

RD-40, 41, 41F Type Pressure Reducing Valve (for Steam)

for **Food processing** **Medical Devices** **Laundry Machines** and other Steam Equipments/Devices

Compact, light-duty, direct operated pressure reducing valve, ideal for integration into a variety of equipments for precise steam control.

Most suitable for food processing equipments, kitchen equipments, medical devices, laundry machines, air-conditioning (humidifying) equipments, and other equipments/devices that are required to be rust free.

For high-grade steam lines, a valve with stainless steel body is most suitable.



RD-40, 41 Type



RD-41F Type

FEATURES

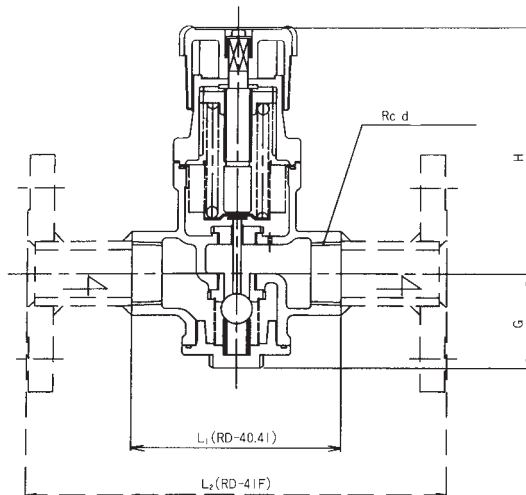
- Ensure large flow (heat) necessary for starting up machines.
- The stainless steel/bronze body and stainless steel disc & seat ensure supply of clean steam.
- Precise adjustment of secondary pressure with manual handle with automatic lock mechanism.
- Stainless steel bellows and embedded strainer (80 mesh) allow high durability.

SPECIFICATIONS

Body material	Cast bronze, Screwed	Stainless steel, Screwed	Stainless steel, Flanged
Model name	RD-40 L/M/H	RD-41 L/M/H	RD-41F L/M/H
Code name	RD40-J □	RD41-D □	RD41F-D □
	※L, M or H for adjustable secondary pressure is required in □.		
Applicable fluid	Steam		
Applicable primary pressure	Max. 1.0MPa*		
Adjustable secondary pressure (Color of name plate and spring)	L: 0.02~0.25MPa (Green) M: 0.2~0.4MPa (Blue) H: 0.35~0.8MPa (Red)		
Maximum reducing rate	20:1		
Minimum pressure differential across the disc	0.02MPa		
Lock up pressure	Max. 0.02MPa		
Offset pressure at rated flow	Within set pressure 0.5 (Adjustable secondary pressure: Max. 0.13MPa) Within 0.07MPa (Adjustable secondary pressure: 0.13MPa~0.4MPa) Within 0.12MPa (Adjustable secondary pressure: 0.4MPa~0.8MPa)		
Leakage allowance	Less than 0.05% of rated flow		
Applicable temperature	Max. 220 °C		
End connection	Screwed JIS Rc		Flanged JIS 10KRF
Materials	Body	Cast bronze	Stainless steel
	Trim	Disc & seat (Stainless steel), Bellow (Stainless steel)	
Valve body pressure test	Hydraulic 1.5MPa		

*Applicable primary pressure 1.6MPa is also available upon your request.

CONSTRUCTION



The structure of the flange-type of welded part may be different from what is shown in the drawing.

DIMENSIONS

Size	d	L ₁	L ₂	G	H
15(1/2")	1/2"	83	186	55	128
20(3/4")	3/4"	96	190	55	128
25(1")	1"	108	190	55	128

