Water Products

Honeywell

Count On One Brand For A Full Line Of Hydronic Heating And Potable Water Solutions

Honeywell Hydronic Heating and Potable Water Products

- **State-of-the-art hydronic heating and plumbing specialties**
- **Unique engineering features**
- **Highest quality assurance - 100% tested**
- **Easy to install and service**
- **Save energy**

AMX Series DirectConnect™ Thermostatic Mixing Valve

- DirectConnect™ to Water Heater - NPT bottom connection attaches easily
- Engineered for fast installation -orientation of the mix and cold ports eliminates the need for elbows on water heater installations
- Dramatically reduces installation time and number of parts in half
- Adjustable temperature range: 90° to 130° F
- Available in multiple connection types: NPT, Sweat, CPVC, Compression and PEX fittings, etc.
- Easy recirculation; integrated port allows for optional recirculation
- Patent pending

AM-1 Series Mixing Valve

- Accurately adjusts, maintains, and limits hot water temperature
- Patented design guarantees faster acting valve for best anti-scald performance
- Nickel plated brass construction, EPDM O-rings
- Teflon® coated inner body and shuttle to prevent mineral build-up
- ASSE 1017 Approved (STD & C Models)
- Union and NPT connections
- Low minimum flow requirement — .5 GPM

UMV Series Under-sink Mixing Valve

- Universal design allows flexibility in adapting to three port or four port applications.
- Shipped with four port adapter.
- Shipped with standoffs for easy mounting.
- Large adjustment knob for ease of setting.
- Integral check valves in hot and cold inlets.
- Lockable hand wheel for tamper resistant temperature
- Dual certification - ASSE 1016, ASSE 1070

MX Series Mixing Valves

- Large flow proportional mixing or diverting valve
- Valve controls hot or cold supply based on valve setting
- Protects people and equipment
- Saves energy
- Bronze/stainless construction
- Wear surfaces Teflon® coated to prevent mineral build-up
- Tamper evident temperature adjustment
- Union NPT and flanged models
- Recirculation port for fast response
- ASSE 1017 certification

DS05/DS06 Series DialSet® Pressure Regulating Valve

- Built-in adjustment dial eliminates the need for a gauge when adjusting the static pressure setting
- The internal and external threading allows for use in thread-by-thread single-union or double-union configurations
- Noncorroding unitized cartridge contains all the working parts and is easily replaceable
- Outlet Pressure Adjustment ranges are suitable for household, light commercial, industrial and turf-and-irrigation applications:
- Full range outlet adjustment (15-75 PSI 1/2 in., 3/4 in. & 1 in.), (15-150 psi 1 1/4 in., 15-130 psi 1 1/2 in. & 2 in.)
- Inlet pressure of 400 psi
- Connections- Non Union, Single & Double Union Sweat & Threaded

AM-1 1070 Mixing Valve

- Designed for rigorous ASSE 1070 Standard
- High flow Cv 1.8
- Minimum flow requirement .5 GPM
- New black lockable hand wheel prevents tampering
- Built in check valves to prevent cross flow
- Teflon® coated inner body parts to extend life
- Thermostrip® for initial temperature setting

SuperVent™

- Removes air, micro bubbles and dirt faster than other models
- Patented dynamic concentrator design merges bubbles which float to top where they are vented to the outside
- Bronze/stainless steel construction
- Prevents system corrosion by air elimination
- Sweat, threaded and universal connection models
- No clog venting

SuperVent™ Top

- High-capacity air vent that reduces and often eliminates the need for bleeding
- Built for hard-to-reach areas
- Debris Baffle to control dirt fouling and prevent failure
- No-Clog Vent for peace of mind, no leaking or callbacks - includes shut off cap
- High Temperature Thermoplastic Float controls venting rate under continuous operation

Table of Contents

Potable Water Control Products

Hydronic Heating Products

Model Number Index

Subject Index

AM-1 Series Thermostatic Mixing Valve

Heating Only

AM 1070

NPT

Union Sweat

The Honeywell AM-1 series accurately adjusts, maintains and limits the hot water temperature to a desired setting selected by the user. In domestic water applications it offers scalding protection and bacteria growth control. By installing a Honeywell AM-1 mixing valve and raising water heater storage temperature setting and limiting mixed outlet water temperature to safe temperature more usable hot water is available. In heating applications it provides comfort and protects the equipment.

- Dual purpose mixing or diverting valves.
- Constant water temperature under changing operating conditions.
- Reliable performance at minimum flow of 0.5 gpm.
- Proportional valve (simultaneous control of hot and cold water).
- Temperature limit at any point.
- Flow reduction in seconds if cold water supply is interrupted
- Nickel-plated brass construction, EPDM O-rings.
- All brass proportioning shuttle.
- Straight through design (hot and cold at the same level).
- Max. pressure
- 150 psi (1034 kPa)
- Max temperature 212 F (100 C).
- Designed for easy maintenance and element replacement. Teflon® coated to prevent mineral build-up and extend life.
- Tamper evident design.
- Valve trapping not required.
- Union STD & C Models include check valves(hot/cold ports)
- ASSE 1017 and ASSE 1070 listed
- CSA and IAPMO
- U.S. Patent No. 6,079,625

Application: Heat Pump Systems, Domestic water, Nursing homes, Public facilities, Automatic faucets, Radiant floor heating, Space heating, Combo systems, Solar hot water, Greenhouses, Industrial applications, Photo processing

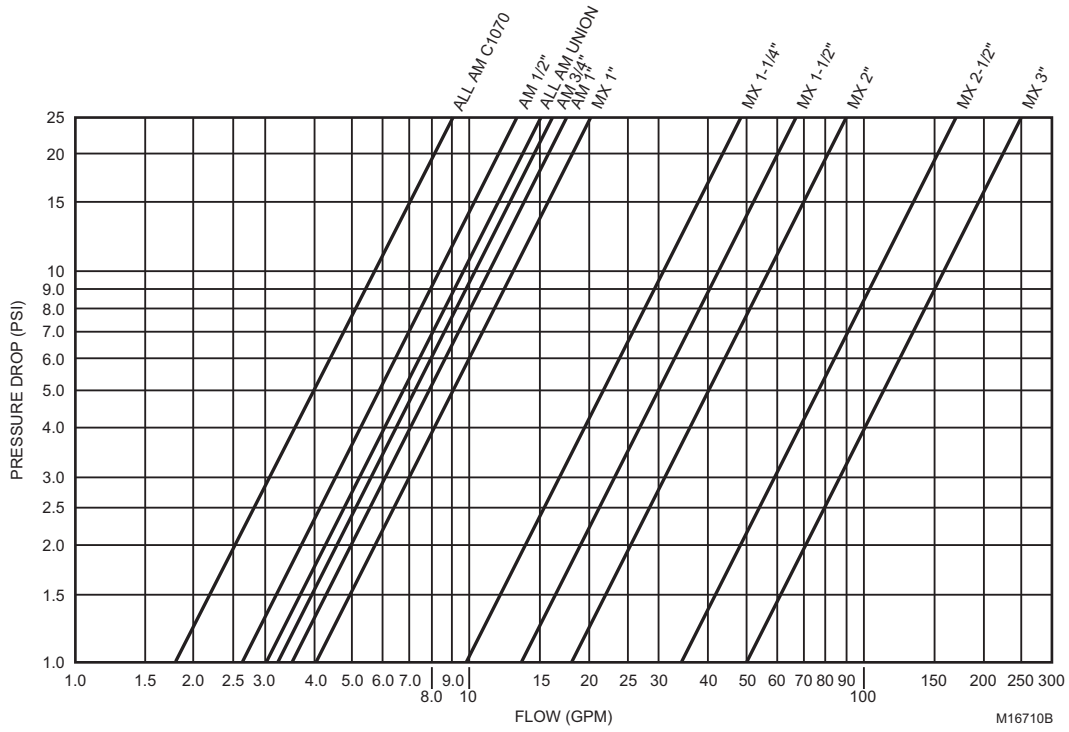
Replacement Parts:
AM-1-020RP Replacement Part AM-1 Series
AM-1-025RP Replacement Part AM-1 Series
AM-1-030RP Replacement Part AM-1 1070 Series

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE	Comments
AM100-1	1/2 in.	DN15	NPT	3.2	100 F to 145 F	38 C to 63 C	1017	
AM100-UCPVC-1	1/2 in.	DN15	Union CPVC	2.4	100 F to 145 F	38 C to 63 C	1017	
AM100-UPEX-1	1/2 in.	DN15	Union PEX	3.9	100 F to 145 F	38 C to 63 C	1017	
AM100-US-1	1/2 in.	DN15	Union Sweat	3.9	100 F to 145 F	38 C to 63 C	1017	
AM100-UT-1	1/2 in.	DN15	Union NPT	3.9	100 F to 145 F	27 C to 49 C	1017	
AM100B-1	1/2 in.	DN15	NPT	3.2	60 F to 100 F	16 C to 38 C	No Approval	
AM100B-US-1	1/2 in.	DN15	Union Sweat	3.9	60 F to 100 F	16 C to 38 C	No Approval	
AM100B-UT-1	1/2 in.	DN15	Union NPT	3.9	60 F to 100 F	16 C to 38 C	No Approval	
AM100C-1	1/2 in.	DN15	NPT	3.2	80 F to 120 F	27 C to 49 C	1017	
AM100C-UCPVC-1	1/2 in.	DN15	Union CPVC	2.4	80 F to 120 F	27 C to 49 C	1017	
AM100C-UPEX-1	1/2 in.	DN15	Union PEX	3.9	80 F to 120 F	27 C to 49 C	1017	
AM100C-US-1	1/2 in.	DN15	Union Sweat	3.9	80 F to 120 F	27 C to 49 C	1017	
AM100C-UT-1	1/2 in.	DN15	Union NPT	3.9	80 F to 120 F	27 C to 49 C	1017	
AM100C1070-UC-1	1/2 in.	DN15	Union Compression	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM100C1070-UCPVC-1	1/2 in.	DN15	CPVC Union Coupling	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM100C1070-UPEX-1	1/2 in.	DN15	Union PEX	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM100C1070-US-1	1/2 in.	DN15	Union Sweat	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM100C1070-UT-1	1/2 in.	DN15	Union NPT	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM100R-UPEX-1	1/2 in.	DN15	Union PEX	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM100R-US-1	1/2 in.	DN15	Union Sweat	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM100R-UT-1	1/2 in.	DN15	Union NPT	3.9	80 F to 180 F	27 C to 82 C	No Approval	
AM101-1	3/4 in.	DN20	NPT	3.8	100 F to 145 F	38 C to 63 C	1017	

Thermostatic Mixing Valves

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE	Comments
AM101-UCPVC-1	3/4 in.	DN20	Union CPVC	3.8	100 F to 145 F	38 C to 63 C	1017	
AM101-UPEX-1	3/4 in.	DN20	Union PEX	3.9	100 F to 145 F	38 C to 63 C	1017	
AM101-US-1	3/4 in.	DN20	Union Sweat	3.9	100 F to 145 F	38 C to 63 C	1017	
AM101-UT-1	3/4 in.	DN20	Union NPT	3.9	100 F to 145 F	38 C to 63 C	1017	
AM101B-1	3/4 in.	DN20	NPT	3.8	60 F to 100 F	16 C to 38 C	No Approval	
AM101B-UCPVC-1	3/4 in.	DN20	Union CPVC	3.8	60 F to 100 F	16 C to 38 C	No Approval	
AM101B-US-1	3/4 in.	DN20	Union Sweat	3.9	60 F to 100 F	16 C to 38 C	No Approval	
AM101B-UT-1	3/4 in.	DN20	Union NPT	3.9	60 F to 100 F	16 C to 38 C	No Approval	
AM101C-1	3/4 in.	DN20	NPT	3.8	80 F to 120 F	27 C to 49 C	1017	
AM101C-UCPVC-1	3/4 in.	DN20	Union CPVC	2.4	80 F to 120 F	27 C to 49 C	1017	
AM101C-UPEX-1	3/4 in.	DN20	Union PEX	3.9	80 F to 120 F	27 C to 49 C	1017	
AM101C-US-1	3/4 in.	DN20	Union Sweat	3.9	80 F to 120 F	27 C to 49 C	1017	
AM101C-UT-1	3/4 in.	DN20	Union NPT	3.9	80 F to 120 F	27 C to 49 C	1017	
AM101C1070-UC-1	3/4 in.	DN20	Union Compression	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM101C1070-UCPVC-1	3/4 in.	DN20	CPVC Union Coupling	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM101C1070-UPEX-1	3/4 in.	DN20	Union PEX	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM101C1070-US-1	3/4 in.	DN20	Union Sweat	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM101C1070-UT-1	3/4 in.	DN20	Union NPT	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM101R-UPEX-1	3/4 in.	DN20	Union PEX	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM101R-US-1	3/4 in.	DN20	Union Sweat	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM101R-UT-1	3/4 in.	DN20	Union NPT	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM102-1	1 in.	DN25	NPT	4.3	100 F to 145 F	38 C to 63 C	1017	
AM102-US-1	1 in.	DN25	Union Sweat	3.9	100 F to 145 F	38 C to 63 C	1017	
AM102-UT-1	1 in.	DN25	Union NPT	3.9	100 F to 145 F	38 C to 63 C	1017	
AM102B-1	1 in.	DN25	NPT	4.3	60 F to 100 F	16 C to 38 C	No Approval	
AM102B-US-1	1 in.	DN25	Union Sweat	3.9	60 F to 100 F	16 C to 38 C	No Approval	
AM102B-UT-1	1 in.	DN25	Union NPT	4.3	60 F to 100 F	16 C to 38 C	No Approval	
AM102C-1	1 in.	DN25	NPT	3.9	80 F to 120 F	27 C to 49 C	1017	
AM102C-US-1	1 in.	DN25	Union Sweat	3.9	80 F to 120 F	27 C to 49 C	1017	
AM102C-UT-1	1 in.	DN25	Union NPT	3.9	80 F to 120 F	27 C to 49 C	1017	
AM102C1070-US-1	1 in.	DN25	Union Sweat	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM102C1070-UT-1	1 in.	DN25	Union NPT	1.8	70 F to 120 F	21 C to 49 C	1070 1017	
AM102R-US-1	1 in.	DN25	Union Sweat	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only
AM102R-UT-1	1 in.	DN25	Union NPT	3.9	80 F to 180 F	27 C to 82 C	No Approval	Heating Only

Pressure Drop Chart



Replacement Parts AM Series (Old Style)

Application: "Old Style" series AM valves
Includes: Element, sprint, and plug assembly

Product Number	Operating Temperature Range (F)	Operating Temperature Range (C)	Description
AM100-001RP	90 F to 120 F	32 C to 49 C	C element, spring, plug assembly (Does not fit AM-1 Series)
AM100-002RP	110 F to 145 F	43 C to 63 C	Standard element, spring, plug assembly (Does not fit AM-1 Series)
AM100-003RP	130 F to 170 F	54 C to 77 C	H element, spring, plug assembly (Does not fit AM-1 Series)
AM100-000RP	60 F to 100 F 70 F to 100 F	16 C to 38 C 21 C to 38 C	B element, spring, plug assembly (Does not fit AM-1 Series)
AM100-010RP	70 F to 100 F	21 C to 38 C	R element, spring, plug assembly (Does not fit AM-1 Series)

AM-1 Series Replacement Parts

Product Number	Operating Temperature Range (F)	Operating Temperature Range (C)	Description	Application
AM-1-025RP	100 F to 145 F 80 to 180 F	38 F to 63 C 27 C to 49 C	Replacement Part AM-1 Series	AM Series Standard and R range mixing valves
AM-1-020RP	80 F to 120 F (B range) 60 F to 100 F (C range)	27 C to 49 C (B range) 16 C to 38 C (C range)	Replacement Part AM-1 Series	AM Series B and C range mixing valves
AMU200-RP	—	—	Gasket Kit for AM-1	AM Series Union models
AM-1-030RP	70 F to 120 F	21 C to 49 C	Replacement Part AM-1 1070 Series	AM-1 1070 models

AMX Series DirectConnect™ Thermostatic Mixing Valves

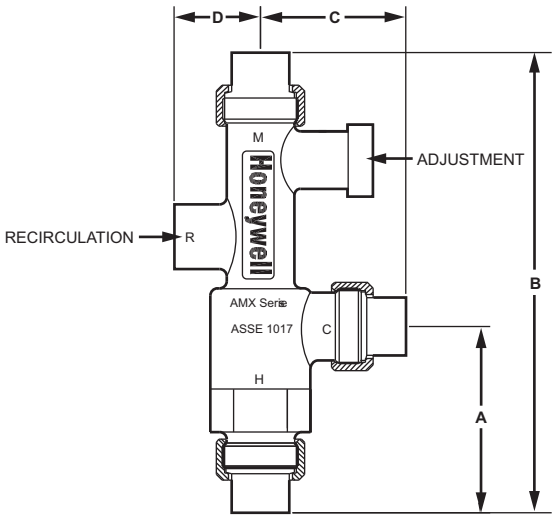
Patented DirectConnect™ design reduces installation time. Orientation of cold and hot ports eliminates need for elbows and tees on typical water heater installations. Added safety designed to prevent scalding. Increased user comfort for more available hot water. Designed to be directly installed on water heater hot outlet port.

- Designed to be directly installed on water heater hot outlet port.
- Constant water temperature under different operating conditions
- Proportional valve(control of hot and cold water)
- Flow reduction in seconds if cold water supply is interrupted
- Tempearture adjustible using 3/16 allen wrench(supplied)
- Union nuts/tail pieces included
- Heat trapping not required
- Recirculation port option for fast response
- Integral check valve on cold port
- Brass/stainless construction
- Teflon® coated wear surfaces for extended service
- ASSE 1017 certified, CSA & IAPMO listed.
- U.S. Patent Pending

Replacement Parts:
AMX-001RP AMX Series DirectConnect Replacement Element

Application: Heat Pump Systems, Domestic water, Nursing homes, Public facilities, Automatic faucets, Radiant floor heating, Space heating, Combo systems, Solar hot water, Greenhouses, Industrial applications, Photo processing

Dimensions Diagram



Product Number	Dimensions (inches)			
	A	B	C	D
AMX100-US-1	3.5	8.2	2.5	1.5
AMX101-US-1	4.2	9.0	2.5	1.5
AMX102-US-1	4.5	10.0	3.5	1.5
AMX100-UT-1	3.5	8.2	2.7	1.5
AMX101-UT-1	4.2	9.7	3.5	1.5
AMX102-UT-1	4.5	10.0	3.7	1.5
AMX100-UCPVC-1	3.5	8.6	2.7	1.5
AMX101-UCPVC-1	4.2	9.2	2.7	1.5
AMX100-UC-1	3.5	9.5	3.7	1.5
AMX101-UC-1	4.2	10.0	3.7	1.5
AMX100-UPEX-1	3.5	9.2	2.6	1.5
AMX100-UPEX-1	3.5	9.2	2.6	1.5
AMX100-UMTPEX-1	4.2	9.2	3.4	1.5
AMX101-UMTPEX-1	4.2	9.2	3.4	1.5
AMX101-UPEX-1	4.2	9.2	2.6	1.5
AMX101-USMT-1	4.2	9.2	3.4	1.5

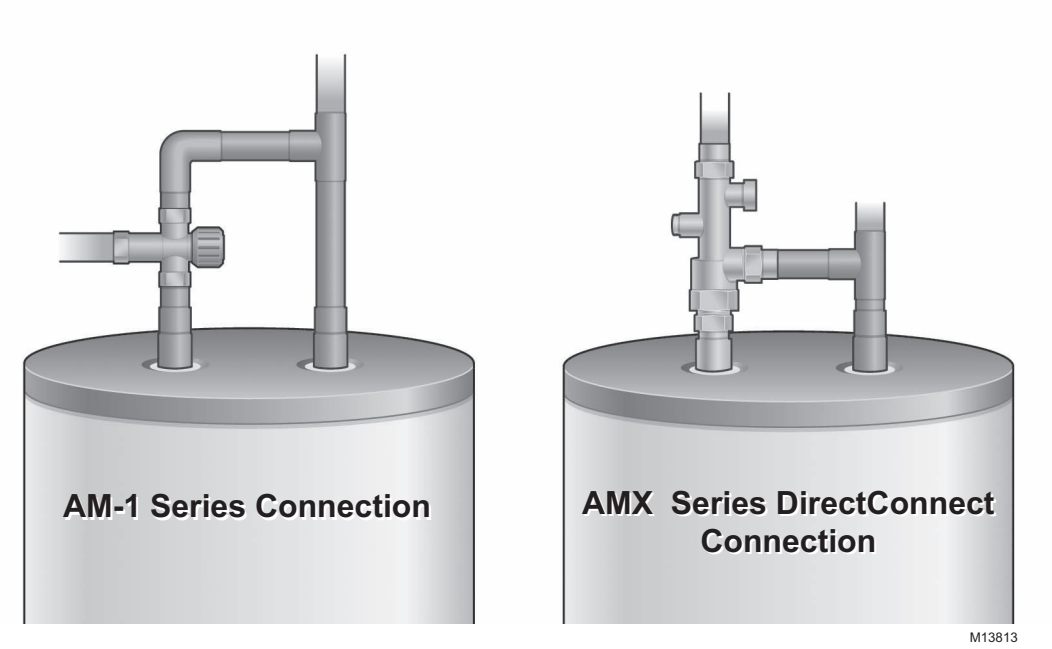
M23260A

Product Number	Pipe Size (inch)	Pipe Size DN	Hot-Cold Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE
AMX100-UC-1	1/2 in.	DN15	Union Compression, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX100-UCPVC-1	1/2 in.	DN15	CPVC Union Coupling, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX100-UMTPEX-1	1/2 in.	DN15	Union MNPT, Union PEX,3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX100-UPEX-1	1/2 in.	DN15	Union PEX, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX100-US-1	1/2 in.	DN15	Union Sweat, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX100-UT-1	1/2 in.	DN15	Union NPT, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017

Product Number	Pipe Size (inch)	Pipe Size DN	Hot-Cold Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE
AMX101-UC-1	3/4 in.	DN20	Union Compression, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-UCPVC-1	3/4 in.	DN20	CPVC Union Coupling, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-UMTPEX-1	3/4 in.	DN20	Union MNPT, Union PEX, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-UPEX-1	3/4 in.	DN20	Union PEX, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-US-1	3/4 in.	DN20	Union Sweat, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-USMT-1	3/4 in.	DN20	—	4.0	90 F to 130 F	32 C to 54 C	1017
AMX101-UT-1	3/4 in.	DN20	Union NPT, 3/4 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX102-US-1	1 in.	DN25	Union Sweat, 1 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017
AMX102-UT-1	1 in.	DN25	Union NPT, 1 in. Bottom	4.0	90 F to 130 F	32 C to 54 C	1017

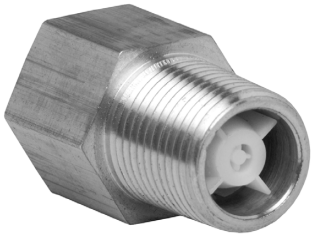
NOTE: AMX100 and AMX101 Series includes 3/4 in. bottom connect NPT, AMX102 Series includes 1 in. bottom connect NPT.

Thermostatic Mixing Valve Installation



Thermostatic Mixing Valves

Check-Adapter™-Check Valves



Check-Adapter™ For AM-1 Series NPT mixing valves without unions or other spring check applications requiring low cracking pressure. Spring check built into sweat adapter.

Materials: Brass/thermoplastic.
Application: AM-1 NPT Models

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Description
CVT-050	1/2 in.	DN15	NPT	1/2 in. NPT x 1/2 in. NPT Check Adapter
CVT-075	3/4 in.	DN20	NPT	3/4 in. NPT x 3/4 in. NPT Check Adapter

HL Series High-Low Temperature Control System

Honeywell HL Series™ High-Low Temperature Control System is pre-engineered, assembled and tested for quality and dependability to provide protection from excessive hot water temperatures. Our systems incorporate ASSE 1017 tested and certified thermostatic mixing valves and components for accurate temperature control. INTELLIGRATION-Honeywell's "integrated solution" for hot water control.

Application: Mixing of hot and cold water to produce tempered water for industrial or commercial applications requiring accurate control of domestic hot water temperature during all capacity flow rates from low to high.

- Dialset™ Pressure regulating valve monitors demand to control hot water temperature
- ASSE 1003.
- Constant water temperature under low through high capacity demand periods.
- Proportional valve (control of hot and cold water.)
- Flow reduction in seconds if cold water supply is interrupted.
- Allen wrenches included for adjustment of temperature setting.
- Union tailpieces on both mixing valves for ease of maintenance.
- Install in any position, heat trapping not required.
- Bronze / stainless steel construction for both mixing valves.
- Wear surfaces on both mixing valves are Teflon® coated to prevent mineral deposits.
- Recirculation connection in small mixing valve for fast response.
- Maximum pressure differentials between hot and cold ports 7 Psi.
- Mixing valves are ASSE 1017 tested and certified.
- Maximum inlet temperature 200 F (93 C).
- Maximum inlet pressure 150 Psig.
- Minimum temperature difference between hot and mix should be 10 F (6 C).

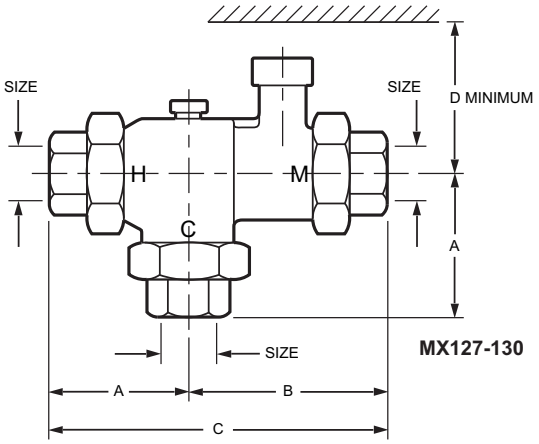
Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Operating Temperature Range (F)	Operating Temperature Range (C)	Description
HL150	1 1/4 in. Inlet port; 1 1/2 in. Outlet port	DN32 Inlet port; DN40 Outlet port	NPT	110 F to 150 F	43 C to 66 C	1 1/4 in. NPT High-Low System
HL200	2 in. Inlet port; 2 in. Outlet port	DN50 Inlet port; DN50 Outlet port	NPT	110 F to 150 F	43 C to 66 C	2 in. NPT High-Low System
HL250	2 in. Inlet port; 2 1/2 in. Outlet port	DN50 Inlet port; DN65 Outlet port	NPT	110 F to 150 F	43 C to 66 C	2 in. NPT High-Low System

MX Series Large Flow Proportional Mixing or Diverting Valve Protects People and Equipment, Saves Energy

The MX Series is a state-of-the-art mixing valve with Teflon® wear surfaces to prevent calcium buildup. Valve controls hot and cold supply based on control setting. If cold water is shut off, the valve will reduce the mixed flow rate in seconds (speed/residual flow rate varies by size). Accurate control of temperature provides energy savings, increased comfort and safety for the user.

- Dual purpose mixing or diverting valve.
- Constant water temperature under different operating conditions.
- Proportional valve (control of hot and cold water).
- Flow reduction in seconds if cold water supply is interrupted.
- Maintains temperature with extremely low minimum flows.
- Temperature adjustable, tamper evident.
- Install in any position, heat trapping not required.
- Recirculation connection for fast response.
- Bronze/stainless construction.
- Wear surfaces Teflon® coated to prevent deposit build-up.
- Union/tailpiece connections included.
- Tapped flange connections 2-1/2 in. and 3 in.
- Allen wrench for temperature adjustment included.
- ASSE 1017 and CSA listed (Union Models)

Dimensions Diagram



MX127-130

Product Number	Size NPT	Dimensions (Inches)			
		A	B	C	D
MX127	1”	2.8	3.7	6.5	6.0
MX128	1-1/4”	3.3	4.4	7.7	6.9
MX129	1-1/2”	3.6	5.0	8.6	7.0
MX130	2”	4.2	5.8	10.0	7.3
MX127C	1”	2.8	3.7	6.5	6.0
MX128C	1-1/4”	3.3	4.4	7.7	6.9
MX129C	1-1/2”	3.6	5.0	8.6	7.0
MX130C	2”	4.2	5.8	10.0	7.3

M23243

Application: Any application requiring accurate control of hot water temperature based on the mixing of hot and cold water, such as: domestic water for homes, apartment, hotels, schools, nursing homes, offices, public facilities, space heating, radiant floor heating,
Weight: 3.6 lb

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE	Description
MX127	1 in.	DN25	NPT	4	110 F to 150 F	43 C to 66 C	1017	1 in. NPT MX Mixing Valves
MX127C	1 in.	DN25	NPT	4	90 F to 120 F	32 C to 49 C	1017	1 in. NPT MX Mixing Valves
MX128	1 1/4 in.	DN32	NPT	9.3	110 F to 150 F	43 C to 66 C	1017	1 1/4 in. MX NPT Mixing Valves
MX128C	1 1/4 in.	DN32	NPT	9.3	90 F to 120 F	32 C to 49 C	1017	1 1/4 in. NPT MX Mixing Valves
MX129	1 1/2 in.	DN40	NPT	13.5	110 F to 150 F	43 C to 66 C	1017	1 1/2 in. NPT MX Mixing Valves
MX129C	1 1/2 in.	DN40	NPT	13.5	90 F to 120 F	32 C to 49 C	1017	1 1/2 in. NPT MX Mixing Valves
MX130	2 in.	DN50	NPT	18	110 F to 150 F	43 C to 66 C	1017	2 in. NPT MX Mixing Valves
MX130C	2 in.	DN50	NPT	18	90 F to 120 F	32 C to 49 C	1017	2 in. NPT MX Mixing Valves
MX131	2 1/2 in.	DN65	Flanged	34	110 F to 150 F	43 C to 66 C	—	2 1/2 in. Flanged MX Mixing Valves
MX132	3 in.	DN80	Flanged	50	110 F to 150 F	43 C to 66 C	—	3 in. Flanged MX Mixing Valves

MX Series Valve Replacement Gasket Kits

Application: MX Series

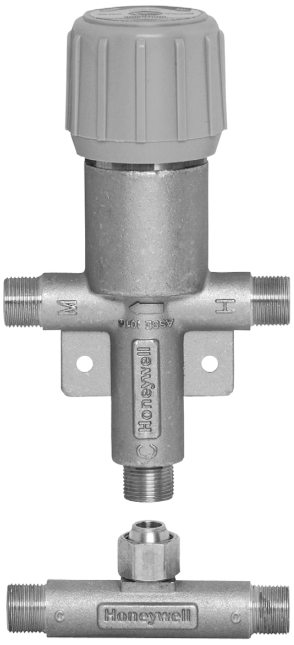
Product Number	Pipe Size (inch)	Pipe Size DN	Description
MX050-RP	1/2 in.	DN15	1/2 in. Recurculation Adapter
MX100-RP	1 in.	DN25	1 in. Gasket Kit for MX Series mixing valves
MX125-RP	1 1/4 in.	DN32	1 1/4 in. Gasket Kit for MX Series mixing valves
MX150-RP	1 1/2 in.	DN40	1 1/2 in. Gasket Kit for MX mixing valves
MX200-RP	2 in.	DN50	2 in. Gasket Kit for MX mixing valves
MX250-RP	2 1/2 in.	DN65	2 1/2 in. Gasket Kit for MX mixing valves
MX300-RP	3 in.	DN80	3 in. Gasket Kit for MX mixing valves

Thermal Temperature Indicator Strip

Application: AM-1 Series STD & C Temp Models, AMX Series DirectConnect™

Product Number	Pipe Size (inch)	Connection Type	Operating Temperature Range (F)	Operating Temperature Range (C)	Description
TS205-064	Use with All Mixing Valves	Adhesive strip	110F to 140F	43C to 60C	Thermal Temperature Indicator Strip for Mixing Valve Setup and Outlet Temperature Monitoring

UMV Series Undersink Mixing Valves



Universal 3 or 4 Port connection for 3/8 in. compression undersink applications. Includes internal check valves in hot and cold ports to prevent cross flow. Easy installation kit includes 3/8 compression nuts, ferrels and stand-offs for secure mounting. Forged brass body construction. Tamper resistant temperature control handwheel locks into desired temperature position.

