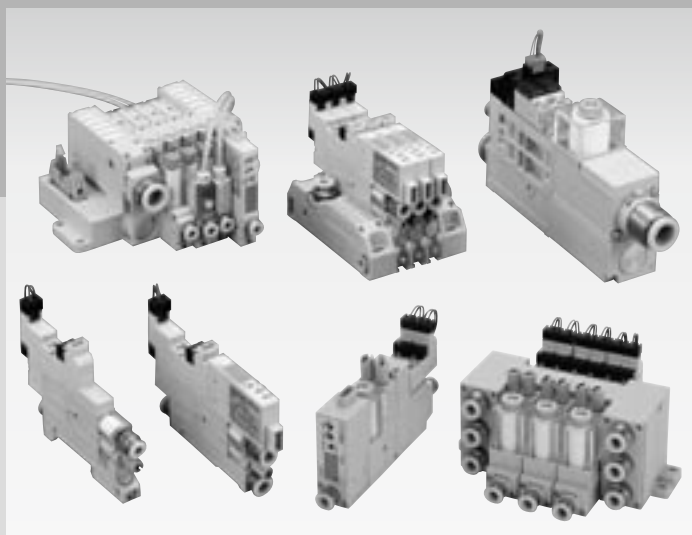


Vacuum pump system type VS*P

■ Vacuum component



CONTENTS

Series variation	166
● 20 mm width universal type (VSJP/VSJPM)	168
● 10.5 mm width universal type (VSXP/VXPM)	184
● 31.5 mm width discrete type (VSQP)	214
● 11 mm pitch manifold dedicated type (VSZPM)	226

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

●: Provided as standard ○: Option

Model	Series	Model no.	Piping method			Components						Nozzle diameter ϕ (1/10mm)						Page
			Discrete	Manifold		Vacuum control valve	Valve for break	Vacuum switch	Vacuum filter	Silencer	Check valve	05	07	10	12	15	20	
				Individual wiring	Reduced wiring													
Vacuum pump system type Vacuum changeover unit	VSJP/VSJPM Series 20 mm width universal type unit • Enable to control air flow and pressure for vacuum break. • The vacuum break time can be shortened with the vacuum break circuit relief function. • Self hold type is standard for vacuum solenoid valve.	VSJP	●			●	●	○	●								Vacuum valve effective area 3.5mm ² (ϕ 4), 5mm ² (ϕ 6)	168
		VSJPM		●		●	●	○	●									
	VSXP/VSXPM Series 10.5 mm width universal type unit • Compact and slim vacuum unit. • Either direct fixing or DIN rail installation is possible. • High cycles are possible with 3-way vacuum valves (optional).	VSXP	●			●	●	○	●								Vacuum valve effective area 2 way valve specifications: 3.5mm ² (ϕ 4), 4.5mm ² (ϕ 6) 3 way valve specifications: 3.0mm ² (ϕ 4), 3.6mm ² (ϕ 6)	184
		VSXPM		●		●	●	○	●									
	VSQP Series 31.5 mm width dedicated unit • Large vacuum units are optimum to control high flow. • Normal open and normal close are used as standards for vacuum solenoid valve.	VSQP	●			●	●	○	●								Vacuum valve effective area 16.5mm ²	214
VSZPM Series 11 mm pitch manifold dedicated unit • Wire-saving vacuum unit for manifold. • Air consumption is reduced by suppressing valve energy consumption to 0.55 W. • Compatible with a wide range of applications and broad vacuum sensor variations.	VSZPM			●	●	●	○	●								Vacuum valve effective area 4.5mm ²	226	

Vacuum pump system

Vacuum pump system

VSJP
VSJPM

VSJP
VSJPM

VSXP
VSXPM

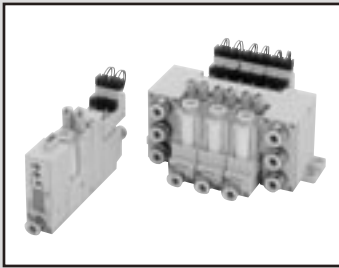
VSXP
VSXPM

VSQP

VSQP

VSZPM

VSZPM



Universal type vacuum changeover unit with break air flow and relief pressure adjusting needle

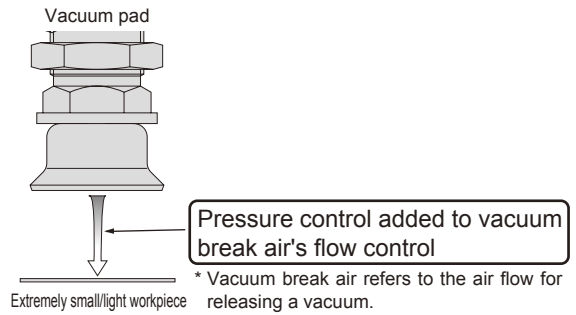
VSJP Series



Features

Vacuum pump system

- Pressure control is added to the conventional vacuum break air flow control to prevent the work piece from blown away.
- Relief function (function to release excessive pressure) is incorporated in the vacuum break circuit to shorten vacuum break time.



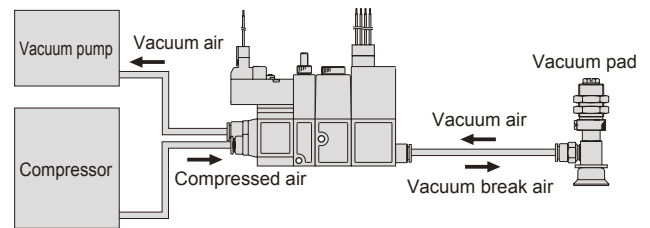
VSJP
VSJPM

- Use the vacuum-pump-compatible model when large amounts of vacuum air are required or when a vacuum must be generated for a long time.

VSXP
VSXPM

VSQP

VSZPM



- A manifold model also enables piping to be reduced. The piping direction is selectable from front or back to match the installation site.
- Three types of supply valves are available; self-holding, normally closed, normally open. The power-saving self-holding type is suitable for special applications such as the vacuum must be generated for a long time.
- LED display with enhanced visibility are used for the vacuum sensor display. 2 types vacuum sensor are available; with 2-point switch output, with analog output, to match your application. Connector wiring is used to facilitate wiring layout.

