

# IAI

Quality and Innovation



## Product Overview

IAI ROBOT LINEUP

Industrial Automation Robots



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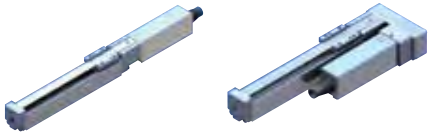
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# Mini ROBO Cylinder



Next-generation electric actuators, the solution for space constrained applications

## RCP3 MINI SLIDER TYPE



Motor Coupled Type    Side-Mounted Motor Type

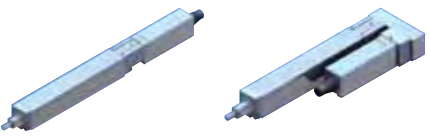
## RCA2 MINI SLIDER TYPE



Motor Coupled Type    Side-Mounted Motor Type

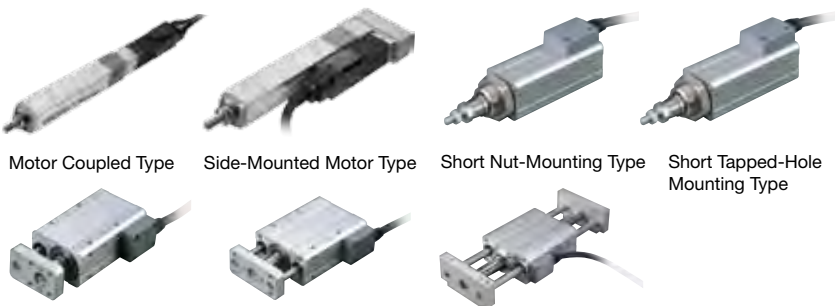
- The coupled motor makes replacement easy.
- The straight type (motor coupled type) and the side-mounted motor type are also available.

## RCP3 MINI ROD TYPE



Motor Coupled Type    Side-Mounted Motor Type

## RCA2 MINI ROD TYPE



Motor Coupled Type    Side-Mounted Motor Type    Short Nut-Mounting Type    Short Tapped-Hole Mounting Type  
Short Free Mounting Type with Single Guide    Short Free Mounting Type with Double Guides    Short Slide Unit Type with Double Guides

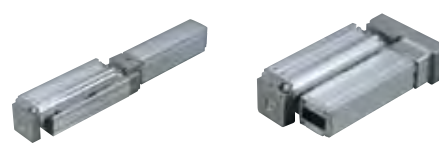
- The unitized motor type has significantly reduced in length.
- If an application requires extra rigidity and linearity, you can choose from single and double built-in guides. The non-guide types allow external guide(s) to be attached, which help significantly reduce the actuator size.

## RCA2 MINI TABLE TYPE



Short Compact Type    Short Wide Type    Short Flat Type

## RCP3/RCA2 MINI TABLE TYPE



Motor Coupled Type    Side-Mounted Motor Type

- The built-in guide allows the actuator to receive overhung loads.
- Actuators with long strokes are also available.

## RCD MINI CYLINDER



Ultra-Compact Type

## RCL MINI LINEAR SERVO TYPE



Micro Slider Slim Type    Micro Slider Long Stroke Type    Micro Cylinder Slim Type

- The smallest in the industry with a cross-section size of 12mm.
- The built-in encoder allows position control.
- With the use of linear motors, these actuators can operate at high speeds and high acceleration/deceleration with G-forces up to 2G.
- Slider and rod types are available. The slider type is classified into six sub-types according to size and stroke.
- The multi-slider type has two sliders installed on one axis, where both sliders can be operated separately.

# ROBO Cylinder®



The affordable high-precision electric actuators reduce your running costs to 1/5 of a pneumatic system. ROBO Cylinders are high-performance electric actuators with a ball screw or belt, linear guide, and AC servo motor or DC servo/stepper motor. These next-generation actuators offer multi-point positioning capability and speed/acceleration change function unseen with air cylinders.

## ERC3 SERIES CONTROLLER INTEGRATED TYPE



Motor Coupled Slider Type      Motor Coupled Rod Type

- The ERC3 Series have built-in controllers which simplify set up and use.
- High-precision, performance and rigidity all in an affordable package.