- Universal adpater for 3 Port connection
- 3/8 compression connections for easy installation
- Includes internal check valves in hot and cold ports to prevent cross flow.
- Tamper resistant hand wheel locks into desired temperature position
- Temperature adjustment range 80-120 F
- Controls temperature with flow as low as 0.5 gpm
- Forged brass body with pilot holes for secure mounting.
- ASSE 1016 and ASSE 1070 listed.

Application: UMV Series 3/8" Compression

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Operating Temperature Range (F)	Operating Temperature Range (C)	ASSE	Description
UMV-304U	3/8 in.	DN20	Compression	.55Cv	80 F to 120 F	27 C to 49 C	1070, 1016	3/8 in. compression Universal 3 or 4 Port Connection

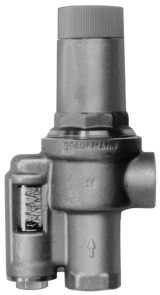
Union-Check™-Check Valves

Check-Adapter™ For AM-1 Series NPT mixing valves without unions or other spring check applications requiring low cracking pressure. Spring check built into sweat adapter.

Materials: Brass/Thermoplastic
Application: AM-1 Series Union Models

Product Number	Capacity (Cv)	Description
AMCU100	8 Cv	AM-1 Union Model Check Valve

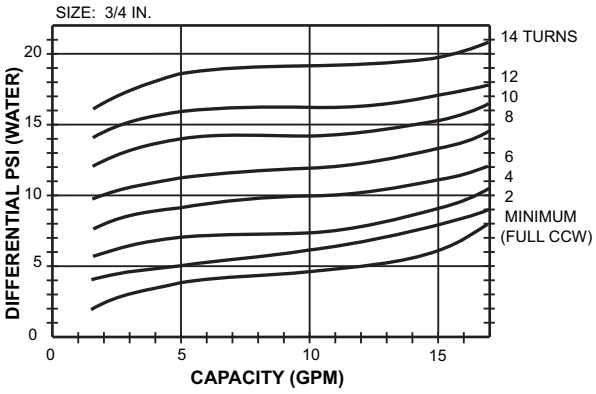
D146 Differential Pressure Regulators

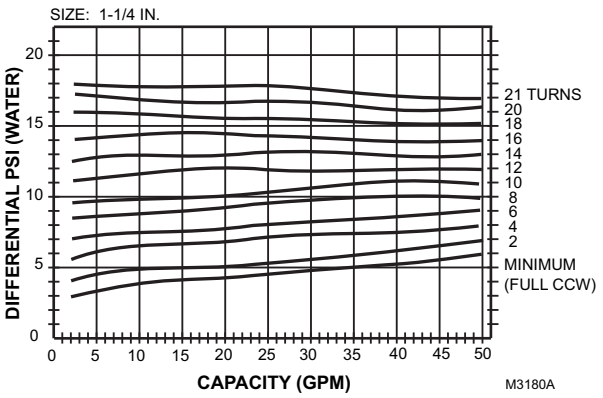


Used to eliminate excessive pump head pressure when most radiator valves are closed due to reduced demand.

- Install between supply and return sides of a hydronic system to stabilize pressure differential and reduce the effects of demand changes.
- Control maintains a constant differential between the two sides by opening a bypass whenever the difference between supply and return reaches the setpoint.
- Provides silent, trouble-free service.
- Easy installation; requires no electrical hookup.
- Easy adjustment of pressure by turning regulating cap.
- Built-in differential pressure indicator.
- Brass valve body with thermoplastic and stainless steel parts.
- Diaphragm of EPDM.

D146 Capacities





Maximum Inlet Pressure Rating (psi): 85 Psi
Outlet Pressure Adjustment Range (psi): 0-17 psi
Temperature Range: 230 F (110 C)

Materials: Brass (body), Stainless steel and engineered thermoplastics. EPDM diaphragm.
Includes: Built-in differential pressure indicator

Product Number	Pipe Size (inch)	Pipe Size DN	Pipe Connection	Capacity	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)
D146M1032	3/4 in.	DN20	Angle type, female threaded NPT	18 gpm 120,000 Btu/hr	6 1/4 in. high x 3 3/8 in. wide	160 mm high x 86 mm wide
D146M1040	1 1/4 in.	DN32	Angle type, female threaded NPT	50 gpm 395,000 Btu/hr	8 1/2 in. high x 4 1/4 in. wide	213 mm high x 109 mm wide

D05T Pressure Regulating Valve—Compact Design

Compact Design pressure regulating valve for new residential and light commercial construction, drip irrigation and other applications requiring sensitive and accurate regulation.

- Flow capacity and accuracy make D05T suitable for a variety of applications
- Bronze body construction with stainless steel and engineered thermoplastic internal parts
- One piece non-corroding unitized cartridge
- Fully balanced regulator mechanism with fabric reinforced diaphragm
- Includes balanced seat for accurate pressure output under varying inlet pressures up to 400psi.
- Inlet and outlet internally and externally threaded (NPT) for union connection.
- Built-in strainer and thermal by-pass
- ASSE 1003 and IAPMO listed.

Maximum Inlet Pressure Rating (psi): 400 psi
Outlet Pressure Adjustment Range (psi): 15-75 psi
Calibrated Adjustment Dial: No
Gauge Tap: 1/4 in. NPT
Reducing Ratio: 10:1 maximum
Temperature Range: 180 F (82 C)
Materials: Bronze (body), Fabric reinforced diaphragm, Stainless steel and engineered thermoplastics.

Approvals:
Canadian Standards Association: Certified: File no. B356
ASSE: Certified (1003)
City of Los Angeles: Listed
IAPMO: Listed

Replacement Parts:
K05A1025 Repair kit for D05T Pressure Regulator Valve with cartridge, screen and O-ring

Product Number	Pipe Size (inch)	Pipe Size DN	Pipe Connection	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Union Fittings
D05T1011	3/4 in.	DN20	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 3 1/2 in. long	168 mm high x 89 mm long	Non-union body
D05T1029	3/4 in.	DN20	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 5 3/16 in. long	168 mm high x 132 mm long	Double-union, sweat
D05T1045	1 in.	DN25	Female NPT threaded inlet and outlet. Externally threaded for unions.	4 1/2 in high x 4 in. long	114 mm high 142mm long	Non-union body
D05T1052	1 in.	DN25	Female NPT threaded inlet and outlet. Externally threaded for unions.	8 5/8 in. high x 6 1/2 in. long	218 mm high x 166 mm long	Double-union, sweat
D05T1060	3/4 in.	DN20	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 5 3/16 in. long	168 mm high x 132 mm long	Double-union, threaded
D05T1078	1 in	DN25	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 5 3/16 in. long	168 mm high x 132 mm long	Double-union, threaded
D05T1086	3/4 in.	DN20	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 5 3/16 in. long	168 mm high x 132 mm long	Single-union, sweat
D05T1094	3/4 in.	DN20	Female NPT threaded inlet and outlet. Externally threaded for unions.	6 5/8 in. high x 4 5/16 in. long	168 mm high x 110 mm long	Single-union, threaded
D05T1110	1 in.	DN25	Female NPT threaded inlet and outlet. Externally threaded for unions.	8 5/8 in. high x 5 in. long	218 mm high x 127 mm long	Single union, threaded
D05T1102	1 in.	DN25	Both inlet and outlet internally threaded NPT, externally threaded for unions.	—	—	Single-union, sweat

DS05 “DialSet” Pressure Regulating Valves

- Dial is calibrated in 10 psi increments to allow quick and accurate adjustment of outlet pressure.
- Flow capacity and accuracy make the DS05 suitable for potable water service and most irrigation applications.
- Full range outlet adjustment from 15 psi to 75 psi (130 psi for 1 1/4 - 2 in.).
- High pressure (400 psi) inlet rating.
- Non-corroding unitized cartridge contains all working parts and is easily replaceable.
- Bronze body with stainless steel and engineered thermoplastic internal parts.
- Balanced single seat for accurate pressure output under varying inlet pressures.
- Inlet and outlet are internally threaded female NPT, and externally threaded for use with union assemblies.
- Built-in strainer and thermal bypass.
- One model can be used in low, standard or high pressure applications.

Valves for new residential and light commercial construction, drip irrigation, and other applications requiring highly sensitive and accurate regulation. Easy DialSet® Adjustment (no gauge required)

Calibrated Adjustment Dial: Yes
Reducing Ratio: 10:1 maximum
Maximum Inlet Pressure Rating (psi): 400 psi
Pipe Connection: Female NPT threaded inlet and outlet. Externally threaded for unions.
Temperature Range: 180 F (82 C)

Materials: Bronze (body), Fabric reinforced diaphragm, Stainless steel and engineered thermoplastics.
Approvals:
Canadian Standards Association: Certified: File no. B356
ASSE: Certified (1003)
City of Los Angeles: Listed
IAPMO: Listed

Product Number	Pipe Size (inch)	Pipe Size DN	Outlet Pressure Adjustment Range (psi)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Union Fittings
DS05C1006	1/2 in.	DN15	15-75 psi	5 1/4 in. high x 3 3/8 in. long	133 mm high x 86mm long	Non-union body
DS05C1014	1/2 in.	DN15	15-75 psi	5 1/4 in. high x 3 7/8 in. long	133 mm high 98mm long	Single union, sweat tailpiece. Second union available as accessories.
DS05C1022	1/2 in.	DN15	15-75 psi	5 1/4 in. high x 4 1/16 in. long	133 mm high 103mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS05C1030	3/4 in.	DN20	15-75 psi	5 1/4 in. high x 3 3/8 in. long	133 mm high x 86 mm long	Non-union body
DS05C1048	3/4 in.	DN20	15-75 psi	5 1/4 in. high x 4 5/16 in. long	133 mm high x 110 mm long	Single union, sweat tailpiece. Second union available as accessories.
DS05C1055	3/4 in.	DN20	15-75 psi	5 1/4 in. high x 4 5/16 in. long	133 mm high x 110 mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS05C1063	1 in.	DN25	15-75 psi	5 1/4 in. high x 3 15/16 in. long	133 mm high x 100 mm long	Non-union body
DS05C1071	1 in.	DN25	15-75 psi	5 1/4 in. high x 5 1/4 in. long	133 mm high x 133 mm long	Single union, sweat tailpiece. Second union available as accessories.
DS05C1089	1 in.	DN25	15-75 psi	5 1/4 in. high x 5 in. long	133 mm high x 127 mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS05D1005	1/2 in.	DN15	15-75 psi	5 1/4 in. high x 5 9/16 in. long	133 mm high x 141 mm long	Double-union, sweat tailpieces
DS05D1013	1/2 in.	DN15	15-75 psi	5 1/4 in. high x 5 15/16 in. long	133 mm high x 125 mm long	Double-union, internally threaded tailpieces
DS05D1021	3/4 in.	DN20	15-75 psi	5 1/4 in. high x 6 1/16 in. long	133mm high x 154 mm long	Double-union, sweat tailpieces
DS05D1039	3/4 in.	DN20	15-75 psi	5 1/4 in. high x 5 3/16 in. long	133 mm high x 132 mm long	Double-union, internally threaded tailpieces
DS05D1047	1 in.	DN25	15-75 psi	5 1/4 in. high x 6 1/2 in. long	133 mm high x 166 mm long	Double-union, sweat tailpieces
DS05D1054	1 in.	DN25	15-75 psi	5 1/3 in. high x 5 3/16 in. long	133 mm high x 132 mm long	Double-union, internally threaded tailpieces
DS05D1062	1 1/4 in.	DN32	15-150 psi	8 5/8 in. high x 7 11/16 in. long	218 mm high x 195 mm long	Double-union, sweat tailpieces

Product Number	Pipe Size (inch)	Pipe Size DN	Outlet Pressure Adjustment Range (psi)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Union Fittings
DS05D1070	1 1/4 in.	DN32	15-150 psi	8 5/8 in. high x 7 5/16 in. long	218 mm high x 186 mm long	Double-union, internally threaded tailpieces
DS05G1085	1 1/4 in.	DN32	15-150 psi	8 5/8 in. high x 6 in. long	218 mm high x 152 mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS05G1093	1 1/4 in.	DN32	15-150 psi	8 5/8 in. high x 6 3/16 in. long	218 mm high x 157 mm long	Single union, sweat tailpiece. Second union available as accessories.
DS05G1127	1 1/4 in.	DN32	15-150 psi	8 5/8 in. high x 4 11/16 in. long	218 mm high x 119 mm long	Non-union body

NEW DialSet Pressure Regulating Valves Transition Models

Product Number	D05T Compact Models	Replaces	NEW DialSet Pressure Regulating Valves Description
DS05C1006		D05A1098	1/2 in. dialset non union body internal & external NPT threaded
DS05C1014		D05A1155, D05G1038, DS05G1044	1/2 in. dialset single union sweat
DS05C1022		D05A1122, D05G1004, DS05G1002	1/2 in. dialset single union threaded
DS05D1005			1/2 in. dialset double union sweat
DS05D1013			1/2 in. dialset double union threaded
DS05C1030	D05T1011	D05A1106	3/4 in. dialset non union body internal & external NPT threaded
DS05C1048	D05T1086	D05A1163, D05G1046, DS05G1051	3/4 in. dialset single union sweat
DS05C1055	D05T1094	D05A1130, D05G1012, DS05G1010	3/4 in. dialset single union threaded
DS05D1021	D05T1029	D05D1019	3/4 in. dialset double union sweat
DS05D1039	D05T1060	D05D1001	3/4 in. dialset double union threaded
DS05C1063	D05T1045	D05A1114	1 in. dialset non union body internal & external NPT threaded
DS05C1071	D05T1102	D05A1171, D05G1053, DS05G1069	1 in. dialset single union sweat
DS05C1089	D05T1110	D05A1048, D05G1020,DS05G1028	1 in. dialset single union threaded
DS05D1047	D05T1052	D05D1035	1 in. dialset double union sweat
DS05D1054	D05T1078	D05D1027	1 in. dialset double union threaded
DS05G1127			1 1/4 in. dialset non union body internal & external NPT threaded
DS05G1093		D05G1079	1 1/4 in. dialset single union sweat
DS05G1085		D05G1061	1 1/4 in. dialset single union threaded
DS05D1062		D05D1043	1 1/4 in.dialset double union sweat
DS05D1070			1 1/4 in. dialset double union threaded
DS06G1042			1 1/2 in. dialset non union body internal & external NPT threaded
DS06G1018		D06G1011	1 1/2 in. dialset single union sweat
DS06G1000		D06G1003	1 1/2 in. dialset single union threaded
DS06D1003			1 1/2 in. dialset double union sweat
DS06D1011			1 1/2 in. dialset double union threaded
DS06G1059			2 in. dialset non union body internal & external NPT threaded
DS06G1034		D06G1037	2 in. dialset single union sweat
DS06G1026		D06G1029	2 in. dialset single union threaded
DS06D1029			2 in. dialset double union sweat
DS06D1037			2 in. dialset double union threaded
K05A1025			Replacement cartridge 1/2 in., 3/4 in. & 1 in. models
K05A1017			Replacement cartridge 1 1/4 in. models
K06D1044			Replacement cartridge 1 1/2 in. & 2 in. models

Pressure Regulator Valves

DS06 “DialSet” Pressure Regulating Valves

High quality pressure regulating valve that maintains a constant outlet pressure over a wide range of inlet supply pressures. Includes calibrated outlet pressure set dial that allows outlet pressure adjustments without the use of a gauge in most applications. Easy DialSet® Adjustment (no gauge required)

- Ideally suited for potable water and irrigation applications requiring accurate regulation.
- Wide outlet pressure range, high inlet pressure, and compact design allow flexibility in installation and application.
- Non-corroding unitized cartridge contains all working parts and is easily replaceable.
- Includes built-in strainer and thermal bypass.
- Balanced seat construction provides superior pressure regulation.
- Gauge tapped.

Maximum Inlet Pressure Rating (psi): 400 psi
Outlet Pressure Adjustment Range (psi): 15-130 psi
Calibrated Adjustment Dial: Yes
Gauge Tap: 1/4 in. NPT (two, one on each side of body).
Reducing Ratio: 10:1 maximum
Temperature Range: 180 F (82 C)

Materials: Bronze (body), Fabric reinforced diaphragm, Stainless steel and engineered thermoplastics.
Approvals:
Canadian Standards Association: Certified: File no. B356
ASSE: Certified (1003)
City of Los Angeles: Listed
IAPMO: Listed

Product Number	Pipe Size (inch)	Pipe Size DN	Pipe Connection	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Union Fittings
DS06D1003	1 1/2 in.	DN40	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 9 3/8 in. long	299 mm high x 238 mm long	Double-union, sweat tailpieces
DS06D1011	1 1/2 in.	DN40	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 9 3/16 in. long	299 mm high x 233 mm long	Double-union, internally threaded tailpieces
DS06D1029	2 in.	DN50	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 10 3/16 in. long	299 mm high x 257 mm long	Double-union, sweat tailpieces
DS06D1037	2 in.	DN50	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 9 5/16 in. long	299 mm high x 237 mm long	Double-union, internally threaded tailpieces
DS06G1000	1 1/2 in.	DN40	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 7 13/16 in. long	299 mm high x 198 mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS06G1018	1 1/2 in.	DN40	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 7 7/8 in. long	299 mm high x 201 mm long	Single union, sweat tailpiece. Second union available as accessories.
DS06G1026	2 in.	DN50	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 7 7/8 in. long	299 mm high x 200 mm long	Single union, internally threaded tailpiece. Second union available as accessories.
DS06G1034	2 in.	DN50	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 8 5/16 in. long	299 mm high x 211 mm long	Single union, sweat tailpiece. Second union available as accessories.
DS06G1042	1 1/2 in.	DN40	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 6 3/8 in. long	299 mm high x 162 mm long	Non-union body
DS06G1059	2 in.	DN50	Female NPT threaded inlet and outlet. Externally threaded for unions.	11 13/16 in. high x 6 3/8 in. long	299 mm high x 162 mm long	Non-union body

PRV Jumper Kits

Temporary stand-in piping components for Pressure Regulating Valves "rough-in" service.

Product Number	Pipe Size (inch)	Pipe Size DN	Pipe Connection	Description
K06U1150	3/4 in.	DN20	Sweat	3/4 in. Jumper Kit- 2 sweat unions, gaskets and nuts
K06U1168	1 in.	DN25	Sweat	1 in. PRV Jumper Kit- 2 Sweat unions, gaskets, nuts
K06U1184	3/4 in.	DN20	Female NPT	3/4 in. PRV Jumper Kit- 2 Threaded Unions, gasket, nuts
K06U1192	1 in.	DN25	Female NPT	1 in. PRV Jumper Kit- 2 Threaded unions, gaskets, nuts
K06U1200	1 1/4 in.	DN32	Sweat	1 1/4 In. Jumper Kit- 2 Sweat Unions, Gaskets & Stand In Pipe
K06U1218	1 1/4 in.	DN32	Female NPT	1 1/4 in. Jumper Kit- 2 Threaded Unions, Gaskets & Stand In Pipe
PRV202-039	3/4 in.	DN20	Male NPT	3/4 in. Stand-in Pipe
PRV202-040	1 in.	DN25	Male NPT	1 in. PRV Stand-in pipe
PRV203-034	1 1/4 in.	DN32	Male NPT	1 1/4 in. PRV Stand-in pipe

D05 Pressure Regulating Valves—Accessories

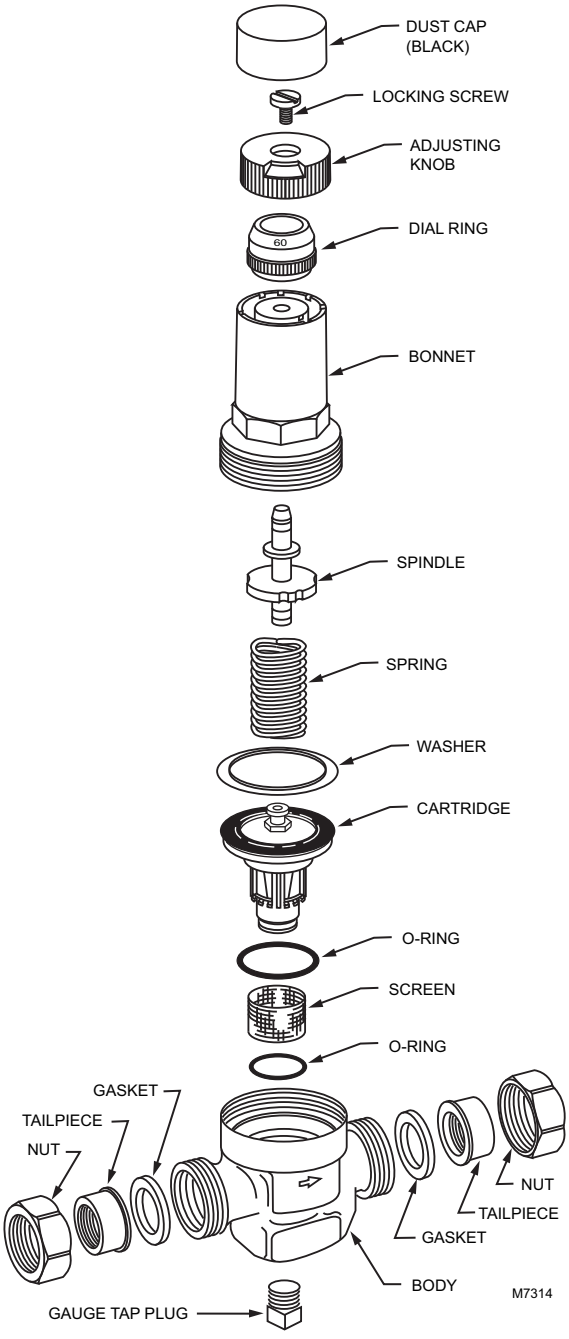
Product Number	Description	Used With
203223	Bonnet assembly for 1/2 in. And 3/4 in. D05 PRV's. Consists of bonnet and threaded insert. 2551900 and 2129600.	D05
203224	Bonnet assembly for 1 in. & 1-1/4 in. D05 PRV. Consists of bonnet & threaded insert. 5439800 and 5440100.	D05
272838	Bonnet for 1/2 in. & 3/4 in. DS05.	DS05
272839	Bonnet for 1 in. & 1 1/4 in. DS05.	DS05
272840	Union gaskets for 1/2 in. D05/DS05.	D05; DS05
272841	Union gaskets for 3/4 in. D05/DS05.	D05; DS05
272842	Union gasket for 1 in. D05/DS05.	D05; DS05
272843	Union gasket for 1 1/4 in. D05/DS05.	D05; DS05
K05A1009	Repair Kit for D05 1/2 in. and 3/4 in.	D05
K05A1017	Repair Kit for D05 and DS05 1 in.	D05; DS05
K05A1025	Repair Kit for DS05C/D05T 1/2 in., 3/4 in. & 1 in.	DS05C; D05T
K05B1007	Repair Kit for D05 and DS05 1/2 in. and 3/4 in.	D05; DS05
K05B1015	Repair Kit for D05 and DS05 1 in.	D05; DS05
K06U1069	Union Kit for 1/2 in. NPT DO5 and DS05 Series valves	—
K06U1077	Union Kit for 3/4 in. NPT DO5 and DS05 Series valves	—
K06U1085	Union Kit for 1 in. NPT DO5 and DS05 Series valves	—
K06U1093	Union Kit for 1/2 in. Sweat DO5 and DS05 Series valves	—
K06U1101	Union Kit for 3/4 in. Sweat DO5 and DS05 Series valves	—
K06U1119	Union Kit for 1 in. Sweat DO5 and DS05 Series valves	—
K06U1135	Union Kit for 1 1/4 in. NPT D05 and DS05 Series valves	—
K06U1143	Union Kit for 1 1/4 in. Sweat D05 and DS05 Series valves	—

D06 Pressure Regulating Valves—Accessories

Product Number	Description
272858	Union gaskets for 1 1/2 in. for DS06G
272859	Union gaskets for 2 in. for DS06G
272867	1-1/2 in. & 2 in. Replacement bonnet kit for DS06G
K06B1030	Repair Kit for D06
K06D1044	Replacement cartridge for 1-1/2 and 2in. D06G/DS06G
K06U1037	Union Nut Kit - 1 1/2 in. union nuts, threaded tail pieces, gaskets
K06U1045	Union Nut Kit - 2 in. union nuts, threaded tail pieces, gaskets
K06U5034	Union Kit for 1 1/2 in. Sweat D05 and DS05.
K06U5042	Union Kit for 2 in. Sweat D05 and DS05.

Repair Kit

Exploded View of valve to display how to repair



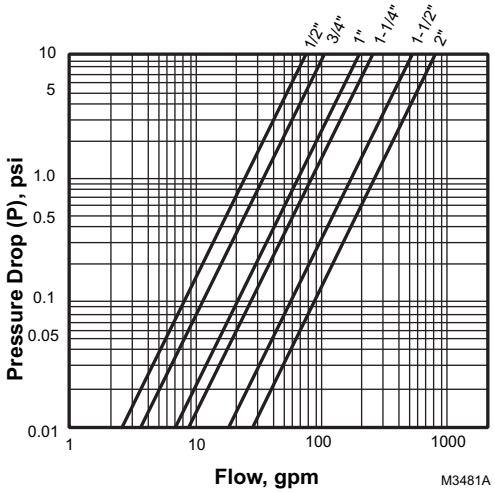
Product Number	Description	Includes	Used With
K05A1025	Repair Kit including cartridge, screen and O-ring	Cartridge, Screen, O-rings	D50T

B200 Brass Ball Valves for Shut-off Applications

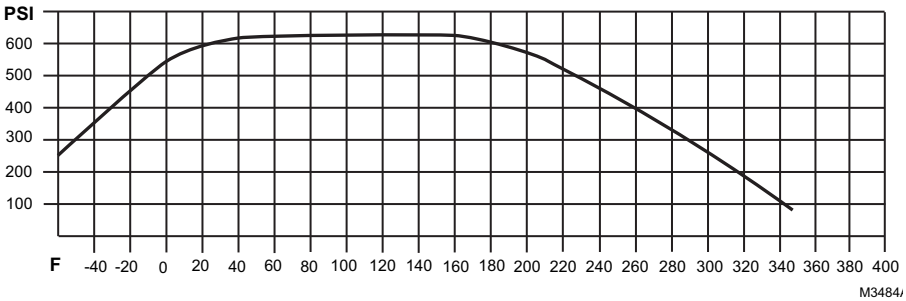
Fully Ported Brass Ball Valves for most heating, plumbing and industrial shut-off applications. The B200S valves have increased agency listing approvals as well as an enhanced design for increased solderability and longer service life.

- Broad temperature and pressure ratings for wide range of applications-water, oil, gas and steam service.
- Fully ported brass ball valves have higher flow rates with less turbulence, noise and pressure drop than reduced or standard port ball valves.
- Easy installation.
- Two-piece cast brass body provides strength and resistance to corrosion.
- Bottom-loaded, blow-out proof stem with NBR70 seals provides extended service life, durability and safety.
- Cushioned, corrosion-resistant steel handle makes operation easier.
- Meets Federal Specification WW-V-35C, Type II, Class A, style 3 end connections A and C (threaded and solder).
- More flexible; more universal than similar valves.
- Not for use in throttling applications.

Pressure Ratings



Maximum Operating Pressure: 4134 kPa; 600 psi
Connection Type: Sweat
Application Type: Fully ported, brass ball valves for most heating, plumbing and industrial applications.
Port Size: Full
Temperature Range: -60 F to +345 F
Materials: (Body) Forged Brass
(Seat) PTFE
(Stem) Brass
(Plug/Ball/Disc) Brass, chrome plated
(Packing) NBR



Product Number	Pipe Size (inch)	Pipe Size DN	Capacity (Cv)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Handle Type	Gas Rated	Gas Approvals
B200S7015	1/2 in.	DN15	23 Cv	1 25/32 in. high x 2 11/64 in. long x 3 11/32 in. handle length	45 mm high x 55 mm long x 85 mm handle length	Zinc plated steel with vinyl cover	No	No
B200S7023	3/4 in.	DN20	34 Cv	1 15/16 in. high x 2 7/8 in. long x 3 11/32 in. handle length	49 mm high x 73 mm long x 85 mm handle length	Zinc plated steel with vinyl cover	No	No
B200S7031	1 in.	DN25	66 Cv	2 5/16 in. high x 3 7/16 in. long x 4 11/32 in. handle length	59 mm high x 87 mm long x 110 mm handle length	Zinc plated steel with vinyl cover	No	No
B200S7049	1 1/4 in.	DN32	82 Cv	2 1/2 in. x 3.937 in. x 4 11/32 in. (handle length)	64 mm high x 100 mm long x 110 mm handle length	Zinc plated steel with vinyl cover	No	No
B200S7056	1 1/2 in.	DN40	195 Cv	3 7/32 in. high x 4 21/32 in. long x 5 5/16 in. handle length	82 mm high x 118 mm long x 135 mm handle length	Zinc plated steel with vinyl cover	No	No

Ball Valves for Shut-off Applications

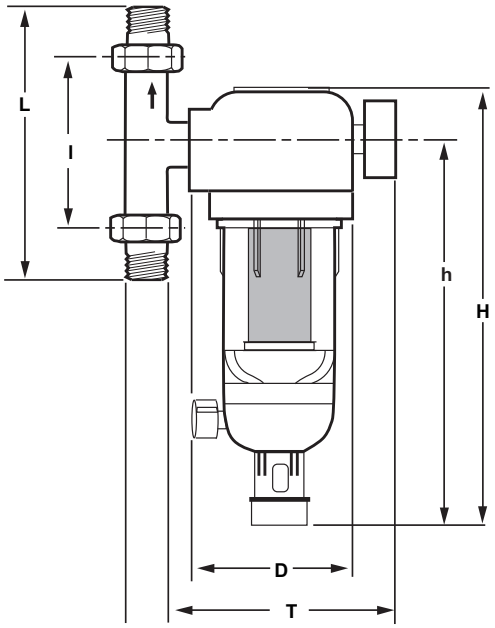
Product Number	Pipe Size (inch)	Pipe Size DN	Capacity (Cv)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Handle Type	Gas Rated	Gas Approvals
B200S7064	2 in.	DN50	280 Cv	3 17/32 in. high x 5 21/32 in. long x 5 5/16 in. handle length	90 mm high x 144 mm long x 135 mm handle length	Zinc plated steel with vinyl cover	No	No
B200S9003	1/2 in.	DN15	23 Cv	1 25/32 in. high x 2 11/64 in. long x 3 11/32 in. handle length	45 mm high x 55 mm long x 85 mm handle length	Aluminum lever, painted	No	No
B200S9011	3/4 in.	DN20	34 Cv	1 15/16 in. high x 2 7/8 in. long x 3 11/32 in. handle length	49 mm high x 73 mm long x 85 mm handle length	Aluminum lever, painted	No	No
B200T1017	1/2 in.	DN15	34 Cv	1 25/32 in. high x 2 7/16 in. long x 3 11/32 in. handle length	45 mm high x 62 mm long x 85 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), ANSI B16.33 (125 psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi), 3.16 (125 psi)
B200T1025	3/4 in.	DN20	34 Cv	1 15/16 in. high x 2 25/32 in. long x 3 11/32 in. handle length	49 mm high x 71 mm long x 85 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), ANSI B16.33 (125 psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi), 3.16 (125 psi)
B200T1033	1 in.	DN25	66 Cv	2 5/16 in. high x 3 9/32 in. long x 4 11/32 in. handle length	59 mm high x 83 mm long x 110 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), ANSI B16.33 (125 psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi), 3.16 (125 psi)
B200T1041	1 1/4 in.	DN32	82 Cv	2 1/2 in. high x 3 27/32 in. long x 4 11/32 in. handle length	64 mm high x 98 mm long x 110 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi)
B200T1058	1 1/2 in.	DN40	195 Cv	3 7/32 in. high x 4 11/32 in. long x 5 5/16 in. handle length	82 mm high x 110 mm long x 135 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi)
B200T1066	2 in.	DN50	280 Cv	3 17/32 in. high x 5 1/4 in. long x 5 5/16 in. handle length	90 mm high x 133 mm long x 135 mm handle length	Zinc plated steel with vinyl cover	Yes	AGA 21.15 (1/2 psi), 3.88 (5psi), CGA 9.1,9.2 (1/2 psi), CR-91-002(5 psi)

F74C Reversing Rinsing Filter

F74C Reverse Rinsing Filters ensure a continuous supply of filtered water. The fine filter prevents the ingress of foreign bodies, such as rust particle and grains of sand. Both horizontal and vertical installations are possible.

