



Quality and Innovation

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# Product Overview

IAI ROBOT LINEUP

## Industrial Automation Robots

### Newest addition to series

Available now!



•Mini Rod Type



•Mini Table Type



•High Rigidity Slider Type

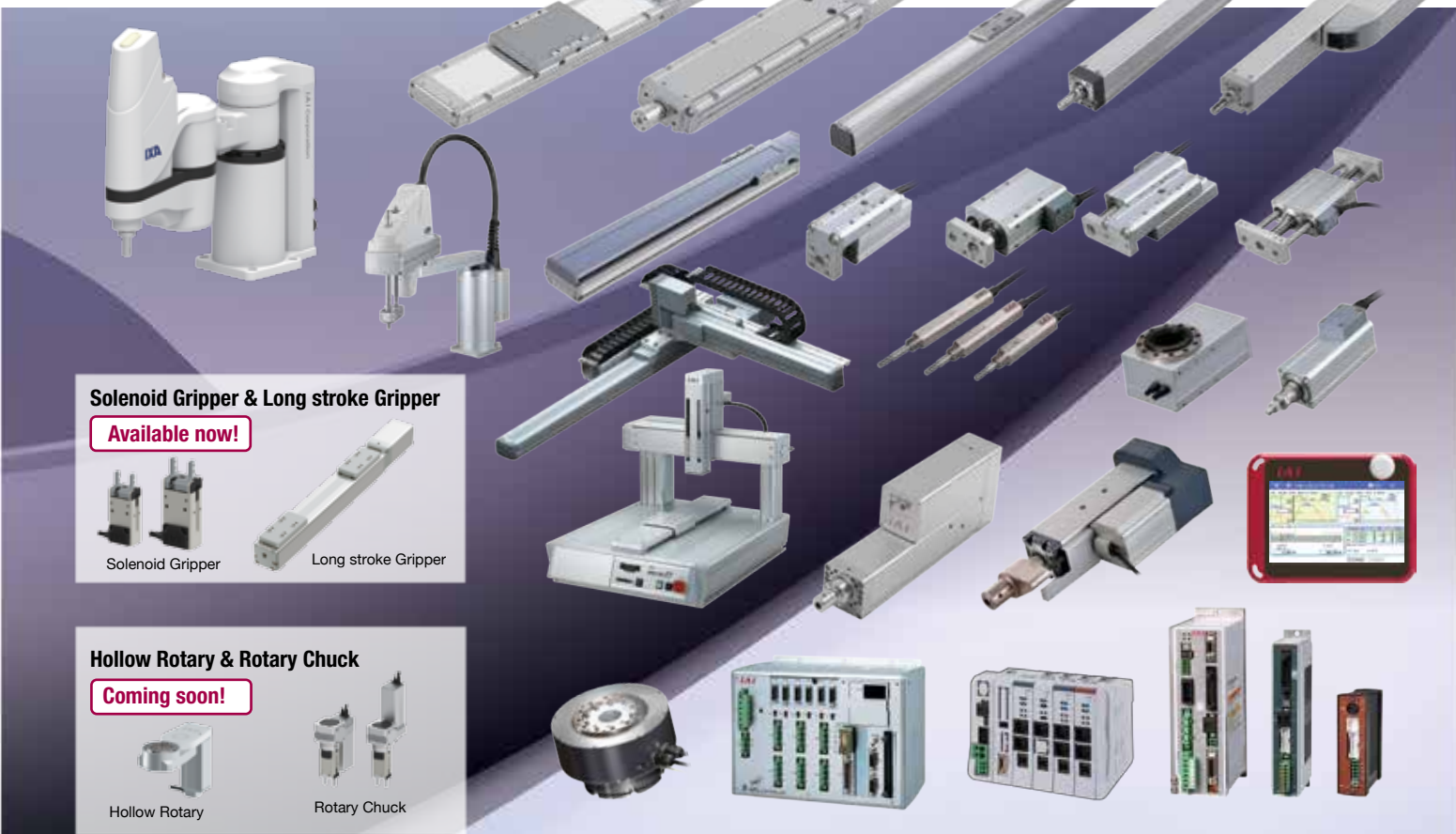


•Radial Cylinder Type  
•High Rigidity Radial Cylinder type



•Waterproof Specification

IP67



### Solenoid Gripper & Long stroke Gripper

Available now!



Solenoid Gripper



Long stroke Gripper

### Hollow Rotary & Rotary Chuck

Coming soon!



