

## Cartesian RCP6 RoboCylinder System

# IK-P6 Series

2-/3-/4-Axis Combinations with High-res  
Battery-less Absolute Encoder

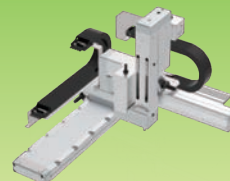
**ROBO  
CYLINDER**

### Newest Additions to the Series

Z-axis Table Type



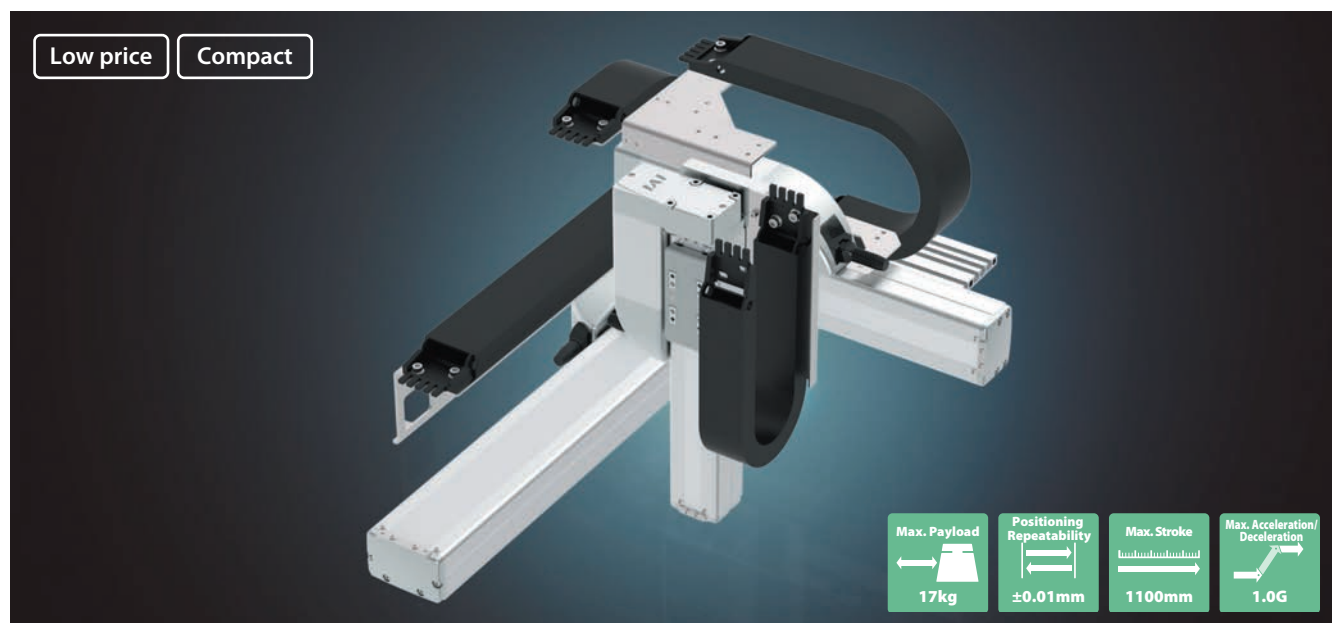
Type with ZR Unit  
(Vertical/Rotation)



# Cartesian RoboCylinder have never been more affordable.

The RoboCylinder equipped as standard with a Battery-less Absolute Encoder has been added to the "IK Series". It helps reduce the design and assembly steps.

The RoboCylinder RCP6 Series has been adopted to achieve even higher speeds compared with conventional models.



## 1 Diverse Combinations

The available combinations have been greatly expanded from the conventional models, allowing the ideal selection to suit your needs from **516 options**.

New configuration types include a table type (TA) with the Z-axis and a model with ZR unit (vertical/rotation).

