

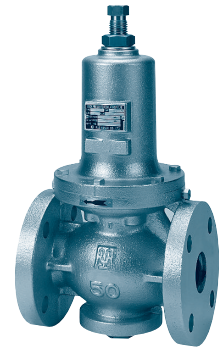


Direct acting

# Type RMD31L Back Pressure Regulating Valves

For gas

- For low pressure use of RMD31 back pressure regulating valve.
- 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	Inlet set pressure range (kPa)	Temp. (°C)	Material for main parts					Connection
			Body	Valve disc & diaphragm	Diaphragm pusher, valve seat & liner	Stem	Spring case	
Air & non-corrosive gases	10-50	0-80	Cast iron	Synthetic rubber	Bronze or stainless steel	Stainless steel	Cast iron	Flanged JIS10KFF
			Cast steel					
			Stainless cast steel					

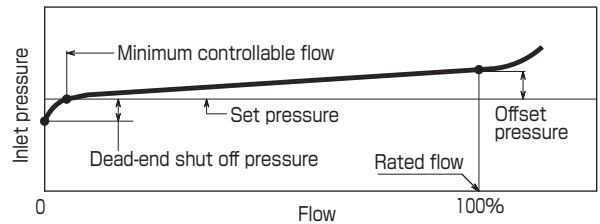
Remark : Non-copper alloy for fluid contact is available.

## Performance

Min. differential pressure	10kPa
Offset pressure	Approx. 15% of max. set range (7.5kPa)
Dead-end shut off pressure	Approx. 1.6-6.6kPa <sup>(1)</sup>
Min. controllable flow	Approx. 3-8m <sup>3</sup> /h (normal) <sup>(1)</sup>
Seat leakage	0.01% of rated flow or less

Note <sup>(1)</sup> : The bigger the pressure difference between the inlet and the outlet, the bigger the dead-end shut off pressure and the min. controllable flow.

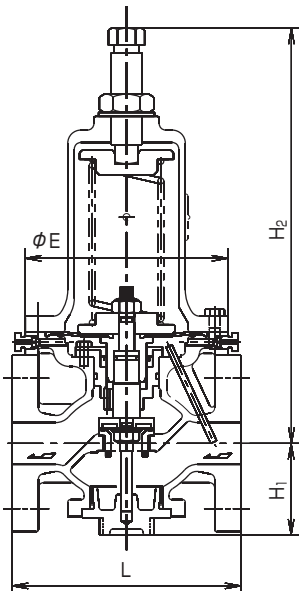
Flow characteristic curve



## 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



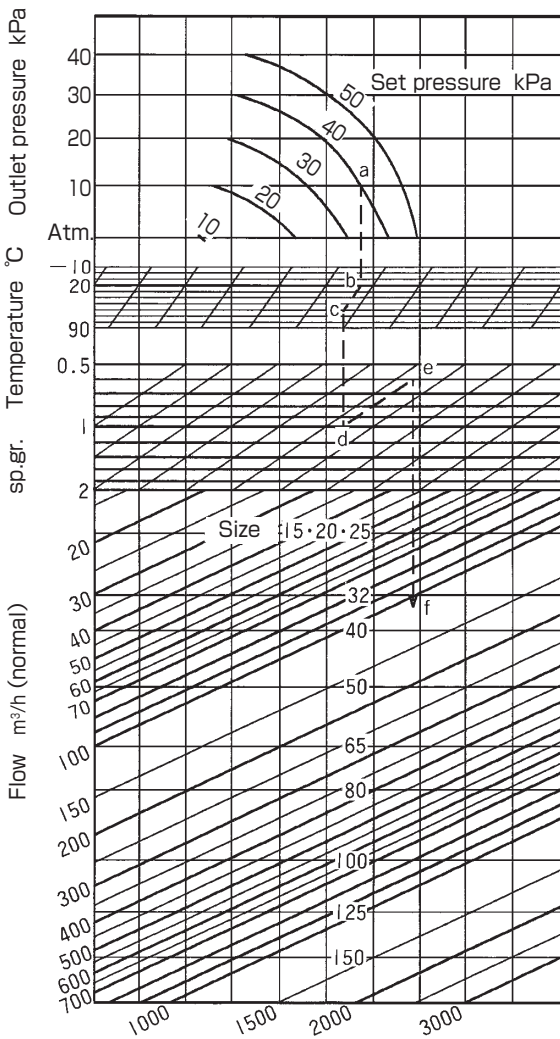
Dimensions and weights

(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	363	155	12	206	70	363	155	16
20 · 25	200	70	363	155	13	210	70	363	155	17
32	175	70	363	155	14	220	70	363	155	18
40	190	80	371	155	16	220	80	371	155	21
50	195	80	371	155	17	225	80	371	155	22
65	230	104	484	210	34	280	109	484	210	38
80	250	104	484	210	35	280	109	484	210	39
100	290	127	531	250	58	330	121	536	250	65
125	365	174	685	320	98	380	174	685	320	114
150	415	207	897	380	150	470	207	897	380	162

# Type RMD31L Back Pressure Regulating Valves

## Sizing



Use the following chart to select the suitable valve size

In the event that the inlet pressure or the outlet pressure is not constant but stays within range, select the minimum difference in pressure between the inlet pressure and outlet pressure to choose the correct size.

### Example

Set pressure (inlet) : 40kPa

Outlet pressure : 10kPa

Temperature : 60°C

Specific gravity : 0.6 (air : 1)

Flow : 110m<sup>3</sup>/h (normal)

From intersection (a) of 10kPa outlet pressure line and 40kPa inlet set pressure line, draw a vertical line down to 20°C temperature line, point (b).

From point (b), draw a line in parallel with oblique line to 60°C temperature line, point (c).

Draw a vertical line from point (c) down to 1 specific gravity line, point (d).

From point (d), draw a vertical line in parallel with oblique line to 0.6 specific gravity line, point (e).

From point (e), draw a vertical line downward to 110m<sup>3</sup>/h (normal) flow line, point (f).

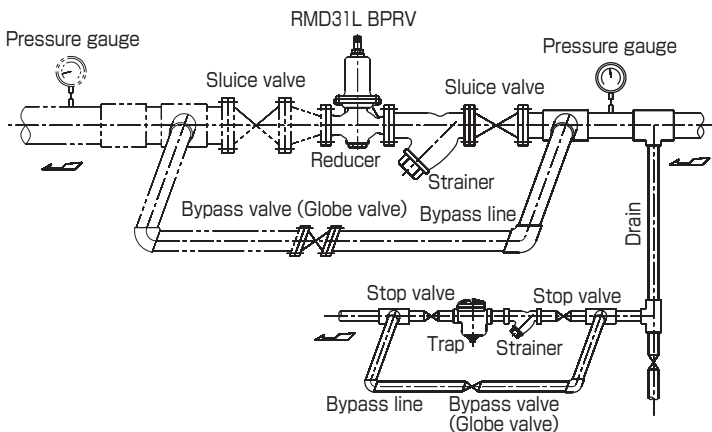
The point (f) is between size 32 line and size 40 line. The required valve size is 40.

## Space required for disassembling and maintenance

(mm)

Size	15-32	40-50	65-80	100	125	150
Above the center of pipe line	520	530	650	720	1010	1330

## Installation example



Note : Install upright in horizontal piping.