

IAI - Robot Lineup Catalog



Industrial Automation Robots **Product Overview**

IAI ROBOT LINEUP

QUALITY AND INNOVATION.

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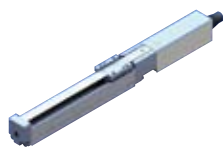
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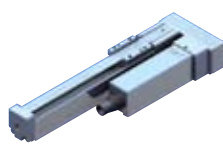
Mini ROBO Cylinder

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

RCP3 MINI SLIDER TYPE



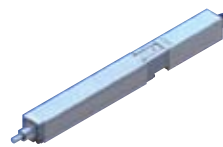
Coupling Type



Folded Motor Type

- 150mm
- 300mm/s
- 1 kg
- ±0.05mm

RCP3 MINI ROD TYPE



Coupling Type



Folded Motor Type

- 150mm
- 300mm/s
- 1 kg
- ±0.05mm

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

RCA2 MINI ROD TYPE

- 75mm
- 300mm/s
- 6 kg
- ±0.02/±0.05mm



Short Nut-Mounting Type



Short Tapped-hole Mounting Type



Short Slide Unit Type with Single Guide



Short Free Mounting Type with Double Guides



Short Slide Unit Type with Double Guides

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

RCA2 MINI TABLE TYPE



Short Compact Type



Short Wide Type



Short Flat Type

RCP3/RCA2 MINI TABLE TYPE



Coupling Type



Coupling Type with Folded Motor

- 100mm
- 300mm/s
- 3 kg
- ±0.02mm

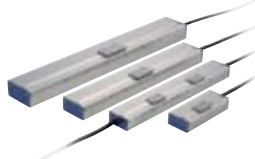
- 30 mm
- 6 kg
- 270mm/s
- ±0.02/±0.05mm

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

RCL MINI LINEAR SERVO



Micro Slider Slim Type



Micro Slider Long Stroke Type



Micro Cylinder

- 288mm
- 1600mm/s
- 3.2 kg
- ±0.1mm

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

ROBO Cylinder®

The affordable high-precision electric actuators reduce your running costs to 1/5 of a pneumatic system

ROBO Cylinders are high-performance electric actuators with a ball screw, linear guide and AC servo motor or DC servo/stepper motor. These next-generation actuators offer multi-point positioning capability and speed/acceleration change function unseen with air

ERC2 SERIES CONTROLLER INTEGRATED TYPE



Motor Coupled Type



Rod Type

- The ERC2 Series have built-in controllers which simplify set up and use
- High-precision, performance and rigidity all in an affordable package

RCP2 SERIES PULSE MOTOR TYPE



Slider Type



Slider Belt Type



Rod Type



Rod Type with Guide



Table Type



Slider Type



High Thrust Type



Rotary Type



Gripper Type



Small Gripper



Short Body Type



Short Body Type with Guide



Three Finger Gripper

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

RCA SERIES 24V SERVO MOTOR TYPE



Coupling Type



Folded Motor Type



Guided Rod Type



Slider Type



Folded Motor Type

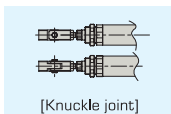


Table Type

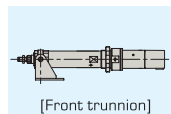


Slider Type

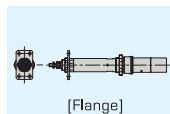
- Shaped similar to a rod-type air cylinder, these actuators accept various mounting brackets that are used on air cylinders.
- Three motor installation methods are available to choose from.
- An optional home check sensor can be set.



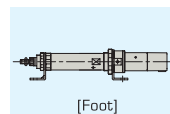
[Knuckle joint]



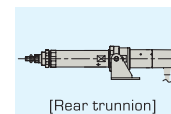
[Front trunnion]



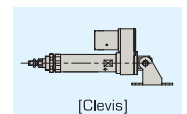
[Flange]



[Foot]



[Rear trunnion]



[Clevis]

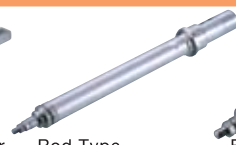
RCS2 SERIES 100V/200V SERVO MOTOR TYPE



Slider Type



Folded Motor Slider Type



Rod Type



Folded Motor Type



Short Rod Type



Ultra High Thrust Rod Type



Guided Rod Type



Arm Type



Flat Type

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

Single Axis Robot

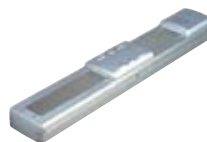
Intelligent actuators with high-speed, high-transfer capabilities



Standard Type
ISA



High-precision Type
ISPA



Simple Dustproof Type
ISDA/ISPDPA



High-rigidity belt-drive Type
IF



Slim Type/Belt-drive Type
FS



Rotary Type
RS



Nut Rotating Type
NS

- Many variations are available to meet diverse applications.
- The guide is integrated with the base.
- Speeds of up to 2,400mm/s and 150kg payload.
- Strokes go as long as 3,000mm with the NS series actuators.

