



Manual, mechanical and other valves

■ Product series

Hand lever valve: 4H Series 76	Push-pull valve: 3L Series 78	Push-pull valve: 4L Series 79
		
Hand slide valve: HSV Series 80	Hand lever valve: 4HV, 4HVL Series 81	Control valve: S3 Series 83
		
Control valve: M3 Series 85	Control valve: M5 Series 87	Control valve: CM3 Series 89
		
Control valve: ZM3 Series 93	Foot pedal valve: 3F, 3FM, 4F Series 95	Flow control valve: ASC Series 97
		
Non-return valve: NRV Series 98		
		



■ Installation and Application

1. Before installing, be sure the valve hasn't been damaged via transportation.
2. It's suggested to use the medium lubricated by 40 μ m filter element. Be aware of the flow direction and port size.
3. Please notice whether the installation condition accords with technical requirements (such as "working pressure" and "scope of application temperature"), then the equipment can be installed and used.
4. Take measure to avoid vibration and frozen.
5. Before using the fittings and tubes make sure they are clean. When connecting to fittings, be sure the PTFE Thread seal tape is used correctly.
6. To keep the dust away, Never forget to install dirt-proof boot in air intake and outlet during dismounting.

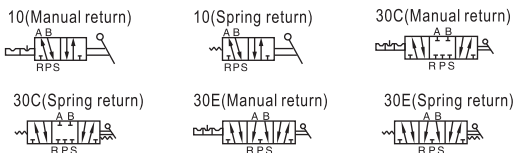
Hand lever valve (5/2, 5/3way)

AIRTAC

4H Series



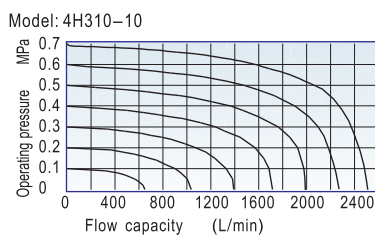
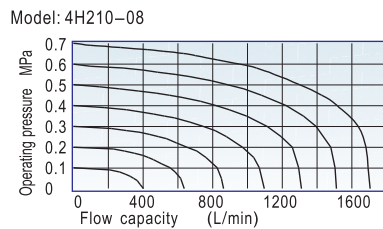
Symbol



Product feature

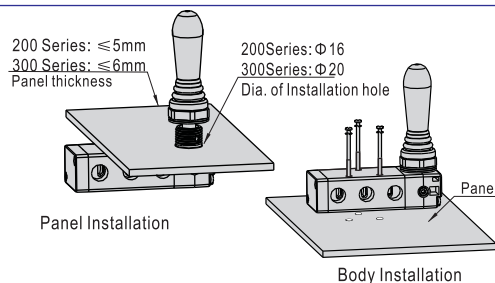
1. Manual operation, smooth actuation, and exact and reliable orientation.
2. Sliding column structure has good tightness and light weight and is easy to install and dismount.
3. Internal hole adopts special processing technology which has little attrition friction, long service life.
4. No need to add oil for lubrication.
5. Panel-mounting makes it convenient to install and apply.

Flow chart



Installation

1. 5/3 way manual return hand lever valve is positioned by steel ball, which is convenient to switch. Please apply the proper force to avoid the position mismatch and misoperation.
 2. When installed by panel, disassemble the gasket according to the practical requirement.
 3. Below is the installation method for reference.
- Note: Please give your attention on the panel thickness and hole dimension when installed by panel.



