

ROBO PUMP

New Release

Environmentally Friendly Factory Airless Vacuum Pump

Compact design which can be installed near the robot tip

Available in two types



Standard
(Atmospheric Release)
RP-VPM



Air Blow Type
(Vacuum Release)
RP-VPMV

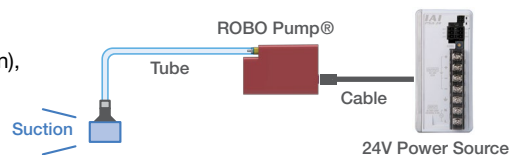
Equipment can be *entirely electric* with ROBO Pump®.



Click here for movie

No piping necessary

Unlike an ejector, no air piping, compressor, or solenoid valve is required. Simply connect the ROBO Pump to the cable and power supply, and it can be activated immediately. Additionally, by equipping the wireless feature (option), wireless communication with a teaching tool can be performed.



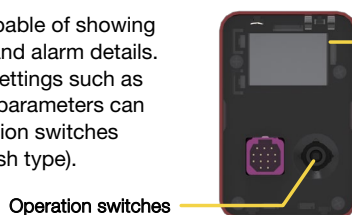
Compact and Easy

This palm-size unit requires very little installation space. The unit contains a built-in solenoid valve and pressure sensor, making it ideal for suctioning lightweight objects.



Main Unit Features

The display unit is capable of showing the current pressure and alarm details. Additionally, various settings such as threshold values and parameters can be set with the operation switches (four-way + center push type).



Pressure
- 54 kPa
Current Pressure Display

Alarm
Code EC1
Detail 0001
Address 0000
Alarm Display

Threshold
Suction -45kPa
Release -4kPa
Threshold Setting

Parameter1
PIOpattern 1
Energy sav. 0
ReleaseT. 1.0s
Parameter Change

Model	RP	-		-		-		-	
Series		Type	Power / Communication Cable length (Every 1m)		Power - I/O Cable length (Every 1m)		Options		
VPM	Standard (Atmospheric release)								
VPMV	Air blow type (Vacuum release)								
1	1m								
to	to								
10	10m								
0	No cable								
(S)1	1m								
to	to								
(S)9	9m								

(Note) When using the interface box 2, the maximum available length is 9 m.

* When selecting RCON-EC connection specification (ACR), select "0".
Power - I/O connector is not included with ACR option.

(S): Cable with 4-way connector

(Note) Make sure that the total length along with the actuator cable is 10m or less.

***Please choose "ENG" option for the English Language Version.**

Blank	NPN specification (Connected via I/F box 2) No option
ACR	RCON-EC connection specification ^{*1}
ENG	Please add "ENG" option for English version
PN	PNP specification (Connected via I/F box 2) ^{*1}
TMD2	Split motor and controller power supply specification ^{*1}
WL	Wireless communication specification (Connected via I/F box 2) ^{*2}

^{*1} If "ACR" is selected, "PN" and "TMD2" options cannot be selected. (I/O for the "ACR" option is NPN only; compatible with split motor and controller power supply as standard).

^{*2} "WL" cannot be selected when "ACR" is selected.
(When using wireless communication, an interface box 2 must be purchased separately.)

Product

Specification
RCON-EC connection specification (Note1)
NPN/PNP specification (Note2)

(Note1) Make sure to select "ACR" in the options.

(Note2) Interface box 2 is included.

Power / Communication Cable

Cable code	Cable length
1 to 3	1 to 3m
4 to 5	4 to 5m
6 to 10	6 to 10m

(Note) Robot cable is standard.

Power - I/O Cable

Standard connector cable		
Cable code	Cable length	User wiring type flying leads CB-EC-PWBIO□□□-RB enclosed
0	No Cable	Only a power - I/O connector is included.
1 to 3	1 to 3m	✓
4 to 5	4 to 5m	✓
6 to 9	6 to 9m	✓

4-way connector cable		
Cable code	Cable length	User wiring type flying leads CB-EC2-PWBIO□□□-RB enclosed
S1 to S3	1 to 3m	✓
S4 to S5	4 to 5m	✓
S6 to S9	6 to 9m	✓

(Note) Robot cable is standard.

Options

Name	Option code
RCON-EC connection specification	ACR
PNP specification	PN
Split motor and controller power supply specification	TMD2
Wireless communication specification	WL

Brackets (sold separately)

Name	Type	Model
Side attachment bracket	Standard	RP-BKT-VPM
	Air blow type	RP-BKT-VPMV
Cable support bracket	Standard / Air blow type	RP-FST-VPM

* For the external dimensions and mounting methods, refer to the instruction manuals.

