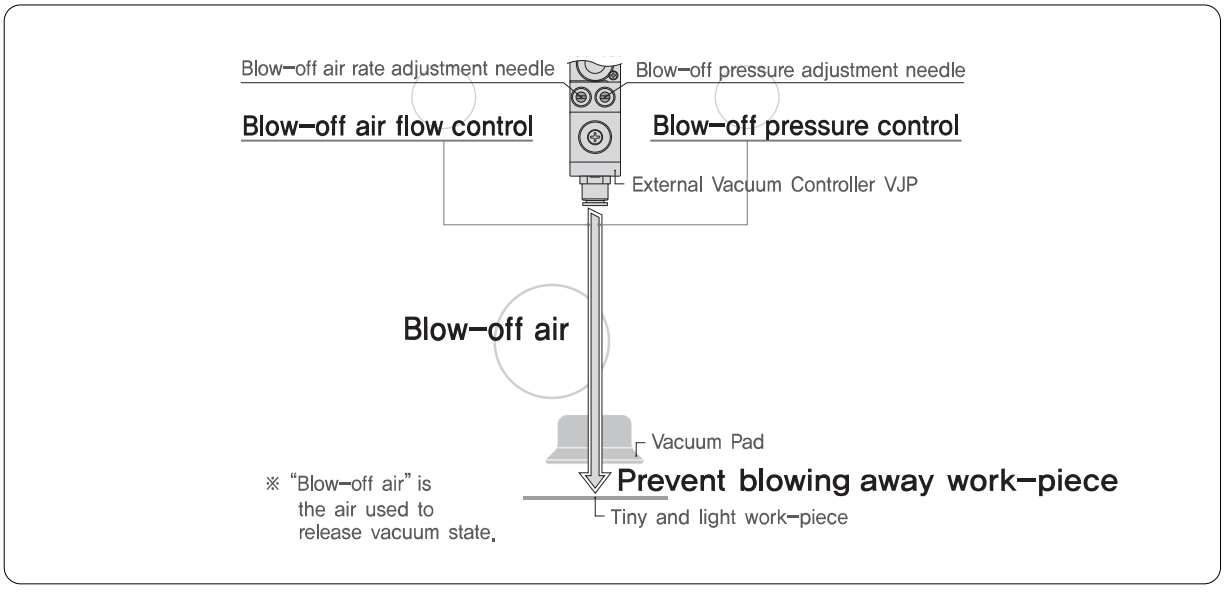
EXTERNAL VACUUM CONTROLLER WITH BLOW-OFF AIR AND RELIEF PRESSURE ADJUSTMENT

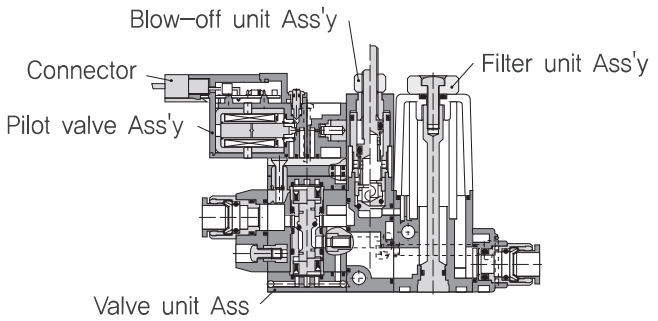
VJP SERIES

EXTERNAL VACUUM CONTROLLER

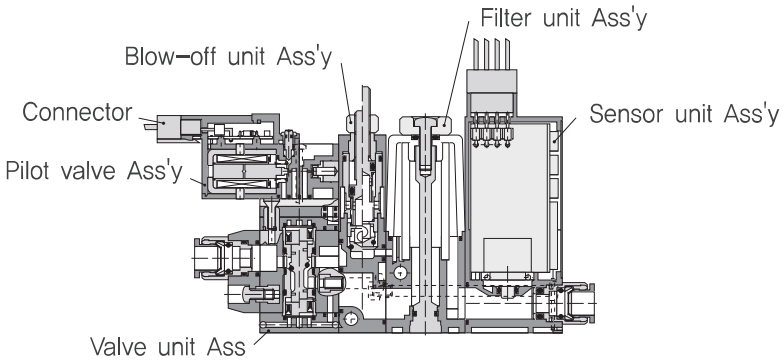
- Wide variety of combinations enables to meet various applications. Complex vacuum generator VJ Series is also available
- Manifold type is available. User-friendly wiring. 2 selections of pipe lead-out directions; Front lead-out type and rear lead-out type.
- 3 Supply valve types
  - Double solenoid type
    (Vacuum retention type, selectable for saving energy)
  - Normally closed type
  - Normally open type
- Visibility improvement by adopting LED display for vacuum switch indication. There are 2 types of vacuum switch; 2 switch output and 1 switch output and analog output.
- Pressure adjustment function and blow-off flow adjusting function, it enables to prevent works from being blown away
- A relief mechanism built into the blow-off circuit which breaks the vacuum (extra pressure is relieved) realizes shorter blow-off time.