Specifications

Descriptions	VSJP
Working fluid	Air
Working pressure range MPa	0.3 to 0.7
Ambient temperature range °C	5 to 50
Use vacuum kPa	0 to -101

Solenoid valve (for vacuum supply, vacuum break) specifications

● Pilot valve

Descriptions	Valve for vacuum supply		Valve for vacuum break	
Actuation	Direct operation			
Valve structure	Rubber sealant, poppet valve			
Rated voltage	24 VDC	100 VAC	24 VDC	100 VAC
Allowable voltage fluctuation range	24 VDC ±10%	100 VAC ±10%	24 VDC ±10%	100 VAC ±10%
Surge protective circuit	Surge absorber	Bridge diode	Surge absorber	Bridge diode
Power consumption	1.2W (with LED)	1.5VA (with LED)	1.2W (with LED)	1.5VA (with LED)
Manual override	Push type non-locking type			
Operating indication	During coil exciting: Red LED ON			
Electric connection	Connector type (cable length: 500 mm)			
	Red: 24 VDC Black: COM	Blue	Red: 24 VDC Black: COM	Blue

● Switching valve

Descriptions	Valve for vacuum supply		Valve for vacuum supply
Actuation	Air pressure operation using pilot valve		
Valve structure	Rubber sealant, poppet valve		
Withstanding pressure	1.05MPa		
Valve type	Self hold, normally closed, normally open		Normally closed
Minimum excitation time	50msec (double solenoid type)		—
Lubrication	Not required		
Effective sectional area	Air supply (PS) port size	ø4: 3.5mm ²	1mm ²
		ø6: 5mm ²	

VSJP
VSJPM
Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

Vacuum switch with LED display specifications

Descriptions		With 2 point switch output (-W)	With analog output (-A)
Default set value		- 50kPa (SW1), - 10kPa (SW2)	-50kPa
Current consumption		40mA or less	
Pressure detection method		Carrier diffusion type semiconductor pressure switch	
Working pressure range		0 to -100kPa	
Set pressure range		0 to -99kPa	
Withstanding pressure		0.2MPa	
Storage temperature range		-20 to 80°C (atmospheric pressure, humidity 60%RH or less)	
Operating temperature range		0 to 50°C (no freezing)	
Operation humidity range		35 to 85%RH (no freezing)	
Power voltage		12 to 24 VDC ± 10% ripple (P - P) 10% or less	
Protective structure		IEC standards IP40 or equivalent	
Pressure setting point		2	1
Operation precision		±3% F. S. max. (at Ta = 25°C)	
Hysteresis		Fixing (2% F. S. max.)	Variable (set point 0 to 15%)
Switch output		NPN open collector output 30V 80mA or less residual voltage 0.8V or less	
Analog output	Output voltage	-	1 to 5V
	Zero point voltage	-	1±0.1 V
	Span voltage	-	4±0.1 V
	Output current	-	1mA or less (load resistance 5kΩ and over)
	LIN/HYS	-	±0.5% F. S. max.
Responsiveness		2msec max.	
Indicator		0 to -99kPa (2 digit red LED display)	
Number of displays		Approx. 4 times/sec.	
Display precision		±3% F. S. ±2 digit	
Resolution		1 digit	
Operating indication		SW1: red LED lighting if setting pressure or more SW2: green LED lighting if setting pressure or more	Red LED lighting if setting pressure or more
Function		1. MODE switchover switch (ME, S1 or S2) 2. S1 setting trimmer (2/3 rotation trimmer) 3. S2 setting trimmer (2/3 rotation trimmer)	1. MODE switchover switch (ME or SW) 2. SW setting trimmer (2/3 rotation trimmer) 3. HYS setting trimmer (set point 0 to 15%)

Vacuum break specifications

Descriptions	Vacuum break function
Break air flow	0 to 50 l/min. (A.N.R.) (at supply pressure 0.5MPa)
Break air relief valve structure	Rubber sealant, poppet valve
Relief starting setting range	0.005 to 0.05MPa

Vacuum filter specifications

Descriptions	Vacuum filter	
Element material	PVF (poly-vinyl formal)	
Filtration	10μm	
Filter area	1130mm ²	
Replacement filter element model no.	For vacuum	VSJ-VE
	For break	VSJ-PE

Weight

① Discrete unit

	VSJP	Weight (g)	Remarks
With sensor	VSJP-*-*-*-**_*	152.0	Vacuum port: ø4, ø6
	VSJP-*-8**-*-**_*	158.5	Vacuum port: ø8
Without sensor	VSJP-*-*-*-**	125.5	Vacuum port: ø4, ø6
	VSJP-*-8**-*-**	132.0	Vacuum port: ø8

② Manifold intermediate block

	Weight (g)	Remarks
Manifold intermediate block	18.5	For 1 station

■ Obtain the VSJ weight using the following formula.

$$\text{Manifold weight} = (\text{① Discrete VSJ unit} + \text{② Manifold intermediate block}) \times \text{No. of stations} + \text{③ Manifold side block} + \text{④ Cartridge} \times \text{No. used}$$

③ Manifold side block

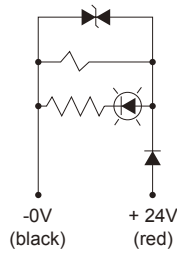
VSJP	Weight (g)	Remarks
Vacuum changeover unit	106.0	Cartridge quantity: 6 pieces

④ Cartridge (input, exhaust port)

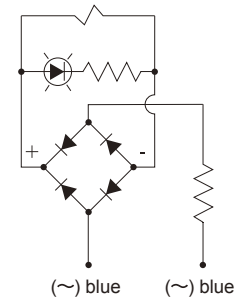
	Weight (g)	Remarks
Push-in joint for ø6	11.5	
Push-in joint for ø8	10.0	
Push-in joint for ø10	13.0	

Electric circuit (solenoid valve)

