

# ROBO PUMP

**New Release**  
 Environmentally Friendly  
 Factory Airless Vacuum Pump

Compact design which can be installed near the robot tip

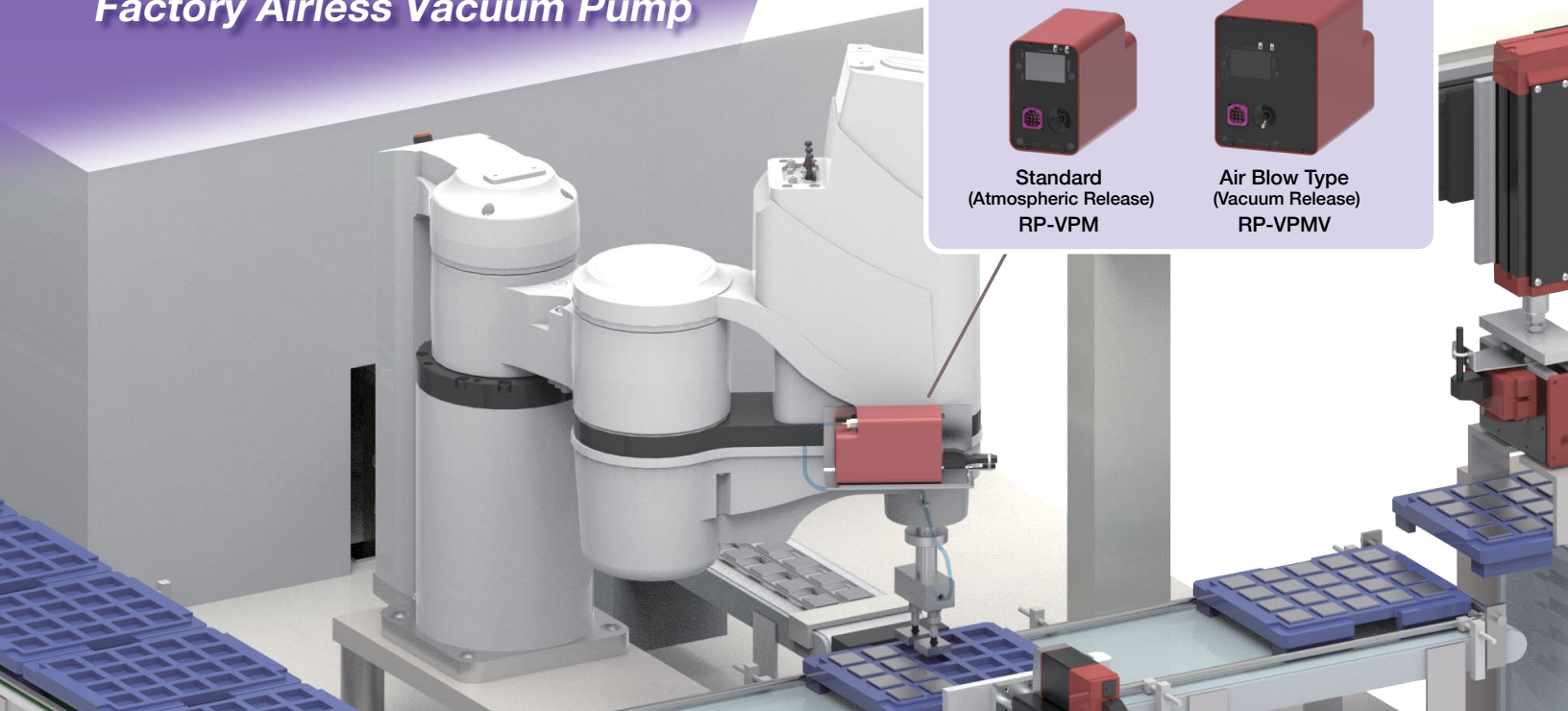
Available in two types



Standard  
 (Atmospheric Release)  
 RP-VPM



Air Blow Type  
 (Vacuum Release)  
 RP-VPMV



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

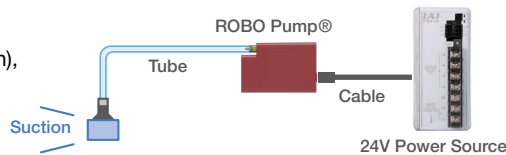


Click here for movie

## 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.



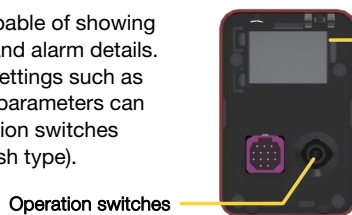
## Compact and Easy

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).

