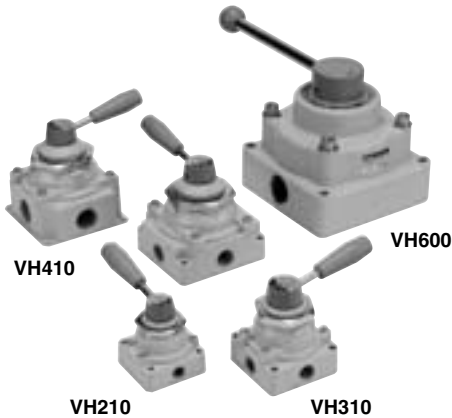


Hand Valve Series VH



Specifications

Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	VH200/300/400	1.0 MPa
	VH600	0.7 MPa
Ambient temperature and operating fluid temperature	-5 to 60°C (No freezing)	
Operating angle	90°	
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)	

Option

Bottom ported	VH300/400
Panel mounted	VH200/300/400
Different 1(P) port location (On handle side)	All models applicable *

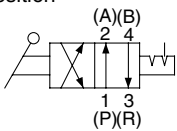


* Note that 1(P) port of VH600 is located on handle side as standard.

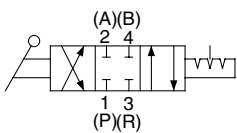
Model

JIS Symbol

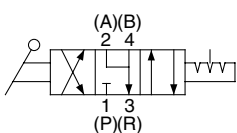
2 position



Closed center

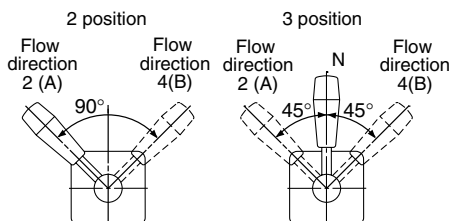


Exhaust center



Handle Operation Angle and Air Flow Direction

(Refer to the figures of piping direction to the right.)



Series	Port size Rc	Number of positions	Piping direction	Model		Effective area (mm ²)	Mass (kg)
				Body mounted	Panel mounted		
VH2	1/4	3 (Closed center)		VH200-02	VH210-02	7.5	0.42
		3 (Exhaust center)		VH201-02	VH211-02		
		2 (Position)		VH202-02	VH212-02		
VH3	1/4, 3/8	3 (Closed center)		VH300-02/03	VH310-02/03	Rc 1/4: 17	0.71
		3 (Exhaust center)		VH301-02/03	VH311-02/03		
		2 (Position)		VH302-02/03	VH312-02/03		
		3 (Closed center)		VH320-02/03	VH330-02/03	Rc 3/8: 20	
		3 (Exhaust center)		VH321-02/03	VH331-02/03		
		2 (Position)		VH322-02/03	VH332-02/03		
VH4	1/4 to 3/4	3 (Closed center)		VH400-02 to 06	VH410-02 to 06	Rc 1/4: 45	1.28
		3 (Exhaust center)		VH401-02 to 06	VH411-02 to 06	Rc 3/8: 49	
		2 (Position)		VH402-02 to 06	VH412-02 to 06	Rc 1/2: 55	
		3 (Closed center)		VH420-02 to 06	VH430-02 to 06	Rc 3/4: 58	
		3 (Exhaust center)		VH421-02 to 06	VH431-02 to 06		
		2 (Position)		VH422-02 to 06	VH432-02 to 06		
VH6	3/4, 1	3 (Closed center)		VH600-06/10	—	Rc 3/4: 185	9.7
		3 (Exhaust center)		VH601-06/10	—	Rc 1: 194	
		2 (Position)		VH602-06/10	—		

How to Order

VH 2 0 1 - 02 - - -

Hand valve

Body size (Base size)

2	1/4 base
3	3/8 base
4	1/2 base
6	1 base

Piping/Mounting

Symbol	Piping <small>Note</small>	Mounting method
0	Side	Body
1	Side	Panel mounting
2	Bottom	Body
3	Bottom	Panel mounting

Note Only side piping is available for VH200 and VH600 and 3(R) port is located on the bottom.

Function

0	3 position closed center
1	3 position exhaust center
2	2 position

Made to Order

Nil	Standard
X116	Handle (Red)

Suffix symbol

Nil	Standard
L	Long handle (Applicable to VH300/400)
R	1(P) port 180° location change

* When specifying more than one option, indicate symbols alphabetically.