● 24 VDC specifications vacuum supply, vacuum break valve

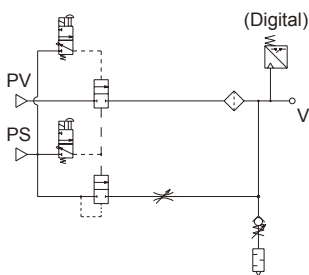


● 100 VAC specifications vacuum supply, vacuum break valve

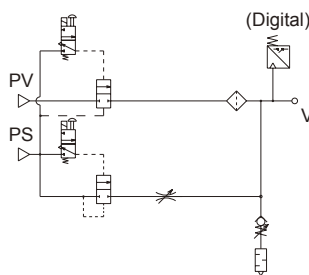


Circuit diagram

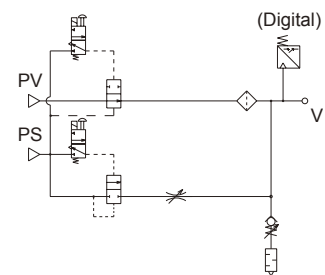
● Self hold type



● Normally closed type



● Normally open type



Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

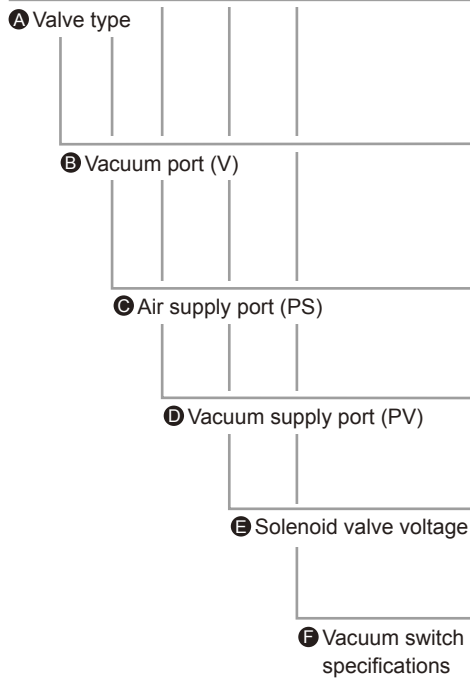
VSQP

VSZPM

How to order (discrete type)

● 20mm width universal type discrete vacuum changeover unit type

VSJP - A 6 6 6 - 3 - W



Symbol	Descriptions
A Valve type	
A	Normally open type
B	Normally closed type
D	Self hold type
B Vacuum port (V)	
4	ø4 push-in joint
6	ø6 push-in joint
8	ø8 push-in joint
C Air supply port (PS)	
4	ø4 push-in joint
6	ø6 push-in joint
D Vacuum supply port (PV)	
4	ø4 push-in joint
6	ø6 push-in joint
E Solenoid valve voltage	
1	100 VAC
3	24 VDC
F Vacuum switch specifications	
Blank	Without vacuum switch
W	2-point NPN output with LED display
A	1-point NPN output + analog output with LED display

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

How to order (manifold type)

● 20mm width universal type vacuum changeover unit manifold type

VSJPM - **D** **6** **10** **10** **10** - **3** - **10** **A** - **W**

A Valve type

B Vacuum port (V)

C Air supply port (PS)

D Exhaust port (EX)

E Vacuum supply port (PV)

F Solenoid valve voltage

G Number of manifold stations

H Common piping outlet direction

I Vacuum switch specifications

Symbol	Descriptions
A Valve type Note 1	
A	Normally open type
B	Normally closed type
D	Self hold type
Z	For mix specifications (indicate details in specification sheet)
B Vacuum port (V) Note 1	
4	ø4 push-in joint
6	ø6 push-in joint
8	ø8 push-in joint
CX	For mix joint (indicate details in specification sheet)
C Air supply port (PS)	
6	ø6 push-in joint
8	ø8 push-in joint
10	ø10 push-in joint
D Exhaust port (EX)	
6	ø6 push-in joint common exhaust
8	ø8 push-in joint common exhaust
10	ø10 push-in joint common exhaust
E Vacuum supply port (PV)	
6	ø6 push-in joint
8	ø8 push-in joint
10	ø10 push-in joint
F Solenoid valve voltage	
1	100 VAC
3	24 VDC
G Number of manifold stations	
2	2 stations
to	to
10	10 stations
H Common piping outlet direction	
A	Vacuum port side
B	Supply port side
I Vacuum switch specifications Note 1	
Blank	Without vacuum switch
W	2-point NPN output with LED display
A	1-point NPN output + analog output with LED display
Z	For mix specifications (indicate details in specification sheet)

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

Note on model no. selection

Note 1: Indicate "Mixed manifold specifications" when selecting mixed specifications. Refer to page 182 for details.

● Model no.