Cleanroom Type

Dedicated cleanroom types conforming to cleanliness class 10



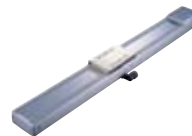
24V Pulse Motor
RCP2CR



24V Servo Motor
RCACR



200V Servo Motor
RCS2CR



Standard Type
ISDACR



High-precision Type
ISPDACR



Anti-static Type
ISDACR-ESD



Small Gripper
RCP2CR-GR



SCARA Robot
IX-NNC



Ultra-Compact
SCARA Robot
IX-NNC

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

Splash proof/Dust proof Type

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



Slider Type
RCP2W-SA16C



Slider Type
ISWA/ISPWA



Pulse Motor Rod Type
RCP2W-RA4C/RA6C



High-thrust Rod Type
RCP2W-RA10C



24V Servo motor
Rod Type
RCAW-RA3/RA4



200V Servo Motor
Rod Type
RCS2W-RA4



Small Gripper (Dustproof)
RCP2W-GR



SCARA Robot
IX-NNW

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

TT Table Top Type

TABLE TOP TT



Gate 2-axis Type



Gated 3-axis Type



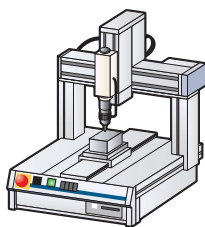
Cantilever 2-axis Type



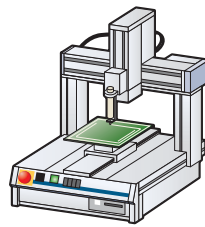
Cantilever 3-axis Type

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

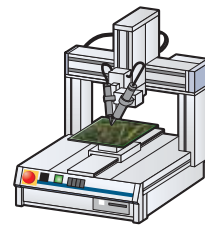
Driving screws



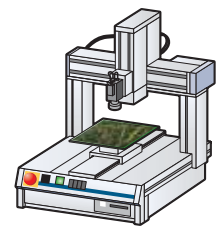
Coating



Soldering



Circuit board inspection



Cartesian Robots

Get your ROI quickly with preconfigured cartesian robots that reduce installation and setup times

