









## 5.0 PERFORMANCE

### Relief Valve Sizing

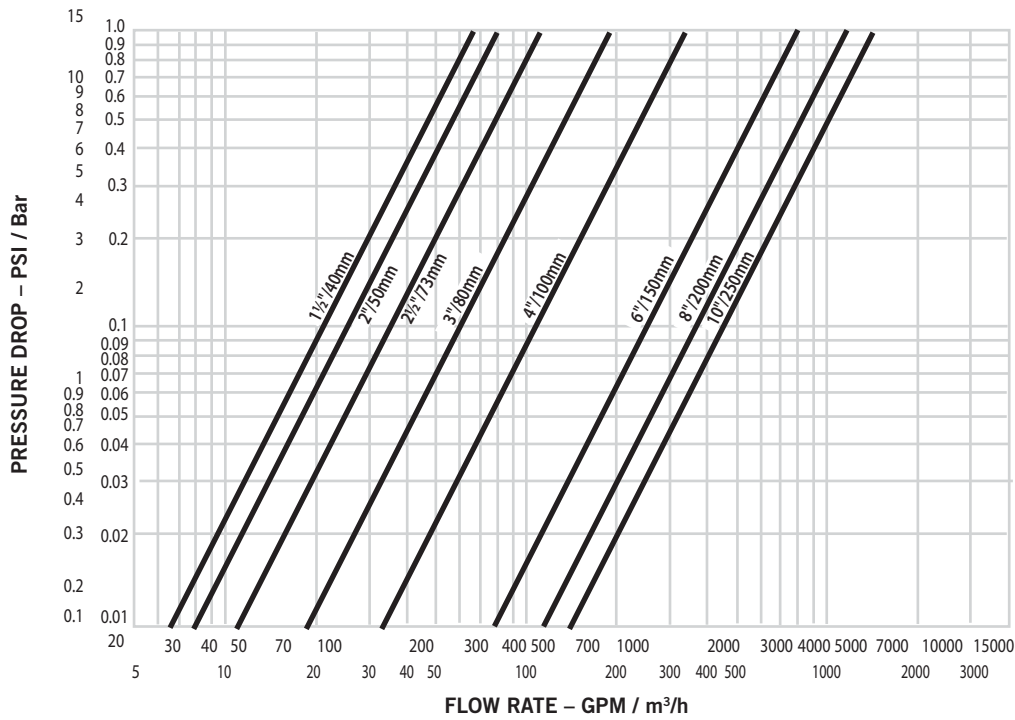
#### Series 867-42T

Systems must be designed with adequate downstream pressure relief to protect components from over pressurization during pump operation.

To maintain FM Approvals, minimum ½"/15mm pressure relief must be provided downstream of all pressure reducing valves.

