

Valve for Water and Chemical Base Fluids (2/3 Port Air Operated Valve) **VCC Series**

Please refer to "Manifold Specification Sheet" in the back of page 667.

How to Order

Valve

VCC1 **2** - **00**

● Passage number

2	2 port valve
3	3 port valve <small>Note 2)</small>
2D	2 port/Diaphragm type (Applicable for 2 liquid paint)

Note 1) Valves must be mounted in the right direction. Refer to page 657.

Note 2) Pressure cannot be applied from a 3 port valve RETURN port.

● Port size

00	For manifold mounting
02	Rc1/4 (for single unit) <small>Note)</small>
02F	G1/4 (for single unit) <small>Note)</small>

Note) Part number for sub-base

For 2 port: VCC12-S-02 [Rc1/4]

02F [G1/4]

For 3 port: VCC13-S-02 [Rc1/4]

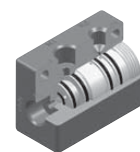
02F [G1/4]



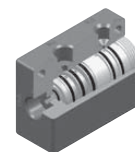
VCC12(D)-00



VCC13-00



VCC12(D)-02(F)



VCC13-02(F)

Manifold

Standard

VV **M** **CC1** - **06** **06** **C4**

● Type (Passage number)

2	2 port valve, Cleaning valve
3	3 port valve
M	2/3 port valves mixed mounting

● Pilot port fitting size

C4	ø4 One-touch fitting (Antistatic)
C6	ø6 One-touch fitting (Antistatic)

● 2 port valve mountable number

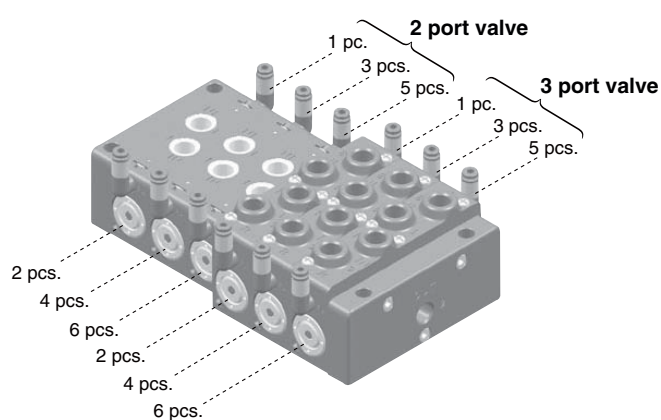
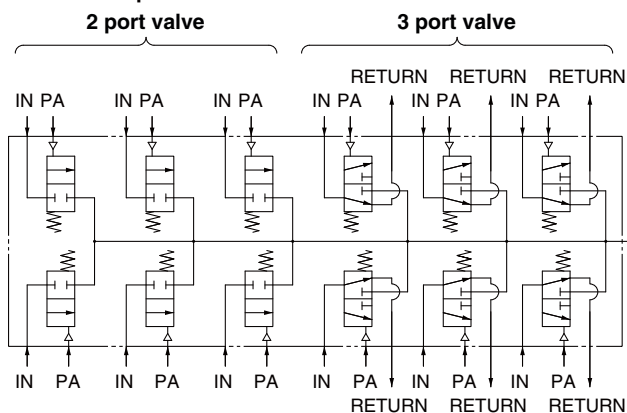
00	No 2 port valves used
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮

● 3 port valve mountable number

00	No 3 port valves used
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮

Note) Maximum mountable valve number: 40 pcs. (in total of 2 port and 3 port valves)

Circuit example



How to Order

Manifold

With gate valve **VV M CC1-02 06 C4-G 04**

Passage number

2	2 port valve, Cleaning valve
M	2/3 port valves mixed mounting

2 port valve mountable number

00	No 2 port valves used
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮

3 port valve mountable number

00	No 3 port valves used
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮

Note) Maximum mountable valve number: 40 pcs. (in total of 2 port, 3 port and gate valves)

Gate valve and cleaning valve mountable number

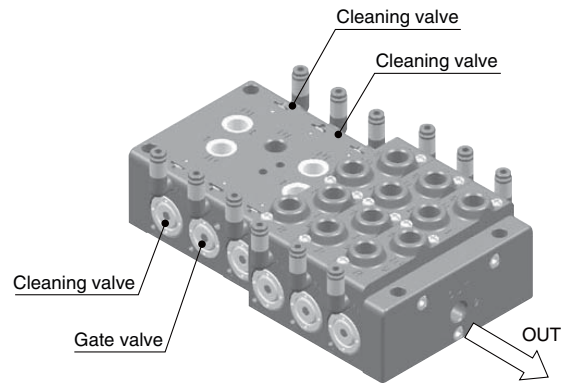
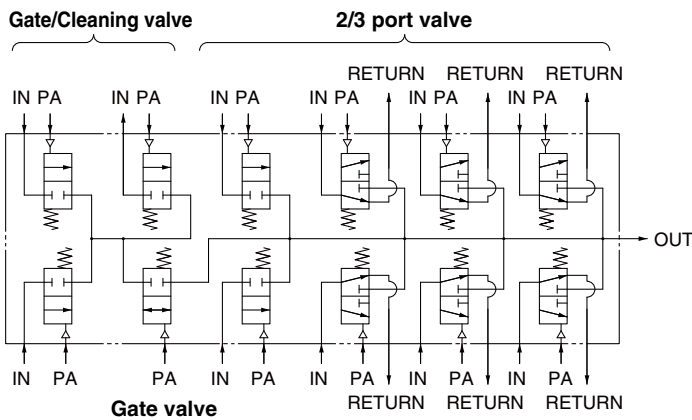
02	Cleaning valve (2 port valve): 1 pc. + Gate valve: 1 pc.
04	Cleaning valve (2 port valve): 3 pcs. + Gate valve: 1 pc.
06	Cleaning valve (2 port valve): 5 pcs. + Gate valve: 1 pc.

Pilot port fitting size

C4	ø4 One-touch fitting (Antistatic)
C6	ø6 One-touch fitting (Antistatic)

- * Valve for installation is not included in the manifold model.
- * Gate valve and cleaning valve (2 port valve) for installation are not included. They are ordered separately. (Gate valve is equivalent to 2 port valve.)
- * When cleaning valve number is an even number, use the blanking plug for 2 port valve.

Circuit example



SUS316L Stainless steel fitting

VCK K 0604 -02F

Shape

H	Male connector
K	40° swivel elbow
L	90° swivel elbow

Port size

02F	G1/4
------------	------

* G1/4 has special shape of bottom seal. Please refer page 652 for details.

Applicable tubing (O.D. x I.D.)

0604	6 x 4
0806	8 x 6
1075	10 x 7.5
1008	10 x 8
1209	12 x 9



VCKH
Male connector



VCKK
40° swivel elbow



VCKL
90° swivel elbow

- VNA
- VNB
- SGC
- SGH
- VNC
- VNH
- VND
- VCC**
- TQ

Option

Blanking Plug Assembly

Type	Model	Description	Qty.
For 2 port valve	VVCC12-10A-1	Blanking plug (with O-ring)	1
		Hexagon socket head plug (R1/4)	1
For 3 port valve	VVCC13-10A-1	Blanking plug (with O-ring)	1
		Hexagon socket head plug (R1/4)	2



VCC Series

Specifications

Model	VCC12	VCC13	VCC12D
Passage number	2 port	3 port ^{Note 3)}	2 port (Diaphragm type)
Construction (Fluid contact material)	Poppet seal (PEEK resin + Stainless steel) + Special fluororesin sliding part		Poppet seal (PEEK resin + Stainless steel) + Special fluororesin diaphragm
Fluid	Water/Chemical base paint, Ink, Cleaning solvent (Water, Butyl acetate), Air		
Operating pressure range (MPa)	0 to 1.0 (Instantaneous pulsation pressure: 1.2)		0 to 0.7 (Instantaneous pulsation pressure: 0.9)
Withstand pressure (MPa)	2		1.5
Pilot pressure (MPa)	0.4 to 0.7		
Orifice diameter (mm)	ø3.8		
Flow rate characteristics Kv(Cv)	IN⇔OUT: 0.28(0.33)	IN⇒OUT: 0.28(0.33) IN⇒RETURN: 0.25(0.3)	IN⇔OUT: 0.28(0.33)
Fluid temperature (°C)	5 to 50		
Ambient temperature (°C)	5 to 50		
Lubrication	Not possible (Initial lubricant: White vaseline is used.)		
Mounting orientation	Unrestricted		
Valve leakage (cm ³ /min)	1 or less (3 port valve IN → RETURN: 20 or less) ^{Note 1)}		1 or less ^{Note 2)}

Note 1) Supply pressure: Valve leakage at 1.2 MPa (for air)

Note 2) Supply pressure: Valve leakage at 0.9 MPa (for air)

Note 3) Pressure cannot be applied from a 3 port valve RETURN port.

