

# Rubber Seal 3 Port/Pilot Poppet Type Base Mounted/Single Unit VP300/500/700 Series

## How to Order



Note) Only DIN and conduit terminal types are available for AC mode. Refer to the electrical entry for details.



Note) Pressure specifications: 0.7 MPa, DC or 24 VAC only. Only applies to X500 and X505 for made-to-order specifications.

RoHS

## Base mounted

VP 3 4 4 - 5 G 1 - A -

### Series

3	VP300
5	VP500
7	VP700

### Pilot type

Nil	Internal pilot	●
R	External pilot	●

### Pressure specification

Nil	Standard (0.7 MPa)	●
K	High-pressure type (1.0 MPa)	—

### Coil specification

Nil	Standard
T	With power saving circuit (DC only)

Note) Be sure to select the power saving circuit type when it is continuously energized for a long time. (Refer to page 1088 for details.)

\* T type is only available for DC mode. When T is selected, only Z type of light/surge voltage suppressor is available.

(Note that when the electrical entry of DIN terminal type without connector is selected, only DOS and YOS are available.)

### Rated voltage

DC	UL-compliant
5	24 VDC
6	12 VDC

### AC (50/60 Hz)

1	100 VAC	—
2	200 VAC	—
3	110 VAC (115 VAC)	—
4	220 VAC (230 VAC)	—
7	240 VAC	—
B	24 VAC	●

Note) For triac output, refer to the made-to-order specifications (X600).

### Type of actuation

A	N.C. (Normally closed)
B	N.O. (Normally open)

### Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

### Made to Order

Nil	—	●
X500	Pilot exhaust port with piping thread (M3) specification (Refer to page 1083).	●
X600	Triac output specification (Refer to page 1083).	—

### Port size (Sub-plate)

Symbol	Port size	VP300	VP500	VP700
Nil	Without sub-plate*	—	—	—
01	1/8	○	—	—
02	1/4	○	○	—
03	3/8	—	○	○
04	1/2	—	—	○

\* With a gasket and two mounting bolts.

## Electrical entry

Grommet	L-type plug connector	M-type plug connector	DIN terminal	DIN (EN175301-803) terminal	Conduit terminal
G: Lead wire length 300 mm H: Lead wire length 600 mm	L: With lead wire (length 300 mm)	M: With lead wire (length 300 mm)	D: With connector	Y: With connector	T: Conduit terminal
G: Lead wire length 300 mm H: Lead wire length 600 mm DC Without light/surge voltage suppressor	LN: Without lead wire	MN: Without lead wire	DO: Without connector	YO: Without connector	
	LO: Without connector	MO: Without connector			
CE/UKCA compliant	DC	●	●	●	●
AC	—	—	—	—	—

\* LN and MN types are with 2 sockets.

\* Refer to page 1086 when different length of lead wire for L/M-type plug connector is required.

\* Refer to page 1087 for details on the DIN (EN175301-803) terminal.

Note) With the same specifications as the DC type, all lead wire entries for the 24 VAC type are CE/UKCA marking compliant.

## Manual override

Nil: Non-locking push type	D: Push-turn locking slotted type	E: Push-turn locking lever type

## Light/surge voltage suppressor

	DC	AC
Nil	Without light/surge voltage suppressor	○
S	With surge voltage suppressor	○ (Note)
Z	With light/surge voltage suppressor	○
R	With surge voltage suppressor (Non-polar)	—
U	With light/surge voltage suppressor (Non-polar)	—

Note) There is no S option for AC mode, since a rectifier prevents surge voltage generation.

\* In the DIN terminal type, since a light is installed in the connector, DOZ, DOU, YOZ, YOU are not available.

## Caution

When using the surge voltage suppressor type, residual voltage will remain. Refer to page 1093 for details.

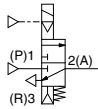
## Flow Rate Characteristics/Weight

Model	Port size	1 ↔ 2 (P ↔ A)			2 ↔ 3 (A ↔ R)			Weight (g) <sup>Note)</sup>	
		C [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv	Grommet	DIN terminal
VP344	1/8	3.6	0.22	0.8	3.5	0.24	0.8	216 (149)	252 (185)
	1/4	3.9	0.22	0.9	3.8	0.14	0.9	211 (149)	247 (185)
VP544	1/4	7.5	0.16	1.7	7.3	0.20	1.7	370 (245)	406 (281)
	3/8	8.8	0.07	2.0	8.8	0.13	2.0	362 (245)	398 (281)
VP744	3/8	12.9	0.10	2.9	13.3	0.24	3.1	676 (459)	712 (495)
	1/2	14.7	0.05	3.3	15.0	0.17	3.4	658 (459)	694 (495)

Note) ( ): Values without sub-plate

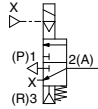
## Application Example

### (1) Blow-off valve



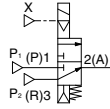
External pilot

### (2) Pressure release valve



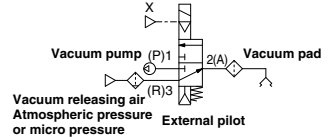
External pilot

### (3) Selector valve

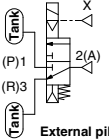


External pilot

### (4) Valve for vacuum

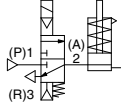


### (5) Divider valve

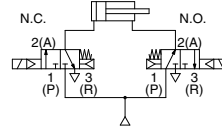


External pilot

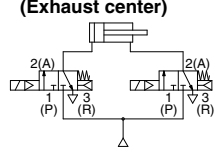
### (6) Single-acting cylinder drive



### (7) Double-acting cylinder drive



### (8) Double-acting cylinder drive (Exhaust center)



## Construction

### Base mounted

#### Symbol

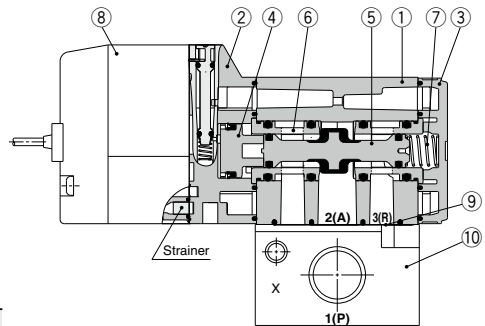
Pilot type	N.C.	N.O.
Internal pilot		
External pilot		

### Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted	White
2	Adapter plate	Resin	Gray
3	End plate	Resin	White
4	Piston	Resin	
5	Poppet valve	Aluminum/HNBR	
6	Retainer	Resin	
7	Spring	Stainless steel	

### Replacement Parts

No.	Description	Part no.			Note
		VP344	VP544	VP744	
8	Pilot valve assembly	Refer to "How to Order Pilot Valve Assembly" on page 1066.			Built-in strainer
9	Gasket	VP300-217-1	VP500-217-1	VP700-217-1	HNBR
10	Sub-plate	VP300-202-□	VP500-202-□	VP700-202-□	Aluminum die-casted
—	Hexagon socket head bolt (1 pc.)	VP300-224-1 (M3 x 36)	VP500-224-1 (M4 x 46)	VP700-224-1 (M5 x 66)	For valve mounting



## How to Order Sub-plate

**VP 3 00-202-1**

#### Series

3	VP344
5	VP544
7	VP744

#### Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

#### Port size

Symbol	VP344	VP544	VP744
1	1/8	1/4	3/8
2	1/4	3/8	1/2

Note) These specifications are common to the internal and external pilots.

## Caution

### Tightening Torque of Mounting Screw

M3: 0.8 N·m  
M4: 1.4 N·m  
M5: 2.9 N·m