#### Flow Chart

#### Series 867-42T, 867-43T, 867-43T-PS

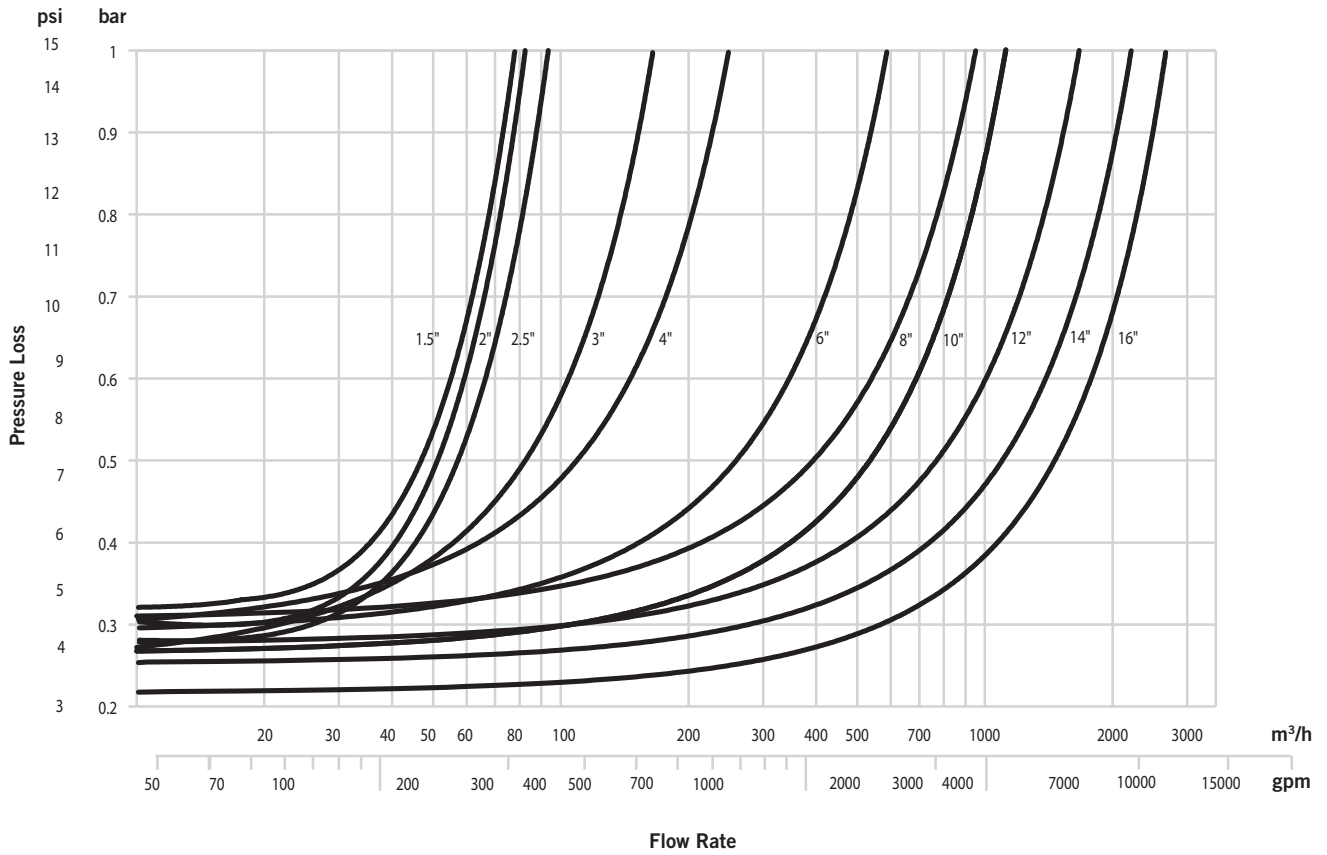


#### NOTE

- For sizes greater than 10"/DN250, please use information in Section 5.2.

## 5.0 PERFORMANCE (CONTINUED)

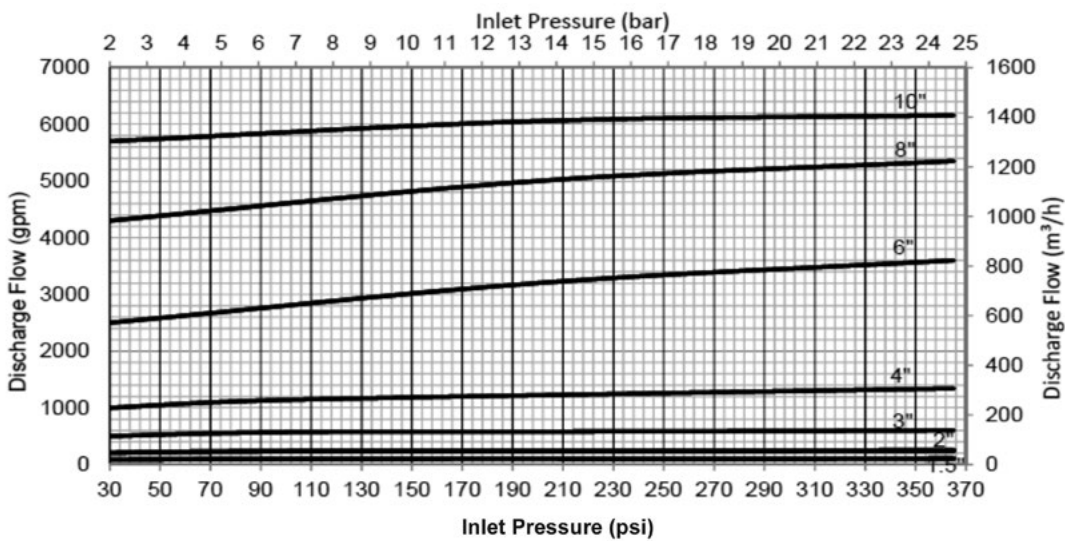
### Pressure Control Deluge or Pressure Reducing Valve Pressure Drop Series 867-42T, 867-43T, 867-43T-PS



## 5.1 PERFORMANCE

Must be installed with a minimum of ½" relief valve for FM Approved installations

### Discharge Chart Series 867-43T



**NOTE**

- For sizes greater than 10" please use information in Section 5.2.