SUS316L Stainless Steel Fitting Specifications

Applicable tubing	Nylon/Fluoro tubing
Fluid	Water/Chemical base paint, Ink, Cleaning solvent (Water, Butyl acetate), Air
Max. operating pressure (at 20°C) (MPa)	1.0
Ambient and fluid temperature (°C)	0 to 60

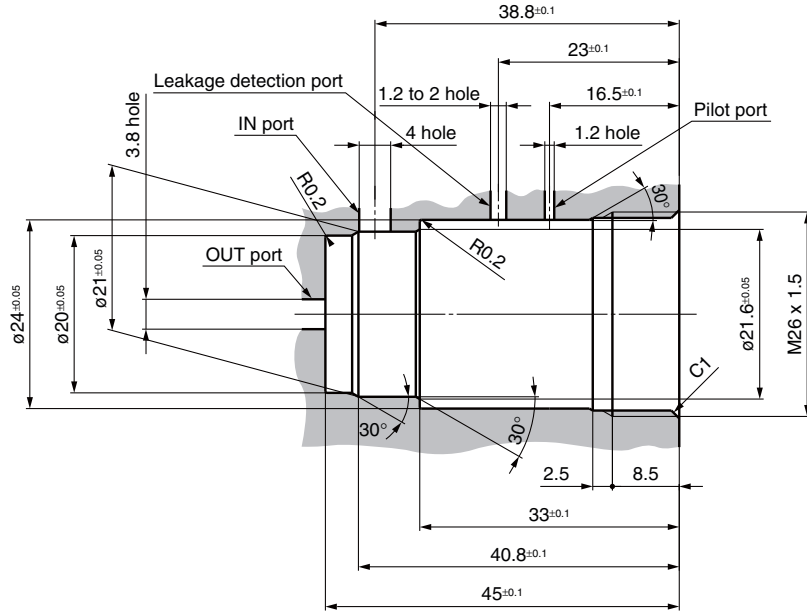
Weight

Valve	VCC12 (2 port)	37 g	
	VCC13 (3 port)	48 g	
Blanking plug assembly	For 2 port	29 g	
	For 3 port	45 g	
Manifold block * Valves are not attached.	For 2 port (2 stations, one-piece type)	150 g	
	For 3 port (2 stations, one-piece type)	254 g	
	For gate valve	300 g	
End plate	For 2 port	409 g	
	For 3 port	495 g	
	For 2/3 port mixed mounting	452 g	
Fittings	VCKH	ø6	24 g
		ø8	25 g
		ø10	33 g
		ø12	36 g
	VCKK	ø6	25 g
		ø8	26 g
		ø10	32 g
		ø12	37 g
	VCKL	ø6	29 g
		ø8	30 g
		ø10	37 g
		ø12	41 g

Dimensions

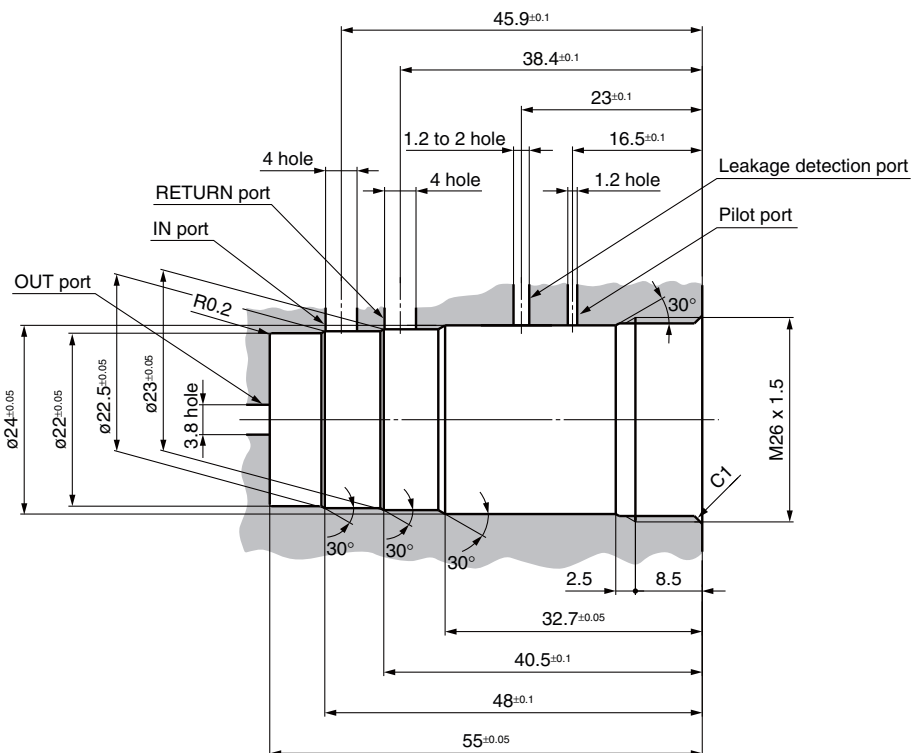
Mounting hole dimensions (When valve is built in to the device.)

VCC12(D)-00



* Recommended surface roughness of inner surface where the valve is inserted is Rz6.3.

VCC13-00



* Recommended surface roughness of inner surface where the valve is inserted is Rz6.3.

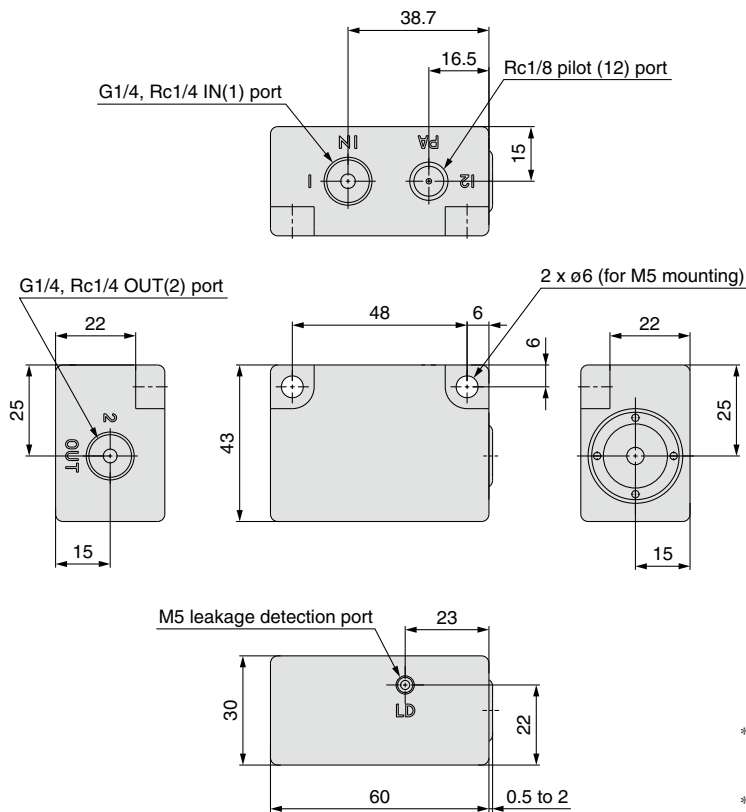
VNA
VNB
SGC
SGH
VNC
VNH
VND
VCC
TQ

VCC Series

Dimensions

Single valve unit

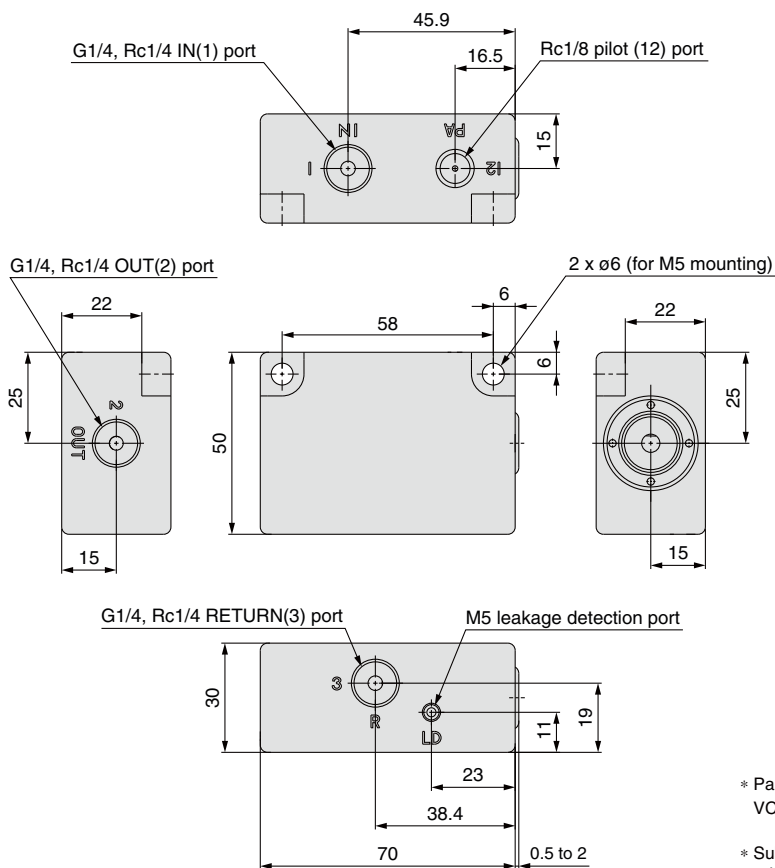
VCC12(D)-02(F)



* Part number for sub-base
VCC12-S-02 [Rc1/4]
02F [G1/4]

* Sub-base material is aluminum
+ hard anodized containing PTFE.

VCC13-02(F)