Hollow Rotary



Rotary Chuck

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NEW

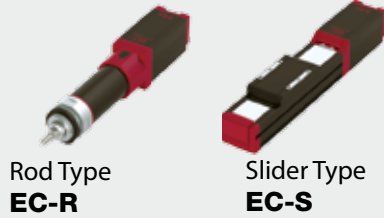


ELECYLINDER

# Advancing into a NEW ERA switching Air to ELECYLINDER

Designed to move between two points just like Air Cylinder  
Speed / Acceleration / Deceleration can be set in just 5 minutes.

## ELECYLINDER SERIES



Rod Type  
**EC-R**

Slider Type  
**EC-S**

### NEW! Newest Additions to the Series



- Mini Rod Type
- Mini Table Type
- High Rigidity Slider Type
- Radial Cylinder Type
- High Rigidity Radial Cylinder type
- Waterproof Specification

- Simple model selection & operation
- Start and end points can be set at any value.
- **A** (Acceleration), **V** (Velocity), **D** (Deceleration), A.V.D. can be adjusted individually.
- Low cost & long service life.

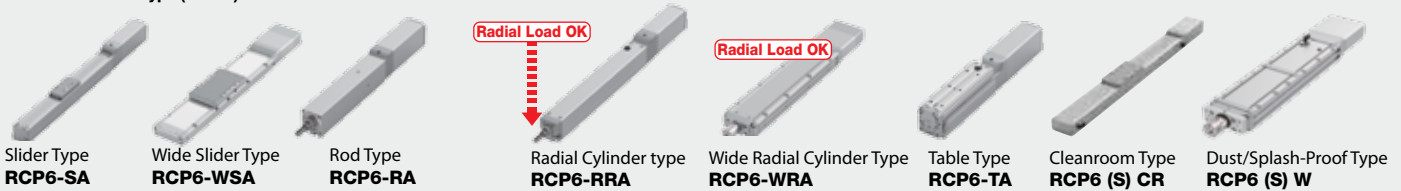
## Next Generation ROBO Cylinder<sup>®</sup> RCP6 & RCS4

From an abundant lineup of 210 total models,  
Equipped with high-resolution battery-less absolute encoder as standard



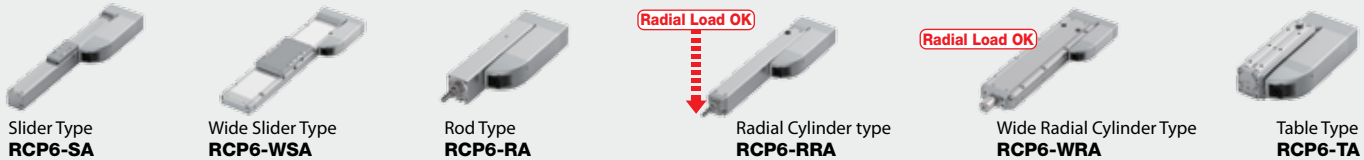
### RCP6(S) STEPPER MOTOR SERIES MOTOR STRAIGHT TYPE

\*Built-in Controller Type (RCP6S) is available



### RCP6(S) STEPPER MOTOR SERIES SIDE-MOUNTED MOTOR TYPE

\*Built-in Controller Type (RCP6S) is available



### RCS4 AC SERVO MOTOR SERIES MOTOR STRAIGHT TYPE /SIDE-MOUNTED MOTOR TYPE



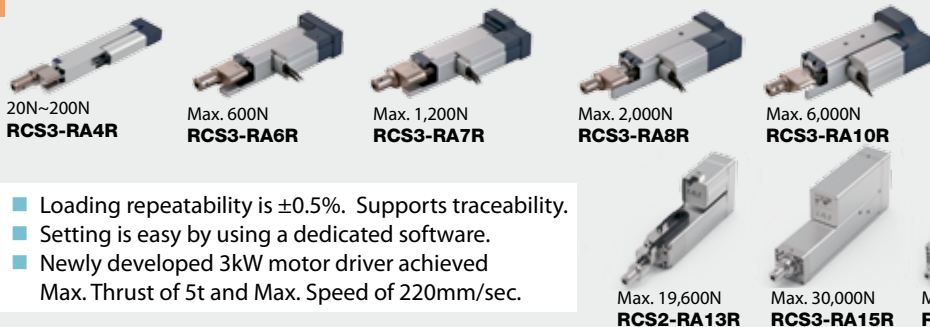
- Improved positioning repeatability:  $\pm 10\mu\text{m}$  (Standard Type),  $\pm 5\mu\text{m}$  (High-Precision specification).
- Cleanroom and Dust/Splash-Proof specification series available.

