

Vacuum Generator VLM

Multi-stage nozzle ejector with multi-layer structure achieves suction flow rate of up to 1,110 liters

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 VLM

(2) Vacuum characteristic

H: High-vacuum type

(3) Nozzle specification

Code	161	162	163	164	165	166
Layer	Single layer		Double layer		Triple layer	
Nozzle quantity	1 pc. 	2 pcs. 	3 pcs. 	4 pcs. 	5 pcs. 	6 pcs.
Suction flow (l/min [ANR])	290	550	760	890	1,020	1,110
Air consumption (l/min [ANR])	110	220	330	440	550	660
Final vacuum (kPa)	-94					
Nozzle bore (mm)	ø1.6					

*Rated supply pressure (0.5 MPa) is applied.

(4) Vacuum port size

Code	06	08
Taper pipe female thread	Rc3/4	Rc1

(5) Air supply port size

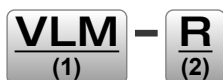
Code	02
Taper pipe female thread	Rc1/4

(6) Exhaust port (Connection type: Taper pipe female thread, Size: Rc3/4)

Code	161, 162 (Layer: Single layer)	163, 164 (Layer: Double layer)	165, 166 (Layer: Triple layer)
No code	 No silencer, End cap 1 pc.	 No silencer, End cap 1 pc.	 No silencer, End cap 1 pc.
S1	 Silencer 1 pc., End cap 1 pc.	 Silencer 2 pcs, End cap 1 pc.	 Silencer 3 pcs, End cap 1 pc.
S2	 Silencer 1 pc., Rotate joint 1 pc., End cap 2 pcs	 Silencer 2 pcs, Rotate joint 2 pcs, End cap 3 pcs	 Silencer 3 pcs, Rotate joint 3 pcs, End cap 4 pcs

*All types contain 2 pcs of bracket for VLM installation and plug for pressure gauge port.

Model Designation of Attachment parts (Example)



(1) Large Flow Vacuum Generator VLM

(2) Parts name

Code	R	E	B	D
Parts	Rotate joint Rc3/4 	End cap R3/4 	Bracket (2 pcs/set) 	Dummy plug (2 pcs/set (*))

*Dummy plug is needed to plug unnecessary nozzle ports.



(1) Plug for Sensor port



(1) Bush

(For connecting Push-in fitting (Thread size: R1/2) to vacuum port (Rc3/4))



(1) Silencer

(For direct mounting to body or attaching to rotate joint)



(1) Nozzle set

- Diffuser (O-ring),
- Nozzle 3 (O-ring+One-way rubber seal+Cover),
- Nozzle 2 (O-ring+One-way rubber seal+Cover),
- Nozzle 1 (O-ring)

Characteristics

Securing high vacuum and large flow rate.

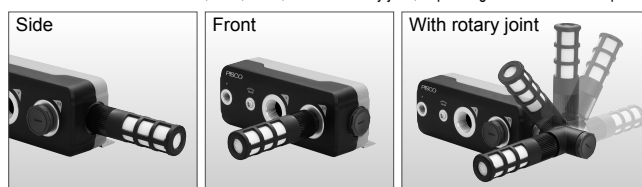
By adoption of multi-stage nozzle and multi-layer structure, suction flow can be secured approx. 2.2 times (on average) larger than air consumption.

Supply pressure	0.5 MPa					
Final vacuum	-94 kPa					
Average Suction flow / Air consumption						
Nozzle code	161	162	163	164	165	166
Layer	1 Layer		2 Layer		3 Layer	
Nozzle quantity	1 pc.	2 pcs.	3 pcs.	4 pcs.	5 pcs.	6 pcs.

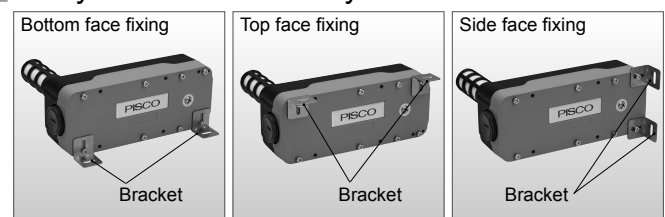
Excellent in ozone resistance.

Silencer installing direction is selectable.

Selectable from three directions; Side, Front, and With rotary joint, depending on the installation space.



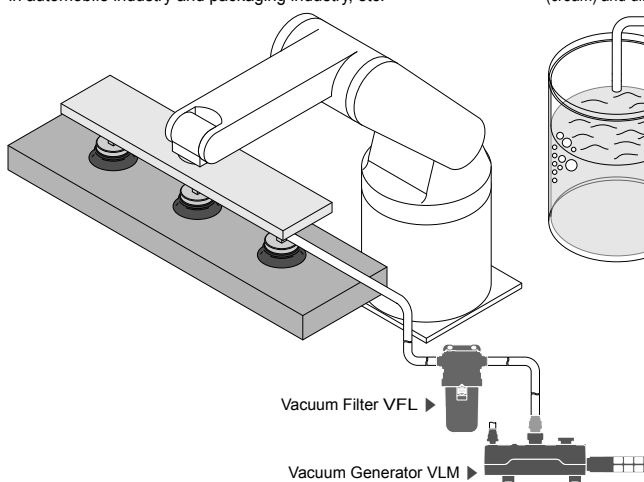
Body can be fixed freely with two brackets.