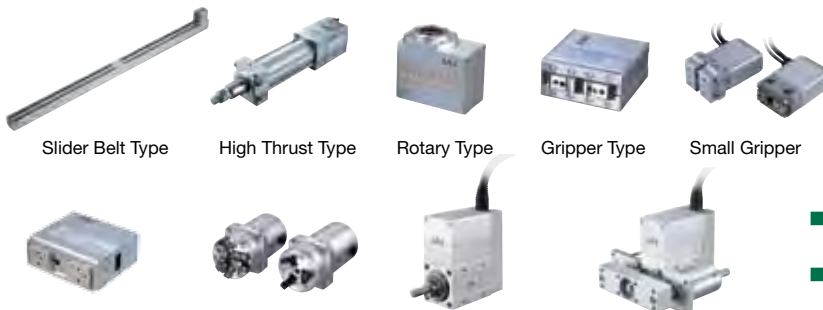
## RCP4 SERIES



Slider Type      Rod Type [Radial Cylinder]

- 1.5 times higher maximum speed and double the payload when combined with a Power CON 150.

## RCP2 SERIES PULSE MOTOR TYPE



Slider Belt Type      High Thrust Type      Rotary Type      Gripper Type      Small Gripper  
High Grip Force Type      Three Finger Gripper      Short Body Type      Short Body Type with Guide

- High push force is achieved with the use of stepper motors.
- Many different sizes and variations are available to meet a wide range of applications.

## RCP3 SERIES



Table Type      Slider Type

## RCA SERIES 24V SERVO MOTOR TYPE



Motor Coupled Rod Type      Side-Mounted Motor Rod Type      Guided Rod Type      Slider Type      Side-Mounted Motor Type

- Shaped similar to a rod-type air cylinder, these actuators accept various mounting brackets that are used on air cylinders.
- Three motor installation methods are available to choose from.
- An optional home check sensor can be set.

## RCA2 SERIES



Table Type      Slider Type



## RCS2 SERIES 100V/200V SERVO MOTOR TYPE



Slider Type      Side-Mounted Motor Slider Type      Slim Rod Type      Large Diameter Hollow Rotary Type      Guided Rod Type



Short Rod Type      Ultra High Thrust Rod Type      Guided Rod Type

## RCS3 SERIES



Aluminum-Base Type      Steel-Base Type

- Equipped with a servo motor, these actuators support high loads and long strokes.
- When an XSEL controller is used, you can combine three or more axes.
- Connectable to DeviceNet, Profibus, Modbus and CC-Link.

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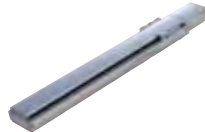
# Single Axis Robot



Intelligent actuators with high-speed, high-transfer capabilities



Standard Type: **ISB**  
High-Precision Type: **ISPB**



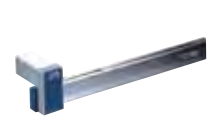
High-Rigidity Type  
(Steel-Base)  
**IS Cast SSPA**



Simple Dust-proof Type  
**ISDB/ISPDB**



High-Rigidity  
Belt-Drive Type  
**IF**



Slim Type / Belt-Drive Type  
**FS**



Rotary Type  
**RS**



Vertical/Rotation  
Integral Type: **ZR**



Nut Rotating Type  
**NS**

- Many variations are available to meet diverse applications.
- The guide is integrated with the base for the linear actuators.

# Cleanroom Type

Dedicated cleanroom types conforming to cleanliness class 10



24V Pulse Motor  
**RCP2CR**



24V Servo Motor  
**RCACR**



200V Servo Motor  
**RCS2CR/RCS3CR**



Standard Type / High-Precision Type  
**ISDBCR/ISPBCR**



Anti-Static Type  
**ISDACR-ESD**



Small Gripper  
**RCP2CR-GRSS/GRLS**



SCARA Robot  
**IX-NNC**



Ultra-Compact  
SCARA Robot  
**IX-NNC**

- The highly sealed structure achieves operation in conformance with cleanliness class 10.
- Wide variations are available, including ROBO Cylinders and single-axis/SCARA robots.

# Splash-proof/Dust-proof Type

Protection conforming to IP54–IP67, these actuators are the solution when the environment is less than desirable



Slider Type  
**RCP2W-SA16C**



Slider Type  
**ISWA/ISPWA**



Pulse Motor Rod Type  
**RCP2W-RA4C/RA6C**



High-Thrust Rod Type  
**RCP2W-RA10C**



24V Servo Motor  
Rod Type  
**RCAW-RA3/RA4**



200V Servo Motor  
Rod Type  
**RCS2W-RA4**



Small Gripper (Dust-proof)  
**RCP2W-GRSS/GRLS**



SCARA Robot  
**IX-NNW**

- These actuators handle environments with extreme dust or water splashes.
- Many variations are available to meet diverse applications.