## Servo Press Compatible ROBO Cylinder<sup>®</sup> with Load Cell

The high-precision position control enables easy adjustment of the push force and the position control, compact and low-thrust rod type actuator that can even be used for simple pressing typically difficult for hydraulic equipment. 8 types from a range of 20N-50,000N are available.

## Wrist Unit

IAI's unique design makes the parts light and compact.  
Low cost compared to 6-axis articulated robots.  
Orthogonal axes and interpolation commands are possible.



- Loading repeatability is  $\pm 0.5\%$ . Supports traceability.
- Setting is easy by using a dedicated software.
- Newly developed 3kW motor driver achieved Max. Thrust of 5t and Max. Speed of 220mm/sec.



Small Size

Medium Size

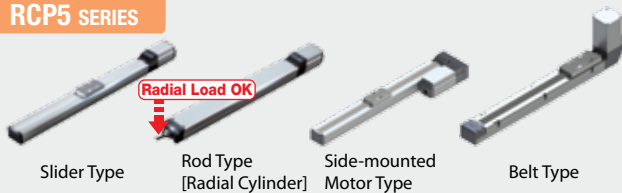
# ROBO Cylinder®



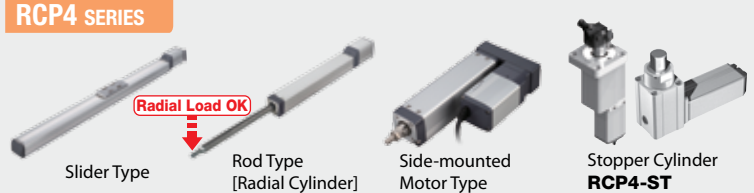
These affordable, highly precise and highly rigid actuators have 1/5th the running cost of a pneumatic system

ROBO Cylinder® is high-performance electric actuator equipped with a ball screw, linear guide, and servo motor. These next-generation actuators have multi-point positioning capability as well as the ability to change speed and Acceleration, unlike anything seen with air cylinders.

## RCP5 SERIES



## RCP4 SERIES



- Battery-less absolute encoder as standard equipment.
- By using a PowerCON, it has 1.5 times higher speeds and double the payload compared to traditional models.

- By using a PowerCON, it has 1.5 times higher speeds and double the payload compared to traditional models.

## RCP3 SERIES



## RCP2 SERIES STEPPER MOTOR TYPE WITH HIGH PERFORMANCE



## RCP4/RCP2/RCD GRIPPER



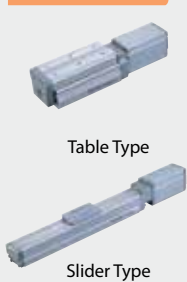
## RCP6-GRT THIN GRIPPER



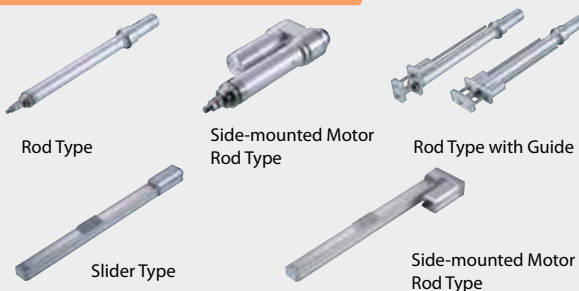
- A high push force is achieved utilizing the characteristics of stepper motors.
- An abundance of sizes and variations is available to meet a wide range of applications.

- Equipped with a Battery-less Absolute Encoder.
- Flat Shape with height of 39mm
- High Rigidity.

## RCA2 SERIES



## RCA SERIES 24V SERVO MOTOR TYPE



## ERC3 SERIES CONTROLLER INTEGRATED TYPE



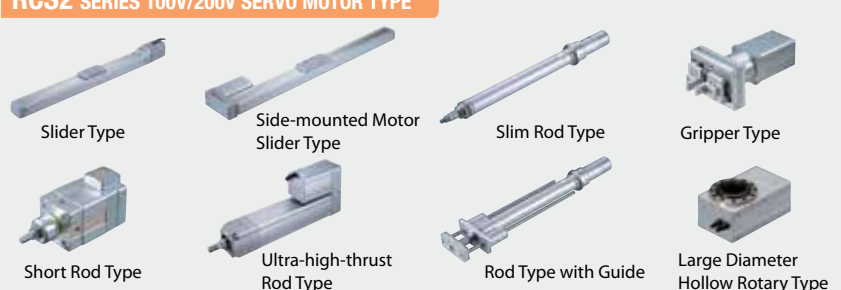
- Shaped similar to a rod-type air cylinder, these actuators accept various mounting brackets that are used on air cylinders.
- Three motor installation methods are available to choose from.
- An optional home check sensor can be set.