## 5.2 PERFORMANCE

### Series 867-42T, 867-43T-PS

#### Cv Values:

Cv values for flow of water at +60°F/+16°C through a fully open valve are shown in the table below.

#### Formulas for Cv and Kv values

$$\Delta P = \frac{Q^2}{C_v^2} \quad \text{or} \quad \Delta P = \frac{Q^2}{K_v^2}$$

$$Q = C_v \times \sqrt{\Delta P} \quad Q = K_v \times \sqrt{\Delta P}$$

Where:







Flow Coefficient	Cv	Kv
Q (Flow)	GPM	m <sup>3</sup> /hr
ΔP (Pressure Drop)	psi	Bar

#### Frictional Resistance

The chart below expresses the frictional resistance of Victaulic Series 867-42T, 867-43T, 867-43T-PS Pressure Reducing and Pressure Relief Valves in equivalent feet of straight pipe.

Valve Size		Full Open Flow Coefficient	Equivalent Length of Pipe
Nominal inches DN	Actual Outside Diameter inches mm		
1 ½ DN40	1.900 48.3	Cv 79	feet 7
		Kv 68	meters 2
2 DN50	2.375 60.3	Cv 92	feet 16
		Kv 80	meters 5
2 ½	2.875 73.0	Cv 116	feet 28
		Kv 100	meters 9
3 DN80	3.500 88.9	Cv 219	feet 23
		Kv 190	meters 7
4 DN100	4.500 114.3	Cv 398	feet 30
		Kv 345	meters 9
6 DN150	6.625 168.3	Cv 912	feet 49
		Kv 790	meters 15
8 DN200	8.625 219.1	Cv 1340	feet 89
		Kv 1160	meters 27
10 DN250	10.750 273.0	Cv 1565	feet 203
		Kv 1355	meters 62
12 DN300	12.750 323.9	Cv 2737	feet 171
		Kv 2370	meters 52
14 DN350	14.000 355.6	Cv 3292	feet 194
		Kv 2850	meters 59
16 DN400	16.000 406.4	Cv 3758	feet 289
		Kv 3254	meters 88

## 6.0 NOTIFICATIONS

 <b>WARNING</b>	
    	<ul style="list-style-type: none"> <li>• Read and understand all instructions before attempting to install any Victaulic products.</li> <li>• Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.</li> <li>• Wear safety glasses, hardhat, and foot protection.</li> </ul> <p>Failure to follow these instructions could result in death or serious personal injury and property damage.</p>
<ul style="list-style-type: none"> <li>• These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.</li> <li>• The installer shall understand the use of this product and why it was specified for the particular application.</li> <li>• The installer shall understand common industry safety standards and potential consequences of improper product installation.</li> <li>• It is the system designer's responsibility to verify suitability of materials for use with the intended fluid media within the piping system and external environment.</li> <li>• The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on materials to confirm system life will be acceptable for the intended service.</li> </ul> <p>Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.</p>	

## 7.0 REFERENCE MATERIALS

- [10.64: Victaulic Firelock™ Rigid Coupling Style 009N](#)
- [29.01: Victaulic Terms and Conditions](#)
- [I-100: Field Installation Handbook](#)
- [I-009N: Field Installation and Maintenance Style 009N](#)
- [I-867-42T: Installation, Operation and Maintenance Manual Series 867-42T](#)
- [I-867-43T: Installation, Operation and Maintenance Manual Series 867-43T](#)
- [Bermad Fire Protection: Pump Suction Pressure Control Valve Model 43T-PS](#)

### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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### Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

### Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at [www.victaulic.com](http://www.victaulic.com).

### Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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