

Pilot operated

Type RFD42 Back Pressure Regulating Valves

For liquid

- Versatile for many applications
- Large capacity for its size.
- Small offset


2
Pressure Regulating Valves (For liquid)

Specifications

Fluid	Inlet set pressure range (MPa)	Temp. (°C)	Material for main valve (OD3)			Material for pilot valve (RPD52-2)			Connection
			Body & cover	Valve disc & diaphragm	Valve seat	Body	Spring case	Valve disc & diaphragm	
Water, light oil & non-corrosive liquid	0.05–0.25	0 80	Cast iron ⁽¹⁾	Synthetic rubber	Bronze	Bronze	Cast iron	Synthetic rubber	Flanged JIS10KFF
	0.2–0.65								Flanged JIS16KFF
	0.6–1.2 1.0–2.0		Cast steel						Flanged JIS20KRF

 Note ⁽¹⁾ : For water lower than 60°C, rust-proof paint is applied for water contact surface.

Remark : Stainless cast steel body are available on request.

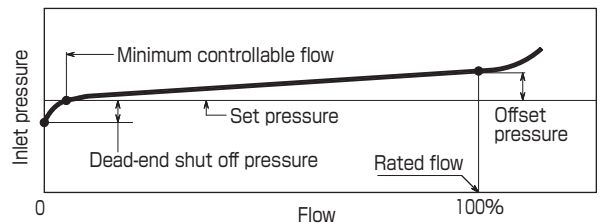
Performance

Max. differential pressure	1.5MPa
Min. differential pressure	0.04MPa
Offset pressure	10% of set pressure (min. 0.04MPa) or less
Dead-end shut off pressure ⁽²⁾	0.01–0.03MPa (For set range 0.05–0.25MPa)
	0.02–0.05MPa (For set range 0.2–0.65MPa)
	0.06–0.09MPa (For set range 0.6–1.2 MPa)
	0.08–0.12MPa (For set range 1.0–2.0 MPa)
Usable max. viscosity fluid	Light oil 20mm ² /s or less
Min. controllable flow rate (water) ⁽²⁾	5–15 ℓ /min
Seat leakage	0.01% of rated flow or less

 Note ⁽²⁾ : The bigger the pressure difference between the inlet and the outlet, the bigger the dead-end shut off pressure and the min. controllable flow.

 Except for water, the flow rate should be divided by $\sqrt{\gamma}$ (γ : sp.gr., water (4°C) : 1).

Flow characteristic curve



Cv values

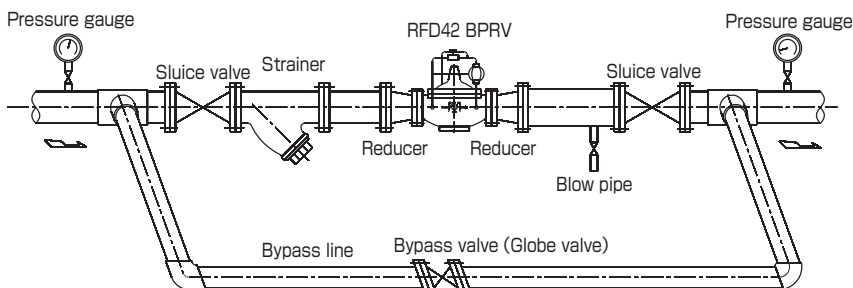
Size	40	50	65	80	100	125	150	200	250	300
Cv	22.5	40	62.5	90	160	250	360	640	1000	1440
Max. flow rate (water) ℓ /min ⁽³⁾	533	800	1300	2000	3000	5000	7700	12000	17000	24000

 Note ⁽³⁾ : Except for water, the flow rate should be divided by $\sqrt{\gamma}$ (γ : sp.gr., water (4°C) : 1).

Space required for disassembling and maintenance (mm)

Size	40	50	65	80	100	125	150	200	250	300
Above the center of pipe line	450	460	470	480	500	530	570	670	870	1040

Installation example

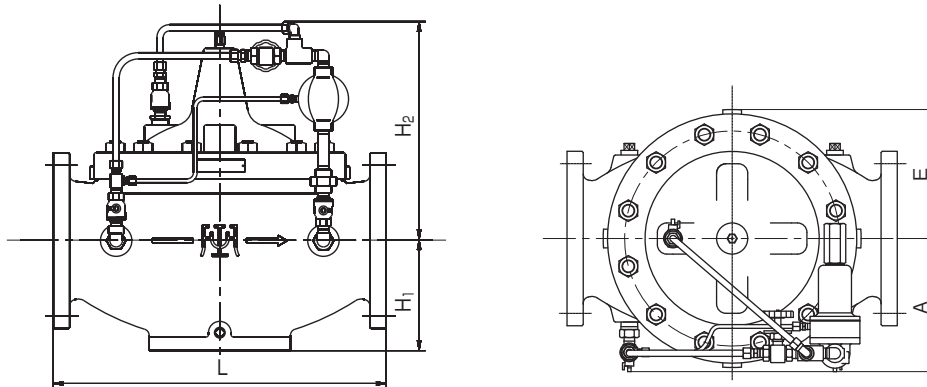


Note 1. Vertical and horizontal installation are possible. But avoid installation in horizontal with upside-down or sideways absolutely.

2. It is recommended that straight pipe lines of at least 600mm in length (for size 40), 900mm (for size 50–100), 1200mm (for size 125, 150), 1600mm (for size 200, 250) and 2000mm (for size 300) are provided in front of and behind the RFD42.

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Construction & Dimensions



Dimensions and weights

(mm, kg)

Material/Connection	Size Symbol	40	50	65	80	100	125	150	200	250	300
Cast iron JIS 10K	L	220	260	290	330	390	470	530	670	800	900
	H ₁	75	90	97	110	125	155	175	220	275	333
	H ₂	260	280	300	300	320	320	345	424	538	640
	A	110	120	135	145	180	200	220	270	320	375
	E	125	113	105	125	147	177	207	265	320	375
	Weight	16	20	32	39	62	94	138	240	420	695
Cast iron JIS 16K	L	220	260	290	334	394	474	534	678	808	908
Cast steel JIS 20K	L	216	260	286	330	390	480	536	684	816	916

Sizing

Use the following chart to select the suitable valve size.

