

# CHECK VALVES

## Type ACV & BCV

**SAGINOMIYA**

### GENERAL DESCRIPTION

- Install in the liquid line of heat pump air conditioner to prevent the counter flow at change over of cycles from heating to cooling and vice versa.
- Also for prevention of reverse flow of high pressure gas when compressor stops.
- For use with Fluorinated Refrigerants, air or oil.
- Can be mounted in horizontal or vertical line.



Type ACV-B



Type BCV

### TYPE NUMBER SELECTION (SPECIFICATIONS)

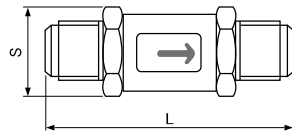
#### Type ACV

Catalog No.	Fluid	Port Size (mm)	Cv Value	Connection		Max. Working Pressure (MPa) {kgf/cm <sup>2</sup> }	Allowable Liquid Temp. (°C)	Wt. (kg)	
				Copper Tube (O.D.)	Style			B	D
<b>ACV-2B (D)</b>	Fluorinated Refrigerants	4,8	0,55	1/4"	B: Flare D: Solder	3 {30.6}	-40 to 125	0.1	0.05
<b>ACV-3B (D)</b>		7,5	1	3/8"				0.2	0.1
<b>ACV-4B (D)</b>	Air Inert Gas	10	2.4	1/2"				0.4	0.2
<b>ACV-5B (D)</b>		12,5	4,2	5/8"				0.5	0.3
<b>ACV-6B (D)</b>		16	6	3/4"				0.7	0.5

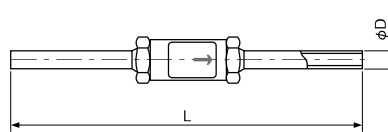
#### Type BCV

Catalog No.	Fluid	Port Size (mm)	Cv Value	Connection		Max. Working Pressure (MPa) {kgf/cm <sup>2</sup> }	Allowable Liquid Temp. (°C)	Wt. (kg)	
				Copper Tube (I.D.)	Style			B	D
<b>BCV-302DY</b>	Fluorinated Refrigerants	3	0,33	1/4"	Solder	4,15 {42.3}	-30 to 120	0.02	
<b>BCV-603DY</b>		5,5	0,97	3/8"				0.04	
<b>BCV-804DY</b>		8	2	1/2"				0.07	
<b>BCV-1005DY</b>		10	3,5	5/8"				0.14	
<b>BCV-1306DY</b>		12,5	4,7	3/4"				0.18	
<b>BCV-1810DY</b>		18	8	1"				0.34	

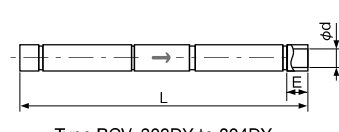
### DIMENSIONS



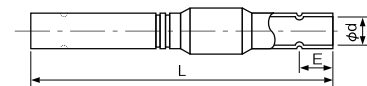
Type ACV-B



Type ACV-D



Type BCV-302DY to 804DY



Type BCV-1005DY to 1810DY

Unit: mm

#### Type ACV

Catalog No.	Unit: mm		
	L	φD	S
<b>ACV-2B</b>	58	—	14
<b>ACV-3B</b>	76		19
<b>ACV-4B</b>	87		24
<b>ACV-5B</b>	103		30
<b>ACV-6B</b>	115		36
<b>ACV-2D</b>	120	6,35	—
<b>ACV-3D</b>	160	9,53	
<b>ACV-4D</b>	187	12,70	
<b>ACV-5D</b>	235	15,88	
<b>ACV-6D</b>	300	19,05	

#### Type BCV

Catalog No.	Unit: mm		
	L	φD	E
<b>BCV-302DY</b>	112	6,55	—
<b>BCV-603DY</b>	120	9,71	8
<b>BCV-804DY</b>	140	12,93	13
<b>BCV-1005DY</b>	160	16,12	16
<b>BCV-1306DY</b>	180	19,30	19
<b>BCV-1810DY</b>	200	25,7	20

# PRESSURE ACTUATED WATER REGULATING VALVES

## Type VWR

**SAGINOMIYA**

### GENERAL DESCRIPTION

- Type VWR: 2-way press. actuated water regulating valves, open on pressure increase.
- Refrigerant: R410A, R407C, R404A
- Type VWR is applicable to the adjustment range which exceeds the applicable adjustment range of type AWR (Refer to next page).
- Pressure connection: 1/4" flare nut (Standard)
- Body material: Bronze for water and glycol.



