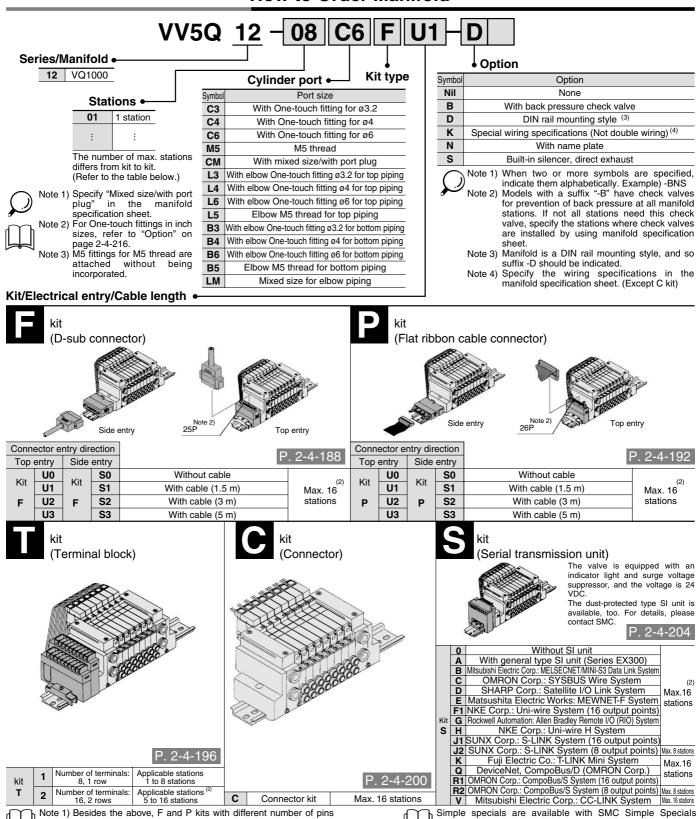
Series VQ1000 **Base Mounted Plug Lead Unit**

How to Order Manifold



Note 1) Besides the above, F and P kits with different number of pins are available. Refer to page 2-4-215 for details.

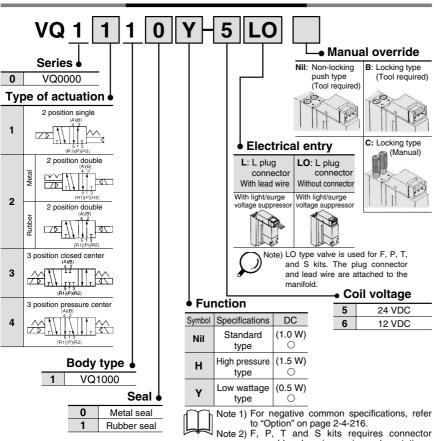
Note 2) For details, refer to page 2-4-216. 2-4-184



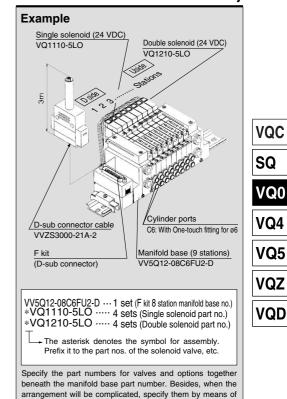
Simple specials are available with SMC Simple Specials System. For details about applicable models, please contact

Plug-in Unit Series VQ1000





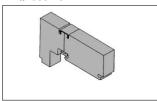
How to Order Valve Manifold Assembly



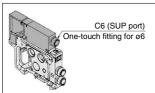
P 2-4-208

Manifold Option

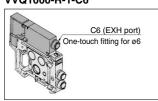
Blanking plate assembly VVQ1000-10A-1



Individual SUP spacer VVQ1000-P-1-C6



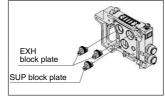
Individual EXH spacer VVQ1000-R-1-C6



• For cylinder port fittings part no., refer to page 2-4-213.

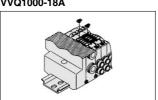
• For replacement parts, refer to page 2-4-231.

SUP/EXH block plate VVQ1000-16A-2



page 2-4-186.

Back pressure check valve assembly [-B] VVQ1000-18A

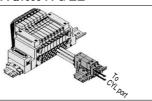


Name plate [-N*] VVQ1000-N2-Station (1 to Max. stations)

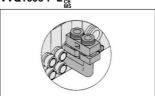


Double check block VVQ1000-FPG-□□

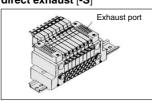
assembly when increasing valve stations. For part nos., refer to "Option" on page 2-4-216. For power consumption of AC type, refer to



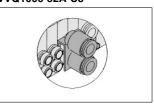
Elbow fitting assembly VVQ1000-F-L $_{c6}^{C3}$



Built-in silencer, direct exhaust [-S]

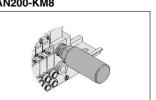


2 stations matching fitting assembly VVQ1000-52A-C8

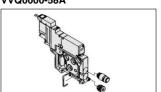


Silencer AN200-KM8

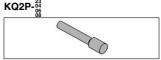
the manifold specification sheet.



Port plug VVQ0000-58A



Blanking plug KQ2P-04 Plug





Plug Lead Unit Series VQ0000/1000

Manifold Specifications

	_			Porting specifica	ations	(2)	Applicable	5 station	
Series	Base model	Type of connection	Port	Port	size ⁽¹⁾	Applicable stations	solenoid	weight	
			location	1(P), 3(R)	4(A), 2(B)	Stations	valve	(g)	
VQ0000	VV5Q05-□□□	■ F kit- D-sub connector ■ P kit-Flat ribbon cable connector ■ T kit-Terminal block ■ C kit-Individual connector ■ S kit-Serial transmission	Side	C6 (Ø6) Option Built-in silencer, direct exhaust	C3 (ø3.2) C4 (ø4) M5 (M5 thread)	1 to 16 stations	VQ0□50 VQ0□51	330 (Single) 400 (Double, 3 position)	
VQ1000	VV5Q12-□□□	■ F kit–D-sub connector ■ P kit–Flat ribbon cable connector ■ T kit–Terminal block ■ C kit–Individual connector ■ S kit–Serial transmission	Side	C8 (Ø8) Option (Built-insilencer, direct exhaust)	C3 (ø3.2) C4 (ø4)C6 (ø6) M5 (M5 thread)	1 to 16 stations	VQ1□10 VQ1□11	818 (Single) 885 (Double, 3 position)	

Note 1) Inch-size One-touch fittings are also available. For details, refer to page 2-4-216. Note 2) For details, refer to page 2-4-216.

