

Conforming to OSHA Standard Pressure Relief 3 Port Valve with Locking Holes (Single Action) **VHS20/30/40/50 Series**

RoHS

How to Order

Single action **VHS 40** - **04** **A** - **BS** - - -

Pressure relief 3 port valve

Body size

Symbol	Body size
20	20
30	30
40	40
50	50

Thread type

Symbol	Thread type
Nil	Rc
N	NPT
F	G

Port size

Symbol	Port size	Body size			
		20	30	40	50
01	1/8	●	—	—	—
02	1/4	●	●	—	—
03	3/8	—	●	—	—
04	1/2	—	—	●	—
06	3/4	—	—	●	●
10	1	—	—	—	●

Handle / Bonnet material

Symbol	Material
A	Flame resistant PBT
B	Aluminum

Made to Order

Symbol	Description
X1	Body: Red (Note)

Note) Refer to Photo of X1 in page 1707 for the appearance.

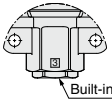
Semi-standard specifications

Symbol	Description
Nil	—
K	Handle color: Black
R	Flow direction: Right → Left
Z (Note)	psi as unit displayed on label

Note) Only for the NPT thread. Under the New Measurement Law, products for overseas use only (SI unit type for use in Japan).

Options

Symbol	Description
Nil	—
B	With bracket
S	Built-in silencer (EXH port)



A spacer or spacer with bracket is required if the valve is combined with modular F.R.L. Please order it separately.
VHS type can be ordered from How to Order of modular F.R.L. combination.

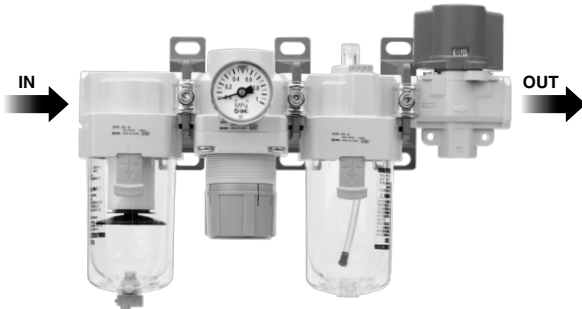
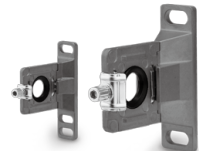
Pressure relief 3 port valve	Spacer part no.	Spacer with bracket part no.	Applicable air preparation equipment
VHS20	Y200-A	Y200T-A	AC20-A, B
VHS30	Y300-A	Y300T-A	AC25-A, B, AC30-A, B
VHS40	Y400-A	Y400T-A	AC40-A, B
VHS40-06	Y500-A	Y500T-A	AC40-06-A, B
VHS50	Y600-A	Y600T-A	AC50-B, AC55-B, AC60-B

* New VHS series compatible with old spacer Y200 (T) to Y600 (T).

Spacer

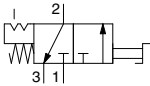


Spacer with bracket





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.

Specifications

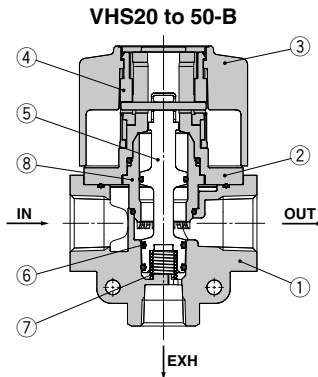
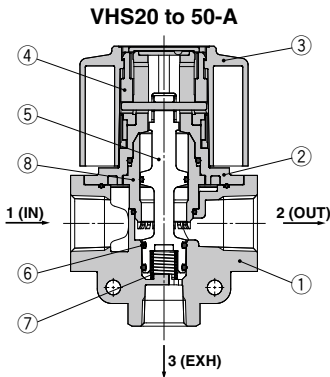
Standard specifications

Model	VHS20	VHS30	VHS40	VHS40-06	VHS50	
Fluid	Air					
Ambient and fluid temperature	-5 to 60°C (No freezing)					
Proof pressure	1.5 MPa					
Operating pressure range	0.1 to 1.0 MPa					
Handle switching angle	90°					
Paint color (Standard)	Handle: Red Body: White					
Weight	A (Handle, bonnet: Flame resistant PBT)	76 g	127 g	247 g	293 g	532 g
	B (Handle, bonnet: Aluminum)	92 g	156 g	301 g	349 g	630 g

