

# GD-41,43,41N,43N

JWWA

JWWA approval  
(GD-41N, GD-43N)

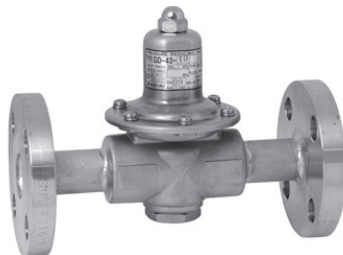
|                 |                   |                  |                 |
|-----------------|-------------------|------------------|-----------------|
| Direct type     | Pilot type        | Piston           | Diaphragm       |
| Bellows         | Internal sensing  | External sensing | Stainless steel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

## ■Features

1. Space saving and resource saving are achieved (used materials are shown on the body and lower cap, thus separate collection of parts for resource recycling is easy).
2. Stainless steel (SCS14A and SUS316) is used for wetted parts, improving corrosion resistance.
3. PTFE covers diaphragm contact surface to fluid, making the diaphragm less liable to deteriorate and highly durable.
4. Special fluorine-contained rubber parts are resistant to corrosion.
5. Pressure balance structure can keep the reduced pressure at a constant level without being affected by inlet pressure.
6. Closed structure keeps fluid from flowing to outside
7. Can be applied to piping washing, system washing, sterilization washing and steam for sterilization.



GD-41, 41N



GD-43, 43N

## ■Specifications

| Model                            | GD-41                                                                                                                                                                                  | GD-43-10                                                               | GD-43-20           | GD-41N         | GD-43N-10          | GD-43N-20          |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------|----------------|--------------------|--------------------|
| Application                      | Cold and hot water                                                                                                                                                                     |                                                                        |                    |                |                    |                    |
|                                  | Steam for washing or sterilization                                                                                                                                                     |                                                                        |                    |                |                    |                    |
| Inlet pressure                   | 0.07-2.0 MPa (0.2 MPa or less for steam for washing or sterilization) *2                                                                                                               |                                                                        |                    |                |                    |                    |
| Reduced pressure                 | (A) Yellow spring: 0.02-0.1 MPa <Standard setting: 0.05 MPa><br>(B) Red spring: 0.1-0.25 MPa <Standard setting: 0.1 MPa><br>(C) Black spring: 0.25-0.5 MPa <Standard setting: 0.3 MPa> |                                                                        |                    |                |                    |                    |
| Minimum differential pressure    | 0.05 MPa                                                                                                                                                                               |                                                                        |                    |                |                    |                    |
| Maximum pressure reduction ratio | Cold and hot water: 10:1                                                                                                                                                               |                                                                        |                    |                |                    |                    |
| Fluid temperature                | 5-90°C<br>(The maximum temperature of steam for washing or sterilization is 130°C. Allow an interval of at least four hours between steam flows.)                                      |                                                                        |                    |                |                    |                    |
| Material                         | Body                                                                                                                                                                                   | Cast Stainless steel (SCS14A)                                          |                    |                |                    |                    |
|                                  | Valve disc                                                                                                                                                                             | Special synthetic rubber (special FKM)                                 |                    |                |                    |                    |
|                                  | Diaphragm                                                                                                                                                                              | Heat-resistant synthetic rubber and PTFE (PTFE applied to wetted face) |                    |                |                    |                    |
| Connection                       | JIS Rc screwed                                                                                                                                                                         | JIS 10K FF flanged                                                     | JIS 20K RF flanged | JIS Rc screwed | JIS 10K FF flanged | JIS 20K RF flanged |

\*1 Available with JIS 5K and JIS 16K for GD-43 and GD-43N.

\*2 The inlet pressure of the GD-43-10 and GD-43N-10 is 0.07 to 1.0 MPa.

