

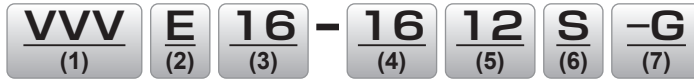
Vacuum Generator VVV

Multi-stage nozzle ejector with large suction flow rate.

Safety instructions for this product

Safety instructions, Common safety instructions for each product category and Detailed safety instructions for each product are in the end of this catalog and our website.

Model Designation (Example)



(1) Vacuum Generator VVV

(2) Vacuum Characteristics

E: High-vacuum at Low air pressure supply type

(3) Nozzle bore

Code	Nozzle bore (mm)	Final Vacuum (kPa)	Suction flow (l/min [ANR])	Consumption flow (l/min [ANR])
16	ø1.6	-90	180	105
25	ø2.5	-94	430	270
27	ø2.7	-94	500	315

*Rated supply pressure: 0.35 MPa

(4) Vacuum port size (V)

Port type	Push-in straight fitting and plug (mm)		Taper pipe thread (Female)
Code	12	16	04
Size	ø12	ø16	Rc1/2
Note	Tube fitting: PC12-04 (3 pcs) and Plug: PP12 (2 pcs) are included.		Without fitting

(5) Air supply port size (P)

Port type	Push-in straight fitting (mm)			Taper pipe thread (Female)
Code	08	10	12	02
Size	ø8	ø10	ø12	Rc1/4
Note	PC8-02	PC10-02	PC12-02	Without fitting

(6) Exhaust port type (EX)

Code	No code	S
Type	Taper pipe thread (Female) : Rc3/4	With silencer

*Silencer type comes with elbow adapter block

(7) Digital pressure gauge

Code	No code	-G
Digital pressure gauge	No gauge (Plugging)	With gauge
Thread size	Rc1/8	

Model code of Silencer

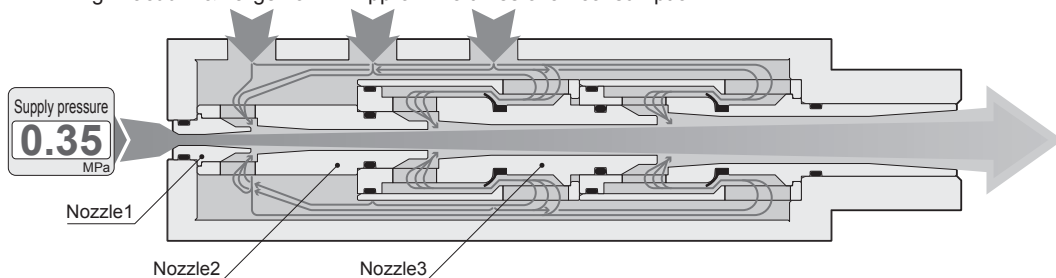
VVVSRO6L
(1)

(1) Silencer for Vacuum Generator VVV

Characteristics

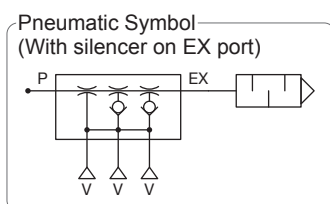
Ensuring high vacuum pressure & high vacuum flow by low (0.35 MPa) air supply.

High vacuum & Large flow ⇒ Approx. 1.5 times of air consumption.



3 vacuum ports enable easy distribution.

See a pneumatic symbol on the right.



Vacuum port direction can be changed.

Depending on the installation site, exhaust direction can be selected from straight or elbow.

Elbow adapter block comes with a silencer, so exhaust direction can be either straight or elbow.



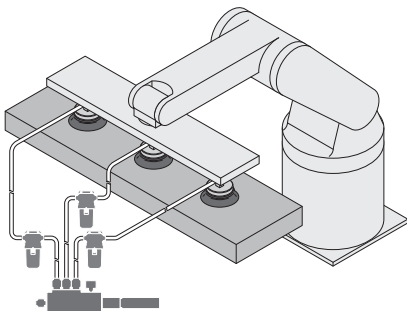
Easy maintenance and long life

Optional digital pressure gauge to check the pressure.

Applications

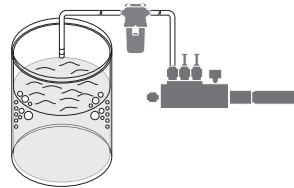
◆ Suction Conveyance

Best suited for large and heavy or porous work-piece in automobile industry and packaging industry, etc.



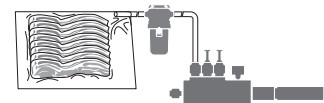
◆ Defoaming·Deaeration

Bubble and air contained in adhesive, cosmetics (cream) and distilled water can be removed.



