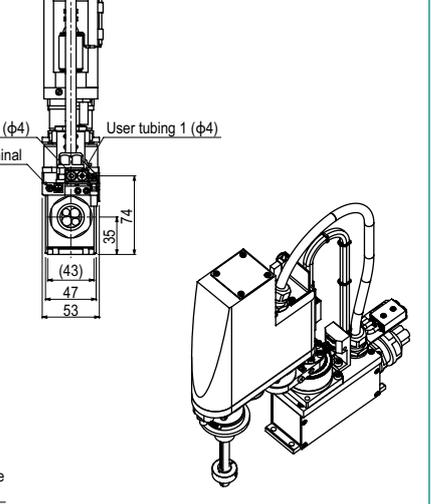
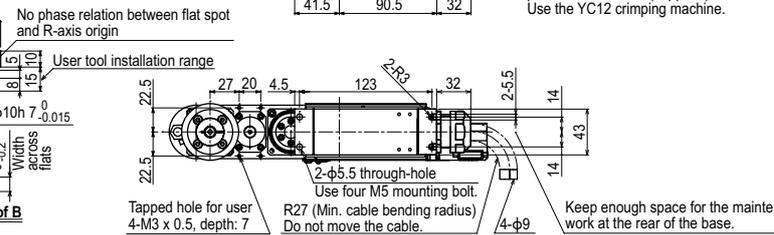
YK120XG



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.



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

		X-axis	Y-axis	Z-axis	R-axis
Axis specifications	Arm length	75 mm	75 mm	50 mm	-
	Rotation angle	+/-125 °	+/-145 °	-	+/-360 °
AC servo motor output		30 W	30 W	30 W	30 W
Deceleration mechanism	Speed reducer	Harmonic drive	Harmonic drive	Ball screw	Harmonic drive
	Transmission method	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm	+/-0.01 mm		+/-0.004 °
Maximum speed		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

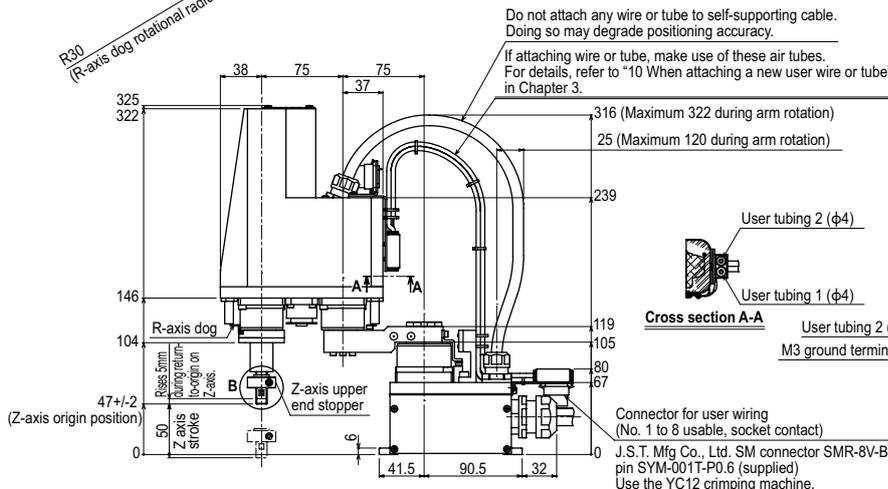
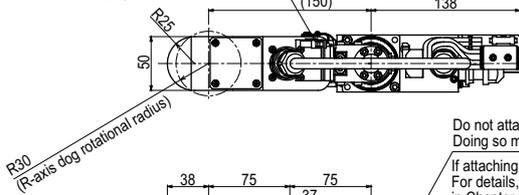
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Note. The movement range can be limited by changing the positions of X and Y axis mechanical stoppers. (The movement range is set to the maximum at the time of shipment.)
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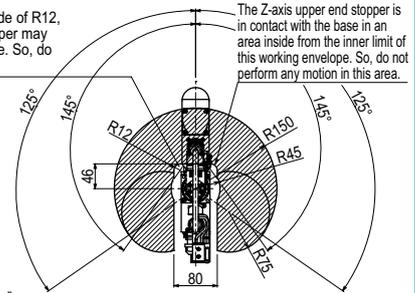
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YK150XG

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.