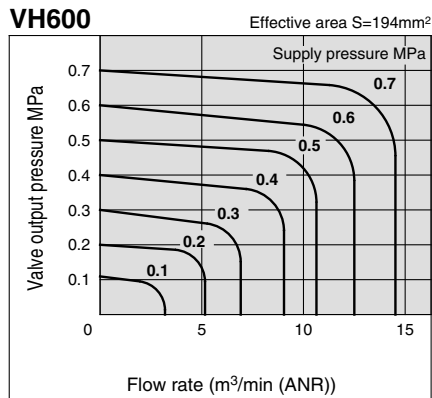
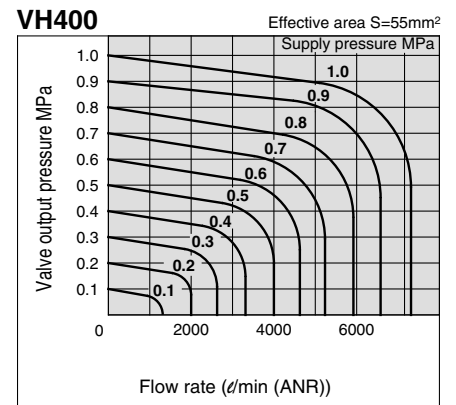
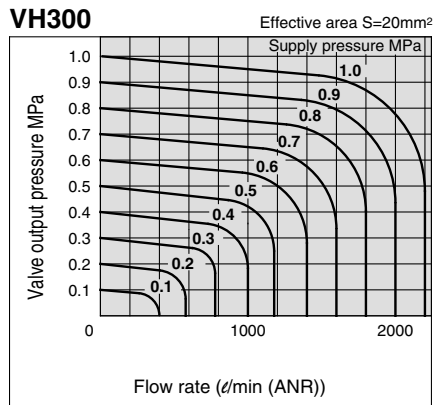
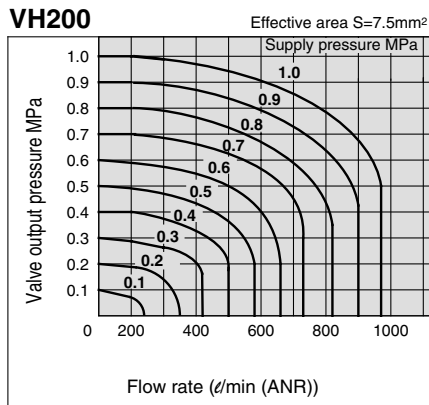
Port size (Nominal size)

Symbol	Port size (Nominal size)	Applicable body size
02	1/4	2, 3, 4
03	3/8	3, 4
04	1/2	4
06	3/4	6
10	1	6

Thread type

Nil	Rc
F	NPT
N	G

Flow Characteristics

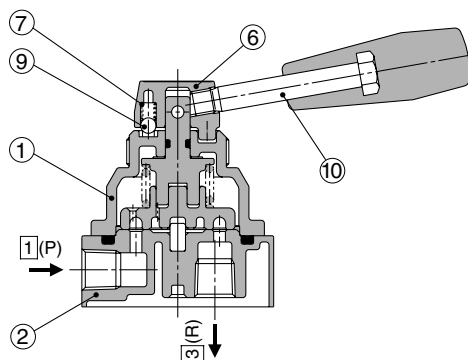
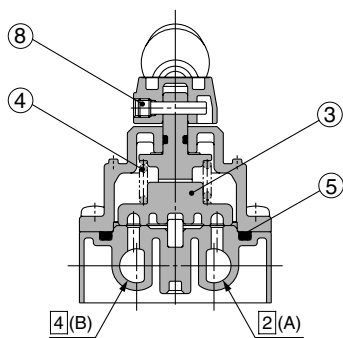


- VM
- VMG
- VR
- VH

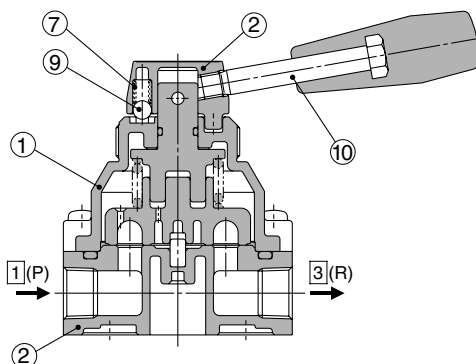
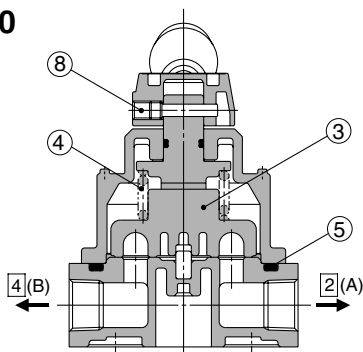
Series VH