ICSA2/ICSPA2 2-axis combination



Y-axis base fixed type
XYB



Y-axis slider fixed type
YYS



Z-axis base fixed type
XZ



Z-axis slider fixed type
YZ

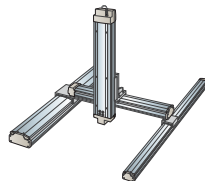


Gantry Type
XYG

ICSA3/ICSP3 3-axis combination



XYB+Z axis type

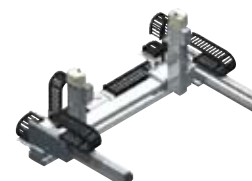


XYG+Z axis type



X-axis nut rotation type
X-axis linear servo type

ICSPA6 6-axis combination



X-axis nut rotation, multi-slider type
X-axis linear servo, multi-slider type

IK Series Multi-axis ROBO Cylinder kits



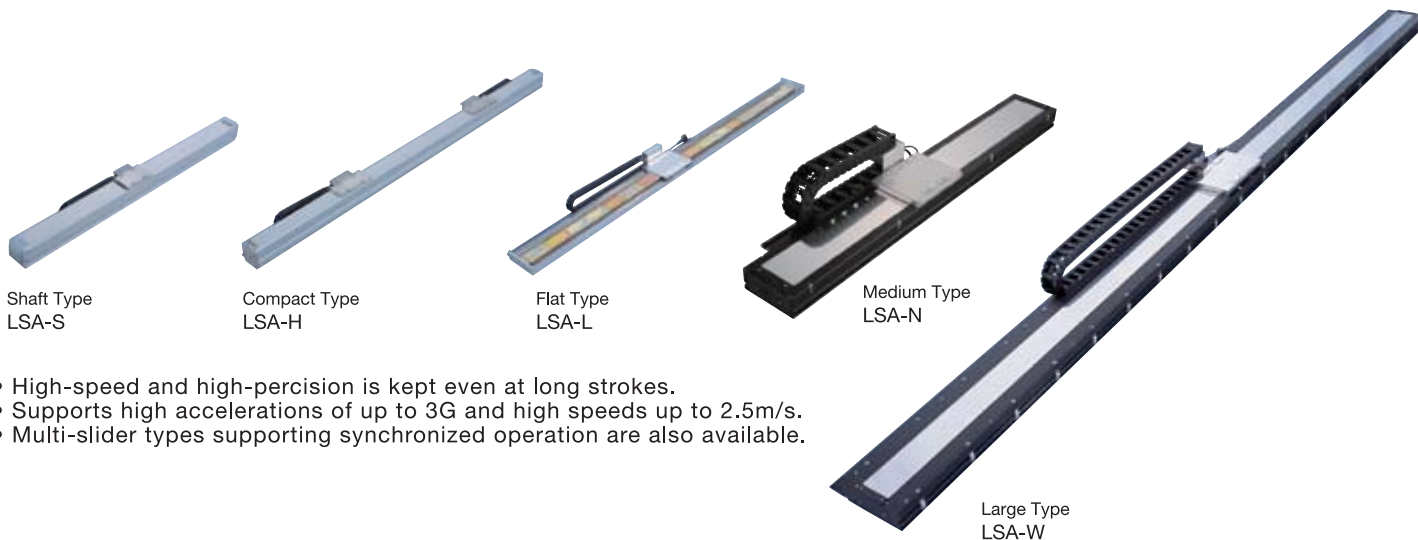
ZR Unit



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

LSA Series Linear Servo Actuator

A full lineup of linear servo actuators to meet your need. Max load capacities of up to 120kg and max strokes of up to 4m.



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

IX Series SCARA Robots

The IX SCARA robots feature high performance and functionality



SCARA Robot Arm Length 250/350/500/600/700/800 mm

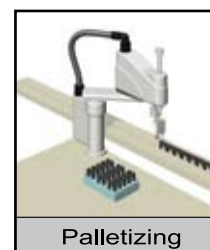
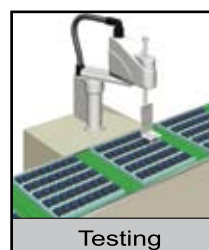
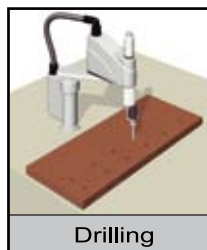


- Achieves high speeds and repeatability.
- Easy programming makes these actuators much more user-friendly.
- Many variations are available to support arm lengths of 250 to 800mm.

Ultra-Compact SCARA Arm Length 120/150/180 mm

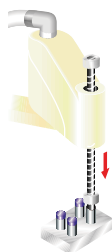


- The compact size of the robot allows you to reduce the size of your production facility.
- The rated loading capacity is 0.2 kg, and can be increased to 1 kg.
- High-speed performance with a cycle time of 0.35 sec.



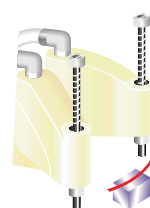
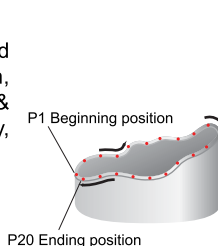
Z-Axis Push Function

Enables you to easily apply compression force and torque.



3D Path Capability

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



Interference Check Zones

Check Zones

A maximum of 10 user-defined check zones can be set inside the robot's operating range.

Controller

Position Controllers and Program Controllers

Wide Operation Patterns for your Specific Needs

3-Position Controller

PSEP



PSEP
RCP2/RCP3

ASEP



ASEP
RCA/RCA2/RCL

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

Position Controller

PCON



RCP2/RCP3
Position Controller

ACON



RCA/RCA2/RCL
Position Controller



SCON
RCS2
- Cartesian - Linear Servo
Position Controller

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

ROBO NET



RCP2/RCP3/RCA/RCA2/RCL
Network Controller



Simple Absolute



Expansion
Unit

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

Program Controller

PSEL



RCP2/RCP3
Program
Controller
1-2 axis

ASEL



RCA/RCA2/RCL
Program
Controller
1-2 axis

SSEL



1-2 axis

XSEL



1-6 axis

RCS2 - Cartesian - Linear Servo Program Controller

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

Teaching Pendant

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



PCON/ACON/SCON/
ROBONET
CON-T



PCON/ACON/SCON/
ROBONET
RCM-E (Simple teaching pendant)



PSEL/ASEL/SSEL/XSEL
SEL-T (Standard)
SEL-TD (ANSI type)



New!
PSEP/PCON/RPCON
ASEP/ACON/RACON
SCON/ERC2*
CON-PT (Standard)
CON-PD (Enable Switch type)
CON-PG (Global Safety type)

Power Supply

Low-cost 24-VDC power supply ideal for powering actuators



PS-24

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



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