### 2-axis combinations (X-axis/Y-axis)

- SA8 + SA7
- SA7 + SA6
- SA6 + SA4
- WSA16 + SA8
- WSA14 + SA7



### 2-axis combinations (Y-axis/Z-axis)

- SA8 + SA7
- SA7 + SA6
- SA6 + SA4
- SA8 + TA7
- SA7 + TA6
- SA6 + TA4



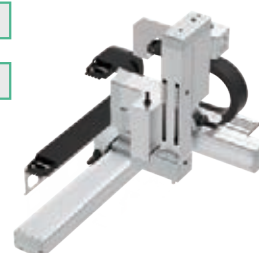
### 3-axis combinations (X-axis/Y-axis/Z-axis)

- SA8 + SA7 + SA6
- SA7 + SA6 + SA4
- WSA16 + SA8 + SA7
- WSA14 + SA7 + SA6
- SA8 + SA7 + TA6
- SA7 + SA6 + TA4



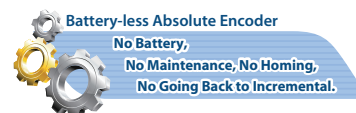
### 4-axis combinations (X-axis/Y-axis/ZR unit)

- SA8 + SA7 + ZR
- WSA14 + SA7 + ZR



## 2 Equipped with high resolution Battery-less Absolute Encoder as standard.

Equipped as standard with Battery-less Absolute Encoder for all configuration axes.  
No battery maintenance is required since there is no battery.  
Homing operation is not required at startup or after emergency stop or malfunction.  
This reduces your operation time, resulting in reduced production costs.



### The advantages of using an absolute encoder.

- (1) With an absolute encoder, home return is not required.
- (2) No external home sensor is required since home return is not necessary.
- (3) Removal of workpieces is not necessary, even after an emergency stop.
- (4) The troublesome creation of home-return programs is not necessary even when stopping inside of a complex machine.

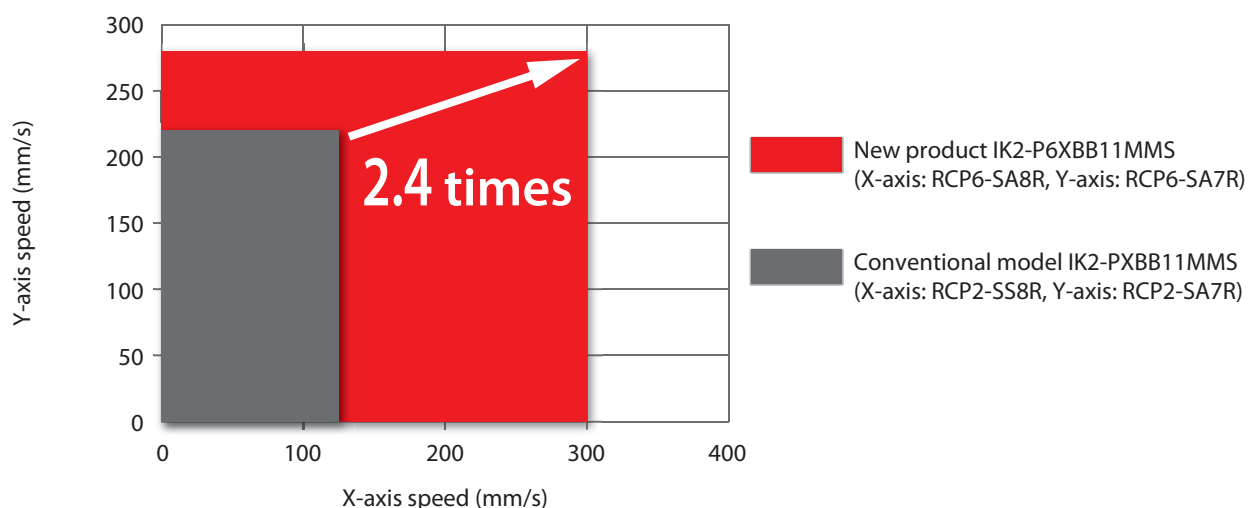
### The advantages of battery-less.