Construction

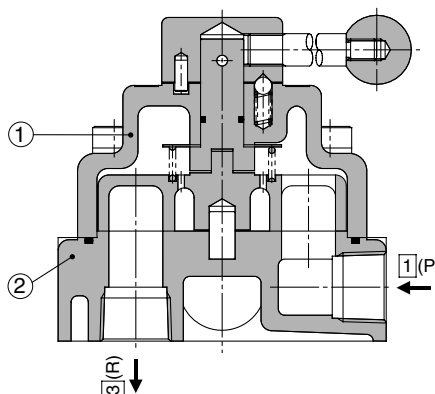
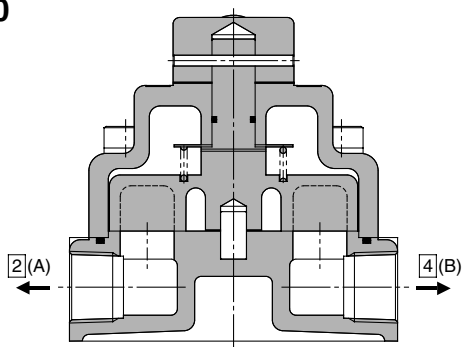
VH200



VH300/400



VH600



Component Parts

No.	Description	Material	
		VH200/300/400	VH600
1	Cover	Zinc die-casted	Cast iron
2	Body	Aluminium die-casted	Cast iron

Replacement Parts

Description	No.	Component parts	Material	Part no.		
				VH200	VH300	VH400
Maintenance and repair kit*	3	Slide ring	Resin			
	4	Slide ring spring	Piano wire	KT-VH2□□-N	KT-VH3□□-N	KT-VH4□□-N
	5	O-ring	NBR			
Handle head assembly*	6	Handle head	Zinc alloy			
	7	Spring	Piano wire	24403A	24413A	24413A
	8	Pin	Structural steel			
	9	Steel ball	SUJ			
Handle head assembly*	6	Handle head	Zinc alloy			
	7	Spring	Piano wire			
	8	Pin	Structural steel	244036A	244125A	244125A
	9	Steel ball	SUJ			
Handle	10	Standard	—	244032	244032	244032
		Long type	—	—	244127	244223
		Red	—	244035	244035	244035

Note) Replacement parts for the VH600 series are not available.

* Including grease.

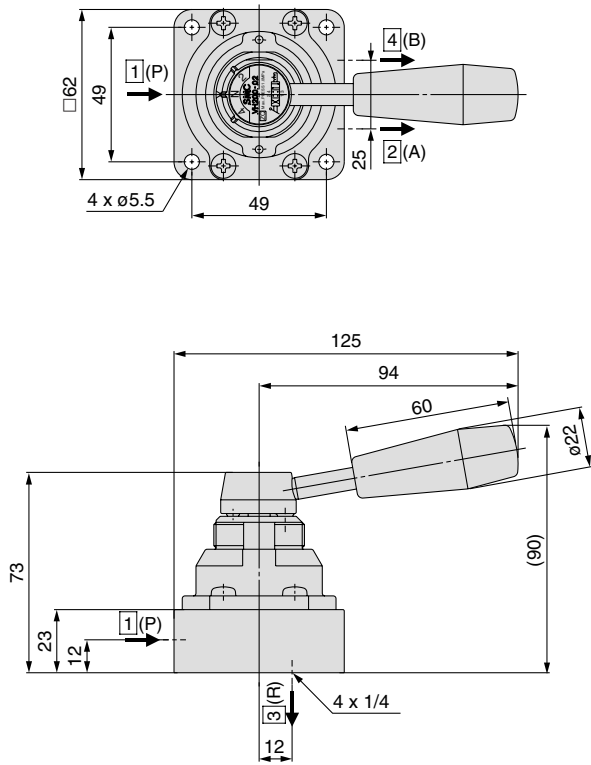
Part No. of Lock Nut for Panel Mounting

Series	Part no.
VH200	244010
VH300	24418
VH400	240258

Note) Not applicable to the VH 600 series.

