

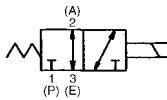
3 Port Direct Operated Solenoid Valve Metal Seal, Body Ported VS3135/3145



Terminal type



JIS Symbol



Specifications

Fluid	Air/Inert gas	
Proof pressure	1.5 MPa	
Operating pressure range	0 to 1.0 MPa	
Ambient and fluid temperature (°C) ⁽¹⁾	-20 to 60	
Lubrication ⁽²⁾	Not required	
Manual override	Option (Non-locking type available)	
Electrical entry	Grommet, Conduit terminal, Dripproof conduit terminal	
Coil rated voltage	AC	100, 200 V 50/60 Hz
	DC	24 V
Allowable voltage fluctuation	-15 to -10% of rated voltage	
Coil insulation type	Class B or equivalent (130°C) ⁽³⁾	
Shock/Vibration resistance (m/s ²)	150/50 ⁽⁴⁾	



Note 1) If it is low temperature, dry air should be used. (No freezing)

Note 2) Use turbine oil Class 1 (ISO VG32), if lubricated.

Note 3) Based on JIS C 4003.

Note 4) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

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

Model

Valve model		VS3135						VS3145					
Flow characteristics		P → A			A → E			P → A			A → E		
		C	b	Cv	C	b	Cv	C	b	Cv	C	b	Cv
		[dm ³ /s·bar]			[dm ³ /s·bar]			[dm ³ /s·bar]			[dm ³ /s·bar]		
	1/4	6.1	0.3	1.5	6.1	0.4	1.6	—	—	—	—	—	—
	3/8	7.2	0.2	1.8	7.3	0.2	1.8	—	—	—	—	—	—
	1/2	9.0	0.2	2.3	9.0	0.3	2.4	18	0.27	4.8	16	0.34	4.1
	3/4	—	—	—	—	—	—	20	0.21	5.1	15	0.46	4.5
Response time ⁽¹⁾ (ms)	AC	30 or less						30 or less					
	DC	60 or less						80 or less					
Max. operating ⁽²⁾ frequency (c.p.m.)	AC	300 or less						180 or less					
	DC	180 or less						180 or less					
Weight (kg)	AC	0.8						1.6					
	DC	1.4						2.4					
Apparent power (VA)	AC	Inrush	50 Hz	100			300						
			60 Hz	90			360						
		Holding	50 Hz	20			50						
			60 Hz	14			60						
Power consumption (W)	DC	13.2						24					



Note 1) Based on JIS B 8375-1981. (at 0.5 MPa, without surge voltage suppressor)

Note 2) Min. operating frequency is once in 30 days. (Based on JIS B 8375.)

Note 3) "Note 1)" and "Note 2)" are with controlled clean air.

How to Order

VS31 3 5-02 1

Body size

3	3/8 Standard
4	1/2 Standard

Port size

02	Rc 1/4
03	Rc 3/8
04	Rc 1/2
06	Rc 3/4

Coil rated

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3*	110 VAC, 50/60 Hz
4*	220 VAC, 50/60 Hz
5	24 VDC
9*	Other

* Option

Electrical entry

Nil	Grommet
T	Conduit terminal
WTB	Dripproof conduit terminal
TZ	Conduit terminal w/ surge voltage suppressor
TL	Conduit terminal w/ indicator light

Thread type

Nil	Rc
N*	NPT
T*	NPTF
F*	G

* Option

Option

Nil	None
P	Manual override

Caution

For Safety Instructions and Solenoid Valve Precautions, refer to pages 4-18-2 to 4-18-6.

How to Calculate the Flow Rate

For obtaining the flow rate, refer to page 4-1-6.

V100

SY

SYJ

VK

VZ

VT

VP

VG

VP

S070

VQ

VKF

VQZ

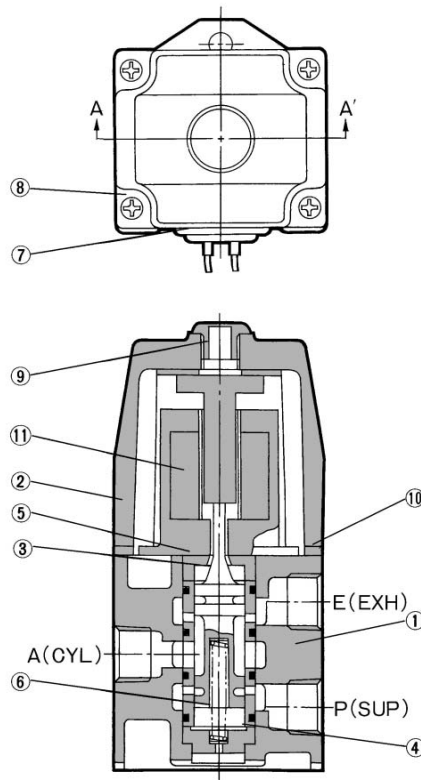
VZ

VS

VFN

Series VS3135/3145

Construction



A-A' cross section

Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Solenoid cover	Aluminum die-casted	Platinum silver
③	Spool/Sleeve	Stainless steel	

⑪ Solenoid Coil Assembly Part No.

