

# IAI Industrial Robots Digest Catalog

2025  
Digest Catalog

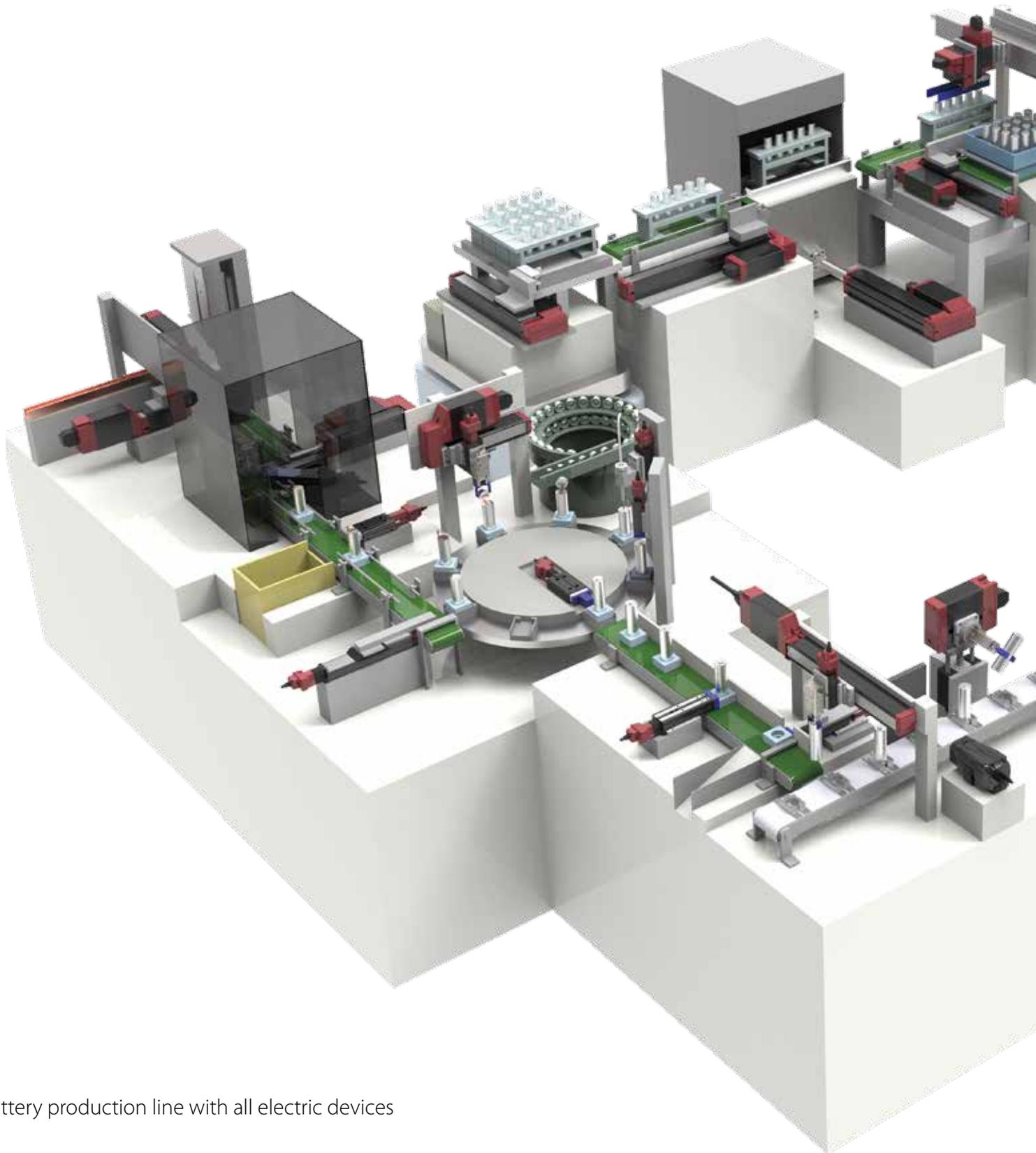
**IAI**  
Quality and Innovation

[www.intelligentactuator.com](http://www.intelligentactuator.com)

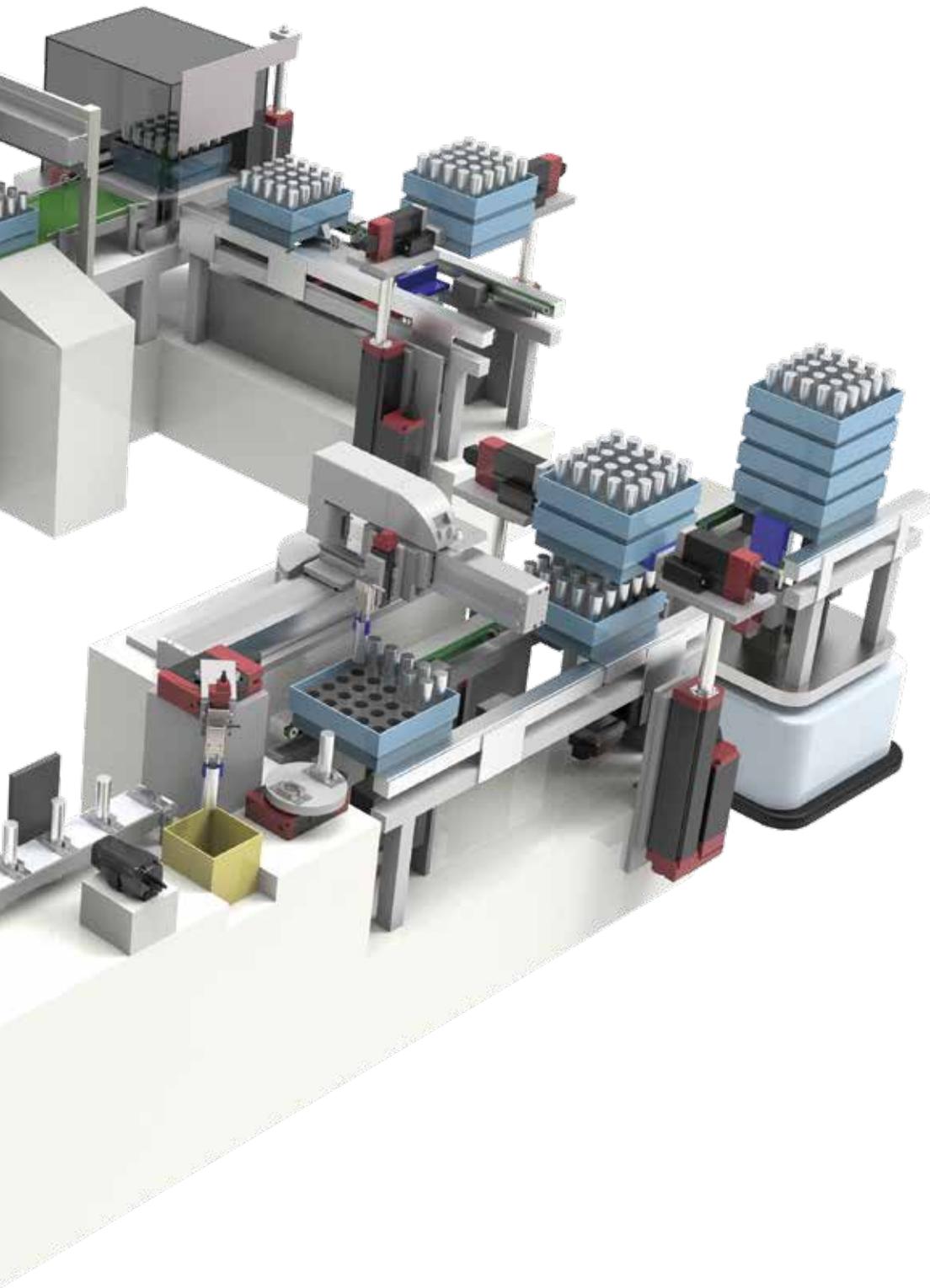


# INDEX

As a leading manufacturer of electric actuators/compact industrial robots, IAI always anticipates market needs and brings a variety of products to market each year. A wide variety of variations are available to provide the best system for your site.



Battery production line with all electric devices



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Leading manufacturer of compact industrial robots  
**World's No.1** share of single axis/Cartesian robots

## IAI Group Headquarters (Japan)

Company Name: IAI Corporation  
 Establishment date: April 3, 1976  
 Representative: President & CEO Toru Ishida  
 Business Description: Development, design, manufacturing and sales of compact industrial robots  
 Development of new agricultural technology (Eco-Farm Department)  
 Number of employees: 1,447 as of April 2025



A new plant was put into operation in 2024 to double production capacity. The headquarters has also been relocated to Ihara-cho accordingly.

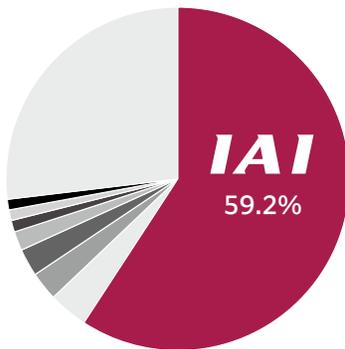
## Worldwide Offices



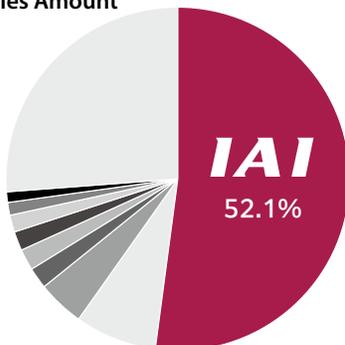
## Single Axis/Cartesian Robots Share in Japan

Japan 2022 Results (Fuji Economic Survey)

### Units Sold



### Sales Amount



## Societal Contribution

### Mini Robo



Mini Robo is a soccer robot developed by IAI. It was born out of the desire for children to experience the joy of making things. Tournaments are also held on a regular basis.

### IAI Stadium



IAI supports the local Shizuoka professional soccer team, the Shimizu S-Pulse, as a sponsor. In 2013, we acquired the naming rights for Nihondaira Stadium, the home stadium of Shimizu S-Pulse.

# What IAI can do for you

## Product lineup

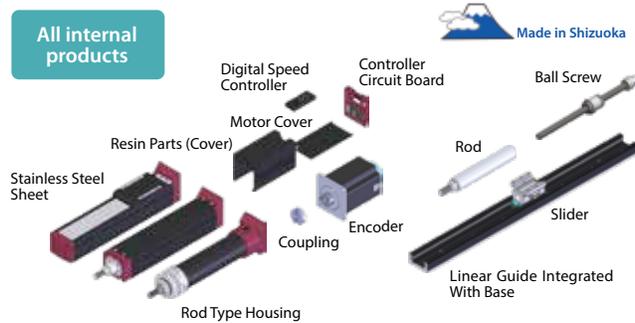
We offer the No. 1 product lineup in the electric actuator industry and a wide variety of variations. (For details, see p. 9)  
Usable for a variety of applications and conditions of use.



## Short Delivery

Major components are manufactured in-house, achieving stable delivery times.

(Ex.) ELECYLINDER®



## Long Life

No sealing material is used in sliding parts, resulting in a long service life.

(Ex.) ELECYLINDER®

### Operational conditions

Operating Day Per Year	Operating Hours	Movement Stroke	Payload	Operation Cycle
240 days	16 hours per day	300mm	Horizontal: 12kg	8 seconds per reciprocating motion

### Life

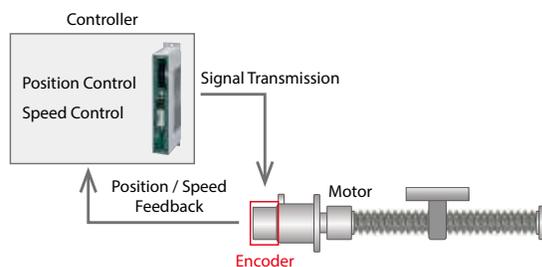
Product Specifications	Life	Operation Life	Lifespan Factors	Remarks
ELECYLINDER® EC-R7	15 Years	~16,000km	End of bearing life	Max. speed: 155mm/s Acceleration/deceleration: 0.5G

## Quality Improvement / Cycle Time Reduction

Maximizing the advantages of electric power contributes to improved productivity.

### Feedback Control

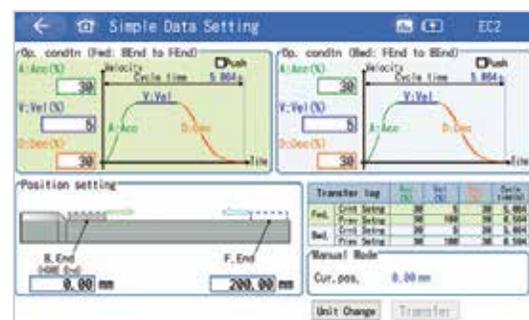
All motors, including stepper motors, are equipped with encoders. The unit continues to operate according to the command value by feedback control.



- ▼ Feedback control
- Position: 1,000 times/second
- Speed: up to 20,000 times/second

### AVD Control

In addition to speed, acceleration and deceleration can be set respectively. Able to increase speed while reducing impact at the start and stop of movement.



Operating conditions abbreviation: AVD

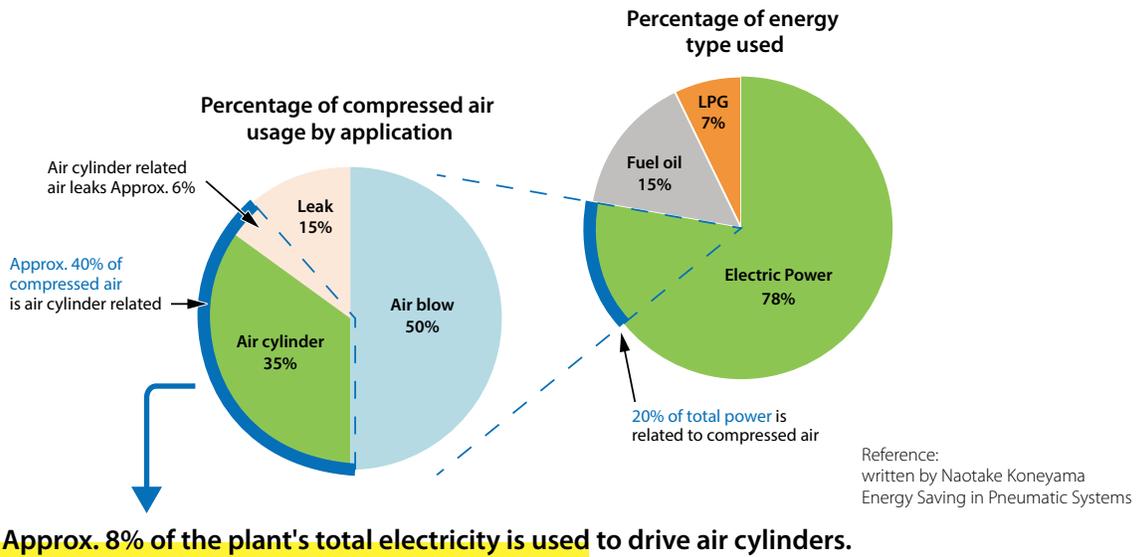
- Acceleration
  - Velocity
  - Deceleration
- } AVD

## Toward Carbon Neutrality

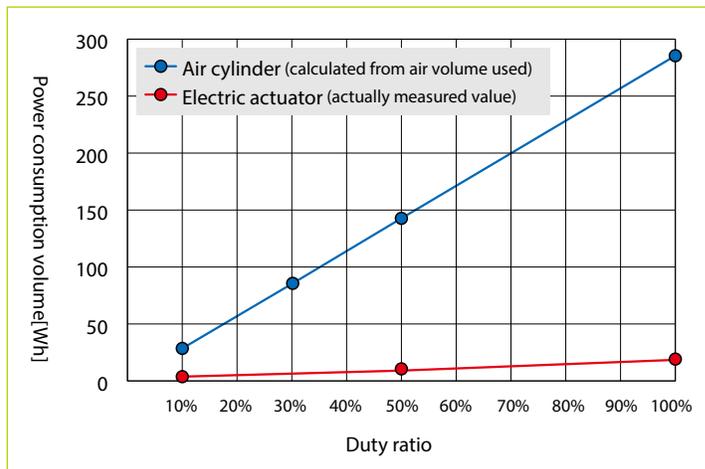
### Energy Saving

Since compressed air is not used, power can be utilized efficiently.

### Percentage of energy used by the plant



### Comparison of power consumption of air cylinders and electric actuators



- Air cylinder (Ø25)  
Air piping inner diameter Ø4mm x 2m, stroke 300mm, 0.4MPa, 300mm/s
- Electric actuator (EC-S6H)  
Horizontal, stroke 300mm, 1G, 300mm/s, 12kg transfer

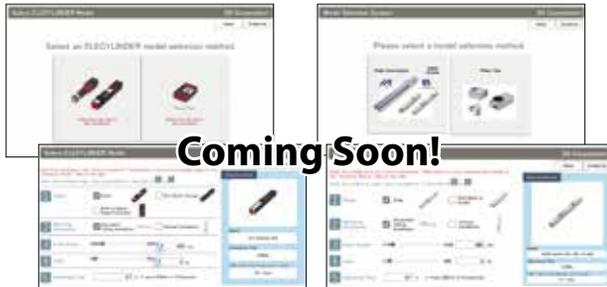
As duty ratio (operating rate) increases, **electric actuators consume less power.**

## The IAI Website

Please take advantage of the useful tools on our website

### Model Selection Software

The optimal model can be selected from approximately 1 million items in one attempt.



Once it's available, we will put the information here. [intelligentactuator.com/new-configurator](http://intelligentactuator.com/new-configurator)

### Catalog PDFs

Please refer to the catalogs for dimensional drawings and specification details.

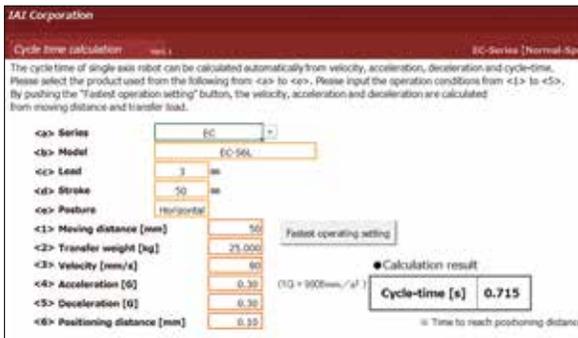


We recommend the Digital Catalog, which has an extensive search function.

Please contact your sales representative or nearest sales office. We also accept requests for information through our website.

### Cycle time calculation software

The cycle time can be checked in advance by the desired actuator and operating conditions of the application.



### Video Lineup

Over 300 videos are available on the IAI YouTube channel. Please refer to the videos for applications and solutions.



## Services

We provide support from application sizing, to actuator maintenance, as well as training and seminars

#### Special specifications supported (customization service for standard products)

We will make proposals and modify the standard product according to your request.



+



#### Training and maintenance seminars, both on-site and in our offices are available

We actively conduct training for hands-on experiences with our softwares, as well as maintenance and safety seminars.



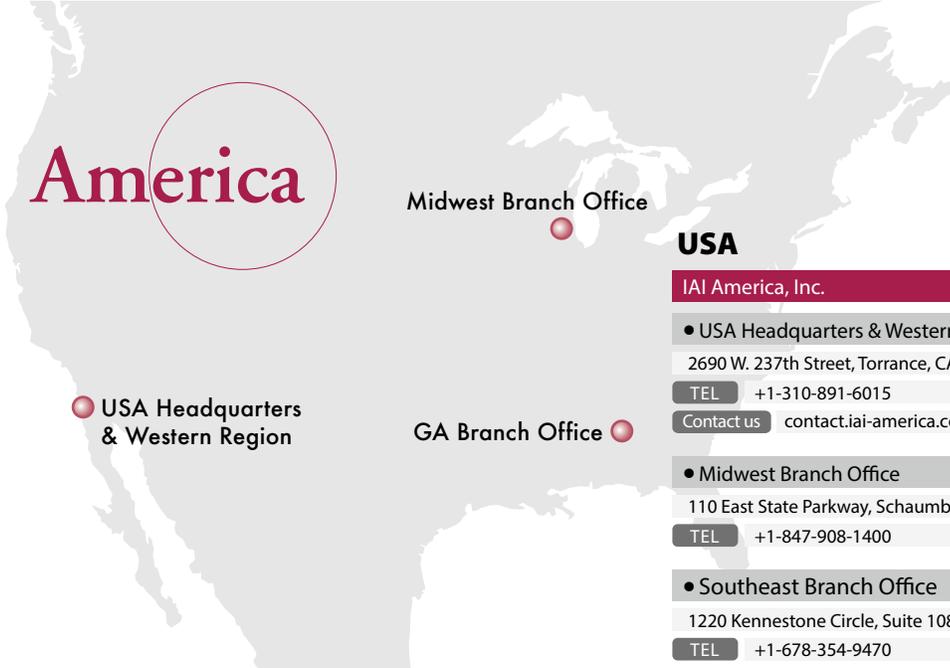
#### Troubleshooting and repair services

A dedicated maintenance and repair contact will respond in a timely manner to any issues that may arise.

# Support system

## ■ Overseas Sales Companies

Support overseas with the same attention to detail as in Japan ~Technical Support at USA, Europe and Asia OCEANIA~



### America

**USA**

Japanese OK TEC Wrench Airplane

**IAI America, Inc.**

- USA Headquarters & Western Region  
2690 W. 237th Street, Torrance, CA 90505, USA  
TEL +1-310-891-6015 URL [www.intelligentactuator.com](http://www.intelligentactuator.com)  
Contact us [contact.iai-america.com](mailto:contact.iai-america.com)
- Midwest Branch Office  
110 East State Parkway, Schaumburg, IL 60173, USA  
TEL +1-847-908-1400 Contact us [contact.iai-america.com](mailto:contact.iai-america.com)
- Southeast Branch Office  
1220 Kennestone Circle, Suite 108, Marietta, GA 30066, USA  
TEL +1-678-354-9470 Contact us [contact.iai-america.com](mailto:contact.iai-america.com)



### Brazil

CBD Mecânica Industrial Ltda. •

**Brazil**

Japanese OK TEC Wrench

**CBD Mecânica Industrial Ltda.**

Rua José Tanoeiro, 261-Vila Monte Sion-08613-123-Suzano-São Paulo-Brazil

TEL +55-11-4745-3939 FAX +55-11-4745-3949  
E-mail [e.nakashima@cbd.com.br](mailto:e.nakashima@cbd.com.br) URL [www.cbd.com.br](http://www.cbd.com.br)



### Europe

IAI Industrieroboter GmbH

**Germany/Europe**

Japanese OK TEC Wrench Airplane

**IAI Industrieroboter GmbH**

Ober der Roth 4, D-65824 Schwalbach am Taunus, Germany

TEL +49 (0) 6196-88950 FAX +49 (0) 6196-889524  
E-mail [info@iai-automation.com](mailto:info@iai-automation.com) URL [www.iai-automation.com](http://www.iai-automation.com)



### Australia

Treotham Automation PTY LTD

**Australia (New Zealand)**

TEC

**Treotham Automation PTY LTD**

109 Wicks Road, Macquarie Park NSW 2113, Australia

TEL +61-2-9907-1788 FAX +61-2-9907-1778  
URL <https://treotham.com.au>



Japanese Language Support



Technical Support



Simple Repair



Global Support



# Asia

JAPAN  
IAI Group Headquarters

CHINA Headquarters

Shenzhen Branch Office

IAI Robot (Thailand) Co., Ltd.

## JAPAN

### IAI Group Headquarters

#### • Head Office/Factory

1210 Iharacho, Shimizu-ku, Shizuoka City, Shizuoka Prefecture 424-0114

#### • Fujinomiya Factory

1700 Utsubusa, Fujinomiya City, Shizuoka Prefecture 419-0317

## China

### IAI (Shanghai) Co., Ltd.



#### • CHINA Headquarters

SHANGHAI JIAHUA BUSINESS CENTER A8-303, 808, Hongqiao Rd. Shanghai 200030, China

TEL +86-21-6448-4753 FAX +86-21-6448-3992 E-mail shanghai@iai-robot.com

URL www.iai-robot.com

#### • Shenzhen Branch Office

Rm 502,212 Block, Tairan 4nd Rd, Tairan Industry Park, Chegongmiao, Shenzhen 518042, China

TEL +86-755-2393-2307 FAX +86-755-2393-2432 E-mail shenzhen@iai-robot.com

#### • Tianjin Branch Office

Rm 2-1105, Hesheng Fortune Square, South side of Beian Bridge, Nanshi Street, Heping Qu, Tianjin 300021, China

TEL +86-22-5817-1826 FAX +86-22-5817-1828 E-mail tianjin@iai-robot.com

## Korea

### IA KOREA Corp.



A-501, Bundang Suji U-Tower, 767, Sinsu-ro, Suji-gu, Yongin-si, Gyeonggi-do 16827 KOREA

TEL +82-31-525-3500 FAX +82-31-525-3515

E-mail info@iakorea.co.kr URL www.iakorea.co.kr

## Taiwan

### Alteks Co., Ltd.



5F, 580, Sec. 1, Min-Sheng N. Rd., Kuei-Shan, Taoyuan, Taiwan R.O.C.

