

VALVES

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VALVES

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VALVES

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VALVES

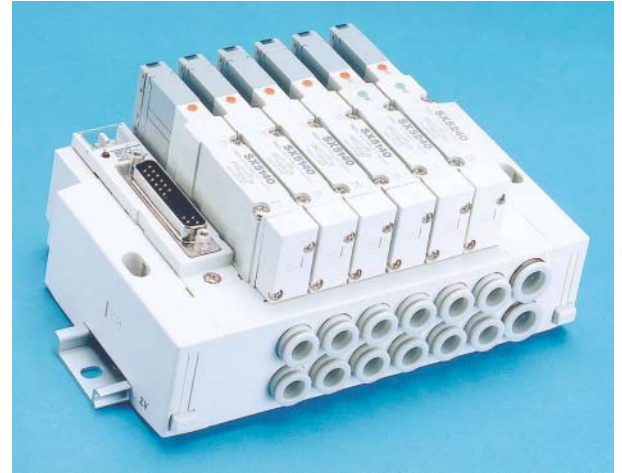
	<p>(N)AK CHECK VALVE</p> <p style="text-align: right;">2.96</p>
	<p>(N)AQ QUICK EXHAUST VALVE</p> <p style="text-align: right;">2.96</p>
	<p>AQ200/300 MINIATURE IN-LINE QUICK EXHAUST VALVE</p> <p style="text-align: right;">2.97</p>
	<p>ASP SPEED CONTROLLER WITH PILOT CHECK VALVE</p> <p style="text-align: right;">2.98</p>
	<p>(N)ASV ADJUSTABLE QUICK EXHAUST VALVE WITH INTEGRAL EXHAUST RESTRICTOR AND SILENCER</p> <p style="text-align: right;">2.100</p>

SERIES SX3000, 5000 SOLENOID VALVE

- ✓ Sizes Available SX3000 and SX5000
- ✓ Compact and Lightweight Design
- ✓ Low Power Consumption: 0.6W
- ✓ Large Flow Capacity
- ✓ Long Life exceeding 50 million cycles

TECHNICAL SPECIFICATIONS

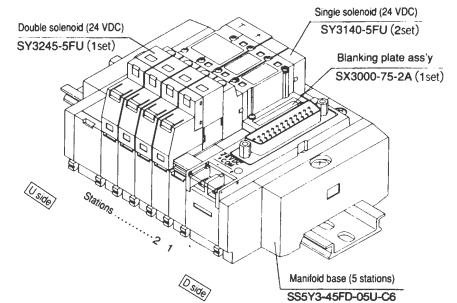
Series	SX3000	SX5000
Fluid	Air / Lubrication Not Required	
Internal Pilot	2 Position Single	0.15 ~ 0.7 (22 ~ 100)
Operating Pressure	2 Position Double	0.1 ~ 0.7 (14.5 ~ 100)
Range MPa (PSI)	3 Position	0.2 ~ 0.7 (30 ~ 100)
External Pilot	2 Position Single	0.25 ~ 0.7 (37 ~ 100)
Operating Pressure	2 Position Double	0.25 ~ 0.7 (37 ~ 100)
Range MPa (PSI)	3 Position	0.25 ~ 0.7 (37 ~ 100)
Ambient & Fluid Temperature °C / °F	Max 50°C / 122°F	
Max Operating	2 Position Single	10 5
Frequency Hz	3 Position	3 3
Manual Override	Non Locking Push Type, Push Locking, Slotted Type	
Lubrication	Not Required	
Mounting Piston	Free	
Impact / Vibration Resistance	150 / 30 (8.3 ~ 2000 Hz)	
Protection Structure	Dust Proof	



BASE MOUNTED TYPE
STACKING TYPE MANIFOLD
DIN RAIL MOUNTED, PLUG-IN TYPE
45F TYPE (D-SUB CONNECTOR)

How to Order Valve / Manifold Ass'y (Example)

Ordering example (45F type / D-sub connector (25-pole))



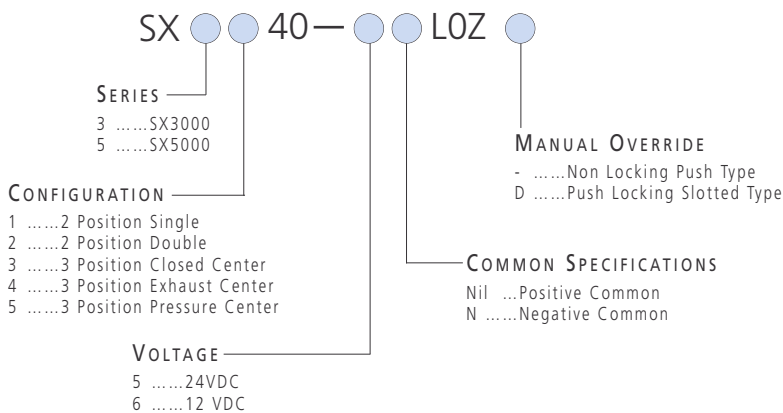
SS5Y3-45FD-05U-C6 1set (45F type D-sub connector 5-station manifold base no.)
 + SY3000-75-2A 1set (Blanking plate ass'y no.)
 + SY3140-5FU 2set (Single solenoid no.)
 + SY3245-5FU 1set (Double solenoid no.)

▶ When ordering Double Solenoid Valves / 3 Position (Dual Body Type), please keep in mind that they require two manifold stations.

SERIES SX3000, 5000 BASE MOUNTED, DIN RAIL PLUG-IN STACKING TYPE MANIFOLD

HOW TO ORDER

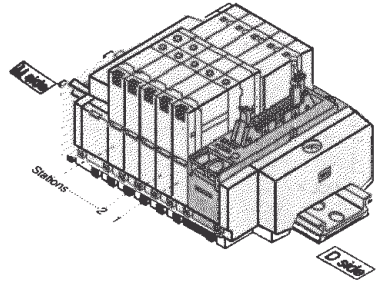
SERIES SX3000/5000 VALVE TYPES 45F, 45P



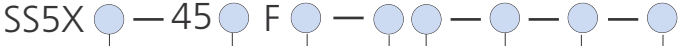
VALVES SERIES SX

**HOW TO
ORDER**

SERIES SX MANIFOLD 45F TYPE / D-SUB CONNECTOR



BASE MOUNTED TYPE
STACKING TYPE MANIFOLD
DIN RAIL MOUNTED, PLUG-IN TYPE
45P TYPE (FLAT CABLE TYPE)



MANIFOLD SERIES
3SX3000
5SX5000

COMMON SPECIFICATIONS
Nil ...Positive Common
NNegative Common

CONNECTOR BOX MOUNTING
UU Side
DD Side

VALVE STATIONS
02-10Double Wiring Specifications
11-20Applicable up to 20 Solenoids.
Use Manifold Specifications Form to specify wiring

VOLTAGE
-24VDC
12V ...12 VDC

OPTION
When a longer than Standard DIN Rail is required, enter the number of Manifold Station that corresponds with the length of DIN Rail needed (20 Stations Max)

SUP/EXH BLOCK ASSEMBLY MOUNTING POSITIONS

UU Side - 2 ~ 10 Stations
DD Side - 2 ~ 10 Stations
BBoth Sides - 2 ~ 20 Stations
*M ...Special Specifications

A, B PORT SIZE

SX3000
Metric Imperial
C4 ...One Touch Fittings for ø4 N3 ..One Touch Fittings for ø5/32"
C6 ...One Touch Fittings for ø6 N7 ..One Touch Fittings for ø1/4"

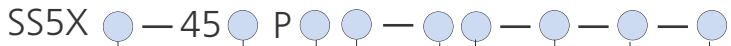
SX5000
Metric Imperial
C4 ...One Touch Fittings for ø4 N3 ...One Touch Fittings for ø5/32"
C6 ...One Touch Fittings for ø6 N7 ...One Touch Fittings for ø1/4"
C8 ...One Touch Fittings for ø8 N9 ...One Touch Fittings for ø5/16"

* Mixed Porting Available by Special Order

Note) OTF = One Touch Fittings

**HOW TO
ORDER**

SERIES SX MANIFOLD 45P TYPE / FLAT CABLE TYPE



MANIFOLD SERIES
3SX3000
5SX5000

COMMON SPECIFICATIONS
Nil ...Positive Common
NNegative Common

CONNECTOR POLES

Symbol	Poles	Station
-	26	2~20
B	20	2~16
H	10	2~8

CONNECTOR MOUNTING POSITION
UU Side
DD Side

VALVE STATIONS (BLANKING PLATE ASSEMBLY ARE INCLUDED)

A, B PORT SIZE

SX3000
Metric Imperial
C4 ...OTF for ø4 N3 ...OTF for ø5/32"
C6 ...OTF for ø6 N7 ...OTF for ø1/4"

SX5000
Metric Imperial
C4 ...OTF for ø4 N3 ...OTF for ø5/32"
C6 ...OTF for ø6 N7 ...OTF for ø1/4"
C8 ...OTF for ø8 N9 ...OTF for ø5/16"

* Mixed Porting Available by Special Order

OPTION
When a longer than Standard DIN Rail is required, enter the number of Manifold Station that corresponds with the length of DIN Rail needed (20 Stations Max)

VOLTAGE
-24VDC
12V ...12 VDC

SUP/EXH BLOCK ASSEMBLY MOUNTING POSITIONS

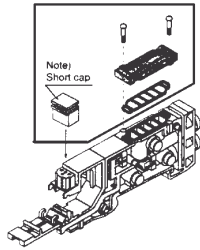
UU Side - 2 ~ 10 Stations
DD Side - 2 ~ 10 Stations
BBoth Sides - 2 ~ 20 Stations
*M ...Special Specifications (by Special Order)

26 Pole (P) Connector			20 Pole (PG) Connector			10 Pole (PH) Connector		
Symbol	Station	Note	Symbol	Station	Note	Symbol	Station	Note
02	2	Double Wiring	02	2	Double Wiring	02	2	Double Wiring
10	10	Specs	08	08	Specs	04	04	Specs
11	11	Applicable up to 20 Solenoids	09	09	Applicable up to 16 Solenoids	05	05	Applicable up to 8 Solenoids
20	20	Use Manifold Specs Form to specify wiring	16	16	Use Manifold Specs Form to specify wiring	08	08	Use Manifold Specs Form to specify wiring

OPTIONS

SERIES SX MANIFOLD OPTIONS

Blanking plate ass'y



Series	Ass'y no.
SX3000	SX3000-75-2A
SX5000	SX5000-76-2A

Note) When mounting a blanking plate, be sure to mount a short cap.

SUP block disc

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.



Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

EXH block disc

When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to isolate exhaust.



Series	Part no.
SX3000	SX3000-77-1A
SX5000	SX5000-77-1A

Block disc indication seal

These seals are stuck on the block with SUP and EXH block discs inside for confirmation from outside. (3 sheets respectively)

VZ3000-123-1A (Both for SX3000, 5000)

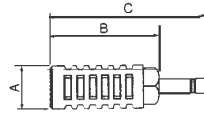
Label for SUP block disc Label for EXH block disc Label for SUP, EXH block disc



Note) When ordering block disc installed at the factory, labels will be attached to the manifold showing the locations.

Silencer for one-touch fitting

The silencer plugs directly into the one-touch fittings of the manifold.



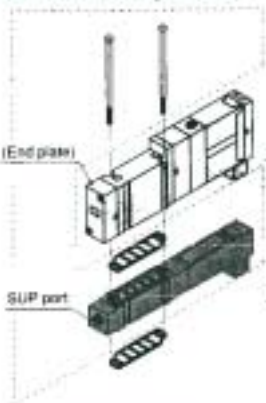
Series	Model	Effective area	A	B	C
SX3000 (ø6)	AN203-KM8	14mm ²	ø16	26	51
SX5000 (ø10)	AN200-KM10	26mm ²	ø22	53.8	80.8
	AN300-KM10	30mm ²	ø25	70	97

(mm)

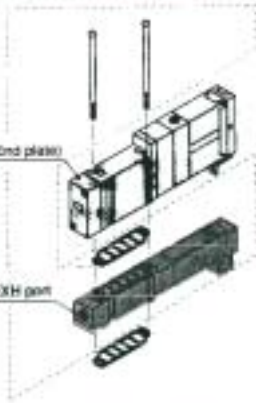
OPTIONS

SERIES SX MANIFOLD OPTIONS

Individual SUP spacer ass'y



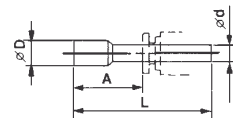
Individual EXH spacer ass'y



Series	Ass'y no.	Port size
SX3000	SX3000-38-3A	M5×0.8
SX5000	SX5000-38-3A	1/8"

Series	Ass'y no.	Port size
SX3000	SX3000-39-3A	M5×0.8
SX5000	SX5000-39-3A	1/8"

PORT PLUGS

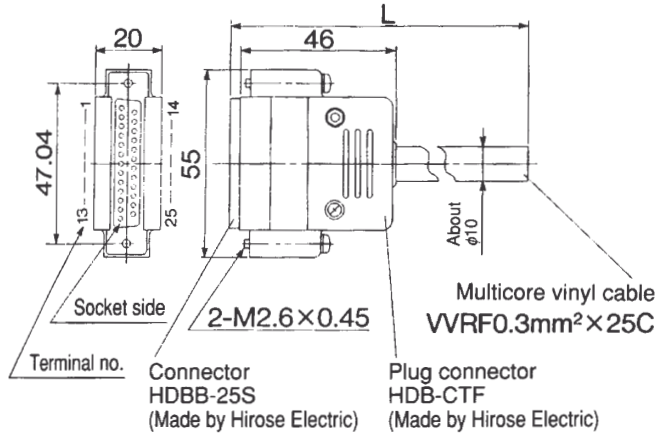


Inserts easily into unused cylinder ports and/or SUP/EXH Ports. The minimum quantity to order is 10 pieces.

Applicable Fitting Size ød	Model	A	L	D
ø4mm	KQP-04	16	32	6
ø5/32"	KQP-03	16	32	6
ø6mm	KQP-06	18	35	8
ø1/4"	KQP-07	18	35	8
ø8mm	KQP-08	20.5	39	10
ø5/16"	KQP-09	20.5	39	10
ø10mm	KQP-10	22	43	12
ø3/8"	KQP-11	22	43	12

VALVES SERIES SX

D-SUB CONNECTOR (25 POLE) / CABLE ASSEMBLY VXZS3000-21A1/2/3



Wire color table by terminal number of D-sub connector cable ass'y

Terminal No.	Lead wire color	Dot marking
1	Black	—
2	Brown	—
3	Red	—
4	Orange	—
5	Yellow	—
6	Pink	—
7	Blue	—
8	Violet	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Violet	—
18	Gray	—
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	—

D-Sub Connector Cable Assembly

Cable Length (L)	Assembly No	Note
1.5m	VVZS3000-21A-1	Cable 25
3m	VVZS3000-21A-2	- Core
5m	VVZS3000-21A-3	x 24AWG

Electric Characteristics

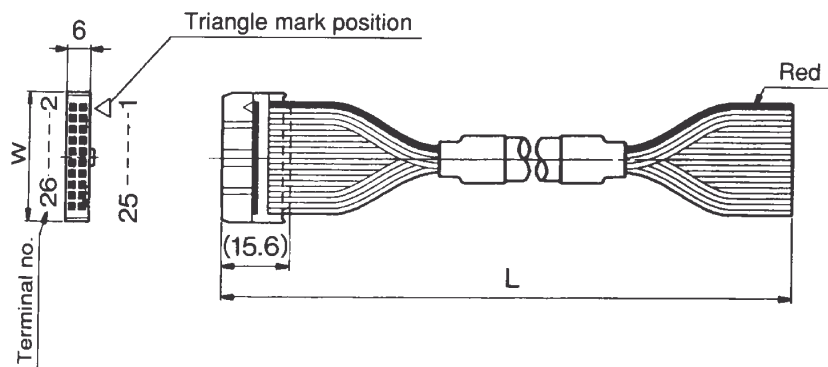
Item	Characteristics
Conductor Resistance /km, 20°C	65 or less
Voltage Limit V, 1 min, AC	1000
Insulation Resistance M km, 20°C	5 or more

* For other commercial connectors, use a 25-pole female connector made in conformity with MIL-C-24308.

Note) The minimum bending radius of D-Sub Connector Cable Assembly is 20mm.

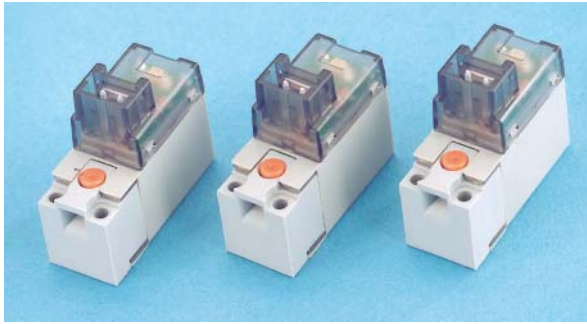
■ Flat Cable Connector / Cable Ass'y

AXT100-FC□ - $\frac{1}{3}$



ACCESSORIES
FLAT CABLE CONNECTOR ASSEMBLY

Cable Length	10 Pole	20 Pole	26 Pole
1.5m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector Width	17.2	30	37.5



3/2 DIRECT ACTING SOLENOID/SPRING VALVES M3 PORTED

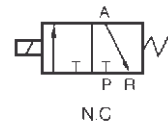
- ✓ Direct Two-Port Solenoid Valve
- ✓ Compact Size
- ✓ Power Saving Version

TECHNICAL SPECIFICATIONS

Type	2 Port Direct Solenoid Valve
Function	Normally Closed, Normally Open
Fluid	Air
Operating Pressure Range	0~0.7MPa (0~100PSI) Vacuum P Port - 100KPa ~ 0.6MPa / -14.5~85PSI R Port - 100KPa ~ 0.06MPa / -14.5~85PSI
Ambient Temperature	Max 50°C / 122°F
Effective Orifice (Cv)	0.14mm ² (0.008) Standard 0.22mm ² (0.012) Large Flow
Power Consumption	0.75W - ø0.8; 0.52W - ø0.6
Allowable Voltage Fluctuation	±10%
Lead Wire Type	M L & Grommet
Lead Wire Specification	HVSF 0.3mm ² ø1.55mm
Response Time	<10ms



Observe Operating Pressure Ranges - see Technical Specifications for details



MODEL SERIES SY100

1KPa = 0.145PSI

Type Of Actuation	Model	Type	Operating Pressure Range MPa/PSI	Vacuum Application MPa		Effective Area mm ² (Cv Factor)
				P Port	R Port	
NC	SY113	Standard	0 ~ 0.7 / 0 ~ 101	-100KPa~0.6	-100KPa~0	0.14 (0.008)
NC	SY114					
NC	SY113A	Large Flow Capacity	0 ~ 0.7 / 0 ~ 101	-100KPa~0.6	-100KPa~0	0.22 (0.012)
NC	SY114A					
NO	SY123	Standard	0 ~ 0.7 / 0 ~ 101	-100KPa~0	-100KPa~0.6	0.14 (0.008)
NO	SY124					
NO	SY123A	Large Flow Capacity	0 ~ 0.7 / 0 ~ 101	-100KPa~0	-100KPa~0.6	0.22 (0.012)
NO	SY124A					

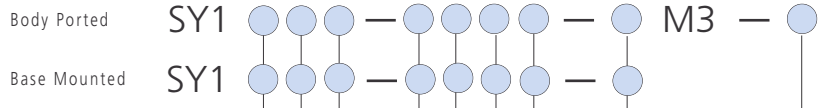
Note 1) In case of SY123/4 and SY123/4 A, Supply Air to R Port, P Port will be the Exhaust Port

Note 2) Value for DC, add 1g for AC

HOW TO
ORDER
SEE NEXT PAGE

SOLENOID VALVES SERIES SY100

**HOW TO
ORDER
SY100**



TYPE OF ACTUATION

- 1Normally Closed
- 2Normally Open

MODEL TYPE

- 3Body Ported
- 4Base Mounted

TYPE

-Standard
- ALarge Flow Capacity

VOLTAGE

- 524 VDC
- 612 VDC
- V6 VDC
- S5 VDC
- R3 VDC
- 1100 VAC 50/60 Hz
- 3110 VAC 50/60 Hz
-115 VAC 50/60 Hz
- 2200 VAC 50/60 Hz
- 4220 VAC 50/60 Hz
-230 VAC 50/60 Hz

ELECTRICAL ENTRY

- GGrommet (Lead Wire Length: 300mm)
- HGrommet (Lead Wire Length: 600mm)
- LL Type Plug with Lead Wire
- LNL Type Plug without Lead Wire
- LOL Type Plug without Connector
- MM Type Plug with Lead Wire
- MNM Type Plug without Lead Wire
- MOM Type Plug without Connector

INDICATOR LIGHT & SURGE SUPPRESSOR

-Without
- SWith Surge Voltage Suppressor
- ZWith Indicator Light and Surge Voltage Suppressor
- UAs Option Z above but non Polar Type
- "U" type: 24, 12 VDC only
- For AC types, there is no "S" Specification since it is integral with Converter

BRACKET

-Without Bracket
- FWith Bracket

PIPING

- Body Ported
-For Manifold
- PFor Body Ported Type to P, R, A Port
- Base Mounted
-Without Subplate
- M3With Subplate

MANUAL OVERRIDE

-Non-Locking Push Type
- DPush-Locking Slotted Type
- BLocking Slotted Type
- EPush-Locking Lever Type

**HOW TO
ORDER**

C O N N E C T O R A S S E M B L Y N U M B E R

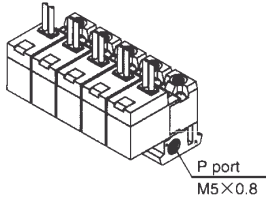
DC	:	SY100 - 30 - 4A -	●
100VAC	:	SY100 - 30 - 1A -	●
200VAC	:	SY100 - 30 - 2A -	●
Other Voltages Of AC	:	SY100 - 30 - 3A -	●

Lead Wire Length

- Nil 300mm
- 6 600mm
- 10 1000mm
- 15 1500mm
- 20 2000mm
- 25 2500mm
- 30 3000mm
- 50 5000mm

Common SUP · Common EXH

Type 30



How to Order

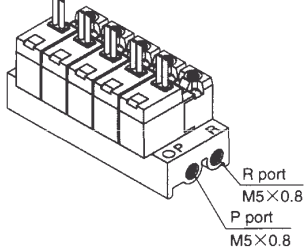
SS3Y1 - 30 - 05 - F

● Stations	
02	2 stations
⋮	⋮
10	10 stations

Applicable valves
SY113-□□□□-M3
SY113A-□□□□-M3
Applicable blank plate ass'y
SY100-77-1A

Note) Piping to exhaust port is not possible.

Type 31



How to Order

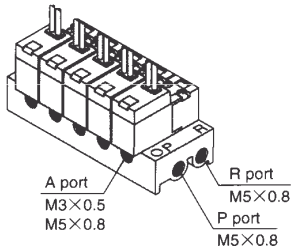
SS3Y1 - 31 - 05

● Stations	
02	2 stations
⋮	⋮
20	20 stations

Applicable valves Note)
SY113-□□□□-M3
SY113A-□□□□-M3
SY123-□□□□-M3
SY123A-□□□□-M3
Applicable blank plate ass'y
SY100-77-1A

Note) SY113(A) and SY123(A) cannot be mounted on the same manifold.

Type S41



How to Order

SS3Y1 - S41 - 05 - M3

● Stations	
02	2 stations
⋮	⋮
20	20 stations

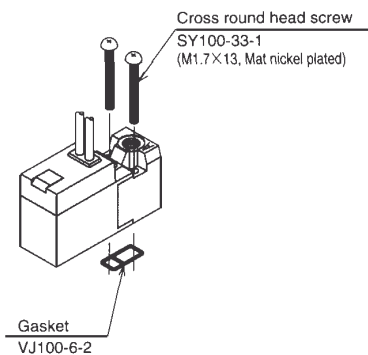
● A port size	
M3	M3×0.5
M5	M5×0.8

Applicable valves Note)
SY114-□□□□
SY114A-□□□□
SY124-□□□□
SY124A-□□□□
Applicable blank plate ass'y
SY100-77-1A

Note) SY114(A) and SY124(A) cannot be mounted on the same manifold.

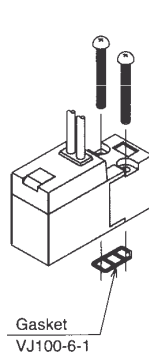
Combination with Solenoid Valve and Gasket Manifold Base

Body ported



Applicable base
· Sub-plate (for body ported)
· SS3Y1-type 30 | Manifold
· SS3Y1-type 31 | base

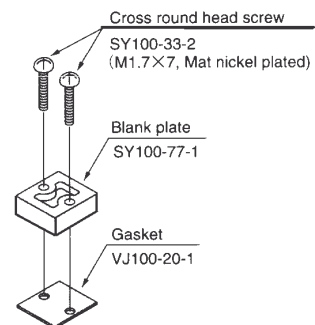
Base mounted



Applicable base
· Sub-plate
· SS3Y1-type S41
Manifold base

Blank Plate Ass'y

Parts no. : SY100-77-1A



Applicable base
· Sub-plate
· SS3Y1-type 30
· SS3Y1-type 31 | Manifold
· SS3Y1-type S41 | base

SOLENOID VALVES

SERIES SY3000/5000/7000



BODY PORTED VALVE SY3000/5000/7000

- ✓ Low Power Consumption : 0.5W
- ✓ Compact Design, Large Flow Capacity
- ✓ High Life Expectancy ; >50 million cycles
- ✓ Quick Response Time

TECHNICAL SPECIFICATIONS

Series		SY3000	SY5000	SY7000
Fluid		Air, Lubrication Not Required		
Internal Pilot	2 Position Single	0.15 ~ 0.7MPa / 22 ~ 100PSI		
Operating Pressure	2 Position Double	0.1 ~ 0.7MPa / 15 ~ 100PSI		
Range	3 Position	0.2 ~ 0.7MPa / 30 ~ 100PSI		
Ambient & Fluid Temperature		-10 ~ 50°C / 14 ~ 122°F		
Max Operating	2 Position Single/Double	10	5	3
Frequency / Hz	3 Position	3	3	3
Manual Override		Non Locking Push Type Push Locking Slotted Type Push Locking Lever Type		
Pilot Exhaust		Common Exhaust for Main & Pilot		
Mounting Position		Free		
Cv Factor		0.23	0.59	0.87

MODEL

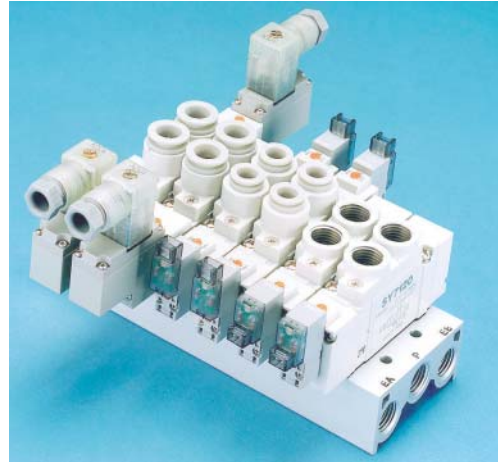
RESPONSE TIME SERIES SY3/5/7000

Model	Configuration	Response Time ms 71 PSI / 0.5MPa	
		W/O Indicator Light & Surge Suppressor	With Indicator Light & Surge Suppressor
SY3000	2 Position Single	12 or less	15 or less
	2 Position Double	10 or less	13 or less
	3 Position	15 or less	20 or less
SY5000	2 Position Single	19 or less	26 or less
	2 Position Double	18 or less	22 or less
	3 Position	32 or less	38 or less
SY7000	2 Position Single	31 or less	38 or less
	2 Position Double	27 or less	30 or less
	3 Position	50 or less	56 or less

How To
ORDER
SEE NEXT PAGE 

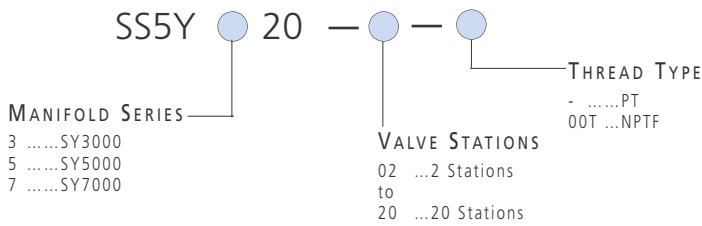
**BODY PORTED/BAR MANIFOLD
 INDIVIDUAL WIRING TYPE
 SY3000/5000/7000**

- ✓ Direct Piping to Main Body of Valve
- ✓ Up to 20 Valve Stations
- ✓ Threaded and Push-In Fittings
- ✓ Lightweight Aluminum Construction
- ✓ Combination of Fittings possible



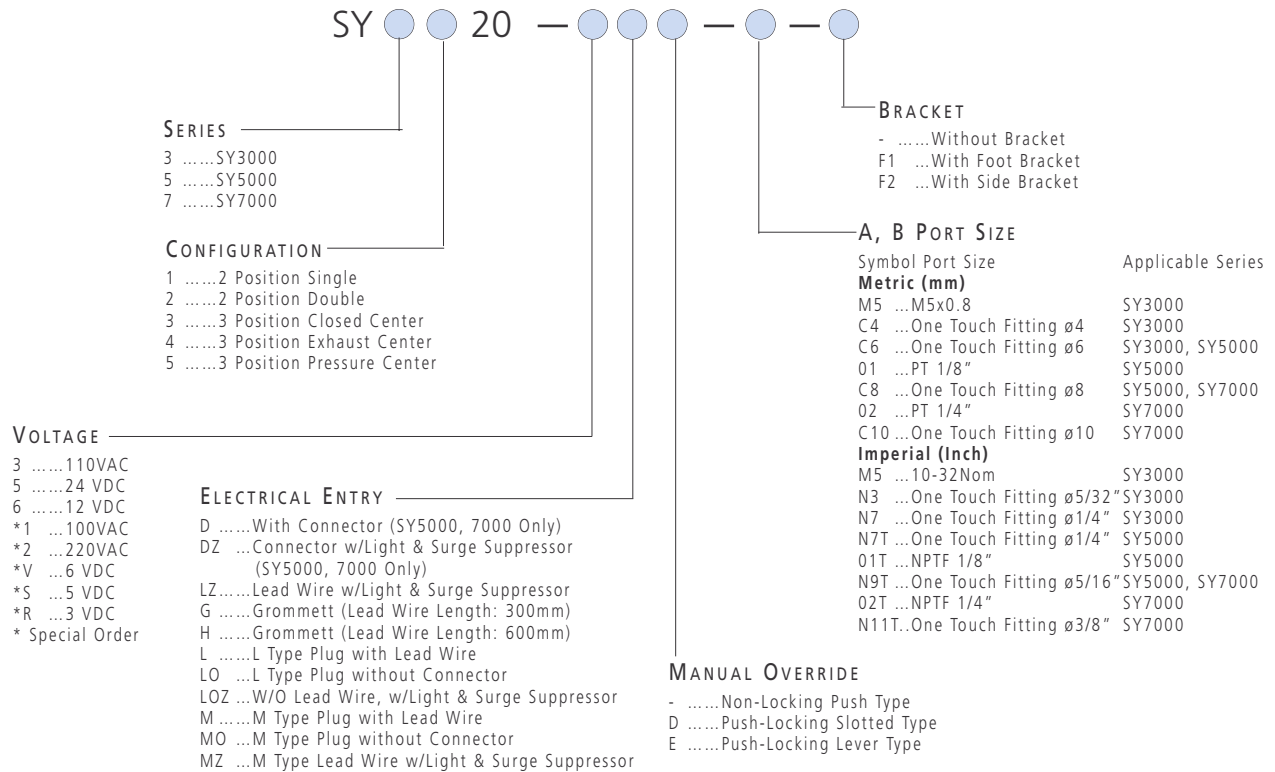
**How To
 ORDER**

**BODY PORTED/BAR MANIFOLD W/INDIVIDUAL LEAD WIRE
 SY3/5/7000**



**How To
 ORDER**

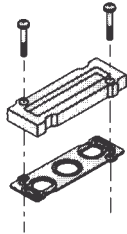
BODY PORTED W/INDIVIDUAL LEAD WIRE SY3/5/7000



SOLENOID VALVES SERIES SY3000/5000/7000

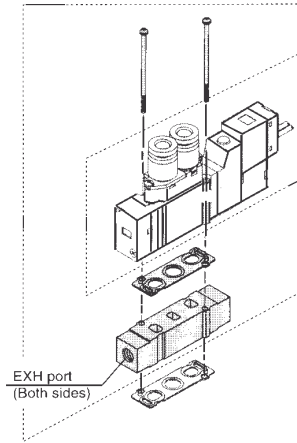
MANIFOLD
OPTIONS

BLANKING PLATE ASSEMBLY



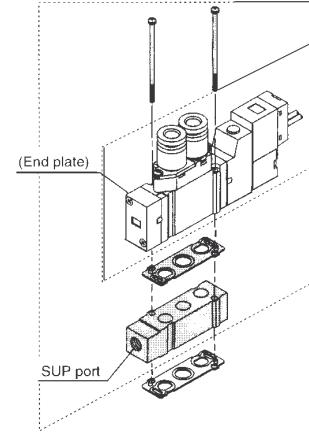
	Ass'y part no.
SY3000	SY3000-26-1A
SY5000	SY5000-26-1A
SY7000	SY7000-26-1A

INDIVIDUAL/EXH SPACER ASSEMBLY



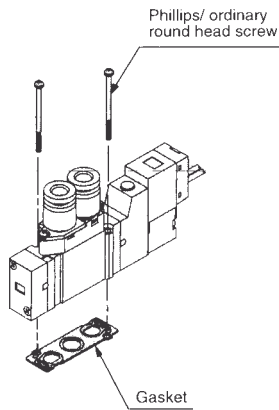
Series	Assembly No	Port Size
SY3000	SY3000-39-1A	M5 (10-32Nom)
SY5000	SY5000-39-1A	PT 1/8
SY5000	SY5000-39-1TA	NPTF 1/8
SY7000	SY7000-39-1A	PT 1/4
SY7000	SY7000-39-1TA	NPTF 1/4

INDIVIDUAL/SUP SPACER ASSEMBLY



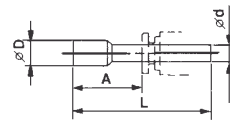
Series	Assembly No	Port Size
SY3000	SY3000-38-1A	M5 (10-32Nom)
SY5000	SY5000-38-1A	PT 1/8
SY5000	SY5000-38-1TA	NPTF 1/8
SY7000	SY7000-38-1A	PT 1/4
SY7000	SY7000-38-1TA	NPTF 1/4

BOLT / GASKET



	Phillips/ordinary round head screw	Gasket
SY3000	SY3000-23-4 (M2 x 21)	SY3000-11-3
SY5000	M3 x 26 (Non-gloss nickel plating)	SY5000-11-1
SY7000	M4 x 31 (Non-gloss nickel plating)	SY7000-11-1

PORT PLUGS



Inserts easily into unused cylinder ports and/or SUP/EXH Ports. The minimum quantity to order is 10 pieces.

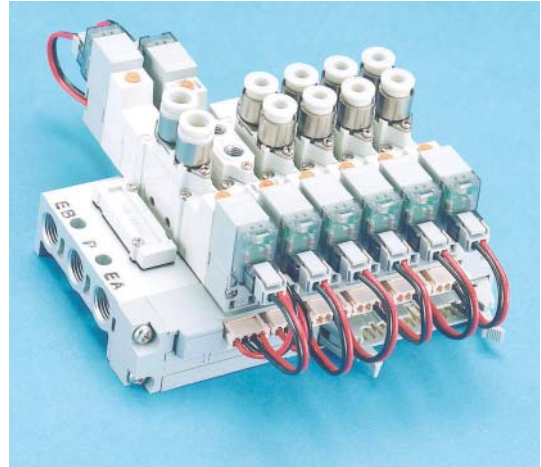
Applicable Fitting Size ød	Model	A	L	D
ø4mm	KQP-04	16	32	6
ø5/32"	KQP-03	16	32	6
ø6mm	KQP-06	18	35	8
ø1/4"	KQP-07	18	35	8
ø8mm	KQP-08	20.5	39	10
ø5/16"	KQP-09	20.5	39	10
ø10mm	KQP-10	22	43	12
ø3/8"	KQP-11	22	43	12

BRACKET ASSEMBLY NUMBER (IF ORDERED SEPARATELY)

F1 Type	SX3/5/7000-16-2A (With Mounting Screw)
F2 Type	SX3/5/7000-16-1A (With Mounting Screw)

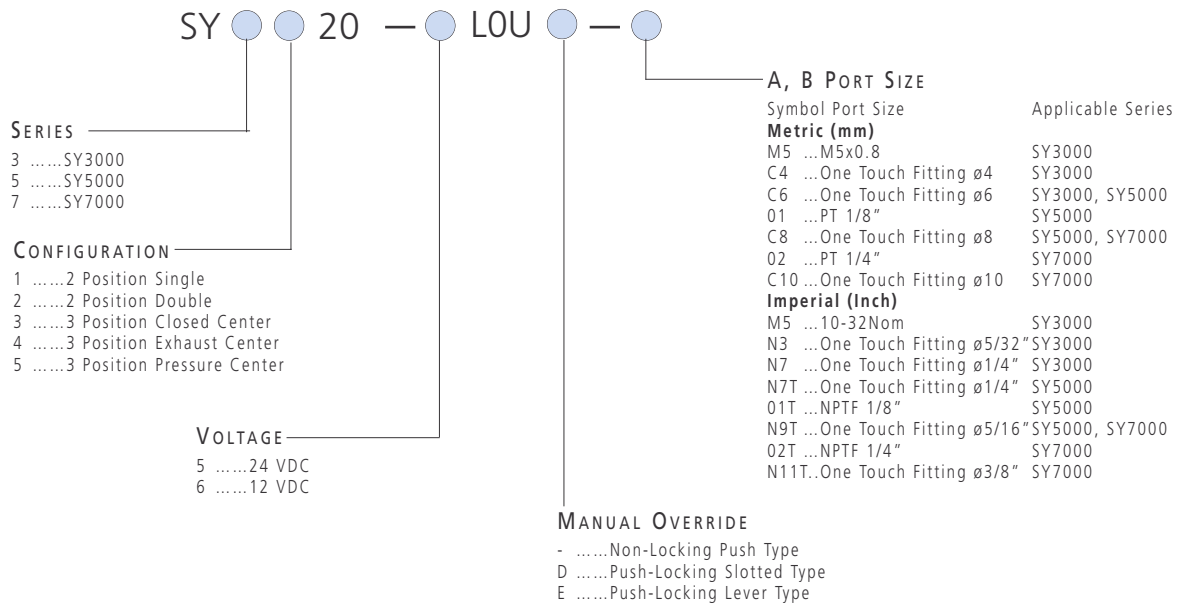
**BODY PORTED/BAR MANIFOLD
 FLAT CABLE TYPE
 SY3000/5000/7000**

- ✓ Direct Piping to Main Body of Valve
- ✓ Up to 20 Valve Stations
- ✓ Threaded and Push-In Fittings
- ✓ Lightweight Aluminum Construction
- ✓ Combination of Fittings possible



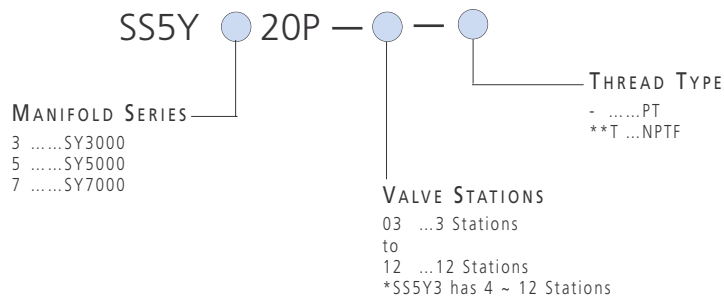
**How To
 ORDER**

**BODY PORTED W/FLAT CABLE MANIFOLD
 SY3/5/7000**



**How To
 ORDER**

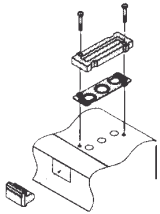
FLAT RIBBON CABLE MANIFOLD SY3/5/7000



SOLENOID VALVES SERIES SY3000/5000/7000

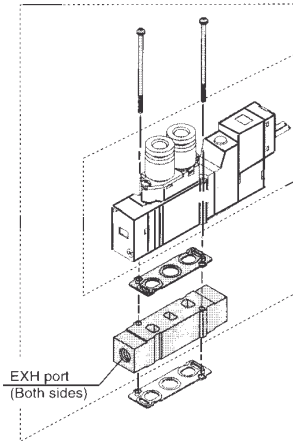
MANIFOLD
OPTIONS

BLANK PLATE ASSEMBLY



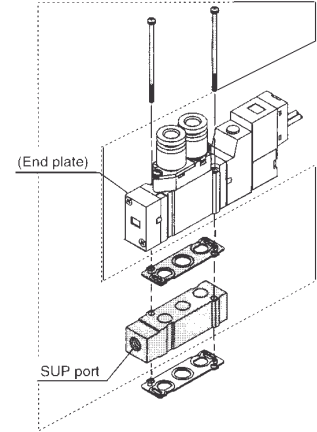
	Ass'y part no.
SY3000	SY3000-26-3A
SY5000	SY5000-26-3A
SY7000	SY7000-26-3A

INDIVIDUAL/EXH SPACER ASSEMBLY



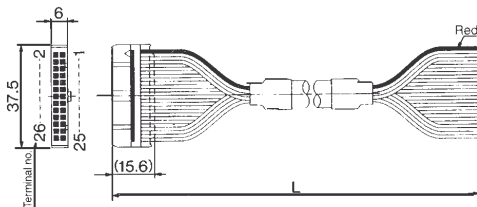
Series	Assembly No	Port Size
SY3000	SY3000-39-1A	M5 (10-32Nom)
SY5000	SY5000-39-1A	PT 1/8
SY5000	SY5000-39-1TA	NPTF 1/8
SY7000	SY7000-39-1A	PT 1/4
SY7000	SY7000-39-1TA	NPTF 1/4

INDIVIDUAL/SUP SPACER ASSEMBLY



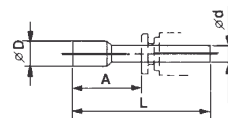
Series	Assembly No	Port Size
SY3000	SY3000-38-1A	M5 (10-32Nom)
SY5000	SY5000-38-1A	PT 1/8
SY5000	SY5000-38-1TA	NPTF 1/8
SY7000	SY7000-38-1A	PT 1/4
SY7000	SY7000-38-1TA	NPTF 1/4

FLAT RIBBON CABLE ASSEMBLY AXT100-FC26(1/2/3)



Cable Length (L)	Assembly Number	Note
1.5m	AXT100-FC26-1	Cable 26 CoreX28AWG
3m	AXT100-FC26-2	Cable 26 CoreX28AWG
5m	AXT100-FC26-3	Cable 26 CoreX28AWG

PORT PLUGS



Inserts easily into unused cylinder ports and/or SUP/EXH Ports. The minimum quantity to order is 10 pieces.

