High Rigidity Slider Type

Radial Cylinder Type

Mini Rod Type

Mini Table Type

High Rigidity Slider Type

Radial Cylinder Type

High Rigidity Radial Cylinder type

Waterproof Specification

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

Solenoid Gripper & Long stroke Gripper

Available now!

Solenoid Gripper

Long stroke Gripper

Hollow Roary & Rotary Chuck

Coming soon!

Hollow Rotary

Rotary Chuck

www.IntelligentActuator.com
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.

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

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.

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.

Battery-less Absolute Encoder

No Battery, No Maintenance, No Homing, and No Price Increase.
No Going Back to Incremental.

Improved positioning repeatability: ±10µm (Standard Type), ±5µm (High-Precision specification).
Cleanroom and Dust/Splash-Proof specification series available.

Loading repeatability is ±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.

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.

No Battery, No Maintenance, No Homing, and No Price Increase.
No Going Back to Incremental.

Battery-less Absolute Encoder

No Battery, No Maintenance, No Homing, and No Price Increase.
No Going Back to Incremental.

RCP6(S) STEPPER MOTOR SERIES MOTOR STRAIGHT TYPE

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

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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.

- 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.
- 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 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.

RCP5 SERIES

- Radial Load OK
- Slider Type
- Rod Type (Radial Cylinder)
- Side-mounted Motor Type
- Belt Type

RCP4 SERIES

- Radial Load OK
- Slider Type
- Rod Type (Radial Cylinder)
- Side-mounted Motor Type
- Stopper Cylinder (RCP4-ST)

RCP3 SERIES

- Table Type
- Slider Type
- Rod Type
- Belt Type
- High Thrust Type
- Flat Type
- Small type
- GRT-7A
- GRT-7B

RCP2 SERIES

- Slider Type
- Rod Type
- Belt Type
- High Thrust Type
- Vertical Type
- Ultra-compact Type
- GRT-7A
- GRT-7B

RCP4/RCP2/RCD GRIPPER

- Flat Type
- Small type
- GRT-7A
- GRT-7B

RCP6-GRT THIN GRIPPER

- Flat Shape with height of 39mm
- High Rigidity

RCA2 SERIES

- Slider Type
- Rod Type
- Side-mounted Motor Rod Type
- Rod Type with Guide

RCA SERIES 24V SERVO MOTOR TYPE

- Table Type
- Rod Type
- Side-mounted Motor Rod Type
- Rod Type with Guide

RCA SERIES

- Table Type
- Slider Type
- Rod Type
- Belt Type
- High Thrust Type
- Vertical Type
- Ultra-compact Type

ERC3 SERIES CONTROLLER INTEGRATED TYPE

- Slider Type
- Simple Dust-proof Type
- Rod Type

ERC3 SERIES

- Aluminum-base Type
- Steel-base Type
- Slider Type
- Side-mounted Motor Slider Type
- Slim Rod Type
- Gripper Type

RCS3 SERIES

- Aluminum-base Type
- Steel-base Type
- High-speed Slider Type
- RCS3-CT8C
- High-speed Table Type
- RCS3-CTZ8C
- Slider Type
- Side-mounted Motor Slider Type
- Slim Rod Type
- Large Diameter Hollow Rotary Type

RCS2 SERIES 100V/200V SERVO MOTOR TYPE

- Slider Type
- Rod Type
- Side-mounted Motor Rod Type
- Rod Type with Guide

RCS2 SERIES

- Slider Type
- Rod Type
- Side-mounted Motor Rod Type
- Rod Type with Guide

RCS3 SERIES

- Aluminum-base Type
- Steel-base Type
- High-speed Slider Type
- RCS3-CT8C
- High-speed Table Type
- RCS3-CTZ8C
- Slider Type
- Side-mounted Motor Slider Type
- Slim Rod Type
- Large Diameter Hollow Rotary Type

These actuators have 1.5 times higher speeds and double the payload compared to traditional models.
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

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

- The smallest in the industry with a cross-section size of 12mm.
- The built-in encoder allows position control.

**RCL MINI LINEAR SERVO TYPE**
- Micro Slider Slim Type
- Micro Slider Long Stroke Type
- Micro Cylinder Slim Type

- 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)**: SSA
- **Simple Dust-proof Type**: ISDB/ISPDB
- **High-rigidity Belt-drive Type**: IF
- **Slim Belt-drive Type**: FS

**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**
  - RACR
- **Servo Motor**
  - RCS2CR/RCS3CR
- **High-performance Type**: ISDBCRR/ISPDBCRR

- **Anti-static Type**: ISDBCR-ESD
- **Gripper Type**: RCP2CR-GR
- **Rotary Type**: RCP2CR-RT
- **SCARA Robot**: IXP-
- **Ultra-compact SCARA Robot**: IX-NNC
- **Direct Drive Motor**: DDACR

**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-R6W/RTW
- **Stepper Motor**
  - Radial Cylinder Type: RCP6(S)W-RA
- **Stepper Motor**
  - Radial Cylinder Type: RCP6(S)W-RRA
- **Stepper Motor**
  - Slider Type: RCP5W-RA
- **Stepper Motor**
  - Rod Type: RCP4W-SA
- **Stepper Motor**
  - Rod Type: RCP2W-SA
- **Stepper Motor Rod Type**: RCP2W-RA

- **Servo Motor Rod Type**: RCS2W-RA
- **Gripper Type**: RCP2W-GR
- **Rotary Type**: RCP2W-RT
- **Slider Type**: ISWA/ISPWA

**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.**

- **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.**

- **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!

- 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

- 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

- 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.

---

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Arm Length</th>
<th>Vertical Axis Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard/ High-speed Type</td>
<td>300mm</td>
<td>150mm</td>
</tr>
<tr>
<td>Standard/ High-speed Type</td>
<td>600mm</td>
<td>180/330mm</td>
</tr>
</tbody>
</table>

---

**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.

---

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

- 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.

---

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

- 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: ±0.005mm (AC servo motor) / ±0.01mm (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 (±3.7s), Index accuracy ± 0.00833 degree (±30s) 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 2-4AXIS 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

<table>
<thead>
<tr>
<th>DC Brushless Servo (24VDC)</th>
<th>24V Servo (24VDC)</th>
<th>Stepper (24VDC)</th>
<th>120 / 240 VAC Servo (120 / 240VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCON</td>
<td>RCP65 Gateway</td>
<td>PCON-CB</td>
<td>SCON-CB</td>
</tr>
<tr>
<td>(1~8 axes)</td>
<td>(1~16 axes)</td>
<td>(1~6 axes)</td>
<td>Note1</td>
</tr>
</tbody>
</table>

| RCON                        | SCON-CB           | RC Option      | Note2                             |
| (1~16 axes)                 |                   | Note3          |                                   |

| SEL (Programmable)          | Multi Axes        |              |                                   |
| ASEL                        | MSEL              | X-SEL         |                                   |
| (1~2 axes)                  | (1~4 axes)        | (1~8 axes)    |                                   |

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

**Power Supply**

Low-cost DC24V power supply ideal for powering actuators

- 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.

**Teaching Pendants**

Programming points have never been easier

Compatible with Safety Category

**FIELD NETWORKS**

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

**IAI America, Inc.**

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