· Filter element for vacuum side

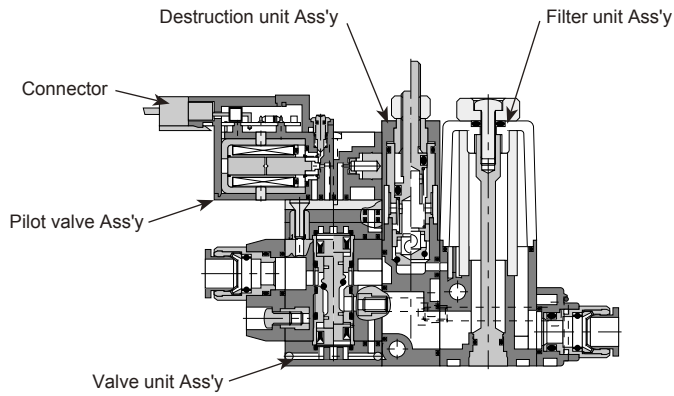
VSG-E

· Filter element for break side

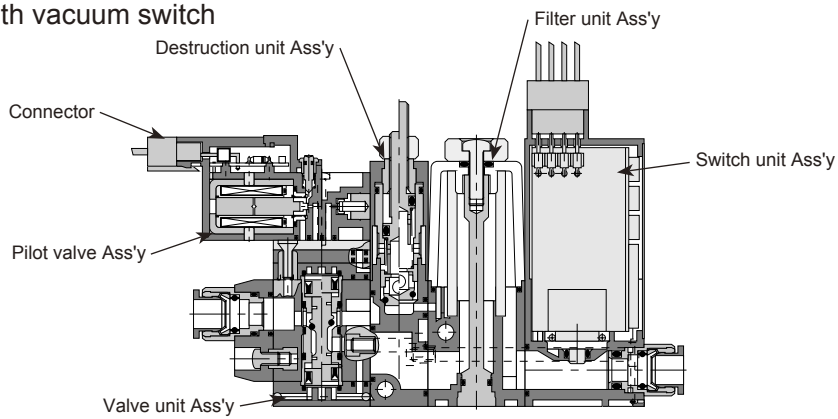
VSJ-PE

Internal structure drawing

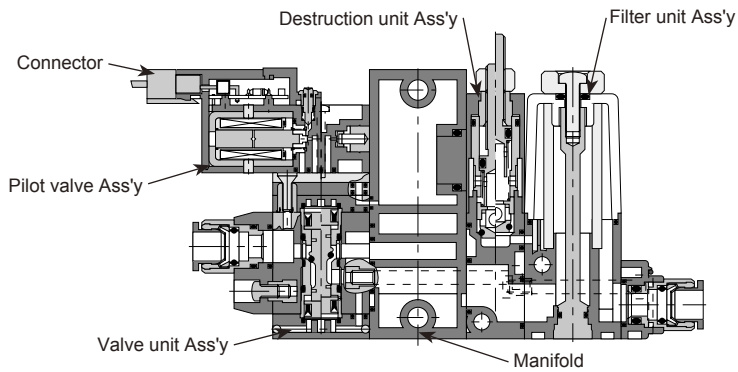
● Discrete type without vacuum switch



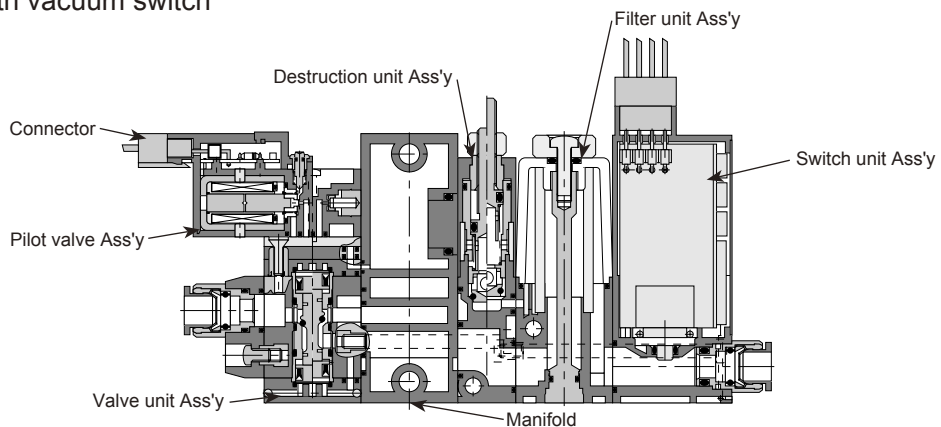
● Discrete type with vacuum switch



● Manifold type without vacuum switch



● Manifold type with vacuum switch



Vacuum pump system

VSJP
VSJPM

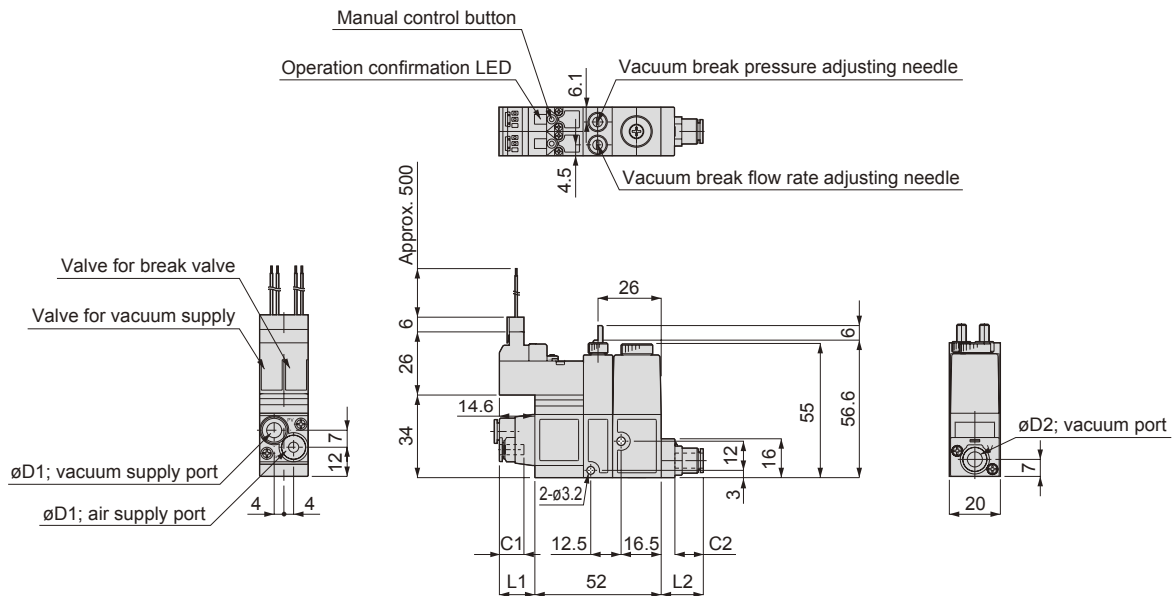
VSXP
VSXPM

VSQP

VSZPM

Dimensions (discrete type)