◆ Vacuum packing

Can be used for vacuum packing of food or the like, removing air from the package.



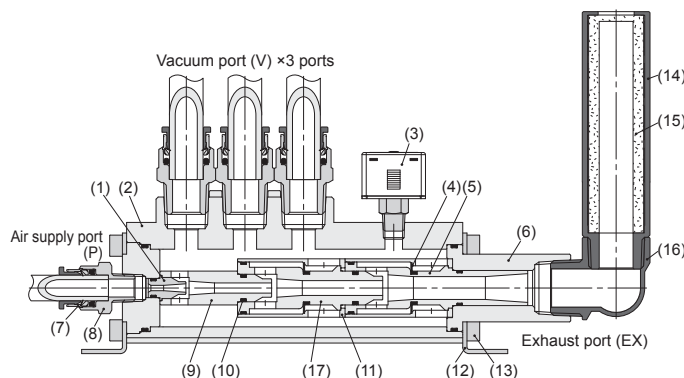
◆ Other applications

[Filtering time savings], [Collection of welding fume], [Dust collection], [Vacuum source for vacuum casting], etc.

Specifications

Fluid medium	Air
Operating pressure range	0.3 to 0.7 MPa
Rated supply pressure	0.35 MPa
Operating temp. range	5 to 50°C (No freezing)

Sectional drawing



No.	Parts	Material
(1)	Nozzle1	Nickel-plated brass
(2)	Body	Aluminum
(3)	Digital pressure gauge	—
(4)	One-way rubber seal	NBR
(5)	Diffuser	Aluminum
(6)	Exhaust cover	Aluminum
(7)	Fitting Ass'y	—
(8)	Fitting metallic body	Nickel-plated brass
(9)	Nozzle2	Aluminum
(10)	O-ring	NBR
(11)	Nozzle cover	Aluminum
(12)	Bracket	SPCC(Nickel-plated)
(13)	Fixing bolt	Iron (Nickel-plated)
(14)	Silencer unit	PBT
(15)	Element	PVFM
(16)	Elbow adapter block	PBT
(17)	Nozzle3	Aluminum

RoHS2 (2011/65/EU+EU2015/863) compliant

Type	Model code
	VVVE[3-4]5[6]7
Multi-stage nozzle ejector	VVVE[3-0402][6]7
	VVVE[3-0408][6]7
	VVVE[3-0410][6]7
	VVVE[3-0412][6]7
	VVVE[3-1202][6]7
	VVVE[3-1208][6]7
	VVVE[3-1210][6]7
	VVVE[3-1212][6]7
	VVVE[3-1602][6]7
	VVVE[3-1608][6]7
	VVVE[3-1610][6]7
	VVVE[3-1612][6]7

*The product image above is with silencer and digital pressure gauge (optional).

Optional parts

Type	Model code
Silencer	VVVSRO6L
Digital Pressure Gauge for negative pressure	GPD-V-01



Notes

*For [3] in model code, please select a code for nozzle bore, code for exhaust port type for [6], and code for digital pressure gauge for [7], referring to Model designation (Example).