VQC

SQ

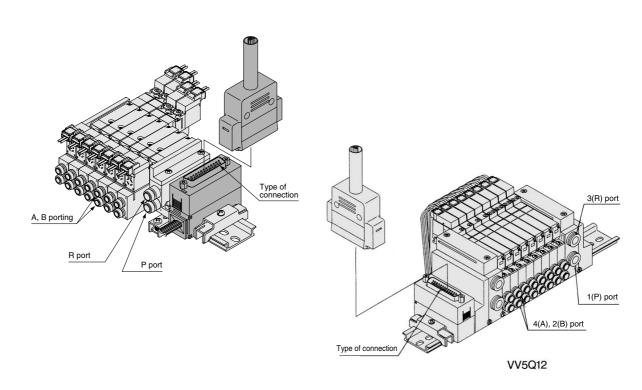
VQ0

VQ4

VQ5

VQZ

VQD



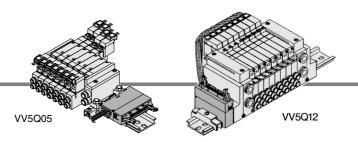


VQ0000/1000 Kit (Flat ribbon cable connector)

- MIL flat ribbon cable connector reduces installation labor savings for electrical connection.
- Using the connector for flat ribbon cable (26P), (10P, 16P, 20P as an option) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.

Top or side receptacle position can be selected in accordance with the available mounting space.

Maximum stations are 16.



Manifold Specifications

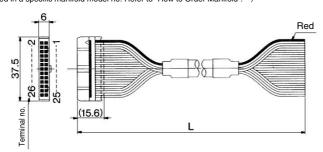
Cable assembly •

		<u> </u>									
ĺ		F	orting spe								
	Series	Port	Po	rt size	Applicable stations						
		location	1(P), 3(R)	4(A), 2(B)	Stations						
ĺ	VQ0000	Side	C6	C3, C4, M5	Max.16 stations						
Ī	VQ1000	Side	C8	C3, C4, C6, M5	Max.16 stations						

Flat Ribbon Cable (26 pins)



(Flat ribbon cable connector assembly can be ordered individually or included in a specific manifold model no. Refer to "How to Order Manifold".



Flat Ribbon Cable Connector Assembly (Option)

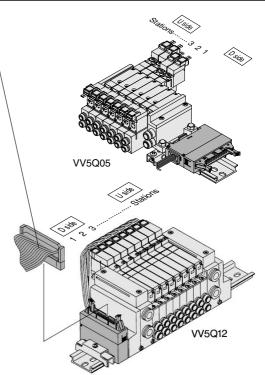
Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC26-1	0-61-00
3 m	AXT100-FC26-2	Cable 26 cores x 28AWG
5 m	AXT100-FC26-3	X ZOAVVO

For other commercial connectors, use a 26 pins type with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

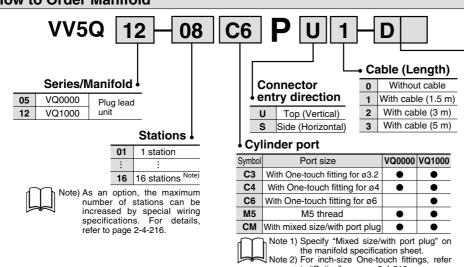
- Hirose Electric Co., Ltd.
- Japan Aviation Electronics Industry, Ltd.
- Sumitomo 3M Limited
- \bullet J.S.T. Mfg. Co., Ltd.
- Fujitsu Limited
- Oki Electric Cable Co., Ltd.

Note) Types with 10, 16, or 20 pin are also available. Refer to page 2-4-215 for details.



The total number of stations is tabulated starting from one on the D side.

How to Order Manifold



Option

Symbol Option VQ0000 VQ1000

B With back pressure check valve (2)

D DIN rail mounting style (3)

K Special wiring specification (Not double wiring)

N With name plate

S Built-in silencer (Direct exhaust)

Note 1) When two or more symbols are specified, indicate them alphabetically. Example) -BNS

Note 2) Models with a suffix "-B" have the back pressure check valve at all manifold stations. If not all stations need this check valve, specify the stations where check valves are installed by using the manifold specification sheet.

Note 3) P kit of VQ0000 and all of VQ1000 are equipped with a DIN rail, so indicate suffix "D".

Note 4) Specify the wiring specifications on the manifold specification sheet.



to "Option" on page 2-4-216.

SQ

VQ0

VQ4

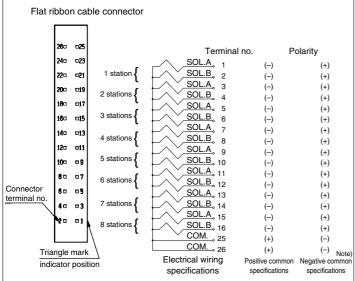
VQ5

VQZ

1 42

VQD

Electrical wiring specifications



As the standard electrical wiring specifications, double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station for 8 stations or less, regardless of valve and option types.

Mixed single and double wiring is available as an option.

For details, refer to page 2-4-216.

How to Order Valves

Note) When using the negative commons specifications, use valves for negative common. (Refer to page 2-4-216.)

How to Order Manifold Assembly

Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

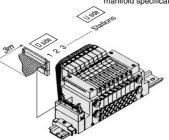
Flat ribbon cable kit with 3 m cable

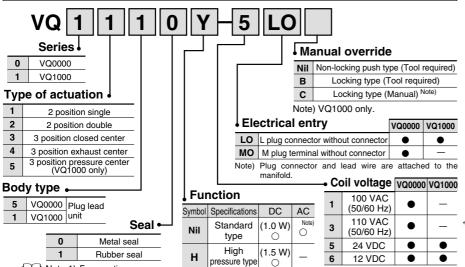
VV5Q12-08C6PU1-D ...1 set-Manifold base no.

