

## RUBBER SEAL/METAL SEAL SERIES VSR8/VSS8



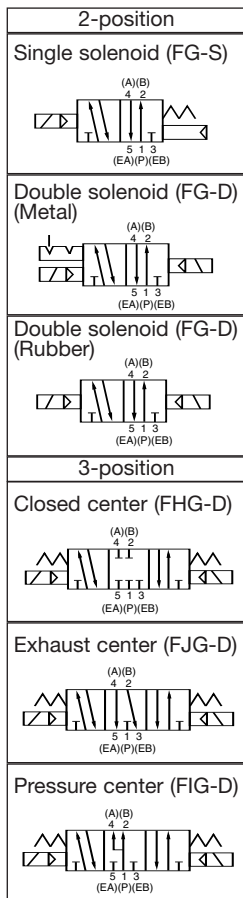
### Model

Size	Model	Seal	Effective area (mm <sup>2</sup> ) (Cv)	Response time (ms) <sup>Note2)</sup>			Weight <sup>Note3)</sup> g (lb)	Port size
				Single	Double	3 position		
1	VSR8-6	Rubber	36 (2.0)	30	30	50	552 (1.21)	1/4, 3/8, 1/2
	VSS8-6	Metal	32 (1.8)	25	20	45		
2	VSR8-8	Rubber	72 (4.0)	50	50	70	824 (1.81)	3/8, 1/2, 3/4
	VSS8-8	Metal	65 (3.6)	40	20	55		
3	VSR8-10	Rubber	97 (5.4)	80	50	95	1000 (2.21)	1/2, 3/4, 1
	VSS8-10	Metal	90 (5.0)	50	25	60		

Note 1) With port size 1/2 for VSR/VSS8-6, 3/4 for VSR/VSS8-10

Note 2) Subject to JISB8375-1981. At 0.5MPa (71psi)

Note 3) Single solenoid type without base



### Specifications

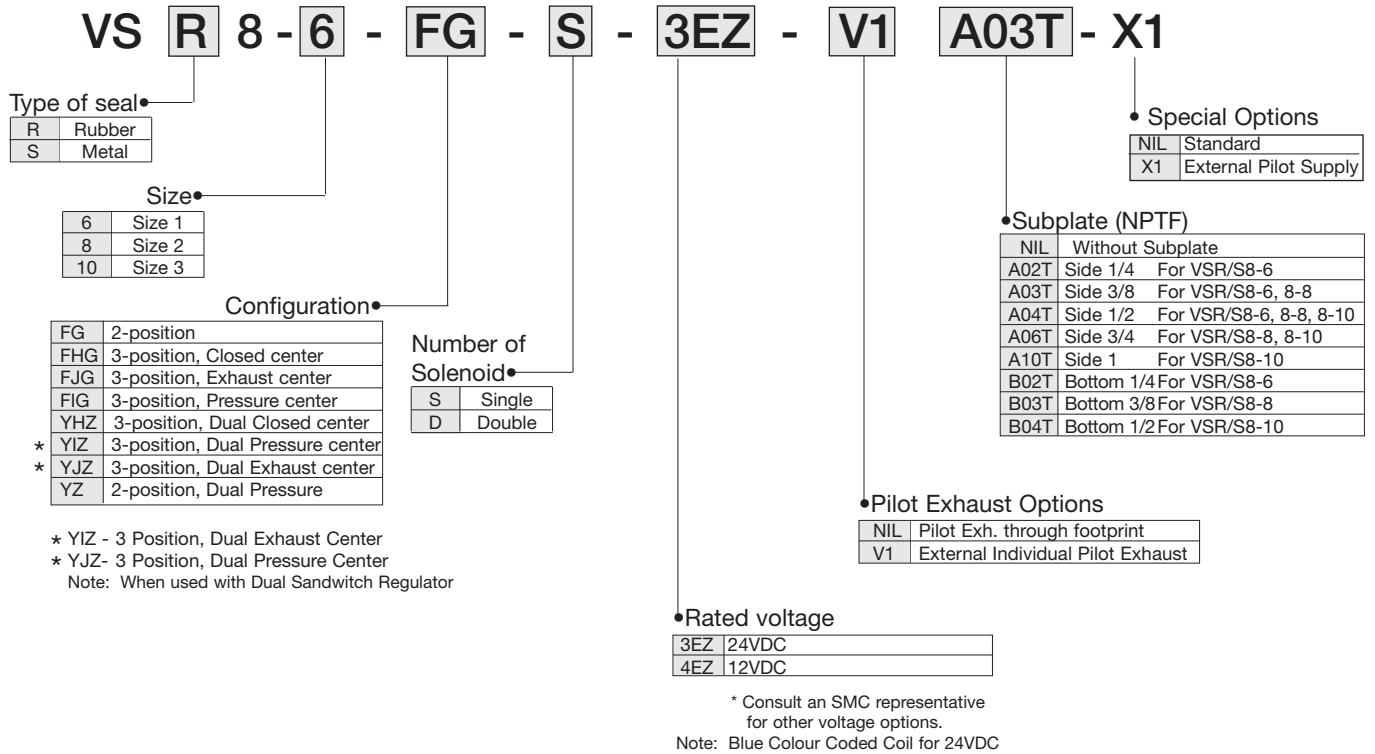
		Rubber Seal	Metal Seal
Valve operation		Pilot operated, 5 port	
Fluid		Air, Inert gas	
Operating pressure range MPa (psi)		0.1~1.0 (14.5~145)	0.1~1.6 (14.5~230) <sup>Note1)</sup>
Proof pressure MPa (psi)		1.5 (217)	2.4 (348)
Ambient and fluid temperature °C (°F) <sup>Note2)</sup>		-5~50 (23~122)	-20~60 (-4~140)
Maximum operating frequency cycle/Sec. <sup>Note3)</sup>	2-position	8-6:5, 8-8:5, 8-10:5	8-6:20, 8-8:15, 8-10:10
	3-position	8-6:3, 8-8:3, 8-10:2	8-6:10, 8-8:10, 8-10:20
Lubrication		Not required	
Manual override		non-locking push type	
Protection structure		NEMA 4/IP65	
Coil rated voltage		24VDC, 12VDC	
Allowable voltage range %		-15~10% of rated voltage	
Coil insulation		Class B or equivalent	
Apparent power VA <sup>Note3)</sup> For 12 VDC	Inrush	50Hz	5.6
	Holding	50Hz	5.0
Apparent power VA <sup>Note3)</sup> For 24 VDC	Inrush	50Hz	3.4
	Holding	60Hz	2.3
Power consumption W		N/A	
Surge voltage suppressor and indicator light		.075 AMPS	
Power consumption W		1.8	
Surge voltage suppressor and indicator light		Available as option	