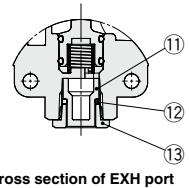
Flow rate characteristics

Model	Port size		Flow rate characteristics					
	IN, OUT	EXH	IN→OUT			OUT→EXH		
			C (dm³/s·bar)	b	Cv	C (dm³/s·bar)	b	Cv
VHS20	1/8	1/8	2.4	0.43	0.65	2.5	0.39	0.69
	1/4		3.3	0.40	0.88	3.1	0.51	0.84
VHS30	1/4	1/4	6.4	0.45	1.7	6.2	0.38	1.7
	3/8		8.3	0.41	2.3	7.0	0.41	1.9
VHS40	1/4	3/8	7.3	0.49	2.0	8.5	0.35	2.3
	3/8		10.9	0.45	3.0	11.6	0.40	3.1
VHS40-06	1/2	1/2	14.2	0.39	3.8	13.3	0.43	3.6
	3/4		18.3	0.31	5.0	17.7	0.37	4.8
VHS50	3/4	1/2	23.8	0.41	6.4	21.8	0.41	5.9
	1		31.9	0.33	8.6	23.5	0.44	6.4

Construction



Built-in silencer (Option)



Cross section of EXH port

Component Parts

No.	Description	Material		Note
		VHS20 to 50-A	VHS20 to 50-B	
1	Body	ADC12	ADC12	White
2	Bonnet	Flame resistant PBT (UL-94 Standard V-0 equivalent)	ADC12	White
3	Handle	Flame resistant PBT (UL-94 Standard V-0 equivalent)	ADC12	Red
4	Cam ring	POM		—
5	Spool	PBT		—
6	Spool O-ring	H-NBR		—
7	Spool spring	Stainless steel		—
8	Sleeve	POM		—

* The VHS series cannot be disassembled. No repair parts available.

Option Part No.

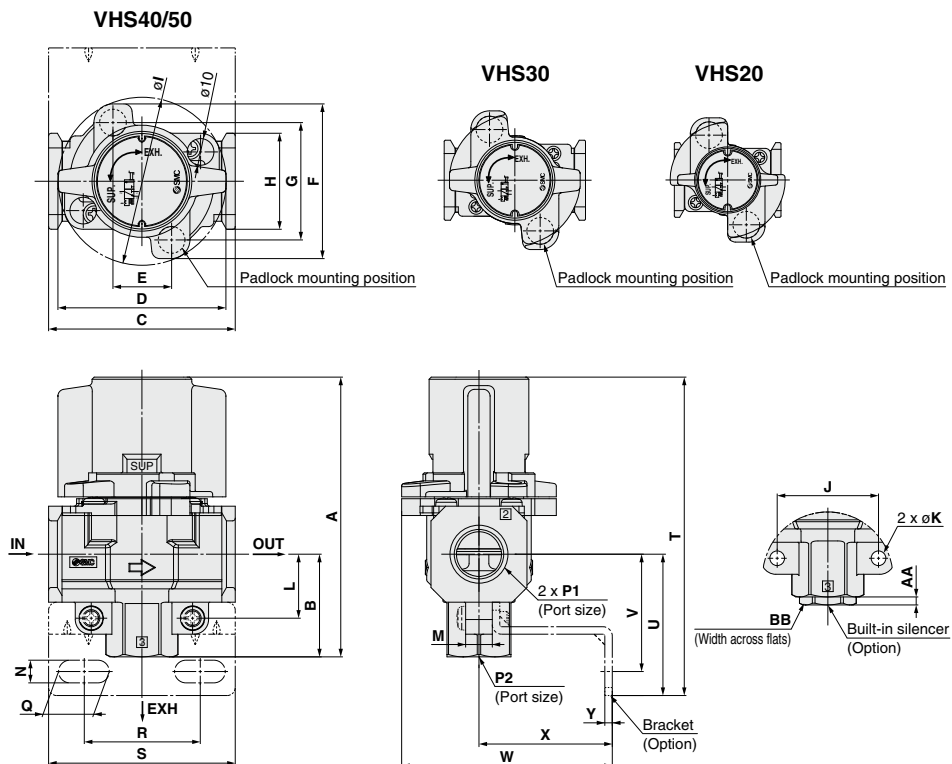
Model	Bracket assembly part no. Note 1)	Silencer assembly part no. Note 2)
VHS20	VHS20PW-180AS	VHS20PW-190AS
VHS30	VHS30PW-180AS	VHS30PW-190AS
VHS40	VHS40PW-180AS	VHS40PW-190AS
VHS40-06	VHS40PW-180-06AS	VHS40PW-190-06AS
VHS50	VHS50PW-180AS	VHS50PW-190AS

Note 1) Bracket/1pc., mounting screw/2pcs.

