

Victaulic® Vertical Pressure Reducing Valve (PRV) Stations

Series 386-V



1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 x 1 1/2" to 4 x 3"/DN50 x DN40 to DN100 to DN80

Pipe Material

- Stainless steel

Maximum Working Pressure

- 300 psi/2068 kPa/21 bar

Operating Temperature Range

- +33°F to +140°F/+1°C to +60°C

Maximum Flowrate

- Up to 918 gpm/3475 lpm

Application

- Fully integrated, ready-to-install vertical pressure reducing valve (PRV) station.
- Typically for use in potable water systems to reduce and control system pressures to specified safe levels, independent of upstream pressure and flow variations.
- Offered in four standard configurations to accommodate various system flowrates, pressure reduction ratios, redundancy, and pressure safety options.
- Includes integrated low-flow bypass branch for accurate control in low water demand situations.
- Features integral automatic hydraulic control valves, isolation valves, pressure gauges and strainers for each branch.
- Fully supported with integrated strut frame, ready for installation.
- Connects to piping with a Victaulic grooved mechanical coupling. For when connecting to a copper piping system, a Victaulic Style 647 dielectric waterway fitting or a Victaulic Style 644 transition coupling is available for order separately.
- Exclusively for use with Victaulic couplings, fittings, valves, accessories and pipe which feature ends formed with Victaulic Original Groove System (OGS).

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

1.0 PRODUCT DESCRIPTION (CONTINUED)

Optional Accessories¹

- Dielectric Waterway Fitting – Victaulic Style 647
- Installation-Ready™ Transition Coupling for Potable Water - Victaulic Style 644
- Pressure Relief Valve – Bermaid Model BC-73Q-P/Victaulic Series 973-Q
- Air Release Valve - Bermaid Model A30, A71, C30 or C70/Victaulic Series 9A3, 9A7, 9C3 or 9C7

¹ These items not offered as part of the standard Series 386 PRV Station but can be ordered separately.

2.0 CERTIFICATION/LISTINGS



PRV Station is UL Classified to ANSI/NSF 61 and 372.

Product designed and manufactured under the Victaulic Quality Management System as certified by LPCB in accordance with ISO-9001:2008.

3.0 SPECIFICATIONS – MATERIAL

- Schedule 10 stainless steel pipe.
- Victaulic Original Groove System (OGS).
- Ductile iron housing conforming to ASTM A536, Grade 65-45-12.
- Standard coating: Hot dipped galvanized.
- Gasket: EPDM.
- Bolts/Nuts: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 FE/ZN5, finish Type III (imperial) or Type II (metric).

Ball Valve (1 ½ – 2 ½"/DN40 – 73.0 mm): CF8M stainless steel body and end cap.

Ball: 316 stainless steel

Seat: Tetrafluoroethylene (TFE)

Seal: Fluoroelastomer

Operator: Carbon steel, zinc-plated; plastic grip

Operator Bracket: Hot rolled steel, black enamel coated

Bracket Bolts & Washers: Cold rolled steel, zinc plated

Power Actuators: Electric, pneumatic, hydraulic

Integral Locking Device Components: Stamped carbon steel, zinc plated

Butterfly Valve (3 – 4"/DN80 – DN100): Stainless steel body conforming to ASTM A351 Grade CF8M.

Seat: EPDM.

Lever Handle: 10-Position (with Lever Lock) – Zinc-plated carbon steel handle with zinc-plated carbon steel latch plate and zinc-plated carbon steel fasteners, infinitely variable and padlockable and includes memory stop. Optionally available with tamper-resistant hardware.

3.0 SPECIFICATIONS – MATERIAL (CONTINUED)

Strainer: Ductile iron body.

Screen: Type 304 stainless steel.

O-Rings: EPDM.

Coating: Fusion bonded epoxy, RAL 5017.

Pressure Reducing Valve and Pressure Reducing System with “Watchdog” Hydraulic Backup Valve: Ductile iron body, cover and partition.

Internals: Stainless steel and bronze.

Control Accessories: Type 316 stainless steel.

Tubing & Fittings: Type 316 stainless steel.

Diaphragm: EPDM, nylon fabric-reinforced.

O-Rings: EPDM.

Seal: NBR.

Coating: Fusion bonded epoxy, RAL 5017.