TEL +886-3-2121020 FAX +886-3-2121250

URL www.alteks.com.tw

### FEDERAL WORLD-WIDE Co., Ltd.



Rm. 1, 14F., No.150, Jian 1st Rd., Zhonghe District, New Taipei City 235, Taiwan R.O.C.

TEL +886-2-8226-5570 FAX +886-2-8226-5430

URL www.kgn.com.tw

### HSIN HSIE SHIANG TRADING Co., Ltd.



4F-1, No.58, Hsing Shan Rd., Neihsu Dist., Taipei City 114, Taiwan R.O.C.

TEL +886-2-8792-9888 FAX +886-2-8792-9968

URL www.hhstc.com.tw

## Thailand

### IAI Robot (Thailand) Co., Ltd.



825 PhairojKijja Tower 7th Floor, Debaratana RD., Bangna Nuea, Bangna, Bangkok 10260, Thailand

TEL +66-2-361-4457~59 FAX +66-2-361-4456

E-mail info@iai-robot.co.th URL www.iai-robot.co.th

## Singapore

### SUS (Singapore) Pte. Ltd.



19 Tannery Road 347730, Singapore

TEL +65-6842-4348 FAX +65-6842-3646

## Vietnam

### Standard Units Supply (Vietnam) Co., Ltd.



Workshop X6, Hai Thanh Leasing workshop area, Hai Thanh Ward, Duong Kinh District, Hai Phong city, Vietnam

TEL +84-2253-632-403 FAX +84-2253-632-405

## Philippines

### Standard Units Supply Philippines Corporation



Building R1-D, Lot 13, Phase 1B, First Philippine Industrial Park, Special Economic Zone, Tanauan City, Batangas 4232, Philippines

TEL +63-43-430-0290~0299 FAX +63-43-430-1071

## Malaysia

### XTS TECHNOLOGIES SDN BHD



No.21, Jalan MJ14, Taman Industri Meranti Jaya, 47120 Puchong, Selangor, Malaysia

TEL +6-03-8066-2496 FAX +6-03-8066-2496

## Indonesia

### PT.ETERNA KARYA SEJAHTERA



Duta Merlin Block C No. 31-32 Jl.Gajah Mada No.3-5 Jakarta 10130, Indonesia

TEL +62-21-6341749 FAX +62-21-6341751

## India

### Standard Units Supply (India) Pvt. Ltd.



43/1 Padasalai Street, Ayanambakkam, Chennai 600095, Tamil Nadu, India

TEL-FAX +91-44-49524482

## Product lineup list

**2-point / 3-point Positioning (ELECYLINDER)** \*A new "3 position mode specification" option is now available. Reference page ▶ **P15**

Type	Slider	Radial Cylinder	Rod	Table	Gripper	Rotary	Stopper	Cleanroom	Dust-proof/splash-proof
Exterior									
Body width	20~188mm	20~108mm	13~148mm	26~88mm	25~138mm	45~185mm	42/93/112/148mm	35~120mm	63/73mm
Stroke	25~2800mm	25~1000mm	10~300mm	10~150mm	2~130mm (one side)	330 deg.	10~50mm	50~2000mm	50~800mm
Max. payload	Horizontal 400kg Vertical 120kg	Horizontal 300kg Vertical 150kg	Horizontal 80kg Vertical 19kg	Horizontal 20kg Vertical 7kg	10~1641N (Max. grip force on both sides)	0.6~25.2N (Max. torque)	100kg (Max. workpiece mass)	Horizontal 90kg Vertical 55kg	Horizontal 80kg Vertical 19kg
Max. speed	2000mm/s	860mm/s	860mm/s	800mm/s	225mm/s	600 deg./s	350mm/s	1350mm/s	860mm/s

## Multi-point positioning / Special application

Reference Page ▶ **P23**

Type	Slider	Linear Servo	Rod	Radial Cylinder	Table	Pulse / Servo Press	Gripper	Rotary	Special Applications
Exterior									
Body width	22~198mm	60~210mm	12~200mm	40~160mm	32~95mm	40~200mm	22~123mm	45~233mm	-
Stroke	25~3200mm	40~4155mm	10~500mm	50~800mm	25~390mm	100~520mm	2~130mm (one side)	330 deg. 360 deg. (Multi-rotation)	-
Max. payload	Horizontal 400kg Vertical 80kg	Horizontal 120kg	Horizontal 1000kg Vertical 600kg	Horizontal 300kg Vertical 150kg	Horizontal 30kg Vertical 24kg	~50,000N (Max. push force)	10~880N (Max. grip force on both sides)	0.24~75N (Max. torque)	-
Max. speed	3000mm/s	2500mm/s	1200mm/s	1500mm/s	1300mm/s	240mm/s	643mm/s	1800mm/s	-

## Multi-axis products

Reference Page ▶ **P29**

Type	Cartesian Robot	Tabletop Robot	Cartesian 6-Axis Robot	SCARA Robot
Exterior				
Number of Axes	2~6 axes	2~4 axes	6-axis	3~4 axes
Base axis movable range	50~4155mm	200~500mm	50~1100mm	180~1200mm
Max. payload	90kg	30kg	2kg	50kg
Max. speed	2500mm/s (Base axis max. speed)	1200mm/s (Base axis max. speed)	700mm/s (Max. composite speed)	9215mm/s (Max. composite speed)

### Products with special specifications



In addition to standard products, we also offer various products with special specifications. If you do not find the product you need, contact our sales representative.

The most requested special specifications, such as non-standard stroke/grease, air purge joint attachment, stainless steel grease nipple, etc., are listed in the leaflet on the left.



Special controller specifications and products for rechargeable battery manufacturing processes are also available.

[intelligentactuator.com/special-specification-products/](http://intelligentactuator.com/special-specification-products/)

## Cleanroom / Dust-proof and splash-proof

Reference Page ▶ P33

Type	Slider	Rod	Radial cylinder	Gripper	Rotary	SCARA Robot
Exterior						
Body width	40~198mm	28~85mm	45~160mm	42~80mm	45~195mm	3~4 axes (axes qty.)
Stroke	25~2500mm	25~300mm	50~800mm	4~7mm (one side)	330 deg. 360 deg. (Multi-rotation)	300~1200mm (Arm length)
Max. payload	Horizontal 150kg Vertical 60kg	Horizontal 100kg Vertical 70kg	Horizontal 240kg Vertical 120kg	6.4~102N (Max. grip force on both sides)	0.24~75N (Max. torque)	47kg
Max. speed	2000mm/s	630mm/s	630mm/s	600mm/s	1800mm/s	8098mm/s (Max. composite speed)

## Controller

Reference Page ▶ P37

Type	RCON	RSEL	REC	PCON-CB/CGB	ACON-CB/CGB	DCON-CB/CGB	SCON2	MSEL	XSEL2	XSEL-RA/SA	XSEL-RAX/SAX (For SCARA)
Exterior											
Max. number of connectable axes	~16 axes	~8 axes (16 axes for EC)	~16 axes	1-axis	1-axis	1-axis	1-axis	~4 axes	~8 axes	~8 axes	~8 axes
Compatible Motor	   	   	  								
Interpolation operation	×	✓	×	×	×	×	×	✓	✓	✓	✓
IAI Exclusive Program (SEL Language)	Not required	Required	Not required	Not required	Not required	Not required	Not required	Required	Required	Required	Required
Supported control method	I/O (input-output)	×	✓	×	✓	✓	✓	✓	✓	✓	✓
	Pulse-train	×	×	×	✓	✓	✓	×	×	×	×
	Field Network	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## Other (24VDC power supply / teaching, etc.)

Reference Page ▶ P41

Type	24VDC power supply	Teaching software for PC		Teaching pendant			Wired Teaching Controller	Wireless Teaching Controller	Brake Release Box
	PSA-24(L)	IA-OS	IA-101	TB-02	TB-03	ADTB	TBD-1	TBD-1WL	BKR-01
Exterior									
Overview	IAI exclusive power supply. Up to 5 units can be connected in parallel.	Compatible with EC, REC, and controllers with □CON in the model name.	Compatible with TTA and controllers having □SEL in the model name.	Compatible with all models listed in the General Catalog. Safety category compliant.	Compatible with all models listed in the General Catalog. Wireless communication with ELECYLINDER is possible.	Teaching pendant with power supply unit. Test run and data setting are possible even before electrical wiring work is done.	Connectable to all ELECYLINDER.	Wireless communication with ELECYLINDER is possible.	Actuator brake release without wiring to the controller during equipment start-up.

**In the case of 2-point positioning (ELECYLINDER),** system configuration necessary for operation is as follows.

## Configuration example

### ELECYLINDER

Model selection software coming soon.



The optimal model can be selected from approximately 1 million items in one attempt.

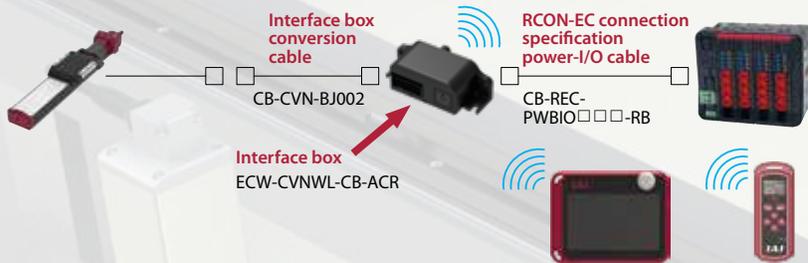
### 24VDC power

Power supply for driving ELECYLINDER.  
Power supply selection requires capacity calculation.  
The power calculator software makes calculation easy.

[Options] » P41 » P43

### In the case of ELECYLINDER\*<sup>1</sup> with actuator cable.

When connecting the REC/EC connecting unit and performing wireless teaching\*<sup>2</sup>, order an interface box, conversion cable, and power-I/O cable separately.



\*1 S□D/S□W/R□W/RR□W are excluded.

\*2 Simultaneous use of specifications RCON-EC connection specification (ACR) and Wireless axis operation specification (WL2) is available as a special order.

\*Only applies to models that require an interface box.

\*For details, please contact IAI.

### Cable

Able to select up to 10m.  
Specify the cable length within the ELECYLINDER model number.

[Included with ELECYLINDER]

### Teaching tools

Three methods are available.

**1 IA-OS** (PC teaching software)

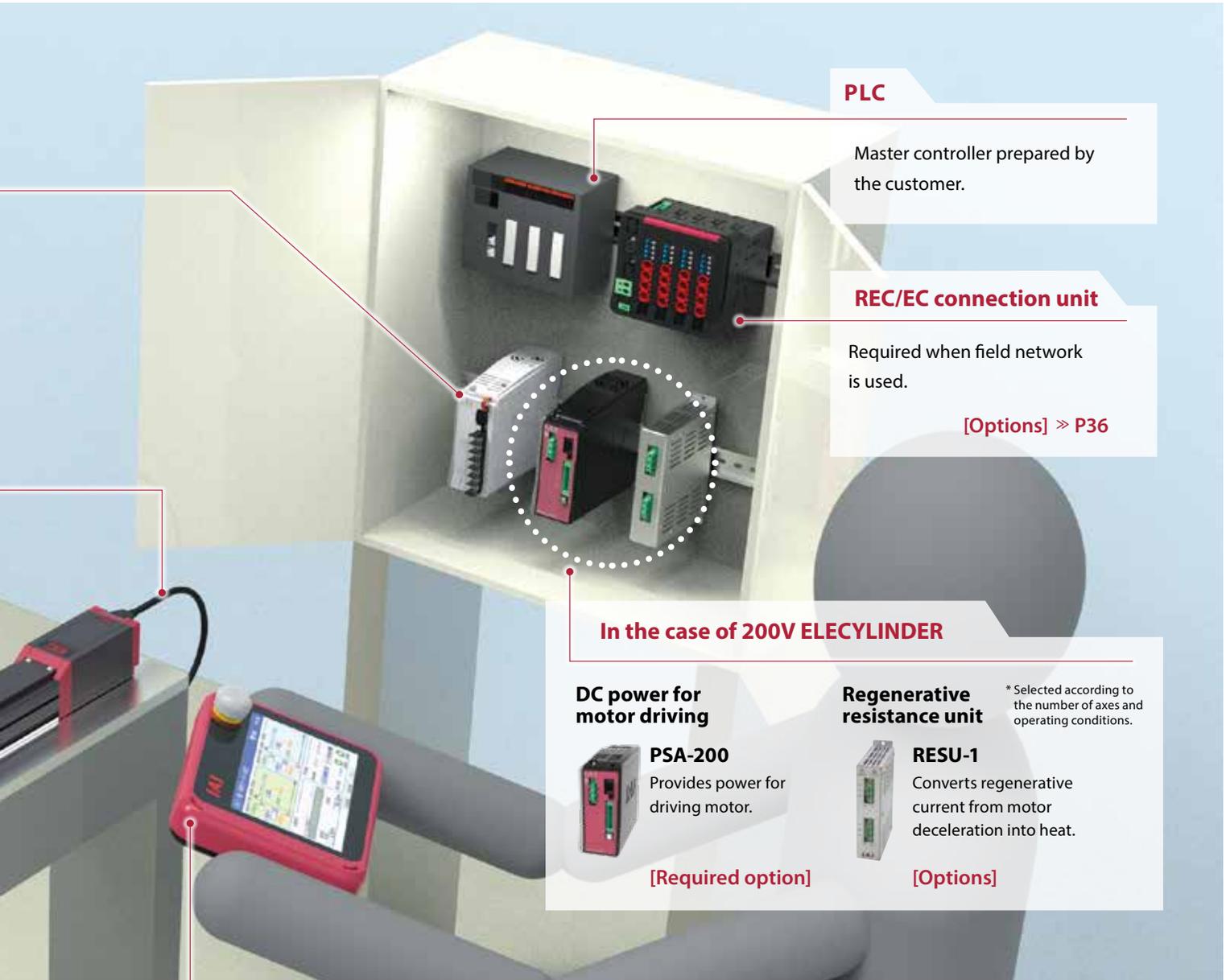


This is start up supporting software for position input, trial operation, monitoring function, etc.

\*Please purchase through your distributor and a download link will be sent to your valid email address.

[Options] » P43

\* Since the ELECYLINDER has a built-in controller, a separate controller is not needed.



**PLC**

Master controller prepared by the customer.

**REC/EC connection unit**

Required when field network is used.

[Options] » P36

**In the case of 200V ELECYLINDER**

**DC power for motor driving**



**PSA-200**  
Provides power for driving motor.

[Required option]

**Regenerative resistance unit**



**RESU-1**  
Converts regenerative current from motor deceleration into heat.

[Options]

\* Selected according to the number of axes and operating conditions.

**2 Teaching pendant**

Wireless/Wired supported



▲TB-03

The same settings and operations as the PC software is possible wirelessly.



▲TB-03E

With a power unit, data setup and test runs are possible even before wiring is completed.

[Options] » P42

**3 Digital teaching controllers**

\* Parameter editing is impossible

**Wireless teaching controller**

Wireless only



▲TBD-1WL

Easy setting like a remote controller

**Wired teaching controller**

Wired only



▲TBD-1

Can be connected to all ELECYLINDER models.

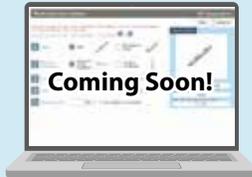
[Options] » P41

**For the multi-positioning/multi-axis products/cleanroom/dust and splash-proof type,** the required system configurations are as follows.

## Configuration example

### Actuator

Model selection software coming soon.



The optimal model can be selected from approximately 1 million items in one attempt.

### PLC

Master controller prepared by the customer.

### I/O cable and connector

Communication cable between controller and PLC. Specify cable length within the controller model number.

For the field network specification, only a connector is included.

[Supplied with the controller]

### 24VDC power

Power supply for driving 24V actuators.

Power supply selection requires capacity calculation.

The power calculator software makes calculation easy.

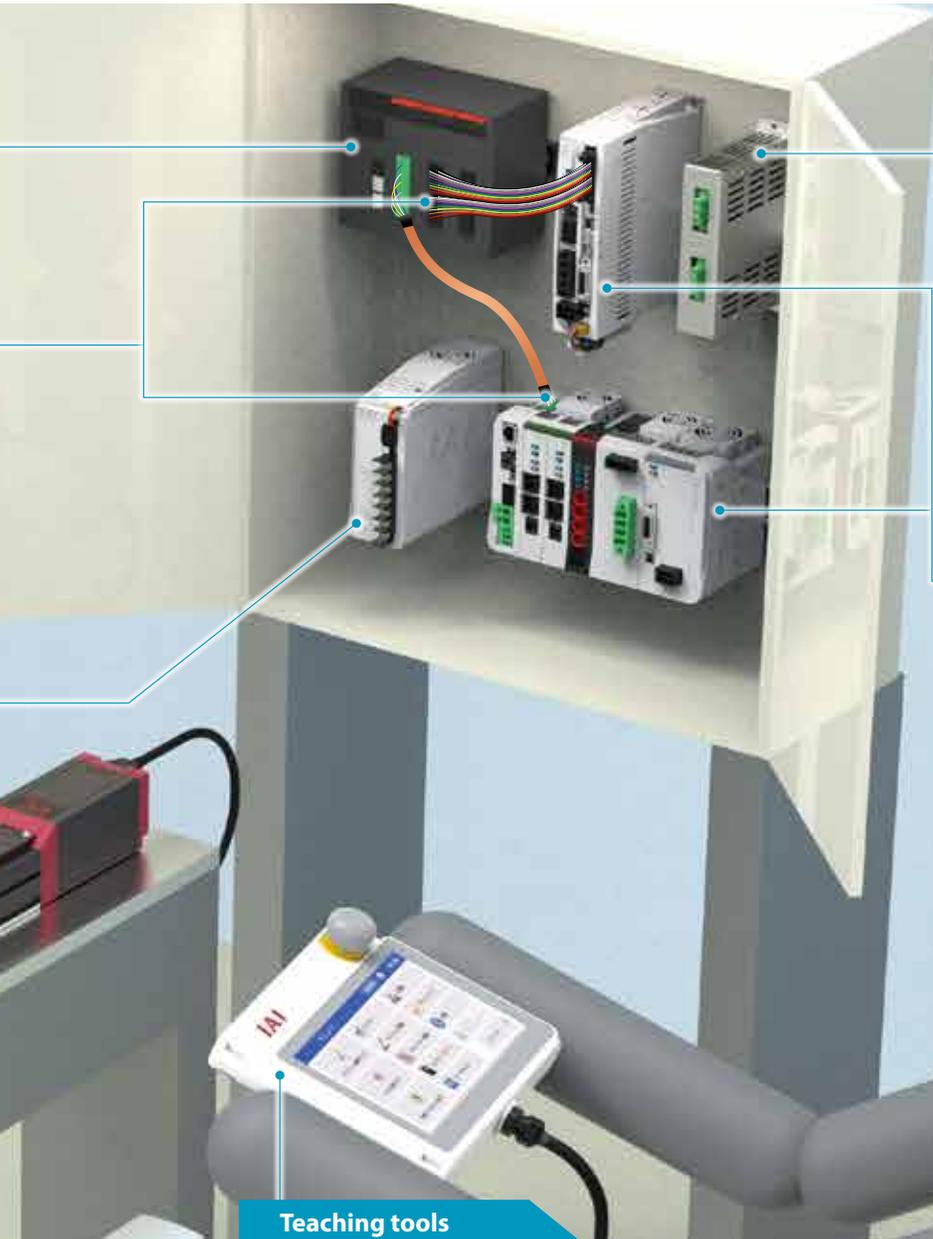
[Options] » P41 » P43

### Motor-encoder cable

Cable between actuator and controller. Specify the cable length within the actuator model number.

[Included in the actuator]

\* Since the table top robot (TTA) has a built-in controller and power, a separate controller is not required.



### In the case of 200V actuators

#### Regenerative resistance unit

\* To be selected according to the number of axes and operating conditions.



#### RESU-1/RESU-2

Converts regenerative current from motor deceleration into heat.

[Options]

#### Controller

Required unit for driving actuators.

» P37

### Teaching tools

Two methods are available.

#### 1 PC teaching software

##### IA-OS



Software for controllers having  CON in the model name.

[Options] » P43

##### IA-101



Software for controllers having  SEL in the model name. This is useful when creating programs or performing simulations.

[Options] » P44

#### 2 Touch panel teaching pendant



Convenient for error checking and adjustments at the palm of your hand.

[Options] » P42

\* Please purchase through your distributor and a download link will be sent to your valid email address.



**What is ELECYLINDER?**

Like solenoid valves, ELECYLINDER can be operated with only an ON/OFF signal, making them easy to operate even for first-time users of electric actuators.

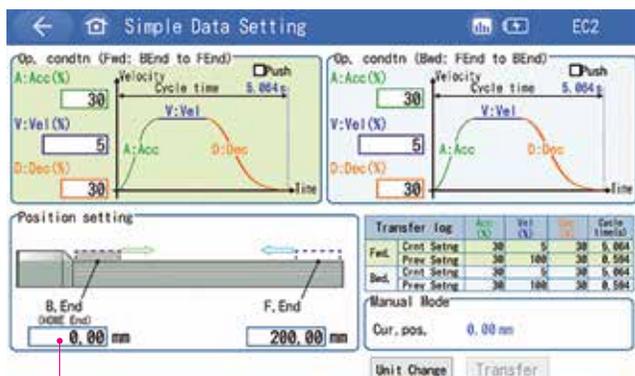
- Electric actuator based on the concept of “simple”
- Built-in controller
- Programless

**ALL IN ONE**



**Simple operation**

Enter numerical values for position, speed, acceleration, deceleration, and push force.



The current position can also be captured.

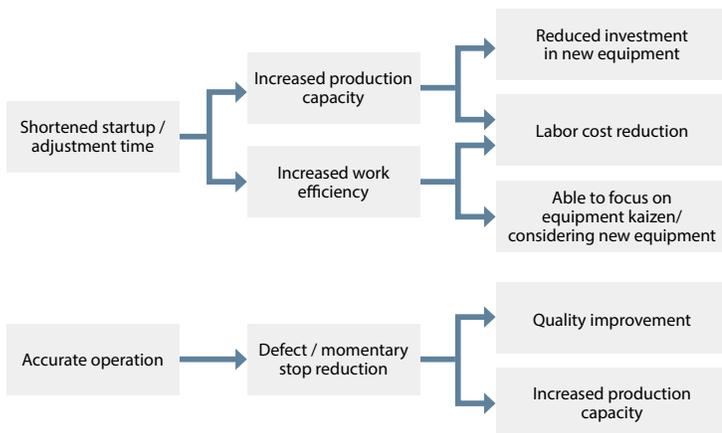
Can operate from a remote location!

Wireless communication possible



**Is your plant going digital?**

- Set numerically → Can be set up accurately by anyone.
- Controlled numerically → At changeover, simply enter the previously confirmed values. Easy teaching even with a large number of adjustment axes.
- Confirm cycle time → Cycle time can be confirmed on the settings tool screen.



Reliable adjustments can be made without relying on intuition or experience. High quality manufacturing is possible because there is no misalignment or speed reduction.

Company A and Company B on a certain day

Company A Uses air cylinder

Company B Uses ELECYLINDER

**PM 5:10**  
Company A: Hey rookie! The speed is not at all correct!  
Company B: Beep Beep

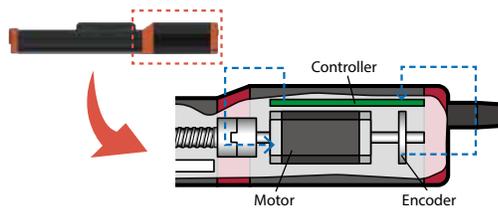
**PM 5:20**  
Company A: It's impossible to adjust the flow valve to the same speed on several axes. What are you saying?!!  
Company B: For this new equipment, these are the values!

**PM 5:25**  
Company A: If you do it often enough, eventually you will get used to it. This, too, is experience!  
Company B: Are you new here? You work really fast! You can go home now!

**PM 10:30**  
Company A: They said I would get used to it, but I just don't know! Zoom! Tumble Tumble! At this rate, I won't be able to go home!  
Company B: Yes! Thank you very much! Let's get ready for tomorrow by going to bed early...

## High Performance

Once set, it will continue to operate at the same value.