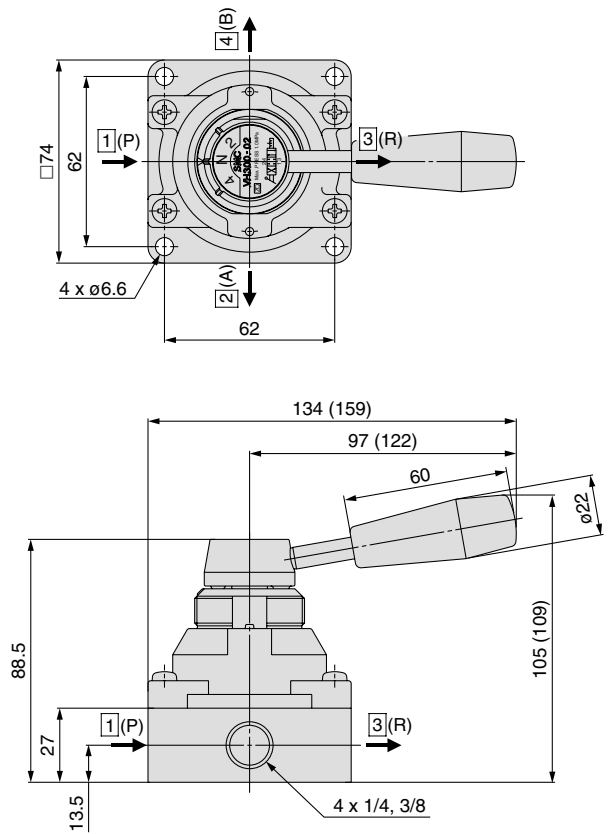
Dimensions: Body Mounted

VH20□-02

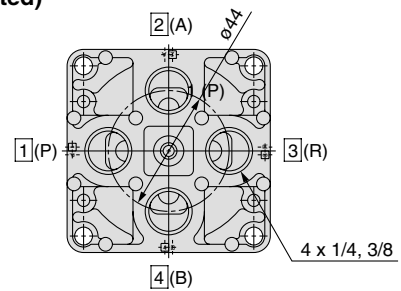


VH30□-02/03

(): Long handle type



VH32□-02/03
(Bottom ported)



