

valve  
**cimberio®**

# ADJUSTABLE THERMOSTATIC BALANCING VALVE

**cim 778**



## NO-LEAD

**NSF/ANSI 61**

# cim 778

## Adjustable Thermostatic Balancing Valve with Anti-Legionella Disinfection

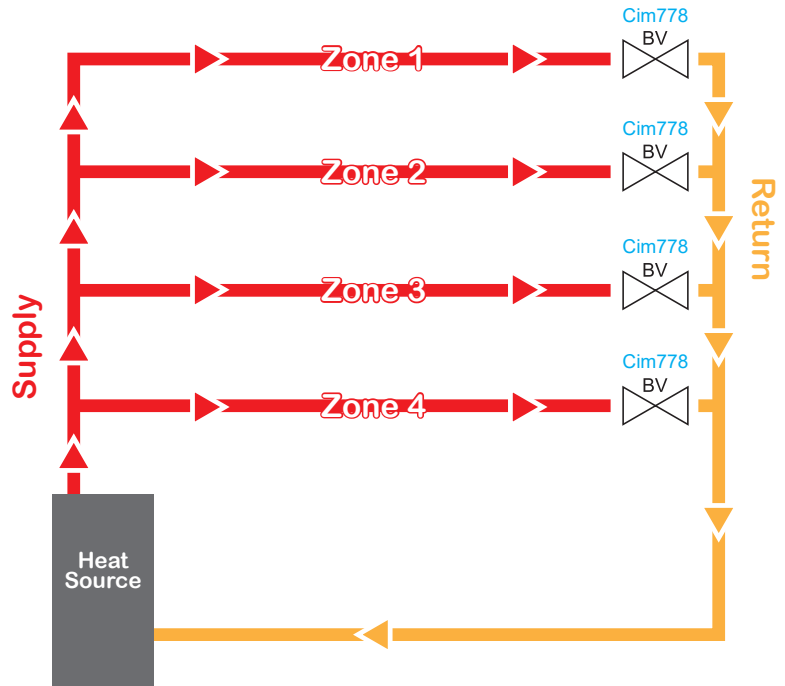
Cim 778 balancing valves allow temperature balancing in domestic hot water recirculation systems. Water temperatures can be easily adjusted by setting its integrated thermostat; no need to remove anything from the system. They guarantee desired temperatures at each point of the system and minimize heat loss. Cim 778 balancing valves feature a by-pass mechanism that intervenes in the case of thermal disinfection against Legionella, and are available with ball valves (2), an inline or swing check valve, and/or strainer.

### How It Works

The Cim 778 thermostatic balancing valve opens and closes in response to the water's temperature. When the water's temperature is too low the Cim 778 opens to allow more water through. When the water's temperature reaches the valve's thermostat set-point the valve closes to allow less water through (the valve never fully closes to ensure water will always flow through the pump). To adjust the water's temperature use a slotted screwdriver to set the valve's thermostat.

### Installation

Install the Cim 778 in the return line of each zone. When the supply water's temperature reaches the valve's thermostat set-point the valve closes and allows the water to remain in the supply, where it is utilized by the other zones. When the temperature of the supply is lower than the valve's thermostat set-point the valve opens and allows the water to return to the heat source where it is warmed and returned to the supply.



### Advantages:

- Adjust Temperature without Removing Valve from the System
- Perform Legionella Disinfection without Removing Valve from the System
- No-Lead & NSF/ANSI 61 Certified
- Corrosion-Resistant Brass
- Options: Ball Valves (2), Inline or Swing Check Valve, and/or Strainer
- Optional Accessories: Temperature Gauge and/or Binder Points
- Replaceable Balancing Mechanism

Based on NSF/ANSI 61-2008 Annex G in compliance with Section 116875 of the California Health & Safety Code.

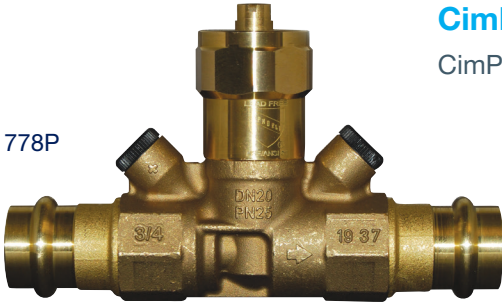
All Cimberio valves qualify for the American Recovery and Reinvestment Act and the Buy American Act.