*VQ1110-5LO ······4 sets-Valve part no. (Stations 1 to 4))
*VQ1210-5LO ······3 sets-Valve part no. (Stations 5 to 8)

Prefix the asterisk to the part nos. of the solenoid valve, etc.

Write sequentially from the 1st station on the D side. When part nos. written collectively are complicated, specify by using the manifold specification sheet.





Low wattage (0.5 W)

Note) For power consumption

of AC type, refer to page 2-4-186.

type

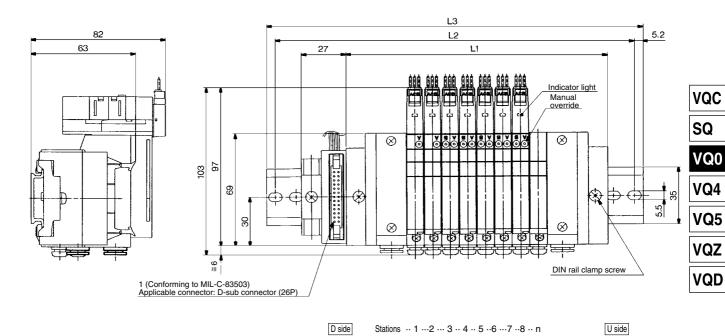
Note 1) For negative common Note 2) specifications, refer to "Option" on page 2-4-126.
Connector assembly

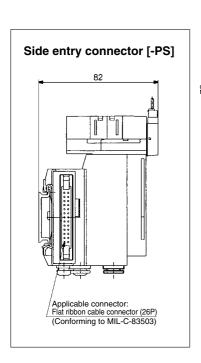
Connector assembly will be required when the P kits add a valve. For part nos., refer to "Option" on page 2-4-

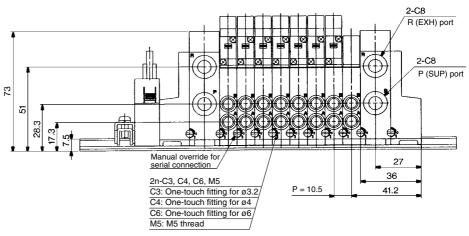


U side

VQ1000







Dimensions: Top Entry Connector [-PU]						Fo	rmula L1	= 10.5	n + 72 r	n: Statio	n (Maxin	num 16	stations)			
L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5	240
L2	137.5	150	150	162.5	175	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5	287.5
L3	148	160.5	160.5	173	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298	298

Dimensions: Side Entry Connector [-PS]

L n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L2	162.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5	275	287.5	300	312.5	312.5
L3	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273	285.5	298	310.5	323	323

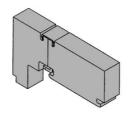
Series VQ1000

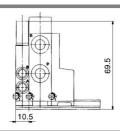
Manifold Option Parts for VQ1000

Blanking plate assembly VVQ1000-10A-1

JIS Symbol

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc



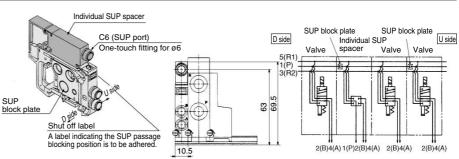


Individual SUP spacer VVQ1000-P-2-C6

When the same manifold is to be used for different pressures, individual SUP spacers are used as SUP ports for different pressures. (One station space is

Block both sides of the station, for which the supply pressure from the individual SUP spacer is used, with SUP block plates. (Refer to the application ex.)

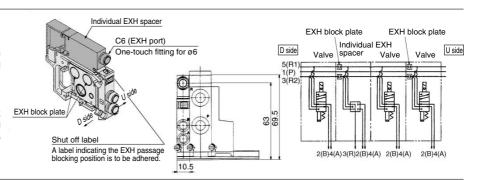
* Specify the spacer mounting position and SUP block plate position on the manifold specification sheet. The block plates are used in two places for one set. (Two SUP block plates forblocking SUP station are attached to the individual SUP spacer.)



Individual EXH spacer VVQ1000-R-2-C6

When valve exhaust affects other stations due to the circuit configuration, this spacer is used for individual valve exhaust. (One station space is occupied.) Block both sides of the individual valve EXH station. (See example.)

* Specify the mounting position, as well as EXH block base or EXH block plate position on the manifold specification sheet. The block plates are used in two places for one set.



SUP/EXH block plate VVQ1000-16A-2

When different pressures, high and low, are supplied to one manifold, a SUP block plate is inserted between the stations under different pressures.

When a valve exhaust affects other stations due to the circuit configuration, this plate is also used between the stations where exhaust should be separated. It is also used for individual exhaust by combining an EXH block plate with an individual EXH spacer.

(2 EXH plates are necessary for 1 station.)

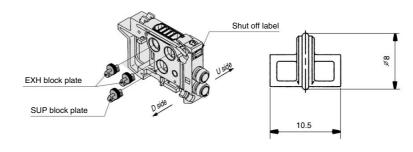
Note) The SUP/EXH block plate is common.

* Specify the number of stations on the manifold specification sheet.

<Blocking indication label>

When using block plates for SUP/EXH passage, the indication label for confirmation of the blocking position from outside is attached. (One label for each)

* When ordering a block plate incorporated with the manifold no., a block indication label is attached to the manifold





SUP passage blocked



EXH passage blocked

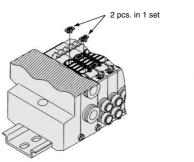


SUP/EXH passage blocked

Back pressure check valve assembly [-B] VVQ1000-18A

It prevents cylinder malfunction caused by other valve exhaust. Insert it into R (EXH) port on the manifold side of a valve which is affected. It is effective when a single acting cylinder is used or an exhaust center type solenoid valve is used.

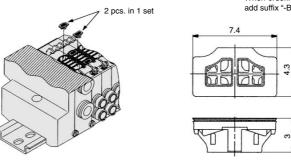
Note) When a check valve for back pressure prevention is desired to be installed only in certain manifold stations, write clearly the part no. and specify the station numbers by using the manifold specification sheet.