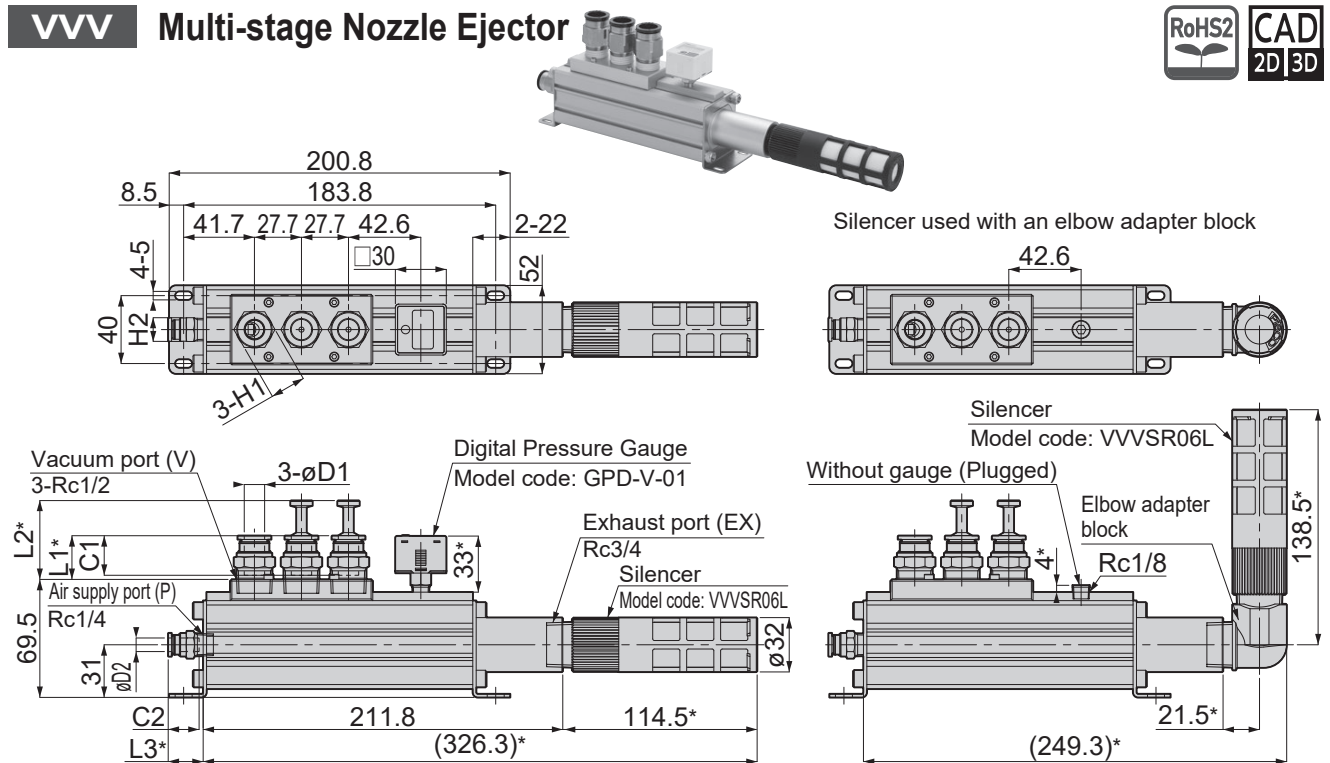
CAD data is available at PISCO website.



Packaging specifications
1 pc. /bag

Dimensional Drawings

VVV Multi-stage Nozzle Ejector



*1. Dimensions marked with * are reference values after thread tightening.

Unit: mm

Model code	Nozzle bore (ømm)	Rated supply pressure (MPa)	Final vacuum (kPa)	Suction flow rate (l/min [ANR])	Air consumption (l/min [ANR])	Weight (*2, 3) (g)
VVVE16- 4 5	1.6	0.35	-90	180	105	1003
VVVE16- 4 5 S						1056
VVVE16- 4 5 S-G						1053
VVVE16- 4 5 -G						1000
VVVE25- 4 5	2.5	0.35	-94	430	270	1001
VVVE25- 4 5 S						1054
VVVE25- 4 5 S-G						1052
VVVE25- 4 5 -G						999
VVVE27- 4 5	2.7	0.35	-94	500	315	1001
VVVE27- 4 5 S						1054
VVVE27- 4 5 S-G						1051
VVVE27- 4 5 -G						998

*2. The weight listed in the above table indicates the weight of female thread (no fitting) type for both vacuum and air supply ports. For the total weight, add the weight listed in the table below based on the specification (fitting size) selected.

*3. The weight listed includes the weight of the elbow adapter block. When using Silencer in a straight line, subtract the weight of the elbow adapter block (20 g).

*4. For 4 in the model code, please select a code for the vacuum port size, and for 5, select a code for the air supply port size, referring to the Model Designation (Example).

Dimension Table for Vacuum Port (V) Fitting Unit: mm

Model code	Code in 4	Tube O.D. øD1	L1	L2	Tube end C1	Hex. H1	Weight (g)
PC12-04	12	12	25.7	46.4	23.3	21	44
PC16-04	16	16	33.1	54.3	24.8	24	63

Weight of plug for vacuum port fitting

Plug for PC12-04 (PP12): 2.4 g

Plug for PC16-04 (PP16): 4.2 g

Dimension Table for Air supply port (P) Fitting Unit: mm

Model code	Code in 5	Tube O.D. øD2	L3	Tube end C2	Hex. H2	Weight (g)
PC8-02	08	8	20.6	18.2	14	14
PC10-02	10	10	23.8	20.7	17	19
PC12-02	12	12	29.9	23.3	21	37

*5. Refer to PISCO website (<https://www.pisco.co.jp/en/product/a/a01/>) for detailed dimensions of Push-in Fitting for the vacuum port/air supply port.