### ▼ Feedback Control

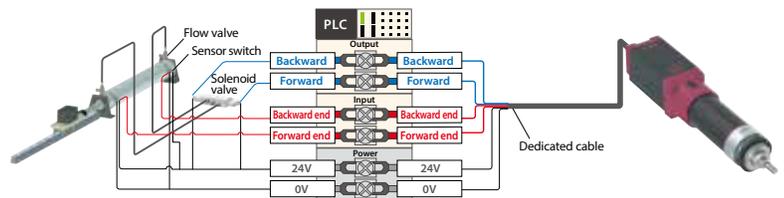
Position: 1,000 cycles/sec.  
Speed: ~20,000 cycles/sec.

### ▼ Set-values Unit

Position: 0.01mm  
Speed: 0.01mm/s

## Reduced wiring

Can be operated with the same wiring and PLC ladder program as the air cylinder.



Can be operated by the same ON/OFF signals as a solenoid valve.

## Energy saving

Reduces power consumption and contributes to energy savings.

### Air cylinder



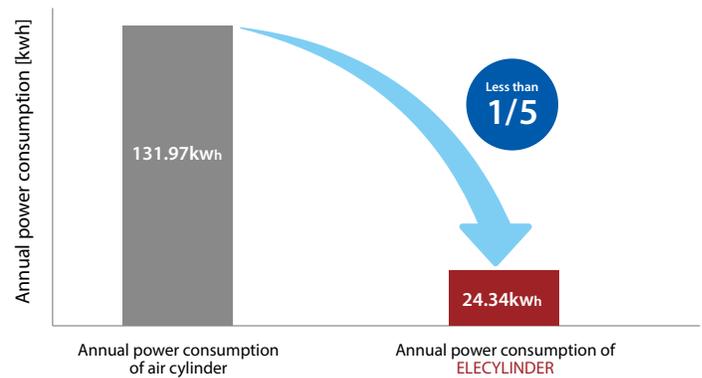
Stroke ..... 300mm  
Speed ..... Approx. 300mm/s  
Load Mass ..... 30kg  
Bore system ..... Ø40  
Moving distance ..... 300mm  
One-way travel time ..... Approx. 1.2 sec.  
Stop time ..... 17 sec.  
Mounting posture ..... Horizontal

### Electric (ELECYLINDER)



Stroke ..... 300mm  
Speed ..... 300mm/s  
Load Mass ..... 30kg  
Acceleration/deceleration ..... 0.3G  
Moving distance ..... 300mm  
One-way travel time ..... 1.2 sec.  
Stop time ..... 17 sec.  
Mounting posture ..... Horizontal

### ▼ Comparison of annual power consumption



\*The comparison is for annual power consumption based on operation of 250 days/year and 10 hours/day for electric actuator and air cylinder.

\*Factory air pressure: 0.6Mpa, Regulator output pressure: 0.4Mpa

\*Air cylinders are calculated based on air consumption.

\*Air cylinder is calculated from actual value of air power meter (by Tokyo Meter)

\*Compressor efficiency: 69% (based on values in our factory)

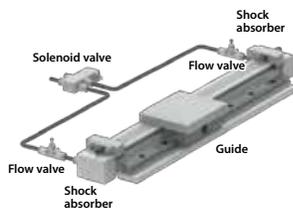
## Low price

Designed to offer cost performance comparable to air cylinders.

### ▼ Rodless type

By integrating functions that normally require external components—such as speed controllers and solenoid valves—ELECYLINDER helps reduce overall system cost. It is designed to minimize total ownership cost throughout the equipment's lifetime.

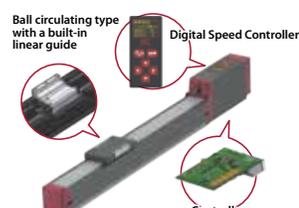
### Air cylinder



- ✓ Air cylinder body (with guide)
- ✓ Flow valve
- ✓ Shock absorber
- ✓ Solenoid valve

Rodless air cylinder Ø25  
Stroke 300 mm

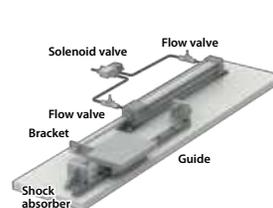
### ELECYLINDER



- ✓ ELECYLINDER built-in
  - Linear guide
  - Motor Encoder
  - Ball screw
  - Controller

ELECYLINDER DS7 with digital speed controller  
Stroke 300 mm

### Air cylinder



- ✓ Air cylinder body
- ✓ Guide
- ✓ Flow valve
- ✓ Shock absorber
- ✓ Solenoid valve

Rod type air cylinder Ø25  
Stroke 300 mm

### ELECYLINDER



- ✓ ELECYLINDER built-in
  - Linear guide
  - Motor Encoder
  - Ball screw
  - Controller

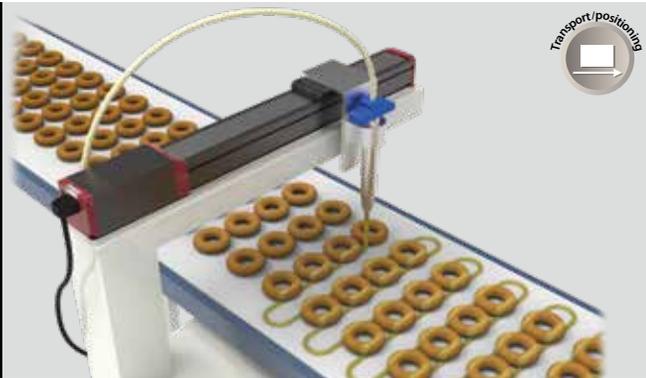
ELECYLINDER DRR6 with digital speed controller  
Stroke 300 mm

2 POSITION  
3 POSITION

# Slider type

Ideal for moving workpieces in the Horizontal direction or over long distances.

## ELECYLINDER



**Catalog Download:**  
intelligentactuator.com/dg23-p13-1



**How to select ELECYLINDER:**  
intelligentactuator.com/dg23-p13-2



**ELECYLINDER Product Page:**  
intelligentactuator.com/dg23-p13-3



\*A new "3 position mode specification" option is now available.

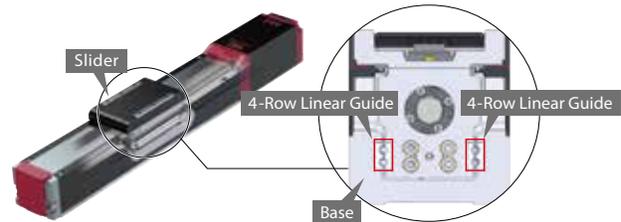
## Features

The standard actuator shape is used to mount and operate a workpiece on a slider on the top surface of the body.

IAI products feature a ball circulating type with a built-in linear guide integrated with base, which is resistant to moments in the rolling direction.

**Extensive lineup:** From palm size to large size capable of carrying up to 400kg horizontally.

**Stable positioning:** No worry about rattling of the guide section because the guide is press-fitted into the base. Stability as a positioning device due to low guide variation<sup>Ⓞ</sup>.



(Ex.) High rigidity type

## Lineup

**Ultra-compact Type** **EC-SL3**



24V Stepper motor, Low price, Compact

● Ultra-compact, palm-sized type

Body width	35mm
Stroke	50~200mm
Max. payload	Horizontal 2kg / Vertical 0.7kg
Max. speed	200mm/s

**Standard Type** **EC-S□(A)**



24V Stepper motor, Low price, Long Ruler, High thrust

● 6 total sizes

Body width	20~85mm
Stroke	25~1500mm
Max. payload	Horizontal 80kg / Vertical 55kg
Max. speed	1200mm/s

**High rigidity Type** **EC-S□AH**



24V Stepper motor, Low price, Long Ruler, High rigidity

● High rigidity 4-column Gothic arc linear guide type

Body width	63/75/85mm
Stroke	50~2000mm
Max. payload	Horizontal 110kg / Vertical 55kg
Max. speed	1440mm/s

**Wide Type** **EC-WS□**



24V Stepper motor, Low price, High rigidity

● Wide body, high rigidity type

Body width	100/120mm
Stroke	50~800mm
Max. payload	Horizontal 62kg / Vertical 13.5kg
Max. speed	1000mm/s

**Belt driven Type** **EC-B□**



24V Stepper motor, 200V AC servo motor, Low price, Long Ruler, High speed

● Belt-driven long actuator

Body width	63~89mm
Stroke	300~2600mm
Max. payload	Horizontal 25kg
Max. speed	2000mm/s

**Large Type** **EC-S1□**



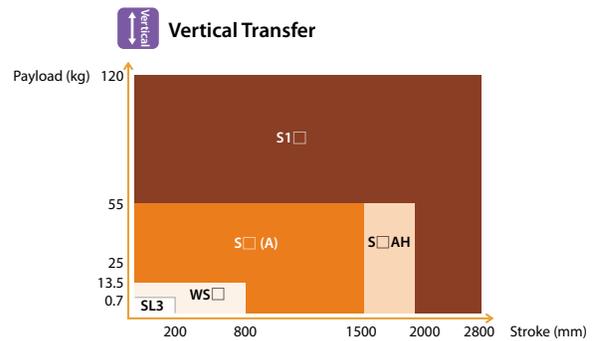
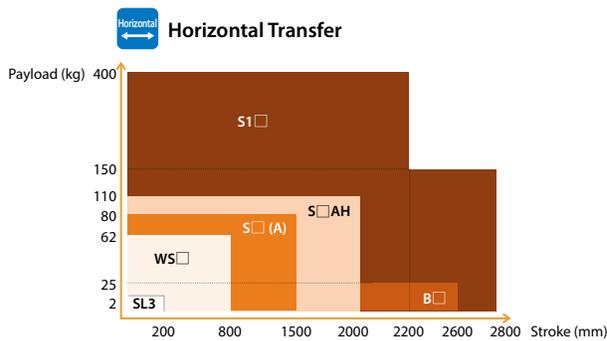
200V AC servo motor, Low price, Long Ruler, High rigidity, High thrust, High speed

● Large actuator with high thrust

Body width	100~188mm
Stroke	100~2800mm
Max. payload	Horizontal 400kg / Vertical 120kg
Max. speed	2000mm/s

## Specifications overview

Correlation diagram of stroke and payload



2 POSITION  
3 POSITION

# Radial Cylinder®

Ideal for radial load transfer, pressing, and press fitting.

## ELECYLINDER



**Radial Cylinder Catalogs:**  
intelligentactuator.com/dg23-p14-1



**How to select ELECYLINDER:**  
intelligentactuator.com/dg23-p14-2



**EC Radial Cylinder features:**  
intelligentactuator.com/dg23-p14-3



\*A new "3 position mode specification" option is now available.

## Features

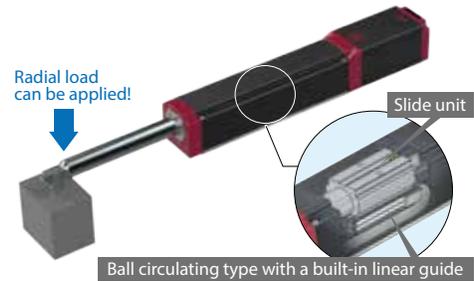
A ball circulating type with a built-in linear guide similar to the slider type is built into the rod type body.  
Radial and unbalanced loads can be directly received by the cylinder body.

### Linearity:

Integrated structure with built-in linear guide suppresses tip runout.

### High thrust:

Max. payload Horizontal 300kg / Vertical 150kg, max. pushing force up to 6000N.



Ball circulating type with a built-in linear guide

(Ex.) High rigidity type

## Lineup

Standard Type **EC-RR□**



● 7 total sizes

Body width	20~108mm
Stroke	25~800mm
Max. payload	Horizontal 300kg / Vertical 150kg
Max. speed	860mm/s

High rigidity Type **EC-RR□AH**

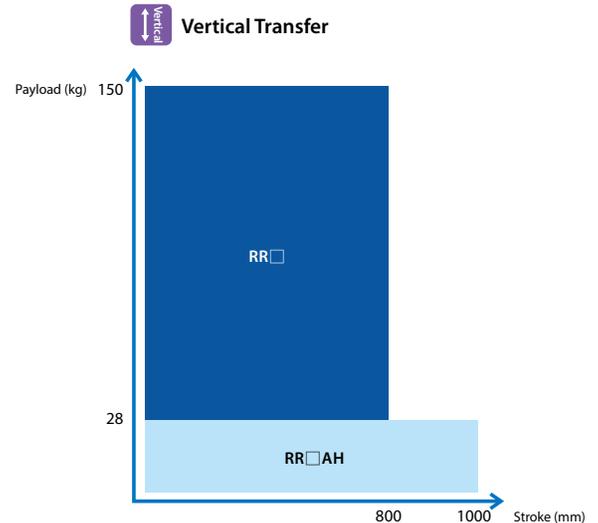
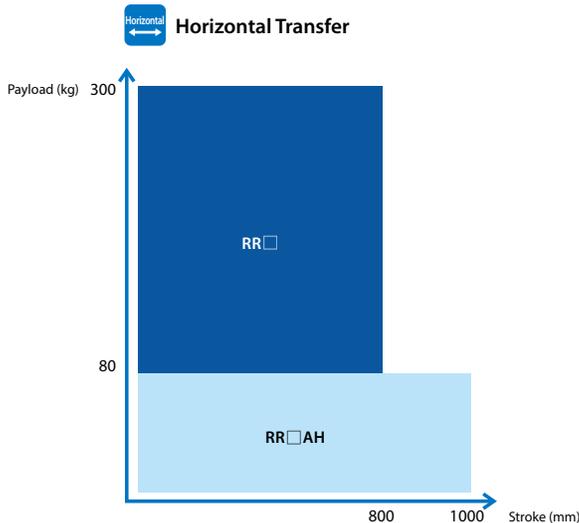


● High rigidity 4-column Gothic arc linear guide type

Body width	63/75mm
Stroke	50~1000mm
Max. payload	Horizontal 80kg / Vertical 28kg
Max. speed	860mm/s

## Specifications overview

### Correlation diagram of stroke and payload





**Catalog Download:**

[intelligentactuator.com/dg23-p15-1](http://intelligentactuator.com/dg23-p15-1)



**How to select ELECYLINDER:**

[intelligentactuator.com/dg23-p15-2](http://intelligentactuator.com/dg23-p15-2)



**EC Table Type features:**

[intelligentactuator.com/dg23-p15-3](http://intelligentactuator.com/dg23-p15-3)



\*A new "3 position mode specification" option is now available.

**Features**

**[Rod type]**

An inexpensive actuator in which the rod operates in the same way as a rod type air cylinder.

**Extensive lineup**

Ultra-compact type, guide type, ball bushing type for lifter applications, etc., can be selected according to the application.

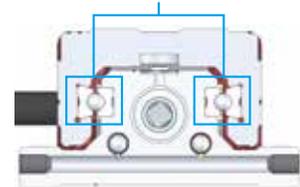
**[Table type]**

The table on the top of the body operates. With a built-in ball circulating type with a built-in linear guide in the table section, it can handle load moments in any direction.

**Compact**

Guide, motor, encoder, and controller built-in to a palm-sized body

Ball circulating type with a built-in linear guide



(Example) Sectional view of ultra-small type

**Lineup**

**Rod type**

Wire Type	Ultra-compact Type	Standard Type	Mini Type	Double guide Type
<b>EC-WER1</b>	<b>EC-GDB3</b>	<b>EC-R6/R7</b>	<b>EC-RP□/GS4/GD□</b>	<b>EC-SRGC9/SRG9 SRG11/15</b>
● Wire-driven type	● Ultra-compact, palm-sized type	● Cylindrical rod type	● Short overall length type	● Ball bushing type
Body width 13mm	Body width 42mm	Body width 63/73mm	Body width 28~112mm	Body width 93/112/148mm
Stroke 10/20mm	Stroke 10~50mm	Stroke 50~300mm	Stroke 30~150mm	Stroke 50~300mm
Max. payload Horizontal 0.75kg / Vertical 0.25kg	Max. payload Horizontal 2kg / Vertical 0.8kg	Max. payload Horizontal 80kg / Vertical 19kg	Max. payload Horizontal 35kg / Vertical 6.5kg	Max. payload Horizontal 60kg / Vertical 12.5kg
Max. speed Set value 100mm/s Actual speed 91mm/s	Max. speed 200mm/s	Max. speed 860mm/s	Max. speed 800mm/s	Max. speed 800mm/s

**Rod type**

Slim Type
<b>EC-CRP□/CGD□</b>
● Slim type with hollow motor
Body width 36~110mm
Stroke 30/50mm
Max. payload Horizontal 16kg / Vertical 7kg
Max. speed 200mm/s

Ultra-compact Type
<b>EC-T3</b>
● Ultra-compact, palm-sized type
Body width 32mm
Stroke 10~50mm
Max. payload Horizontal 2kg / Vertical 0.8kg
Max. speed 200mm/s

**Table type**

Mini Type
<b>EC-TC□/TW□</b>
● Short overall length type
Body width 26~88mm
Stroke 30~150mm
Max. payload Horizontal 20kg / Vertical 6.5kg
Max. speed 800mm/s

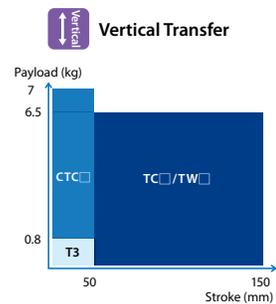
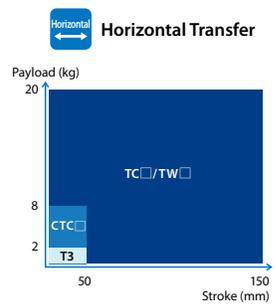
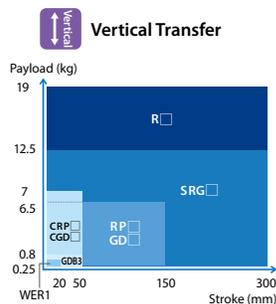
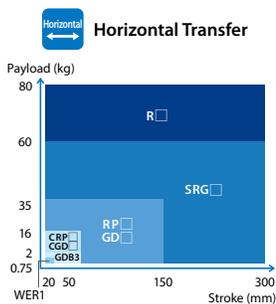
Slim Type
<b>EC-CTC3/CTC5</b>
● Slim type with hollow motor
Body width 36/52mm
Stroke 30/50mm
Max. payload Horizontal 8kg / Vertical 7kg
Max. speed 200mm/s

**Specifications overview**

**Correlation diagram of stroke and payload**

**[Rod type]**

**[Table type]**

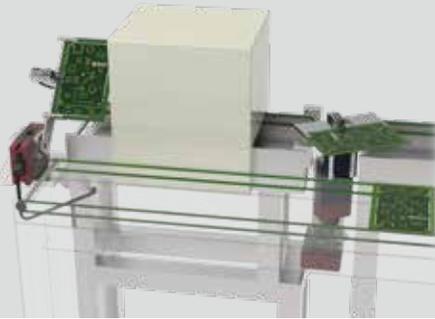


2 POSITION  
3 POSITION

# Gripper / Rotary / Stopper

Can be used for gripping, turning, and stopping applications.

## ELECYLINDER



**ELECYLINDER Gripper Type**  
intelligentactuator.com/dg23-p16-1



**ELECYLINDER Rotary Type**  
intelligentactuator.com/dg23-p16-2



**ELECYLINDER Stopper Type**  
intelligentactuator.com/dg23-p16-3



\*A new "3 position mode specification" option is now available.

## Features

### [Gripper]

Gripping force can be adjusted in 1% increments.

### Easy setup

Simply input the clamping force, standby position, and clamping start point numerically.



### [Rotary]

Rotary actuator with built-in controller and reduced height.

### Built-in controller

Allowing smooth stopping even at high speeds.

### [Stopper]

Ideal for stopping workpieces on conveyors without an air source.

### Sliding bushing

construction, sliding bushings allow for radial loads.



## Lineup

### Gripper

Wire Type	EC-WEGR2	Gripper Type	EC-GRB(P)□	Gripper Type	EC-GRC6/GRC7	Gripper Type	EC-GRST□
● Wire-driven type		● Vertical type		● Flat type		● Long stroke	
Body width	25mm	Body width	81~130mm	Body width	60/70mm	Body width	35~73mm
Stroke (one side)	2mm	Stroke (one side)	10~20mm	Stroke (one side)	10~40mm	Stroke (one side)	25~130mm
Max. grip force (both sides)	10N	Max. grip force (both sides)	28~360N	Max. grip force (both sides)	36~350N	Max. grip force (both sides)	125~1641N

### Gripper

Gripper Type	EC-GRTR14□
● 3-finger	
Body width	∅138mm
Stroke (one finger)	15mm
Max. grip force (3 finger)	950N

### Rotary

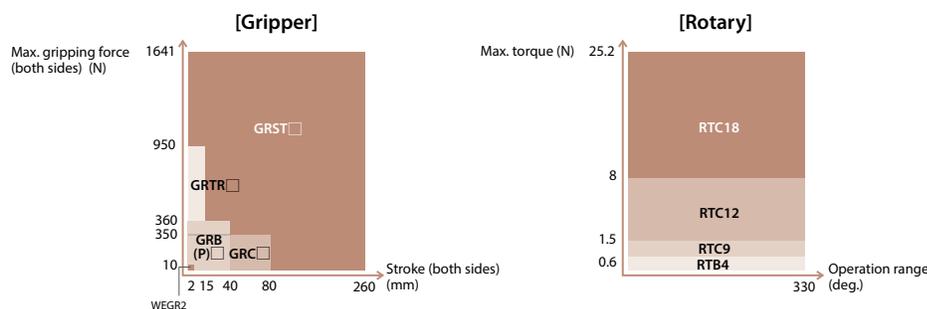
Rotary Type	EC-RTB4	Rotary Type	EC-RTC□
● Vertical type		● Flat type	
Body width	45mm	Body width	90~185mm
Operation range	0~330 deg.	Operation range	0~330 deg.
Max. torque	0.6N	Max. torque	1.5~25.2N
Allowable inertia moment	~0.011 kg·m <sup>2</sup>	Allowable inertia moment	~0.49 kg·m <sup>2</sup>

### Stopper

Stopper Type	EC-GDS3
● Palm-sized, ultra small type	
Body width	42mm
Stroke	10~30mm
Max. workpiece mass	8kg

## Specifications overview

### Correlation chart between stroke and max. grip force/operation range and max. torque

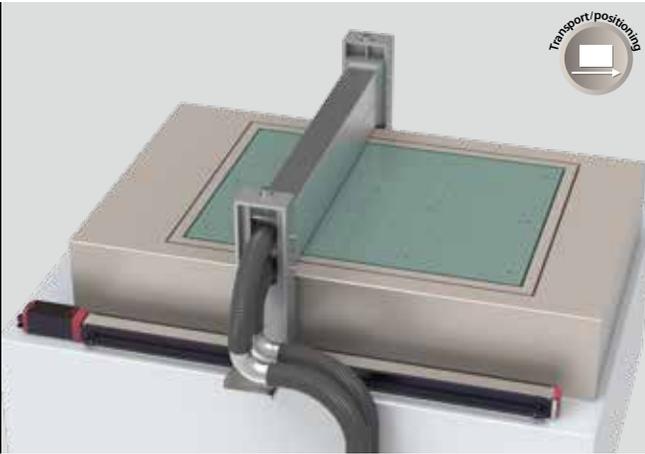
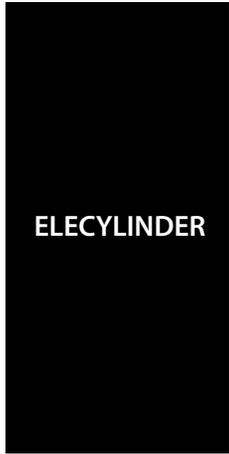


### Stopper Type

#### EC-ST9/STC9 ST11/15



● Can be selected from three sizes	
Body width	93/112/148mm
Stroke	30~50mm
Max. workpiece mass	100kg



**EC Cleanroom Type Catalog:**  
intelligentactuator.com/dg23-p17-1



**EC Cleanroom Specification:**  
intelligentactuator.com/dg23-p17-2



\*A new "3 position mode specification" option is now available.

**Features**

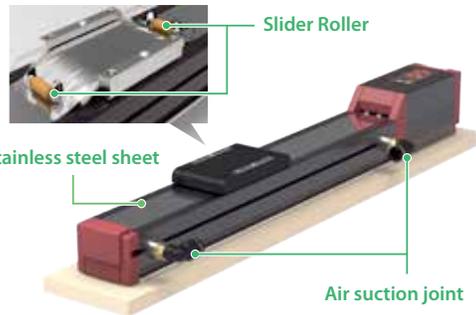
The system is ISO class 2.5/3 compliant, making it ideal for operation in clean environments. (ISO 14644-1)

**Extensive lineup:**

From compact type to Horizontal 80kg high payload type.

**Unlimited installation orientation:**

Sealed construction allows for Vertical or Horizontal installation.



**What is ISO Class 2.5...?**  
Refers to an environment with less than 316 pieces of debris 0.1 μm or larger in 1 m<sup>3</sup>.