Note 1) Pilot pressure range should be 0.1~1.0MPa (14.5~145psi).

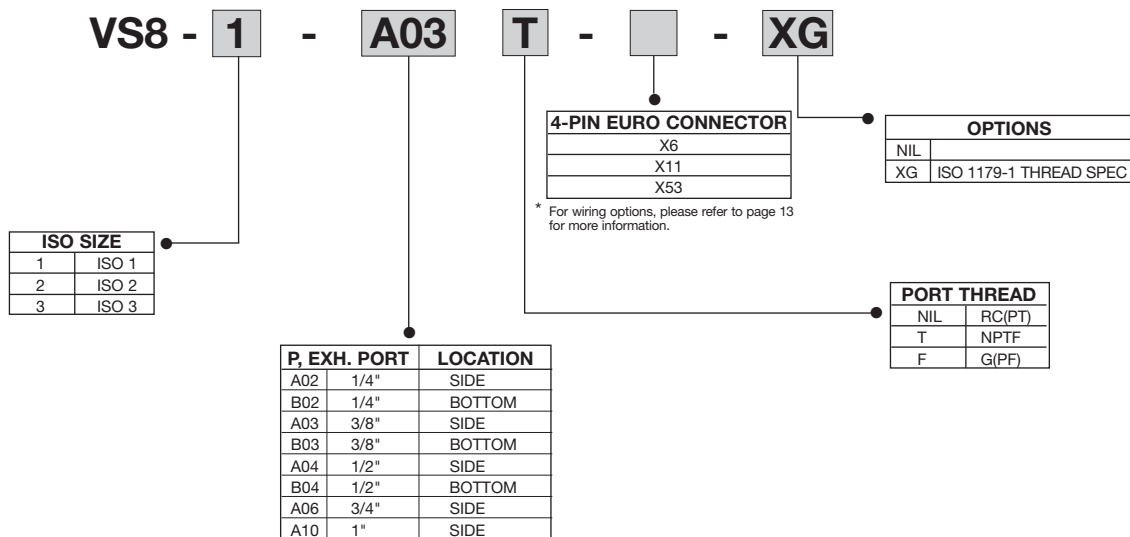
Note 2) Use dry air to prevent dew condensation when operating at low temperature.

