

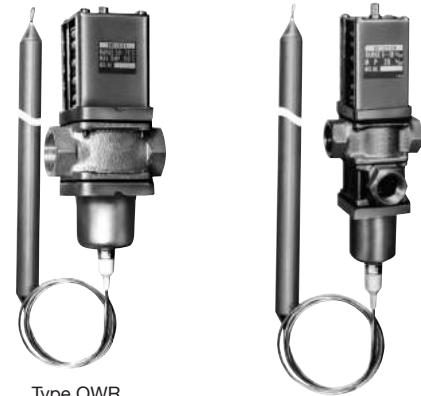
TEMPERATURE ACTUATED WATER REGULATING VALVES

Type OWR, HWR & XWR

SAGInoMIYA

GENERAL DESCRIPTION

- Type OWR: 2-way temp. actuated water regulating valves, open on temperature increase.
- Type HWR: 2-way temp. actuated water regulating valves, open on temperature decrease.
- Type XWR: 3-way temp. actuated water regulating valves.
- Temperature sensing element (Bulb)
- Body material: Bronze for water and glycol, cast iron for water only



Type OWR

Type XWR

TYPE NUMBER SELECTION (SPECIFICATIONS)

TEMPERATURE ACTUATED VALVES 2-WAY

Unit: °C

Catalog No.	Valve Body Material	Connection		Temp. Range	Max. Water Temp.	Max. Water Press. MPa {kgf/cm ² }	Max. Bulb Temp.	Bulb Size (mm)	* Factory Setting	Wt. (kg)
		Size	Style							
OWR-HWR-	Bronze	Rc	1/2"	30 to 50	60	0.98 {10}	80	φ 19×150	40	1.0
			3/4"							1.2
			1"							2.0
			1-1/4"							2.2
	Cast Iron	Flange	1-1/2"					11.5		
			2"					18.3		
	Cast Iron	Flange	2-1/2"					22.2		
			Bronze					Rc		50 to 75
	3/4"	1.2								
	1"	2.0								
	1-1/4"	2.2								
	Cast Iron	Flange	1-1/2"	11.5						
			2"	18.3						
	2-1/2"	22.2								

* Pressure at which valve starts opening.

- OWR & HWR with flange connection are supplied with JIS 10K (0.98 MPa) round companion flanges (JIS B2220 2239) and bolt/nuts.
- Capillary tube ... Standard φ 24mm × 1 meter, optional 1.5, 2 and 3 meters

TEMPERATURE ACTUATED VALVES 3-WAY

Unit: °C

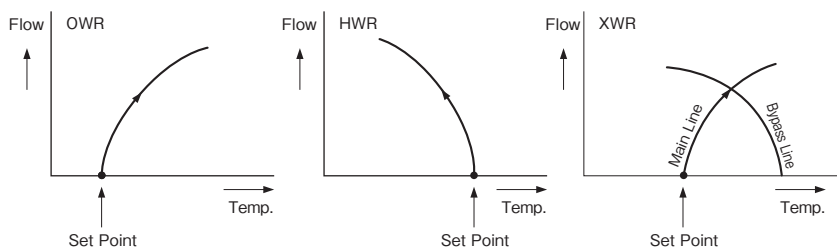
Catalog No.	Valve Body Material	Connection		Temp. Range	Max. Water Temp.	Max. Water Press. MPa {kgf/cm ² }	Max. Bulb Temp.	Bulb Size (mm)	* Factory Setting	Wt. (kg)					
		Size	Style												
XWR-	Bronze	Rc	1/2"	30 to 50	60	0.98 {10}	80	φ 19×150	40	1.0					
			3/4"							1.5					
			1"							2.5					
			1-1/4"							3.0					
			Cast Iron	Flange			Flange	50 to 75	100	φ 19×150	60	φ 19×320	60	1.1	
														3/4"	1.5
														1"	2.5
														1-1/4"	3.0

* Pressure at which valve starts opening.

- Capillary tube ... Standard φ 24mm × 1 meter, optional 1.5, 2 and 3 meters

VALVE ACTION

Set Point is pressure for valve opening. Each characteristic of valves is different as follows.



ADJUSTMENT

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

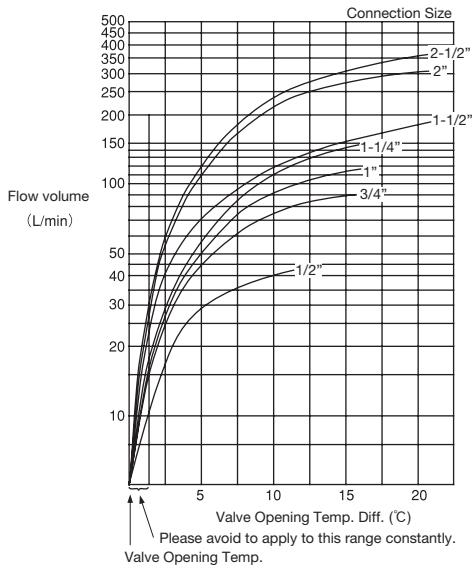
Catalog No.	Change in Temp. Setting
OWR-HWR-XWR- ** 04G	Approx. 4.0°C
** 06G	
** 10G	
OWR-HWR- ** 12G	Approx. 3.0°C
** 14F	Approx. 4.0°C
** 20F	
** 24F	