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# TT Table Top Type Robot

**TABLE TOP TT**



2-axis Gate Type



3-axis Gate Type



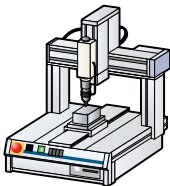
2-axis Cantilever Type



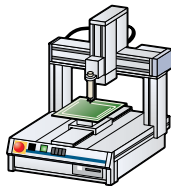
3-axis Cantilever Type

- These all-in-one robots are ideal for cell production and R&D applications. The 200mm x 200mm and 400mm x 400mm type are available as standard products.
- The TT is equipped with a rigid base, stepper control motor and an encoder to prevent mis-stepping.
- All models come with a built-in XSEL controller which is popular for its ability to achieve high tracing precision and constant speed operation.

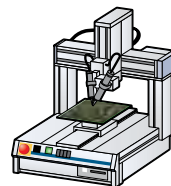
## Screw Driving



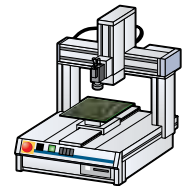
## Coating



## Soldering



## Circuit Board Inspection



## Cartesian Robots

Get your ROI quickly with pre-configured cartesian robots that reduce installation and setup times

### ICSA2/ICSPA2 2-AXIS COMBINATION



Y-axis Base Fixed Type  
**XYB**



Y-axis Slider Fixed Type  
**XYS**



Z-axis Base Fixed Type  
**XZ**



Z-axis Slider Fixed Type  
**YZ**

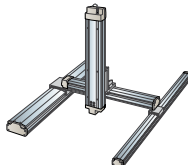


Gantry Type  
**XYG**

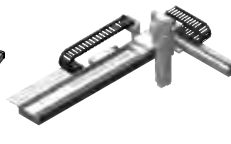
### ICSA3/ICSPA3 3-AXIS COMBINATION



XYB+Z axis Type

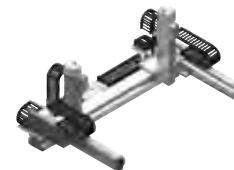


XYG+Z axis Type



X-axis Nut Rotation Type  
X-axis Linear Servo Type

### ICSPA6 6-AXIS COMBINATION



X-axis Nut Rotation, Multi-Slider Type  
X-axis Linear Servo, Multi-Slider Type

### IK SERIES MULTI-AXIS ROBO CYLINDER KITS



### ZR UNIT



- Many variations are available to support 2 to 6 axis configurations.
- The multi-slider types (ICSPA4/ICSPA6) let you reduce space and cycle time.
- We can also design specifications with rotational axis(es).
- Customize the optimum model that suits your specific needs.

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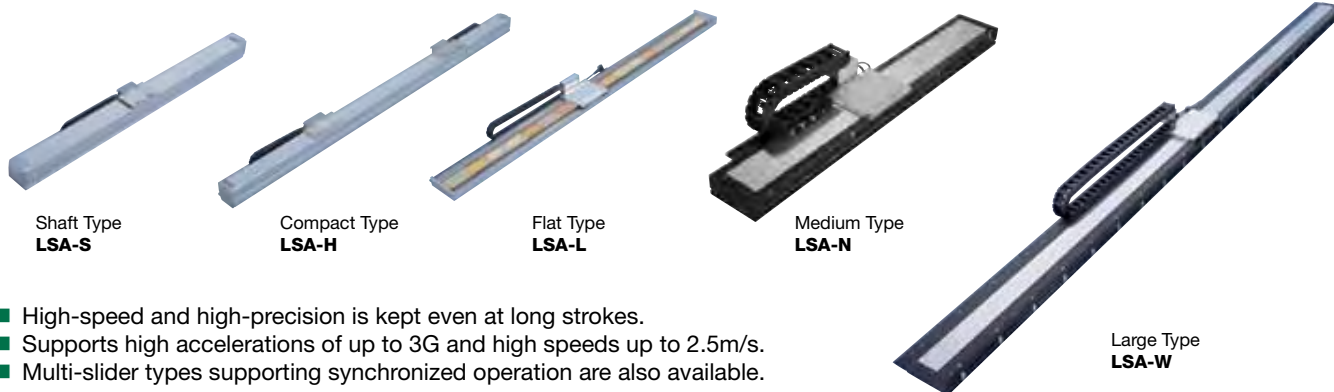
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# LSA Series Linear Servo Actuator

A full lineup of linear servo actuators to meet your needs  
Maximum load capacities of up to 120kg and maximum strokes of up to 4m



- High-speed and high-precision is kept even at long strokes.
- Supports high accelerations of up to 3G and high speeds up to 2.5m/s.
- Multi-slider types supporting synchronized operation are also available.

