

**Direct
acting**

Type RMD31 Back Pressure Regulating Valves

**For
gas**

- Negligible influence is exerted by outlet pressure change due to the use of a pressure balancing construction.
- A valve disc made of synthetic rubber ensures tight shut off when closed.

**2****Back Pressure Regulating Valves (For gas)**

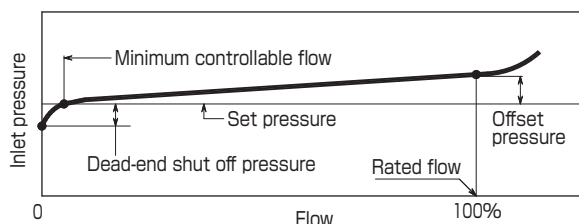
Specifications

| Fluid | Size | Inlet set pressure range (MPa) | Temp. (°C) | Material for main parts | | | | Connection |
|---------------------------|---------|--------------------------------|--------------|-------------------------|------------------------|---------------------|-----------------|------------------|
| | | | | Body & spring case | Valve disc & diaphragm | Valve seat, & liner | Stem | |
| Air & non-corrosive gases | 15-80 | 0.035-0.3 0.2 -0.7 | 0 80 | Cast iron | Synthetic rubber | Bronze | Stainless steel | Flanged JIS10KFF |
| | 100 | 0.035-0.3 0.2 -0.55 | | | | | | |
| | 125-150 | 0.035-0.4 | | | | | | |

Remarks 1. Cast steel body and stainless cast steel body are available on request.
2. Non-copper alloy for fluid contact is available.

Performance

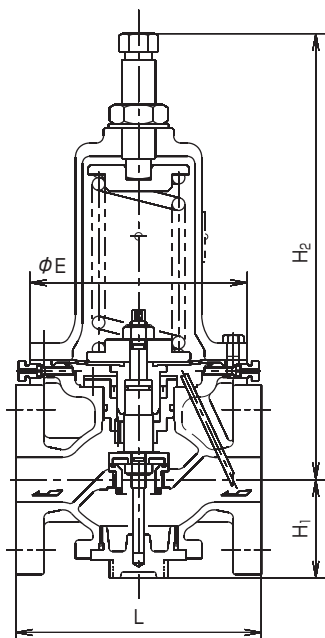
| | |
|-----------------------------|--------------------------------|
| Min. differential pressure | 0.02MPa |
| Offset pressure | 15% of max. set range or less |
| Dead-end shut off pressure | 0.01-0.02MPa |
| Min. controllable flow rate | 5-10m ³ /h (normal) |
| Seat leakage | 0.01% of rated flow or less |

Flow characteristic curve

Cv values

| Size | 15-20-25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|------|----------|-----|-----|----|----|----|-----|-----|-----|
| Cv | 3.9 | 6.3 | 8.3 | 13 | 21 | 29 | 50 | 76 | 109 |

Construction

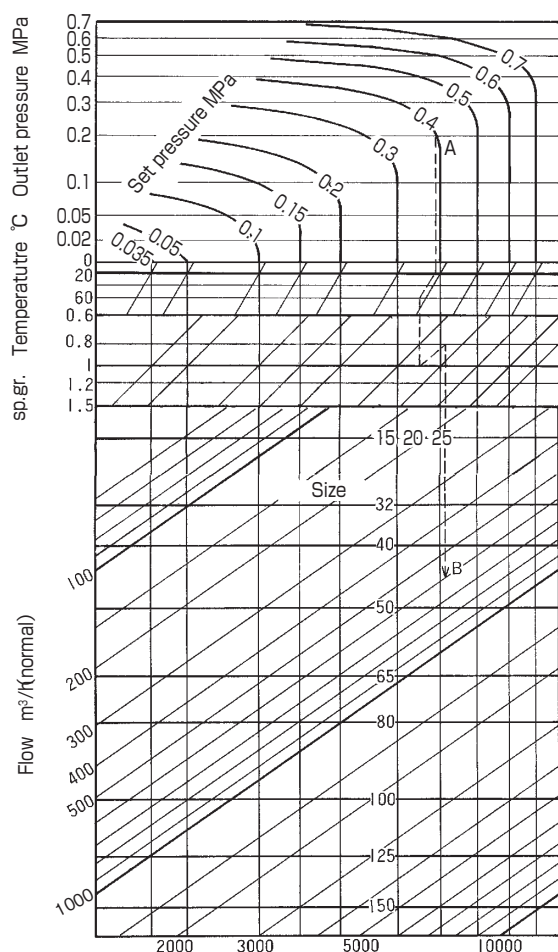
**Dimensions and weights**

(mm, kg)