- Whole House Protection
- Filtered water supplied even during reverse rinsing. Patented reverse rinsing system.
- Fast and thorough cleaning of the filter with a small amount of water.
- Bayonet connection enables simple retro-fitting of reverse rinsing actuator.
- Large filter surface.
- Shock resistant, clear synthetic material filter bowl enables easy inspection of filter contamination.
- Filter insert fully interchangeable.
- Simple operation.
- Tested for reliability.

Dimensions Diagram



DIMENSION	CONNECTION SIZE	
	3/4 (19)	1 (25)
H	12-13/16 (324)	12-13/16 (324)
h	11-3/16 (285)	11-3/16 (285)
L	6-3/8 (162)	7-1/4 (184)
l	3-9/16 (90)	3-15/16 (100)
D	4-1/8 (105)	4-1/8 (105)
T	5-5/16 (150)	5-5/16 (150)

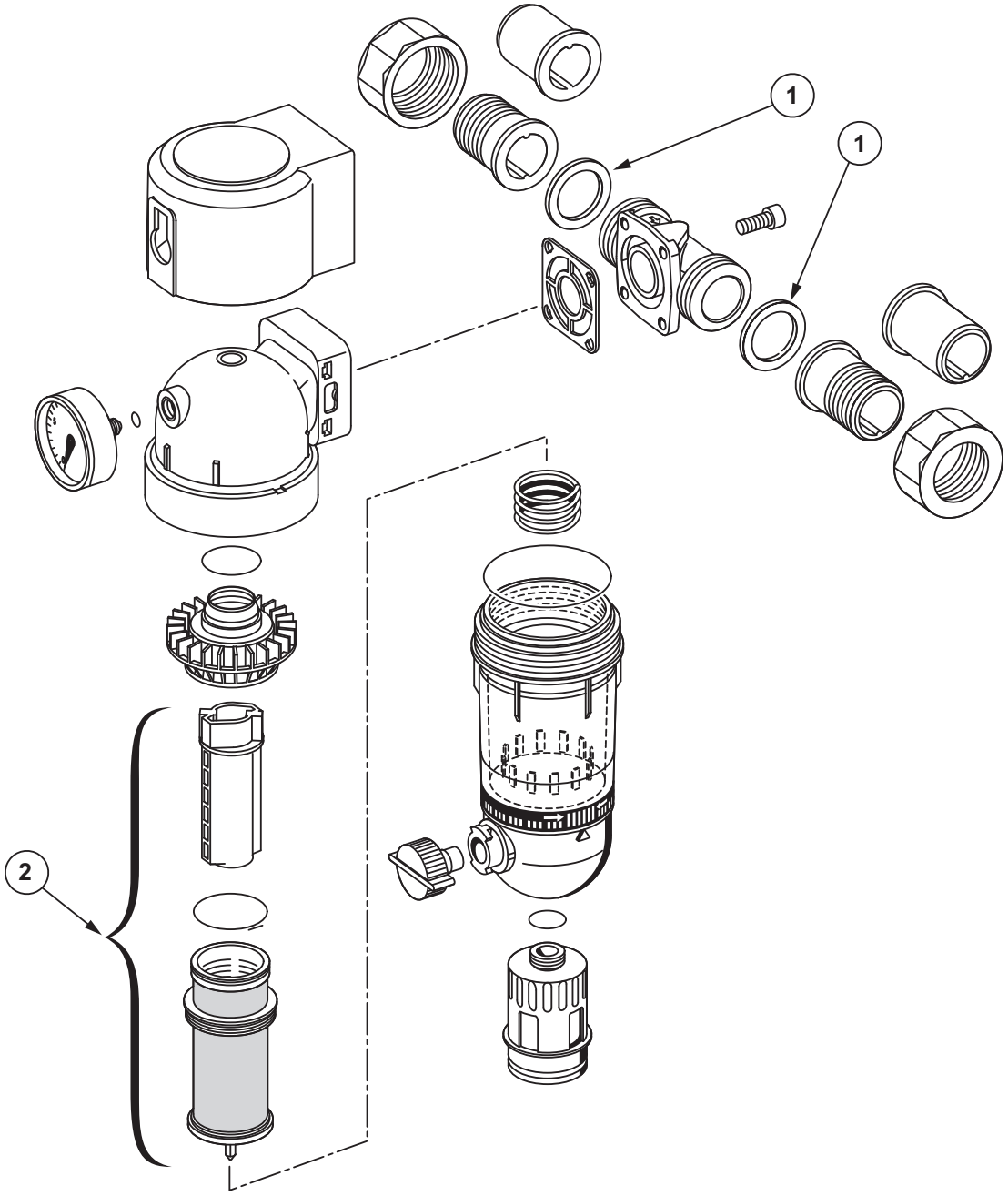
M18087A

Materials (Body): Plastic with Brass Fittings
Temperature Rating: 86 F Maximum (30 C Maximum)
Weight: 6 lb (2.7 kg)
Includes: gauge and wrench

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Capacity (Kv)	Screen Size	Sump	Pressure Ratings (psi)
F74C1015	3/4 in.	DN20	Sweat and threaded	9 Cv	7.7 Kv	100 micron screen	Clear Plastic	230 psi maximum
F74C1023	1 in.	DN25	Sweat and threaded	10 Cv	8.57 Kv	100 micron screen	Clear Plastic	230 psi maximum

Water Filters

Exploded View and Parts List



No.	Description	Part Number
1	Union Gasket, 3/4 in.	901444
1	Union Gasket, 1 in.	901445
2	Replacement Filter Assembly for F74C, 3/4 in. and 1 in., 100 Micron. Includes the filter insert complete (O-ring, mesh with mesh support, impeller), sump O-ring (mounted between the filter housing and the sump).	AF74-1A

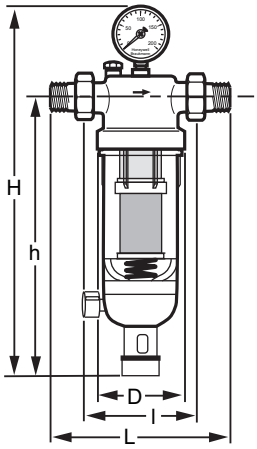
M13833

F76 Water Filters

High flow capacity water filter used to remove sediment and debris from residential or commercial water systems.

- Whole House Protection
- Ideally suited for sediment removal applications that would quickly plug and restrict the flow of normal filters.
- Used as a prefilter, the F76 protects elements of the water system, including specialized treatment devices or other common fixtures and appliances.
- The flow filtering capacity and ease of cleaning make the F76S ideal for the most demanding applications.
- Built-in secondary filter provides an uninterrupted supply of filtered water during backwashing.

Dimensions Diagram



SIZE	L (1)	I (1)	D (1)	H (1)	h (1)	WEIGHT (2)
1/2 INCH	6-11/16 (170)	4-5/16 (110)	3-13/16 (97)	17-11/16 (449)	13-13/16 (350)	6.4 (2.9)
3/4 INCH	7 (178)	4-5/16 (110)	3-13/16 (97)	17-11/16 (449)	13-13/16 (350)	6.4 (2.9)
1 INCH	8-1/4 (209)	5-1/8 (130)	3-13/16 (97)	17-7/8 (453)	13-13/16 (350)	6.8 (3.1)
1-1/4 INCH	8-3/4 (222)	5-1/8 (130)	3-13/16 (97)	17-7/8 (453)	13-13/16 (350)	7.3 (3.3)
1-1/2 INCH	9-11/16 (246)	5-15/16 (150)	4-3/4 (119)	20-15/16 (532)	16-7/16 (417)	8.8 (4.0)
2 IINCH	10-1/2 (267)	5-15/16 (150)	4-3/4 (119)	20-15/16 (532)	16-7/16 (417)	10.6 (4.8)

(1) DIMENSIONS IN INCHES AND (MILLIMETERS).

(2) WEIGHT IN POUNDS AND (KILOGRAMS).

M18084

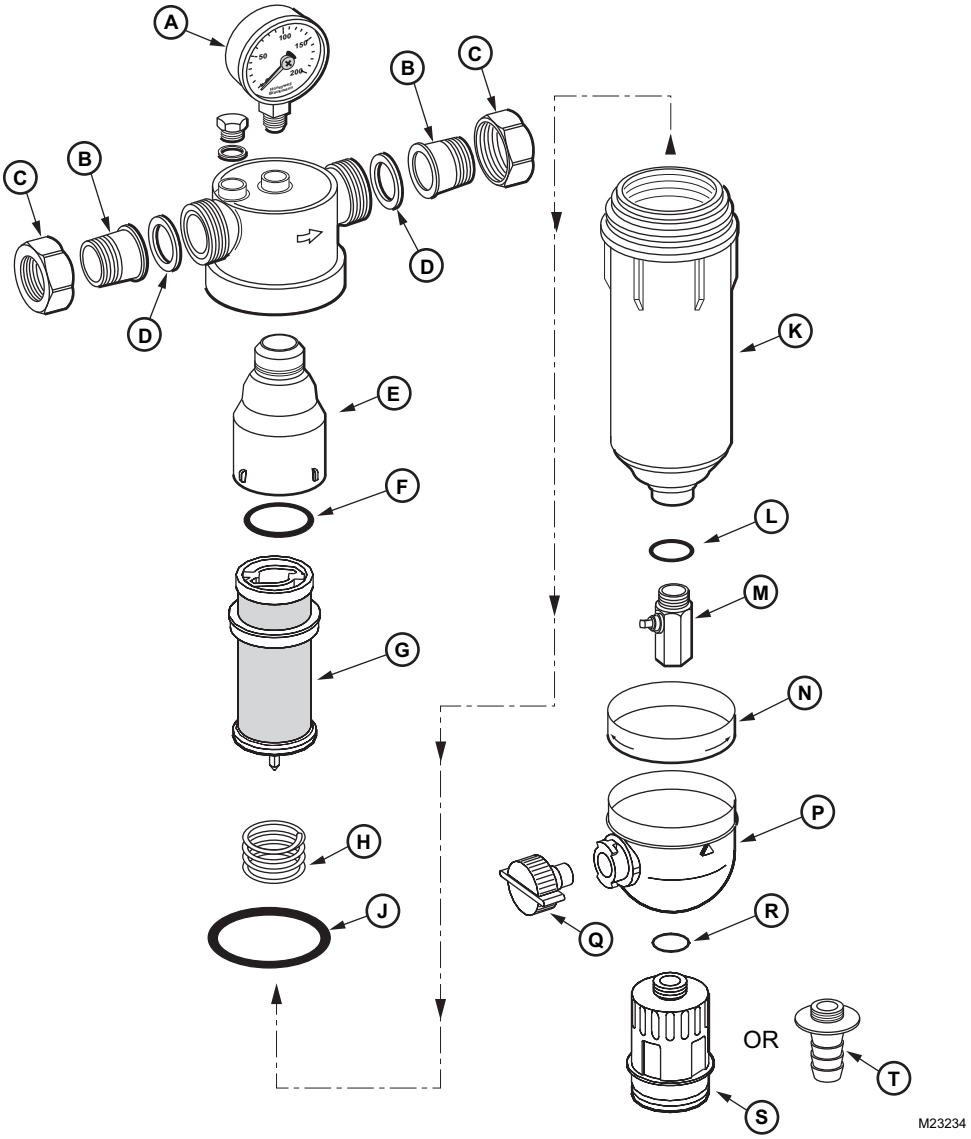
Screen Size: 100 micron screen
Materials (Body): Brass
Sump: Clear Plastic

Temperature Rating: 104 F Maximum (40 C Maximum)
Weight: 6.4 lb (2.9 kg)
Includes: gauge and service wrench

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Capacity (Kv)	Pressure Ratings (psi)
F76S1007	1/2 in.	DN15	External NPT Threaded and Sweat	8 Cv	6.9 Kv	230 psi maximum
F76S1015	3/4 in.	DN20	External NPT Threaded and Sweat	11 Cv	9.4 Kv	230 psi maximum
F76S1023	1 in.	DN25	External NPT Threaded and Sweat	18 Cv	15.4 Kv	230 psi maximum
F76S1031	1 1/4 in.	DN32	External NPT Threaded and Sweat	20 Cv	17 Kv	230 psi maximum
F76S1049	1 1/2 in.	DN40	External NPT Threaded	26 Cv	22.3 Kv	230 psi maximum
F76S1056	2 in.	DN50	External NPT Threaded	30 Cv	25.7 Kv	230 psi maximum

Water Filters

Exploded View and Parts List for F76S



Parts List is on the following page.

Parts and Accessories for new style F76S filters

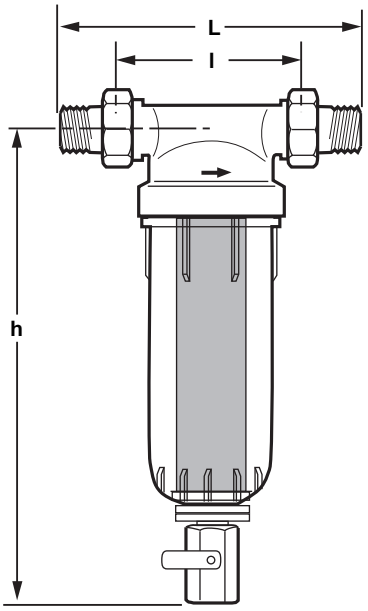
Description	1/2 inch	3/4 inch	1 inch	1 1/4 inch	1 1/2 inch	2 inch
(D) Tailpiece Gaskets (sold in packs of 10)	0901444	0901444	0901445	0901446	0901447	0901448
(E) Guide Barrel	N/A	N/A	N/A	N/A	N/A	N/A
Screen Insert Complete (new style only)						
20 Micron	AF11S-1B	AF11S-1B	AF11S-1B	AF11S-1B	AF11S-112B	AF11S-112B
50 Micron	AF11S-1C	AF11S-1C	AF11S-1C	AF11S-1C	AF11S-112C	AF11S-112C
100 Micron	AF11S-1A	AF11S-1A	AF11S-1A	AF11S-1A	AF11S-112A	AF11S-112A
200 Micron	AF11S-1D	AF11S-1D	AF11S-1D	AF11S-1D	AF11S-112D	AF11S-112D
Includes: (F) Barrel O Ring (G) Impeller and Screen Assembly (J) Chamber O Ring						
(H) Base Spring	N/A	N/A	N/A	N/A	N/A	N/A
(J) Chamber O Ring (sold in packs of 10)	0900747	0900747	0900747	0900747	0900748	0900748
Filter Sump Kits (new style only)						
Clear Plastic	KF11S-1A	KF11S-1A	KF11S-1A	KF11S-1A	KF11S-112A	KF11S-112A
Includes: (J) Chamber O-Ring (K) Sump (L) Ball Valve O-Ring (M) Integrated Ball Valve (N) Memory Ring (P) Ball Valve Bowl (Q) Ball Valve Knob (R) Joint Ring Seal (S) Drain Connector						
Ball Valve Assembly (new style only) Includes: (M) Ball Valve (L) Ball Valve O-Ring	KH11S-1A	KH11S-1A	KH11S-1A	KH11S-1A	KH11S-1A	KH11S-1A

FF06 Rinseable Fine Filter

The FF06 Rinseable Fine Filter ensures a continuous supply of filtered water. The fine filter stops the flow of particulates, such as rust particles and grains of sand. Sediment collected at the bottom of the bowl can simply be removed by flushing with the turn of a knob. This compact filter was designed to fit where the space is limited.

- Easy installation.
- Same installed dimensions as F74C for easy future upgrade to a backwashable filter.
- Continuous supply of filtered water, even during rinse cycle.
- Shock resistant clear synthetic material filter bowl enables easy inspection for filter contamination.
- Stainless steel filter element.
- Filter bowl and sleeve are easily exchanged.
- Shipped with threaded and sweat union connections and service wrench.

Dimensions Diagram



Dimension	Connection Size	
	3/4 (19)	1 (25)
L	6-1/4 (158)	7-1/16 (179)
l	3-9/16 (90)	3-15/16 (100)
h	7-1/16 (180)	7-1/16 (180)

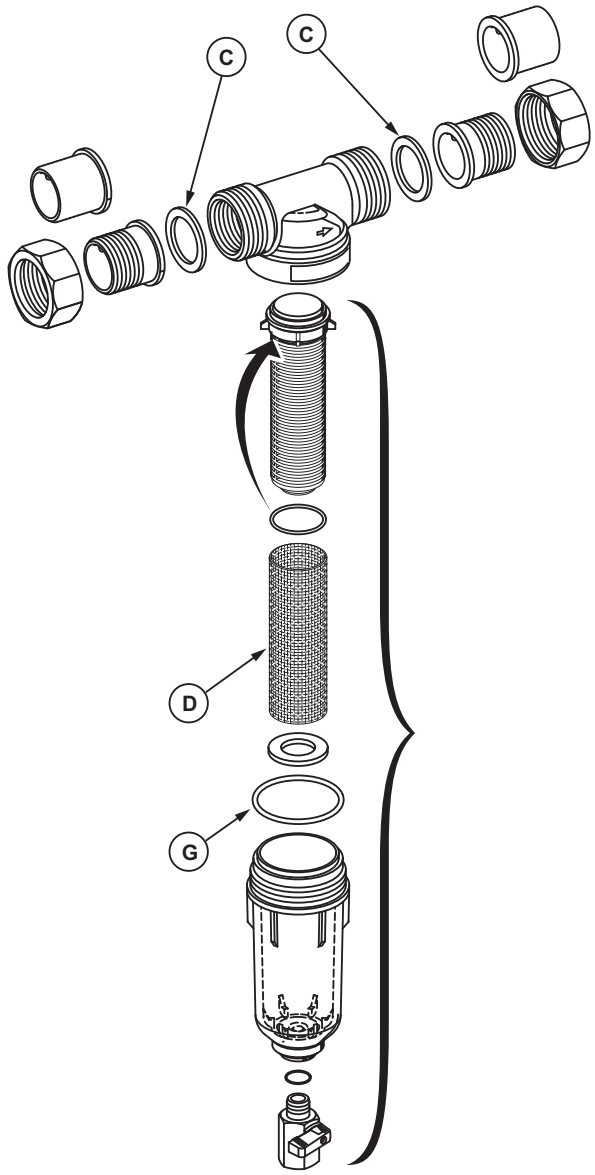
M18086B

Materials (Body): Dezincification-resistant (DZR) forged Brass
Sump: Clear Plastic
Temperature Rating: 104 F Maximum (40 C Maximum)
Weight: 2.2 lb (1.0 kg)
Includes: service wrench

Replacement Parts:
U76S5015 F76 tailpiece for 3/4 in. Sweat
U76S5023 F76 tailpiece for 1 in. Sweat
U76T1014 F76 tailpiece for 3/4 in. NPT
U76T1022 F76 tailpiece for 1 in. NPT

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Capacity (Cv)	Screen Size	Pressure Ratings (psi)
FF06A1013	3/4 in.	DN20	External NPT Threaded and Sweat	7.7 Cv	100 micron screen	230 psi maximum
FF06A1021	1 in.	DN25	External NPT Threaded and Sweat	10.2 Cv	100 micron screen	230 psi maximum

Exploded View and Parts List for FF06



Item Number	Part Number	Description
C	0901444	Gasket 3/4 in. (10 pcs)
	0901445	Gasket 1 in. (10 pcs)
D & G	AS 06-1A	Filter mesh and sump O-ring (5 pcs)
G	901499	Filter bowl O-ring set (pack of 10)

M17536A

Water Sediment Filter Parts and Accessories

Product Number	Description	Used With
AF11S-112A	100 Micron Screen kit for F76S Water Filter 1 1/2 in. to 2 in.	F76S
AF11S-112B	20 Micron Screen kit for F76S Water Filter 1 1/2 in. to 2 in.	F76S
AF11S-112C	50 Micron Screen kit for F76S Water Filter 1 1/2 in. to 2 in.	F76S
AF11S-112D	200 Micron Screen kit for F76S Water Filter 1 1/2 in. to 2 in.	F76S
AF11S-1A	100 Micron Screen kit for F76S Water Filter 1/2 in. to 1 1/4 in.	F76S
AF11S-1B	20 Micron Screen kit for F76S Water Filter 1/2 in. to 1 1/4 in.	F76S
AF11S-1C	50 Micron Screen kit for F76S Water Filter 1/2 in. to 1 1/4 in.	F76S
AF11S-1D	200 Micron Screen kit for F76S Water Filter 1/2 in. to 1 1/4 in.	F76S
AF74-1A	Insert Filter 100 Micron Screen	F74C
AS06-1A	Replacement Filter FF06A	—
FT09RS-112A	Bronze Sump for F76S water filter 1 1/2 in. to 2 in.	F76S
FT09RS-1A	Bronze Sump for F76S water filter 1/2 in. to 1 1/4 in.	F76S
KF11S-112A	Clear Plastic Sump for F76S water filter 1 1/2 in. to 2 in.	F76S
KF11S-1A	Clear Plastic Sump for F76S water filter 1/2 in. to 1 1/4 in.	F76S

MV876 Automatic Backwash Control

The MV876B Automatic-Backwash Control is available as an accessory. This control is fitted to the drain valve and is programmed by the user to automatically perform the backwash function according to the desired interval.

- Net fitting simplifies upgrade to automatic backwash.
- 16 field-selectable backwash intervals (from every four minutes to once every three months) eliminate need for external timer.
- Connections for external control on the MV876 provide for use in automated systems and differential pressure control.
- MV876 can be manually activated to initiate backwash.
- Battery (AA) backup to insure completion of backwash cycle in spite of power loss.

Dimensions, Approximate: 6 in. high, 2-3/4 in wide, 6-5/16 in. deep (152 mm high, 70mm wide, 160 mm deep)
Electrical Ratings: 24 Vac, 10 W

Product Number	Backwash Intervals	Interval Selection	Display	Electrical Connections	Cycle Time (sec)	Battery Back-up	Description
MV876B1018	16 Adjustable intervals from 4 min to 3 months.	16 field selectable via keypad	Digital	Remote Activation	20 sec	Yes, 4xAA	Automatic backwash control, fits 1/2 in. to 2 in. F76S models and F74C models.

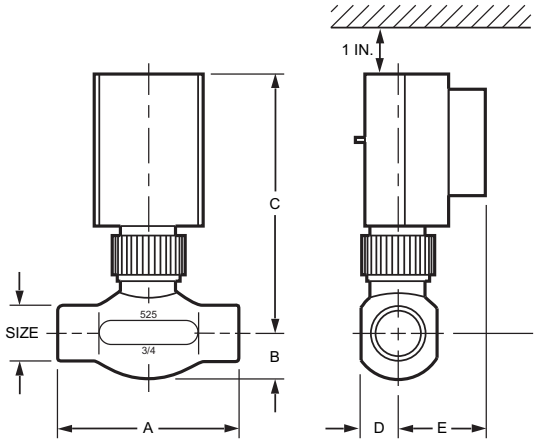
MZV Series Motorized Zone Valves

Pre-balance valve

- Rack and pinion linear design.
- Fast acting, 10 seconds to open, 5 seconds to close.
- Two piece rack design to extend service life.
- Low power consumption, 8 valves, 40 VA transformer.
- External valve position indicator.
- Quiet operation, no water hammer.
- Built-in tamper resistant balancing valve for pre-balancing.
- High torque, constant speed synchronous motor.
- Cooler running, longer life motor.
- Operator can be replaced without draining system.
- Manual opening feature.
- Replaceable valve cartridge.
- Large adjustable flow, 1/2 in. 3/4 in. Cv 5.8; 1 in. 7.0 Cv; 1-1/4 in. Cv 7.0.
- Motor CSA recognized.
- 4 wire operator with auxiliary switch.
- 2 wire without switch, 24 in. leads.
- Compatible with programmable thermostats.
- Bronze casting; brass/stainless trim.
- USA Patent Nos. 5,529,282; D369,650; 5,941,500; 6,032,924.
- UK Patent No. 2,052,382. 24 VAC, 60 Hz, 0.25 ampere.

Honeywell MZV Series is the first linear zone valve with a built-in balancing plug that permits pre-balancing for each zone.

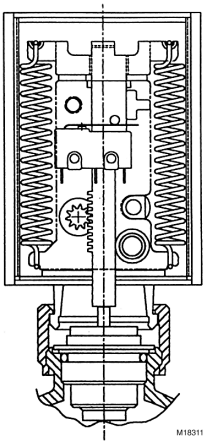
Dimensions Diagram



Size	Dimensions (inches)				
	A	B	C	D	E
1/2”	3.3	1.0	4.8	.7	1.6
3/4”	3.3	.8	4.8	.7	1.6
1”	3.8	1.0	4.8	.8	1.6
1-1/4”	3.8	1.0	4.8	.8	1.6

M23259

Patented long life rack and pinion design with built in balancing valve.



Application: Residential or Commercial Zoning for hot water heating or chilled water air conditioning systems, fan coil units or indirect water heater service.
Body Pattern: Two-way
Voltage: 24 Vac
Frequency: 60 Hz
Maximum Ambient Temperature: 240 F (115 C)

Product Number	Pipe Size (inch)	Pipe Size DN	Connection Type	Maximum Close-off Pressure (psi)	Maximum Water Pressure (psi)	Maximum Water Pressure (kPa)
MZV524-T	1/2 in.	DN15	NPT	20 psi	125 psi	862 kPa
MZV524E-T	1/2 in.	DN15	NPT	20 psi	125 psi	862 kPa
MZV525	3/4 in.	DN20	Sweat	20 psi	125 psi	862 kPa
MZV525-T	3/4 in.	DN20	NPT	20 psi	125 psi	862 kPa
MZV525E	3/4 in.	DN20	Sweat	20 psi	125 psi	862 kPa
MZV525E-T	3/4 in.	DN20	NPT	20 psi	125 psi	862 kPa
MZV526	1 in.	DN25	Sweat	17.5 psi	125 psi	862 kPa
MZV526-T	1 in.	DN25	NPT	17.5 psi	125 psi	862 kPa
MZV526E	1 in.	DN25	Sweat	17.5 psi	125 psi	862 kPa
MZV526E-T	1 in.	DN25	NPT	17.5 psi	125 psi	862 kPa
MZV527	1 1/4 in.	DN32	Sweat	17.5 psi	125 psi	862 kPa
MZV527E	1 1/4 in.	DN32	Sweat	17.5 psi	125 psi	862 kPa

MZV Series Replacement Parts

Voltage: 24 Vac
Frequency: 60 Hz
Maximum Ambient Temperature: 240 F (115 C)

Product Number	Description	Used With
MZV520-RP	Operator for MZV525E, MZV526E, MZV527E zone valves with auxiliary switch	MZV, RM-SZ Series
MZV521-RP	Operator for MZV525, MZV526, MZV527 zone valves without auxiliary switch	MZV Series
MZV525-RP	Replacement valve cartridge for 3/4 in. MZV525, MZV525E	MZV Series
MZV526-RP	Replacement valve cartridge for 1 in. MZV526, MZV526E, MZV527, MZV527E	MZV Series

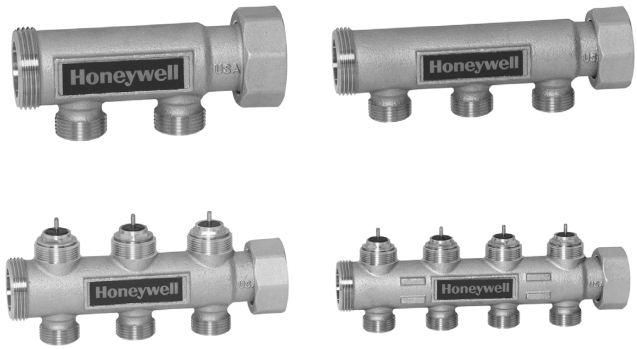
MT4 Series Smart-T Thermal Electric Actuator

- Thermal electric actuator mounts directly onto Honeywell brass-valved manifolds
- Provides individual loop flow control on multiple-zoned manifolds.
- Smart-T Actuator is available in both Normally
- Closed (NC) and Normally Open (NO) with an end switch
- Open/closed indicator for visual inspection of valve operation
- Open/close cycle time is 4-5 minutes

Application: Replacement Actuator
Sensor (Integral or Remote): Integral
Maximum Ambient Temperature: 122 F (50 C)

Product Number	Collar Diameter (in.)	Collar Diameter (mm)	Electrical Ratings	Timing	End Switch Rating	Description	Used With
MT4-024S-NC	1 3/16 in.	30 mm	24 Vac, 3 VA, 0.125A Draw	5 minutes Open / 5 minutes Close (max.)	240V/50-60Hz, 5 A	24 Vac Normally Closed Actuator with end switch for use with V100 valve in hydronic and steam heating systems	RM & SZ Series Manifolds

RM Series Radiant Manifold



Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters. Manifolds can be easily grouped together in configurations of 2 Port, 3 Port and 4 Port by using built-in union nut adapters allowing different zoning configurations to meet job needs. Supply Manifolds-Without Valves are used in combination with Return manifolds that contain valves for individual loop flow and temperature control. Return Manifolds-With Valves incorporate built-in balancing valves to allow flow adjustment and balance for individual heating loops.

Materials (Body): Bronze
Dimensions, Approximate: 1.67 in. high x 4.87 in. long x 1.6 in. deep
Flow Rate: 3.5 gpm

Maximum Differential Pressure: 40 ft., 17.5 psi
Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F(104 C)

Product Number	Number of Zones	Connection Type	Size	Description	Comments
RM200WOV	2 Zones	Threaded	3/4 in.	2 Port Supply Radiant Manifold Without Valves	Without Operators
RM200WV	2 Zones	Threaded	3/4 in.	2 Port Return Radiant Manifold With Valves	Without Operators
RM300WOV	3 Zones	Threaded	3/4 in.	3 Port Supply Radiant Manifold Without Valves	Without Operators
RM300WV	3 Zones	Threaded	3/4 in.	3 Port Return Radiant Manifold With Valves	Without Operators
RM400WOV	4 Zones	Threaded	3/4 in.	4 Port Supply Radiant Manifold Without Valves	Without Operators
RM400WV	4 Zones	Threaded	3/4 in.	4 Port Return Radiant Manifold With Valves	Without Operators

Manifold Zone Valves

RAM Series Pre Assembled Radiant Manifold

Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters. Manifolds can be easily grouped together in configurations of 2 Port, 3 Port and 4 Port by using built-in union nut adapters allowing different zoning configurations to meet job needs. Supply Manifolds-Without Valves are used in combination with Return manifolds that contain valves for individual loop flow and temperature control. Return Manifolds-With Valves incorporate built-in balancing valves to allow flow adjustment and balance for individual heating loops. Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters.