- The ERC3 Series has built-in controllers which allows for a reduction in wiring, and setup steps.
- Despite being extremely low cost, it utilizes a ball screw and linear guide, with high precision and high rigidity.

## RCS3 SERIES



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



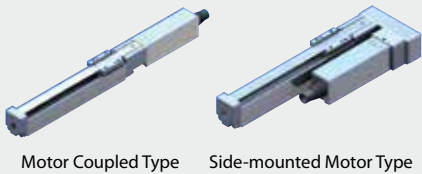
- Equipped with a servo motor, these actuators support high loads and long strokes.
- When an XSEL controller is used, you can combine three or more axes.
- Compatible with DeviceNet, CC-Link, and other field networks.

# Mini ROBO Cylinder®



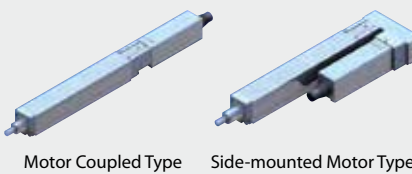
Next-generation electric actuators, the solution for space constrained applications

## RCP3 MINI SLIDER TYPE



Motor Coupled Type Side-mounted Motor Type

## RCP3 MINI ROD TYPE



Motor Coupled Type Side-mounted Motor Type

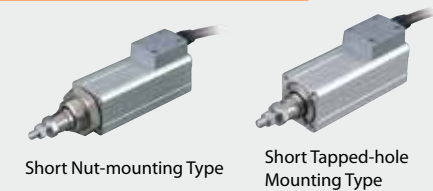
## RCA2 MINI SLIDER TYPE



Motor Coupled Type Side-mounted Motor Type

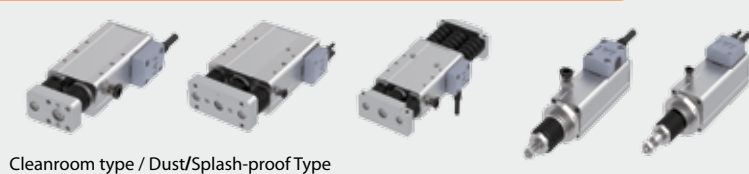
- Replacement is simple with the coupled type motor.
- You can choose from the straight type (motor coupled type) and the side-mounted motor type.

## RCA2/RCS2 MINI ROD TYPE



Short Nut-mounting Type Short Tapped-hole Mounting Type

## RCA2/RCS2 MINI ROD TYPE CLEANROOM DUST/SPLASH-PROOF

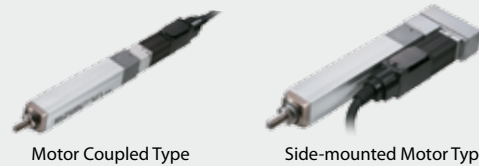


Cleanroom type / Dust/Splash-proof Type



Short Free Mounting Type with Single Guide Short Free Mounting Type with Double Guides Short Slide Unit Type with Double Guides

## RCA2 MINI ROD TYPE



Motor Coupled Type Side-mounted Motor Type

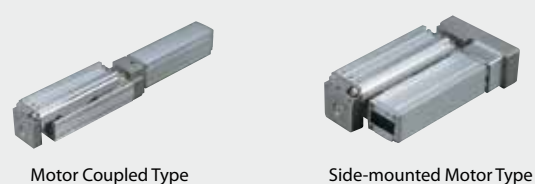
- You can choose between the slim motor coupled type and the short free mounting type, that has significantly reduced in length.
- You can choose between built-in guide type which allows for increased rigidity and straightness, or the external guide type which has significantly been reduced in size.

## RCA2/RCS2 MINI TABLE TYPE



Short Compact Type Short Wide Type Short Flat Type

## RCP3/RCA2 MINI TABLE TYPE



Motor Coupled Type Side-mounted Motor Type

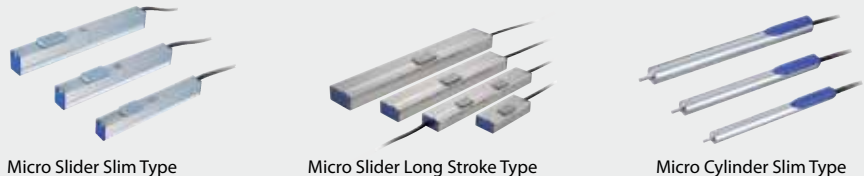
- The built-in guide allows the actuator to hold overhung loads.
- You can choose between the compact short type and the motor coupled type with longer stroke.

