

GP-1000HEN, 1000H

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

■Features

1. The GP-1000HEN can be replaced easily from existing valve because it complies with face-to-face dimensions of the EN standard.
2. Respond very sharply to the fluctuation of inlet pressure and the change of the flow rate, so that the reduced pressure can be kept at a constant level.
3. Pressure adjustment is easy, and the set pressure range is wide.
4. Compliant with the standard of SHASE-S106 Pressure Reducing Valves (by the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan).



GP-1000H

■Specifications

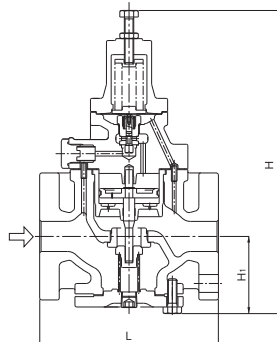
| Model | GP-1000HEN | GP-1000H |
|----------------------------------|--|--|
| Application | Steam | |
| Inlet pressure | 0.1-1.6 MPa | |
| Reduced pressure | (A) 0.05-0.9 MPa (B) 0.9-1.4 MPa | |
| | 90% or less of inlet pressure (gauge pressure) | |
| Minimum differential pressure | 0.05 MPa | |
| Maximum pressure reduction ratio | 20:1 | |
| Maximum temperature | 220°C | |
| Valve seat leakage | 0.01% or less of rated flow rate | |
| Material | Body | |
| | Ductile cast iron | |
| | Main valve, valve seat | |
| | Stainless steel | |
| | Pilot valve, pilot valve seat | |
| Stainless steel | | |
| Piston, cylinder | | |
| Stainless steel | | |
| Diaphragm | | |
| Stainless steel | | |
| Connection | EN PN25 flanged | JIS 16K FF flanged ASME Class 300 flanged |

- Available with JIS Rc screwed (GP-1010H).
- For 15A, 20A, ASME flange is not available.

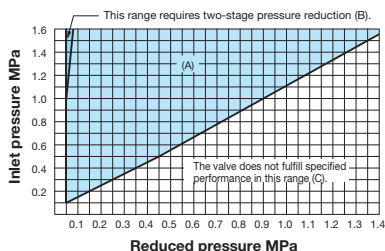
■Dimensions (mm) and Weights (kg)

| Nominal size | L | | H | H ₁ | Weight | |
|--------------|------------|-----------|-----|----------------|------------|-------------|
| | GP-1000HEN | GP-1000H | | | GP-1000HEN | GP-1000H |
| 15A | 150 | 150 (-) | 291 | 64 | 8.0 | 8.0 (-) |
| 20A | 150 | 155 (-) | 291 | 64 | 8.5 | 8.5 (-) |
| 25A | 160 | 160 (160) | 300 | 67 | 10.0 | 10.0 (10.0) |
| 32A | 180 | 190 (180) | 333 | 82 | 14.0 | 14.0 (14.0) |
| 40A | 200 | 190 (200) | 333 | 82 | 15.5 | 14.5 (15.5) |
| 50A | 230 | 220 (230) | 353 | 93 | 21.0 | 20.0 (21.0) |
| 65A | 290 | 245 (278) | 357 | 100 | 30.0 | 30.0 (30.0) |
| 80A | 310 | 290 (310) | 404 | 122 | 37.0 | 35.0 (37.0) |
| 100A | 350 | 330 (350) | 450 | 144 | 57.0 | 52.5 (57.0) |

- The values in parentheses are the dimensions of ASME Class 300 flanged.



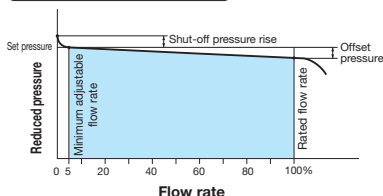
Specifications Selection Chart



Find the intersection point of the inlet and reduced pressures. If the intersection point is within range (A) in the chart, the pressures are controllable with a single pressure reducing valve.

They can be controlled by two-stage pressure reduction if the intersection point is within range (B). The valve does not fulfill specified performance in range (C).