# IX Series SCARA Robots

The IX SCARA robots feature high performance and functionality



**SCARA ROBOT** ARM LENGTH 250/350/500/600/700/800 MM

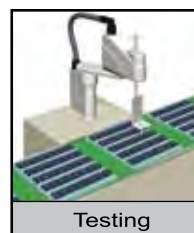


- Achieves high speeds and repeatability.
- Easy programming makes these actuators much more user-friendly.
- Many variations are available to support arm lengths of 250 to 800mm.

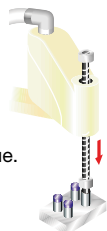
**ULTRA-COMPACT SCARA** ARM LENGTH 120/150/180 MM



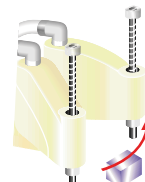
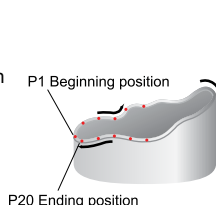
- The compact size of the robot allows you to reduce the size of your production facility.
- The rated loading capacity is 0.2 kg, and can be increased to 1 kg.
- High-speed performance with a cycle time of 0.35 sec.



**Z-axis Push Function**  
Enables you to easily apply compression force and torque.



**3D Path Capability**  
Faster CPU speed and rigid robot construction, along with 3D arc motion & path control, allow for easy, accurate path tracing.



**Interference Check Zones**  
A maximum of 10 user-defined check zones can be set inside the robot's operation range.

# Controller

Wide variety of operation patterns for your specific needs

## 3-POSITION CONTROLLER

### PMEC AMEC



- Power supply, acceleration/speed change function included.
- Operation as easy as any air-cylinder system.

RCA/  
RCP2/RCP3 RCA2/RCL

### PSEP ASEP DSEP



- Use the same signals as air-cylinder solenoid valves.
- Standard and dust-proof specifications are available.
- The dust-proof specification has a protective structure conforming to IP53, allowing it to be installed outside the control panel.

RCA/  
RCP2/RCP3 RCA2/RCL RCD

## POSITION CONTROLLER

### Power CON 150 PCON-CA



RCP4 Position  
Controller

### ACON



RCA/RCA2/RCL  
Position Controller

### SCON-CA



RCS2/RCS3  
- Cartesian - Linear Servo  
Position Controller

- PCON/ACON controllers are available in: Positioner/Solenoid valve/Pulse-train input/ Serial communication types.
- SCON controllers are an all-in-one controller that conforms to all control methods.
- Up to 512 positions can be set.
- DeviceNet, CC-Link and other field networks can be supported.
- SCON-CA comes with force control and vibration control functions.

## ROBO NET



RCP2/RCP3/RCA/RCA2/RCL  
Network Controller



Simple Absolute



Expansion Unit

- The simple absolute unit is an encoder backup that connects to a PCON/ACON controller to eliminate the need for home return.
- ROBOTNET minimizes wires and operates on DeviceNet, CC-Link or other networks.
- Link and operate up to 16 axes.

## PROGRAM CONTROLLER

### PSEL



RCP2/RCP3  
Program Controller  
1-2 axis

### ASEL



RCA/RCA2/RCL  
Program Controller  
1-2 axis

### SSEL



1-2 axis

### X-SEL



1-6 axis

RCS2/RCS3  
- Cartesian - Linear Servo  
Program Controller

- PSEL/ASEL/SSEL controllers support interpolated operation and are used to set one or two axes.
- XSEL controllers can operate up to 6 axes.
- All controllers support DeviceNet, CC-Link and other field networks.

# Power supply

Low-cost 24VDC power supply ideal for powering actuators



PS-24

- Accelerate an actuator with maximum momentary current output of 17A.
- Up to 5 units can be operated in parallel.
- The load factor detection function lets you monitor the load condition of the unit.

# Teaching Pendant

Programming points have never been easier (ANSI type offering enhanced safety is available)



PCON/ACON/SCON/  
ROBOTNET/PSEP/ASEP/PMEC/AMEC  
CON-PTA-M-ENG



ERC3 Power Supply Built-in Teaching Pendant  
RCM-PST (Quick Teach)