* When ordering assemblies incorporated with a manifold, add suffix "-B" to the manifold no



- 1. Back pressure check valve assembly is assembled with a check valve structure. However, as slight air leakage allowed for the back pressure, take note exhaust air will not be throttled at the exhaust port.
- When a back pressure check valve is mounted, the effective orifice of the valve decrease by about 20%



SQ

VQ0

VQ4

VQ5

VQZ

VQD

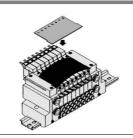
Plug-in Unit Series VQ1000

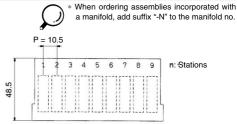
Name plate [-N*]

VVQ1000-N2-Station (1 to Max. stations)

It is a transparent resin plate for placing a label that indicates solenoid valve function, etc.

Insert it into the groove on the side of the end plate and bend it as shown in the figure.



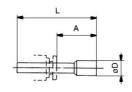


Blanking plug (For One-touch fittings)

KQ2P-

It is inserted into an unused cylinder port and SUP/EXH ports. Purchasing order is available in units of 10 pieces.



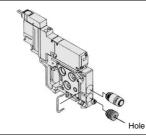


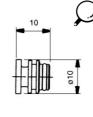
Dimensions

Applicable fitting size ød	Model	A	L	D
3.2	KQ2P-23	16	31.5	3.2
4	KQP-04	16	32	6
6	KQP-06	18	35	8
8	KQP-08	20.5	39	10

Port plug VVQ0000-58A

The plug is used to block the cylinder port when using a 4 port valve as a 3 port valve.





- * When ordering a plug incorporated with a manifold, indicate "CM" for the port size in the manifold no., as well as, the mounting position and number of stations andcylinder port mounting positions, A and B, by means of the manifold specification sheet.
- * Lightly screw an M3 screw in the port plug hole and pull it for removal.

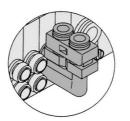
Elbow fittings assembly VVQ1000-F-L calculus

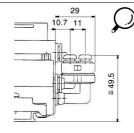
It is used for piping that extends upward or downward from the manifold.

When not mounting it to all manifold stations, clearly write the elbow type fitting assembly no. and specify the station's qty and position by manifold specifications.

* When mounting elbow fittings assembly on the edge of manifold station and a silencer on EXH port, select a silencer, AN203-KM8.

Silencer (AN200-KM8) is interfered with fittings.





* When ordering assemblies incorporated with a manifold, indicate "L\sum or "B\sum for the manifold port size.

Built-in silencer, Direct exhaust [-S]

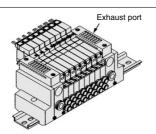
This is an exhaust port on the manifold end plate.

The built-in silencer exhibits an excellent noise suppression effect. (Silencing effect: 30 dB)

Note) A large quantity of drainage generated in the air source results in exhaust of air together with drainage.



• For maintenance, refer to page 2-4-214.





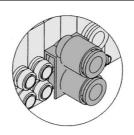
When ordering assemblies incorporated with a manifold, add suffix "-S" to the manifold no.

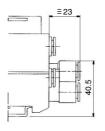
2 stations matching fitting assembly VVQ1000-52A-C8

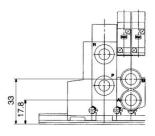
For driving a cylinder with a large bore, valves for two stations are operated to double the flow rate. This assembly for the cylinder port is used in that case. The assembly is equipped with One-touch fittings for a $\emptyset 8$ bore.

* The bore for the manifold no. is "CM"

Clearly indicate the 2 station matching fitting assembly no., and specify the number of stations and positions on the manifold specification sheet.





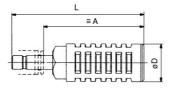


Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).

 When mounting elbow fittings assembly (VVQ1000-F-L□) on the edge of manifold station, select a silencer, AN203-KM8.

Silencer (AN200-KM8) is interfered with fittings.



Dimensions

Series	Applicable fitting size ød	Model	A	L	D	Effective area (mm²)	Noise reduction (dB)
V04000		AN200-KM8	59	78	22	20	30
VQ1000	8	AN203-KM8	32	51	16	14	25 *

Manifold Option Parts for VQ0000/VQ1000

Double check block (Separated type)

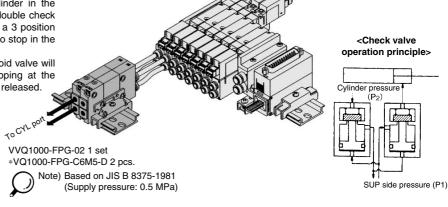
VQ1000-FPG-□□

It is used on the outlet side piping to keep the cylinder in the intermediate position for a long time. Combining the double check block with a built-in pilot type double check valve and a 3 position exhaust center solenoid valve will enable the cylinder to stop in the middle or maintain its position for a long time.

The combination with a 2 position single/double solenoid valve will permit this block to be used for preventing the dropping at the cylinder stroke end when the SUP residual pressure is released.

Specifications

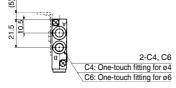
Max. operating pressure	0.8 MPa
Min. operating pressure	0.15 MPa
Ambient and fluid temperature	−5 to 50°C
Flow characteristics: C	0.60 dm3/(s·bar)
Max. operating frequency	180 CPM

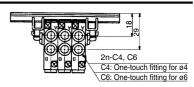


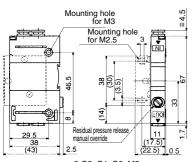
Manifold

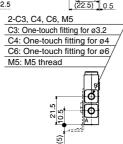
Dimensions

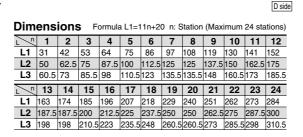
Single unit



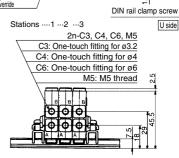








Option



<Example>
_____ 5(R1) 5(R1) -

Intermediate

stops

1(P) 1(P 3(R2) 3(R2

0

How to Order

Double check block

VQ1000-FPG-<u>C4 | M5</u>

IN side port size

C4	One-touch fitting for ø4
C6	One-touch fitting for ø6

OUT side port size

M5	M5 thread
C3	One-touch fitting for ø3.2
C4	One-touch fitting for ø4
C6	One-touch fitting for ø6

Nil None F With bracket D DIN rail mounting style (For manifold) N Name plate

Note) When two or more symbols are specified, indicate them alphabetically.

