# OB-1・1G

## Features

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

## Specifications

| Model | | OB-1 | OB-1G |
|---|---|---|---|
| Application | Heating | Steam, Hot water | |
| | Heated | Cold and hot water, Oil, Non-dangerous fluids | |
| Maximum pressure | Body | 0.7 MPa | |
| | Thermal bulb | 1.0 MPa | |
| Max. 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 temperature -10˚C or less | Set temperature +30˚C or less |
| Material | Body | Cast bronze | |
| | Valve | Phosphor bronze | |
| | Valve spindle | Stainless steel | |
| | Bellows | Phosphor bronze | |
| | Thermal bulb | Stainless steel | |
| Standard capillary length | | 2 m | |
| Connection | | JIS Rc screwed (union joint) | |

- If the ambient temperature is higher than the set pressure or the set temperature is less than 40˚C, use the OB-1G (with external pressure type bellows).
- Available with capillary of up to 5 meter.
- Available with thermal well (SUS304 made or with a PTFE cap) for liquid.

## Temperature Adjusting Range

●OB-1

| Temperature adjusting range (˚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.
- Available with temperature adjusting range of 30˚C (the OB-1 only).

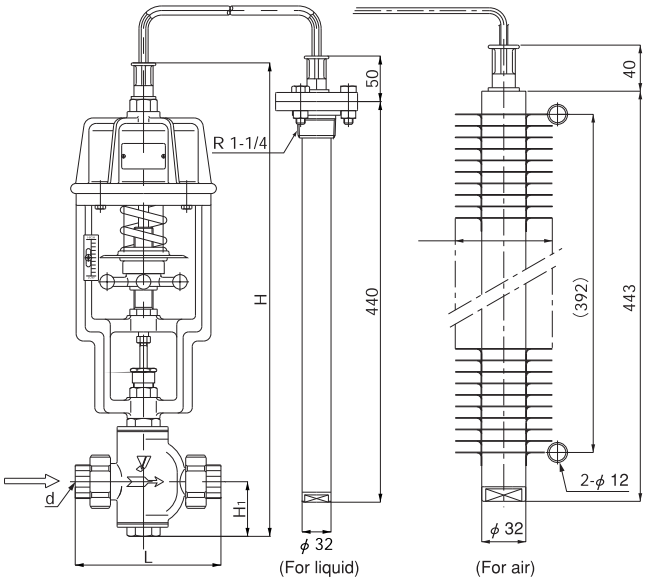
●OB-1G

| Temperature adjusting range (˚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 |

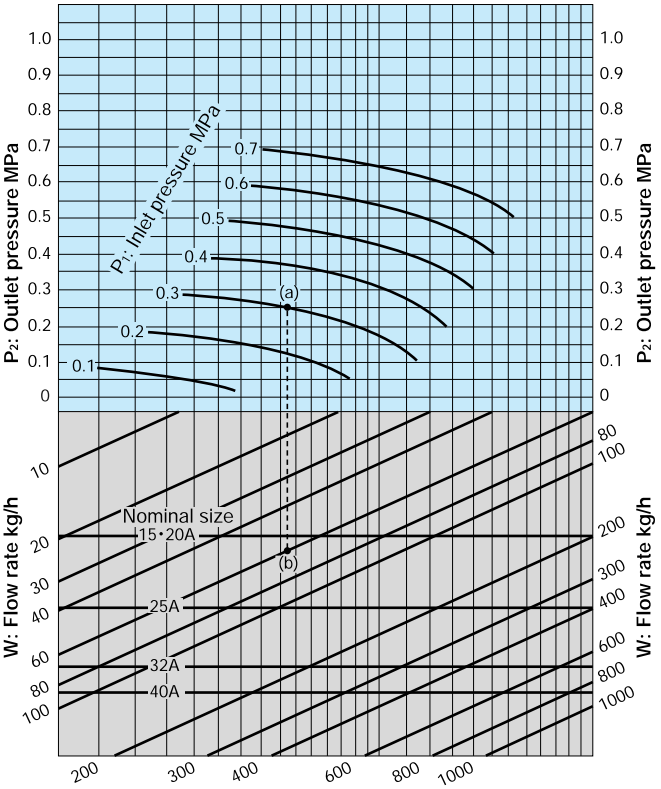
- The term "withstand temperature" means the temperature from pressure resistance of the bellows.

## Dimensions (mm) and Weights (kg)

| 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 |




## Nominal Size Selection Chart (For Steam)




**How to use the chart**

When selecting the nominal size of a temperature regulator whose inlet pressure ($P_1$), outlet pressure ($P_2$), 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.

## Valve Seat Leakage

Unit: steam (kg/h), water (ℓ/h)

| 15A | 20A | 25A | 32A | 40A | 50A | 65A | 80A | 100A | 125A | 150A |
|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 1.5 | 1.8 | 2.4 | 3.0 | 3.6 | 4.8 | 6.0 | 7.2 | 9.0 | 10.8 |

* The values in the table above are max. valve seat leakage observed under the conditions of 0.5 MPa or max. pressure and set temperature + 5˚C (– 5˚C for cooling).

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