## Options:

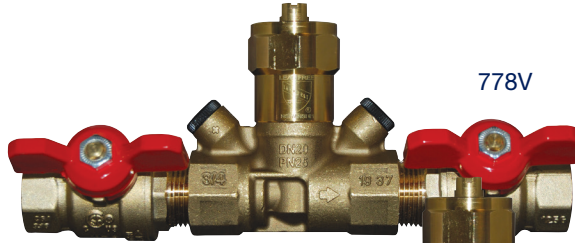
### CimPRESS Connections

CimPRESS connections allow the valve to be installed faster saving labor costs.

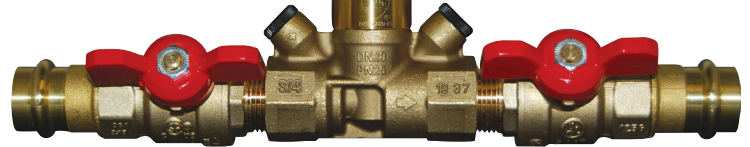
778P



778V



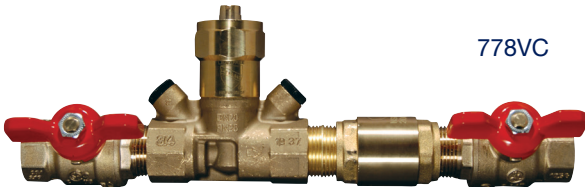
778PV



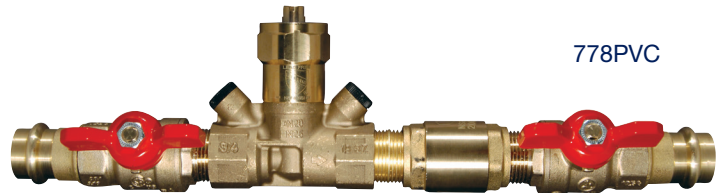
### Ball Valves (2):

Ball valves isolate the balancing valve allowing it to be maintained faster saving labor costs.

778VC



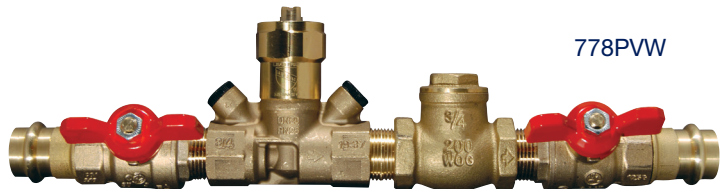
778PVC



778VW



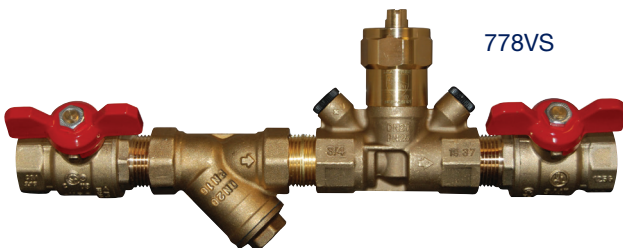
778PVW



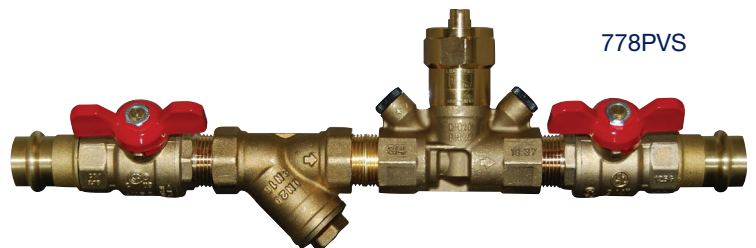
### Strainer:

A strainer helps remove imperfections in the water prior to it entering the balancing valve, extending the valve's longevity and ensuring the integrity of the system.

778VS



778PVS



## Model Selection

The Cim 778 offers NPT or CimPRESS connections with or without ball valves (2), an inline or swing check valve, and/or a strainer. To order, simply provide a Cim No. by choosing the necessary items from the chart below. Accessories include optional temperature gauge and/or binder points.