Applicable Fitting Size ød	Model	A	L	D
ø4mm	KQP-04	16	32	6
ø5/32"	KQP-03	16	32	6
ø6mm	KQP-06	18	35	8
ø1/4"	KQP-07	18	35	8
ø8mm	KQP-08	20.5	39	10
ø5/16"	KQP-09	20.5	39	10
ø10mm	KQP-10	22	43	12
ø3/8"	KQP-11	22	43	12

SERIES SY3000/5000/7000



BASE MOUNTED VALVE SY3000/5000/7000

- ✓ Low Power Consumption : 0.5W
- ✓ Compact Design, Large Flow Capacity
- ✓ High Life Expectancy ; >50 million cycles
- ✓ Quick Response Time
- ✓ Serial Interface Option

TECHNICAL SPECIFICATIONS

Series		SY3000	SY5000	SY7000
Fluid		Air, Lubrication Not Required		
Internal Pilot	2 Position Single	22 ~ 100PSI / 0.15 ~ 0.7MPa		
Operating Pressure Range	2 Position Double 3 Position	25 ~ 100PSI / 0.1 ~ 0.7MPa 30 ~ 100PSI / 0.2 ~ 0.7MPa		
External Pilot	Pilot 2 Position Single	37 ~ 100PSI / 0.25 ~ 0.7MPa		
Operating Pressure Range	Pressure 2 Position Range 3 Position	37 ~ 100PSI / 0.25 ~ 0.7MPa 37 ~ 100PSI / 0.25 ~ 0.7MPa		
Ambient & Fluid Temperature		-10 ~ 50°C / 14 ~ 122°F		
Max Operating Frequency / Hz	2 Position Single/Double 3 Position	10 10	5 3	5 3
Pilot Exhaust	Internal Pilot External Pilot	Common Exhaust for Main & Pilot Individual Exhaust for Pilot Valve		
Mounting Position		Free		
Cv Factor		0.3	0.7	1.2

MODEL RESPONSE TIME SERIES SY3/5/7000

Model	Configuration	Response Time ms 71 PSI / 0.5MPa	
		W/O Indicator Light & Surge Suppressor	With Indicator Light & Surge Suppressor
SY3000	2 Position Single	12 or less	15 or less
	2 Position Double	10 or less	13 or less
	3 Position	15 or less	20 or less
SY5000	2 Position Single	19 or less	26 or less
	2 Position Double	18 or less	22 or less
	3 Position	32 or less	38 or less
SY7000	2 Position Single	31 or less	38 or less
	2 Position Double	27 or less	30 or less
	3 Position	50 or less	56 or less

HOW TO
ORDER
SEE NEXT PAGE 

SOLENOID VALVES SERIES SY3000/5000/7000

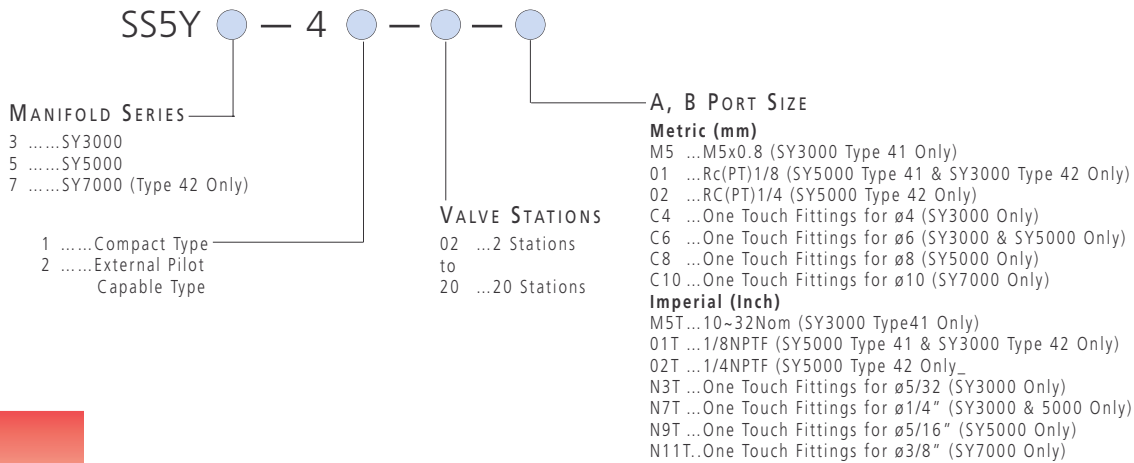
BASE MOUNTED/BAR MANIFOLD INDIVIDUAL WIRING TYPE SY3000/5000/7000

- ✓ Facilitates maintenance when valves are changed
- ✓ Up to 20 Valve Stations
- ✓ Threaded and Push-In Fittings
- ✓ Lightweight Aluminum Construction
- ✓ Vacuum Low Pressure Combination System is Available (Type 42 Only)



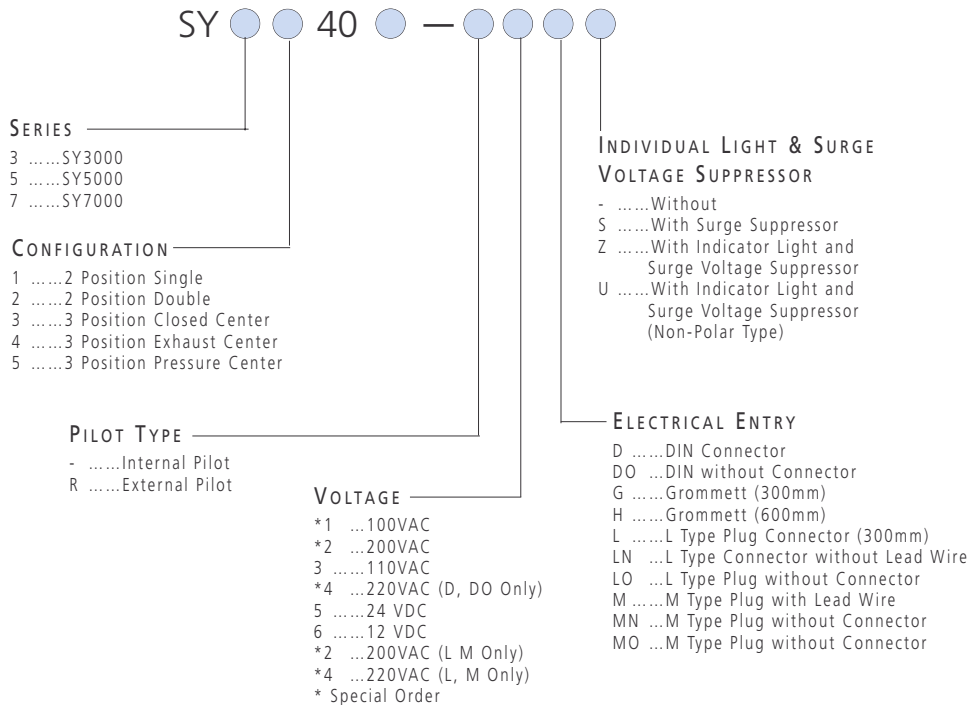
**How To
ORDER**

BASE MOUNTED/BAR MANIFOLD W/INDIVIDUAL LEAD WIRE
SY3/5/7000



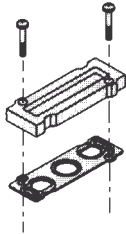
**How To
ORDER**

BASE MOUNTED VALVE W/INDIVIDUAL LEAD WIRE SY3/5/7000



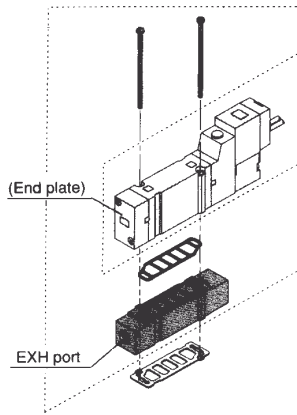
**MANIFOLD
OPTIONS**

BLANKING PLATE ASSEMBLY



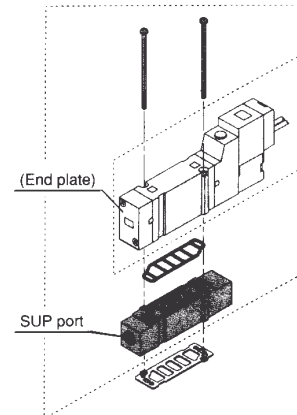
Series	Assembly Part No
SY3000	SY3000-26-2A
SY5000	SY5000-26-2A
SY7000	SY7000-26-2A

INDIVIDUAL/EXH SPACER ASSEMBLY



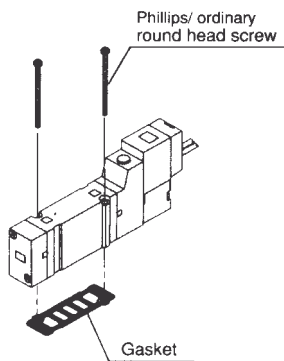
Series	Assembly No	Port Size
SY3000	SY3000-39-2A	M5x0.8 (10-32Nom)
SY5000	SY5000-39-2A	PT 1/8
SY5000	SY5000-39-2TA	NPTF 1/8
SY7000	SY7000-39-2A	PT 1/4
SY7000	SY7000-39-2TA	NPTF 1/4

INDIVIDUAL/SUP SPACER ASSEMBLY



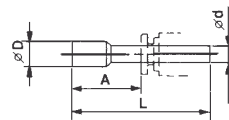
Series	Assembly No	Port Size
SY3000	SY3000-38-2A	M5x0.8 (10-32Nom)
SY5000	SY5000-38-2A	PT 1/8
SY5000	SY5000-38-2TA	NPTF 1/8
SY7000	SY7000-38-2A	PT 1/4
SY7000	SY7000-38-2TA	NPTF 1/4

BOLT / GASKET



Series	Phillips /Ordinary Round Head Screw	Gasket
SY3000	SY3000-23-4 (M2x21)	SY3000-11-8
SY5000	M3x26 (Non Glare Nickel Plating)	SY5000-11-2
SY7000	M4 x 31 (Non Glare Nickel Plating)	SY7000-11-2

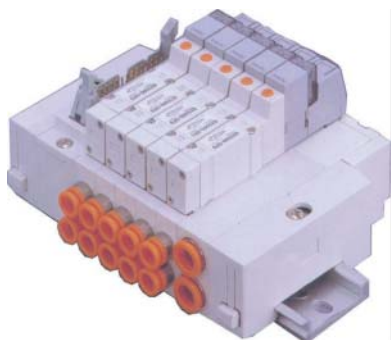
PORT PLUGS



Inserts easily into an unused cylinder port and/or SUP/EXH Ports. The minimum quantity to order is 10 pieces.

Applicable Fitting Size ød	Model	A	L	D
ø4mm	KQP-04	16	32	6
ø5/32"	KQP-03	16	32	6
ø6mm	KQP-06	18	35	8
ø1/4"	KQP-07	18	35	8
ø8mm	KQP-08	20.5	39	10
ø5/16"	KQP-09	20.5	39	10
ø10mm	KQP-10	22	43	12
ø3/8"	KQP-11	22	43	12

SOLENOID VALVES SERIES SY3000/5000/7000

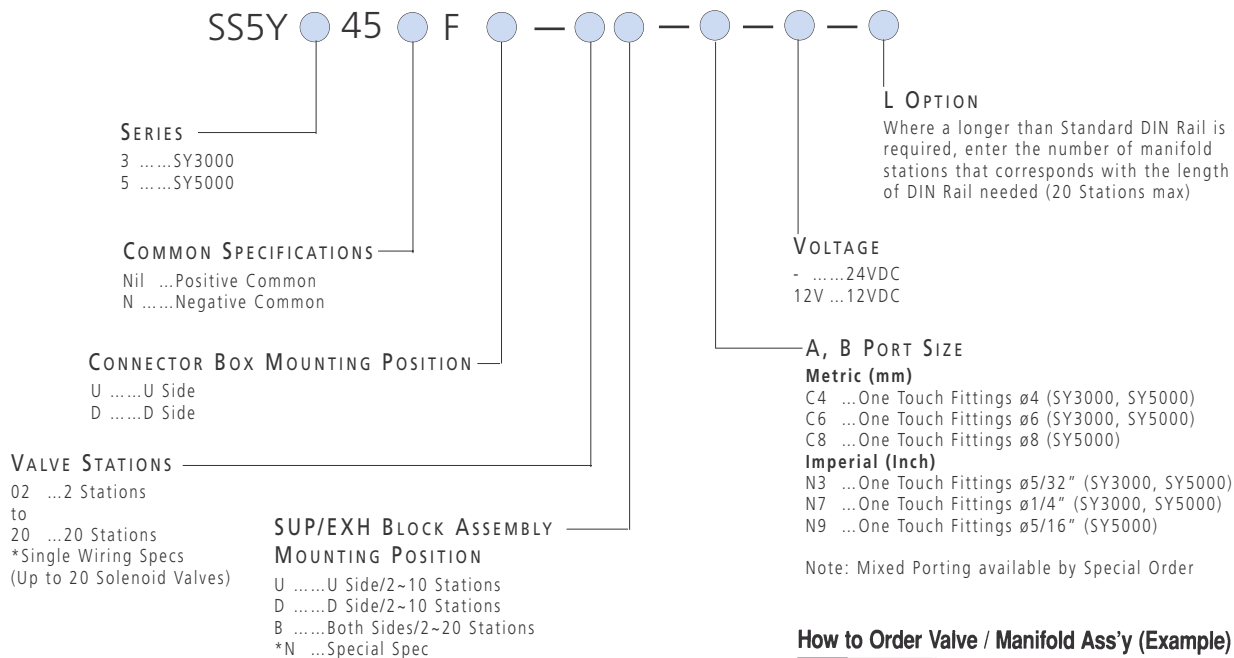


BASE MOUNTED PLUG-IN DIN RAIL MOUNTED STACKING TYPE MANIFOLD SY3000/5000

- ✓ Number of Stations can be increased on DIN Rail
- ✓ Easy Electrical Connection
- ✓ Threaded or Push In Fittings
- ✓ Compact, Lightweight and Aesthetic

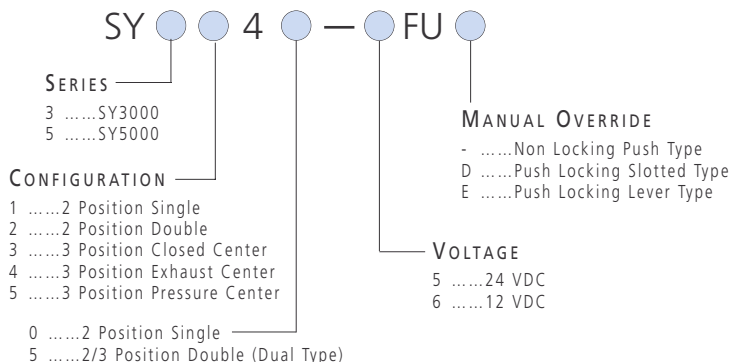
HOW TO ORDER

BASE MOUNTED MANIFOLD 45F TYPE (D-SUB CONNECTOR 25 POLE)



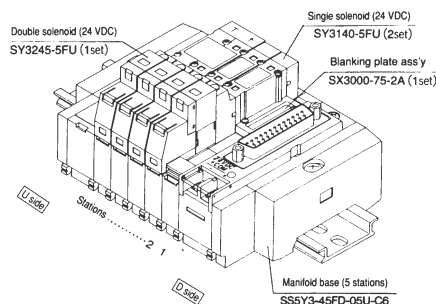
HOW TO ORDER

BASE MOUNTED VALVE 45F, 45P TYPE



How to Order Valve / Manifold Ass'y (Example)

Ordering example (45F type / D-sub connector (25-pole))



- SSSY3-45FD-05U-C6 1set (45F type D-sub connector 5-station manifold base no.)
 - + SY3000-75-2A 1set (Blanking plate ass'y no.)
 - + SY3140-5FU 2set (Single solenoid no.)
 - + SY3245-5FU 1set (Double solenoid no.)
- * When ordering Double Solenoid Valves / 3 Position (Dual Body Type), please keep in mind that they require two manifold stations.

HOW TO ORDER

SERIES SY MANIFOLD 45P TYPE / FLAT CABLE TYPE



MANIFOLD SERIES
 3SY3000
 5SY5000

COMMON SPECIFICATIONS
 Nil ...Positive Common
 NNegative Common

CONNECTOR POLES

Symbol	Poles	Station
-	26	2~20
B	20	2~16
H	10	2~8

CONNECTOR MOUNTING POSITION
 UU Side
 DD Side

VALVE STATIONS (BLANKING PLATE ASSEMBLY ARE INCLUDED)

26 Pole (P) Connector			20 Pole (PG) Connector			10 Pole (PH) Connector		
Symbol	Station	Note	Symbol	Station	Note	Symbol	Station	Note
02	2	Single	02	2	Single	02	2	Single
..	..	Wiring Specs	..	..	Wiring Specs	..	..	Wiring Specs
20	20	Applicable up to 20 Solenoid	16	16	Applicable up to 16 Solenoids	08	08	Applicable up to 8 Solenoids

A, B PORT SIZE

SY3000
 Metric (mm) Imperial (Inch)
 C4 ...OTF for ø4 N3 ...OTF for ø5/32"
 C6 ...OTF for ø6 N7 ...OTF for ø1/4"

SY5000
 Metric (mm) Imperial (Inch)
 C4 ...OTF for ø4 N3 ...OTF for ø5/32"
 C6 ...OTF for ø6 N7 ...OTF for ø1/4"
 C8 ...OTF for ø8 N9 ...OTF for ø5/16"

* Mixed Porting Available by Special Order

OPTION
 When a longer than Standard DIN Rail is required, enter the number of Manifold Station that corresponds with the length of DIN Rail needed (20 Stations Max)

VOLTAGE
 -24VDC
 12V ...12 VDC

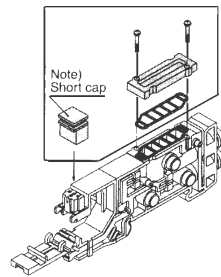
SUP/EXH BLOCK ASSEMBLY MOUNTING POSITIONS

UU Side - 2 ~ 10 Stations
 DD Side - 2 ~ 10 Stations
 BBoth Sides - 2 ~ 20 Stations
 *M ...Special Specifications (by Special Order)

MANIFOLD OPTIONS

Manifold Options

■ **Blank plate ass'y**



	Ass'y part no.
SY3000	SY3000-75-2A
SY5000	SY5000-76-2A

Note) -When mounting a blank plate, be sure to mount a short cap.
 -Two pcs. are necessary for the double, 3-position type (dual body type).

■ **SUP block disc**

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.



	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

■ **EXH block disc**

When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to isolate exhaust.



	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

■ **Block disc indication label**

These labels are stuck on the block with SUP and EXH block discs inside for confirmation from outside. (3 sheets respectively)

VZ3000-123-1A (Both for SX3000 / 5000)

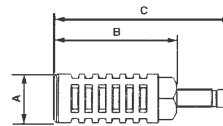
Label for SUP block disc Label for EXH block disc Label for SUP / EXH block disc



Note) When ordering block disc installed at the factory, labels will be attached to the manifold showing the locations.

■ **Silencer for One-touch fitting**

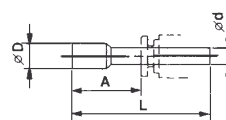
The silencer plugs directly into the One-touch fittings(R port) of the manifold.



	Part no.	Effective orifice	A	B	C
SY3000 (ø8)	AN203-KM8	14mm ²	ø16	26	51
	AN200-KM10	26mm ²	ø22	53.8	80.8
SY5000 (ø10)	AN300-KM10	30mm ²	ø25	70	97

Applicable Fitting Size ød	Model	A	L	D
ø4mm	KQP-04	16	32	6
ø5/32"	KQP-03	16	32	6
ø6mm	KQP-06	18	35	8
ø1/4"	KQP-07	18	35	8
ø8mm	KQP-08	20.5	39	10
ø5/16"	KQP-09	20.5	39	10
ø10mm	KQP-10	22	43	12
ø3/8"	KQP-11	22	43	12

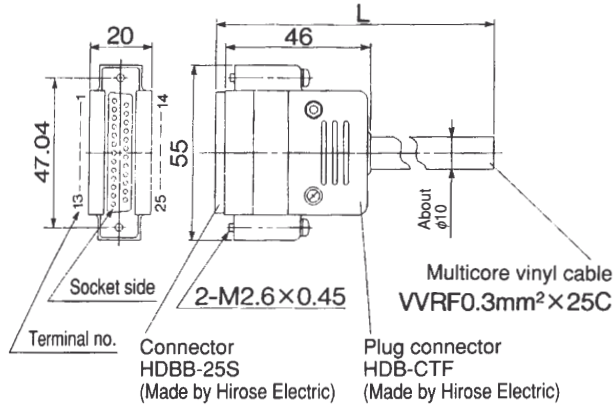
PORT PLUGS



Inserts easily into an unused cylinder port and/or SUP/EXH Ports. The minimum quantity to order is 10 pieces.

SOLENOID VALVES SERIES SY3000/5000/7000

CABLE ASSEMBLIES FOR TYPE 45 PRE-WIRED MANIFOLDS



Wire color table by terminal number of D-sub connector cable ass'y

Terminal No.	Lead wire color	Dot marking
1	Black	-
2	Brown	-
3	Red	-
4	Orange	-
5	Yellow	-
6	Pink	-
7	Blue	-
8	Violet	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Violet	-
18	Gray	-
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	-

D-Sub Connector Cable Assembly

Cable Length (L)	Assembly No	Note
1.5m	VVZS3000-21A-1	Cable 25
3m	VVZS3000-21A-2	- Core
5m	VVZS3000-21A-3	x 24AWG

Electric Characteristics

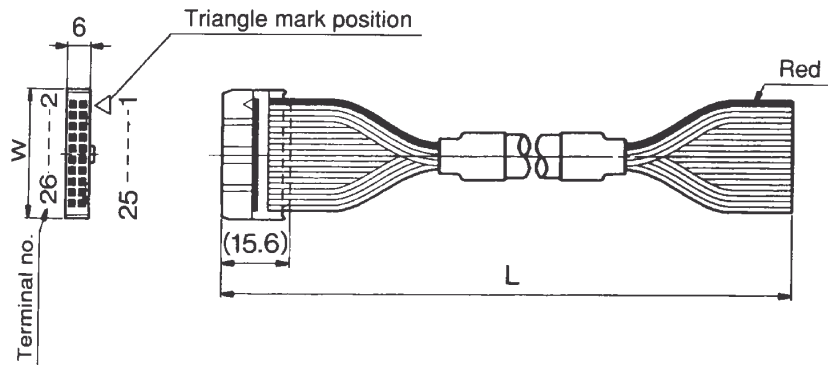
Item	Characteristics
Conductor Resistance /km, 20°C	65 or less
Voltage Limit V, 1 min, AC	1000
Insulation Resistance M km, 20°C	5 or more

* For other commercial connectors, use a 25-pole female connector made in conformity with MIL-C-24308.

Note) The minimum bending radius of D-Sub Connector Cable Assembly is 20mm.

■ Flat Cable Connector / Cable Ass'y

AXT100-FC□ - $\frac{1}{3}$



ACCESSORIES

FLAT CABLE CONNECTOR ASSEMBLY

Cable Length	10 Pole	20 Pole	26 Pole
1.5m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector Width	17.2	30	37.5

3/2 DIRECT ACTING SOLENOID VALVE M3-M5 PORT SERIES VQ100

- ✓ High Speed Repeatable Response - on 3.5ms, off 1.5ms
- ✓ Long Life Expectancy - 200 million cycles
- ✓ Compact Lightweight Construction -10mm Body Width
- ✓ Low Power Consumption 1 Watt (0.5 Watt Option)
- ✓ Latching, Clean Room and Vacuum Valve Options Available
- ✓ Normally Open Version Available
- ✓ LED Indication and Surge Suppression is Standard
- ✓ Cv = 0.02 Standard (Cv = 0.04 Option Available)
- ✓ Locking Manual Override Available (Standard on Latching Version)



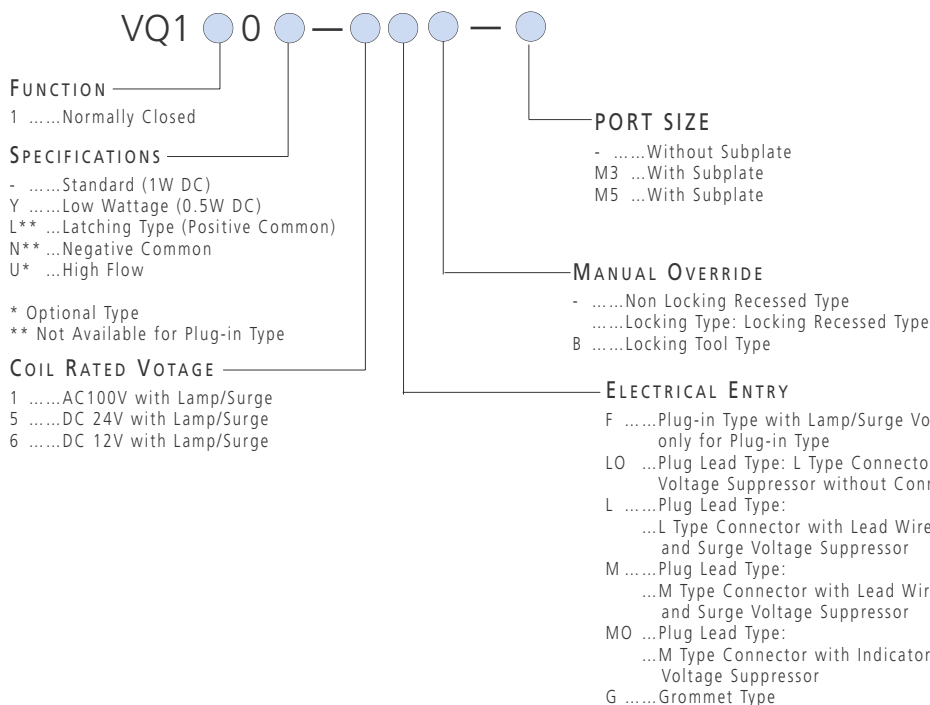
TECHNICAL SPECIFICATIONS

Application	.....1 Watt, 0.8MPa (117PSI) / 6.5 Watt, 0.7MPa (101PSI)
Type of Actuation	.....Direct Operated 3 Port Poppet Type (Normally Closed)
Fluid	.....Air - inert gas
Max Operating Pressure	.....0.8MPa (117PSI) / 0.7MPa (101PSI)
Min Operating Pressure	.....0MPa (0PSI)
Effective Area	.....P-A .....0.28mm ² (Cv 0.016) / 0.14mm ² (Cv 0.008)
	.....A-R .....0.36 mm ² (Cv 0.02) / 0.20mm ² (Cv 0.011)
Response Time	.....ON: 3.5ms OFF: 1.5ms
Ambient and Fluid Temperature	.....-10 - +50°C (14 ~ 122°F)
Lubrication	.....Not Required
Manual Override	.....Non Locking Push Type/Locking Optional
Mounting Position	.....Free
Protection Structure	.....Dust Proof
Weight	.....12.6g (L M Connector Type without Subplate)
Coil Rated Voltage	.....DC .....24V 12V
Allowable Voltage Range	.....±10% of Rated Voltage
Coil Insulation	.....Class B or equivalent
Power Consumption	.....DC .....1W / 0.5W
Electrical Entry	.....Plug In Type, L/M Type Connector (With Lamp/Surge Voltage Suppressor), Grommet



HOW TO ORDER

SOLENOID VALVE SERIES VQ100



ACCESSORIES

CABLE ASSEMBLIES

NEGATIVE COMMON STANDARD

Single	.....AXT661-14-AN-*
Latching	.....AXT661-13-AN-*

POSITIVE COMMON (OPTION AVAILABLE)

Single	.....AXT661-14-A-*
Latching	.....AXT661-13-A-*

* Cable length code

Nil	.....300mm
6	.....600mm
10	.....1000mm
20	.....2000mm
30	.....3000mm

SOLENOID VALVES SERIES VQ100

SERIES VQ100 MANIFOLDS

- ✓ Plug-In Version available up to 18 Stations for use with VQ110-*F Valves (VV3Q11)
- ✓ Standard Option for Individual Wiring up to 20 Stations for use with VQ110 - *LO Valves (VV3Q12)



HOW TO ORDER

MANIFOLDS SERIES VQ100

VV3Q1

MANIFOLD BASE TYPE

- 1Plug In Unit
- 2Plug Lead Unit

NUMBER OF STATIONS

- 02 ...2 Stations to 18 ...18 Stations Available upto 20 Stations for Plug Lead Type

ELECTRICAL ENTRY

- CMulti Connector Type

OPTION

-None
- DDIN Rail Mount

CABLE LENGTH

- 1With 1.5m Cable
- 2With 3m Cable
- 3With 5m Cable

ELECTRICAL ENTRY POSITION

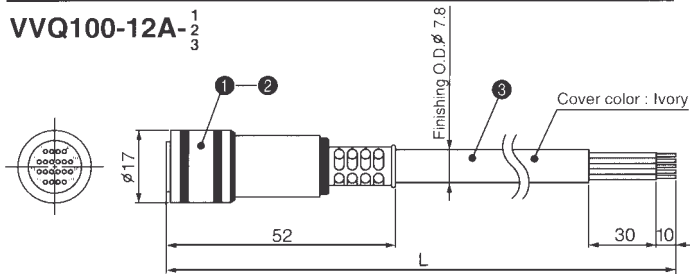
- UUpper
- SSide

ACCESSORIES

PLUG ASSEMBLY SERIES VQ100

Plug Ass'y

VVQ100-12A-¹/₂/₃



1	Plug	RP13A-12PS-20SC <Made by Hirose Electric>
2	Female contact	RP19-SC-222 <Made by Hirose Electric>
3	Vinyl multi-core cable	VVRF 0.2mm ² 20-core

Cable Length

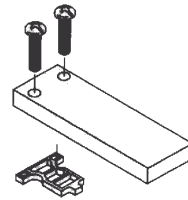
Model	L dimensions
VVQ100-12A-1	1.5m
VVQ100-12A-2	3m
VVQ100-12A-3	5m

ACCESSORIES

VQ100 MANIFOLDS

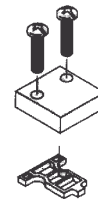
Blanking Plate Kit

for VV3Q11VVQ100-10A-1
(includes fixing screws x2 and gasket)



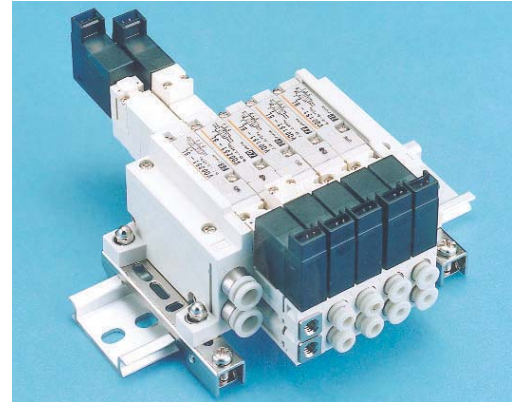
Blanking Plate Kit

for VV3Q12VVQ100-10A-2
(includes fixing screws x2 and gasket)



5 PORT METAL SEAL/RUBBER SEAL ULTRA HIGH SPEED SOLENOID VALVE SERIES VQ0000

- ✔ High Speed Response from new Solenoid Design.
- ✔ Long Life: Over 200 Million Cycles can be achieved with the Special Plunger and Poppet Valve Construction of the Patent Pilot Valve.
- ✔ Space Saving Design
- ✔ Four Options for Electrical Connection.
- ✔ Indicator light and Voltage Surge Suppressor
- ✔ Ease of Assembly and Maintenance.
- ✔ Optimum performance from Metal Seal Valves is achieved when used with a Mist Separator.



TECHNICAL SPECIFICATIONS

Type of Seal	Metal	Rubber
Fluid	Air, Inert Gas	Air, Inert Gas
Min Operating Pressure		
Max Operating Pressure ^(Note 1)	0.75MPa / 109 PSI	0.75MPa / 109 PSI
Effective Area (Cv Factor) mm ²		
Response Time ^(Note 2)	Single	Max 12m sec
	Double	Max 10m sec
	3-position	Max 20m sec
Life		200 million cycles or more
		200 million cycles
Ambient and Fluid Temp ^(Note 3)	-10 to +50°C (14~122°F)	-5 to +50°C (23~122°F)
Lubricant ^(Note 4)	Not required	Not required
Manual Override	Non locking push type	Non locking push type
Protection Structure	Dustproof	Dustproof

^(Note 2) Calculated on the basis of JIS B 8375-1981 (Supply pressure 0.5 MPa [5.1 Bar]; the above valve shows reponse time checked when the valve is equipped with an indicator light and surge voltage suppressor).

^(Note 3) Use dry air to prevent dew condensation in the case when temperature is low.

^(Note 4) Perfect dry air (dew point equals to -30°C) No grease on main valve.

Special types (Contact SMC for details and availability):
 i Pressure centre function
 ii External pilot
 iii Low power consumption (0.5W)
 iv Positive common wiring

	Metal	Rubber
Single	0.1MPa/14.5PSI	0.15MPa/22PSI
Double	0.1MPa/14.5PSI	0.1MPa/14.5PSI
3-Position	0.1MPa/14.5PSI	0.2MPa/29PSI

	Metal	Rubber
Single	2.5 (0-14)	2.7 (0-15)
Double	2.5 (0-14)	2.7 (0-15)
3-Position	2.0 (0-11)	2.7 (0-15)

SYMBOLS

1	2 position single A B R1 P R2
2	2 position double A B R1 P R2
3	3 position closed center A B R1 P R2
4	3 position exhaust center A B R1 P R2
5	3 position pressure center A B R1 P R2

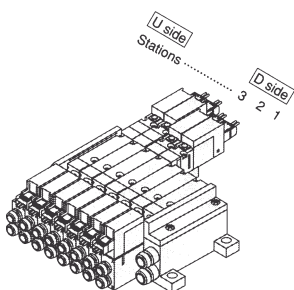
SOLENOID SPECIFICATIONS

Coil rated voltage	12 VDC, 24 VDC	100/110 VAC
Allowable voltage	±10% of rated voltage	±10% of rated voltage
Type of coil insulation	Class B	Class B
Power consumption ^(Note 1)	1W	Inrush/Holding: 1.1 VA (11mA)
Electrical entry	Plug in or connector type	Plug in or connector type

^(Note 1)

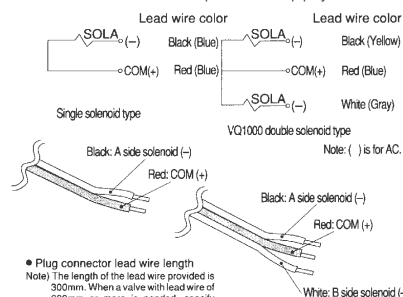
C-KIT (CONNECTOR) SERIES VQ0000

- ✔ Type which has lead wires in plug connected to each valve individually.



WIRING SPECIFICATIONS

- Negative common.
 - The lead wires are connected to the valve as shown below.
- Connect each to the power supply side.



● Plug connector lead wire length

^(Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Example) Lead wire length 1000mm
 VQ1110-SLO 3 pcs.
 AXT661-14A-10 3 pcs.

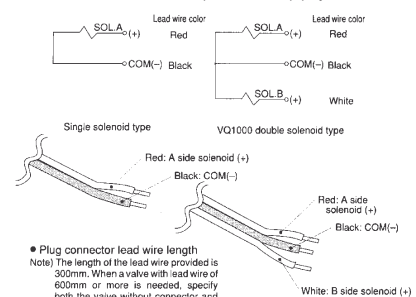
Connector ass'y No. (DC)

Lead wire length	No. for single & VQ0000 double types		No. for VQ1000 double type
	AXT661-12A		
Socket (3 pcs.)			
300mm	AXT661-14A		AXT661-13A
600mm	AXT661-14A-6		AXT661-13A-6
1000mm	AXT661-14A-10		AXT661-13A-10
2000mm	AXT661-14A-20		AXT661-13A-20
3000mm	AXT661-14A-30		AXT661-13A-30

^(Note) Regarding the AC type, AXT661-31A-# applies to the single type and AXT661-32A-# to the double type.

WIRING SPECIFICATIONS

- Positive common, Eg Serial Transmission.
 - The lead wires are connected to the valve as shown below.
- Connect each to the power supply side.



● Plug connector lead wire length

^(Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Example) Lead wire length 1000mm
 VQ1110-SLO 3 pcs.
 AXT661-14AN-10 3 pcs.

Connector ass'y No.

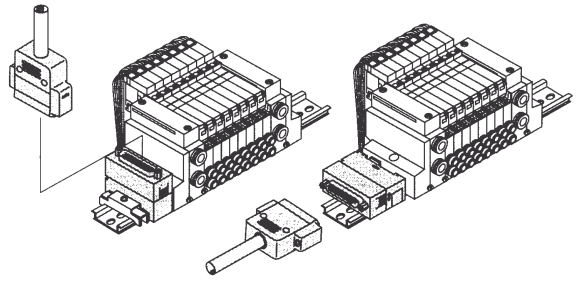
Lead wire length	No. for single & VQ0000 double types		No. for VQ1000 double type
	AXT661-12A		
Socket (3 pcs.)			
300mm	AXT661-14AN		AXT661-13AN
600mm	AXT661-14AN-6		AXT661-13AN-6
1000mm	AXT661-14AN-10		AXT661-13AN-10
2000mm	AXT661-14AN-20		AXT661-13AN-20
3000mm	AXT661-14AN-30		AXT661-13AN-30

^(Note) Use negative COM type values for negative COM specification manifolds.

SOLENOID VALVES SERIES VQ0000

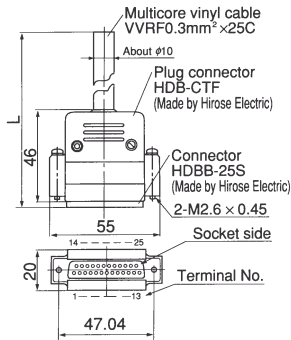
F KIT (D-SUB CONNECTION) SERIES VQ0000

- ✓ The D-sub connector permits simple rationalization and installation labor saving for electrical connection.
- ✓ The D-sub connector (25-pin std., 15-pin option) conforms with MIL permitting use of commercial connectors with wide interchangeability.
- ✓ Top or side connector receptacle position can be selected in accordance with the available mounting space.
- ✓ Standard max 8 stations (Optional 16 stations possible).



VVZS3000-21A-¹/₃

(The D-sub connector cable ass'y can be ordered individually or included with a specific manifold model no. Refer to "How to Order/Manifold".



Note) Types with 15-pin are also available.

D-Sub connector cable assembly (Option)

Cable Length (L)	Assembly No.	Note
1.5m	VVZS3000-21A-1	Cable 25-core x 24AWG
3m	VVZS3000-21A-2	
5m	VVZS3000-21A-3	

*For other commercial connectors, use a 25-pin female connector made in conformity with MIL-C-24308

Where color table by terminal number of D-Sub connector cable assembly:

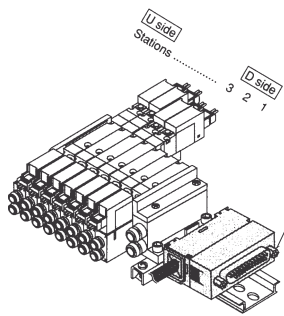
Terminal No.	lead wire colour	Dot marking
1	Black	-
2	Brown	-
3	Red	-
4	Orange	-
5	Yellow	-
6	Pink	-
7	Blue	-
8	Violet	White
9	Grey	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Violet	-
18	Grey	-
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Grey	Red
24	Black	White
25	White	-

Electric Characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩkm, 20°C	5 or more

Note) The min. bending radius of D-Sub cable assembly is 20mm.

Electrical Wiring Specifications



D-sub connector

Connector terminal No.

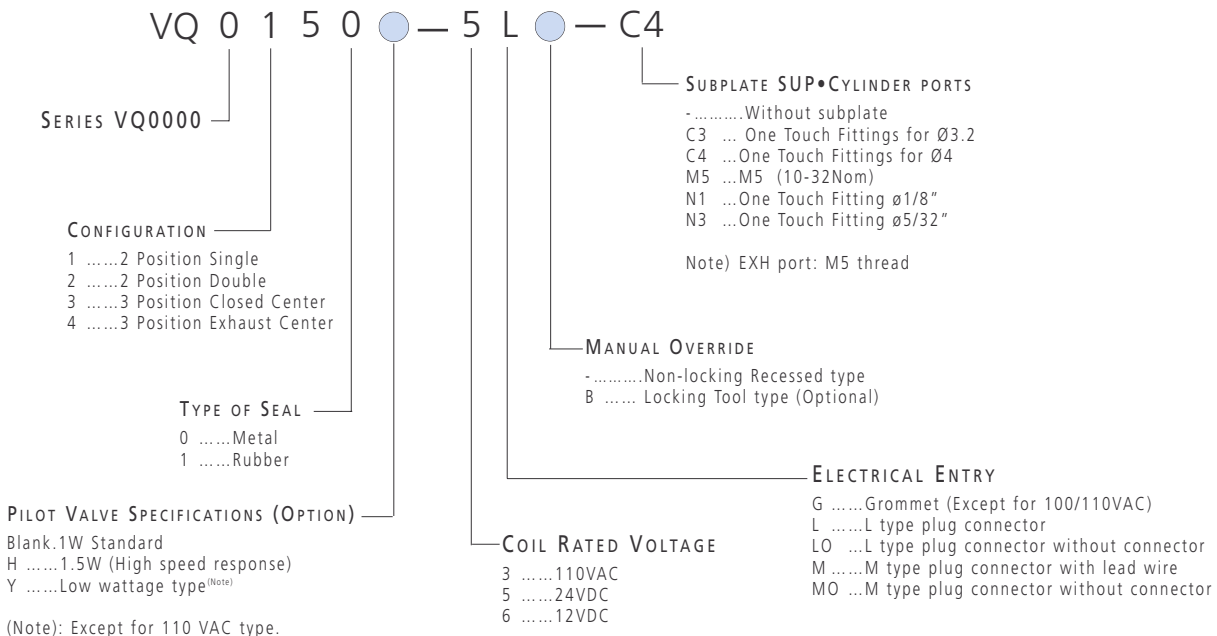
Terminal No.	Polarity	D-sub cable ass'y (VVZS3000-21A-*) wire color table	
		Lead wire color	Dot marking
1 station	SOLA ₁	1 (-)	(+) Black —
	SOLB ₁₄	14 (-)	(+) Yellow Black
2 stations	SOLA ₂	2 (-)	(+) Brown —
	SOLB ₁₅	15 (-)	(+) Pink Black
3 stations	SOLA ₃	3 (-)	(+) Red —
	SOLB ₁₆	16 (-)	(+) Blue White
4 stations	SOLA ₄	4 (-)	(+) Orange —
	SOLB ₁₇	17 (-)	(+) Purple —
5 stations	SOLA ₅	5 (-)	(+) Yellow —
	SOLB ₁₈	18 (-)	(+) Gray —
6 stations	SOLA ₆	6 (-)	(+) Pink —
	SOLB ₁₉	19 (-)	(+) Orange Black
7 stations	SOLA ₇	7 (-)	(+) Blue —
	SOLB ₂₀	20 (-)	(+) Red White
8 stations	SOLA ₈	8 (-)	(+) Purple White
	SOLB ₂₁	21 (-)	(+) Brown White
COM-13	(+)	Note) (-) Orange	Red

Positive COM Negative COM

These figures show the standard internal wiring for double solenoid capability provided for each station.

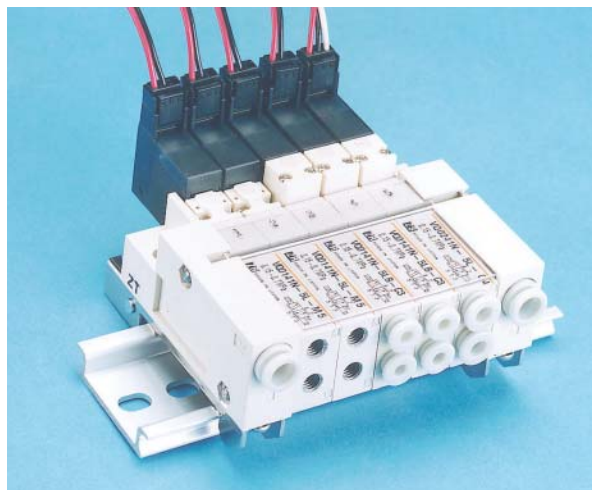
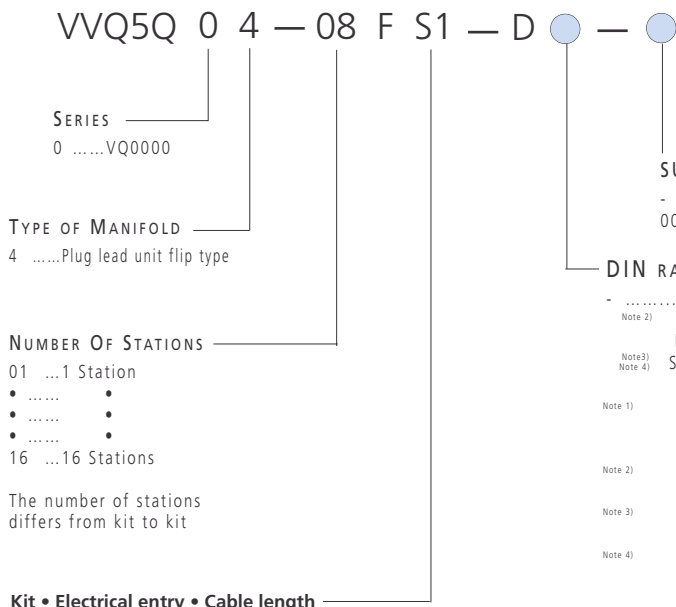
Note) Use negative COM type valves for negative COM specification manifolds.

**HOW TO
ORDER
BASE MOUNTED TYPE VALVE
SINGLE UNIT VQ0000**



BODY PORTED TYPE PLUG LEAD UNIT/FLIP TYPE

HOW TO ORDER MANIFOLD



SUP/EXH PORT
-Metric (mm)
00T ...Imperial (Inch)

DIN RAIL/OPTION

-None (C Kit only)
- Note 2) D...DIN Rail Mounted
- N...With Nameplate
- Note 3) Note 4) S...Built-in Silencer (Direct Exhaust)

Note 1) When more than one option is desired, combine symbols in alphabetical order. Example) -DNS

Note 2) All F, P, and S kits are of DIN rail mounted type, so include suffix "D".

Note 3) All VQ0000 series are provided with a built-in silencer (direct exhaust) so include suffix "S".

Note 4) F, P, and S kits are provided with an exhaust on one side while C kits are with an exhaust on both sides.

F kit (D-sub connection)

Side entry (Note 2) 25-pin, Top entry (Note 2) 25-pin

Connector Location				
Top (vertical)	Side (horizontal)	Kit	Without cable	
U0	S0	Kit	Without cable	Note 1) Max. 8 stations
U1	S1	Kit	With cable (1.5m)	
U2	S2	F	With cable (3m)	
U3	S3	F	With cable (5m)	

C kit (Connector)

Kit	Connector	Max. stations
C	Connector	Max 16 stations

S kit (Serial transmission unit) Compatible only with 24VDC valves.

Kit	Without SI unit	Max. stations
A	Without SI unit	Max. 16 stations (Single)
B	With general type SI unit	Max. 8 stations (Double)
C	With SI unit for Mitsubishi, MELSEC-A	
D	With SI unit for Omron, SYSMAC	
D	With SI unit for Sharp, New satellite	

Note 1) The max. standard stations are 8. With single wiring, arrangement of up to 16 stations is possible. Specify the arrangement of stations using the manifold specification form for more than 8 stations.

Note 2) Other than those above, F and P kits with different number of pins are available.

HOW TO ORDER VALVE

VQ 0 1 4 0 N - 5 L - C6

SERIES
0VQ0000

CONFIGURATION

1	2 position single A B R1 P R2
2	2 position double (latching) A B R1 P R2

TYPE OF SEAL
0 Metal
1 Rubber

PILOT VALVE SPECIFICATIONS
-1W (Standard)
H.....1.5W (High speed reponse)
Note1 Y.....Low Wattage (0.5W)
NNegative Common

COIL VOLTAGE

3 .....110VAC	} With indicator light and surge voltage suppressor.
5 .....24VDC	
6 .....12VDC	

CYLINDER PORTS
C3 One Touch Fittings for ø3.2
C4 One Touch Fittings for ø4
M5 M5 (10-32Nom)
N1 One Touch Fittings ø1/8"
N3 One Touch Fittings ø5/32"

MANUAL OVERRIDE

(Blank) Non-locking recessed type	(Note1) B Locking tool type
-----------------------------------	-----------------------------

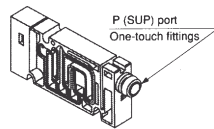
CONFIGURATION

L:L type Plug connector with lead wire	
LO:L type Plug connector without connection	
M:M type Plug connector with lead wire	
MO:M type Plug connector without connection	

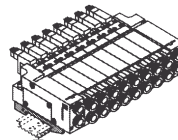
Note1) LO and MO valves are used for F, P, and S kits.
Note 2) The plug connector and lead wire are attached to the manifold.
Note 3) The connector direction in the case of L and M types is based on the pilot valve.
Note 4) Grommet type (G) is also available for C-kit, single type of VQ0000/1000/2000. (Except for 110VAC)

ACCESSORIES MANIFOLD OPTIONS

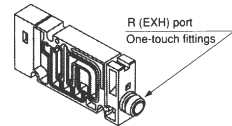
INDIVIDUAL SUP SPACER
VVQ0000-P-4-C4



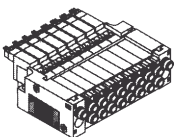
DIN RAIL MOUNTED BRACKET [-D]
VVQ0000-57A-4



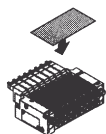
INDIVIDUAL EXH SPACER
VVQ0000-R-4-C4



**BUILT IN SILENCER,
DIRECT EXHAUST [-S]**



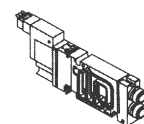
NAMEPLATE [-N4]
VVQ0000-N4-STATION



BLANKING PLUG KQP



block valve VQ□⁰/₂4⁰-□-□□□-□

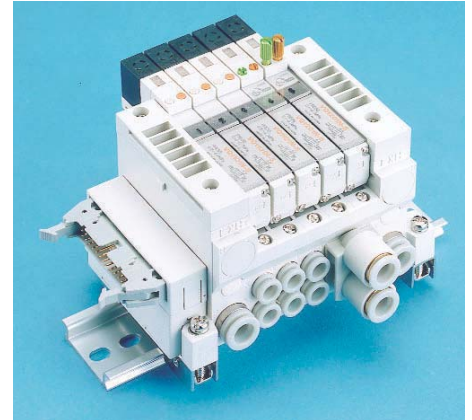


23
04
06
08
01
03

SOLENOID VALVES SERIES VQ1000

5 PORT METAL SEAL/RUBBER SEAL ULTRA HIGH SPEED SOLENOID VALVE SERIES VQ1000

- ✓ High Speed Response from new Solenoid Design.
- ✓ Long Life: Over 200 Million Cycles can be with Patent Pilot Valve design.
- ✓ Indicator light and Voltage Surge Suppressor
- ✓ Space Saving Design
- ✓ Five Options for Manifold Electrical Connection.
- ✓ Plug lead and Plug In valve manifold options.
- ✓ New cassette type manifold available.