FLOW CAPACITY

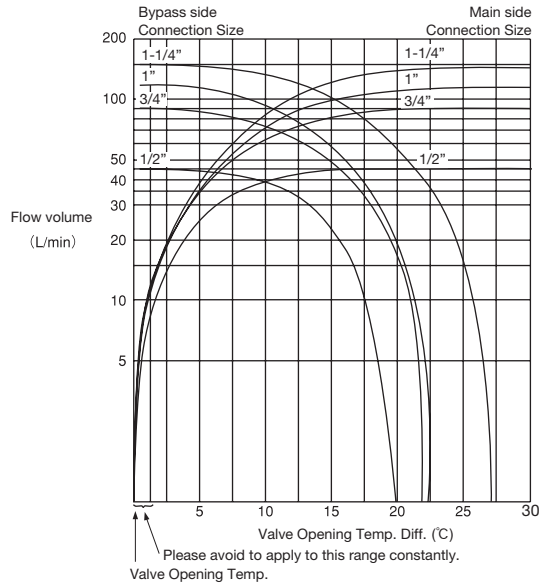
Flow Capacity shows respectively opening temp. diff. at horizontal axis and flow rate of cooling water at vertical axis considering water press. diff. before and behind a valve with 0.1 MPa. (press. diff. between inlet and outlet of valve)

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.

Type OWR, HWR
water pressure difference before and behind a valve: 0.1MPa

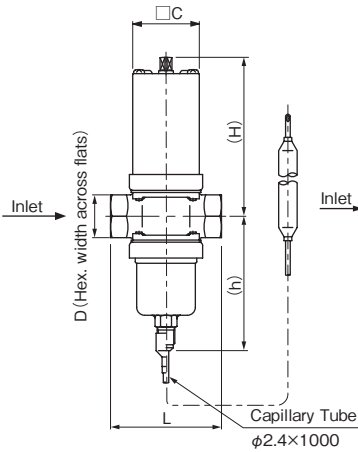


Type XWR
water pressure difference before and behind a valve: 0.1MPa

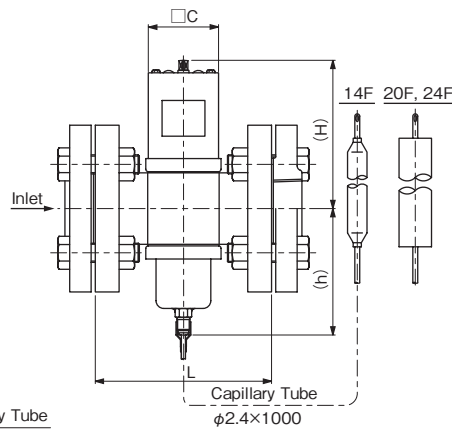


DIMENSIONS

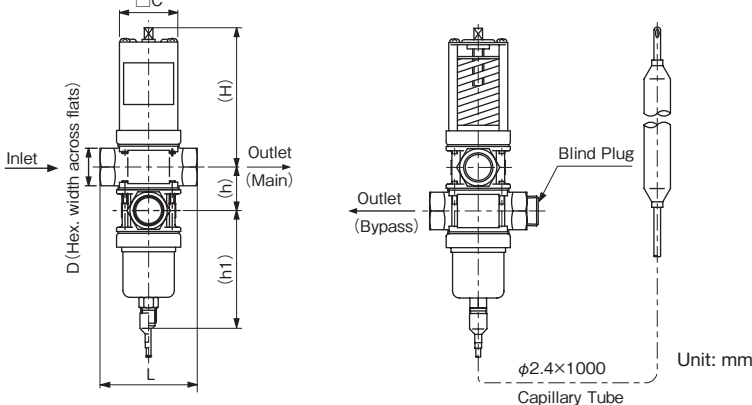
Type OWR-G, HWR-G



Type OWR-F, HWR-F



Type XWR



COMPENSATION COEFFICIENTS

Press. Drop Across Valve: MPa {kgf/cm ² }	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

Catalog No.	Unit: mm					□C
	D	L	H	h	h	
OWR-HWR-	5004G	27	70	100	83	42
	5006G	32	80	104	87	
	5010G	40	90	116	97	
	5012G	50	100	121	102	
	5014F	-	148	125	105	
	5020F	-	173	180	155	89
	5024F	-	179	180	155	
	P7504G	27	70	100	83	
	P7506G	32	80	104	87	
	P7510G	40	90	116	97	
OWR-HWR-	P7512G	50	100	121	102	59
	P7514F	-	148	125	106	
	P7520F	-	173	180	155	89
	P7524F	-	179	180	155	89

Catalog No.	Unit: mm					□C		
	D	L	H	h	h ₁			
XWR-	5004G	27	70	100	31	114	42	
	5006G	32	80	104	39	126		
	5010G	40	90	116	44	141		
	5012G	50	100	121	54	156		
	5014G	50	100	121	54	156		
	XWR-	P7504G	27	70	100	31	114	42
		P7506G	32	80	104	39	126	
		P7510G	40	90	116	44	141	
		P7512G	40	90	116	44	141	
			50	100	121	54	156	