GD-400,400SS

Direct type | Pilot type | Piston | Diaphragm
Bellows | Internal sensing | External sensing | Stainless steel
With handle | Built-in strainer | Slight pressure | Remote
Valve leakage 0 | Nylon



GD-400SS

■Features

1. Pressure balance structure can keep the reduced pressure at a constant level without being affected by inlet pressure.
2. Due to simple structure, disassembly and maintenance can be conducted easily.
3. Wide range of use due to high maximum pressure ratio.
4. Diaphragm with a large pressure sensing area has accuracy to high set pressure.

■Specifications

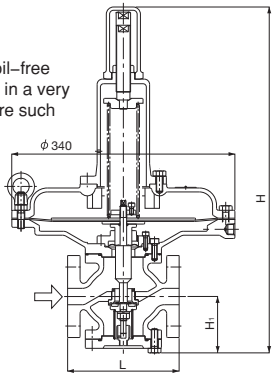
Model		GD-400	GD-400SS
Nominal size		15-50A	
Application		Air, Nitrogen gas *1	
Inlet pressure		2.5-400 kPa	
Reduced pressure		(A) 0.5-1.4 kPa (B) 1.2-3.3 kPa (C) 3.0-8.0 kPa (D) 7.0-20 kPa	
Working temperature		5-60°C	
Minimum differential pressure		2.0 kPa	
Maximum pressure reduction ratio		400:1	
Reduced pressure detection method		External sensing *2	
Minimum adjustable flow rate		15-25A: 1.2 m^3/h (standard condition) 32-50A: 10.0 m^3/h (standard condition)	
Material	Body	Cast iron	Cast stainless steel (SCS14)
	Valve	Stainless steel	
	Valves seat	Stainless steel	
	Disc	NBR *3	
	Spindle	Stainless steel	
	Diaphragm	NBR *3	
Connection		JIS 10K FF Flanged	

*1 Please contact us when using for other fluids.
*2 A conduit (φ8-2 m) and a joint for external sensing are included for GD-400.For GD–400SS, please prepare one at your end.
*3 Available with FKM type.
*4 Use on a compressed air system with dry air from oil–free compressors may cause deterioration of rubber parts in a very short time (ozone crack). Please consult with us before such installation.

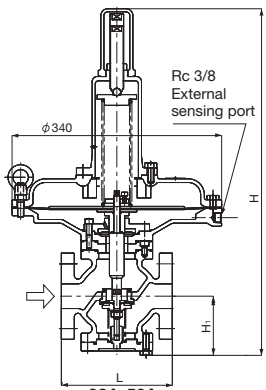
■Dimensions (mm) and Weights (kg)

Nominal size	L	H1	H	Weight
15A	166	86	526	29.0 (32.0)
20A	170	86	526	29.0 (32.0)
25A	170	86	526	30.0 (33.0)
32A	180	96	561	32.0 (34.0)
40A	180	96	561	32.0 (34.0)
50A	180	101	561	33.0 (35.0)

* The values in parentheses are the weights of the GD-400SS.

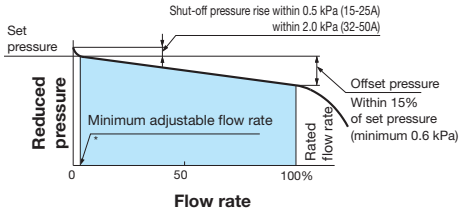


15A-25A



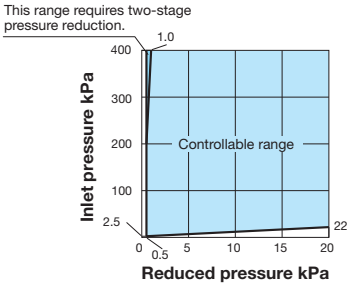
32A-50A

Flow Characteristic Chart

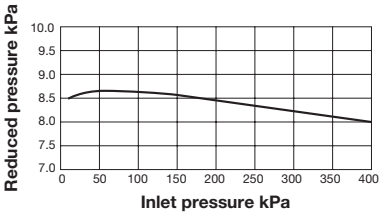


* 15-25A: 1.2 m³/h (standard condition)
  32-50A: 10.0 m³/h (standard condition)