Example) -DN

Manifold

VVQ1000-FPG-06

<Example>

VVQ1000-FPG-06 ··· 6 types of manifold *VQ1000-FPG-C4M5-D, 3 sets *VQ1000-FPG-C6M5-D, 3 sets block

Bracket Assembly

Part no.	Tightening torque
VQ1000-FPG-FB	0.22 to 0.25 N·m

⚠ Caution

 Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from stopping for a long time. Check the leakage using neutral household detergent, such as dish washing soap.
 Also check the cylinder's tube gasket, piston packing and rod packing for air leakage.

Drop

prevention

- Since One-touch fittings allow slight air leakage, screw piping (with M5 thread) is recommended when stopping the
- cylinder in the middle for a long time.

 Combining double check block with 3 position closed center or pressure center solenoid valve will not work.
- M5 fitting assembly is attached, not incorporated into the double check block. After screwing in the M5 fittings, mount
 the assembly on the double check block.
- {Tightening torque: 0.8 to 1.2 N·m}
 If the exhaust of the double check block is throttled too much, the cylinder may not operate properly and may not stop intermediately.
- Set the cylinder load so that the cylinder pressure will be within two times that of the supply pressure.



SQ

VQ0

VQ4

VQ5

VQZ

VQD

⚠ Precautions 1

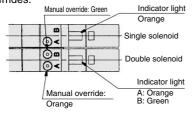
Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

Light/Surge Voltage Suppressor

⚠ Caution

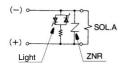
In the case of VQ1000, the standard model is equipped with an indicator light and surge voltage suppressor. The lighting positions are concentrated on one side for both single solenoid type and double solenoid type.

For the double solenoid type, A side and B side energization are indicated by two colors which match the colors of the manual overrides.



* In the case of VQ0000, solenoid and manual override on both sides.

VQ1000 (DC)/Single solenoid



 In the case of VQ0000, solenoid and manual override on both sides.

Note) A side energization:

DC circuit diagram

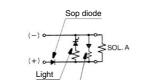
VQ0000

A light (orange) illuminates. With wrong wiring preventing ability (stop diode)

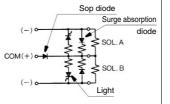
B side energization:

B light (green) illuminates.
Equipped with a surge absorption

(surge absorption diode mechanism.



VQ1000/Double solenoid



Manual Override

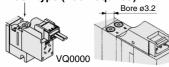
⚠ Warning

Without an electric signal for the solenoid valve the manual override is used for switching the main valve.

Push type is standard. (Tool required)

Option: Locking type (Tool required/Manual)

■ Push type (Tool required)



Push down on the manual override button with a small screwdriver until it stops. Release the screwdriver and the manual override will return.

■ Locking type (Tool required) <Option>

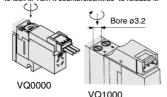
If the manual override is turned by 180° clockwise and the ▶ mark is adjusted to 1, it will be locked in the ON state.

1, it will be locked in the ON state.

If the manual override is turned by 180° counterclockwise and the ▶ mark is adjusted to 0, locking will be released and the manual override will return.

Push down completely on the manualoverride button with a small screwdriver. While down, turn clockwise 90° to lock it. Turn it counterclockwise to release it.

VQ1000



■ Locking type (Manual) <Option>



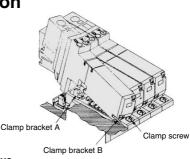
Push down on the manual override button with a small screwdriver or with your fingers until it stops. Turn clockwise by 90° to lock it. Turn it counterclockwise to release it.

↑ VQ1000

Do not apply excessive torque when turning the locking type manual override. (0.1 N·m or less)

How to Mount/Remove Solenoid Valve

⚠ Caution



How to Remove

- **1.** Loosen the clamp screw until it turns freely. (The screw is captive.)
- 2. Lift the coil side of the valve body while pressing down slightly on the screw head and remove it from the clamp bracket B. When the screw head cannot be pressed easily, gently press the area near the manual override of the valve.

How to Remove

- Press down on the clamp screw. → Clamp bracket A opens. Diagonally insert the hook on the valve end plate side into clamp B.
- 2. Press the valve body downward. (When the screw is released, it will be locked by clamp bracket A.)
- Tighten the clamp screw. (Proper tightening torque: 0.25 to 0.35 N·m)

Mounting

- Dust on the sealing surface of the gasket or solenoid valve can cause air leakage.
- 2. In the case of VQ0000, valve mounting screw clamping torque is 0.18 to 0.25 N·m.

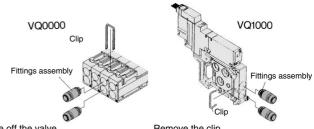
Replacement of Cylinder Port Fittings

⚠ Caution

The cylinder port fittings are a cassette for easy replacement.

The fittings are blocked by a clip inserted from the top of manifold. Remove the clip with a screwdriver to remove fittings.

For replacement, insert the fitting assembly until it strikes against the inside walland then re-insert the clip to specified position.



Take off the valve and remove the clip.

Remove the clip after taking off the manifold.

America de la Ambiento O.D.	Fitting asser	mbly part no.
Applicable tubing O.D.	VQ0000	VQ1000
Applicable tubing ø3.2	VVQ1000-51A-C3	VVQ1000-50A-C3
Applicable tubing ø4	VVQ1000-51A-C4	VVQ1000-50A-C4
Applicable tubing ø6	_	VVQ1000-50A-C6
M5	_	VVQ1000-50A-M5

* Refer to "Option" on pages 2-4-208 to 2-4-211 for other types of fittings.

⚠ Caution

- Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.
- After screwing in the fittings, mount the M5 fitting assembly on the manifold base. (Tightening torque 0.8 to 1.2 N·m)
- 3. Purchasing order is available in units of 10 pieces.

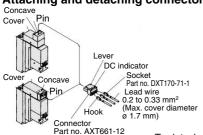
⚠ Precautions 2

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 2-9-2.

How to Use Plug Connector

⚠ Caution

Attaching and detaching connectors

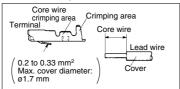


To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever's pawl is pushed into the groove and locks.