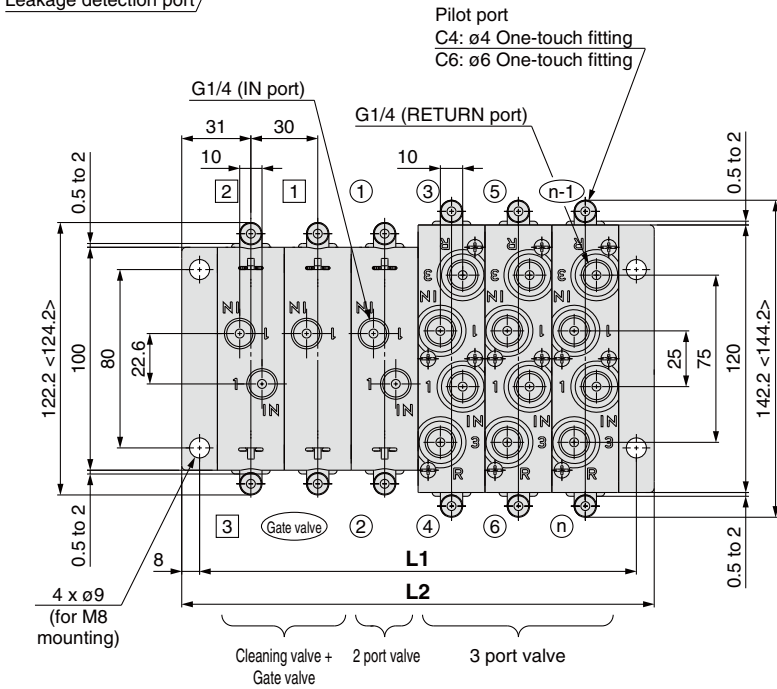
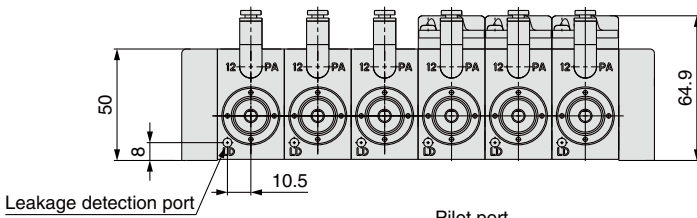
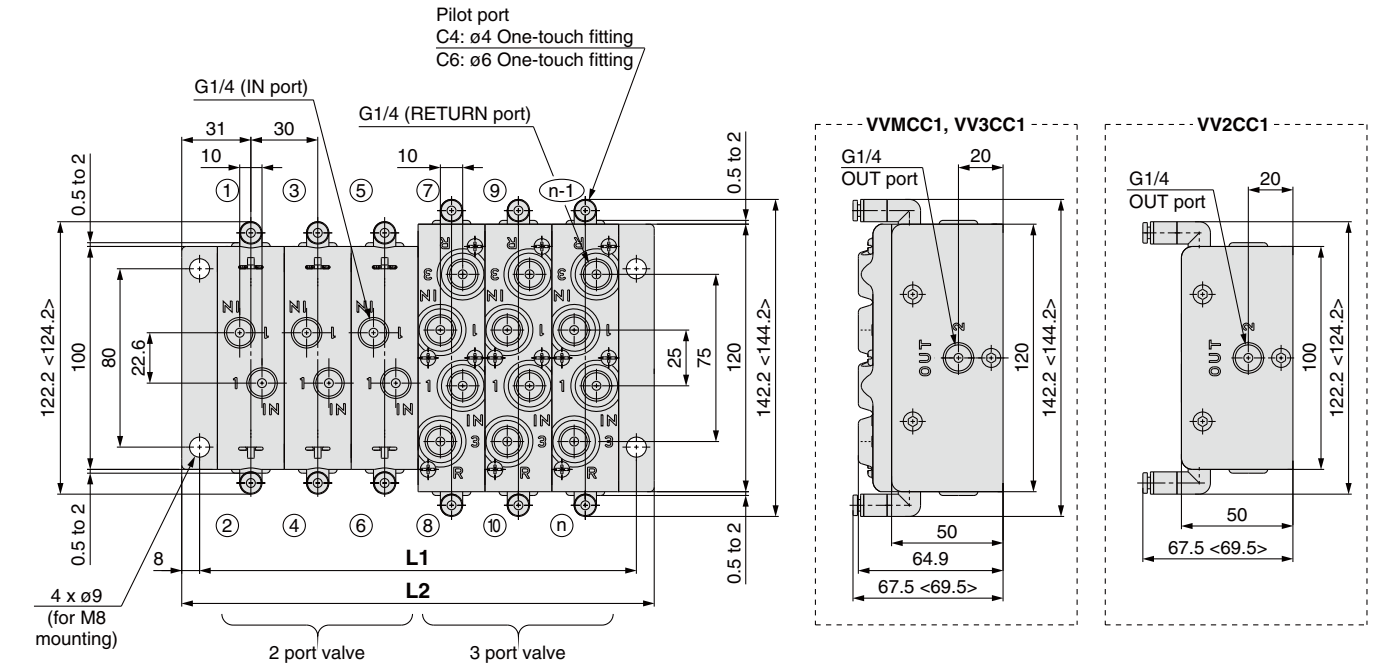


* Part number for sub-base
VCC13-S-02 [Rc1/4]
02F [G1/4]

* Sub-base material is aluminum
+ hard anodized containing PTFE.

Dimensions

Manifold



* Aluminum + hard anodized containing PTFE and POM are used for a part of the manifold material. Refer to page 660 for details.

< >: Pilot port is C6.

$L1 = n / 2 \times 30 + 16$ $L2 = n / 2 \times 30 + 32$

* n = Number of valves (cleaning valve + gate valve + other valves)

n: Stations (mm)

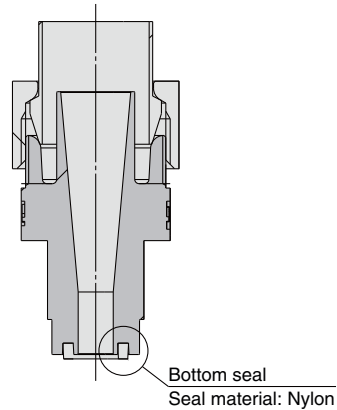
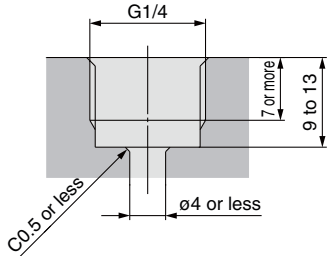
n	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
L1	46	76	106	136	166	196	226	256	286	316	346	376	406	436	466	496	526	556	586	616
L2	62	92	122	152	182	212	242	272	302	332	362	392	422	452	482	512	542	572	602	632

VCC Series

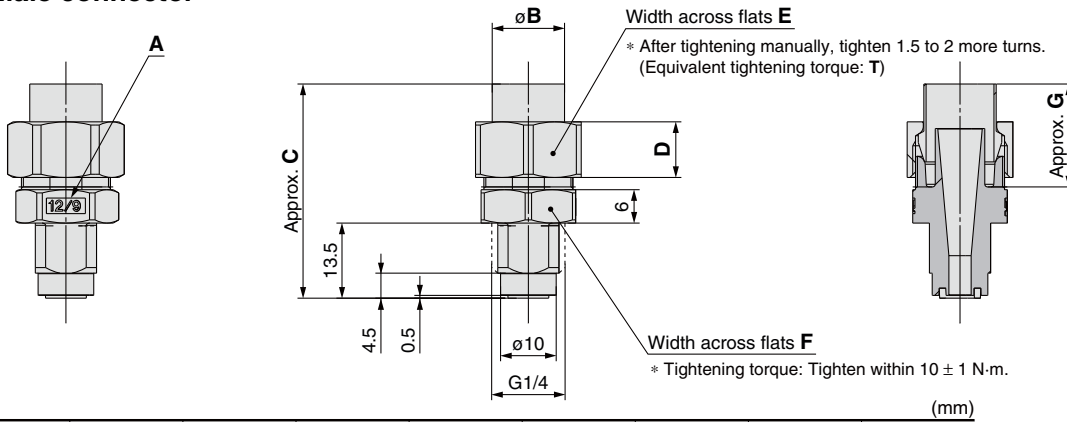
Dimensions

SUS316L Stainless steel fittings

Mounting female thread recommended dimensions

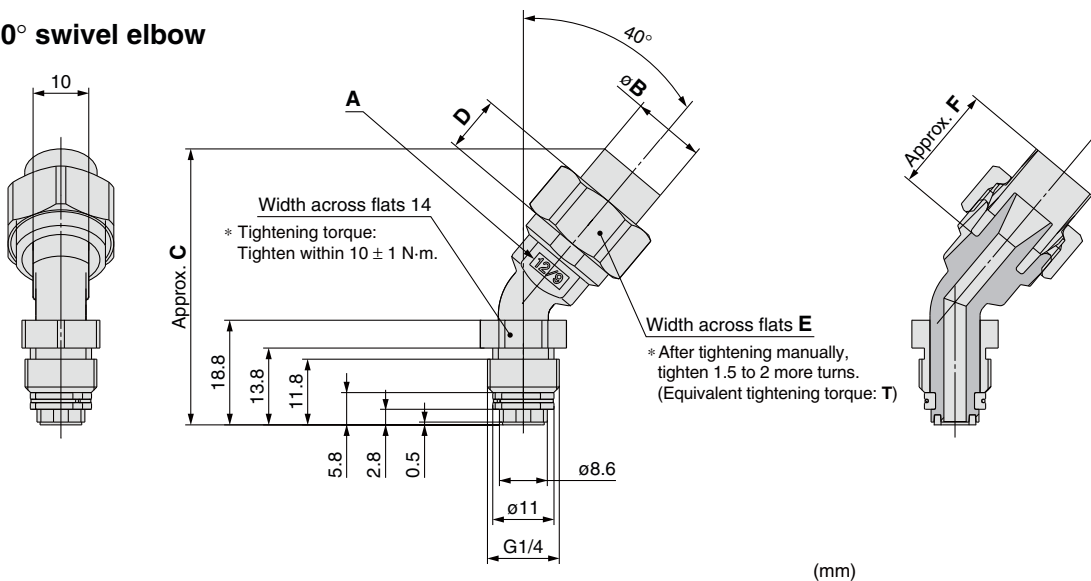


VCKH Male connector



Part no.	Indication of A	øB	C	D	E	F	G	T
VCKH1209-02F	12/9	13	38.5	10	19	17	18.5	9 to 12 N·m
VCKH1008-02F	10/8	11	38	9	17	17	18.5	6 to 9 N·m
VCKH1075-02F	10-75	11	38	9	17	17	18.5	6 to 9 N·m
VCKH0806-02F	8/6	9	36.5	8	14	14	16	4 to 9 N·m
VCKH0604-02F	6/4	7	36.5	8	12	14	15	3 to 8 N·m

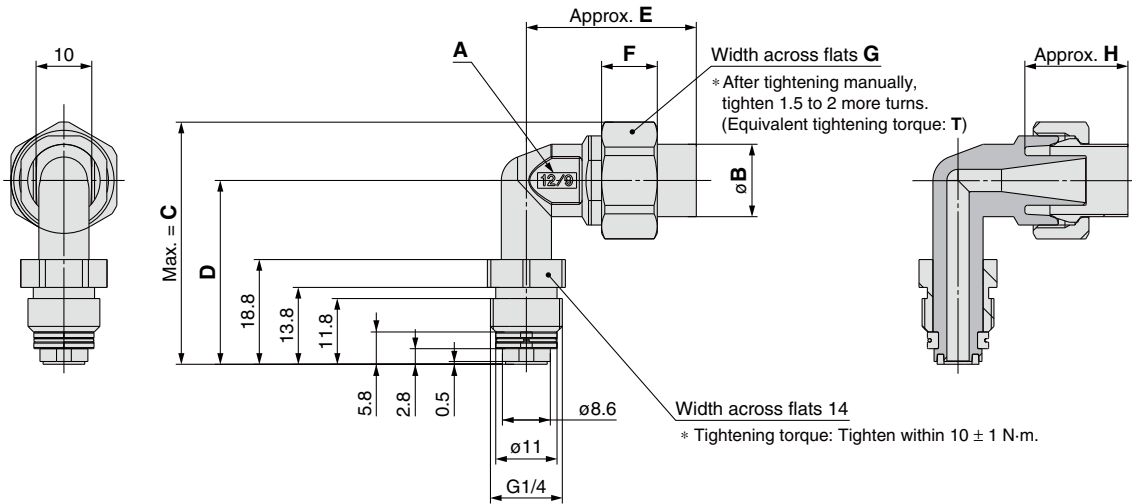
VCKK 40° swivel elbow



Part no.	Indication of A	øB	C	D	E	F	T
VCKK1209-02F	12/9	13	49.5	10	19	18.5	9 to 12 N·m
VCKK1008-02F	10/8	11	48.5	9	17	18.5	6 to 9 N·m
VCKK1075-02F	10-75	11	48.5	9	17	18.5	6 to 9 N·m
VCKK0806-02F	8/6	9	46	8	14	16	4 to 9 N·m
VCKK0604-02F	6/4	7	45.5	8	12	15	3 to 8 N·m