Materials (Body): Bronze
Dimensions, Approximate: 7 1/2 in long x 2 5/8 in wide x 8 1/4 in. high
Flow Rate: 3.5 gpm

Maximum Differential Pressure: 40 ft., 17.5 psi
Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F (104 C)

Product Number	Number of Zones	Connection Type	Size	Description	Comments	Used With
RAM200	2 Zones	Threaded	3/4 in.	Pre Assembled 2 Port Supply & Return Radiant Manifold With Valves	Without Operators	AQ2000 Controls
RAM300	3 Zones	Threaded	3/4 in.	Pre Assembled 3 Port Supply & Return Radiant Manifold With Valves	Without Operators	AQ2000 Controls
RAM400	4 Zones	Threaded	3/4 in.	Pre Assembled 4 Port Supply & Return Radiant Manifold With Valves	Without Operators	AQ2000 Controls
RAM200FM	2 Zones	Threaded	3/4 in.	Pre Assembled 2 Port Supply & Return Radiant Manifold With Valves	With Flowmeters	AQ2000 Controls
RAM300FM	3 Zones	Threaded	3/4 in.	Pre Assembled 3 Port Supply & Return Radiant Manifold With Valves	With Flowmeters	AQ2000 Controls
RAM400FM	4 Zones	Threaded	3/4 in.	Pre Assembled 4 Port Supply & Return Radiant Manifold With Valves	With Flowmeters	AQ2000 Controls

RM Series Manifold Accessories

Materials (Body): Brass

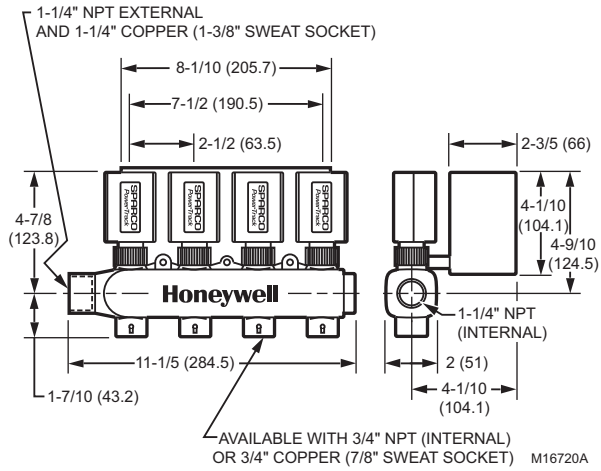
Dimensions, Approximate: 1 7/8 in. high x 1 3/4 in. long x 1 7/8 in. deep

Product Number	Connection Type	Size	Description	Used With
MA206-018	PEX	R32 x 3/4 in.	R32 x 3/4 in. Pex Adapter	RM Series Manifolds
MA206-019	PEX	R32 x 1 in.	R32 x 1 in. PEX Adapter	RM Series Manifolds
MA206-020	NPT	R32 x 1 in.	R32 x 1 in. NPT Adapter	RM Series Manifolds
MA206-021	Sweat	R32 x 1 in.	R32 x 1 in. Sweat Adapter	RM Series Manifolds
MA206-022	Sweat	R32 x 1 1/4 in.	R32 x 1 1/4 in. Sweat Adpater	RM Series Manifolds
MA206-029	PEX	3/4 in.	3/4 PEX Fitting ASTM F1807	RM Series Manifolds
MA206-030	Threaded	PEX Fitting Compression Nut	PEX Fitting Compression Nut	RM Series Manifolds
MBKT204	—	—	RM Series Manifold Bracket	RM Series Manifolds
MC206-002	Threaded	30mm	RM & SZ Series Manifold Valve Cap	RM Series Manifolds
MC206-010	—	—	RM Series Union Coupling Gasket	RM Series Manifolds
MC206-011	Threaded	1 in	RM Series Manifold End Cap	RM Series Manifolds
MPF203-023	Threaded	3/4 in	RM Series Manifold Branch Cap	RM Series Manifolds
MT4-024S-NC	Threaded	30 mm	MT4 Thermal Electric Actuator	RM Series Manifolds
MTK150	Threaded	1 in	RM Series Manifold End Cap with Drain & Vent	RM Series Manifolds
MTK202	Threaded	1 in	RM Series Manifold Union End Fitting with Thermometer	RM Series Manifolds
MZV520-RP	Threaded	30 mm	MZV Series Manifold Actuator-24Vac with End Switch NC	RM Series Manifolds

SZ Series Multiple Zone Valve Return Manifold- with MZV Operators

Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters. Supply Manifold Header-Without Valves are used in combination with Return manifolds that contain valves for individual loop flow and temperature control. Return Manifolds-With Valves incorporate built-in balancing valves to allow flow adjustment and balance for individual heating loops.

Dimensions Diagram

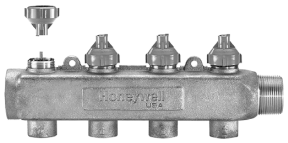


Materials (Body): Bronze
Current Draw: 0.25 A
Flow Rate: 10 gpm
Maximum Differential Pressure: 40 ft., 17.5 psi
Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F (104 C)

Product Number	Number of Zones	Connection Type	Port Size	Description	Comments
SZ3S1	3 Zones	1 1/4 in. Sweat	3/4 in.	3 Zones Sweat Valve	Without Control
SZ3T1	3 Zones	1 1/4 in. Threaded	3/4 in.	3 Zones NPT Valve	Without Control
SZ4S1	4 Zones	1 1/4 in. Sweat	3/4 in.	4 Zones Sweat Valve	Without Control
SZ4T1	4 Zones	1 1/4 in. Threaded	3/4 in.	4 Zones NPT Valve	Without Control
SZ3S	3 Zones	1 1/4 in.Sweat	3/4 in.	3 Zones Sweat Valve	Without MZV
SZ3T	3 Zones	1 1/4 in.Threaded	3/4 in.	3 Zones NPT Valve	Without MZV
SZ4S	4 Zones	1 1/4 in. Sweat	3/4 in.	4 Zones Sweat Valve	Without MZV
SZ4T	4 Zones	1 1/4 in. Threaded	3/4 in.	4 Zones NPT Valve	Without MZV

Manifold Zone Valves

S2Z Series Multiple Zone Valve Snow Melt Manifold- with Manual Valves



Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters. Manifolds-With Valves incorporate built-in balancing valves to allow flow adjustment and balance for individual heating loops.

Materials (Body): Bronze
Dimensions, Approximate: 6 9/16 in. high x 11 3/16 in. long x 2 in. deep (167.1 mm high x 284.5 mm long x 50.8 mm deep)
Flow Rate: 10 gpm
Maximum Differential Pressure: 40 ft., 17.5 psi
Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F (104 C)

Product Number	Number of Zones	Connection Type	Size	Description	Comments
SZ4S1L	4 Zones	Sweat	3/4 in.	4 Zones Sweat Valve	Snow Melt (no controls or operators)

S2Z Series Multiple Zone Valve Supply Manifold- without Valves

Manifolds are used to control individual heating loop flow and temperature controls through both Supply and Return configurations. Individual tubing loops are connected to the manifolds through connection adapters. Supply Manifolds Without Valves are used in combination with Return manifolds that contain valves for individual loop flow and temperature control.

Materials (Body): Bronze
Dimensions, Approximate: 3 3/4 in. high x 11 3/16 in. long x 2 in. deep (167.1 mm high x 284.5 mm long x 50.8 mm deep)
Current Draw: 0.25 A

Flow Rate: 10 gpm
Maximum Differential Pressure: 40 ft., 17.5 psi
Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F (104 C)

Product Number	Number of Zones	Connection Type	Size	Description	Comments
SH4S	4 Zones	Sweat	3/4 in.	4 Zone header	Header Only
SH4T	4 Zones	Threaded	3/4 in.	4 Zone header	Header Only

S2Z Series Multiple Zone Valve- Replacement Parts

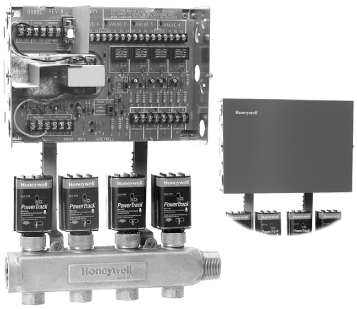
S2Z Series is the only multiple zone valve that is preassembled, prewired and ready to connect. It simplifies installation, saves labor, parts, time and money. The S2Z Series multiple zone valve concept brings a factory assembled, piped and wired package to the job site that is easy to install and service. The reduced number of joints and wiring connections saves hours of labor and parts. It simplifies the repair of possible leaks and greatly reduces wiring mix ups. The contractor installs the pipes to the S2Z Series manifold and connects 110V, the TT terminal and the thermostat wires. The low cost S2Z Series supply header with four zone connections simplifies installation, saves money and provides a clean installation.

- R8889 zoning panel with priority
- Three or four zone multiple zone valves.
- Four S2Z Series, up to sixteen zones, can be assembled.
- Built-in balancing plugs for flow adjustment for each zone.
- Large flow rate, up to 10 gpm per zone.
- Manual opener for each zone.
- 4 wire MZV Series operators with auxiliary switch, 10-12 sec. to open.
- Priority relay switch for indirect water heater.
- Low current draw, 0.25 amps, means low operating costs.
- Maximum shut off differential pressure 40 ft., 17.5 psi.
- Max. temp/pressure: 220 F/125psi.
- Bronze casting.

Dimensions, Approximate: 6 9/16 in. high x 11 3/16 in. long x 2 in. deep (167.1 mm high x 284.5 mm long x 50.8 mm deep)

Product Number	Description	Comments
SZ001	Valve replacement Kit	Includes Control with Priority.
SZ07-070	PowerTrack Conversion Kit	Includes Control with Priority.

S2Z Series Multiple Zoning Controller



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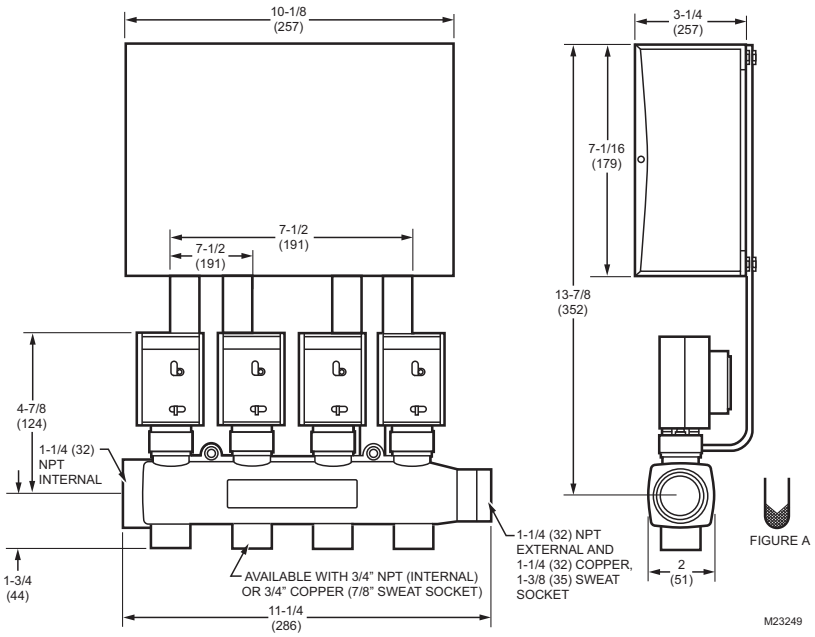
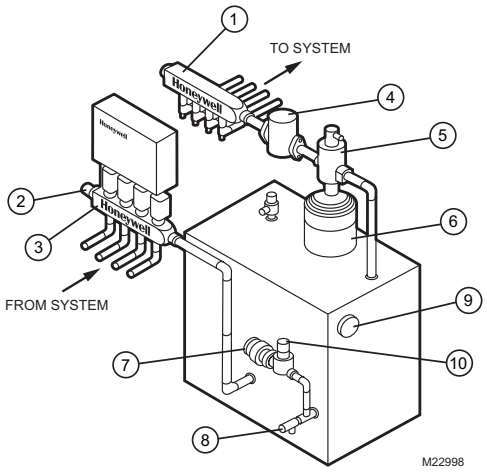
- Priority relay switch for indirect water heater.
- Low current draw, 0.25 amps, means low operating costs.
- Maximum shut off differential pressure 40 ft., 17.5 psi.
- Max. temp/pressure: 220 F/125psi.
- Bronze casting.
- Made in USA.

Dimensions Diagram



Manifold Zone Valves

Typical boiler system shown.



1. Sparcozone2™ Supply Header
2. Drain Valve for Purging
3. Sparcozone2™ Multiple Zoning Control and Return Manifold
4. Circulator
5. SuperVent™
6. Expansion Tank
7. Backflow Preventer
8. Boiler Drain
9. Tridicator
10. Boiler Fill Valve

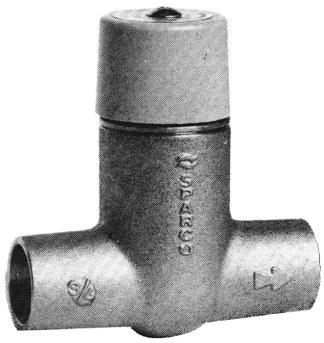
Boiler diagram intended for illustration purpose only.

Current Draw: 0.25 A
Flow Rate: 10 gpm
Maximum Differential Pressure: 40 ft., 17.5 psi

Maximum Operating Pressure: 125 psi
Maximum Temperature: 220 F (104 C)

Product Number	Number of Zones	Connection Type	Size	Description
S2Z3S3	3 Zones	Sweat	3/4 in.	3 Zones Sweat Valve
S2Z3T3	3 Zones	Threaded	3/4 in.	3 Zones Sweat Valve
S2Z4S3	4 Zones	Sweat	3/4 in.	Sparcozone 2
S2Z4T3	4 Zones	Threaded	3/4 in.	Sparcozone 2

FlowCheck—Gravity Check Valves



Honeywell FlowChecks prevent the flow of water to any part of a system when the pump is shut off. They permit summer/winter operation of indirect water heaters. Honeywell FlowChecks are easy to clean. Just unscrew the top of the valve for inspection and cleaning. Bronze and brass construction. To allow gravity flow, the FlowCheck can be changed to manual operation by turning the hand wheel counterclockwise (open position).
Honeywell FlowChecks prevent the flow of water to any part of a system when the pump is shut off. They permit summer/winter operation of indirect water heaters. Honeywell FlowChecks are easy to clean. Just unscrew the top of the valve for inspection and cleaning. Bronze and brass construction. To allow gravity flow, the FlowCheck can be changed to manual operation by turning the hand wheel counterclockwise (open position).

Type: Horizontal
Dimensions, Approximate: 3 11/16 in. high x 3 5/16 in. long x 1 1/2 in. wide
Materials (Body): Brass

Product Number	Size (inch)	Connection Type	Weight (kg)	Weight (lb)
FC200SB	3/4 in.	Sweat	0.5 kg	1.1 lb
FC201SB	1 in.	Sweat	0.68 kg	1.5 lb

AP400—Air Purger

Application: Closed heating systems
Materials (Body): Cast Iron
Maximum Operating Temperature: 275 F (135 C)
Maximum Operating Pressure: 125 psi (862 kPa)

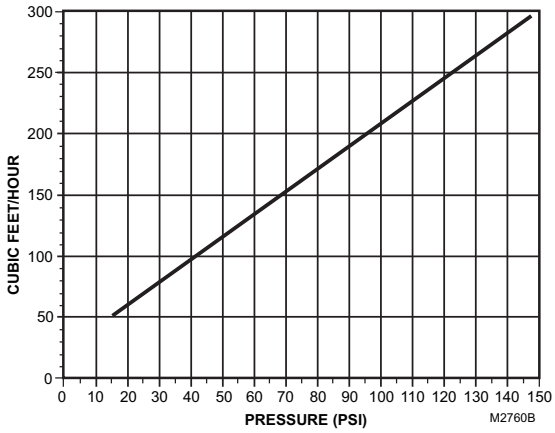
Product Number	Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Weight (lb)	Weight (kg)	Description
AP400	1 in.	6 in. long x 4 in. high x 2 1/2 in. deep	152 mm long x 102 mm high x 64 mm deep	NPT	1 In. with Bottom: 1/2 in.; Top: 1/8 in.	4 lb	1.8 kg	1 in. NPT Air Purger for closed heating systems
AP401	1 1/4 in.	6 in. long x 4 in. high x 2 1/2 in. deep	152 mm long x 102 mm high x 64 mm deep	NPT	1 1/4 In. with Bottom: 1/2 in.; Top: 1/8 in.	4 lb	1.8 kg	1 1/4 in. NPT Air Purger for closed heating systems
AP402	1 1/2 in.	6 in. long x 4 in. high x 2 1/2 in. deep	152 mm long x 102 mm high x 64 mm deep	NPT	1 1/2 In. with Bottom: 1/2 in.; Top: 1/8 in.	4 lb	1.8 kg	1 1/2 in. NPT Air Purger for closed heating systems

EA79 Industrial Air Vents

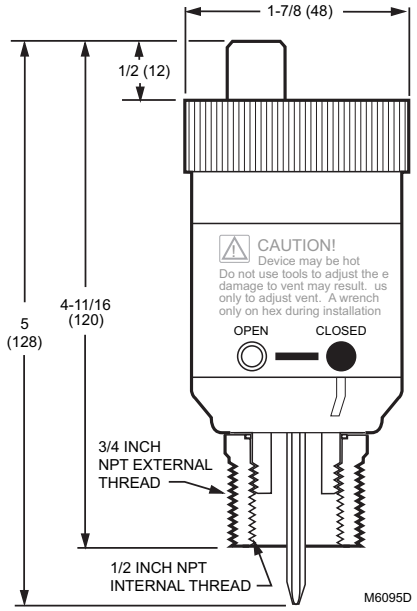
Purges air from high pressure mains and equipment in closed hot or cold water systems.

- Built-in shutoff valve for servicing without system shutdown.
- Built-in vacuum breaker.
- Removable float/valve assembly for easy servicing.
- Safety drain connection and vent cap with leakage guard.
- Brass shell construction.
- Internal parts made of corrosion-resistant and chemical-resistant materials for use with water systems containing propylene glycol, mineral oils, or petroleum-based oils.
- Replaces Hoffman # 79 or Dole # 75 Vents.
- Maintains quiet and efficient operation.

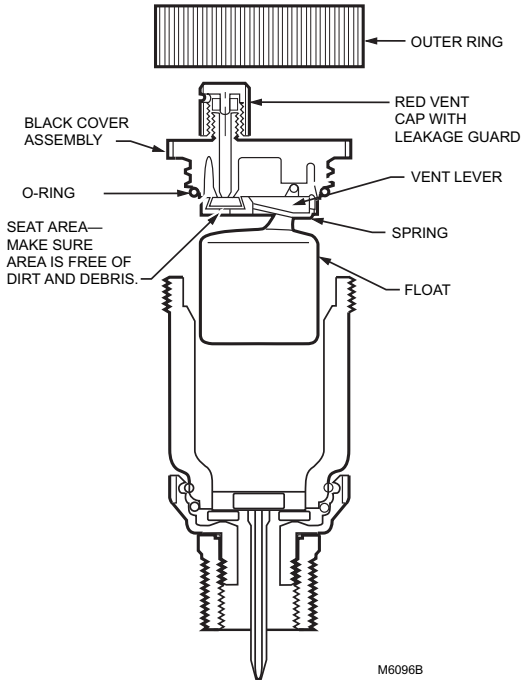
EA79 capacities.



Dimension Diagrams



EA179 construction



Application: Hydronics
Corrosion Resistant: Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol, mineral oils, or petroleum-based oils.
Temperature Ratings: 250 F (120C)

Accessories:
Q122A1001 Safe waste Connector

Replacement Parts:
P79B1003 Replacement O-ring, cover and internals

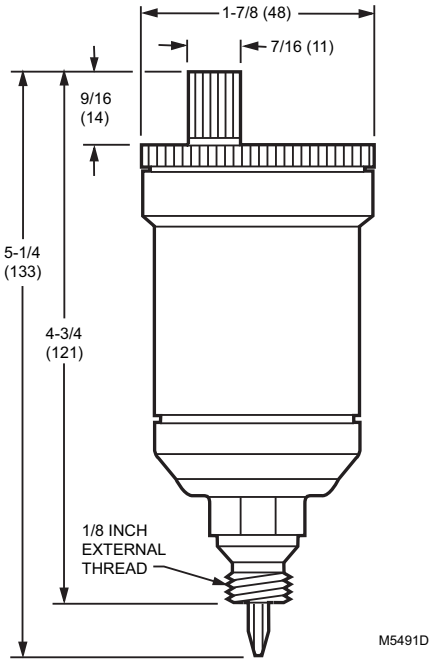
Product Number	Connection Type	Maximum Pressure Ratings (psi)	Maximum Pressure Ratings (kPa)	Description
EA79A1004	3/4 in. male NPT pipe thread with 1/2 in. female NPT pipe thread	150 psi	1050 kPa	Industrial automatic air vent
EA79A1012	3/4 in. male NPT pipe thread with 1/2 in. female NPT pipe thread	150 psi	1050 kPa	Industrial automatic air vent with safe waste connector (Q112A)

EA122A Automatic Air Vent for Heating System Applications

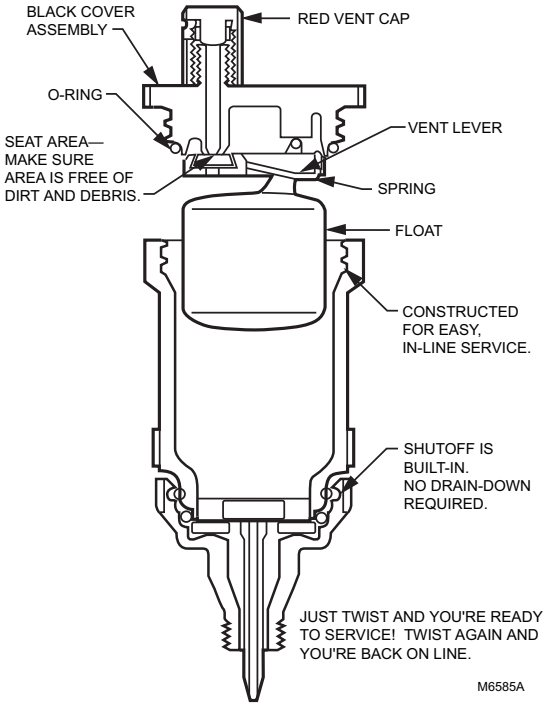
The Honeywell EA122A Automatic Air Vent purges air from high pressure mains and equipment in hot or cold closed water systems.

- Includes removable float/valve assembly for easy servicing.
- Not for use in steam systems.
- Body, cover and float assembly made of thermoplastics.
- Internal parts made of corrosion-resistant and chemical-resistant materials for use with water systems containing light concentrations of propylene glycol, mineral oils, or petroleum-based oils.
- Oil resistant seal.
- NBR seat disc and O-ring.

Dimensions Diagram



EA122A construction



Application: Hydronics
Corrosion Resistant: Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol, mineral oils, or petroleum-based oils.
Maximum Operating Temperature: 212 F (100 C)
Maximum Operating Pressure: 90 psi (620 kPa)

Accessories:
Q122A1001 Safe waste connector

Replacement Parts:
P122B1002 Replacement O-ring

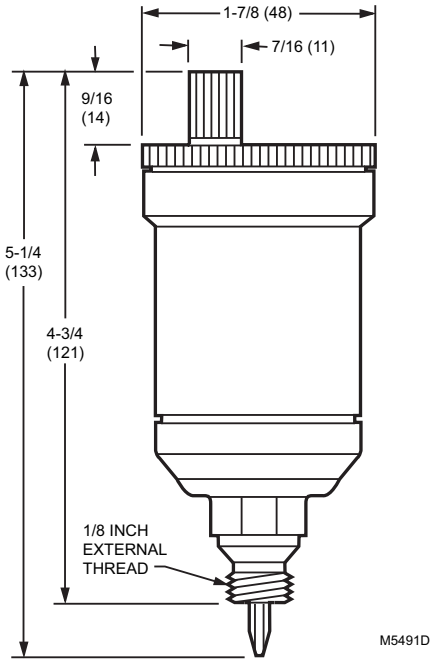
Product Number	Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Description
EA122A1002	1/8 in.	5 1/4 in. long x 1 7/8 in. diameter	133 mm long x 48 mm diameter	NPT male thread	1/8 In.	Automatic air vent with built-in shutoff valve and leakage guard, oil resistant

EA122A Automatic Air Vent for Non-Heating System Applications

The Honeywell EA122A Automatic Air Vent purges air from high pressure mains and equipment in hot or cold closed water systems.

- Includes removable float/valve assembly for easy servicing.
- Not for use in steam systems.
- Body, cover and float assembly made of thermoplastics.
- Internal parts made of corrosion-resistant and chemical-resistant materials for use with water systems containing light concentrations of propylene glycol, mineral oils, or petroleum-based oils.
- Oil resistant seal.
- EPDM seat disc and O-ring.

Dimensions Diagram



Application: Water Treatment
Corrosion Resistant: Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol (not resistant to mineral oils or petroleum-based oils).
Maximum Operating Temperature: 212 F (100 C)
Maximum Operating Pressure: 90 psi (620 kPa)

Accessories:
Q122A1001 Safe waste connector

Replacement Parts:
900761 Red Vent cap for Air Vent
P122B1010 Replacement O-ring

Product Number	Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Description
EA122A1028	1/8 in.	5 1/4 in. long x 1 7/8 in. diameter	133 mm long x 48 mm diameter	NPT male thread	1/8 In.	Automatic air vent with built-in shut off valve; EPDM seat disc and O-ring.

Air Vent Accessories

Product Number	Description	Used With
P122B1002	Replacement O-ring	EA122A1002
P122B1010	Replacement O-ring	EA122A1028
P79B1003	Replacement O-ring	EA79A1004
Q122A1001	Safe waste connector	EA79; EA122A

GoldTop™—Universal Air Vent for Residential and Commercial Heating and Cooling Systems.

Installers, wholesalers and OEM's can now stock one vent for all their venting needs between 1 and 150 psi systems and obtain the highest venting performance. Honeywell has reinvented the vent! Air vents have been removing air from heating and cooling systems for decades. Some were better than others. Many stopped venting after initial filling. No one has, up to now, been able to design a low cost vent that performs at both low and high pressures. It was always one or the other. Honeywell's revolutionary patented fulcrum design offers a venting rate of 3-4 times that of other products. It works when others stop venting at higher pressures. The GoldTop offers convenient, one-fits-all concept and is competitively priced.

- Patent No. 5,988,201.

Application: Residential or commercial heating an cooling systems
Materials (Body): Brass
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 150 psi (1034 kPa)

Product Number	Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Weight (lb)	Weight (kg)	Description
FV180	1/8 in.	1 27/32 in. high x 3 1/4 in. long	24 mm high x 83 mm long	NPT	1/8 In.	0.4 lb	0.18 kg	1/8 in. NPT Goldtop Universal Air Vent for heating and cooling systems
FV180A	1/4 in.	1 27/32 in. high x 3 1/4 in. long	24 mm high x 83 mm long	NPT	1/4 in.	0.4 lb	0.18 kg	1/4 in. NPT Goldtop Universal Air Vent for heating and cooling systems
FV183	3/4 in.	1 27/32 in. high x 3 1/4 in. long	24 mm high x 83 mm long	NPT	3/4 in.	0.4 lb	0.18 kg	3/4 in. NPT Goldtop Universal Air Vent for heating and cooling systems

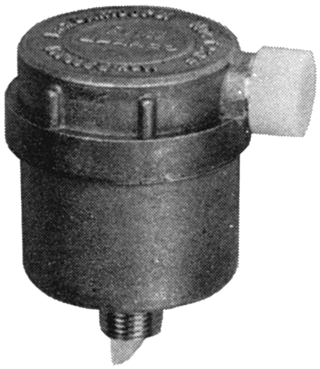
Hygrovent—Automatic Vent for Hot Water or Steam

The Honeywell Hygrovent is an automatic air vent for hot water and steam systems. Install in baseboards, radiators, convectors and high points in piping systems to remove air. The nickel-plated valve has a quick venting design and a positive shut-off ball check.

Application: Hot water or steam
Materials (Body): Nickel Plated
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: Water: 125 psi; Steam: 10 psi

Product Number	Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Weight (lb)	Description
HV190	1/8 in.	1 27/32 in. high x 3 1/4 in. long	24 mm high x 83 mm long	NPT	1/8 In.	0.6 lb	1/8 in. NPT Automatic Air Vent for hot water or steam

MaxiVent™—Air Vent for heating and cooling systems



The MaxiVent features a low profile, fit anywhere solid brass body and cover, and a high temperature polypropylene float.

Application: Residential or commercial heating an cooling systems
Materials (Body): Brass
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 150 psi (1034 kPa)

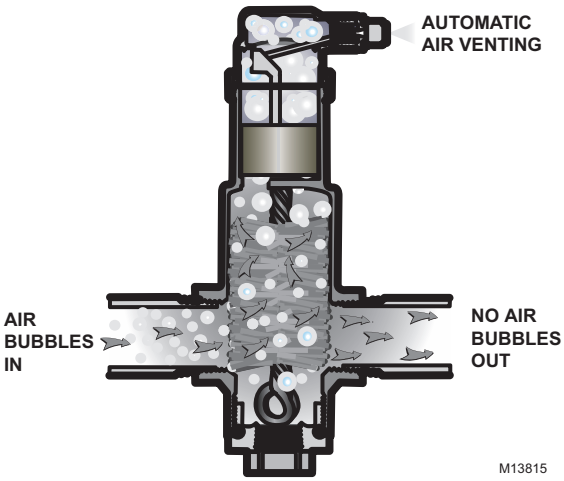
Product Number	Size (inch)	Dimensions, Approximate (inch)	Connection Type	Connection Size	Weight (lb)	Description
FV147	1/8 in.	2 in. high x 1 5/32 in. diameter	NPT	1/8 in.	0.12 lb	1/8 in. NPT Air Vent for heating and cooling systems
FV147A	1/4 in.	2 in. high x 1 5/32 in. diameter	NPT	1/4 in.	0.12 lb	1/4 in. NPT Air Vent for heating and cooling systems

SuperVent™ Air Eliminator- Eliminates Air from Hydronic Heating Systems without Bleeding

SWEAT THREADED

- No clog vent.
- Dirt and debris resistant.
- 360 degree adjustable collar ring for installation flexibility.
- Stainless steel concentrator which eliminates gurgling noise.
- Bronze body for rigid construction.
- Threaded and sweat connections.
- Patent No. 5,490,874

How it works



Conventional automatic air vents installed in Hydronic heating systems can leak and cause inefficient system operation. To effectively eliminate air from the system without bleeding, air bubbles ned to be vented. The NEW Honeywell SuperVent™ purges air through a no clog vent assembly that controls dirt and debris to minimize air vent fouling.