Specification

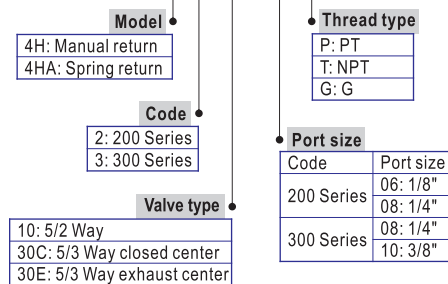
Model	210-06	230-06	210-08	230-08	310-08	330-08	310-10	330-10
Fluid	Air (to be filtered by 40 μ m filter element)							
Operating	Manual control direct acting type							
Port size ^①	In=Out		In=Out=1/4";		In=Out		In=Out=3/8";	
Orifice size	14.0mm ² (Cv=0.78)	12.0mm ² (Cv=0.67)	16.0mm ² (Cv=0.89)	12.0mm ² (Cv=0.67)	25.0mm ² (Cv=1.39)	18.0mm ² (Cv=1.00)	30.0mm ² (Cv=1.67)	18.0mm ² (Cv=1.00)
Valve type	5/2 Way	5/3 Way	5/2 Way	5/3 Way	5/2 Way	5/3 Way	5/2 Way	5/3 Way
Lubrication ^②	Not required							
Pressure range	0~0.8MPa(0~116psi)							
Proof pressure	1.5MPa(215psi)							
Temperature	-20~70°C							
Material body	Aluminum alloy							
Operating angle	$\pm 15^\circ$	$\pm 8.5^\circ$	$\pm 15^\circ$	$\pm 8.5^\circ$	$\pm 18^\circ$	$\pm 10^\circ$	$\pm 18^\circ$	$\pm 10^\circ$

① PT thread, NPT thread and G thread are available;

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

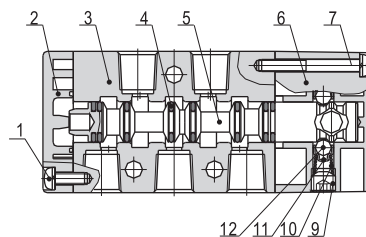
Ordering code

4H 2 30C 08 P

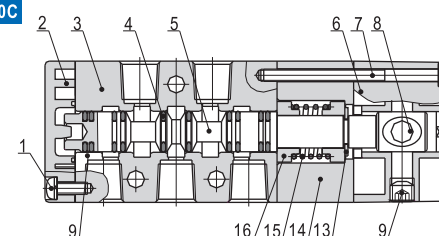


Inner structure

4H210



4HA230C



No.	Item
1	Round head screw
2	Bottom cover
3	Body
4	O-ring
5	Spool
6	Top cover
7	Round head cover
8	Axle
9	Stop screw
10	Spring
11	Steel ball jacket
12	Steel ball
13	E clip
14	Side cover
15	Spring
16	Spring holder

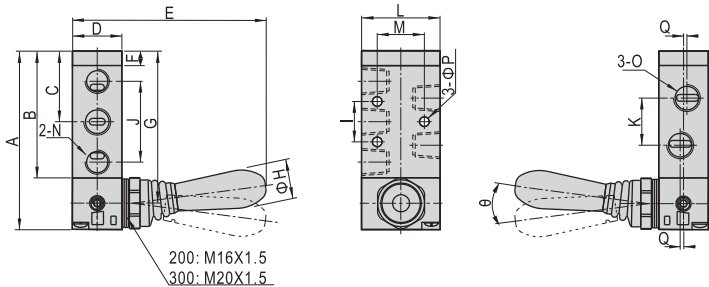
Hand lever valve (5/2, 5/3way)