- Low-dust structure**
- Stainless steel sheet on top surface
  - Air suction inside the body
  - Roller structure of slider section
  - Low dust grease (Ball screw/guide section)

**Lineup**

**Standard Type** EC-S□(A)CR



- 24V Stepper motor
- Low price
- Long Ruler
- high thrust

- 5 total sizes
- ISO Class 3 (ISO 14644-1 Std.)

Body width	35~85mm
Stroke	50~1500mm
Max. payload	Horizontal 80kg / Vertical 55kg
Max. speed	1200mm/s

**High rigidity Type** EC-S□AHCR



- 24V Stepper motor
- Low price
- Long Ruler
- High rigidity

- High rigidity 4-row Gothic arc linear guide type
- ISO Class 2.5 (ISO 14644-1 Std.)

Body width	63/85mm
Stroke	50~2000mm
Max. payload	Horizontal 90kg / Vertical 55kg
Max. speed	1350mm/s

**Wide Type** EC-WS□CR



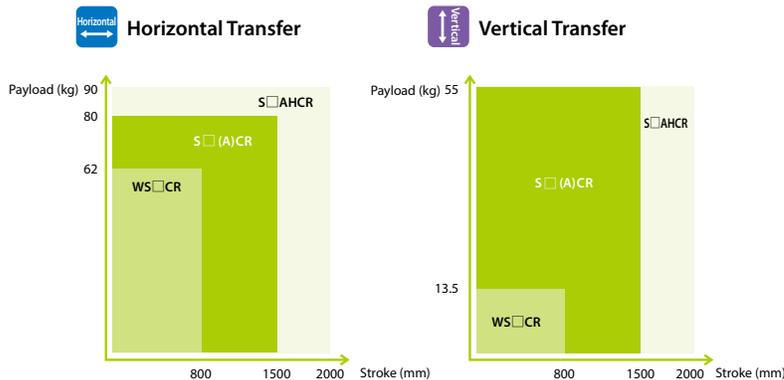
- 24V Stepper motor
- Low price
- High rigidity

- Wide body, high rigidity type
- ISO Class 3 (ISO 14644-1 Std.)

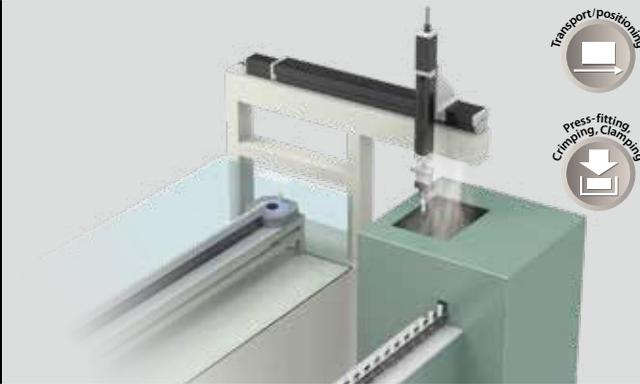
Body width	100/120mm
Stroke	50~800mm
Max. payload	Horizontal 62kg / Vertical 13.5kg
Max. speed	900mm/s

**Specifications overview**

**Correlation diagram of stroke and payload**



ELECYLINDER



Catalog Download:

[intelligentactuator.com/dg23-p18-1](http://intelligentactuator.com/dg23-p18-1)



EC Dust/Splash-proof Specification:

[intelligentactuator.com/dg23-p18-2](http://intelligentactuator.com/dg23-p18-2)



\*A new "3 position mode specification" option is now available.

Features

IP40~67 rating allows use in water and dusty environments. It is used in processing machines, food processing machines, washing machines, etc.

**Grease options:** Optional grease for food machinery can be selected.

**Integrated guide:** Slider type/radial cylinders have a built-in ball circulating type with a built-in linear guide as in the standard environment version, so that moment loads in the rolling direction can be accommodated.

Ingress Protection Display	Dust-resistant specification	Dust/splash-proof specification	Dust/splash-proof specification	Dust/splash-proof specification
<b>IP</b> □ □ 1st Display Number Protection against human body and solid foreign objects 2nd Display Number Protection from water ingress				
	S□D	S□W	S□W WS Option	GRBP□W
<b>Ingress Protection</b>	IP40	IP43	IP44*	IP54 equivalent
<b>1st Display Number Description</b>	No tools, wires, or other solid objects exceeding 1.0 mm in diameter or thickness can penetrate.	Thickness 1.0 mm		Dust that will affect operation will not enter the interior.
<b>2nd Display Number Description</b>	Unprotected	<b>Rainproof</b> No harmful effects from water drop falling within 60° from the vertical.	<b>Splashproof</b> Not adversely affected by splashing water from any direction.	<b>Waterproof</b> Water does not enter the interior even when submerged under water under defined conditions.

\* S□W: IP44 when wiper seal mounted specification (WS) option is adopted.

Lineup

Standard Type **Slider type**  
EC-S□D/S□W



● IP40~44  
 Body width 63/73mm  
 Stroke 50~800mm  
 Max. payload Horizontal 51kg / Vertical 19kg  
 Max. speed 860mm/s

Standard Type **Rod type**  
EC-R□W



● IP67  
 Body width 63/73mm  
 Stroke 50~300mm  
 Max. payload Horizontal 80kg / Vertical 19kg  
 Max. speed 860mm/s

Standard Type **Radial Cylinder®**  
EC-RR□W



● IP67  
 Body width 63/73mm  
 Stroke 65~315mm  
 Max. payload Horizontal 80kg / Vertical 19kg  
 Max. speed 860mm/s

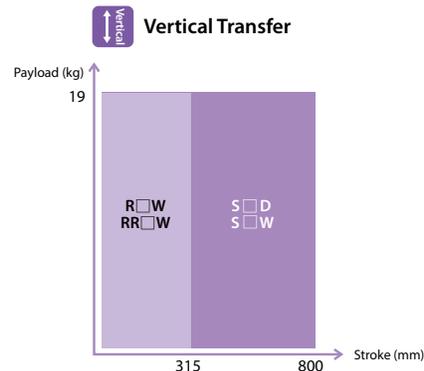
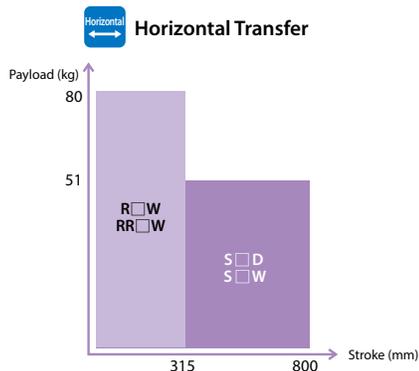
Standard Type **Gripper**  
EC-GRBP□W



● IP54 equivalent  
 Body width 89~137mm  
 Stroke (one side) 10~20mm  
 Max. grip force (both sides) 36~258N

Specifications Overview

Correlation diagram of stroke and payload



ROBO Cylinder  
Single-axis robot



Catalog Download

[intelligentactuator.com/dg23-p19-1](http://intelligentactuator.com/dg23-p19-1)



Slider Type Lineup:

[intelligentactuator.com/dg23-p19-2](http://intelligentactuator.com/dg23-p19-2)



Features

The standard actuator shape is used to mount and operate a workpiece on a slider on the top surface of the body. IAI products feature a ball circulating type with a built-in linear guide integrated with base, which is resistant to moments in the rolling direction.

Extensive lineup

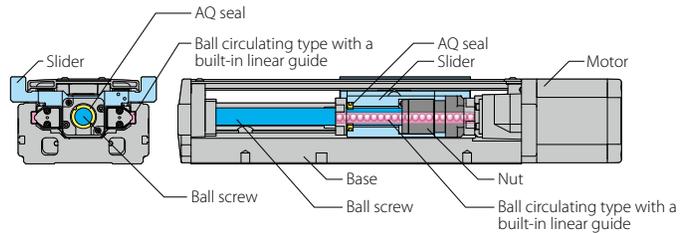
A wide range of types can be selected to suit the application, from compact types, long-strokes, low-cost belt-driven types, and multi-slider types.

Stable positioning

Guide is press-fitted into the base, so there is no risk of rattling of the guide section.

High precision

Positioning repeatability up to 3µm  
Ideal for equipment requiring high running accuracy and high precision positioning when combined.



(Ex.) Single Axis Robot

Lineup

ROBO Cylinder  
RCP6 Series  
RCP6-SA□/  
HSA□/WSA□



- 8 total sizes
- Motor side-mounted type is also selectable

Body width	40~160mm
Stroke	50~1500mm
Max. payload	Horizontal 100kg / Vertical 55kg
Max. speed	1440mm/s

ROBO Cylinder  
RCP5 Series  
RCP5-BA□



- Belt-driven type
- Motor with top/bottom mounting can be selected

Body width	40~70mm
Stroke	300~2600mm
Max. payload	Horizontal 16kg
Max. speed	1600mm/s

ROBO Cylinder  
RCP3 Series  
RCP3-SA2□



- Compact type with a body width of 22mm and up

Body width	22/28mm
Stroke	25~150mm
Max. payload	Horizontal 1kg
Max. speed	300mm/s

ROBO Cylinder  
RCS4 Series  
RCS4-SA□/  
HSA□/WSA□



- 8 total sizes
- Motor side-mounted type is also selectable

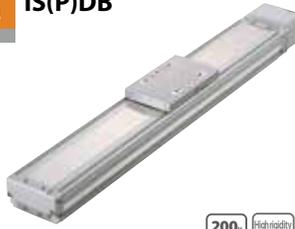
Body width	40~160mm
Stroke	50~1100mm
Max. payload	Horizontal 120kg / Vertical 50kg
Max. speed	2200mm/s

Single Axis Robot  
**ISB** IS(P)B  
Series



- High precision type  
(Positioning repeatability:  $\pm 3\mu\text{m}$ ) also selectable
- |              |                                  |
|--------------|----------------------------------|
| Body width   | 90~198mm                         |
| Stroke       | 100~3000mm                       |
| Max. payload | Horizontal 400kg / Vertical 80kg |
| Max. speed   | 2500mm/s                         |

Single Axis Robot  
**ISDB** IS(P)DB  
Series



- Simple dust-proof type with stainless steel sheet
- |              |                                  |
|--------------|----------------------------------|
| Body width   | 90~150mm                         |
| Stroke       | 100~1600mm                       |
| Max. payload | Horizontal 120kg / Vertical 40kg |
| Max. speed   | 2200mm/s                         |

Single Axis Robot  
**NSA** NSA  
Series



- Rotating nut type
  - Multi-sliders can also be selected
- |              |                  |
|--------------|------------------|
| Body width   | 125~198mm        |
| Stroke       | 300~3000mm       |
| Max. payload | Horizontal 120kg |
| Max. speed   | 2500mm/s         |

Single Axis Robot  
**IFA** IFA  
Series



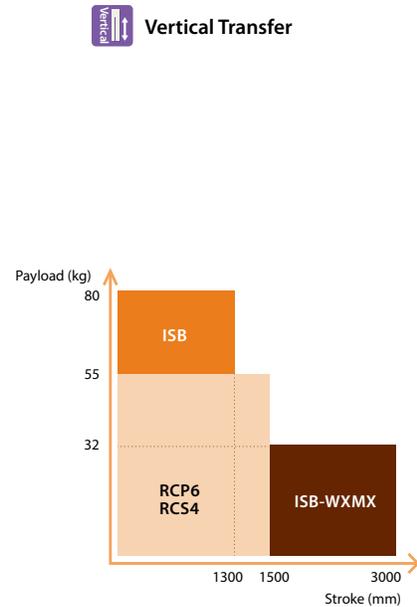
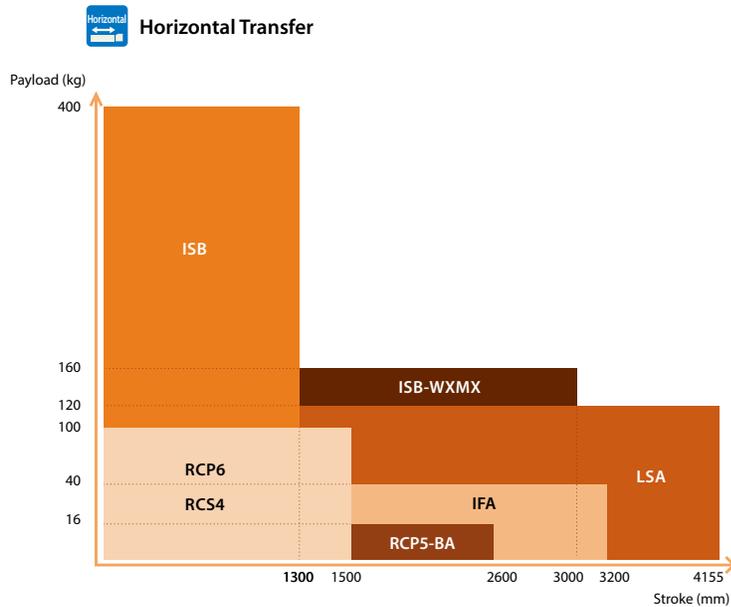
- Belt-driven type
  - Motor with top/bottom mounting can be selected
- |              |                 |
|--------------|-----------------|
| Body width   | 105/134mm       |
| Stroke       | 200~3200mm      |
| Max. payload | Horizontal 40kg |
| Max. speed   | 3000mm/s        |

Single Axis Robot  
**LSA** LSA/LSAS  
Series

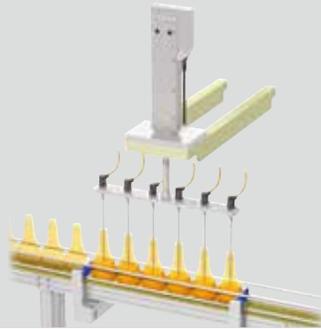


- Linear servo type
  - Multi-sliders can also be selected
- |              |                  |
|--------------|------------------|
| Body width   | 60~210mm         |
| Stroke       | 40~4155mm        |
| Max. payload | Horizontal 120kg |
| Max. speed   | 2500mm/s         |

Specifications overview Correlation diagram of stroke and payload



ROBO Cylinder



**Catalog Download**  
intelligentactuator.com/dg23-p21-1



**Rod Type Lineup:**  
intelligentactuator.com/dg23-p21-2



Features

[Rod type]

This is an inexpensive actuator in which the rod operates in the same way as a rod type air cylinder.

Extensive lineup

Selectable from pen size to maximum pressing force of 2t to suit the application.

[Radial Cylinder]

A ball circulating type with a built-in linear guide is built into the rod type body. Radial and unbalanced loads can be directly received by the cylinder body.

Linearity

Integrated structure with built-in linear guide suppresses tip runout.

Lineup

ROBO Cylinder RCP6 Series RCP6-RA□ / RRA□ / WRA□



- 8 total sizes
- Motor side-mounted type is also selectable

Body width	40~160mm
Stroke	50~800mm
Max. payload	Horizontal 100kg / Vertical 70kg
Max. speed	1120mm/s

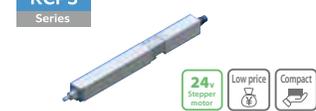
ROBO Cylinder RCP5 Series RCP5-RA10□



- High thrust type
- Motor side-mounted type is also selectable

Body width	108mm
Stroke	50~800mm
Max. payload	Horizontal 300kg / Vertical 150kg
Max. speed	250mm/s

ROBO Cylinder RCP3 Series RCP3-RA2□



- Compact and mini type

Body width	22/28mm
Stroke	25~150mm
Max. payload	Horizontal 8kg / Vertical 2.5kg
Max. speed	300mm/s

ROBO Cylinder RCP2 Series RCP2-SR□4R



- Overall length shortening type
- Guide type is also available

Body width	44/45mm
Stroke	20~200mm
Max. payload	Horizontal 35kg / Vertical 15kg
Max. speed	250mm/s

ROBO Cylinder RCD Series RCD



- Ultra-compact type with a cross section size of □12 mm

Body width	12mm
Stroke	10~30mm
Max. payload	Horizontal 0.7kg / Vertical 0.3kg
Max. speed	300mm/s

ROBO Cylinder RCS4 Series RCS4-RA□ / RRA□ / WRA□



- 8 total sizes
- Motor side-mounted type is also selectable

Body width	40~160mm
Stroke	50~800mm
Max. payload	Horizontal 100kg / Vertical 72kg
Max. speed	1500mm/s

ROBO Cylinder RCA2 Series RCA2



- Overall length shortening type
- Guide type is also available

Body width	28~72mm
Stroke	30~75mm
Max. payload	Horizontal 6kg / Vertical 1.5kg
Max. speed	300mm/s

ROBO Cylinder RCS3 Series RCS3-RA15R/20R



- Max. 2t push force

Body width	150/200mm
Stroke	100~500mm
Max. payload	Horizontal 1000kg / Vertical 600kg
Max. speed	400mm/s

ROBO Cylinder RCS2 Series RCS2



- Overall length shortening type
- Guide type is also available

Body width	46~94mm
Stroke	50~300mm
Max. payload	Horizontal 55kg / Vertical 22.5kg
Max. speed	800mm/s

ROBO Cylinder RCS2 Series RCS2-RA13R

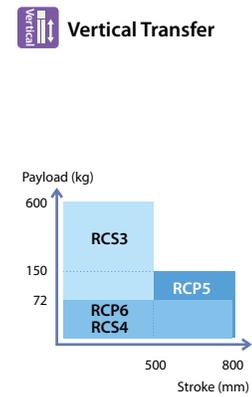
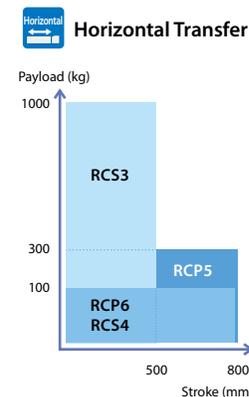


- Max. approx. 2t push force

Body width	130mm
Stroke	50~200mm
Max. payload	Horizontal 500kg / Vertical 300kg
Max. speed	125mm/s

Specifications overview

Correlation diagram of stroke and payload



ROBO Cylinder



Catalog Download

[intelligentactuator.com/dg23-p22-1](http://intelligentactuator.com/dg23-p22-1)



Table Type Lineup:

[intelligentactuator.com/dg23-p22-2](http://intelligentactuator.com/dg23-p22-2)

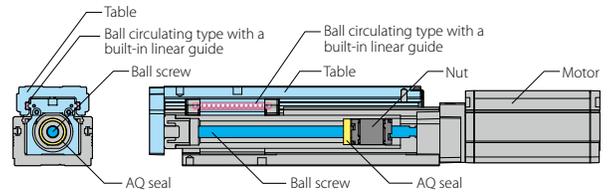


Features

The table on the top of the body operates. With a built-in ball circulating type with a built-in linear guide in the table section, it can handle load moments in any direction. Used for clamping workpieces from the left and right sides, for workpiece widening mechanisms and for orthogonal combination axes such as the Vertical axis.

Extensive lineup

Selectable according to application from high load moment type to compact size with nut rotation



Lineup

ROBO Cylinder  
RCP6  
Series

RCP6-TA □



- 3 total sizes
- Motor side-mounted type is also selectable

Body width	40~70mm
Stroke	25~390mm
Max. payload	Horizontal 30kg / Vertical 24kg
Max. speed	1120mm/s

ROBO Cylinder  
RCS4  
Series

RCS4-TA □



- 3 total sizes
- Motor side-mounted type is also selectable

Body width	40~70mm
Stroke	25~390mm
Max. payload	Horizontal 30kg / Vertical 24kg
Max. speed	1300mm/s

ROBO Cylinder  
RCA2  
Series

RCA2-T □



- Overall length shortening type

Body width	32~71mm
Stroke	30 / 50mm
Max. payload	Horizontal 6kg / Vertical 1.5kg
Max. speed	300mm/s

ROBO Cylinder  
RCS2  
Series

RCS2-T □

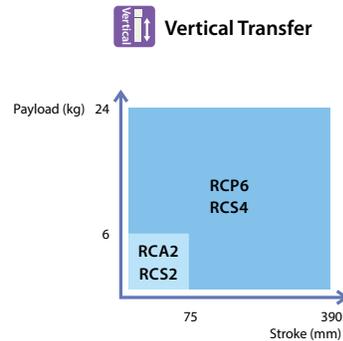
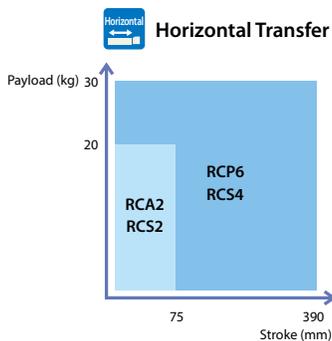


- Overall length shortening type

Body width	48~95mm
Stroke	50 / 75mm
Max. payload	Horizontal 20kg / Vertical 6kg
Max. speed	380mm/s

Specifications overview

Correlation diagram of stroke and payload



ROBO Cylinder



Catalog Download

[intelligentactuator.com/dg23-p23-1](http://intelligentactuator.com/dg23-p23-1)



Special Purpose

[intelligentactuator.com/dg23-p23-2](http://intelligentactuator.com/dg23-p23-2)



Stopper Cylinder RCP4-ST

[intelligentactuator.com/dg23-p23-3](http://intelligentactuator.com/dg23-p23-3)



Features

[Pulse press]

Actuator that enables force control by combining a stepper motor and load cell.

Low price / Simple

Equipped with a stepper motor, the price is less than half of the servo press specifications and can be easily set up with a teaching tool.

Can be pushed and pulled  
Load direction push and pull  
functionality with unlimited  
push/pull time.



[Servo press]

Actuator that combines a servo motor with a load cell to provide high precision force control.

High precision

A wide variety of press motions difficult to achieve with hydraulic pressure.



[Special applications model]

Can be used for various applications, such as a stopper to stop a conveyor workpiece, vacuum pump without air or a model that can realize two types of motions with a single actuator.

Lineup

ROBO Cylinder  
RCP6 Series  
Pulse Press  
RCP6-RR□R



● 3 total sizes



Body width	40~73mm
Stroke	110~320mm
Max. push / Tensile strength	2000N
Max. payload	Horizontal 10kg Vertical 10kg
Loading repeatability	±1.0% F.S.

ROBO Cylinder  
RCS3/2 Series  
Servo Press  
RCS3/RCS2-RA□R



● 8 total sizes



Body width	40~200mm
Stroke	50~520mm
Max. push / Tensile strength	50000N
Rated thrust	126~25902N
Loading repeatability	±0.5% F.S.

RP Series  
ROBO Pump®  
RP-VPM



● Vacuum pump without air



Generating flow rate	1.8L/min or more
Vacuum level	-50kPa or less
Payload guideline (with 20mm vacuum pad)	Horizontal 0.4kg Vertical 0.2kg

ROBO Cylinder  
RCP4 Series  
Stopper cylinder  
RCP4-ST□



● Stopper cylinder for stopping workpieces on the conveyor



Body width	42/60mm
Stroke	20/30mm
Max. workpiece mass	150kg
Max. workpiece impact speed (m/min)	40mm/s

ZR Series  
Vertical/rotation integrated  
ZR



● Unit type with vertical and rotational axis in one



Stroke	Z-axis: ~200mm R-axis: ±360 deg.
Max. payload	6kg

WU Series  
Wrist Unit  
WU



● Wrist unit with oscillating and rotational axis in one



Operation range	B-axis: ~±105 deg. T-axis: ±360 deg.
Max. payload	2kg

RCP6 Series  
Rotary Chuck  
RCP6-RTCK□



● Rotation and grip in one unit



Rotational operation range	0~360 deg.
Grip stroke	2mm
Max. grip force (both sides)	20N

ROBO Cylinder  
Single-axis  
robot



Catalog Download

intelligentactuator.com/dg23-p24-1



Gripper

intelligentactuator.com/dg23-p24-2



Rotary

intelligentactuator.com/dg23-p24-3



Features

[Gripper]

Since a large number of gripping points and gripping forces can be set, there is no need to adjust the setup.

Supports workpiece identification

Zone signal function outputs a signal when the machine moves to an arbitrary position, enabling workpiece identification and pass/fail judgment.

[Rotary]

330 degree and multi-turn specifications are selectable. Infinite rotation in one direction is also supported.

Extensive lineup

Compact to large, vertical, flat, etc., the most suitable model for your equipment can be selected.