| Size | Body : Cast iron JIS10KFF | | | | | Body : Cast steel or Stainless cast steel JIS10KFF | | | | |
|------|---------------------------|----------------|----------------|-----|--------|--|----------------|----------------|-----|--------|
| | L | H ₁ | H ₂ | E | Weight | L | H ₁ | H ₂ | E | Weight |
| 15 | 196 | 70 | 317 | 155 | 12 | 206 | 70 | 317 | 155 | 16 |
| 20 | 200 | 70 | 317 | 155 | 12 | 210 | 70 | 317 | 155 | 17 |
| 25 | 200 | 70 | 317 | 155 | 13 | 210 | 70 | 317 | 155 | 17 |
| 32 | 175 | 70 | 317 | 155 | 14 | 220 | 70 | 317 | 155 | 18 |
| 40 | 190 | 80 | 325 | 155 | 16 | 220 | 80 | 325 | 155 | 21 |
| 50 | 195 | 80 | 325 | 155 | 17 | 225 | 80 | 325 | 155 | 22 |
| 65 | 230 | 104 | 425 | 210 | 34 | 280 | 109 | 425 | 210 | 38 |
| 80 | 250 | 104 | 425 | 210 | 35 | 280 | 109 | 425 | 210 | 39 |
| 100 | 290 | 127 | 460 | 250 | 58 | 330 | 121 | 465 | 250 | 65 |
| 125 | 365 | 174 | 607 | 320 | 98 | 380 | 174 | 607 | 320 | 114 |
| 150 | 415 | 207 | 787 | 380 | 159 | 470 | 209 | 810 | 380 | 190 |

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Sizing



Example

Set pressure (inlet) : 0.4MPa

Outlet pressure : 0.2MPa

Temperature : 60°C

Specific gravity : 0.8 (air : 1)

Flow : 600m³/h (normal)

Draw a vertical line downward from the intersection A of 0.4MPa inlet set pressure line and 0.2MPa outlet pressure line until it reaches 20°C temperature line.

From there, draw a line in parallel with oblique line to 60°C temperature line and continue to draw a vertical line downward to 1 specific gravity line.

Then, draw a line parallel with oblique line to 0.8 specific gravity line.

From there, draw a vertical line downward to 600m³/h (normal) flow line, point B.

The point B is between size 40 line and size 50 line.

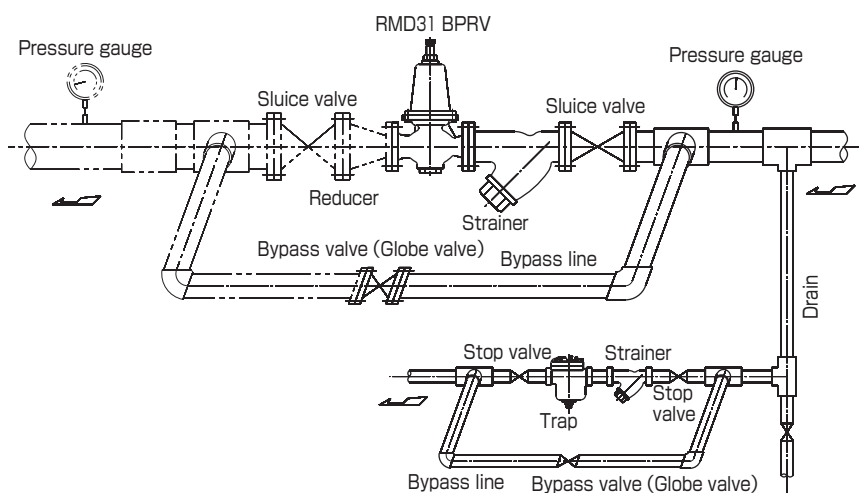
The required valve size is 50.

Space required for disassembling and maintenance

(mm)

| Size | 15~32 | 40~50 | 65~80 | 100 | 125 | 150 |
|-------------------------------|-------|-------|-------|-----|-----|------|
| Above the center of pipe line | 470 | 480 | 640 | 730 | 930 | 1220 |

Installation example



Note : RMD31 can be installed in both horizontal and vertical piping