Dimensions

VCKL 90° swivel elbow



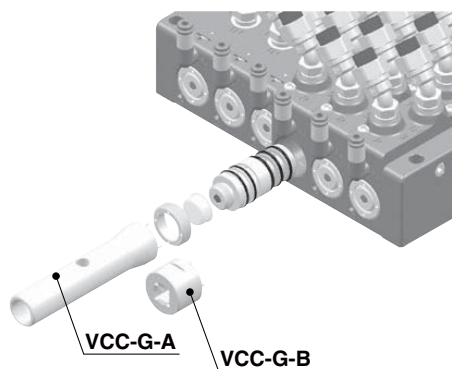
Part no.	Indication of A	øB	C	D	E	F	G	H	T
VCKL1209-02F	12/9	13	43.5	33	30.5	10	19	18.5	9 to 12 N-m
VCKL1008-02F	10/8	11	42.5	33	30	9	17	18.5	6 to 9 N-m
VCKL1075-02F	10·75	11	42.5	33	30	9	17	18.5	6 to 9 N-m
VCKL0806-02F	8/6	9	40	32	27.5	8	14	16	4 to 9 N-m
VCKL0604-02F	6/4	7	38.5	32	27.5	8	12	16	3 to 8 N-m

(mm)

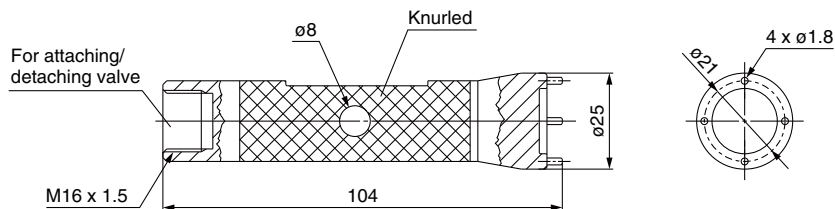
- VNA
- VNB
- SGC
- SGH
- VNC
- VNH
- VND
- VCC**
- TQ

VCC Series Special Tools

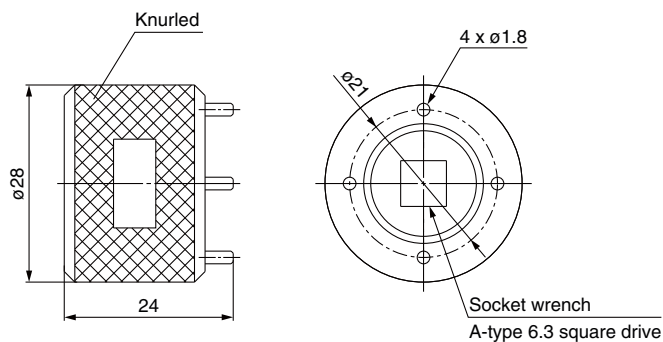
Tool for Attaching/Detaching Valve



VCC-G-A

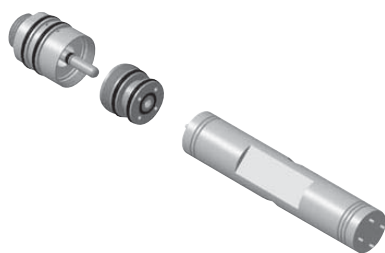


VCC-G-B (for socket wrench)

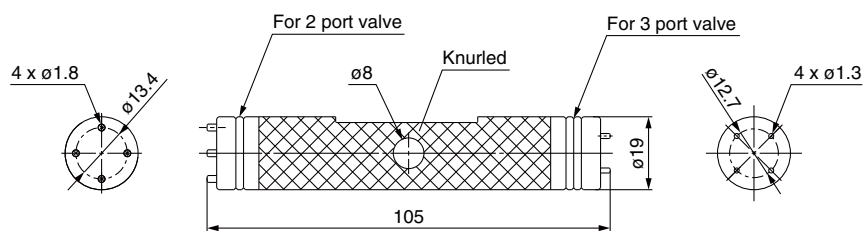


Tool for Disassembling/Cleaning Valve Element

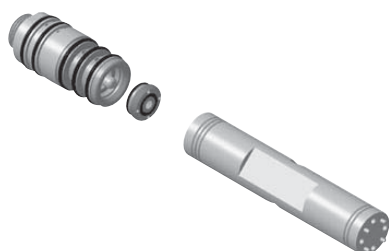
VCC12(D) 2 port valve



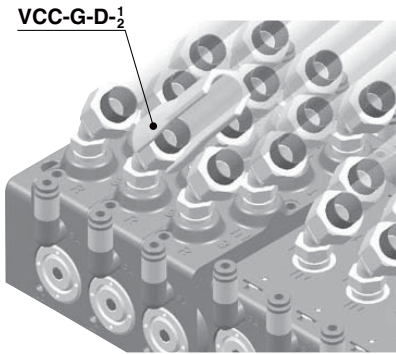
VCC-G-C



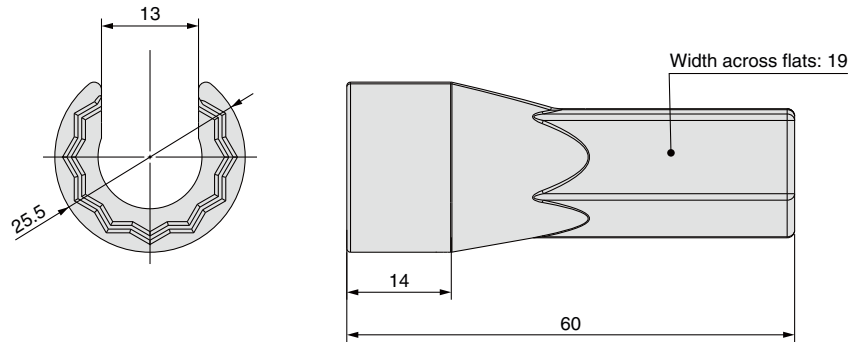
VCC13 3 port valve



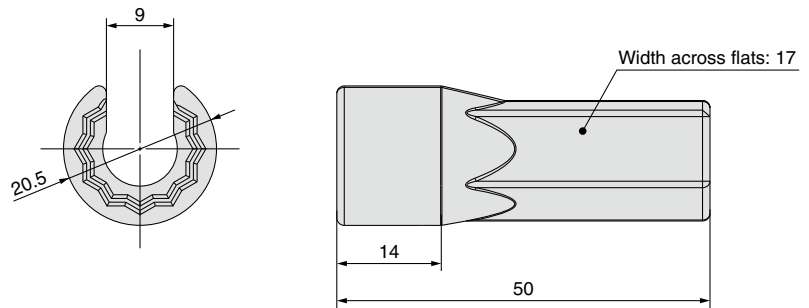
Union Nut Socket



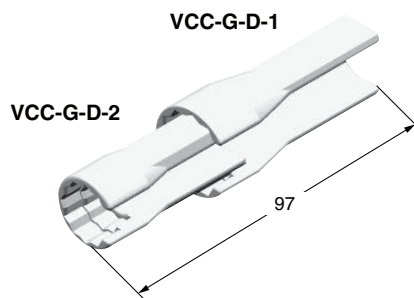
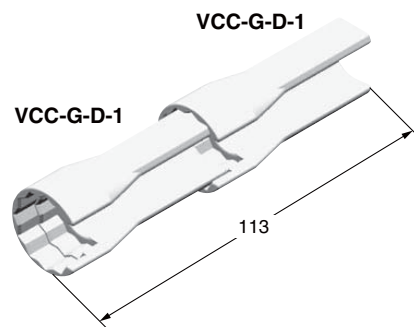
VCC-G-D-1 (Applicable fitting VCK□¹²⁰⁹₁₀₀₈¹⁰⁷⁵)



