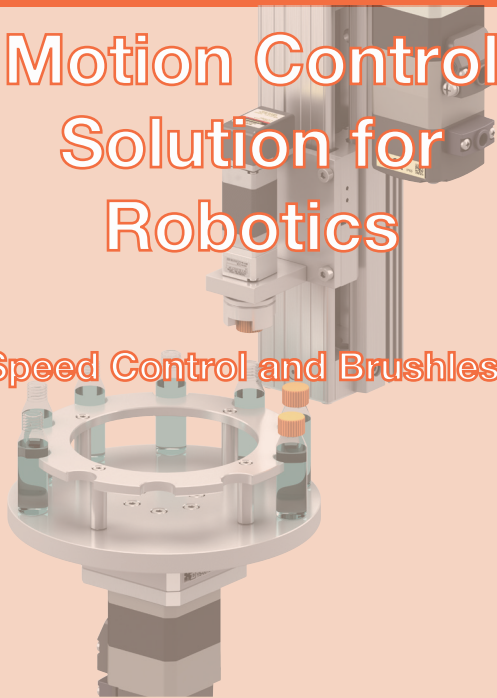


***Oriental motor***

# Motion Control Solution for Robotics

Speed Control and Brushless



Application  
ExampleIn-house Motor Production Example  
Work-lifting Device

A return conveyor is a lifting device that transfers workpieces between conveyors of different heights. It is used at both ends of the conveyors arranged in the upper and lower stages to circulate the tray. With this device, we have automated the process of tray collection and transportation work that was previously manual.

This lifting device is manufactured in-house to illustrate how application use of our motors and is not available in the market.



Return Conveyors (lifting device)

Number of axes	3 axes	
Work	Mass	0.5kg
	Upper limit of mass * 1	10kg
	Speed	167mm / s
Lifting Shaft	Speed Upper limit * 2	500mm / s
	Effective Stroke	600mm / s
	Speed	143mm / s
Conveyor Shaft	Speed Upper limit * 3	400mm / s
	Main Power Supply * 4	AC100V
Device Mass	52.4kg	

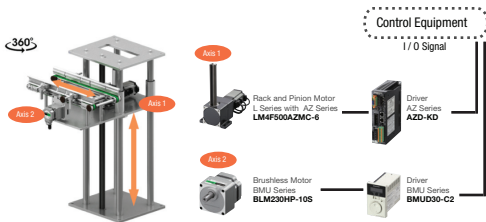
\* 1 The maximum speed of the conveyor is 233 mm / s

\* 2 The payload is 7kg or less

\* 3 The upper limit of the work mass is 3kg

\* 4 The power supply for driver control is DC24V

## System Configuration

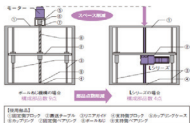


# Configuration for each Axis

## Axis ① - Lifting axis

Rack and pinion system L series  $\alpha$ STEP AZ Series installed

- Time saving for design and assembly. It can be installed with a small number of parts.
- With AZ Series Absolute sensor equipped. Sensorless Homing can be achieved.
- Position and motor information can be monitored constantly



## Axis ② - Conveyor axis

Brushless Motor BMU Series installed

- Easy speed adjustment with dial operation



Turn the dial, and set the speed to desired speed



Turning the dial slowly changes the speed by 1 r/min.



Pushing the dial sets the speed.



The dial operation can be locked.

- Lightening the conveyor unit and reducing the load (BLDC vs AC)

Product Name	Brushless Motor	Induction Motor
		B1M230HP-105 / BMUD30-AZ
Mass	0.63kg ( $\Delta$ 48%)	1.2kg
Full Length	72 mm ( $\Delta$ 34%)	109 mm
Mounting Angle Dimensions	60 mm	60 mm
Rated Output	30W	6W

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