● Without vacuum switch



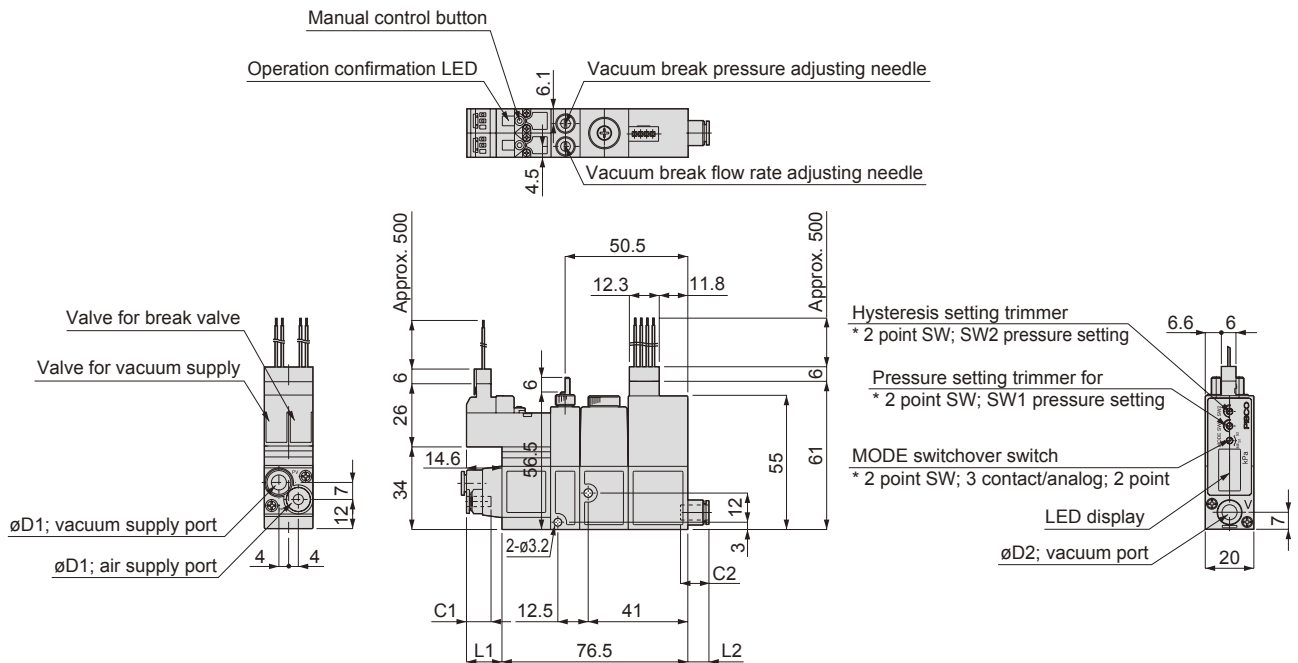
Unit: mm

Air supply port tube outer diameter øD1	C1	L1
4	11.5	14.9
6	11.9	17.3

Unit: mm

Vacuum port tube outer diameter øD2	C2	L2
4	11.2	14.6
6	11.9	17.4
8	18.2	25.8

● With vacuum switch



Unit: mm

Air supply port tube outer diameter øD1	C1	L1
4	11.5	14.9
6	11.9	17.3

Unit: mm

Vacuum port tube outer diameter øD2	C2	L2
4	11.2	6.1
6	11.9	8.9
8	18.2	17.3

Vacuum pump system

VSJP
VSJPM

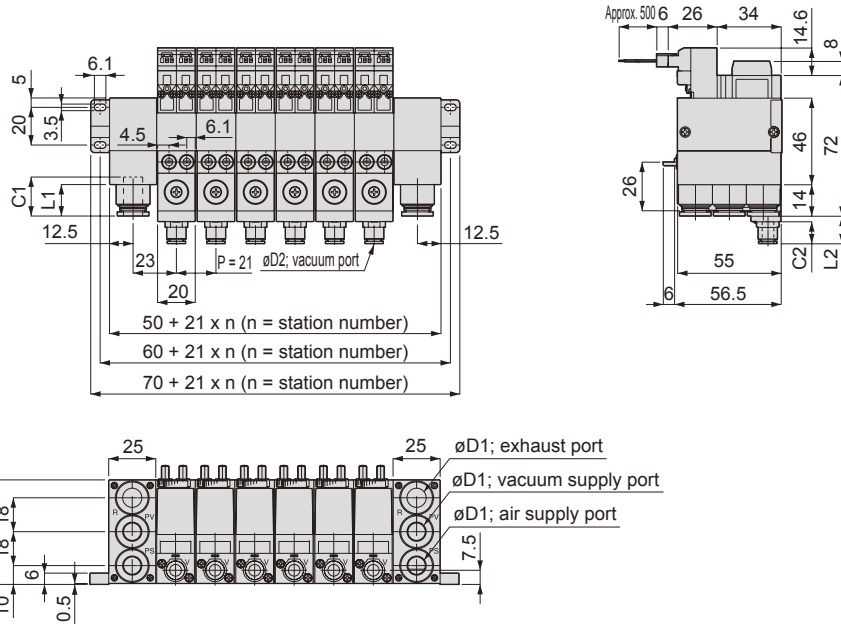
VSXP
VSXPM

VSQP

VSZPM

Dimensions (manifold type VSJPM)

- Common exhaust, common piping outlet direction, vacuum port side, without vacuum switch



Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

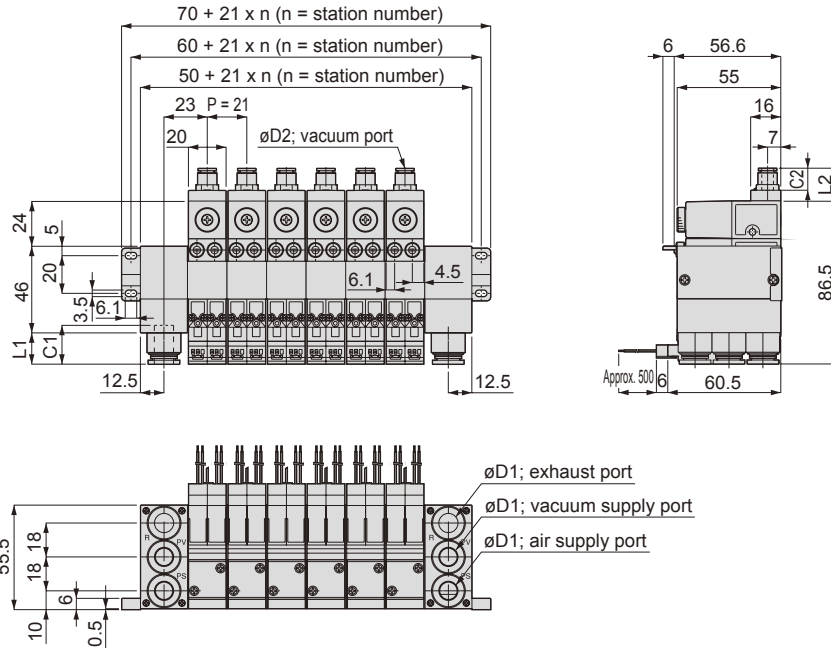
VSQP

VSZPM

Unit: mm		
Air supply port tube outer diameter øD1	C1	L1
6	17	11.6
8	18.2	13.1
10	20.7	16.7

Unit: mm		
Vacuum port tube outer diameter øD2	C2	L2
4	11.2	14.6
6	11.9	17.4
8	18.2	23.0

- Common exhaust, common piping outlet direction, supply port side, without vacuum switch



Unit: mm		
Air supply port tube outer diameter øD1	C1	L1
6	17	11.6
8	18.2	13.1
10	20.7	16.7

Unit: mm		
Vacuum port tube outer diameter øD2	C2	L2
4	11.2	14.6
6	11.9	17.4
8	18.2	23.0

Safety precautions

Refer to Intro 13 for general precautions of vacuum system components.