4H Series

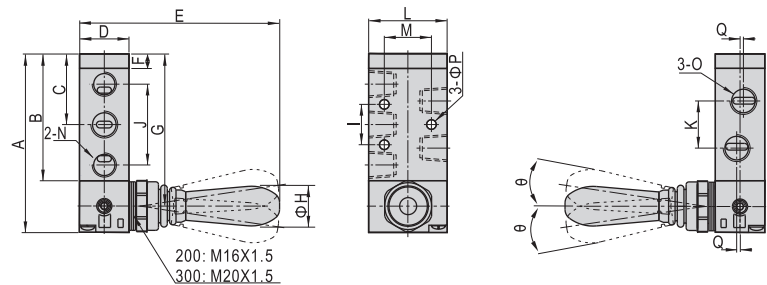
■ Dimensions

4H210\310, 4HA210\310



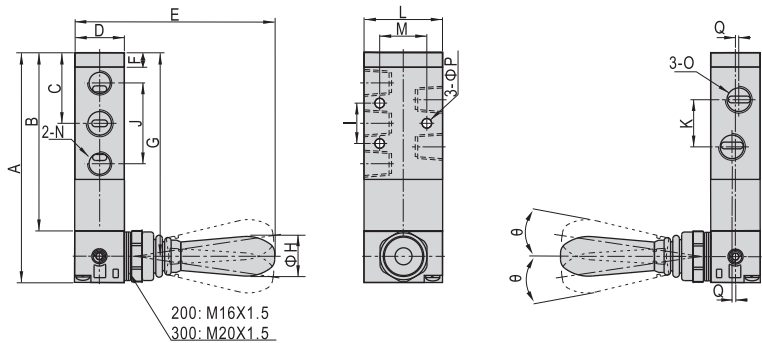
Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Θ
4H210-06 4HA210-06	81.5	57.5	32.5	22	90	7.5	69.5	18	20	36	18	35	23.5	1/8"	1/8"	4.3	-	15
4H210-08 4HA210-08	81.5	57.5	32.5	22	90	7.5	69.5	18	20	36	21	35	23.5	1/8"	1/4"	4.3	1.5	15
4H310-08 4HA310-08	101	73	40.5	27	93.5	8	87	18	24	45	22	40	27.5	1/4"	1/4"	4.3	-	18
4H310-10 4HA310-10	101	73	40.5	27	93.5	8	87	18	24	45	24	40	27.5	1/4"	3/8"	4.3	2	18

4H230C\330C, 4H230E\330E



Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Θ
4H230C-06 4H230E-06	81.5	57.5	32.5	22	90.5	7.5	69.5	18	20	36	18	35	23.5	1/8"	1/8"	4.3	-	8.5
4H230C-08 4H230E-08	81.5	57.5	32.5	22	90.5	7.5	69.5	18	20	36	21	35	23.5	1/8"	1/4"	4.3	1.5	8.5
4H330C-08 4H330E-08	101	73	40.5	27	94	8	87	18	24	45	22	40	27.5	1/4"	1/4"	4.3	-	10
4H330C-10 4H330E-10	101	73	40.5	27	94	8	87	18	24	45	24	40	27.5	1/4"	3/8"	4.3	2	10

4HA230C\330C, 4HA230E\330E



Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Θ
4HA230C-06 4HA230E-06	100.5	76.5	32.5	22	90.5	7.5	88.5	18	20	36	18	35	23.5	1/8"	1/8"	4.3	-	8.5
4HA230C-08 4HA230E-08	100.5	76.5	32.5	22	90.5	7.5	88.5	18	20	36	21	35	23.5	1/8"	1/4"	4.3	1.5	8.5
4HA330C-08 4HA330E-08	120	92	40.5	27	94	8	106	18	24	45	22	40	27.5	1/4"	1/4"	4.3	-	10
4HA330C-10 4HA330E-10	120	92	40.5	27	94	8	106	18	24	45	24	40	27.5	1/4"	3/8"	4.3	2	10



4H

Push-pull valve(3/2way)

AIRTAC

3L Series

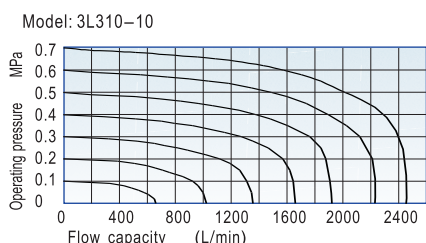
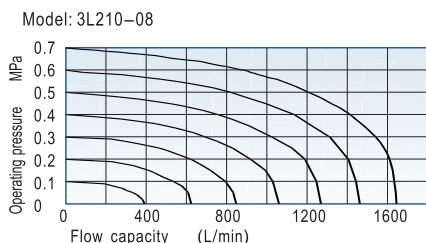
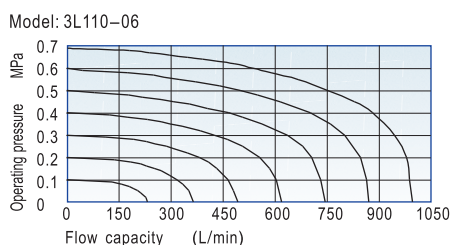


3L

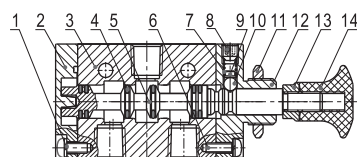
Symbol



Flow chart



Inner structure



No.	Item	No.	Item	No.	Item
1	Round head screw	6	Round head screw	11	Hexagon nut
2	Bottom cover	7	Spring	12	Top cover
3	Body	8	Stop screw	13	Safety nut
4	O-ring	9	Spring base	14	Hand grip
5	Spool	10	Steel ball		