Note 2) Element ①, element O-ring ②, element cover ③ 1pc. for each.

VHS20/30/40/50 Series

Dimensions



Dimensions

(mm)

Model	Standard specifications															
	P1	P2	A	B	C	D	E	F		G	H	I	J	K	L	M
								A type	B type							
VHS20	1/8, 1/4	1/8	66.4	22.3	40	37.5	14	46.6	47.2	33.6	28	43	24	4.5	14.8	9
VHS30	1/4, 3/8	1/4	80.3	29.4	53	49	19	52		38	30	49	30	4.5	19	9
VHS40	1/4, 3/8, 1/2	3/8	104.9	38.5	70	63	22	58		44	36	63	38	5.5	24	10
VHS40-06	3/4	1/2	110.4	42	75	63	22	58		44	44	63	43	5.5	26	10
VHS50	3/4, 1	1/2	134.3	53	90	76	26	76		61	53	81	50	6.5	31	12

Model	Options specifications											
	With bracket										Built-in silencer	
	N	Q	R	S	T	U	V	W	X	Y	AA	BB
VHS20	5.4	8.4	27	40	75.4	31.3	25.3	53.3	30	2.3	3	12
VHS30	6.5	10	36.5	53	90.9	40	33	67	41	2.3	3	14
VHS40	8.5	19	43.5	70	119.4	53	44	79	50	2.8	3	19
VHS40-06	8.5	19	43.5	70	123.4	55	46	79	50	2.8	4	22
VHS50	11	27.5	49.5	90	152.3	71	60	108	70	3.2	4	22

Conforming to OSHA Standard Pressure Relief 3-Port Valve with Locking Holes

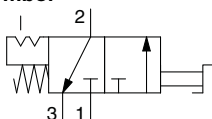
VHS20/30/40/50-X510

(White Vaseline Specification)

How to Order



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.

VHS 40 - [] 04 A - BS - [] - X510

Pressure relief 3-port valve

Body size

Symbol	20	30	40	50
20	●	—	—	—
30	●	●	—	—
40	—	●	●	—
50	—	—	●	●

Thread type

Symbol	Nil	Rc
Nil	●	—
N	—	●
F	—	—

Port size

Symbol	Port size	Body size			
		20	30	40	50
01	1/8	●	—	—	—
02	1/4	●	●	—	—
03	3/8	—	●	●	—
04	1/2	—	—	●	—
06	3/4	—	—	●	●
10	1	—	—	—	●

Knob/Bonnet material

Symbol	Material
A	Flame-resistant PBT
B	Aluminum

White vaseline

Semi-standard specifications

Symbol	Description
Nil	—
K	Knob color: Black
R	Flow direction: Right → Left
Z (Note)	psi as unit displayed on label

Note) Only for the NPT thread. This product is for overseas use only according to the New Measurement Act. (The SI unit type is provided for use in Japan.)

Options

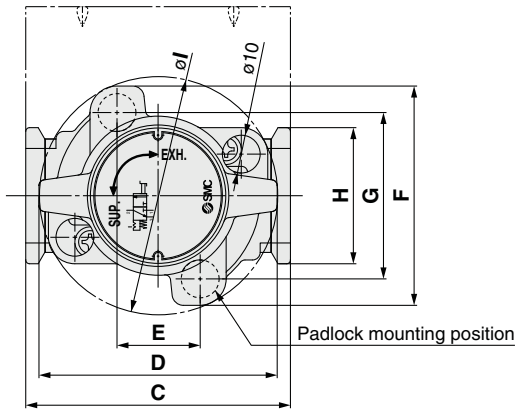
Symbol	Description
Nil	—
B	With bracket
S	Built-in silencer (EXH port)