- (1) No battery maintenance required.
- (2) No installation space for battery required.



## 3 Higher Speed

Compatible with PowerCon which is equipped with a high-output driver.  
The maximum speed has been increased with the use of PowerCon.  
This can reduce cycle time and help improve productivity.



2-axis combinations

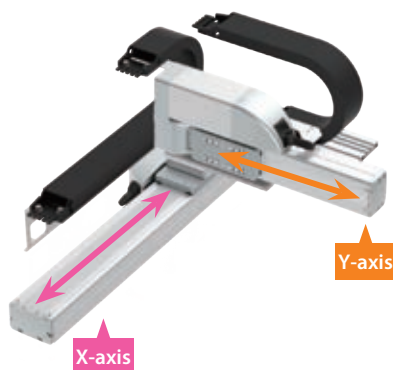
3-axis combinations

4-axis combinations

# Configuration Type Descriptions

Each configuration pattern is available with an extensive range of sizes from light load to heavy load and short stroke to long stroke. Select the optimal model for your application.

## XYB (Y-axis base mount) type



A basic configuration type in which the base of the Y-axis is fixed to the X-axis slider. It is operated by fixing equipment or a Z-axis on the Y-axis slider.

### Point 1

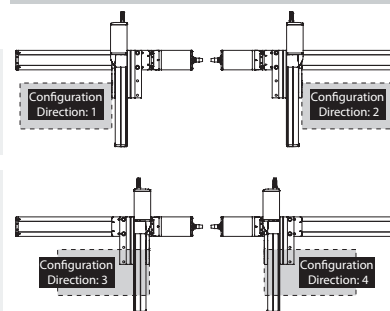
Select from 4 patterns of Y-axis configuration directions. (See the figure at right)

### Point 2

A cable track can be selected for Y-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 2-axis combinations IK2-P6XB: p5~34

### Configuration Direction



## YZB (Z-axis base mount) type



For this type, the base of the Z-axis (vertical axis) is fixed to the Y-axis slider with the Y-axis side-mounted. The Z-axis slider moves vertically, allowing mounting of jigs or chucks for transport, raising, or lowering of workpieces.

### Point 1

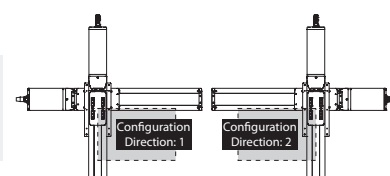
Select from 2 patterns of Z-axis configuration directions. (See the figure at right)

### Point 2

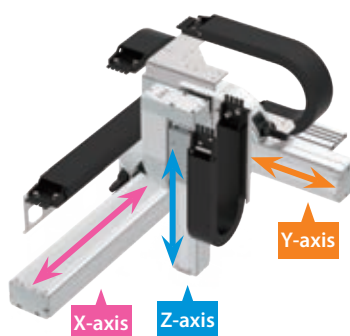
A cable track can be selected for Z-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 2-axis combinations IK2-P6YB: p35~70

### Configuration Direction



## XYB (Y-axis base mount) + Z-axis base mount type



For this type, the base surface of the Z-axis is fixed to the Y-axis slider of XYB type (Y-axis base is fixed to X-axis slider).

### Point 1

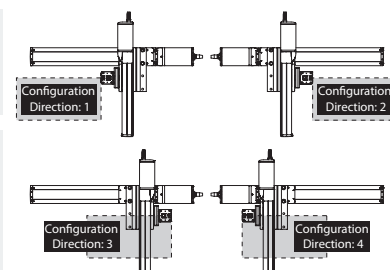
The Z-axis body is fixed and the slider moves vertically.