Crimping the lead wire and socket

Peel 3.2 to 3.7 mm of the tip of lead wire, neatly into a socket and press contact it by a press tool.

Be careful so that the cover of lead wire does not enter into the core press contacting part. To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.



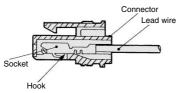
Attaching and detaching lead wires with sockets Attaching

Insert a socket in the square hole (Indicated as \bigoplus , \bigoplus) of connector, push in the lead wire and lock by hanging the hook of socket to the seat of connector. (Pushing-in can open the hook and lock it automatically.) Then confirm the lock by lightly pulling on the lead wire.

Detaching

For pulling-out the socket from the connector, pull out the lead wire while pushing the hook of the socket with a fine point (ca.1 mm) tool.

If the socket is to be re-used, spread the hook to the outside.



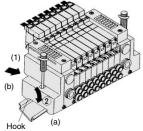
Mounting/Removing from the DIN Rail (VQ1000)

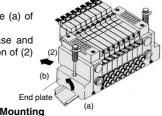
⚠ Caution

Removing

1.Loosen the clamp screw on side (a) of the end plate on both sides.

2.Lift side (a) of the manifold base and slide the end plate in the direction of (2) shown in the figure to remove.





Hook side (b) of the manifold base on the DIN rail.

- **2.** Press side (a) and mount the end plate on the DIN rail.
- Tighten the clamp screw on side (a) of the end plate. The proper tightening torque for screws is 1.2 to 1.6 N·m.

Enclosure IP65

⚠ Caution

Wires, cables, connectors, etc. used for models conforming to IP65 should also have enclosures equivalent to or of stricter than IP65.

How to Calculate the Flow Rate

⚠ Caution

2-4-214

For obtaining the flow rate, refer to pages 2-1-8 to 2-1-11.

Built-in Silencer Replacement

⚠ Caution



A silencer element is incorporated in the end plate on both sides of the manifold base. A dirty and choked element may reduce cylinder speed and cause malfunction. Clean or replace the dirty element.

Remove the cover from the top of the end plate and remove the old element with a screwdriver, etc.

Element part no.

Type	Element part no.				
туре	VQ0000	VQ1000			
Built-in silencer, direct exhaust (-S)	VVQ0000-82A-1	VVQ1000-82A-1			

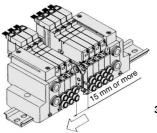
* The minimum order quantity is 10 pcs.

Manifold Base Station Increasing Procedure (VQ1000)

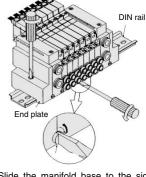
⚠ Caution

1. Loosen the clamp screw on the top surface of the end plate on one side.

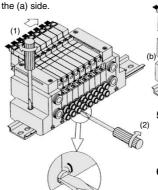
Turn the manual override between the manifold blocks with a regular screwdriver, etc. in a couterclockwise direction.



4. Mount the station increasing manifold block assembly and solenoid valve on the DIN rail. Install it to the DIN rail by applying the hook on the (b) side of the manifold block and pushing down



Slide the manifold base to the side where the screw is loosened. Make a clearance of 15 mm or more.



5. Slide the manifold bases with a slight clearance in-between and lock them by turning the manual override between the manifold blocks

clockwise.
6. Tighten the screw on the top surface of the end plate, and the station has been added.

(Proper tightening torque 1.2 to 1.6

Manifold Block Assembly

	<u> </u>
VQ1000	Port size
VVQ1000-1A-2-C3	With One-touch fitting for ø3.2
VVQ1000-1A-2-C4	With One-touch fitting for ø4
VVQ1000-1A-2-C6	With One-touch fitting for ø6
VVQ1000-1A-2-M5	M5 thread



SQ

VQ0

VQ4

VQ5

VQZ

VQD

Option

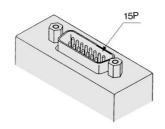
Different Number of Connector Pins

F and P kits with the following number of pins are available besides the standard number (F = 25; P = 26). Select the desired number of pins and cable length from the cable assembly list.

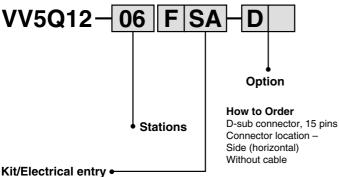
Place an order for the cable assembly separately.



kit (D-sub connector) 15 pins



How to order manifold

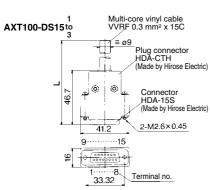


Kib Electrical entry

Pins	Тор	entry	Side	entry
15P (Max. 7 stations)	Kit F	UA	Kit F	SA

Wiring Specifications

* In the same way as the 25-pin models (standard), terminal no. 1 for is SOL.A at the 1st station, terminal no. 9 for SOL.B at the 1st station, and terminal no. 8 for COM.



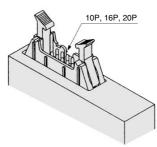
Terminal no.	Lead wire color	Dot marking		
1	Black	None		
2	Brown	None		
3	Red	None		
4	Orange	None		
5	Yellow	None		
6	Pink	None		
7	Blue	None		
8	Purple	White		
9	Gray	Black		
10	White	Black		
11	White	Red		
12	Yellow	Red		
13	Orange	Red		
14	Yellow	Black		
15	Pink	Black		

D-sub Connector Cable Assembly

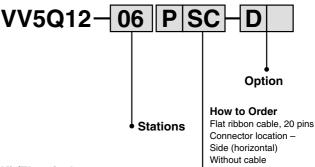
Cable length (L)	15P
1.5 m	AXT100-DS15-1
3 m	AXT100-DS15-2
5 m	AXT100-DS15-3

^{*} For other commercial connectors, use a type conforming to MIL-C-24308.

kit (Flat ribbon cable connector) 10 pins, 16 pins, 20 pins



How to order manifold

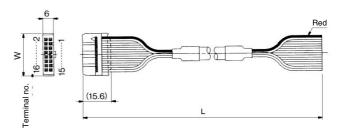


Kit/Electrical entry•

Pins	Top 6	entry	Side	entry
10P (Max. 4 stations)	IZ'a	UA	IZ:	SA
16P (Max. 7 stations)	Kit	UB	Kit	SB
20P (Max. 9 stations)	Ρ	UC	Р	SC

Wiring Specifications

* In the same way as the 26-pin models (standard), terminal no. 1 is SOL.A at the 1st station, terminal no. 2 for SOL.B at the 1st station, and two pins from the max.