Lineup

Gripper

**Solenoid gripper**  
Series

**GRS/GRM**



Low price Compact

- Solenoid-driven compact gripper

Body width	26/32mm
Stroke (one side)	2mm
Max. grip force (both sides)	20N

**ROBO Cylinder**  
Series

**RCD**



24V Brushless DC motor Low price Compact

- Ultra-compact, palm-sized type gripper

Body width	22mm
Stroke (one side)	2mm
Max. grip force (both sides)	10N

**ROBO Cylinder**  
Series

**RCP6-GRT7**



24V Stepper motor

- Flat shape type with height of 39mm

Body width	91/123mm
Stroke (one side)	15~40mm
Max. grip force (both sides)	300N

**ROBO Cylinder**  
Series

**RCP6-GRST**



24V Stepper motor Long Stroke

- Long Stroke Gripper
- Motor side-mounted type is also selectable

Body width	58/70mm
Stroke (one side)	90~130mm
Max. grip force (both sides)	880N

**ROBO Cylinder**  
Series

**RCP4-GR**



24V Stepper motor Slide Lever

- 6 total models

Body width	34~60mm
Stroke (one side)	7~15mm 90 deg.
Max. grip force (both sides)	220N 90N

**ROBO Cylinder**  
Series

**RCP2-GR3**



24V Stepper motor Slide Lever

- 3-claw type is also available

Body width	62/80mm
Stroke (one side)	5/7mm 19 deg.
Max. grip force (both sides)	102N 51N

Rotary

**ROBO Cylinder**  
Series

**RCP2-RT**



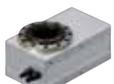
24V Stepper motor Low price

- 6 total models

Body width	45~114mm
Operation range	330/360 deg. (multi-rotation)
Max. torque	4.6N
Allowable inertia moment	~0.03 kg·m <sup>2</sup>

**ROBO Cylinder**  
Series

**RCS2-RTC L**



200V AC servo motor High thrust

- Hollow type

Body width	135~233mm
Operation range	330/360 deg. (multi-rotation)
Max. torque	8.6N
Allowable inertia moment	~0.17kg·m <sup>2</sup>

**Single Axis Robot**  
Series

**DDA**



200V AC servo motor High thrust High precision

- Large diameter direct drive motor

Body width	180mm
Operation range	360 deg. (multi-rotation)
Max. torque	~75N
Allowable inertia moment	~1.8kg·m <sup>2</sup>

**ROBO Cylinder**  
Series

**RCP6-RTFML**



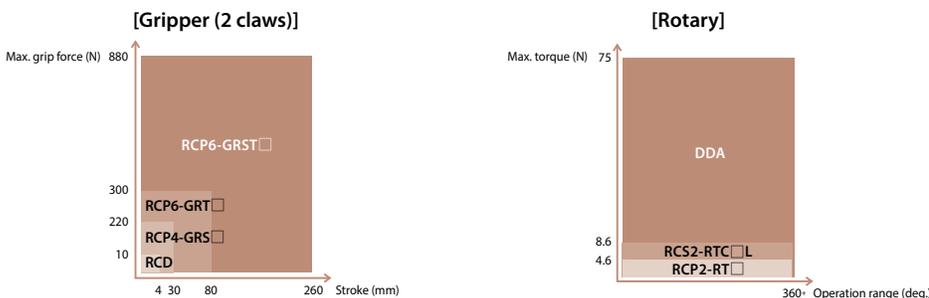
24V Stepper motor

- Ø49 Large caliber hollow shaft

Operation range	±180 deg.
Max. torque	5.2N
Allowable inertia moment	~0.08kg·m <sup>2</sup>

Specifications overview

Correlation chart between stroke and max. grip force/operation range and max. torque



Cartesian Robot



Catalog Download

[intelligentactuator.com/dg23-p25-1](http://intelligentactuator.com/dg23-p25-1)



Cartesian Robot

[intelligentactuator.com/dg23-p25-2](http://intelligentactuator.com/dg23-p25-2)



Features

Choose from IK series with low-cost RCP6 or ICSB series which combines high rigidity, high precision, and high speed operation of the ISB. (2~6 axes)  
A wide range of combination patterns are available for various applications.  
Battery-less absolute encoder is standard, eliminating the need for a home return motion when starting up the machine.

Lineup

**IK2 IK2**  
Series



24v Stepper motor Low price

Max. stroke X-axis: 1100 Y-axis: 500mm  
Max. payload 17kg  
Max. speed X-axis: 650 Y-axis: 800mm/s

**IK2 IK2**  
Series



24v Stepper motor Low price

Max. stroke Y-axis: 1100 Z-axis: 300mm  
Max. payload 8kg  
Max. speed Y-axis: 800 Z-axis: 800mm/s

**IK3 IK3**  
Series



24v Stepper motor Low price

Max. stroke X-axis: 1100 Y-axis: 500  
Z Axis: 300mm  
Max. payload 6kg  
Max. speed X-axis: 300 Y-axis: 640  
Z-axis: 800mm/s

**IK4 IK4**  
Series



24v Stepper motor Low price

Max. stroke X-axis: 1100 Y-axis: 400  
Z-axis: 150 R-axis: ±360mm  
Max. payload 5kg  
Max. speed X-axis: 300 Y-axis: 280  
Z-axis: 400 R-axis: 1000mm/s

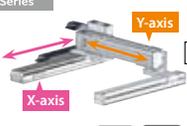
**ICSB2 ICS(P)B2-B**  
Series



200v AC servo motor High thrust Long Ruler High precision

Max. stroke X-axis: 3000 Y-axis: 700mm  
Max. payload 90kg  
Max. speed X-axis: 2500  
Y-axis: 2400mm/s

**ICSB2 ICS(P)B2-G**  
Series



200v AC servo motor High thrust Long Ruler High precision

Max. stroke X-axis: 2500 Y-axis: 1200mm  
Max. payload 60kg  
Max. speed X-axis: 1200  
Y-axis: 1200mm/s

**ICSB2 ICS(P)B2-Z**  
Series



200v AC servo motor Long Ruler High precision

Max. stroke X-axis: 2500 Z-axis: 500mm  
Max. payload 20kg  
Max. speed X-axis: 2400  
Z-axis: 1200 mm/s

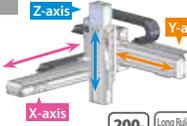
**ICSB2 ICS(P)B2-Y**  
Series



200v AC servo motor High thrust High precision

Max. stroke Y-axis: 1300 Z-axis: 500mm  
Max. payload 40kg  
Max. speed Y-axis: 2400  
Z-axis: 1200 mm/s

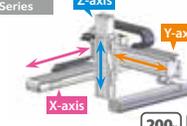
**ICSB3 ICS(P)B3-B**  
Series



200v AC servo motor Long Ruler High precision

Max. stroke X-axis: 3000 Y-axis: 700  
Z-axis: 500 mm  
Max. payload 36.4kg  
Max. speed X-axis: 2500 Y-axis: 2400  
Z-axis: 1200 mm/s

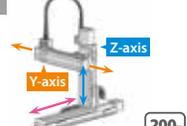
**ICSB3 ICS(P)B3-G**  
Series



200v AC servo motor Long Ruler High precision

Max. stroke X-axis: 2500 Y-axis: 1200  
Z-axis: 600mm  
Max. payload 34.3kg  
Max. speed X-axis: 1200 Y-axis: 1200  
Z-axis: 1200 mm/s

**ICSB3 ICS(P)B3-Z3**  
Series



200v AC servo motor High precision

Max. stroke X-axis: 1270 Y-axis: 500  
Z-axis: 500 mm  
Max. payload 16.5kg  
Max. speed X-axis: 1200 Y-axis: 1200  
Z-axis: 600mm/s

**ICSB4 ICS(P)B4-B HZR**  
Series



200v AC servo motor

Max. stroke X-axis: 1300 Y-axis: 700  
Z-axis: 200 R-axis: ±360mm  
Max. payload 5kg  
Max. speed X-axis: 1200 Y-axis: 1200  
Z-axis: 1256 R-axis: 2200mm/s

**ICSB4 ICS(P)B4-B N1**  
Series



200v AC servo motor High thrust Long Ruler High precision

Max. stroke X-axis: 2700 Y-axis: 700mm  
Max. payload 45kg  
Max. speed X-axis: 2400 Y-axis: 1200mm/s

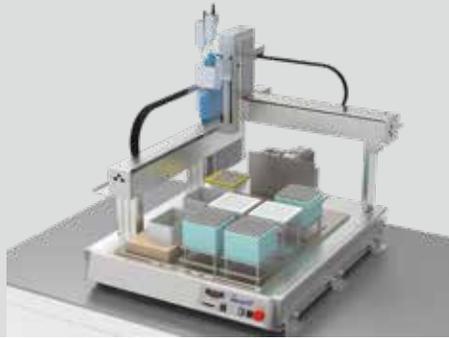
**ICSB6 ICS(P)B6-B N1**  
Series



200v AC servo motor Long Ruler High precision

Max. stroke X-axis: 2700 Y-axis: 700  
Z-axis: 500 mm  
Max. payload 20kg  
Max. speed X-axis: 2400 Y-axis: 1200  
Z-axis: 1200 mm/s

Tabletop Robot



Catalog Download

[intelligentactuator.com/dg23-p26-1](http://intelligentactuator.com/dg23-p26-1)



TTA Product Page

[intelligentactuator.com/dg23-p26-2](http://intelligentactuator.com/dg23-p26-2)



Features

Tabletop all-in-one Cartesian Coordinate Robot with built-in controller and power supply, capable of interpolated control of up to 4 axes. Two patterns are available: workpiece moving type and workpiece fixed type.

Simple program

Automatic generation of soldering, coating, and screw tightening programs is possible by using the "SEL Program Generator" in the PC software (see p. 44 for details)

Switch Option

Up to four additional switches can be added to the full panel for configurable usage. No PLC is required, reducing wiring and lowering costs.

Workpiece gantry type  
TTA-A Series

Type where workpieces are loaded on the X Axis and moved around. The workpiece itself moves.



Workpiece mount type  
TTA-C Series

Type where workpieces are loaded on the base. The workpiece itself does not move.



Lineup

TTA TTA-A2

Series



Max. stroke	X-axis: 500 Y-axis: 500mm
Max. payload	X-axis: 30 Y-axis: 20kg
Max. speed	X-axis: 1200 Y-axis: 1200mm/s

TTA TTA-A3

Series



Max. stroke	X-axis: 500 Y-axis: 500 Z-axis: 150mm
Max. payload	X-axis: 30 Z-axis: 15kg
Max. speed	X-axis: 1200 Y-axis: 1200 Z-axis: 400 mm/s

TTA TTA-A4

Series



Max. stroke	X-axis: 500 Y-axis: 500 Z-axis: 150 mm
Max. payload	X-axis: 30 ZR-axis: 15kg
Max. speed	X-axis: 1200 Y-axis: 1200 Z-axis: 400 mm/s

TTA TTA-C2

Series



Max. stroke	X-axis: 500 Y-axis: 450mm
Max. payload	20kg
Max. speed	X-axis: 1000 Y-axis: 800mm/s

TTA TTA-C3

Series



Max. stroke	X-axis: 500 Y-axis: 450 Z-axis: 150mm
Max. payload	15kg
Max. speed	X-axis: 1000 Y-axis: 1000 Z-axis: 400 mm/s

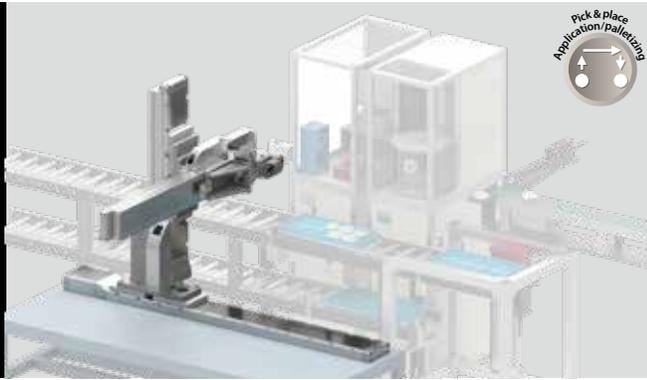
TTA TTA-C4

Series



Max. stroke	X-axis: 500 Y-axis: 450 Z-axis: 150 mm
Max. payload	15kg
Max. speed	X-axis: 1000 Y-axis: 1000 Z-axis: 400 mm/s

**Cartesian 6-Axis Robot**



**Catalog Download**  
[intelligentactuator.com/dg23-p27-1](http://intelligentactuator.com/dg23-p27-1)



**Cartesian 6-Axis Robot**  
[intelligentactuator.com/dg23-p27-2](http://intelligentactuator.com/dg23-p27-2)



**Features**

This 6-DOF robot combines 3 orthogonal axes and 3 rotational axes. High degree of freedom of movement including rotation and swivel is possible. The orthogonal 6-axis robot can perform movements that could only be handled with Vertical multi-joints at a lower cost.

**Simulation**

Using the "Simulator for CRS" in the PC software, operation check, programming, and cycle time check can be performed in advance even without the robot itself.

**Optimal size**

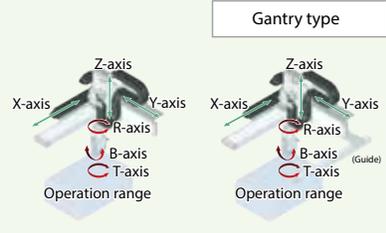
XYZ Axis allows selection of stroke per axis.

**ROBO Cylinder**  
 Orthogonal configuration  
 (X,Y, Z Axis)

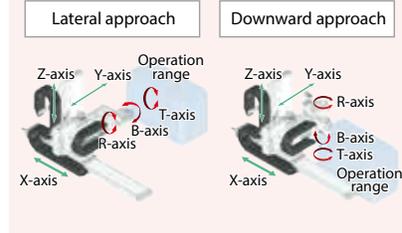
**Hollow rotary**  
 RCP6-RTFML  
 (R-axis)

**Wrist Unit**  
 WU-S/M  
 (B,T axis)

**Can be pivoted and rotated with respect to the horizontal plane (XY plane)**



**Can be pivoted and rotated with respect to a wall surface (YZ plane)**



**Lineup**

**CRS** **CRS-XB** □  
 Series

24v Stepper motor 200v AC servo motor

Max. stroke	X-axis: 1100 Y-axis: 300 Z-axis: 200 mm
Max. payload	2kg
Standard cycle time	1.66 secs.

**CRS** **CRS-XG** □  
 Series

24v Stepper motor 200v AC servo motor

Max. stroke	X-axis: 1100 Y-axis: 600 Z-axis: 200 mm
Max. payload	2kg
Standard cycle time	1.66 secs.

**CRS** **CRS-XZCY**  
 Series

24v Stepper motor

Max. stroke	X-axis: 800 Y-axis: 300 Z-axis: 200 mm
Max. payload	1kg
Standard cycle time	2.55 secs.

**CRS** **CRS-XZCZ**  
 Series

24v Stepper motor

Max. stroke	X-axis: 800 Y-axis: 300 Z-axis: 200 mm
Max. payload	1kg
Standard cycle time	2.55 secs.

**CRS** **CRS-XZ** □ Y  
 Series

24v Stepper motor 200v AC servo motor

Max. stroke	X-axis: 800 Y-axis: 300 Z-axis: 500 mm
Max. payload	1kg
Standard cycle time	1.69 secs.

**CRS** **CRS-XZ** □ Z  
 Series

24v Stepper motor 200v AC servo motor

Max. stroke	X-axis: 800 Y-axis: 300 Z-axis: 500 mm
Max. payload	1kg
Standard cycle time	1.69 secs.

SCARA Robot



Catalog Download

[intelligentactuator.com/dg23-p28-1](http://intelligentactuator.com/dg23-p28-1)



IXA Series Lineup

[intelligentactuator.com/dg23-p28-2](http://intelligentactuator.com/dg23-p28-2)



IXP Series

[intelligentactuator.com/dg23-p28-3](http://intelligentactuator.com/dg23-p28-3)



Features

Choose from the low-cost IXP series equipped with a stepper motor and the industry's fastest, high rigidity (double arm construction) IXA series.

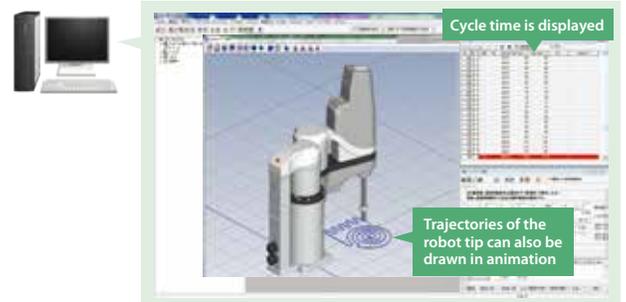
The IXA series has an interior cable, allowing it to be used in applications with height restrictions.

IXA simulation

Using the "Simulator for IXA" in the PC software, operation check, programming, and cycle time check can be performed in advance even without the robot itself.

**The industry's fastest IXA**

- Fully enclosed structure**  
The operating part is covered for enhanced dust-proofing.  
\*Excluding arm length 800 / 1000
- Patented**
- Double arm structure**  
Improved rigidity keeps vibration low.  
Heat dissipation is improved and continuous cycle time is faster.  
\*Excluding arm length 180
- Patented**
- Cable built-in**  
With built-in cables, the height dimension can be reduced to allow effective use of space.



Lineup

IXP Series



● Rotational axis / gripper type also available

Arm length	180~650mm
Vertical Axis Stroke	80~200mm
Max. payload	6kg
Standard cycle time	0.57 secs.~

IXA Series Standard type IXA-□NNN



● 6 total models

Arm length	180~1000mm
Vertical Axis Stroke	50~400mm
Max. payload	21kg
Standard cycle time	0.26 secs.~

IXA Series High-speed type IXA-□NSN



● 5 total models

Arm length	180~1000mm
Vertical Axis Stroke	150~400mm
Max. payload	24kg
Standard cycle time	0.26 secs.~

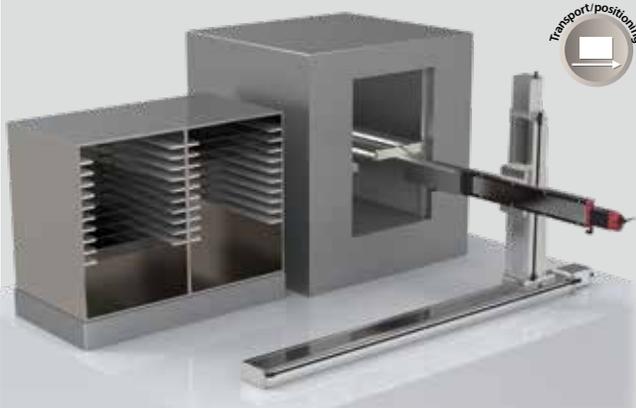
IXA Series High payload type IXA-□NHN



● Longest IAI SCARA robot

Arm length	1000/1200mm
Vertical Axis Stroke	400mm
Max. payload	50kg
Standard cycle time	0.56 secs.~

**ROBO Cylinder**  
Single-axis  
robot



**Catalog Download**

[intelligentactuator.com/dg23-p29-1](http://intelligentactuator.com/dg23-p29-1)



**Cleanroom Type**

[intelligentactuator.com/dg23-p29-2](http://intelligentactuator.com/dg23-p29-2)



**Dust & Splash-proof Type**

[intelligentactuator.com/dg23-p29-3](http://intelligentactuator.com/dg23-p29-3)



**Features**

**[Cleanroom]**

The stainless steel sheet on the top surface, air suction inside the body, and low-dust construction with low-dust grease ensure compliance with ISO Class 2.5 or equivalent. (ISO 14644-1)

**[Dust-proof/splash-proof]**

The IP65 rating ensures that even dusty environments or equipment directly exposed to water will not be affected.

**Lineup**

**Cleanroom**

**ROBO Cylinder RCP6CR Series**  
**RCP6CR-SA□C/ WSA□C**



- 8 total sizes
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)



Body width	40~160mm
Stroke	50~1100mm
Max. payload	Horizontal 100kg / Vertical 55kg
Max. speed	1440mm/s

**ROBO Cylinder RCP6CR Series**  
**RCP6CR-HSA□C/ HSA□C**



- 2 total sizes
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)

Body width	63~75mm
Stroke	50~1500mm
Max. payload	Horizontal 55kg / Vertical 25kg
Max. speed	1280mm/s

**Dust-proof/splash-proof**

**ROBO Cylinder RCP4W Series**  
**RCP4W-SA□C**



- 3 Total Types
- IP65



Body width	57~79mm
Stroke	100~700mm
Max. payload	20kg
Max. speed	530mm/s

**Single Axis Robot ISWA Series**  
**IS(P)WA**



- High rigidity type
- IP65



Body width	94~155mm
Stroke	100~1200mm
Max. payload	70kg
Max. speed	1000mm/s

**ROBO Cylinder RCS4CR Series**  
**RCS4CR-SA□C/ WSA□C**



- 8 total sizes
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)



Body width	40~160mm
Stroke	50~1100mm
Max. payload	Horizontal 100kg / Vertical 50kg
Max. speed	1500mm/s

**Single Axis Robot ISDBCR Series**  
**IS(P)DBCR**



- Anti-static type is also available
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)



Body width	90~150mm
Stroke	100~2500mm
Max. payload	Horizontal 120kg / Vertical 40kg
Max. speed	1800mm/s

**Single Axis Robot ISDACR Series**  
**IS(P)DACR-W**



- High thrust type
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)



Body width	198mm
Stroke	100~2500mm
Max. payload	Horizontal 120kg / Vertical 60kg
Max. speed	2000mm/s

## ROBO Cylinder



### Catalog Download

[intelligentactuator.com/dg23-p30-1](http://intelligentactuator.com/dg23-p30-1)



### Cleanroom Type

[intelligentactuator.com/dg23-p30-2](http://intelligentactuator.com/dg23-p30-2)



### Dust & Splash-proof Type

[intelligentactuator.com/dg23-p30-3](http://intelligentactuator.com/dg23-p30-3)



## Features

### [Cleanroom]

The air suction inside the body meets ISO Class 3.5 or equivalent. (ISO 14644-1)

### [Dust-proof/splash-proof]

IP52/65 rating by sealing the joint with a gasket and seal.

## Lineup

### Cleanroom

#### ROBO Cylinder RCA2CR Series



- Overall shortened length type
- Guide type is also available
- ISO Class 100 (0.1µm, Fed.Std.209D)

Body width	28~35mm
Stroke	25~50mm
Max. payload	Horizontal 6kg / Vertical 1.5kg
Max. speed	300mm/s

### Dust-proof/splash-proof

#### ROBO Cylinder RCP6W Series



- 8 total sizes
- Motor side-mounted type is also selectable
- IP65

Body width	40~160mm
Stroke	50~800mm
Max. payload	Horizontal 100kg / Vertical 70kg
Max. speed	630mm/s

#### ROBO Cylinder RCP5W Series



- High thrust type
- IP65

Body width	108mm
Stroke	50~800mm
Max. payload	Horizontal 240kg / Vertical 120kg
Max. speed	200mm/s

#### ROBO Cylinder RCS2CR Series



- Overall shortened length type
- Guide type is also available
- ISO Class 100 (0.1µm, Fed.Std.209D)

Body width	46/48mm
Stroke	50/75mm
Max. payload	Horizontal 20kg / Vertical 6kg
Max. speed	380mm/s

#### ROBO Cylinder RCA2W Series



- Overall shortened length type
- Guide type is also available
- IP52

Body width	28~35mm
Stroke	25~50mm
Max. payload	Horizontal 6kg / Vertical 1.5kg
Max. speed	300mm/s

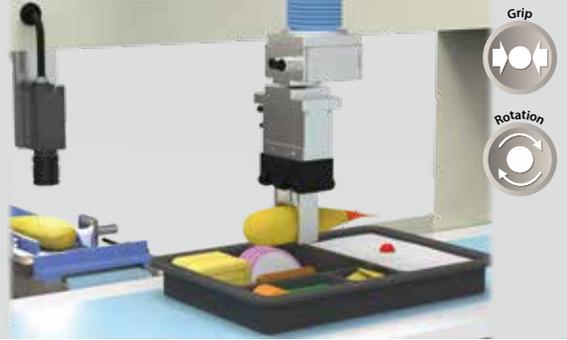
#### ROBO Cylinder RCS2W Series



- Overall shortened length type
- Guide type is also available
- IP52

Body width	46/48mm
Stroke	50/75mm
Max. payload	Horizontal 20kg / Vertical 6kg
Max. speed	380mm/s

ROBO Cylinder  
Single-axis  
robot



Catalog Download

[intelligentactuator.com/dg23-p31-1](http://intelligentactuator.com/dg23-p31-1)



Cleanroom Type

[intelligentactuator.com/dg23-p31-2](http://intelligentactuator.com/dg23-p31-2)



Dust & Splash-proof Type

[intelligentactuator.com/dg23-p31-3](http://intelligentactuator.com/dg23-p31-3)



Features

[Cleanroom]

The air suction inside the body meets ISO Class 2.5 or equivalent. (ISO 14644-1)

[Dust-proof/splash-proof]

The gripper is equipped with a rubber cover for simple dustproofing, and the rotary is dustproof and drip-proof due to the sealed structure of the body frame.