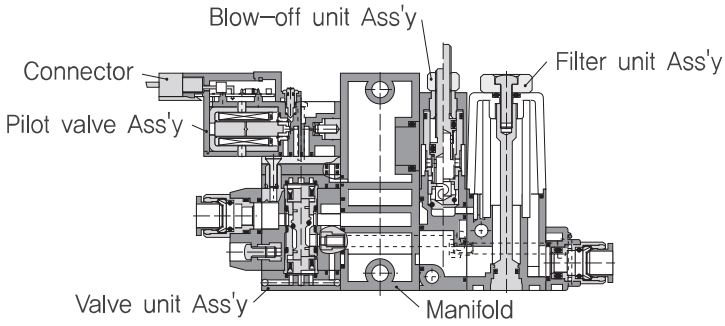
Stand-alone type, Without vacuum switch



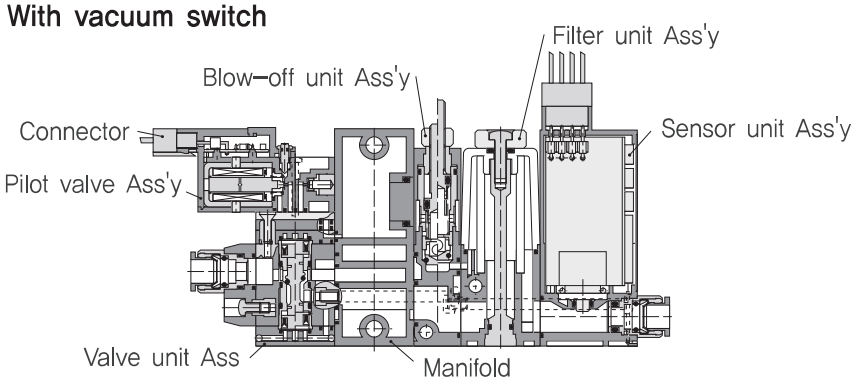
Stand-alone type, With vacuum switch



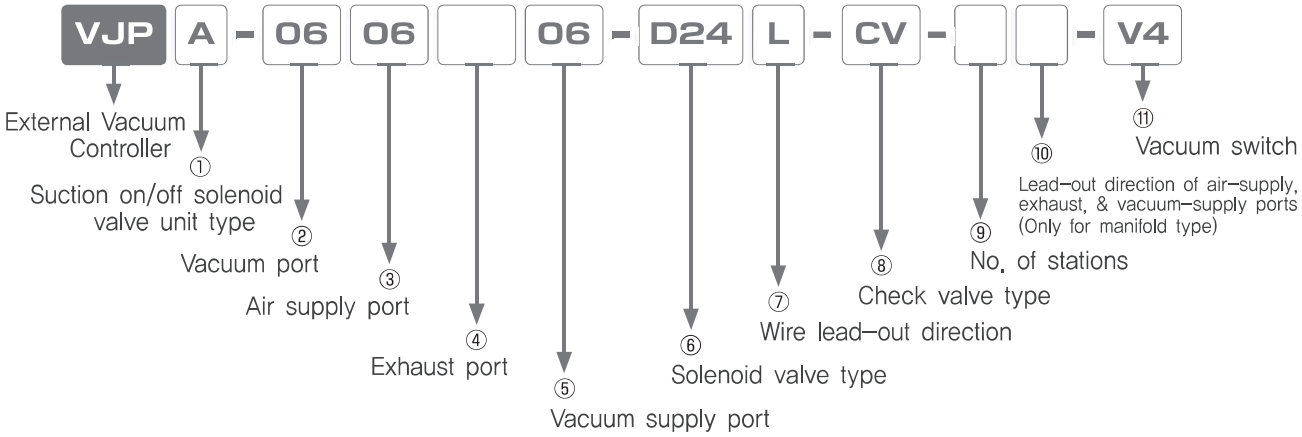
Manifold type, Without vacuum switch



Manifold type, With vacuum switch



Model Designation (Example)



① Suction on/off solenoid valve unit type

Code	Valve unit	Code	Valve unit	Code	Valve unit
A	Double solenoid type (Vacuum retention type)	B	Normally closed type	C	Normally open type
K	Combination of different value unit type on a manifold (Fill in the details on Specification Order Form)				

② Vacuum port (Applicable tube size)

Code	04	06	08
Tube dia.(mm)	ø4	ø6	ø8

00 : When different vacuum ports are mixed on a manifold (Fill in the details on Specification Order Form)

③ Air supply port (Applicable tube size)

Code	04	06	08	10
Tube dia.(mm)	ø4(※1)	ø6	ø8(※2)	ø10(※2)

※1. Stand-alone type only.
※2. Manifold type only.

④ Air supply port (Applicable tube size)

Code	06	08	10
Tube dia.(mm)	ø6	ø8	ø10

※Manifold Specifications Only (Individual Types Not Applicable)

⑤ Vacuum supply port (Applicable tube size)

Code	04	06	08	10
Tube dia.(mm)	ø4(※1)	ø6	ø8(※2)	ø10(※2)

※1. Stand-alone type only.
※2. Manifold type only.

⑥ Solenoid valve type

Code	D24	A100
Voltage	DC24V	AC100V

⑦ Wire lead-out direction

Code	L	S	K
lead-out direction	Top	Side	Different lead-out directions are mixed on a manifold (Fill in the details on Specification Order Form)

⑧ Check valve type

Code	No Code	CV
Type	Without check valve	Check valve internal

⑨ No. of stations (Only for manifold type)

Code	02	03	04	05	06	07	08	09	10
No. of stations	2	3	4	5	6	7	8	9	10

Model Designation (Example)

⑩ Lead-out direction of air-supply, exhaust, & vacuum-supply. ports (Only for manifold type)

Code	A	B
Lead-out direction	Vacuum port side	Solenoid valve side

⑪ Vacuum switch

Code	V4	DWE	K
Switch	NPN open collector Button type vacuum switch 2 switch output+analog output	1 switch output and for saving energy	Manifold combination spec mixes the valve function for vacuumsaving in each station (By separate order)

※Please select N, C Type for vacuum generator valve when using DWE energy saving switch.

Order Example

1 Exteral vacuum controller stand-alone type

VJP A - 04 04 06 - D24 L - CV - 05 A - V4
① ② ③ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Suction on/off solenoid valve unit type : A→Double solenoid type (Vacuum retention type)
② Vacuum port: 04→ø4mm Push-In Fitting
③ Air supply port: 04→ø4mm Push-In Fitting
⑤ Vacuum supply port: 06→ø6mm Push-In Fitting
⑥ Solenoid valve type: D24→24VDC
⑦ Wire lead-out direction: L→Top
⑧ Check type : CV - Check valve internal
⑨ No. of stations : 05 → 5stations
⑩ Lead-out direction of air-supply, exhaust, & vacuum-supply ports: A→Vacuum port side
⑪ Vacuum switch : K → St.1, St.2, St.3 : V4 → 2 switch + analog output
St.4 : Without vacuum switch

2 External vacuum controller manifold type

VJP A - 04 08 08 10 - D24 L - CV - 04 A - V4
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Suction on/off solenoid valve unit type : A→Double solenoid type (Vacuum retention type)
② Vacuum port: 04→ø4mm Push-In Fitting
③ Air supply port: 08→ø8mm Push-In Fitting
④ Exhaust port: 08→ø8mm Push-In Fitting
⑤ Vacuum supply port: 10→ø10mm Push-In Fitting
⑥ Solenoid valve type: D24→24VDC
⑦ Wire lead-out direction: L→Top
⑧ Check type : CV - Check valve internal
⑨ No. of stations : 04 → 4stations
⑩ Lead-out direction of air-supply, exhaust, & vacuum-supply ports: A→Vacuum port side
⑪ Vacuum switch : K → St.1, St.2, St.3 : V4 → 2 switch + analog output
St.4 : Without vacuum switch