Flat Ribbon Cable Assembly

Pins Cable length (L)	10P	16P	20P
1.5 m	AXT100-FC10-1	AXT100-FC16-1	AXT100-FC20-1
3 m	AXT100-FC10-2	AXT100-FC16-2	AXT100-FC20-2
5 m	AXT100-FC10-3	AXT100-FC16-3	AXT100-FC20-3
Connector width (W)	17.2	24.8	30

^{*} For other commercial connectors, use a type with strain relief conforming to MIL-C-83503.

Series VQ0000/1000

Option

Special Wiring Specifications

In the internal wiring of F kit, P kit, T kit and S kit, double wiring (connected to SOL. A and SOL. B) is adopted for each station regardless of the valve and option types.

Mixed single and double wiring is available as an option.

1. How to Order

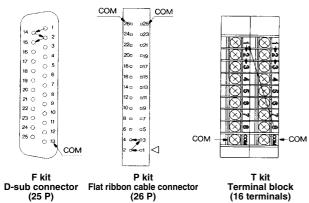
Indicate an option symbol "-K", for the manifold no. and be sure to specify the mounting position and number of stations of the single and double wiring by means of the manifold specification sheet.

Example) VV5Q05-08C4FU1-DKS

Others, option symbols: to be indicated alphabetically.

2. Wiring specifications

With the A side solenoid of the 1st station as no. 1 (meaning, to be connected to no. 1 terminal), without making any terminals vacant.



3. Max. number of stations

The maximum number of stations depends upon the number of solenoids. Assuming one for a single and two for a double, determine the number of stations so that the total number is not more than the max. number given in the following table.

Kit	F kit (D-sub connector)		P kit (Flat ribbon cable connector)			(Ter	kit minal ock)	S kit (Serial transmission)	
Туре	F s □ 25P	F s A 15P	P [∪] □ 26P	P s C 20P	P s B 16P	P s A 10P	T1	T2	S□
Max. points	16 ^{Note)}	14	16 ^{Note)}	16 ^{Note)}	14	8	8	16	16

Note) Due to the limitation of internal wiring.

Negative Common Specifications [Series VQ1□10]

The following valve part numbers are for negative COM specifications. Manifold model no. is the same as the standard products.

How to order negative COM valves

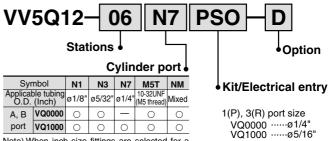


Negative common specifications

 \ast Series VQ0 \square 50 has no polarity, so the negative common is applicable to standard models.

Inch-size One-touch Fittings

Valve with inch-size One-touch fittings is shown below.



Note) When inch size fittings are selected for a cylinder port, use inch size fittings for both P and R port, too.

Plug Connector Assembly Model

Connector assembly will be required when the F, P, S kits add a valve. Specify the style of valve and connector assembly.

Connector Assembly Part No.

Specifi	Part no.	
Single VQ0000	Single VQ0000 Positive common	
(2-wire)	Negative common	AXT661-14AN-F
Double (latching)	Positive common	AXT661-13A-F
(3-wire)	Negative common	AXT661-13AN-F

Note) Lead wire length: 300 mm

The part numbers above are applicable to 2 to 10 stations. 11 to 16 stations: "AXT661-\frac{14}{12}A(N)-F-425".

DIN Rail Mounting

Each manifold can be mounted on a DIN rail. Order it by indicating a DIN rail mounting option symbol, "-D". In this case, a DIN rail which is approx. 30 mm longer than the manifold with the specified number of stations is attached. Other than this, it is applicable for the following cases.

 When DIN rail is unnecessary (C kit VQ0000 only) Indicate the option symbol, -DO, for the manifold no.

Example)

VV5Q05-08C4C-DOS

Others, option symbols: to be indicated alphabetically.

 When using DIN rail longer than the manifold with specified number of stations (VQ0000/VQ1000)

Clearly indicate the necessary number of stations next to the option symbol. "D" for the manifold no.

Example)

VV5Q05-08C4FU1-D09S

DIN rail for 9 stations • Others, option symbols:

Others, option symbols: to be indicated alphabetically.

 When changing the manifold style into a DIN rail mounting style (VQ0000 only)

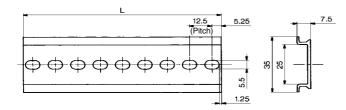
Order brackets for mounting a DIN rail. (Refer to "Option" on page 2-4-209.)

No. VVQ0000-57A-5 2 pcs. per one set.

When ordering DIN rail only (VQ0000 only)

DIN rail no.: AXT100-DR-□

As for \Box , specify the number from the DIN rail table. For L dimension, refer to the dimensions of each kit.



L Dimension

 $L = 12.5 \times n + 10.5$

No.	1	2	3	4	5	6	7	8	9	10
L dimension	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5
No.	11	12	13	14	15	16	17	18	19	20
L dimension	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
No.	21	22	23	24	25	26	27	28	29	30
L dimension	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5
No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