Application: Residential or Commercial Zoning for hot water heating or chilled water air conditioning systems, fan coil units or indirect water heater service.
Materials (Body): Bronze
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 125 psi (862 kPa)

Product Number	Size (inch)	Maximum Diameter (inch)	Maximum Diameter (mm)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Capacity (Cv)	Weight (lb)
PV075	3/4 in.	1 13/16 in.	46 mm	6 29/32 in. high x 2 11/16 in. long	176 mm high x 68 mm long	NPT	3/4 in.	13 Cv	2 lb
PV075S	3/4 in.	1 13/16 in.	46 mm	6 29/32 in. high x 3 3/16 in. long	176 mm high x 81 mm long	Sweat	3/4 in.	13 Cv	2 lb
PV100	1 in.	2 3/32 in.	53 mm	6 1/2 in. high x 3 3/32 in. long	192 mm high x 79 mm long	NPT	1 in.	22 Cv	2.75 lb
PV100S	1 in.	2 3/32 in.	53 mm	6 1/2 in. long x 3 11/16 in. wide	192 mm long x 94 mm wide	Sweat	1 in.	22 Cv	2.75 lb
PV125	1 1/4 in.	2 1/2 in.	64 mm	7 27/32 in. high x 3 11/16 in. long	199 mm high x 94 mm long	NPT	1 1/4 in.	38 Cv	3.5 lb
PV125S	1 1/4 in.	2 1/2 in.	64 mm	7 27/32 in. high x 4 13/32 in. long	199 mm high x 112 mm long	Sweat	1 1/4 in.	38 Cv	3.5 lb
PV150	1 1/2 in.	3 3/32 in.	79 mm	9 5/32 in. high x 4 5/16 in. long	233 mm high x 110 mm long	NPT	1 1/2 in.	50 Cv	5.2 lb
PV200	2 in.	4 in.	102 mm	10 9/32 in. high x 5 3/16 in. long	261 mm high x 132 mm long	NPT	2 in.	95 Cv	8 lb

SuperVent™ Air Eliminator Universal Models - Eliminate Air from Hydronic Heating Systems without Bleeding

UNIVERSAL

Conventional automatic air vents installed in Hydronic heating systems can leak and cause inefficient system operation. To effectively eliminate air from the system without bleeding, air bubbles ned to be vented. The NEW Honeywell SuperVent™ purges air through a no clog vent assembly that controls dirt and debris to minimize air vent fouling.

- No clog vent.
- Dirt and debris resistant.
- 360 degree adjustable collar ring for installation flexibility.
- Stainless steel concentrator which eliminates gurgling noise.
- Bronze body for rigid construction.
- Threaded connections.
- PVU Models for vertical riser applications.
- Patent No. 5,490,874

Application: Residential or Commercial Zoning for hot water heating or chilled water air conditioning systems, fan coil units or indirect water heater service.
Materials (Body): Bronze
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 125 psi (862 kPa)

Typical Installation

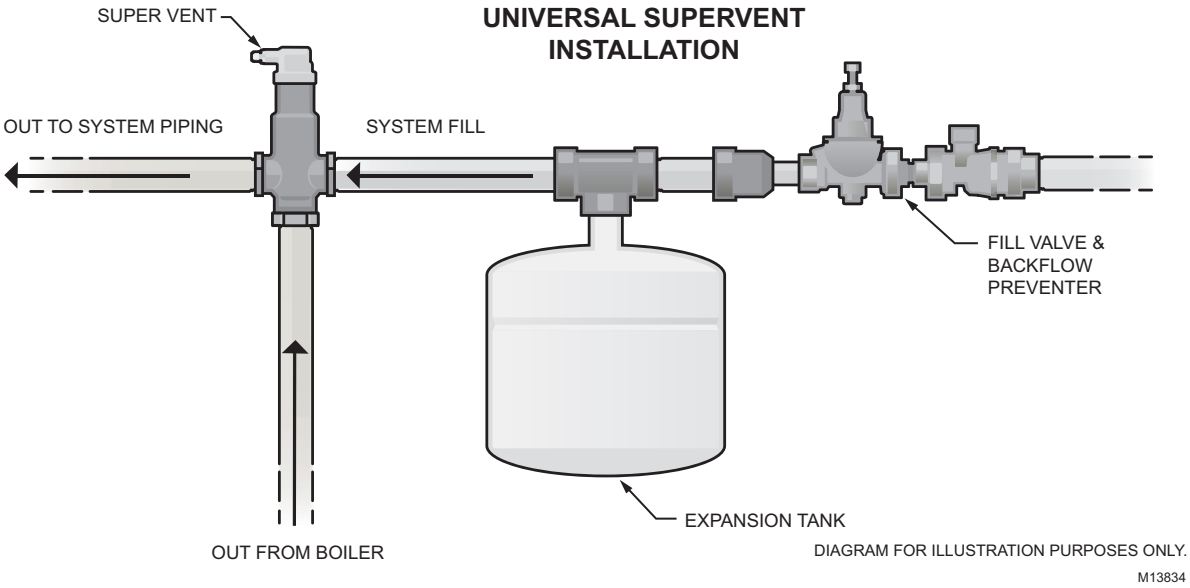


DIAGRAM FOR ILLUSTRATION PURPOSES ONLY.

M13834

Product Number	Size (inch)	Maximum Diameter (inch)	Maximum Diameter (mm)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Capacity (Cv)	Weight (lb)
PVU075	3/4 in.	1 13/16 in.	46 mm	7 9/32 in. long x 2 11/16 in. wide	185 mm long x 68 mm wide	Universal NPT	3/4 in. with 3/4 in. Bottom inlet	3.6 Cv	2.1 lb
PVU100	1 in.	2 3/32 in.	53 mm	7 27/32 in. high x 4 13/32 in. long	199 mm high x 112 mm long	Universal NPT	1 in. with 1 in. Bottom inlet	6.2 CV	2.8 lb
PVU125	1 1/4 in.	2 1/2 in.	64 mm	8 1/4 in. high x 3 11/16 in. long	212 mm high x 94 mm long	Universal NPT	1 1/4 in. with 1 1/4 in. Bottom inlet	10.5 Cv	3.6 lb
PVU150	1 1/2 in.	3 3/32 in.	79 mm	9 13/32 in. high x 4 5/16 in. long	239 mm high x 110 mm long	Universal NPT	1 1/2 in. with 1 1/2 in. Bottom inlet	14.3 Cv	5.2 lb

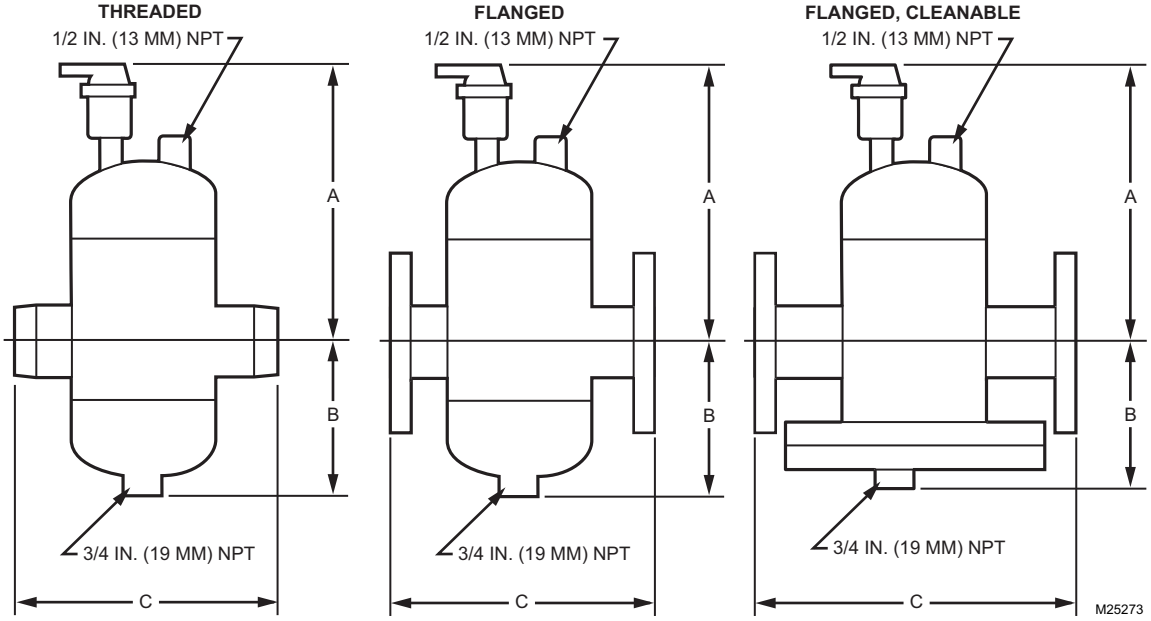
SuperVent™—The Best Commercial Air Eliminator. Removes All Trapped Air, Micro Bubbles and Dirt from Heating, Cooling and Domestic Water Systems.

Conventional automatic air vents installed in Hydronic heating systems can leak and cause inefficient system operation. To effectively eliminate air from the system without bleeding, air bubbles ned to be vented. The NEW Honeywell SuperVent™ purges air through a no clog vent assembly that controls dirt and debris to minimize air vent fouling.

- No clog vent.
- Dirt and Debris resistant.
- 360 degree adjustable collar ring for installation flexibility.
- Stainless steel concentrator which eliminates gurgling noise.
- Bronze body for rigid construction.
- Threaded and sweat connections.

Application: Commercial Zoning for hot water heating or chilled water air conditioning systems, fan coil units or indirect water heater service.
Materials (Body): Bronze
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 150 psi (1034 kPa)

Dimensions Diagrams



Product Number	Size (inch)	Maximum Diameter (inch)	Maximum Diameter (mm)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Capacity (Cv)	Weight (lb)	Weight (kg)
PV200F	2 in.	5 5/8 in.	142.2 mm	17.23 in. height x 10.13 in. length	437.6 mm high x 257.3 mm wide	Flanged	2 in.	95 Cv	31.5 lb	14.29 kg
PV200FC	2 in.	10 in.	254 mm	16.9 in. high x 12.25 in. wide	429.3 mm high x 311.2 mm wide	Flanged Cleanable	2 in.	95 Cv	64 lb	29.03 kg
PV200T	2 in.	5 5/8 in.	142.2 mm	17.23 in. height x 10.13 in. length	437.6 mm high x 257.3 mm wide	NPT	2 in.	95 Cv	22 lb	9.98 kg
PV250F	2 1/2 in.	5 5/8 in.	142.2 mm	17.23 in. height x 10.13 in. length	437.6 mm high x 257.3 mm wide	Flanged	2 1/2 In.	140 Cv	37 lb	16.78 kg
PV250FC	2 1/2 in.	10 in.	254 mm	16.9 in. long x 12.25 in. wide	429.3 mm long x 311.2 mm wide	Flanged Cleanable	2 1/2 In.	140 Cv	70 lb	31.75 kg
PV250T	2 1/2 in.	5 5/8 in.	142.2 mm	17.23 in. height x 10.13 in. length	437.6 mm high x 257.3 mm wide	NPT	2 1/2 In.	140 Cv	23 lb	10.43 kg
PV300F	3 in.	8 5/8 in.	218.4 mm	23.58 in. long x 15.5 in. wide	598.9 mm long x 393.7 mm wide	Flanged	3 in.	215 Cv	66 lb	29.94 kg

Air Eliminators

Product Number	Size (inch)	Maximum Diameter (inch)	Maximum Diameter (mm)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Capacity (Cv)	Weight (lb)	Weight (kg)
PV300FC	3 in.	13 1/2 in.	342.9 mm	23.0 in. long x 16.0 in. wide	584.2 mm long x 406.4 mm wide	Flanged Cleanable	3 in.	215 Cv	137 lb	62.14 kg
PV300T	3 in.	8 5/8 in.	218.4 mm	23.58 in. long x 15.5 in. wide	598.9 mm long x 393.7 mm wide	NPT	3 in.	215 Cv	50 lb	22.68 kg
PV400F	4 in.	8 5/8 in.	218.4 mm	23.58 in. long x 15.5 in. wide	598.9 mm long x 393.7 mm wide	Flanged	4 In.	360 Cv	78.5 lb	35.61 kg
PV400FC	4 in.	13 1/2 in.	342.9 mm	23.0 in. long x 16.0 in. wide	584.2 mm long x 406.4 mm wide	Flanged Cleanable	4 In.	360 Cv	150 lb	68.04 kg
PV400T	4 in.	8 5/8 in.	218.4 mm	23.58 in. long x 15.5 in. wide	598.9 mm long x 393.7 mm wide	NPT	4 In.	360 Cv	52.5 lb	23.81 kg
PV500F	5 in.	12 13/16 in.	325.1 mm	32.1 in. long x 24.0 in. wide	815.3 mm long x 609.6 mm wide	Flanged	5 In.	590 Cv	147 lb	66.68 kg
PV500FC	5 in.	19 in.	482.6 mm	30.85 in. long x 24.0 in. wide	30.85 in. long x 609.6 mm wide	Flanged Cleanable	5 In.	590 Cv	310 lb	140.62 kg
PV600F	6 in.	12 13/16 in.	325.1 mm	32.1 in. long x 24.0 in. wide	815.3 mm long x 609.6 mm wide	Flanged	6 In.	860 Cv	158 lb	71.67 kg
PV600FC	6 in.	19 in.	482.6 mm	30.85 in. long x 24.0 in. wide	783.6 mm long x 609.6 mm wide	Flanged Cleanable	6 In.	860 Cv	320 lb	145.15 kg
PV800F	8 in.	16 in.	406.4 mm	38.75 in. long x 30.0 in. wide	984.3 mm long x 762 mm wide	Flanged	8 In.	1500 Cv	254 lb	115.21 kg
PV800FC	8 in.	23 1/2 in.	596.9 mm	37.71 in. long x 30.0 in. wide	957.8 mm long x 762 mm wide	Flanged Cleanable	8 In.	1500 Cv	516 lb	234.06 kg

SuperVent™ Vent Top for Heating and Cooling Systems

The SuperVent™ has high venting capacity and incorporates a check valve. Use with SuperVent™ PV Series products.

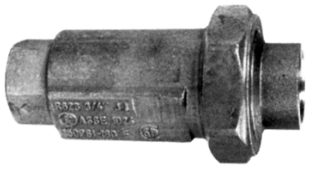
Application: Residential or commercial heating and cooling systems
Materials (Body): Brass
Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 150 psi (1034 kPa)

Product Number	Size (inch)	Maximum Diameter (inch)	Maximum Diameter (mm)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Connection Type	Connection Size	Weight (lb)	Description
SV173	3/8 in.	2 in.	51 mm	3 in. high x 2 in. diameter	76 mm high x 51 mm diameter	NPT	3/8 In.	0.43 lb	3/8 in. NPT connection SuperVent™ Top Air Vent for heating and cooling systems
SV175	1/2 in.	2 in.	51 mm	3 in. high x 2 in. diameter	76 mm high x 51 mm diameter	NPT	1/2 in.	0.43 lb	1/2 in. NPT connection SuperVent™ Top Air Vent for heating and cooling systems

SuperVent™ Replacement Parts

Product Number	Description
PV-001RP	Replacement Air Vent Assembly for vertical vent (old style) size 3/4 in., 1 in., 1 1/4 in., 1 1/2 in. and 2 in.
PV-020RP	PV SuperVent™ Vent Top Replacement (New Style 90 Degree)

Backflow Preventers—Dual Check for Domestic Water



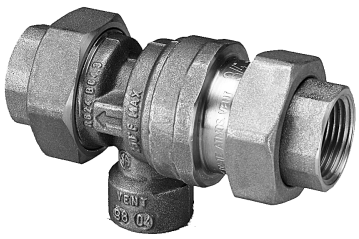
ASSE 1024

Backflow Preventers-Dual Check for Domestic water
- Dual Check Valves may be installed in either a vertical or horizontal position and should be installed immediately down stream of the water meter.

Dimensions, Approximate: 4 3/8 in. long x 2 1/8 in. wide (111 mm long x 54 mm wide)
Connection Type: NPT
Maximum Ambient Temperature: 180 F (82 C)
Maximum Operating Pressure: 150 psi(1034 kPa)
Approvals:
ASSE: Certified

Product Number	Connection Size (inch)	Connection Size DN	Description	Weight (lb)	Weight (kg)
BP700	3/4 in.	DN20	Dual check 3/4 in. NPT	1.0 lb	0.45 kg
BP701	1 in.	DN25	Dual Check 1 in. NPT	1.4 lb	0.64 kg

Backflow Preventers—with Intermediate Atmospheric Vent for Heating Systems

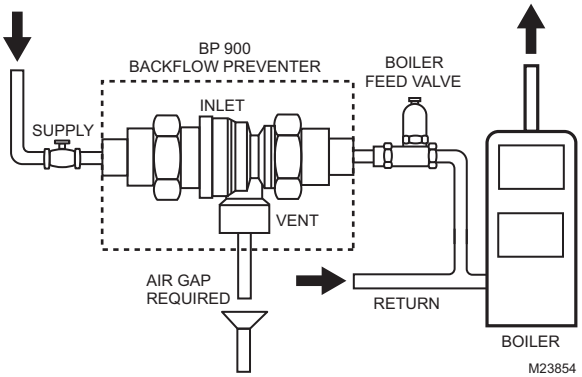


ASSE 1012

The BP900 is a double check backflow preventer with an intermediate vacuum breaker designed to prevent the backflow of contaminated water into the potable water supply. Designed for the use on small supply lines, it protects against both backflow and back siphonage for continuous pressure applications.
- It is ideal for boiler feed lines, livestock drinking fountains, trailer park water hook-ups, laboratory equipment and numerous other applications.
- Suitable for either hot or cold water service, the BP900 is designed for non-continuous backflow temperatures up to 250 F and working supply pressures up to 175 psi.

Dimensions, Approximate: 4 7/8 in. long x 2 1/2 in. wide (124 mm long x 63 mm wide)
Connection Type: NPT
Maximum Ambient Temperature: 250 F (121 C)
Maximum Operating Pressure: 175 psi (1207 kPa)
Approvals:
ASSE: Certified

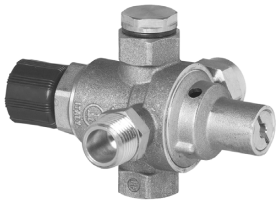
Typical Installation



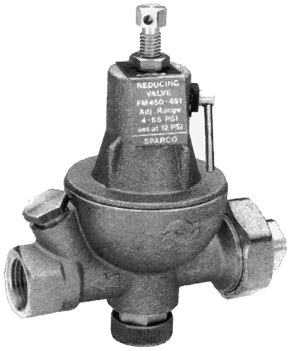
Product Number	Connection Size (inch)	Connection Size DN	Description	Weight (lb)	Weight (kg)
BP900	1/2 in.	DN15	Double check intermediate vacuum breaker - 1/2 in. NPT	1.2 lb	0.54 kg
BP901	3/4 in.	DN20	Double check intermediate vacuum breaker - 3/4 in. NPT	1.2 lb	0.54 kg

Boiler Fill Valves

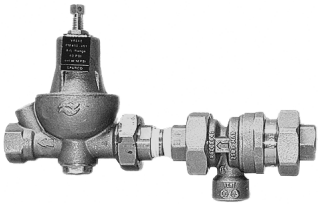
FM Boiler Fill Valves



F449



FM450



FM911

Pressure regulating valve for automatic control of boiler feed water and other pressure reducing applications. Especially constructed for expansion tank mounting.

- Fast fill feature.
- Built-in check valve.
- FM450 replaces FM451 with connections sweat and threaded

Application: Pressure regulating valve for automatic control of boiler feed water.
Connection Type: NPT
Mixing (Supply) Maximum Control Temperature: 1/2 in.
Pipe Size: 1/2 in.
Materials (Body): Brass
Maximum Ambient Temperature: 212 F (100 C)
Maximum Operating Pressure: 150 psi (1034 kPa)

Product Number	Inlet Connection Type	Regulating Pressure Range (psi)	FAST Fill	Dimensions, Approximate (inch)	Weight (lb)	Description
F449	Female for tank connection; Male for air purger/Powervent	7 psi to 45 psi	no	2 7/8 in. wide x 4 3/4 in. long	1.62 lb	1/2 in. Threaded pressure reducing valve with 1/2 in internal threaded to connect to tank and 1/2 external threaded to connect to purger
FM450	Sweat and Threaded	4 psi to 60 psi	yes	4 1/8 in. high x 5 5/16 in. long	1.8 lb	1/2 in. sweat union Pressure reducing valve
FM911	Sweat and Threaded	4 psi to 60 psi	yes	—	4 lb	1/2 in. NPT Backflow preventer and boiler fill valve combo assembly

Boiler Fill Valves Replacement Parts

Application: Replacement filter assembly for FM450 or FM451
Mixing (Supply) Maximum Control Temperature: 1/2 in.
Materials (Body): Brass

Product Number	Description	Weight (lb)
FM462-RP	Replacement filter assembly for FM450 and FM451 pressure reducing valves	0.2 lb

Combo Expansion Tank Kit with Air Purger

Expansion Tanks are designed to absorb hot water expansion in closed heating systems. TL and TAX tanks are used in large installations. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, loss of BTUs and reduce circulator running time. Use the air purger, Honeywell PowerVent and air vents to remove air and micro-bubbles from the system for maximum performance.

- Tank, Air Purger, Floatvent (FV180).
- Individually packaged for heating systems.

Comments: Combination Kit

Product Number	Connection Size (inch)	Connection Type	Diameter		Height		Maximum Acceptance Volume		Weight		Includes
			(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(lb)	(kg)	
TK300-15A-1	Tank Connnection: 1/2 in. Purger Connnection: 1 in.	NPT	—	—	—	—	—	—	9 lb	4.1 kg	TK300-15, AP400, FV180
TK300-15A-2	Tank Connection: 1/2 in. Purger Connnection: 1 1/4 in.	NPT	—	—	—	—	—	—	9 lb	4.1 kg	TK300-15, AP401, FV180
TK300-30A-1	Tank Connection: 1/2 in. Purger Connnection: 1 in.	NPT Male	—	—	24 in. high	609 mm high	2.5 gal	9.5 L	13 lb	5.9 kg	TK300-30, AP400, FV180
TK300-30A-2	Tank Connection: 1/2 in. Purger Connnection: 1 1/4 in.	NPT Male	11 in.	279.4 mm	—	—	2.5 gal	9.5 L	13 lb	5.9 kg	TK300-30, AP401, FV180
TK300-60A-1	Tank Connection: 1/2 in. Purger Connnection: 1 in.	NPT Male	—	—	—	—	—	—	—	—	TK300-60, AP401, FV180
TK300-60A-2	Purger Connection: 1 1/4 in. Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	24 in. high	609 mm high	2.5 gal	9.5 L	32 lb	14.5 kg	TK300-60, AP401, FV180

Expansion Tank Kits

Combo Expansion Tank Kit with Air Purger and Fill Valve

Expansion Tanks are designed to absorb hot water expansion in closed heating systems. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, loss of BTUs and reduce circulator running time. Use the air purger and air vents to remove air and micro-bubbles from the system for maximum performance.

- Tank, Air Purger (1 or 1 1/4), Floatvent, Fill Valve (FV180, F449) for heating systems.

Comments: Combination Kit

Product Number	Connection Size (inch)	Connection Type	Diameter		Height	Maximum Acceptance Volume	Weight		Includes
			(inch)	(mm)	(inch)	(L)	(lb)	(kg)	
TK300-15A-1FM	—	—	—	—	—	—	—	—	TK300-15, AP400, FV180, FM911
TK300-15AFV-1	Tank Connection: 1/2 in. Purger Connnection:1 in.	NPT	—	—	—	—	11 lb	5 kg	TK300-15, AP400, FV180
TK300-15AFV-2	Tank Connection: 1/2 in. Purger Connnection:1 1/4 in.	NPT Male	—	—	—	—	11 lb	5 kg	TK300-15, AP401, FV180
TK300-30A-1FM	Air Purger 1 in. NPT Female	NPT	—	—	—	—	—	—	TK300-30, AP400, FV180, FM911
TK300-30A-2FM	Air Purger 1 1/4 in. NPT Female	NPT	—	—	—	—	—	—	TK300-30, AP401, FV180, FM911
TK300-30AFV-1	Purger Connnection:1 in. NPT Tank Connection: 1/2 in.	NPT Male	—	—	—	—	15 lb	6.8 kg	TK300-30, AP400, FV180, F449
TK300-30AFV-2	Tank Connection: 1/2 in. Purger Connnection:1 1/4 in.	NPT Male	—	—	—	—	15 lb	6.8 kg	TK300-30, AP401, FV180, F449
TK300-60AFV-1	Purger Connection: 1 in. Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	36 in. high	9.5 L	24 lb	10.9 kg	TK300-60, AP400, FV180, F449
TK300-60AFV-2	Purger Connection: 1 1/4 in. Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	36 in. high	9.5 L	24 lb	10.9 kg	TK300-60, AP401, FV180, F449

TK Series Combo Tank Kits with SuperVent™

Expansion Tanks are designed to absorb hot water expansion in closed heating systems. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, loss of BTUs and reduce circulator running time. Use the super efficient Honeywell SuperVent™ or air vents to remove air and micro-bubbles from the system for maximum performance.

- Welded diaphragm tank, SuperVent™, air and micro-bubble eliminator.
- Sweat SuperVent™ add "S".

Product Number	Connection Size (inch)	Connection Type	Diameter (inch)	Diameter (mm)	Height (inch)	Weight (lb)	Weight (kg)	Comments
TK15PV075	SuperVent™ Connection: 3/4 in.Tank Connection: 1/2 in.	NPT	—	—	—	7 lb	31.4 kg	Combination Kit
TK30PV100	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	11.7 lb	5.31 kg	Combination Kit
TK30PV100FM	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV100S	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV100SFB	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV100SFM	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV125	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	12.5 lb	5.68 kg	Combination Kit
TK30PV125FM	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV125S	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV125SFB	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV125SFM	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	Sweat	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PV150FM	SuperVent™ Connection: 1 1/2 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PVU100FM	SuperVent™ Connection: 1 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK30PVU125FM	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	—	—	Combination Kit
TK60PV125	SuperVent™ Connection: 1 1/4 in.Tank Connection: 1/2 in.	NPT	11 in.	279.4 mm	23 in. high	17.5 lb	7.95 kg	Combination Kit
TK60PV150	SuperVent™ Connection: 1 1/2 in.Tank Connection: 1/2 in.	NPT	11 in.	279.4 mm	23 in. high	19.0 lb	12.71 kg	Combination Kit

Expansion Tank Kits

TX Series Combo Tank Kits with BackFlow Preventer- Potable Water

The Honeywell Thermal Expansion Absorber is a welded, pressurized expansion tank with a butyl diaphragm to control excess pressure in potable hot water systems. The Thermal Expansion Tank controls pressure build-up in the system, eliminates relief valve spillage, protects fixtures and extends water heater life.

- Heavy duty butyl rubber diaphragm (FDA approved) isolates water from air.
- Polypropylene liner, 100% non-metallic, non-corrosive water reservoir.
- Prevents water hammer.
- Maintenance free.
- Protects water heater from harmful pressure cycling.
- Allows storage of expanded water with no increase in system pressures.
- Prevents backflow when supply pressure falls below system pressure.

Maximum Operating Temperature: 200 F (93 C)
Maximum Operating Pressure: 150 psi (1034 kPa)
Precharge: 40 psi
Materials: Shell: Steel
Connection: Brass
Liner: Polypylene
Diaphragm: Butyl

Height: 12 5/8 in. high (321 mm high)
Weight: 5 lb (2.27 kg)
Comments: Combination Kit

Product Number	Connection Size (inch)	Connection Type	Diameter		Volume		Maximum Acceptance Volume		Includes
			(inch)	(mm)	(gal)	(L)	(gal)	(L)	
TX-5-1	Backflow Preventer Connection: 3/4 in. Tank Connection: 3/4 in.	NPT Male	8 in.	203.2 mm	2.0 gal	3.41 L	0.9 gal	3.41 L	TX-5, BP700
TX-5-2	Backflow Preventer Connection: 1 in. Tank Connection: 3/4 in.	NPT Male	8 in.	203.2 mm	2.0 gal	7.6 L	0.9 gal	3.41 L	TX-5, BP701
TX12-1	Backflow Preventer Connection: 3/4 in. Tank Connection: 3/4 in.	NPT Male	11 in.	279.4 mm	4.4 gal	16.7 L	3.2 gal	12.1 L	TX-12, BP700
TX-12-2	Backflow Preventer Connection: 1 in. Tank Connection: 3/4 in.	NPT Male	11 in.	279.4 mm	4.4 gal	16.7 L	3.2 gal	12.1 L	TX-12, BP701

TK300 Series Expansion Tanks- Heating

Honeywell Expansion Tanks are designed to absorb hot water expansion in closed heating systems. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, loss of BTUs and reduce circulator running time. Use the super efficient Honeywell PowerVent or air vents to remove air and micro-bubbles from the system for maximum performance.

- Butyl/EPDM diaphragm- 9 times better than natural rubber
- Deep-drawn steel tank
- Controls system pressure
- Air-tight cushion-factory pre-charged to 12 psig and 100% tested

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 100 psi (689 kPA)
Materials: steel shell, heavy duty butyl diaphragm
Comments: Heating

Product Number	Connection Size (inch)	Connection Type	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
			(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
TK300-15	1/2 in.	NPT Male	8 in.	203.2 mm	12 5/8 in. high	321 mm high	2.0 gal	7.6 L	1 gal	3.8 L	5 lb	2.3 kg
TK300-30	1/2 in.	NPT Male	11 in.	279.4 mm	15 1/2 in. high	394 mm high	4.4 gal	16.7 L	2.5 gal	9.5 L	9 lb	4.1 kg
TK300-60	1/2 in.	NPT Male	11 in.	279.4 mm	23 in. high	584 mm high	7.6 gal	28.8 L	2.5 gal	9.5 L	14 lb	6.4 kg
TK300-90	1/2 in.	NPT Male	15 3/8 in.	390.5 mm	21 in. high	533 mm high	14.0 gal	53.1 L	11.5 gal	40.1 L	23 lb	10.4 kg

Expansion Tanks—Domestic Hot Water Systems- Large Capacity

The Honeywell Thermal Expansion Absorber is a welded, pressurized expansions tank with a butyl diaphragm to control excess pressure in potable hot water systems. The Thermal Expansion Tanks controls pressure build-up in the system, eliminates relief valve spillage, protects fixtures and extends water heater life.

- Heavy Duty butyl rubber diaphragm (FDA Approved) isolates water from air.
- Polypropylene liner, 100% non-metallic, non-corrosive water reservoir.
- Prevents water hammer.
- Maintenance free.
- Protects water heater from harmful pressure cycling.
- Allows storage of expanded water with controlled increase in systems pressures.

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 150 psi (1034 kPa)
Precharge: 40 psi
Connection Type: NPT Female

Materials: Shell: Steel
Connection: Bronze
Bladder: Butyl
Comments: Potable

Product Number	Connection Size (inch)	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
		(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
TX-451	2 in.	30 in.	762.0 mm	74 1/2 in. high	1892 mm high	158.0 gal	598.8 L	103 gal	389.86 L	626 lb	283.95 kg
TX-452	2 in.	30 in.	914.4 mm	92 1/2 in. high	2349.5 mm high	211.0 gal	798.64 L	137 gal	518.55 L	760 lb	344.74 kg
TX-453	3 in.	36 in.	914.4 mm	85 5/8 in. high	2175 mm high	264.0 gal	999.24 L	172 gal	651.02 L	810 lb	367.42 kg
TX-454	3 in.	36 in.	914.4 mm	98 in. high	2490 mm high	317.0 gal	1199.85 L	206 gal	779.71 L	914 lb	414.59 kg
TX-455	3 in.	36 in.	914.4 mm	110 3/8 in. high	2803.5 mm high	370.0 gal	1400.45 L	241 gal	912.19 L	1018 lb	461.76 kg
TX-456	3 in.	48 in.	1219.2 mm	81 7/8 in. high	2080 mm high	422.0 gal	1597.27 L	275 gal	1040.88 L	1655 lb	750.71 kg
TX-457	3 in.	48 in.	1219.2 mm	95 3/4 in. high	2432 mm high	528.0 gal	1998.48 L	344 gal	1302.04 L	1925 lb	873.18 kg

TAX Series Expansion Tanks- Commercial Usage

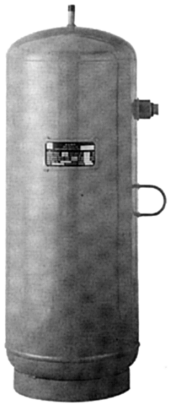
TAX Series (commercial) Expansion Tanks are designed to absorb hot water expansion in closed heating systems. TAX tanks are used in large installations. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped, design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, and loss of BTUs.

