You can believe in.

PRESSURE REDUCING VALVE

GD-200 SERIES

GD-200・GD-200H

ISO 14001 9001

GD-200 SERIES PRESSURE REDUCING VALVES ARE WIDELY USED FOR CONSTRUCTION EQUIPMENT, AIR CONDITIONING EQUIPMENT, FACTORY EQUIPMENT, INDUSTRIAL EQUIPMENT, ETC. THEY GUARANTEE BOTH STABLE REDUCED PRESSURE AND A LARGE FLOW RATE.

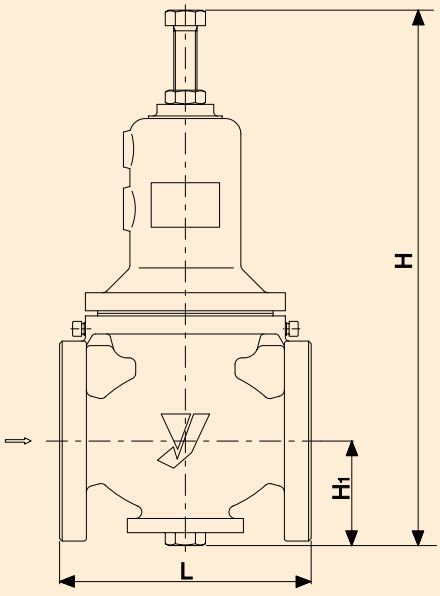
Features

1. Pressure balancing mechanism enables stable reduced pressure without affecting the inlet pressure.
2. The stainless steel made valve seat enables high resistant to corrosion.
3. Easy maintenance and inspection. Internal inspection can be easily done because disassembly is done from the top in only one direction.
4. The main valve features a single seat and disc, thereby eliminating leakage.
5. Maximum inlet pressure is up to 2.0MPa because of ductile cast iron body for model GD-200H.

Specification

Model		GD-200	GD-200H
Application		Water, Oil , Air, Non-corrosive fluids	
Connection		JIS 10K FF Flanged	JIS 20K RF Flanged
Inlet pressure		1.0MPa {10kgf/cm²G} or less	2.0MPa {20kgf/cm²G} or less
Reduced pressure	15A～50A	(A)0.05～0.25MPa, (B)0.26～0.7MPa	(A)0.05～0.25MPa, (B)0.26～0.7MPa, (C)0.5～1.0MPa
	65A, 80A		(A)0.05～0.25MPa, (B)0.26～0.7MPa, (C)0.5～0.9MPa
	100A～150A	(A)0.05～0.25MPa, (B)0.26～0.5MPa	(A)0.05～0.25MPa, (B)0.26～0.5MPa, (C)0.5～0.75MPa
Min. differential pressure		0.05MPa {0.5kgf/cm²}	
Max. pressure reduction ratio		10 : 1	
Temperature		5～80℃*	
Valve seat leakage		None	
Material	Body	Ductile Cast Iron	
	Valve / Diaphragm	NBR*	
	Valve Seat	Stainless Steel (SUS304)**	
	Spindle	Stainless Steel (SUS303 or 304)**	

● Viscosity: 600 cSt or less
* Rubber parts: FKM is also available {Max. temperature 90℃}
** Trim (Valve seat, Spindle) material (SUS316) is also available (GD-200HS).



Dimensions and Weights

(mm)

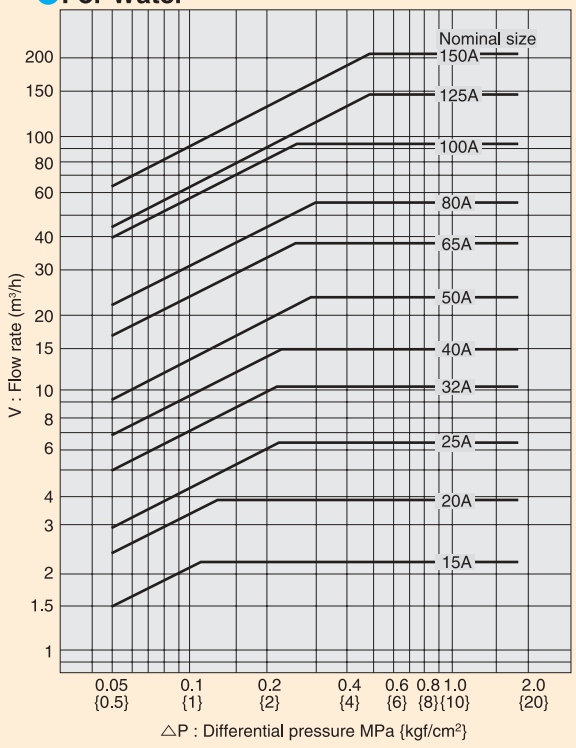
Nominal Size	L	H	H1	Weight(kg)
15A	145	297	57	8.2
20A	150	297	57	8.2
25A	150	320	67	10.0
32A	195	397	76	17.3
40A	195	397	76	17.3
50A	195	415	81	19.2
65A	270	555	110	40.0
80A	270	582	125	43.7
100A	308	645	143	70.7
125A	380(384)	849	179	144(145)
150A	400(404)	918	204	173(175)

●L and Weight shown in parenthesis are for GD-200H.