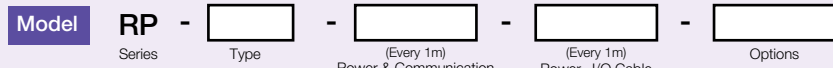


Pressure  
 - 54 kPa  
 Current Pressure Display

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



VPM	Standard (Atmospheric release)
VPMV	Air blow type (Vacuum release)

1	1m
to	to
10	10m

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

**Product**

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

(Note 1) Make sure to select "ACR" in the options.  
(Note 2) 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.

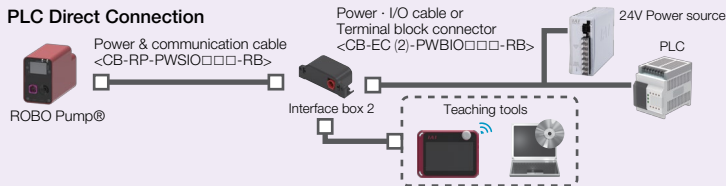
**Specification**

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 less
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

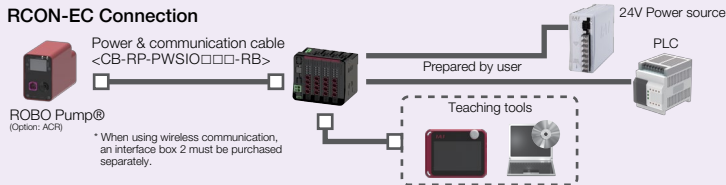
**Connected**

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

**PLC Direct Connection**



**RCON-EC Connection**



\* When using wireless communication, an interface box 2 must be purchased separately.

0	No cable Terminal block connector is included when "ACR" is not selected*
1 to 9	1m to 9m standard cable included
S1 to S9	1m to 9m 4-way connector cable included

\* When selecting RCON-EC connection specification (ACR), select "0".  
Power - I/O cable is not included.  
(S): 4-way connector cable  
(Note) Make sure that the total length along with the actuator cable is 10m or less.

**Power - I/O Cable**

\* Only a terminal block connector is included.

Standard connector cable		
Cable code	Cable length	User wiring type flying leads CB-EC-PWBIO□□□-RB enclosed
0	No Cable	*The only accessory provided is the terminal block.
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.

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

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

**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

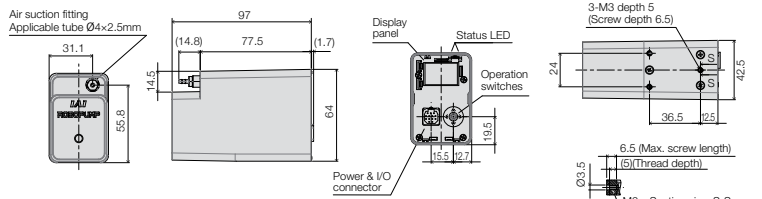
\* For the external dimensions and mounting methods, refer to the instruction manuals.

**Appearance**

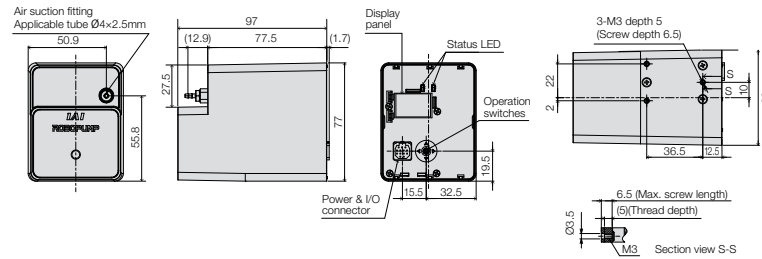
CAD drawings can be downloaded from our website. [www.intelligentactuator.com](http://www.intelligentactuator.com)



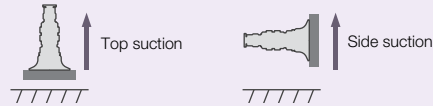
**[Standard]**



**[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)

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

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