VCC-G-D-2 (Applicable fitting VCK□⁰⁸⁰⁶₀₆₀₄₎



For extending the socket

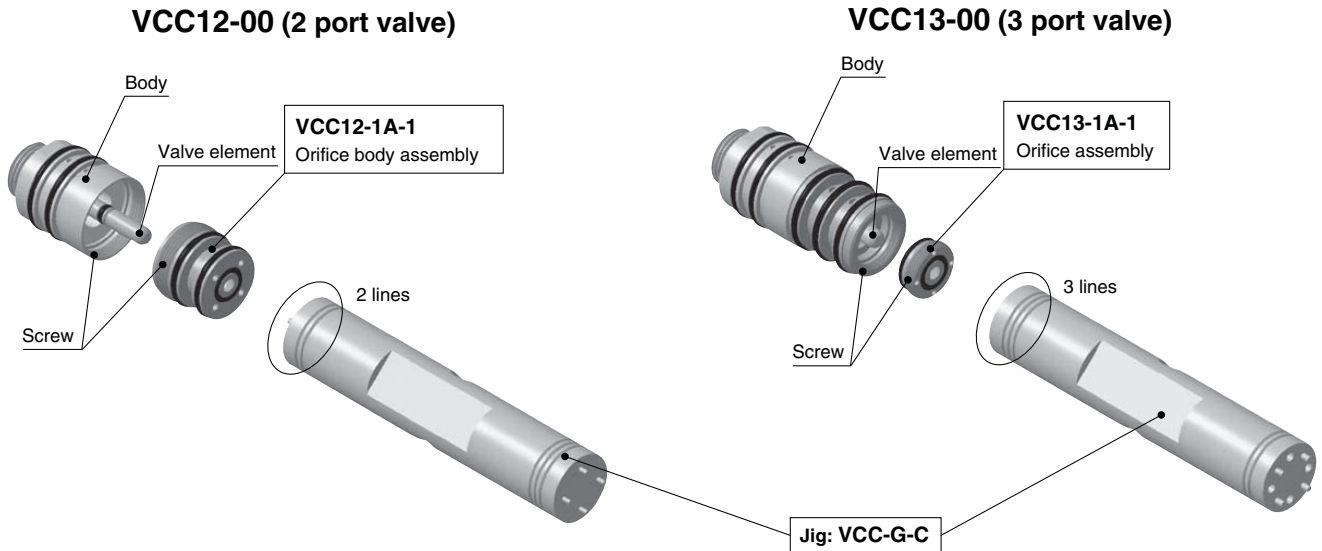


VNA
VNB
SGC
SGH
VNC
VNH
VND
VCC
TQ

Disassembly/Assembly/ Maintenance Procedure

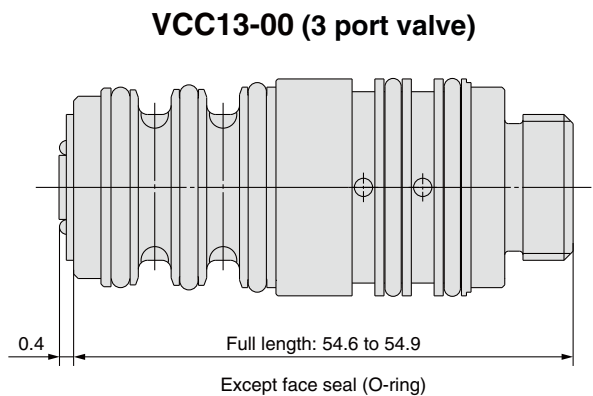
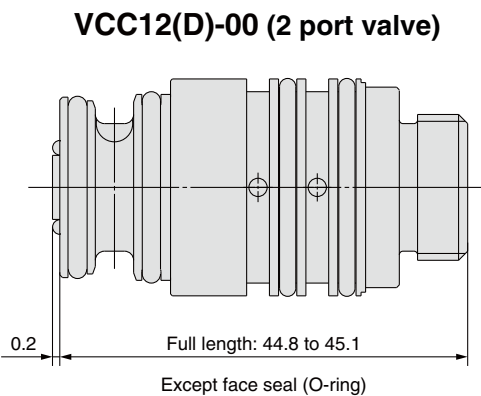
Cleaning Valve Element

Special tool part no.: VCC-G-C



Procedure

- ① Loosen the orifice body with a tool and remove it.
- ② Clean the valve.
- ③ Assemble a new orifice body.



Tighten the screw until it hits the body by pressing the orifice body with approx. 100 to 200 N of force.

(* Additional tightening is not necessary.)

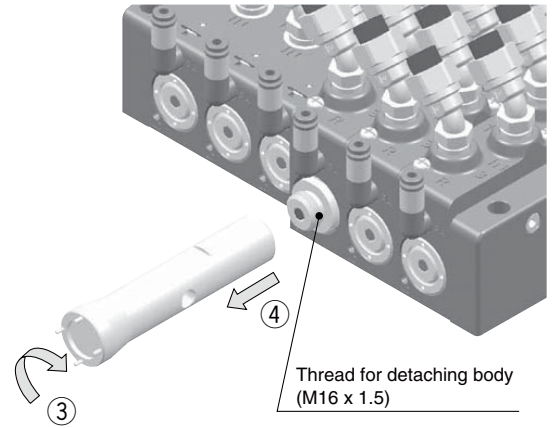
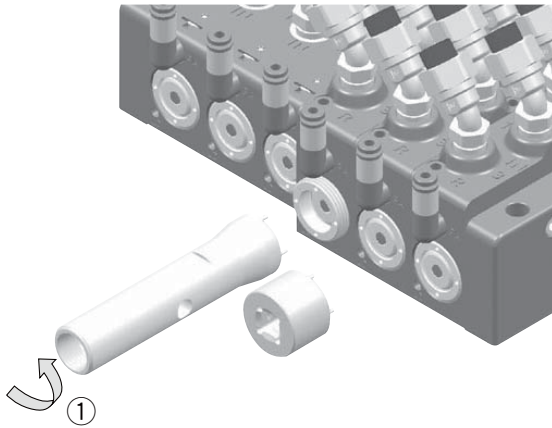
Control dimension with full length. (2 port valve: 44.8 to 45.1 mm, 3 port valve: 54.6 to 54.9 mm)

Reference tightening torque is approx. 1 to 2 N·m for VCC12(D)-00 (2 port valve), and 0.5 to 1 N·m for VCC13-00 (3 port valve).

There is a possibility of damaging threads if tightening exceeds the tightening torque range.

How to Remove the Valve

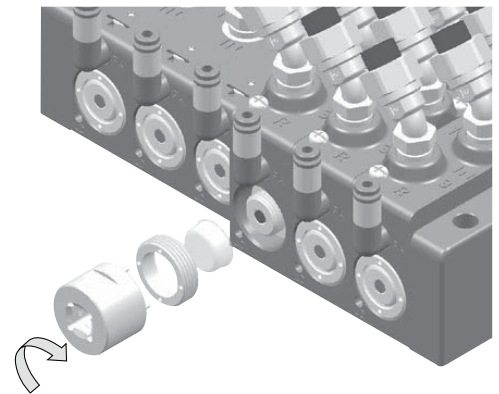
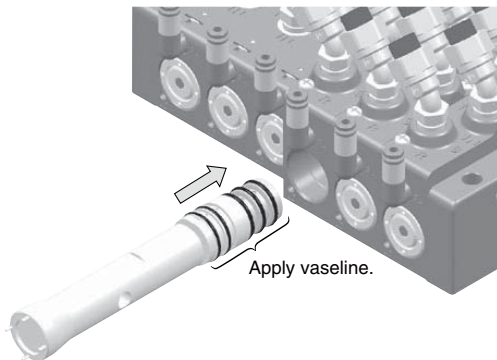
Special tool part no.: VCC-G-A, VCC-G-B (Refer to page 654.)



Procedure

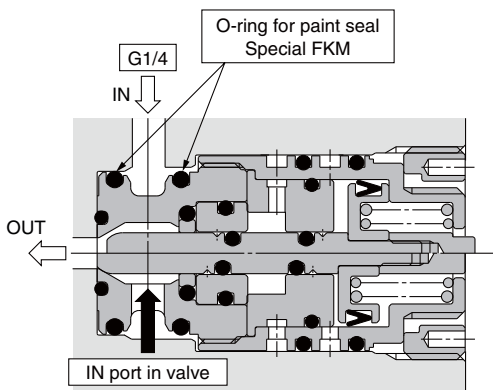
- ① Loosen the mounting nut with a tool to remove.
- ② Remove the indicator lamp cover.
- ③ Turn 45 to 90° (idle turn) clockwise with a tool (to avoid O-ring adhesion).
- ④ Pull out the valve straight.
- ⑤ Wipe off residual paint on inner surface of the base with a cleaning material.
- ⑥ Replace the O-ring mounted to the valve. (O-ring part number: See page 658.)

How to Attach the Valve

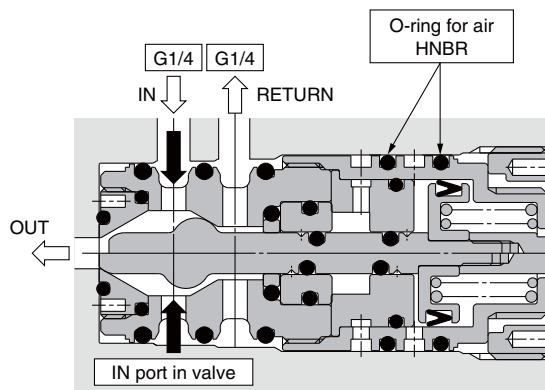


Apply vaseline (commercially available) on the O-ring surface, and insert straight. (Note the direction shown on the label.)

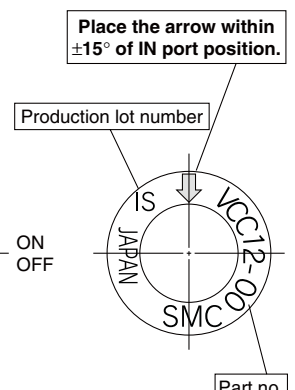
After mounting the indicator lamp cover, tighten the mounting nut to a tightening torque of 2.5 to 3.5 N·m of tightening torque.