TECHNICAL SPECIFICATIONS

Type of Seal		Metal	Rubber
Fluid		Air, inert gas	Air, inert gas
Min Operating Pressure	Single	0.1MPa/14.5PSI	0.15MPa/22PSI
	Double	0.1MPa/14.5PSI	0.1MPa/14.5PSI
	3-position	0.1MPa/14.5PSI	0.2MPa/29PSI
Max Operating Pressure ^(Note 1.)		0.75MPa/109PSI	0.75MPa/109PSI
Effective Area (Cv Factor) mm ²	Single	3.6 (0.2)	5.4 (0.3)
	Double	3.6 (0.2)	5.4 (0.30)
	3-position	3.6 (0.2)	5.4 (0.3)
Response Time ^(Note 2.)	Single	Max 12ms	Max 15ms
	Double	Max 10ms	Max 15ms
	3-position	Max 20ms	Max 25ms
Life		200 million cycles or more	
Ambient and Fluid Temperature ^(Note 3)		-10 to +50°C (14~122°F)	-5 to +50°C (23~122°F)
Lubricant ^(Note 4)		Not required	Not required
Manual Override		Non-locking, Push	Non-locking, Push
Protection		Dustproof	Dustproof

- (Note 2) Calculated on the basis of JIS B 8375-1981 (Supply pressure 0.5 MPa (5.1 bar); the above valve shows reponse time checked when the valve is equipped with an indicator light and surge voltage suppressor).
- (Note 3) Use dry air to prevent dew condensation in the case when temperature is low.
- (Note 4) Perfect dry air (dew point equals to -30°C) No grease on main valve.

- Special types:
- i Pressure centre function
 - ii External pilot
 - iii Low power consumption (0.5W)
 - iv Positive common wiring

SOLENOID SPECIFICATIONS

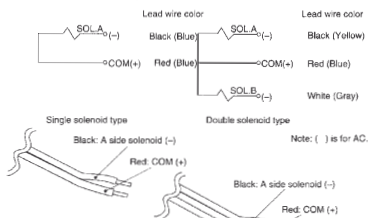
Coil Rated Voltage	12 VDC, 24 VDC	100/110 VAC
Allowable Voltage	±10% of Rated Voltage	±10% of Rated Voltage
Type of Coil Insulation	Class B	Class B
Power Consumption ^(Note 1)	1W	Inrush/Holding: 1.1 VA (11mA)
Electrical Entry	Plug In or Connector Type	Plug In or Connector Type

(Note 1)

WIRING SPECIFICATIONS POSITIVE COM

Wiring Specifications/Positive COM

- The lead wires are connected to the valve as shown below. Connect each to the power supply side.



- Plug connector lead wire length ^{Note} The length of the lead wire provided is 300mm. When ordering a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Connector ass'y No.(DC)

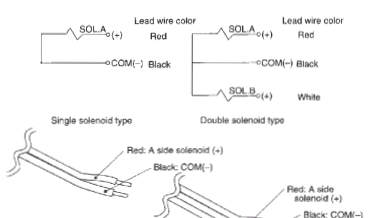
Lead wire length	Single type No.	Double type No.
Socket only (3 pcs.)	AXT661-12A	
300mm	AXT661-14A	AXT661-13A
600mm	AXT661-14A-6	AXT661-13A-6
1000mm	AXT661-14A-10	AXT661-13A-10
2000mm	AXT661-14A-20	AXT661-13A-20
3000mm	AXT661-14A-30	AXT661-13A-30

Note) Regarding the AC type, AXT661-31A-6 applies to the single type and AXT661-32A-6 to the double type.

WIRING SPECIFICATIONS NEGATIVE COM (OPTION)

Wiring Specifications/Negative COM (Option)

- The lead wires are connected to the valve as shown below. Connect each to the power supply side.



- Plug connector lead wire length ^{Note} The length of the lead wire provided is 300mm. When ordering a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Connector ass'y No.

Lead wire length	Single type No.	Double type No.
Socket only (3 pcs.)	AXT661-13AN	
300mm	AXT661-14AN	AXT661-13AN
600mm	AXT661-14AN-6	AXT661-13AN-6
1000mm	AXT661-14AN-10	AXT661-13AN-10
2000mm	AXT661-14AN-20	AXT661-13AN-20
3000mm	AXT661-14AN-30	AXT661-13AN-30

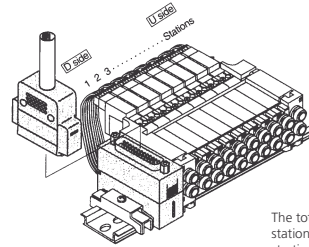
Note) Use negative COM type valves for negative COM specification manifolds.

SYMBOLS

1	2 position single A B R1 P R2
2	2 position double A B R1 P R2
3	3 position closed center A B R1 P R2
4	3 position exhaust center A B R1 P R2
5	3 position pressure center A B R1 P R2

F KIT D-SUB CONNECTOR (25 PIN) SERIES VQ1000

- ✓ The D-Sub Connector permits simple rationalization and installation labor saving for Electrical Connection.
- ✓ The D-Sub Connector (25-pin std., 15-pin option) conforms with MIL permitting use of commercial connectors with wide interchangeability.
- ✓ Top or Side Connector Receptacle Position can be selected in accordance with the available mounting space.
- ✓ Standard max 8 stations (Optional 16 stations possible).



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

(The D-sub connector cable ass'y can be ordered individually or included with a specific manifold model no. Refer to "How to Order/Manifold".)

Multicore vinyl cable VVRF0.3mm²×25C
Plug connector HDB-CTF (Made by Hirose Electric)
Connector HDBB-25S (Made by Hirose Electric)
2-M2.6×0.45
Socket side
Terminal No.

Terminal No.	Last wire color	Dot marking
1	Black	-
2	Brown	-
3	Red	-
4	Orange	-
5	Yellow	-
6	Pink	-
7	Blue	-
8	Violet	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Violet	-
18	Gray	-
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	-

Item	Characteristic
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1min, AC	1000
Insulation resistance MΩ/km, 20°C	5 or more

Note) The min. bending radius of D-sub cable ass'y is 20 mm.

Note) Types with 15-pin are also available.

Cable length (L)	Ass'y No.	Note
1.5m	VVZS3000-21A-1	Cable 25-core × 24AWG
3m	VVZS3000-21A-2	
5m	VVZS3000-21A-3	

Examples of connector makers
• Fujitsu Ltd.
• Japan Aviation Electronics Industry, Ltd.
• Japan Solderless Terminal Sales Co., Ltd.

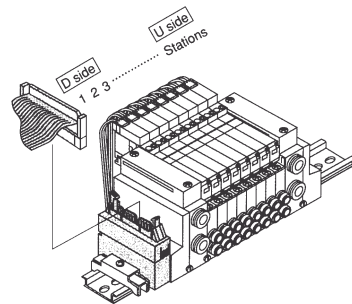
D-sub connector	Terminal No.	Polarity	Last wire color	Dot marking
1 station	SOLA 1	(-)	Black	-
	SOLB 14	(-)	Yellow	Black
	SOLA 2	(+)	Brown	-
2 stations	SOLB 15	(+)	Pink	Black
	SOLA 3	(-)	Red	-
3 stations	SOLB 16	(-)	Blue	White
	SOLA 4	(+)	Orange	-
4 stations	SOLB 17	(+)	Violet	-
	SOLA 5	(-)	Yellow	-
5 stations	SOLB 18	(-)	Gray	-
	SOLA 6	(+)	Pink	-
6 stations	SOLB 19	(+)	Orange	Black
	SOLA 7	(-)	Blue	-
7 stations	SOLB 20	(-)	Red	White
	SOLA 8	(+)	Violet	White
8 stations	SOLB 21	(+)	Brown	White
	SOLA 9	(-)	Orange	Red
	COM 13	(+)	Orange	Red

Positive COM Negative COM

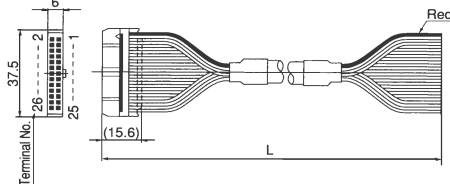
These figures show the standard internal wiring for double solenoid capability provided for each station. Specify the number of stations by the manifold specifications for items with more than 8 stations.
Note) Use negative COM type valves for negative COM specification manifolds.

P KIT (FLAT CABLE CONNECTION) SERIES VQ1000

- ✓ MIL Flat Cable Connector permits simple rationalization and installation labor savings for Electrical Connection.
- ✓ The Connector (26 pin; 10-, 16-, and 20 pin optional) conforms with MIL spec permitting use of widely interchangeable commercial connectors.
- ✓ Top or Side Receptacle Position can be selected in accordance with the available mounting space.
- ✓ Standard max 8 Stations (Optional 16 Stations optional).



AXT100-FC26- $\frac{1}{3}$
(Flat cable connector ass'y can be ordered individually or included with a specific manifold model no. Refer to "How to Order/Manifold".)



Cable length (L)	Ass'y parts No.	Note
1.5m	AXT100-FC26-1	Cable 26-core × 28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

※ For other commercial connectors, use a 26-pin type with strain relief made in conformity with MIL-C-83503.

Examples of connector makers

- Hirose Electric Co., Ltd.
- Sumitomo 3-M Ltd.
- Fujitsu Ltd.
- Japan Aviation Electronics Industry, Ltd.
- Japan Solderless Terminal Sales Co., Ltd.

Note: Types with 10-, 16-, or 20-pin are also available.

Flat cable connector

Terminal No.	Polarity
1 station	SOLA 1 (-) (+)
	SOLB 2 (-) (+)
	SOLA 3 (-) (+)
2 stations	SOLB 4 (-) (+)
	SOLA 5 (-) (+)
3 stations	SOLB 6 (-) (+)
	SOLA 7 (-) (+)
4 stations	SOLB 8 (-) (+)
	SOLA 9 (-) (+)
5 stations	SOLB 10 (-) (+)
	SOLA 11 (-) (+)
6 stations	SOLB 12 (-) (+)
	SOLA 13 (-) (+)
7 stations	SOLB 14 (-) (+)
	SOLA 15 (-) (+)
8 stations	SOLB 16 (-) (+)
	COM 25 (+) (-)
	COM 26 (+) (-)

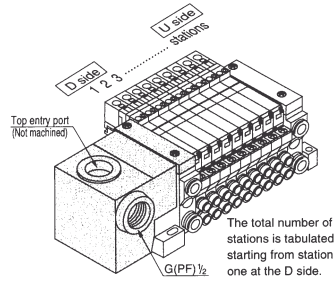
Electrical wiring specifications Positive COM Negative COM

These figures show the standard internal wiring for double solenoid capability provided for each station.
Note) Use negative COM valves for negative COM specification manifolds.

SOLENOID VALVES SERIES VQ1000

T KIT (TERMINAL BLOCK BOARD) SERIES VQ1000

- ✓ This Kit has a small Terminal Block inside a junction box. The Electrical Entry Port G (PF) 1/2 permits connection of Conduit Fittings.
- ✓ Max 12 Stations.

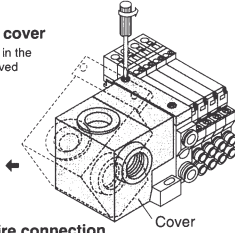


The total number of stations is tabulated starting from station one at the D side.

Open the terminal block cover for wire connection.

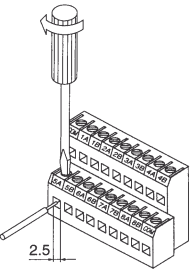
Sequence 1. How to remove terminal block cover

Loosen the screws on the terminal block cover and open it in the direction shown by the arrow. The cover can then be removed from the terminal block.



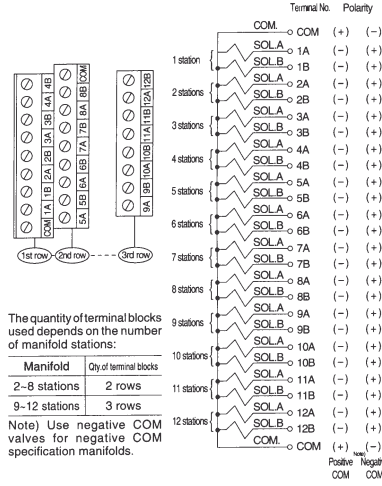
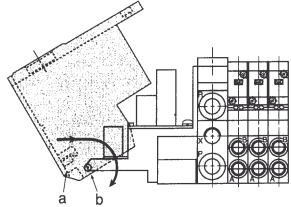
Sequence 2. Wire connection

The diagram on the right shows the terminal block wiring schematic. All stations are provided with double solenoid wiring. Insert each lead wire into the terminal opening and tighten the screw directly above.



Sequence 3. How to replace terminal block cover

Hook groove "b" on shaft "a" and close the cover. Then tighten the screws.



HOW TO ORDER

BODY PORTED VALVE - SINGLE UNIT

VQ1 1 6 0 N - 5 L - C6

SERIES VQ1000

CONFIGURATION

- 12 Position single
- 22 Position double (latching)
- 33 Position closed centre
- 43 Position exhaust centre
- 53 Position pressure centre

TYPE OF SEAL

- 0Metal
- 1Rubber

PILOT VALVE SPECIFICATIONS (OPTION)

-1W Standard
- H1.5W (High speed response)
- YLow wattage type^(Note)
- NNegative common wiring

(Note): Except for 110 VAC type.

SUBPLATE SUP CYLINDER PORTS

- C3 ...One Touch Fittings for Ø3.2
- C4 ...One Touch Fittings for Ø4
- C6 ...One Touch Fittings for Ø6
- M5 ...M5 (10-32Nom)
- N1 ...One Touch Fittings ø1/8"
- N3 ...One Touch Fittings ø5/32"
- N7 ...One Touch Fittings ø1/4"

(Note) EXH Port is a Direct Exhaust Type (with Built In Silencer)

MANUAL OVERRIDE

-Non locking recessed type
- ^{Note) B}Locking tool type*
- *CLocking knob type
- ^{Note)} Locking type (B) is standard for double (latching) type.
- Indicate "B" in model no.
- Option

ELECTRICAL ENTRY

- GGrommet (Except for latching type and 100/110VAC)
- LL type plug connector with lead wire
- LOL type plug connector without connector
- MM type plug connector with lead wire
- MOM type plug connector without connector

COIL RATED VOLTAGE

- 3110VAC
- 524VDC
- 612VDC

BASE MOUNTED TYPE PLUG IN UNIT VQ1000

How To ORDER MANIFOLD

VV5Q 1 1 — 08 C6 F U1 — N

SERIES:

1VQ1000

TYPE OF MANIFOLD

1Plug In Unit - Base Mounted

NUMBER OF STATIONS

01 ...1 Station
•
•
•
16 ...16 Stations

CYLINDER PORTS

C3 ...One Touch Fittings for Ø3.2
C4 ...One Touch Fittings for Ø4
C6 ...One Touch Fittings for Ø6
M5 ...M5 (10-32Nom)
N1 ...One Touch Fittings ø1/8"
N3 ...One Touch Fittings ø5/32"
N7 ...One Touch Fittings ø1/4"
* Mixed Ports Available

Note1) Insert code L (upward) or B (downward) for elbow type fittings for all manifold stations.
Example) B6: Elbow one touch fittings for downward (bottom) piping.

Note2) LM for models with elbow fittings and mixed cylinder port sizes.

OPTION

Symbol	Option	VQ1000
(Blank)	None	•
B	Check valve for prevention of back pressure	•
D	DIN Rail Mounted Type	•
J	With Vacuum Ejector Unit	•
N	With Nameplate	•
R	External Pilot capable	•
S	Built-in Silencer (Direct Exhaust)	•

Note 1) When more than one option is desired Combined symbols in alphabetical order.
Example) • BRS

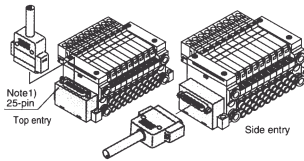
Note 2) Models with a suffix "-B" have checked valves for prevention of back pressure at all manifold stations.

Note 3) In the case of the external pilot "-R", order solenoid valves with the external pilot specification "R".

Note4) Combination of ejector option "J" and nameplate "N" is not possible.

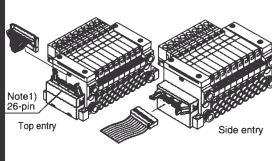
KIT • ELECTRICAL ENTRY • CABLE LENGTH

F kit (D-sub connection)



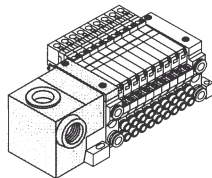
Connector location		Max. 12 stations
Top (vertical)	Side (horizontal)	
U0	S0	Without cable
kit U1	kit S1	With cable (1.5m)
F U2	F S2	With cable (3m)
U3	S3	With cable (5m)

P kit (Flat cable connection)



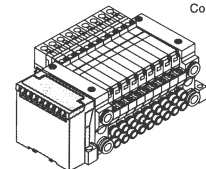
Connector location		Max. 12 stations
Top (vertical)	Side (horizontal)	
U0	S0	Without cable
kit U1	kit S1	With cable (1.5m)
P U2	P S2	With cable (3m)
U3	S3	With cable (5m)

T kit (Terminal block board)



kit T 0 Terminal block board Max. 12 stations

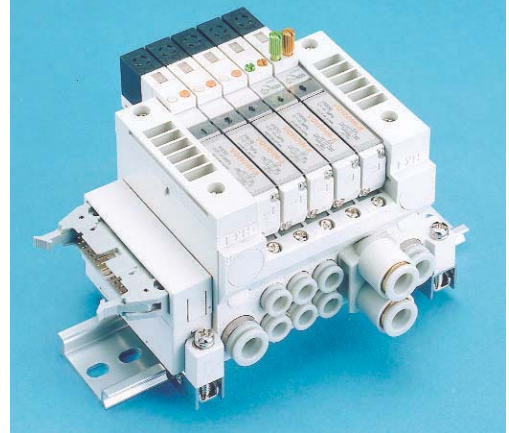
S kit (Serial transmission unit)



Compatible only with 24VDC valves.

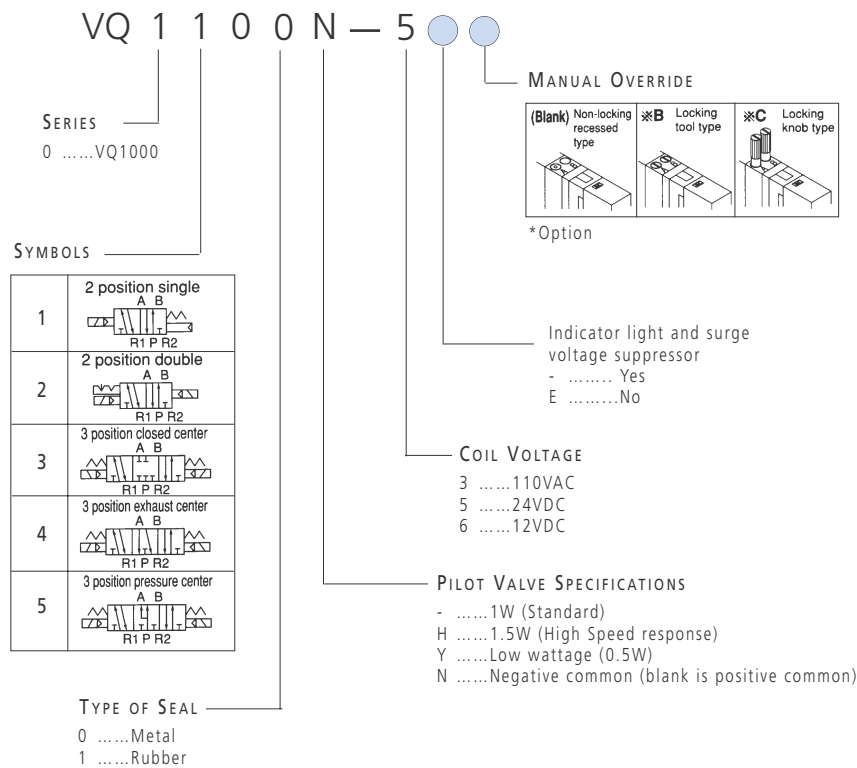
kit S	Without SI unit	Max. 16 stations (Single)
A	With general type SI unit	
B	With SI unit for Mitsubishi, MELSEC-A	
C	With SI unit for Omron, SYSMAC	
D	With SI unit for Sharp, New satellite	

Note 1) Besides the above, the number of pins for F and P kits is different, as well.
Note 2) G and T kits are applicable only to VQ1000.



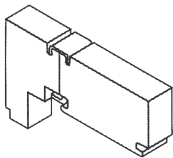
SOLENOID VALVES SERIES VQ1000

**HOW TO
ORDER
VALVE**

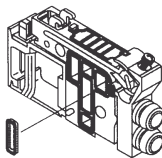


**ACCESSORIES
MANIFOLD OPTIONS**

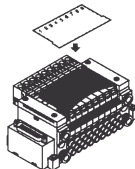
BLANKING PLATE ASSEMBLY
VVQ1000-10A-5



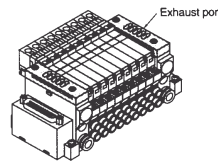
SUP BLOCK PLATE
VVQ1000-16A-
P R PR



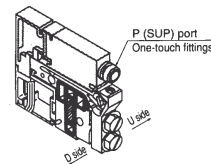
NAMEPLATE [-N]
VVQ1000-N5-Station
(1-Max. stations)



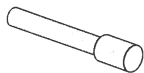
BUILT IN SILENCER
Direct exhaust [-S]



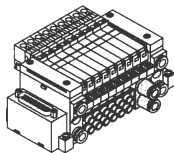
INDIVIDUAL SUP SPACER
VVQ1000-P-1-C6



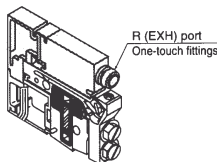
BLANKING PLUG
KQP-
23
04
06
08
10
01
03
07



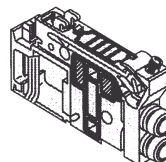
2 STATIONS MATCHING FITTINGS ASSEMBLY
VVQ1000-52A-C8 (VQ1000)



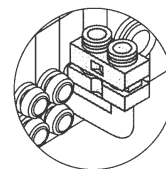
INDIVIDUAL EXH SPACER
VVQ1000-R-1-C6



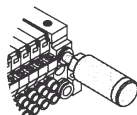
EXH BLOCK BASE ASSEMBLY
VVQ1000-19A-
F: C3
P: C4
L: C6
N1
N3
N7
(VQ1000)



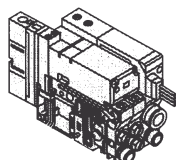
ELBOW FITTINGS ASSEMBLY
VVQ1000-F-L-
C3
C4
C6
(VQ1000)



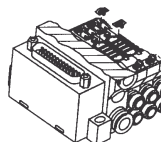
SILENCER (EXH PORT)



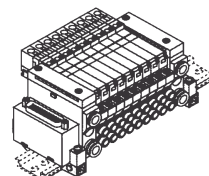
VACUUM EJECTOR UNIT
VVQ1000-J_BM (VQ1000)



CHECK VALVE FOR PREVENTION OF BACK PRESSURE ASSEMBLY [-B]
VVQ1000-18A

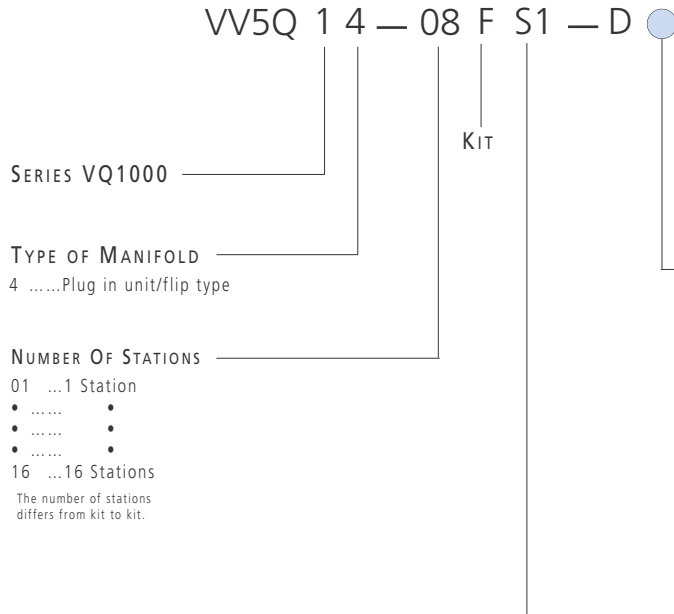
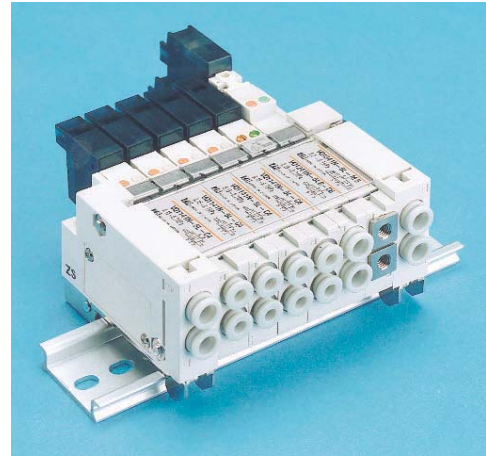


DIN RAIL MOUNTED BRACKET [-D]
VVQ1000-57A



BODY PORTED TYPE
PLUG LEAD UNIT/FLIP TYPE
SERIES VQ1000

HOW TO
ORDER
MANIFOLD



Symbol	Option
-	None (C kit only)
Note 2) D	DIN Rail Mounted Type
N	With Nameplate
Note 3) S	Built-in Silencer (Direct Exhaust)

Note 1) When more than one option is desired Combined symbols in alphabetical order. Example) • DNS

Note 2) All F, P, and S kits are of DIN rail mounted type. So include suffix "D".

Note 3) F, P, and S kits are provided with an exhaust on one side while C kits are with an exhaust on both sides.

KIT • ELECTRICAL ENTRY CABLE LENGTH

F kit (D-sub connection)

Side entry (Note 2) 25-pin

Top entry (Note 2) 25-pin

Connector Location			Note 1) Max. 8 stations
Top (vertical)	Side (horizontal)		
U0	S0	Without cable	
U1	S1	With cable (1.5m)	
U2	S2	With cable (3m)	
U3	S3	With cable (5m)	

C kit (Connector)

c	Connector	Max 16 stations
---	-----------	-----------------

S kit (Serial transmission unit)

Compatible only with 24VDC valves.

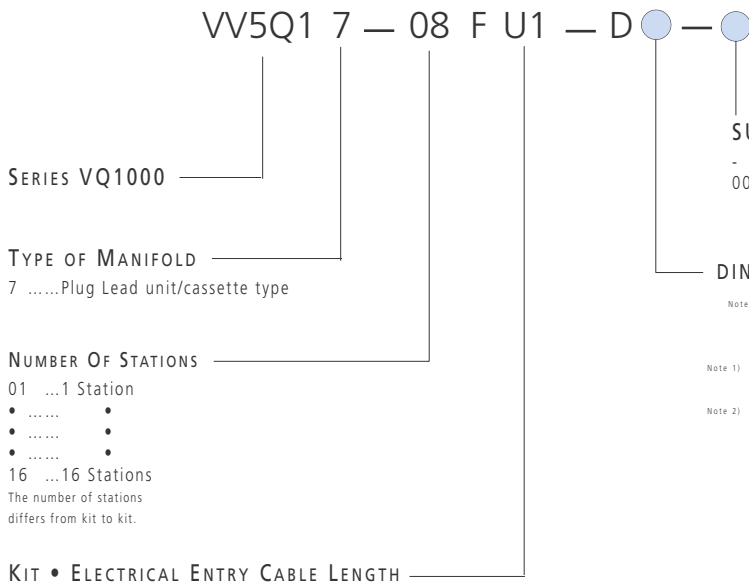
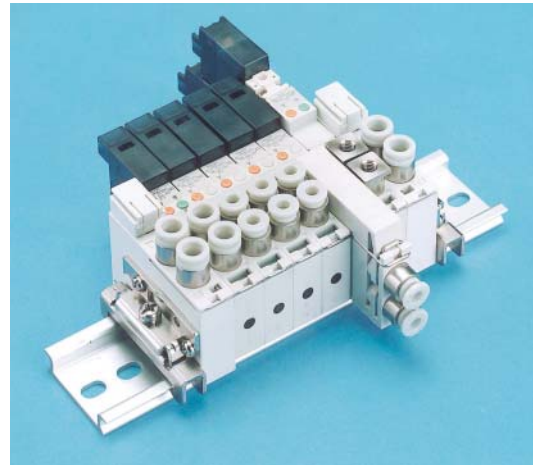
0	Without SI unit	Max. 16 stations (Single)
A	With general type SI unit	
B	With SI unit for Mitsubishi, MELSEC-A	Max. 8 stations (Double)
C	With SI unit for Omron, SYSMAC	
D	With SI unit for Sharp, New satellite	

Note 1) The max. standard stations are 8. With single wiring arrangement of up to 16 stations is possible. Specify the arrangement of stations using the manifold specification form for more than 8 stations.

Note 2) Other than those above, F and P kits with different number of pins are available.

BODY PORTED TYPE PLUG LEAD UNIT/CASSETTE TYPE SERIES VQ1000

HOW TO
ORDER
MANIFOLD



SUP/EXH PORT
-Metric (mm)
00T ...Imperial (Inch)

DIN RAIL/OPTION

Note 1) D DIN rail mounted type
N With Nameplate

Note 1) Manifold is of a DIN rail mounted type,
and so suffix "D" should be indicated.

Note 2) When the "N" option is desired, write as "DN".

F kit
(D-sub connection)

Note 1) 25-pin

Note 1) 25-pin

Connector Location		Without cable	Note 2) Max. 8 stations
Top (vertical)	Side (vertical)		
Kit U0	Kit S0	Without cable	
Kit U1	Kit S1	With cable (1.5m)	
F U2	F S2	With cable (3m)	
F U3	F S3	With cable (5m)	

C kit
(Connector)

C	Connector	Max. 16 stations

S kit
(Serial transmission unit)

Compatible only with 24VDC valves.

kit S		Max. 16 stations (Single)
0	Without SI unit	
A	With general type SI unit	
B	With SI unit for Mitsubishi, MELSEC-A	Max. 8 stations (Double)
C	With SI unit for Omron, SYSMAC	
D	With SI unit for Sharp, New satellite	

Note 1) Other than those above, F and P kits with different number of pins are available.
Note 2) The max. standard stations are 8. With single wiring, arrangement of up to 16 stations is possible.

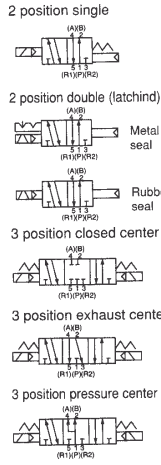
SOLENOID VALVES SERIES VQ1000

HOW TO
ORDER
VALVE

VQ1 1 7 0 N — 5 M ● — C6

SERIES
1VQ1000

CONFIGURATION



TYPE OF SEAL
0Metal
1Rubber

PILOT VALVE SPECIFICATIONS
-1W (Standard)
H1.5W (High Speed response)
NNegative Common
Note 1) Y Low wattage (0.5W)

Note) Except for 100/110VAC type.

COIL VOLTAGE

3110VAC
524VDC
612VDC

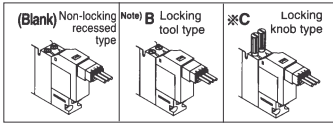
With indicator light and surge voltage suppressor

CYLINDER PORTS

C3 ...One Touch Fittings for Ø3.2
C4 ...One Touch Fittings for Ø4
C6 ...One Touch Fittings for Ø6
M5 ...M5 (10-32Nom)
N1 ...One Touch Fittings ø1/8"
N3 ...One Touch Fittings ø5/32"
N7 ...One Touch Fittings ø1/4"

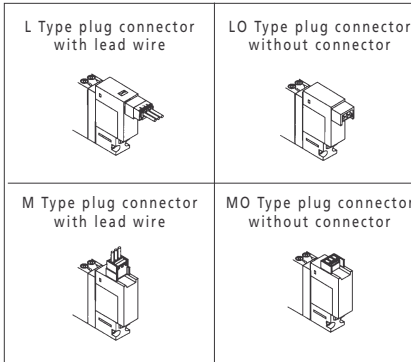
Note 1) The code is L for Elbow Piping for all Manifold Stations.
Example L6: Elbow with One Touch Fittings.

MANUAL OVERRIDE



Note) Locking type (B) is used for the double (latching) type as standard. Must include "B" suffix.

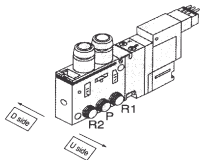
ELECTRICAL ENTRY



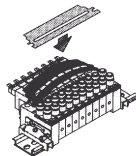
Note 1) LO and MO valves are used for F,P, and S kits.
Plug connector and lead wire layers are attached to the manifold.
Note 2) Grommet type (G) is also available for C kit type.
(Except for latching type and 100/110VAC)

ACCESSORIES
MANIFOLD OPTIONS

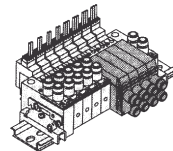
SUP-EXH BLOCK PUSH ASSEMBLY
VVQ1000-87A-B-50



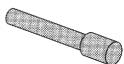
NAMEPLATE [-N7]
VVQ1000-N7 Station (1- Max. Stations)



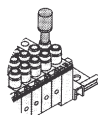
ELBOW FITTINGS ASSEMBLY
VVQ1000-F7-L
C3
C4
C6



BLANKING PLUG
KQP - 23
04
06
01
03
07

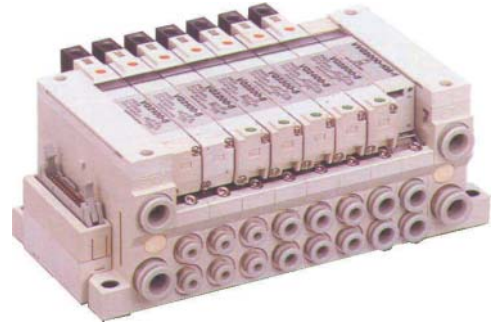


SILENCER
AN103-X233



5 PORT METAL SEAL/RUBBER SEAL ULTRA HIGH SPEED SOLENOID VALVE SERIES VQ2000

- ✔ High Speed Response from new Solenoid Design.
- ✔ Long Life: Over 200 Million Cycles can be achieved with Patent Pilot Valve design.
- ✔ Indicator Light and Voltage Surge Suppressor
- ✔ Space Saving Design
- ✔ Plug Lead and Plug In manifold options.



TECHNICAL SPECIFICATIONS

Type of Seal		Metal	Rubber
Fluid		Air, inert gas	Air, inert gas
Min Operating Pressure	Single	0.1MPa / 14.5PSI	0.15MPa / 22PSI
	Double	0.1MPa / 14.5PSI	0.1MPa / 14.5PSI
	3-position	0.1MPa / 14.5PSI	0.2MPa / 29PSI
Max Operating Pressure ^(Note 1)		0.75MPa / 109PSI	0.75MPa / 109PSI
Effective Area (Cv Factor) mm ²	Single	14.4 (0.8)	16.2 (0.9)
	Double	14.4 (0.8)	16.2 (0.9)
	3-position	12.6 (0.7)	14.4 (0.8)
Response Time ^(Note 2)	Single	Max 23ms	Max 24ms
	Double	Max 18ms	Max 23ms
	3-position	Max 28ms	Max 33ms
Life Expectancy		200 million cycles or more	
Ambient and Fluid Temperature ^(Note 3)		-10 to +50°C / 14~122°F	-5 to +50°C / 23~122°F
Lubricant ^(Note 4)		Not required	Not required
Manual Override		Non-locking, momentary	
Protection		Dustproof	Dustproof

- ^(Note 1) Contact us for 10 bar.
^(Note 2) Calculated on the basis of JIS B 8375-1981 (Supply pressure 0.5 MPa {5.1 bar}; the above valve shows reponse time checked when the valve is equipped with an indicator light and surge voltage suppressor).
^(Note 3) Use dry air to prevent dew condensation in the case when temperature is low.
^(Note 4) Perfect dry air (dew point equals to -30°C) No grease on main valve.

Special types

- i Pressure center function
- ii External pilot
- iii Low power consumption (0.5W)
- iv Positive common wiring

C KIT (CONNECTOR) SERIES VQ2000

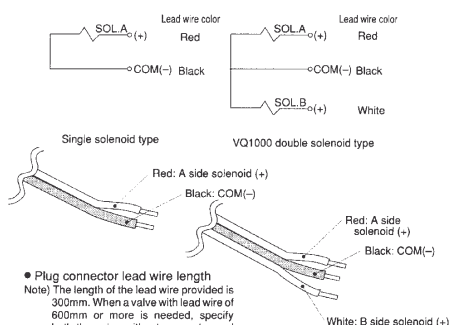
- ✔ Type which has lead wires in plug connected to each valve individually.
- ✔ Max. 16 stations

SOLENOID SPECIFICATIONS

Coil rated voltage	12 VDC, 24 VDC	100/110 VAC
Allowable voltage	±10% of rated voltage	±10% of rated voltage
Type of coil insulation	Class B	Class B
Power consumption ^(Note 1)	1W	Inrush/Holding: 1.1 VA (11mA)
Electrical entry	Plug-in or Connector type	Plug-in or Connector type

WIRING SPECIFICATIONS NEGATIVE COM

- The lead wires are connected to the valve as shown below. Connect each to the power supply side.



- Plug connector lead wire length
 Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

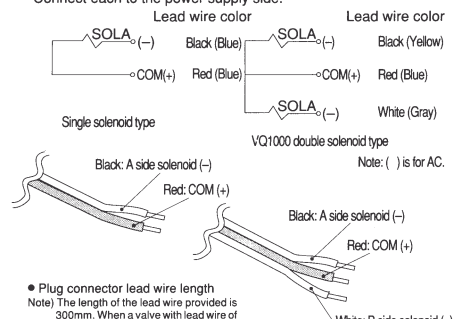
Connector ass'y No.

Lead wire length	No. for single & VQ0000 double types	No. for VQ1000 double type
Socket (3 pcs.)	AXT661-12A	
300mm	AXT661-14AN	AXT661-13AN
600mm	AXT661-14AN-6	AXT661-13AN-6
1000mm	AXT661-14AN-10	AXT661-13AN-10
2000mm	AXT661-14AN-20	AXT661-13AN-20
3000mm	AXT661-14AN-30	AXT661-13AN-30

Note) Use negative COM type valves for negative COM specification manifolds.

WIRING SPECIFICATIONS POSITIVE COM (OPTION)

- The lead wires are connected to the valve as shown below. Connect each to the power supply side.



- Plug connector lead wire length
 Note) The length of the lead wire provided is 300mm. When a valve with lead wire of 600mm or more is needed, specify both the valve without connector and the longer connector ass'y no.

Connector ass'y No. (DC)

Lead wire length	No. for single & VQ0000 double types	No. for VQ1000 double type
Socket (3 pcs.)	AXT661-12A	
300mm	AXT661-14A	AXT661-13A
600mm	AXT661-14A-6	AXT661-13A-6
1000mm	AXT661-14A-10	AXT661-13A-10
2000mm	AXT661-14A-20	AXT661-13A-20
3000mm	AXT661-14A-30	AXT661-13A-30

Note) Regarding the AC type, AXT661-31A-iii applies to the single type and AXT661-32A-ii to the double type.

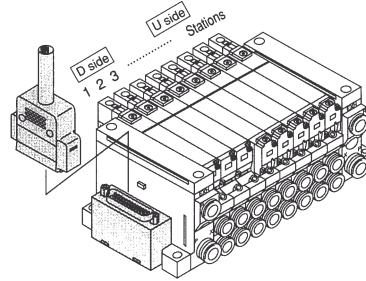
SYMBOLS

1	2 position single A B R1 P R2
2	2 position double A B R1 P R2
3	3 position closed center A B R1 P R2
4	3 position exhaust center A B R1 P R2
5	3 position pressure center A B R1 P R2

SOLENOID VALVES SERIES VQ2000

F KIT (D-SUB CONNECTION) SERIES VQ2000

- ✓ The D-sub connector permits simple rationalization and installation labor savings for electrical connection.
- ✓ The D-sub connector (25-pin std., 15-pin option) conforms with MIL permitting use of commercial connectors with wide interchangeability.
- ✓ Top or side connector receptacle position can be selected in accordance with the available mounting space.
- ✓ Standard max 8 stations (Optional 16 stations possible).



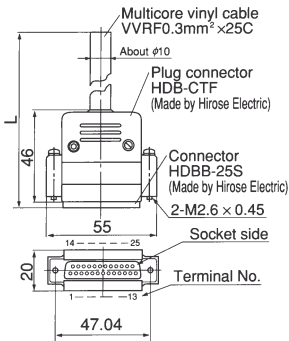
VV5Q21

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

D-sub connector (25-pin)

VVZS3000-21A-1

(The D-sub connector cable ass'y can be ordered individually or included with a specific manifold model no.) Refer to "How to Order/Manifold".



Cable Length (L)	Assembly No.	Note
1.5m	VVZS3000-21A-1	Cable 25-core x24AWG
3m	VVZS3000-21A-2	
5m	VVZS3000-21A-3	

* For other commercial connectors, use a 25-pin female connector made in conformity with MIL-C-24308.

Item	Characteristics
Conductor resistance Ω, 20°C	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩkm, 20°C	5 or more

Note: The min. bending radius of D-sub assembly is 20mm.

Terminal No.	Lead wire colour	Dot marking
1	Black	-
2	Brown	-
3	Red	-
4	Orange	-
5	Yellow	-
6	Pink	-
7	Blue	-
8	Violet	White
9	Grey	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Violet	-
18	Grey	-
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Grey	Red
24	Black	White
25	White	-

Note: Type with 15 pin are also available.

Electrical Wiring Specifications

Connector terminal No.

	Terminal No.	Polarity	Lead wire color	Dot marking
1 station	SOLA 1	(-)	(+) Black	-
	SOLB 14	(-)	(+) Yellow	Black
2 stations	SOLA 2	(-)	(+) Brown	-
	SOLB 15	(-)	(+) Pink	Black
3 stations	SOLA 3	(-)	(+) Red	-
	SOLB 16	(-)	(+) Blue	White
4 stations	SOLA 4	(-)	(+) Orange	-
	SOLB 17	(-)	(+) Violet	-
5 stations	SOLA 5	(-)	(+) Yellow	-
	SOLB 18	(-)	(+) Gray	-
6 stations	SOLA 6	(-)	(+) Pink	-
	SOLB 19	(-)	(+) Orange	Black
7 stations	SOLA 7	(-)	(+) Blue	-
	SOLB 20	(-)	(+) Red	White
8 stations	SOLA 8	(-)	(+) Violet	White
	SOLB 21	(-)	(+) Brown	White
9 stations	SOLA 9	(-)	(+) Gray	Black
	SOLB 22	(-)	(+) Pink	Red
10 stations	SOLA 10	(-)	(+) White	Black
	SOLB 23	(-)	(+) Gray	Red
11 stations	SOLA 11	(-)	(+) White	Red
	SOLB 24	(-)	(+) Black	White
12 stations	SOLA 12	(-)	(+) Yellow	Red
	SOLB 25	(-)	(+) White	-
	COM. 13	(+)	None (-) Orange	Red

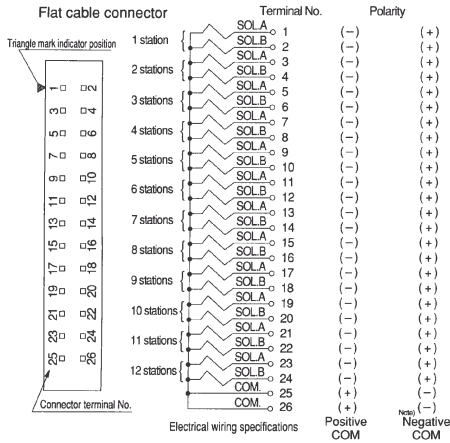
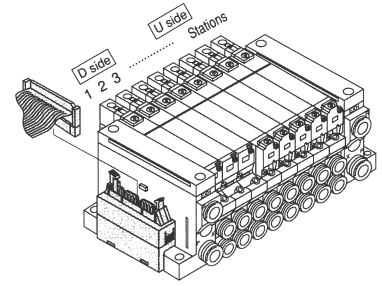
These figures show the standard internal wiring for double solenoid capability provided for each station.

Note) Use negative COM type valves for negative COM specification manifolds.

Positive COM Negative COM

P KIT (FLAT CABLE CONNECTION) SERIES VQ2000

- ✔ MIL type flat cable connector permits simple rationalization and installation labor savings for electrical connection.
- ✔ The connector (26 pin; 10-, 16-, and 20 pin optional) conforms with MIL spec permitting use of widely interchangeable commercial connectors.
- ✔ Top or side receptacle position can be selected in accordance with the available mounting space.
- ✔ Standard max 8 stations (Optional 16 stations optional).

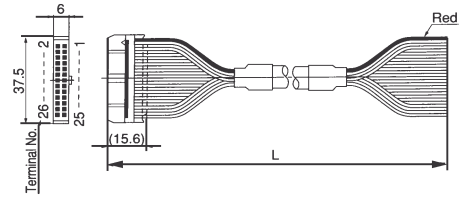


These figures show the standard internal wiring for double solenoid capability provided for each station.

Note) Use negative COM values for negative COM specification manifolds.

AXT100-FC26-¹/₃

(Flat cable connector ass'y can be ordered individually or included with a specific manifold model no. Refer to "How to Order/Manifold.")



Flat cable connector ass'y (Option)

Cable length (L)	Ass'y No	Note
1.5m	AXT100-FC26-1	Cable 26-core × 28AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

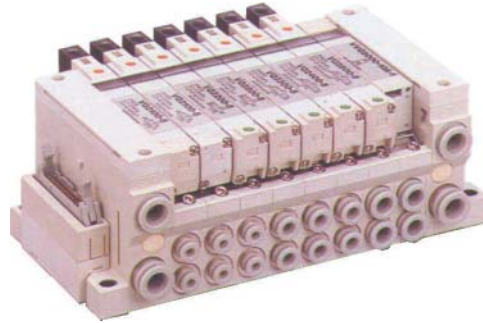
※ For other commercial connectors, use 26-pin type with strain relief made in conformity with MIL-C-83503.