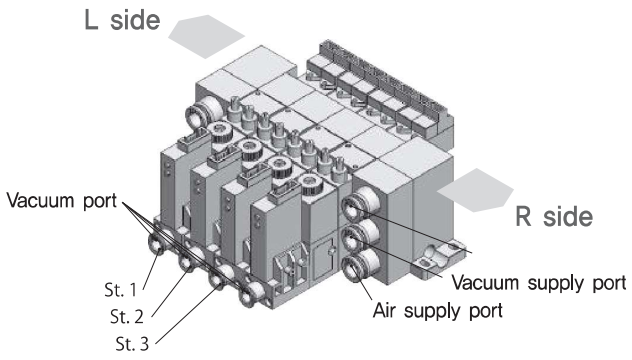
3 External vacuum controller manifold type

(When any one of mounting units has a different specification on a manifold)

VJP K - 00 10 10 10 - D24 L - CV - 05 A - V4
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Suction on/off solenoid valve unit type:
K→St.1, St.2 and St.3: Double solenoid type (Vacuum retention type)
St.4, St.5: Normally closed type
② Vacuum port: 00→St.1, St.2 and St.3: ø4mm Push-In Fitting
St.4, St.5: ø8mm Push-In Fitting
③ Air supply port: 10→ø10mm Push-In Fitting
④ Exhaust port: 10→ø10mm Push-In Fitting
⑤ Vacuum supply port: 10→ø10mm Push-In Fitting
⑥ Solenoid valve type: D24→24VDC
⑦ Wire lead-out direction: L→Top
⑧ Check type : CV - Check valve internal
⑨ No. of stations : 05 → 5stations
⑩ Lead-out direction of air-supply, exhaust, & vacuum-supply ports: A→Vacuum port side
⑪ Vacuum switch : K → St.1, St.2, St.3 : V4 → 2 switch + analog output
St.4 : Without vacuum switch

Manifold Type Example



※ Station no. is arranged St.1, St.2 ··· St.10 from L side.

■ Specification Order Form (In case of order example of 3 in the left page)

			Valve unit type ①	Vacuum port ②	Air supply port ③	Exhaust port ④	Vacuum supply port ⑤	Solenoid valve type ⑥	Wire lead-out direction ⑦	No. of stations ⑧	Lead-out direction of PS & EX ports ⑨	Vacuum switch ⑩
Manifold type	VJP		K —	00	10	10	10 —	D24	L —	05	A —	K
Mounting unit code	L ⬆ ⬇ R	St.1	A	06								W
	St. no.	St.2	St.1									
		St.3	St.1									
		St.4	B	08								
		St.5	B	08								A
		St.6										
		St.7										
		St.8										
		St.9										
		St.10										

※ When the top-mounting units for St. 1, St. 2 and St. 3 are of the same specifications as in the above example of specification order form, fill up the St. 1 space (uppermost) only, while entering "St. 1" in each of the St. 2 and St. 3 grids on the valve unit type column①.

External Vacuum Controller VJP Series Specification Order Form

To: PISCO KOREA PNEUMATIC CO., LTD

Manager

--- Order in the following format ---

Name:

Order No.:

• TEL : • FAX : • E-mail :

• Request EX-W PISCO Date : • Quantity :

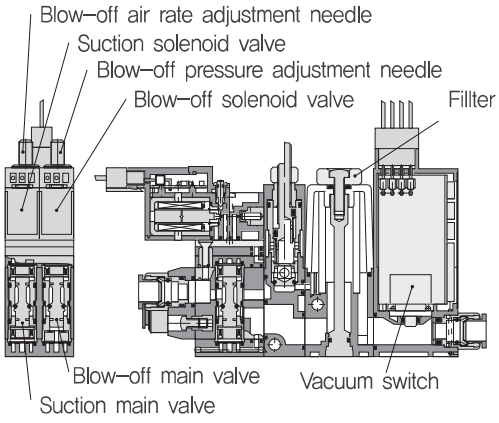
			Valve unit type ①	Vacuum port ②	Air supply port ③	Exhaust port ④	Vacuum supply port ⑤	Solenoid valve type ⑥	Wire lead-out direction ⑦	No. of stations ⑧	Lead-out direction of PS & EX ports ⑨	Vacuum switch ⑦
Manifold type	VJP		—				—		—		—	
Mounting unit code	L ⬆ ⬇ R	St.1										
	St. no.	St.2										
		St.3										
		St.4										
		St.5										
		St.6										
		St.7										
		St.8										
		St.9										
		St.10										

※. Make a copy of this form and fill in it referring to the example in the previous page.
※. When the combination of mounting unit spec. is different, a separate Specification Order Form is required.

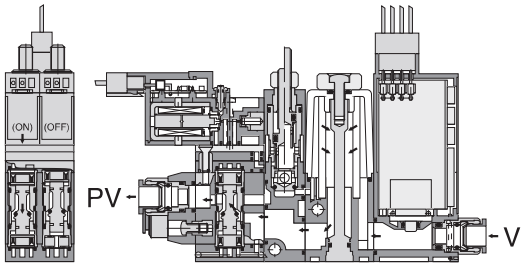
Mechanism of VJP

Example) VJPA-□□□-□□-□□-□ (Valve unit type: Double solenoid type (Vacuum retention type)