Lineup

Cleanroom

ROBO Cylinder RCP2CR Series RCP2CR-GR



- Slide, Lever, 3 Claw Type
- 6 total models
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)

Body width	42~80mm
Stroke (one side)	4~7mm / 90 deg.
Max. grip force (both sides)	102N



Dust-proof/splash-proof

ROBO Cylinder RCP2W Series RCP2W-GR



- Slide, Lever, 3 Claw Type
- 6 total models
- IP50

Body width	42~80mm
Stroke (one side)	4~7mm / 90 deg.
Max. grip force (both sides)	102N



ROBO Cylinder RCP2CR Series RCP2CR-RT



RCP2CR-RTB RCP2CR-RTC

- 6 total models
- ISO Class 10 (0.1µm, Fed.Std.209D)

Body width	45~114mm
Operation range	330/360 deg. (multi-rotation)
Max. torque	~4.6N
Allowable inertia moment	~0.03 kg/m <sup>2</sup>



Single Axis Robot DDACR Series DDACR



- Large diameter direct drive motor
- ISO Class 2.5 or equivalent (ISO 14644-1 Std.)

Body width	180mm
Operation range	360 deg. (multi-rotation)
Max. torque	~75N
Allowable inertia moment	~1.8kg·m <sup>2</sup>



ROBO Cylinder RCP2W Series RCP2W-RT



RCP2W-RTB RCP2W-RTC

- 6 total models
- IP54

Body width	45~114mm
Operation range	330/360 deg. (multi-rotation)
Max. torque	~4.6N
Allowable inertia moment	~0.03 kg/m <sup>2</sup>



Single Axis Robot DDW Series DDW



- Large diameter direct drive motor
- IP66M

Body width	195mm
Operation range	360 deg. (multi-rotation)
Max. torque	~67N
Allowable inertia moment	~1.6kg·m <sup>2</sup>



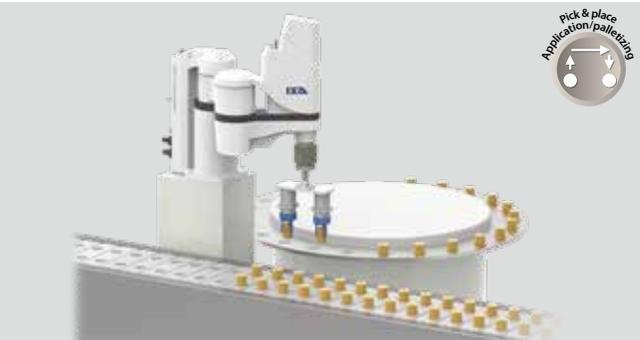
CLEANROOM

DUST/SPLASH PROOF

# SCARA Robot

The fastest SCARA robot in the industry reduces cycle time.

SCARA Robot



### Catalog Download

[intelligentactuator.com/dg23-p32-1](http://intelligentactuator.com/dg23-p32-1)



### SCARA Robot Lineup

[intelligentactuator.com/dg23-p32-2](http://intelligentactuator.com/dg23-p32-2)



### IXP Series

[intelligentactuator.com/dg23-p32-3](http://intelligentactuator.com/dg23-p32-3)



## Features

Choose from the low-cost IXP series equipped with a stepper motor and the industry's fastest, high rigidity (double arm construction) IXA series. The IXA series has an interior cable, allowing it to be used in applications with height restrictions.

### [Cleanroom]

ISO Class 3 or 3.5 compliant, these products are used in assembly and transport equipment in clean environments. (ISO 14644-1)

### [Dust-proof/splash-proof]

While complying with IP65, the specifications are equivalent to those of standard environmental specifications.

### The industry's fastest IXA (dust-proof splash-proof specification)

#### Aluminum cover adopted

No water ingress due to cover deformation even when subjected to direct jets. There is no swelling caused by coolant.

#### Double arm structure

Improved rigidity keeps vibration low. Heat dissipation is improved and continuous cycle time is faster.

\*Excluding arm length 300



#### Cable built-in

With built-in cables, the height dimension can be reduced to allow effective use of space.

## Lineup

### Cleanroom

#### IXP Series IXP-□□



● ISO Class 3.5 or equivalent (ISO 14644-1 Std.)

Arm length	350~650mm
Vertical Axis Stroke	150/200mm
Max. payload	6kg
Standard cycle time	0.74 secs.~

### Dust-proof/splash-proof

#### IXP Series IXP-□W□



● IP65 (Excluding bellows)

Arm length	350~650mm
Vertical Axis Stroke	150/200mm
Max. payload	6kg
Standard cycle time	0.74 secs.~

#### IXA Series High-speed type IXA-4NSC



● ISO Class 3 (ISO 14644-1 Std.)

Arm length	300~600mm
Vertical Axis Stroke	150~330mm
Max. payload	10kg
Standard cycle time	0.27 secs.~

#### IXA Series High-speed type IXA-4NSW



● IP65 (Excluding bellows)

Arm length	300~1000mm
Vertical Axis Stroke	150~400mm
Max. payload	21kg
Standard cycle time	0.30 secs.~

#### IXA Series High payload type IXA-4NHW



● IP65 (Excluding bellows)

Arm length	1200mm
Vertical Axis Stroke	400mm
Max. payload	47kg
Standard cycle time	0.61 secs.~

Cleanroom / dust-proof splash-proof



Controller

Catalog Download  
[intelligentactuator.com/dg23-p33-1](http://intelligentactuator.com/dg23-p33-1)



Controller Lineup Page  
[intelligentactuator.com/dg23-p33-2](http://intelligentactuator.com/dg23-p33-2)



Lineup

Single-axis controller

When only 1 axis is controlled by 1 controller

Supported control system ▶ I/O (Input/output) Pulse-train Field network Serial communication (Modbus)

**PCON** Series

Compact Low price 24V Stepper motor

- Equipped with PowerCON (high-output driver), which draws out the maximum capability of the stepper motor
- Equipped with a collision detection function

Max. dimensions (mm): W35×D78.1×H190



**ACON** Series

Compact Low price 24V AC servo motor

- Equipped with an off-board tuning function to set the optimum gain to match the transport load

Max. dimensions (mm): W35×D78.1×H185



**DCON** Series

Compact Low price 24V Brush-less DC motor type

- RCD Controller

Max. dimensions (mm): W35×D78.1×H185



**SCON2** Series

Compact Low price 200V AC servo motor

- Convenient functions such as reading actuator information, drive recorder function, safety function, etc.
- Pulse output is available

Dimensions (mm): W40×D143×H160



**SCON** Series

Low price 200V AC servo motor

- 200VAC servo motor
- All models equipped with the system can be connected.
- Pulse output is available

Max. dimensions (mm): W92.7×D174×H300



Multi-axis controller

When controlling multiple axes with 1 controller

Supported control system ▶ SEL language (IAI exclusive program) \*Excluding RCON I/O (Input/output) Field network

**RCON** Series

Compact Low price 24V Stepper motor 24V AC servo motor 24V Brush-less DC motor type 200V AC servo motor

Recommended product!

- Unit connection type
- Different motor types can be controlled by 1 unit
- Up to 16 axes can be connected (some restrictions apply)
- ELECYLINDER can also be connected

Dimensions (mm): D98.8×H115



**RSEL** Series

Compact Low price 24V Stepper motor 24V AC servo motor 24V Brush-less DC motor type 200V AC servo motor

Recommended product!

- Unit connection type
- Control of different motor types is possible
- Up to 8 axes can be connected (some restrictions apply)
- ELECYLINDER can also be connected

Dimensions (mm): D98.8×H115



**MSEL** Series

24V Stepper motor

- Built-in power supply type (100~230VAC±10%)
- SCARA Robot IXP, Wrist Unit WU can be controlled

Dimensions (mm): W130×D125×H195



**XSEL** Series

200V AC servo motor

- SCARA Robot IXA can be controlled
- Capable of 2-axis synchronous control
- Control of up to 40 axes is possible in the extended motion.

Max. dimensions (mm): W304~372×D125.3×H195



**XSEL2** Series

200V AC servo motor

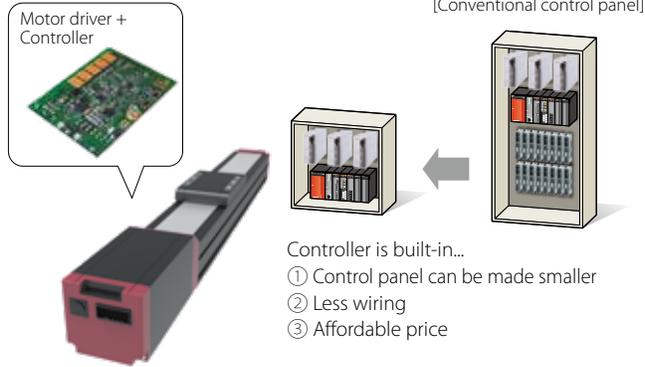
- Interference check is possible on 3D CAD data
- Equipped with software PLC
- ELECYLINDERS can be connected

Max. dimensions (mm): W302×D125.3×H195



## ELECYLINDER® Controller built-in type

For 2-point/3-point positioning, ELECYLINDER® with built-in controller is recommended.



## Field network connection unit for ELECYLINDER®

**REC Series**

- Compact Stepper motor
- 24V Stepper motor
- Low price
- 200V AC servo motor

- ELECYLINDER Exclusive
- Control of different motor types is possible
- Up to 16 axes can be connected (some restrictions apply)

When connected to an EC connection unit\*, I/O control via a field network is possible.  
\*Integration into RCON and RSEL is also possible.

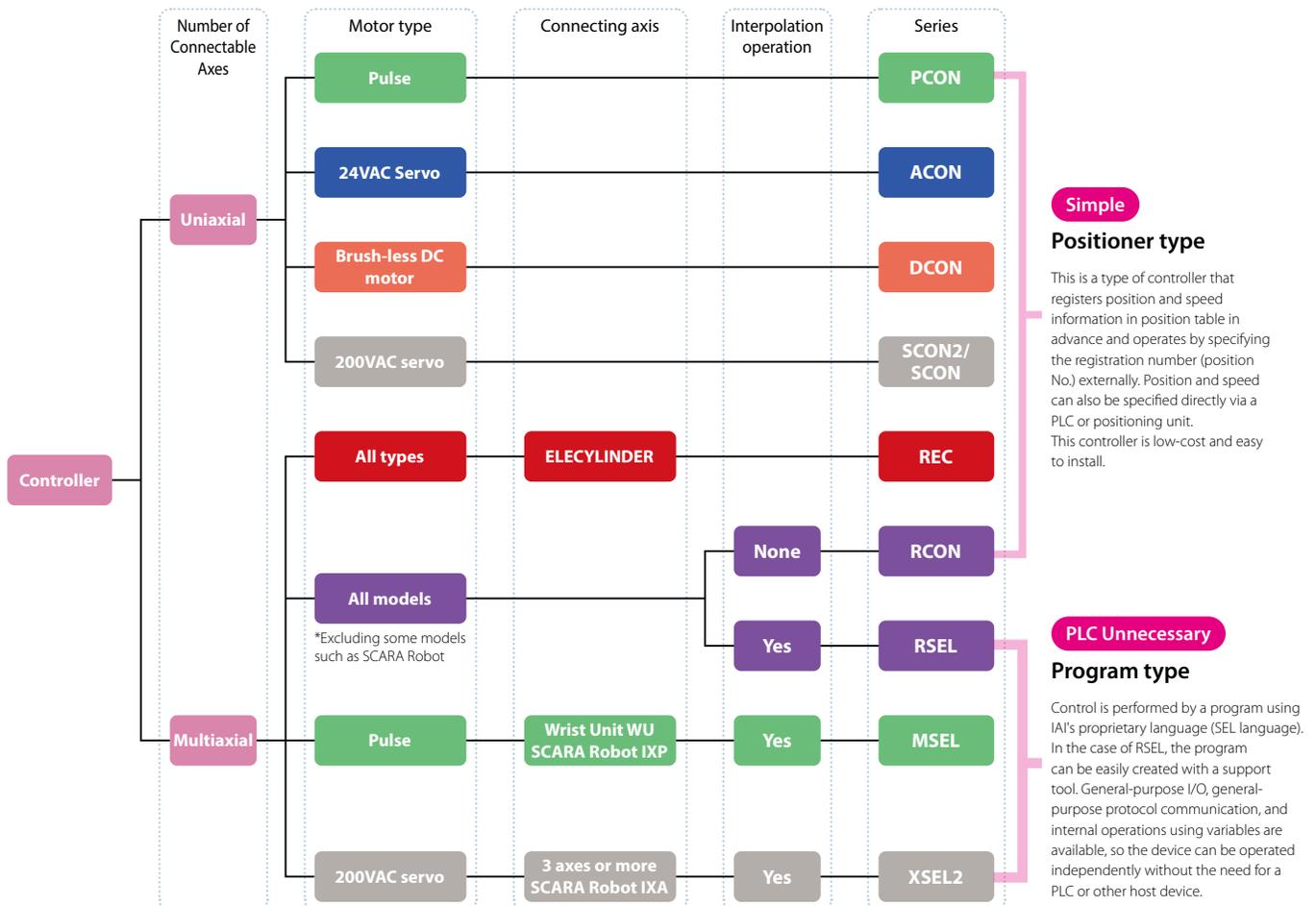
## Field networks

Our controllers support numerous field networks

Motion control by motion network is also available.



## Selection flow



General functions

► Positioner type with “□CON” in the model name

General functions

Function	Description
Multi-point positioning	0.01mm (deg.) * Set by unit
Speed control	Speed can be set for each position
Acceleration deceleration control	Acceleration/deceleration can be set for each position
Push	Push start point and current (%), Set push width
Pitch feed	Arbitrary values for equally spaced movement
Jog motion	Operable only while input is ON
Zone output	0.01mm (deg.) * Set by unit
Pausing	Stop at any position by putting up a pause signal Command cancellation is also possible by combining a reset signal
Speed changes while moving	Speed can be changed without pausing by updating only the speed while moving

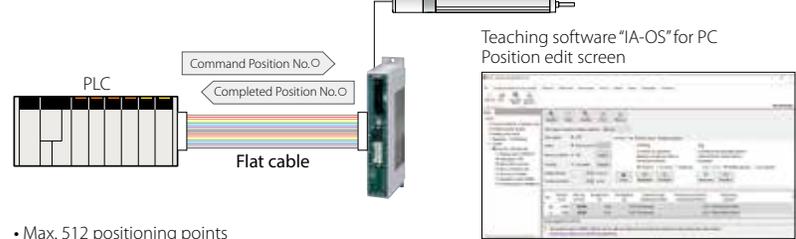
\*0.001 for some models

Other functions

Function	Description
Overload warning	Set load level with parameters Warning and alarm outputs available
Collision detection *1	Set current value and judgment time If a collision is detected, Servo OFF immediately
Vibration control *2	Set vibration frequency with parameters Vibration suppression support available
Power conservation	Automatic servo OFF and auto-current down settings for power saving

\*1 Stepper motor specification only  
\*2 AC servo motor specification only

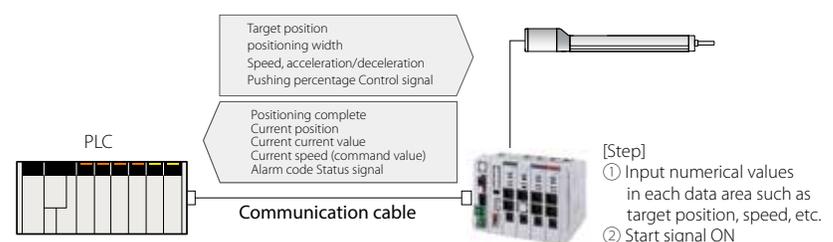
PIO control (Ex.) PCON NPN specification



- Max. 512 positioning points
- Pre-registration of operational conditions
- Outputs a completion signal for each position after operation completion

- [Step]
- ① Enter operational conditions in position data
  - ② Specify the position No. from the top
  - ③ Start signal ON

Field network control (Ex.) RCON direct numerical control mode



- Unlimited number of positioning points
- Specify numerical values for target position, speed, acceleration/deceleration, and push current limit  
In addition to the current position, the speed and current value can be monitored

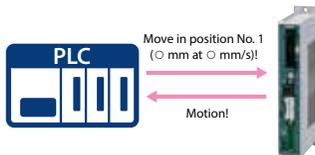
- [Step]
- ① Input numerical values in each data area such as target position, speed, etc.
  - ② Start signal ON

Compatible models

Position-specified move using I/O signals



Select the PIO specification.  
(MSEL equipped as standard)



"Move!" to a pre-registered point and send instructions.

Direct numerical control from PLC, etc.



Select the field network specification.

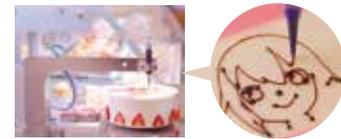


The position and speed of the device can be freely controlled from a touch panel attached to the device.

Interpolation control (Application, palletizing, etc.)



Programming in IAI's proprietary language (SEL language) is required.  
In the case of RSEL, the SEL program can be easily created with a support tool.

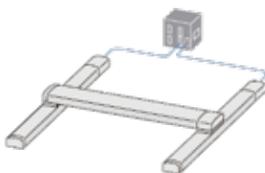


Free movement is possible, including diagonal movement and circular arcs.

Synchronous control



Select an actuator with a limit switch for the connecting actuator.

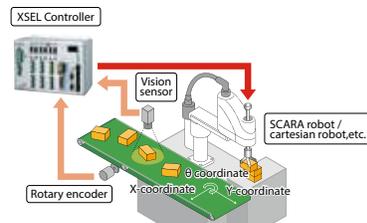


The 2 axes operate at exactly the same timing.

Conveyor tracking



Special specifications will be supported.

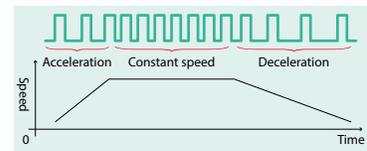


The robot transfers the workpiece in accordance with the conveyor's movement.

Pulse-train control



Select the pulse-train specification.



Position and speed are indicated by the number and speed of pulses.



## ▶ Program type with “□SEL” in the model name and tabletop robot

In addition to the functions of the positioner type, the program type has the following functions.

### General functions (Plus added features)

Function	Description
Interpolation control	Linear / circular motion with multiple axes interpolating each other
Synchronous control	Two axes operate simultaneously with automatic compensation
Autostart program	Automatic startup of the set program in READY state after controller power-on.

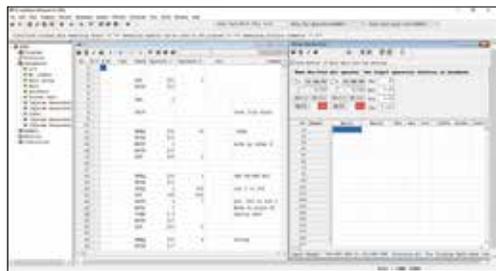
### Other functions (Plus added features)

Function	Description
Simple interference check zone *1	If the tool tip encroaches into arbitrary 3D space, an error output prevents interference
IXA Compliance Control	Function that softly controls the robot in accordance with external forces and assists in fitting of workpieces, etc.
Multi-slider over-approach detection *2	Ability to detect multi-slider over-approach by setting a minimum distance with parameters

\*1 SCARA / Cartesian 6-axis  
 \*2 NSA / LSA / LSAS

Controlled by IAI's exclusive program (SEL language) and position data.

PC Teaching software: IA-101



### Stand-alone

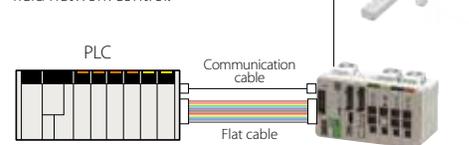
(When a host unit such as PLC is not used)



Auto-start program allows device configuration without a PLC.

### Control using PLC

Can support both I/O control and field network control.



Field network enables:

- Editing position data from PLC
- Direct numerical specification from PLC
- Output of coordinates to PLC

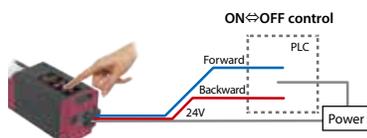
Numerical data can be easily exchanged by programming using variables.

### Air cylinder replacement



EC PCON ACON DCON SCON2  
 SCON

Select the PIO specification.  
 Solenoid valve mode is available.



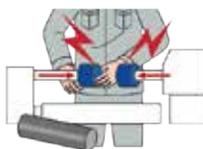
Can be operated with the same wiring and programming as the air cylinder.

### Torque limited while moving



RCON PCON ACON DCON SCON2  
 SCON RSEL MSEL X-SEL2 X-SEL

Motor current value can be limited.  
 (For PCON, ACON, DCON, and SCON, only pulse-train specifications are supported.)



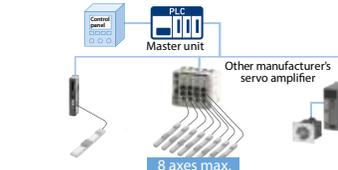
The actuator can be stopped when a person or object interferes during movement.

### Motion control



RCON PCON ACON DCON SCON2  
 SCON

Select motion specifications. The system is equipped with a mechanism to match the timing.



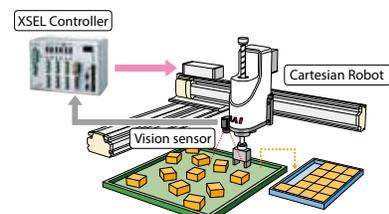
Simultaneous operation and interpolation control are possible by combining IAI products with motors from other manufacturers.

### Vision system



TTA MSEL X-SEL2 X-SEL RSEL

Connection via Ethernet or RS-232C.



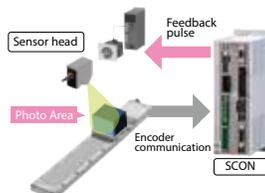
Robot can be moved to the position read by the camera. Please consult your sales representative for details.

### Feedback pulse output



SCON2 SCON

Select the PIO specification. Special specifications are available for field network specifications in SCON.



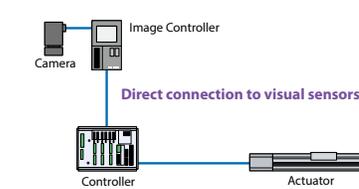
It is possible to feed back to external devices whether the actuator has moved as commanded.

### Serial communication direct control



RCON PCON ACON DCON SCON2  
 SCON RSEL MSEL X-SEL2 X-SEL

Any I/O type can be used for any model.



The same protocol can be used to connect to software and hardware from other vendors.

## 24VDC power supply

### Power supply internal data external output

Contents listed at right can be monitored by connecting with RCON/RSEL.



Calculator software provides an easy calculation for required number of 24V power units. >> P43



### PSA-24

- IAI exclusive power supply
- Up to 5 units can be connected in parallel

Power supply voltage: 100VAC~230VAC±10%  
Continuous rated output: ~13.8A (330W)  
Max. dimensions (mm): W54×D142.8.1×H131



## Brake release box

### Shortened start up time

Brake release of the actuator is possible without waiting for electric wiring work.



### BKR-01

- Actuator brake release without wiring to the controller during equipment start-up.

Dimensions (mm): W76×D35×H135

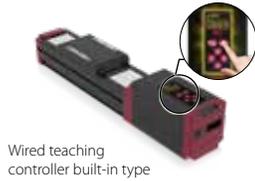


## Digital speed controller (ELECYLINDER exclusive)

Just pick a number and input it.  
Intuitive digital speed controller

The ELECYLINDER can be operated simply by selecting values.

By using a digital speed controller, you can set it on the spot and check it immediately.



Digital Speed Controller  
For external / wireless communication

### ▼ Setting screen



Simple setting (10 levels)



AVD Settings (1~100%)



Cycle time display

### ▼ Digital speed controller enables

- Basic setting (position, acceleration, speed, deceleration)
- Reading current positions
- Jog motion
- Motor power ON/OFF
- Error display
- Setting push force motion
- Brake release
- Cycle time checking
- Alarm reset

### TBD-1 Wired teaching controller

#### ELECYLINDER Exclusive Wired Teaching Controller

- By connecting the included cable to the SIO connector, all ELECYLINDERS can be operated regardless of model or installation conditions.

Dimensions (mm): W31.6×D10.3×H95



### TBD-1WL Wireless teaching controller

#### ELECYLINDER Exclusive Wireless Teaching Controller

- Wireless communication allows easy connection to ELECYLINDER installed in hard-to-reach locations.
- Maximum number of simultaneously detected axes: 16.

Dimensions (mm): W45×D30×H113



<Note>Parameter editing is not possible. To change parameters, use either PC teaching software or teaching pendant.



## Teaching pendant

All types of controller settings can be made with 1 unit

Compatible with all controllers including ELECYLINDER.  
 \*Models listed in the General Catalogs 2018 and later

In addition, ELECYLINDER can be connected wirelessly.

