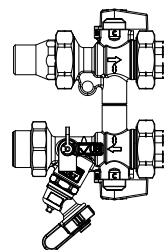


# Victaulic® Series UBM Unibody Manual Balancing Valve



106.21



## PROJECT INFORMATION

Project  
Contractor  
Job  
Engineer  
Date

## 1.0 PRODUCT DESCRIPTION

**Available Sizes:** ½ – 1"/DN15 – DN25 (UH1 Ready and Non-UH1 Ready)

**Function:** Compact, multi-function coil hookup device includes a multi-directional flushing bypass for ease of commissioning and maintenance, flow control, straining, draining, isolation, and pressure/temperature/flow verification with additional manual balancing valve (78K or 78BL).

**Application:** Hydronic heating and cooling systems containing treated water.

**Maximum Working Pressure:** 400 psi / 2750 kPa / 27.5 bar

**Operating Temperature Range:** -4°F to 250°F / -20°C to +120°C

## 2.0 MATERIALS AND DESIGN

### Unibody Manifold Valve

**Body:** Dezincification-Resistant (DZR) Brass

**Union Nut:** DZR Brass

**Union Face Seal:** EPDM O-Ring

**Tailpiece:** DZR Brass

**Adapters:** DZR Brass

**Ball Valve Stem:** DZR Brass (304 Stainless Steel Optional)

**Ball Valve Stem O-Ring Seals:** EPDM

**Ball:** Plated DZR Brass (304 Stainless Steel Optional)

**Ball Seat:** PTFE

**Handles:** Aluminum

**Handle Restraint Screw:** Plated Carbon Steel

### Unibody Manifold Valve (Continued)

**Handle Stop Screw:** Stainless Steel

**Strainer:** Stainless Steel, 20 Mesh (800 µm)

**Body Seals:** EPDM

**Drain Valve Seat:** PTFE

**Drain Valve Stem:** DZR Brass

**Drain Valve Cap:** Nylon

**Drain Valve External Body:** Glass-Filled Nylon

**Drain Valve Outlet Manifold:** Glass-Filled Nylon

**Drain Valve Outlet Cap:** Nylon

**Drain Valve Outlet Cap Seal:** TPE

**Drain Valve Outlet Cap Tether:** Elastomer

## 3.0 AVAILABLE ACCESSORIES

- See [Section 9.0 Reference Materials](#) for Accessory and Replacement Components and Part Codes

## 4.0 CARTRIDGE SELECTION GUIDE

- Not applicable

## 5.0 CERTIFICATIONS/LISTINGS

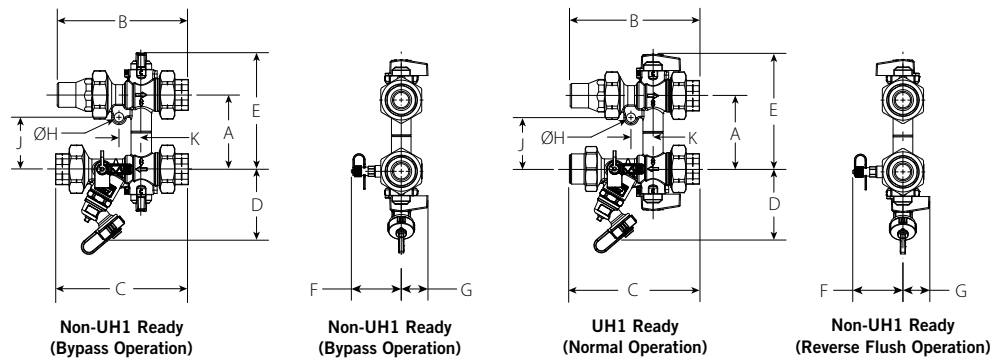
Product manufactured by Victaulic and/or certified suppliers in accordance with ISO-9001.

THE INFORMATION CONTAINED ON THIS PAGE IS NOT INTENDED TO REPLACE THE FULL PRODUCT DATA LISTED LATER IN THIS DOCUMENT. THOROUGHLY READ AND UNDERSTAND ALL INSTALLATION INSTRUCTIONS AND PRODUCT SAFETY INFORMATION BEFORE INSTALLING THIS PRODUCT.