2 port valve



3 port valve



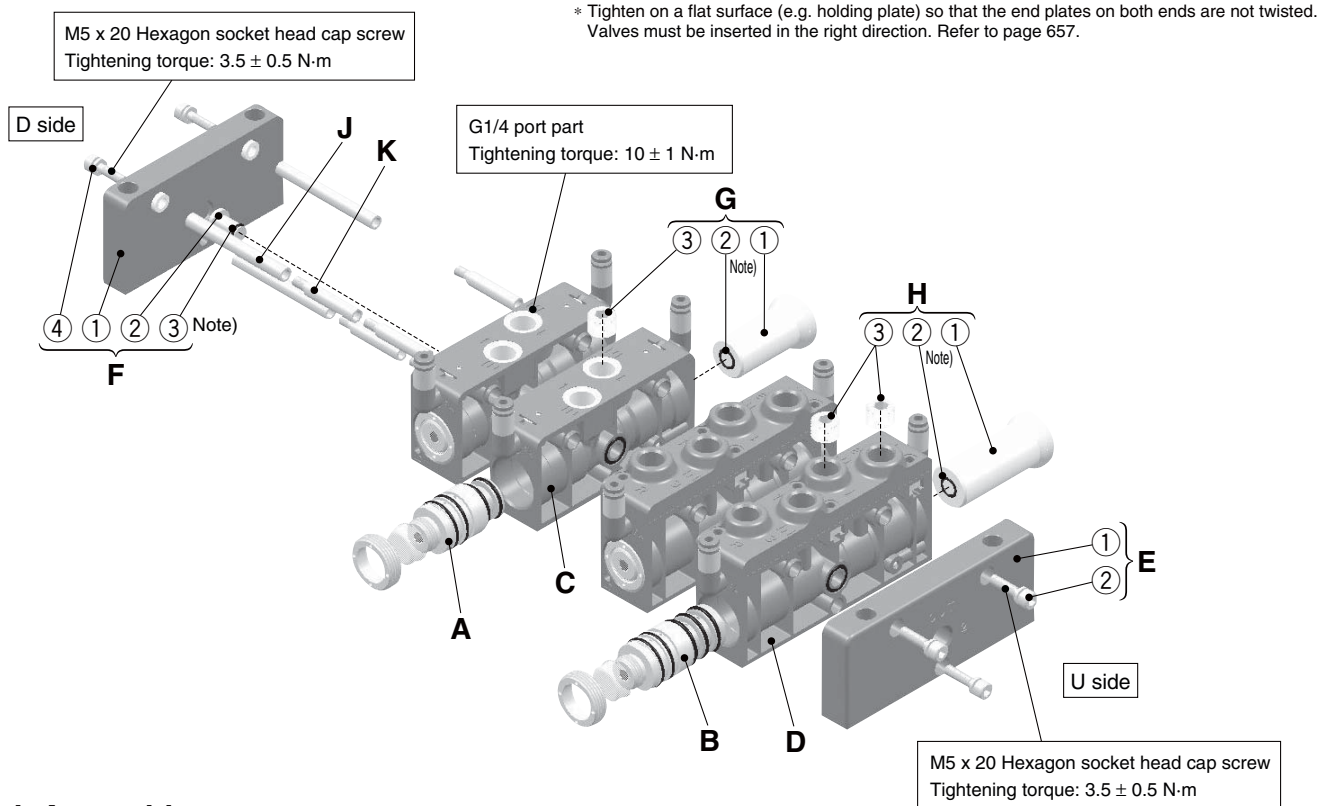
Model label

Attach and remove the valve straight. If the paint applied to the O-ring for paint adheres to the pneumatic passage, clean it. When inserting, apply vaseline to the O-ring and the inner surface of the base and insert slowly so that the O-ring is not twisted or cut. The arrow shown on the model label of the valve is set for the optimum direction for cleaning. Mount the valve so that the arrow comes to IN port position.

VNA
VNB
SGC
SGH
VNC
VNH
VND
VCC
TQ

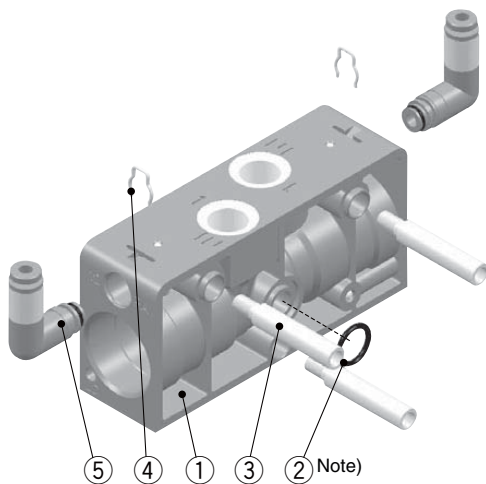
VCC Series Replacement Parts

VV□CC1□: Manifold



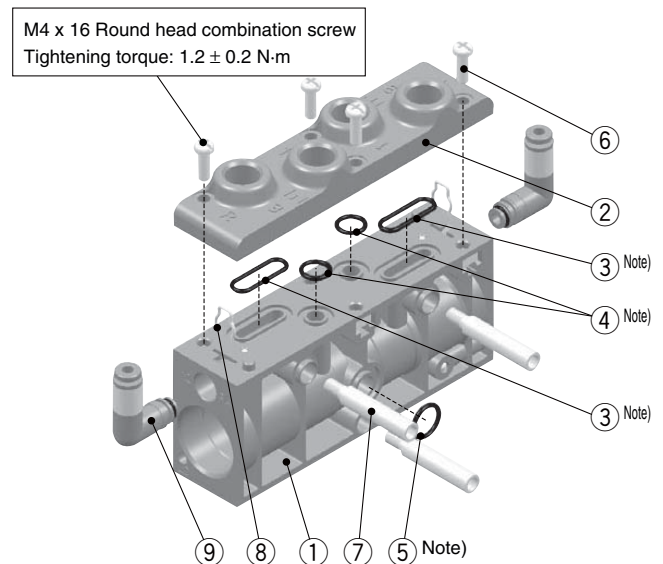
Block Assembly

C: 2 port valve manifold block assembly Manifold block assembly for gate valve



* The figure shows the 2 port valve manifold block assembly.

D: 3 port valve manifold block assembly



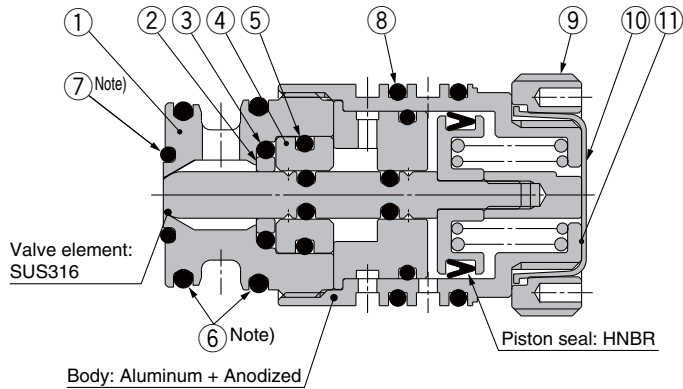
Component Parts

Model	Part no.	Description	Symbol	Component	Material	Qty.	Order qty.
VV2CC1 VV3CC1 VVMCC1 (common)	VVCC12-OR-1	O-ring between manifold blocks	C-2	O-ring	Special FKM	1	1 set unit
			D-5				
VV2CC1 VV3CC1 VVMCC1 (common)	VVCC12-50A-L1C4	ø4 One-touch fitting	C-5	One-touch fitting	—	1	1 set unit
			D-9				
			D-9				
VV2CC1 VV3CC1 VVMCC1 (common)	VVCC12-50A-L1C6	ø6 One-touch fitting	D-9	O-ring	HNBR	1	1 set unit
			D-9				
VV3CC1 VVMCC1	VVCC12-OR-3	O-ring	F-3	O-ring	Special FKM	1	1 set unit
			D-3				
VV3CC1 VVMCC1	VVCC13-OR-1	O-ring assembly between port blocks	D-3	O-ring	Special FKM	2	1 set unit
			D-4				

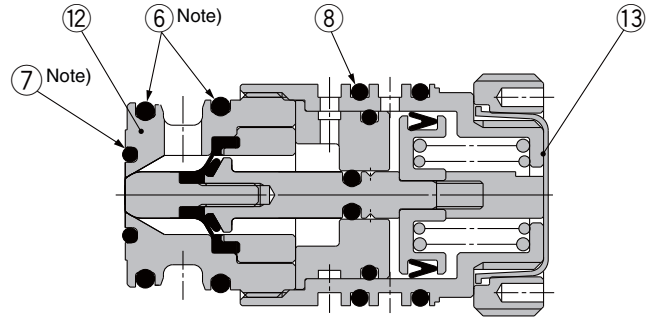
Note) If the manifold is disassembled or rearranged, replace the O-rings with new O-rings. (Specific Product Precautions 4/Maintenance 5 on page 665)

2/3 Port Valve

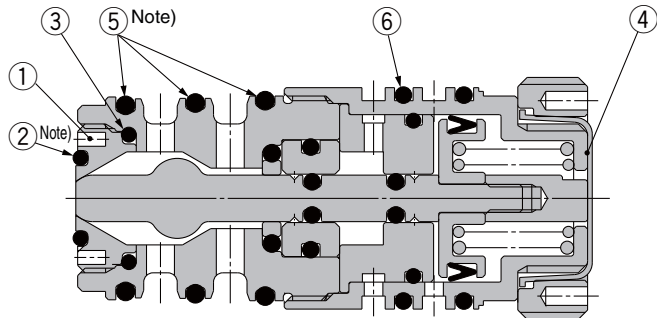
**A: 2 port valve
Standard VCC12-00**







Diaphragm / 2 liquid paint type VCC12D-00



**B: 3 port valve
VCC13-00**



Component Parts

Model	Part no.	Description	Symbol	Component	Material	Qty.	Order qty.
VCC12(D)-00 (dedicated)	VCC12-1A-1 (for VCC12-00)	Orifice body assembly 	A-①	Orifice body	PEEK resin	1	1 set unit
			A-②	PTFE seal	Special PTFE	1	
			A-③	O-ring	Special FKM	1	
			A-④	Sleeve	POM	1	
			A-⑤	O-ring	Special FKM	1	
			A-⑥	O-ring	Special FKM	2	
			A-⑦	O-ring	Special FKM	1	
	VCC12D-1A-1 (for VCC12D-00)	Orifice body assembly 	A-⑥	O-ring	Special FKM	2	1 set unit
			A-⑦	O-ring	Special FKM	1	
			A-⑫	Orifice body	PEEK resin	1	
VCC12-OR-1	O-ring assembly	A-⑥	O-ring	Special FKM	2	1 set unit	
		A-⑦	O-ring	Special FKM	1		
VCC12-OR-4	O-ring assembly	A-⑧	O-ring	HNBR	2	1 set unit	
		A-⑥	O-ring	Special FKM	2		
VCC13-00 (dedicated)	VCC13-1A-1	Orifice assembly 	B-①	Orifice	PEEK resin	1	1 set unit
			B-②	O-ring	Special FKM	1	
			B-③	O-ring	Special FKM	1	
			B-④	Name plate	—	1	
	VCC13-OR-1	O-ring assembly	B-②	O-ring	Special FKM	1	1 set unit
			B-⑤	O-ring	Special FKM	3	
VCC13-OR-2	O-ring assembly	B-⑥	O-ring	HNBR	2	1 set unit	
		B-⑤	O-ring	Special FKM	3		
VCC12(D)-00 VCC13-00 (common)	VCC12-2A-1	Mounting nut assembly 	A-⑨	Mounting nut	Aluminum	1	1 set unit
			A-⑩	Switching display cover	A-PET	1	
	VCC12-OR-5	O-ring assembly	A-⑦	O-ring	Special FKM	1	1 set unit
			B-②				
G-②							
VCC10-30A-1	Switching display cover	A-⑩	Switching display cover	A-PET	10	1 set unit	