Examples of connector makers

- Hirose Electric Co., Ltd.
- Sumitomo 3-M Ltd.
- Fujitsu Ltd.
- Japan Aviation Electronics Industry, Ltd.
- Japan Solderless Terminal Sales Co., Ltd.

Note) Types with 10-, 16-, or 20-pin are also available.

BASE MOUNTED TYPE PLUG IN UNIT VQ2000



How To
ORDER
MANIFOLD

VV5Q 2 1 — 08 C6 F U1 — N

SERIES:
2VQ2000

TYPE OF MANIFOLD
1Plug in unit

NUMBER OF STATIONS
01 ...1 Station
•
•
•
16 ...16 Stations
The number of stations
differ from kit to kit

CYLINDER PORTS
C4 ...One Touch Fittings for Ø4
C6 ...One Touch Fittings for Ø6
C8 ...One Touch Fittings for Ø8
M5 ...M5 (10-32Nom)
N3 ...One Touch Fittings Ø5/32"
N7 ...One Touch Fittings Ø1/4"
N9 ...One Touch Fittings Ø5/16"
* Mixed Ports Available

Kit

OPTION

Symbol	Option	VQ2000
(Blank)	None	•
B	Check valve for prevention of back pressure	•
D	DIN Rail Mounted Type	•
K	Special Wiring	•
N	With Nameplate	•
R	External Pilot Capable	•
S	Built-in Silencer (Direct Exhaust)	•

Note 1) When more than one option is desired
Combined symbols in alphabetical order.
Example) • BRS

Note 2) In the case of the external pilot "-R", order
solenoid valves with the external pilot
specification "R"

Kit • ELECTRICAL ENTRY • CABLE LENGTH

F kit (D-sub connector)

Note 1) 25-pin

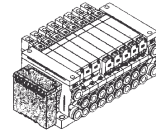
Connector location		Top	Side	Without cable	Notes
Kit	UO	U1	S0	S1	2-12 stations
F	U2	F	S2	S3	With cable (3m) 2-12 stations
	U3			S3	With cable (5m)

P kit (Flat cable connector)

Note 1) 25-pin

Connector location		Top	Side	Without cable	Notes
Kit	UO	U1	S0	S1	2-12 stations
P	U2	P	S2	S3	With cable (3m) 2-12 stations
	U3			S3	With cable (5m)

S kit (Serial transmission unit)



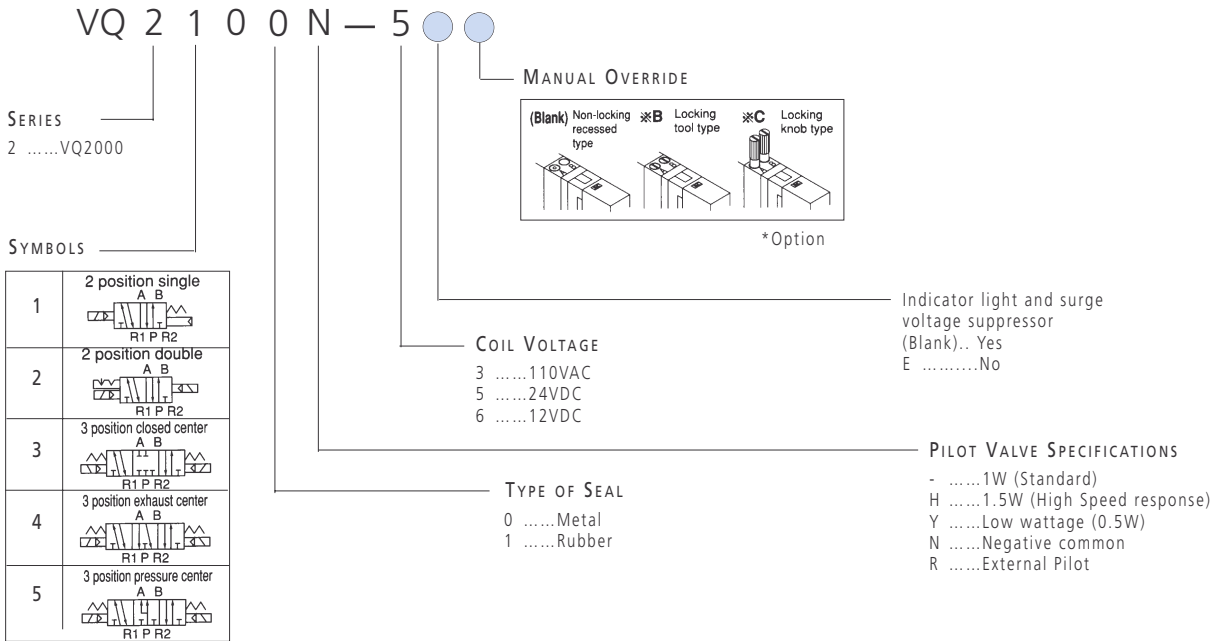
The valve is equipped with a lamp/surge voltage suppressor, and the voltage is 24VDC. The dustproof type SI unit is also applicable.

Kit	S	Option	Notes
	0	Without SI unit	
	A	With general type SI unit	
	B	With SI unit for Mitsubishi MELSEC-A	
	C	With SI unit for Omron SYSMAC	
	D	With SI unit for Sharp, New satellite	2-8 stations
F1		16-point serial kit applicable to NKE uni-wire system	
F2		8-point serial kit applicable to NKE uni-wire system	

Note 1) Besides the above, the number of pins for F and P kits is different, as well.

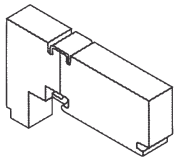
Note 2) As optional specifications, the maximum number of stations can be increased based on special wiring specifications.

HOW TO ORDER VALVE

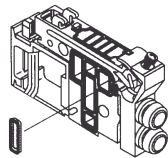


ACCESSORIES MANIFOLD OPTIONS

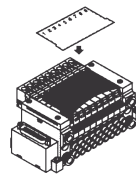
BLANKING PLATE ASSEMBLY
VVQ2000-10A-1



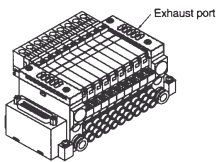
SUP BLOCK PLATE
VVQ2000-16A



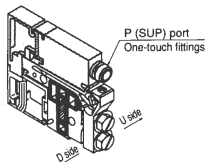
NAMEPLATE [-N]
VVQ2000-N-Station (1-Max. stations)



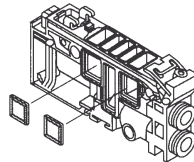
BUILT IN SILENCER
Direct Exhaust [-S]



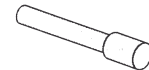
INDIVIDUAL SUP SPACER
VVQ2000-P-1-C8



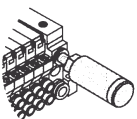
EXH BLOCK PLATE
VVQ2000-19A (Q2000)



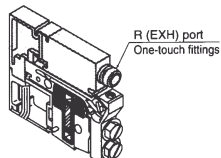
BLANKING PLUG
KQP-04
06
03
07



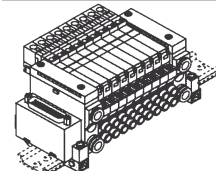
SILENCER (EXH PORT)
AN200-KM10



INDIVIDUAL EXH SPACER
VVQ2000-R-1-C8

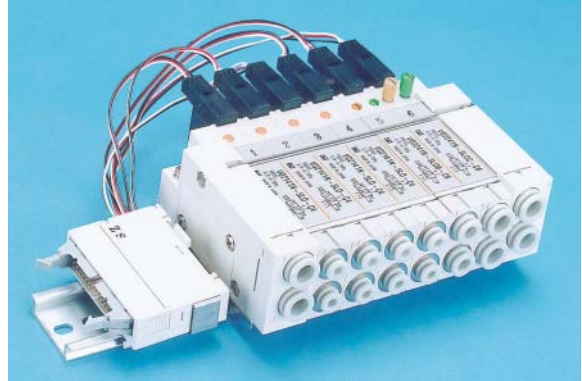


DIN RAIL MOUNTED BRACKET [-D]
VVQ2000-57A



SOLENOID VALVES SERIES VQ2000

BODY PORTED TYPE PLUG LEAD UNIT/FLIP TYPE VQ2000



HOW TO
ORDER
MANIFOLD

VV5Q 2 4 - 08 F S1 - D

SERIES
2VQ2000

TYPE OF MANIFOLD
4Plug lead unit/flip type

NUMBER OF STATIONS
01 ...1 Station
•
•
•
16 ...16 Stations
The number of stations differ from kit to kit

SUP/EXH PORT
-Metric (mm)
00T ...Imperial (Inch)

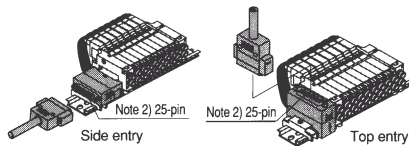
DIN RAIL/OPTION

Symbol	Option
(Blank)	None (C Kit only)
Note 2) D	DIN Rail Mounted Type
N	With Nameplate
Note 3) S	Built-in Silencer (Direct Exhaust)

- Note 1) When more than one option is desired Combined symbols in alphabetical order. Example) • DNS
- Note 2) All F.P. and S. kits are of DIN rail mounted type, so include suffix "D".
- Note 3) F.P. and S. kits are provided with an exhaust on one side, while C kits are with an exhaust on both sides.

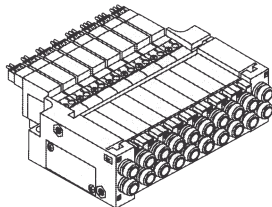
KIT • ELECTRICAL ENTRY • CABLE LENGTH

F kit (D-sub connection)



Connector Location		Without cable	Note 1) Max. 8 stations
Top (vertical)	Side (horizontal)		
U0	S0	Without cable	
U1	S1	With cable (1.5m)	
U2	S2	With cable (3m)	
U3	S3	With cable (5m)	

C kit (Connector)



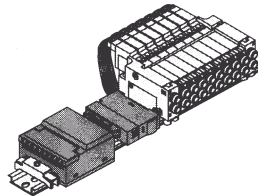
C	Connector	Max. 16 stations
---	-----------	------------------

Note 1) The max. standard stations are 8. With single wiring, arrangement of up to 16 stations is possible.

Note 2) Other than those above, F and P kits with different number of pins are available.

S kit (Serial transmission unit)

Compatible only with 24VDC valves.



0	Without SI unit	Max. 16 stations (Single)
A	With general type SI unit	
B	With SI unit for Mitsubishi, MELSEC-A	
C	With SI unit for Omron, SYSMAC	
D	With SI unit for Sharp, New satellite	Max. 8 stations (Double)

HOW TO ORDER VALVE

VQ2 1 4 0 N - 5 L - C6

SERIES
2VQ2000

CONFIGURATION

1	2 position single A B
2	2 position double (latching) A B R1 P R2

TYPE OF SEAL

0Metal
1Rubber

PILOT VALVE SPECIFICATIONS

-1W (Standard)
H1.5W (High Speed response)
Note 1) Y Low wattage (0.5W)
NNegative common

Note) Except for double (latching) type.

COIL VOLTAGE

3110VAC
524VDC
612VDC

With indicator light and surge
voltage suppressor

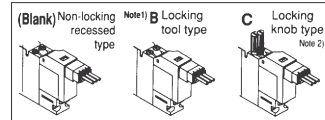
Note1) See "Option Specifications" for negative COM specifications.

Note2) F, P, and S kits need connector assembly when increasing the valve station. See "Option Specifications" for types.

CYLINDER PORTS

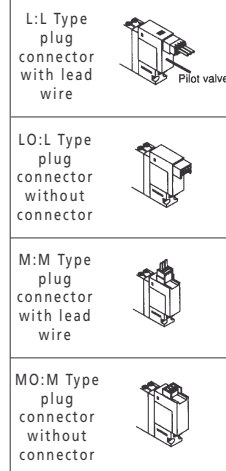
C4 ...One Touch Fittings for Ø4
C6 ...One Touch Fittings for Ø6
C8 ...One Touch Fittings for Ø8
N3 ...One Touch Fittings ø5/32"
N7 ...One Touch Fittings ø1/4"
N9 ...One Touch Fittings ø5/16"

MANUAL OVERRIDE



Note 1) Locking type (B) is used for the double (latching) type as VQ1000/2000 standard. Must include "B" suffix.
Note 2) Not available for VQ0000

ELECTRICAL ENTRY

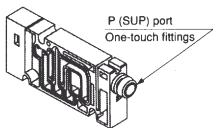


G ...Grommet C Kit
Single Type Only

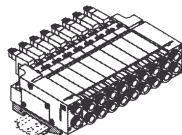
ACCESSORIES

MANIFOLD OPTIONS

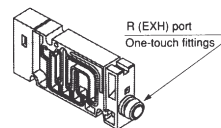
INDIVIDUAL SUP SPACER
VVQ2000-P-4-C8



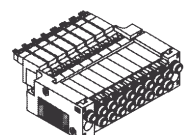
DIN RAIL MOUNTED BRACKET [-D]
VVQ2000-57A- 4



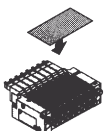
INDIVIDUAL EXH SPACER
VVQ2000-R-4-C8



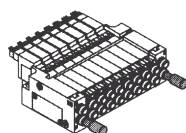
BUILT IN SILENCER
Direct exhaust [-S]



NAMEPLATE [-N4]
VVQ2000-N4 station
(1-Max. station.)



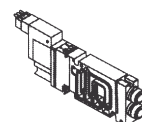
SILENCER (EXH PORT)
AN203-KM8 (VVQ2000)



BLANKING PLUG
KQP-
06
06
03
07



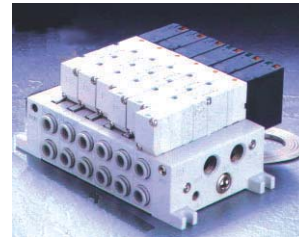
P
R BLOCK VALVE VVQ□4□-□-□-□-□
PR



SOLENOID VALVES SERIES VQ4000

5 PORT METAL SEAL/RUBBER SEAL BASE MOUNTED / PLUG IN TYPE SERIES VQ4000

- ✓ High Speed and Long Life
- ✓ Compact Design with Large Flow Capacity
- ✓ Various Centralized Wiring Options
- ✓ Optional IP65 Available
- ✓ Dust Proof, Jet Proof



TECHNICAL SPECIFICATIONS SERIES VQ4000

	Type Of Seal		Metal Seal	Rubber Seal
	Fluid		Air Inert Gas	Air Inert Gas
Valve Specifications	Maximum Operating Pressure		1MPa (145PSI)	
	Minimum	Single	0.15MPa (22PSI)	0.20MPa (29PSI)
	Operating	Double	0.15MPa (22PSI)	0.15MPa (22PSI)
	Pressure	3 Position	0.15MPa (22PSI)	0.20MPa (29PSI)
	Proof Pressure		1.5MPa (220PSI)	
	Ambient & Fluid Temperature		-10 ~ 50°C / 14~122°F	-5 ~ 50°C / 23~122°F
Lubrication		Not Required		
Manual Override		Pushing Type/Slotted Locking Type (Tool Type) Option		
Shock/Vibration Resistance		150/30 m/s ²		
Enclosure		Dust Proof (Available to IP65 Type)		
Solenoid Specifications	Coil Rated Voltage		12, 24VDC and 100, 110, 200, 220VAC (50/60Hz)	
	Allowable Voltage		±10% of Rated Voltage	
	Coil Insulation		Class B	
		24VDC	1WDC (42mA), 0.5WDC (21mA)	
		12VDC	1WDC (83mA), 0.5WDC (42mA)	
	Power	100VAC	Inrush 1.2VA (12mA), Holding 1.2VA (12mA)	
	Consumption (Current Value)	110VAC	Inrush 1.3VA (11.7mA), Holding 1.3VA (11.7mA)	
	200VAC	Inrush 2.4VA (12mA), Holding 2.4VA (12mA)		
	220VAC	Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)		

SYMBOLS

1	2 position single A B R1 P R2
2	2 position double A B R1 P R2
3	3 position closed center A B R1 P R2
4	3 position exhaust center A B R1 P R2
5	3 position pressure center A B R1 P R2

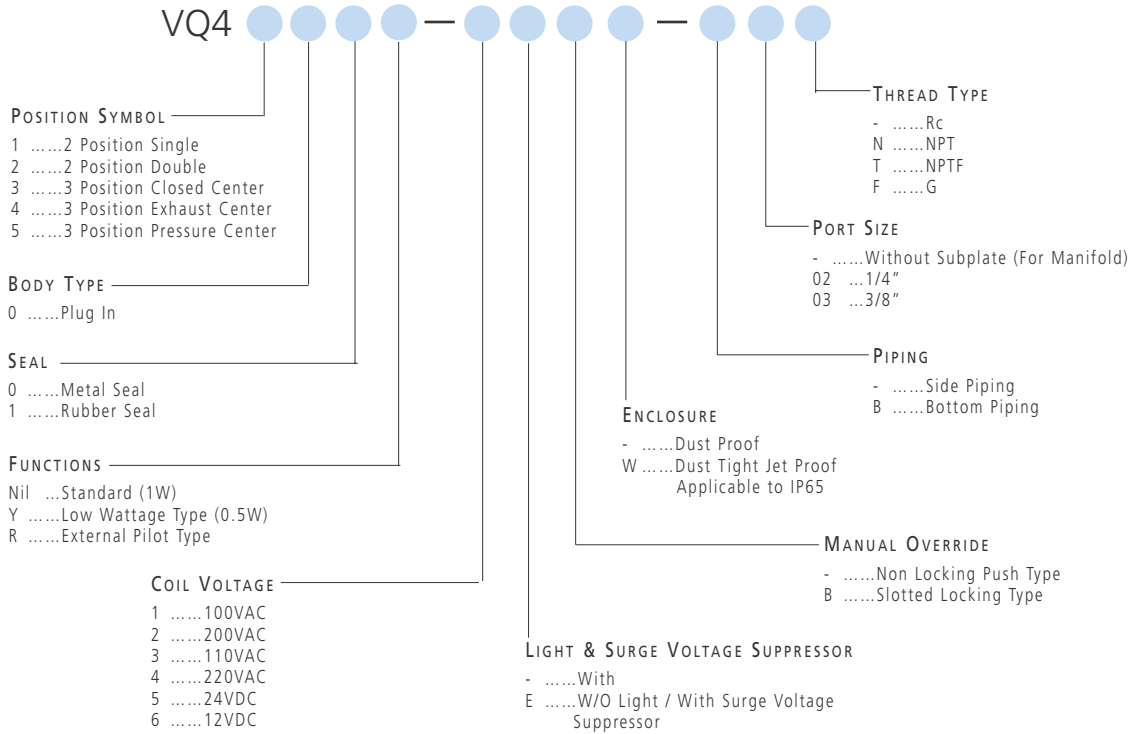
MODEL SERIES VQ4000

	Number Of Solenoids	Type	Note 1) Effective Area mm ² (Cv)	Response Time ms Note 2)	
				Standard 1W	Low Wattage and AC
2 Positions	Single	Metal Seal VQ41(0, 5)0	36.0 (2.0)	20 or less	22 or less
		Rubber Seal VQ41(0, 5)0	39.6 (2.2)	25 or less	27 or less
	Double	Metal Seal VQ42(0, 5)0	36.0 (2.0)	12 or less	12 or less
		Rubber Seal VQ42(0, 5)0	39.6 (2.2)	15 or less	15 or less
3 Positions	Closed	Metal Seal VQ43(0, 5)0	32.4 (1.8)	45 or less	47 or less
		Rubber Seal VQ43(0, 5)0	36.0 (2.0)	50 or less	52 or less
	Center	Metal Seal VQ44(0, 5)0	36.0 (2.0)	45 or less	47 or less
		Rubber Seal VQ44(0, 5)0	39.6 (2.2)	50 or less	52 or less
	Exhaust	Metal Seal VQ45(0, 5)0	36.0 (2.0)	45 or less	47 or less
		Rubber Seal VQ45(0, 5)0	39.6 (2.2)	50 or less	52 or less
Pressure	Metal Seal VQ45(0, 5)0	36.0 (2.0)	45 or less	47 or less	
	Rubber Seal VQ45(0, 5)0	39.6 (2.2)	50 or less	52 or less	

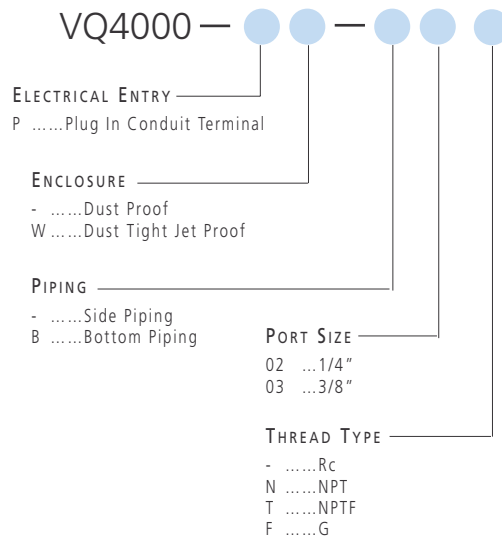
Note 1) Value for Valve on Subplate and Cylinder Port Rc 3/8

Note 2) As per JISB8375-1981 (Supply Pressure; 0.5 MPa (5.1 kgf/cm²);
with Indicator Light and Surge Voltage Suppressor; Clean Air)

**How To
ORDER
SERIES VQ4000**



**How To
ORDER
SUBPLATE
SERIES VQ4000**



SOLENOID VALVES SERIES VQ4000

HOW TO
ORDER
MANIFOLD

SERIES VQ4000

VV5Q4 1 — ● — ● — ● — ● — ● — ● —

MANIFOLD TYPE
1 Plug In Unit

NO OF STATIONS
02 ... 2 Stations
n n Stations
Max & Min depends on Kit
Refer to Section

PORT SIZE

- C8 ... One Touch Fitting for ø8
- C10 ... One Touch Fitting for ø10
- C12 ... One Touch Fitting for ø12
- N7 ... One Touch Fitting for ø1/4"
- N9 ... One Touch Fitting for ø5/16"
- N11 ... One Touch Fitting for ø3/8"
- 02 ... 1/4"
- 03 ... 3/8"
- B Bottom Piping 1/4"
- CM ... Mixed Size

THREAD TYPE

- Rc
- N NPT
- T NPTF
- F G

OPTION

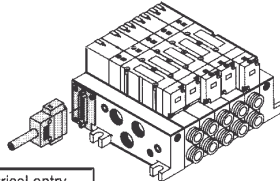
- None
 - CD ... Exhaust Cleaner; For D Side Mounting (NOTE 2)
 - CU ... Exhaust Cleaner; For U Side Mounting (NOTE 2, 3)
 - K Specail Wiring Spec (Other than Double Wiring) (NOTE 4)
 - N Name Plate (T Kit Only)
 - SD ... Direct Jet with Silencer Box; D Side Exhaust
 - SU ... Direct Jet Silencer Box; U Side Exhaust (NOTE 4)
 - W Enclosure IP65 (Except F Kit)
- NOTE 1) WHEN SPECIFYING MORE THAN ONE OPTION, COMBINE SYMBOLS IN ALPHABETICAL ORDER
NOTE 2) COMBINATION OF CU/CD AND SU/SD IS NOT POSSIBLE
NOTE 3) COMBINATION OF T AND S KITS IS NOT POSSIBLE
NOTE 4) SPECIFY THE WIRING SPECIFICATIONS BY MEANS OF THE MANIFOLD SPECIFICATION FORM (EXCEPT L KIT)

CONTROL UNIT

KIT / ELECTRICAL ENTRY / CABLE LENGTH

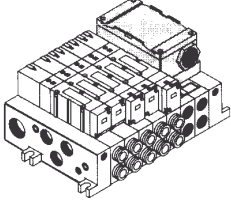
Kit/Electrical entry/Cable length

F Kit (D sub-connector)



Electrical entry				
D side	U side			
Kit D0	Kit U0	Without cable		Note 2)
F D1	F U1	Cable length 1.5m		2 to 12 stations
D2	U2	Cable length 3m		
D3	U3	Cable length 5m		

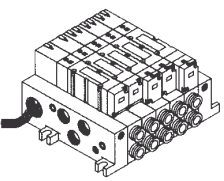
T Kit (Terminal box kit)



Applicable to IP65

Kit T	0	Terminal box	3 to 12 stations	Note 2)
--------------	----------	--------------	------------------	---------

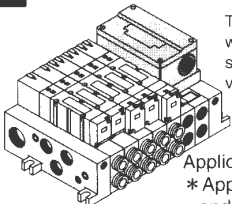
L Kit (Lead wire kit)



Electrical entry				
D side	U side			
Kit D0	Kit U0	Cable length 0.6m		2 to 16 stations
L D1	L U1	Cable length 1.5m		
D2	U2	Cable length 3m		

Applicable to IP65

S Kit (Serial transmission kit)

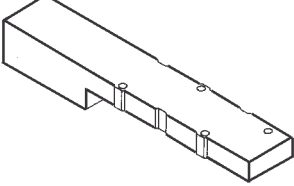
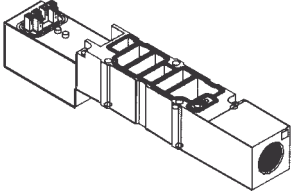
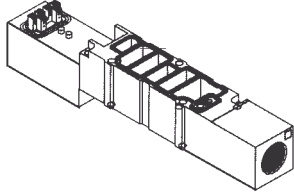
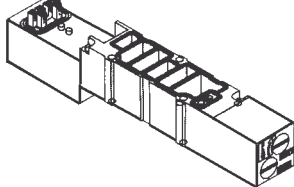
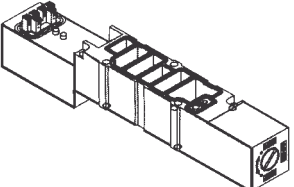
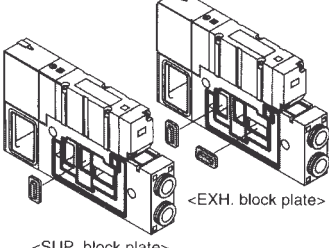
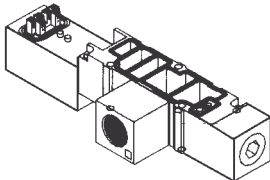
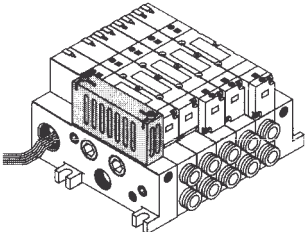
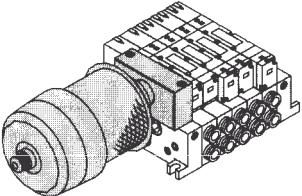


The valve is equipped with a lamp/surge voltage suppressor, and the voltage is 24VDC.

Applicable to IP65
* Applicable to INPUT and OUTPUT type.

Kit S	O	Without SI unit
	A	With general type SI unit
	B	With SI unit for Mitsubishi: MELSECNET/Mini-S3 data link system
	C	With SI unit for OMRON: SYSBUS wire system
	D	With SI unit for Sharp: New satellite I/O link system
	F1	With SI unit for NKE: Wiring saving system (16 points output)
	J1	With SI unit for Sanks: S-LINK system 16 points output
	J2	With SI unit for Sanks: S-LINK system 8 points output
	K	With SI unit for Fuji electric: T link mini system
	Q	With SI unit for Device Net and OMRON: Compo Bus
	R1	With SI unit for OMRON: Compo Bus/S (16 points)
	R2	With SI unit for OMRON: Compo Bus/S (8 points)
	BM	With SI unit for Mitsubishi: MELSECNET/Mini-S3 data link system
	Input unit	{ <input type="checkbox"/> Stations (0 to 2) }

OPTIONS
 MANIFOLD SERIES VQ4000

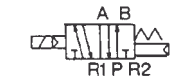
<p>Blank plate ass'y VVQ4000-10A-1</p> 	<p>Individual SUP. spacer VVQ4000-P-1-03</p> 	<p>Individual EXH. spacer VVQ4000-R-1-03</p> 
<p>Speed controller spacer VVQ4000-20A-1</p> 	<p>SUP. stop valve spacer VVQ4000-37A-1</p> 	<p>SUP. EXH. block plate VVQ4000-16A</p>  <p><EXH. block plate> <SUP. block plate></p>
<p>Release valve spacer VVQ4000-24A-1D (Note)</p> 	<p>Built-in silencer (Direct exhaust) [-S D] (Note)</p> 	<p>For exhaust cleaner mounting [-C D] (Note)</p>  <p>Applicable exhaust cleaner AMC 610-10</p>

(Note) Combination of external pilot specification and release valve spacer, built-in silencer box direct exhaust, exhaust cleaner mounting type is not available.

2.46 SOLENOID VALVES SERIAL TRANSMISSION SERIES VQ1000

5/2, 5/3 SPOOL & SLEEVE, ULTRA HIGH SPEED SOLENOID VALVE SERIES VQ1000

- ✓ Choice of Five Supported Protocols
- ✓ 512 Points through 32 Transmission Terminals
- ✓ 100m Minimum Transmission Distance
- ✓ Communication Speeds up to 500K Baud - Protocol Dependent
- ✓ "Plug In" System: easy assembly and maintenance
- ✓ High Speed Response from new Solenoid Design
- ✓ Long Life: Over 200 million cycles can be achieved by means of a special plunger and poppet valve construction within the pilot valve (patented)
- ✓ Space Saving Design
- ✓ Electrical Connection by D Sub Connector
- ✓ Indicator Light (2 Color on Double Solenoid Valve)
- ✓ Interface Integral with Manifold
- ✓ The VQ Valve incorporates a 2 Stage Armature allowing the valve to open before the armature completes its stroke



2 POSITION SINGLE



2 POSITION DOUBLE



3 POSITION CLOSED CENTRE



3 POSITION EXHAUST CENTRE

TECHNICAL SPECIFICATIONS

Type of Seal	Metal	
Fluid	Air, Inert Gas	
Min Operating Pressure	{1.0 Bar} 14.5PSI	
Max Operating Pressure ^(Note 1)	{8.2 Bar} 119PSI	
Effective Area (Cv Factor) mm ²	3.6 (0.20)	
Response Time ^(Note 2)	Single	Max 12m sec
	Double	Max 10m sec
	3-Position	Max 20m sec
Life	100 million cycles or more	
Ambient and Fluid Temperature ^(Note 3)	-10 to +50°C / 14-122°F	
Lubricant ^(Note 4)	Not required	
Manual Override	Non-Locking Push Type	
Protection Structure	Dustproof	

^(Note 1) Calculated on the basis of JIS B 8375-1981 (Supply pressure 0.5MPa{5.1 Bar}); the above valve shows response time checked when the valve is equipped with an indicator light and surge voltage suppressor).

^(Note 2) Use dry air to prevent dew condensation in the case when temperature is low.

^(Note 3) Perfect dry air (dew point equals to -30°C). Non grease on main valve. Mist separation required.

Note: The VQ valves used with Serial Transmission Manifolds must be positive common type which differs from valves used on 'D' Sub-connector manifolds.

Note: Valves and Manifold to be ordered as separate items.

Note: Switch Identification and setting information is attached to the SI Interface. The terminal abbreviation "FG" means Frame Ground - ie chassis earth.

Example: A seven station manifold, complete with Omron Sysmac series including with Diameter 4 one touch fittings and DIN rail mount, with 5 off single solenoid valves and 2 off double solenoid valves is ordered as follows :

VV5Q11-07C45C-D 1 off
VQ1100-5 5 off
VQ1200-2 2 off

SOLENOID SPECIFICATIONS

Allowable Voltage	±10% of Rated Voltage
External Power Supply	24VDC
Current Consumption	1.0A max
Type of Coil Insulation	Class B
Power Consumption	1.0WDC

HOW TO ORDER MANIFOLD

VV5Q1 1 — S — 5

MANIFOLD BASE TYPE

1 Plug-in type

NO OF STATIONS*

02 2 stations
to
16 16 stations

PORTING

C3 3.2mm fittings for Ø3.2mm tube
C4 4mm fittings for Ø4mm tube
C6 6mm fittings for Ø6mm tube
M5 M5x0.8
N1 Ø1/8" Fittings for Ø1/8" Tube
N3 Ø5/32" Fittings for Ø5/32" Tube
N7 Ø1/4" Fittings for Ø1/4" Tube

INTERFACE

B Mitsubishi Melsec - A
C Omron Sysmac
D Sharp New Satelite
E Matsushita Mewnet
G Allen Bradley
Note) More options are available,

OPTION

B Back Pressure Prevention Valve
D DIN Rail Mounting
S Built-in (TOP) silencer: not piped exhaust

HOW TO ORDER VALVES

VQ1 00 — 5

SYMBOL

1 2-position
..... single
2 2-position
..... double
3 3-position
..... closed centre
4 3-position
..... exhaust centre

BODY TYPE

0 Plug-in Base Type

TYPE OF SEAL

0 Metal Seal
1 Rubber Seal

VOLTAGE

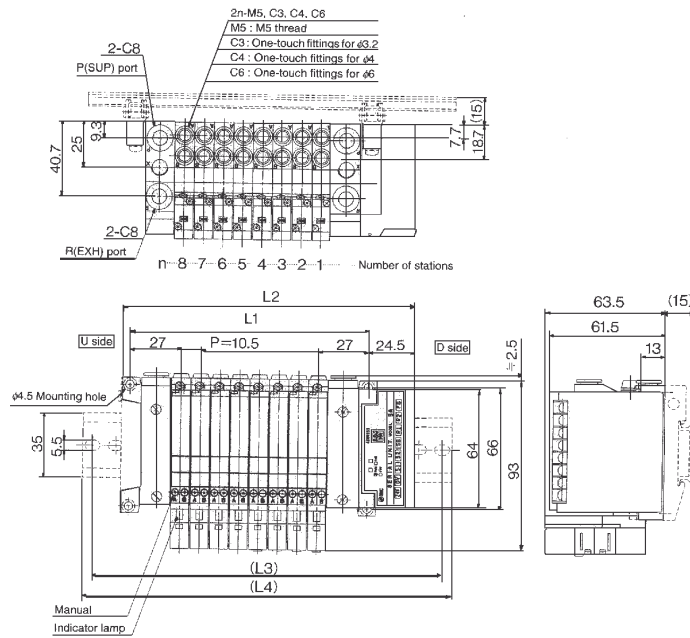
5 24VDC with indicator light and surge voltage suppressor

*NOTE

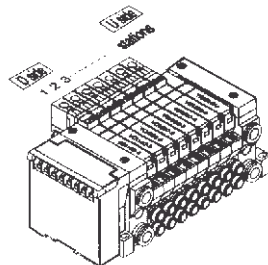
2-8 station manifolds are wired for single or double solenoid operation.

SERIAL TRANSMISSION SERIES VQ1000

DIMENSIONS



L/n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	64.5	75	85.5	96	106.5	117	127.5	138	148.5	159	169.5	180	190.5	201	211.5
L2	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5	230	240.5
(L3)	125	125	137.5	150	16+2.5	175	187.5	187.5	200	212.5	225	237.5	250	250	262.5
(L4)	135.5	135.5	148	160.5	173	185.5	198	198	210.5	223	235.5	248	260.5	260.5	273



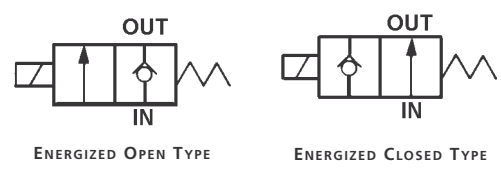
Stations are counted from the D side

SOLENOID VALVES SERIES VX



2 PORT SOLENOID VALVE DIRECT OPERATED TYPE SERIES VX21/22/23

- ✓ Compact and Lightweight
- ✓ Large Flow Capacity
- ✓ Can be quickly disassembled and reassembled
- ✓ High Reliability Molded Coil
- ✓ Proper Selection of Body and Sealing Materials permits Application of a Wide Variety of Fluid



**TECHNICAL
SPECIFICATIONS**

ENERGIZED OPEN TYPE SERIES VX

1MPa = 145PSI

Port Size	Orifice mmø	Flow Rate Cv Effective Area (mm²)		Model	Maximum Operating Pressure								Maximum System Pressure MPa	Proof Pressure MPa
					Differential MPa									
					Water		Air		Oil		Steam			
AC	DC	AC	DC	AC	DC	AC	DC	AC						
1/8 (6A)	2	0.17	3	VX2110-01	2	1.5	2	1.5	1.5	1.5	1	Water	5	
	3	0.33	6	VX2120-01	0.9	0.5	1.1	0.6	0.5	0.5	1	•		
	4.5	0.61	11	VX2130-01	0.4	0.2	0.45	0.2	0.2	0.15	0.45	Oil		
1/4 (8A)	2	0.17	3	VX2110-02	2	1.5	2	1.5	1.5	1.5	1	•		
	3	0.33	6	VX2120-02	0.9	0.5	1.1	0.6	0.5	0.5	1	Air		
	3	0.33	6	VX2220-02	1.7	1.5	2	1.5	1.2	1.2	1	3		
	3	0.33	6	VX2320-02	2.5	3	3	3	1.7	2	-			
	4.5	0.61	11	VX2130-02	0.4	0.2	0.45	0.2	0.2	0.15	0.45	••		
	4.5	0.61	11	VX2230-02	0.6	0.35	0.75	0.35	0.35	0.3	0.75	Steam		
	4.5	0.61	11	VX2330-02	0.85	0.9	1	0.9	0.55	0.85	1			
	6	1.05	19	VX2240-02	0.35	0.15	0.4	0.15	0.2	0.1	0.4	1		
	6	1.05	19	VX2340-02	0.55	0.3	0.5	0.35	0.35	0.3	0.5			
	8	1.7	31	VX2250-02	0.13	0.08	0.15	0.08	0.1	0.08	0.15	Water		
8	1.7	31	VX2350-02	0.17	0.2	0.2	0.2	0.14	0.2	0.2	•			
10	1.9	34	VX2260-02	0.08	0.03	0.08	0.03	0.05	0.03	0.08	Oil • Air			
10	1.9	34	VX2360-02	0.1	0.07	0.1	0.07	0.08	0.07	0.1	3			
3/8 (10A)	3	0.33	6	VX2220-03	1.7	1.5	2	1.5	1.2	1.2	1	Water	5	
	3	0.33	6	VX2320-03	2.5	3	3	3	1.7	2	-	•		
	4.5	0.61	11	VX2230-03	0.6	0.35	0.75	0.35	0.35	0.3	0.75	Oil • Air		
	4.5	0.61	11	VX2330-03	0.85	0.9	1	0.9	0.55	0.85	1	3		
	6	1.05	19	VX2240-03	0.35	0.15	0.4	0.15	0.2	0.1	0.4	Steam		
	6	1.05	19	VX2340-03	0.55	0.3	0.5	0.35	0.35	0.3	0.5	1		
	8	1.7	31	VX2250-03	0.13	0.08	0.15	0.08	0.1	0.08	0.15	Water		
	8	1.7	31	VX2350-03	0.17	0.2	0.2	0.2	0.14	0.2	0.2	•		
	10	2.4	43	VX2260-03	0.08	0.03	0.08	0.03	0.05	0.03	0.08	Oil • Air		
	10	2.4	43	VX2360-03	0.1	0.07	0.1	0.07	0.08	0.07	0.1	1		
1/2 (15A)	10	2.4	43	VX2260-04	0.08	0.03	0.08	0.03	0.05	0.03	0.08	Steam	3	
	10	2.4	43	VX2360-04	0.1	0.07	0.1	0.07	0.08	0.07	0.1	0.5		

TECHNICAL SPECIFICATIONS

ENERGIZED CLOSED TYPE SERIES VX

1 MPa = 145PSI

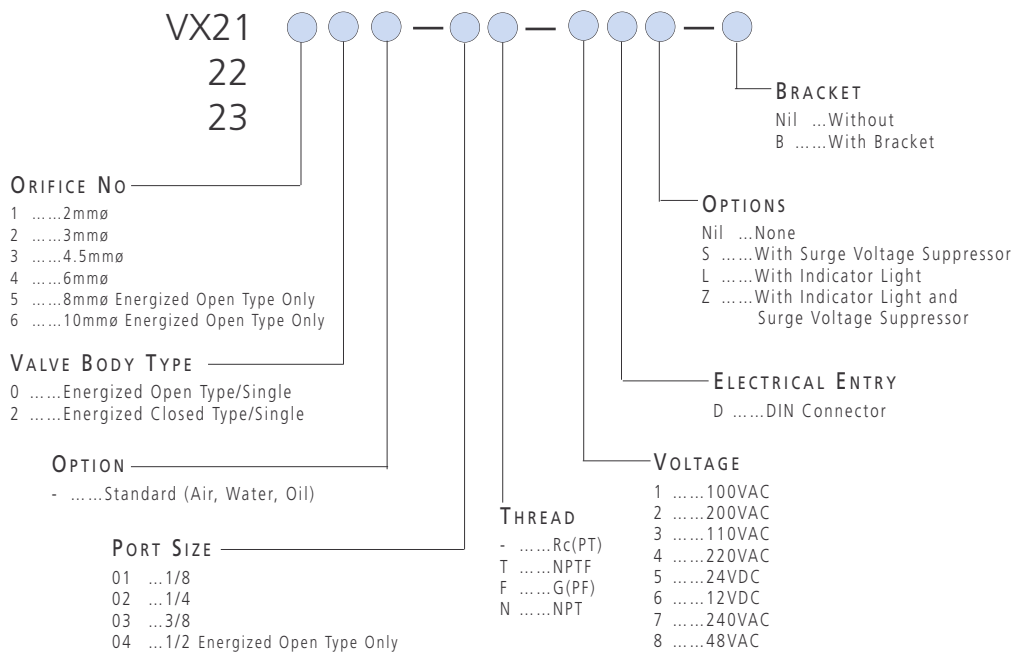
Port Size	Orifice mmø	Flow Rate		Model	Maximum Operating Pressure				Maximum System Pressure MPa	Proof Pressure MPa
		Cv	Effective Area (mm²)		Differential MPa					
					Water	Air	Oil	Steam AC		
1/8 (6A)	2	0.17	3	VX2112-01	0.9	1.5	0.8	1	Water • Oil • Air 3 •• Steam 1	5
	3	0.33	6	VX2122-01	0.45	0.7	0.45	0.7		
	4.5	0.61	11	VX2132-01	0.2	0.3	0.2	0.3		
1/4 (8A)	2	0.17	3	VX2112-02	0.9	1.5	0.8	1		
	3	0.33	6	VX2122-02	0.45	0.7	0.45	0.7		
	3	0.33	6	VX2222-02	0.8	1	0.7	1		
	3	0.33	6	VX2322-02	1.2	1.6	1	-		
	4.5	0.61	11	VX2132-02	0.2	0.3	0.2	0.3		
	4.5	0.61	11	VX2232-02	0.3	0.45	0.3	0.45		
	4.5	0.61	11	VX2332-02	0.6	0.8	0.6	0.8		
6	1.05	19	VX2242-02	0.15	0.25	0.15	0.25			
6	1.05	19	VX2342-02	0.35	0.45	0.35	0.45			
3/8 (10A)	3	0.33	6	VX2222-03	0.8	1	0.7	1		
	3	0.33	6	VX2322-03	1.2	1.6	1	-		
	4.5	0.61	11	VX2232-03	0.3	0.45	0.3	0.45		
	4.5	0.61	11	VX2332-03	0.6	0.8	0.6	0.87		
	6	1.05	19	VX2242-03	0.15	0.25	0.15	0.25		
	6	1.05	19	VX2342-03	0.35	0.45	0.35	0.45		

ACCESSORIES

BRACKET SERIES VX

Type	Part Number
VX2120	VX070-020
VX2120	
VX2130	
VX2220	
VX2230	VX070-022
VX2240	
VX2320	
VX2330	
VX2340	VX070-029
VX2250	
VX2260	
VX2350	
VX2360	

HOW TO ORDER SERIES VX



DIMENSIONS

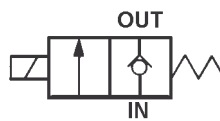
TYPE PORT SIZE ORIFICE X SERIES VX21/22/23

Solenoid Valve Type (Port Size)			Orifice Size (Number)					
VX21	VX22	VX23	1	2	3	4	5	6
			2mmø	3mmø	4.5mmø	6mmø	8mmø	10mmø
01 (1/8)	-	-	●	●	●	-	-	-
02 (1/4)	-	-	●	●	●	-	-	-
-	02 (1/4)	02 (1/4)	-	●	●	●	●	●
-	03 (3/8)	03 (3/8)	-	●	●	●	●	●
-	04 (1/2)	04 (1/2)	-	-	-	-	-	●

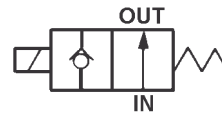
SOLENOID VALVES SERIES VX

2 PORT SOLENOID VALVE PILOT OPERATED TYPE SERIES VXD21

- ✓ Compact and Lightweight
- ✓ Large Flow Capacity
- ✓ Can be quickly disassembled and reassembled
- ✓ High Reliability Molded Coil
- ✓ Proper Selection of Body and Sealing Materials permits Application of a Wide Variety of Fluid



ENERGIZED OPEN TYPE



ENERGIZED CLOSED TYPE

TECHNICAL SPECIFICATIONS

ENERGIZED OPEN TYPE SERIES VXD

1 MPa = 145PSI

Connection	Orifice mmo	Flow Rate Cv Effective Area (mm ²)		Model	Minimum Operating Pressure Differential MPa	Maximum Operating Pressure Differential MPa						Maximum System Pressure MPa
						Water		Air		Oil		
						AC	DC	AC	DC	AC	DC	
1/4	10	1.9	34	VXD2130-02	0.02	0.7	0.5	0.9	0.7	0.5	0.4	1.5
3/8	10	2.4	43	VXD2130-03	0.02	0.7	0.5	0.9	0.7	0.5	0.4	
3/8	15	4.5	80	VXD2140-03	0.02	1	1	1	1	0.7	0.7	
1/2	10	2.4	43	VXD2130-04	0.02	0.02	0.5	0.9	0.7	0.5	0.4	
1/2	15	5.5	100	VXD2140-04	0.02	1	1	1	1	0.7	0.7	
3/4	20	9.5	170	VXD2150-06	0.02	1	1	1	1	0.7	0.7	

