Slider Type
Mini
Standard
Controllers Integrated
Rod Type
Mini
Standard
Controllers Integrated
Table/Arm /Flat Type
Mini
Standard
Gripper/ Rotary Type
Linear Servo Type
Cleanroom Type
Splash Proof
Controllers
PMEC /AMEC
PSEP /ASEP
ROBO NET
ERC2
PCON
ACON
SCON
PSEL
ASEL
SSEL
XSEL
Pulse Motor
Servo Motor (24V)
Servo Motor (200V)
Linear Servo Motor

RCA-RA3D
ROBO Cylinder　Rod Type　ø32mm Diameter　24V Servo Motor　Built–In (Direct–Coupled) Motor

■ Configuration:

| RCA | – | RA3D | – | I | – | 20 | – | ☐ | – | ☐ | – | ☐ | – | ☐ | – | ☐ |
| Series | | Type | | Encoder | | Motor | | Lead | | Stroke | | Compatible Controllers | | Cable Length | | Option |

Encoder
I: Incremental
* The Simple absolute encoder is also considered type "I".

Motor
20 : 20W Servo Motor

Lead
10 : 10mm
5 : 5mm
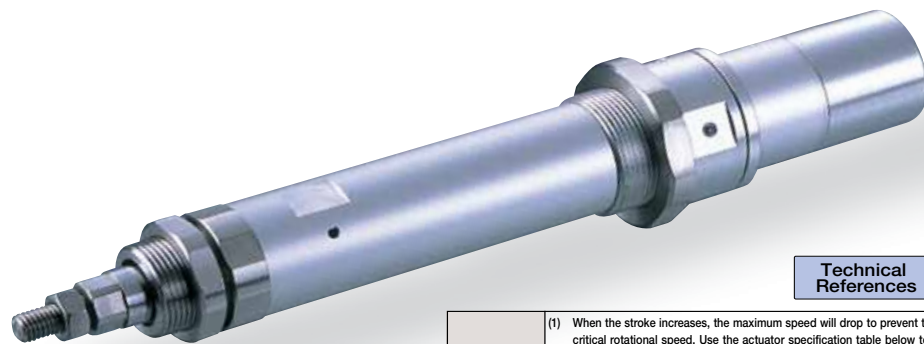2.5 : 2.5mm

Stroke
50 : 50mm
〜
200 : 200mm
(50mm pitch increments)

Compatible Controllers
A1 : ACON RACON ASEL
A3 : AMEC ASEP

Cable Length
N : None
P : 1m
S : 3m
M : 5m
X☐☐ : Custom
R☐☐ : Robot cable

Option
See Options below

* See page Pre-35 for an explanation of the naming convention.

Power-saving

Technical References ☞ P. A-5

POINT
Notes on Selection

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm–lead model). This is the upper limit of the acceleration.

(3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

(4) Please note that models with built–in motor are not equipped with a brake.

■ Actuator Specifications

■ Lead and Load Capacity

Model	Motor Output (W)	Lead (mm)	Max. Load Capacity		Rated Thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA–RA3D–I–20–10–①–②–③–④	20	10	4.0	1.5	36.2	50〜200 (50mm increments)
RCA–RA3D–I–20–5–①–②–③–④		5	9.0	3.0	72.4	
RCA–RA3D–I–20–2.5–①–②–③–④		2.5	18.0	6.5	144.8	

Legend ① Stroke ② Compatible controllers ③ Cable length ④ Options

■ Stroke and Maximum Speed

Stroke / Lead	50 〜 200 (50mm increments)
10	500
5	250
2.5	125

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	–
100	–
150	–
200	–

③ Cable List

Type	Cable Symbol		Standard Price
Standard	P (1m)		–
	S (3m)		–
	M (5m)		–
Special Lengths	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)	–

* See page A–39 for cables for maintenance.

④ Option List

Name	Option Code	See Page	Standard Price
Foot bracket	FT	→ A–29	–
Flange bracket (front)	FL	→ A–27	–
Flange bracket (back)	FLR	→ A–28	–
Home sensor	HS	→ A–32	–
Power–saving	LA	→ A–32	–
Knuckle joint	NJ	→ A–34	–
Reversed–home	NM	→ A–33	–
Trunnion bracket (front)	TRF	→ A–38	–
Trunnion bracket (back)	TRR	→ A–38	–

* The home sensor (HS) cannot be used on the reversed–home models.