VM□

VMG

VR□

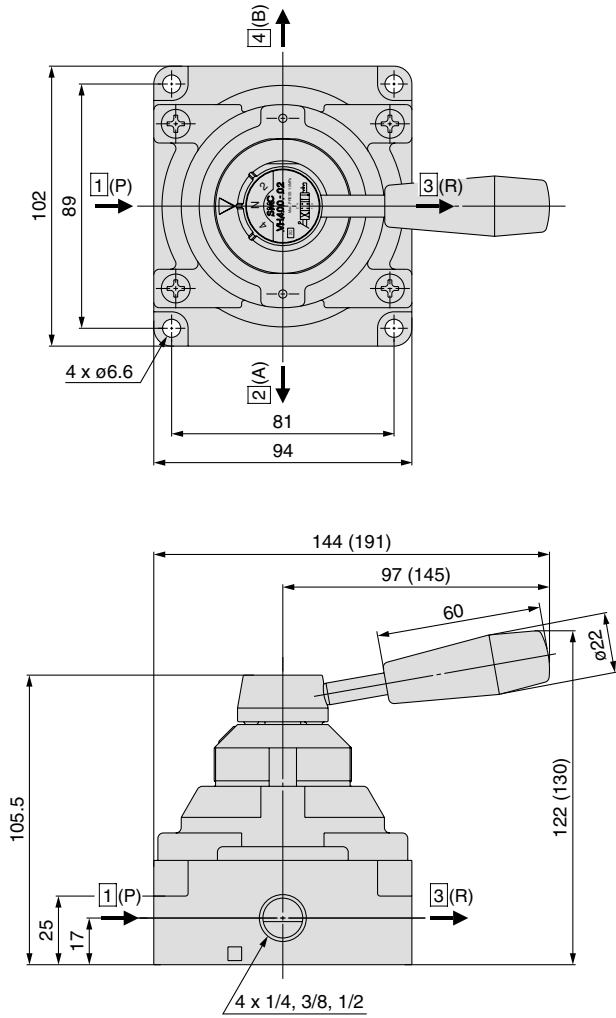
VH□

Series VH

Dimensions: Body Mounted

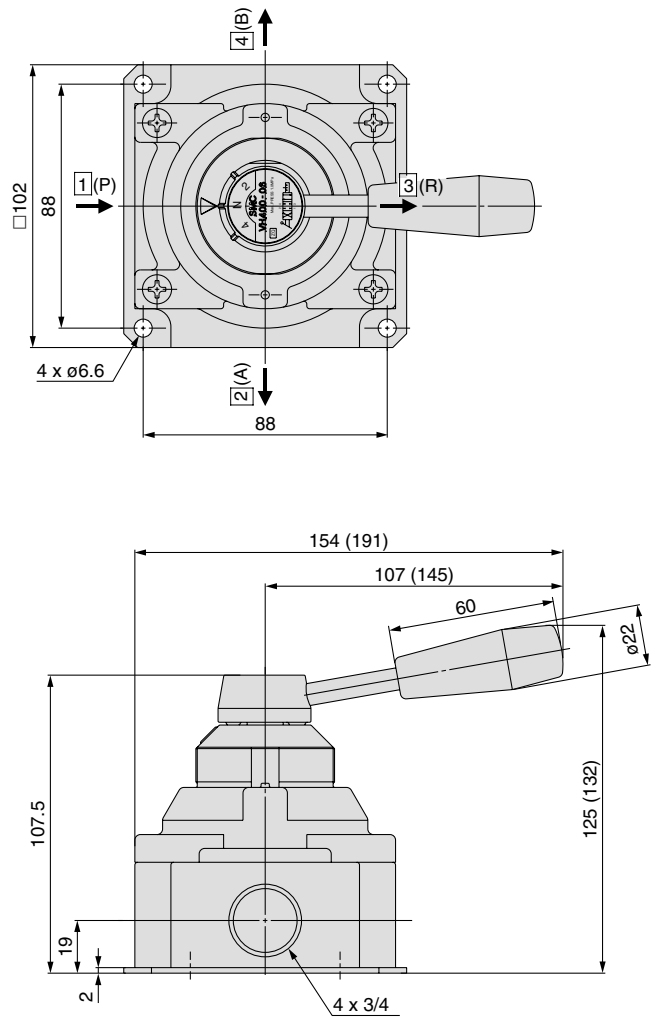
VH40□-02 to 04

(): Long handle type

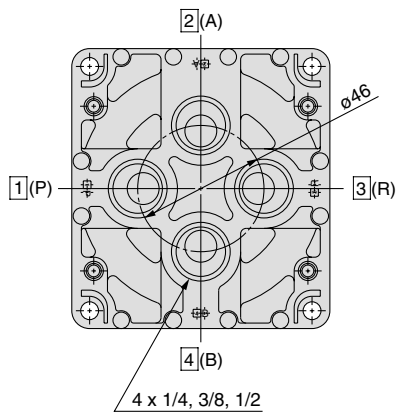


VH40□-06

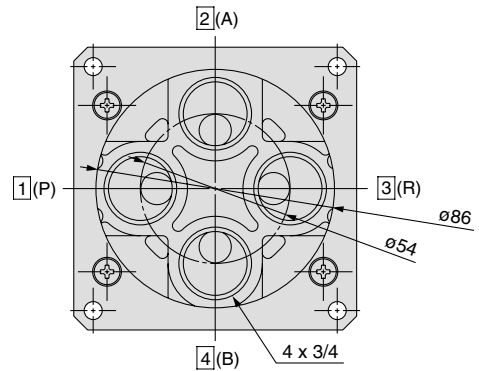
(): Long handle type



VH42□-02 to 04
(Bottom ported)