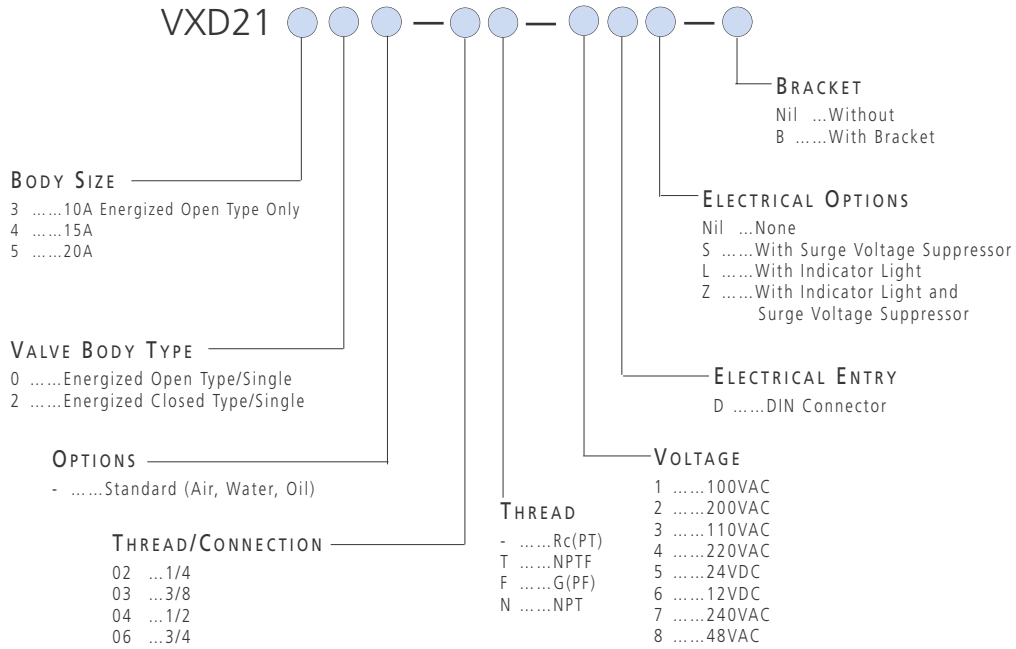
TECHNICAL SPECIFICATIONS

ENERGIZED CLOSED TYPE SERIES VXD

1 MPa = 145PSI

Connection	Orifice mmo	Flow Rate Cv Effective Area (mm ²)		Model	Minimum Operating Pressure Differential MPa	Maximum Operating Pressure Differential MPa		Maximum System Pressure MPa
						Water / Air	Oil	
3/8	15	4.5	80	VXD2142-03	0.02	0.7	0.6	1.5
1/2	15	5.5	100	VXD2142-04	0.02	0.7	0.6	
3/4	20	9.5	170	VXD2152-06	0.02	0.7	0.6	

**HOW TO
 ORDER
 SERIES VXD**



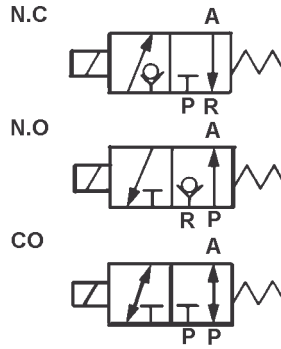
SOLENOID VALVES SERIES VX



3 PORT SOLENOID VALVE DIRECT OPERATED TYPE SERIES VX31/32/33

- ✓ Compact and Lightweight
- ✓ Large Flow Capacity
- ✓ Can be quickly disassembled and reassembled
- ✓ High Reliability Molded Coil
- ✓ Proper Selection of Body and Sealing Materials permits Application of a Wide Variety of Fluid

SYMBOLS



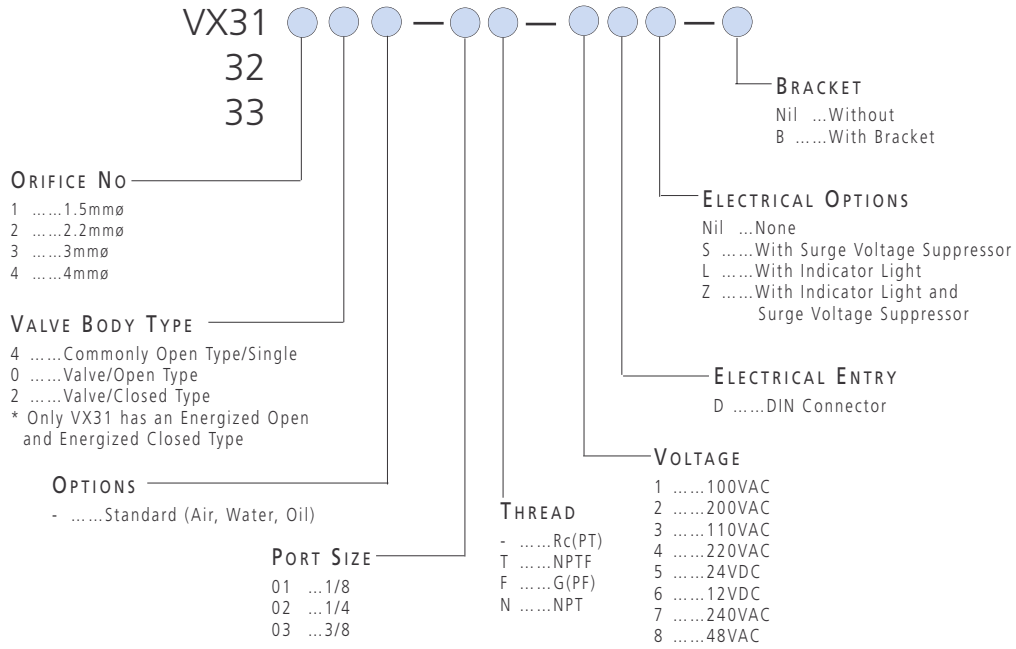
1MPa = 145PSI

TECHNICAL
SPECIFICATIONS

SERIES VX31/32/33

Port Size	Orifice mm	Flow Rate		Model	Maximum Operating Pressure Differential MPa		Maximum System Pressure MPa
		Cv	Effective Area (mm ²)		No AC AC	CO AC / DC	
1/8 (6A)	1.5	0.08	1.4	VX311(0/2/4)-01	1	0.6	Water
	2.2	0.16	2.8	VX312(0/2/4)-01	0.5	0.3	
	3	0.24	4.3	VX313(0/2/4)-01	0.3	0.2	
1/4 (8A)	1.5	0.08	1.4	VX311(0/2/4)-02	1	0.6	• Oil
	2.2	0.16	2.8	VX312(0/2/4)-02	0.5	0.3	
	2.2	0.19	3.4	VX3224-02	-	0.6	• Air
	2.2	0.19	3.4	VX3324-02	-	1	
	3	0.24	4.3	VX313(0/2/4)-02	0.3	0.2	2
	3	0.33	6	VX3234-02	-	0.3	
	3	0.33	6	VX3334-02	-	0.6	•• Steam
	4	0.5	9	VX3244-02	-	0.15	
4	0.5	9	VX3344-02	-	0.3		
3/8 (10A)	2.2	0.19	3.4	VX3224-03	-	0.6	1
	2.2	0.19	3.4	VX3324-03	-	1	
	3	0.33	6	VX3234-03	-	0.3	
	3	0.33	6	VX3334-03	-	0.6	
	4	0.5	9	VX3244-03	-	0.15	
	4	0.5	9	VX3344-03	-	0.3	

**HOW TO
 ORDER**
 SERIES VX31/32/33



SOLENOID VALVES SERIES VX

2 PORT SOLENOID VALVE PILOT OPERATED TYPE DIFFERENTIAL PRESSURE OPERATION TYPE SERIES VXZ22

- ✓ Compact, Lightweight
- ✓ Large Valve Capacity
- ✓ Zero Differential Pressure Operation
- ✓ Low Power Consumption, Long Life
- ✓ High Reliability Molded Coil
- ✓ Easy Change Of Valve Type from Normally Closed to Normally Open



TECHNICAL SPECIFICATIONS

NORMALLY CLOSED TYPE SERIES VXZ

1MPa = 145PSI

Port Size	Orifice Size mmø	Flow Rate Cv Effective Orifice (mm ²)		Model	Maximum Operating Pressure Differential MPa						Maximum System Pressure MPa
					Water		Air		Oil		
					AC	DC	AC	DC	AC	DC	
1/4	10	1.9	34	VXZ2230-02	1	0.7	1	0.7	0.7	0.7	1.5
3/8	10	2.4	43	VXZ2230-03	1	0.7	1	0.7	0.7	0.7	
1/2	15	5.3	95	VXZ2240-04	1	0.7	1	0.7	0.7	0.7	

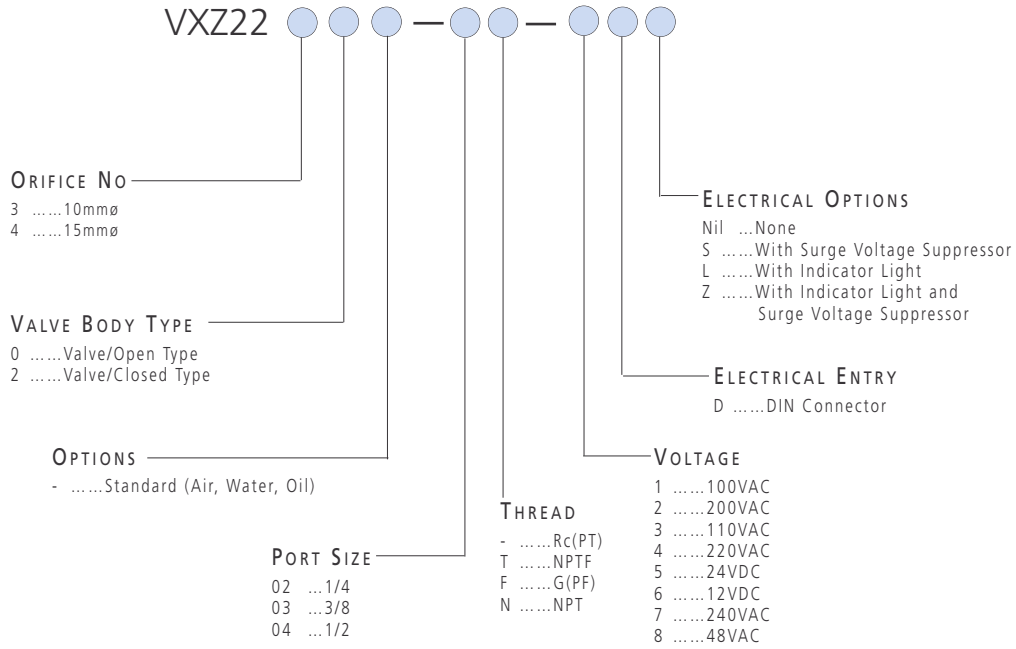
TECHNICAL SPECIFICATIONS

NORMALLY OPEN TYPE SERIES VXZ

1MPa = 145PSI

Port Size	Orifice Size mmø	Flow Rate Cv Effective Orifice (mm ²)		Model	Maximum Operating Pressure Differential MPa						Maximum System Pressure MPa
					Water		Air		Oil		
					AC	DC	AC	DC	AC	DC	
1/4	10	1.9	34	VXZ2232-02	0.7	0.6	0.7	0.6	0.7	0.6	1.5
3/8	10	2.4	43	VXZ2232-03	0.7	0.6	0.7	0.6	0.7	0.6	
1/2	15	5.3	95	VXZ2242-04	0.7	0.6	0.7	0.6	0.7	0.6	

**HOW TO
 ORDER
 SERIES VXZ**



SOLENOID VALVES SERIES (N)VZ100

3/2 DIRECT ACTING SOLENOID VALVE 10-32Nom PORTED

- ✓ N/O or N/C Option
- ✓ 10-32Nom Body Ported, possible to Manifold Mount
- ✓ Cv 0.05
- ✓ Optional Lamp and Surge Voltage Suppressor
- ✓ Suitable for Pressure or Vacuum

TECHNICAL SPECIFICATIONS

Fluid	Air
Ambient and Fluid Temperature	Max 50°C / 122°F
Response Time	15ms or less
Max Operating Frequency	15c/s
Manual Override	Non-locking type
Lubrication	Not required (Use turbine oil ±1 (ISO VG32) if lubrication is provided)
Enclosure	Dust Proof

SOLENOID SPECIFICATIONS

Electrical Entry	Grommet (G), Plug connector (M)		
Voltages	AC	240V, 110V, 24V	
	DC	12V, 24V	
Allowable Voltage	-15~+10% of rated voltage		
Coil Insulation	Class E or equivalent (120°C)		
Temperature Rise	45°C or less / 113°F or less		
Power Consumption	DC	1.8W/2.1W (W/LED)	
Apparent Power	AC	Inrush	4.5VA/50Hz, 4.2VA/60Hz
		Holding	3.5VA/50Hz, 3VA/60Hz
Surge Voltage Suppressor	DC: Diode, AC: ZNR		
Indicator Light	DC: LED (Red), AC: Neon lamp		

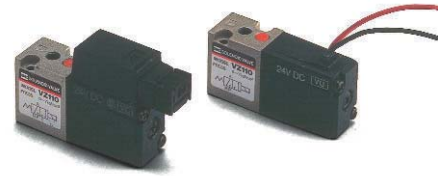
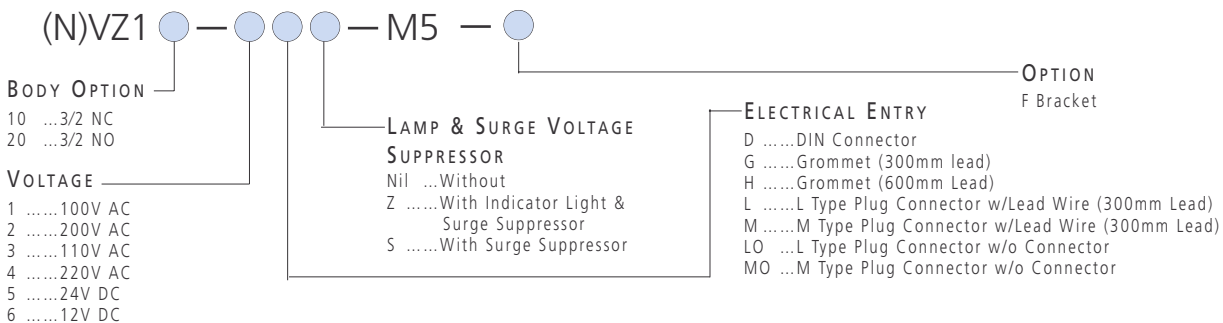
FLOW SPECIFICATIONS

Body Type	Model	Type Of Actuation	Operating Pressure Range kgf/cm ²	Vacuum Application		Effective Orifice mm ² (Cv Factor)	Port Size	Weight
				P Port	R Port			
Body Ported	(N)VZ110-**-M5	NC	0 ~ 7MPa 0 ~ 100PSI	22in-Hg 0~85PSI	VAC ~0PSI	P->A 0.6 (0.034) A->R 0.9 (0.05)	10-32Nom (M5x0.8)	0.15g
	(N)VZ110-**-M5	NO	0 ~ 5MPa 0 ~ 70PSI	22in-Hg 0~85PSI	VAC ~55PSI	R->A 0.6 (0.034) A->P 0.6 (0.034)		

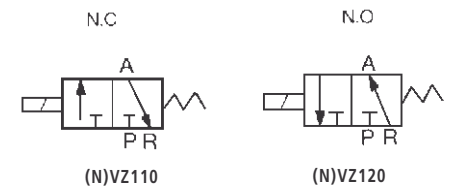
Note: In case of (N)VZ120 Supply Air to 'R' Port. "P" Port will be the Exhaust Port.

HOW TO ORDER

(N)VZ100 SOLENOID VALVE



SYMBOLS



ACCESSORIES

(N)VZ100 SOLENOID VALVE

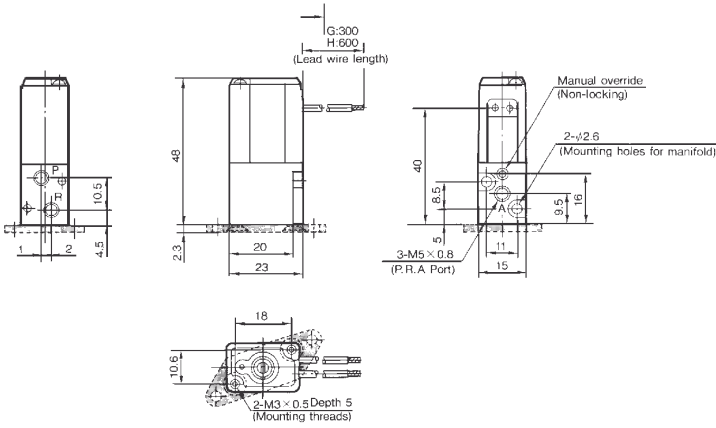
- DXT170-123-A-30Plug with 3m lead
- DXT170-34-1AFoot bracket with screws



Observe Operating Pressure Ranges - see Technical Specifications for details

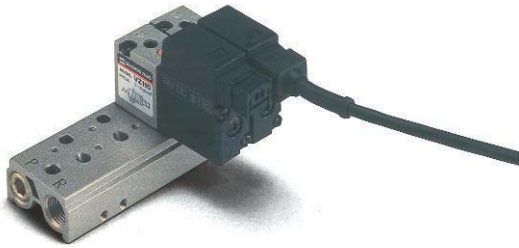
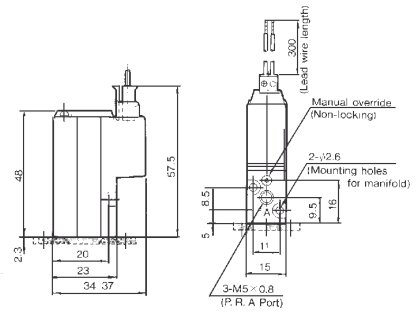
DIMENSIONS

(N)VZ100 BODY PORTED GROMMET TYPE



DIMENSIONS

(N)VZ100 BODY PORTED MN PLUG TYPE



SERIES (N)VZ100 MANIFOLDS

2 - 9 station manifold with a common supply and exhaust.

HOW TO ORDER

MANIFOLD TYPE 20 TOP PORTED

(N)VV4Z1—20—1

STATIONS

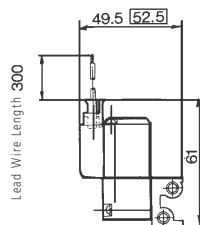
02 ...2 Stations
to
20 ...20 Stations

THREAD TYPE
-PT
00T ...NPTF

OPTION
FBracket

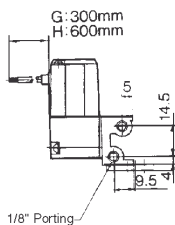
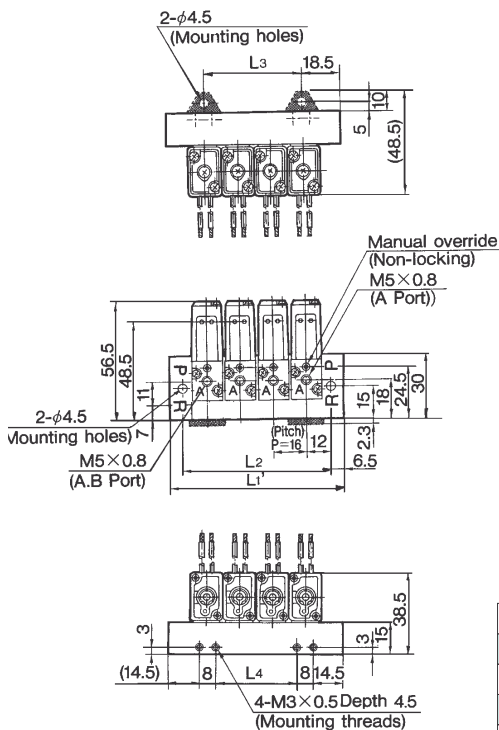
DIMENSIONS

MANIFOLD TYPE 20 TOP PORTED M PLUG TYPE



DIMENSIONS

MANIFOLD TYPE 20 TOP PORTED GROMMET TYPE



ACCESSORIES

MANIFOLD TYPE 20 TOP PORTED

DXT170-25-1ABlanking Plate Assembly

Stations (n)	2	3	4	5	6	7	8	9	10
L1	53	69	85	101	117	133	149	165	181
L2	40	56	72	88	104	120	136	152	168
L3	16	32	48	64	80	96	112	128	144
L4	8	24	40	56	72	88	104	120	136

SOLENOID VALVES SERIES (N)VZ300



3/2 PILOT OPERATED SOLENOID/SPRING VALVE 10-32NOM

- ✓ N/O or N/C Option
- ✓ 10-32Nom Body Ported or Sub Base Manifold Mounted
- ✓ Cv 0.2 ~ 0.25
- ✓ Optional Lamp and Surge Voltage Suppressor
- ✗ Solenoid Coils are integral and must not be removed
- ✗ These valves are supplied without leads which must be ordered separately (see Accessories Section).

TECHNICAL SPECIFICATIONS

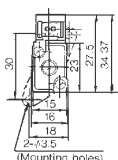
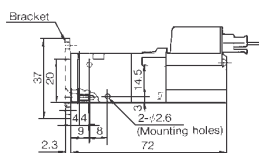
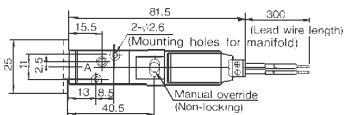
Fluid	Air and Inert Gases
Operating Pressure Range	20 ~ 100PSI (1.5-7kgf/cm ²)
Ambient and Fluid Temperature	Max 50°C / 122°F
Response Time	20ms or less
Max Operating Frequency	50 Cycles per Second
Manual Override	Non-Locking Push Type
Pilot Exhaust	Individual, Common
Lubrication	Not Required;
Enclosure	Dust Proof

SOLENOID SPECIFICATIONS

Electrical Entry	Grommet (G), Plug Connector (MN)	
Voltages	AC	24V, 110V, 240V
	DC	12V, 24V
Allowable voltage	-15~+10% of rated voltage	
Coil insulation	Class E or equivalent	
Temperature rise	45°C or less / 113°F or less	
Power consumption DC	1.8W/2.1W (W/LED)	
Apparent power AC	Inrush	4.5VA/50Hz, 4.2VA/60Hz
	Holding	3.5VA/50Hz, 3VA/60Hz
Surge voltage suppressor	DC: Diode, AC: ZNR	
Indicator light	DC: LED (Red), AC: Neon lamp	

DIMENSIONS

SERIES (N)VZ300 BODY PORTED M PLUG TYPE



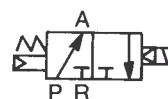
Observe Operating Pressure Ranges - see Technical Specifications for details

Model		Type of Actuation	Effective Orifice mm ² /(Cv factor)
Body Ported Type	(N)VZ312	NC	3.6 (0.2)
	(N)VZ322	NO	
Base Mounted Type (with Subplate)	(N)VZ314	NC	4.5 (0.25)
	(N)VZ324	NO	

SYMBOLS



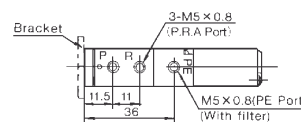
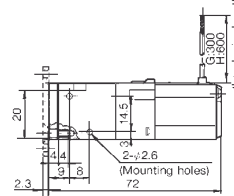
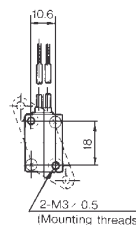
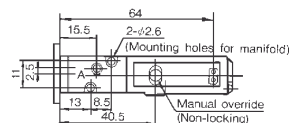
(N)VZ312



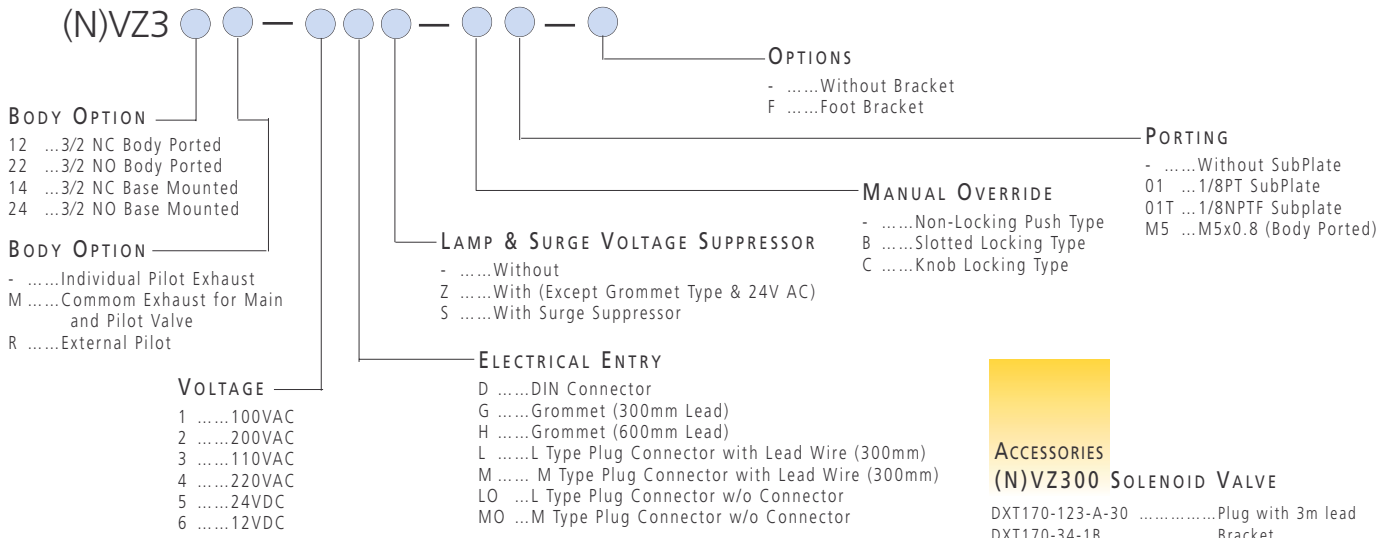
(N)VZ322

DIMENSIONS

SERIES (N)VZ300 BODY PORTED GROMMET TYPE



**HOW TO
ORDER
(N)VZ300 SOLENOID VALVE**



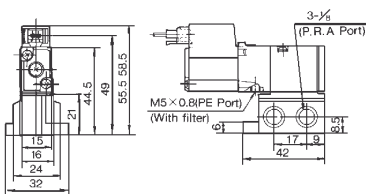
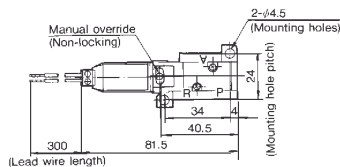
SERIES (N)VZ300 MANIFOLDS

A Single Sub-base and 3 different Manifold Designs.

- (i) Side Entry Single Sub-base for use with the Base Mounted Valve (Type 40).
- (ii) 2-10 Station Type 20 Mmanifold for use with the Body Ported Valve (Type 20).
- (iii) 2-10 Station Type 40 Side Entry Manifold for use with the Base Mounted Valve (Type 40).
- (iv) 2 - 10 Station Type 40 Bottom Entry Manifold for use with the Base Mounted Valve (Type 40).

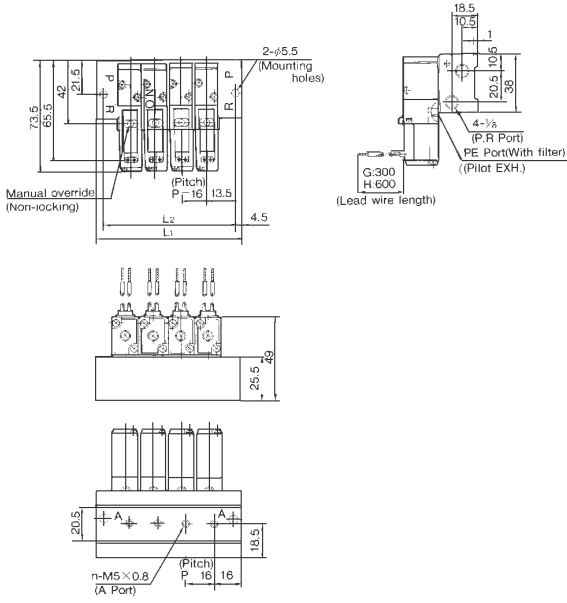


**DIMENSIONS
SINGLE SUB-BASE SIDE PORTED
M TYPE PLUG CONNECTOR**



DIMENSIONS

MANIFOLD TYPE 40 BOTTOM PORTED



HOW TO ORDER

MANIFOLD TYPE 40 BOTTOM PORTED

(N)VV3Z3 — 40 — ● 2 — ●

NUMBER OF STATIONS

02 ...2 stations
to
20 ...20 stations

SIZE OF A, B PORT

M5 ...10-32Nom (P, R Port PT)
M5T...10-32Nom (P, R Port NPTF)
01T ...1/8" NPTF

ACCESSORIES

MANIFOLD TYPE 40 SIDE PORTED

DXT200-8-1ABlanking Plate Kit

Stations (n)	2	3	4	5	6	7	8	9	10	
M5x0.8	L1	52	68	84	100	116	132	148	164	180
	L2	43	59	75	91	107	123	139	155	171

SOLENOID VALVES SERIES (N)VZ500



3/2 PILOT OPERATED SOLENOID / SPRING VALVE

- ✓ N/O or N/C Option
- ✓ 1/8 Body Ported, Sub Base or Manifold Mounted (1 to 10 Stations)
- ✓ Cv 0.5
- ✓ Optional Lamp and Surge Voltage Suppressor
- ✗ Solenoid Coils are integral and must not be removed
- ✗ These valves are supplied without leads which must be ordered separately (see Accessories Section)

TECHNICAL SPECIFICATIONS

Fluid	Air
Operating Pressure Range	20 ~ 100PSI (1.5-7kgf/cm ²)
Ambient and Fluid Temperature	Max 50°C / 122°F
Response Time	20ms or less
Max Operating Frequency	50 Cycles per Second
Manual Override	Non-Locking Push Type
Pilot Exhaust	Individual, Common
Lubrication	Not Required;
Enclosure	Dust Proof

Model	Type of Actuation	Effective Orifice mm ² (Cv Factor)
Body Ported Type	(N)VZ512	NC
	(N)VZ522	NO
Base Mounted Type (with Subplate)	(N)VZ514	NC
	(N)VZ524	NO

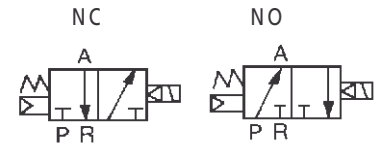
SOLENOID SPECIFICATIONS

Electrical Entry	Grommet (G), Plug Connector (M)	
Voltages	AC	240Hz, 110V50/60Hz, 24V50/60Hz
	DC	12V, 24V
Allowable Voltage	-15~+10% of rated voltage	
Coil Insulation	Class E or equivalent (120°C)	
Temperature Rise	45°C or less / 115°F or less	
Power Consumption DC	1.8W/2.1W (W/LED)	
Apparent Power AC	Inrush	4.5VA/50Hz, 4.2VA/60Hz
	Holding	3.5VA/50Hz, 3VA/60Hz
Surge Voltage Suppressor	DC: Diode, AC: ZNR	
Indicator Light	DC: LED (Red), AC: Neon lamp	



Observe operating pressure ranges - see technical specifications for details

SYMBOLS



ACCESSORIES

- (N)VZ500 SOLENOID VALVE**
- DXT170-123-A-30 Plug with 3m lead
 - DXT201-19-1A Bracket

HOW TO ORDER

(N)VZ500 SOLENOID VALVE



- BODY OPTION**
- 12 ...3/2 NC Body Ported
 - 22 ...3/2 NO Body Ported
 - 14 ...3/2 NC Base Mounted
 - 24 ...3/2 NO Base Mounted

- BODY OPTION**
-Individual Pilot Exhaust
 - MCommon Exhaust for Main and Pilot Valve
 - RExternal Pilot

- VOLTAGE**
- 1100V AC
 - 3110V AC
 - 4220V AC
 - 524V DC
 - 612V DC

- ELECTRICAL ENTRY**
- DDIN Connector
 - GGrommet (300mm lead)
 - HGrommet (600mm Lead)
 - LL Type Plug Connector with Lead Wire (300mm)
 - M M Type Plug Connector with Lead Wire (300mm)
 - LOL Type Plug Connector w/o Connector
 - MOM Type Plug Connector w/o Connector

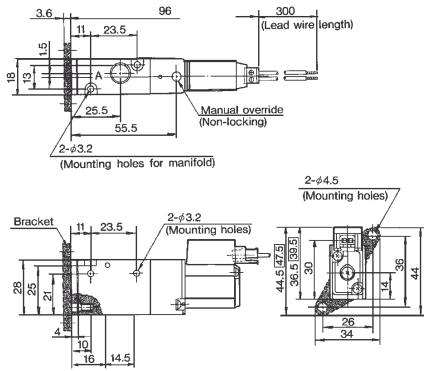
- PORTING**
-Without Sub Plate
 - 01T ...1/8" Sub Plate
 - 02T ...1/4" Sub Plate
 - 01T ...1/8 (Body Ported)

- OPTIONS**
-Without Bracket
 - FFoot Bracket

- LAMP & SURGE VOLTAGE SUPPRESSOR**
-Without
 - ZWith (Except Grommet Type & 24V AC)
 - SWith Surge Suppressor

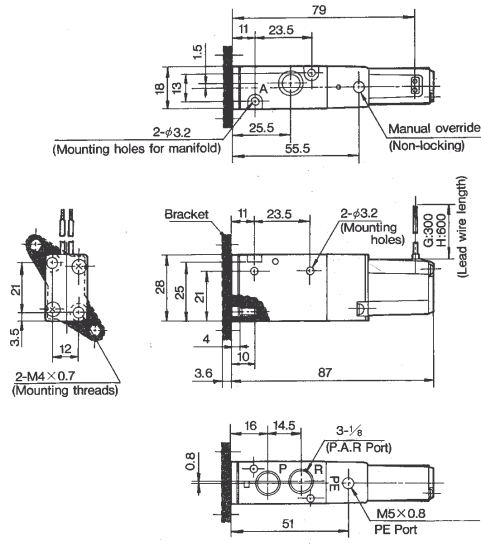
DIMENSIONS

SERIES (N)VZ500 BODY PORTED MN PLUG TYPE



DIMENSIONS

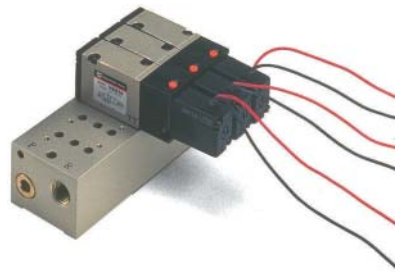
SERIES (N)VZ500 BODY PORTED GROMMET TYPE



SERIES (N)VZ500 MANIFOLDS

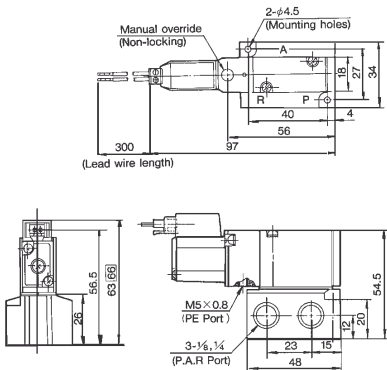
A Single Sub Base and 3 Different Manifold Design.

- (i) Side Entry Single Sub-base for use with the Base Mounted Valve (Type 40).
- (ii) 2-10 Station Type 21 Manifold for use with the Body Ported Valve (Type 20).
- (iii) 2-10 Station Type 41 Side Entry Manifold for use with the Base Mounted Valve (Type 40).
- (iv) 2 - 10 Station Type 41 Bottom Entry Manifold for use with the Base Mounted Valve (Type 40).



DIMENSIONS

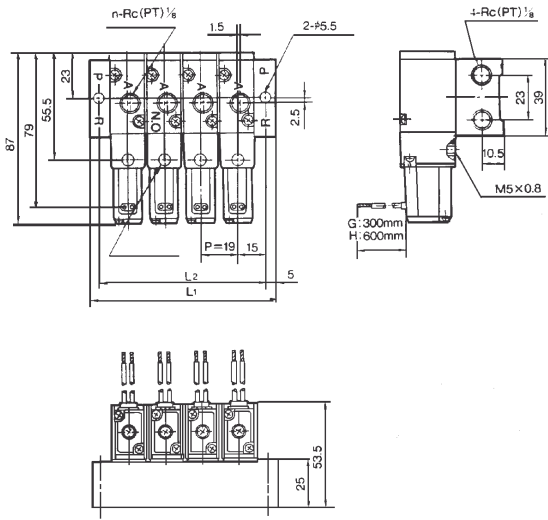
SINGLE SUB-BASE SIDE PORTED TYPE M



SOLENOID VALVES SERIES (N)VZ500

DIMENSIONS

MANIFOLD TYPE 20 TOP PORTED GROMMET TYPE



Stations (n)	2	3	4	5	6	7	8	9	10
L ₁	59	78	97	116	135	154	173	192	211
L ₂	49	68	87	106	125	144	163	182	201

How To ORDER

MANIFOLD TYPE 20 TOP PORTED

(N)VV3Z5 — 20 — 1 —

NUMBER OF STATIONS
02 ...2 Stations
to
20 ...20 Stations

THREAD TYPE
-PT
00T ...NPTF

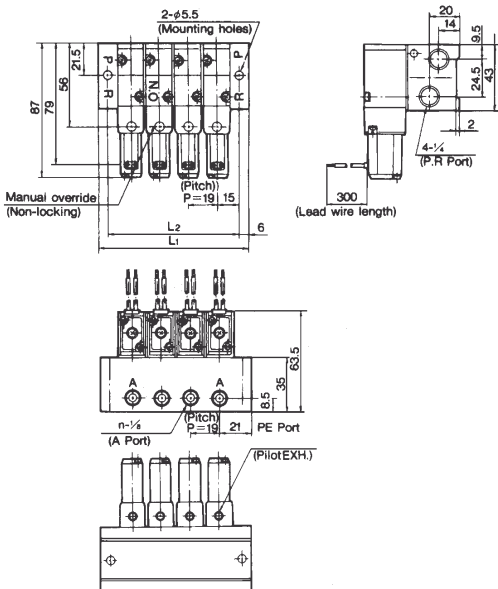
ACCESSORIES

MANIFOLD TYPE 20 TOP PORTED

DXT201-15-1ABlanking Plate Kit

DIMENSIONS

MANIFOLD TYPE 41 SIDE PORTED GROMMET TYPE



Stations (n)	2	3	4	5	6	7	8	9	10
L ₁	61	80	99	118	137	156	175	194	213
L ₂	49	68	87	106	125	144	163	182	201

How To ORDER

MANIFOLD TYPE 41 SIDE PORTED

(N)VV3Z5 — 41 — 1 — 01T

NUMBER OF STATIONS
02 ...2 stations
to
20 ...20 stations

SIZE OF A, B PORT
01T ...1/8" NPTF
B7T ...One Touch Fitting 1/4"
B9T ...One Touch Fitting 5/16"

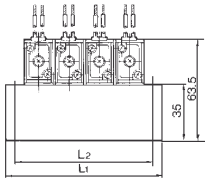
ACCESSORIES

MANIFOLD TYPE 41 SIDE PORTED

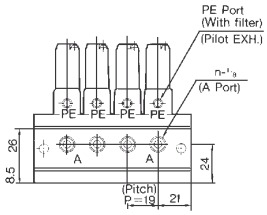
DXT201-15-1ABlanking Plate Pit

DIMENSIONS

MANIFOLD TYPE 41 BOTTOM PORTED GROMMET TYPE



FOR ALL OTHER
DETAILS, REFER TO
TYPE 41 SIDE PORTED
MANIFOLD.



HOW TO ORDER

MANIFOLD TYPE 41 BOTTOM PORTED

(N)VV3Z5-41-2-01T

NUMBER OF STATIONS

02 ...2 Stations
to
20 ...20 Stations

THREAD TYPE

-PT
TNPTF

ACCESSORIES

MANIFOLD TYPE 41 BOTTOM PORTED

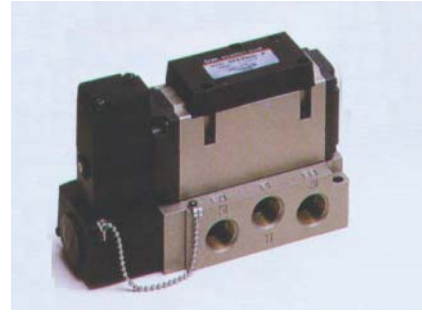
DXT201-15-1ABlanking Plate Kit

Stations (n)	2	3	4	5	6	7	8	9	10
L ₁	61	80	99	118	137	156	175	194	213
L ₂	49	68	87	106	125	144	163	182	201

SOLENOID VALVES SERIES NVFS

SERIES NVFS 2000, 3000, 4000, 5000, 6000 5 PORT PILOT OPERATED BASE-MOUNTED / PLUG-IN TYPE

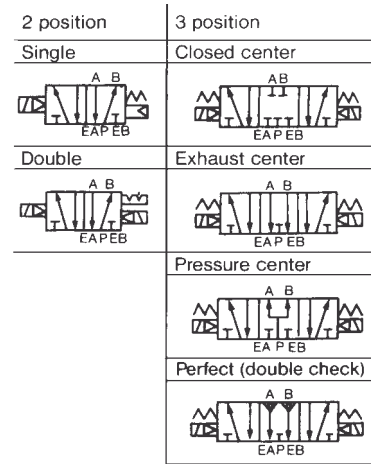
- ✓ Large Flow Capacity
- ✓ Low Power Consumption
- ✓ Long Life
- ✓ Ease Maintenance
- ✓ Many Variations Available



MODEL NVFS2000

Position	Number Of Solenoid	Type Plug-In	Port Size (NPTF)	Cv Factor	Response Time (ms)
2 Position	Single	NVFS2100	1/8	0.7	15 or less
			1/4	0.83	
	Double	NVFS2200	1/8	0.7	13 or less
			1/4	0.83	
3 Position	Closed Center	NVFS2300	1/8	0.65	20 or less
			1/4	0.67	
	Exhaust Center	NVFS2400	1/8	0.65	20 or less
			1/4	0.67	
	Pressure Center	NVFS2500	1/8	0.65	20 or less
			1/4	0.67	
Perfect (Double Check)	NVFS2600	1/8	0.4	25 or less	
			1/4	0.4	

SYMBOLS



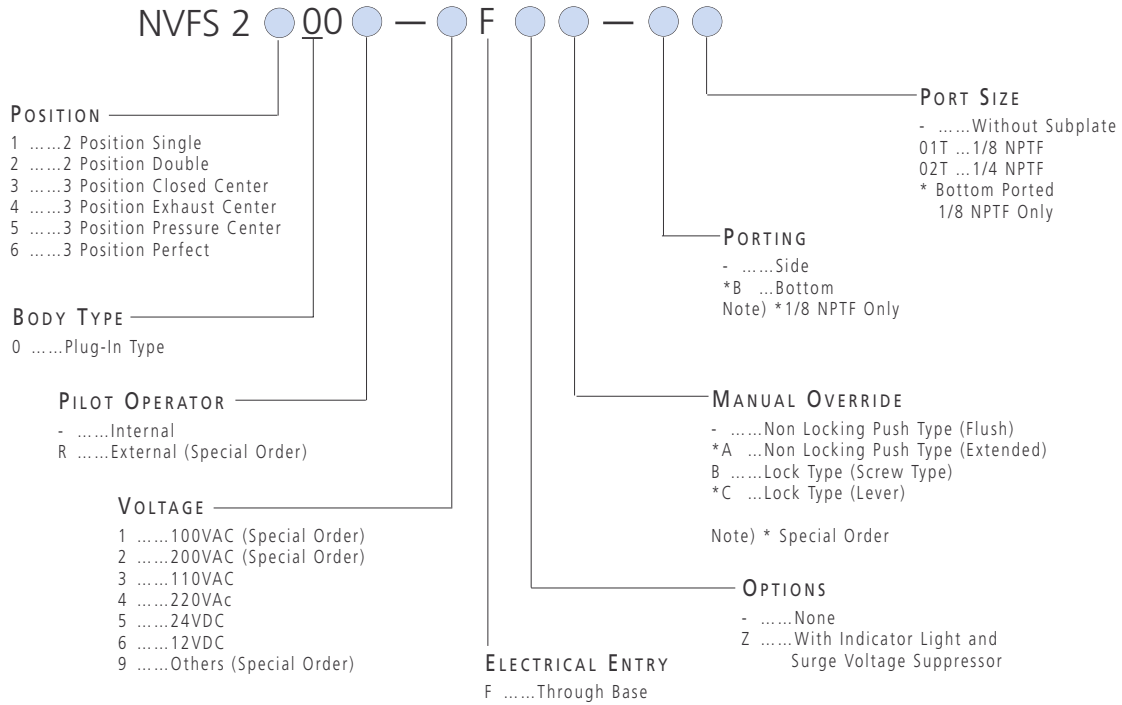
TECHNICAL SPECIFICATIONS STANDARD

Fluid		Air and Inert Gas		
Valve	Max Operating Pressure	150 PSI (1MPa)		
	Min Operating Pressure	2 Position	15 PSI (0.1MPa)	
		3 Position	22 PSI (0.15MPa)	
	Ambient & Fluid Temperature	14~140°F (-10~60°C)		
	Lubrication	Not Required		
	Pilot Operator Manual Override	Non Locking Push Type (Flush)		
Protection Construction		Dust Proof		
Electrical	Rated Voltage	AC	110VAC50/60Hz, 220V50/60Hz, 24V50/60Hz	
		DC	12V, 24V	
	Allowable Voltage Range	-15 ~ 10% Rated Voltage		
	Coil Insulation	Class B or Equivalent		
	Apparent Power AC (Power Consumption)	InRush	5.0VA/60Hz, 5.6VA/50Hz	
		Holding	2.3VA(1.5W)/60Hz, 3.4VA(2.1W)/50Hz	
	Power Consumption DC	1.8W		
Electrical Entry	Plug In	Conduit Terminal (Base Access)		

TECHNICAL SPECIFICATIONS OPTIONAL

Pilot Type		External Pilot Type
Manual Override	Pilot Operator	Non Locking Push Type (Extended), Lock Type (Tool), Lock Type (Lever)
Voltage	AC	100V50/60Hz, 200V50/60Hz
	DC	6V, 48V, 100V
Porting	Bottom Ported Subplate	
Option	W/Indicator Light & Surge Voltage Suppressor	

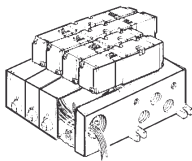
HOW TO ORDER NVFS2000



HOW TO ORDER MANIFOLD

Plug-in Type: Connector with Lead Wire ("wire harness")

● The insert plug is attached to the manifold block and is connected with valve side. Connect leads with corresponding power supply.



NVV5FS2-01-06 1-01T

Series NVFS2000
Manifold valve

Plug-in Type
Connector with
Lead wire
(AXT624-52A-D1-3)

Stations	
02	2 stations
⋮	⋮
15	15 stations

Symbol	P, EA, EB	A, B
01T	1/8 NPTF	1/8 NPTF
02T	1/4 NPTF	1/4 NPTF

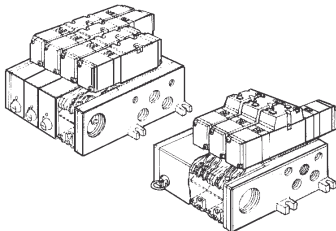
Symbol	Port specifications		Porting Specifications (A,B)
	P	EA, EB	
1	Common	Common	Side
*2†			Bottom
	Mixed		

*Special Order
† Bottom porting specification with
"-02T" is 1/8" P,A,B bottom and 1/4" A,B side.