Simple, graphical support functions

Each menu uses icons to make menu selection easier.

Enhanced troubleshooting functions

Just select YES/NO for the alarm status to navigate the troubleshooting methods.

Full range of monitoring functions

Checking actuator status and input/output signals is possible.

### TB-02

- Available for safety category B~4 (TP adapter, dummy plug required separately).
- Low price

Dimensions (mm): W190×D25/55×H155

Standard specifications      Safety category compliance specification

### TB-03

- Wireless connection to ELECYLINDER allows for external positioning, operation settings, and commissioning without the need for a cable connection.

Dimensions (mm): W200×D34×H155

ELECYLINDER operating status can be confirmed up to 16 axes.

Model name	EC-S4S-200	Servo Cur. pos.	Travel Crd.	398,687	Alarm Group	1
S/N	A88972946	Travel Dist.	Travel Dist.	57,159m	Overload alarm	0%
Serial No.	75,24	Overload Ls.				

### ADTB

- Teaching pendant with power supply unit.
- Brake release, trial operation, and data setting are all possible prior to wiring since the teaching pendant has its own power supply unit.

\*Compatible with 24V ELECYLINDER/RCP series

Operation is possible with 100VAC/200VAC power only.

TB-03E/03P      TB-02E/02P

ADTB

Since the RCP series power supply unit serves as the controller, a separate controller is not needed.

It can be mounted for your TB-03/02.

Other Products

## Teaching software for PC

There are 2 types of software for setting positions and parameters. (Windows only)

**IA-OS** For position controller ... Compatible with controllers having □CON in the model name.

### ▼ Main stored software

- IA-OS
- PC software for RC (for old controllers)
- Calculator software
- Functional safety unit configuration tool (for SCON2)

### ▼ Compatible controllers

EC, RCON, REC, PCON, ACON, DCON, SCON2, SCON, etc.

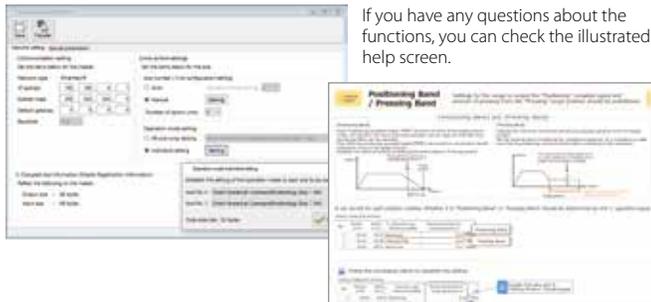


\*Please purchase through your distributor and a download link will be sent to your valid email address.

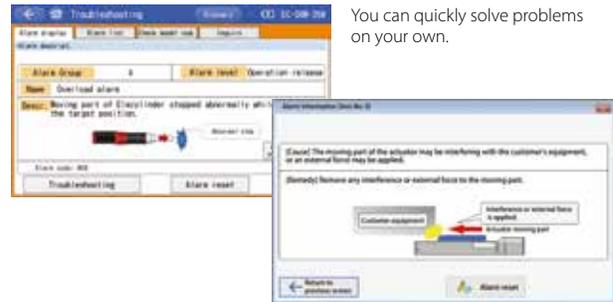
## IA-OS

This software is used to set the position and parameters of the position controller. In addition to test runs, servo monitoring and troubleshooting are also available. The extensive help/guide functions allow for smooth start-up and setup without referring to separate manuals.

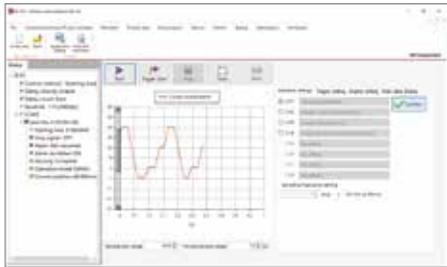
### ▼ Trial operation / position editing



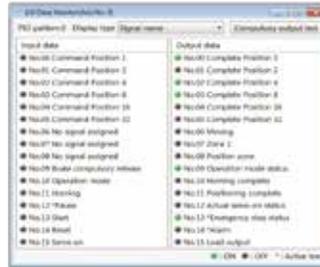
### ▼ Troubleshooting



### ▼ Servo monitor



### ▼ Data monitoring



Easy checking of input/output status. Forced I/O output is also possible.



## Calculator software

The calculator software is included to the IA-OS software package.

The optimum 24V power supply capacity can be determined for actuator operation. It is also possible to calculate power consumption, number of required regenerative resistor units, and cycle time.

### Flow guide



### Motion setting



### Calculation results



Not only electricity consumption, but also electricity costs and CO<sub>2</sub> emissions can be checked.



**IA-101** For program controller ... Compatible with tabletop robots and controllers having □SEL in the model name.

▼ Main stored software

- IA-101 (Including older versions)
- Simulator for IXA/CRS

▼ Compatible controllers

TTA, RSEL, MSEL, XSEL, XSEL2, etc.



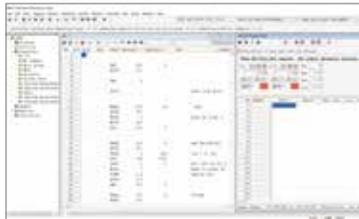
\*Please purchase through your distributor and a download link will be sent to your valid email address.

**IA-101**

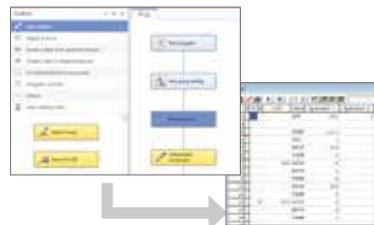
Software for setting program controller positions, parameters, and programs.

In addition to trial operations, input/output signal checking, servo monitoring and troubleshooting are also possible.

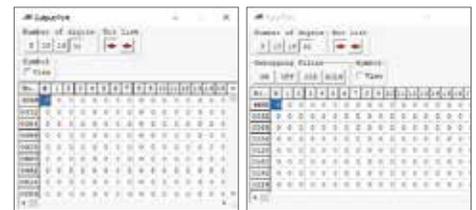
▼ Program / Position editing



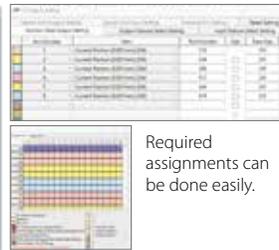
▼ SEL Program support tool (for RSEL)



▼ Input/output monitor



▼ Assignment setting



Required assignments can be done easily.

▼ Troubleshooting



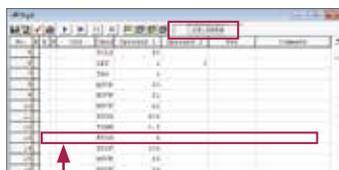
You can quickly solve errors at the time of programming, too.

**Simulator for IXA/CRS**

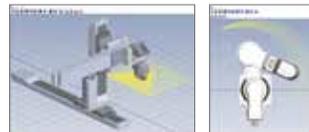
Motion checks can be performed on SCARA (IXA) and Cartesian 6-axis robots (CRS). Since checking is possible on the desk, designing can be done without the robot.

▼ What the simulation software can do

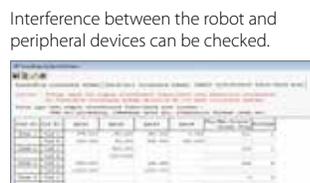
- ① Program operation can be checked.
- ② Cycle time can be confirmed.
- ④ Operation trajectory can be checked.



The motion trajectory can be observed from various directions: top, bottom, front, back, right side, left side, and isometric view.



- ⑤ Simple interference check zone can be set



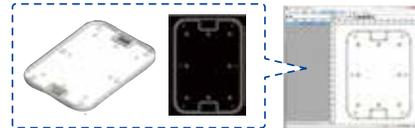
- ③ Input/output signals from external sources can be simulated.

**SEL Program generator**

Software to easily perform soldering, coating, and screw tightening operations using a Tabletop Robot (TTA).

▼ Basic operation in only 2 steps

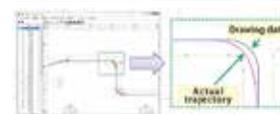
- ① Read the target workpiece into the DXF software



- ② Generate program and position data



Created automatically



Confirm the Actual Operation  
 You can visually confirm the amount of deviation by overlaying the plotted data and the actual movement path.



Download the SEL program from here:  
 intelligentactuator.com/sel-pg/

## ELECYLINDER (2-point positioning)



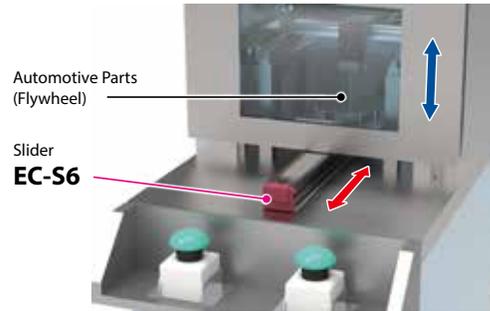
### Door opening/closing mechanism for processing machines



In addition to speed, acceleration and deceleration can be set respectively, enabling shockless opening and closing while increasing speed.



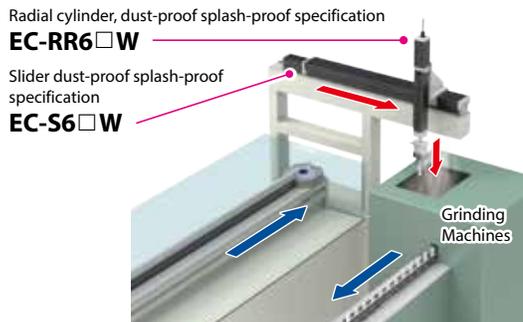
### Laser marking equipment



Positions can be set in increments of 0.01mm, and feedback control of 1,000 times per second ensures repeatable and accurate engraving.



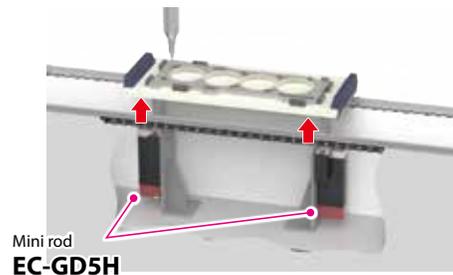
### Ceramic product grinding process



Since S6□W is IP43/44 (IP54 equivalent with WS option) and RR6□W is IP67 rated, they can be used in machining processes where dust is generated.



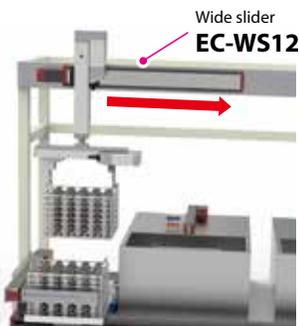
### Sealant application equipment



Compact slender type with built-in controller and shortened overall length. Wireless teaching is possible by using the teaching tool TB-03 or Wireless Teaching Controller.



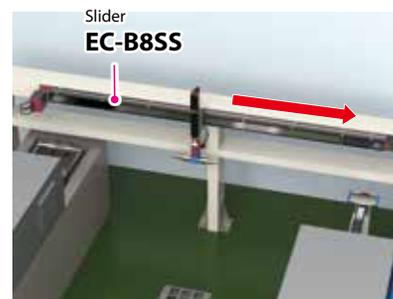
### Workpiece transfer device for washing machines



The wide slider type has high moment rigidity and can handle large overhangs. In addition, vibration during movement can be prevented by individual settings of acceleration, speed, and deceleration.



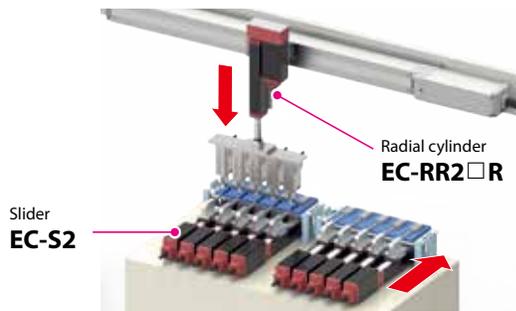
### In-process transfer of motor shafts



The belt-driven type is ideal for long-distance interprocess transfer because there is no speed reduction due to strokes. Battery-less absolute encoder eliminates the need for home return when power is turned on.



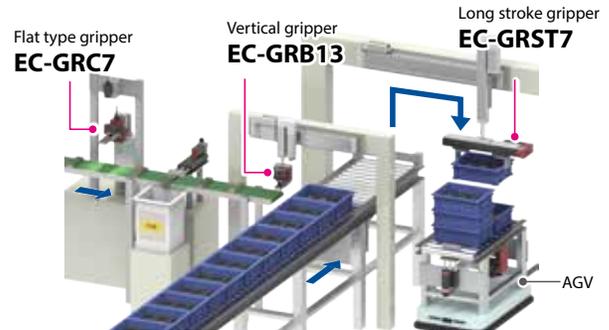
### Transfer and press-fitting of plastic gears into motors



The 20mm compact base width allows for use in locations where installation space is limited. Since pressing settings are quantified, every part can be accurately press-fitted with the same torque.



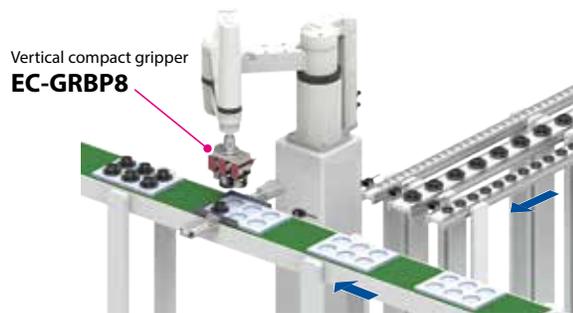
### Inspection and pallet-transfer of diecast parts



Several variations are available: flat type with height of 30/35 mm, vertical type convenient for combined axes, maximum gripping force of 1641 N (both sides), and long stroke type with maximum stroke of 130 mm (one side).



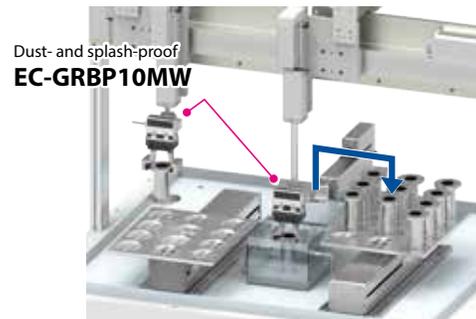
### Bearing assembly process



Thanks to its compact body, multiple axes can be combined and used. Despite its compact body, high precision gripping is possible because of the built-in driver and controller like other ELECYLINDERS.



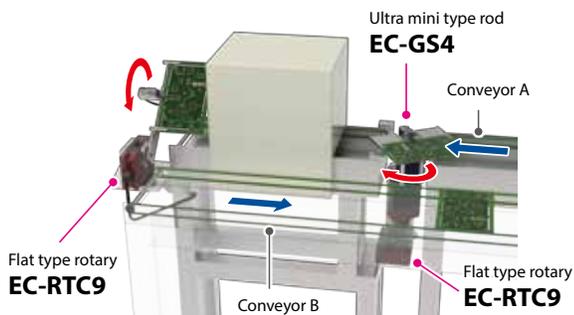
### Cleaning equipment for metal parts



IP54 equivalent construction allows for operation in the environment where it is exposed to water splash. The rubber cover material can be selected according to the environment. (chloroprene rubber or silicone rubber)



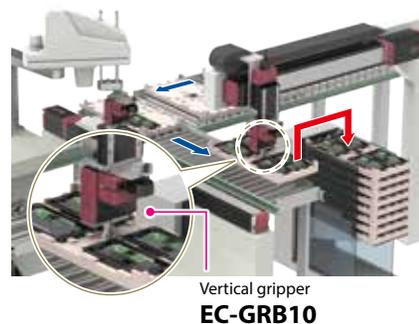
### Substrate reversal



Since the rotary type can also adjust acceleration and deceleration, speed can be increased while reducing the impact at the time of reversal.



### Transfer of electronic parts



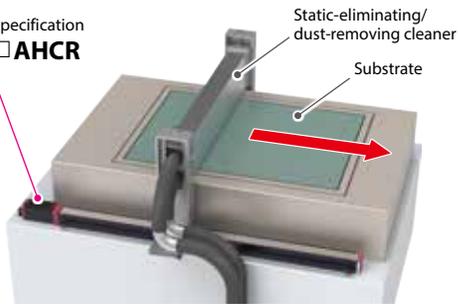
Gripping force, standby position and gripping start position can easily be set numerically. Wireless teaching is possible by TB-03 teaching tool or wireless teaching controller.

## ELECYLINDER (2-point positioning)



### Static-eliminating/dust-removing air type substrate cleaner

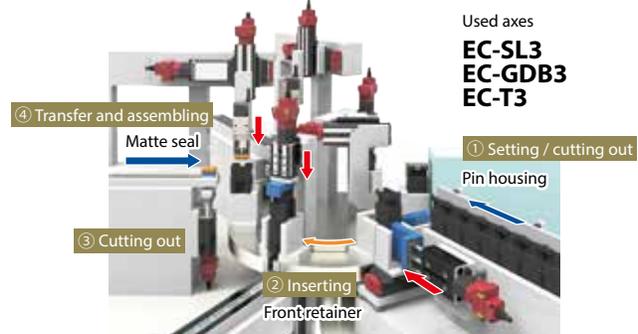
Slider clean specification  
**EC-S7X□AHCR**



Cleanroom specification is compliant with ISO class 2.5 or 3. Suitable for transfer in the clean environment.



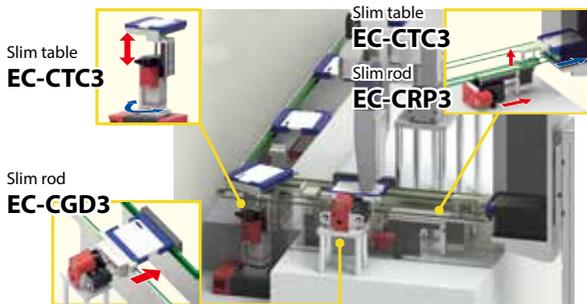
### Index table connector assembling equipment



Palm-sized electric actuator. Up to 16 axes can be connected by using the REC controller.



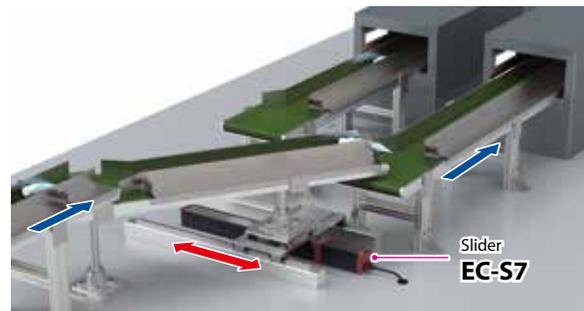
### Printing process for cover parts



The slim body's overall length is 59.5mm and up, allowing for use in locations where installation space is limited.



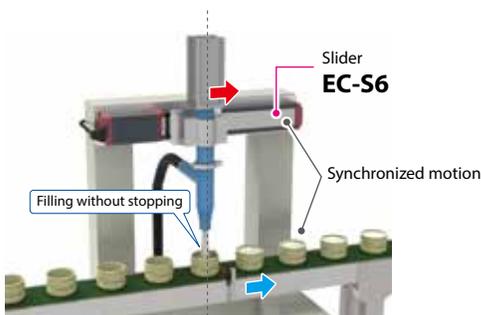
### Sorting equipment for cosmetic goods on the conveyor



Since there is no degradation of speed due to aging, the system can perform sorting according to the setting for a long period of time.



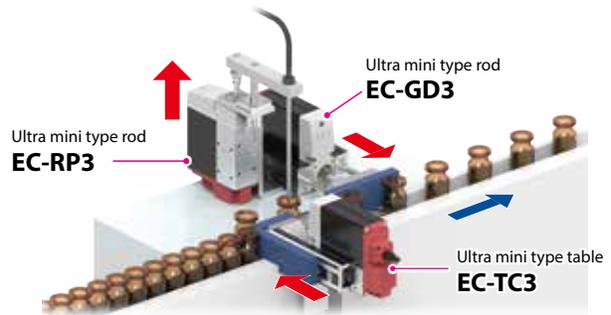
### Hand cream filling equipment



The speed can be set in 0.01 mm/s increments, allowing the conveyor speed and motion to follow. This reduces the time required for conveyor stoppage.



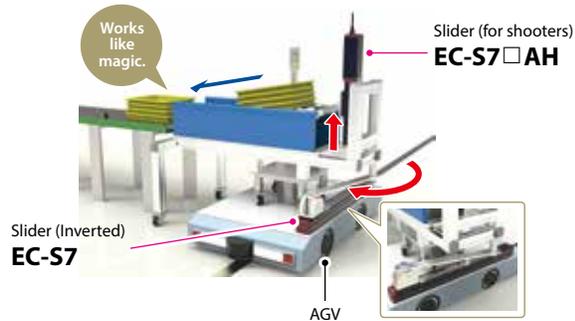
### Filling line for vials



The compact base width of approximately 30 mm allows for compact equipment design. Since the same operation is performed every time, choco-tei (temporary stoppages) due to timing deviations can be reduced.



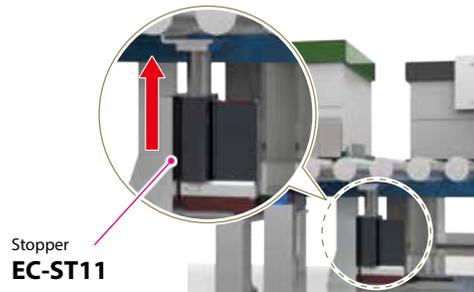
### Equipment for inverting pallets loaded on AGVs



The built-in controller and 24V power supply make it ideal for installation in AGVs.



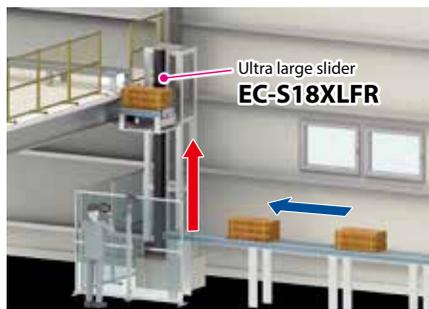
### Stopper for foldable container line



Sliding bushing construction is resistant to radial impact loads, making it ideal for stopper applications. The 24V power supply allows it to be used in any location.



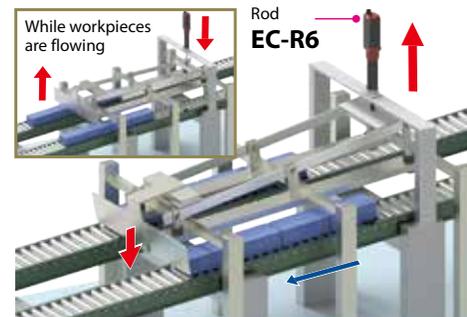
### Timber lift and transfer device



The ultra large slider type for timber transfer. Best suited for lifting applications because long stroke movements are possible even when mounted vertically.



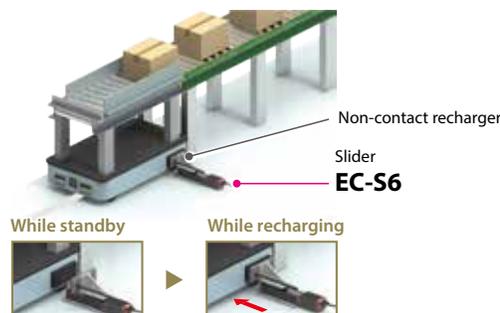
### Workpiece stopper of a chuter



Since there is no degradation of speed due to aging, speed re-adjustments and manual relocation of workpieces are not needed.



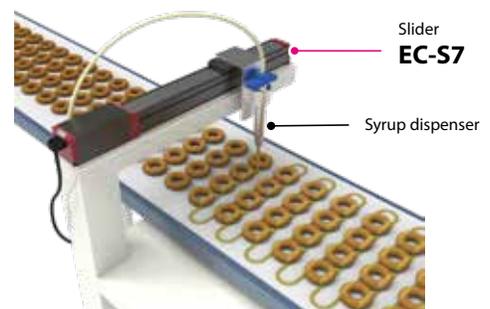
### Positioning equipment for AGV recharger



The position can be set in 0.01 mm increments, allowing the recharger to be aligned precisely. This prevents component damage due to contact with the AGV.



### Equipment for dispensing syrup on donuts

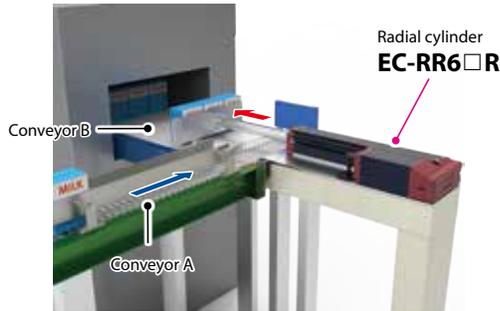


The speed feedback of 20,000 times per second ensures that the moving speed is stable and evenly syrupy.

