

# Conforming to OSHA Standard Pressure Relief 3 Port Valve With Locking Holes (Double Action Type) Series **VHS4510/5510**

When in the exhaust position, the valve may be padlock secured. This prevents erroneous operation.

Push the handle and then turn. Double action construction prevents erroneous operation.

Combination with modular type FRL is possible.



## Model

Model		VHS4510			VHS4510-06	VHS5510	
Port size	1 (P) · 2 (A)	1/4	3/8	1/2	3/4	3/4	1
	3 (R)	3/8			1/2	1/2	
Effective area (mm <sup>2</sup> )	1 (P) → 2 (A)	27	38	55	77	82	125
	2 (A) → 3 (R)	36	40	42	49	50	53
Mass (kg)		0.36			0.42	0.77	

## Specifications

Fluid	Air	
Proof pressure	0.1 to 1.0 MPa	
Operating pressure range	1.5 MPa	
Ambient and fluid temperature	-5 to 60°C (No freezing)	
Handle switching angle	90°	
Paint color (Standard)	VHS4510, 5510	Handle: Red, Body: Platinum silver

VHS 4510 and 5510 can be locked from either side.

## How to Order

**VHS 4 5 1 0 - [ ] 01 - [ ] - [ ]**

- Pressure relief 3 port valve**
- With locking holes**
- Body size**

4	1/2
5	1
- Double action**
- Thread type**

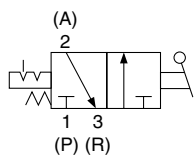
Nil	Rc
F	G
N	NPT
- Port size**

02	1/4
03	3/8
04	1/2
06	3/4
10	1
- Paint color**

Nil	Standard color
X1	Handle, body: Red
- Optional specifications**

R	Flow direction: Right → Left
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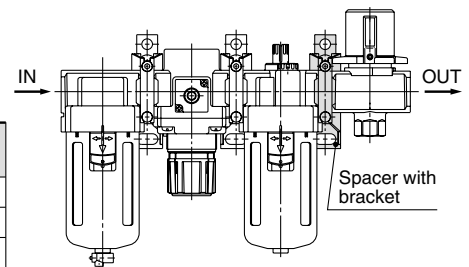
### JIS Symbol



**OSHA standard (Occupational Safety and Health Administration Department of Labor)**  
For safety control, OSHA rule requires energy sources for certain equipment be turned off or disconnected and that the device either be locked or labelled with a warning tag.

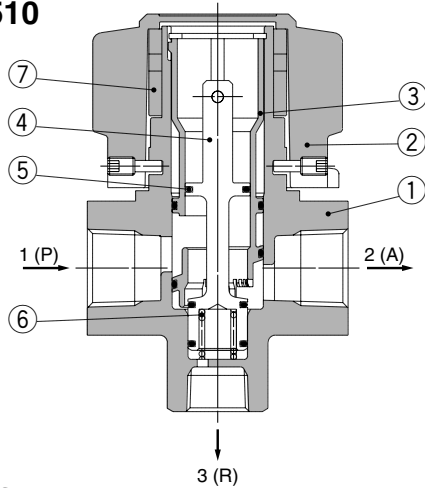
A spacer is required if the valve is combined with modular FRL.

Pressure relief 3 port valve	Spacer part no.	Applicable FRL
VHS4510	Y400	AC40
VHS4510-06	Y500	AC40-06
VHS5510	Y600	AC50/55/60



## Construction

### VHS4510-5510



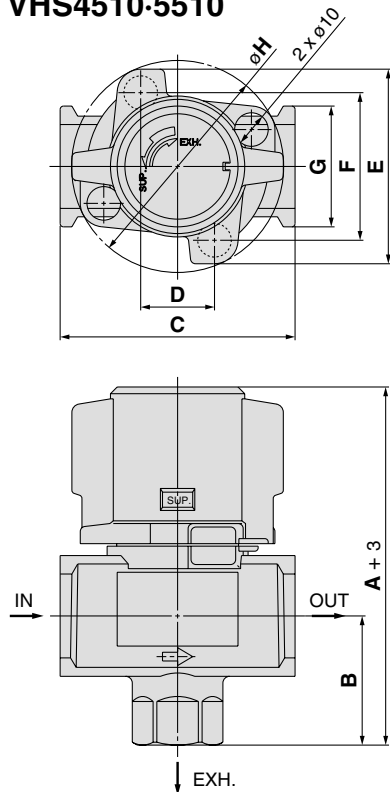
### Component Parts

No.	Description	Material	Note
①	<b>Body</b>	Aluminum die-casted	Platinum silver coated
②	<b>Handle</b>	Aluminum die-casted	Red coated
③	<b>Sleeve</b>	POM	
④	<b>Spool</b>	Brass	Electroless nickel plated
⑤	<b>O-ring</b>	NBR	
⑥	<b>Spring</b>	Stainless steel	
⑦	<b>Cam ring</b>	Zinc alloy	

The VHS series cannot be disassembled. Parts cannot be shipped separately.

## Dimensions

### VHS4510-5510



Model	A	B	C	D	E	F	G	H
VHS4510	107	39	70	22	58	44	36	63.2
VHS4510-06	110	42	75	21	65	50	44	69.2
VHS5510	134	53	90	26	76	61	54	81.3

## ⚠ Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 3 to 7 for 3/4/5 Port Solenoid Valve Precautions.

### Caution on Design

#### ⚠ Warning

- (1) Do not supply air pressure from ports other than the 1 (P) port. The valve will malfunction when air pressure is supplied from other ports.
- (2) Do not use the valve under negative pressure. It will lead to malfunction due to air leakage.

### Selection

#### ⚠ Caution

- (1) Stopping the handle between the extreme positions may cause malfunction and air leakage. The valve must be switched to each position instantly and securely.
- (2) Do not remove the mounting screws from the handle as this may cause malfunction.

### Piping

#### ⚠ Warning

- (1) The port marked with an arrow (>) is the 1 (P) port (IN) and one on the opposite side is the 2 (A) port (OUT). The port at a right angle to them is the 3 (R) port (EXH). Be sure to confirm before connecting since erroneous connection will cause malfunction.
- (2) When the valve is exposed to a large amount of dust and debris, install a silencer on the 3(R) port (EXH) to protect the valve. Otherwise, dust will ingress from the 3 (R) port and cause air leakage.

### Air Supply

#### ⚠ Warning

- (1) Install an air filter on the inlet side in proximity to the valve. Filtration degree should be 5 μm or less.

VM

VMG

VR

VH