- ASME construction: Horizontal TAX Series tanks.

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 125 psi (862 kPa)
Precharge: 12 psi
Materials: steel shell, heavy duty butyl diaphragm
Comments: ASME Construction

Product Number	Connection Size (inch)	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
		(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
TAX-100	1/2 in.	16 1/4 in.	412.7 mm	68 1/4 in. high	1734 mm high	55.7 gal	211 L	22.6 gal	85.6 L	231 lb	105 kg
TAX-120	1 in.	24 in.	609.6 mm	40 1/4 in. high	1022 mm high	68 gal	257.7 L	34 gal	128.9 L	233 lb	105.9 kg
TAX-144	1 in.	24 in.	609.6 mm	45 1/4 in. high	1146 mm high	77.0 gal	291.8 L	34 gal	128.9 L	256 lb	116.4 kg
TAX-15	1/2 in.	12 in.	304.8 mm	19 in. high	483 mm high	7.8 gal	29.6 L	2.5 gal	9.5 L	46 lb	20.9 kg
TAX-180	1 in.	24 in.	609.6 mm	52 1/2 in. high	1333.5 mm high	90 gal	341.1 L	34 gal	128.9 L	286 lb	130 kg
TAX-20	1/2 in.	12 in.	304.8 mm	25 3/4 in. high	654 mm high	10.9 gal	40.2 L	2.5 gal	9.5 L	59 lb	26.8 kg
TAX-200	1 in.	24 in.	609.6 mm	63 in. high	1600 mm high	110 gal	416.9 L	34 gal	128.9 L	326 lb	148.2 kg
TAX-240	1 in.	30 in.	762 mm	49 1/8 in. high	1247.8 mm high	132.0 gal	500.3 L	46 gal	174.3 L	435 lb	207.3 kg
TAX-40	1/2 in.	16 1/4 in.	412.7 mm	29 1/8 in. high	740 mm high	21.7 gal	82.2 L	11.3 gal	42.8 L	114 lb	52.7 kg
TAX-60	1/2 in.	16 1/4 in.	412.7 mm	42 1/2 in. high	1079.5 mm high	33.6 gal	127.3 L	11.3 gal	42.8 L	139 lb	63.2 kg
TAX-80	1/2 in.	16 1/4 in.	412.7 mm	55 1/4 in. high	1403 mm high	44.4 gal	168.3 L	22.6 gal	85.6 L	196 lb	89.1 kg

TAXV Series Expansion Tank- Commercial Usage



TAX Series (commercial) Expansion Tanks are designed to absorb hot water expansion in closed heating systems. TAX tanks are used in large installations. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped, design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, and loss of BTUs.

- ASME construction: Horizontal TAX Series tanks.

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 125 psi (862 kPa)
Precharge: 12 psi
Materials: steel shell, heavy duty butyl diaphragm
Comments: ASME Construction

Product Number	Connection Size (inch)	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
		(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
TAXV-015	1/2 in.	12 in.	304.8 mm	19 1/4 in. high	489 mm high	7.8 gal	29.6 L	2.5 gal	9.5 L	48 lb	21.8 kg
TAXV-020	1/2 in.	12 in.	304.8 mm	26 in. high	660 mm high	10.9 gal	40.2 L	2.5 gal	9.5 L	61 lb	27.7 kg
TAXV-040	1/2 in.	16 1/4 in.	412.7 mm	29 1/2 in. high	749 mm high	21.7 gal	82.2 L	11.3 gal	42.8 L	116 lb	52.7 kg
TAXV-060	1/2 in.	16 1/4 in.	412.7 mm	45 1/8 in. high	1146 mm high	33.6 gal	127.3 L	11.3 gal	42.8 L	145 lb	65.9 kg
TAXV-080	1/2 in.	16 1/4 in.	412.7 mm	56 in. high	1422 mm high	44.4 gal	168.3 L	22.6 gal	85.6 L	70 lb	89.1 kg
TAXV-100	1/2 in.	16 1/4 in.	412.7 mm	68 1/4 in. high	1734 mm high	55.7 gal	211 L	22.6 gal	85.6 L	231 lb	105 kg
TAXV-120	1 in.	24 in.	609.6 mm	44 1/4 in. high	1124 mm high	68 gal	257.7 L	34 gal	128.9 L	233 lb	105.9 kg
TAXV-144	1 in.	24 in.	609.6 mm	49 1/8 in. high	1247.8 mm high	77.0 gal	291.8 L	34 gal	128.9 L	256 lb	116.4 kg
TAXV-180	1 in.	24 in.	609.6 mm	56 1/2 in. high	1435 mm high	90 gal	341.1 L	34 gal	128.9 L	286 lb	130 kg
TAXV-200	1 in.	24 in.	609.6 mm	63 in. high	1600 mm high	110 gal	416.9 L	34 gal	128.9 L	326 lb	148.2 kg
TAXV-240	1 in.	30 in.	762 mm	49 1/8 in. high	1368.4 mm high	132.0 gal	500.3 L	46 gal	174.3 L	456 lb	207.3 kg

TL Series Expansion Tanks- Commercial Usage

Expansion Tanks are designed to absorb hot water expansion in closed heating systems. TL and TAX tanks are used in large installations. They are equipped with butyl diaphragms to separate the air from the system water (glycol). The tanks are a welded, not clamped, design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valve spills, loss of BTUs and reduce circulator running time. Use the super efficient Honeywell PowerVent or air vents to remove air and micro-bubbles from the system for maximum performance.

- Tank, Air Purger (1 or 1 1/4), Floatvent, Fill Valve (FV180, F449) for heating systems.

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 125 psi (862 kPa)
Precharge: 12 psi
Materials: steel shell, heavy duty butyl diaphragm
Comments: Commercial

Product Number	Connection Size (inch)	Diameter		Height		Volume		Weight	
		(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(lb)	(kg)
TL125-1000-L	1 1/2 in.	36 in.	914.4 mm	74 in. high	1880 mm high	264 gal	1000.6 L	760 lb	345.4 kg
TL125-1200-L	1 1/2 in.	36 in.	914.4 mm	88 1/4 in. high	2241.5 mm high	317 gal	1201.4 L	864 lb	392.7 kg
TL125-1400-L	1 1/2 in.	36 in.	914.4 mm	100 5/8 in. high	2556 mm high	370 gal	1402.3 L	968 lb	440 kg
TL125-1600-L	1 1/2 in.	48 in.	1219.2 mm	71 in. high	1803 mm high	422 gal	1561.4 L	1580 lb	718.2 kg
TL125-200-L	1 in.	24 in.	609.6 mm	38 3/8 in. high	975 mm high	53 gal	200.9 L	192 lb	88.6 kg
TL125-2000-L	1 1/2 in.	48 in.	1219.2 mm	85 in. high	2159 mm high	528 gal	2001.1 L	1810 lb	822.7 kg
TL125-300-L	1 in.	24 in.	609.6 mm	52 3/8 in. high	1330 mm high	80.0 gal	303.2 L	238 lb	128.6 kg
TL125-400-L	1 in.	24 in.	609.6 mm	66 1/4 in. high	1683 mm high	106.0 gal	401.7 L	238 lb	128.6 kg
TL125-500-L	1 in.	24 in.	609.6 mm	80 1/4 in. high	2038 mm high	132.0 gal	500.3 L	328 lb	149 kg
TL125-600-L	1 1/2 in.	30 in.	762 mm	65 in. high	1651 mm high	158 gal	598.8 L	550 lb	250 kg
TL125-800-L	1 1/2 in.	30 in.	762 mm	83 in. high	2108 mm high	211 gal	799.7 L	680 lb	309 kg

TX Series Expansion Tanks- Domestic Hot Water

The Honeywell Thermal Expansion Absorber is a welded, pressurized expansion tank with a butyl diaphragm to control excess pressure in potable hot water systems. The Thermal Expansion Tank controls pressure build-up in the system, eliminates relief valve spillage, protects fixtures and extends water heater life.

- Heavy duty butyl rubber diaphragm (FDA approved) isolates water from air.
- Polypropylene liner, 100% non-metallic, non-corrosive water reservoir.
- Full size range: 2-528 gals., for all water heating volumes (ASME available).
- Prevents water hammer.
- Maintenance free.
- Protects water heater from harmful pressure cycling.
- Allows storage of expanded water with no increase in system pressures.

Maximum Operating Temperature: 200 F (93 C)
Maximum Operating Pressure: 150 psi (1034 kPa)
Precharge: 40 psi

Materials: Shell: Steel
Connection: Brass
Liner: Polypylene
Diaphragm: Butyl
Comments: Potable

Product Number	Connection Size (inch)	Connection Type	Diameter (inch)	Diameter (mm)	Height (inch)	Height (mm)	Volume (gal)	Volume (L)	Maximum Acceptance Volume (gal)	Maximum Acceptance Volume (L)	Weight (lb)	Weight (kg)
TX-12	3/4 in.	NPT Male	11 in.	279.4 mm	12 5/8 in. high	321 mm high	4.4 gal	16.7 L	3.2 gal	12.1 L	5 lb	2.27 kg
TX-180V	1 1/4 in.	NPT Female	22 in.	558.8 mm	46 3/4 in. high	1187.5 mm high	62.0 gal	235 L	34.1 gal	129.1 L	92 lb	41.73 kg
TX-210V	1 1/4 in.	NPT Female	26 in.	660.4 mm	47 1/4 in. high	1200 mm high	86.0 gal	325.5 L	46.4 gal	175.6 L	123 lb	55.79 kg
TX-25V	3/4 in.	NPT Female	15 3/8 in.	390.5 mm	19 1/4 in. high	489 mm high	10.3 gal	39 L	10.3 gal	39 L	23 lb	10.43 kg
TX-30V	3/4 in.	NPT Female	15 3/8 in.	390.5 mm	23 7/8 in. high	606 mm high	14.0 gal	53.1 L	11.3 gal	42.8 L	25 lb	11.34 kg
TX-42V	3/4 in.	NPT Female	15 3/8 in.	390.5 mm	31 5/8 in. high	803 mm high	20.0 gal	75.7 L	11.4 gal	43.2 L	33 lb	14.97 kg
TX-5	3/4 in.	NPT Male	8 in.	203.2 mm	12 5/8 in. high	321 mm high	2.0 gal	7.6 L	0.9 gal	3.41 L	5 lb	2.27 kg
TX-60V	1 1/4 in.	NPT Female	22 in.	558.8 mm	29 5/8 in. high	752.5 mm high	34.0 gal	128.7 L	34.0 gal	128.7 L	61 lb	27.67 kg
TX-80V	1 1/4 in.	NPT Female	22 in.	558.8 mm	36 in. high	914 mm high	44.0 gal	166.5 L	33.9 gal	128.3 L	63 lb	28.58 kg

Expansion Tanks

TX Series Expansion Tanks—ASME Construction for Potable Water

The Honeywell Thermal Expansion Absorber is a welded, pressurized expansion tank with a butyl diaphragm to control excess pressure in potable hot water systems. The Thermal Expansion Tank controls pressure build-up in the system, eliminates relief valve spillage, protects fixtures and extends water heater life.

- Heavy duty butyl rubber diaphragm (FDA approved) isolates water from air.
- Polypropylene liner, 100% non-metallic, non-corrosive water reservoir.
- Full size range: 2-528 gals., for all water heating volumes (ASME available).
- Prevents water hammer.
- Maintenance free.
- Protects water heater from harmful pressure cycling.
- Allows storage of expanded water with no increase in system pressures.

Maximum Operating Temperature: 200 F (93 C)
Maximum Operating Pressure: 150 psi (1034 kPa)
Precharge: 40 psi
Materials: Shell: Steel
Diaphragm: Butyl
Connection: Stainless Steel
Liner: Polypropylene
Comments: ASME Construction

Product Number	Connection Size (inch)	Connection Type	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
			(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
TX-120V-C	—	NPT Female	24 in.	609.6 mm	47 3/4 in. high	1213 mm high	66 gal	249.8 L	33 gal	124.9 L	258 lb	117.1 kg
TX-180V-C	1 1/4 in.	NPT Female	24 in.	609.6 mm	52 5/8 in. high	1338 mm high	77.0 gal	291.5 L	33.9 gal	128.3 L	255 lb	115.67 kg
TX-20V-C	3/4 in.	NPT Male	24 in.	609.6 mm	47 3/4 in. high	1213 mm high	7.6 gal	28.8 L	3.2 gal	12.1 L	258 lb	117 kg
TX-210V-C	1 1/4 in.	NPT Female	24 in.	609.6 mm	60 in. high	1524 mm high	88.0 gal	333.1 L	34.3 gal	129.8 L	295 lb	133.81 kg
TX-30V-C	3/4 in.	NPT Male	16 1/4 in.	412.8 mm	17 1/4 in. high	438 mm high	12.5 gal	47.3 L	10.0 gal	37.9 L	84 lb	38.10 kg
TX-42V-C	3/4 in.	NPT Male	16 1/4 in.	412.8 mm	24 1/4 in. high	616 mm high	17.5 gal	66.2 L	11.4 gal	43.2 L	98 lb	44.45 kg
TX-447-C	2 in.	NPT Female	24 in.	609.6 mm	60 in. high	1524 mm high	53.0 gal	200.6 L	34.5 gal	130.6 L	263 lb	119.4 kg
TX-448-C	2 in.	NPT Female	24 in.	609.6 mm	46 in. high	1168 mm high	80.0 gal	302.8 L	52 gal	196.8 L	308 lb	139.8 kg
TX-449-C	2 in.	NPT Female	24 in.	609.6 mm	60 in. high	1524 mm high	106.0 gal	401.2 L	69 gal	261.2 L	353 lb	160.3 kg
TX-450-C	2 in.	NPT Female	24 in.	609.6 mm	74 in. high	1880 mm high	132.0 gal	499.6 L	86 gal	325.5 L	391 lb	177.5 kg
TX-451-C	2 in.	NPT Female	30 in.	762.0 mm	74 1/2 in. high	1892 mm high	158.0 gal	598 L	103 gal	389.86 L	626 lb	283.95 kg
TX-452-C	2 in.	NPT Female	30 in.	762.0 mm	92 1/2 in. high	2349.5 mm high	211.0 gal	798.64 L	137 gal	518.55 L	760 lb	344.74 kg
TX-453-C	3 in.	NPT Female	36 in.	914.4 mm	85 5/8 in. high	2175 mm high	264.0 gal	999.24 L	172 gal	651.02 L	810 lb	367.42 kg
TX-454-C	3 in.	NPT Female	36 in.	914.4 mm	98 in. high	2490 mm high	317.0 gal	1199.85 L	206 gal	779.71 L	914 lb	414.59 kg
TX-455-C	3 in.	NPT Female	36 in.	914.4 mm	110 3/8 in. high	2803.5 mm high	370.0 gal	1400.45 L	241 gal	912.19 L	1018 lb	461.76 kg
TX-456-C	3 in.	NPT Female	48 in.	1219.2 mm	81 7/8 in. high	2080 mm high	422.0 gal	1597.27 L	275 gal	1040.88 L	1655 lb	750.71 kg
TX-457-C	3 in.	NPT Female	48 in.	1219.2 mm	95 3/4 in. high	2432 mm high	528.0 gal	1998.48 L	344 gal	1302.04 L	1925 lb	873.18 kg
TX-5-C	3/4 in.	NPT Male	10 in.	254.0 mm	10 3/8 in. high	263.5 mm high	2.0 gal	7.6 L	0.86 gal	3.26 L	21 lb	9.53 kg
TX-60V-C	3/4 in.	NPT Male	16 1/4 in.	412.8 mm	34 in. high	864 mm high	25.0 gal	94.6 L	11.3 gal	42.8 L	125 lb	56.7 kg
TX-80V-C	1 1/4 in.	NPT Female	24 in.	609.6 mm	40 1/2 in. high	1029 mm high	53.0 gal	200.6 L	34.5 gal	130.6 L	190 lb	86.18 kg

XPS Series Honeywell Expansion Tanks

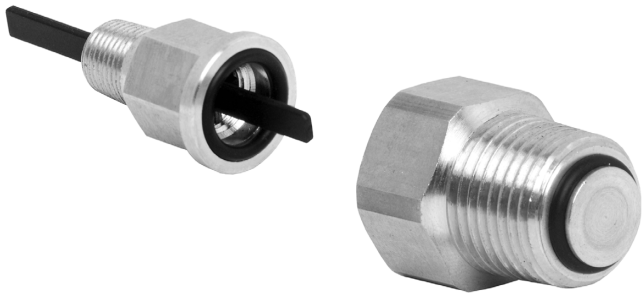
XPS Series (commercial) Expansion Tanks are designed to absorb hot water expansion in closed heating systems in larger installations. They are equipped with butyl diaphragms to separate clamped design. Pre-pressurized at 12 psi, the tank keeps fluids circulating and maintains minimum system pressure. Honeywell tanks resist waterlogging, loss of pressure through relief valves spills, loss BTUs for improved system performance.

- For ASME construction consult factory.

Maximum Operating Temperature: 240 F (115 C)
Maximum Operating Pressure: 100 psi (689 kPA)
Materials: steel shell, heavy duty butyl diaphragm
Comments: Heating

Product Number	Connection Size (inch)	Connection Type	Diameter		Height		Volume		Maximum Acceptance Volume		Weight	
			(inch)	(mm)	(inch)	(mm)	(gal)	(L)	(gal)	(L)	(lb)	(kg)
XPS-030V	1 in.	NPT Female	15 3/8 in.	390.5 mm	23 7/8 in. high	606 mm high	14.0 gal	53.1 L	11.3 gal	42.8 L	25 lb	11.4 kg
XPS-040V	1 in.	NPT Female	15 3/8 in.	390.5 mm	31 5/8 in. high	803 mm high	20.0 gal	75.8 L	11.3 gal	42.8 L	33 lb	15 kg
XPS-060V	1 in.	NPT Female	15 3/8 in.	390.5 mm	46 1/2 in. high	584 mm high	32 gal	121.3 L	11.3 gal	42.8 L	43 lb	19.5 kg
XPS-090V	1 1/4 in.	NPT Female	22 in.	558.8 mm	36 in. high	914 mm high	44 gal	166.8 L	34 gal	128.9 L	69 lb	31.4 kg
XPS-110V	1 1/4 in.	NPT Female	22 in.	558.8 mm	46 3/4 in. high	876.3 mm high	62 gal	235 L	34 gal	128.9 L	92 lb	41.8 kg
XPS-160V	1 1/4 in.	NPT Female	26 in.	660.4 mm	47 1/4 in. high	1200 mm high	86.0 gal	325.9 L	46 gal	174.3 L	123 lb	55.9 kg

Service Check Valves



Check-Adapter™ For AM-1 Series NPT mixing valves without unions or other spring check applications requiring low cracking pressure. Spring check built into sweat adapter.

⚠ CAUTION

Reduce system temperature to ambient and pressure to 0 psi before servicing components. Failure to do so may result in injuries.

Application: Combo Kit Accessory, Expansion Tanks, Air Vents

Product Number	Pipe Size		Connection Type	Operating Temperature Range		Description
	(inch)	DN		(F)	(C)	
SCV-0125	1/8 in.	—	Inlet FNPT, Outlet MNPT	80 F to 240 F	27C to 115 C	Service Check Valve
SCV-050	1/2 in.	DN15	Inlet FNPT, Outlet MNPT	80 F to 240 F	27C to 115 C	Service Check Valve

Thermometers

Sweat Thermometers with Thermowells

2 inch

sweat well

Thermometer with Sweat or Threaded Connection.
- Brass thermowell is included to allow the thermometer to be removed without draining the system.
- 2 inch or 2 1/2 inch Dial.

Materials: Case: steel; Well: brass
Temperature Range: 32 F to 250 F (0 C to 121 C)
Connection Size: 1/2 in.

Product Number	Connection Type	Connection Size	Dial Size (inch)	Dial Size (mm)	Length (inch)	Length (mm)	Weight (lb)	Weight (kg)	Comments
GS200	Sweat	1/2 in.	2 in.	51 mm	1 1/4 in.	51 mm	0.21 lb	0.095 kg	Brass thermowell is included to allow the thermometer to be removed without draining the system.
GS250	Sweat	1/2 in.	2 1/2 in.	63.5 mm	1 1/14 in.	51 mm	0.25 lb	0.114 kg	Brass thermowell is included to allow the thermometer to be removed without draining the system.

Threaded Thermometers with Thermowells

2 1/2 inch

NPT well

Thermometer with Sweat or Threaded Connection.
- Brass thermowell is included to allow the thermometer to be removed without draining the system.
- 2 inch or 2 1/2 inch Dial.

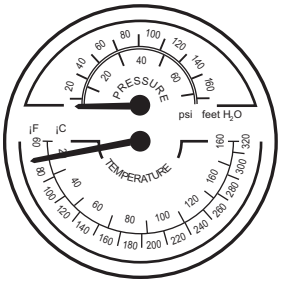
Materials: Case: steel; Well: brass
Temperature Range: 32 F to 250 F (0 C to 121 C)
Connection Size: 1/2 in.

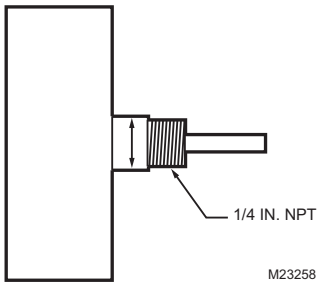
Product Number	Connection Type	Connection Size	Dial Size (inch)	Dial Size (mm)	Length (inch)	Length (mm)	Weight (lb)	Weight (kg)	Comments
GT161	NPT	1/2 in.	2 in.	51 mm	1 1/2 in.	51 mm	0.21 lb	0.095 kg	Brass thermowell is included to allow the thermometer to be removed without draining the system.
GT162	NPT	1/2 in.	2 1/2 in.	63.5 mm	1 1/2 in.	51 mm	0.25 lb	0.114 kg	Brass thermowell is included to allow the thermometer to be removed without draining the system.

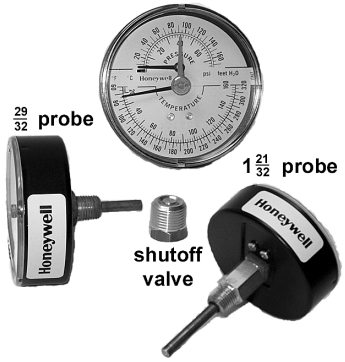
Tridicators

Pressure/temperature gauge with relief set point indicator for boilers and shut off valve.

Temperature Range: 60 F to 320 F (15 C to 160 C)
Connection Size: 1/4 in.; Shutoff Valve 1/2 in.
Maximum Operating Pressure: 75 psi







Product Number	Connection Type	Connection Size	Dial Size		Length		Weight		Comments
			(inch)	(mm)	(inch)	(mm)	(lb)	(kg)	
TD-090	NPT	1/4 in.	3 1/8 in.	79.38 mm	1 21/32 in.	23.02 mm	0.3 lb	0.14 kg	Pressure/temperature gauge with relief set point indicator
TD-165	NPT	1/4 in.	3 1/8 in.	79.38 mm	2 in.	42.06 mm	0.3 lb	0.14 kg	Pressure/temperature gauge with relief set point indicator
TDV-040	NPT	1/2 in.	3 1/8 in.	79.38 mm	29/32 in.	23.02 mm	0.4 lb	0.18 kg	Pressure/temperature gauge with relief set point indicator and shut off valve

V135 Thermostatic Mixing or Diverting Valves

Thermostatic Mixing or Diverting Valves for use in hydronic heating systems as a three-way mixing or diverting valve; controls loop temperature in radiant heating systems.

- T100R Thermostatic Actuator includes strap-on-pipe sensor.
- V135 includes plastic handle for manual operation.
- Knurled ring on T100R control head for easy attachment to V135.

Application: Capacity: Standard
Materials (Body): Bronze
Differential Pressure Rating: 17 psi maximum
Pressure Ratings (Steam): 232 psi maximum (1601 kPa)
Temperature Rating: 248 F maximum (120 C maximum)

	Pipe Size		Dimensions, Approximate	
Product Number	**(inch)**	**DN**	**(inch)**	**(mm)**
V135A1006	3/4 in.	DN20	2 9/16 in. x 5 1/8 in.	64 mm x 128 mm
V135A1014	1 in.	DN25	2 15/16 in. x 5 13/16 in.	74 mm x 148 mm
V135A1022	1 1/4 in.	DN32	3 3/4 in. x 7 1/8 in.	95 mm x 180 mm
V135A1048	1 1/2 in.	DN40	—	—
V135A1063	1 1/4 in.	DN32	3 3/8 in. x 6 3/8 in.	86 mm x 162 mm

		Pipe Size		Body	Capacity	Connection		
Product Number	**Application**	**(inch)**	**DN**	**Pattern**	**(Cv)**	**Type**	**Description**	**Used With**
V135A1006	Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.	3/4 in.	DN20	Three-way	3.7 Cv	Sweat	Three-way 3/4 in. mixing or diverting valve for hydronic heating systems	T100R
V135A1014	Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.	1 in.	DN25	Three-way	5.8 Cv	Sweat	Three-way 1 in. mixing or diverting valve for hydronic heating systems	T100R
V135A1022	Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.	1 1/4 in.	DN32	Three-way	5.8 Cv	NPT Threaded	Three-way 1 1/4 in. mixing or diverting valve for hydronic heating systems	T100R
V135A1048	Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.	1 1/2 in.	DN40	Three-way	11.7 Cv	NPT Threaded	Three-way 1 1/2 in. mixing or diverting valve for hydronic heating systems	T100R
V135A1063	Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.	1 1/4 in.	DN32	Three-way	5.8 Cv	Sweat	Three-way 1 1/4 in. mixing or diverting valve for hydronic heating systems	T100R

T100R Thermostatic Mixing or Diverting Valve Actuator

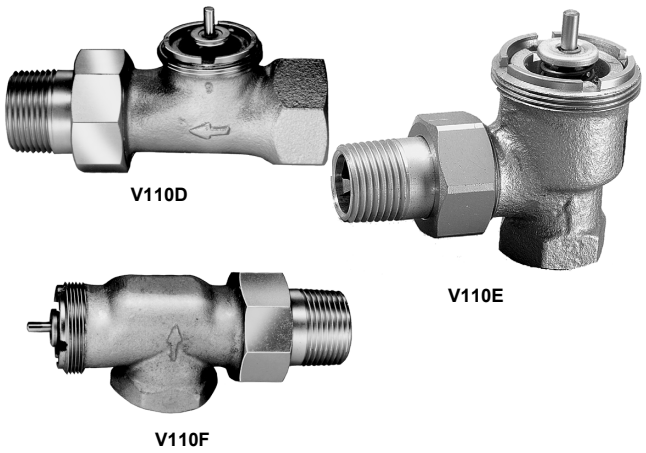
For use in hydronic heating systems as a three-way mixing or diverting valve; controls loop temperature in radiant heating systems.

- T100R Thermostatic Actuator includes strap-on-pipe sensor.
- Knurled ring on T100R control head for easy attachment to V135.

Application: Replacement Locking Rachet
Used With Valve: V135
Collar Diameter: 1 3/16 in. (30 mm)

Product Number	Application Type	Capillary Length		Temperature Range		Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Description	Used With
		(ft)	(m)	(F)	(C)				
T100R1004	Thermostatic Radiator Controller for use with V135 valve body for diverting or mixing applications. Includes remote sensor for hydronic heating systems requiring remote sensing.	6 ft. 8 in.	2 m	50 F to 122 F	10 C to 50 C	Remote	Remote	Thermostatic Mixing or Diverting Valve Actuator with remote sensor(50-120F), 6ft 8 in capillary and 1 3/16 in. collar diameter	V135
T100R1012	Thermostatic Radiator Controller for use with V135 valve body for diverting or mixing applications. Includes remote sensor for hydronic heating systems requiring remote sensing.	6 ft. 8 in.	2 m	86 F to 158 F	30 C to 70 C	Remote	Remote	Thermostatic Mixing or Diverting Valve Actuator with remote sensor(86-158F), 6ft 8 in capillary and 1 3/16 in. collar diameter	V135

V110 High Capacity Thermostatic Radiator Valves

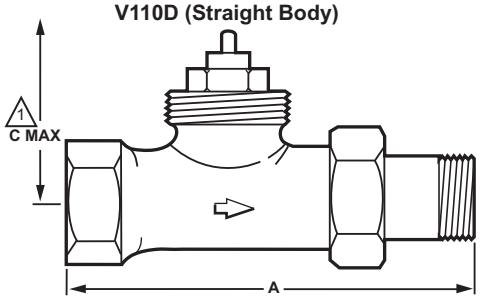


High Capacity Thermostatic Radiator Valves provide precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through free-standing radiators, convectors and other heating units with high capacity requirements.

- Continually monitors and adjusts room temperature for consistent comfort and relief from underheating and overheating.
- Designed with the higher capacity normally required by U.S.A. heating systems.
- Valve seat disc, which is made of resilient material (EPDM), ensures tight shutoff on steam or hot water systems.
- Nickel-plated bronze casted body with working parts in cartridge insert for ease of service.
- Controls include sensor, setpoint dial and valve actuator; components may be integral or connected by capillary tubes.
- Require no electrical connections.
- All working parts are replaceable using service tool (MT100C1011) while valve remains in service, in-line, under pressure.
- Valve normally open without control mounted.
- Valves may also be used with MV110 Electric Zone Valve Actuator.
- Meet ASHRAE Standard 102-1989.
- Replaces V5086 models.