## 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.

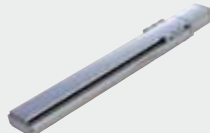
- By using linear motors, these actuators operate at a g-force (in speeds and acceleration force) of up to 2G.
- The slider and rod types are available. The slider-type has six different kinds based on size and stroke.
- The multi-slider type, which has two independently-working sliders installed on one axis, is available.

# Single-axis Robots

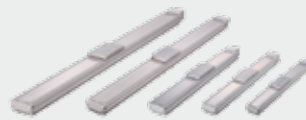
Intelligent actuators with high-speed and high-transfer capabilities



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



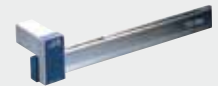
High-rigidity Type  
(Steel-base)  
**SSPA**



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



High-rigidity  
Belt-drive Type  
**IF**



Slim Belt-drive Type  
**FS**



Rotary Type  
**RS**



Vertical / Rotational  
Integral Type: **ZR**



Nut Rotational Type  
**NS**

- ISB/ISDB Series equipped with Battery-less Absolute Encoder as standard.
- ISB/ISDB Series equipped with 3x lead ball screw type is available.
- Many variations are available to meet diverse applications.
- The guide is integrated with the base for the linear actuators.

# Cleanroom Types

Dedicated cleanroom types conforming to cleanliness class 10



Stepper Motor  
**RCP6 (S) CR**



AC Servo Motor  
**RCS4CR-SA**



AC Servo Motor  
**RCS4CR-WSA**



Stepper Motor  
**RCP5CR**



Stepper Motor  
**RCP4CR**



Servo Motor  
**RCACR**



Servo Motor  
**RCS2CR/RCS3CR**



High-performance Type  
**ISDBC/ISPBCR**



Anti-static Type  
**ISDBC-ESD**



Gripper Type  
**RCP2CR-GR**



Rotary Type  
**RCP2CR-RT**



SCARA Robot  
**IXP-□C**



SCARA Robot  
**IX-NNC**



Ultra-compact  
SCARA Robot  
**IX-NNC**



Direct Drive  
Motor  
**DDACR**

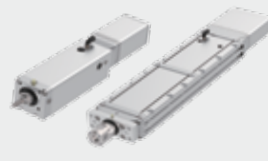
- A well sealed structure allows it to achieve a cleanliness class 10.
- A wide variety of products are available, from ROBO Cylinder® all the way to single-axis actuators and SCARA robots.

# Splash-proof/Dust-proof Types

These actuators offer protection conforming to IP54~IP67, and are a desirable solution when operated in adverse environments.



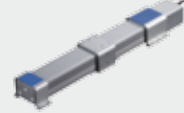
Stepper Motor  
Water proof/Dust proof Type  
**EC-R6□W/R7□W**



Stepper Motor  
Radial Cylinder Type  
**RCP6(S)W-RA**  
**RCP6(S)W-RAA**  
**RCP6(S)W-WRA**