Note 3) Subject to JISB8375-1975.

## HOW TO ORDER VALVE



## HOW TO ORDER ISO SUB-BASES

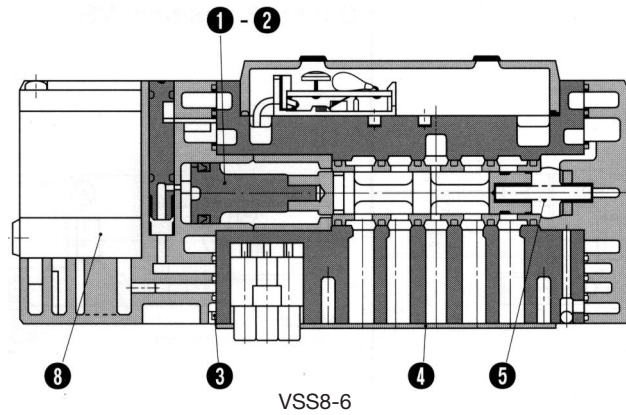


### ISO SUB BASES WITH 4-PIN CONNECTORS

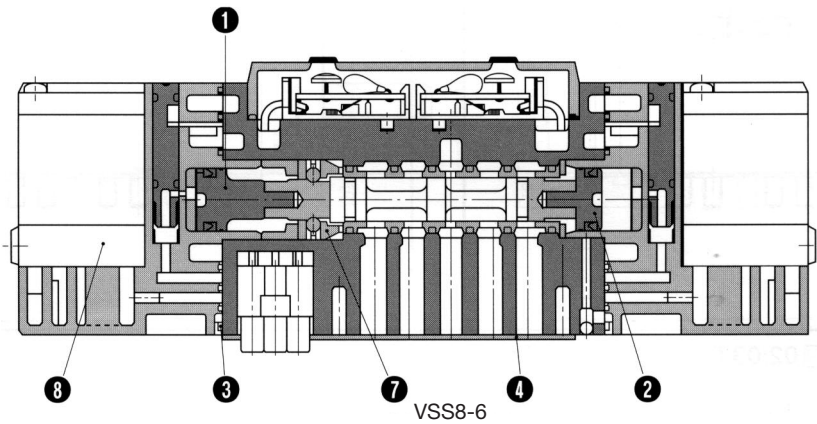
DESCRIPTION	PART#
VS8-1-A03T with 4 pin micro-connector	US15893
VS8-2-A04T with 4 pin micro-connector	US2249
VS8-3-A06T with 4 pin micro-connector	US18552

**CONSTRUCTION**

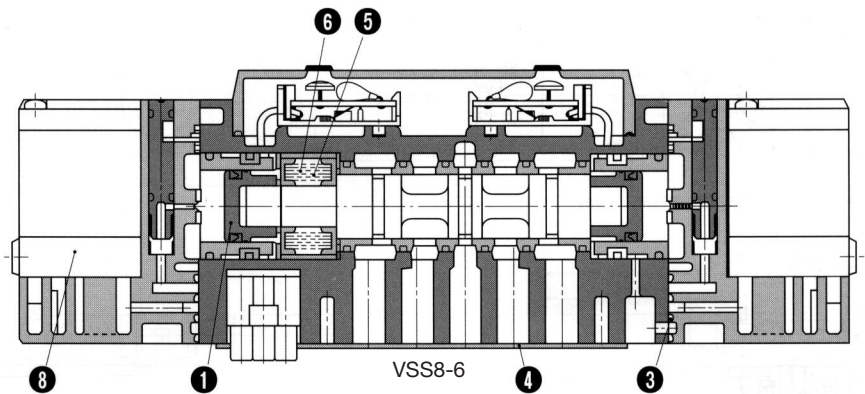
**SERIES VSS (METAL SEAL TYPE)  
SINGLE SOLENOID**