Applications

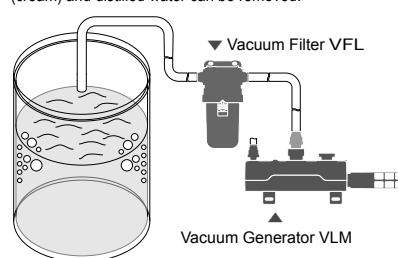
◆ Suction Conveyance

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



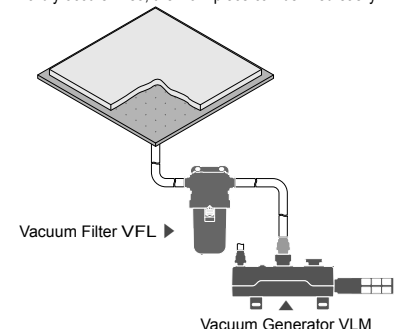
◆ Defoaming·Deaeration

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



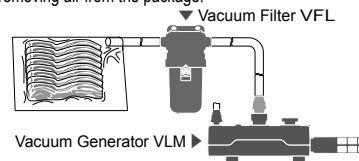
◆ Vacuum chuck

The processing accuracy can be stabilized because the distortion and thermal deformation of the work-piece hardly occurs. Also, the work piece can be fixed easily.



◆ Vacuum packing

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



Related Products



Main Block (Large nozzle dia. Type)
▶ P.74
Vacuum Filter VFL
▶ P.360

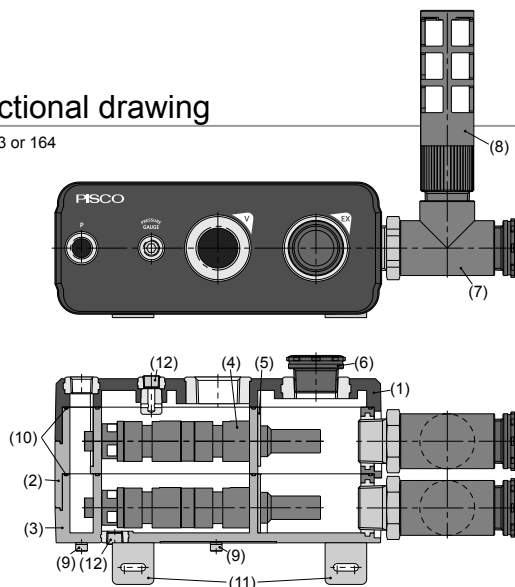
Vacuum Generator VLM

Specifications

Fluid medium	Air
Operating pressure range	0.3 to 0.7 MPa
Rated supply pressure	0.5 MPa
Operating temp. range	5 to 50°C (No freezing)

Sectional drawing

VLMH163 or 164



No.	Parts	Material
(1)	Top case	Brass, PA, Aluminum
(2)	Middle case	PA, Aluminum
(3)	Bottom case	PA, Aluminum
(4)	Nozzle Ass'y	PA, HNBR
(5)	Nozzle clip	Nickel-plated iron
(6)	End cap	PBT
(7)	Rotate joint	Aluminum, PBT
(8)	Silencer	Nickel-plated brass
(9)	Hexagon socket head bolt	Nickel-plated iron
(10)	Case packing	FKM
(11)	Bracket	Nickel-plated iron
(12)	Plug for pressure gauge port	Nickel-plated iron

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

Single layer, Nozzle 1 pc. or 2 pcs.		Double layers, Nozzle 3 pcs. or 4 pcs.		Triple layers, Nozzle 5 pcs. or 6 pcs.	
Type	Model code VLMH[3]-[4]02	Type	Model code VLMH[3]-[4]02	Type	Model code VLMH[3]-[4]02
Without Silencer VLM	VLMH161-[4]02 VLMH162-[4]02	Without Silencer VLM	VLMH163-[4]02 VLMH164-[4]02	Without Silencer VLM	VLMH165-[4]02 VLMH166-[4]02
					
Type	Model code VLMH[3]-[4]02-S1	Type	Model code VLMH[3]-[4]02-S1	Type	Model code VLMH[3]-[4]02-S1
With Silencer VLM	VLMH161-[4]02-S1 VLMH162-[4]02-S1	With Silencer VLM	VLMH163-[4]02-S1 VLMH164-[4]02-S1	With Silencer VLM	VLMH165-[4]02-S1 VLMH166-[4]02-S1
					
Type	Model code VLMH[3]-[4]02-S2	Type	Model code VLMH[3]-[4]02-S2	Type	Model code VLMH[3]-[4]02-S2
Silencer with rotate joint VLM	VLMH161-[4]02-S2 VLMH162-[4]02-S2	Silencer with rotate joint VLM	VLMH163-[4]02-S2 VLMH164-[4]02-S2	Silencer with rotate joint VLM	VLMH165-[4]02-S2 VLMH166-[4]02-S2
					



Notes

*For [4] in model code, please select a code for vacuum port size, referring to Model designation (Example).

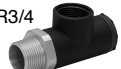


CAD data is available
at PISCO website.



Packaging specifications
1 pc. /bag

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

Attachment parts					
Type	Model code	Type	Model code	Type	Model code
Bracket VLM 	VLM-B	Rotate joint VLM Rc3/4 	VLM-R	End cap VLM 	VLM-E
Type	Model code	Type	Model code	Type	Model code
Dummy plug VLM 	VLM-D	Nozzle set VLM 	VLMH16-NS	Silencer VVV 	VVVS06
Type	Model code	Type	Model code		
Bush PF Rc1/2 	PF06-04	Plug for Sensor port PP 	PP01-A		



CAD data is available
at PISCO website.



Packaging specifications
1 pc. /bag: Vacuum generator
1 Set (2 pcs). /bag: Bracket & Dummy plug