Specifications

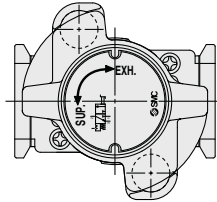
Model		VHS20-X510	VHS30-X510	VHS40-X510	VHS40-06-X510	VHS50-X510
Fluid		Air				
Ambient and fluid temperatures		-5 to 60°C (No freezing)				
Proof pressure		1.5 MPa				
Operating pressure range		0.1 to 1.0 MPa				
Knob switching angle		90°				
Paint color (Standard)		Knob: Red Body: Red				
Weight	A (Knob, bonnet: Flame-resistant PBT)	76 g	127 g	247 g	293 g	532 g
	B (Knob, bonnet: Aluminum)	92 g	156 g	301 g	349 g	630 g

Dimensions

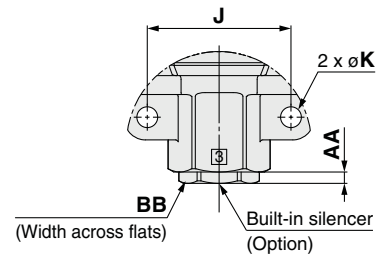
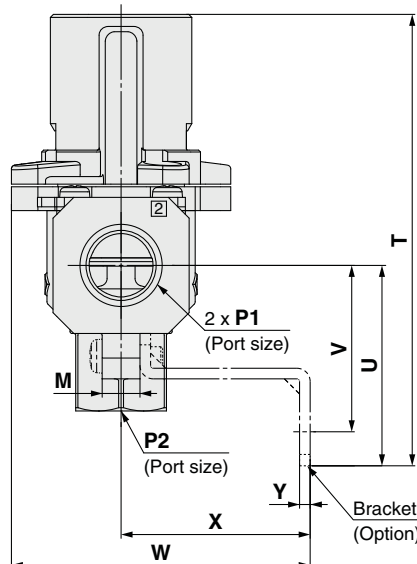
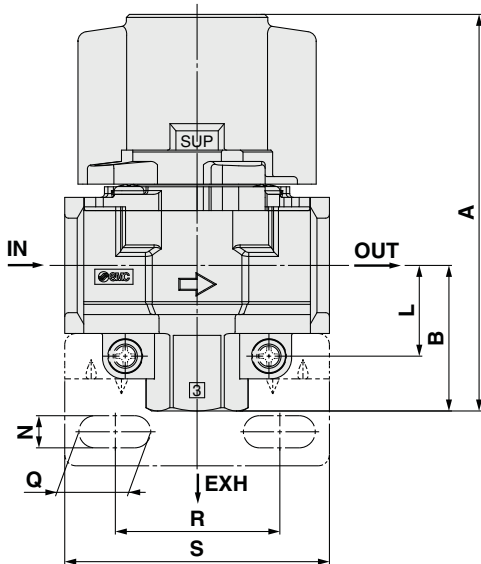
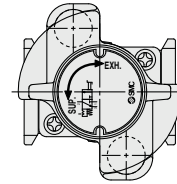
VHS40/50-X510



VHS30-X510



VHS20-X510



Dimensions

(mm)

Model	Standard specifications															
	P1	P2	A	B	C	D	E	F		G	H	I	J	K	L	M
								A type	B type							
VHS20-X510	1/8, 1/4	1/8	66.4	22.3	40	37.5	14	46.6	47.2	33.6	28	43	24	4.5	14.8	9
VHS30-X510	1/4, 3/8	1/4	80.3	29.4	53	49	19	52		38	30	49	30	4.5	19	9
VHS40-X510	1/4, 3/8, 1/2	3/8	104.9	38.5	70	63	22	58		44	36	63	38	5.5	24	10
VHS40-06-X510	3/4	1/2	110.4	42	75	63	22	58		44	44	63	43	5.5	26	10
VHS50-X510	3/4, 1	1/2	134.3	53	90	76	26	76		61	53	81	50	6.5	31	12

Model	Optional specifications											
	With bracket										Built-in silencer	
	N	Q	R	S	T	U	V	W	X	Y	AA	BB
VHS20-X510	5.4	8.4	27	40	75.4	31.3	25.3	53.3	30	2.3	3	12
VHS30-X510	6.5	10	36.5	53	90.9	40	33	67	41	2.3	3	14
VHS40-X510	8.5	19	43.5	70	119.4	53	44	79	50	2.8	3	19
VHS40-06-X510	8.5	19	43.5	70	123.4	55	46	79	50	2.8	4	22
VHS50-X510	11	27.5	49.5	90	152.3	71	60	108	70	3.2	4	22