4.0 DIMENSIONS

Series 386-V Vertical PRV Stations

(Use the 8th place in the part code to designate which configuration is being ordered)

EXAMPLE: KC40386AEV

Series 386A-V = Single Stage PRV Station with Low-Flow Bypass (LFB)

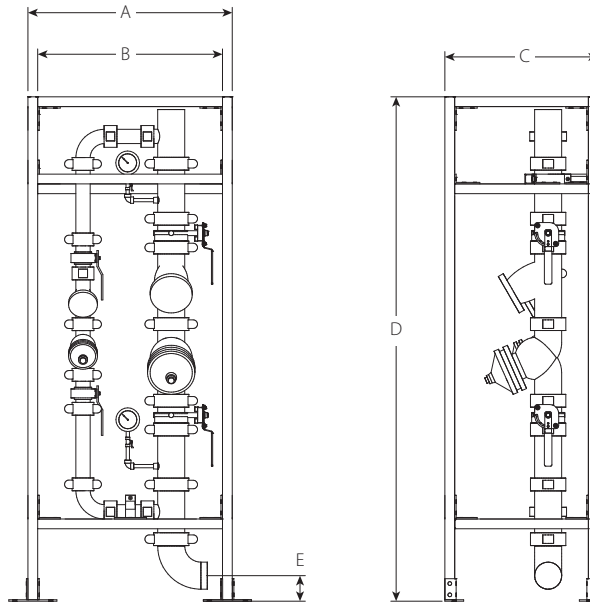
Series 386B-V = Two Stage PRV Station with LFB

Series 386C-V = Single Stage PRV Station with LFB & "Watchdog" Combination

Series 386D-V = Two Stage PRV Station with LFB & "Watchdog" Combination

4.1 DIMENSIONS

Series 386A-V Single Stage Vertical PRV Station with Low-Flow Bypass

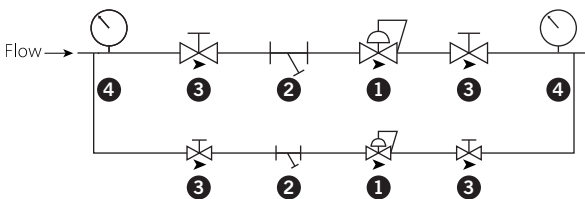


Size						Dimensions					Weight									
Primary Line	x	Low-Flow Bypass	Actual Outside Diameter			A	B	C	D	E	Approximate (Each)									
			Primary Line	x	Low-Flow Bypass							inches	mm	inches	mm	inches	mm	lb	kg	
2	x	1 1/2	2.375	x	1.900	29.00	25.75	22.00	65.50	3.19	295.6									
DN50		DN40	60.3		48.3	737	654	559	1664	81	134.1									
2 1/2	x	1 1/2	2.875	x	1.900	30.00	26.75	22.00	69.50	3.44	316.3									
DN80		DN40	73.0		48.3	762	679	559	1765	87	143.5									
3	x	1 1/2	3.500	x	1.900	30.50	27.25	24.00	73.69	3.75	350.9									
		DN80										DN40	88.9	48.3	775	692	610	1872	95	159.2
		2				30.50	27.25	24.00	74.81	3.75	378.4									
		DN50										60.3	775	692	610	1900	95	171.6		
4	x	1 1/2	4.500	x	1.900	34.00	30.75	25.50	80.94	4.25	514.5									
		DN100										DN40	114.3	48.3	864	781	648	2056	108	233.4
		2													34.00	30.75	25.50	83.94	4.25	532.0
		DN50				60.3	864	781	648	2132	108	241.3								
		3				34.00	30.75	25.50	83.94	4.25	588.3									
		DN80				88.9	864	781	648	2132	108	266.8								

NOTE

- The standard Series 386-V Vertical PRV Station is configured for top to bottom flow. If other flow configurations are required, please contact Victaulic.

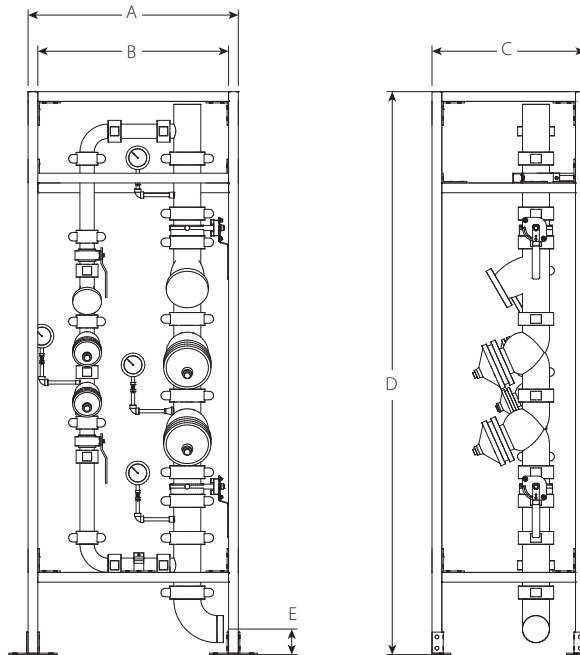
System Schematic



Symbol	Model or Valve Combo
①	Series 972 Pressure Reducing Valve
②	Series 968-F Strainer
③	Series 726S or Series 461 Valve for Isolation
④	Pressure Gauge