WARNING

- Check that the leakage current is 1mA or less when operating valves. Malfunctions may result from the leakage current and cause problems.
- Vacuum leaks are tolerated with vacuum holding function. Provide separate safety measures if the vacuum must be held for a long time.
- When continuously energizing the pilot valve for a long time, heat generated from the coil could cause burns or adversely affect peripheral devices. Contact CKD when energizing the pilot valve for a long time.
- When using a self-hold type (VSJ-**A...), the switching valve location is neutral when the pilot air supply is stopped and then restarted, including when first used after delivery. When restarting the pilot air supply, issue a signal to the pilot valve or switch the valve manually.

CAUTIONS

- Do not apply excessive tension or bending to the pilot valve or vacuum switch leads. Wires or connectors may break.
- When using manifold specifications, the number of manifold or combination of installed devices may adversely affect performance or other station vacuum ports. Consult with CKD.
- Compressed air contains large amounts of drainage (water, oxidized oil, tar, foreign matter, etc.). The drainage may adversely affect performance. Dehumidify air with an after cooler and dryer and improve air quality.
- Do not use the lubricator.
- Rust etc. in the pipe may result in operation faults. Install a 5 μm or smaller filter preceding the supply port.
- Avoid using this vacuum changeover unit in environments with corrosive or flammable gas. Do not use this unit for fluids.
- Do not operate the vacuum break solenoid valve while generating vacuum.
- When replacing the vacuum port's cartridge joint, wipe away all dirt and substance and insert the lock pin securely.
- When replacing the supply port joint block, check that packing has not dropped off. Wipe away all dirt and substance and tighten the set screw securely to the specified.

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

How to use

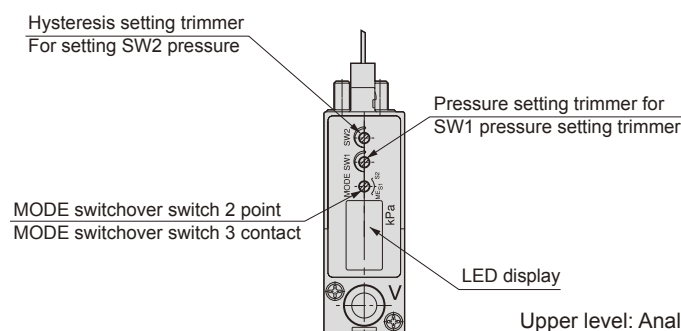
1. Vacuum switch

(1) Pressure setting procedures

- ① Energizing (checking wiring and supplying DC power.)
- ② Set the display change switch to pressure setting mode (ME→S1 or S2, SW).
- ② -2. (Only for analog output vacuum sensors)
Turn the hysteresis setting trimmer (HYS) fully in the CCW direction to set hysteresis to a minimum.
- ③ Turn the pressure setting trimmer (S1 or S2, SW) with a small screwdriver, setting it to the required setting.
- ④ Set the display change switch to ME, apply pressure, and check that the sensor operates appropriately.
(For vacuum sensors with 2-point switch output)
Switch output 1 (S1): The operation LED (red) turns on when set pressure is exceeded.
Switch output 2 (S2): The operation LED (red) turns on when set pressure is exceeded.
(For vacuum sensors with analog output)
Switch output (SW): The operation LED (red) turns on when set pressure is exceeded.

(2) Setting hysteresis

- ① Hysteresis is adjusted using the hysteresis setting trimmer (HYS).
- ② Hysteresis is adjusted from 0 to 15% of the setting. Hysteresis increases when the trimmer is turned to CW.
- ③ Checking hysteresis
Set the display change switch to pressure display mode (ME) and gradually increase and decrease pressure near the set pressure. Read values at which the operation indicator is turned on and off. The difference in displayed values is hysteresis.
- ④ Example of hysteresis adjustment
· If pressure has a pulse and output is thin and intermittent, use large hysteresis.



Upper level: Analog output vacuum sensor
Lower level: Vacuum sensor with 2-point switch output

⚠ Cautions

- ① Do not use this vacuum switch in fluids or in an atmosphere with corrosive substances. The switch may fail.
- ② Do not use wiring or applications that may cause noise (surge), etc., to be applied. The switch may fail.
- ③ Do not use this vacuum switch in an atmosphere containing fluids or flammable or explosive gases. This device is not explosion-proof, so faults may occur.
- ④ Do not use this vacuum switch where it may be exposed to water, oil, or dust. This device is not drip-proof, so faults may occur.
- ⑤ Do not use this vacuum switch for applications that generate heat exceeding the working temperature range. The switch may fail.
- ⑥ Turn power off before wiring. Check the lead wire color during wiring, and check that the output terminal, power terminal, and COM terminal are not short-circuited. The switch may fail if these terminals are short-circuited.
- ⑦ Do not apply excessive tension or bend the connector cable excessively. Wires or connector section may break.
- ⑧ Check that pressure exceeding 0.2 MPa is not constantly applied during a vacuum break. Constant application of this pressure may damage the switch.
- ⑨ When setting pressure or hysteresis, use a small screwdriver, and gently turn the trimmer within its rotation range. Do not force it. The trimmer or PCB may be damaged if excessive force is applied during adjustment.
- ⑩ Use stabilized DC power.
- ⑪ Insert a surge voltage absorption circuit in the relay or solenoid valve, etc., connected to the output terminal or power terminal. Avoid uses in which current exceeds 80 mA.
- ⑫ Ground the FG terminal when using unit power, such as switching power.
- ⑬ Do not short-circuit the output terminal (black or gray lead) with other terminals.
- ⑭ Do not apply excessive external impact or force to the switch.