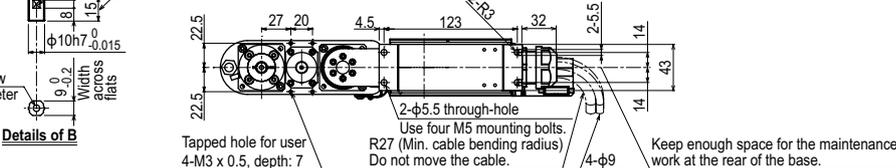
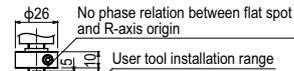
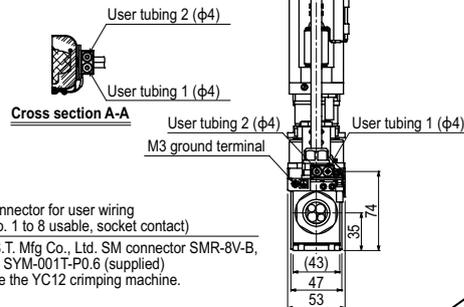


If the robot enters the inside of R12, the Z-axis upper end stopper may be in contact with the base. So, do not perform such motion.



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

YK180X

Standard type: Tiny type

- Arm length 180mm
- Maximum payload 1kg



Ordering method

YK180X - 100

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

RCX340-4

Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.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	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	Direct-coupled			
	Motor to speed reducer Speed reducer to output	Direct-coupled			
Repeatability <small>Note 1</small>	+/-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 <small>Note 2</small>		0.39 sec			
R-axis tolerable moment of inertia <small>Note 3</small>		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) <small>Note 4</small>		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

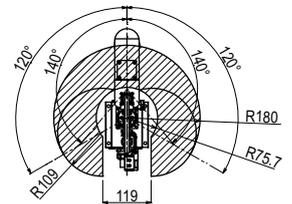
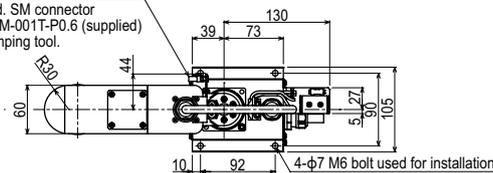
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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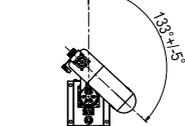
YK180X

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



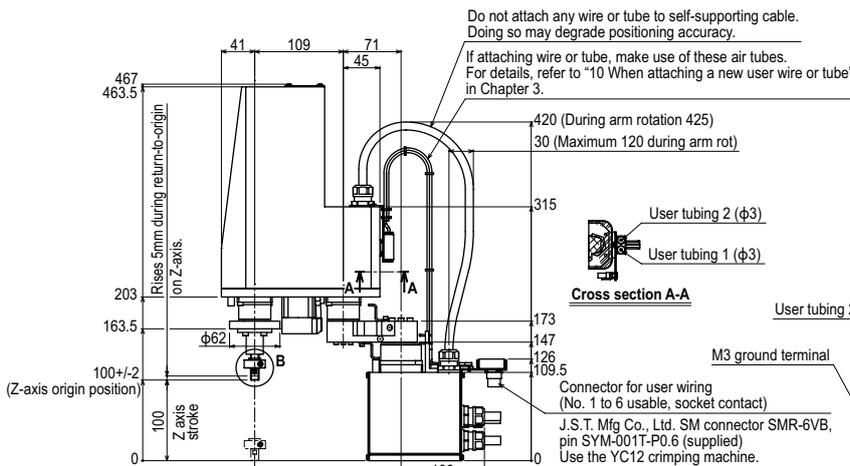
Working envelope

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.