Electrical entry	Voltage	Part no.	
		VS3135	VS3145
Grommet	100 VAC	A01-01	A12-01
	200 VAC	A01-02	A12-02
	24 VDC	A07-52	A08-52
Conduit terminal	100 VAC	A01-01-63	A12-01-63
	200 VAC	A01-02-63	A12-02-63
	24 VDC	A07-52-63	A08-52-63

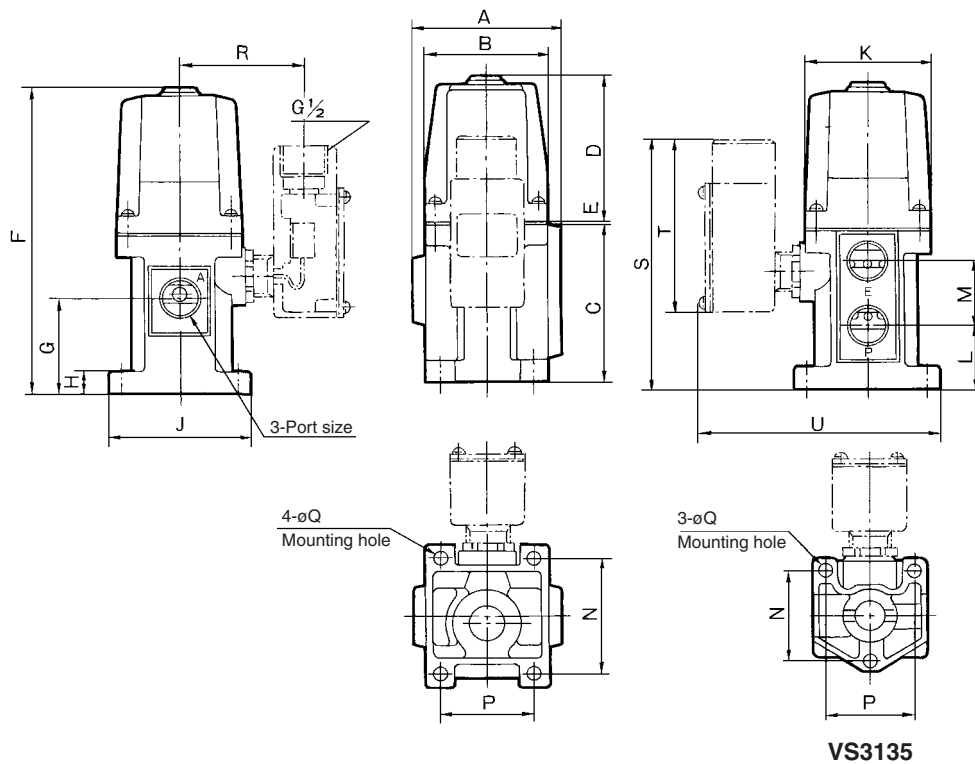
Replacement Parts

No.	Description	Material	Part no.	
			VS3135	VS3145
④	Cap	Resin	XT019-6	AXT103-4
⑤	Bushing	Resin	XT013-13-2	XT021-12
⑥	Spring	Steel wire	XT010-15	XT103-5
⑦	Rubber plug for wire	NBR	XT010-20	XT010-20
⑧	Round head combination screw	Steel wire	XT010-21	XT010-21
⑨	Plug for cover	NBR	XT041-1	XT041-1
⑩	Gasket	NBR	XT013-31-2	NXT030-8

Series VS3135/3145

Dimensions

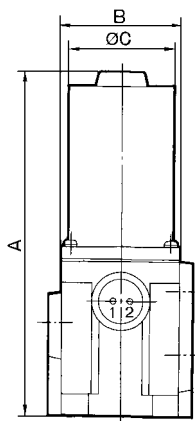
VS3135/3145



Model	Port size Rc	A	B	C	D	E	F	G	H	J	K	L	M	N	P	øQ	Terminal dimensions			
																	R	S	T	U
VS3135-02 VS3135-03 VS3135-04	1/4, 3/8, 1/2	64	64	65	70	1	136	35	9	64	54	19	32	50	50	7	60	120	96	118
VS3145-04 VS3145-06	1/2, 3/4	82	68	88	92	1	181	53	12	81	70	35	36	66	52	9	66	140	96	133

- V100
- SY
- SYJ
- VK
- VZ
- VT
- VP
- VG
- VP
- S070
- VQ
- VKF
- VQZ
- VZ
- VS**
- VFN

DC



Model	Port size Rc	A	B	øC
VS3135-02 VS3135-03 VS3135-04	1/4, 3/8, 1/2	163	64	50.8
VS3145-04 VS3145-06	1/2, 3/4	196	68	60.5