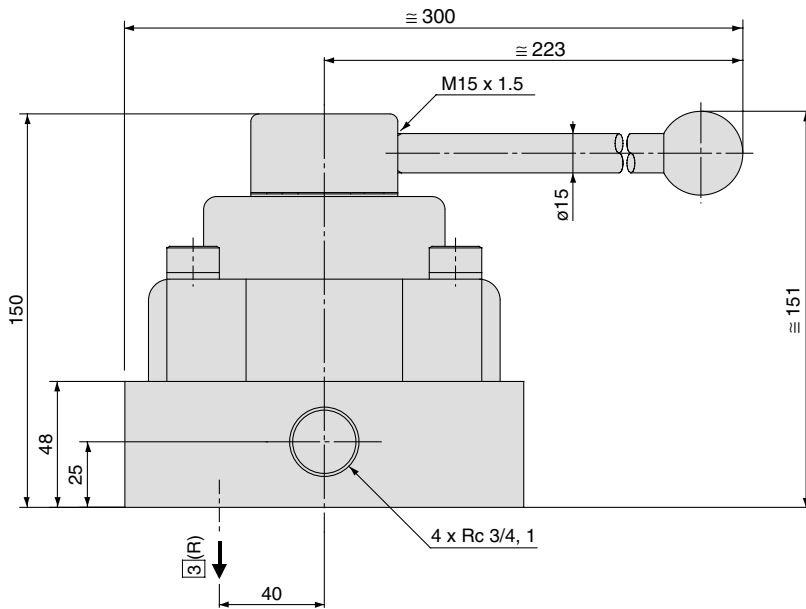
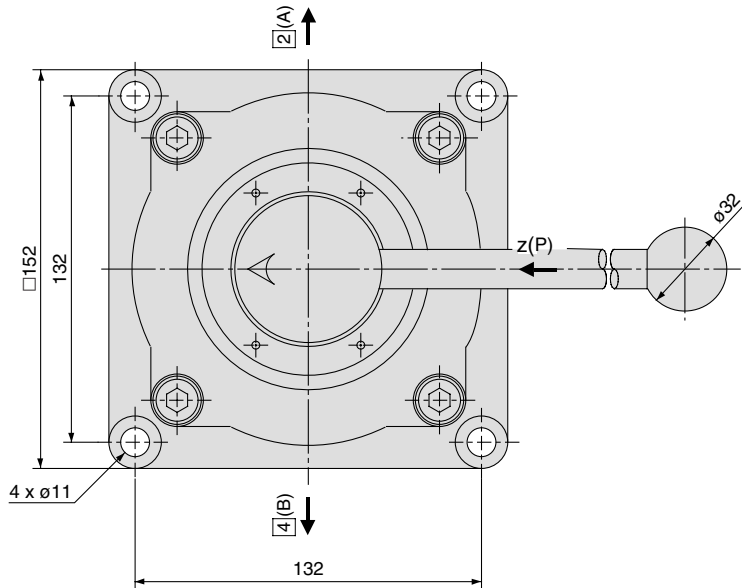


VH42□-06
(Bottom ported)



