

IAI

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

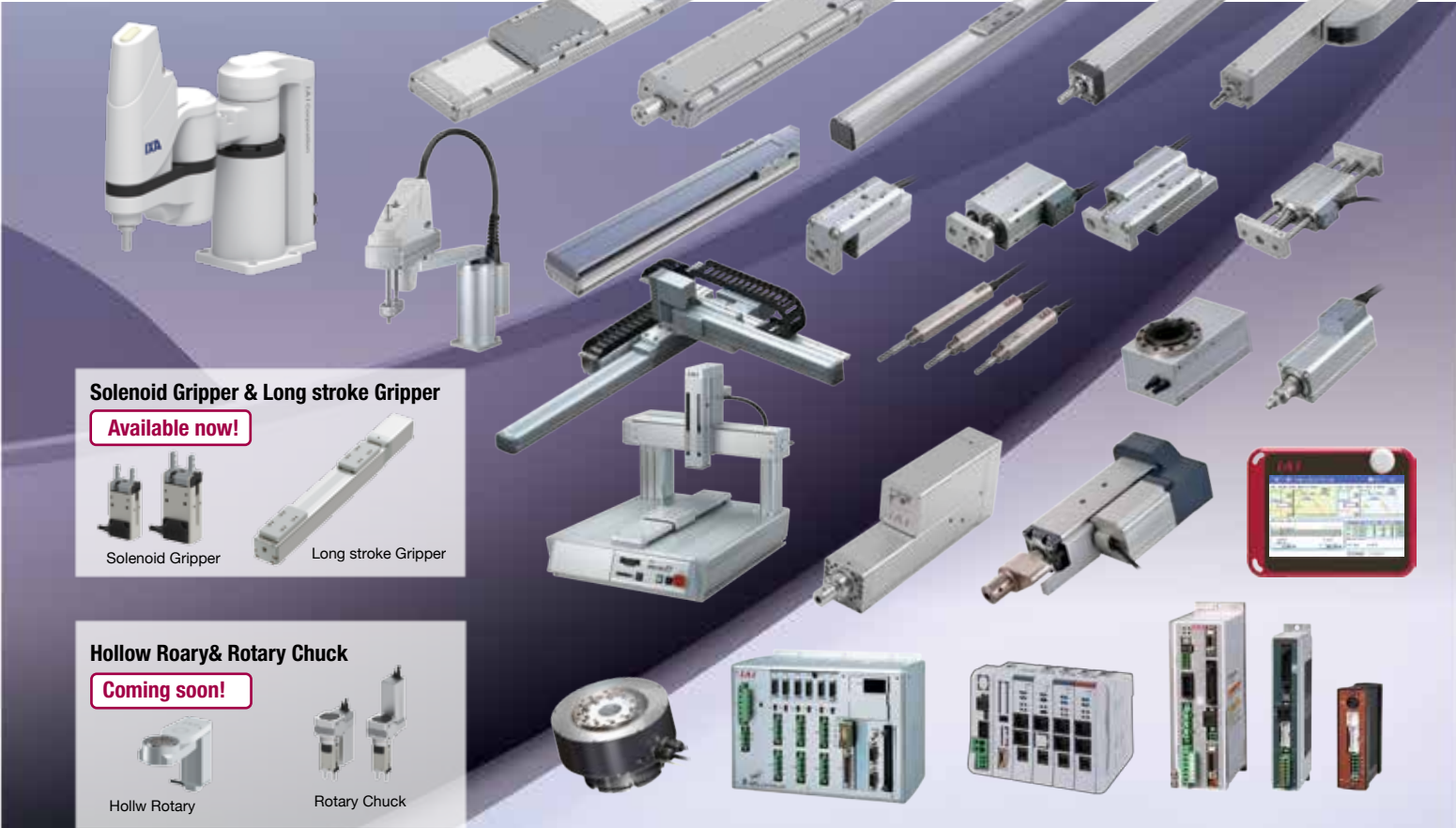


•Radial Cylinder Type
•High Rigidity Radial Cylinder type



•Waterproof Specification

IP67



Solenoid Gripper & Long stroke Gripper

Available now!