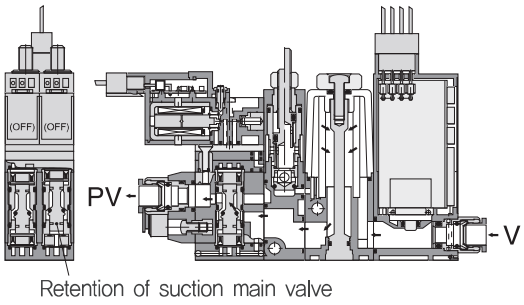
① At vacuum generation suspended



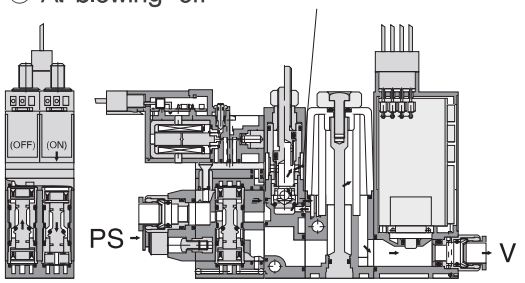
② At vacuum generating



③ At vacuum retention

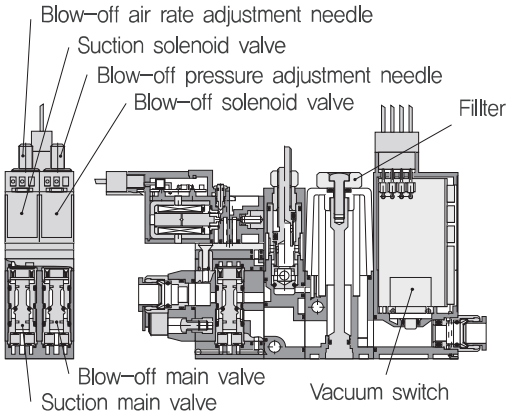


④ At blowing-off

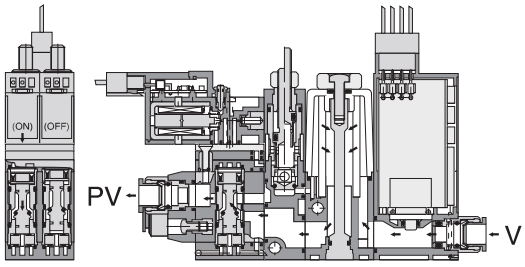


Example) VJPB-□□□-□□-□□-□ (Valve unit type: Normally closed)

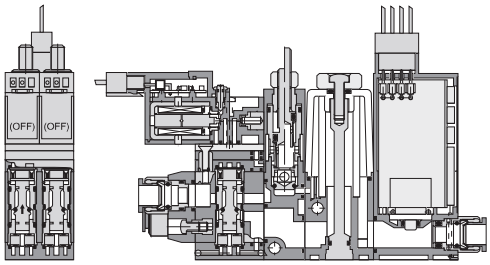
① At vacuum generation suspended



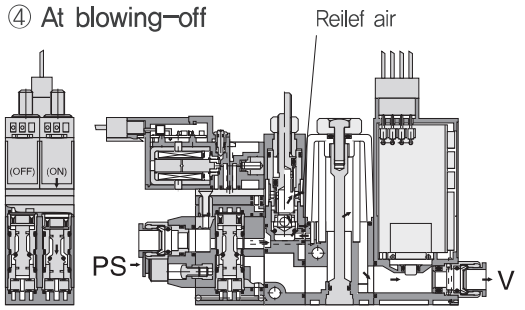
② At vacuum generating



③ At vacuum retention



④ At blowing-off



※ V: Vacuum air / PS: Supply air / PV: Vacuum supply air

Specfication (Supply pressure)

Fluid medium	Air
Operating pressure range	0.3 ~ 0.7 MPa
Operating temp. range	5 ~ 50° C
Operating vacuum range	0 ~ –100kPa

Solenoid valve (Suction solenoid valve / Blow–off solenoid valve

Pilot valves

Item	Suction solenoid valve		Blow–off solenoid valve	
Operating system	Direct operation			
Valve construction	Elastic seal, Poppet valve			
Rated voltage	DC24V	AC100V	DC24V	AC100V
Allowable voltage range	DC24V ±10%	AC100V ±10%	DC24V ±10%	AC100V ±10%
Surge protection circuit	Diode	Diode bridge	Diode	Diode bridge
Power consumption	1.2W (With LED)	1.5VA (With LED)	1.2W (With LED)	1.5VA (With LED)
Manual operation	Non–lock push–button type			
Operation indicator	Coil excitation: Red LED ON			
Wire connection method	Connector (Lead wire length: 500mm)			
	Red : DC24V Black : COM	Blue	Red : DC24V Black : COM	Blue

Switchover valve

Item	Suction main valve		Blow–off main valve
Operating system	Pneumatic operation by pilot valve		
Valve construction	Elastic seal, Poppet valve		
Proof pressure	1.05MPa		
Valve unit type	Double solenoid (retention)/ N.C. / N.O.		N.C.
Response time	50msec (Double solenoid type only)		–
Lubrication	Not required		
Effective sectional area	Air supply port (PV) size	ø 4mm : 3.5mm^2	1mm^2
		ø 6mm : 5mm^2	

Filter specification

Element material	PVF (Polyvinyl formal)		
Filtering capacity	10μm		
Filter area	1,130mm^2		
Replacement filter model code	Vacuum	filter	VGFE 10
	Blow-off	filter	VJFF

Blow–off function

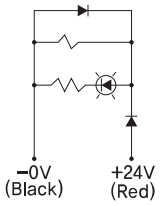
Blow–off air rate	0 ~ 50ℓ/min[ANR] (Rated supply pressure: 0.5Mpa)
Valve structure	Elastic seal, Poppet valve
Relief pressure setting range	0.005 ~ 0.05MPa

Button Type Compound Pressure Sensor (–V4)

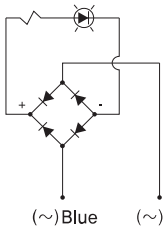
General specifi–cations	Fluid medium	Non–corrosive gas
	Operating temp. range	0~50° C (No freezing)
	Preservation temp. range	–20~70° C (No freezing)
	Operating humidity range	35–85%RH (No dew condensation)
Pressure range	Display method	Pressure gauge
	Operating pressure range	–100kPa – 300kPa
	Pressure proof	1.471MPa
Power supply	Rated voltage	DC12~24V ± 10%
	Current consumption	30mA Max
Display	Panel lock function	On/Off by push button
	Non–display function	On/Off by push button
	Pressure display unit	kPa
	Display Display resolution	1kPa
	Indication accuracy	±3%F.S. (0~50°C, at Ta=25°C)
	Zero point adjustment	Adjustable by zero adjusting mode
Switch	Output points	2 point switch outputs
	Output method	NPN open collector
	Switch capacity	DC30V 80mA Max
	Residual voltage	1.2V Max (at load current 80mA)
	Output mode	Separate mode, Window comparator mode
	Pressure setting range	–8~30 counts (kPa setting)
	Operational indication	Output On : LED ON (SW1 : Red, SW2 : Greend)
	Temperature characteristics	±5%F.S. (0~50° C, at Ta=25°C)
	Repeat accuracy	±3%F.S.
	Response time	Filter setting at 0 msec : 5msec
	Hysteresis adjustment	0~30counts
	Overload protection	Equipped
Analog output	Output voltage	1+0.06V
	Voltage with max negative pressure applied (–100kPa)	1~5V
	Voltage with negative pressure applied (–90kPa)	1.1±0.06V
	Zero point voltage	2±0.06V
	Voltage with Max positive pressure applied (300kPa)	5±0.06V
	Linearity	±0.5%F.S.
	Repeat accuracy	±0.5%F.S.
	Temperature characteristics	±5%F.S. (0–50°C, at Ta=25°C)

※ Please refer to the 'VJ Vacuum Generator' electronic sensor (V4) instruction manual for LED display type digital vacuum sensor (V4) instruction manual.