**Example: 778PVC-06** = ¾" valve with CimPRESS connections, ball valves (2), and an inline check valve.

Connection		-	Ball Valve		-	Check Valve		-	Strainer		-	Size	
778	NPT		V	Ball Valves (2)		C	Inline Check		S	Strainer		04	½"
778P	PRESS					W	Swing Check					06	¾"
												07	1"

## Popular Models

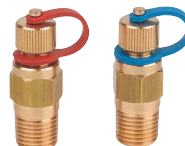
NPT	Size	Cim No.	Description
	1/2"	778-04	Adjustable Thermostatic Balancing Valve
	3/4"	778-06	Adjustable Thermostatic Balancing Valve
	1"	778-07	Adjustable Thermostatic Balancing Valve
NPT	Size	Cim No.	Description
	1/2"	778V-04	with Ball Valves (2)
	3/4"	778V-06	with Ball Valves (2)
	1"	778V-07	with Ball Valves (2)
NPT	Size	Cim No.	Description
	1/2"	778VC-04	with Ball Valves (2) and Inline Check Valve
	3/4"	778VC-06	with Ball Valves (2) and Inline Check Valve
	1"	778VC-07	with Ball Valves (2) and Inline Check Valve
NPT	Size	Cim No.	Description
	1/2"	778VW-04	with Ball Valves (2) and Swing Check Valve
	3/4"	778VW-06	with Ball Valves (2) and Swing Check Valve
	1"	778VW-07	with Ball Valves (2) and Swing Check Valve
NPT	Size	Cim No.	Description
	1/2"	778VS-04	with Ball Valves (2) and Strainer
	3/4"	778VS-06	with Ball Valves (2) and Strainer
	1"	778VS-07	with Ball Valves (2) and Strainer
NPT	Size	Cim No.	Description
	1/2"	778VCS-04	with Ball Valves (2), Inline Check Valve, and Strainer
	3/4"	778VCS-06	with Ball Valves (2), Inline Check Valve, and Strainer
	1"	778VCS-07	with Ball Valves (2), Inline Check Valve, and Strainer
NPT	Size	Cim No.	Description
	1/2"	778VWS-04	with Ball Valves (2), Swing Check Valve, and Strainer
	3/4"	778VWS-06	with Ball Valves (2), Swing Check Valve, and Strainer
	1"	778VWS-07	with Ball Valves (2), Swing Check Valve, and Strainer
PRESS	Size	Cim No.	Description
	1/2"	778P-04	Adjustable Thermostatic Balancing Valve
	3/4"	778P-06	Adjustable Thermostatic Balancing Valve
	1"	778P-07	Adjustable Thermostatic Balancing Valve
PRESS	Size	Cim No.	Description
	1/2"	778PV-04	with Ball Valves (2)
	3/4"	778PV-06	with Ball Valves (2)
	1"	778PV-07	with Ball Valves (2)
PRESS	Size	Cim No.	Description
	1/2"	778PVC-04	with Ball Valves (2) and Inline Check Valve
	3/4"	778PVC-06	with Ball Valves (2) and Inline Check Valve
	1"	778PVC-07	with Ball Valves (2) and Inline Check Valve
PRESS	Size	Cim No.	Description
	1/2"	778PVW-04	with Ball Valves (2) and Swing Check Valve
	3/4"	778PVW-06	with Ball Valves (2) and Swing Check Valve
	1"	778PVW-07	with Ball Valves (2) and Swing Check Valve
PRESS	Size	Cim No.	Description
	1/2"	778PVS-04	with Ball Valves (2) and Strainer
	3/4"	778PVS-06	with Ball Valves (2) and Strainer
	1"	778PVS-07	with Ball Valves (2) and Strainer
PRESS	Size	Cim No.	Description
	1/2"	778PVCS-04	with Ball Valves (2), Inline Check Valve, and Strainer
	3/4"	778PVCS-06	with Ball Valves (2), Inline Check Valve, and Strainer
	1"	778PVCS-07	with Ball Valves (2), Inline Check Valve, and Strainer
PRESS	Size	Cim No.	Description
	1/2"	778PVWS-04	with Ball Valves (2), Swing Check Valve, and Strainer
	3/4"	778PVWS-06	with Ball Valves (2), Swing Check Valve, and Strainer
	1"	778PVWS-07	with Ball Valves (2), Swing Check Valve, and Strainer

## Accessories:



### Temperature Gauge

The water temperature gauge offers temperature verification at the valve for easier and more accurate balancing.