Specification

Model	3L110-06	3L210-06	3L210-08	3L310-08	3L310-10
Fluid	Air (to be filtered by 40 μm filter element)				
Operating	Manual control direct acting type				
Port size ^①	1/8"		1/4"		3/8"
Orifice size	12.0mm ² (Cv=0.67)	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.39)	30.0mm ² (Cv=1.67)
Valve type	3/2 Way				
Lubrication ^②	Not required				
Pressure range	0~0.8MPa(0~116psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70℃				
Material body	Aluminum alloy				

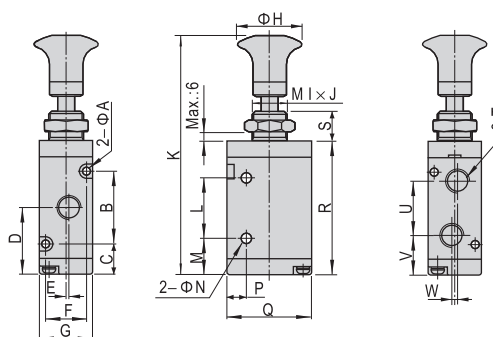
① PT thread, NPT thread and G thread are available.

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

Ordering code

3L 2 10 08 P	
Model	3L: 3 port 2 position push-pull valve
Code	1: 100 Series 2: 200 Series 3: 300 Series
Valve type	10: 2 position
Thread type	P: PT T: NPT G: G
Port size	Code Port size 100 Series 06: 1/8" 06: 1/8" 200 Series 08: 1/4" 08: 1/4" 300 Series 08: 1/4" 10: 3/8"

Dimensions



Item\Type	3L110	3L210	3L310	Item\Type	3L110	3L210	3L310
A	06	06	08	L	21	25	30
B	19	30	35	M	12.2	15.2	17.5
C	13.2	12.7	15	N	3.3	4.3	4.3
D	23.7	27.7	32.5	P	7.5	8	10
E	1	0	1.5	Q	27	35	40
F	13	17	20	R	47	57	65.8
G	18	22	27	S	10	10	10
H	22	22	25	T	1/8"	1/8"	1/4"
I	12	14	16	U	16	22.5	24
J	1.0	0.75	1.0	V	14.7	16.5	20.5
K	79	90	100	W	2	0	0

Push-pull valve(5/2way)

AIRTAC

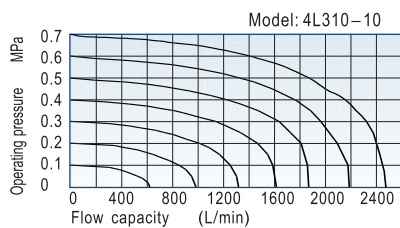
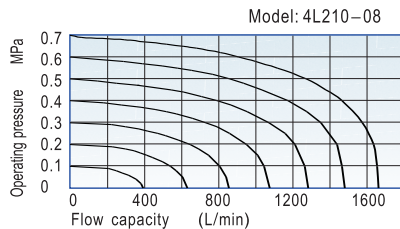
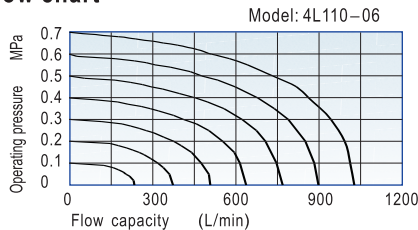
4L Series



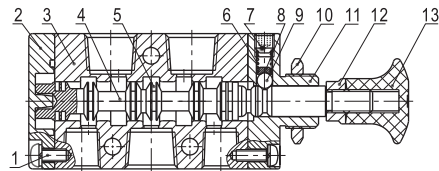
Symbol



Flow chart



Inner structure



No.	Item	No.	Item	No.	Item
1	Round head screw	6	Spring	11	Top cover
2	Bottom cover	7	Stop screw	12	Safety nut
3	Body	8	Spring base	13	Hand grip
4	Spool	9	Steel ball		
5	O-ring	10	Hexagon nut		

Specification

Model	4L110-06	4L210-06	4L210-08	4L310-08	4L310-10
Fluid	Air (to be filtered by 40 μm filter element)				
Operating	Manual control direct acting type				
Port size①	1/8"		1/4"		3/8"
Orifice size	12.0mm ² (Cv=0.67)	14.0mm ² (Cv=0.78)	16.0mm ² (Cv=0.89)	25.0mm ² (Cv=1.39)	30.0mm ² (Cv=1.67)
Valve type	5/2 Way				
Lubrication②	Not required				
Pressure range	0~0.8MPa(0~116psi)				
Proof pressure	1.5MPa(215psi)				
Temperature	-20~70℃				
Material body	Aluminum alloy				