Circuit diagram (Solenoid valve)



24VDC Supply/Blow-off solenoid valve



24VDC Supply/Blow-off solenoid valve

VJP Series Weight List

① Stand-alone type

Type	Model code	Weight(g)	Remarks
With vacuum switch	VJP□-□□□□-□□-□	152.0	Vacuum port: ϕ4, ϕ6
	VJP□-8□□□-□□-□	158.5	Vacuum port: ϕ8
Without vacuum switch	VJP□-□□□□-□□	125.5	Vacuum port: ϕ4, ϕ6
	VJP□-8□□□-□□	132.0	Vacuum port: ϕ8

② Manifold intermediate block

	Weight(g)	Remarks
Manifold intermediate block	18.5	Per station

③ Manifold Side block

	Weight(g)	Remarks
External Vacuum Controller	106.0	Cartridge qty: 6pcs

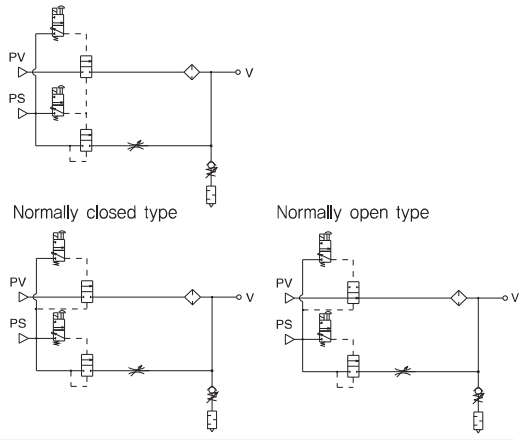
④ Cartridge (Supply and Exhaust ports)

Model code	Weight(g)	Remarks
CJC14-06	11.5	Forϕ6
CJC14-08	10.0	Forϕ8
CJC14-10	13.0	Forϕ10

■ Calculate the total weight by the following calculation formula.
Total weight of manifold type = (①VJP Stand-alone unit + ②Manifold intermediate block) x station qty
+ ③Manifold Side block + ④Cartridge x qty)

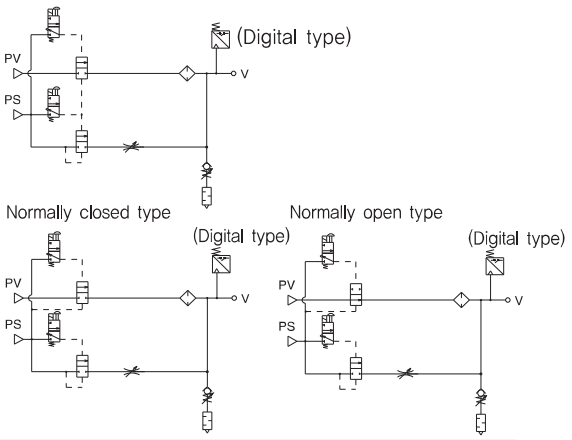
Standard Size List

Wire lead-out direction: top or side
Double solenoid type



Type	Page to refer	Vacuum port	Air supply port 4mm	Air supply port 6mm	Vacuum supply port
VJP	265	4mm	●	●	8mm
			●	●	With Silencer
		6mm	●	●	8mm
			●	●	With Silencer
		8mm	●	●	8mm
			●	●	With Silencer

With vacuum switch, Wire lead-out direction: top or side
Double solenoid type



Type	Page to refer	Vacuum port	Air supply port 4mm	Air supply port 6mm	Vacuum supply port
VJP	266	4mm	●	●	8mm
			●	●	With Silencer
		6mm	●	●	8mm
			●	●	With Silencer
		8mm	●	●	8mm
			●	●	With Silencer

Wire lead-out direction: Top

VJP

Model code

VJP□-□□□-□L

Unit: mm

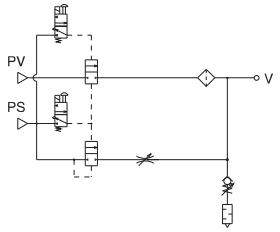
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

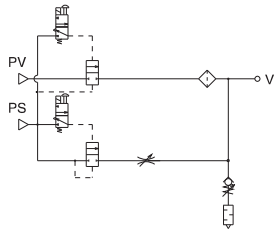
Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	14.3
6	11.7	17.2
8	21.7	25.8

Circuit diagram

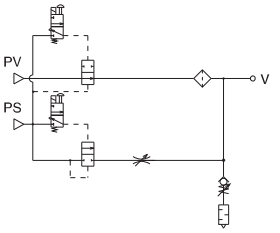
VJPA···(Double solenoid stand-alone type)



VJPB···(Normally closed stand-alone type)



VJPC···(Normally open stand-alone type)

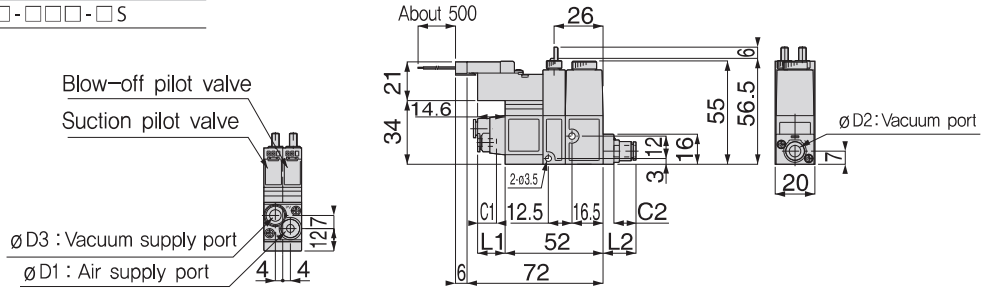


Wire lead-out direction: Side

VJP

Model code

VJP□-□□□-□S



Unit: mm

Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	14.3
6	11.7	17.2
8	21.7	25.8

Circuit diagram

See the above circuit diagram for the one for this type.