Unit type conduit cover: AXT625-28-3A
Unit type conduit retainer: AXT625-87

Plug-in Type: With Terminal Blocks

● Lead wires of solenoid valve are connected with the terminals on upper surface of terminal block, corresponding lead wires from power source can be wired at the bottom of terminal block.



NVV5FS2-01T 1-08 1-02T

Series NVFS2000
Manifold valve

Plug-in type
With terminal block

Junction cover/ classification	
-	Unit type individual station cover
1	One-pc. type cover

Note: Individual cover part no. above.

Stations	
02	2 stations
⋮	⋮
15	15 stations

Port size		
Symbol	P, EA, EB	A, B
01T	1/8 NPTF	1/8 NPTF
02T	1/4 NPTF	1/4 NPTF

Symbol	Port specifications		Porting Specifications (A,B)
	P	EA, EB	
1	Common	Common	Side
*2†			Bottom
	Mixed		

*Special Order
† Bottom porting specification with
"-02T" is 1/8" P,A,B bottom and 1/4" A,B side

HOW TO
ORDER

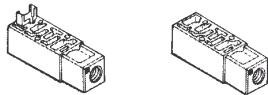
MANIFOLD / OPTION PARTS ASSEMBLY

Manifold /Option Parts Ass'y

SUP Relocation spacer

An individual SUP spacer on manifold block can form individual P port for the valve.

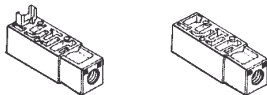
Body type	Plug-in type
Part No. 1/8NPTF	NVFS2000-P-01T-1
1/4NPTF	NVFS2000-P-02T-1



EXH Relocation spacer

An individual EXH spacer on manifold block can form individual EXH port for the valve.

Body type	Plug-in type
Part No. 1/8NPTF	NVFS2000-R-01T-1
1/4NPTF	NVFS2000-R-02T-1



SUP gallery block disc

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.

Body type	Plug-in type
Part No.	AXT625-12A

EXH gallery block disc

When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to isolate valve exhaust.

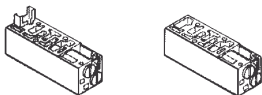
Body type	Plug-in type
Part No.	AXT625-12A



Interface speed control

Needle valve on the manifold block can control cylinder speed by throttling exhaust.

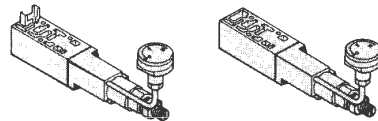
Body type	Plug-in type
Part No.	NVFS2000-20A-1 NVFS2000-20A-2



Interface regulator

Spacer type regulator on manifold block controls supply pressure to the valve. With standard gauge.

Body type	Plug-in type
Pressure Regulation P	NARBF2000-00-P-1

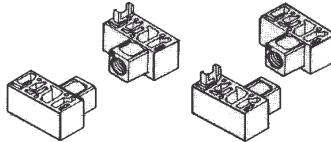


Air Shutoff valve spacer

The concurrent use of air shutoff valve spacer with NVFS2100 controls supply of air pressure to the manifold (3-way dump valve). Specify location in **first (L)** or **last (R)** station of manifold.

Body type	Plug-in type
Part No.	NVFS2000-24A-1 L R

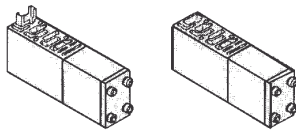
Note) L: U side mount R: D side mount



Double Check "Perfect" spacer

The concurrent use of perfect spacer with built-in double check valve can stop the cylinder at mid-position and hold for extended time without being affected by the air leakage across spool seals.

Body type	Plug-in type
Part No.	NVFS2000-22A-1



Blank plate

When disassembling valve for maintenance purposes or when spare manifold stations are required, install Blank plate on the manifold block.

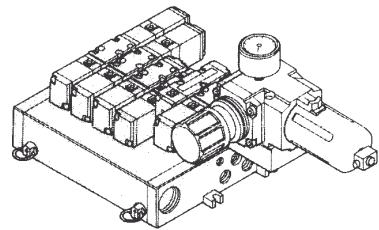
Body type	Plug-in type
Part No.	VVFS2000-10A

Manifold /Option

Control Unit

Plug-in type.

- Filter/Regulator, Pressure switch, and Air shutoff valve all combine to form one unit.
- Piping work eliminated.

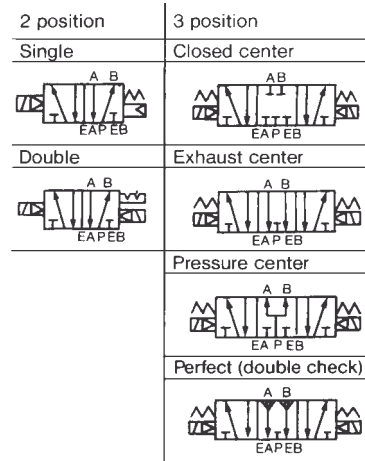


For more information, Please refer to catalog N233

MODEL NVFS3000

Position	Number Of Solenoid	Type Plug-In	Port Size (NPTF)	Cv Factor	Response Time (ms)
2 Position	Single	NVFS3100	1/4	1.8	20 or less
			3/8	2	
3 Position	Double	NVFS3200	1/4	1.8	15 or less
			3/8	2	
	Closed Center	NVFS3300	1/4	1.8	40 or less
			3/8	2	
	Exhaust Center	NVFS3400	1/4	1.8	40 or less
			3/8	2	
Pressure Center	NVFS3500	1/4	1.8	40 or less	
		3/8	2		
Perfect (Double Check)	NVFS3600	1/4	1.1	50 or less	
		3/8	1.2		

SYMBOLS



TECHNICAL SPECIFICATIONS STANDARD

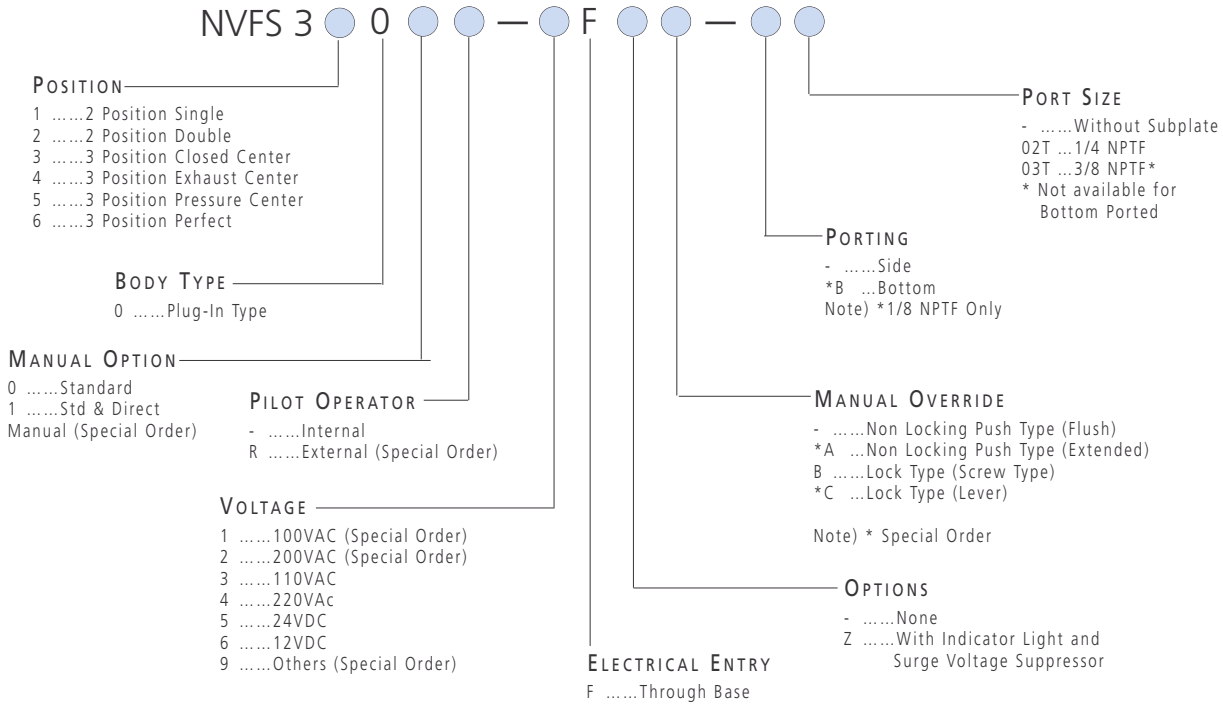
	Fluid	Air and Inert Gas	
Valve	Max Operating Pressure	150 PSI (1MPa)	
	Min Operating Pressure	22 PSI (0.15MPa)	
	Ambient & Fluid Temperature	14~140°F (-10~60°C)	
	Lubrication	Not Required	
	Pilot Operator Manual Override	Non Locking Push Type (Flush)	
	Protection Construction	Dust Proof	
Electrical	Rated Voltage	AC 110VAC50/60Hz, 220V50/60Hz, 24V50/60Hz	
		DC 12V, 24V	
	Allowable Voltage Range	-15 ~ 10% Rated Voltage	
	Coil Insulation	Class B or Equivalent	
	Apparent Power AC (Power Consumption)	InRush	5.0VA/60Hz, 5.6VA/50Hz
		Holding	2.3VA(1.5W)/60Hz, 3.4VA(2.1W)/50Hz
	Power Consumption DC	1.8W	
Electrical Entry	Plug In	Conduit Terminal (Base Access)	

TECHNICAL SPECIFICATIONS OPTIONAL

Pilot Type	External Pilot Type	
Manual Override	Main Valve	Direct Manual Override Type
	Pilot Operator	Non Locking Push Type (Extended), Lock Type (Tool), Lock Type (Lever)
Voltage	AC	100V50/60Hz, 200V50/60Hz
	DC	6V, 48V, 100V
Porting	Bottom Ported Subplate	
Option	W/Indicator Light & Surge Voltage Suppressor	

SOLENOID VALVES SERIES NVFS

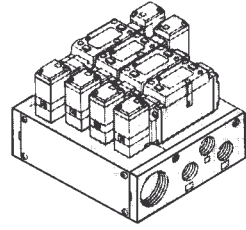
**HOW TO
ORDER
NVFS3000**



**HOW TO
ORDER
MANIFOLD**

Plug-in Type: With Terminal Blocks

● Lead wires of solenoid valve are connected with the terminals on upper surface of terminal block, corresponding lead wires from power source can be wired at the bottom of terminal block.



NVV5FS3-01T-061-02T

- Series NVFS3000 Manifold valve
- Plug-in type With terminal block
- Stations:

02	2 stations
⋮	⋮
10	10 stations
- Port size:

Symbol	A, B
02T	1/4NPTF
03T	3/8NPTF

 * Bottom ported 1/4NPTF only.
- Porting Symbol:

Symbol	Port specifications		Porting Specifications (A,B)
	P	EA, EB	
1	Common	Common	Side
*2			Bottom (Option)
	Mixed		

※ Special Order.

HOW TO ORDER

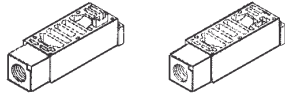
MANIFOLD / OPTION PARTS ASSEMBLY

Manifold/Option Parts

SUP Relocation spacer

An individual SUP spacer on manifold block can form individual P port for the valve.

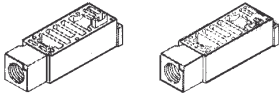
Body type	Plug-in type
Part No.	NVFS3000-P-03T-1



EXH Relocation spacer

An individual EXH spacer on the manifold block can form individual R port for the valve.

Body type	Plug-in type
Part No.	NVFS3000-R-03T-1



SUP gallery block disc

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.

Body type	Plug-in type
Part No.	AXT636-1A

EXH gallery block disc

When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to separate valve exhaust.

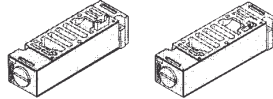
Body type	Plug-in type
Part No.	AXT636-1A



Interface Speed Control

Needle valve on the manifold block can control cylinder speed by throttling exhaust.

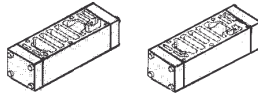
Body type	Plug-in type
Part No.	NVFS3000-20A-1



Double Check "Perfect" spacer

The concurrent use of perfect spacer with built-in double check valve can stop the cylinder at mid-position and hold for extended time without being affected by normal air leakage across spool seals.

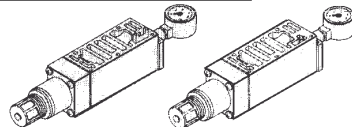
Body type	Plug-in type
Part No.	NVFS3000-22A-1



Interface regulator

Spacer type regulating valve on manifold block can regulate the pressure to the valve.

Body type	Plug-in type
Pressure regulation P	NARBF3000-NO-P-1
Pressure regulation A	NARBF3000-NO-A-1
Pressure regulation B	NARBF3000-NO-B-1



Blank plate

When disassembling valve for maintenance purposes or when spare manifold stations are required, install Blank plate on the manifold block.

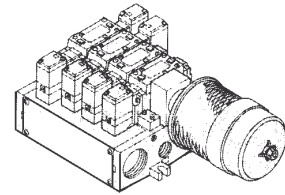
Body type	Plug-in type
Part No.	VVFS3000-10 A

Manifold Options

Exhaust Cleaner Unit

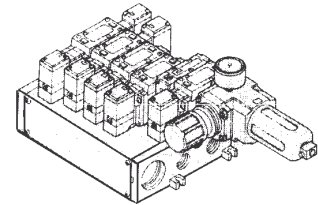
Plug-in type

- Valve exhaust noise damping: 35dB or more.
- Oil mist collection: Rate of collection 99.9% or more.
- Piping process reduced.



Control Unit

- Filter/Regulator, Pressure switch, and Air shutoff valve all combine to form one unit.
- Piping work eliminated.



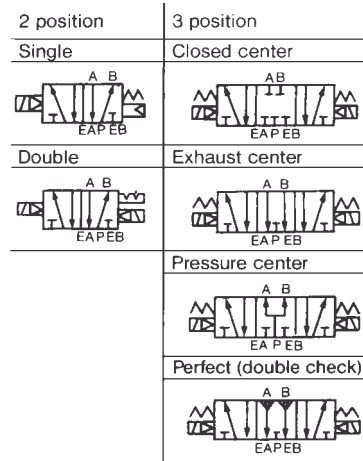
For more information, refer to catalog N233

SOLENOID VALVES SERIES NVFS

MODEL NVFS4000

Position	Number Of Solenoid	Type Plug-In	Port Size (NPTF)	Cv Factor	Response Time (ms)
2 Position	Single	NVFS4100	3/8	3.3	40 or less
			1/2	6	
	Double	NVFS4200	3/8	3.3	15 or less
			1/2	3.6	
3 Position	Closed Center	NVFS4300	3/8	2.8	50 or less
			1/2	3	
	Exhaust Center	NVFS4400	3/8	2.8	50 or less
			1/2	3	
	Pressure Center	NVFS4500	3/8	3.2	50 or less
			1/2	3.4	
	Perfect (Double Check)	NVFS4600	3/8	1.7	55 or less
1/2			1.8		

SYMBOLS



TECHNICAL SPECIFICATIONS STANDARD

	Fluid	Air and Inert Gas		
Valve	Max Operating Pressure	150 PSI (1MPa)		
	Min Operating Pressure	2 Position	15 PSI (0.1MPa)	
		3 Position	22 PSI (0.15MPa)	
	Ambient & Fluid Temperature	Note 1) 14~140°F (-10~60°C)		
	Lubrication	Note 2) Not Required		
	Pilot Operator Manual Override	Non Locking Push Type (Flush)		
	Protection Construction	Dust Proof		
Electrical	Rated Voltage	AC	110VAC50/60Hz, 220V50/60Hz, 24V50/60Hz	
		DC	12V, 24V	
	Allowable Voltage Range	-15 ~ 10% Rated Voltage		
	Coil Insulation	Class B or Equivalent		
	Apparent Power AC (Power Consumption)	InRush	5.0VA/60Hz, 5.6VA/50Hz	
		Holding	2.3VA(1.5W)/60Hz, 3.4VA(2.1W)/50Hz	
	Power Consumption DC	1.8W		
Electrical Entry	Plug In	Conduit Terminal (Base Access)		

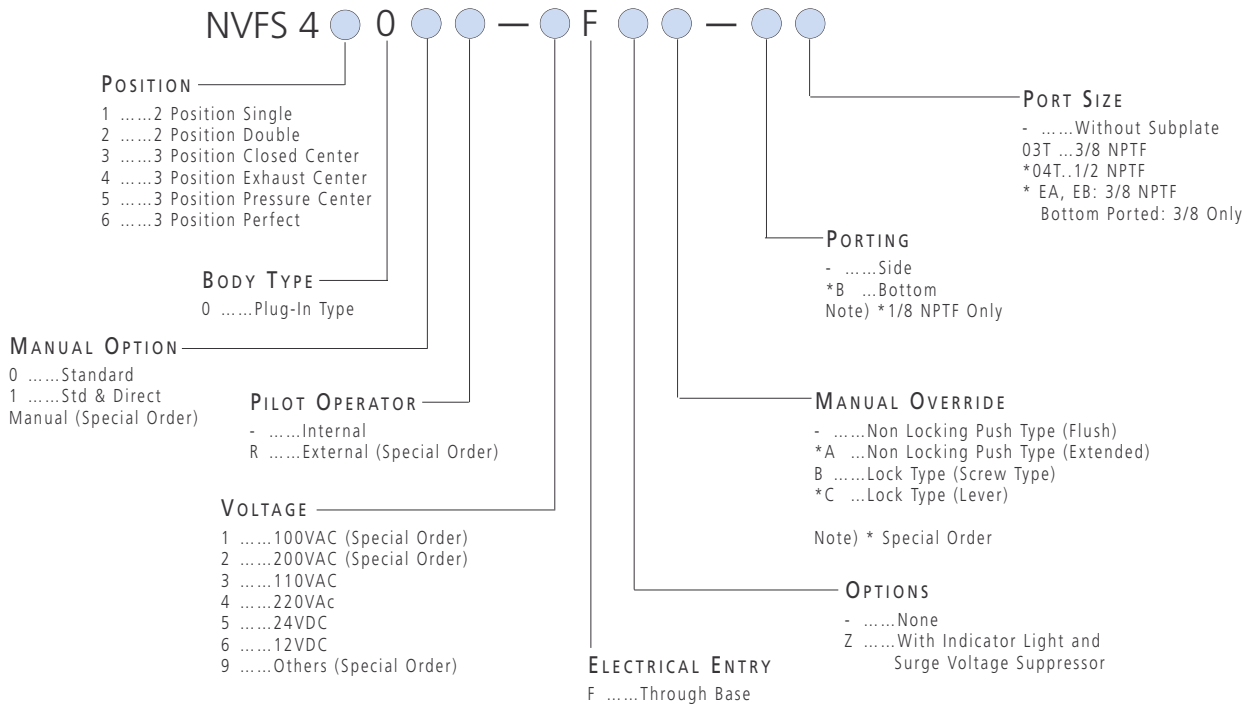
Note 1) Use Dry Air at Low Temperature

Note 2) Use Turbine Oil No 1 (ISOVG32), if lubricated

TECHNICAL SPECIFICATIONS OPTIONAL

Pilot Type		External Pilot Type
Manual Override	Main Valve	Direct Manual Override Type
	Pilot Operator	Non Locking Push Type (Extended), Lock Type (Tool), Lock Type (Lever)
Voltage	AC	100V50/60Hz, 200V50/60Hz
	DC	6V, 48V, 100V
Porting	Bottom Ported Subplate	
Option	W/Indicator Light & Surge Voltage Suppressor	

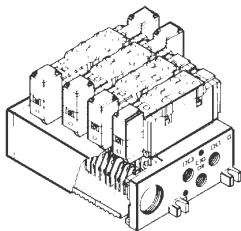
HOW TO ORDER NVFS4000



HOW TO ORDER MANIFOLD

Plug-in Type: With Terminal Block

● Lead wires of solenoid valve are connected with the terminals on upper surface of terminal block, corresponding lead wires from power source can be wired at the bottom of terminal block.



NV5FS4-01T-061-03T

Series NVFS4000
Manifold valve

Plug-in type
With terminal block

Stations

02	2 stations
⋮	⋮
10	10 stations

● Port size

Suffix	P, EA, EB	A, B
03T	3/8 NPTF	3/8 NPTF
04T	1/2 NPTF	1/2 NPTF

* Bottom ported 3/8NPTF only.

● Symbol

Suffix	Port specifications		Porting specifications (A,B)
	P	EA, EB	
1	Common	Common	Side
* 2	Common	Common	* Bottom
	Mixed		

* Special order.

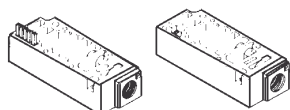
HOW TO
ORDER

MANIFOLD / OPTION PARTS ASSEMBLY

Manifold / Option Parts**SUP Relocation spacer**

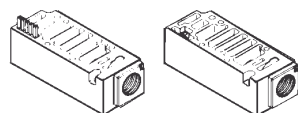
An individual SUP spacer on manifold block can form individual P port for the valve.

Body type	Plug-in type
Part No.	NVVFS4000-P-03T-1

**EXH Relocation spacer**

An individual EXH spacer on manifold block can form individual R port for the valve.

Body type	Plug-in type
Part No.	NVVFS4000-R-04T-1

**SUP gallery block disc**

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.

Body type	Plug-in type
Part No.	AXT634-10A



SUP block disc

EXH gallery block disc

When valve exhaust affects the other stations on the circuit or when the reverse pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to separate valve exhaust.

Body type	Plug-in type
Parts No.	AXT634-11A

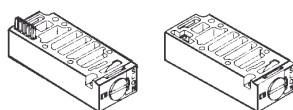


EXH block disc

Interface speed control

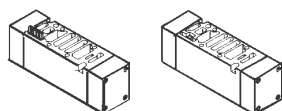
Needle valve on the manifold block can control cylinder speed by throttling exhaust.

Body type	Plug-in type
Part No.	NVVFS4000-20A-1

**Double Check "Perfect" spacer**

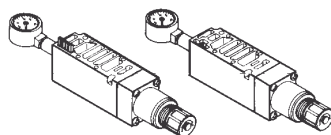
The concurrent use of perfect spacer with built-in double check valve can stop the cylinder at mid-position and hold for extended time without being affected by normal air leakage across the spool seals.

Body type	Plug-in type
Part No.	NVVFS4000-22A-1

**Interface regulator**

Spacer type regulating valve on manifold block can regulate the pressure to the valve. With std. gauge.

Body type	Plug-in type
Pressure Regulation P	NARBF4000-NO-P-1
Pressure Regulation A	NARBF4000-NO-A-1
Pressure Regulation B	NARBF4000-NO-B-1

**Blank plate : VVFS4000-10A**

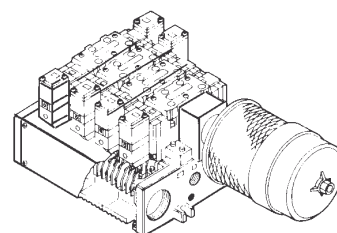
When disassembling valve for maintenance purposes or when spare manifold stations are required, install Blank plate on the manifold block.

Body type	Plug-in type
Part No.	VVFS4000-10A

Manifold Options**With exhaust cleaner unit**

Plug-in type

- Valve exhaust noise damping: 35db or more.
- Oil mist collection: Rate of collection 99.9% or more.
- Piping process reduced.

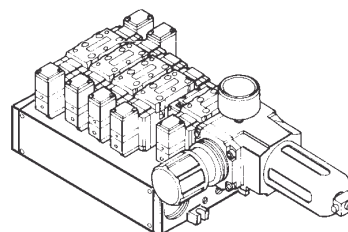


For more information,
refer to catalog N233

With Control Unit

Plug-in type

- Filter/Regulator, Pressure Switch, and Air shutoff valve all combine to form one unit.
- Piping work eliminated.

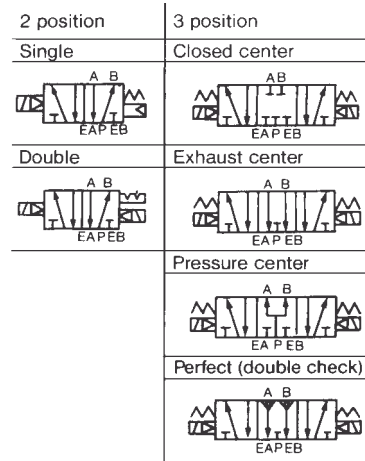


For more information,
refer to catalog N233

MODEL NVFS5000

Position	Number Of Solenoid	Type Plug-In	Port Size (NPTF)	Cv Factor	Response Time (ms)
2 Position	Single	NVFS5100	3/8	4.4	45 or less
			1/2	5.4	
			3/4	5.7	
3 Position	Double	NVFS5200	3/8	4.4	25 or less
			1/2	5.4	
			3/4	5.7	
	Closed Center	NVFS5300	3/8	3.7	55 or less
			1/2	4.6	
			3/4	4.8	
Exhaust Center	NVFS5400	3/8	3.9	55 or less	
		1/2	4.8		
		3/4	5		
Pressure Center	NVFS5500	3/8	3.9	55 or less	
		1/2	4.8		
		3/4	4.9		
Perfect (Double Check)	NVFS5600	3/8	2.2	60 or less	
		1/2	2.7		
		3/4	2.8		

SYMBOLS



TECHNICAL SPECIFICATIONS STANDARD

	Fluid	Air and Inert Gas
Valve	Max Operating Pressure	150 PSI (1MPa)
	Min Operating Pressure	15 PSI (0.15MPa)
	Ambient & Fluid Temperature	Note 1) 14~140°F (-10~60°C)
	Lubrication	Note 2) Not Required
	Pilot Operator Manual Override	Non Locking Push Type (Flush)
	Protection Construction	Dust Proof
Electrical	Rated Voltage	AC 110VAC50/60Hz, 220V50/60Hz, 24V50/60Hz
		DC 12V, 24V
	Allowable Voltage Range	-15 ~ 10% Rated Voltage
	Coil Insulation	Class B or Equivalent
	Apparent Power AC (Power Consumption)	InRush 5.0VA/60Hz, 5.6VA/50Hz
		Holding 2.3VA(1.5W)/60Hz, 3.4VA(2.1W)/50Hz
	Power Consumption DC	1.8W
Electrical Entry	Plug In	Conduit Terminal (Base Access)

TECHNICAL SPECIFICATIONS OPTIONAL

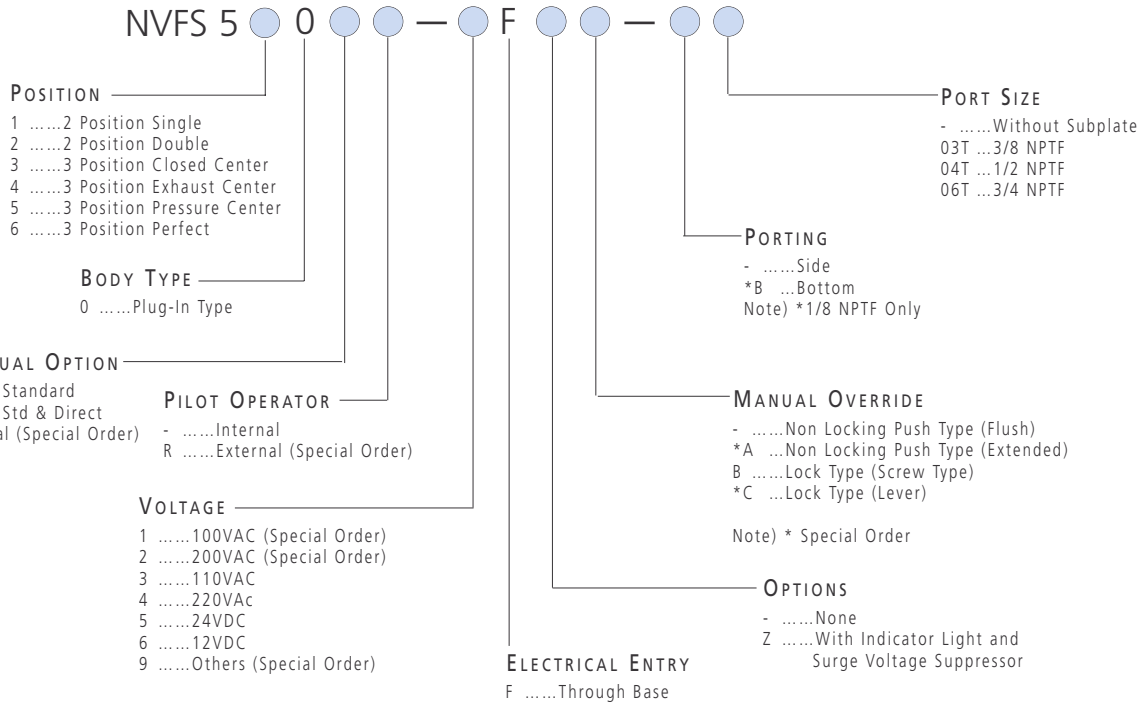
	Pilot Type	External Pilot Type
Manual Override	Main Valve	Direct Manual Override Type
	Pilot Operator	Non Locking Push Type (Extended), Lock Type (Tool), Lock Type (Lever)
Voltage	AC	100V50/60Hz, 200V50/60Hz
	DC	6V, 48V, 100V
Porting		Bottom Ported Subplate
Option		W/Indicator Light & Surge Voltage Suppressor

Note 1) Use Dry Air at Low Temperature

Note 2) Use Turbine Oil No 1 (ISOVG32), if lubricated

SOLENOID VALVES SERIES NVFS

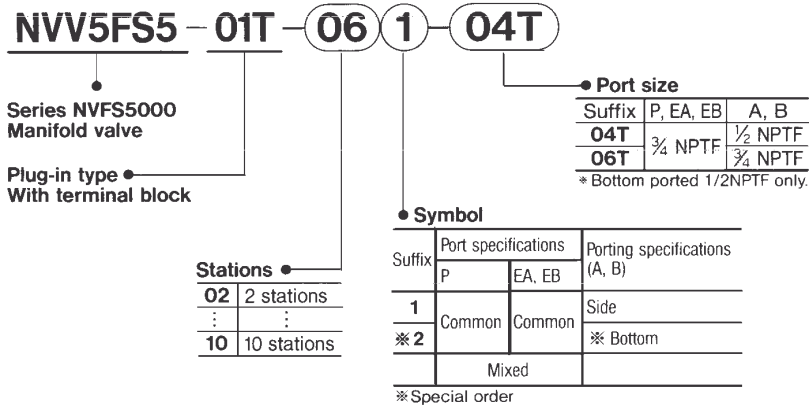
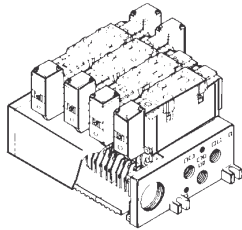
How To
ORDER
NVFS5000



How To
ORDER
MANIFOLD

Plug-in Type: With Terminal Block

● Lead wires of solenoid valve are connected with the terminals on upper surface of terminal block, corresponding lead wires from power source can be wired at the bottom of terminal block.

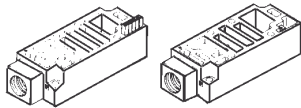


Manifold / Option Part's Ass'y

SUP Relocation spacer

An individual SUP spacer on manifold block can form individual P port for the valve.

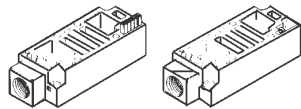
Body type	Plug-in type
Part No.	NVVFS5000-P-04T-1



EXH Relocation spacer

An individual EXH spacer on manifold block can form individual R port for the valve.

Body type	Plug-in type
Part No.	NVVFS5000-R-04T-1



SUP gallery block disc

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.

Body type	Plug-in type
Part No.	AXT628-12A



SUP block disc

EXH gallery block disc

When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to separate valve exhaust.

Body type	Plug-in type
Part No.	AXT512-14-1A

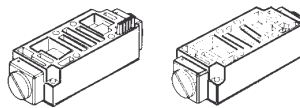


EXH block disc

Interface speed control

Needle valve on the manifold block can control cylinder speed by throttling exhaust.

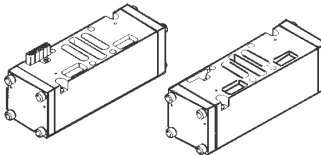
Body type	Plug-in type
Part No.	NVVFS5000-20A-1



Double Check "Perfect" spacer

The concurrent use of perfect spacer with built-in double check valve can stop the cylinder at mid-position and hold for extended time without being affected by normal air leakage across the spool seals.

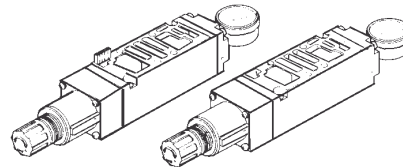
Body type	Plug-in type
Part No.	NVVFS5000-22A-1



Interface regulator

Spacer type regulating valve on manifold block can regulate the pressure to the valve.

Body type	Plug-in type
Pressure Regulation P	NARBF5000-N0-P-1
Pressure Regulation A	NARBF5000-N0-A-1
Pressure Regulation B	NARBF5000-N0-B-1



Blank plate

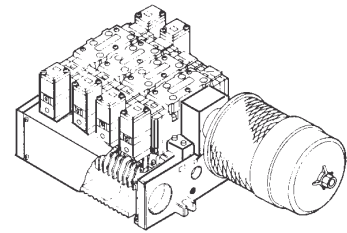
When disassembling valve for maintenance purposes or when spare manifold stations are required, install Blank plate on the manifold block.

Body type	Plug-in type
Part No.	VVFS5000-10A

Manifold Options

With Exhaust Cleaner Plug-in type

- Valve exhaust noise damping: 35dB or more.
- Oil mist collection: Rate of collection 99.9% or more.
- Piping process reduced.



For more information, Please refer to catalog **N233**

SOLENOID VALVES SERIES NVFS

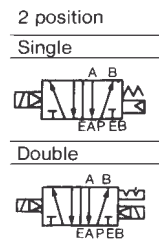
M O D E L
NVFS6000

Position	Number Of Solenoid	Type Plug-In	Port Size (NPTF)	Cv Factor	Response Time (ms)
2 Position	Single	NVFS6100	3/4"	9	60 or less
			1"	10	
	Double	NVFS6200	3/4"	9	60 or less
			1"	10	

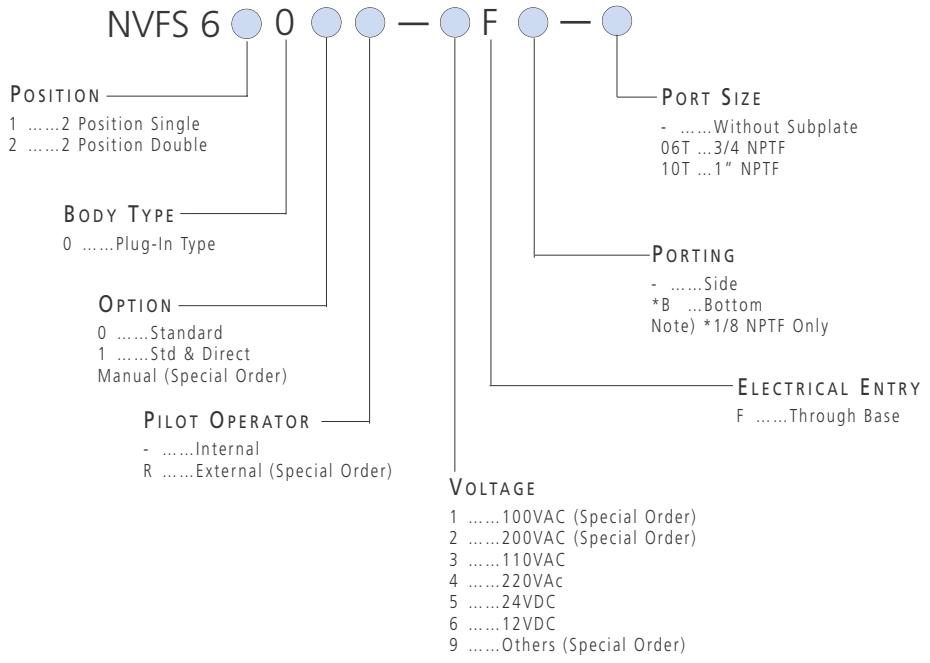
TECHNICAL SPECIFICATIONS STANDARD

Valve	Fluid	Air and Inert Gas
	Max Operating Pressure	145 PSI (1.2MPa)
	Min Operating Pressure	15 PSI (0.1MPa)
	Proof Pressure	220PSI (1.5MPa)
	Ambient & Fluid Temperature	14~140°F (-10~60°C)
	Lubrication	Not Required
	Pilot Operator Manual	Non Locking Push Type (Flush)
Electrical	Override	Dust Proof
	Protection Construction	110VAC50/60Hz, 24VDC, Others
	Rated Voltage	-15 ~ 10% Rated Voltage
	Allowable Voltage Range	Class B or Equivalent (130°C)
	Coil Insulation	5.0VA/60Hz, 5.6VA/50Hz
	Apparent Power AC InRush (Power Consumption) Holding	2.3VA(1.5W)/60Hz, 3.4VA(2.1W)/50Hz
	Power Consumption DC	1.8W
	Electrical Entry	Conduit Terminal
	Electrical Entry Option	With Indicator Light and Surge Voltage Suppressor (FZ Style)

S Y M B O L S

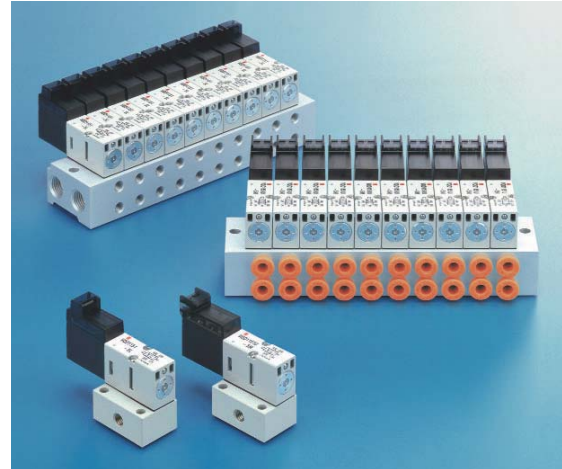


H O W T O O R D E R
NVFS6000



4 PORT DIRECT OPERATED POPPET SOLENOID VALVE SERIES VQD1000

- ✓ High Speed Coil with Stable Response Times
- ✓ Large Flow Capacity in a Compact Lightweight (34g) Valve
- ✓ Vacuum Applications are possible (up to 10 Torr)
- ✓ Clean Room Specifications are available as Special
- ✓ Copper Free Specifications is Standard



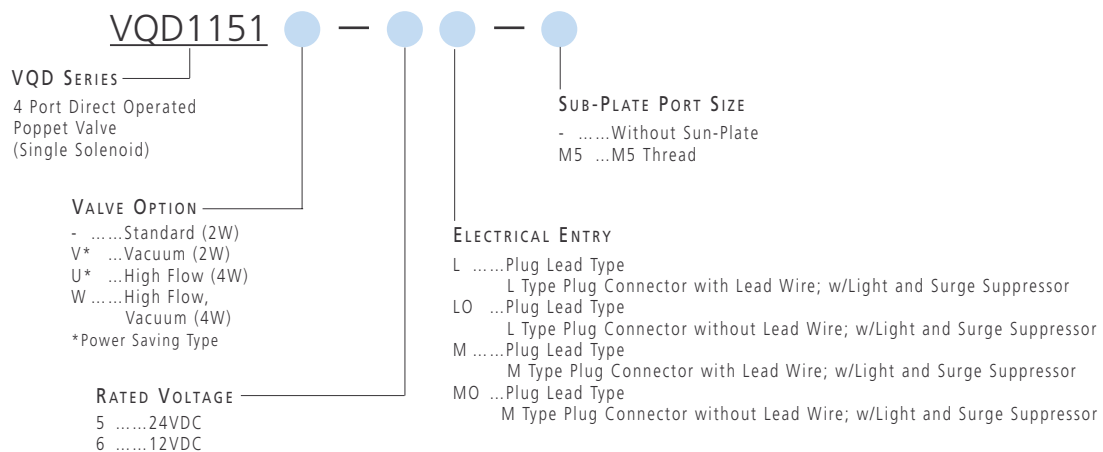
TECHNICAL SPECIFICATIONS SERIES VQD1000

Valve Specifications	Standard Type (2W)	High Flow Capacity (4W Power Saving Type)
Valve Structure	4 Port Direct Operated Poppet Valve	
Fluid	Air, Inert Gas	
Max Operating Pressure	0.7MPa (7.1kgf/cm ²)	
Min Operating Pressure/Vacuum	0MPa / 10 Torr	
Effective Area (Cv Factor)	0.9mm ² (Cv 0.05)	1.5mm ² (Cv 0.08)
Response Time	ON: 4ms / OFF: 2ms	
Ambient & Fluid Temperature	-10 ~ 50°C	
Lubrication	Not Required	
Manual Override	Non-Locking Push Type	
Shock Resistance/Vibration Resistance	150 / 30m/s ²	
Mounting Orientation	Free	
Enclosure	Dust Proof	
Weight	34g (without Sub-Plate)	
Electrical Specifications		
Coil Rated Voltage DC	24V, 12V	
Allowable Voltage Fluctuation	±10% of Rated Voltage	
Type of Coil Insulation	Class B	
Power Consumption DC	2W	4W (Power Saving) (Inrush: 4W; Holding: 2W)
Electrical Entry	L Type Plug Connector, M Type Plug Connector (With Light and Surge Suppressor)	

NOTES :

- The 4W Power Saving Circuit, has an inrush power demand of 4W for 10ms when first energized. After this, Holding Power falls to 2W.
- A Clean Room version is available to specified order -
- The VQD1000 is used either on a Single Sub-base or Manifold Mounted. Body Ported versions have not been developed.
- Can be used as a 3 Port Valve by plugging either the A or B Port.