6.0 DIMENSIONS

Series UBM



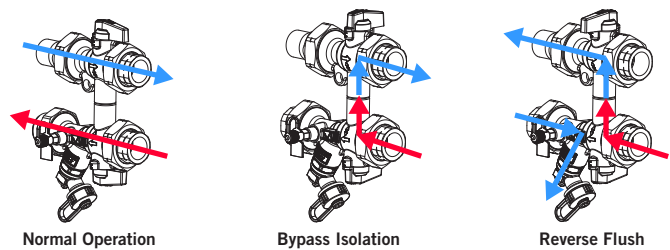
Size			Dimensions											Weight
Nominal	IPS Actual Outside Diameter	CTS Actual Outside Diameter	A	B	C	C	D	E	F	G	ØH	J	K	Approx. (Each)
inches DN	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lb kg
½ DN15	0.840 21.3	0.625 15.9	3.15 80	5.42 138	5.58 142	5.61 142	3.13 77	5.00 126	2.21 56	1.18 30	0.39 10	2.21 56	0.95 24	4.0 1.8
¾ DN20	1.050 26.9	0.875 22.2	3.15 80	5.55 141	5.59 142	5.62 143	3.13 77	5.00 126	2.21 56	1.18 30	0.39 10	2.21 56	0.95 24	4.1 1.9
1 DN25	1.315 33.7	1.125 28.6	3.15 80	6.12 155	6.05 154	6.54 166	3.13 77	5.00 126	2.21 56	1.18 30	0.39 10	2.21 56	0.95 24	5.1 2.3

- NOTES:
- Dimensions are for Female NPT connections; other choices may affect lengths, such as copper press adapters or sweat tailpieces.
  - Visit [victaulic.com](http://victaulic.com) for design software downloads.

7.0 PERFORMANCE

Valve Handle Operation Positions

Series UBM



Valve	Normal Operation	Bypass Isolation	Reverse Flush
Upstream (Red)	B	C	C
Downstream (Blue)	B	C	A

## 7.1 PERFORMANCE

Cv/Kv values for flow of water at +60°F/+16°C are shown in the table.

### Formulas for Cv and Kv Values

$$\Delta P = Q^2 / C_v^2$$

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

$$\Delta P = Q^2 / K_v^2$$

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

Where:

Flow Coefficient	C <sub>v</sub>	K <sub>v</sub>
Q (Flow)	GPM	m <sup>3</sup> /hr
ΔP (Pressure Drop)	psi	bar

### Strainer Branch Flow Coefficient

Nominal inches DN	Size		Flow Coefficient  C <sub>v</sub> K <sub>v</sub>
	IPS Actual Outside Diameter inches mm	CTS Actual Outside Diameter inches mm	
1/2 DN15	0.840 21.3	0.625 15.9	4.13 3.58
3/4 DN20	1.050 26.9	0.875 22.2	4.13 3.58
1 DN25	1.315 33.7	1.125 28.6	4.13 3.58

### Return Shut-Off Valve Flow Coefficient

Nominal inches DN	Size		Flow Coefficient Full Open C <sub>v</sub> K <sub>v</sub>
	IPS Actual Outside Diameter inches mm	CTS Actual Outside Diameter inches mm	
1/2 DN15	0.840 21.3	0.625 15.9	13.50 11.68
3/4 DN20	1.050 26.9	0.875 22.2	13.50 11.68
1 DN25	1.315 33.7	1.125 28.6	13.50 11.68

