# **Temperature Regulator**

#### 2,2 Direct acting type Pilot operated type Heating Bellows Diaphragm Single valve Double valve Soft seat

### Features

- 1. No need for adjusting tool due to the attached adjusting handle, making adjustment easy.
- 2. Double valve structure offers larger flow rate than single valve type.
- 3. Excellent accuracy since special packing is used for spindle gland packing which affects opening/closing operation of the valve.
- 4. The OB-2G ensures distinguished temperature resistance due to an external pressure type bellows.



Model		del	OB-2	OB-2G		
oplication		Heating	Steam, Hot water			
		Heated	Cold and hot water, Oil, Non-dangerous fluids			
flaximum foressure			15A-40A: 0.7 MPa (1.0 MPa)			
		Body	50A: 0.5 MPa (0.7 MPa)			
			65A: 0.5 MPa (0.7 MPa)			
			80A: 0.4 MPa (0.5 MPa)			
			100A: 0.4 MPa			
			125A: 0.2 MPa (0.35MPa for OB-2)			
			150A: 0.2 MPa			
		Thermal bulb	1.0 MPa			
Max. temperature		nperature	180°C			
mperature Isting range		For liquid	40-120°C	15-100°C		
		For air	40-120°C	15-100°C		
Ambient temperature		emperature	Set temperature –10°C or less	Set temperature +30°C or less		
	Body		Cast iron			
ſ	Valve, valve seat		Phosphor bronze (stainless steel)			
rial	Valve spindle		Stainless steel			
ſ	Bellows		Phosphor bronze			
	Thermal bulb		Stainless steel			
Standard capillary length			15A-80A: 2 m 100A-150A: 3 m			
Connection			JIS 10K FF flanged			
e seat leakage: Refer to P. 📴 - 43.						

## Specifications

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Mate

\* Valv

\* If the ambient temperature is higher than the set temperature or less than 40°C, use the OB-2G (with external pressure type bellows).

\* If using at a pressure higher than 0.5 MPa, with stainless steel trim parts is recommended.

· Available with capillary of up to 5 meter. (Please refer to P.12-46 for errors of set temperature).

· Available with Max, temperature inside [], (Valve and valve seat material, and bellow is different from standard type).

· Available with temperature adjusting range of 30°C. (For OB-2 only).

· Available with thermal well (SUS304 made or with a PTFE cap) for liquid.

### Temperature Adjusting Range

### · OB-2

Temperature	Withstand		
For liquid	For air	temperature (°C)	
40-60	40-60	70	
50-70	50-70	80	
60-80	60-80	90	
80-100	80-100	110	
100-120	100-120	130	

• The term "withstand temperature" means the temperature from pressure resistance of the bellows.

#### · OB-2G

Temperature	Withstand		
For liquid	For air	temperature (°C)	
15-35	15-35	50	
20-40	20-40	50	
35-55	35-55	70	
40-60	40-60	90	
50-70	50-70	100	
60-80	60-80	110	
70-90	70-90	120	
80-100	80-100	130	

• The term "withstand temperature" means the temperature from pressure resistance of the bellows.

## Dimensions (mm) and Weights (kg)



		(mm)		
Nominal size	L	H <sub>1</sub>	Н	Weight
15A	126	60	520	15
20A	130	60	520	16
25A	140	70	540	18
32A	150	75	550	21
40A	160	75	550	23
50A	180	110	620	29
65A	215	125	650	38
80A	260	135	670	48
100A	300	160	750	58
125A	360	190	810	76
150A	382	220	980	125

· The OB-2G comes in nominal size up to 125A.



■OB-2, 2G Nominal Size Selection Chart (For Steam)

#### How to use the chart

When selecting the nominal size of a temperature regulator whose inlet pressure (P<sub>1</sub>), outlet pressure (P<sub>2</sub>), and steam flow rate are 0.3 MPa, 0.25 MPa, and 60 kg/h, respectively, first find intersection point (a) of the inlet pressure of 0.3 MPa and the outlet pressure of 0.25 MPa. Trace down vertically from this intersection point (a) to find intersection point (b) with the flow rate of 60 kg/h.

Since this intersection point (b) lies between nominal sizes 15A or 20A and 25A, select the larger one, 25A. \* Chart of the flow rate is a reference value.