**DOUBLE SOLENOID**



**3-POSITION**

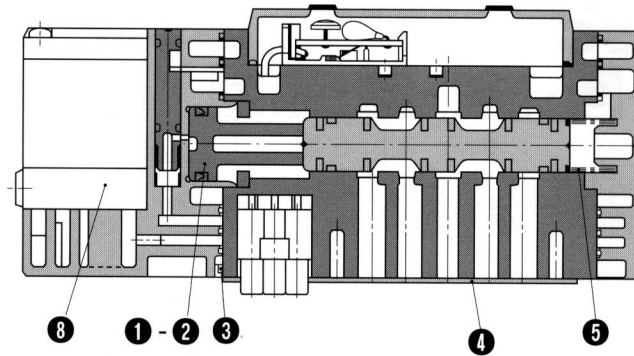


**PART LIST**

Description	Single solenoid			Double solenoid			3 position		
	VSS8-6	VSS8-8	VSS8-10	VSS8-6	VSS8-8	VSS8-10	VSS8-6	VSS8-8	VSS8-10
1. Piston assembly A	-	-	-	-	-	-	-	-	-
2. Piston assembly B	-	-	-	-	-	-	-	-	-
3. Gasket	-	-	-	-	-	-	-	-	-
4. Gasket	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1
5. Return spring A	-	-	-	-	-	-	-	-	-
6. Return spring B	-	-	-	-	-	-	-	-	-
7. Detent assembly	-	-	-	-	-	-	-	-	-
8. Pilot valve assembly	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30

