

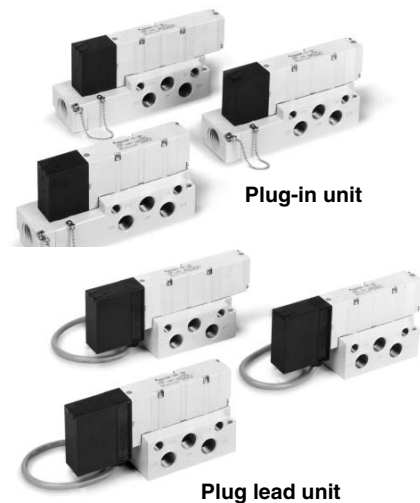
Series VQ4000

Base Mounted

Plug-in/Plug Lead Single Unit

Model

Series	Configuration		Model		Port size	Flow characteristics						Response time (ms)			Weight (kg)
						1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Standard 1 W	Low wattage 0.5 W	AC	
						C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv				
VQ4000	2 position	Single	Metal seal	VQ41 ⁰ ₅₀	Rc 3/8	6.2	0.19	1.5	6.9	0.17	1.7	20 or less	22 or less	22 or less	0.23 (0.29)
			Rubber seal	VQ41 ⁰ ₅₁		7.2	0.43	2.1	7.3	0.38	2.0	25 or less	27 or less	27 or less	
		Double	Metal seal	VQ42 ⁰ ₅₀		6.2	0.19	1.5	6.9	0.17	1.7	12 or less	14 or less	14 or less	0.26 (0.32)
			Rubber seal	VQ42 ⁰ ₅₁		7.2	0.43	2.1	7.3	0.38	2.0	15 or less	17 or less	17 or less	
	3 position	Closed center	Metal seal	VQ43 ⁰ ₅₀		5.9	0.23	1.5	6.3	0.18	1.6	45 or less	47 or less	47 or less	0.28 (0.34)
			Rubber seal	VQ43 ⁰ ₅₁		7.0	0.34	1.9	6.4	0.42	1.9	50 or less	52 or less	52 or less	
		Exhaust center	Metal seal	VQ44 ⁰ ₅₀		6.2	0.18	1.5	6.9	0.17	1.7	45 or less	47 or less	47 or less	0.28 (0.34)
			Rubber seal	VQ44 ⁰ ₅₁		7.0	0.38	1.9	7.3	0.38	2.0	50 or less	52 or less	52 or less	
		Pressure center	Metal seal	VQ45 ⁰ ₅₀		6.2	0.18	1.6	6.4	0.18	1.6	45 or less	47 or less	47 or less	0.28 (0.34)
			Rubber seal	VQ45 ⁰ ₅₁		7.0	0.38	1.9	7.1	0.38	2.0	50 or less	52 or less	52 or less	
		Double check	Metal seal	VQ46 ⁰ ₅₀		2.7	—	—	3.7	—	—	55 or less	57 or less	57 or less	0.50 (0.56)
			Rubber seal	VQ46 ⁰ ₅₁		2.8	—	—	3.9	—	—	62 or less	64 or less	64 or less	



Note 1) Value for valve on sub-plate and cylinder port Rc 3/8

Note 2) Based on JIS B 8375-1981 Supply pressure: 0.5 MPa, with indicator light and surge voltage suppressor, clean air. This will change depending on pressure and air quality.) The value when ON for the double type.

Note 3) Values inside () indicate the weight of plug lead units.

Table: Without sub-plate, With sub-plate: Add 0.41 kg for plug-in type, 0.30 kg for plug lead type.

Standard Specifications

Valve specifications	Valve construction		Metal seal	Rubber seal
	Fluid		Air/Inert gas	Air/Inert gas
	Maximum operating pressure ⁽³⁾		1.0 MPa (0.7 MPa)	
	Min. operating pressure	Single	0.15 MPa	0.20 MPa
		Double	0.15 MPa	0.15 MPa
		3 position	0.15 MPa	0.20 MPa
	Ambient and fluid temperature		−10 to 50°C ⁽¹⁾	−5 to 50°C ⁽¹⁾
	Lubrication		Not required	
	Manual override		Push type/Locking type (Tool required) Option	
	Shock/Vibration resistance		150/30 m/s ²	
Solenoid specifications	Enclosure		Dust tight (IP65 compatible)	
	Coil rated voltage		12, 24 VDC, 100, 110, 200, 220 VAC (50/60 Hz)	
	Allowable voltage fluctuation		±10% of rated voltage	
	Coil insulation type		Class B or equivalent	
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA)	
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA)	
		100 VAC	Inrush 1.2 VA (12 mA), Holding 1.2 VA (12 mA)	
		110 VAC	Inrush 1.3 VA (11.7 mA), Holding 1.3 VA (11.7 mA)	
		200 VAC	Inrush 2.4 VA (12 mA), Holding 2.4 VA (12 mA)	
		220 VAC	Inrush 2.6 VA (11.7 mA), Holding 2.6 VA (11.7 mA)	



Note 1) Use dry air to prevent condensation when operating at low temperatures.

