Spence Type D34 Water Pressure Reducing Valve

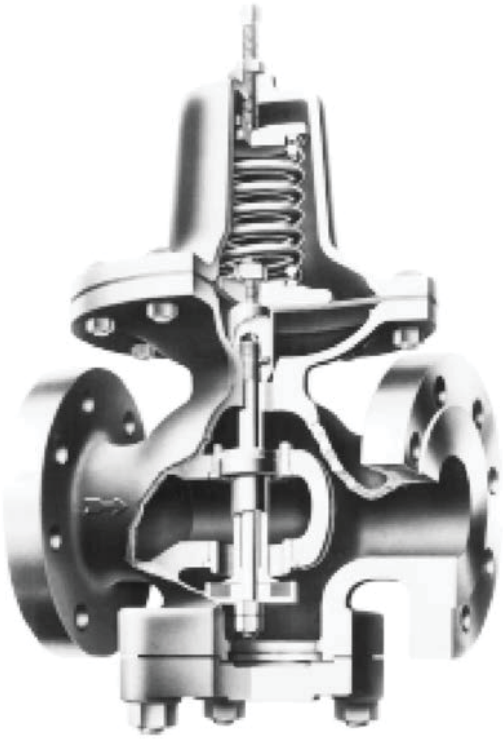

***Figure 1**. Type D34 Water Pressure Reducing Valve*

Features

- **Self-contained**
- **Fast Acting for Rapid Changes in Flow**
- **Sediment Settles away from Control Ports when Installed Horizontally**
- **ANSI/FCI 70-2 Class VI Shutoff**

Introduction

Type D34 water pressure reducing valve is adjustable, direct operated, packless, diaphragm actuated, balanced and single seated. The valve has a tight shutoff for dead end service and maintains a discharge pressure which will not vary more than 1 psig / 0.07 bar for each 10 psig / 0.70 bar inlet pressure variation. Delivery pressure variations from zero flow to rated flow do not exceed 15% of the maximum spring pressure rating. The valve is be suitable for 200°F / 93°C service temperature.

Valve body is cast iron, sizes range from NPS 1 to 6 / DN 25 to 150, Size NPS 2-1/2 / DN 65 and larger have flanged ends. Trim is stainless steel to mitigate corrosion. Valve is equipped with reversible composition disc, diaphragms. All working parts are easily accessible without removal of valve from the line for ease of maintenance.

Specifications

The specifications section on this page provides the ratings and other specifications for the Type D34 water pressure reducing valve.

Valve Sizes
NPS 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5 and 6 / DN 25, 32, 40, 50, 65, 80, 100, 125 and 150

End Connection Styles
NPT, CL125 and CL250

Maximum Temperature[1]
200°F / 93°C

Maximum Pressure[1]
CL125: 165 psig / 11.4 bar
NPT and CL250: 200 psig / 13.8 bar

Spring Ranges
10 to 40 psig / 0.69 to 2.76 bar
30 to 80 psig / 2.07 to 5.52 bar
70 to 140 psig / 4.83 to 9.65 bar

Flow Coefficient, C_v
NPS 1 / DN 25: 3.3
NPS 1-1/4 / DN 32: 7.5
NPS 1-1/2 / DN 40: 10.4
NPS 2 / DN 50: 14.4
NPS 2-1/2 / DN 65: 21.6
NPS 3 / DN 80: 32
NPS 4 / DN 100: 52
NPS 5 / DN 125: 84
NPS 6 / DN 150: 118

Construction Materials
Body: Cast Iron
Stem and Seat: Stainless steel
Disc and Diaphragm: Nitrile (NBR)
Spring: Steel
Gasket: Grafoil or Graphite

Approximate Weight
See Table 2

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

Principle of Operation

The Type D34 is a direct-operated regulator. Downstream pressure is registered internally to the under side of the diaphragm. When the downstream pressure is at or above the set pressure, the disc is held against the seat, restricting fluid flow through the regulator. When demand increases, downstream pressure drops slightly allowing the spring to extend, moving the stem down and the disc away from the seat. This allows fluid flow through the body to the downstream system.

Installation

- Carefully clear inlet piping system of foreign matter and mount regulator with the flow arrow pointing in the direction of flow.
- Preferred position for Type D34 valve is in a horizontal line with spring chamber up. When so mounted, the tendency of sediment to settle in the control ports is practically eliminated.
- Provide a three-valve by-pass to facilitate inspection of the reducing valve without interrupting service.
- Avoid damaging effects of foreign matter in the flow by using a strainer ahead of the valve.
- NPT connections up to 1 in. / 25.4 mm. be tightened 1.5 to 3 turns past finger tight.