## 8.0 NOTIFICATIONS

### ⚠ WARNING



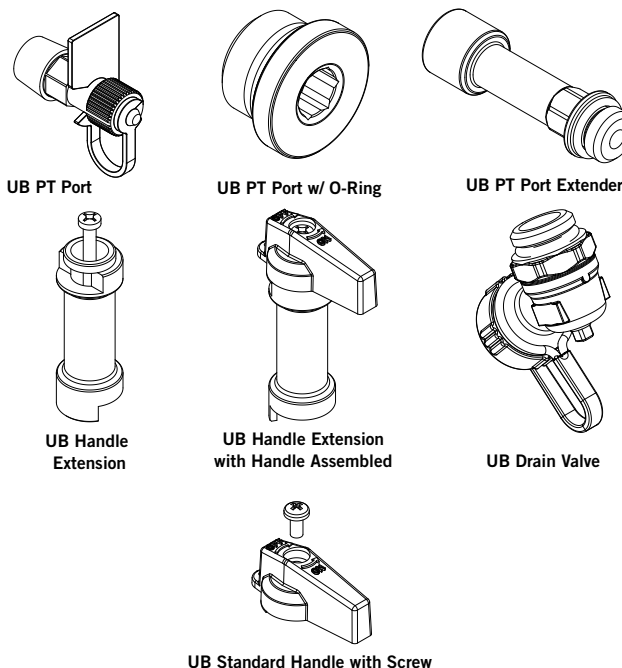
- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, foot protection, and hearing protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

## 9.0 REFERENCE MATERIALS

### Accessories

Description	Part Code
UB PT Port Standard Length ¼" BSPT BLUE	P002UBPPTB
UB PT Port Standard Length ¼" BSPT RED	P002UBPPTR
UB PT Port Plug with O-Ring ¼" BSPP	P002UBPPLG
UB PT Port Extender 2" Length	P004UBP2XT
UB PT Port Extender or 4" Length	P004UBP4XT
UB Standard Handle (with RED screw / kit)	P004UBPRHL
UB Standard Handle (with BLUE screw / kit)	P004UBPBHL
UB Handle Extension 2" Length CW617	P004UBP2HL
UB Handle Extension 4" Length CW617	P004UBP4HL
Replacement Strainer Screen (20 Mesh, 800 µm)	P004UBPSTN
UB Strainer Plug O-Ring	P004UBPORG
UB Drain Valve	P000UBPDRN



## 9.1 REFERENCE MATERIALS

[08.16: Victaulic Balancing Valves - TA Series 786H/787H/788/789 and Series 78KH](#)

[08.30: Victaulic KOIL-KIT™ Coil Pack](#)

[08.34: Victaulic Automatic Balancing Valves - Series 76T, 76B, 76K, 76V & 76G](#)

[08.50: Victaulic Balancing Valve - TA Series 78BL](#)

[08.60: Series 78Y/78U Manual Coil-Kit™ Coil Pack with Series 78KH Union Inlet Globe Style Valve](#)

[08.61: Series 78T/78U Manual Coil-Kit™ Coil Pack with Series 78KH Union Inlet Globe Style Valve](#)

[106.30: Victaulic Series UH1 Flexible Pipe](#)

[I-KOIL.KIT: KOIL-KIT™ Coil Pack Installation and Maintenance Instructions](#)

[I-UBM: Victaulic Series UBM Installation and Maintenance Instructions](#)

[I-UH1: Victaulic Series UH1 Flexible Pipe Installation and Use Guidelines](#)

#### User Responsibility for Product Selection and Suitability

Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation 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, warranty, installation instructions, or this disclaimer.

#### Installation

Always refer to and follow the [Victaulic Installation Handbook](#) or installation instructions for 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 victaulic.com.

#### Warranty

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

#### Intellectual Property Rights

No statement concerning the use of any material, product, service, or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Victaulic or any of its affiliates, or as a recommendation for the use of such material, product, service, or design in the infringement of any patent or other intellectual property right. The terms "Patented" or "Patent Pending" refer to design or utility patents or patent applications for articles and/or methods of use in the United States and/or other countries. Victaulic and all other Victaulic marks are the trademarks or registered trademarks of Victaulic Company, and/or its affiliated entities, in the U.S. and/or other countries.

#### Note

All products bearing a Victaulic trademark are manufactured by Victaulic or to Victaulic specifications. All products are to be installed only in accordance with the applicable Victaulic installation instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.