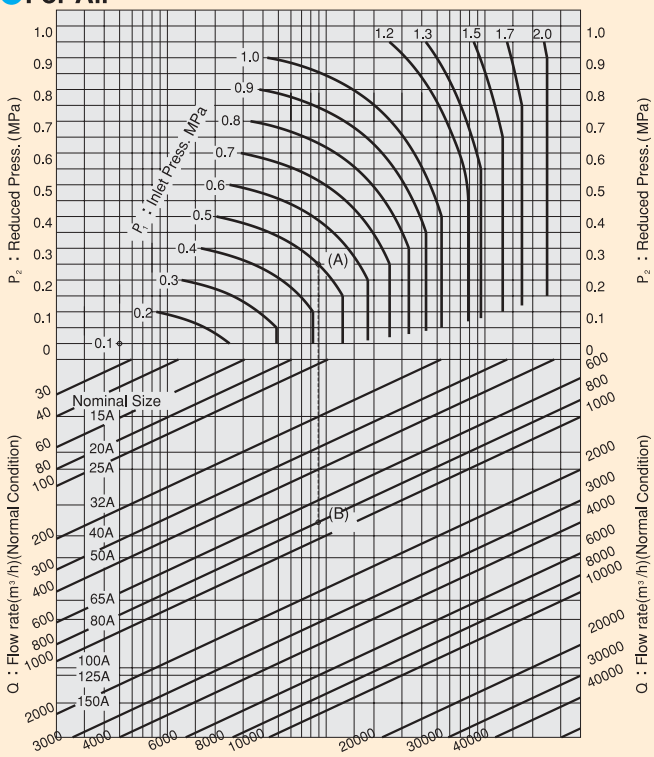
Yoshitake® INC.

Nominal Size Selection Chart

For Water



For Air



Nominal Size Selection Formula

Calculation formula for Cv value

〈For gas〉

In case of $P_2 > \frac{P_1}{2}$ $\quad Cv = \frac{Q}{2940}\sqrt{\frac{(273+t)\,G}{\triangle P\,(P_1+P_2)}}$

In case of $P_2 \leqq \frac{P_1}{2}$ $\quad Cv = \frac{Q\sqrt{(273+t)\,G}}{2550P_1}$

〈For liquid〉 $\quad Cv = \frac{0.365V\sqrt{G}}{\sqrt{\triangle P}}$

P_1: Inlet pressure (MPa・A)
P_2: Reduced pressure (MPa・A)
$\triangle P$: $P_1 - P_2$ (MPa)
Q: Maximum flow rate of Gas (m³/h, normal condition)
G: Specific gravity (Gas: specific gravity to air, Liquid: specific gravity to water)
t: Fluid temperature (℃)
V: Maximum flow rate of liquid (m³/h)
Cv: Cv value of specified nominal size
Iv: Viscosity index
Mcst: Viscosity (cSt)

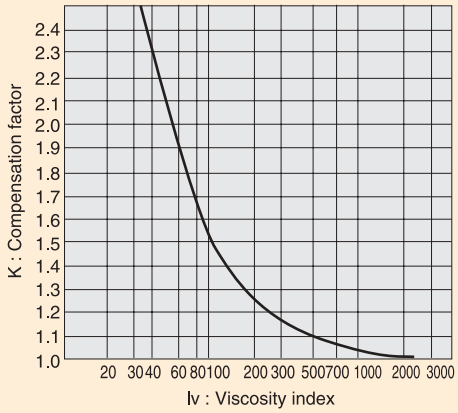
Viscosity compensation curve

First, find viscosity index Iv.

$$Iv = \frac{72780}{Mcst}\left(\frac{\triangle P}{G}\right)^{\frac{1}{4}} G^{\frac{1}{2}}$$

Find K from calculated Iv on the viscosity compensation curve. The calculated maximum flow rate (V) devided by K is the value of the compensated flow rate.

Compensated maximum flow rate:
V'=V/K (m³/h)



Cv Value

Nominal Size	15A	20A	25A	32A	40A	50A	65A	80A	100A	125A	150A
Cv Value	2.5	4	5	8	12	16	28	36	68	75	108

Product lineup for GD-200 series

GD-200C **Nylon coated pressure reducing valve** (Coated with Nylon both inside and outside of body for superior anti-corrosion)
GD-20R **Primary pressure regulating valve** (Used in by-pass systems to prevent pump shut-off and to maintain a constant pressure in the line)
GD-20R **Pressure sustaining valve** (Used as a pressure sustaining valve to prevent dripping induced by gravitational force when the pump is turned off)
GD-21 **Differential pressure regulating valve** (Used as the pump relief valve in closed circuit of air conditioning equipment in high-rise building)

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