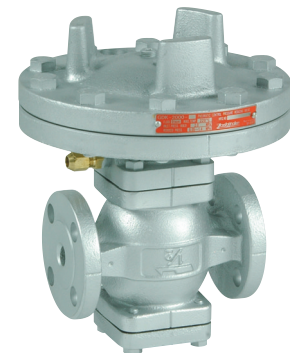


GDK-2000

Features

1. Due to direct acting type the actuating parts are fewer and structure is simple but robust.
2. Spherical main valve offers great sealability and great reduction of valve seat leakage (compliant with ANSI Class IV).
3. Large-size diaphragm ensures high Cv value and distinguished controllability against load fluctuations.
4. Remote operation makes pressure adjustment easy, and the pressure setting is wide.



Flanged type

Specifications

Model	GDK-2000		
Application	Steam		
Reduced pressure sensing method	External sensing		
Inlet pressure	0.1-2.0 MPa	0.1-1.0 MPa	
Reduced pressure	0.05-1.4 MPa	0.05-0.9 MPa	
	90% or less of inlet pressure (gauge pressure)		
Operation air pressure	Refer to the loading air pressure-set pressure chart.		
Minimum differential pressure	0.05 MPa		
Maximum pressure reduction ratio	10:1		
Maximum temperature	220°C		
Valve seat leakage	0.01% or less of rated flow		
Material	Body	Ductile cast iron	
	Valve	Stainless steel	
	Valve seat	Stainless steel	
	Diaphragm	Stainless steel	
Reduced pressure sensing pipe	Copper pipe ϕ 8-2 m		
Connection	JIS Rc screwed	JIS 20K RF flanged	JIS 10K FF flanged

- Available with ASME or EN flanged.

Dimensions (mm) and Weights (kg)

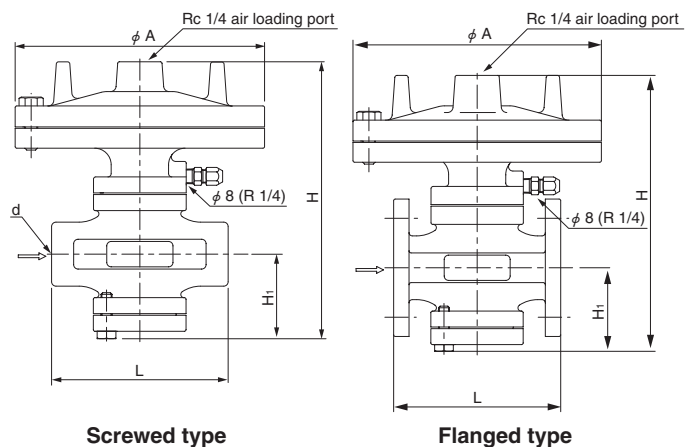
●Screwed type

Nominal size	d	L	H ₁	H	A	Weight
15A	Rc 1/2	150	74	244	200	12.4
20A	Rc 3/4	150	74	244	200	12.4
25A	Rc 1	160	76	251	226	16.4
32A	Rc 1-1/4	180	90	282	226	19.9
40A	Rc 1-1/2	180	90	282	226	19.9
50A	Rc 2	230	103	319	276	30.5

●Flanged type

Nominal size	L	H ₁	H	A	Weight
15A	146 (142)	74	244	200	13.9 (13.7)
20A	146 (142)	74	244	200	14.4 (14.2)
25A	156 (152)	76	251	226	19.2 (18.8)
32A	176 (172)	90	282	226	22.4 (22.0)
40A	196 (192)	90	282	226	22.9 (22.5)
50A	222 (218)	103	319	276	33.5 (33.5)
65A	282 (278)	122	373	352	61.8 (61.5)
80A	302 (294)	135	399	352	69.1 (66.9)
100A	342 (330)	167	488	401	108.6 (105.0)

- The above values in parentheses are the dimensions and weights of JIS 10K FF flanged.