Note) If the manifold is disassembled or rearranged, replace the O-rings with new O-rings. (Specific Product Precautions 4/Maintenance 5 on page 665)

VCC Series

Parts Description

Model	Symbol	Part no.	Description	Symbol	Description	Material	Surface treatment	Note
For 2 port valve	A	VCC12(D)-00	2 port valve	—	—	—	—	—
	C	VVCC12-1A-02F ^{C4} _{C6} * Pilot port C4: ø4 piping C6: ø6 piping	Manifold block assembly for 2 port valve	①	Manifold block	PPS resin	—	For VVCC12-1A-02F ^{C4} _{C6}
				②	O-ring	Aluminum	Hard anodized containing PTFE	For VVCC12-1G-02F ^{C4} _{C6}
		VVCC12-1G-02F ^{C4} _{C6} * Pilot port C4: ø4 piping C6: ø6 piping	Manifold block assembly for gate valve	③	Tie-rod for adding stations	Special FKM	—	—
				④	Clip	Stainless steel	—	For adding stations
				⑤	One-touch fitting	Stainless steel	—	Refer to "Replacement Parts."
	E	VVCC12-2A-02F	U-side end plate assembly for 2 port valve	①	U-side end plate	Aluminum	Hard anodized containing PTFE	When neighboring valve is a 2 port valve.
				②	Hexagon socket head cap screw with M5 x 20 SW	POM	—	
	F	VVCC12-3A-1	D-side end plate assembly for 2 port valve	①	D-side end plate	Aluminum	Hard anodized containing PTFE	When neighboring valve is a 2 port valve.
				②	Plug	Special FKM	—	
				③	O-ring	Stainless steel	—	
				④	Hexagon socket head cap screw with M5 x 20 SW	—	—	
	G	VVCC12-10A-1	Blanking plug assembly for 2 port valve	①	Blanking plug	POM	—	—
				②	O-ring	Special FKM	—	—
				③	R1/4 Hexagon socket head plug	Stainless steel	—	—
For 3 port valve	B	VCC13-00	3 port valve	—	—	—	—	—
	D	VVCC13-1A-02F ^{C4} _{C6} * Pilot port C4: ø4 piping C6: ø6 piping	Manifold block assembly for 3 port valve	①	Manifold block	PPS resin	—	—
				②	Port block	Aluminum	Hard anodized containing PTFE	—
				③	O-ring	Special FKM	—	—
				④	O-ring	Special FKM	—	—
				⑤	O-ring	Special FKM	—	—
				⑥	Round head combination screw with M4 x 16 SW	Stainless steel	—	—
				⑦	Tie-rod for adding stations	Stainless steel	—	For adding stations
				⑧	Clip	Stainless steel	—	—
				⑨	One-touch fitting	—	—	Refer to "Replacement Parts."
	E	VVCC13-2A-02F	U-side end plate assembly for 3 port valve	①	U-side end plate	Aluminum	Hard anodized containing PTFE	When neighboring valve is a 3 port valve.
				②	Hexagon socket head cap screw with M5 x 20 SW	Stainless steel	—	
	F	VVCC13-3A-1	D-side end plate assembly for 3 port valve	①	D-side end plate	Aluminum	Hard anodized containing PTFE	When neighboring valve is a 3 port valve.
				②	Plug	POM	—	
				③	O-ring	Special FKM	—	
④				Hexagon socket head cap screw with M5 x 20 SW	Stainless steel	—		
H	VVCC13-10A-1	Blanking plug assembly for 3 port valve	①	Blanking plug	POM	—	—	
			②	O-ring	Special FKM	—	—	
			③	R1/4 Hexagon socket head plug	Stainless steel	—	—	
Common	J	VVCC12-20A-□	Tie-rod	—	—	Stainless steel	—	□ = Three manifold blocks make up one set.
	K	VVCC12-21A	Tie-rod for adding stations	—	—	Stainless steel	—	3 pcs. make up one set. ^{Note)}

Note) When the manifold is shipped out, tie-rods for two extra stations are used. You can add or reduce 2 stations of manifold block (4 valves in total).

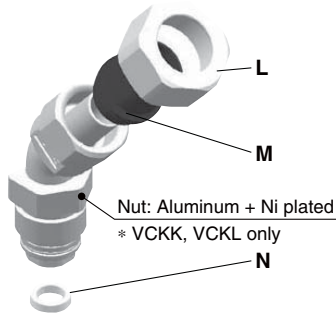
Example) For manifold block 4 stations (8 valves)

Tie-rod for 2 stations (VVCC12-20A-2)	Tie-rod for adding stations (VVCC12-21A)	Tie-rod for adding stations (VVCC12-21A)
--	---	---

Example) For manifold block 5 stations (10 valves)

Tie-rod for 3 stations (VVCC12-20A-3)	Tie-rod for adding stations (VVCC12-21A)	Tie-rod for adding stations (VVCC12-21A)
--	---	---

SUS316L Stainless Steel Fitting



Component Parts

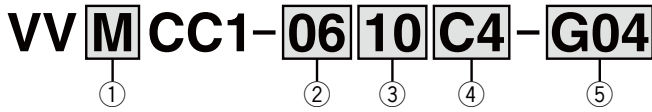
Model	Symbol	Part no.	Description	Conforming item	Material	Qty.	Order qty.
K VCKL□□□□-02F H	L	KFN-06-X2	Union nut	K VCKL0604-02F H	C3604BD + Ni plated	1	1 set unit
		KFN-08-X2		K VCKL0806-02F H			
		KFN-10-X2		K VCKL1075-02F H			
		KFN-12-X2		K VCKL1008-02F H			
		KFN-12-X2		K VCKL1209-02F H			
	M	KFS-06	Sleeve	K VCKL0604-02F H	Nylon	1	1 set unit
		KFS-08		K VCKL0806-02F H			
		KFS-10		K VCKL1075-02F H			
		KFS-12		K VCKL1008-02F H			
		KFS-12		K VCKL1209-02F H			
	N	VCKK-4-1	Gasket		Nylon	1	10 set unit

- VNA
- VNB
- SGC
- SGH
- VNC
- VNH
- VND
- VCC**
- TQ

Manifold Specifications

VCC Series

1. How to Order Manifold



* This "How to Order" is that of the example below.

① Type (Passage number)

2	2 port valve
3	3 port valve
M	2/3 port valves mixed mounting

② 2 port valve mountable number Note 1)

00	Without 2 port valve
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮
40	40 pcs. (colors) <small>Note 2)</small>

④ Pilot port fitting size

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

③ 3 port valve mountable number Note 1)

00	Without 3 port valve
02	2 pcs. (colors)
04	4 pcs. (colors)
⋮	⋮
40	40 pcs. (colors) <small>Note 2)</small>

⑤ Gate valve and cleaning valve mountable number Note 1)

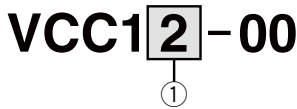
Nil	Without gate valve <small>Note 3)</small>
G02	Cleaning valve: 1 pc. + Gate valve: 1 pc.
G04	Cleaning valve: 3 pcs. + Gate valve: 1 pc.
G06	Cleaning valve: 5 pcs. + Gate valve: 1 pc.

Note 1) Two valves can be installed per manifold block. Total valve number must be an even number.

Note 2) Maximum valve number is forty (40) valves (colors) by total of ② + ③ + ⑤.

Note 3) When "Without gate valve" is selected, use 2 port valve of ② as a cleaning valve.

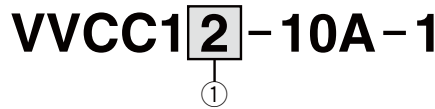
2. How to Order Valve



① Type (Passage number)

2	2 port valve
3	3 port valve
2D	2 port/Diaphragm type

3. How to Order Blanking Plug

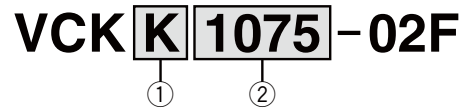


① Type (Passage number)

2	For 2 port valve
3	For 3 port valve

Used when number of valves used on the manifold base is an odd number.

4. How to Order SUS316L Stainless Steel Fitting

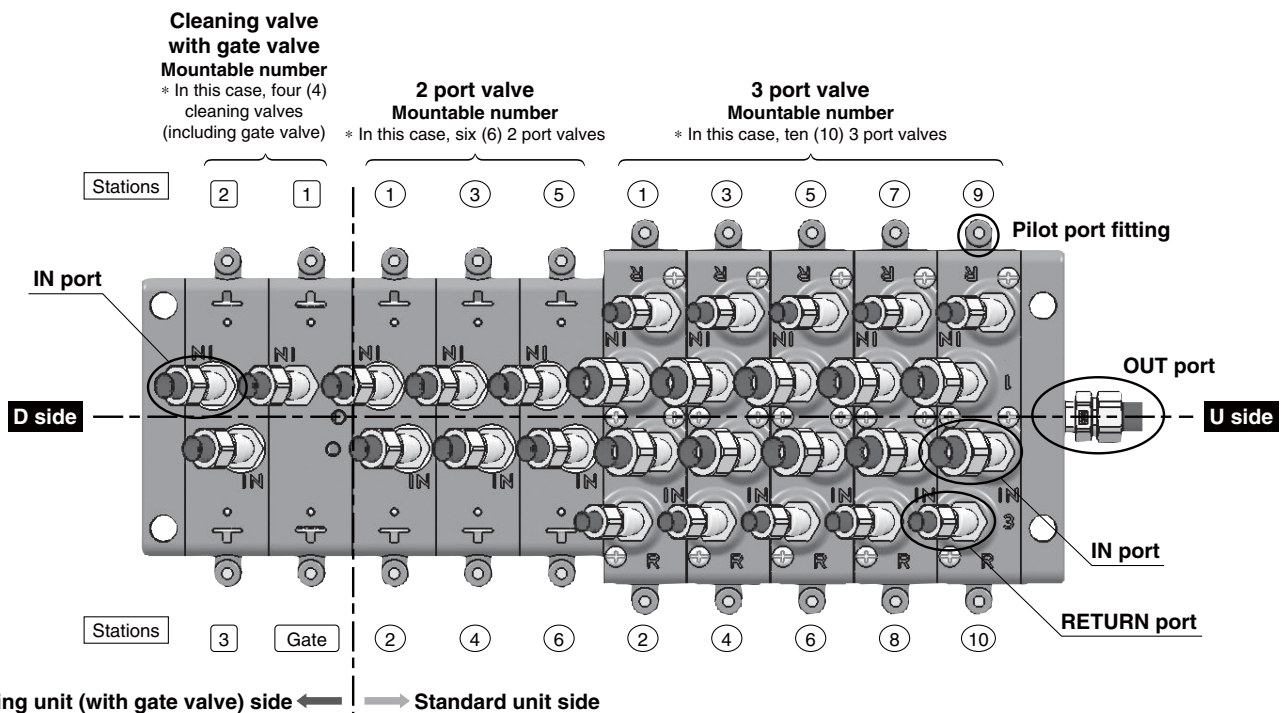


① Type (Shape)