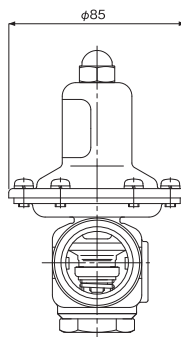
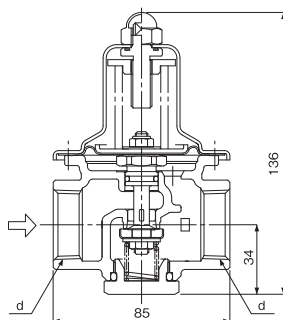
· If using for washing steam or sterilization steam, be sure that maximum temperature is 130°C and avoid continuous use for more than 30 minutes.

· Available with pressure gauge (JIS Rc 1/8 screwed).



## ■ Dimensions (mm) and Weights (kg)

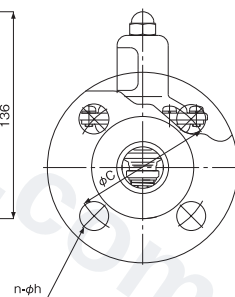
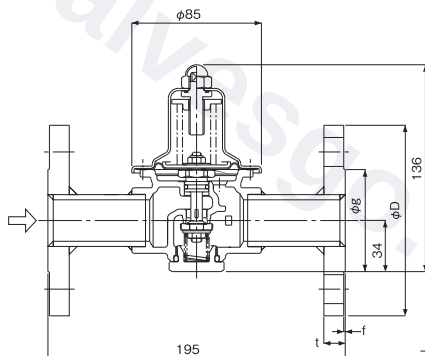
### · GD-41 · 41N



| Nominal size | d      | Weight |
|--------------|--------|--------|
| 15A          | Rc 1/2 | 1.2    |
| 20A          | Rc 3/4 | 1.1    |
| 25A          | Rc 1   | 1.0    |

\* All dimensions are same except connection size.

### · GD-43 · 43N



\* All dimensions are same except flange size.

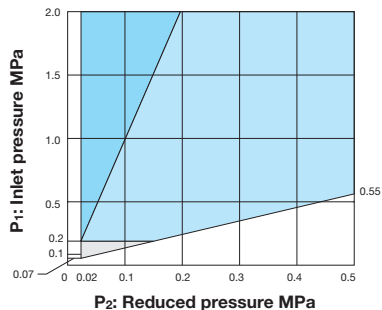
(mm)

| Size | JIS 20KRF flange |    |    |         |   |      | Weight (kg) |
|------|------------------|----|----|---------|---|------|-------------|
|      | D                | C  | g  | t       | f | n-h  |             |
| 15A  | 95               | 70 | 51 | 14 (12) | 1 | 4-15 | 2.8 (2.6)   |
| 20A  | 100              | 75 | 56 | 16 (14) | 1 | 4-15 | 3.0 (2.9)   |
| 25A  | 125              | 90 | 67 | 16 (14) | 1 | 4-19 | 4.0 (3.7)   |

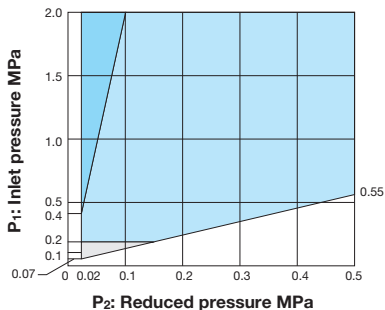
\* The values in parenthesis are the weights of the GD-43-10, GD-43N-10.

### Specifications Selection Chart

(Cold and hot water)

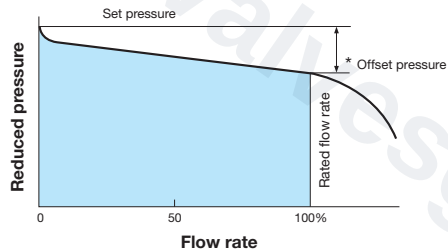


(Air, carbon dioxide gas, and nitrogen gas)



- Controllable range
- Range requiring two-stage pressure reduction
- Range controllable and also compatible with steam for washing or sterilization