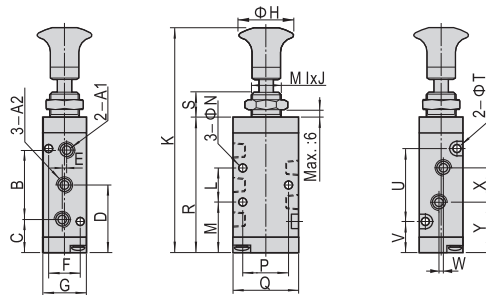
① PT thread. NPT thread and G thread are available;

② Once lubricated air is used, continue with same medium to optimise valve life span. It is suggested to use ISO VG32 lubricant or the oil with the same grade.

Ordering code

4L 2 10 08 P	
Model	4L: 5 port 2 position push-pull valve
Code	1: 100 Series 2: 200 Series 3: 300 Series
Valve type	10: 2 position
Thread type	P: PT T: NPT G: G
Port size	Code Port size 100 Series 06: 1/8" 200 Series 06: 1/8" 08: 1/4" 300 Series 08: 1/4" 10: 3/8"

Dimensions



Item\Type	4L110	4L210	4L310	Item\Type	4L110	4L210	4L310
A1	06	06	08	M	21.2	21.7	28
A2	1/8"	1/8"	1/4"	N	3.3	4.3	4.3
B	28	36	45	P	19	23.5	27.5
C	14.2	13.7	17.5	Q	27	35	40
D	28.2	31.7	40	R	58	65	80.8
E	2	0	0	S	10	10	10
F	13	17	20	T	3.3	3.3	4.3
G	18	22	27	U	30	38	50
H	22	22	25	V	13.2	12.7	15
I	12	14	16	W	3	0	4
J	0.75	1.0	1.0	X	16	18	22
K	90	98	115	Y	20.2	22.7	29
L	14	20	24				



4L

Hand slide valve

HSV Series

AIRTAC



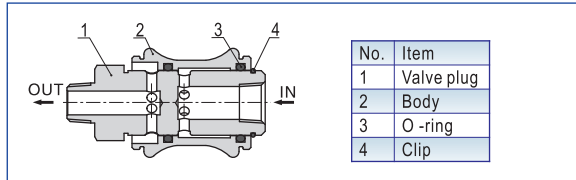
Symbol



Product feature

1. There are several ways of internal and external thread connection, suitable for the application in different pipeline systems.
2. The direction-change slides smoothly and has good hand feeling.
3. There is large effective circulating area.
4. The valve spool surface is treated with acid washing passivation, and the surface of valve body is oxidized to keep the color for a long time.

Inner structure



Specification

Model	HSV06	HSV08	HSV10	HSV15	HSV20	HSV25
Fluid	Air (to be filtered by 40 μm filter element)					
Operating	Manual control direct acting type					
Port size①	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Orifice size	23.0mm ² (Cv=1.28)	40.0mm ² (Cv=2.20)	62.0mm ² (Cv=3.50)	140.0mm ² (Cv=7.80)	250.0mm ² (Cv=13.80)	392.0mm ² (Cv=21.78)
Valve type	3/2 Way					
Lubrication	Not required					
Pressure range	0~1.0MPa(0~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature	-20~70°C					
Material body	Aluminum alloy					

① PT thread, NPT thread and G thread are available.

Ordering code

HSV 08 SS P			
Model	HSV: Hand slide valve	Port size	Thread type
			P: PT T: NPT G: G
Port size	08: 1/4"	Dovt thread	Blank: Standard
			SS: Double male thread FF: Double female thread SF: Male and female thread

Dimensions

Standard

Double female thread (FF)

Male and female thread (SF)

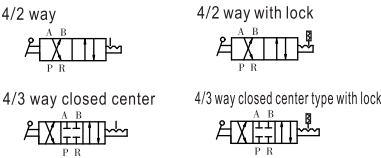
Double male thread (SS)