4.2 DIMENSIONS

Series 386B-V Two Stage Vertical PRV Station with Low-Flow Bypass

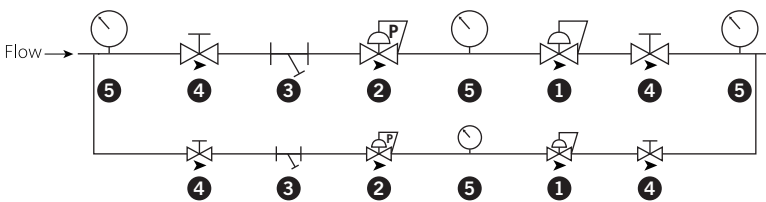


Size				Dimensions					Weight		
Nominal Primary Line	x	Low-Flow Bypass	Actual Outside Diameter Primary Line	x	Low-Flow Bypass	A	B	C	D	E	Approximate (Each)
inches DN			inches mm			inches mm	inches mm	inches mm	inches mm	inches mm	lb kg
2 DN50	x	1 1/2 DN40	2.375 60.3	x	1.900 48.3	32.25 819	29.00 737	22.00 559	73.94 1878	3.19 81	345.5 156.7
2 1/2	x	1 1/2 DN40	2.875 73.0	x	1.900 48.3	32.25 819	29.00 737	22.00 559	77.81 1976	3.44 87	371.4 168.5
3 DN80	x	1 1/2 DN40	3.500 88.9	x	1.900 48.3	34.00 864	30.75 781	24.00 610	80.69 2049	3.75 95	428.9 194.5
		2 DN50			2.375 60.3	34.00 864	30.75 781	24.00 610	78.81 2002	3.75 95	459.9 208.6
4 DN100	x	1 1/2 DN40	4.500 114.3	x	1.900 48.3	35.00 889	31.75 806	25.50 648	93.69 2380	4.25 108	626.4 284.1
		2 DN50			2.375 60.3	35.00 889	31.75 806	25.50 648	93.69 2380	4.25 108	647.7 293.8

NOTE

- The standard Series 386-V Vertical PRV Station is configured for top to bottom flow. If other flow configurations are required, please contact Victaulic.

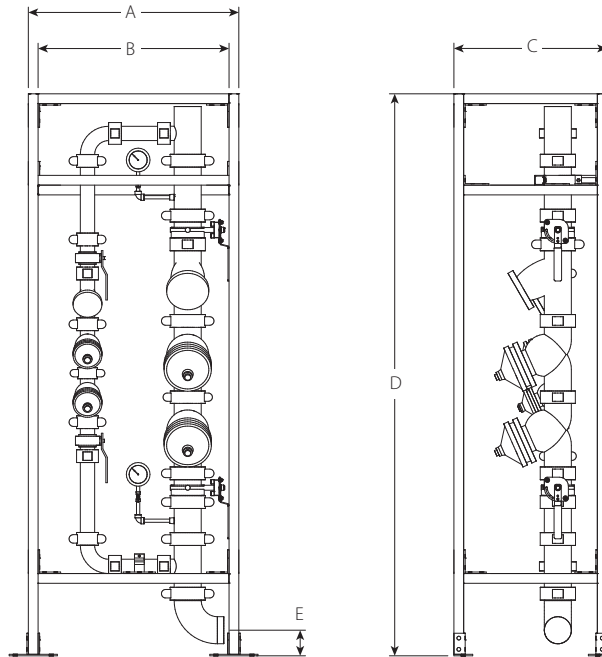
System Schematic



Symbol	Model or Valve Combo
1	Series 972 Pressure Reducing Valve
2	Series 972-PD Proportional Pressure Reducing Strainer
3	Series 968-F Strainer
4	Series 726S or Series 461 Valve for Isolation
5	Pressure Gauge