Flow Characteristic Chart



- Shut-off pressure rise: Within 0.02 MPa
- Offset pressure: Within 0.03 MPa
(when the set pressure is between 0.05 MPa and 0.1 MPa)
- Within 0.05 MPa (when the set pressure is more than 0.1 MPa and 1.4 MPa or less)

Table of Corrected Cv Values

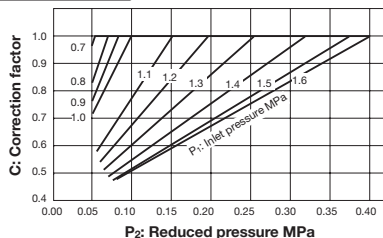
Table of rated Cv values (Cv value when the correction factor C = 1)

| Nominal size | 15A | 20A | 25A | 32A | 40A | 50A | 65A | 80A | 100A |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Cv values | 1 | 2.3 | 4 | 6.5 | 9 | 16 | 25 | 36 | 64 |

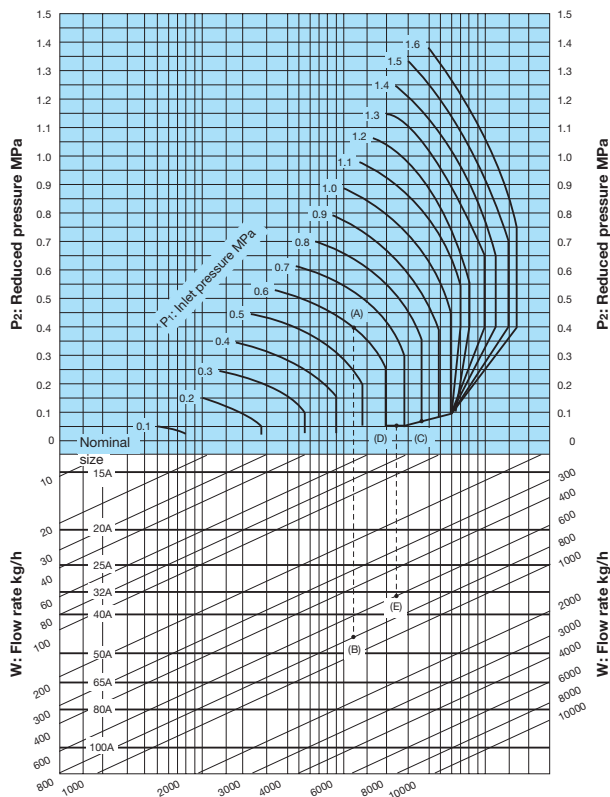
Note) When the reduced pressure is within either of the ranges shown below, calculate the corrected Cv value by multiplying the rated Cv value by the correction factor C obtained from the Fig.1.

- When the inlet pressure is between 0.7 MPa and 1.0 MPa and the pressure reduction ratio is more than 10:1
- When the inlet pressure is more than 1.0 MPa and the reduced pressure is 0.4 MPa or less

Fig. 1: Corrected Cv value



■ GP-1000HEN, 1000H Nominal Sizes Selection Chart (For Steam)

**[Example 1]**

When selecting the nominal size of a pressure reducing valve whose inlet pressure (P₁), reduced pressure (P₂), and steam flow rate are 0.6 MPa, 0.4 MPa, and 800 kg/h, respectively, first find intersection point (A) of the inlet pressure of 0.6 MPa and the reduced pressure of 0.4 MPa. Trace down vertically from this intersection point to find intersection point (B) with the flow rate of 800 kg/h. Since intersection point (B) lies between nominal sizes 40A and 50A, select the larger one, 50A.

[Example 2]

When selecting the nominal size of a pressure reducing valve whose inlet pressure (P₁), reduced pressure (P₂), and steam flow rate are 0.8 MPa, 0.05 MPa, and 600 kg/h, respectively, first find intersection point (C) of the inlet pressure of 0.8 MPa and the diagonal line. Trace down to the left from this diagonal line to find intersection point (D) with the reduced pressure of 0.05 MPa. Trace down vertically from intersection point (D) to find intersection point (E) with the flow rate of 600 kg/h. Since intersection point (E) lies between nominal sizes 32A and 40A, select the larger one, 40A.

· Set the safety factor at 80 to 90%.