Dimensions: Body Mounted

VH600-06/10

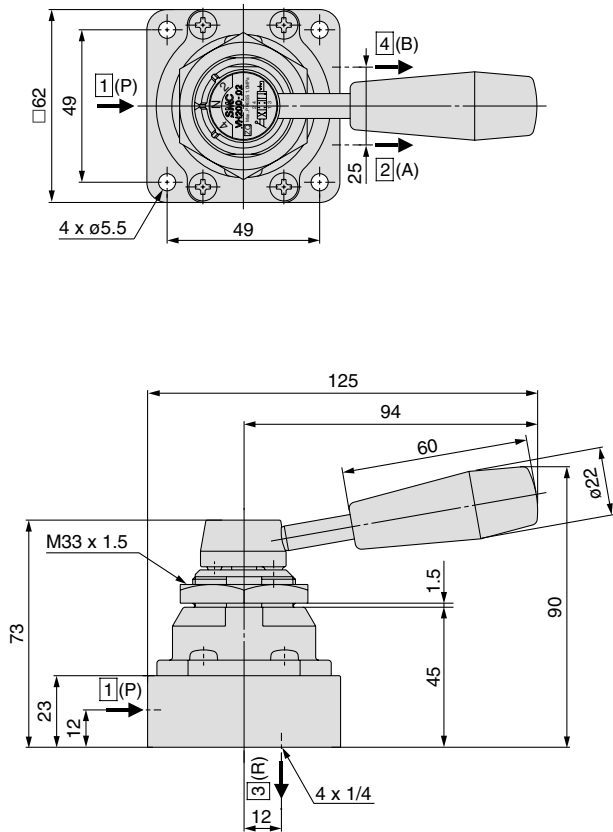


- VM
- VMG
- VR
- VH**

Series VH

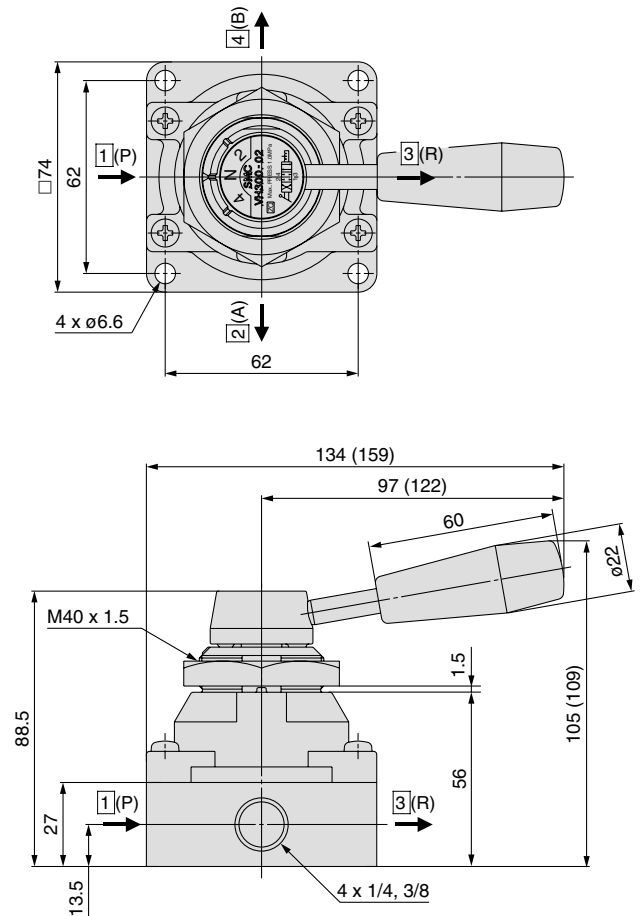
Dimensions: Panel Mounted

VH21□-02

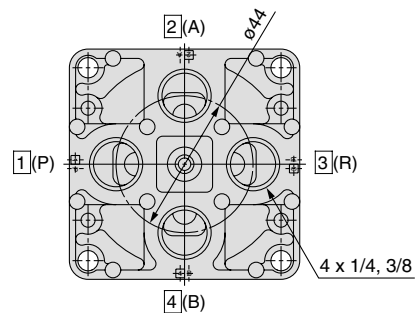


VH31□-02/03

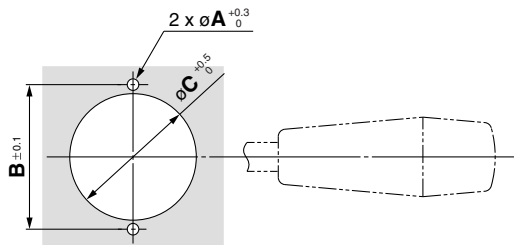
(): Long handle type



VH33□-02/03 (Bottom ported)