### Point 2

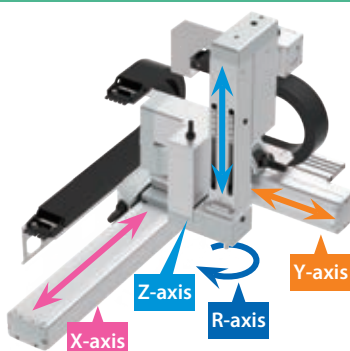
Cable tracks can be selected for Y-axis and Z-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

→ 3-axis combinations IK3-P6BB: p71~106

### Configuration Direction



## XYB (Y-axis base mount) + ZR (vertical/rotation) unit type



This is an XYB (Y-axis base mount) type Y-axis slider equipped with a ZR unit that enables both vertical and rotational operation.

### Point 1

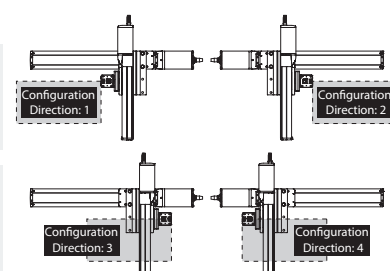
More compact with the integrated Z-axis and rotational axis.

### Point 2

Cable tracks can be selected for Y-axis and Z-axis wiring. Select the cable track size from a maximum of 4 different sizes.

→ 4-axis combinations IK4-P6BB: p107~118

### Configuration direction





# Cartesian RoboCylinder

## RoboCylinder 2-axis Combinations

### IK2 Pulse Motor

IK2-P6XBD1□□S	5
IK2-P6XBD2□□S	7
IK2-P6XBD3□□S	9
IK2-P6XBC1□□S	11
IK2-P6XBC2□□S	13
IK2-P6XBC3□□S	15
IK2-P6XBB1□□S	17
IK2-P6XBB2□□S	19
IK2-P6XBB3□□S	21
IK2-P6XBF1□□S	23
IK2-P6XBF2□□S	25
IK2-P6XBF3□□S	27
IK2-P6XBE1□□S	29
IK2-P6XBE2□□S	31
IK2-P6XBE3□□S	33
IK2-P6YBD1□□S	35
IK2-P6YBD2□□S	37
IK2-P6YBD3□□S	39
IK2-P6YBC1□□S	41
IK2-P6YBC2□□S	43
IK2-P6YBC3□□S	45
IK2-P6YBB1□□S	47
IK2-P6YBB2□□S	49
IK2-P6YBB3□□S	51
IK2-P6YBI1□□S	53
IK2-P6YBI2□□S	55
IK2-P6YBI3□□S	57
IK2-P6YBH1□□S	59
IK2-P6YBH2□□S	61
IK2-P6YBH3□□S	63
IK2-P6YBG1□□S	65
IK2-P6YBG2□□S	67
IK2-P6YBG3□□S	69



## RoboCylinder 3-axis Combinations

### IK3 Pulse Motor

IK3-P6BBC1□□S	71
IK3-P6BBC2□□S	73
IK3-P6BBC3□□S	75
IK3-P6BBB1□□S	77
IK3-P6BBB2□□S	79
IK3-P6BBB3□□S	81
IK3-P6BBF1□□S	83
IK3-P6BBF2□□S	85
IK3-P6BBF3□□S	87
IK3-P6BBE1□□S	89
IK3-P6BBE2□□S	91
IK3-P6BBE3□□S	93
IK3-P6BBH1□□S	95
IK3-P6BBH2□□S	97
IK3-P6BBH3□□S	99
IK3-P6BBG1□□S	101
IK3-P6BBG2□□S	103
IK3-P6BBG3□□S	105



## RoboCylinder 4-axis Combinations

### IK4 Pulse Motor

IK4-P6BBB1□□S	107
IK4-P6BBB2□□S	109
IK4-P6BBB3□□S	111
IK4-P6BBF1□□S	113
IK4-P6BBF2□□S	115
IK4-P6BBF3□□S	117



### Options

119

### Controller

MSEL	MSEL	123
PCON	PCON-CB/CFB	133
MCON	MCON-C/LC	137