

APPLICATION

Install the pressure reducing valve directly in the sub-pipe to reduce fluid pressure inside the pipe. A filter in the inlet of the pressure reducing valve will prevent blockage of the valve gate caused by impurities and lime scale. Installing a pressure relief valve downstream of the pressure reducing valve will protect the system. While using screws to connect the pressure reducing valve, joints should be installed in the inlet and outlet enabling easy maintenance.

SPECIFICATION

Working Pressure: PN16
Pressure needed from fully closed to fully open-opened gate 1.5 kgf/cm^2
Pressure adjusting range $1 \approx 6 \text{ kgf/cm}^2$, $4 \approx 10 \text{ kgf/cm}^2$, $8 \approx 13 \text{ kgf/cm}^2$
($1 \text{ kgf/cm}^2 = 14.2 \text{ psi}$)

Applied Temperature: -15°C to 100°C , $100^\circ\text{C} - 180^\circ\text{C}$ (steam)

Size Range: $1/2'' - 6''$

Connections: Standard female threaded or flanged

Features:

- Suitable for fluids, air and steam
- Balanced-pressure design, the outlet pressure will not be influenced by unstable inlet pressure
- The outlet pressure responds directly and quickly to the pressure control chamber and adjusts the setting pressure accurately
- Piston & diaphragm design improves the inability of sustaining pressure and leakage

Material:

- Main body, upper & lower covers, piston, shaft, Stainless Steel 316
- Pressure gauge Stainless Steel
- Fixed bolt & adjusting stem Stainless Steel 304
- U-ring, diaphragm, UH-ring NBR/Viton
- O-ring, sealing spacer NBR/Viton/Teflon
- Spring Steel
- Washer Brass

Testing Pressure:

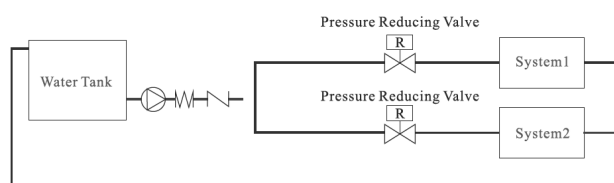
- Valve body: 35 kgf/cm^2
- Max. applied pressure: 25 kgf/cm^2

DIMENSIONS AND PRODUCT CODES

Dimensions and Kv per Product Code and Size						
Product Code	Size	H(mm)	L(mm)	Weight (Kg)	CV	Kv
DNS15-ST	$1/2''$	80	70	0.8	2.5	2.2
DNS20-ST	$3/4''$	105	85	1.0	4.0	3.5
DNS25-ST	$1''$	105	92	1.1	6.5	5.6
DNS40-ST	$1 1/2''$	130	115	2.2	13	11.2
DNS50-ST	$2''$	130	120	3.1	17	14.7
DNS15-SF	15mm	85	150	2.0	2.5	2.2
DNS20-SF	20mm	105	150	2.8	4.0	3.5
DNS25-SF	25mm	105	150	3.5	6.5	5.6
DNS40-SF	40mm	130	190	5.9	13	11.2
DNS50-SF	50mm	130	190	6.5	17	14.7
DNS65-SF	65mm	185	210	11.5	30	26
DNS80-SF	80mm	185	225	12	42	36.3
DNS100-SF	100mm	230	250	19	75	64.9
DNS150-SF	150mm	290	310	45	170	147.1



INSTALLATION/OPERATION INSTRUCTION



Pressure setting and flow rate

When the outlet pressure is lower than the setting pressure, the valve gate automatically opens. To fully open the valve gate, the adjustable pressure range and setting pressure are relative points.

A: pressure drop needed for fully-opened valve gate = $B/4$

B: Maximum minimum adjustable pressure range

C: Setting Pressure of outlet

P: Pressure of fully opened outlet valve gate $P = C - A$

Example:

Pressure drop needed for fully-opened valve gate for adjusting pressure range $3 \approx 9 \text{ kgf/cm}^2$

$A = B/4 = (9-3)/4 = 1.5 \text{ kgf/cm}^2$

If the setting pressure of the outlet is 6 kgf/cm^2 , the pressure of the fully-opened valve gate will be

$P = 6 - 1.5 = 4.5 \text{ kgf/cm}^2$

The outlet pressure should be lower than 4.5 kgf/cm^2 to fully open the valve gate.

Cover steam pipelines with thermal materials.

Flow Chart of Direct-activated Pressure Reducing Valve