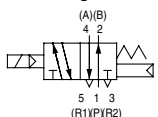
Note 2) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

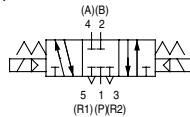
Note 3) Values inside () denote the low wattage (0.5 W) specifications.

JIS Symbol

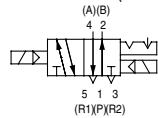
2 position single



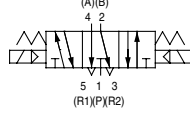
3 position closed center



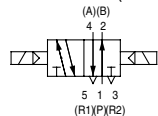
2 position double (Metal)



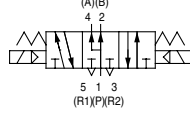
3 position exhaust center



2 position double (Rubber)



3 position pressure center



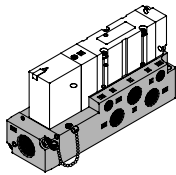
3 position double check



How to Order Valves

Body

0: Plug-in sub-plate



Port size

Nil	Without sub-plate (For manifold)
02	Rc 1/4
03	Rc 3/8

Note) For thread standard, refer to page 2-5-39.

Porting specifications

Nil	Side ported
B	Bottom ported

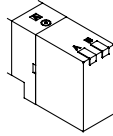
Enclosure

Nil	Dust-protected
W	Dusttight/Low jetproof type (IP65)

Manual override

Nil: Non-locking push type (Tool required)

B: Slotted locking type (Tool required)

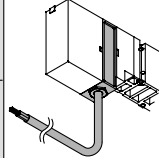


Light/Surge voltage suppressor

Nil	Yes
E	Without light, with surge voltage suppressor

Electrical entry

G	Lead wire length 0.6 m
H	Lead wire length 1.5 m



Coil voltage

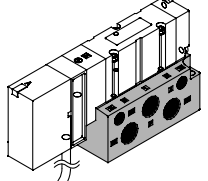
1	100 VAC (50/60 Hz)
2	200 VAC (50/60 Hz)
3	110 VAC (50/60 Hz)
4	220 VAC (50/60 Hz)
5	24 VDC
6	12 VDC

Seal

0	Metal seal
1	Rubber seal

Body

5: Plug lead sub-plate



Type of actuation

1	2 position single (A/B) 4 2 (R1)(P)(R2)
2	2 position double (A/B) 4 2 (R1)(P)(R2)
3	3 position closed center (A/B) 4 2 (R1)(P)(R2)
4	3 position exhaust center (A/B) 4 2 (R1)(P)(R2)
5	3 position pressure center (A/B) 4 2 (R1)(P)(R2)
6	3 position double check (A/B) 4 2 (R1)(P)(R2)

Note) For double check style, refer to page 2-5-36.

Plug-in

Plug lead

VQ4000

1 **0** **0**

2 **5** **1**

Body

Port size

Porting specifications

Enclosure

Manual override

Light/Surge voltage suppressor

Electrical entry

Coil voltage

Seal

Function

Nil	Standard type (1 W)
Y ⁽¹⁾	Low wattage type (0.5 W)
R ⁽²⁾	External pilot

Note 1) Applicable to DC specifications.
Note 2) For external pilot specifications, refer to page 2-5-39. Combination of external pilot and perfect interface is not possible.
Note 3) When two or more symbols are specified, indicate them alphabetically.

VQC

SQ

VQ0

VQ4

VQ5

VQZ

VQD

How to Order Sub-plates

VQ4000

Electrical entry

P	Plug-in conduit terminal
S	Plug lead

Enclosure

Nil	Dust-protected
W ^{Note)}	Dusttight/Low jetproof type

Note) It is not necessary for plug lead type.

Port size

02	Rc 1/4
03	Rc 3/8

Porting specifications

Nil	Side ported
B	Bottom ported ⁽¹⁾

Note 1) For bottom ported port size is RC 1/4 only.
Note 2) For thread standard, refer to page 2-5-39.

Replacement of pilot valve assembly (Voltage)

- Refer to pages 2-5-44 and 2-5-45 for pilot valve assembly part numbers.
- For "How to Replace", refer to page 2-5-3.