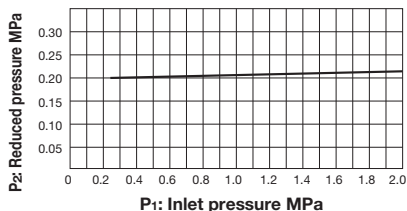
### Flow Characteristic Chart



\* Offset pressure

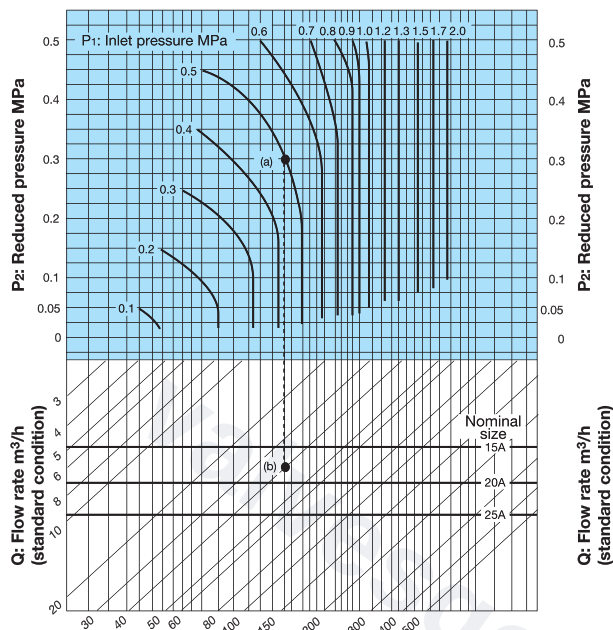
| Set pressure      | Offset pressure |
|-------------------|-----------------|
| 0.2 MPa or less   | Within 0.05 MPa |
| More than 0.2 MPa | Within 0.08 MPa |

### Pressure Characteristic Chart



This chart shows variation in reduced pressure when the inlet pressure of 0.25 MPa is changed to 2.0 MPa while the reduced pressure is set at 0.20 MPa.

## Nominal Sizes Selection Chart (For Air)

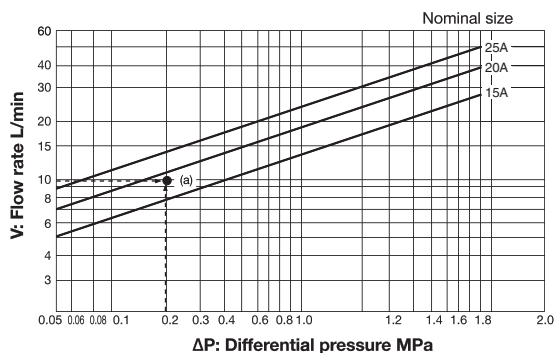


### [Example]

When selecting the nominal size of a pressure reducing valve whose inlet pressure (P<sub>1</sub>), reduced pressure (P<sub>2</sub>), and flow rate are 0.5 MPa, 0.3 MPa, and 40 m<sup>3</sup>/h (standard condition), respectively, first find intersection point (a) of the inlet pressure of 0.5 MPa and the reduced pressure of 0.3 MPa. Trace down vertically from this intersection point to find intersection point (b) with the flow rate of 40 m<sup>3</sup>/h (standard condition). Since intersection point (b) lies between nominal sizes 15A and 20A, select the larger one, 20A.

\* Set the safety factor at 80 to 90%.

## Nominal Sizes Selection Chart (For Cold and Hot Water)



### [Example]

When selecting the nominal size of a pressure reducing valve whose inlet pressure (P<sub>1</sub>), reduced pressure (P<sub>2</sub>), and flow rate are 0.5 MPa, 0.3 MPa, and 10 L/min, respectively, trace up vertically from the 0.2 MPa point of differential pressure before and after the valve to find intersection point (a) with the flow rate of 10 L/min. Since intersection point (a) is between nominal sizes 15A and 20A, select the larger one, 20A.