## ELECYLINDER (2-point positioning)



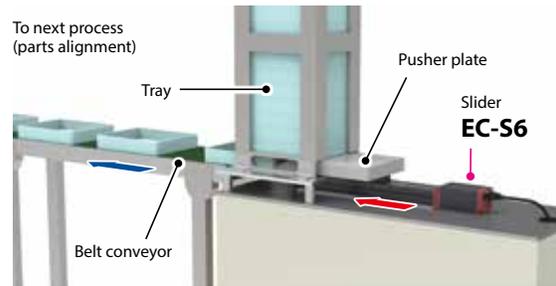
### Milk carton transfer equipment



In addition to speed, acceleration and deceleration can be set respectively, thus preventing milk cartons from being knocked over or rolled in.



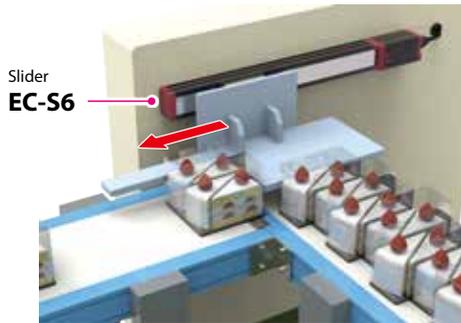
### Tray unstacking equipment



Since speed feedback is performed 20,000 times per second, the same timing can be used for each tray.



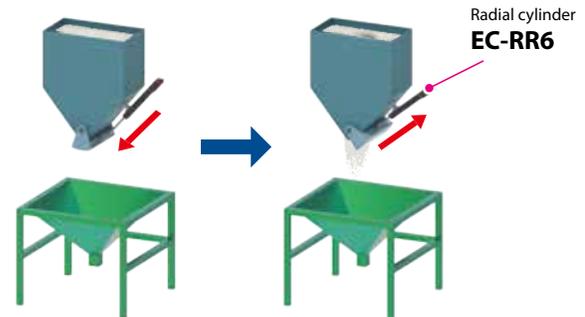
### Shortcake transfer equipment



Smooth start/stop by adjusting acceleration and deceleration allows cakes to be transferred to the conveyor without collapsing.



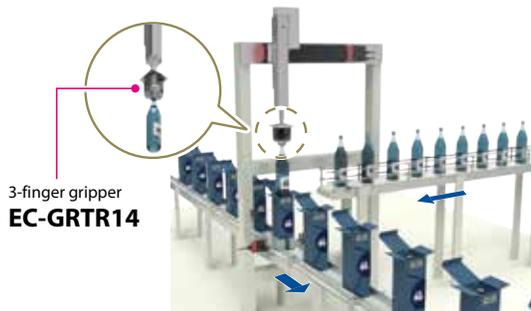
### Automated weighing equipment for rice



Since the speed does not change with the season or time of day, it opens and closes at the same timing every time. No more rice than the specified amount flows in, eliminating the need for re-weighing.



### Packing process for Japanese rice wine bottles



The 3-finger is suitable for gripping cylindrical workpieces such as bottles. Due to the built-in controller, settings for gripping force and gripping start position can be performed precisely.



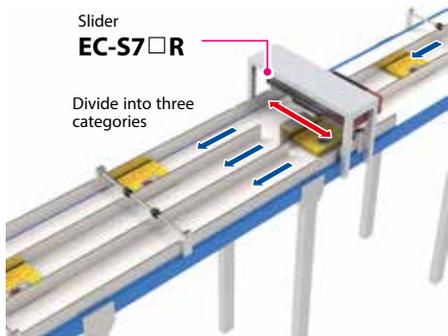
### Commercial Dishwasher door open/close



Driven by 24V power supply, no wiring work is required in the kitchen. The built-in controller helps save space.



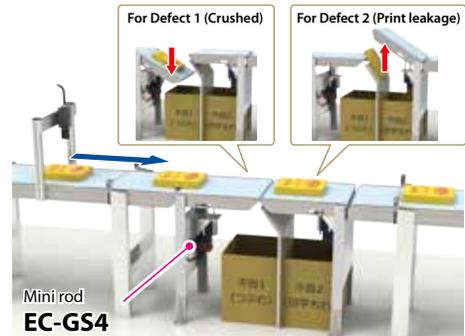
### Equipment for sorting curry packs to the next process line



Speed feedback of 20,000 times per second ensures stable speed and eliminates misclassification.



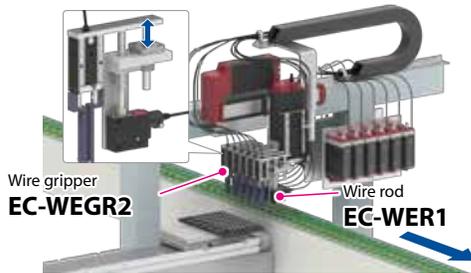
### Damaged instant soup package sorting equipment



Compact slender type with built-in controller and shortened overall length. Wireless teaching is possible by using the teaching tool TB-03 or Wireless Teaching Controller.



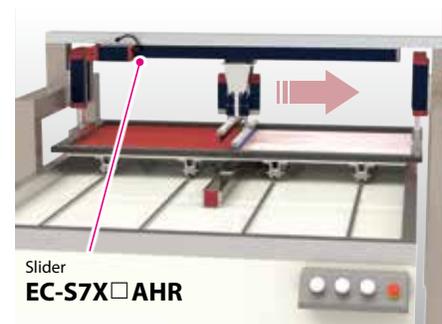
### Assembling process of clock circuit boards



Application of pick and place for parts (quartz) using wire cylinders. It's compact and light weight allow multiple axes to be installed together at the tip of the robot.



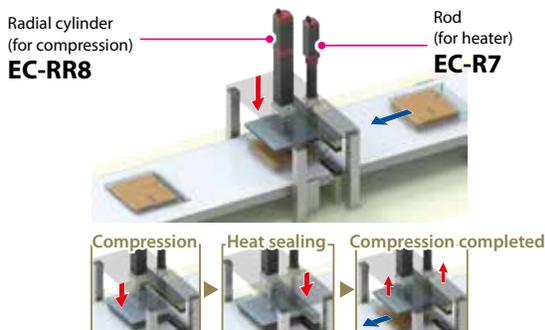
### Silk screen printing machine



If the installation space in the longitudinal direction is limited, we recommend the motor side-mounted type.



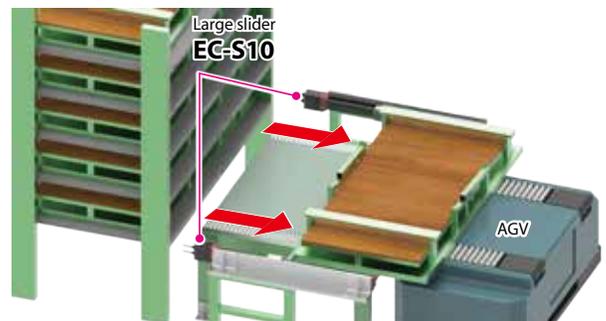
### Bagging of clothes



Feedback control enables the same operation every time. Since the operation is stable, automation is possible while maintaining high quality.



### Transfer equipment for stands

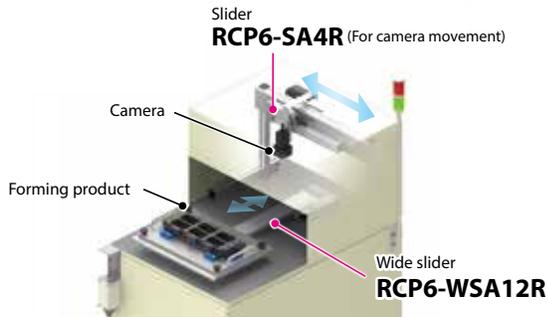


Simultaneous motion is possible by applying motion commands to two axes simultaneously. Feedback control reduces choco-tei (temporary stoppages) and re-adjustment due to time lag between the two axes.

## Multi-point positioning / Multi-axis products / Cleanroom, dust-proof, splash-proof



### Insert missing parts inspection equipment for resin cases



The inspection camera is brought to a smooth standstill by adjusting acceleration and deceleration. This can significantly reduce standby time due to camera vibration.



### Tensile testing of wire harnesses

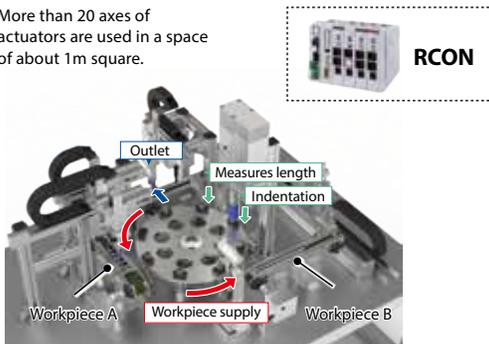


Pulse presses can handle loads in the tensile direction and have no limit on tensile time. High precision judgments are possible at a low cost.



### Automatic assembly machine with indexing system (press fitting of bushings)

More than 20 axes of actuators are used in a space of about 1m square.

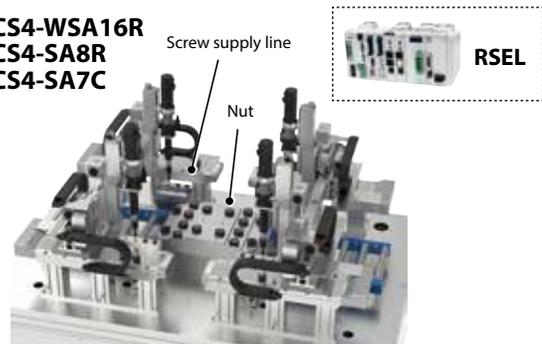


R-unit controllers can be used with a mix of 24V/200V motors. A single unit can connect up to 16 axes, reducing price and installation space.



### Orthogonal 3-axis nutrunner screw tightening equipment

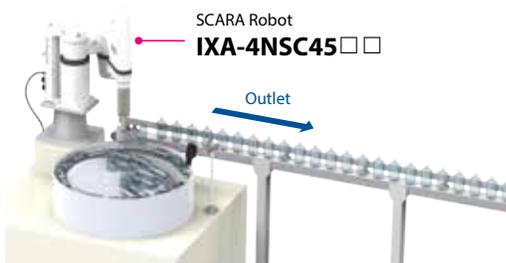
X Axis: **RCS4-WSA16R**  
Y Axis: **RCS4-SA8R**  
Z Axis: **RCS4-SA7C**



IAI's slider type incorporates a ball circulating type with a built-in linear guide, making it suitable for applications with large rotational reaction forces and moment loads.



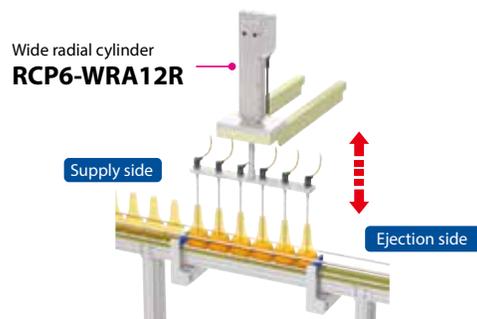
### Pick and place medical bottles



The IXA cleanroom specification is ISO Class 3 compliant, making it ideal for operation in clean environments. Preliminary verification on a PC is possible by using simulation software.



### Shampoo bottle filling equipment



The speed can be changed during movement, allowing the nozzle tip to move in accordance with the rate of rise of the liquid surface. By adjusting acceleration and deceleration, shampoo foaming can be prevented.



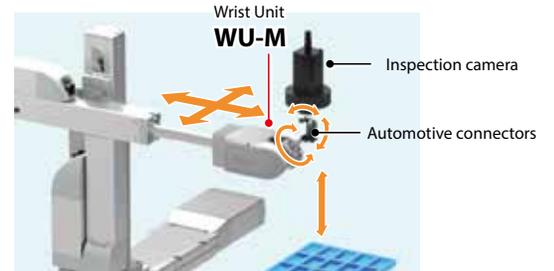
### Fast pick and place of radiators and tips



IXA, the fastest in the industry, also supports push-motion operation. When fitting part A to part B, the position error can be compensated (compliance control).



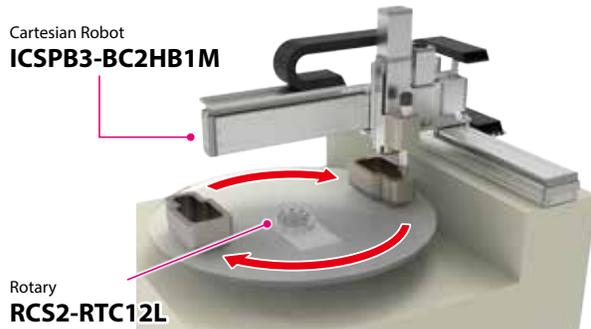
### Automotive connector inspection equipment



Diagonal approaches and tip swiveling, possible until now only with vertically articulated robots, can now be performed at a low cost. The wrist unit is capable of interpolating motion with the orthogonal axes.



### Part sealant application equipment



Multiple target positions can be moved to the final landing point without stopping (pass operation). Since there is no need to pause, coating time can be shortened.



### Workpiece supply/unloading process to washing machine



The IXA's dust-proof and splash-proof specifications are IP65 compliant, so it is not affected by water vapor. The IXA-4NHW12040 can handle a max. payload of 47 kg.



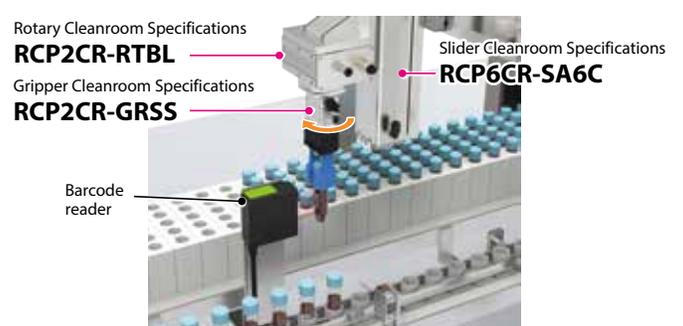
### Pick and place vials



By combining Cartesian axes and wrist units, the cost can be reduced compared to Vertical articulated robots. In addition, the size of the safety fence can be reduced.



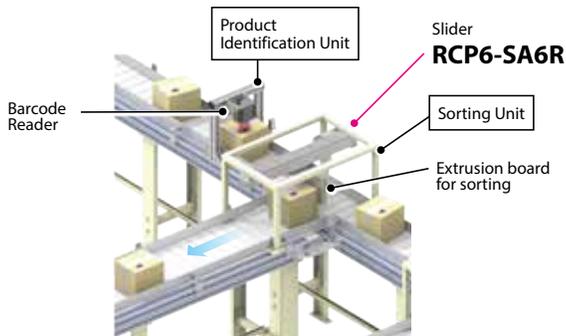
### Barcode reading of specimen samples



The system is ISO class 2.5 equivalent, making it ideal for operation in clean environments. The wide lineup of products allows for a combination of axes with cleanroom specifications.

## Multi-point positioning / Multi-axis products / Cleanroom, dust-proof, splash-proof

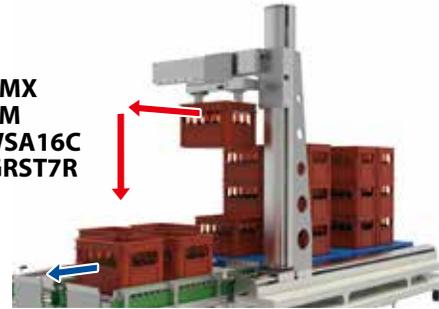
### Logistics Automatic sorting equipment for corrugated cardboard



Since the speed can be changed during the movement, the cycle time can be shortened by using low speed in the range where the extruder plate for sorting contacts the corrugated board, and then using high speed for subsequent extrusion movements.

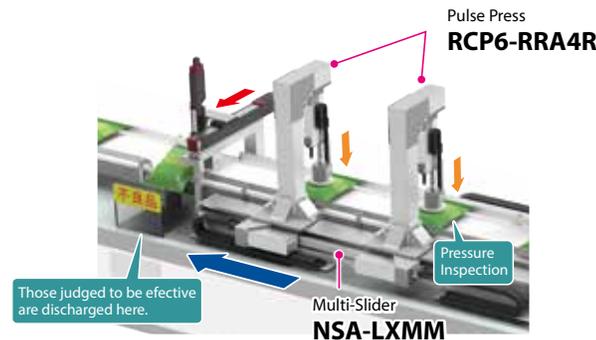
### Logistics Beer bottle case transfer equipment

Single Axis Robot  
X Axis: **ISB-WXMX**  
Z Axis: **ISB-WXM**  
Y Axis: **RCS4-WSA16C**  
G Axis: **RCP6-GRST7R**



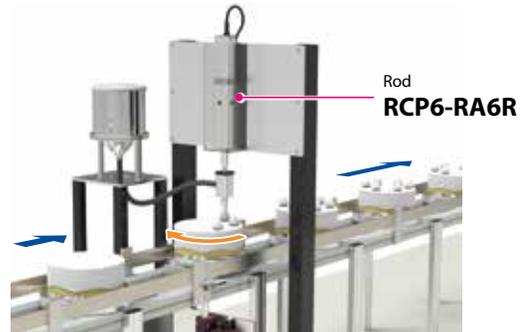
ISB-WXM has a high payload capacity of horizontal 400 kg and vertical 80 kg. Even heavy loads can be handled with a uniaxial configuration robot.

### Foodstuffs Packaging Bag Leak Test Machine



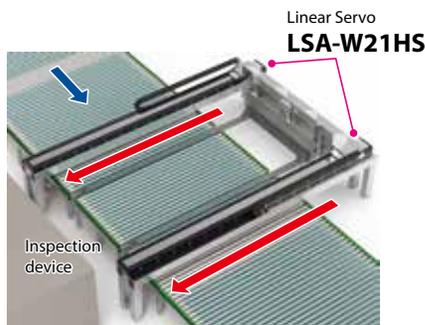
NSA's multi-slider system has two sliders that each move in tandem with the conveyor, eliminating the need to stop the conveyor for each inspection.

### Foodstuffs Cake decorating equipment



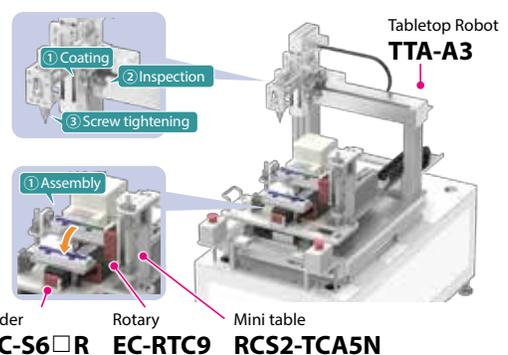
The speed can be changed while moving, so that the cream can be dispensed slowly at first and faster at the end. Multi-point positioning allows for the handling of cakes of various shapes.

### Electrical Machinery Precision Glass circuit board loader/unloader



Large glass circuit boards are transported by 2-axis synchronous control. Stroke is 4155 mm. There is no speed reduction even with long strokes.

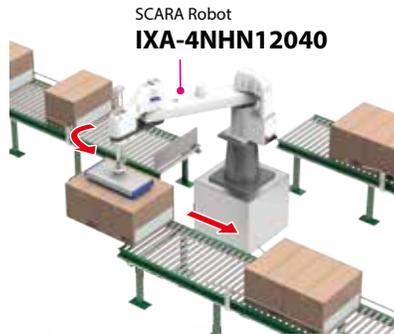
### Electrical Machinery Precision Compact LED light assembly machine



Four processes (assembly, coating, screw tightening, and inspection) are integrated into a single tabletop robot. The number of workpiece sets can be reduced and cycle time can be shortened.



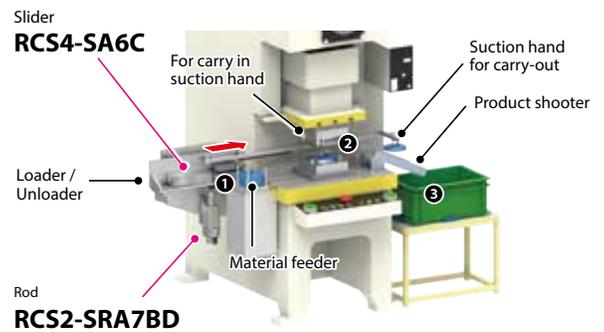
### Interconveyor transfer equipment



Large SCARA robot with arm length of 1200mm and maximum payload of 50kg. Collision detection and interference check functions by the controller prevent damage due to collisions.



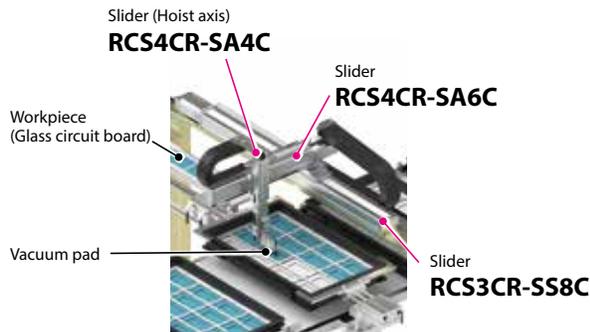
### Loader/Unloader for Press Machine



By adjusting the deceleration, the shock when X Axis stops can be reduced, preventing the workpiece from falling.



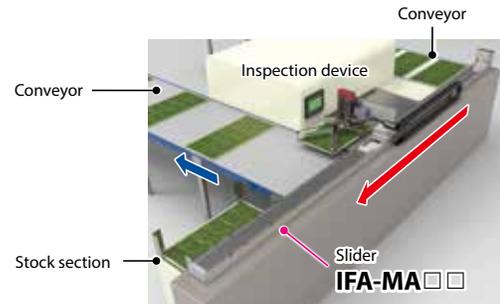
### Glass circuit board transfer equipment



The system is ISO class 2.5 equivalent, making it ideal for operation in clean environments. Arching the motion allows palletizing with the shortest path (arch motion).



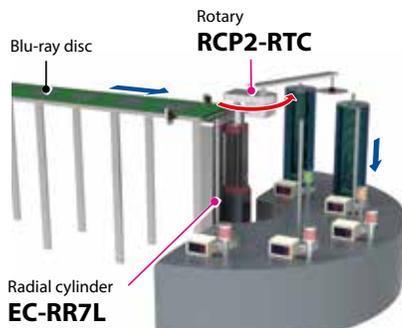
### Circuit board inspection inter-process transfer equipment



The belt-driven type is ideal for long-distance interprocess transfer because there is no speed reduction due to strokes. Stroke up to 3200mm, max. speed up to 3000mm/s.



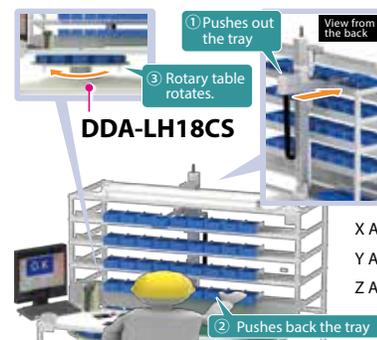
### Blu-ray disc process feed



Rotary multi-point positioning increases the number of stock sections and eliminates setup changeover. Feedback control ensures reliable feeding to the stock section.



### Electric parts rack



X Axis: **RCP5-BA7U**  
Y Axis: **RCP6-RA4R**  
Z Axis: **RCP6-SA6C**

Since the system does not use a sensor, but uses the actuator's position information to confirm take-out, the cost can be reduced compared to conventional error-proofing systems.



[www.intelligentactuator.com](http://www.intelligentactuator.com)

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## IAI America, Inc.

**USA Headquarters & Western Region:**

2690 W. 237th Street, Torrance, CA 90505, USA TEL: +1-310-891-6015

**Midwest Branch Office:**

110 East State Parkway, Schaumburg, IL 60173, USA TEL: +1-847-908-1400

**Southeast Branch Office:**

1220 Kennestone Circle, Suite 108, Marietta, GA 30066, USA TEL: +1-678-354-9470

[www.intelligentactuator.com](http://www.intelligentactuator.com)

**IAI Group Headquarters and Main Factory:**

1210 Iharacho, Shimizu-ku, Shizuoka-shi, Shizuoka, 424-0114, JAPAN

**IAI Industrieroboter GmbH**

Ober der Röth 4, D-65824 Schwalbach am Taunus, Germany

**IAI Robot (Thailand) Co., Ltd.**

825 Phairojkiija Tower 7th Floor, Debaratana Rd.,  
Bangna Nuea, Bangna, Bangkok 10260, Thailand

**IAI (Shanghai) Co., Ltd.**

SHANGHAI JIAHUA BUSINESS CENTER A8-303,  
808 Hongqiao Rd. Shanghai 200030, China