Type\Item	A	B1	B2	B3	B4	C	D	E1	E2	F1	F2
HSV06	30	50	43	50	57	27.5	17	1/8"	1/8"	1/8"	1/8"
HSV08	32.5	58	47	58	69	30	19	1/4"	1/4"	1/4"	1/4"
HSV10	39	68.5	55.5	68.5	81.5	35.5	22	3/8"	3/8"	3/8"	3/8"
HSV15	50	85.5	70.5	85.5	100.5	44	30	1/2"	1/2"	1/2"	1/2"
HSV20	58	96.5	79.5	96.5	113.5	53.5	36	3/4"	3/4"	3/4"	3/4"
HSV25	70	114.5	96.5	114.5	132.5	65.5	44	1"	1"	1"	1"

Hand lever valve (4/3, 4/2 way)
4HV, 4HVL Series



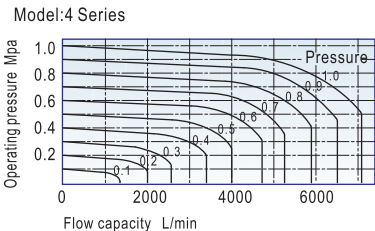
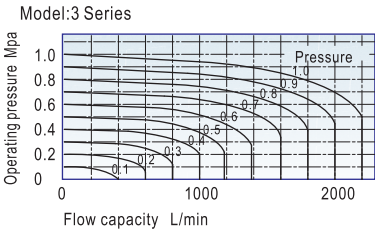
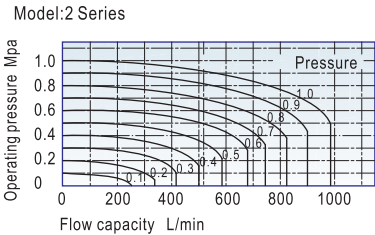
Symbol



Product feature

- 1. The direction-change turns lightly with good hand feeling and exact orientation.
- 2. Large effective circulating area leads to little pressure loss.
- 3. Panel and body installation are optional. The panel installation can be attached with installing nut.

Flow chart



Specification

Model	4HV2□□ -06(L)	4HV2□□ -08(L)	4HV3□□ -08(L)	4HV3□□ -10(L)	4HV4□□ -15(L)	4HV4□□ -20(L)
Fluid	Air (to be filtered by 40 μm filter element)					
Operating	Manual control direct acting type)					
Port size①	1/8"	1/4"	1/4"	3/8"	1/2"	3/4"
Orifice size	14.0mm ² (Cv=0.76)	16.0mm ² (Cv=0.89)	30.0mm ² (Cv=1.67)	33.0mm ² (Cv=1.83)	88.0mm ² (Cv=4.89)	95.0mm ² (Cv=5.27)
Valve type	4/2 Way 4/3 Way					
Lubrication	Not required					
Pressure range	0~1.0MPa(0~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature	-20~70°C					
Operating angle	90°(4/3 Way:45°)					

① PT thread, NPT thread and G thread are available.

Ordering code

4HV 2 30 06 S L P

- Model**
4HV: Hand lever valve
- Code**
2: 200 Series
3: 300 Series
4: 400 Series
- Valve type**
10: 4 port 2 position
30: 4 port 3 position ①
- Port size**
Code Port size
200 Series 06: 1/8"
08: 1/4"
300 Series 08: 1/4"
10: 3/8"
400 Series 15: 1/2"
20: 3/4"
- Thread type**
P: PT
T: NPT
G: G
- Note**
Blank: Without lock
L: With lock
- Installation**
Blank: Body installation
S: Panel installation ②

- ① 4 port 3 position only has closed center type.
- ② The panel installation can be attached with installing nut.

Inner structure

4HVL

No.	Item	No.	Item
1	Bogy	12	Pin one
2	Seal base	13	Front cover
3	Valve cover	14	Spring
4	Valve plug	15	Handle
5	Column pin	16	Pin two
6	Shaft	17	Shaft O-ring
7	Washer	18	Spring
8	Fixing plate	19	Iron plate
9	Lock pin	20	Fixing screw
10	Valve cap	21	Body O-ring
11	Spring pin	22	Seal base O-ring