With vacuum switch, Wire lead-out direction: Top

VJP

Model code

VJP□-□□□-□L

Unit: mm

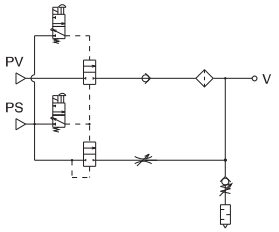
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

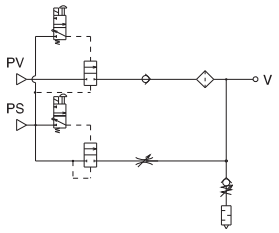
Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	14.3
6	11.7	17.2
8	21.7	25.8

Circuit diagram

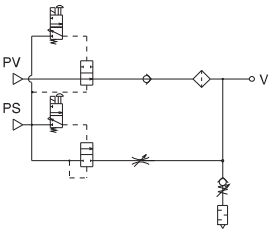
VJPA···(Double solenoid stand-alone type)



VJPB···(Normally closed stand-alone type)



VJPC···(Normally open stand-alone type)



Wire lead-out direction: Side

VJP

Model code

VJP□-□□□-□S

Unit: mm

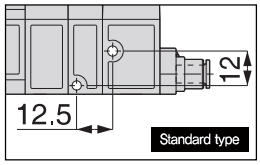
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

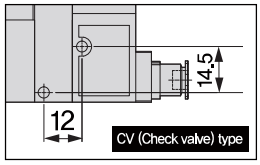
Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	14.3
6	11.7	17.2
8	21.7	25.8

Circuit diagram

See the above circuit diagram for the one for this type.





※ Please be careful when using the CV type and standard because they have different attachment size.

With V4 switch, Wire lead-out direction : Top

VJP

Model code

VJP□-□□□-□L-□

Unit: mm

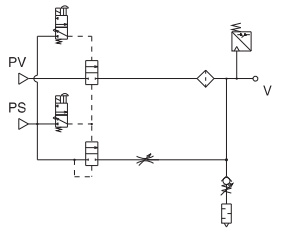
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

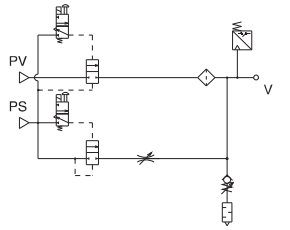
Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

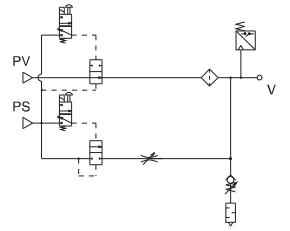
VJPA···(Double solenoid stand-alone type)



VJPB···(Normally closed stand-alone type)



VJPC···(Normally open stand-alone type)

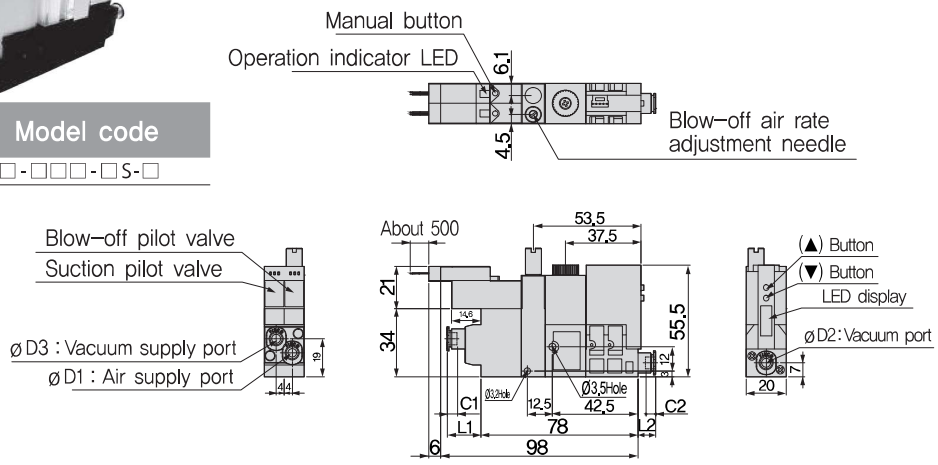


With V4 Switch, Wire lead-out direction : Side

VJP

Model code

VJP□-□□□-□S-□



Unit: mm

Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

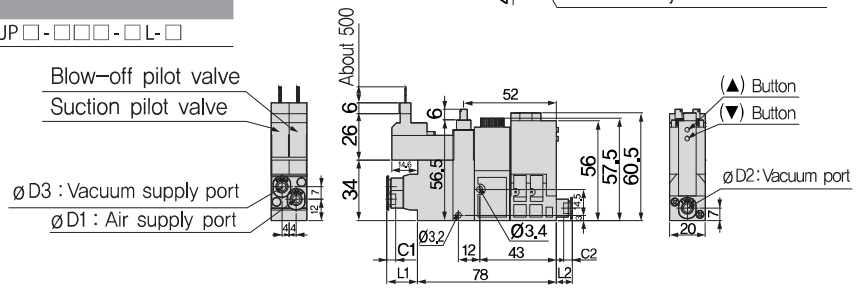
See the above circuit diagram for the one for this type.

CV(Check Valve) + With V4 switch, Wire lead-out direction : Top

VJP

Model code

VJP□-□□□-□L-□



Unit: mm

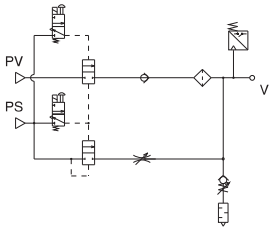
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

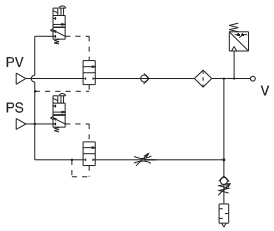
Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

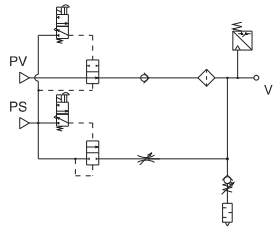
VJPA···(Double solenoid stand-alone type)



VJPB···(Normally closed stand-alone type)



VJPC···(Normally open stand-alone type)