Dimensions Diagram

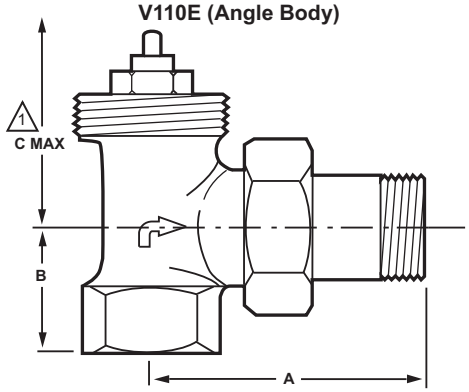
V110D (Straight Body)



PIPE SIZE	A IN. (MM)	1 C MAX IN. (MM)
1/2 INCH	3-3/4 (95)	4-3/4 (121)
3/4 INCH	4-1/8 (105)	4-3/4 (121)
1 INCH	4-15/16 (125)	4-3/4 (121)
1-1/4 INCH	5-7/8 (149)	5 (127)

1 C MAX DIMENSION IS WITH T104 CONTROL INSTALLED. M18959A

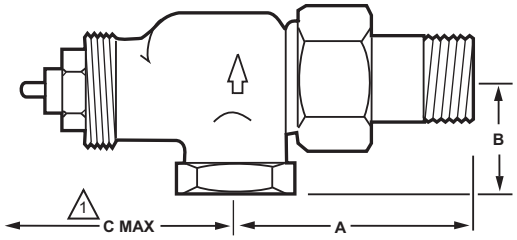
V110E (Angle Body)



PIPE SIZE	A IN. (MM)	B IN. (MM)	1 C MAX IN. (MM)
1/2 INCH	2-9/16 (65)	1 (25)	4-3/4 (121)
3/4 INCH	2-5/8 (67)	1-1/8 (29)	4-3/4 (121)
1 INCH	3 (76)	1-5/16 (33)	4-3/4 (121)
1-1/4 INCH	3-5/8 (90)	1-11/16 (43)	5 (127)

1 C MAX DIMENSION IS WITH T104 CONTROL INSTALLED. M18960A

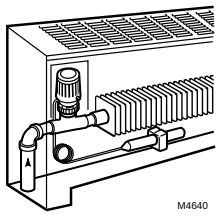
V110F (Horizontal Angle Body)

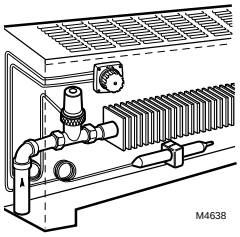


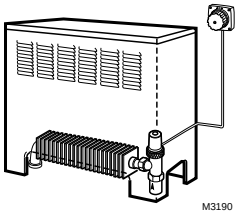
PIPE SIZE	A IN. (MM)	B IN. (MM)	1 C MAX IN. (MM)
1/2 INCH	2-1/4 (57)	1 (25)	5-1/8 (130)
3/4 INCH	2-9/16 (65)	1-1/8 (29)	5-1/4 (133)
1 INCH	2-15/16 (74)	1-3/16 (30)	5-1/4 (133)
1-1/4 INCH	3-1/2 (89)	2-3/16 (56)	5-1/4 (133)

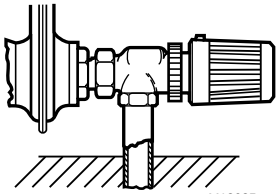
1 C MAX DIMENSION IS WITH T104 CONTROL INSTALLED. M18961A

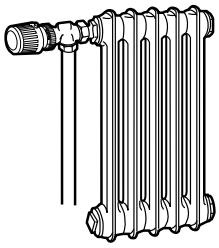
Typical Installations


M4640


M4638


M3190


M12935


M4632

Capacity: high
Materials (Body): Nickel Plated Bronze
Differential Pressure Rating: 17 psi maximum
Pressure Ratings (Hot Water): 150 psi maximum (1034 kPa)
Pressure Ratings (Steam): 15 psi maximum (103 kPa)
Temperature Rating: 248 F maximum (120 C maximum)
Cartridge Change Tool: Yes - Use MT110C1011

Product Number	Application	Pipe Size		Body Pattern	Capacity		Connection Type	Description	Used With
		(inch)	DN		(Cv)	(Btu/hr-steam)			
V110D1000	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	1/2 in.	DN15	Straight	4.6 Cv	127,000 Btu/hr	Threaded	Straight Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110D1008	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	3/4 in.	DN20	Straight	5.8 Cv	162,000 Btu/hr	Threaded	Straight Pattern 3/4 in. Valve for High Capacity Radiator	T104
V110D1016	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	1 in.	DN25	Straight	7.0 Cv	193,000 Btu/hr	Threaded	Straight Pattern 1 in. Valve for High Capacity Radiator	T104
V110D1024	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	1 1/4 in.	DN32	Straight	8.0 Cv	193,000 Btu/hr	Threaded	Straight Pattern 1 1/4 in. Valve for High Capacity Radiator	T104
V110D5001	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	1/2 in.	DN15	Straight	4.6 Cv	127,000 Btu/hr	Sweat	Straight Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110D5009	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	3/4 in.	DN20	Straight	5.8 Cv	162,000 Btu/hr	Sweat	Straight Pattern 3/4 in. Valve for High Capacity Radiator	T104
V110D5017	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units.	1 in.	DN25	Straight	7.0 Cv	193,000 Btu/hr	Sweat	Straight Pattern 1 in. Valve for High Capacity Radiator	T104
V110E1004	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1/2 in.	DN15	Angle	4.6 Cv	127,000 Btu/hr	Threaded	Angle Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110E1012	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	3/4 in.	DN20	Angle	5.8 Cv	162,000 Btu/hr	Threaded	Angle Pattern 3/4 in. Valve for High Capacity Radiator	T104

Thermostatic Radiator Valves

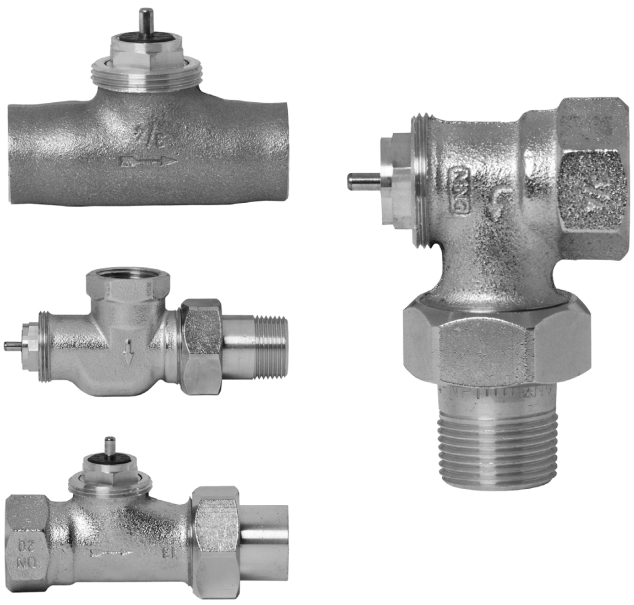
Product Number	Application	Pipe Size		Body Pattern	Capacity		Connection Type	Description	Used With
		(inch)	DN		(Cv)	(Btu/hr-steam)			
V110E1020	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1 in.	DN25	Angle	7.0 Cv	193,000 Btu/hr	Threaded	Angle Pattern 1 in. Valve for High Capacity Radiator	T104
V110E1028	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1 1/4 in.	DN32	Angle	8.0 Cv	193,000 Btu/hr	Threaded	Angle Pattern 1 1/4 in. Valve for High Capacity Radiator	T104
V110E5005	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1/2 in.	DN15	Angle	4.6 Cv	127,000 Btu/hr	Sweat	Angle Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110E5013	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	3/4 in.	DN20	Angle	5.8 Cv	162,000 Btu/hr	Sweat	Angle Pattern 3/4 in. Valve for High Capacity Radiator	T104
V110F1002	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1/2 in.	DN15	Horizontal Angle	4.6 Cv	127,000 Btu/hr	Threaded	Horizontal Angle Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110F1010	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	3/4 in.	DN20	Horizontal Angle	5.8 Cv	162,000 Btu/hr	Threaded	Horizontal Angle Pattern 3/4 in. Valve for High Capacity Radiator	T104
V110F1018	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1 in.	DN25	Horizontal Angle	7.0 Cv	193,000 Btu/hr	Threaded	Horizontal Angle Pattern 1 in. Valve for High Capacity Radiator	T104
V110F1026	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1 1/4 in.	DN32	Horizontal Angle	8.0 Cv	193,000 Btu/hr	Threaded	Horizontal Angle Pattern 1 1/4 in. Valve for High Capacity Radiator	T104
V110F5003	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	1/2 in.	DN15	Horizontal Angle	4.6 Cv	127,000 Btu/hr	Sweat	Horizontal Angle Pattern 1/2 in. Valve for High Capacity Radiator	T104
V110F5011	Precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through high capacity heating units	3/4 in.	DN20	Horizontal Angle	5.8 Cv	162,000 Btu/hr	Sweat	Horizontal Angle Pattern 3/4 in. Valve for High Capacity Radiator	T104

V110 Cross Reference

Product Number	Replaces
V110D 1000	V5086A 1015
V110D 1008	V5086A 1049
V110D 1016	V5086A 1064
V110D 1024	V5086A 1080
V110D 5001	V5086A 1007
V110D 5009	V5086A 1031
V110F 1002	V5086A 1023
V110F 1010	V5086A 1056
V110F 1018	V5086A 1072

Product Number	Replaces
V110F 1026	V5086A 1098
T104A 1040	T5086A 1009
T104B 1038	T5086B 1007
T104C 1036	T5086C 1005
V2042HSL10	Y5086
	197966
SA123	197970
CA110C1007	197965
	197968

V2000 Series Standard CapacityThermostatic Radiator Valve Body

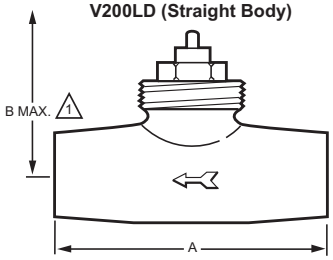


Allow automatic temperature control in two-pipe steam or hot water systems for free standing radiator, convectors and other heating units with standard capacity requirements. Provide comfort and energy savings for conversion of manual control.

- Continually monitors and adjusts room temperature for consistent comfort and relief from under heating and overheating.
- Adjustable balancing cartridge design made from resilient material (EPDM), ensures tight shut-off on steam and hot water systems.
- Nickel plated brass casted body.
- Replaceable cartridge for easy service with service tool.
- Controls include sensor, setpoint dial and valve actuator, componenets may be integral or connected by capillary tubes.
- No electrical connection required for non-electric acuators.
- Normally open without control mounted.
- Used with MV100 and T100 actuators.

Dimensions Diagram

V200LD (Straight Body)

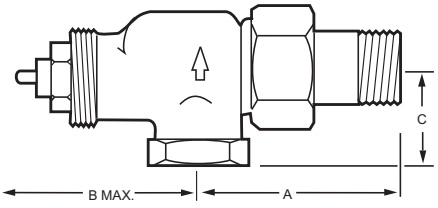


PIPE SIZE	A IN. (MM)	1 B MAX IN. (MM)
1/2 INCH	2-5/8 (66)	4-1/16 (104)
3/4 INCH	2-15/16 (74)	4-1/16 (104)

1 B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

M12933C

V2040A (Horizontal Angle Body)

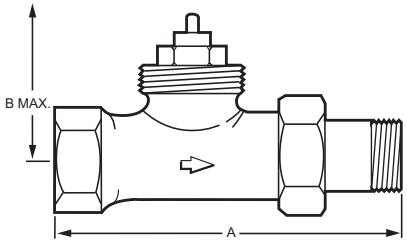


PIPE SIZE	A IN. (MM)	1 B MAX IN. (MM)	C IN. (MM)
1/2 INCH	2-1/8 (54)	4-1/2 (115)	1-1/8 (29)
3/4 INCH	2-1/2 (64)	5-3/16 (132)	1-3/16 (31)
1 INCH	2-15/16 (74)	5-3/16 (132)	1-7/16 (37)

1 B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

M12932C

V2040D (Straight Body)

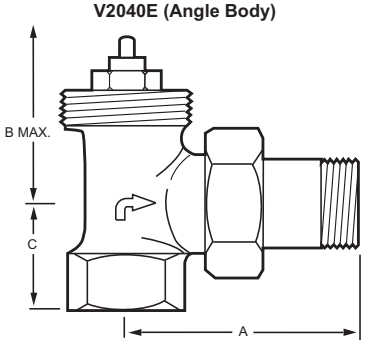


PIPE SIZE	A IN. (MM)	1 B MAX IN. (MM)
1/2 INCH	3-3/4 (95)	4-1/6 (104)
3/4 INCH	4-3/16 (106)	4-1/6 (104)
1 INCH	4-1/2 (114)	4-1/2 (114)

1 B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

M12930D

V2040E (Angle Body)



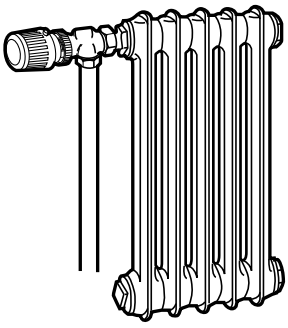
PIPE SIZE	A IN. (MM)	1 B MAX IN. (MM)	C IN. (MM)
1/2 INCH	2-5/16 (58)	3-13/16 (97)	1 (25)
3/4 INCH	2-5/8 (66)	3-13/16 (97)	1-1/8 (29)
1 INCH	2-15/16 (74)	4-5/16 (110)	1-5/16 (34)

1 B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

M12931D

Thermostatic Radiator Valves

Typical Installation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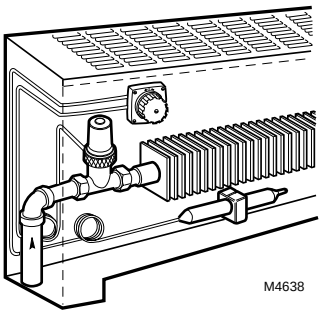
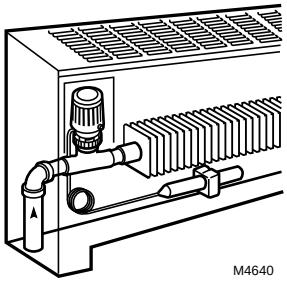

M4638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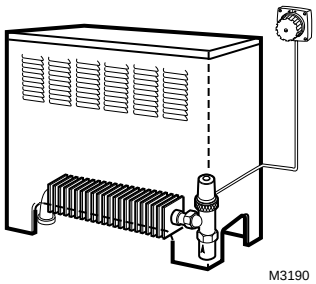

M3190

Capacity: Standard
Materials (Body): Nickel Plated Bronze
Differential Pressure Rating: With T100 or T200: 15 psi (With T100 or T200: 103 kPa); With MV100: 36 psi (With MV100: 248 kPa)
For low noise: 3 psi (For low noise: 20 kPa)

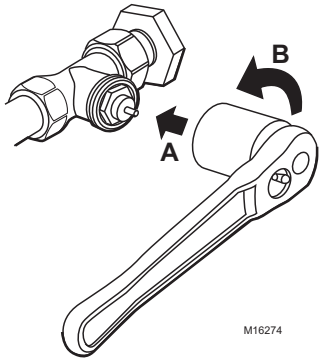
Pressure Ratings (Hot Water): 150 psi maximum (1034 kPa)
Pressure Ratings (Steam): 15 psi maximum (103 kPa)
Temperature Rating: 248 F maximum (120 C maximum)
Cartridge Change Tool: Yes - Use VA8200A001

Product Number	Application	Pipe Size (inch)	Pipe Size DN	Body Pattern	Capacity (Cv)	Capacity (Btu/hr-steam)	Connection Type	Description	Used With
V200LDSL15	For baseboards and other installations with copper tubing.	1/2 in.	DN15	Straight	2.5 Cv	59,100 Btu/hr	Sweat both ends, no union	Sweat straight pattern 1/2 in. valve for standard capacity Radiators	T100
V200LDSL20	For baseboards and other installations with copper tubing.	3/4 in.	DN20	Straight	2.7 Cv	63,800 Btu/hr	Sweat both ends, no union	Sweat straight pattern 3/4 in. valve for standard capacity Radiators	T100
V2040ASL15	Replaces most manual valves with minimum piping changes.	1/2 in.	DN15	Horizontal Angle	2.5 Cv	59,100 Btu/hr	Threaded	Horizontal Angle Pattern 1/2 in. Valve for Standard Capacity Radiator	T100A, M and V controls to conform to horizontal mounting requirements
V2040ASL20	Replaces most manual valves with minimum piping changes.	3/4 in.	DN20	Horizontal Angle	2.7 Cv	63,800 Btu/hr	Threaded	Horizontal Angle Pattern 3/4 in. Valve for Standard Capacity Radiator	T100A, M and V controls to conform to horizontal mounting requirements
V2040ASL25	Replaces most manual valves with minimum piping changes.	1 in.	DN25	Horizontal Angle	2.7 Cv	70,500 Btu/hr	Threaded	Horizontal Angle Pattern 1 in. Valve for Standard Capacity Radiator	T100A, M and V controls to conform to horizontal mounting requirements
V2040DSL15	Especially suited for base boards and straight runs where manual valves were not originally installed.	1/2 in.	DN15	Straight	2.5 Cv	59,100 Btu/hr	Threaded	Straight Pattern 1/2 in. Valve for Standard Capacity Radiator	—
V2040DSL20	Especially suited for base boards and straight runs where manual valves were not originally installed.	3/4 in.	DN20	Straight	2.7 Cv	63,800 Btu/hr	Threaded	Straight Pattern 3/4 in. Valve for Standard Capacity Radiator	—

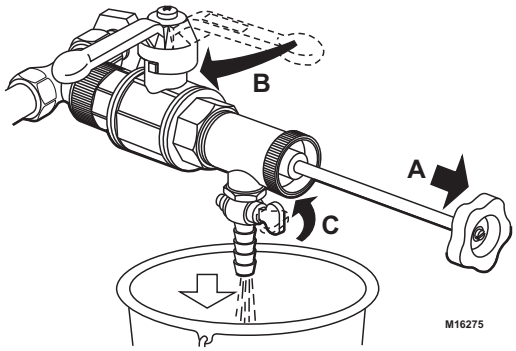
Product Number	Application	Pipe Size		Body Pattern	Capacity		Connection Type	Description	Used With
		(inch)	DN		(Cv)	(Btu/hr-steam)			
V2040DSL25	Especially suited for base boards and straight runs where manual valves were not originally installed.	1 in.	DN25	Straight	2.7 Cv	70,500 Btu/hr	Threaded	Straight Pattern 1 in. Valve for Standard Capacity Radiator	—
V2040ESL15	Use where installation space is limited	1/2 in.	DN15	Angle	2.5 Cv	59,100 Btu/hr	Sweat	Angle Pattern 1/2 in. Valve for Standard Capacity Radiator	T100BT100CT100F
V2040ESL20	Use where installation space is limited	3/4 in.	DN20	Angle	2.7 Cv	63,800 Btu/hr	Sweat	Angle Pattern 3/4 in. Valve for Standard Capacity Radiator	T100BT100CT100F
V2040ESL25	Use where installation space is limited	1 in.	DN25	Angle	2.7 Cv	70,500 Btu/hr	Threaded	Angle Pattern 1 in. Valve for Standard Capacity Radiator	T100BT100CT100F
V2043ASL15	Replaces most manual valves with minimum piping changes.	1/2 in.	DN15	Horizontal Angle	2.5 Cv	59,100 Btu/hr	Sweat	Horizontal Angle Pattern 1/2 in. Valve for Standard Capacity Radiator	T100A, M and V controls to conform to horizontal mounting requirements
V2043ASL20	Replaces most manual valves with minimum piping changes.	3/4 in.	DN20	Horizontal Angle	2.7 Cv	63,800 Btu/hr	Sweat	Horizontal Angle Pattern 3/4 in. Valve for Standard Capacity Radiator	T100A, M and V controls to conform to horizontal mounting requirements
V2043DSL15	For baseboards and other installations with copper tubing.	1/2 in.	DN15	Straight	2.5 Cv	59,100 Btu/hr	Sweat both ends, no union	Sweat straight pattern 1/2 in. valve for standard capacity Radiators	T100
V2043DSL20	Especially suited for base boards and straight runs where manual valves were not originally installed.	3/4 in.	DN20	Straight	2.7 Cv	63,800 Btu/hr	Sweat	Straight Pattern 3/4 in. Valve for Standard Capacity Radiator	—
V2043ESL15	Use where installation space is limited	1/2 in.	DN15	Angle	2.5 Cv	59,100 Btu/hr	Sweat	Angle Pattern 1/2 in. Valve for Standard Capacity Radiator	T100BT100CT100F
V2043ESL20	Use where installation space is limited	3/4 in.	DN20	Angle	2.7 Cv	63,800 Btu/hr	Sweat	Angle Pattern 3/4 in. Valve for Standard Capacity Radiator	T100BT100CT100F

V2000 Series Thermostatic Radiator Valve Cartridge Changing Tool

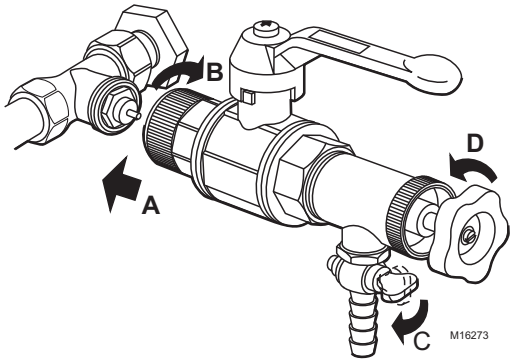
Remove control and loosen valve cartridge slightly.



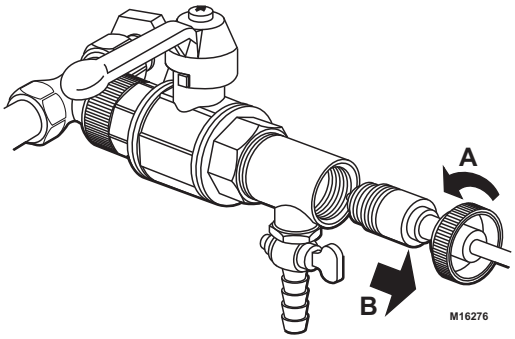
Open shut-off on drain cock, removing excess water and steam from chamber.



Tighten Cartridge Changer to valve body and close off drain cock.



Unscrew end cap and remove cartridge from chamber. Clean or replace cartridge.



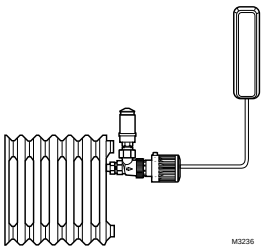
Product Number	Application	Description	Used With
VA8200A001	Accessory or Replacement Part	Cartridge Change Tool	T100

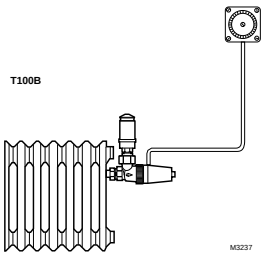
V2042H; V2043H One-pipe Steam Thermostatic Radiator Valve

One-Pipe Steam Thermostatic Radiator Valves allow automatic temperature control in one-pipe steam or hot water systems for free standing radiators, convectors and other heating units with standard capacity requirements. Provide comfort and energy savings.

- Continually monitors and adjusts room temperature for consistent comfort and relief from underheating and overheating.
- Adjustable balancing cartridge design made from resilient material (EPDM), ensures tight shut-off on steam and hot water systems.
- Nickel plated brass casted body.
- Replaceable cartridge for easy service with service tool.
- Controls include valve body, steam air vent.
- Used with T100 set point and capillary actuators.
- No electrical connection required for non-electric actuators.
- Normally open without control mounted.

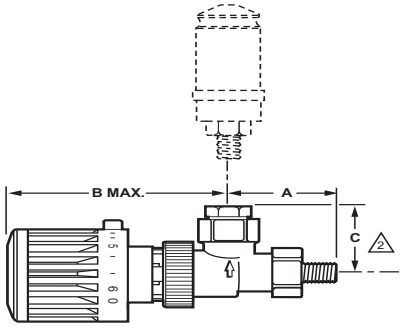
Typical Installation





Dimensions Diagram

V2042H (Body)/V2043H (Body with Vent)

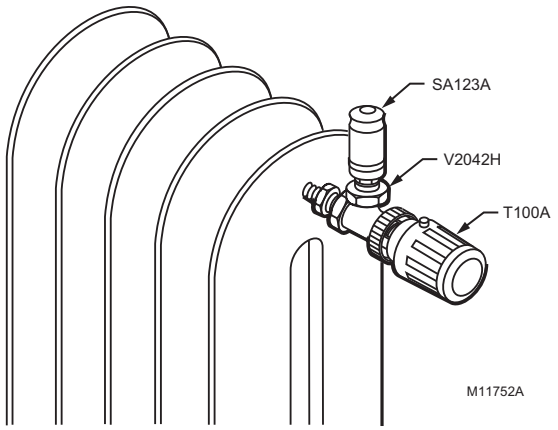


PIPE SIZE	A IN. (MM)	1 B MAX IN. (MM)	2 C IN. (MM)
3/8 INCH	1-11/16 (43)	3-13/16 (97)	1-3/16 (31)

1 B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

2 C DIMENSION IS WITHOUT THE STEAM/AIR VENT INSTALLED.

M17016B



Capacity: Standard
Materials (Body): Nickel Plated Bronze
Differential Pressure Rating: With T100 or T200: 15 psi (With T100 or T200: 103 kPa); With MV100: 36 psi (With MV100: 248 kPa) For low noise: 3 psi (For low noise: 20 kPa)

Pressure Ratings (Steam): 15 psi maximum (103 kPa)
Temperature Rating: 248 F maximum (120 C maximum)
Cartridge Change Tool: Yes - Use VA8200A001

Product Number	Application	Pipe Size (inch)	Dimensions, Approximate (inch)	Dimensions, Approximate (mm)	Body Pattern	Connection Type	Description	Includes	Used With
V2042HSL10	Angle pattern valve body for one pipe steam systems	1/8 in.	1 3/16 in. x 1 11/16 in.	31 mm x 43 mm	Angle	Threaded	One-pipe Steam 1/8 in. Radiator valve	—	T100
V2043HSL10	Thermostatic Radiator Valve Pack. Includes V100P1046 body with SA123 steam/air vent. Use for one pipe steam applications.	1/8 in.	—	—	Angle	NPT Threaded	One Pipe Steam Thermostatic Radiator valve and air vent pack	V2042HSL10 and SA143 steam air vent	—

NEW V2000 Series TRV Valve Bodies Cross Reference to OLD Style V100 Series

Use T100, T200 And MV100 Series TRV Actuators With New V2000 Series TRV Valve Bodies

V2000 Series Replacement	V100 Series Product	Product Description
V2040DSL15	**V100D 1056**	1/2 in. TRV Straight Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040DSL20	**V100D 1064**	3/4 in. TRV Straight Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040DSL25	**V100D 1072**	1in. TRV Straight Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2043DSL15	**V100D 5057**	1/2 in. TRV Straight Body, Female NPT Inlet, Sweat Tailpiece Outlet
V2043DSL20	**V100D 5065**	3/4 in. TRV Straight Body, Female NPT Inlet, Sweat Tailpiece Outlet
V2040ESL15	**V100E 1055**	1/2 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040ESL20	**V100E 1063**	3/4 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040ESL25	**V100E 1071**	1 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tailpiece Outlet
V2043ESL15	**V100E 5056**	1/2 in. TRV Vertical Body, Female NPT Inlet, Sweat Tailpiece Outlet
V2043ESL20	**V100E 5064**	3/4 in. TRV Vertical Body, Female NPT Inlet, Sweat Tailpiece Outlet
V2040ASL15	**V100F 1054**	1/2 in. TRV Horizontal, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040ASL20	**V100F 1062**	3/4 in. TRV Horizontal, Female NPT Inlet, Male NPT Tailpiece Outlet
V2040ASL25	**V100F 1070**	1” TRV Horizontal, Female NPT Inlet, Male NPT Tailpiece Outlet
V2043ASL15	**V100F 5055**	1/2 in. TRV Horizontal Body, Female NPT Inlet, Sweat Tailpiece Outlet
V2043ASL20	**V100F 5063**	3/4 in. TRV Horizontal Body, Female NPT Inlet, Sweat Tailpiece Outlet
V200LDSL15	**V100G 5054**	1/2 in. TRV Straight Body, Sweat Inlet, Sweat Outlet No Tailpiece
V200LDSL20	**V100G 5062**	3/4 in. TRV Straight Body, Sweat Inlet, Sweat Outlet No Tailpiece
V2042HSL10	**V100P 1046**	1/8 in. TRV (1/2 in. Body With 1/8 in. Adapter) Male NPT Inlet, Female NPT Outlet. One Pipe Steam
V2043HSL10	**Y100P 1001**	1/8 in. TRV (1/2 in. Body With 1/8 in. Adapter) Male NPT Inlet, Female NPT Outlet. One Pipe Steam Includes SA123A1003
VS1200SL01		Replacement Cartridge New V2000 Series
VA8200A001		Cartridge Service Tool V2000 Series Bodies

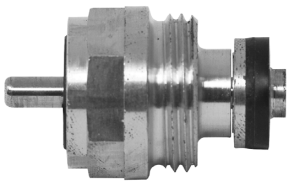
V100P/Y100P One-pipe Steam Thermostatic Radiator Valve

Product Number	Application	Description	Used With
SA123A1002	Steam Vent	Steam air vent	V100P

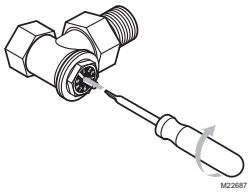
Thermostatic Valve Accessories

Product Number	Application	Description	Used With
2428300	Accessory or Replacement Part	Seat Disc Valve	V110
CA100B1008	Accessory or Replacement Part	Replacement cartridge for old style V100 (metal cartridge body)	V100 Series new style
CA110C1007	Accessory or Replacement Part	Replacement Cartridge for V110	—
MT111V1000	Accessory or Replacement Part	Tool	T100V124T104V1033

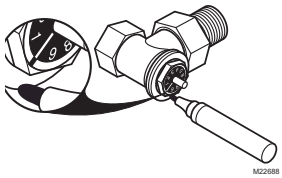
V2000 Series Thermostatic Radiator Valve Accessories



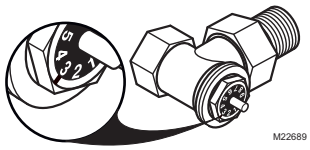
V2000 Series Cartridge Balancing Procedure Step 1



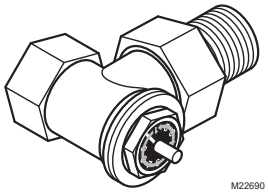
V2000 Series Cartridge Balancing Procedure Step 2



V2000 Series Cartridge Balancing Procedure Step 3



V2000 Series Cartridge Balancing Procedure Step 4



Materials (Body): Bronze
Cartridge Change Tool: VA8200A001

Product Number	Application	Description	Used With
VS1200SL01	Accessory or Replacement Part	Replacement cartridge for NEW V2000 (adjustable cartridge)	V2000

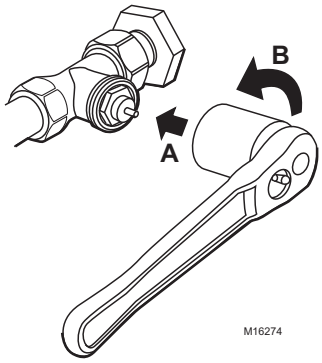
MT100; MT110 Cartridge Changing Tool

The MT110 Valve Cartridge Changing Tool enables the user to remove, and clean or replace the valve cartridge while the valve remains pressurized. Boiler shutdown is not required.

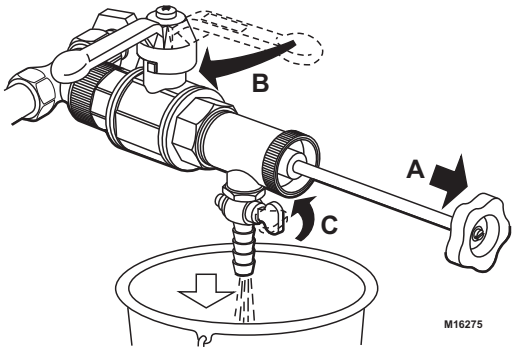
- MT110 for V110 Series valves.

Application: Cartridge changing tool
Used With Valve: V100
Collar Diameter: 1 3/16 in. (30 mm)

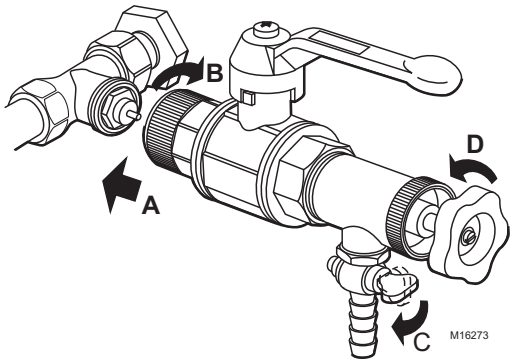
Remove control and loosen valve cartridge slightly.