K	40° swivel elbow
L	90° swivel elbow
H	Male connector

② Piping port

1209	Piping port for ø12 x ø9
1008	Piping port for ø10 x ø8
1075	Piping port for ø10 x ø7.5
0806	Piping port for ø8 x ø6
0604	Piping port for ø6 x ø4



Fill in this format.

Date: Year ____ / Month ____ / Date ____

Company name	Department	Person in charge		
Phone	Fax	Repeat	<input type="checkbox"/> Repeat	<input type="checkbox"/> Not Repeat
Device description	Drawing number	Production number		

Ordered part number (Please order with this part number.)

Manifold valve part no.	SMC use
-------------------------	---------

Manifold

V V □ C C 1 - □ □ □ □ - □ □ □ □

Valve

V C C 1 □ □ - 0 0

To fill in the blanks □ in the manifold number, please refer to symbols in catalog. Select the valve referring to the specification table.

Specification Sheet

* Fill in the symbol for stainless steel fitting. For others, mark necessary items with a circle.

Unit		Cleaning unit (with gate valve) ^{Note 2)}	Standard unit																	
Part number (Mountable valve number)	Stations ^{Note 1)}	G06	G04	G02	02	04	06	08	10	12	14	16	18	20					40	
		Description/Model		4/5	2/3	1/Gate	1/2	3/4	5/6	7/8	9/10	11/12	13/14	15/16	17/18	19/20	/	/	/	/
2 port valve	Valve options	D side																		U side (OUT port side)
	2 port valve (Sliding type) VCC12-00																			
	2 port valve (Diaphragm type) VCC12D-00																			
Blanking plug for 2 port valve VVCC12-10A-1																				
Fitting ^{Note 3)}																				
IN port																				

Unit		D side	Standard unit																	
Part number (Mountable valve number)	Stations ^{Note 1)}		02	04	06	08	10	12	14	16	18	20							40	
Description/Model																				
3 port valve	Valve options	D side																		U side (OUT port side)
	3 port valve (Sliding type) VCC13-00																			
	Blanking plug for 3 port valve VVCC13-10A-1																			
Fitting ^{Note 3)}																				
IN port																				
RETURN port																				

Select stainless steel fitting for IN, RETURN port from the table below, and enter the symbol into the specification table.

Symbol	Description	Part no.
A	For piping ø12 x ø9 40° swivel elbow	VCKK1209-02F
B	For piping ø10 x ø8 40° swivel elbow	VCKK1008-02F
C	For piping ø10 x ø7.5 40° swivel elbow	VCKK1075-02F
D	For piping ø8 x ø6 40° swivel elbow	VCKK0806-02F
E	For piping ø6 x ø4 40° swivel elbow	VCKK0604-02F

Symbol	Description	Part no.
F	For piping ø12 x ø9 Male connector	VCKH1209-02F
G	For piping ø10 x ø8 Male connector	VCKH1008-02F
H	For piping ø10 x ø7.5 Male connector	VCKH1075-02F
J	For piping ø8 x ø6 Male connector	VCKH0806-02F
K	For piping ø6 x ø4 Male connector	VCKH0604-02F

Fill in the model number in the table below for connecting the fitting to OUT port. (See SUS316L stainless steel fitting type.)

For connecting the elbow union, piping direction is on top (IN, RETURN port side).

OUT port Stainless steel fitting V C K □ □ □ □ - 0 2 F

Note 1) Two valves can be installed per manifold block. Assign two valves in one square.

Note 2) Please order cleaning unit if when the gate valve is necessary.

Note 3) When the fitting is necessary for IN, RETURN port, please order by putting necessary stainless steel fitting symbol in the port of each station.

For 40° swivel elbow, piping direction is on D side.

Customer/SMC use						Serial No.	
Customer code	U/C	Department code	Code for person in charge	Registered image no.			
Fill in for faxed order	Customer's order no.	Date of delivery	SMC order no.				

Component list								
	Part no.	Qty.		Part no.	Qty.		Part no.	Qty.
1		6			11			
2		7			12			
3		8			13			
4		9			14			
5		10			15			

VNA

VNB

SGC

SGH

VNC

VNH

VND

VCC

TQ

Manifold Specifications — Example of how to fill in

Condition	Valve type		Valve arrangement	Fitting arrangement		
	2 port valve		7 pcs.	IN port	ø10 x ø8 (40° swivel elbow)	
	3 port valve		24 pcs.	IN port	ø12 x ø9 (40° swivel elbow)	
				RETURN port	ø6 x ø5 (Male connector)	
	Cleaning unit	Gate valve	1 pc.			
Cleaning valve		4 pcs.	IN port	ø8 x ø6 (40° swivel elbow)		
			OUT port	ø10 x ø8 (90° swivel elbow)		
			Pilot port	One-touch fitting for ø4		

Put "M", because 2 port valves (including cleaning unit) and 3 port valves are installed together.

Seven (7) 2 port valves are installed. Since two valves are installed per manifold base, it must be an even number, so the number of valve that can be installed is "08".
* Specify four (4) stations for manifold

When twenty-four (24) 3 port valves are used, specify "24".
* Specify twelve (12) stations for manifold.

Specify when the gate valve is necessary for cleaning valve. This example requires one gate valve and four cleaning valves, but specify "06" for number of valves that can be installed, as this must be an even number.

Manifold
 Valve

VVMCC1-08 24 C4-G06
VCC1-00

Pilot port piping size

To fill in the blanks in the manifold number, please refer to symbols in catalog. Select the valve referring to the specification table.

* Fill in the symbol for stainless steel fitting. For others, mark necessary items with a circle.

Upper table is for 2 port valve. Lower is for 3 port valve.

Part number (Mountable valve number)	Stations (Note 1)	Description/Model	Cleaning unit (with gate valve)		Standard unit															
			G06	G04	G02	02	04	06	08	10	12	14	16	18	20	40				
VCC12-00	4	2 port valve (Sliding type)	5	3	1	1	3	5	7	9	11	13	15	17	19	39				
VCC12D-00	2	2 port valve (Diaphragm type)	3	1	1	3	5	7	9	11	13	15	17	19	39					
VVCC12-10A-1	1	Blanking plug for 2 port valve	Gate																	
IN port		Piping port	D	D	D	B	B	B	B											

Part number (Mountable valve number)	Stations (Note 1)	Description/Model	Standard unit															
			02	04	06	08	10	12	14	16	18	20	40					
VCC13-00	1	3 port valve (Sliding type)	1	3	5	7	9	11	13	15	17	19	24	39	40			
VVCC13-10A-1	2	Blanking plug for 3 port valve																
IN port		Piping port	A	A	A	A	A	A	A	A	A	A	A	A	A			
RETURN port		Piping port	K	K	K	K	K	K	K	K	K	K	K	K	K			

Select stainless steel fitting for IN, RETURN port from the table below, and enter the symbol into the specification table.

Symbol	Description	Part no.
A	For piping ø12 x ø9 40° swivel elbow	VCKK1209-02F
B	For piping ø10 x ø8 40° swivel elbow	VCKK1008-02F
C	For piping ø10 x ø7.5 40° swivel elbow	VCKK1075-02F
D	For piping ø8 x ø6 40° swivel elbow	VCKK0806-02F
E	For piping ø6 x ø4 40° swivel elbow	VCKK0604-02F

Symbol	Description	Part no.
F	For piping ø12 x ø9 Male connector	VCKH1209-02F
G	For piping ø10 x ø8 Male connector	VCKH1008-02F
H	For piping ø10 x ø7.5 Male connector	VCKH1075-02F
J	For piping ø8 x ø6 Male connector	VCKH0806-02F
K	For piping ø6 x ø4 Male connector	VCKH0604-02F

Fill in the model number in the table below for connecting the fitting to OUT port. (See SUS316L stainless steel fitting type.)
For connecting the elbow union, piping direction is on top (IN, RETURN port side).

OUT port Stainless steel fitting VCKL1008-02F

Note 1) Two valves can be installed per manifold block. Assign two valves in one square.
Note 2) Please order cleaning unit if when the gate valve is necessary.
Note 3) When the fitting is necessary for IN, RETURN port, please order by putting necessary stainless steel fitting symbol in the port of each station.
For 40° swivel elbow, piping direction is on D side.

Customer/SMC use				Serial No.			
Customer code	U/C	Department code	Code for person in charge	Registered image no.			
Fill in for faxed order	Customer's order no.	Date of delivery	SMC order no.				
Component list							
Part no.	Qty.	Part no.	Qty.	Part no.	Qty.	Part no.	Qty.
VVMCC1-0824C4-G06	1	VCKK1008-02F	7				
VCC12-00	12	VCKK0806-02F	4				
VCC13-00	24	VCKH0604-02F	24				
VVCC12-10A-1	2	VCKL1008-02F	1				
VCKK1209-02F	24						

2 port valve is specified for the gate valve and the cleaning valve.
7 valves + 1 valve + 4 valves = 12 valves