*6. Refer to PISCO website (<https://www.pisco.co.jp/en/product/detail/p/p13/>) for detailed dimensions of the optional digital pressure gauge GPD-V-01.

■ Maintenance

■ Clean the nozzles and diffuser following the instructions below.

Be careful not to get injured when doing maintenance.

(1) Remove the fixing screws on the exhaust port (EX) side, and then remove the bracket and exhaust cover.

(2) Remove the nozzles and diffuser from the body.

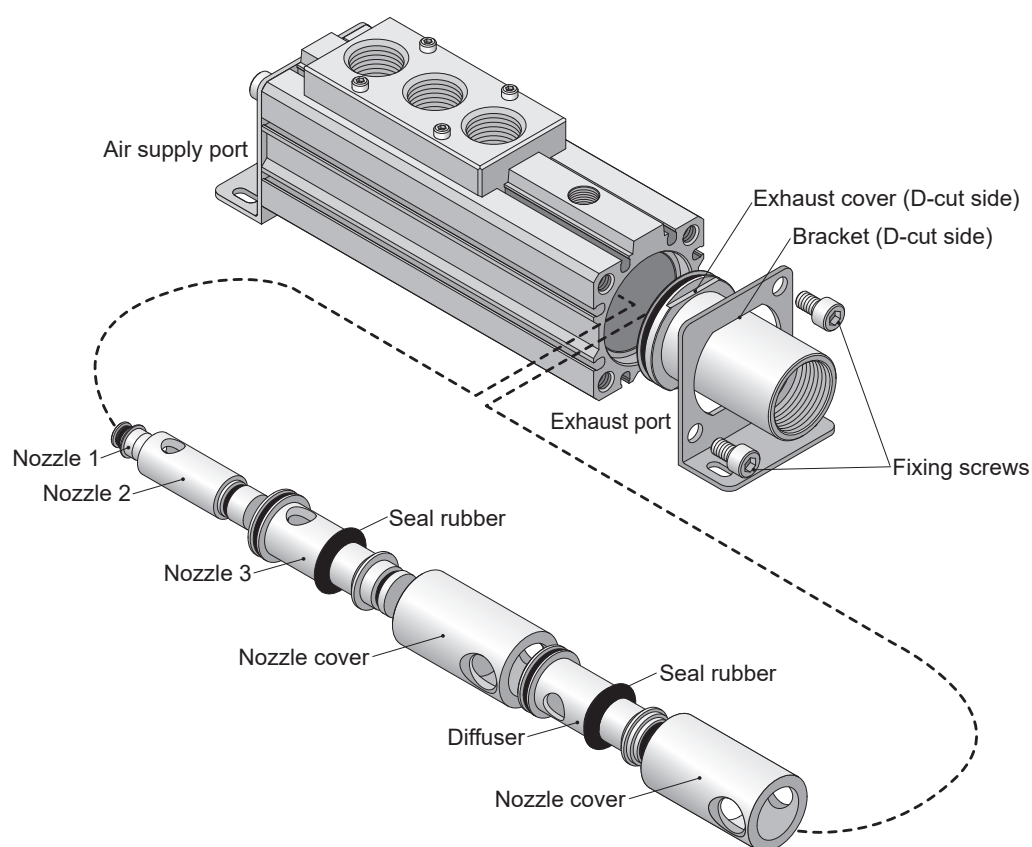
The nozzles and diffuser will come off when the exhaust cover is removed. If nozzle 1 remains inside the body, remove piping on the air supply port (P) and use a rod of diameter 3 to 5 mm to push nozzle 1 out. In doing so, be careful not to damage the lock claws, elastic sleeve of the fitting, and nozzle bore. Scratches may lead to decreased performance.

(3) Remove deposits from the nozzles, diffuser, nozzle cover parts, and seal parts (seal rubber, etc.) by air blowing and wiping.

(4) Insert the nozzles and diffuser into the body.

(5) Mount the exhaust cover and bracket on the body and fasten with fixing screws. Be sure to align the D-cuts on the exhaust cover and bracket. Tighten the fixing screws at the designated torque.

Designated torque	2.4 to 2.66 N·m
-------------------	-----------------



■ How to change the vacuum port lead-out direction

■ Change the vacuum port lead-out direction following the instructions below.

- (1) Remove the fixing screws on both sides and change the vacuum port direction.
- (2) Rotate the body to the desired vacuum port lead-out direction with D-cuts on the cap and exhaust cover aligning the corresponding D-cut on the bracket.
- (3) Fasten the cap, exhaust cover, and bracket by tightening the fixing screws at the designated torque.

Designated torque	2.4 to 2.66 N·m
-------------------	-----------------

