APPLICATION
TRANSERVO — Compact single-axis robots
FLIP-X — Single-axis robots
PHASER — Linear motor single-axis robots
XY-X — Cartesian robots
YK-XG — SCARA robots
YP-X — Pick & place robots
CLEAN
CONTROLLER
INFORMATION
Orbit type
Tiny type
Small type
Medium type
Large type
Wall-mount / inverse type
Dust-proof & drip-proof type

YK500XGP

Dust-proof & drip-proof type

● Arm length 500mm   ● Maximum payload 8kg

■ Ordering method

YK500XGP		F		RCX240		R3					BB
Model	Z axis stroke	Tool flange	Cable	Controller	Usable for CE	Regenerative unit	Expansion I/O Note 1	Network option	iVY System	Gripper	Battery

- **Model**
- **Z axis stroke**: 200: 200mm / 300: 300mm
- **Tool flange**: F: With tool flange
- **Cable**: 3L: 3.5m / 5L: 5m / 10L: 10m
- **Controller**
- **Usable for CE**: No entry: Standard / E: CE marking
- **Regenerative unit**: R3: RGU-3
- **Expansion I/O Note 1**: N, P: Standard I/O 16/8 / N1, P1: 40/24 / N2, P2: 64/40 / N3, P3: 88/56 / N4, P4: 112/72
- **Network option**: No entry: None / CC: CC-Link / DN: DeviceNet / PB: Profibus / EN: EtherNet / EP: EtherNet/IP / YC: YC-Link Note 2
- **iVY System**: No entry: None / VY: iVY (Vision) / TR: iVY+Light +Tracking / LC: iVY+Light
- **Gripper**: No entry: None / GR: Gripper
- **Battery**: BB: 4 pcs

Note 1. Use N to N4 when NPN is selected on the I/O board, and P to P4 when PNP is selected.
Note 2. Available only for the master.

■ Specifications

		X-axis	Y-axis	Z-axis		R-axis
Axis specifications	Arm length (mm)	200	300	200	300	–
	Rotation angle (°)	+/-130	+/-145	–		+/-360
AC servo motor output (W)		400	200	200		200
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 (XYZ: mm) (R: °)		+/-0.01		+/-0.01		+/-0.004
Maximum speed (XYZ: m/sec) (R: °/sec)		7.6		2.3	1.7	1700
Maximum payload (kg)		8				
Standard cycle time: with 2kg payload Note 2 (sec)		0.55				
R-axis tolerable moment of inertia Note 3 (kgm²)		0.3				
Protection class Note 4		Equivalent to IP65 (IEC 60529)				
User wiring (sq × wires)		0.2×20				
User tubing (Outer diameter)		φ6×3				
Travel limit		1.Soft limit 2.Mechanical stopper (X,Y,Z axis)				
Robot cable length (m)		Standard: 3.5 Option: 5,10				
Weight (kg)		Z axis 200mm: 32 Z axis 300mm: 33				

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.
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.
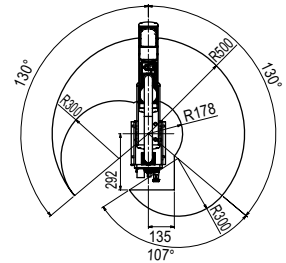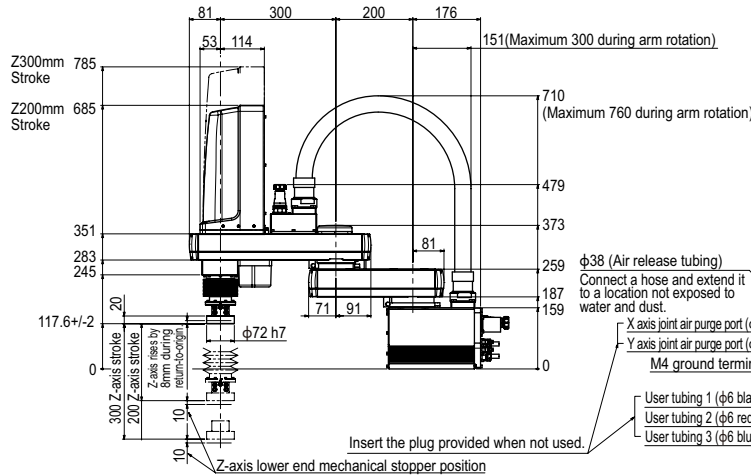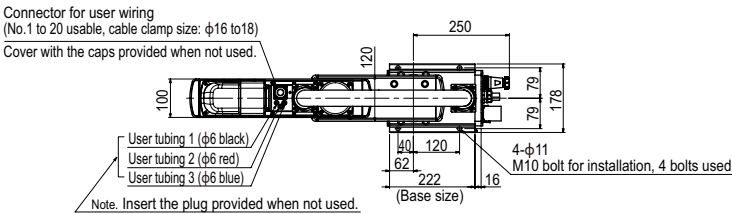
■ Controller

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

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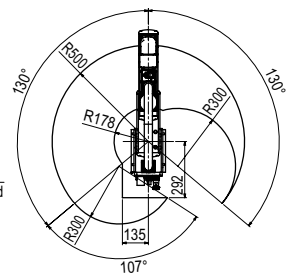See our robot manuals (installation manuals) for detailed information.

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

Our robot manuals (installation manuals) can be downloaded from our website at the address below:
http://www.yamaha-motor.co.jp/global/industrial/robot/

YK500XGP

Connector for user wiring (No.1 to 20 usable, cable clamp size: φ16 to18)
Cover with the caps provided when not used.

User tubing 1 (φ6 black)
User tubing 2 (φ6 red)
User tubing 3 (φ6 blue)
Note. Insert the plug provided when not used.

4-φ11
M10 bolt for installation, 4 bolts used
(Base size)

151(Maximum 300 during arm rotation)
710 (Maximum 760 during arm rotation)

φ38 (Air release tubing)
Connect a hose and extend it to a location not exposed to water and dust.

X axis joint air purge port (φ6)
Y axis joint air purge port (φ6)
M4 ground terminal

Connector for user wiring (No.1 to 20 usable, cable clamp size: φ16 to18)
Cover with the caps provided when not used.

User tubing 1 (φ6 black)
User tubing 2 (φ6 red)
User tubing 3 (φ6 blue)

Insert the plug provided when not used.
Z-axis lower end mechanical stopper position

φ25 H7+0.021/0
φ72 h7 0/-0.03

P.C.D.60
P.C.D.36
6-M5×0.8 Depth 11
10-M5×0.8 Depth 11
* There is no phase relation between each position of M5 tapped holes and R-axis origin position.
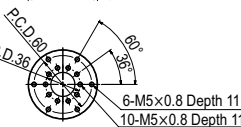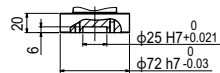
Z axis tip shape

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 : 147°