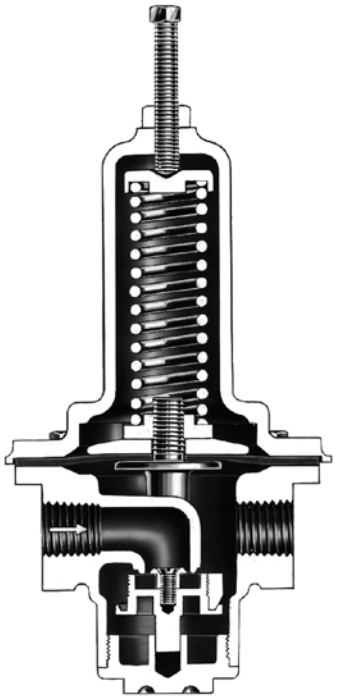
August 2009

Type 75A Water Pressure Regulator

W2248

EXTERIOR



W0057

SECTIONAL VIEW
FOR NPS 1/2, 3/4, 1, AND 1-1/2
(DN 15, 20, 25, AND 40) BODIES

Figure 1. *Type 75A Regulator*

Introduction

The Type 75A regulator is designed to reduce domestic or industrial water pressure, thus protecting plumbing fixtures and meters from high-pressure surges. The Type 75A is self-contained, requiring no external control line for operation.

Downstream pressure is directly registered under the diaphragm. As the downstream pressure increases, the diaphragm force overcomes the spring compression, causes the valve disk to rise, and reduces flow through the regulator.

If the downstream pressure decreases, the spring force pushes the valve yoke and disk down to open the body port. This permits increased flow and increases outlet pressure to the desired level. The spring for each regulator allows operation over an outlet pressure range of 20 to 80 psig (1,4 to 5,5 bar). The outlet pressure setting is easily changed by turning the adjusting screw.

D100116X012

Specifications

Body Size
NPS 1/2, 3/4, 1, and 1-1/2 (DN 15, 20, 25, and 40) with integral cast seats
NPS 2 and 2-1/2 (DN 50 and 65) with threaded-in seats

Maximum Inlet Pressure(1)
200 psig (13,8 bar)

Outlet Pressure Ranges
20 to 80 psig (1,4 to 5,5 bar)

Maximum Allowable Outlet Pressure(1)
10% above spring setting, or 5 psig (0,34 bar) above setting, whichever is greater

Minimum Operating Differential(1)
5 psi (0,34 bar)

Maximum Operating Temperature(1)
-20° to 150°F (-29° to 66°C)

Construction Materials
Body: Bronze
Spring Case: Cast iron
Threaded-in Orifice (NPS 2 and 2-1/2 (DN 50 and 65) units only): Bronze
Valve Disk and Holder: Nitrile (NBR) and bronze
Diaphragm: Nitrile (NBR)

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

Table 1. *Capacity Chart for Type 75A Regulator*

BODY SIZE, NPS (DN)	CAPACITIES IN GPM (l/min) OF WATER				WIDE-OPEN C_v FOR RELIEF SIZING
	Droop, PSIG (bar)				
	5 (0,34)	7 (0,48)(1)	10 (0,69)	15 (1,0)	
1/2 (15)	8 (30,3)	10 (37,9)	14 (53,0)	19 (71,9)	4.3
3/4 (20)	16 (60,6)	20 (75,7)	28 (106)	40 (151)	8.4
1 (25)	25 (94,6)	33 (125)	45 (170)	60 (227)	13.5
1-1/2 (40)	50 (189)	65 (246)	85 (322)	115 (435)	28.0
2 (50)	75 (284)	95 (360)	125 (473)	175 (662)	39.0
2-1/2 (65)	115 (435)	140 (530)	185 (700)	260 (984)	64.0

1. The 7 psig (0,48 bar) offset pressure and the related capacities are considered the upper limits of flows consistent with good piping practices and maximum fluid velocities of 10 feet per second (3,05 m/s).