### TYPE NUMBER SELECTION (SPECIFICATIONS)

#### PRESSURE ACTUATED VALVES 2-WAY

Unit: MPa {kgf/cm<sup>2</sup>}

Catalog No.	Kind of Refrigerant	Valve Body Material	Connection		Press. Range	Max. Working Press.	Max. Water Temp.(°C)	Max. Water Press.	* Factory Setting	Wt. (kg)
			Size	Style						
VWR-	1203G	Fluorinated Refrigerants	3/8"	Rc	1.5 to 2.9 {15.3 to 29.6}	4.2 {42.8}	60	1 {10.2}	2.4 {24.5}	0.68
	1504G									0.9
	2006G									1.0

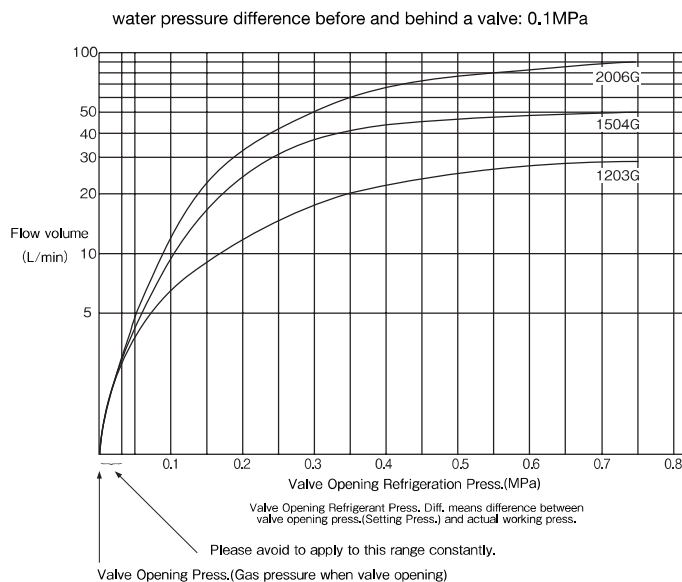
\* Pressure at which valve starts opening.

• Adjust type VWR to a set value which is suitable for the refrigerant employed.

### FLOW CAPACITY

Flow Capacity shows respectively refrigeration press. diff. at horizontal axis and flow rate of cooling water at vertical axis considering water press. diff. before and behind a valve with 0.1 MPa. (press. diff. between inlet and outlet of valve)

In case of water press. diff. before and behind a valve is excepting for 0.1MPa, value is calculated multiplying by coefficient in compensation table.



### ADJUSTMENT

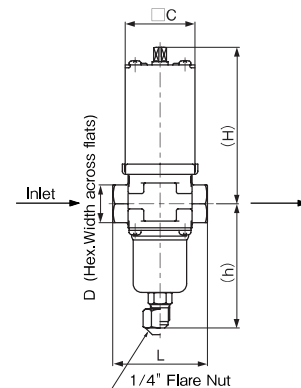
One full turn of adjusting screw changes pressure setting as shown below.

Catalog No.		Change in Press. Setting
VWR-	1203G	Approx. 0.2MPa
	1504G	
	2006G	

### COMPENSATION COEFFICIENTS

Press. Drop Across Valve: MPa {kgf/cm <sup>2</sup> }	Coefficient
0.2 {2}	1.4
0.1 {1}	1
0.03 {0.3}	0.55
0.05 {0.5}	0.7
0.07 {0.7}	0.8

### DIMENSIONS



Catalog No.		Unit: mm				
VWR-	1203G	22	55	91	72	40
	1504G	27	70	100	83	42
	2006G	32	80	104	87	