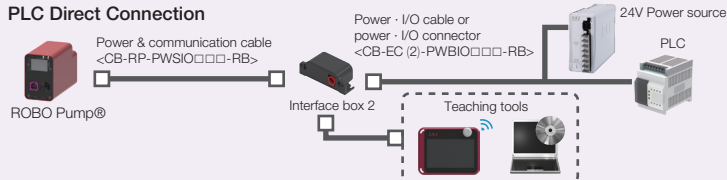
Specification

Item	Standard	Air Blow Type
Release method	Vent to atmosphere	Vacuum release
Pump type	Diaphragm pump system	
Power supply voltage	24VDC±10%	
Vacuum pressure	-50kPa or less	(Negative pressure) -50kPa or less (Positive pressure) +30kPa or more
Generated flow volume	1.8L/min or more	(Negative / Positive pressure) 1.1L/min or more
Air suction fitting size	For Ø4x2.5mm tube	
Installation orientation	Horizontal	
Ambient operating temperature	0 to 40°C	5 to 40°C
Ambient operating humidity	85% RH or less (no condensation)	
Allowable duty cycle	100% Duty cycle operation available Duty ratio (%) = Vacuum time / (Vacuum time + Stop time)	100% Duty cycle operation available Duty ratio (%) = (Vacuum time + Release time) / (Vacuum time + Release time + Stop time) *Release: Air blow
Ingress protection	IP20	
Mass	320g	400g

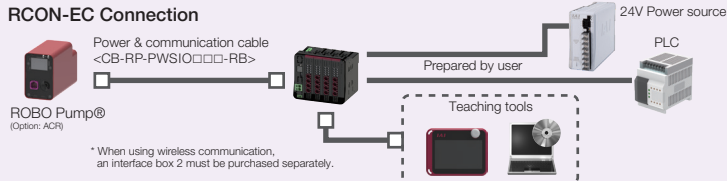
Connected

*For individual model numbers and connection limitations, refer to the instruction manual.

PLC Direct Connection



RCON-EC Connection



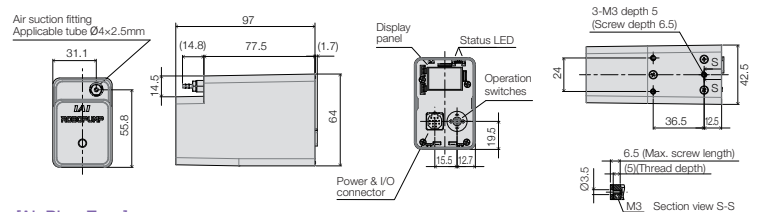
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Appearance

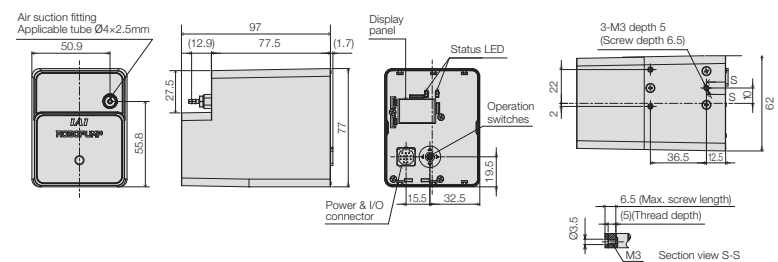
CAD drawings can be downloaded from our website. www.intelligentactuator.com

2D/3D
CAD

[Standard]



[Air Blow Type]



Reference for Loadable Workpiece Mass



Suction Cup Diameter (mm)	Top suction payload (kgf) [Safety Margin 4]	Side suction payload (kgf) [Safety Margin 8]
1	0.001	0.0005
3	0.009	0.0045
6	0.036	0.018
10	0.1	0.05
15	0.225	0.113
20	0.401	0.2

(Pressure -50kPa, Nitrile Rubber Pad)

IAI America, Inc.

USA Headquarters & Western Region (Los Angeles): 2690 W. 237th Street, Torrance, CA 90505 (310) 891-6015
Midwest Branch Office (Chicago): 110 East State Parkway, Schaumburg, IL 60173 (847) 908-1400
Southeast Branch Office (Atlanta): 1220 Kennestone Circle, Suite 108, Marietta, GA 30066 (678) 354-9470

www.intelligentactuator.com

JAPAN Headquarters

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

The information contained in this product brochure may change without prior notice due to product improvements.

IAI Industrieroboter GmbH

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

IAI (Shanghai) Co., Ltd.

Shanghai Jiahua Business Center A8-303, 808,
Hongqiao Rd., Shanghai 200030, China

IAI Robot (Thailand) Co., Ltd.

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