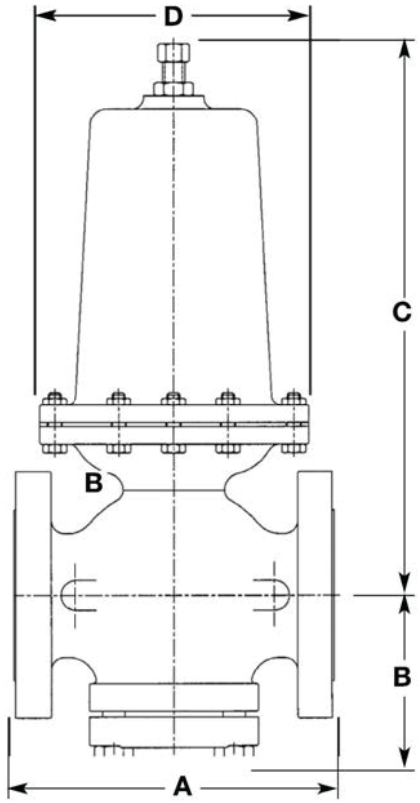

***Figure 2**. Type D34 Water Pressure Reducing Valve Dimension*

***Table 1**. Type D34 Water Pressure Reducing Valve Dimension*

SIZE		A						B		C		D	
		NPT		CL125		CL250							
NPS	DN	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
1	25	5-3/8	136	- - - -	- - - -	- - - -	- - - -	3-3/8	86	12-1/8	308	5-1/2	140
1-1/4	32	6-1/2	165	- - - -	- - - -	- - - -	- - - -	3-5/8	92	12-1/2	316	5-1/2	140
1-1/2	40	7-1/4	184	- - - -	- - - -	- - - -	- - - -	4-1/4	108	13-3/8	340	6	152
2	50	7-1/2	191	8-1/2	216	9	228	4-5/8	117	14-3/4	375	6-3/4	171
2-1/2	65	- - - -	- - - -	9-3/8	238	10	254	5-1/2	140	18-3/4	476	8	203
3	80	- - - -	- - - -	10	254	10-3/4	273	6	152	21-3/4	552	9	229
4	100	- - - -	- - - -	11-7/8	302	12-1/2	318	6-5/8	168	26-5/8	676	11-1/4	283
5	125	- - - -	- - - -	13-5/8	346	14-1/2	268	7-5/8	194	33-1/8	841	14-1/4	362
6	150	- - - -	- - - -	15-1/8	384	16	406	9-1/8	232	35-7/8	911	16	406

***Table 2**. Approximate Weight*

SIZE		A					
		NPT		CL125		CL250	
NPS	DN	lbs	kg	lbs	kg	lbs	kg
1	25	22	10	- - - -	- - - -	- - - -	- - - -
1-1/4	32	24	11	- - - -	- - - -	- - - -	- - - -
1-1/2	40	34	15	- - - -	- - - -	- - - -	- - - -
2	50	44	20	51	23	57	26
2-1/2	65	- - - -	- - - -	78	35	89	40
3	80	- - - -	- - - -	108	49	128	58
4	100	- - - -	- - - -	198	90	225	102
5	125	- - - -	- - - -	352	160	394	252
6	150	- - - -	- - - -	500	227	550	250

Ordering Information

When ordering, complete the ordering guide on this page. Refer to the Specifications section. Review the description to the right of each specification and the information in each referenced table or figure. Specify your choice whenever a selection is offered.

Ordering Guide

Size (Select One)

- ☐ NPS 1 / DN 25
- ☐ NPS 1-1/4 / DN 32
- ☐ NPS 1-1/2 / DN 40
- ☐ NPS 2 / DN 50
- ☐ NPS 2-1/2 / DN 65
- ☐ NPS 3 / DN 80
- ☐ NPS 4 / DN 100
- ☐ NPS 5 / DN 125
- ☐ NPS 6 / DN 150

Connections (Select One)

- ☐ NPT
- ☐ CL125
- ☐ CL250

Spring Ranges (Select One)

- ☐ 10 to 40 psig / 0.69 to 2.76 bar
- ☐ 30 to 80 psig / 2.07 to 5.52 bar
- ☐ 70 to 140 psig / 4.83 to 9.65 bar

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