Solenoid Gripper



Long stroke Gripper

Hollow Roary & Rotary Chuck

Coming soon!



Hollow Rotary



Rotary Chuck

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NEW

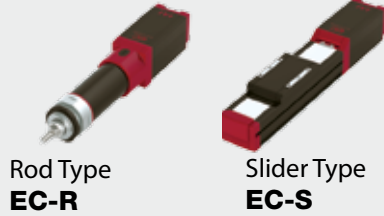


ELECYLINDER

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.

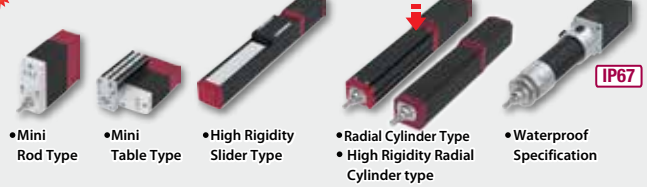
ELECYLINDER SERIES



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.

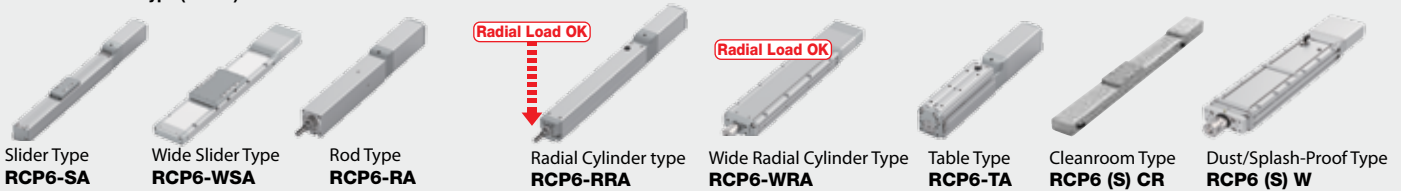
Next Generation ROBO Cylinder[®] RCP6 & RCS4

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



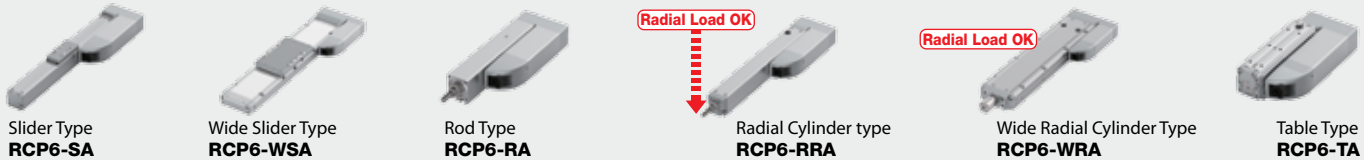
RCP6(S) STEPPER MOTOR SERIES MOTOR STRAIGHT TYPE

*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[®] 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.



- 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.



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.



Small Size

Medium Size

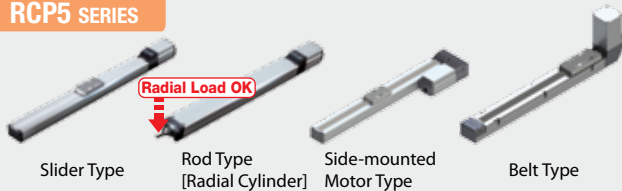
ROBO Cylinder®



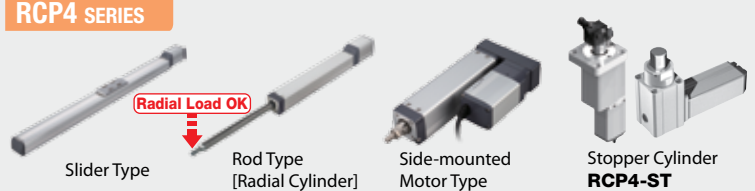
These affordable, highly precise and highly rigid actuators have 1/5th the running cost of a pneumatic system