Stepper Motor  
Radial Cylinder Type  
**RCP5W-RA**



Stepper Motor  
Slider Type  
**RCP4W-SA**



Stepper Motor  
Rod Type  
**RCP4W-RA**



Stepper Motor  
Slider Type  
**RCP2W-SA**



Stepper Motor Rod Type  
**RCP2W-RA**



Stepper Motor  
High-thrust Rod Type  
**RCP2W-RA**



Servo Motor Rod Type  
**RCS2W-RA**  
**RCAW-RA**



Gripper Type  
**RCP2W-GR**



Rotary Type  
**RCP2W-RT**



Slider Type  
**ISWA/ISPWA**



SCARA Robot  
**IXP-□W**



SCARA Robot  
**IX-NNW**

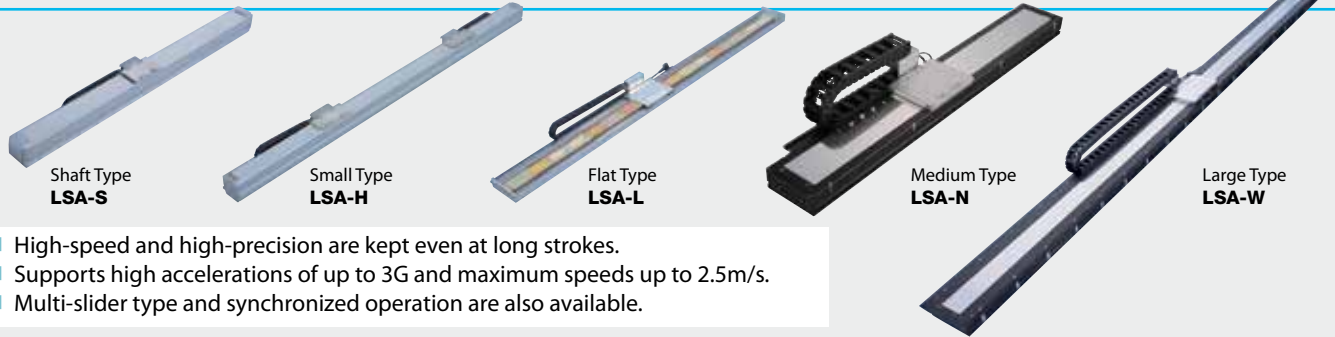


Direct Drive Motor  
**DDW**

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

## LSA Series Linear Servo Actuators

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



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

## IXA Series SCARA® Robots

Introducing the new SCARA Robot IXA!



Standard/ High-speed Type  
Arm length: 300mm  
Vertical axis stroke: 150mm

Standard/ High-speed Type  
Arm length: 600mm  
Vertical axis stroke: 180/330mm

Standard/ High-speed Type  
Arm length: 450mm  
Vertical axis stroke: 180/330mm

### SCARA ROBOT ARM LENGTH 300/450/600mm

- Fastest cycle times:  
Standard cycle time : 0.26s (High speed type)
- Achieves a low price.
- Low vibration, accurate positioning
- Equipped with Battery-less absolute encoder as standard.
- Mechanical structure / features.
- Standard type / High-speed type are available.

## IXP Series PowerCON SCARA® Robots

All models come standard with battery-less absolute encoders



Standard Type

Gripper Type

Splash-proof/  
Dust-proof Type

Cleanroom Type

### POWERCON SCARA ROBOT ARM LENGTH 180/250/350/450/550/650mm

- All models come standard with battery-less absolute encoders.
- The encoder resolution has increased to 10 times that of the existing IXP.
- The cost of IXP is around half of the traditional models.
- Lighter than conventional models.
- The regular cycle time is about 60% shorter than conventional Cartesian robots.
- Added 3-axis specification, 4-axis with gripper specification.
- Equipped with optimal speed and acceleration/deceleration settings.

## IX Series SCARA Robots

The IX SCARA robots feature high performance and functionality

### SCARA ROBOT ARM LENGTH 250/350/500/600/700/800mm



Standard Compact Type

Standard Medium Type

Standard Large Type

High-speed Type

Wall Type

Ceiling Type

### ULTRA-COMPACT SCARA ARM LENGTH 120/150/180mm



- The compact size of the robot allows you to reduce the size of your production equipment.
- The rated payload of 0.2kg can be increased up to a maximum of 1kg.
- High-speed performance with a cycle time of 0.35sec.

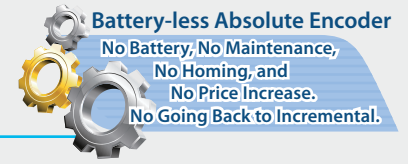
### SUPER-LARGE SCARA ROBOT ARM LENGTH 1,000/1,200mm



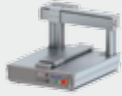
- Achieves high-speed, payload and precision.
- Each arm length type can carry up to 50kg.
- All high-speed performance with a standard cycle time of 0.66sec.

# TTA Series Tabletop Robots

Improved tabletop robots for cell productions, R&D applications, and more



## Gate Type



2-axis Specification



3-axis Specification



4-axis Specification

## Cantilever Type



2-axis Specification



3-axis Specification



4-axis Specification with ZR

- Every model equipped with battery-less absolute encoder as standard.
- AC Servo Motor specification added to the series.
- Max. payload: X-axis: 30kg Z-axis: 15kg (AC servo motor), Max. speed: XY-axis: 1200mm/s Z-axis: 40mm/s (AC servo motor)
- Improved positioning repeatability:  $\pm 0.005\text{mm}$  (AC servo motor) /  $\pm 0.01\text{mm}$  (Stepper motor spec)
- The SEL Program Generator eliminates the tedious work of program creation.