4.3 DIMENSIONS

Series 386C-V Single Stage Vertical PRV Station with Low-Flow Bypass and "Watchdog" Combination

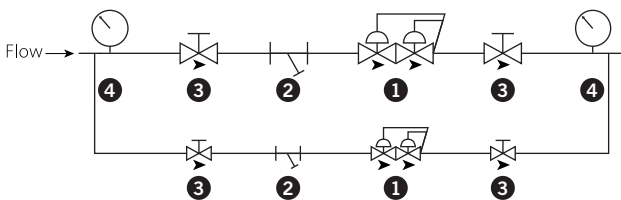


Size						Dimensions					Weight
Primary Line	x	Low-Flow Bypass	Actual Outside Diameter			A	B	C	D	E	Approximate (Each)
			Primary Line	Low-Flow Bypass							
2 DN50	x	1 ½ DN40	2.375	1.900	30.00	26.75	22.00	73.44	3.19	309.6	
			60.3	48.3	762	679	559	1865	81	140.4	
2 ½	x	1 ½ DN40	2.875	1.900	30.00	26.75	22.00	77.63	3.44	330.4	
			73.0	48.3	762	679	559	1972	87	149.8	
3 DN80	x	1 ½ DN40	3.500	1.900	33.00	29.75	24.00	80.56	3.75	377.7	
			88.9	48.3	838	756	610	2046	95	171.3	
		2 DN50	2.375	1.900	33.00	29.75	24.00	78.63	3.75	408.8	
			60.3	48.3	838	756	610	1997	95	185.4	
4 DN100	x	1 ½ DN40	4.500	1.900	35.00	31.75	25.50	93.50	4.25	494.6	
			114.3	48.3	889	806	648	2375	108	224.3	
		2 DN50	2.375	1.900	35.00	31.75	25.50	93.50	4.25	516.4	
			60.3	48.3	889	806	648	2375	108	234.2	

NOTE

- The standard Series 386-V Vertical PRV Station is configured for top to bottom flow. If other flow configurations are required, please contact Victaulic.

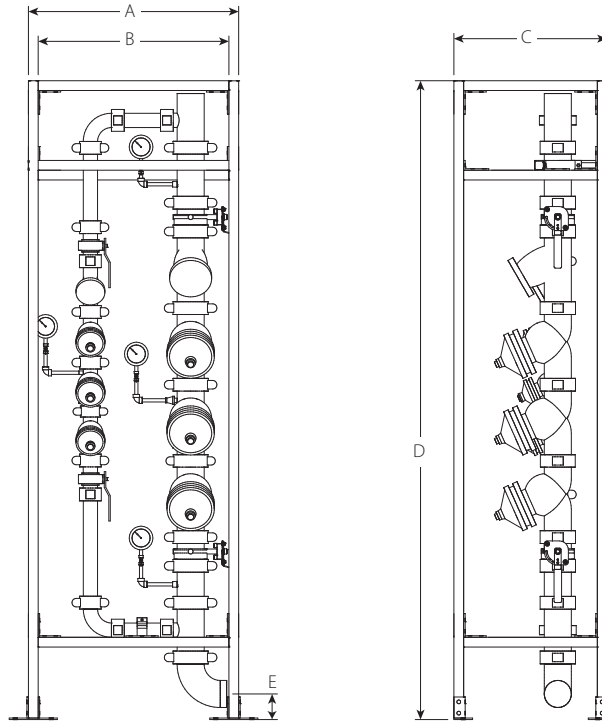
System Schematic



Symbol	Model or Valve Combo
①	Series 972S-H Watchdog Combination
②	Series 968-F Strainer
③	Series 726S or Series 461 Valve for Isolation
④	Pressure Gauge

4.4 DIMENSIONS

Series 386D-V Two Stage Vertical PRV Station with Low-Flow Bypass and "Watchdog" Combination

