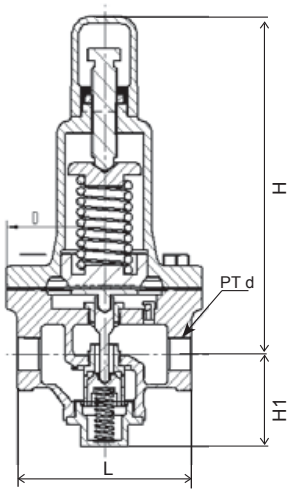
ALPHA GROUP

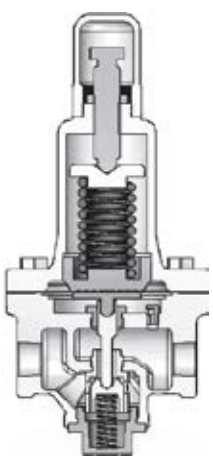
Pressure Reducing Valve

Type JRV-ST11

J • K

Pilot Piston Type for Steam





Direct operated pressure reducing valve with diaphragm made of speical synthesized rubber. This model is suitable for a viariety of applications from small to large flow for piping lines, steam equipments etc.

Features

Stable operation in small flow applications, which are not controllable using pilot-operated type, and large flow applications.

Structure which is not influenced by foreign materials easily and easy maintenance.

Maximum reducing rate is high.

Minimum pressure differential across the discis low.

Materials List

Part Name	Standard Material
Body	Cast Iron
Bonnet	Cast Iron
Cap	Cast Iron
Plug	Cast Bronze
Disc	Stainless Steel
Disc Rubber	Synthetic Rubber
Disc Washer	Brass
Stem	Stainless Steel
Seat	Stainless Steel
Guide Liner	Stainless Steel
Guide	Stainless Steel
Fixing Plate	Steel
Spring Seat	Steel
Diaphragm	Synthetic Rubber
Adjust Screw	Brass
Lock Nut	Brass
Spring	Carbon Steel
Bolt	Steel
Nut	Steel
Plug Gasket	Ptfe
Nut Nylon	Stainless Steel
Air Cock	Brass
O-Ring	NBR

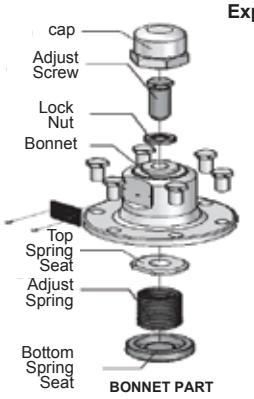
Specifications

Model	JRV-SF11
Size	15(1/2”), 20(3/4”), 25(1”), 32(1 1/4”), 40(1 1/2”)
Applicable Fluid	Steam
Applicable Temperature	Max. 184°C
Applicable primary pressure	Max. 10kgf/cm²(1.0MPa)
Adjustable secondary pressure	0.2~2, 1.5~4kgf/cm² (0.02~0.2, 0.15~0.4MPa)
Maximum reducing rate	20 : 1
Minimum pressure differential across the disc	0.2kgf/cm²(0.02MPa)
Lock up pressure	Max. 0.2kgf/cm²(0.02MPa)
OFFSET pressure	1. Spring 0.2~2kgf/cm²(0.02~0.2MPa) : Within 0.45kgf/cm² (0.045MPa) However in case of Set pressure at 0.8kgf/cm² (0.08MPa) or less : Set pressure X 0.5 or less) 2. Spring 1.5~4kgf/cm²(0.15~0.4MPa) : Within 0.6kgf/cm² (0.06MPa)
Minimum adjustable flow	2~5kg/h
Leakage Allowance	Less than 0.05% of rated flow
End Conoection	PT Screw
Materials	Body(Cast Iron), Disc&seat (Stainless Steel), Diaphragm(Synthetic rubber)
Valve body pressure test	Hydraulic 20kgf/cm²(2.0MPa)

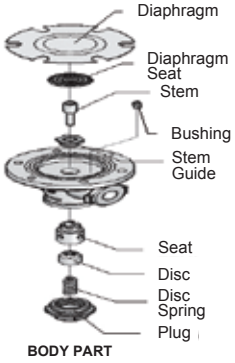
Dimensions (mm)

Part \ Size	15A	20A	25A	32A	40A
d	1/2”	3/4”	1”	1 1/4”	1 1/2”
L	110	110	120	150	150
H1	57	57	63	78	78
H	207	207	223	278	278
D	124	124	140	166	166
Cv	1.3	1.3	1.6	2.8	2.8