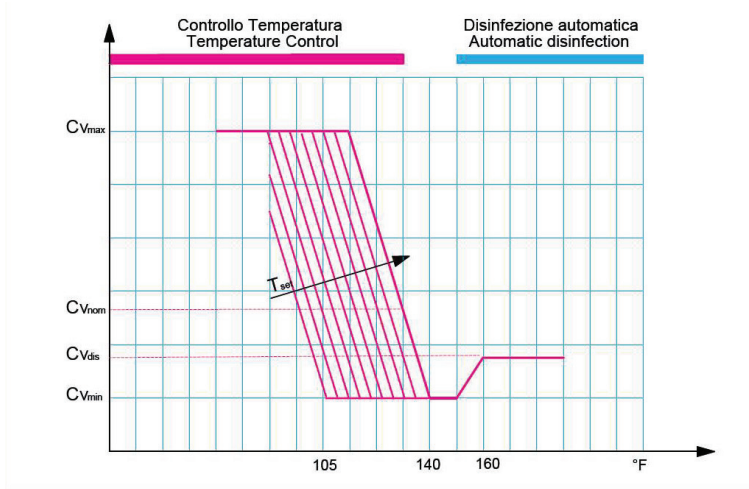
### Binder Points

Binder Points allow for testing of the water's condition before and after the valve to ensure proper operation.



Technical Data

Technical data applies to Cim 778 thermostatic balancing valve *ONLY* (without any options).



Pressure Rating:

360 PSI

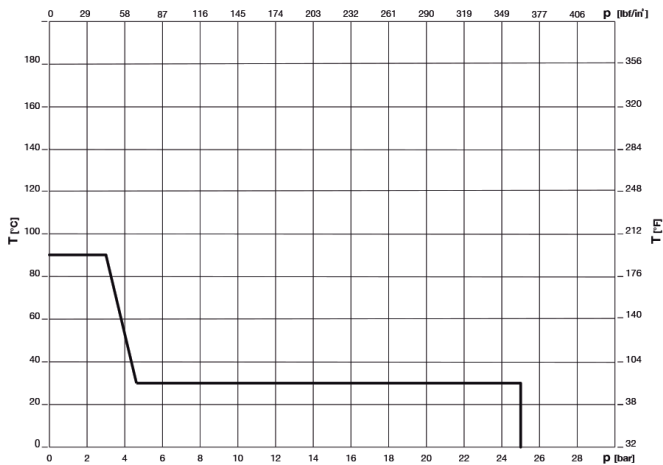
Working Temperature:

15° F — 200° F

Features:

- Adjustable Temperature Regulation
- F° or C° Temperature Settings
- Automatic Legionella Disinfection

Pressure temperature ratings



SIZE	1/2"	3/4"	1"
CV max	1.7	3.6	4.2
CV min	0.29	0.29	0.29
CV nom (dt=10°F)	0.7	0.8	0.9
CV dis	0.6	0.6	0.6

CV = Flow rate in GPM with a pressure drop of 1 PSI.

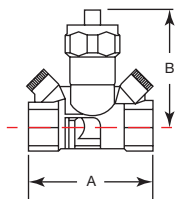
Technical Characteristics

**Fluid:** Water  
**Nominal Pressure:** 360 PSI (PN 25)  
**Temperature:** 15°F to 200°F  
**Temperature Setting Range:** 105°F-140°F  
**Body Material:** EN 12165-CW511L "NL" Brass  
**Threads:** NPT - ANSI B1.20.1

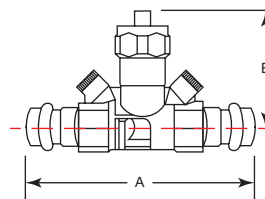
CV CM CS MT

**CV:** Capacity in "U.S. gal/min" at pressure drop of "1 PSI"  
**CM:** Working Torque in "lb x in"  
**CS:** Starting Torque in "lb x in"  
**MT:** Torque Breaking Point on the Sten in "lb x in"  
**Element:** Water – Temperature: 59.9° F  
**Working Pressure:** 250 PSI  
**Max. Operating Temp:** Working Limit for Fluids: -4° F – 248° F  
**Test Pressures:** According to ISO 5208

