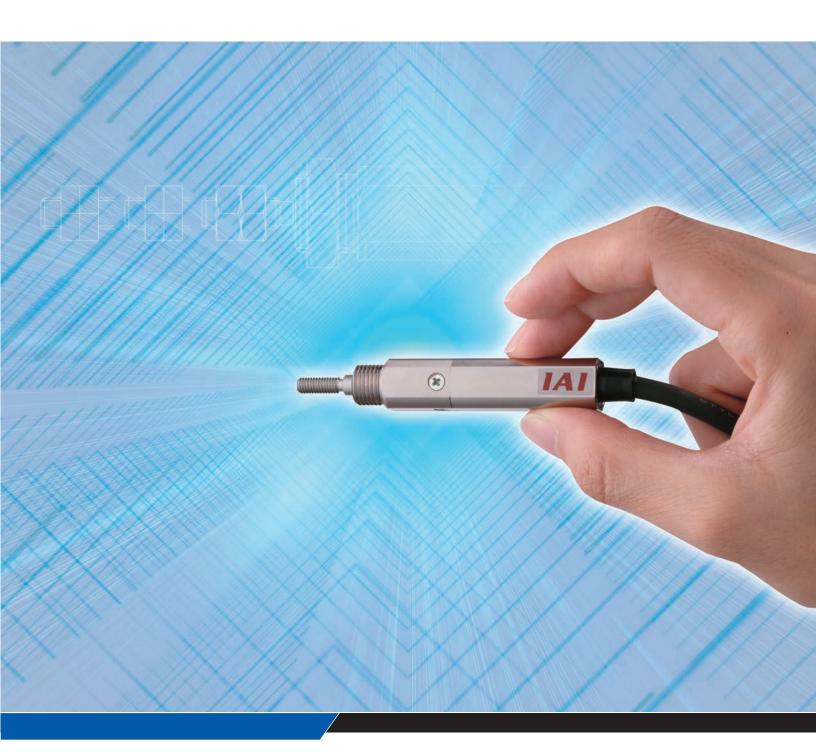


Mini Cylinder RCD



www.intelligentactuator.com

Ultra-Compact
Motorized Cylinder with
12mm Cross-Section

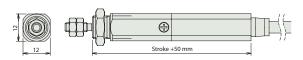
RCD actuators

Features

Ultra-compact size makes it a good replacement for compact air cylinders.

Ultra-compact size has been achieved, with a cross-section of only 12 mm and a body length as short as 60 mm.

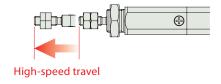
The Mini Cylinder RCD is small enough to replace compact air cylinders used for short-stroke travel, pressing, hoisting, etc.



Slim actuator

High-speed performance with maximum acceleration/deceleration of 1 G and maximum speed of 300 mm/s

The Mini Cylinder RCD incorporates a newly developed brushless DC motor that generates sufficient torque despite its compact size. Its high-speed performance with maximum acceleration/deceleration of 1 G and maximum speed of 300 mm/s is highly effective in reducing cycle time in a variety of systems.



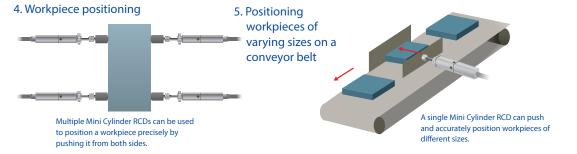
Application Examples







Three-point positioning enables the Mini Cylinder RCD to handle a workpiece with variable height dimensions.



CD-RA1DA

ROBO Cylinder, Ultra-Compact Rod Type, Actuator Width 12mm, DC24V Brushless Motor

Model Specification Items

Motor 2.5W

D5 Applicable Controllers
 Cable Length

3: DC Brushless I: Incremental 2: 2mm

Stroke 10: 10mm 30: 30mm (Every 10mm)

D5: DSEP DCON MSEP

N:None P:1m S:3m M:5m

X□□: Custom length

R□□: Robot cable

Controller is not included.









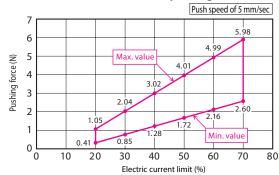
*If vou install in a vertical position, there are restrictions applied depending on the model.



