

OB-3,3G

Direct acting type	Pilot operated type	Heating	Cooling
Bellows	Diaphragm	Single valve	Double valve
Soft seat			



■Features

1. Piping can be easily connected due to a union type connection screw.
2. These temperature regulators do not require any adjusting tool because equipped with an adjusting handle which leads to easy adjustment.
3. Since these temperature regulators adopt a dual-valve structure, the flow rate is larger than that of single-valve temperature regulators.
4. Excellent accuracy since special packing is used for spindle gland packing which affects opening/closing operation of the valve.
5. OB-3G ensures distinguished temperature resistance due to an external pressure type bellows.

■Specifications

Model		OB-3	OB-3G	
Application	Cooling	Cold water, Refrigerant		
	Cooled	Cold and hot water, Oil, Non-dangerous fluid		
Max. pressure	Body	0.7 MPa		
	Thermal valve	1.0 MPa		
Maximum temperature		180°C		
Temperature adjusting range	For liquid	40-120°C	15-100°C	
	For air	40-120°C	15-100°C	
Ambient temperature		Set temp. -10°C or less	Set temp.+30°C or less	
Material	Body	Bronze		
	Valve, valve seat	Bronze		
	Valve spindle	Stainless steel		
	Bellows	Phosphor bronze		
	Thermal valve	For liquid	Stainless steel	
		For air	Stainless steel with fin	
Standard capillary length		2 m		
Connection		JIS Rc screwed (union joint)		

- Valve seat leakage: Refer to P.18-39.
- If the ambient temperature is higher than the set temperature or less than 40°C, use the OB-3G (with external pressure type bellows).
- Available with capillary of up to 5 meter. (Please refer to P.18-42 for errors of set temperature).
- Available with temperature adjusting range of 30°C. (For OB-3 only).
- Available with thermal well (SUS304 made or with a PTFE cap) for liquid.

■Temperature Adjusting Range

· OB-3

Temperature adjusting (°C)		Withstand temperature (°C)
For liquid	For air	
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

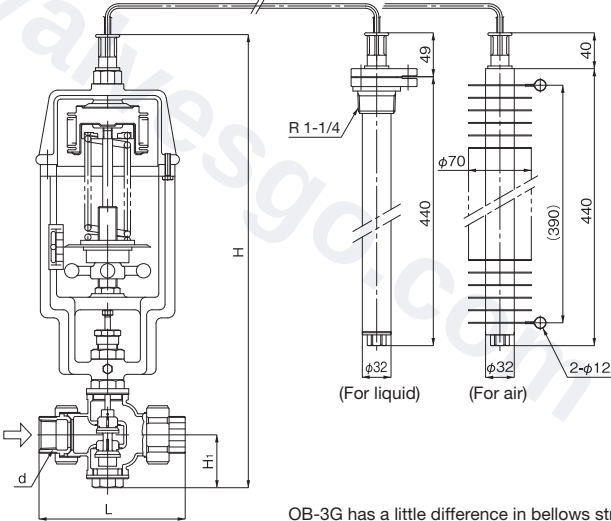
· The term “Withstand temperature” means the temperature from pressure resistance of the bellows.

· OB-3G

Temperature adjusting (°C)		Withstand temperature (°C)
For liquid	For air	
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

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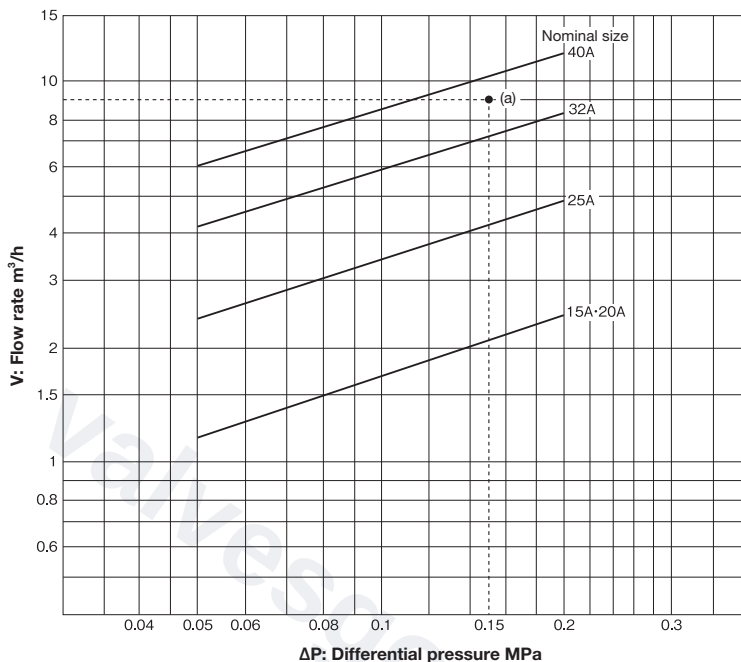
■Dimensions (mm) and Weights (kg)



OB-3G has a little difference in bellows structure.

Nominal size	d	L	H ₁	H	Weight
15A	Rc 1/2	148	55	510	11
20A	Rc 3/4	148	55	510	11
25A	Rc 1	160	60	520	12
32A	Rc 1-1/4	195	60	520	12
40A	Rc 1-1/2	210	65	530	13

■OB-3, 3G Nominal Size Selection Chart (For Water)



How to use the chart

When inlet pressure is 0.3 MPa, outlet pressure is 0.15 MPa, and flow rate is 9 m^3/h , first find the intersection point (a) with the differential pressure (ΔP) 0.15 MPa (0.3 MPa – 0.15 MPa) before and after valve and the flow rate 9 m^3/h . Since this intersection point (a) locates between nominal sizes 32A and 40A, select the larger one, 40A.

* Chart of the flow rate is a reference value.