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

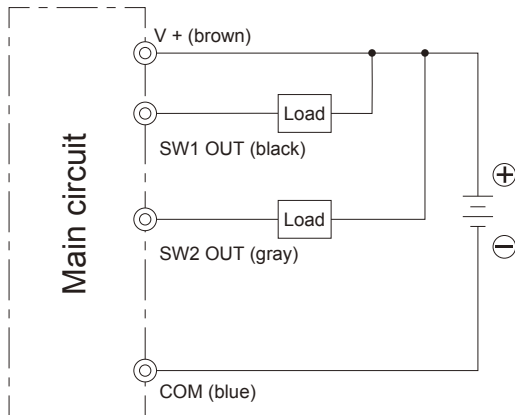
VSQP

VSZPM

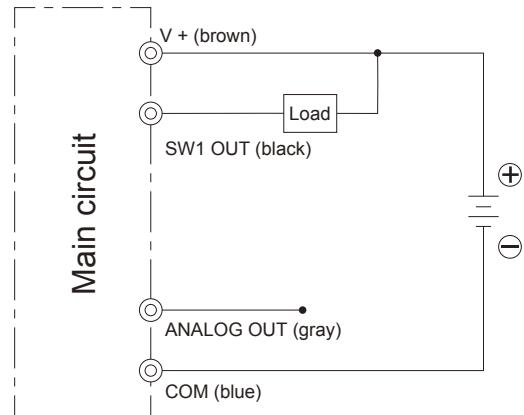
How to use

(4) Connection method

Vacuum pump system



Vacuum switch with 2 point switch output



Vacuum switch with analog output

2. Adjusting the relief valve

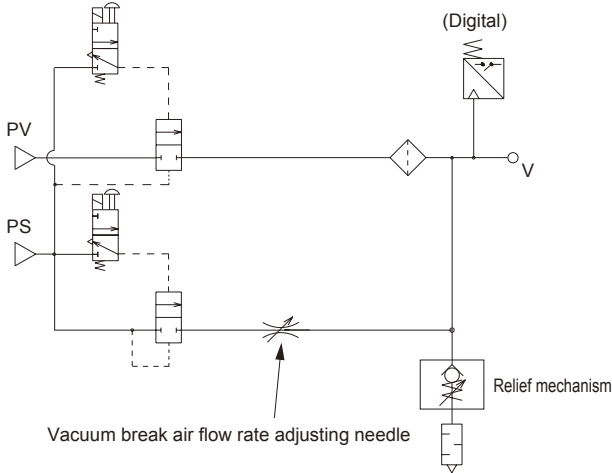
(1) circuit diagram, structural drawing

 VSJP
VSJPM

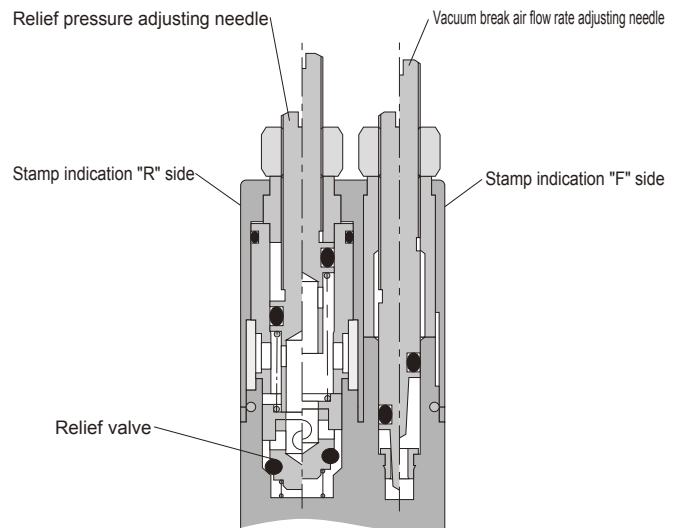
 VSXP
VSXPM

VSQP

VSZPM



Circuit diagram (VSJP-**B normally closed type)



Vacuum break unit structure drawing

(2) Adjust the relief needle referring the relief needle opening limit on the Table 1 below, and set the relief pressure.

Table 1. Relief needle opening limit

Vacuum characteristics	H: (High vacuum medium flow type)				L: (Medium vacuum large flow rate type)			E: (High vacuum small flow rate type)		
Nozzle diameter (mm)	0.5	0.7	1.0	1.2	0.5	0.7	1.0	0.7	1.0	1.2
Max. opening (rotation)	6.5	7.5	8.5	9.0	7.5	8.0	9.0	7.5	8.0	8.5

* The needle opening limit for the vacuum pump-compatible unit (VSJP*) differs based on the performance of the vacuum pump. Set the needle opening so that the vacuum startup time and vacuum degree are not affected.

* Values in Table 1 apply to rated air pressure. The relief needle opening limit differs based on the supplied air pressure, vacuum properties, and vacuum piping (capacity), etc., so use values in Table 1 as references.

(3) After setting the relief needle, confirm that the vacuum properties and vacuum startup time are correct.

* If the relief needle opening limit in Table 1 is exceeded, the vacuum startup time could be delayed, or the correct vacuum degree may not be attained. (Refer to "(5) Other" on page 181)

(4) Set the required vacuum break flow rate with the vacuum break flow rate adjustment needle.

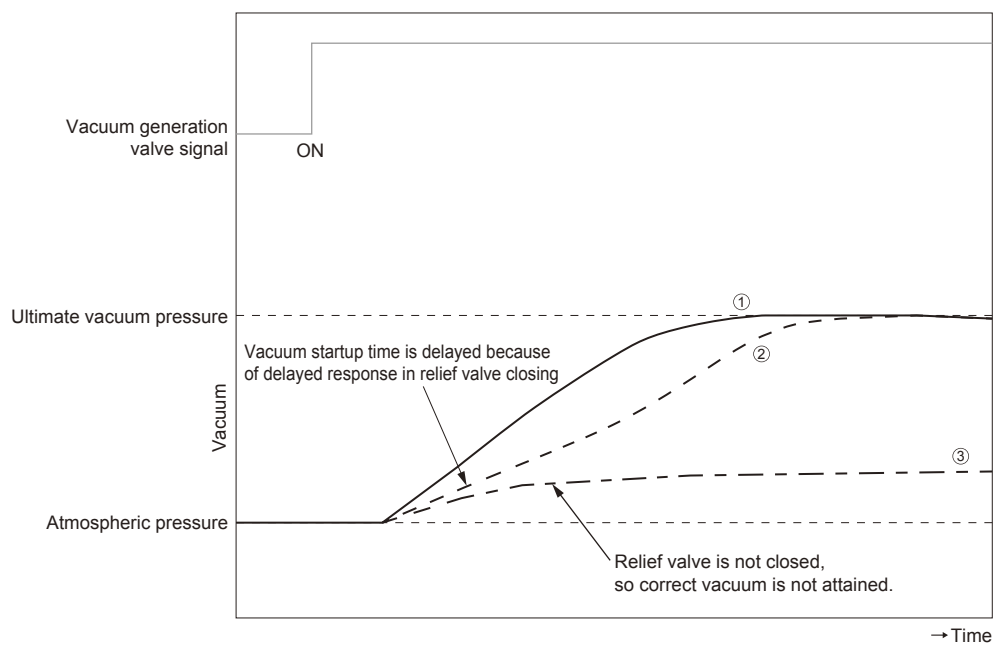
* To shorten the vacuum break time, increase the vacuum air break flow rate.