# CT4 High-speed Cartesian Robots

High-speed cartesian robot that shortens assembly / inspection cycle times by operating at high speed, ensuring high rigidity, and demonstrating excellent straight moving performance.



- Maximum speed 2.5m/s, maximum acceleration /deceleration 3.2G.
- Acceleration is significantly improved (conventionally 0.3 ~ 1.0G) and standard cycle time is reduced by 32% compared to conventional cartesian robots.
- Rotational axis specification and pick & rotate specification are added to the series.

# DDW, DDA Direct Drive Motors

High speed/payload/precision, easy control, and compact: A direct drive motor that achieved high cost-performance.



DDW Splash-proof/  
Dust-proof type



DDA/DDACR  
Slim Type



DDA Slim Type  
with Brake



DDA/DDACR  
High Torque type

- Positioning repeatability  $\pm 0.00103$  degree ( $\pm 3.7\text{s}$ ), Index accuracy  $\pm 0.00833$  degree ( $\pm 30\text{s}$ ) with SCON-CB & High resolution type.(DDA)
- Maximum speed of 1,800°/s and acceleration/deceleration of 6.0G can make faster positioning time possible.(DDA)

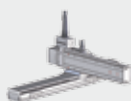
# Cartesian Robots

Pre-configured cartesian robots that reduce installation and setup times

## ICS(P)B2/ICS(P)A2 2-AXIS CONFIGURATION



Y-axis Base Mount  
**XYB**



Y-axis Slider Mount  
**XYB**



Z-axis Upright Mount  
**XZ**



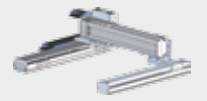
Z-axis Slider Mount  
**YZB**



Z-axis Base Mount  
**YZB**

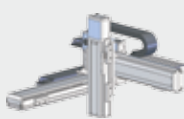


Y-axis Horizontal Gantry  
**XYG**



Y-axis Side-mounted Gantry  
**XYBG**

## ICSB3/ICSPB3 3-AXIS CONFIGURATION



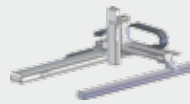
Y-axis Base Mount  
Z-axis Base Mount  
**XYB+ZB**



Y-axis Base Mount  
Z-axis Slider Mount  
**XYB+ZS**



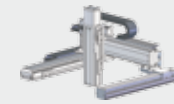
Z-axis Upright Mount  
Y-axis Slider Mount  
**XZ+YS**



Y-axis Horizontal Gantry  
Z-axis Base Mount  
**XYG+ZB**



Y-axis Horizontal Gantry  
Z-axis Slider Mount  
**XYG+ZS**



Y-axis Side-mounted Gantry  
Z-axis Base Mount  
**XYBG+ZB**



Y-axis Side-mounted Gantry  
Z-axis slider Mount  
**XYBG+ZS**

## ICS(P)A4 4-AXIS CONFIGURATION



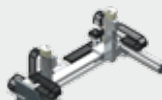
Y-axis Side Base Mount  
ZR-axis Base Mount  
**XYB+ZRB**