HOW TO ORDER SERIES VQD1000 SOLENOID VALVE



SOLENOID VALVES SERIES VQZ100/200/300

3 PORT SOLENOID VALVE BASE MOUNTED / PLUG LEAD TYPE SERIES VQZ100/200/300



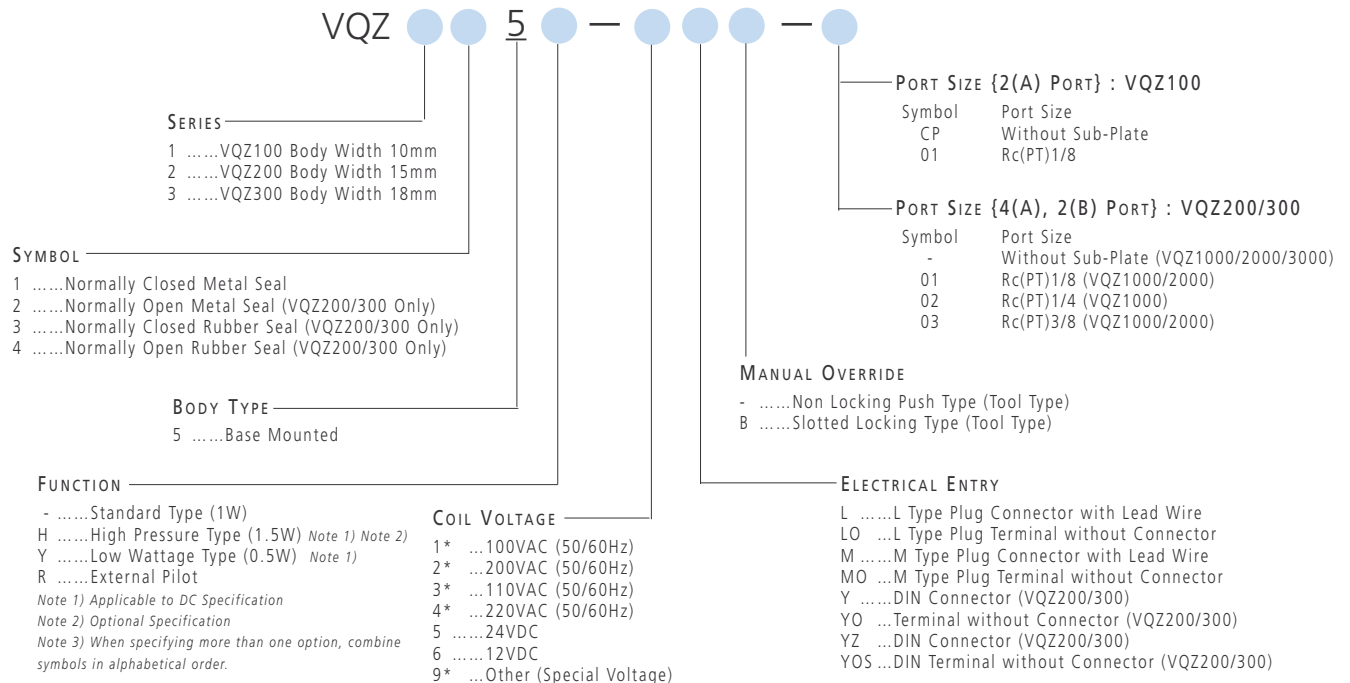
**TECHNICAL
SPECIFICATIONS**

SERIES VQZ100/200/300

Valve Specifications		Metal Seal	Rubber Seal
Type Of Seal		Air, Inert Gas	Air, Inert Gas
Fluid		Air, Inert Gas	Air, Inert Gas
Maximum Operating Pressure		0.7MPa / 102PSI (High Pressure Type 0.8MPa / 116PSI)	
Minimum Operating Pressure		0.1MPa / 14.5PSI	0.15MPa / 22PSI
Ambient & Fluid Temperature		-10° to 50°C	-10° to 50°C
Max Operating Frequency		20Hz	5Hz
Proof Pressure		1.5MPa / 218PSI	
Lubrication		Not Required	
Manual Override		Non-Locking Push Type/Slotted Locking Type	
Shock/Vibration Resistance		150/30 m/s ²	
Enclosure		Dust Proof	
Solenoid Specifications			
Coil Rated Voltage		12, 24VDC and 100, 110, 200, 220VAC	
Allowable Voltage		±10% of Rated Voltage	
Coil Insulation		Class B	
	24VDC	1WDC (42mA), 1.5WDC (63mA), 0.5WDC (21mA)	
	12VDC	1WDC (83mA), 1.5WDC (125mA), 0.5WDC (42mA)	
Power	100VAC	Inrush 1.2VA (12mA), Holding 1.2VA (12mA)	
Consumption	110VAC	Inrush 1.3VA (11.7mA), Holding 1.3VA (11.7mA)	
(Current Value)	200VAC	Inrush 2.4VA (12mA), Holding 2.4VA (12mA)	
	220VAC	Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)	

**HOW TO
ORDER**

SERIES VQZ100/200/300 BASE MOUNTED PLUG LEAD TYPE



MODEL
SERIES VQZ100/200/300

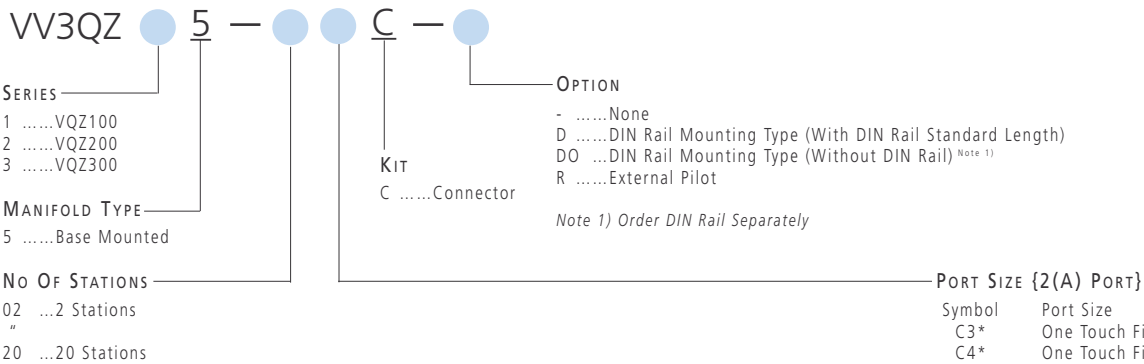
Series	Valve Construction	Type	Effective Area mm ² (Cv) ^{Note 1)}	Response Time ms		Weight ^{Note 2)}
				Standard: 1W High Pressure: 1.5W	Low Wattage and AC	
VQZ100	Normally Closed	Poppet VQZ115	5.4 (0.3)	10 or less	13 or less	25
VQZ200	Normally Closed	Metal VQZ215	10.8 (0.6)	14 or less	18 or less	53
	Normally Closed	Rubber VQZ235	12.6 (0.7)	15 or less	20 or less	53
	Normally Open	Metal VQZ225	10 (0.55)	14 or less	18 or less	53
	Normally Open	Rubber VQZ245	12.6 (0.7)	15 or less	20 or less	53
VQZ300	Normally Closed	Metal VQZ315	16.2 (0.9)	17 or less	22 or less	77
	Normally Closed	Rubber VQZ335	21.6 (1.2)	25 or less	33 or less	77
	Normally Open	Metal VQZ325	15.3 (0.85)	17 or less	22 or less	77
	Normally Open	Rubber VQZ345	21.6 (1.2)	25 or less	33 or less	77

Note 1)
Value for Sub-Plate and Maximum Diameter

Note 2)
Weight without Sub-Plate

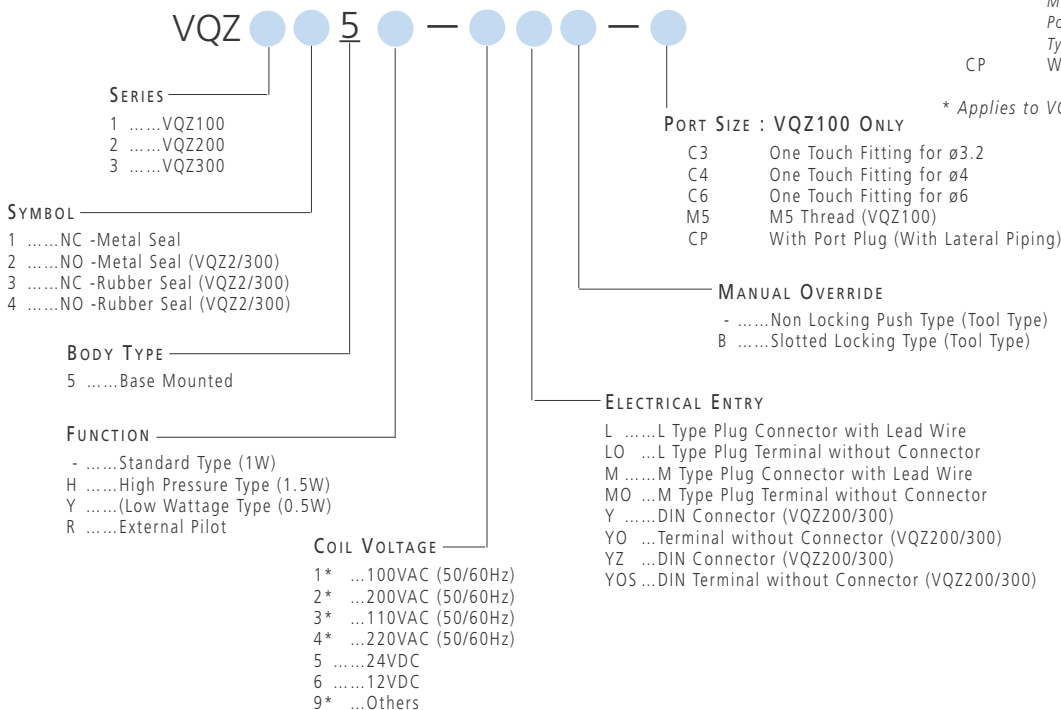
HOW TO ORDER

SERIES VQZ100/200/300 BASE MOUNTED PLUG LEAD TYPE MANIFOLD



HOW TO ORDER

SERIES VQZ100/200/300 BASE MOUNTED PLUG LEAD TYPE VALVE



SOLENOID VALVES

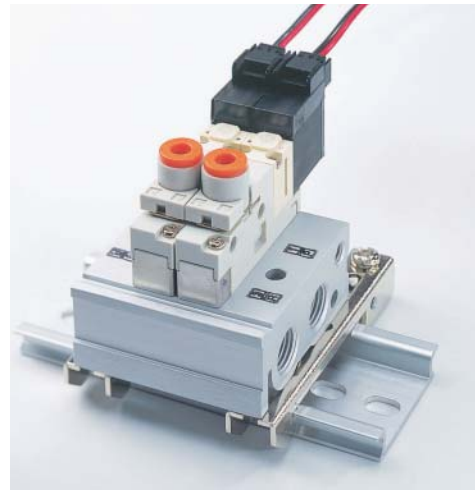
SERIES VQZ100/200/300 BODY PORTED

3 PORT SOLENOID VALVE BODY PORTED / PLUG LEAD TYPE SERIES VQZ100/200/300

**TECHNICAL
SPECIFICATIONS**

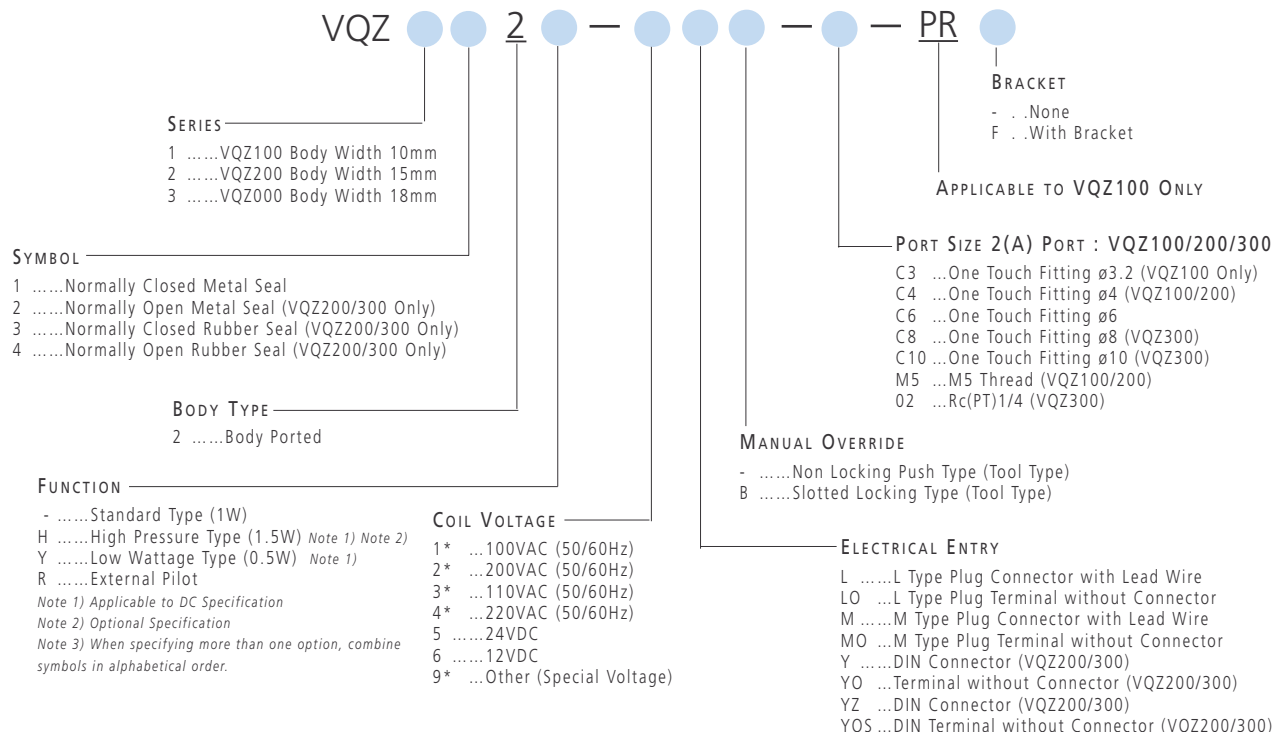
SERIES VQZ100/200/300

Valve Specifications		Metal Seal	Rubber Seal
Type Of Seal		Air, Inert Gas	Air, Inert Gas
Fluid		Air, Inert Gas	Air, Inert Gas
Maximum Operating Pressure		0.7MPa / 102PSI (High Pressure Type 0.8MPa / 116PSI)	
Minimum Operating Pressure		0.1MPa / 14.5PSI	0.15MPa / 22PSI
Ambient & Fluid Temperature		-10° to 50°C	-10° to 50°C
Max Operating Frequency		20Hz	5Hz
Proof Pressure		1.5MPa / 218PSI	
Lubrication		Not Required	
Manual Override		Non-Locking Push Type/Slotted Locking Type	
Shock/Vibration Resistance		150/30 m/s ²	
Enclosure		Dust Proof	
Solenoid Specifications		Class B	
Coil Rated Voltage		12, 24VDC and 100, 110, 200, 220VAC	
Allowable Voltage		±10% of Rated Voltage	
Coil Insulation		Class B	
Power	24VDC	1WDC (42mA), 1.5WDC (63mA), 0.5WDC (21mA)	
	12VDC	1WDC (83mA), 1.5WDC (125mA), 0.5WDC (42mA)	
	100VAC	Inrush 1.2VA (12mA), Holding 1.2VA (12mA)	
	110VAC	Inrush 1.3VA (11.7mA), Holding 1.3VA (11.7mA)	
	200VAC	Inrush 2.4VA (12mA), Holding 2.4VA (12mA)	
	220VAC	Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)	



**HOW TO
ORDER**

SERIES VQZ100/200/300 BODY PORTED PLUG LEAD TYPE



SERIES VQZ100/200/300 BODY PORTED

MODEL SERIES VQZ100/200/300

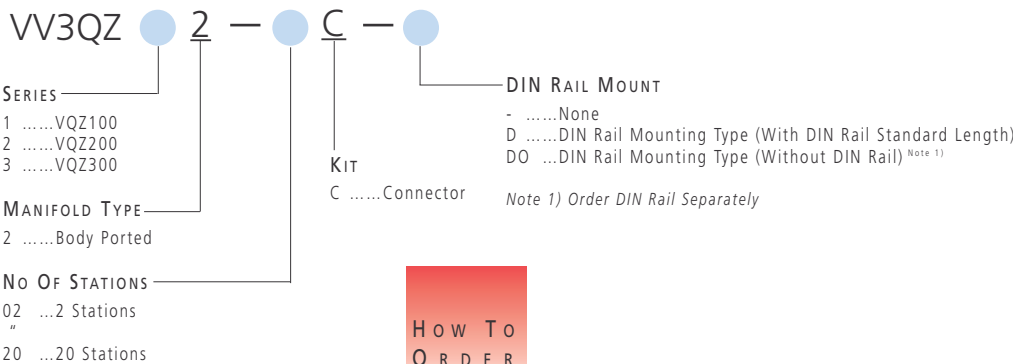
Series	Valve Construction	Type	Effective Area mm ² (Cv) ^{Note 1)}	Response Time ms		Weight ^{Note 2)}
				Standard: 1W High Pressure: 1.5W	Low Wattage and AC	
VQZ100	Normally Closed	Poppet VQZ115	5.4 (0.3)	10 or less	13 or less	25
VQZ200	Normally Closed	Metal VQZ215	10.8 (0.6)	14 or less	18 or less	53
	Normally Closed	Rubber VQZ235	12.6 (0.7)	15 or less	20 or less	53
	Normally Open	Metal VQZ225	10 (0.55)	14 or less	18 or less	53
	Normally Open	Rubber VQZ245	12.6 (0.7)	15 or less	20 or less	53
VQZ300	Normally Closed	Metal VQZ315	16.2 (0.9)	17 or less	22 or less	77
	Normally Closed	Rubber VQZ335	21.6 (1.2)	25 or less	33 or less	77
	Normally Open	Metal VQZ325	15.3 (0.85)	17 or less	22 or less	77
	Normally Open	Rubber VQZ345	21.6 (1.2)	25 or less	33 or less	77

Note 1)
Value for
Sub-Plate
and
Maximum
Diameter

Note 2)
Weight
without
Sub-Plate

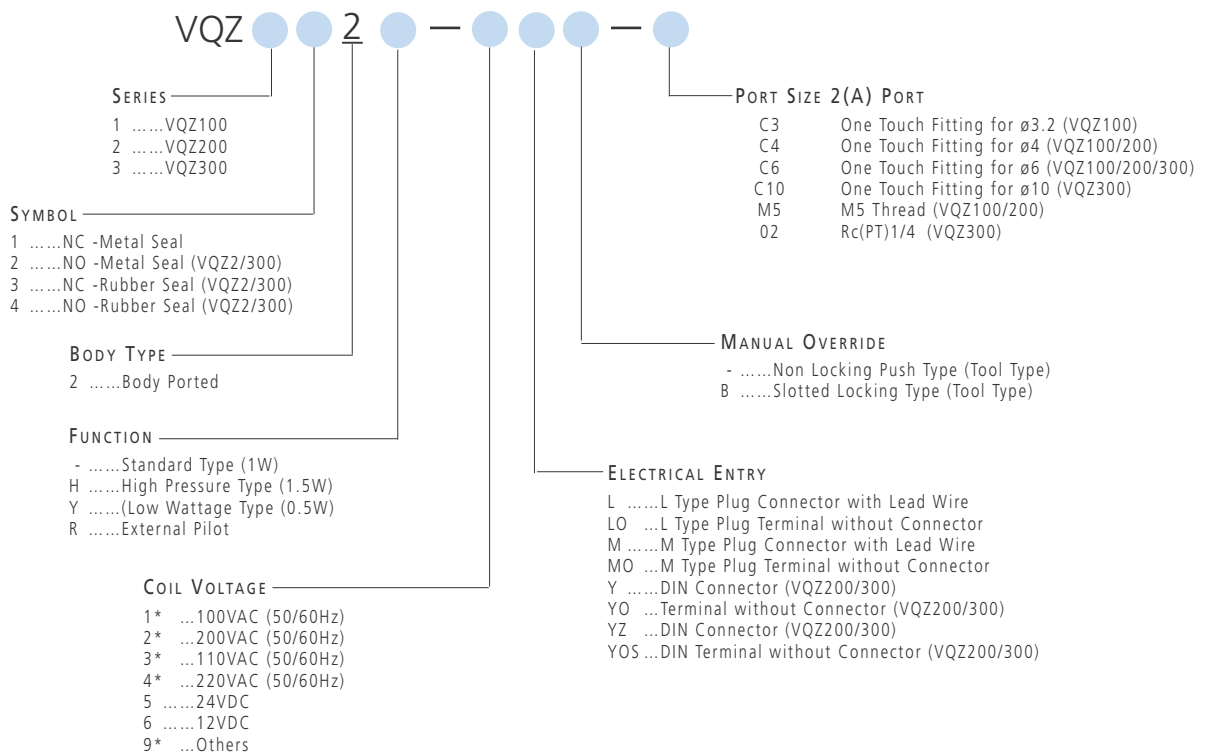
HOW TO ORDER

SERIES VQZ100/200/300 BODY PORTED PLUG LEAD TYPE MANIFOLD



HOW TO ORDER

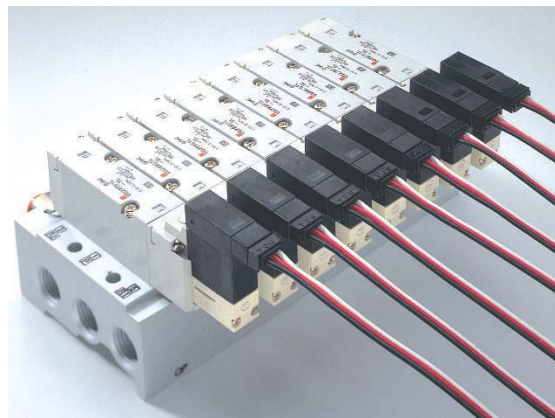
SERIES VQZ100/200/300 BODY PORTED PLUG LEAD TYPE VALVE



SOLENOID VALVES SERIES VQZ

5 PORT SOLENOID VALVE BASE MOUNTED / PLUG LEAD TYPE SERIES VQZ1000/2000/3000

- ✓ High Speed and Long Life
- ✓ Compact Design with Large Flow Capacity
- ✓ Metal or Rubber Seal Main Valve Construction Options
- ✓ Optional IP65 Rated DIN Connector Type Available
- ✓ DIN Rail Mounting Available
- ✓ Built-In One Touch Fitting for Easier Piping
- ✓ Piping Direction can be changed on VQZ100
- ✓ Both 3 and 5 Port Valves can be mounted on the same manifold
- ✓ Possible to have all Solenoids on same side of Manifold



**TECHNICAL
SPECIFICATIONS**

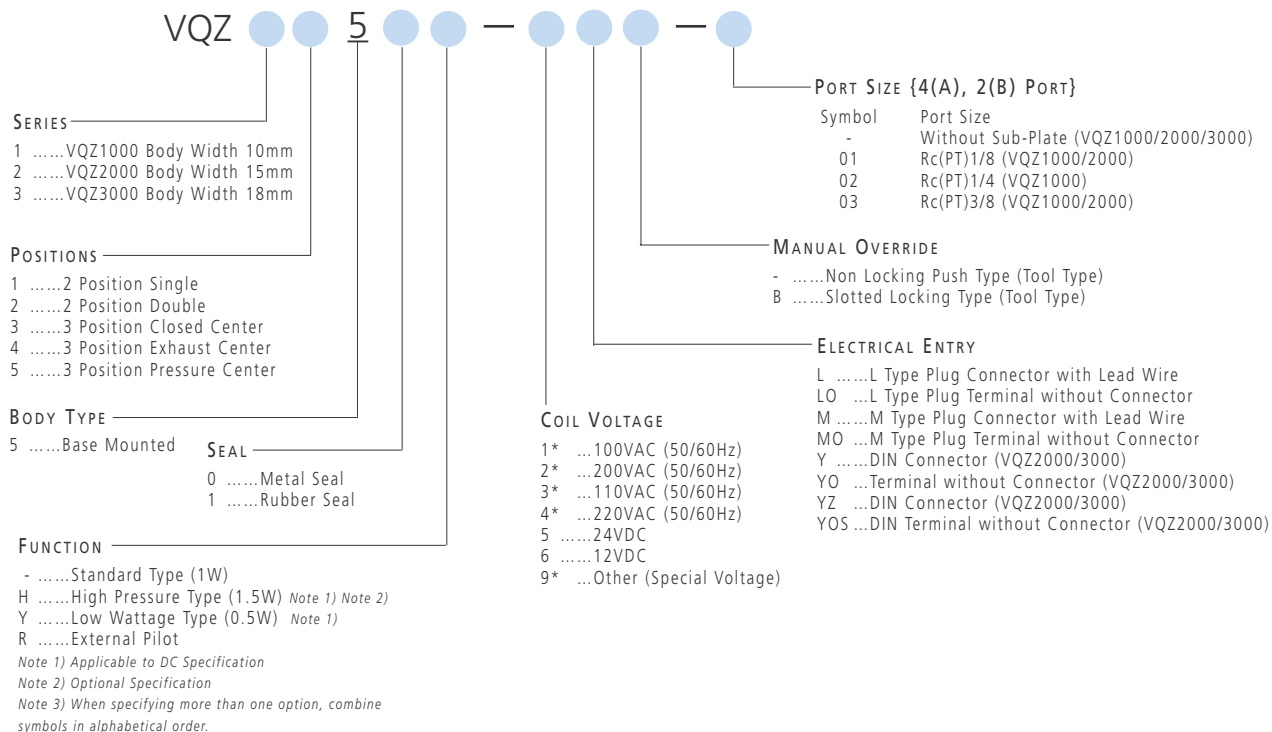
SERIES VQZ1000/2000/3000

Series VQZ1000/2000/3000 Base Mounted Cv Factor			
	1	2	3
Metal Spool	0.2	0.6	0.9
Rubber Spool	0.35	0.7	1.2

Type Of Seal		Metal Seal	Rubber Seal
Fluid		Air, Inert Gas	Air, Inert Gas
Maximum Operating Pressure		0.7MPa / 102PSI (High Pressure Type)	0.8MPa / 116PSI
Minimum	Single (2 Pos)	0.10MPa / 14.5PSI	0.15MPa / 22PSI
Operating Pressure	Double (2 Pos)	Only for VQZ3000 / 3 Pos	0.10MPa / 14.5PSI
	3 Position	0.15MPa / 22PSI	0.20MPa / 29PSI
Ambient & Fluid Temperature		-10° to 50°C / 14 to 122°F	-10° to 50°C / 14 to 122°F
Max Operating Pressure	2 Position S & D	20Hz	5Hz
	3 Position	10Hz	3Hz
Proof Pressure		1.5MPa / 218PSI	
Lubrication		Not Required	
Manual Override		Non-Locking Push Type/Slotted Locking Type	
Shock/Vibration Resistance		150/30 m/s ²	
Enclosure		Dust Proof	
Coil Rated Voltage		12, 24VDC and 100, 110, 200, 220VAC	
Allowable Voltage		±10% of Rated Voltage	
Coil Insulation		Class B	
Power	24VDC	1WDC (42mA), 1.5WDC (63mA), 0.5WDC (21mA)	
	12VDC	1WDC (83mA), 1.5WDC (125mA), 0.5WDC (42mA)	
	100VAC	Inrush 1.2VA (12mA), Holding 1.2VA (12mA)	
	110VAC	Inrush 1.3VA (11.7mA), Holding 1.3VA (11.7mA)	
	(Current Value) 200VAC	Inrush 2.4VA (12mA), Holding 2.4VA (12mA)	
Consumption	220VAC	Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)	
	220VAC	Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)	

**HOW TO
ORDER**

SERIES VQZ BASE MOUNTED PLUG LEAD TYPE



5 PORT SOLENOID VALVE
BASE MOUNTED /
PLUG LEAD TYPE
SERIES VQZ1000/2000/3000
MANIFOLD / CONNECTOR KIT

TECHNICAL
SPECIFICATIONS

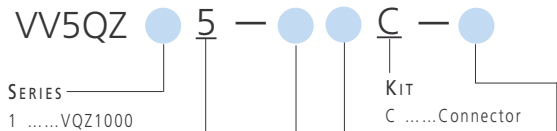
SERIES VQZ1000/2000/3000 MANIFOLD

Series	Base Model	Piping Applications		Applicable Valve	Applicable Stations	Manifold Base ^{Note 1)} Weight g	
		Piping	Port Size				
			1(P), 3/5(R)				4(A), 2(B)
VQZ1000	VV5QZ15-□□□	In-Line	Rc(PT) 1/8	C3(ø3.2) C4(ø4) C6(ø6) M5(M5Thread)	VQZ1□50 to VQZ1□51	2 to 20 Stations 2 Stations: 105 per Addition Station: 27	
VQZ2000	VV5QZ25-□□□	In-Line	Rc(PT) 1/4	C4(ø4) C6(ø6) C8(ø8) Rc(PT)1/8	VQZ2□50 to VQZ2□51	2 to 20 Stations 2 Stations: 105 per Addition Station: 54	
VQZ3000	VV5QZ35-□□□	In-Line	1(P)Port Rc(PT)3/8 3*5(R)Port Rc(PT)1/4	C6(ø6) C8(ø8) C10(ø10) Rc(PT)1/4	VQZ3□50 to VQZ3□51	2 to 20 Stations 2 Stations: 398 per Addition Station: 102	

Note 1)
Threaded
Port
Type

HOW TO
ORDER

SERIES VQZ BASE MOUNTED PLUG LEAD TYPE MANIFOLD



SERIES
1VQZ1000
2VQZ2000
3VQZ3000

MANIFOLD TYPE
5Base Mounted

NO OF STATIONS
02 ...2 Stations
20 ...20 Stations

PORT SIZE {4(A), 2(B) PORT}

- Symbol Port Size
- C3 One Touch Fitting for ø3.2 (VQZ1000)
 - C4 One Touch Fitting for ø4 (VQZ1000/2000)
 - C6 One Touch Fitting for ø6 (VQZ1000/2000/3000)
 - C8 One Touch Fitting for ø8 (VQZ2000/3000)
 - C10 One Touch Fitting for ø10 (VQZ3000)
 - M5 M5 Thread (VQZ2000/3000)
 - 01 Rc(PT)1/8 (VQZ2000)
 - 02 Rc(PT)1/4 (VQZ3000)
 - CM Mixture of Port Size (VQZ1000/2000/3000)

When ordering Port Mixture and/or with Port Plug, suffix it in Manifold Specs. Port Mixture and Port Plug are available only for One Touch Type.

LIGHT & SURGE
VOLTAGE SUPPRESSOR

- With
- With
- With
- Without
- Without
- With
- With (w/o Light)

COIL VOLTAGE

- 1* ...100VAC (50/60Hz)
- 2* ...200VAC (50/60Hz)
- 3* ...110VAC (50/60Hz)
- 4* ...220VAC (50/60Hz)
- 524VDC
- 612VDC
- 9* ...Other (Special Voltage)

HOW TO
ORDER

SERIES VQZ BASE MOUNTED PLUG LEAD TYPE VALVE



SERIES
1VQZ1000 Body Width 10mm
2VQZ2000 Body Width 15mm
3VQZ3000 Body Width 18mm

POSITIONS
12 Position Single
22 Position Double
33 Position Closed Center
43 Position Exhaust Center
53 Position Pressure Center

BODY TYPE
5Base Mounted

SEAL
0Metal Seal
1Rubber Seal

FUNCTION

-Standard Type (1W)
- HHigh Pressure Type (1.5W) ^{Note 1) Note 2)}
- YLow Wattage Type (0.5W) ^{Note 1)}
- RExternal Pilot

Note 1) Applicable to DC Specification

Note 2) Optional Specification

Note 3) When specifying more than one option, combine symbols in alphabetical order.

MANUAL OVERRIDE

-Non Locking Push Type (Tool Type)
- BSlotted Locking Type (Tool Type)

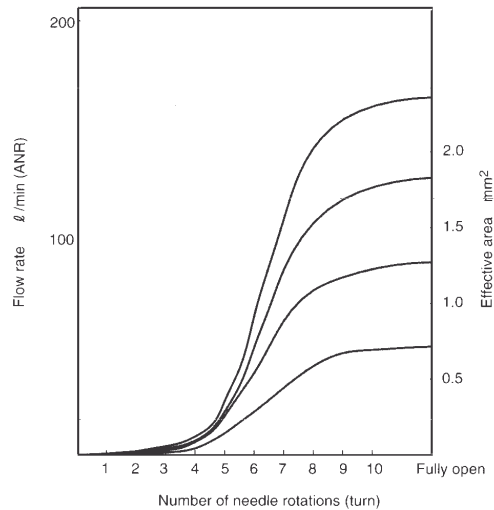
ELECTRICAL ENTRY

- LL Type Plug Connector with Lead Wire
- LOL Type Plug Terminal without Connector
- MM Type Plug Connector with Lead Wire
- MOM Type Plug Terminal without Connector
- YDIN Connector (VQZ2000/3000)
- YOTerminal without Connector (VQZ2000/3000)
- YZDIN Connector (VQZ2000/3000)
- YOSDIN Terminal without Connector (VQZ2000/3000)

COMPACT BODY TYPE WITH BUILT-IN SPEED CONTROLLER - FOR VQZ2000 ONLY

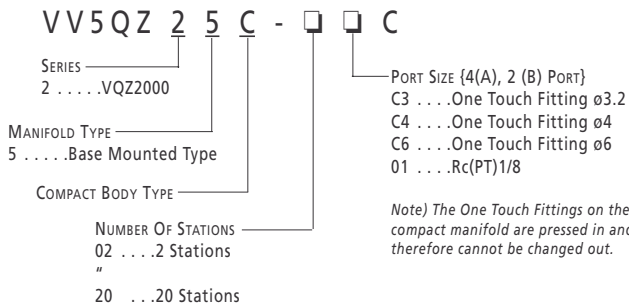
- Speed Controllers are built into the valve body (Rubber Seal Models only), making it easier to adjust cylinder speed.
- Needle valve is equipped with a mechanism to prevent it from being pulled out.

Note) Compact body type valves and standard valves are not interchangeable. Compact valves cannot be mounted on a standard manifolds and vice versa.



HOW TO ORDER

SERIES VQZ COMPACT BODY TYPE MANIFOLD



MANIFOLD OPTIONS FOR VQZ1000/2000/3000:

- BLANK PLATE ASSEMBLY
- INDIVIDUAL SUP SPACER
- INDIVIDUAL EXH SPACER
- PORT PLUG

MANIFOLD OPTION FOR VQZ2000:

- INTERFACE SPEED CONTROLLER

MANIFOLD OPTION FOR VQZ2000/3000:

- NAMEPLATE (N)

OTHER MANIFOLD OPTIONS FOR SERIES VQZ:

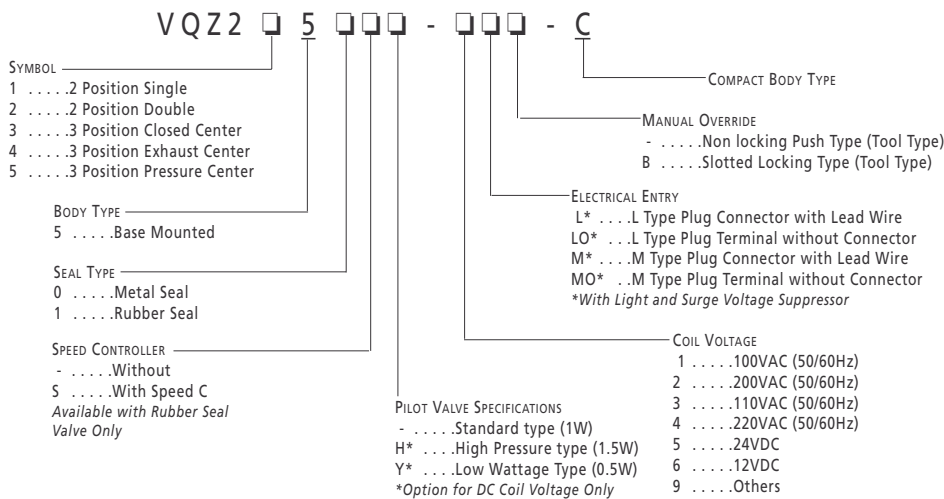
- DIN RAIL
- FITTING BLANK PLUG
- EXH PORT SILENCER
- LATCHING SOLENOID TYPE
- LATCHING TYPE VALVE
- LATCHING TYPE VALVE / MANUAL OVERRIDE

MANIFOLD OPTION PARTS:

- PERFECT CHECK BLOCK
- PERFECT CHECK BLOCK WITH VALVE OR MANIFOLD

HOW TO ORDER

SERIES VQZ VALVE



SERIES VQZ - BODY PORTED TYPE

5 PORT SOLENOID VALVE BODY PORTED / PLUG LEAD TYPE SERIES VQZ1000/2000/3000

- ✓ High Speed and Long Life
- ✓ Compact Design with Large Flow Capacity
- ✓ Metal or Rubber Seal Main Valve Construction Options
- ✓ Optional IP65 Rated DIN Connector Type Available
- ✓ DIN Rail Mounting Available
- ✓ Built-In One Touch Fitting for Easier Piping
- ✓ Both 3 and 5 Port Valves can be mounted on the same manifold
- ✓ Possible to have all Solenoids on same side of Manifold



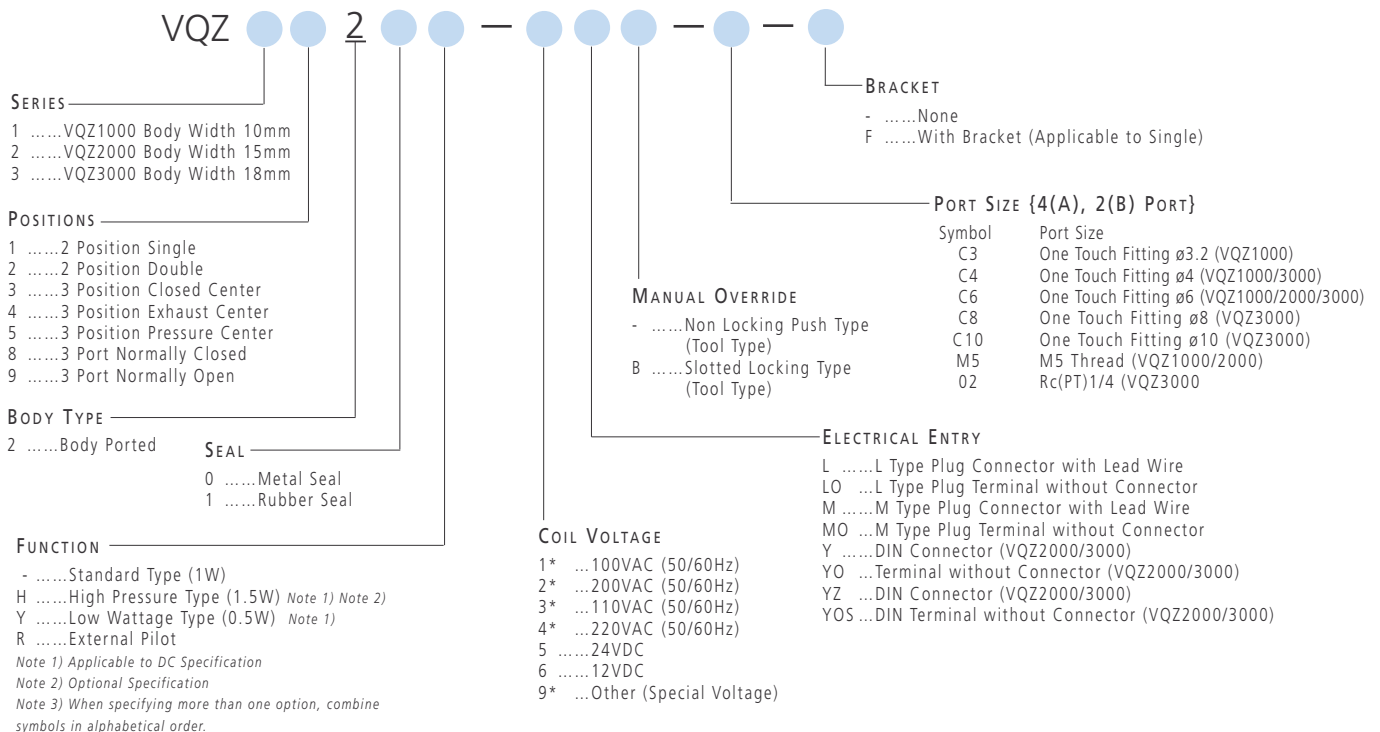
TECHNICAL SPECIFICATIONS
SERIES VQZ1000/2000/3000

Series VQZ1000/2000/3000 Body Ported Cv Factor			
	1	2	3
Metal Spool	0.15	0.45	0.7
Rubber Spool	0.3	0.6	0.9

Type Of Seal		Metal Seal	Rubber Seal
Fluid		Air, Inert Gas	Air, Inert Gas
Maximum Operating Pressure		0.7MPa (High Pressure Type 0.8MPa)	
Minimum	Single (2 Pos)	0.10MPa	0.15MPa (22PSI)
Operating	Double (2 Pos)	Only for VQZ3000 / 3 Pos 0.10MPa	
Pressure	3 Position	0.15MPa (22PSI)	0.20MPa (29PSI)
Ambient & Fluid Temperature		-10° to 50°C	
Max Operating 2 Position S & D		20Hz	5Hz
Pressure	3 Position	10Hz	3Hz
Proof Pressure		1.5MPa	
Lubrication		Not Required	
Manual Override		Non-Locking Push Type/Slotted Locking Type	
Shock/Vibration Resistance		150/30 m/s ²	
Enclosure		Dust Proof	
Coil Rated Voltage		12, 24VDC and 100, 110, 200, 220VAC	
Allowable Voltage		±10% of Rated Voltage	
Coil Insulation		Class B	
Power		24VDC: 1WDC (42mA), 1.5WDC (63mA), 0.5WDC (21mA) 12VDC: 1WDC (83mA), 1.5WDC (125mA), 0.5WDC (42mA) 100VAC: Inrush 1.2VA (12mA), Holding 1.2VA (12mA)	
Consumption (Current Value)		110VAC: Inrush 1.3VA (11.7mA), Holding 1.3VA (11.7mA) 200VAC: Inrush 2.4VA (12mA), Holding 2.4VA (12mA) 220VAC: Inrush 2.6VA (11.7mA), Holding 2.6VA (11.7mA)	

HOW TO ORDER

SERIES VQZ BODY PORTED PLUG LEAD TYPE



SOLENOID VALVES SERIES VQZ - BODY PORTED TYPE

5 PORT SOLENOID VALVE BODY PORTED / PLUG LEAD TYPE SERIES VQZ1000/2000/3000 MANIFOLD / CONNECTOR KIT

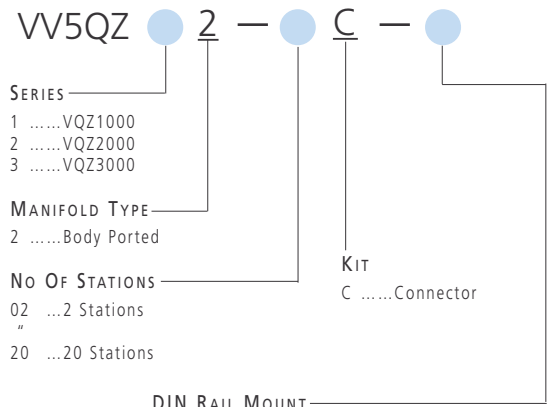
**TECHNICAL
SPECIFICATIONS**

SERIES VQZ1000/2000/3000 MANIFOLD

Series	Base Model	Piping Applications		Applicable Valve	Applicable Stations	Manifold Base Weight g	
		Piping	Port Size				
			1(P), 3/5(R)				4(A), 2(B)
VQZ1000	VV5QZ12-□□□□	Top	Rc(PT) 1/8	C3(ø3.2) C4(ø4) C6(ø6) M5(M5Thread)	VQZ1□20 VQZ1□21	2 to 20 Stations per Station: 64 Addition per Station: 18	
VQZ2000	VV5QZ22-□□□□	Top	Rc(PT) 1/8	C4(ø4) C6(ø6) M5(M5Thread)	VQZ2□20 VQZ2□21	2 to 20 Stations per Station: 86 Addition per Station: 26	
VQZ3000	VV5QZ32-□□□□	Top	Rc(PT)1/4	C6(ø6) C8(ø8) C10(ø10) Rc(PT)1/4	VQZ3□20 VQZ3□21	2 to 20 Stations per Station: 181 Addition per Station: 53	

**HOW TO
ORDER**

SERIES VQZ BODY PORTED PLUG LEAD TYPE MANIFOLD



- SERIES**
- 1VQZ1000
 - 2VQZ2000
 - 3VQZ3000

- MANIFOLD TYPE**
- 2Body Ported

- NO OF STATIONS**
- 02 ...2 Stations
 - " ...2 Stations
 - 20 ...20 Stations

- KIT**
- CConnector

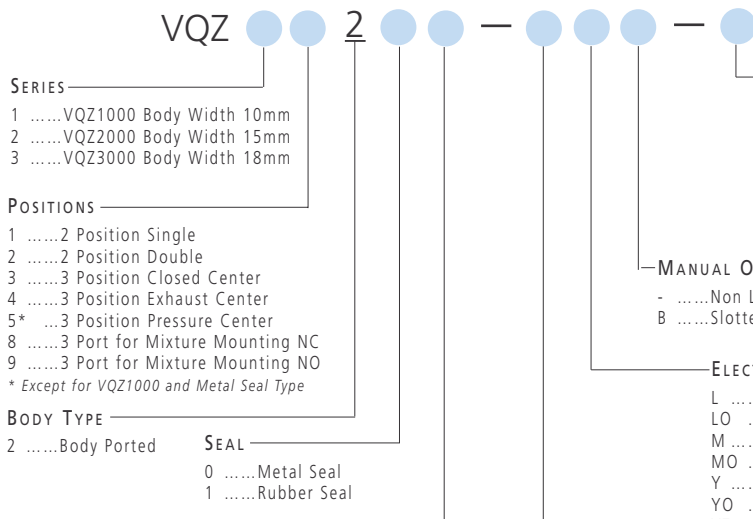
DIN RAIL MOUNT

-None
- DDIN Rail Mounting Type (With DIN Rail Standard Length)
- DO ...DIN Rail Mounting Type (Without DIN Rail) ^{Note 1)}

Note) Order DIN Rail Separately

**HOW TO
ORDER**

SERIES VQZ BODY PORTED PLUG LEAD TYPE VALVE



- SERIES**
- 1VQZ1000 Body Width 10mm
 - 2VQZ2000 Body Width 15mm
 - 3VQZ3000 Body Width 18mm

- POSITIONS**
- 12 Position Single
 - 22 Position Double
 - 33 Position Closed Center
 - 43 Position Exhaust Center
 - 5* ...3 Position Pressure Center
 - 83 Port for Mixture Mounting NC
 - 93 Port for Mixture Mounting NO
 - * Except for VQZ1000 and Metal Seal Type

- BODY TYPE**
- 2Body Ported
- SEAL**
- 0Metal Seal
 - 1Rubber Seal

- FUNCTION**
-Standard Type (1W)
 - HHigh Pressure Type (1.5W) *Note 1) Note 2)*
 - YLow Wattage Type (0.5W) *Note 1)*
 - RExternal Pilot
- Note 1) Applicable to DC Specification*
Note 2) Optional Specification
Note 3) When specifying more than one option, combine symbols in alphabetical order.

- PORT SIZE {4(A), 2(B) PORT}**
- C3 ...One Touch Fitting for ø3.2 (VQZ1000)
 - C4 ...One Touch Fitting for ø4 (VQZ1000/2000)
 - C6 ...One Touch Fitting for ø6 (VQZ1000/2000/3000)
 - C8 ...One Touch Fitting for ø8 (VQZ3000)
 - C10 ...One Touch Fitting for ø10 (VQZ3000)
 - M5 ...M5 Thread (VQZ1000/2000)
 - Q2 ...Rc(PT)1/4 (VQZ3000)

- MANUAL OVERRIDE**
-Non Locking Push Type (Tool Type)
 - BSlotted Locking Type (Tool Type)

- ELECTRICAL ENTRY**
- LL Type Plug Connector with Lead Wire
 - LO ...L Type Plug Terminal without Connector
 - MM Type Plug Connector with Lead Wire
 - MO ...M Type Plug Terminal without Connector
 - YDIN Connector (VQZ2000/3000)
 - YO ...Terminal without Connector (VQZ2000/3000)
 - YZ ...DIN Connector (VQZ2000/3000)
 - YOS ...DIN Terminal without Connector (VQZ2000/3000)

- LIGHT & SURGE
VOLTAGE SUPPRESSOR**
- With
 - With
 - With
 - With
 - Without
 - Without
 - With
 - With (w/o Light)

- COIL VOLTAGE**
- 1* ...100VAC (50/60Hz)
 - 2* ...200VAC (50/60Hz)
 - 3* ...110VAC (50/60Hz)
 - 4* ...220VAC (50/60Hz)
 - 524VDC
 - 612VDC
 - 9* ...Other (Special Voltage)

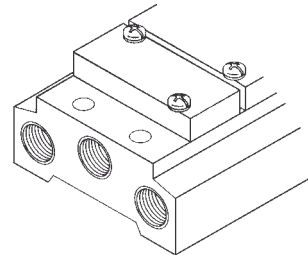
SERIES VQZ - BODY PORTED TYPE

MANIFOLD OPTION

SERIES VQZ1000/2000/3000 BLANK PLATE ASSEMBLY

- BLANK PLATE ASSEMBLY
- VVQZ1000-10A-2
- VVQZ2000-10A-2
- VVQZ3000-10A-2

- USED TO RESERVE A VALVE MOUNTING SPACE ON THE MANIFOLD FOR FUTURE USE



MANIFOLD OPTION

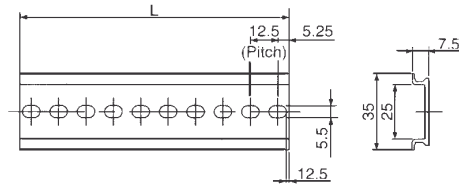
SERIES VQZ1000/2000/3000 DIN RAIL

DIN RAIL

AXT100 - DR - □

- Suffix number into □ from the Dimension Table below.

- TO ORDER A MANIFOLD WITH DIN RAIL ALREADY ATTACHED, INSERT 'D' AT THE END OF THE MANIFOLD PART NUMBER. THE DIN RAIL IS APPROXIMATELY 30MM LONGER THAN THE LENGTH OF THE MANIFOLD.