4HV/4HVL



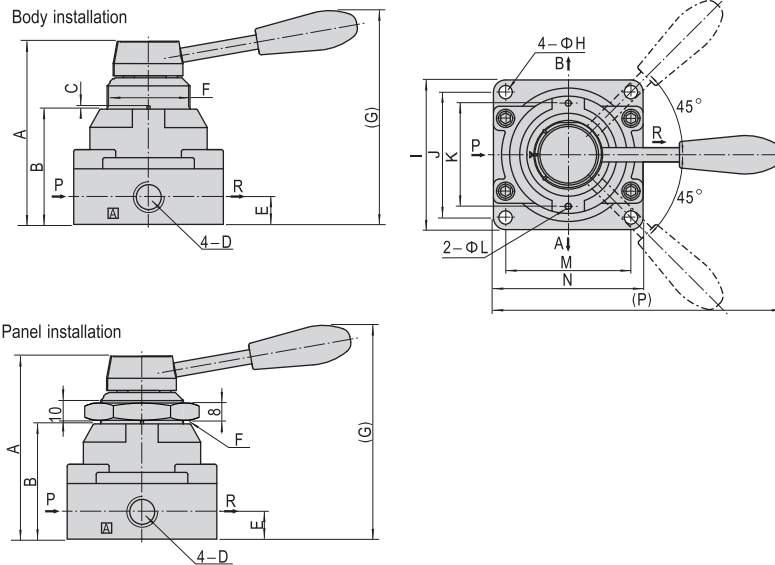
Hand lever valve (4/3, 4/2 way)

AIRTAC

4HV, 4HVL Series

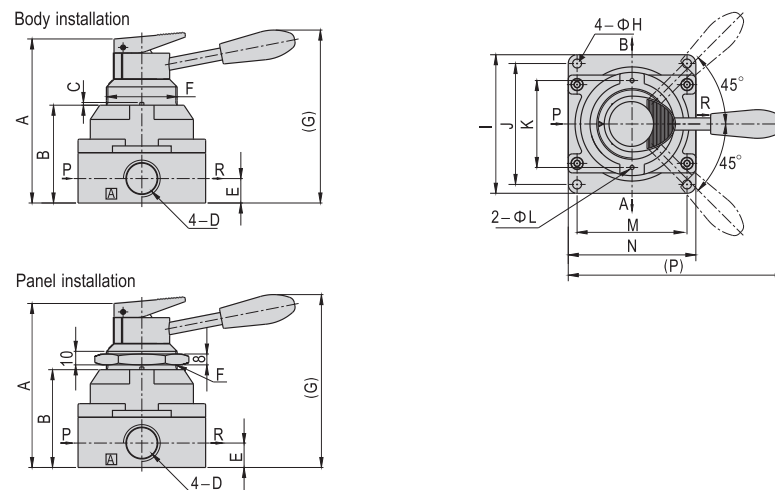
■ Dimensions

4HV Series



Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
4HV2□□-06	73	45	1.5	1/8"	11.5	M34×1.5	92.5	5.5	62	49	40	3	49	62	120
4HV2□□-08	73	45	1.5	1/4"	11.5	M34×1.5	92.5	5.5	62	49	40	3	49	62	120
4HV3□□-08	88.5	56	1.5	1/4"	13.5	M40×1.5	104	6.5	74	62	51	3	62	74	140
4HV3□□-10	88.5	56	1.5	3/8"	13.5	M40×1.5	104	6.5	74	62	51	3	62	74	140
4HV4□□-15	110	72	2	1/2"	18	M52×1.5	128	6.5	102	89	64	3	81	94	160
4HV4□□-20	110	72	2	3/4"	18	M52×1.5	128	6.5	102	89	64	3	81	94	160

4HVL Series



Model\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
4HV2□□-06L	84	45	1.5	1/8"	11.5	M34×1.5	92.5	5.5	62	49	40	3	49	62	120
4HV2□□-08L	84	45	1.5	1/4"	11.5	M34×1.5	92.5	5.5	62	49	40	3	49	62	120
4HV3□□-08L	99	56	1.5	1/4"	13.5	M40×1.5	104	6.5	74	62	51	3	62	74	140
4HV3□□-10L	99	56	1.5	3/8"	13.5	M40×1.5	104	6.5	74	62	51	3	62	74	140
4HV4□□-15L	121	72	2	1/2"	18	M52×1.5	128	6.5	102	89	64	3	81	94	160
4HV4□□-20L	121	72	2	3/4"	18	M52×1.5	128	6.5	102	89	64	3	81	94	160