Exploded View



BONNET PART



BODY PART

Pressure Reducing Valve

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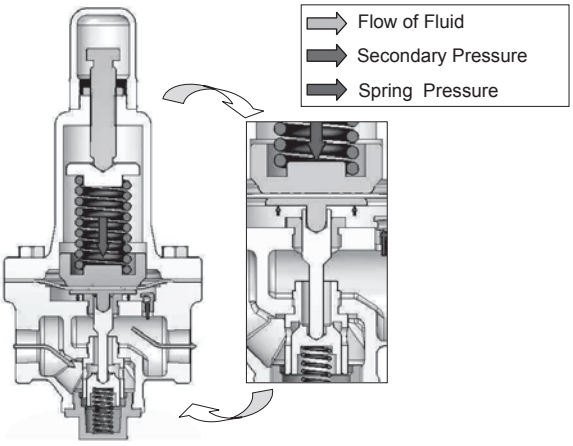
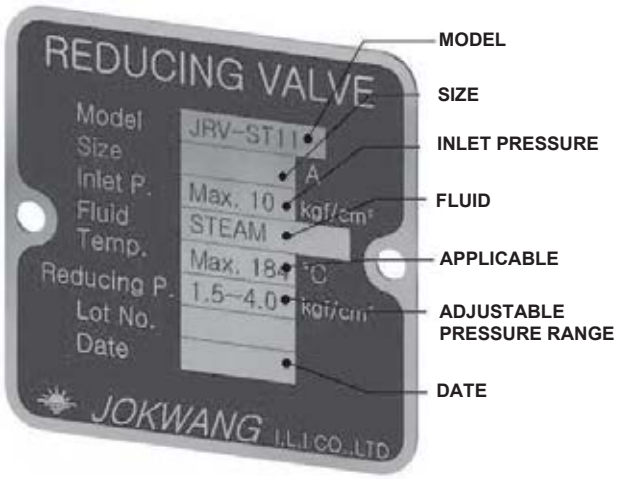
Operation

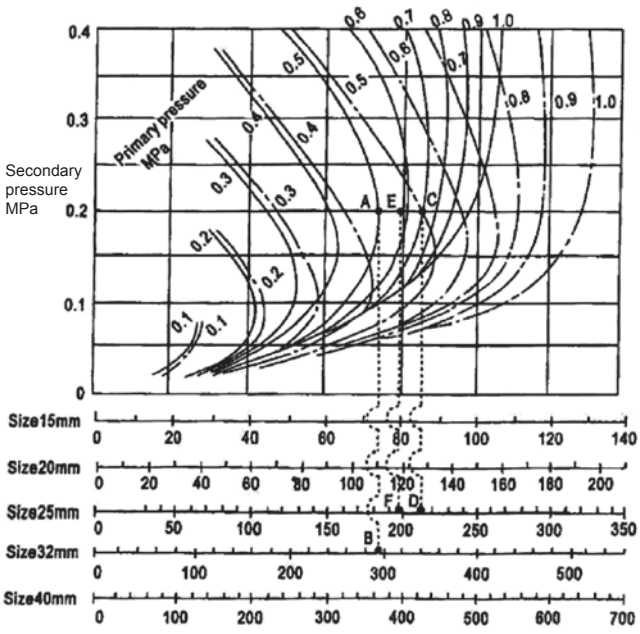


1. Spring pressure push the diaphragm.
2. Secondary pressure from Primary pressure flow in the room and lift up the diaphragm.
3. In the result, spring pressure and secondary pressure could make balance to operate the secondary pressure as setting pressure.

Name Plate



Nominal Diameter Selection Chart



Example
- Primary pressure : 0.5MPa
- Secondary pressure : 0.2 MPa
- Flow rate : 205kg/h

The flow increases when selecting a larger diameter for the secondary piping.

1. Secondary piping diameter
Types of primary pressure line
Solid line (————) : The secondary piping diameter is the same as that of pressure reducing valve.
Dashed line(—— – ——) : The secondary piping diameter is 2 sizes larger than that of pressure reducing valve.

2. The secondary piping diameter is the same as that of pressure reducing valve.

1) Find out the intersection point A between primary pressure 0.5MPa line (solid line) and secondary pressure 0.2MPa line.
2) Draw a vertical line from point A until the line intersects with the flow 205kg/h line.
From the intersection point B, it is able to determine the nominal diameter, which is size 32mm in this case.

3. The secondary pipig diameter is 2 sizes larger than that of pressure reducing valve.

1) Find out the intersection point C between primary pressure 0.5MPa line(dash line) and secondary pressure 0.2MPa line.
2) Draw a vertical line from point C until the line intersects with the flow 205kg/h line.
From the intersection point D, it is able to determine the nominal diameter, which is size 25mm
(size 40mm for the secondary piping diameter).

● In the above example, the flow at point D is 213kg/h, which is larger than the necessary flow(205kg/h).
It is necessary to check whether the necessary flow can be satisfied when the secondary piping diameter is 1 size larger, draw a vertical line from point E(the median point between points A and C) untile it intersects with the nominal diameter size 25mm line.
From the intersection point F, it is able to find out the flow 196kg/h, which is insufficient in this case.