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



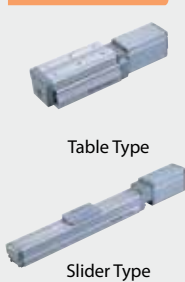
RCP6-GRT THIN GRIPPER



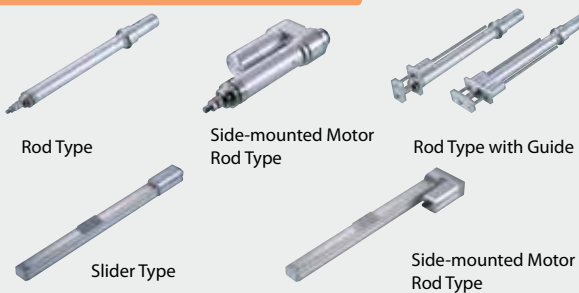
- A high push force is achieved utilizing the characteristics of stepper motors.
- An abundance of sizes and variations is available to meet a wide range of applications.

- 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



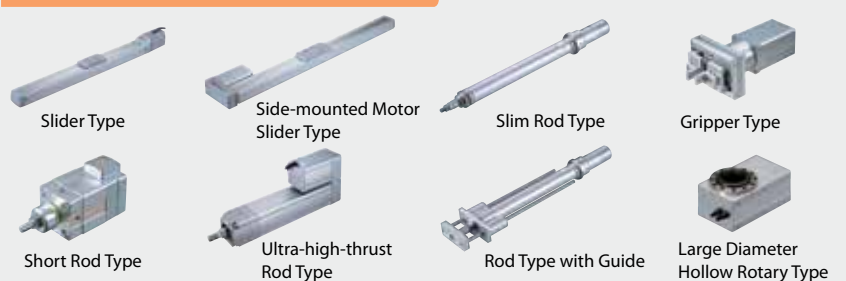
- Shaped similar to a rod-type air cylinder, these actuators accept various mounting brackets that are used on air cylinders.
- Three motor installation methods are available to choose from.
- An optional home check sensor can be set.

- 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



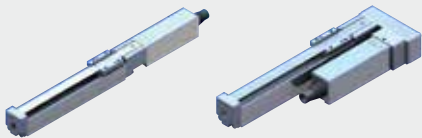
- Equipped with a servo motor, these actuators support high loads and long strokes.
- When an XSEL controller is used, you can combine three or more axes.
- Compatible with DeviceNet, CC-Link, and other field networks.

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

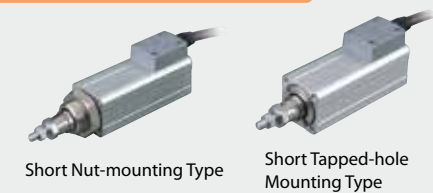
RCA2 MINI SLIDER TYPE



Motor Coupled Type Side-mounted Motor Type

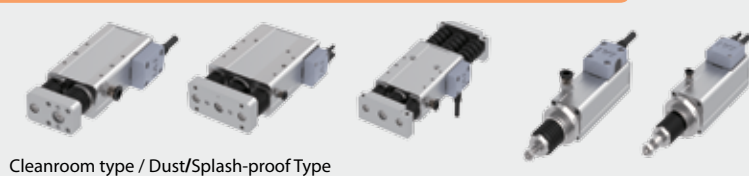
- Replacement is simple with the coupled type motor.
- You can choose from the straight type (motor coupled type) and the side-mounted motor type.

RCA2/RCS2 MINI ROD TYPE



Short Nut-mounting Type Short Tapped-hole Mounting Type

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

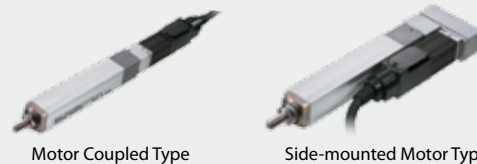


Cleanroom type / Dust/Splash-proof Type



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

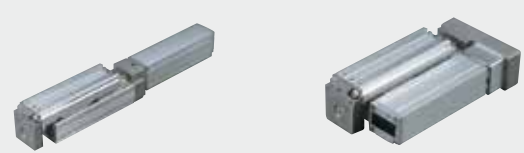
- You can choose between the slim motor coupled type and the short free mounting type, that has significantly reduced in length.
- You can choose between built-in guide type which allows for increased rigidity and straightness, or the external guide type which has significantly been reduced in size.

