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.

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.

Note. "Harmonic Drive" is the registered trademark of Harmonic Drive Systems Inc.

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

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

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

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

YK400XGS

---

### Specifications

<table>
<thead>
<tr>
<th>Axis</th>
<th>X-axis</th>
<th>Y-axis</th>
<th>Z-axis</th>
<th>R-axis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm length</td>
<td>250 mm</td>
<td>150 mm</td>
<td>150 mm</td>
<td>–</td>
</tr>
<tr>
<td>Rotation angle</td>
<td>+/-125°</td>
<td>+/-144°</td>
<td>+/-360°</td>
<td></td>
</tr>
<tr>
<td>AC servo motor output</td>
<td>200 W</td>
<td>150 W</td>
<td>50 W</td>
<td>100 W</td>
</tr>
</tbody>
</table>

### Deceleration mechanism

- **Speed reducer**: Harmonic drive
- **Transmission method**: Direct-coupled

### Maximum payload

- 5 kg (Standard specification), 4 kg (Option specification)

### Standard cycle time: with 2kg payload (sec)

- 0.49 sec

### R-axis tolerable moment of inertia (kgm²)

- 0.95 kgm²

### User wiring

- 2.5 sq × 10 wires

### Robot cable length

- Standard: 3.5 m
- Option: 5 m, 10 m

### Weight

- 20 kg

---

### Controller

<table>
<thead>
<tr>
<th>Controller</th>
<th>Power capacity (VA)</th>
<th>Operation method</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCX340</td>
<td>1000</td>
<td>Programming / I/O point trace / Remote command</td>
</tr>
<tr>
<td>RCX240S</td>
<td>1000</td>
<td>Operation using RS-232C communication</td>
</tr>
</tbody>
</table>

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### Option Specifications

- **YK400XGS**: Arm length 400mm, Maximum payload 5kg
- **FLIP-X**: Linear motor
- **XY-X**: Cartesian robots
- **YP-X**: Pick & place robots
- **YP-XCLEAN**: Dust-proof controllers

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### Controller Information

- **RCX340**: Controller Power capacity (VA) Operation method
- **RCX240S**: Additional Z-axis upper limit stopper: Allows changing the Z-axis upper limit position to a point 12mm, 15mm or 18mm (in 3mm steps) lower than the standard position.
- **RCX340S**: No limit of working envelope: 4mm from additional stopper (Cannot be used when user wiring and tubing are set through spline shaft.)

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### Contact Information

- Contact us for the delivery period.
- Do not move the cable.

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### Organization

- **Yamaha Motor Corporation**
- **Harmonic Drive Systems Inc.**
- **Nippon Paint Co., Ltd.**
- **Dust-Proof Robots**

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### General Information

- **Technical Specifications**
- **Installation Instructions**
- **Safety Instructions**
YK400XGS Tool flange mount type

D-sub connector for user wiring (No. 1 to 10 usable)

User tubing 2 (Φ4 red)
User tubing 1 (Φ4 black)
User tubing 3 (Φ4 blue)

M4 ground terminal
R27 (Min. cable bending radius)
Do not move the cable.

381 (Maximum 410 during arm rotation)
48-9
M8 bolt for installation
4 bolts used

Cross section B-B

Keep enough space for the maintenance work on the top face of the base.

Working envelope

X-axis mechanical stopper position: 127°
Y-axis mechanical stopper position: 146°

Option:
- Additional Z-axis upper limit stopper:
  Allows changing the Z-axis origin position to a point 12mm, 15mm or 18mm (in 3mm steps) lower than the standard position.
- Additional Z-axis lower limit stopper:
  Allows changing the Z-axis stopper position to a point 17mm or more higher than the standard position.
  (Lower limit of working envelope: 4mm from additional stopper)

Notes:
- Inverse type is installed upside down.
- Keep enough space for the maintenance work on the top face of the base.
- Hollow diameter: Φ11
- 4-M3 through-hole
  5-M3 through-hole
- 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.
- 4-M3 x 0.5 through-hole (No phase relation to R-axis origin.)
  As this hole is intended for the wiring/tubing clamp, do not attach a large load to it.
- Cross section B-B

Option:
User wiring/tubing through spline type

Note: Inverse type is installed upside down.