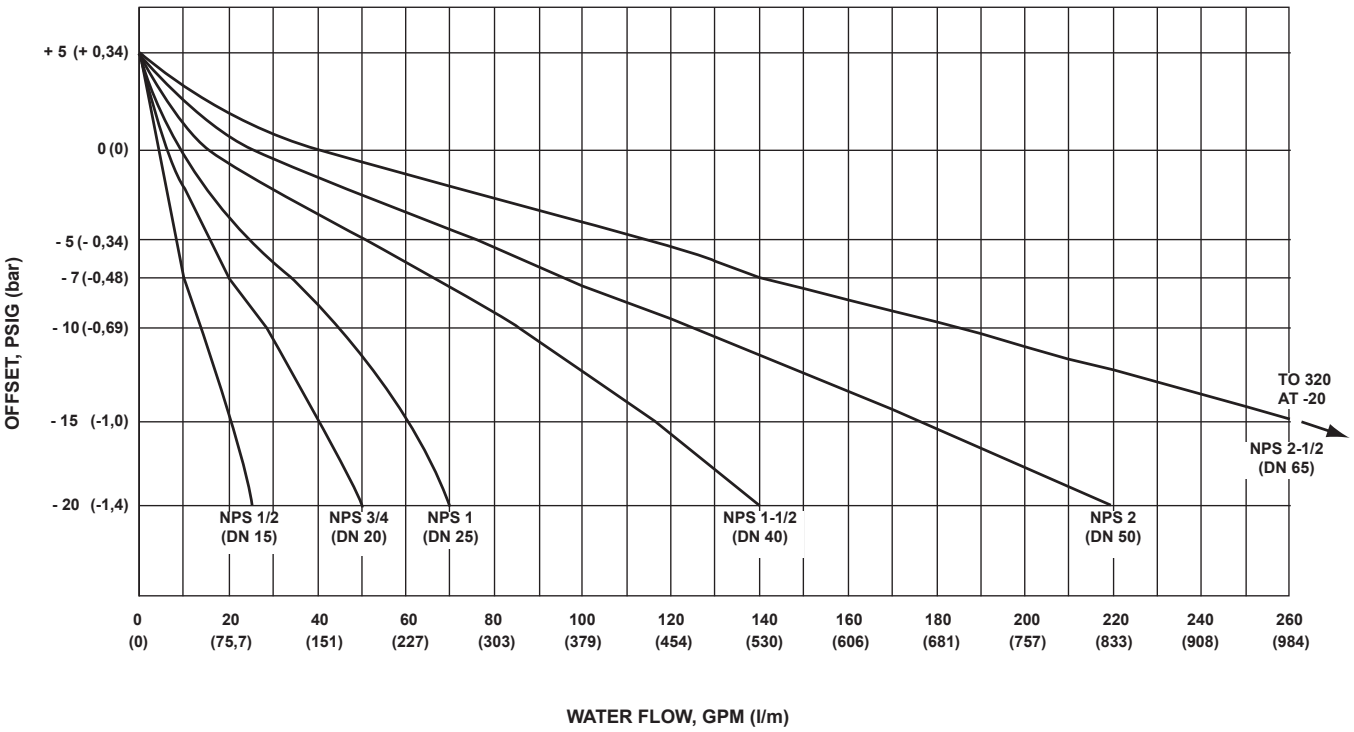


Figure 2. *Type 75A Sizing Curves*

Overpressure Protection

As is the case with most regulators, Type 75A has maximum inlet pressure ratings which exceed the outlet pressure ratings. Overpressuring any regulating equipment may be hazardous. If actual inlet pressure can exceed the outlet pressure ratings, some type of overpressure protection is needed.

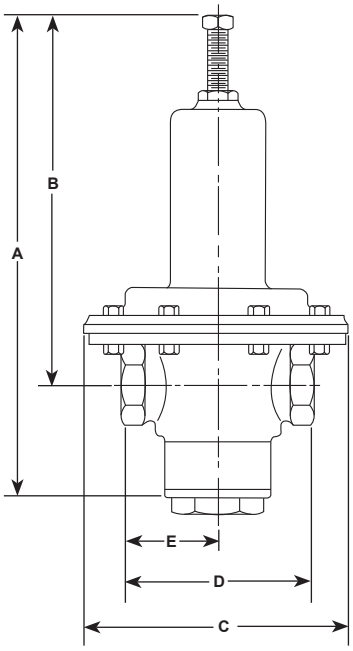
Sizing Information

Flow capacity and the maximum permissible offset pressure that the system can tolerate determine the correct regulator size for your application. Consult the Type 75A Sizing Curves (Figure 2) and the Capacity Chart (Table 1) to size the regulator. Several choices may provide the required flow rate.

For example, if desired water flow is 30 GPM (114 l/m), the first intersecting curve (Figure 2) is that of the NPS 3/4 (DN 20) regulator. At that point, offset is 11 psi (0,76 bar), which is outside the limits of good piping practice. Moving upward again, the next intersecting curve is that of the NPS 1 (DN 25) regulator. Here, offset is 6 psi (0,41 bar). This rating is permissible and the NPS 1 (DN 25) regulator is acceptable.

Ordering Information

In order to prevent delays in order processing, please specify type numbers and regulator size clearly.



BODY SIZE, NPS (DN)	DIMENSIONS, INCHES (mm)				
	A	B	C	D	E
1/2 (15) 3/4 (20)	9.75 (248) 11.25 (286)	7.12 (181) 8.38 (213)	4.31 (109) 5.44 (138)	3.75 (95) 4.25 (108)	1.88 (48) 2.12 (54)
1 (25) 1-1/2 (40)	12.25 (311) 13.62 (346)	9.12 (232) 9.88 (251)	6.62 (168) 8.19 (208)	4.75 (121) 5.88 (149)	2.38 (60) 2.94 (75)
2 (50) 2-1/2 (65)	18.62 (473) 19.12 (486)	13.88 (353) 14.12 (359)	9.38 (238) 9.38 (238)	6.38 (162) 7.75 (197)	3.19 (81) 3.88 (99)

Figure 3. *Dimensions*

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