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

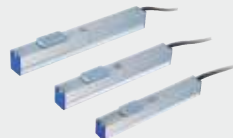
- The built-in guide allows the actuator to hold overhung loads.
- You can choose between the compact short type and the motor coupled type with longer stroke.

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.

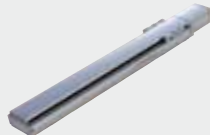
- By using linear motors, these actuators operate at a g-force (in speeds and acceleration force) of up to 2G.
- The slider and rod types are available. The slider-type has six different kinds based on size and stroke.
- The multi-slider type, which has two independently-working sliders installed on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

Single-axis Robots

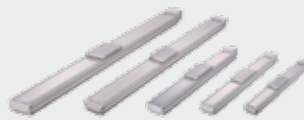
Intelligent actuators with high-speed and high-transfer capabilities



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



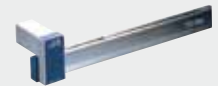
High-rigidity Type
(Steel-base)
SSPA



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

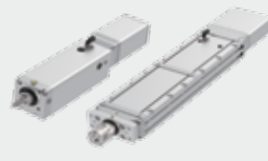
- A well sealed structure allows it to achieve a cleanliness class 10.
- A wide variety of products are available, from ROBO Cylinder® all the way to single-axis actuators and SCARA robots.

Splash-proof/Dust-proof Types

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



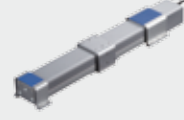
Stepper Motor
Water proof/Dust proof Type
EC-R6□W/R7□W



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

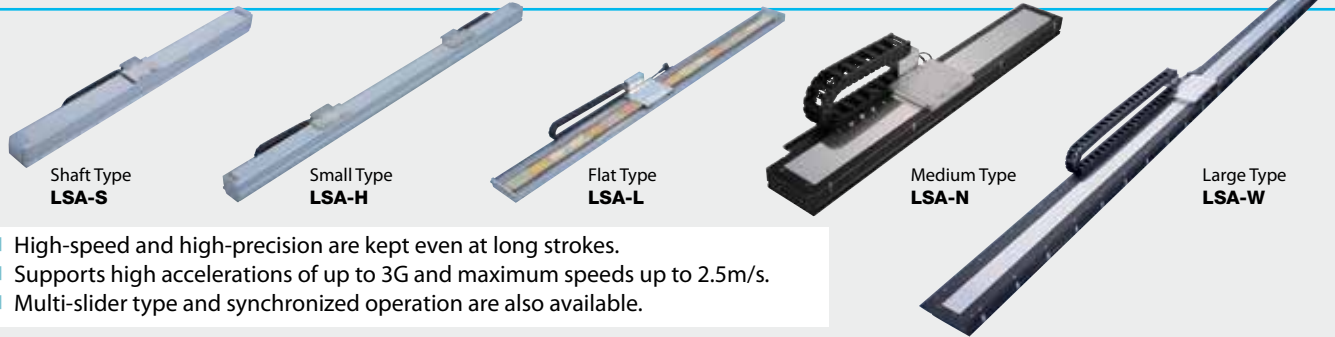


Direct Drive Motor
DDW

- 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.

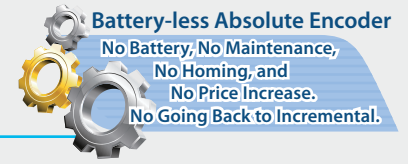
SUPER-LARGE SCARA ROBOT ARM LENGTH 1,000/1,200mm



- 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



Cantilever Type



- 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.