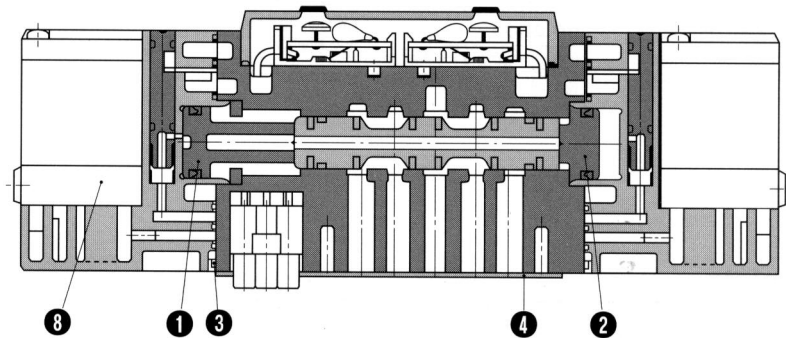
## CONSTRUCTION

SERIES VSR (RUBBER SEAL TYPE)  
SINGLE SOLENOID



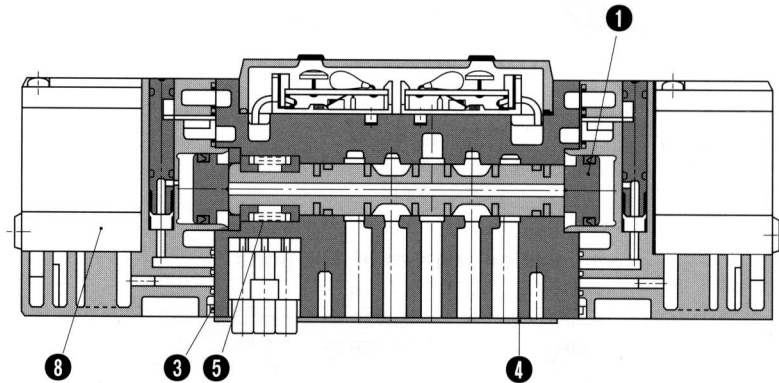
VSR8-6

DOUBLE SOLENOID



VSR8-6

3-POSITION

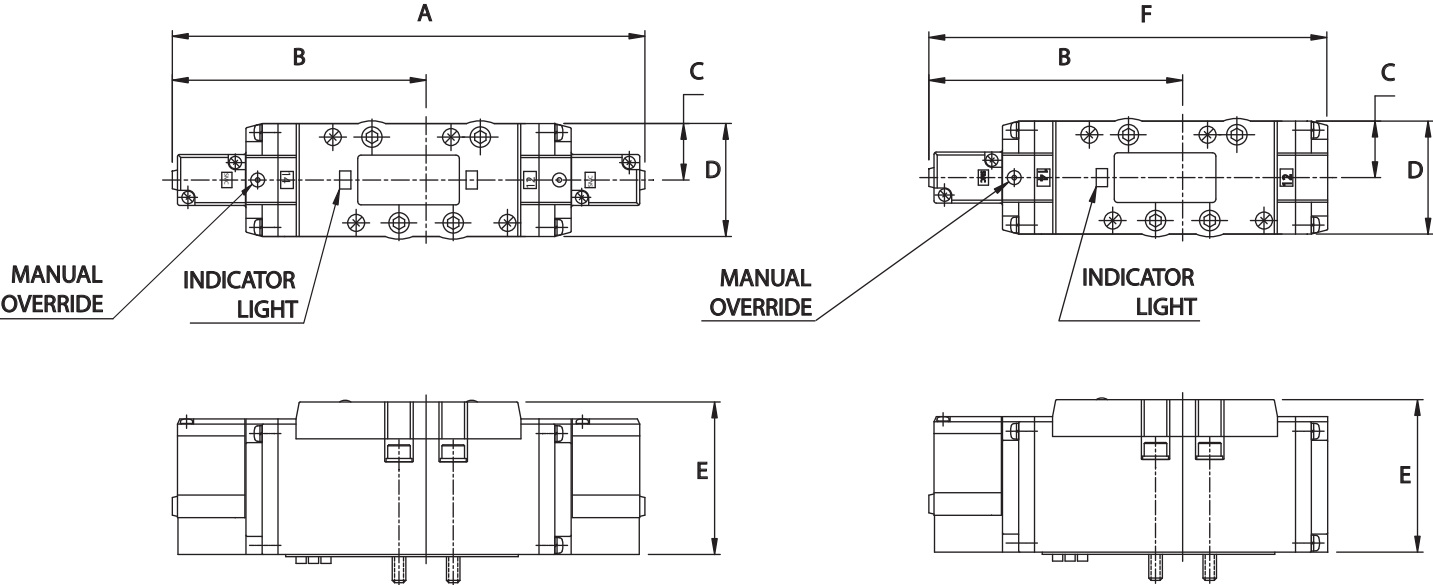


VSR8-6

## PART LIST

Description	Single solenoid			Double solenoid			3 position		
	VSS8-6	VSS8-8	VSS8-10	VSS8-6	VSS8-8	VSS8-10	VSS8-6	VSS8-8	VSS8-10
1. Piston assembly A	-	-	-	-	-	-	-	-	-
2. Piston assembly B	-	-	-	-	-	-	-	-	-
3. Gasket	-	-	-	-	-	-	-	-	-
4. Gasket	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1	VS8060-19-1
5. Return spring A	-	-	-	-	-	-	-	-	-
6. Return spring B	-	-	-	-	-	-	-	-	-
7. Detent assembly	-	-	-	-	-	-	-	-	-
8. Pilot valve assembly	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30	SF4-□ F-30