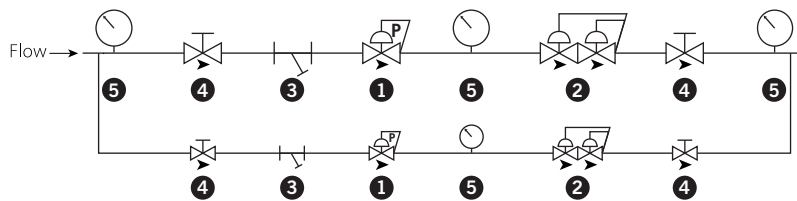


Size				Dimensions					Weight	
Nominal Primary Line inches DN	x	Low-Flow Bypass inches DN	Actual Outside Diameter		A inches mm	B inches mm	C inches mm	D inches mm	E inches mm	Approximate (Each) lb kg
			Primary Line inches mm	Low-Flow Bypass inches mm						
2 DN50	x	1 ½ DN40	2.375 60.3	x 1.900 48.3	32.50 826	29.25 743	22.00 559	78.94 2005	3.19 81	361.2 163.8
2 ½	x	1 ½ DN40	2.875 73.0	x 1.900 48.3	32.50 826	29.25 743	22.00 559	83.25 2115	3.44 87	388.2 176.0
3 DN80	x	1 ½ DN40	3.500 88.9	x 1.900 48.3	34.00 864	30.75 781	24.00 610	90.50 2299	3.75 95	455.9 206.8
		2 DN50			2.375 60.3	34.00 864	30.75 781	24.00 610	88.88 2257	3.75 95

NOTE

- The standard Series 386-V Vertical PRV Station is configured for top to bottom flow. If other flow configurations are required, please contact Victaulic.

System Schematic



Symbol	Model or Valve Combo
①	Series 972-PD Proportional Pressure Reducing Valve
②	Series 972S-H Watchdog Combination
③	Series 968-F Strainer
④	Series 726S or Series 461 Valve for Isolation
⑤	Pressure Gauge

5.0 PERFORMANCE

Series 386-V Vertical PRV Station Design Recommendations

Flow Recommendation

Series 386A/B/C/D - Main Branch & Low-Flow Bypass Operational

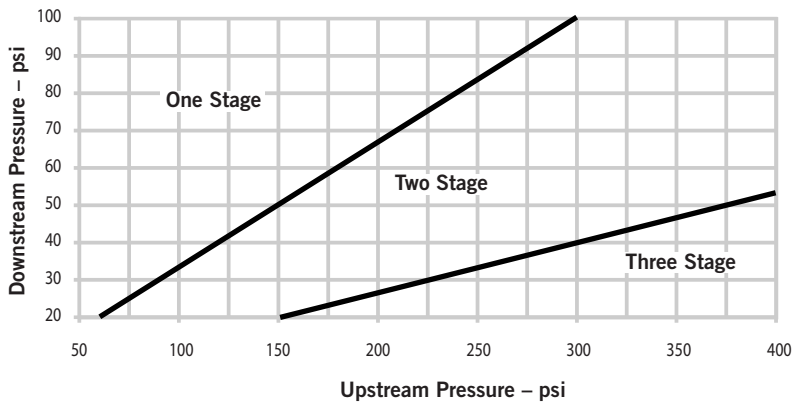
PRV Station Size inches	Maximum Continuous Flow		Maximum Intermittent Flow	Minimum Flow gpm	Series 973-Q Pressure Relief Valve Recommended Size inches
	8 ft/sec	10 ft/sec	15 ft/sec		
2 x 1 ½	122	153	229	1	1 ½
2 ½ x 1 ½	166	208	312	1	1 ½
3 x 1 ½	220	275	413	1	1 ½
3 x 2	254	318	477	1	1 ½
4 x 1 ½	358	447	670	1	1 ½
4 x 2	391	489	734	1	1 ½
4 x 3*	490	612	918	3	2

* The 4 x 3 PRV Station size is only available in the Series 386A-V configuration.

Pressure Reduction Stages Guide

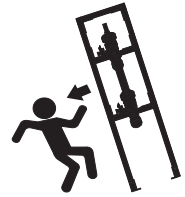
Check the location on the graph according to the inlet and the outlet pressures:

- Single Stage: Series Series 386A-V and Series 386C-V
- Two Stage: Series 386B-V and Series 386D-V
- Three Stage: Contact Victaulic.



6.0 NOTIFICATIONS

WARNING



- Read and understand all instructions before attempting to install any Victaulic piping products.
 - Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
 - Wear safety glasses, hardhat, and foot protection.
 - Verify that the proper equipment is available for handling the Pressure-Reducing Valve (PRV) Station.
 - Use proper material handling techniques to prevent the PRV Station assembly from tipping.
 - The PRV station shall be anchored securely to the floor or wall with appropriate fasteners for the substrate and load.
 - Isolate each section and vent pressure before attempting to remove, adjust, or maintain the PRV Station.
- Failure to follow these instructions could result in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

[02.06: Victaulic Approvals for Potable Water Products](#)

[I-PRV: Victaulic Series 386 Pressure Reducing Valve \(PRV Station\) Installation Instructions](#)

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, 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.

Warranty

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

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