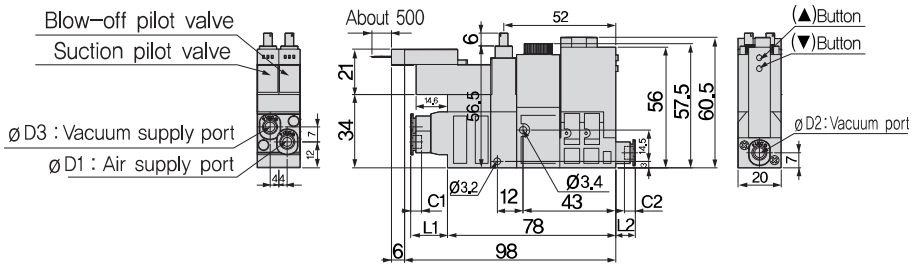


CV(Check Valve) + With V4 switch, Wire lead-out direction : Side

VJP

Model code

VJP□-□□□-□S-□



Unit: mm

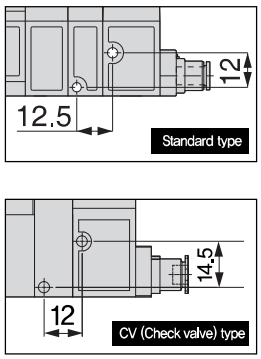
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

See the above circuit diagram for the one for this type.



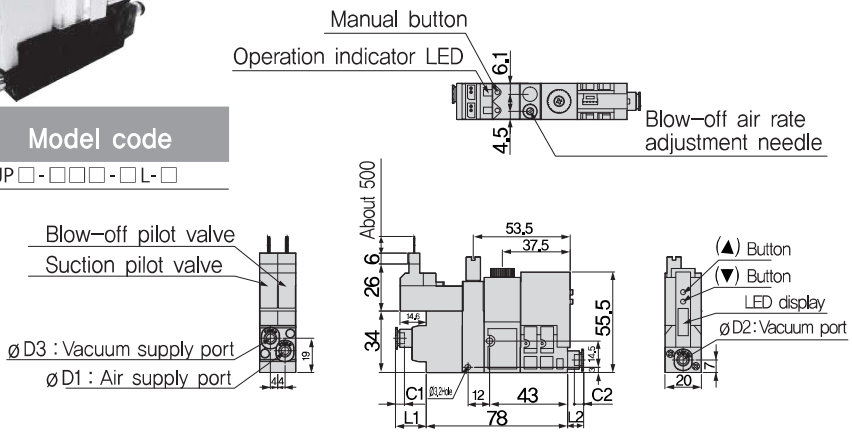
※ Please be careful when using the CV type and standard because they have different attachment size.

CV(Check Valve) + With DWE switch, Wire lead-out direction : Top

VJP

Model code

VJP□-□□□-□L-□



Unit: mm

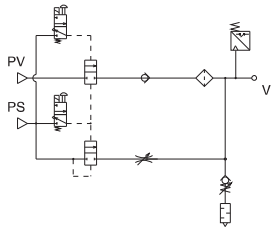
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

Unit: mm

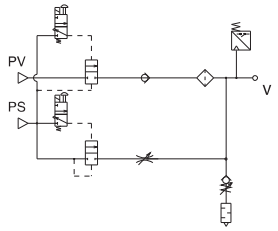
Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

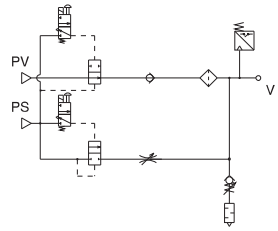
VJPA···(Double solenoid stand-alone type)



VJPB···(Normally closed stand-alone type)



VJPC···(Normally open stand-alone type)

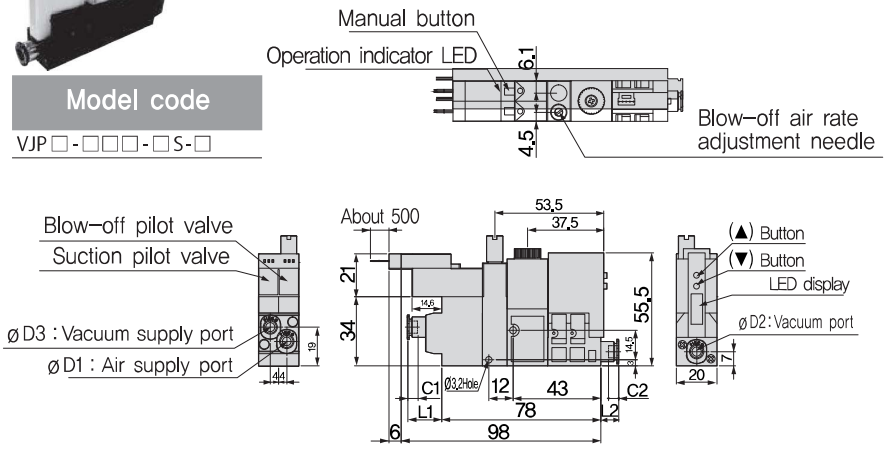


CV(Check Valve) + With DWE switch, Wire lead-out direction : Side

VJP

Model code

VJP□-□□□-□S-□



Unit: mm

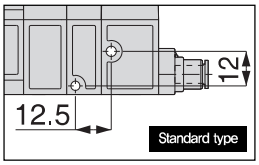
Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
4	11.2	14.6
6	11.7	17.1

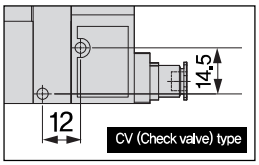
Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2
4	10.9	5.8
6	11.7	8.7
8	18.2	17.3

Circuit diagram

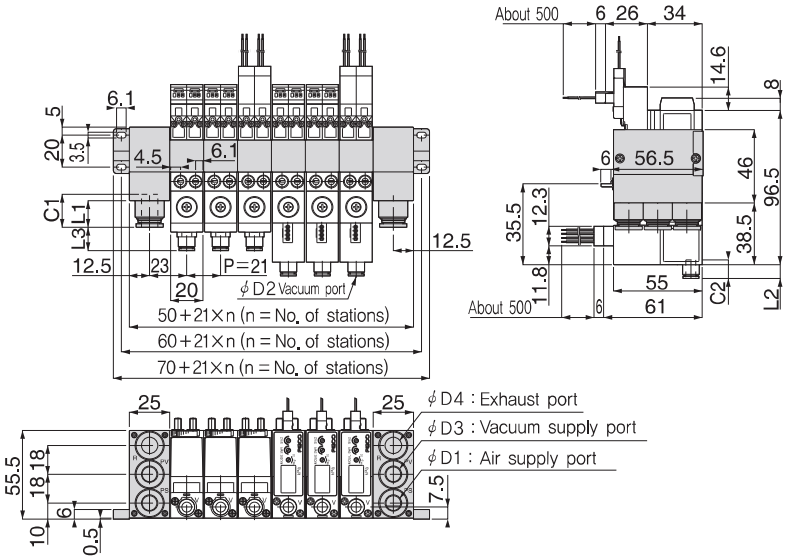
See the above circuit diagram for the one for this type.