VALVES

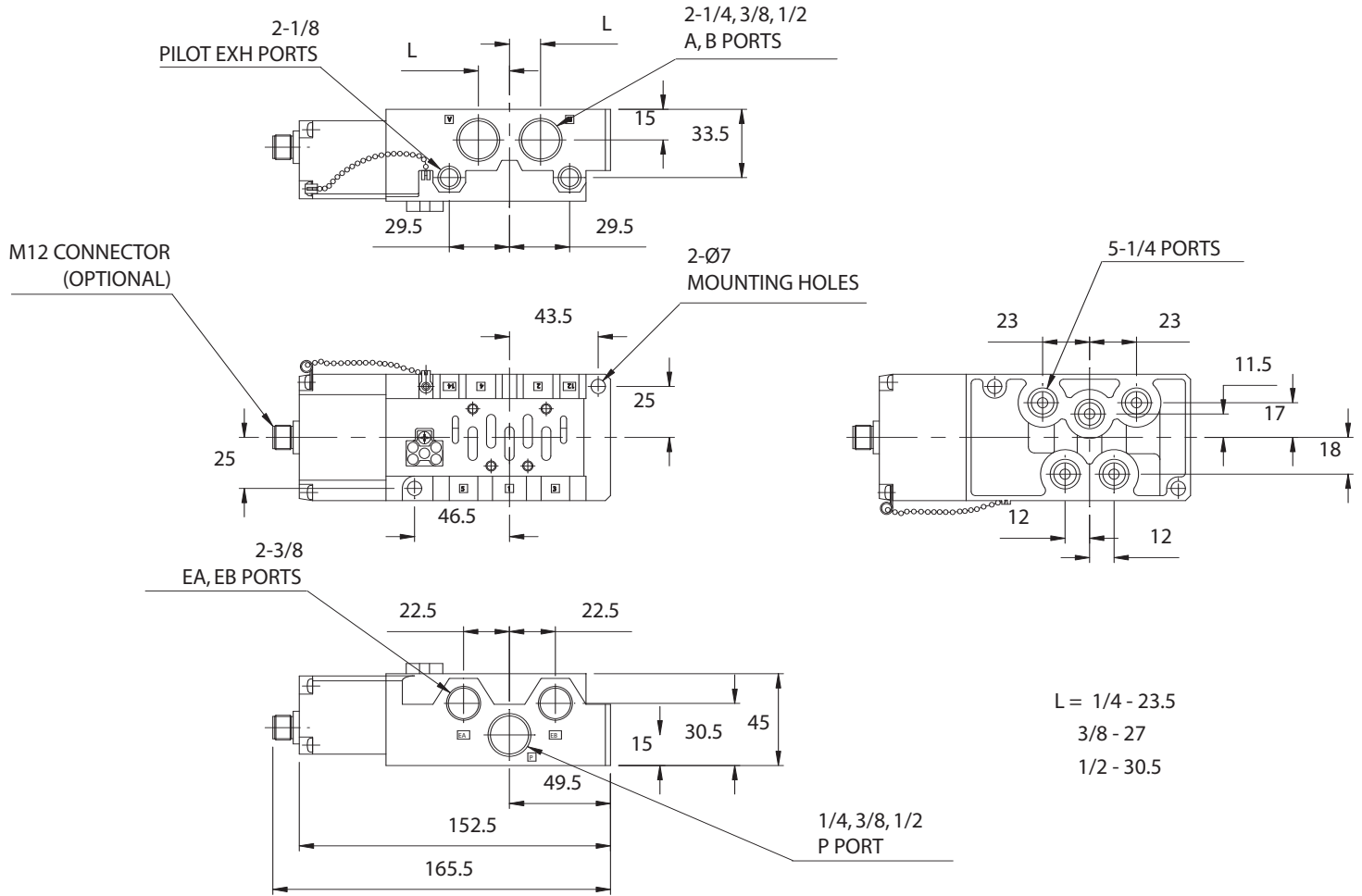


ALL DIMENSIONS ARE IN MILLIMETERS

	A	B	C	D	E	F
SIZE 1	188.5	103	19	38	65	150.5
SIZE 2	205	110.5	25	50	67.5	175
SIZE 3	228	122	32	64	71	198

## ISO SIZE 1 SUB-BASE

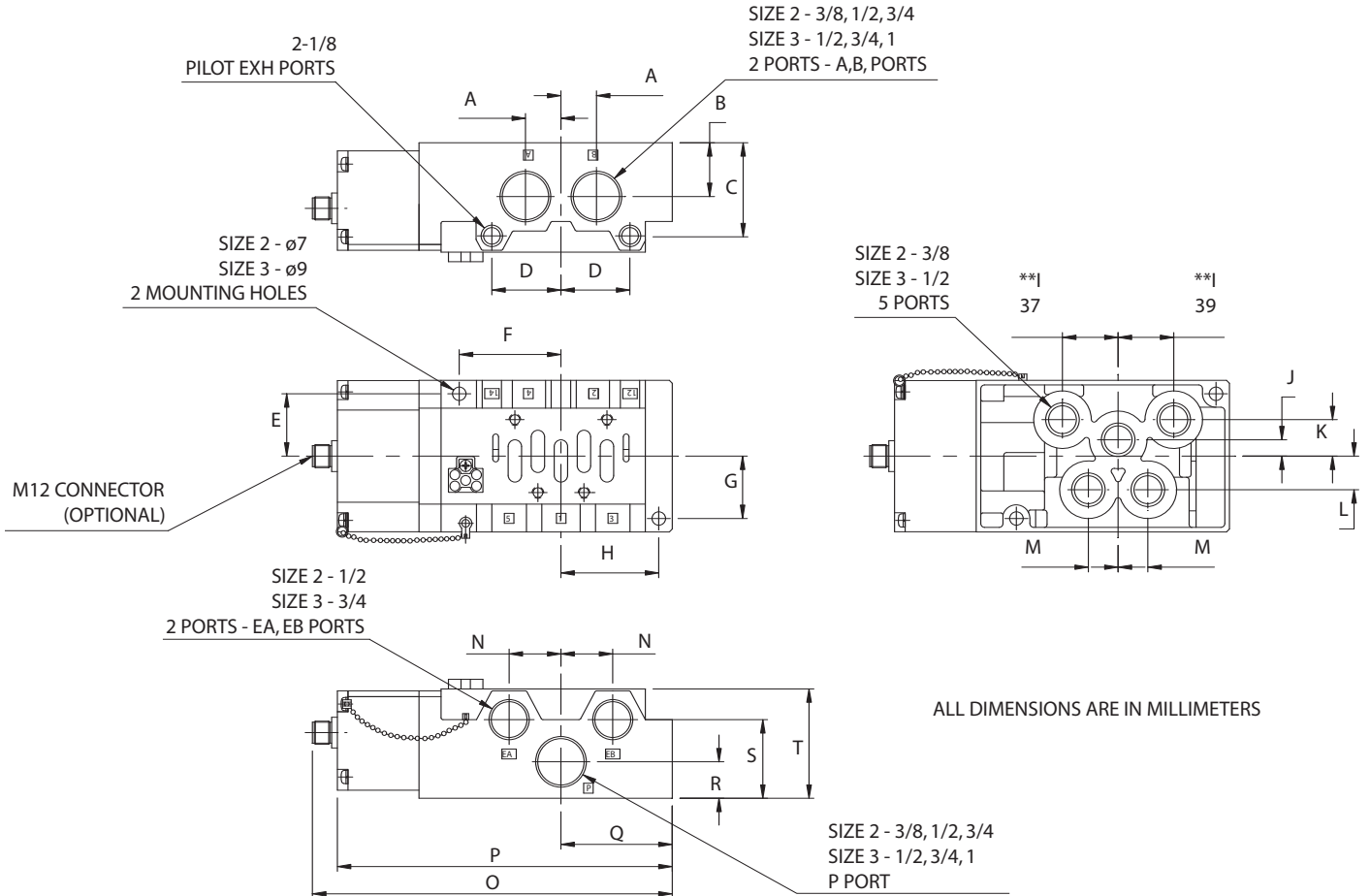