L DIMENSION

NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L DIMENSION	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
NUMBER	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
L DIMENSION	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

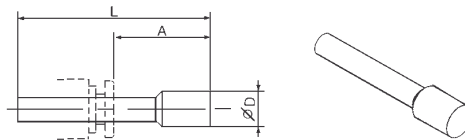
MANIFOLD OPTION

SERIES VQZ1000/2000/3000 FITTING BLANK PLUG

FITTING BLANK PLUG

- KQP-23-X19
- KQP-04-X19
- KQP-06-X19
- KQP-08-X19
- KQP-10-X19

- COLOR: WHITE



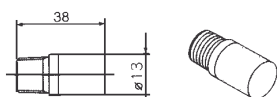
DIMENSIONS

APPLICABLE FITTING SIZE ØD	PART NUMBER	A	L	D
3.2	KQP-23-X19	16	31.5	3.2
4	KQP-04-X19	16	32	6
6	KQP-06-X19	18	35	8
8	KQP-08-X19	20.5	39	10
10	KQP-10-X19	22	43	12

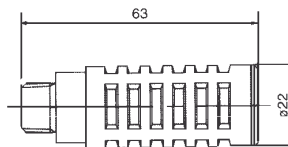
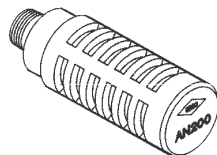
MANIFOLD OPTION

SERIES VQZ1000/2000/3000 EXH PORT SILENCER

SILENCER IS INSTALLED IN THE EXH PORT



AN110-01



AN200-02

TYPE	SILENCER P/N
VQZ1000	AN110-01
VQZ2000	AN200-02
VQZ3000	AN200-02

MANIFOLD OPTION PARTS AVAILABLE:

- PERFECT CHECK BLOCK
- PERFECT CHECK BLOCK WITH VALVE OR MANIFOLD

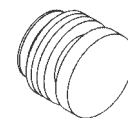
MANIFOLD OPTION

SERIES VQZ1000/2000/3000 PORT PLUG

PORT PLUG

- VVQZ100-CP (FOR VQZ1000/VQZ2000)
- VVQZ2000-CP (FOR VQZ3000)

- USED TO BLOCK AN UNUSED CYLINDER PORT WHEN USING A 4 WAY VALVE AS A 3 WAY VALVE



OTHER MANIFOLD OPTIONS:

- LATCHING SOLENOID TYPE
- LATCHING TYPE VALVE
- LATCHING TYPE VALVE WITH MANUAL OVERRIDE

4/2, 4/3 HAND VALVE SERIES (N)VH

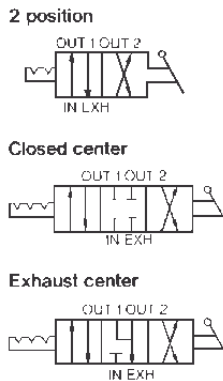
- ✓ Durable High Flow Rotary Panel Mounting Hand Valves
- ✓ Three Body Sizes with Ports from 1/4 ~ 3/4
- ✓ Having 4 Ports, this valve is available in 2 position or 3 Position Closed or Exhaust Center
- ✓ White Color to match Bright Operating Environments



TECHNICAL SPECIFICATIONS

Fluid	Air
Max Operating Pressure	1MPa / 145PSI (VH2/3/400) 0.7MPa / 100PSI (VH600)
Ambient & Fluid Temperature	-5 ~ 60°C / 23 ~ 140°F
Operation Angle	90°C / 194°F

SYMBOLS



HOW TO ORDER (N)VH SERIES

(N)VH ● ● ● — ● ●

BODY SIZE

- 2 1/4 Port
- 3 3/8 Port
- 4 1/2 Port
- 6 1 Port

PIPING/MOUNTING

- 0 Side / Body
- 1 Side / Panel
- 2 Bottom / Body
- 3 Bottom / Panel

POSITION SYMBOL

- 0 3 Position/Closed Center
- 1 3 Position/Exhaust Center
- 2 2 Position

THREAD

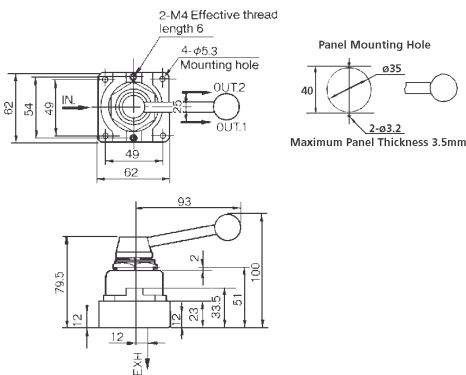
- Rc* Remove (N) when ordering
- N NPT
- F G* Remove (N) when ordering

PORTING

- 02 ... 1/4 (Body Size 2)
- 03 ... 3/8 (Body Size 3)
- 04 ... 1/2 (Body Size 4)
- 06 ... 3/4 (Body Size 4)

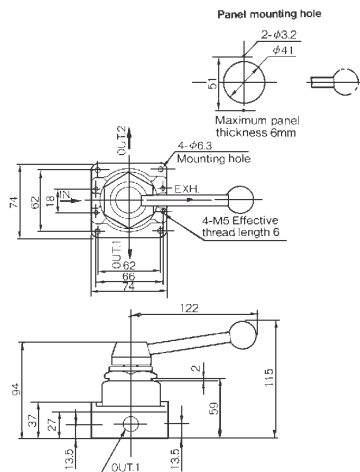
DIMENSIONS

(N)VH SERIES BODY SIZE 200



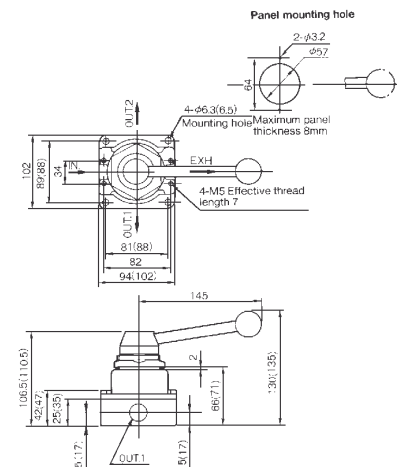
DIMENSIONS

(N)VH SERIES BODY SIZE 300



DIMENSIONS

(N)VH SERIES BODY SIZE 400



3/2 MECHANICAL VALVE 1/8 (N)VM400 SERIES

- ✓ 3/2 Normally Open or Normally Closed Valve
- ✓ Many Different Actuators
- ✓ Cv 0.38 Flow

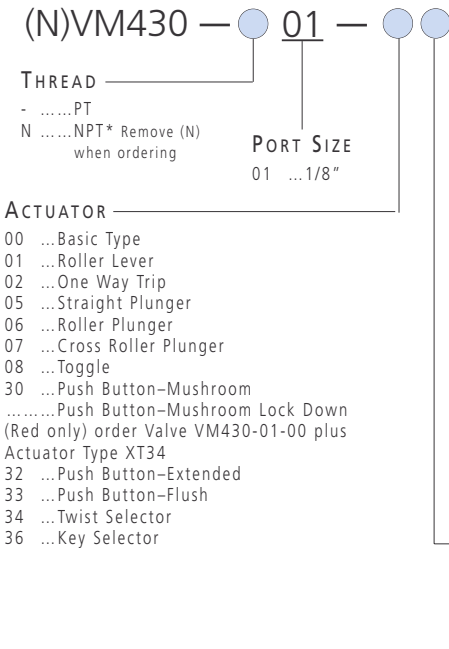


TECHNICAL SPECIFICATIONS

Fluid	Air
Operating Pressure	0 ~ 1MPa / 0 ~ 145PSI
Ambient & Fluid Temperature	5 ~ 60°C / 41 ~ 140°F
Effective Orifice (Cv Factor)	7mm ² (0.38)
Recommended Lubricant	Lubricant (ISO VG32)
Port Size	1/8

HOW TO ORDER

(N)VM400 VALVE



HOW TO ORDER

(N)VM400 ACTUATOR ONLY

.....PART NO.APPLICATION

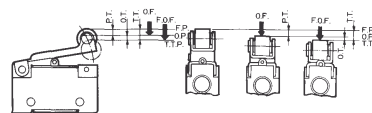
MECHANICAL OPERATION

Basic.....		
Roller Lever	VM-01A	Polyacetal roller
Roller Lever	VM-01AS	Hardened Steel Roller
One Way Trip	VM-02A	Polyacetal roller
One Way Trip	VM-02AS	Hardened Steel Roller
Straight Plunger	VM-05A	
Roller Plunger	VM-06A	Polyacetal roller
Roller Plunger	VM-06AS	Hardened Steel Roller
Cross Roller Plunger	VM-07A	Polyacetal roller
Cross Roller Plunger	VM-07AS	Hardened Steel Roller

MANUAL OPERATION

Toggle	VM-08A	
Push Button-Mushroom ..	VM-30AR	Red
Push Button-Mushroom ..	VM-30AB	Black
Push Button-Mushroom ..	VM-30AG	Green
Push Button-Mushroom Lock down	XT34-11-21R	Red
Push Button-Extended	VM-32AR	Red
Push Button-Extended	VM-32AB	Black
Push Button-Extended	VM-32AG	Green
Push Button-Flush	VM-33A	
Twist Selector	VM-34AR	Red
Twist Selector	VM-34AB	Black
Twist Selector	VM-34AG	Green
Key Selector	VM-36A	

KEY TO DIMENSIONAL TABLES



- F.O.F. (Full Operating Force) ...Required force to total travel position
- P.T. (Pre Travel)From free position to initial valve opening position
- O.T. (Over Travel).....From initial valve opening position to total travel position
- T.T. (Total Travel)From free position to total travel position



If these valves are used for guarding or safety interlock systems, installation and application should be as per BS5304: 1988. Careful note should be taken of the operating principles and design of different ranges of mechanical valves when specifying valves for safety related systems.

MECHANICAL VALVES SERIES (N)VM800

3/2 MECHANICAL VALVE 1/8 (N)VM800 SERIES

- ✓ 3/2 Normally Open or Normally Closed Valve
- ✓ A Variety Of Actuator Types Available
- ✓ Robust Design

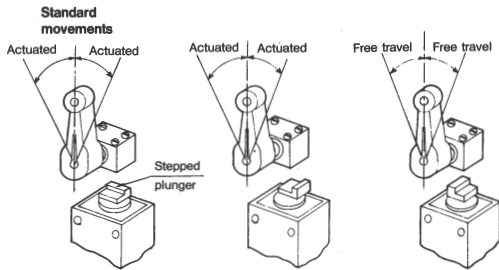
TECHNICAL SPECIFICATIONS

Fluid	Air
Operating Pressure	0 ~ 9.9 Bar / 0 ~ 144PSI
Ambient and Fluid Temperature	5 ~ 60°C / 41 ~ 140°F
Effective Orifice (Cv Ffactor)	6mm ² (0.33)
Recommended Lubricant	Turbine Oil #1 (ISO VG32)
Port Size	1/8

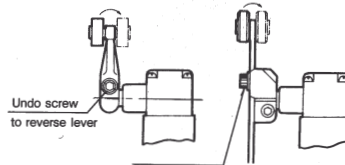


APPLICATIONS

Movement is changeable



Roller can be mounted to inside of lever



HOW TO ORDER (N)VM800 VALVE

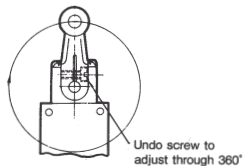
(N)VM830 — 01 —

No Of PORTS
33 Ports

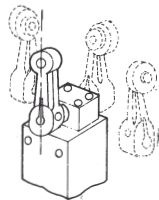
THREAD
-PT
NNPT
* Remove (N) when ordering

ACTUATOR
00 ...Basic Type
01 ...Roller Lever
13 ...Adjustable Roller Lever
14 ...Adjustable Rod Lever

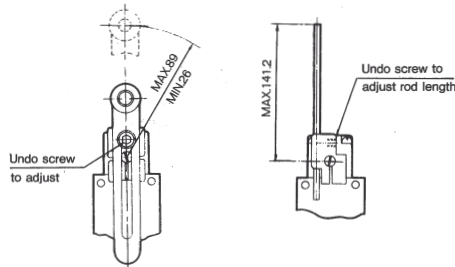
Lever location can be changed



Head direction can be changed



Lever length adjustment



HOW TO ORDER (N)VM800 ACTUATOR ONLY

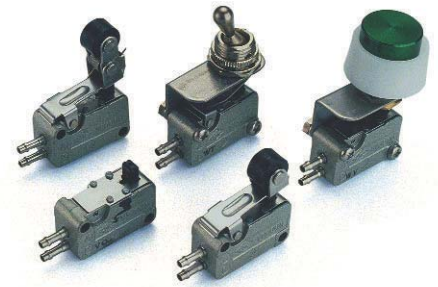
Roller leverVM-01F
Adjustable roller leverVM-13F
Adjustable rod leverVM14F

TECHNICAL SPECIFICATIONS

Type of Valve	NC Poppet Type
Number of Ports	3
Total Travel	4.8mm (Basic)
Piping	Side
Fluid	Air
Operating Pressure	0 ~ 8 Bar / 10 ~ 116PSI
Ambient and Fluid Temperature	5 ~ 60°C / 41 ~ 140°F
Effective Orifice (Cv Factor)	1mm ² (0.055)
Lubrication	Not Required Use Turbine Oil #1 (ISO VG32) if lubrication is provided
Fitting	w/Hose Nipple
Weight (Basic)	20gf

3/2 N.C. MICRO MECHANICAL VALVE (N)VM1000 SERIES

- ✓ 3/2 Normally Closed Valve
- ✓ 5 Different Actuators
- ✓ Cv 0.055 Flow
- ✓ Built-in Hose Nipple Connection
- ✓ Suitable for Ø4mm OD, 2.5mm ID Nylon Tube
- ✓ Over travel after Actuation (Mechanical Operation Type)
- ✓ Interchangeable with V3 Electrical Switches



How To ORDER (N)VM1000

(N)VM1000 — 4N — ● ●

No Of Ports

- 03 Ports
- 12 Ports

ACTUATOR

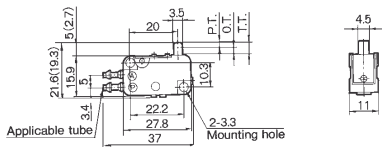
- 00 ...Basic Type
- 01 ...Roller Lever
- 02 ...One way Trip
- 08 ...Toggle
- 32 ...Push Button

PUSH BUTTON COLOR

- RRed
- GGreen
- BBlack

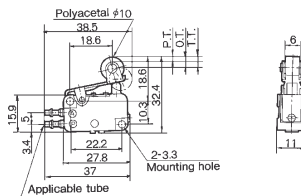
DIMENSIONS

(N)VM1000 BASIC VALVE



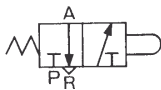
DIMENSIONS

(N)VM1000 ROLLER LEVER



SYMBOLS

(N)VM1000 BASIC VALVE



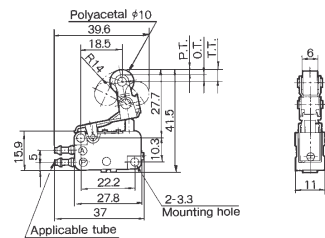
SYMBOLS

(N)VM1000 ROLLER LEVER



DIMENSIONS

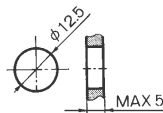
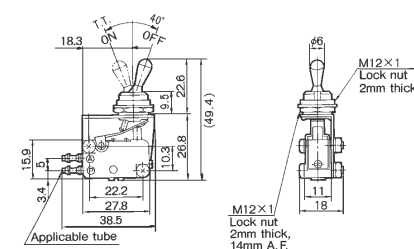
(N)VM1000 ONE WAY TRIP



PT= Pre-travel
OT= Over travel
TT= Total travel

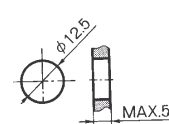
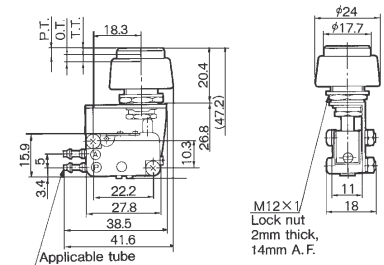
DIMENSIONS

(N)VM1000 TOGGLE



DIMENSIONS

(N)VM1000 PUSH BUTTON



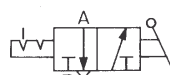
SYMBOLS

(N)VM1000 ONE WAY



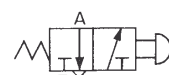
SYMBOLS

(N)VM1000 TOGGLE



SYMBOLS

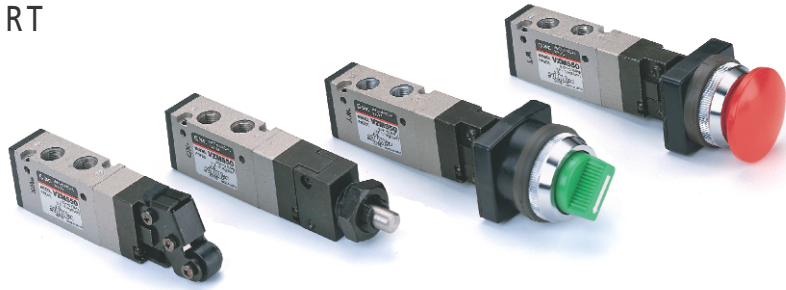
(N)VM1000 PUSH BUTTON



MECHANICAL VALVES SERIES (N)VZM550

5/2 MECHANICAL VALVE 1/8 PORT SERIES (N)VZM550

- ✓ Many Different Actuators
- ✓ High Flow Cv 0.6
- ✓ High Cycle Rate
- ✓ Long Life
- ✓ Interfaces with VZ5000 2-10 Station Type 21 Manifold



How To ORDER

(N)VZM550 VALVE

(N)VZM550 — 01 —

BODY OPTION

- 0Standard
- 1External Pilot

THREAD

-PT
- NNPT
- * Remove (N) when ordering

PORT SIZE
01 ...1/8"

ACTUATOR

- 00 ...Basic Type
- 01 ...Roller Lever
- 02 ...One Way Trip
- 05 ...Straight Plunger
- 06 ...Roller Plunger
- 08 ...Toggle
- 30 ...Push Button-Mushroom
- 32 ...Push Button-Extended
- 33 ...Push Button-Flush
- 34 ...Twist Selector
- 35 ...5/3 Twist Selector
- 37 ...Push-Pull

PUSH BUTTON COLOR

- RRed
- GGreen
- BBlack
- SSteel

How To ORDER

(N)VZM550 ACTUATOR ONLY

PART NO APPLICATION

MECHANICAL OPERATION

- Basic.....
- Roller LeverVM-01CPolyacetal roller
- Roller LeverVM-01CSHard steel roller
- One Way TripVM-02CPolyacetal roller
- One Way TripVM-02CSHard steel roller
- Straight PlungerVM-05C
- Roller PlungerVM-06CPolyacetal roller
- Roller PlungerVM-06CSHard steel roller

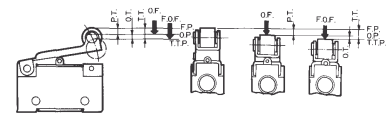
MANUAL OPERATION

- Toggle.....VM-08C
- Push Button-Mushroom ...VM-30CR ...Red
- Push Button-Mushroom ...VM-30CB ...Black
- Push Button-Mushroom ...VM-30CG ...Green
- Push Button-ExtendedVM-32CR ...Red
- Push Button-ExtendedVM-32CB ...Black
- Push Button-ExtendedVM-30CG ...Green
- Push Button-FlushVM-33C
- Twist SelectorVM-34CR ...Red
- Twist SelectorVM-34CB ...Black
- Twist SelectorVM-34CG ...Green
- Key SelectorVM-36C
- Push-Pull.....Black

TECHNICAL SPECIFICATIONS

Fluid	Air, Inert gas
Operating Pressure	1.5~7 Bar / 22~101PSI
Ambient & Fluid Temperature	5 ~ 60°C / 41 ~ 140°F
Effective Orifice (Cv Factor)	10.8mm ² (0.6)
Maximum Frequency	300c.p.m.
Lubrication	Not Required
Port Size	Main Valve 1/8 Pilot Valve (EXH) M5x0.8

KEY TO DIMENSIONAL TABLES



- F.O.F. (Full Operating Force) ...Required force to total travel position
- P.T. (Pre Travel).....From free position to initial valve opening position
- O.T. (Over Travel).....From initial valve opening position to total travel position
- T.T. (Total Travel)From free position to total travel position

ACCESSORIES

MANIFOLD TYPE 21 TOP PORTED

- DXT199-22-1ABlanking plate kit



Valves with certain operators cannot be mounted side by side. Check valve dimensions



If these valves are used for guarding or safety interlock systems, installation and application should be as per BS5304: 1988. Careful note should be taken of the operating principles and design of different ranges of mechanical valves when specifying valves for safety related systems.

ANCILLARY VALVES SERIES (N)AK AND (N)AQ

SYMBOLS



CHECK VALVE SERIES (N)AK

- ✓ High Flow Capacity
- ✓ Low Cracking Pressure: 0.2 Bar
- ✓ Port Sizes from 1/8 ~ 1 PT, NPT

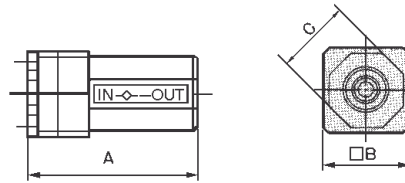
HOW TO ORDER SERIES (N)AK

BODY SIZE	PORT SIZE NPT	EFFECTIVE ORIFICE*
NAK2000-N01..	1/8	25
NAK2000-N02..	1/4	27.5
NAK4000-N02..	1/4	47
NAK4000-N03..	3/8	85
NAK4000-N04..	1/2	95
NAK6000-N06..	3/4	200
NAK6000-N10..	1	230

TECHNICAL SPECIFICATIONS

Fluid	Air
Proof Pressure	1.5MPa / 218 PSI
Max Operating Pressure	1MPa / 145 PSI
Min Operating Pressure	0.02MPa / 3 PSI
Ambient & Fluid Temperature	5 ~ 60°C / 41 ~ 140°F

DIMENSIONS SERIES (N)AK

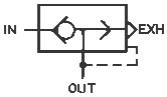


Model	Port Size	A	B	C
(N)AK2001-N01, 02	3/8, 1/4	50	25	22
(N)AK4000-N02, 03, 04	1/4, 3/4, 1/2	67	36	36
(N)AK6000-N06, 10	3/4, 1	95	50	50

Note: When ordering PT Ports, remove 'N' from the model number.
Eg: AK2000-01

*S (mm²) is Effective Orifice
Figure given for A-R Direction (Exhaust Flow)

SYMBOLS



QUICK EXHAUST VALVE SERIES (N)AQ

- ✓ High Exhaust Characteristics
- ✓ Port Sizes from M5 ~ 3/4 PT, NPT
- ✓ High Flow Capacity

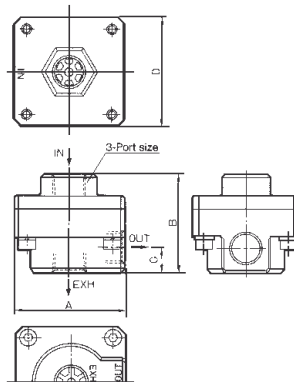
HOW TO ORDER SERIES (N)AQ

BODY SIZE	PORT SIZE NPT	EFFECTIVE ORIFICE*
NAQ1500-M5	M5	2.8
NAQ1510-N01	1/8	5.8
NAQ2000-N01	1/8	25
NAQ2000-N02	1/4	40
NAQ3000-N02	1/4	42
NAQ3000-N03	3/8	70
NAQ5000-N04	1/2	115
NAQ5000-N06	3/4	180

TECHNICAL SPECIFICATIONS

Fluid	Air
Proof Pressure	1.5MPa / 218 PSI
Max Operating Pressure	(N)AQ1500~1510 0.7MPa / 101 PSI (N)AQ2000~5000 1MPa / 145 PSI
Min Operating Pressure	(N)AQ1500~1510 0.1MPa / 14.5 PSI (N)AQ2000~5000 0.05MPa / 8 PSI
Ambient & Fluid Temperature	5 ~ 60°C / 41 ~ 140°F

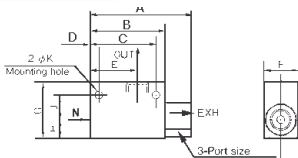
DIMENSIONS SERIES (N)AQ2000, 3000, 5000



Note: When ordering PT Ports, remove 'N' from the model number.
Eg: AQ1510-01

*S (mm²) is Effective Orifice
Figure given for A-R Direction (Exhaust Flow)

DIMENSIONS SERIES (N)AQ1500, 1510



Model	Port Size	A	B	C	D	E	F	G	H	J	øK
(N)AQ1500-M5	M5x0.8	23	20	14	3	12.5	12	15	5.5	6.5	3.1
(N)AQ1510-N01	1/8	45	33	25	4	21	15	25	8	11	4.3

Model	Port Size	A	B	C	D
(N)AQ2000-N01, 02	1/8, 1/4	45	40	10	45
(N)AQ3000-N02, 03	1/4, 3/8	56	50	12.5	56
(N)AQ5000-N4, 06	1/2, 3/4	85	75	18	85

MINIATURE IN-LINE QUICK EXHAUST VALVES SERIES AQ200/300

- ✓ Option of Built-in Silencer or Facility to pipe Exhaust away
- ✓ Minimizes Installation Time and Cost
- ✓ Integral One Touch fittings
- ✓ Accepts Nylon and Polyurethane Tubing
- ✓ Compact Lightweight Design



TECHNICAL SPECIFICATIONS

Proof Pressure	1.5MPa (218 PSI)
Max Operating Pressure	1MPa (145 PSI)
Min Operating Pressure	0.1MPa (14.5 PSI)
Ambient and Fluid Temperatures	0~60°C / 32~140°F
Applicable Tube Materials	Nylon, Soft Nylon, Polyurethane

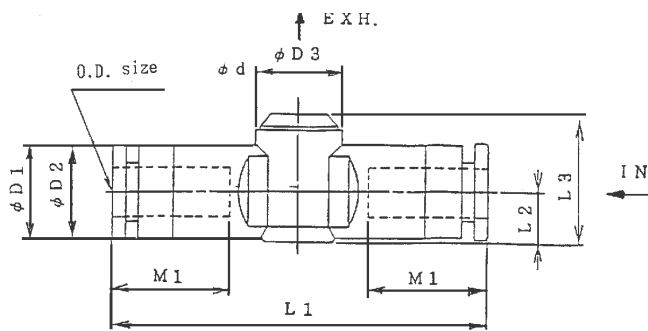
FLOW COMPARISON

Models	Tube size		Effective area mm ²	
	Ø4	Ø6	In-Out	Out-Exh
AQ240F-04-*	•	•	1.7	2.5
AQ240F-06-*	•	•	2.4	2.7
AQ340F-06-*	•	•	4	4

NOTE: observe maximum recommended operating pressures for tube when using Soft Nylon or Polyurethane

DIMENSIONS

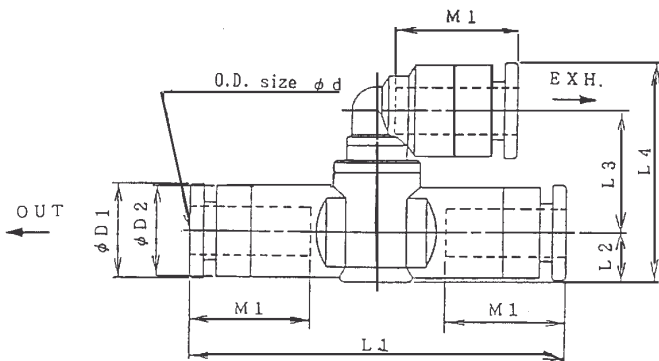
SERIES AQ240F/340F WITH SILENCER



Models	O.D size d	D1	D2	D3	L1	L2	L3	M1	Weight
AQ240F-04-00	4	9.5	8.9	10	39.3	5	14.1	13	4.2
AQ240F-06-00	6	11.5	11	10	43.9	6	15.2	14	5.2
AQ340F-06-00	6	11.5	11	11.8	45.2	6.3	20	14	10.4

DIMENSIONS

SERIES AQ240F/340F WITH EXHAUST TAKE OFF

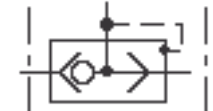


Models	O.D size d	D1	D2	L1	L2	L3	L4	M1	Weight
AQ240F-04-04	4	9.5	8.9	39.3	5	13.7	23.4	13	5.7
AQ240F-06-06	6	11.5	11	43.9	6	14.7	26.5	14	7.3
AQ340F-06-06	6	11.5	11	45.2	6.3	19.6	31.7	14	12.5

SYMBOLS WITH BUILT-IN SILENCER



SYMBOLS WITHOUT SILENCER



HOW TO ORDER

SERIES AQ240F/340F

AQ 40

BODY SIZE

- 2M5
- 31/8"

TUBE CONNECTION

- FBuilt-in One Touch Tube Connection

OD SIZE

- Metric
- 04 ...Ø4mm
- 06 ...Ø6mm
- Imperial
- 07 ...1/4"

EXHAUST PORT

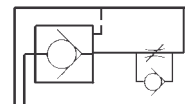
- Metric
- 00 ...Built-in Silencer
- 04 ...Ø4mm
- 06 ...Ø6mm
- Imperial
- 00 ...Built-in Silencer
- 07 ...1/4"

ANCILLARY VALVES SERIES ASP



SPEED CONTROLLER WITH PILOT CHECK VALVE SERIES ASP

- ✓ Integrated Pilot Check Valve and Speed Controller
- ✓ Temporary Intermediate Stop and Speed Control of Cylinders is possible
- ✓ 360° Freedom for Tube Mounting Direction



TECHNICAL SPECIFICATIONS

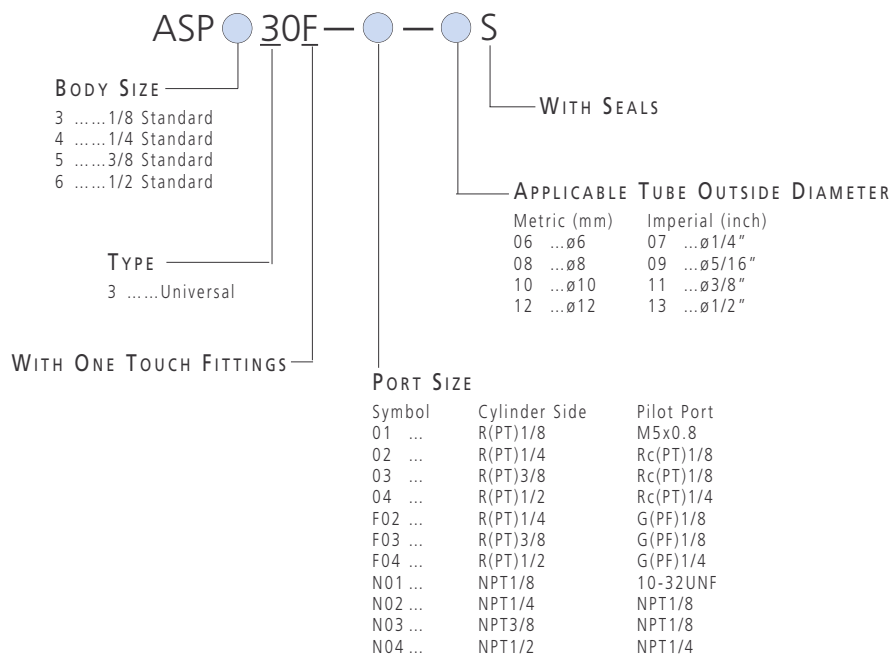
Proof Pressure	1.5MPa (218 PSI)
Max Operating Pressure	1MPa (145 PSI)
Min Operating Pressure	0.1MPa (14.5 PSI)
Pilot Check Valve Actuation Pressure	50% of Operating Pressure
Ambient and Fluid Temperatures	-5~60°C (W/O Freezing) 23~140°F
Number Of needle Rotations	10
Applicable Tube Material	Nylon, Soft Nylon, Polyurethane

TECHNICAL SPECIFICATIONS

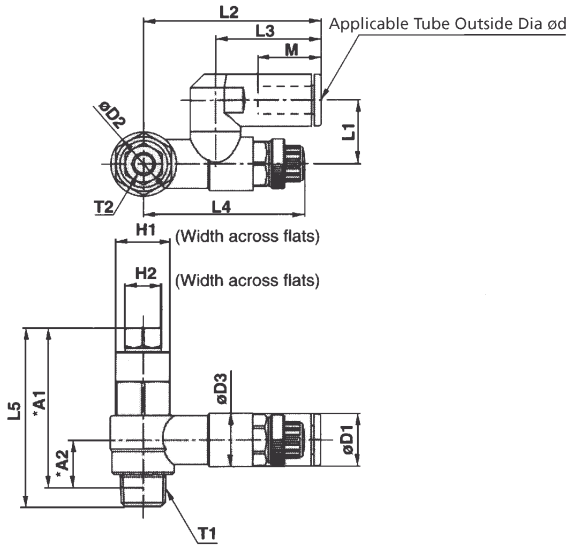
FLOW RATE AND EFFECTIVE SECTIONAL AREA

Model		ASP330F	ASP430F	ASP530F	ASP630F
Tube	mm	ø6, ø8	ø6 ø8	ø8 ø10	ø10 ø12
Outside Diameter	inch	ø1/4"	- ø1/4"	ø5/16" ø3/8"	- ø3/8"
Controlled Flow (Free Flow)	Flow Rate l/min (ANR)(N l/m)	180	330 350	600 750	1100 1190
	Effective Sectional Area mm ²	2.9	5.2 5.4	9.3 11.6	16 18.4

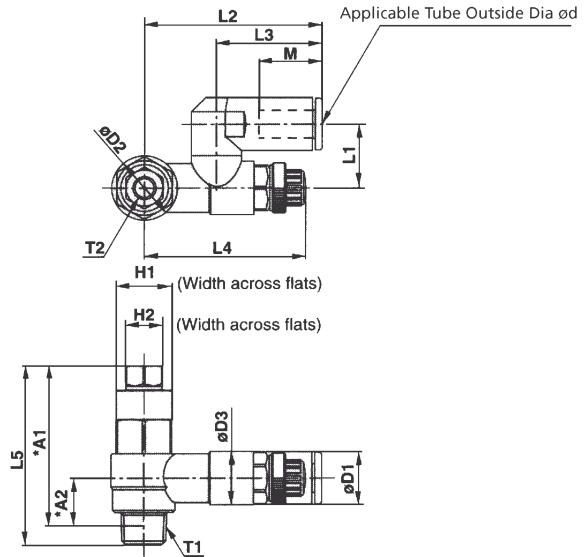
HOW TO ORDER SERIES ASP



DIMENSIONS (MM) SERIES ASP



DIMENSIONS (INCH) SERIES ASP



Model	d	T1	T2	H1	H2	D1	D2	D3	L1	L2	L3	L4		L5	*A1	*A2	M	Weight g
												Max	Min					
ASP330F-01-06S	6	R(PT)1/8	M5x0.8	12	8	11.6	14.2	11.8	14	38.4	22.9	39.6	34.6	39.5	35.2	10.5	13.7	32
ASP330F-01-08S	8	R(PT)1/8	M5x0.8	12	8	15.2	14.2	11.8	15.8	44.7	28.2	38.9	33.9	39.5	35.2	10.5	18.7	35
ASP430F-02-06S	6	R(PT)1/4	Rc(PT)1/8	17	12	12.8	18.5	15	18	43.4	25.2	41.7	36.7	48.7	42.4	10.9	16.8	65
ASP430F-02-08S	8	R(PT)1/4	Rc(PT)1/8	17	12	15.2	18.5	15	19.7	46.4	28.2	41.7	36.7	48.7	42.4	10.9	18.7	68
ASP530F-03-08S	8	R(PT)3/8	Rc(PT)1/8	19	12	15.2	23	19.8	20.3	51.3	28.2	46.9	41.9	56.2	50	14.4	18.7	107
ASP530F-03-10S	10	R(PT)3/8	Rc(PT)1/8	19	12	18.5	23	19.8	23.1	54.1	32.6	46.9	41.9	56.2	50	14.4	20.8	110
ASP630F-04-10S	10	R(PT)1/2	Rc(PT)1/4	24	17	18.5	28.6	26.5	25.9	64.2	32.6	64.8	57.3	70.3	61.8	18.3	20.8	212
ASP630F-04-12S	12	R(PT)1/2	Rc(PT)1/4	24	17	20.9	28.6	26.5	25.9	66	34.4	64.8	57.3	70.3	61.8	18.3	21.8	215

Model	d	T1	T2	H1	H2	D1	D2	D3	L1	L2	L3	L4		L5	*A1	*A2	M	Weight g
												Max	Min					
ASP330F-N01-07S	1/4"	NPT1/8	10-32UNF	1/2"	8	13.2	14.2	11.8	15.8	42.2	25.6	38.9	33.9	39.5	35.1	10.5	17	35
ASP330F-N01-09S	5/16"	NPT1/8	10-32UNF	1/2"	8	15.2	14.2	11.8	15.8	44.7	28.2	38.9	33.9	39.5	35.1	10.5	18.7	35
ASP430F-N02-07S	1/4"	NPT1/4	NPT1/8	11/16"	1/2"	13.2	18.5	15	18	43.9	25.6	41.7	36.7	48.7	42.6	10.9	17	68
ASP430F-N02-09S	5/16"	NPT1/4	NPT1/8	11/16"	1/2"	15.2	18.5	15	18	46.4	28.2	41.7	36.7	48.7	42.6	10.9	18.7	68
ASP530F-N03-09S	5/16"	NPT3/8	NPT1/8	19	1/2"	15.2	23	19.8	20.3	51.3	28.2	46.9	41.9	56.2	50.3	14.4	18.7	107
ASP530F-N03-11S	3/8"	NPT3/8	NPT1/8	19	1/2"	18.5	23	19.8	23.1	54.1	32.6	46.9	41.9	56.2	50.3	14.4	20.8	116
ASP630F-N04-11S	3/8"	NPT1/2	NPT1/4	15/16"	11/16"	18.5	28.6	26.5	25.9	64.2	32.6	64.8	57.3	70.3	61.8	18.3	20.8	220
ASP630F-N04-13S	1/2"	NPT1/2	NPT1/4	15/16"	11/16"	21.7	28.6	26.5	26.5	66.3	34.7	64.8	57.3	70.3	61.8	18.3	21.8	230

TECHNICAL SPECIFICATIONS

Proof Pressure 1.5 MPa (222 PSI)
 Max Operating Pressure 1 MPa (148 PSI)
 Min Operating Pressure 0.1 MPa (14.5 PSI)
 Ambient & Fluid Temperature 0~60°C / 32~140°F
 Suitable Tube Material Nylon, soft nylon, polyurethane

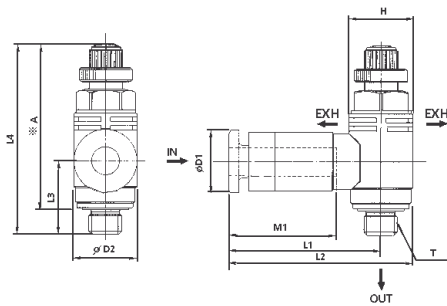
Note: observe maximum recommended operating pressures for tube when using soft nylon or polyurethane

ADJUSTABLE QUICK EXHAUST VALVE WITH INTEGRAL EXHAUST RESTRICTOR AND SILENCER SERIES (N)ASV

- ✓ Three Functions from a Single Component
- ✓ Minimizes Installation Time and Cost
- ✓ Accepts Nylon and Polyurethane Tubing
- ✓ Wide Variety of Sizes M3 to ½
- ✓ Integral One Touch Fitting - 4mm to 12mm
- ✓ Excellent Control Characteristics
- ✓ Compact Design



DIMENSIONS SERIES (N)ASV ELBOW TYPE



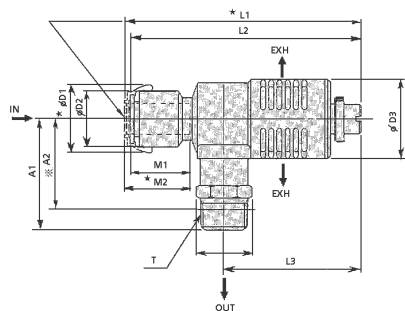
FLOW COMPARISON

Model	Port thread	Tube O.D (mm)					Effective area	
		4	6	8	10	12	In-Out	Out-Exh
ASV120F-M3	M3x0.5	•					0.3	0.3
ASV220F-M5	M5x0.8	•	•				1.3	1.3
ASV310F-01	PT1/8			•	•		7	8
ASV310F-02	PT1/4			•	•		7	8
ASV410F-01	PT1/8			•	•	•	13.5	14
ASV410F-02	PT1/4			•	•	•	13.5	14
ASV410F-03	PT3/8			•	•	•	13.5	14
ASV510F-02	PT1/4			•	•	•	27	27
ASV510F-03	PT3/8			•	•	•	27	29
ASV510F-04	PT1/2			•	•	•	27	29

Model	Applicable Tube OD	T	H	D1	D2	L1	L2	L3	L4	*A		M1	Weight g	
										Max	Min			Max	Min
ASV120F-M3-04	4	M3x0.5	5.5	9.5	7	21.5	25	9.8	28.6	26.1	25.8	23.3	13	5
ASV220F-M5-04	4	M5x0.8	8	9.5	9.6	22.8	27.6	11.1	31.4	28.6	27.7	24.9	13	8
ASV220F-M5-06	6	M5x0.8	8	11.5	9.6	23.9	28.7	11.1	31.4	28.6	27.7	24.9	14	9

* Assembled height

DIMENSIONS SERIES (N)ASV TEE TYPE



SYMBOLS WITH BUILT-IN SILENCER



Model	Applicable tube O.D	T	H	D1	D2	D3	L1			L2			L3			A1	A2	M1	M2	Weight g
							Max	Min	Max	Min	Max	Min	Max	Min						
ASV310F-01-06S	6	R(PT)1/8	10	16.8	12.8	17.6	71.9	65.9	69.9	63.9	45.8	39.8	27.4	23.4	17	19	22			
ASV310F-01-08S	8	R(PT)1/8	10	19.3	15.2	17.6	73.8	67.8	71.8	65.8	45.8	39.8	27.4	23.4	19	21	23			
ASV310F-02-06S	6	R(PT)1/4	14	16.8	12.8	17.6	71.9	65.9	69.9	63.9	45.8	39.8	31.4	25.4	17	19	30			
ASV310F-02-08S	8	R(PT)1/4	14	19.3	15.2	17.6	73.8	67.8	71.8	65.8	45.8	39.8	31.4	25.4	19	21	31			
ASV410F-01-08S	8	R(PT)1/8	12	19.3	15.2	24	83.1	75.6	81.1	73.6	52.8	45.3	30.7	26.7	19	21	39			
ASV410F-01-10S	10	R(PT)1/8	12	23.3	18.5	24	85.2	77.7	83.2	75.7	52.8	45.3	30.7	26.7	21	23	41			
ASV410F-02-08S	8	R(PT)1/4	14	19.3	15.2	24	83.1	75.6	81.1	73.6	52.8	45.3	34.7	28.7	19	21	47			
ASV410F-02-10S	10	R(PT)1/4	14	23.3	18.5	24	85.2	77.7	83.2	75.7	52.8	45.3	34.7	28.7	21	23	49			
ASV410F-03-08S	8	R(PT)3/8	17	19.3	15.2	24	83.1	75.6	81.1	73.6	52.8	45.3	36.7	30.4	19	21	61			
ASV410F-03-10S	10	R(PT)3/8	17	23.3	18.5	24	85.2	77.7	83.2	75.7	52.8	45.3	36.7	30.4	21	23	63			
ASV510F-02-10S	10	R(PT)1/4	17	23.3	18.5	30	90.2	84.2	88.2	82.2	55.6	49.6	39.8	33.8	21	23	69			
ASV510F-02-12S	12	R(PT)1/4	17	25.7	20.9	30	91.8	85.8	89.8	83.8	55.6	49.6	39.8	33.8	22	24	74			
ASV510F-03-10S	10	R(PT)3/8	17	23.3	18.5	30	90.2	84.2	88.2	82.2	55.6	49.6	41.8	35.5	21	23	73			
ASV510F-03-12S	12	R(PT)3/8	17	25.7	20.9	30	91.8	85.8	89.8	83.8	55.6	49.6	41.8	35.5	22	24	78			
ASV510F-04-10S	10	R(PT)1/2	22	23.3	18.5	30	90.2	84.2	88.2	82.2	55.6	49.6	45.8	37.6	21	23	95			
ASV510F-04-12S	12	R(PT)1/2	22	25.7	20.9	30	91.8	85.8	89.8	83.8	55.6	49.6	45.8	37.6	22	24	100			

Height to centre based on nominal thread engagement

HOW TO ORDER SERIES (N)ASV

(N)ASV 0 F — — — — —

BODY SIZE

- 1 M3
- 2 M5
- 3 ½
- 4 ¼
- 5 ⅜

BODY TYPE

- 1 Tee
- 2 Elbow

PORT THREAD

- M3 ... M3x0.5
- M5 ... M5x0.8
- 01 ... 1/8
- 02 ... 1/4
- 03 ... 3/8
- 04 ... 1/2

TUBING DIAMETER

Metric (mm)	Imperial (inch)
04 ... Ø4mm	07 ... Ø1/4"
06 ... Ø6mm	09 ... Ø5/16"
08 ... Ø8mm	11 ... Ø3/8"
10 ... Ø10mm	13 ... Ø1/2"
12 ... Ø12mm	

THREAD

- PT* Remove (N) when ordering
- N NPT

THREAD SEAL

- M3, M5
- S ½ - ½

TUBE RELEASING TOOL TG-1, TG-2

- ✔ Switchable for all manifolds with integral $\varnothing 4\text{mm}$ and 6mm One-touch fittings (TG-1) or $\varnothing 1/8"$ and $1/4"$ One-touch fittings (TG-2)
- ✔ Easy change between 4mm and 6mm tube size fittings or $1/8"$ and $1/4"$ tube size fittings
- ✔ Simplifies removal of tubing by simultaneously depressing collet and gripping tube
- ✔ Can be used one handed in confined spaces



TG-1 Tube Releasing Tool

Available in Blue

For 4mm and 6mm Tube Size Fittings

TG-2 Tube Releasing Tool

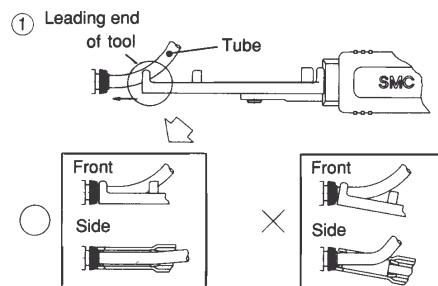
Available in Red

For $1/8"$ and $1/4"$ Tube Size Fittings

USAGE

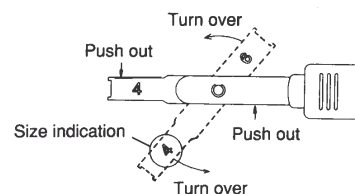
Operation

- 1 Insert the tool straight along the tube in the fittings mounting direction until the leading end of the tool reaches the leading end of the release bush.



Size change

Push and turn the nose of the tool in the directions of arrows simultaneously to release it from the fixed state. Turn the nose by 180° and fix it. The applicable tube size is shown on the back side.



- 2 After inserting the tool into the leading end of the release bush, firmly grip the handle of the tool and push it in until the tube holding section strikes against the stroke end.

[Note: Insufficient insertion may not release tubing.]

- 3 After inserting the tube holding section up to the stroke end, release the force. The returning force of the spring releases the tube held with the tool.