※ Please be careful when using the CV type and standard because they have different attachment size.

Manifold type, Lead-out direction of PS & EX ports: Vacuum port side
VJP



Unit: mm

Model code
VJP□-□□□□-□□-□A-□

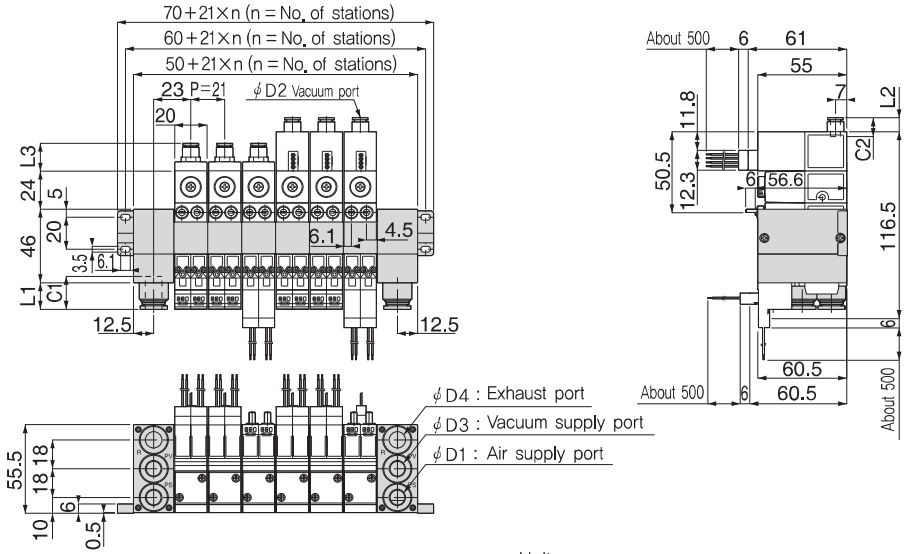
Unit: mm

Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
6	16.95	11.55
8	18.2	13.1
10	20.7	16.7

Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2	L3
4	10.9	5.8	14.3
6	11.7	8.7	17.2
8	18.2	17.3	23.0

Manifold type, Lead-out direction of PS & EX ports: Solenoid valve side
VJP



Unit: mm

Model code
VJP□-□□□□-□□-□B-□

Unit: mm

Air supply port Appilcable tube size: ø D1, ø D3	C1	L1
6	16.95	11.55
8	18.2	13.1
10	20.7	16.7

Unit: mm

Vacuum port Appilcable tube size: ø D2	C2	L2	L3
4	10.9	5.8	14.3
6	11.7	8.7	17.2
8	18.2	17.3	23.0

Detailed Safety Instructions

Before using PISCO products, be sure to read "Safety Instructions" and "Safety Instruction Manual" on page 35–39 and "Common Safety Instructions for Vacuum Series" on page 47–49.

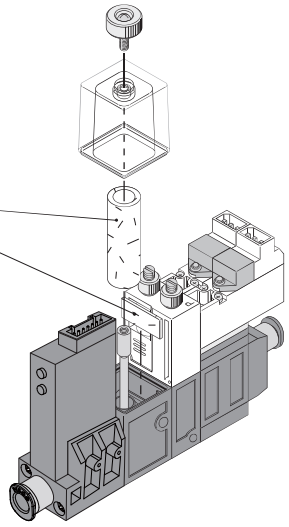
Warning

1. Make sure that the leakage current is less than 1mA, when operating a valve unit. Leakage current larger than that may cause malfunction.
2. External vacuum controller with vacuum retention function permits some vacuum leakage. Provide an appropriate safety measure when vacuum retention for long period of time is required.
3. The coil in a pilot solenoid valve generates heat under the following ① to ③ conditions. The heat may cause dropping life cycle, malfunctions and burn or may affect negatively on peripheral machines. Contact us when the power is applied to the vacuum generator under the following conditions:
   ① The power is continuously ON for over 2 hours.
   ② High-cycle operation.
   ③ Even when intermittent running of the generator is carried out,, the total operation time per day is longer than non-operation time.
4. When the electricity is applied to valves continuously for a long time, the coils generate heat. It may cause dropping life cycle, malfunctions, getting burnt or damaging peripheral machines due to the heat. 5. Regarding double-solenoid types (VJPA...), the switchover valve (main valve) is placed in neutral after the supply of pilot air has been suspended (the same is true when the valve is being operated for the first time after shipment). When resuming the supply of pilot air, be sure to send a signal to the pilot valve, or conduct switchover operations manually as required.

Caution

1. Do not give an excessive tensile strength and bending on a lead wire. Otherwise, breaking wire or damage on connector may be caused.
2. When manifold type is selected, dropping the performance or having an effect to other vacuum ports can be caused depending on number of stations or a combination of mounting units. Contact us for any unclear points.
3. Compressed air contains many kinds of drains such as water, oxidized oil, tar and other foreign substances. Dehumidify the compressed air by using an after-cooler or a dryer and improve the air condition, since those drains seriously impair the performance of the vacuum generator.
4. Do not use lubricators.
5. Since pipe rust cause malfunctions, a filter finer than 5μ m should be placed right before the air supply port.
6. Do not use the vacuum generator under the condition of corrosive and / or inflammable gas. Also do not use these gasses as fluid medium.
7. Do not operate a blow-off valve during vacuum generating.
8. When replacing vacuum port cartridge, first remove any foreign matter clinging to them and the surrounding areas, then firmly insert pins into cartridges.
9. When replacing a supply port block, make sure not to lose the seal rubber and remove the foreign substances stuck around the block. Tighten the screw to fix the block with 0.27–0.3Nm of the tightening torque.

Replacement of Element



Memo

PISCO

www.pisco.co.kr