

**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 prevents seat leakage.


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

## Specifications

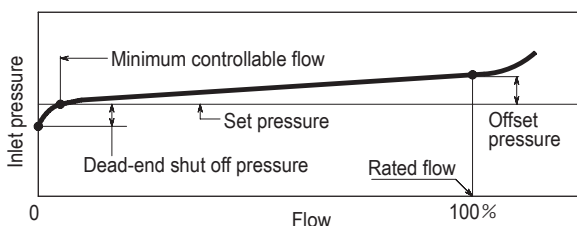
Fluid	Size	Inlet set pressure range (MPa)	Temp. (°C)	Material for main parts				Connection
				Body & spring case	Valve disc & diaphragm	Valve seat, & liner	Stem	
Air & non-corrosive gases	15-80	0.035-0.3 0.2 -0.7	0   80	Cast iron	Synthetic rubber	Bronze	Stainless steel	Flanged JIS10KFF
	100	0.035-0.3 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 <sup>3</sup> /h (normal)
Seat leakage	Nil

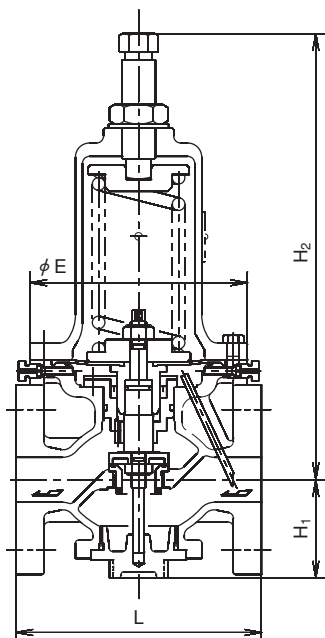
## Flow characteristic curve



## 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



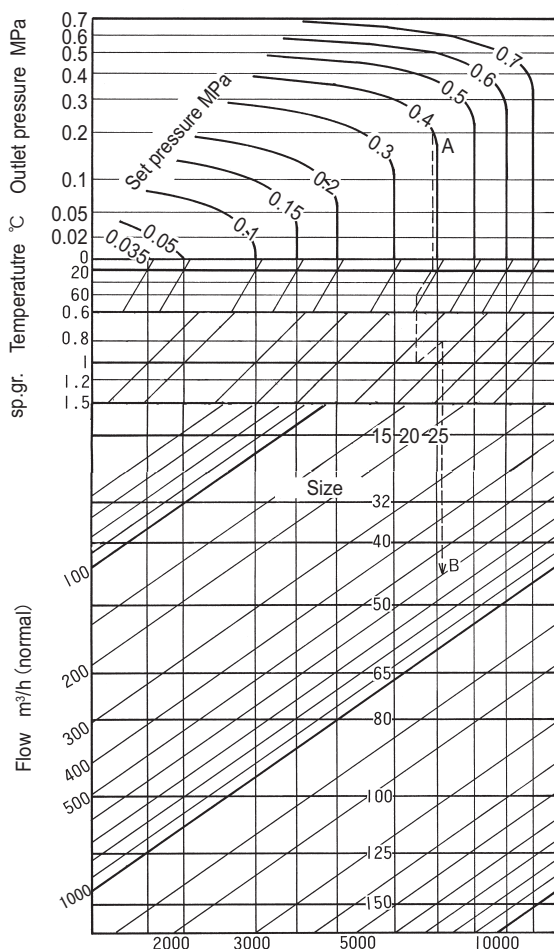
## Dimensions and weights

(mm, kg)

Size	Body : Cast iron JIS10KFF					Body : Cast steel or Stainless cast steel JIS10KFF				
	L	H <sub>1</sub>	H <sub>2</sub>	E	Weight	L	H <sub>1</sub>	H <sub>2</sub>	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

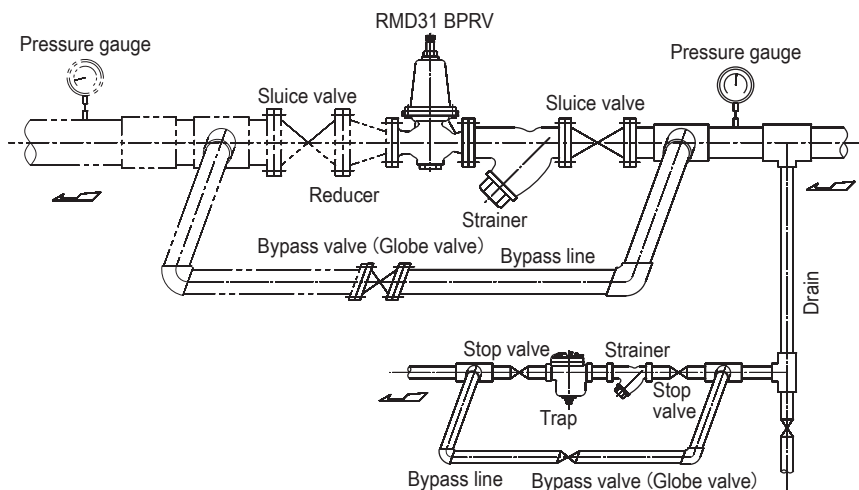
Set pressure (inlet) : 0.4MPa  
 Outlet pressure : 0.2MPa  
 Temperature : 60°C  
 Specific gravity : 0.8 (air : 1)  
 Flow : 600m<sup>3</sup>/h (normal)  
 Draw a vertical line downward from the intersection A of 0.4MPa inlet set pressure line and 0.2MPa outlet pressure line until it reaches 20°C temperature 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 600m<sup>3</sup>/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