Panel cut dimension



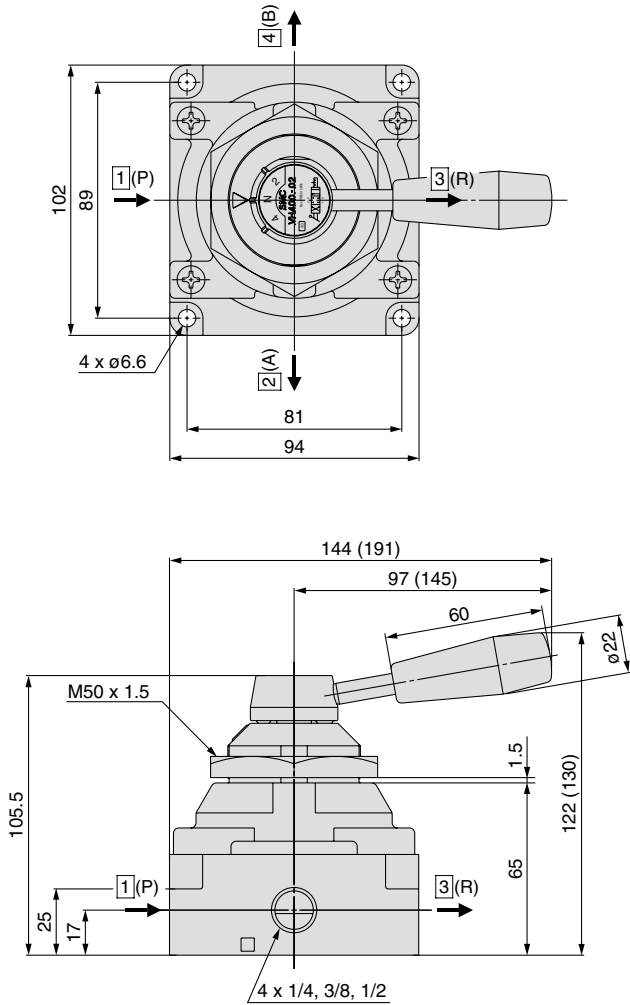
Max. panel thickness D

	(mm)			
	A	B	C	D
VH200	3.2	40	35	3.5
VH300	3.2	51	41	6
VH400	3.2	64	51	8

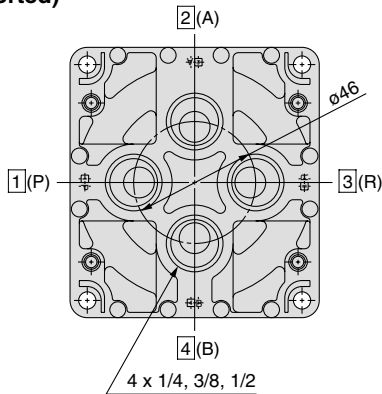
Dimensions: Panel Mounted

VH41□-02 to 04

(): Long handle type

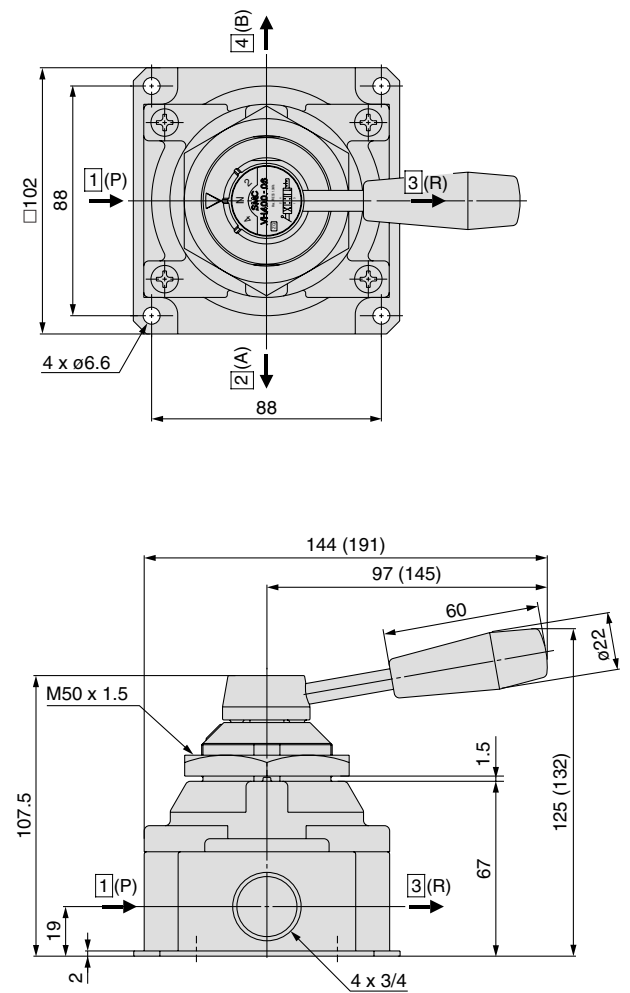


VH43□-02 to 04
(Bottom ported)

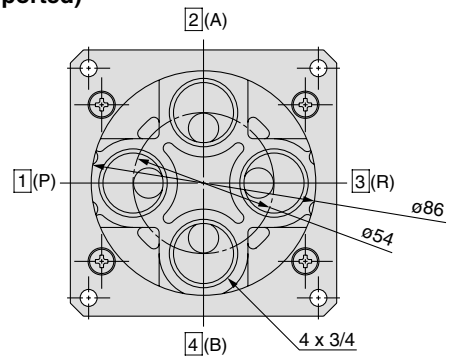


VH41□-06

(): Long handle type



VH43□-06
(Bottom ported)



- VM□
- VMG
- VR□
- VH□



Series VH

Specific Product 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.

Design

Warning

- 1. Not suitable for use as a selector valve or a divider valve.**
The valve can malfunction due to air leakage.
- 2. Not suitable for negative pressure.**
The valve can malfunction due to air leakage.
- 3. Do not supply air pressure from other ports than 1(P) port.**
Air leakage may occur when the pressure is supplied from other ports.

Selection

Warning

- 1. Intermediate stop**
When stopping the cylinder piston in the middle using the 3 position closed center valve, it is not possible to stop it correctly and precisely as the hydraulic equipment due to the air compressibility. Do not use this valve because it has slight air leakage and can not hold a stopping position. When it is necessary to hold a stopping position, select an equipment to prevent displacement and design the circuit.

Caution

- 1. Use in low temperature environments**
The valve can be used at a temperature down to -5°C . Take appropriate measures to avoid freezing of drainage, moisture, etc.
- 2. Operation method**
The valve must be switched to each position instantly and securely. Stopping the handle halfway between the extreme positions may cause malfunction.

Piping

Caution

- 1. Ensure connection so that air is supplied to the port "1(P)" port.**
Air leakage may occur when the pressure is supplied from other ports.
- 2. Note that in the case of the option of different "1(P)" porting position, porting indication on the body and flow direction by handle operation are reversed.**

Environment

Warning

- 1. When the valve is exposed to a large amount of dust, install a silencer into the port "3(R)". When dust enters the valve from the port "3(R)", it may cause air leakage.**