- (1) The load capacity is based on operation at an acceleration of 1G. This is the upper limit of the acceleration/deceleration speed.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) The push motion is when operated at 5mm/s.
- (4) Since this model uses a lead screw, the actuator specifications may change according to
- (5) Take note that, since there is no brake, the rod may come down when the power is turned off if the actuator is used vertically.

■ Electric Current Limit and Pushing Force

Electric current limit and pushing force



* The ranges shown in this graph take into account efficiency deterioration caused by wear on the lead screw. Always use the product within the maximum and minimum values.

Actuator Specifications

■ Lead and Payloads

Model Number	Motor	Feed	Lead	Maximum Payload		Maximum	Stroke
	Output(w)	Screw	(mm)	Horizontal (kg) Vertical (kg)		Push Force (N)	(mm)
RCD-RA1DA-I-3-2-①-D5-②	2.5	Lead Screw	2	0.7	0.3	4.2	10 to 30 (Every 10 mm)

■ Stroke and Maximum Speed

Lead (mm)	10~30 (Every 10mm)
2	300

Legend: ① Stroke ② Cable length

(Unit: mm/s)

①Stroke

Stroke (mm)	Standard Price
10	_
20	_
20	

②Cable Length

Type	Cable Code	Standard Price		
	P (1m)	_		
Standard Type	S (3m)	_		
	M (5m)	_		
Special Length	X06 (6m) ~ X10 (10m)	_		
	X11 (11m) ~ X15 (15m)	_		
	X16 (16m) ~ X20 (20m)	_		
Robot Cable	R01 (1m) ~ R03 (3m)	_		
	R04 (4m) ~ R05 (5m)	_		
	R06 (6m) ~ R10 (10m)	_		
	R11 (11m) ~ R15 (15m)	_		
	R16 (16m) ~ R20 (20m)	_		

Actuator Specifications

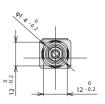
Actuator Specifications				
ltem	Description			
Drive Method	Ball screw, ø3mm			
Positioning Repeatability	±0.05mm			
Lost Motion	0.2mm or less			
Encoder Resolution	480 pulses/rev			
Base	Material: Aluminum, white alumite treated			
Rod Allowable Static Moment	0.02 N•m			
Rod Non-rotation Precision	±3 deg			
Ambient Operating Temperature/Humidity	0 to 40°C, 85% RH max. (Non-condensing)			
Service Life	10 million cycles (for horizontal and vertical)			

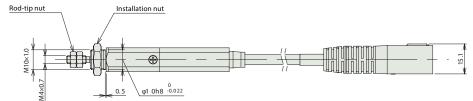
Dimensional Drawings

CAD drawings can be downloaded www.intelligentactuator.com

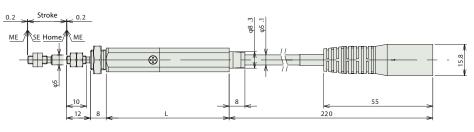


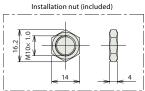


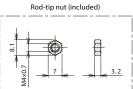




(Installation nut not shown)







ME: Mechanical end SE: Stroke end

Stroke	10	20	30
L	52	62	72
Weight (g)	47	51	55

Applicable Controllers

RCD series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External View	Model	Max. Number of Connectable Axes	Max. Positioning Points	Input Voltage	Standard Price
Solenoid Valve Type	O The same of	DSEP-C-3I-①-2-0	1	3 points	DC24V	_
Dust-proof Solenoid Valve Type	3 mm	DSEP-CW-3I-①-2-0	1			_
Solenoid Valve Multi-axis Type (PIO Specification)		MSEP-∭-Ŵ-~①-2-0	C:8 LC:6	3 points		-
Solenoid Valve Multi-axis Type (Network Specification)		MSEP- ∭-Ŵ- ~ ∭-0-0		256 points		
Positioner Type		DCON-CA-3I- ①-2-0	1	512 points		_
Network Type		DCON-CA-3I-①-0-0		768 points		

*① indicates I/O type (NP/PN) *⑩ indicates Field Network specification code *⑩ indicates C (standard) or LC (with PLC function) type *⑩ indicates the number of axes

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