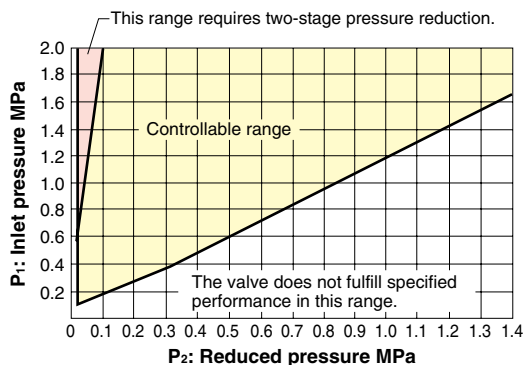


Screwed type

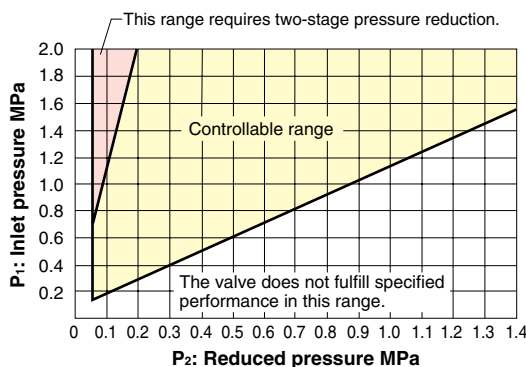
Flanged type

Specifications Selection Chart

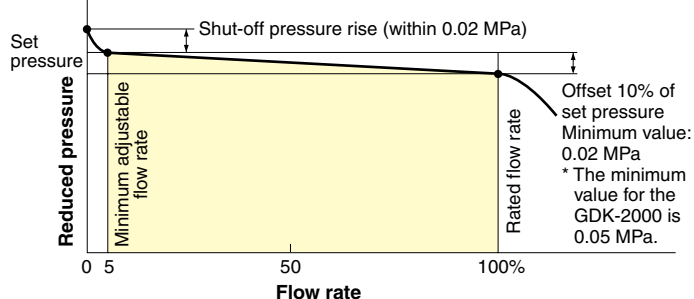
● **GPK-2001 · 2003**



● **GDK-2000**

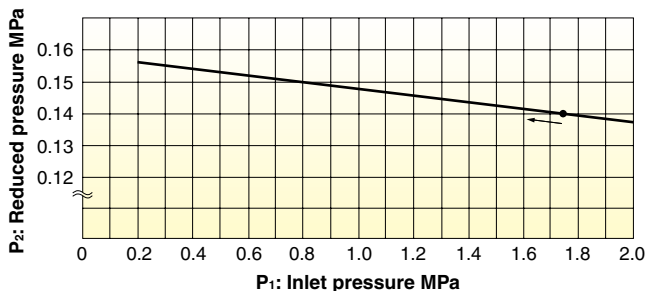


Flow Characteristic Chart



Pressure Characteristic Chart

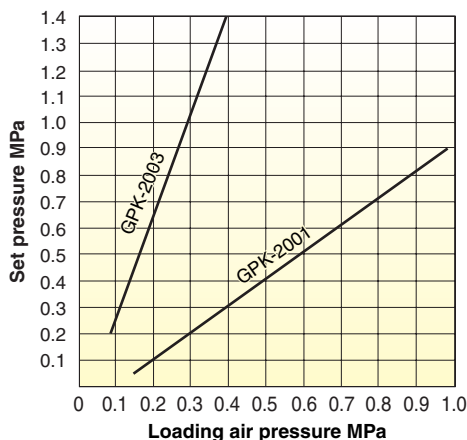
● **GPK-2001 · 2003**



This chart shows variation in reduced pressure when the inlet pressure of 1.75 MPa is changed between 0.3 MPa and 1.0 MPa while the reduced pressure is set at 0.14 MPa.

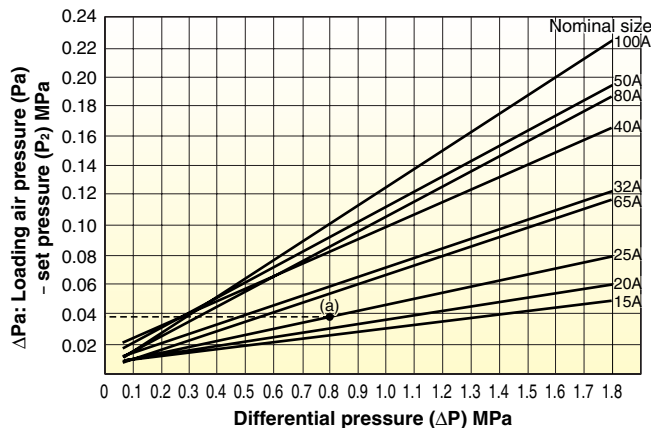
Loading Air Pressure-set Pressure Chart

● **GPK-2001 · 2003**



Basically, the set pressure to the loading air pressure is as shown in the chart above. The set pressure is slightly different depending on the working conditions. For the actual use, adjust loading air pressure suitable for the necessary set pressure.

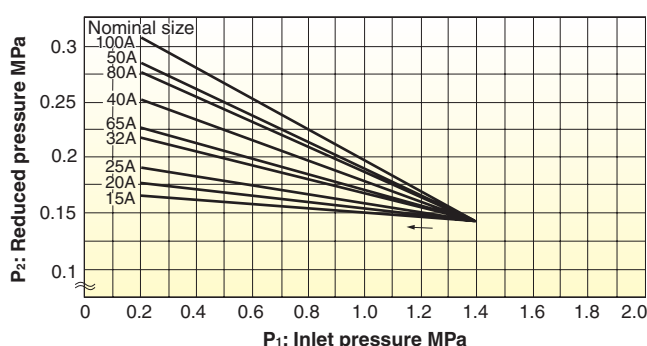
● **GDK-2000**



How to read the chart (GDK-2000)

When the nominal size is 25A, the inlet pressure (P_1) is 1.0 MPa, and the reduced pressure (P_2) is 0.2 MPa, the loading air pressure is calculated as follows: Trace up vertically from the differential pressure (ΔP) before and after the pressure reducing valve ($1.0 \text{ MPa} - 0.2 \text{ MPa} = 0.8 \text{ MPa}$) to find intersection point (a) with the nominal size of 25A. Calculate ΔPa [loading air pressure (P_a) - set pressure (P_2)] = 0.037 MPa by horizontally tracing to the left from intersection point (a). Thus, the loading air pressure is: (P_a) = $\Delta Pa + P_2 = 0.037 + 0.2 = 0.237 \text{ MPa}$.

● **GDK-2000**



This chart shows variation in reduced pressure when the inlet pressure of 1.4 MPa is changed between 0.2 MPa and 1.4 MPa while the reduced pressure is set at 0.14 MPa.