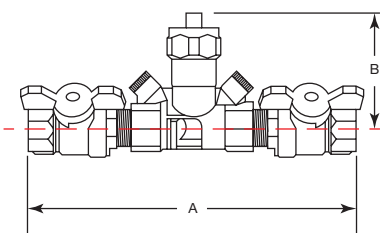
## Dimensions



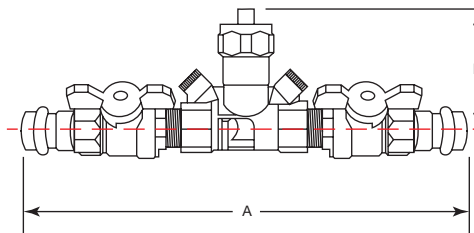
778			
SIZE	1/2"	3/4"	1"
A	3.062"	3.125"	3.438"
B	2.875"	2.9375"	3.0625"



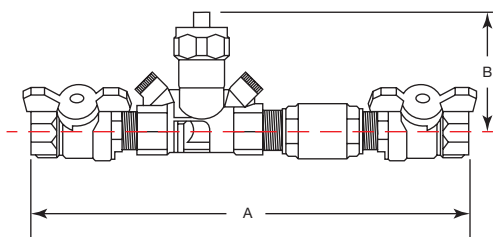
778P			
SIZE	1/2"	3/4"	1"
A	5.5"	5.875"	6.375"
B	2.875"	2.9375"	3.0625"



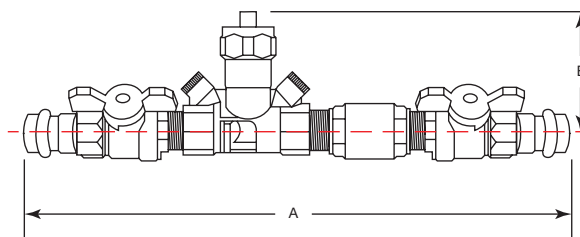
778V			
SIZE	1/2"	3/4"	1"
A	7.375"	8.375"	8.875"
B	2.875"	2.9375"	3.0625"



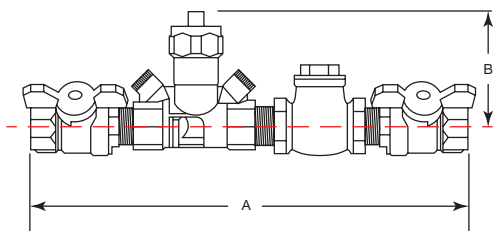
778PV			
SIZE	1/2"	3/4"	1"
A	9.75"	11"	11.75"
B	2.875"	2.9375"	3.0625"



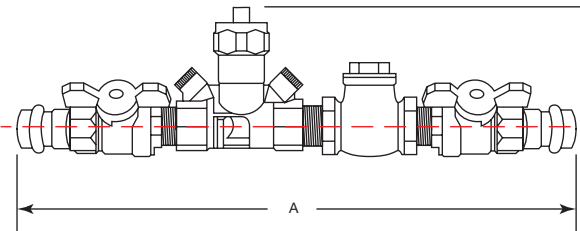
778VC			
SIZE	1/2"	3/4"	1"
A	9.875"	11.25"	11.875"
B	2.875"	2.9375"	3.0625"



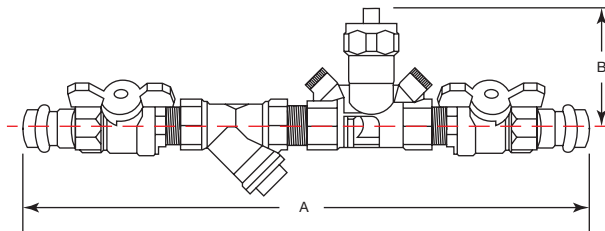
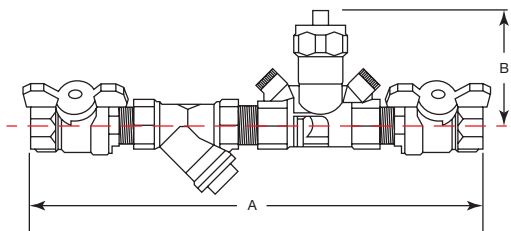
778PVC			
SIZE	1/2"	3/4"	1"
A	12.25"	13.875"	14.75"
B	2.875"	2.9375"	3.0625"