VS8-1-□ 02/03/04 □



ALL DIMENSIONS ARE IN MILLIMETERS

ISO SIZE 2-3 SUB-BASE

VS8- □ 03/04/06/10 □



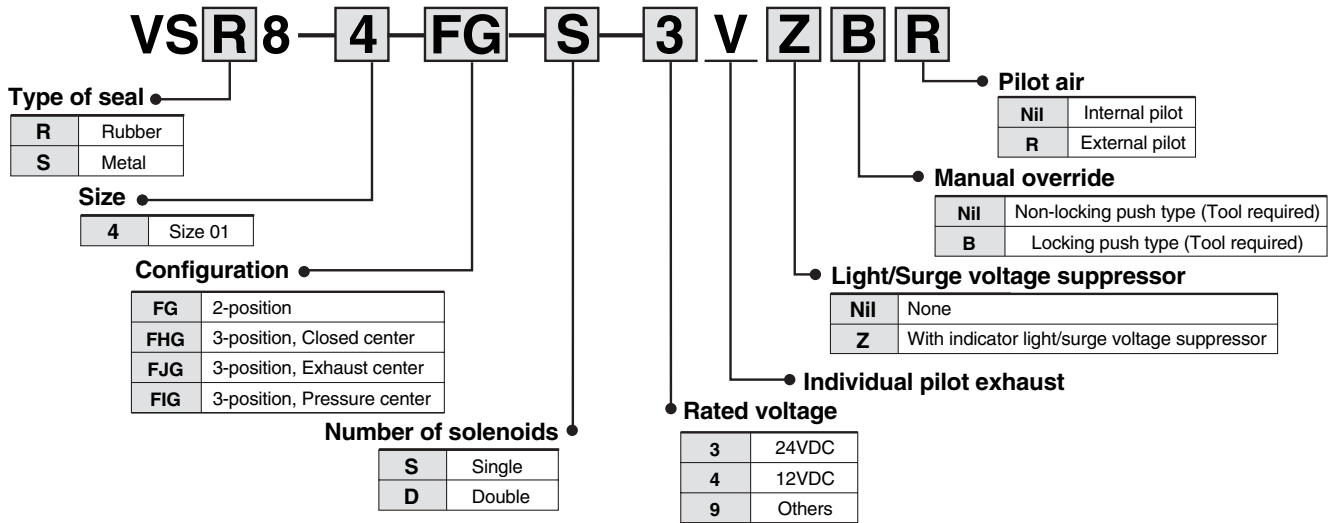
	A	B	C	D	E	F	G	H	I	J
SIZE 2	*	28	48.5	36	32.5	52	32.5	47.5	29	8.5
SIZE 3	22	27	47	45	40	65	40	71	**	22