SQ

VQC

VQ0

VQ4

VQ5

VQZ

VQD

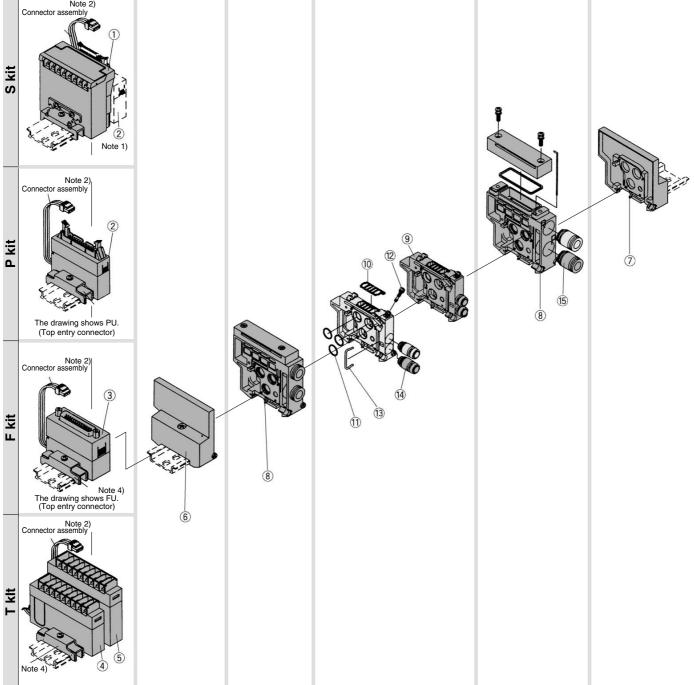
Series VQ

Exploded View: VQ1000/Plug Lead Unit

Housing assembly and SI unit D side end block assembly SUP/EXH block assembly

(F, P, T, S kit)

 \ast For how to increase the stations, refer to the instruction manual. Manifold block assembly SUP/EXH block assembly U side end block assembly





Note 1) S kit is composed of a flat ribbon cable housing assembly (AXT100-2-PU20) of ① SI unit and ② P kit (20 pins).

Note 2) Since no connector assembly is included, order it separately. (Refer to page 2-4-216.)

Note 3) A housing assembly is not used for a C kit.

Note 4) A DIN rail clamping bracket is attached to each.

<Housing Assembly and SI Unit>Housing assembly and SI unit no.

	ing accomb	iy and or differ no.	
No.	Manifold	Part no.	Description
	(SA kit)	EX321-S001(-XP) (5)	General type SI unit (Series EX300)
	(SB kit)	EX121-SMB1(-XP) (5)	SI unit for MELSECNET/MINI-S3 Data Link System (Mitsubishi Electric Corporation)
	(SC kit)	SI unit for SYSBUS Wire System (OMRON Corporation)	
	(SD kit)	EX121-SSH1(-XP) (5)	SI unit for Satellite I/O Link System (SHARP Corpoation)
	(SE kit)	EX121-SPA1	SI unit for MEWNET-F System (Matsushita Electric Works, Ltd.)
	(SF1kit)	EX121-SUW1(-XP) (5)	SI unit for 16 point Uni-wire System (NKE Corporation)
	(SG kit)	EX121-SAB1(-XP) (5)	SI unit for Allen Bradley Remote I/O (RIO) System (Rockwell Automation, Inc.)
1	(SH kit)	EX120-SUH1(-XP) (5)	SI unit for 16 point Uni-wire H System (NKE Corporation)
	(SJ1 kit)	EX121-SSL1(-XP) (5)	16 point S-LINK System (SUNX Corporation)
	(SJ2 kit)	EX121-SSL2(-XP) (5)	8 point S-LINK System (SUNX Corporation)
	(SK kit)	EX121-SFU1(-XP) (5)	T-LINK Mini System (Fuji Electric Co., Ltd.)
	(SQ kit)	EX121-SDN1	DeviceNet, CompoBus/D (OMRON Corporation)
	(SR1 kit)	EX121-SCS1(-XP) (5)	OMRON Corporation: CompoBus/S System (16 output points)
	(SR2 kit)	EX121-SCS2(-XP) (5)	OMRON Corporation: CompoBus/S System (8 output points)
	(SV kit)	EX120-SMJ1(-XP) (5)	Mitsubishi Electric Corporation: CC-LINK System
2	P∜kit	AXT100-2-P ^U □ (2)	Flat ribbon cable housing assembly □ = Number of pins: 26, 20, 16, 10
3	F∜kit	AXT100-2-F [∪] _S □ ⁽²⁾	D-sub connector housing assembly □ = Number of pins: 25, 15
4	T kit	AXT100-2-TB1 (4)	Terminal block assembly (8 terminals)
5	T kit	AXT100-2-TB2 (4)	Terminal block assembly (8 terminals)

 $\overline{\mathcal{Q}}$

Note 1) A S kit is composed of a flat ribbon cable housing assembly (AXT100-2-PS20) of ① SI unit and ② P kit (20 pins). Place an order for AXT100-2-PU20 separately.

Note 2) Top/vertical entry connector for FU and PU while side (horizontal) entry connector for FS and PS.

Note 3) Since no connector assembly is included, order it separately. (Refer to page 2-4-216.)

Note 4) In the case of standard specifications and double wring, 4 is for 1 to 4 stations and 5 is for 5 to 8 stations.

Note 5) Suffix "-XP" for dust-protected type SI unit.

<D Side End Plate Assembly>

⑥ D side end plate assembly no. VVQ1000-3A-2

<U Side End Plate Assembly>

7 U side end plate assembly no.

VVQ1000-2A-2

<SUP/EXH block Assembly>

8 SUP/EXH block assembly no.

VVQ1000-PR-2-C8-

	Nil	Common exhaust type	
	S	Built-in silencer, direct exhaust	
Note) The ⑤'s fitting assembly is include			

M5 thread

<Replacement Parts for Manifold Block> Replaceable Parts

No.	Part no.	Description	Material	Number
10	VVQ1000-80A-1	Gasket	HNBR	12
11)	VVQ1000-80A-2-2	O-ring	HNBR	12
12	VVQ1000-80A-3	Clamp screw	Carbon steel	12
13	VVQ1000-80A-2-4	Clip	Stainless steel	12

Note) A set of parts containing 12 pcs. each is enclosed.

<Fitting Assembly>

(4) Fitting assembly part no. (For cylinder port)

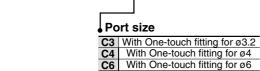
VVQ1000-50A-

Note) Purchasing order is available in units of 10 pieces.

Port size				
<u>C3</u>	Applicable tubing ø3.2			
C4	Applicable tubing ø4			
C6	Applicable tubing ø6			
M5	With M5 thread			

<Manifold Block Assembly>

Manifold block assembly no.
 VVQ1000-1A-2-□



(5) Fitting assembly part no. (For P, R port)

VVQ1000-51A-<u>C8</u>

Applicable tubing ø8



VQC

VQ0

VQ4

VQ5

VQZ

VQD