778VW			
SIZE	1/2"	3/4"	1"
A	9.75"	11"	12"
B	2.875"	2.9375"	3.0625"

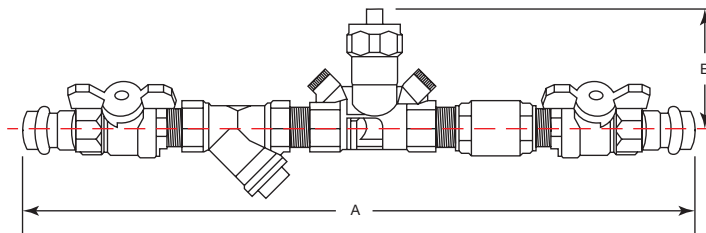
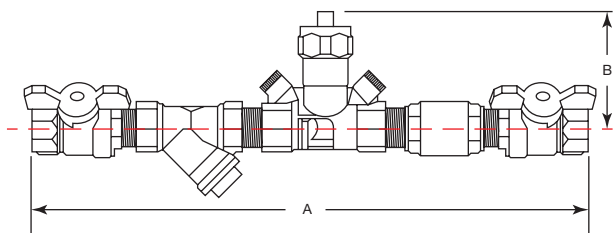


778PVW			
SIZE	1/2"	3/4"	1"
A	12"	13.75"	14.875"
B	2.875"	2.9375"	3.0625"



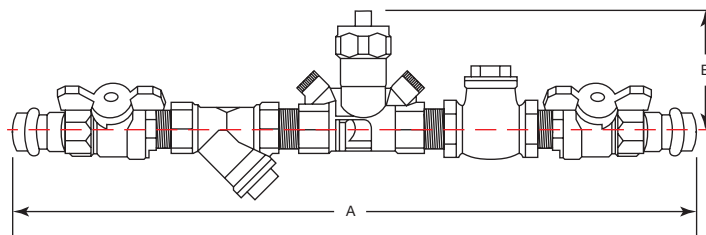
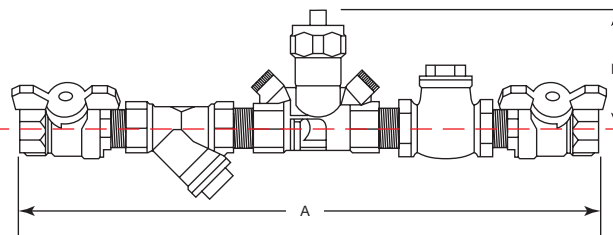
778VS			
SIZE	1/2"	3/4"	1"
A	10"	11.5"	12.25"
B	2.875"	2.9375"	3.0625"

778PVS			
SIZE	1/2"	3/4"	1"
A	12.375"	14.125"	15.125"
B	2.875"	2.9375"	3.0625"



778VCS			
SIZE	1/2"	3/4"	1"
A	12.625"	14.375"	15.25"
B	2.875"	2.9375"	3.0625"

778PVCS			
SIZE	1/2"	3/4"	1"
A	14.875"	17.125"	18"
B	2.875"	2.9375"	3.0625"



778VWS			
SIZE	1/2"	3/4"	1"
A	12.375"	14.125"	15.375"
B	2.875"	2.9375"	3.0625"

778PVWS			
SIZE	1/2"	3/4"	1"
A	14.75"	16.875"	18.25"
B	2.875"	2.9375"	3.0625"

Job: \_\_\_\_\_

Order #: \_\_\_\_\_

Engineer: \_\_\_\_\_

Submitted By: \_\_\_\_\_

Contractor: \_\_\_\_\_

Approved By: \_\_\_\_\_

Representative: \_\_\_\_\_

Date: \_\_\_\_\_

#### 778 NPT

☐ 778 ☐ 778V ☐ 778VC ☐ 778VW ☐ 778VS ☐ 778VCS ☐ 778VWS

#### 778 PRESS

☐ 778P ☐ 778PV ☐ 778PVC ☐ 778PVW ☐ 778PVS ☐ 778PVCS ☐ 778PVWS



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