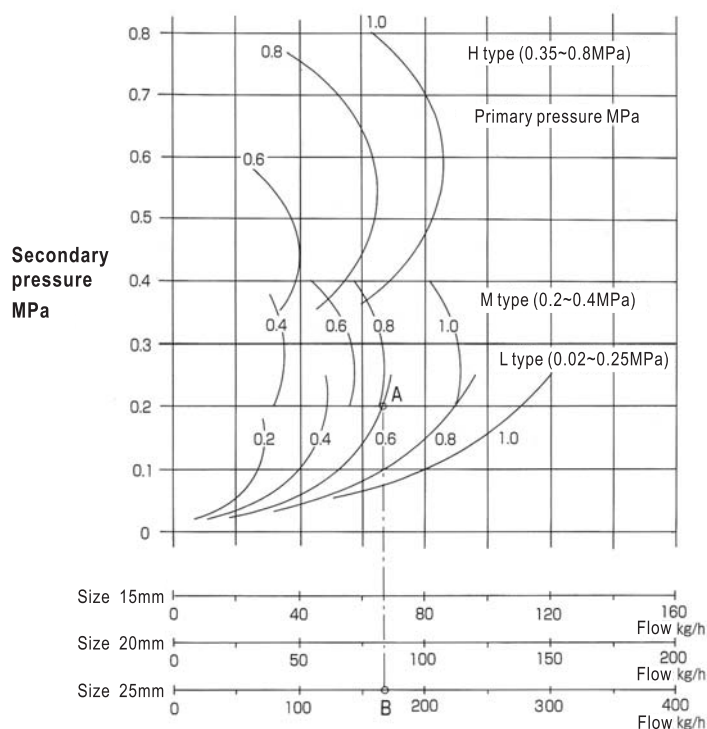
MASS

Size	RD-40 Type	RD-41 Type	RD-41F Type
15(1/2")	1.7	2	3.8
20(3/4")	1.7	2	4
25(1")	1.9	2.4	5.5

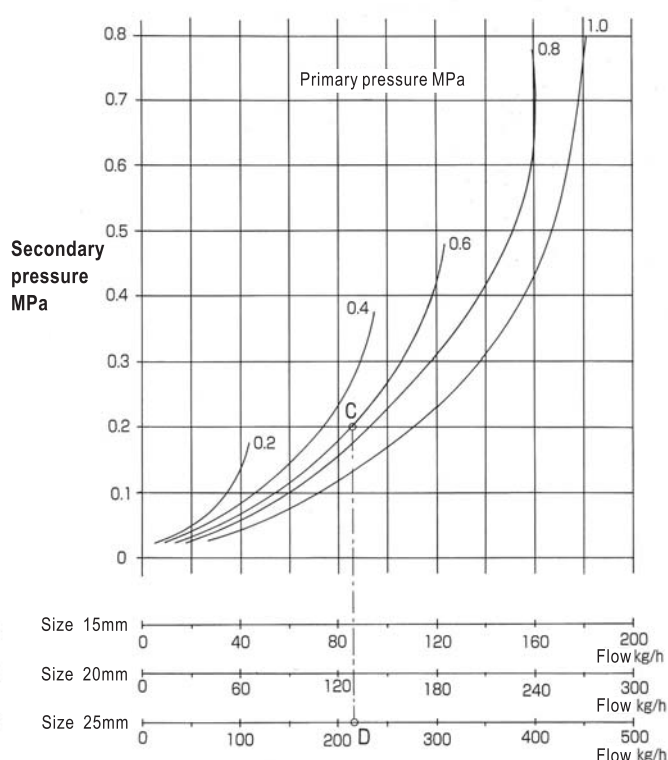
DATA/RD-40, 41, 41F Type Pressure Reducing Valve (for Steam)

NOMINAL DIAMETER SELECTION CHART (For saturated steam)

[Rate Flow Chart]



[Open Flow Chart]



● Offset pressure of rated flow (MPa)

Set pressure	Offset pressure
0.13 or less	Set pressure within 0.5
Over 0.13~0.4	Within 0.07
Over 0.4~0.8	Within 0.12

Opening flow

Opening flow is the full opening flow of the stop valve at the secondary side when the diameter of the secondary piping is the same as that of pressure reducing valve.

Note: At opening flow, the secondary pressure reduces significantly.

HOW TO USE THE CHART

Example (conditions):

- Primary pressure: 0.6MPa
- Secondary pressure: 0.2MPa
- Saturated steam: 100kg/h

Generally, the nominal diameter can be decided using the Rated Flow Chart.

- Find out the intersection point A between primary pressure 0.6MPa and secondary pressure 0.2MPa.
- Draw a vertical line from point A. The line intersects with the flow 100kg/h line. From the intersection point B, we can find the desired nominal diameter, or size, i.e. 25mm.

To decide the flow necessary for starting up a machine, use the Open Flow Chart.

- Under the same pressure condition above mentioned, the open flow of size 25mm valve can be determined using intersection points C and D. In this case, the open flow is 215kg/h.