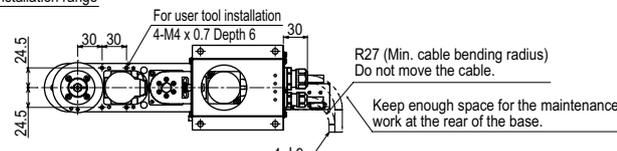
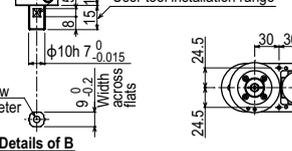


Cross section A-A

User tubing 2 (φ3)
 User tubing 1 (φ3)

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.

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



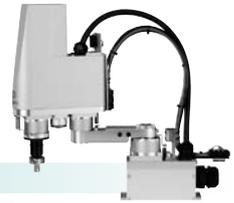
R27 (Min. cable bending radius)
 Do not move the cable.
 Keep enough space for the maintenance work at the rear of the base.

Controller

RCX340 ▶ 508 RCX240S ▶ 495

YK180XG

Standard type: Tiny type



- Arm length 180mm
- Maximum payload 1kg

Ordering method

YK180XG - 50

Model	Z axis stroke	Cable
	50: 50mm	2L: 2m
		3L: 3.5m
		5L: 5m
		10L: 10m

RCX340-4

Controller / Number of controllable axes	Safety standard	Option A (OP.A)	Option B (OP.B)	Option C (OP.C)	Option D (OP.D)	Option E (OP.E)	Absolute battery
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Specify various controller setting items. RCX340 ▶ **P.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	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	Direct-coupled			
	Motor to speed reducer	Direct-coupled			
	Speed reducer to output	Direct-coupled			
Repeatability ^{Note 1}		+/-0.01 mm		+/-0.01 mm	+/-0.004 °
Maximum speed		3.3 m/sec		0.9 m/sec	1700 °/sec
Maximum payload		1.0 kg			
Standard cycle time: with 0.1kg payload ^{Note 2}		0.33 sec			
R-axis tolerable moment of inertia ^{Note 3}		0.01 kgm ²			
User wiring		0.1 sq × 8 wires			
User tubing (Outer diameter)		φ 4 × 2			
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)			
Robot cable length		Standard: 2 m Option: 3.5 m, 5 m, 10 m			
Weight (Excluding robot cable) ^{Note 4}		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

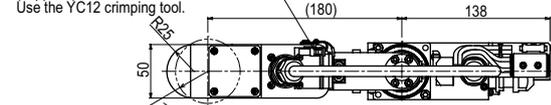
Controller	Power capacity (VA)	Operation method
RCX340 RCX240S	500	Programming / I/O point trace / Remote command / Operation using RS-232C communication

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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

146

104

R-axis dog

119

105

80

67

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

50

41.5 90.5 32

Bas. firm turning radius location on Z-axis

Z-axis upper end stopper

φ26

No phase relation between flat spot and R-axis origin

User tool installation range

φ10h 7⁰_{-0.015}

Hollow diameter : φ4

Width across flats

22.5

27 20

4.5

123

32

2-φ5.5 through-hole (Use four M5 mounting bolts.)

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

2-φ5.5

14

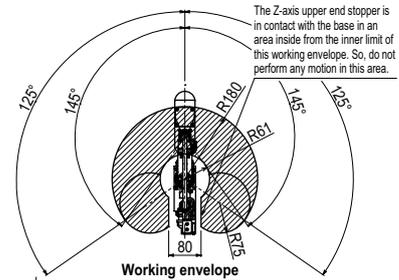
14

4-φ9

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

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

Details of B



The Z-axis upper end stopper is in contact with the base in an area inside from the inner limit of this working envelope. So, do not perform any motion in this area.

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.

User tubing 2 (φ4)

User tubing 1 (φ4)

Cross section A-A

User tubing 2 (φ4)

M3 ground terminal

User tubing 1 (φ4)

35

74

(43)

47

53