\* 3/8 - 14.5  
1/2 - 16  
3/4 - 18.5

	K	L	M	N	O	P	Q	R	S	T
SIZE 2	19	17.5	15.5	27	187.5	174.5	58	19	41	57
SIZE 3	14	26	19	40	234	221	76	27	39	65

# Series VSR/VSS8-4

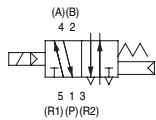
## How to Order Valve (ISO15407-2)



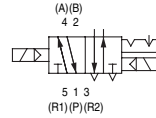
## Standard Specifications

### Symbol

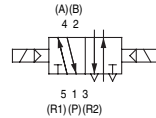
#### 2-position single



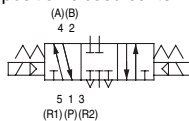
#### 2-position double (metal)



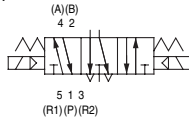
#### 2-position double (rubber)



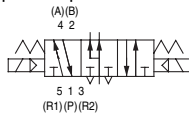
#### 3-position closed center



#### 3-position exhaust center



#### 3-position pressure center



Valve specifications	Valve type		Metal seal	Rubber seal
	Fluid		Air, Inert gas	
Internal pilot Operating pressure range	Single	0.1 to 1.0 MPa		
	Double	0.1 to 1.0 MPa		
	3-position	0.15 to 1.0 MPa		
Operating pressure range		-100 kPa to 1.0 MPa		
External pilot Note 1) Operating/Pilot pressure range	Pilot pressure range	Single	0.1 to 1.0 MPa	0.15 to 1.0 MPa
		Double	0.1 to 1.0 MPa	0.1 to 1.0 MPa
		3-position	0.15 to 1.0 MPa	0.2 to 1.0 MPa
Ambient and fluid temperature		-10 to 60C Note 2)		
Lubrication		Not required (non-lube type)		
Manual override		Push type (tool required)		
Impact resistance/Vibration resistance		150, 30ms <sup>2</sup> Note 3)		
Enclosure		IP65 (Dust/Splashproof type)		
Electric specifications	Rated coil voltage		12VDC, 24VDC	
	Allowable voltage fluctuation		10% of rated voltage	
	Type of coil insulation		Equivalent to class B	
	Power consumption (Current)	24VDC	1W DC (42mA)	
		12VDC	1W DC (83mA)	

Note 1) Operating pressure Pilot pressure

Note 2) Use dry air to prevent condensation at low temperatures.

Note 3) **Impact resistance:** No malfunction resulted during an impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature for both energized and de-energized conditions.

**Vibration resistance:** No malfunction resulted during an one-sweep test between 8.3 and 2000Hz. The test was performed in the axial and right angle directions of the main valve and armature for both energized and de-energized conditions.

## Flow Rate Characteristics

Position	Seal	VSR/S8-4						
		1→4, 2 (P→A, B)			4, 2→5, 3 (A, B→EA, EB)			
		C	b	Cv	C	b	Cv	
2-position	Single	Metal	3.10	0.10	0.60	3.40	0.10	0.70
		Rubber	3.60	0.28	0.90	4.20	0.20	1.00
	Double	Metal	3.10	0.10	0.60	3.40	0.10	0.70
		Rubber	3.60	0.28	0.90	4.20	0.20	1.00
3-position	Closed center	Metal	3.10	0.10	0.60	3.20	0.10	0.60
		Rubber	3.20	0.34	0.80	4.20	0.30	1.00
	Exhaust center	Metal	2.70	0.10	0.60	3.30	0.10	0.70
		Rubber	3.10	0.26	0.80	4.00	0.25	1.10
	Pressure center	Metal	3.20	0.10	0.70	3.20	0.10	0.60
		Rubber	4.40	0.25	1.00	3.60	0.25	1.00