■ Actuator Specifications

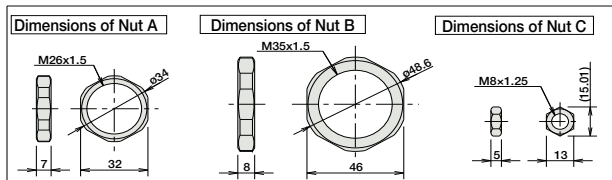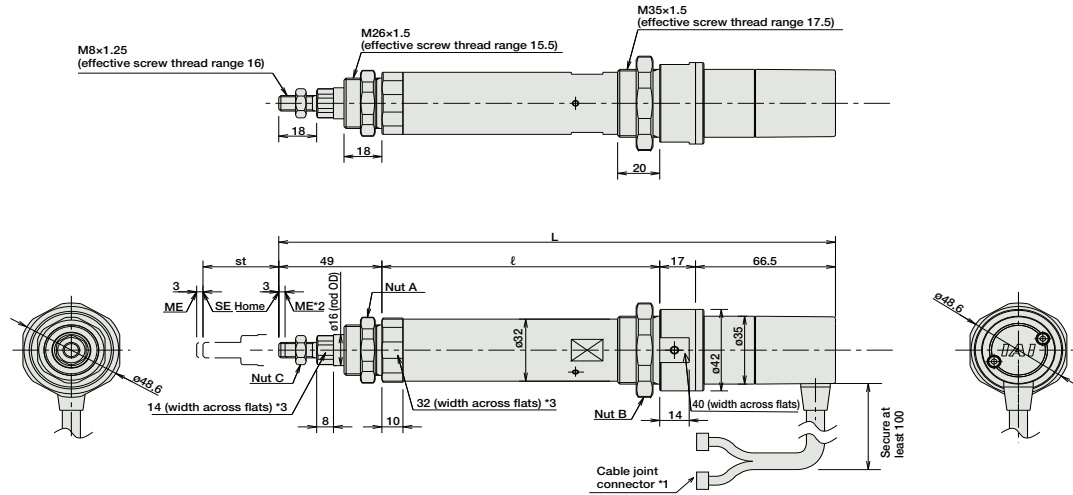| Item	Description
Drive System	Ball screw　ø8mm　C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum (white alumite treated)
Rod Diameter	ø16mm
Non–rotating accuracy of rod	±1.0 deg
Ambient Operating Temp./Humidity	0〜40°C, 85% RH or less (non–condensing)

Dimensions

*1 A motor–encoder cable is connected here. See page A–39 for details on cables.
*2. When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end   SE: Stroke end
*3. The orientation of the bolt will vary depending on the product.

[No Brake]

M8×1.25 (effective screw thread range 16)
M26×1.5 (effective screw thread range 15.5)
M35×1.5 (effective screw thread range 17.5)

Dimensions of Nut A	Dimensions of Nut B	Dimensions of Nut C

■ Dimensions/Weight by Stroke
RCA–RA3D (without brake)

Stroke	50	100	150	200
L	264.5	314.5	364.5	414.5
ℓ	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0

The RCA–RA3D models are not equipped with a brake.

② Compatible Controllers

The RCA series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		AMEC–C–20SI–① NP–2–1	Easy–to–use controller, even for beginners	3 points	AC100V	2.4A rated	–	→ P477
		ASEP–C–20SI–① NP–2–0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.	3 points	DC24V	1.7A rated 5.1A peak	–	→ P487
Splash–Proof Solenoid Valve Type		ASEP–CW–20SI–① NP–2–0					–	
Positioner Type		ACON–C–20SI–① NP–2–0	Positioning is possible for up to 512 points	512 points			–	
Safety–Compliant Positioner Type		ACON–CG–20SI–① NP–2–0					–	
Pulse Train Input Type (Differential Line Driver)		ACON–PL–20SI–① NP–2–0	Pulse train input type with differential line driver support	(–)			–	→ P535
Pulse Train Input Type (Open Collector)		ACON–PO–20SI–① NP–2–0	Pulse train input type with open collector support				–	
Serial Communication Type		ACON–SE–20SI–① N–0–0	Dedicated to serial communication	64 points			–	
Field Network Type		RACON–20S ①	Dedicated to field network	768 points			–	→ P503
Program Control Type		ASEL–C–1–20SI–① NP–2–0	Programmed operation is possible Operation is possible on up to 2 axes	1500 points			–	→ P567

* This is for the single–axis ASEL.
* ① is a placeholder for the code "LA" if the power–saving option is specified.

IAI

RCA-RA3D 202

Side tabs: Slider Type / Mini / Standard / Controllers Integrated / Rod Type / Mini / Standard / Controllers Integrated / Table/Arm /Flat Type / Mini / Standard / Gripper/ Rotary Type / Linear Servo Type / Cleanroom Type / Splash Proof / Controllers / PMEC /AMEC / PSEP /ASEP / ROBO NET / ERC2 / PCON / ACON / SCON / PSEL / ASEL / SSEL / XSEL / Pulse Motor / Servo Motor (24V) / Servo Motor (200V) / Linear Servo Motor