X-axis Multi-Slider  
Y-axis Base Mount  
**XMYB**



X-axis Multi-Slider  
Y-axis Side Base Mount  
Z-axis Base Mount  
**XMYB+ZB**



X-axis Multi-Slider  
Y-axis Side Base Mount  
Z-axis Slider Mount  
**XMYB+ZS**

## ICSPA6 6-AXIS CONFIGURATION

## IK series 2-4-AXIS CONFIGURATION



Y-axis Base Mount Type  
**XYB**



Z-axis Base Mount Type  
**YZB**



Y-axis Base Mount Type  
Z-axis Base Mount Type  
**XYB**



Y-axis Base Mount Type  
Z-axis Base Mount Type  
**+ Z-axis Table Type**

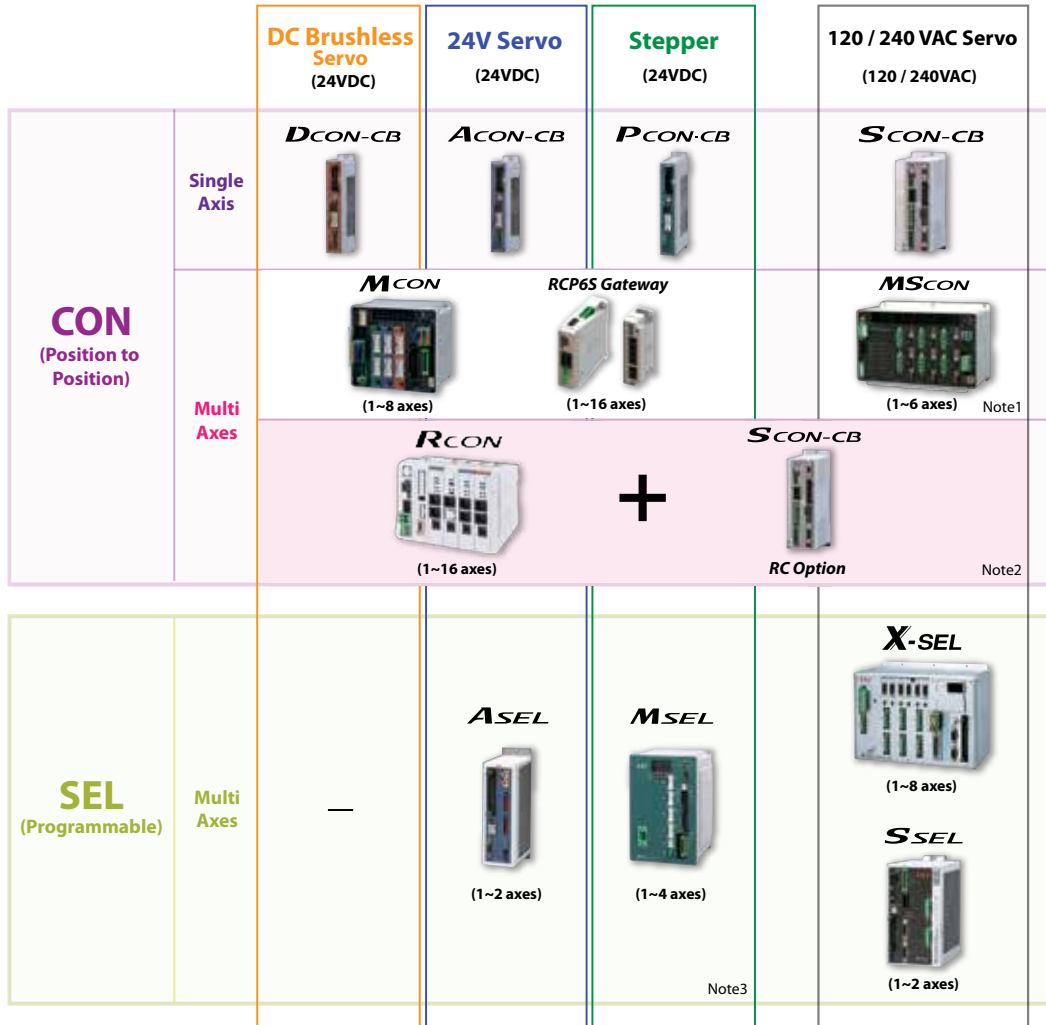


Y-axis Base Mount Type  
ZR (Vertical/Rotation) Type  
**XYB + ZR unit**

- Many variations are available to support 2 to 6-axis configurations.
- The multi-slider types (ICSPA4/ICSPA6) let you reduce space and cycle time.
- Also available are models with rotational axis(es) additions.
- Any models can be customized to meet your specific needs.
- High resolution Battery-less Absolute Encoder is available.

# Controllers

A wide variety of operational patterns to fit your specific needs



Note1: SSEL (1~2 axes) has Positioner Mode. Note2: Additional SCON-CB RC Option required per axis. Note3: PSEL (1~2 axes) only supports RCP2/RCP3

## FIELD NETWORKS

Note: The type of compatible networks may vary depending on the controller.



## Power Supply

Low-cost DC24V power supply ideal for powering actuators

### PS-24



- Safely accelerate an output actuator at a maximum momentary current of 17A.
- Up to five units can be operated parallel to one another.
- The load factor detection function lets you monitor the load condition of the unit.

Available now!

PSA-24/24L



- Power source: Universal AC100V ~230V
- Continuous rated output: 240W/330W
- Peak output: 408W (17A)
- Compact size, smaller than PS-24

## Teaching Pendants

Programming points have never been easier  
Compatible with Safety Category



Touch Panel Teaching Pendant for Controllers  
**TB-02**



Touch Panel Teaching Pendant with wireless data setting function for EC  
**TB-03**

\*screen image



## IAI America, Inc.

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