* If the workpiece is blown, etc., reduce the vacuum air break flow rate.

How to use

(5) Other

- 1) If the relief needle opening is within the range, vacuum startup with ① in the graph below is attained.
- 2) If the relief needle limit is exceeded, the vacuum startup state with ② in the graph below is attained and the vacuum startup time is delayed.
- 3) If the relief needle is further opened, the state with ③ in the graph below is attained, and the correct vacuum degree is not attained.



Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

Preparing the VSJPM mixed manifold specifications

● Mix manifold model no. (example)

VSJPM - ^AZ - ^BCX - ^C8 - ^D8 - ^E8 - ^F3 - ^G5 - ^HB - ^IZ

● Mix manifold specifications (example)

Vacuum pump system

Vacuum changeover unit model no. ^A ^B ^I	Layout										Quantity
	1	2	3	4	5	6	7	8	9	10	
VSJPM - B 4 - W	○	○	○								3
VSJPM - B 6 - A				○							1
VSJPM - B 8 - W					○						1
VSJPM - [] [] - []											
VSJPM - [] [] - []											

<Specifications when only output port size joints are mixed>

● Mix manifold model no. (example)

VSJPM - ^AB - ^BCX - ^C6 - ^D8 - ^E8 - ^F3 - ^G5 - ^HB - ^IW

● Mix manifold specifications (example)

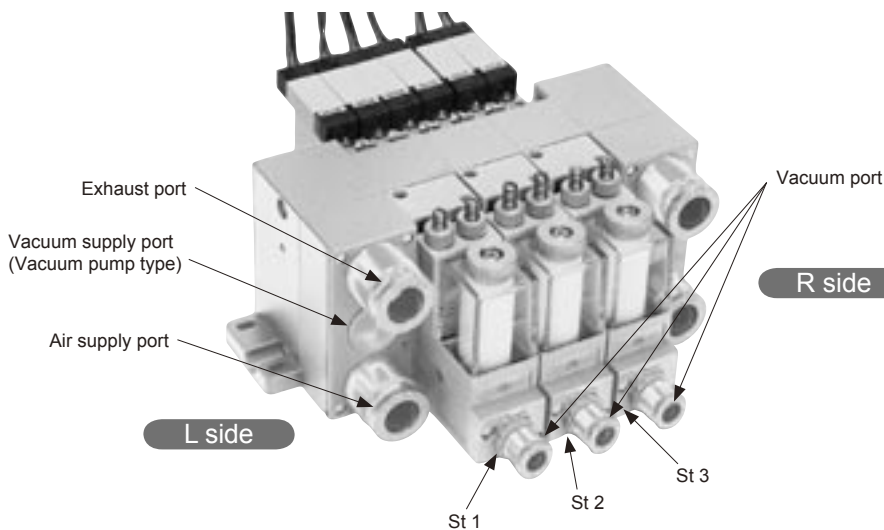
VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

Vacuum changeover unit model no. ^A ^B ^I	Layout										Quantity
	1	2	3	4	5	6	7	8	9	10	
VSJPM - B 4 - W	○		○		○						3
VSJPM - B 6 - W		○									1
VSJPM - B 8 - W				○							1
VSJPM - [] [] - []											
VSJPM - [] [] - []											



* The stations numbers are assigned as St. 1, St. 2 to St. 10 from the L side looking at the vacuum port from the front.

<Completing the form>

- Piping locations start from the vacuum port, and are set in order from the left.
- Indicate the total number of designated product models required at the far right in the table.

VSJPM mix manifold specifications

Contact _____ Quantity _____ Set _____ Request date / / _____ Issue / / _____
 Slip No. _____ Order No. _____ Your company name _____
 Contact _____ Messrs. _____
 Purchase order No. _____

● Mix manifold model no.

VSJPM - - - -

A Valve type	
A	Normally open type
B	Normally closed type
D	Self hold type
Z	For mix specifications (indicate details in specification sheet)

B Vacuum port (V)	
4	ø4 push-in joint
6	ø6 push-in joint
8	ø8 push-in joint
CX	For mix joint (indicate details in specification sheet)

C Air supply port (PS)	
6	ø6 push-in joint
8	ø8 push-in joint
10	ø10 push-in joint

D Exhaust port (EX)	
6	ø6 push-in joint common exhaust
8	ø8 push-in joint common exhaust
10	ø10 push-in joint common exhaust

E Vacuum supply port (PV)	
6	ø6 push-in joint
8	ø8 push-in joint
10	ø10 push-in joint

F Solenoid valve voltage	
1	100 VAC
3	24 VDC

G Number of manifold stations	
2 to 10	2 stations to 10 stations

H Common piping outlet direction	
A	Vacuum port side
B	Supply port side

I Vacuum switch specifications	
Blank	Without vacuum switch
W	2-point NPN output with LED display
A	1-point NPN output + analog output with LED display
Z	For mix specifications (indicate details in specification sheet)

Vacuum pump system

VSJP
VSJPM

VSXP
VSXPM

VSQP

VSZPM

● Mix manifold specifications

Vacuum changeover unit model no. A B I	Layout										Quantity
	1	2	3	4	5	6	7	8	9	10	
VSJPM - <input type="text"/> <input type="text"/> - <input type="text"/>											
VSJPM - <input type="text"/> <input type="text"/> - <input type="text"/>											
VSJPM - <input type="text"/> <input type="text"/> - <input type="text"/>											
VSJPM - <input type="text"/> <input type="text"/> - <input type="text"/>											
VSJPM - <input type="text"/> <input type="text"/> - <input type="text"/>											