

YP-X Series

Product Lineup

PICK & PLACE ROBOTS

Ideal for small components high-speed pick & up work.
Positioning is made by servo control, so no complex mechanical
adjustments are needed.



Full lineup of 6 models in all from 2 axes to 4 axes

2 axes type

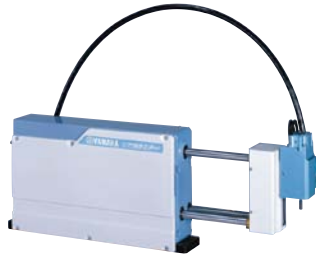
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YP220BX/YP320X

3 axes type

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YP220BXR/YP320XR/YP330X

4 axes type

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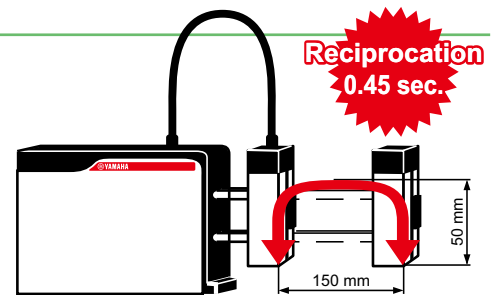
YP340X

Model	Axis	Structure				Maximum payload (kg)	Cycle time (sec.)	Page
		X-axis	Y-axis	Z-axis	R-axis			
YP220BX	2 axes	Belt	-	Belt	-	3	0.45	P.397
YP320X		Ball screw	-	Belt	-	3	0.57	P.398
YP220BXR	3 axes	Belt	-	Belt	Rotation axis	1	0.62	P.399
YP320XR		Ball screw	-	Belt	Rotation axis	1	0.67	P.400
YP330X		Ball screw	Ball screw	Belt	-	3	0.57	P.401
YP340X	4 axes	Ball screw	Ball screw	Belt	Rotation axis	1	0.67	P.402

POINT 1

High speed

Super high-speed pick & place operation with a standard cycle time of 0.45 sec. (YP220BX with up/down 50 mm, back/forth 150 mm, arch amount 50, load 1 kg) greatly contributes to improvement of the productivity. Since it is possible to output a signal to turn on/off any external equipment from any position while the axis is moving, the actual production cycle time is further improved.



POINT 2

Compact

Use of a compact size with an overall width of 109 mm (YP220BX) makes it possible to make the production line compact and simple. The moving arm structure with less interference with surroundings contributes to space saving.

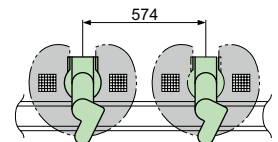
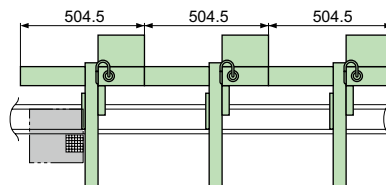
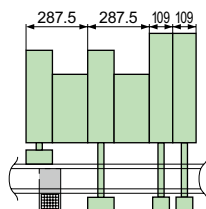
Reference examples of robot layout comparisons

■ Line using pick & place utilizing space saving

■ Line using YAMAHA's compact Cartesian robot PXYx
X-axis stroke: 250 mm
Y-axis stroke: 250 mm

■ Line using YAMAHA's compact SCARA robot YK250X

The compactness can be checked by comparing the occupied spaces when the YP-X series and YAMAHA's Cartesian/SCARA robots are laid out.



POINT 3

High accuracy

Both extremely high-speed performance and high repeated positioning accuracy of +/- 0.02 mm (YP320X, YP320XR, YP330X, YP340X) are assured.

POINT 4

Complete absolute position system

As the complete absolute position system is used, no return-to-origin operation is needed.

POINT 5

Versatility

Use of YAMAHA's unique servo system makes it possible to freely program the stop point and operation pattern settings. This robot is applicable to production of many models in small quantities that cannot be supported by the cam type robot.