- Positioning repeatability ± 0.00103 degree ($\pm 3.7\text{s}$), Index accuracy ± 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



ICSB3/ICSPB3 3-AXIS CONFIGURATION



ICS(P)A4 4-AXIS CONFIGURATION



ICSPA6 6-AXIS CONFIGURATION



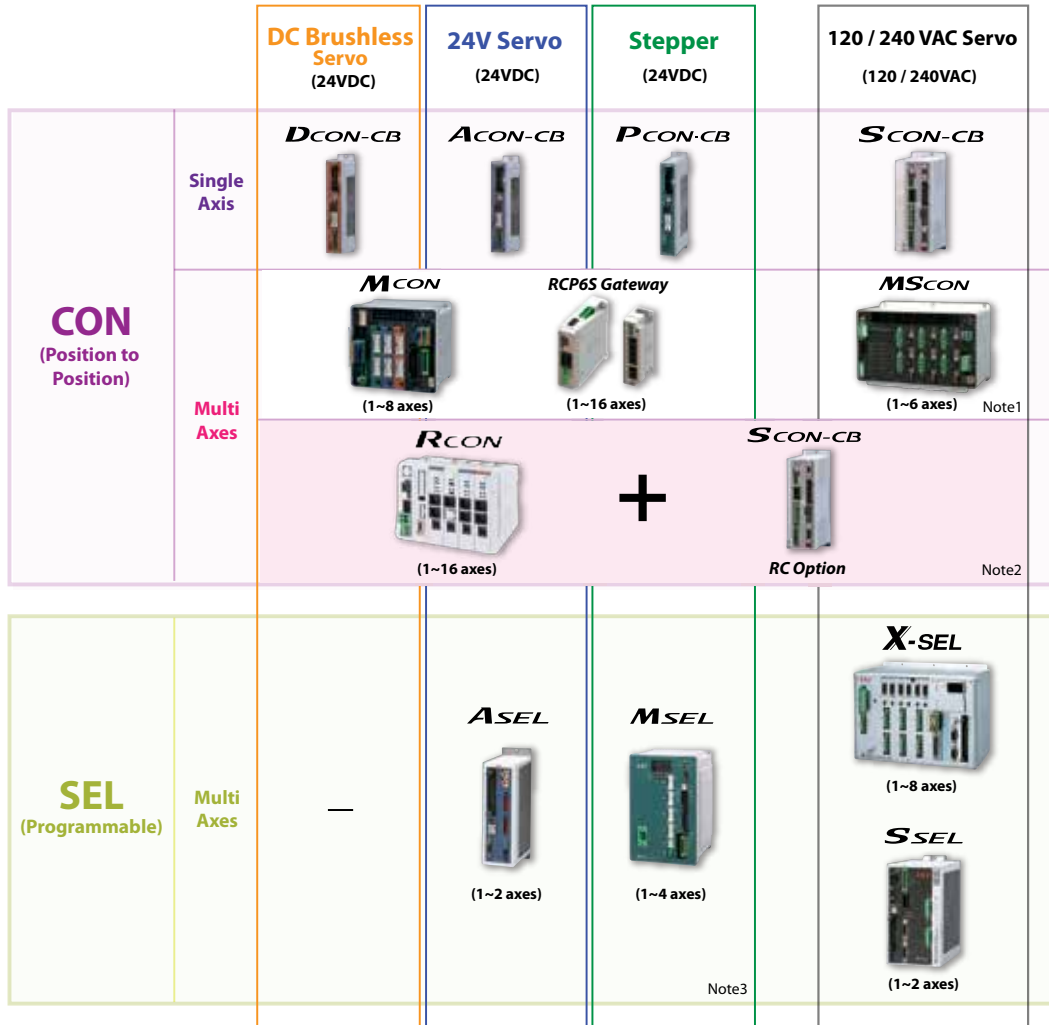
IK series 2-4-AXIS CONFIGURATION



- 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



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The information contained in this product brochure may change without prior notice due to product improvements.

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