Specifications Chart

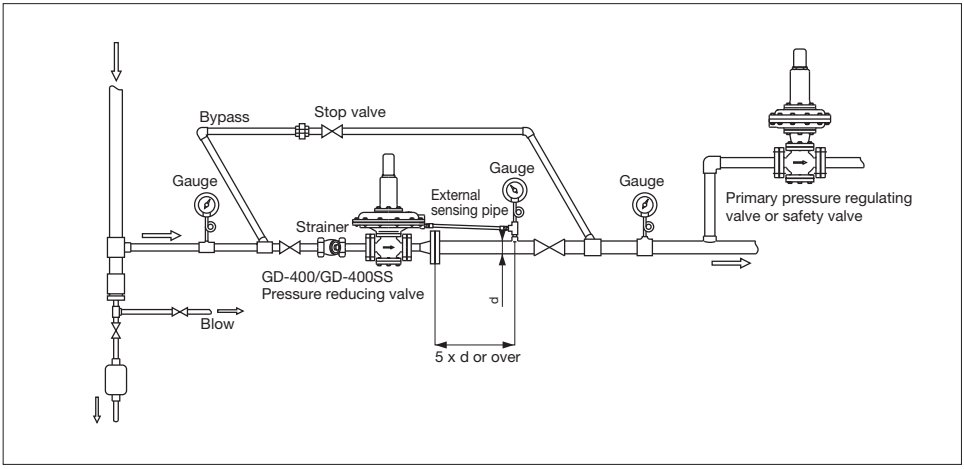


Pressure Characteristic Chart



This chart shows variation in reduced pressure when the inlet pressure of 400 kPa is changed to 10 kPa while the reduced pressure is set at 8.0 kPa.

■Piping Diagram Example



[Precautions]

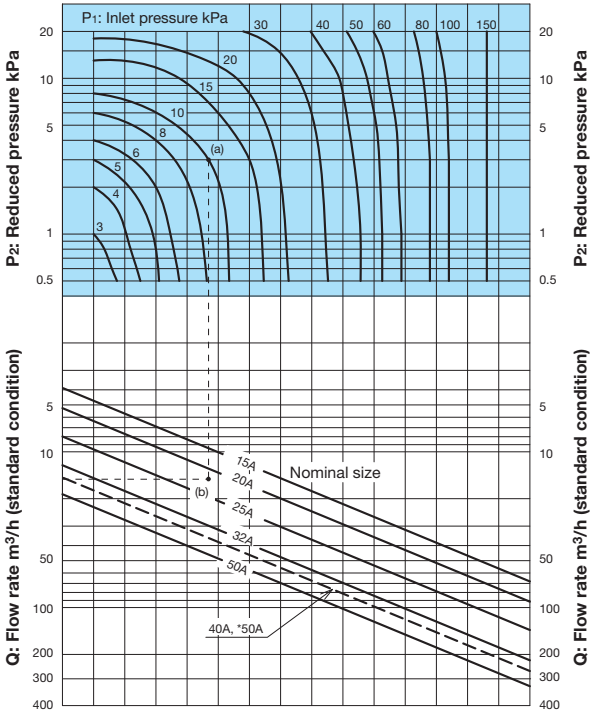
1. Connect the external sensing part to the outlet side.
2. Do not adjust needle valve of the pressure reducing valve unreasonably.
3. Make sure to use a pipe with a diameter that can keep the inside flow velocity between 5 m/s and 15 m/s for outlet side.
4. When performing pressure test or airtight test after connected to the piping, apply the airtest pressure specified in the right table.

* If pressure beyond the specified airtest pressure is applied, internal parts may be damaged.

Airtight test	Airtight test pressure			
	Inlet pressure			400 kPa or less
	Reduced pressure	Spring range	A	1.8 kPa or less
			B	4.2 kPa or less
			C	10 kPa or less
			D	25 kPa or less

■Chart for Selecting Nominal Sizes (GD-400)

When the inlet pressure is between 2.5 kPa and 200 kPa (Fluid: 20°C Air)



* FKM type for 50A.

[Example]

When selecting the nominal size of a pressure reducing valve whose inlet pressure (P_1), reduced pressure (P_2), and flow rate are 10 kPa, 3 kPa, and 15 m^3/h (standard condition), respectively, first find intersection point (a) of the inlet pressure of 10 kPa and the reduced pressure of 3 kPa. Trace down vertically from this intersection point to find intersection point (b) with the flow rate of 15 m^3/h (standard condition). Since intersection point (b) lies between nominal sizes 20A and 25A, select the larger one, 25A.

* Set the safety factor at 80 to 90%.

Table 1: When the inlet pressure is between 200 kPa and 400 kPa

Nominal size	Inlet pressure (kPa)	Rated flow rate (m^3/h [standard condition])	
		Reduced pressure (kPa)	
		0.5-4	4-20
15A	200-400	60	60
20A	200-300	90	90
	300-400	90	120
25A	200-300	120	120
	300-400	120	150
	400	120	190

Nominal size	Inlet pressure (kPa)	Rated flow rate (m^3/h [standard condition])	
		Reduced pressure (kPa)	
		0.5-4	4-20
32A	200-400	200	250
	300-400	200	300
40A	200-300	250	300
	300-400	250	350
50A	200-300	350 [300]	400 [350]
	300-400	350 [300]	450 [400]

* The values in parentheses are the rate of FKM type.