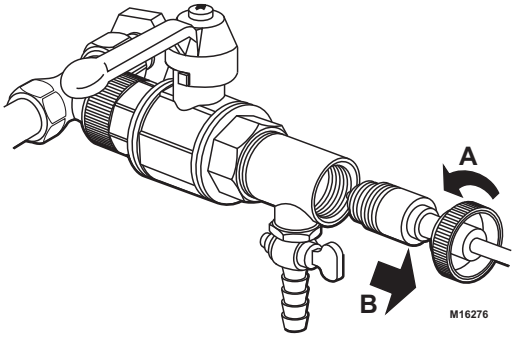
Open shut-off on drain cock, removing excess water and steam from chamber.



Tighten Cartridge Changer to valve body and close off drain cock.



Unscrew end cap and remove cartridge from chamber. Clean or replace cartridge.



Product Number	Application Type	Description	Comments	Used With
MT100C1016	Cartridge changing tool, in service, in line, under pressure for V100 series valve.	Cartridge changing tool, in service, in line, under pressure for V100 series valve.	—	V100
MT100L1023	Tool to remove T100M tamper resistant direct mount control from valve body.	Actuator Removal Tool for T100M2041 tamper-resistant, direct mount actuator from valve body	—	T100M
MT110C1011	Cartridge changing tool, in service, in line, under pressure for V110 series valve.	Cartridge Changing Tool for in-line service of V100 valves	—	V100
MT110D1019	Socket to remove or replace cartridges on V110D, E, F series valves; use in combination with MT110C1011 for pre-loosening and final tightening of cartridge. Fits 3/8 in. socket driver.	Cartridge Changing tool	For CA110C Cartridge	—

T104 High Capacity Thermostatic Radiator Valves

T104A

T104V

T104B

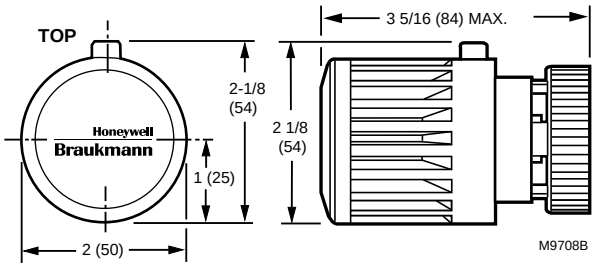
T104C

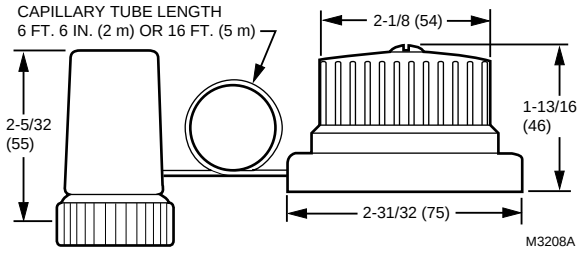
T104F

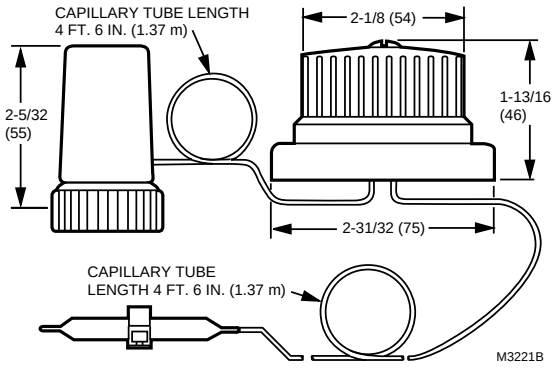
Provide precise and automatic control of room temperature in two-pipe systems by modulating the flow of hot water or steam through free-standing radiators, convectors and other heating units with high capacity requirements.

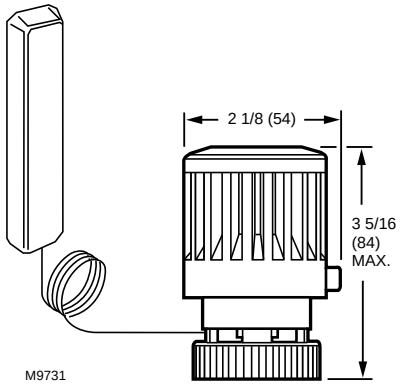
- Continually monitor and adjust room temperature for consistent comfort and relief from underheating and overheating.
- Designed with the higher capacity normally required by U.S.A. heating systems.
- Valve seat disc, which is made of resilient material (EPDM), ensures tight shutoff on steam or hot water systems.
- Nickel-plated bronze casted body with working parts in cartridge insert for ease of service.
- Controls include sensor, setpoint dial and valve actuator; components may be integral or connected by capillary tubes.
- Require no electrical connections.
- All working parts are replaceable using service tool (MT100C1011) while valve remains in service, in-line, under pressure.
- Valve normally open without control mounted.
- Valves may also be used with MV110 Electric Zone Valve Actuator.
- Meet ASHRAE Standard 102-1989.

Dimensions Diagram



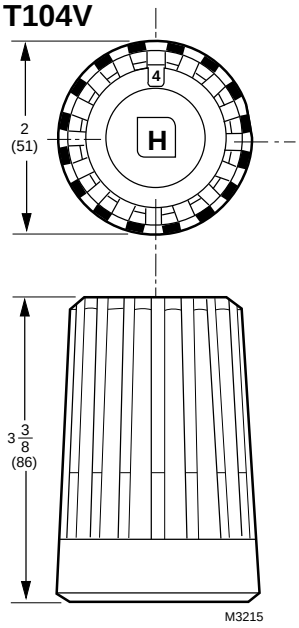






Thermostatic Radiator Valves

T104V



Application: High Capacity Thermostatic Radiator Actuator
Used With Valve: V110
Collar Diameter: 1 19/32 in. (40 mm)

Product Number	Application Type	Capillary Length (ft)	Capillary Length (m)	Temperature Range (F)	Temperature Range (C)	Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Description	Comments	Used With
T104A1040	Self-contained controller with sensor, setpoint dial and valve actuator in one unit. Adjustable limits. Mount horizontal. Not for use inside enclosures or in locations with restricted airflow around sensor. For V110 valves.	—	—	43 F to 79 F	6 C to 26 C	Integral	Integral	High Capacity Thermostatic Radiator Actuator with integral sensor and 1 19/32 in. collar diameter	Adjustable Limits	V110
T104B1038	Controller with combined remote setpoint and sensor mounted on a wall. Setpoint/sensor connect with a capillary tube to an actuator, which mounts on the valve body. For V110 valves.	6 ft. 8 in.	2 m	48 F to 79 F	9 C to 26 C	Remote	Remote	High Capacity Thermostatic Radiator Actuator with remote sensor, 6ft 8in. capillary and 1 19/32 in. collar diameter	—	V110
T104B1046	Controller with combined remote setpoint and sensor mounted on a wall. Setpoint/sensor connect with a capillary tube to an actuator, which mounts on the valve body. For V110 valves.	16 ft.	4.9 m	48 F to 79 F	9 C to 26 C	Remote	Remote	High Capacity Thermostatic Radiator Actuator with remote sensor, 16ft capillary and 1 19/32 in. collar diameter	—	V110
T104C1036	Controller with remote setpoint and sensor normally mounted with setpoint dial mounted on outside cabinet or enclosure; sensor mounted beneath heating coils in cold air return. Double capillaries. For V110 valves.	Two 4 1/2 ft.	Two 1.4 m	48 F to 79 F	9 C to 26 C	Remote	Remote	High Capacity Thermostatic Radiator Actuator with sepearte remote sensor, 2-4ft 6in. capillary and 1 19/32 in. collar diameter	—	V110
T104C1052	Controller with remote setpoint and sensor normally mounted with setpoint dial mounted on outside cabinet or enclosure; sensor mounted beneath heating coils in cold air return, below the heat source. Double capillaries. For V110 valves.	Two 4 1/2 ft.	Two 1.4 m	48 F to 79 F	9 C to 26 C	Remote	Remote	High Capacity Thermostatic Radiator Actuator with separate remote sensor, 2-4ft 6in. capillary and 1 19/32 in. collar diameter	With special scale	V110

Product Number	Application Type	Capillary Length		Temperature Range		Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Description	Comments	Used With
		(ft)	(m)	(F)	(C)					
T104F1512	Thermostatic radiator valve controller for use with V110 series valves. With remote temperature sensing and integral set point. Adjustable limits.	6 ft. 8 in.	2 m	43 F to 79 F	6 C to 26 C	Remote	Integral	High Capacity Thermostatic Radiator Actuator with remote temperature sensing and remote sensor and 1 19/32 in. collar diameter	Adjustable Limits	V110
T104V1422	Self-contained controller with sensor, setpoint dial and valve actuator in one unit. Locks to valve body. Rugged design. Adjustable setpoint under locking cap. Factory set at 68 F (20 C). Mounts horizontal. Not for use in enclosures. For V110 valves.	—	—	43 F to 79 F	6 C to 26 C	Integral	Integral	High Capacity Thermostatic Radiator Actuator with integral sensor, vandal resistant housing and 1 19/32 in. collar diameter	Vandal Proof	V110

Thermostatic Valve Actuator—Accessories

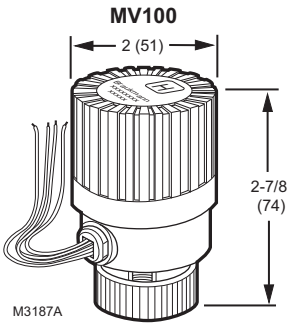
Product Number	Description	Used With
202814	Locking cap for T100V and T104V thermostatic radiator valve controllers.	T100V; T104V
272873	MT100F driver upgrade kit. For use with old and new V100.	V100

MV100; MV110 Electric Zone Valve Actuators

24V heat motor actuators used to operate V100 and V110 valves in hot water and steam heating systems.

- Provide efficient zone control for hot water or two-pipe steam heating systems when used with low voltage thermostats, such as T810, T822 or Honeywell Chronotherm® III thermostats.
- Additional system components may include AT140 Transformer, and MZ110 or MZ410 Elapsed Time Meter.
- Built-in, normally open end switch may be used to operate additional components, such as circulator pump or burner relays.
- Compact size for ease of installation.
- Smooth response of heat motor prevents water hammer, providing silent operation and reliability.
- Heater element has reduced power consumption, eliminating the need for continuous on-off cycling of the heat motor during operation.

Dimensions Diagram



Application: Replacement Actuator
Used With Valve: V100, V2000
Electrical Ratings: 24 Vac, 3 VA, 0.125A Draw
End Switch Rating: 240V/50-60Hz, 5 A
Timing: 5 minutes Open / 5 minutes Close (max.)
Maximum Ambient Temperature: 122 F (50 C)

Product Number	Application Type	Description	Comments	Used With
MV100S8011	24 V normally closed Heat Motor actuator for Hot water and steam heating systems	24 Vac Normally Closed Actuator with end switch for use with V100 valve in hydronic and steam heating systems	Can be used with V135 for two-position Control	V100, V2000
MV110S8005	24 V normally closed Heat Motor actuator for Hot water and steam heating systems	24 Vac Normally Closed Actuator with end switch for use with V110 valves in hydronic and steam heating systems	Can be used with V135 for two-position Control	V110

T100;T200 Standard Capacity Thermostatic Radiator Actuators

T100A

T100B

T100F

T100C

T200A

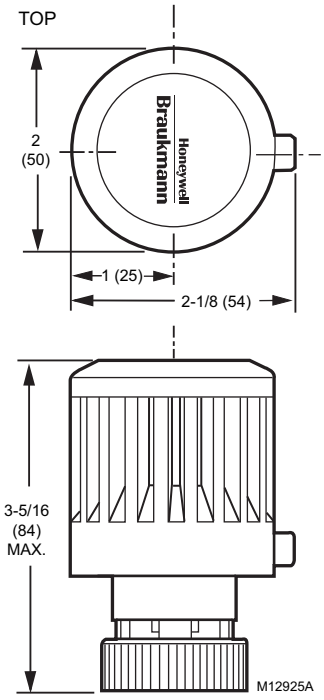
T100M

Allow automatic temperature control in two-pipe steam or hot water systems for free standing radiators, convectors, and other heating units with standard capacity requirements. Provide comfort and energy savings at affordable prices.
Use with V2000 Series Standard Capacity Valves

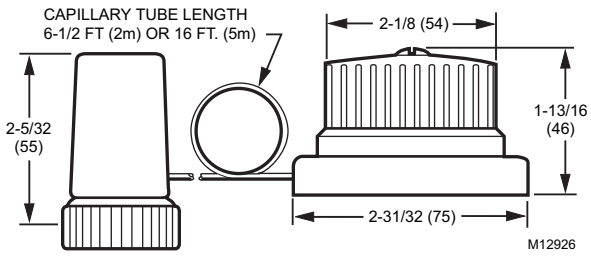
- Continually monitor and adjust room temperature for consistent comfort and relief from underheating and overheating.
- Valve seat disc, which is made of resilient material (EPDM), ensures tight shutoff on steam or hot water systems.
- Nickel-plated brass casted body with working parts in cartridge insert for ease of service.
- Controls include sensor, setpoint dial and valve actuator; components may be integral or connected by capillary tubes.
- Require no electrical connections.
- All working parts are replaceable using service tool (MT100C1016) while valve remains in service, in-line, under pressure.
- Valve normally open without control mounted.
- Valves may also be used with MV100 Electric Zone Valve Actuator.

Dimensions Diagrams

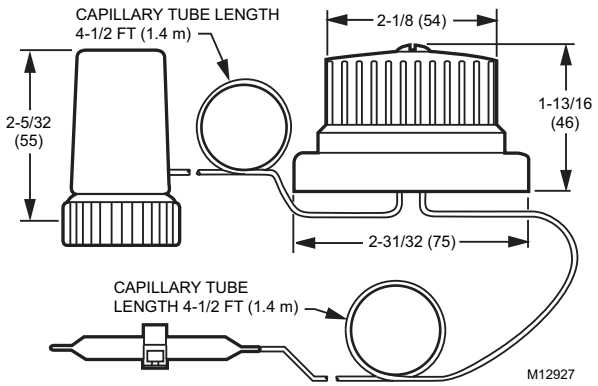
T100A



T100B



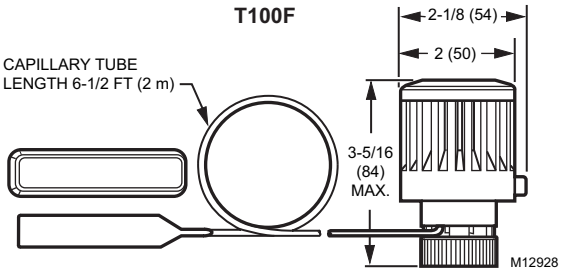
T100C



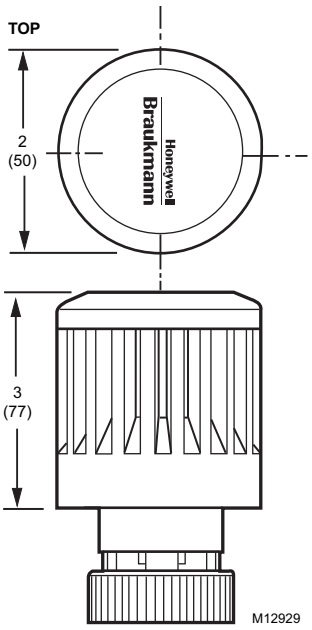
Thermostatic Valve Actuators

Dimensions Diagrams

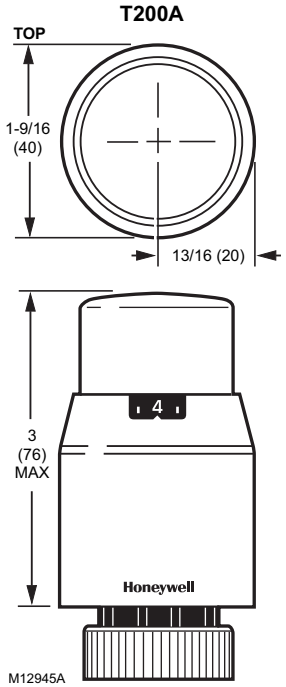
T100F



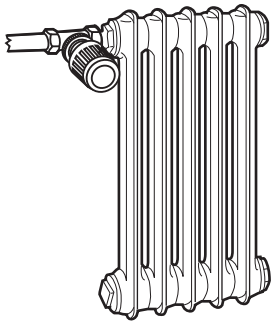
T100M

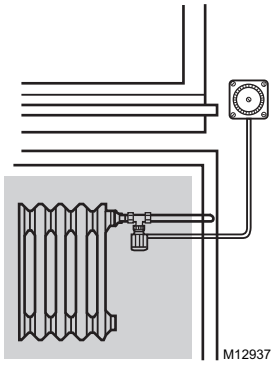


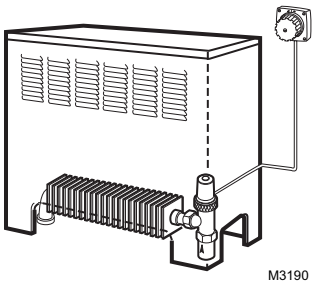
T200A

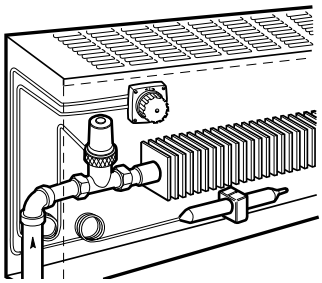


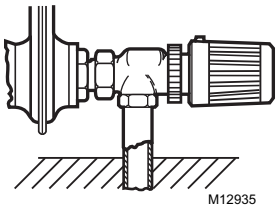
Typical Installation











Application: Replacement Locking Rachet
Used With Valve: V100, V2000
Collar Diameter: 1 3/16 in. (30 mm)

Product Number	Application Type	Capillary Length (ft)	Capillary Length (m)	Temperature Range (F)	Temperature Range (C)	Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Comments
T100A1028	A self-contained control with sensor, setpoint dial and valve actuator in one unit. Mounts horizontal. Not for use inside enclosures or where airflow around sensor is restricted. Adjustable limits. For V100 valves.	—	—	43 F to 79 F	6 C to 26 C	Integral	Integral	Adjustable Limits
T100B1035	A control with combined remote setpoint and sensor mounted on wall. Connected by a capillary tube to an actuator, which is mounted on the valve body. For V100 valves.	6 1/2 ft. or 16 ft.	2 m or 5 m	48 F to 79 F	9 C to 26 C	Remote	Remote	—
T100B1043	A control with combined remote setpoint and sensor mounted on wall. Connected by a capillary tube to an actuator, which is mounted on the valve body. For V100 valves.	6 1/2 ft. or 16 ft.	2 m or 5 m	48 F to 79 F	9 C to 26 C	Remote	Remote	—
T100C1026	A control with remote setpoint and sensor mounted with setpoint dial on outside of heating cabinet; sensor mounted beneath heating coils in cold air return. Dual capillary. For V100 valves.	Two 4 1/ 2 ft.	Two 1.4 m	48 F to 79 F	9 C to 26 C	Remote	Remote	—
T100F1395	Thermostatic radiator valve controller for use with V100 series valves. With remote temperature sensing and integral set point. Adjustable limits.	6 ft. 8 in.	2 m	43 F to 79 F	6 C to 26 C	Integral	Integral	Adjustable Limits
T100M2056	A self-contained control with sensor, setpoint dial and actuator in one unit. Use where increased durability, tamper resistance and limited adjustment range are desired. Horizontal mount. Locks onto valve body. Not for enclosures. For V100 valves.	—	—	43 F to 79 F	6 C to 26 C	Integral	Integral	Tamper Resistant, Adjustable Limits
T200A1000	Chromed end with white body. Self-contained control with sensor, setpoint dial, and valve actuator in one unit. Mounts horizontal. Not for use inside enclosures or in locations with restricted airflow around sensor. For V100 valves.	—	—	43 F to 79 F	6 C to 26 C	Integral	Integral	Designer Look

Non-Programmable Thermostats

PRO 3000 Basic Non-Programmable Thermostat

The PRO series provides non-programmable thermostats for 24 Vac conventional and heat pump systems or 750 mV heating systems.

- Non-programmable digital thermostat.
- Backlit digital display - both current and set temperatures are easy to read in various lighting conditions.
- Precise comfort control (±1 F) maintains consistent comfort to the highest level of accuracy.
- Basic operation - easy-to-use slide switches allow you to select the heat or cool mode, and operate the fan.

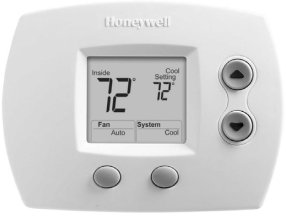
Dimensions, Approximate: 3 13/16 in. High X 5 3/8 in. Wide X 1 1/4 in. Deep (97 mm High X 137 mm Wide X 32 mm Deep)
Electrical Ratings: 20 to 30 Vac or 750 mV
Setting Temperature Range: Heat: 40 F to 90 F; Cool: 50 F to 99 F (Heat: 4.5 C to 32 C; Cool: 10 C to 37 C)
Changeover: Manual
Operating Humidity Range (% RH): 5 to 90% RH, non-condensing
Accuracy: ±1 F (±0.5 C)
Cycles per Hour: Heating 1-12 CPH; Cooling 1-6 CPH
Operating Temperature Range: 32 F to 120 F (0 C to 48.9 C)
Switch Type: Relay

Currents (Cooling): 0.02 A to 1.0 A running
Currents (Heating): 0.02 A to 1.0 A running
Frequency: 50 Hz; 60 Hz
Power Method: Battery or Hardwired
Sensor Element: Thermistor
Mounting: Horizontal

Accessories:
50002883-001 FocusPRO 5000/6000 and PRO 3000/4000 Cover Plate Assembly
50007298-001 12 pack of medium coverplates (5 in. x 6 7/8 in.)

Product Number	Application	Color	Switch Positions		Terminal Designations	Stages
			System	Fan		
TH3110D1008	1 Heat / 1 Cool Conventional and Heat Pump	Premier White®	COOL-OFF-HEAT	AUTO-ON	R, Rc, W, Y, G, O, B, C	1 Heat/1 Cool

FocusPRO™ 5000 Digital Non-Programmable Thermostats



The FocusPRO™ non-programmable digital thermostat provides electronic control of 24 Vac conventional and heat pump systems or 750 mV heating systems.

- Non-programmable digital thermostat.
- Large, clear, backlit display - easy to read in various lighting conditions.
- Display size options - available in large screen or standard.
- Precise comfort control (±1 F) - maintains consistent comfort to the highest level of accuracy.
- Easy change battery door - flip out door allows for easy battery replacement without removing or disassembling the thermostat.

Dimensions, Approximate: 3 7/16 in. high x 4 1/2 in. wide x 1 5/16 in. deep (86 mm high x 114 mm wide x 33 mm deep)
Color: Premier White®
Electrical Ratings: 20 to 30 Vac
Setting Temperature Range: Heat: 40 F to 90 F; Cool: 50 F to 99 F (Heat: 4.5 C to 32 C; Cool: 10 C to 37 C)
Changeover: Automatic/Manual Selectable
Operating Humidity Range (% RH): 5 to 90% RH, non-condensing
Accuracy: ±1 F (±0.5 C)
Operating Temperature Range: 32 F to 120 F (0 C to 48.9 C)
Switch Type: Relay
Currents (Cooling): 1.0 A running
Currents (Heating): 1.0 A running
Currents (Fan): 0.5A running
Frequency: 50 Hz; 60 Hz

Power Method: Battery or Hardwired
Sensor Element: Thermistor
Mounting: Horizontal

Accessories:
50001137-001 FocusPRO TH5110 Cover Plate Assembly
50002883-001 FocusPRO 5000/6000 and PRO 3000/4000 Cover Plate Assembly
50007297-001 12 pack of small coverplates (4 5/16 in. x 5 1/2 in.)
50007298-001 12 pack of medium coverplates (5 in. x 6 7/8 in.)

Replacement Parts:
50000951-001 Replacement Battery Holder for FocusPRO TH5110 Thermostat

Product Number	Application	Switch Positions		Terminal Designations	Stages	Comments
		System	Fan			
TH5110D1006	Heating and Cooling systems	HEAT-OFF-COOL-AUTO	AUTO-ON	R, Rc, C, W (O/B), Y, G	Up to 1 Heat/1 Cool	Standard Display

T87K,N The Round®

The Round® T87K and T87N thermostats provide electronic control of 24Vac heating and cooling systems with the classic twist to set dial.

- Mercury Free
- Classic Styling
- Premier White®
- Separate temperature setting and thermometer
- The T87K heat only works with 2 or 3 wire heat only systems
- The Easy-To-See has enlarged scale and raised numbers--plus it clicks at every 2 F change

Dimensions, Approximate: 3 11/16 in. diameter x 1 3/4 in. deep (94 mm diameter x 45 mm deep)
Color: Premier White®
Electrical Ratings: 18 to 30 Vac
Setting Temperature Range: 40 F to 90 F
Changeover: Manual
Operating Humidity Range (% RH): 5 to 90% RH (non-condensing)
Accuracy: 2 F (1 C)
Cycles per Hour: Adj. 1,3,5,9
Switch Type: Relay

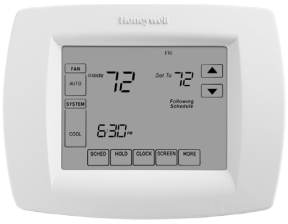
Currents (Heating): 0.02-1.2A running
Frequency: 50 Hz; 60 Hz
Power Method: Uses stored power from system controls.
Sensor Element: Thermistor
Mounting: Round

Accessories:
50000066-001 Decorative Cover Plate for T8775 or T87K,N
50010944-001 Range Stop Assembly

Product Number	Application	Switch Positions		Terminal Designations	Stages
		System	Fan		
T87K1007	Heat only gas or oil systems	OFF-HEAT	—	R, W, Y	1 Heat
T87N1000	Heating and Cooling systems	COOL-OFF-HEAT	AUTO-ON	R, Rc, W, Y, G, O, B	1 Heat/1 Cool

Programmable Thermostats

VisionPRO® 8000 Touchscreen 7-Day Programmable Thermostat



The Touch Screen Universal Programmable Thermostats provide electronic control of 24 Vac heating and cooling systems or 750 mV heating system.

- Large, Clear Display with Backlighting.
- Current temperature, set temperature and time are easy-to-read and all are displayed on the home screen.
- Menu Driven Programming Guides you through the scheduling process, showing only necessary information and choices on each screen.
- Ability to Select Multiple Days allows you to easily customize the thermostat for your unique schedule.
- Real-Time Clock keeps time during power failure; automatically updates for daylight savings.
- Armchair Programming allows you to remove thermostat from wall to set the schedule.
- Precise Temperature Control (±1 F) reliable, consistent comfort.
- Multiple HOLD options allow you to modify schedule indefinitely or for a specific time.
- Change Reminders reminds you to service or replace the air filter, humidifier pad, ultraviolet lamp or thermostat batteries.
- Programmable Fan increases air quality when combined with a whole-house air cleaner.
- Outdoor Temperature Indication (Select Models) shows current outdoor temperature on the display and used for Dual Fuel Heat Pump applications.

Application: Conventional and Heat Pump systems
Dimensions, Approximate: 4 9/16 in. high x 6 in. wide x 1 1/4 in. deep
Color: Premier White®
Programmability: Universal Programming from 7 Day to Non-Programmable
Changeover: Auto or Manual
Electrical Ratings: 20 to 30 Vac
Setting Temperature Range: Heat: 40 F to 90 F; Cool: 50 F to 99 F (Heat: 4.5 C to 32 C; Cool: 10 C to 37 C)
Operating Humidity Range (% RH): 5 to 90% RH, non-condensing
Differential Temperature: ±1 F (±0.5 C)
Currents (Cooling): 1.0 A running
Currents (Heating): 1.0 A running
Currents (Fan): 0.6A running
Frequency: 50 Hz; 60 Hz
Power Method: Battery or Hardwired
Sensor Element: Thermistor
Mounting: Horizontal

Accessories:
32003796-001 Premier White® cover plate 7 7/8 in. (200 mm) x 5 1/2 in. (140 mm)
C7089U1006 Outdoor Sensor
C7189U1005 Remote Indoor Sensor

Product Number	Switch Positions		Terminal Designations	Stages	Comments
	System	Fan			
TH8110U1003	HEAT-OFF-COOL-AUTO	AUTO-ON	R, RC, C, W (O/B), Y, G, S1, S2	Up to 1 Heat/1 Cool	Selectable to Heat Only or Cool Only

Honeywell

AUTOMATION AND CONTROL PRODUCTS

WARRANTY POLICY

Honeywell Water Controls warrants the products in this catalog to be free from defects due to workmanship or materials, under normal use and service, for twelve (12) months from date of installation.

If a product is defective due to workmanship or materials, is removed within the applicable warranty period, and is returned to Honeywell in accordance with the procedure described below, Honeywell will, at its option, either repair, replace or credit the customer for the purchase price of the product, in accordance with the procedure described below. This warranty extends only to persons or organizations who purchase products in this catalog for resale.

The express warranty above constitutes the entire warranty of Honeywell with respect to the products in this catalog and IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL HONEYWELL Water Controls BE RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.

INSTRUCTIONS—INSTALLING OR SERVICING CONTRACTOR OR DEALER

When replacing a Honeywell product under warranty, including those products furnished on original heating and/or cooling equipment, you should rely on your local Honeywell Wholesaler or Distributor for prompt and efficient product replacement service.

A Honeywell Returned Goods Identification Tag (form 87-0030) or an electronic data notification system must be completed and approved by the servicing dealer/contractor prior to submitting the product to the Honeywell Wholesaler or Distributor. (Tags may be obtained from the Wholesaler or Distributor in advance.) No warranty claim for product replacement or credit will be honored by the Wholesaler/Distributor without a completed warranty tag attached or electronic notification.

INSTRUCTIONS—WHOLESALER OR DISTRIBUTOR

List Water Controls products on a separate Return Goods Order form, marked "Water Controls." This will assure you the best possible services.

The following will apply to the return of any product to Honeywell Water Controls under this warranty:

Any products which are:

(i) identified with Honeywell's Returned Goods Identification Tag (form 87-0030) (tags are available free of charge via a P.O. to your Customer Service Representative), or electronic notification system;

(ii) are listed individually with Returned Goods ID Tag numbers and date codes listed on Honeywell's Returned Goods Order (form 71-96024) or a similar form;

(iii) packed separately from other returns and protected from shipping damage;

(iv) have certification by the installer or servicing dealer that the product was removed, due to failure, within the applicable warranty period;

(v) are received transportation pre-paid at:

Honeywell Water Controls Return Goods
Dock 4 MN10-3860
1885 Douglas Drive
Golden Valley, MN 55422

(vi) and are found by Honeywell's inspection to be defective in workmanship or materials under normal use and service

will be handled in accordance with one of the two following procedures, as specified by the customer making the return:

1. *CREDIT PROCEDURE*. Honeywell will issue credit, at Honeywell's lowest wholesaler net price in effect at the time of the return (as set forth on Honeywell's then current price sheet) or at the actual invoice amount if a copy of that invoice is attached to the packing list. (TRADELINE Replacement Exchange Products will be at Honeywell's lowest replacement exchange net price in effect at the time of such return, as shown on Honeywell's then current price sheet.) Honeywell reserves the right to disallow this credit option in cases of warranty abuse.
2. *REPAIR OR REPLACEMENT PROCEDURE*. Honeywell will, at its option, either repair or replace the product free of charge and return it or its replacement lowest cost transportation prepaid. The replacement will be a functionally equivalent new TRADELINE product. Premium transportation will be used at customer's request and expense.

The warranty will not be honored if:

(i) product is damaged or missing parts or accessory items including batteries.

(ii) product exhibits evidence of field mis-applications.

Final disposition of any warranty claim will be determined solely by Honeywell. If inspection by Honeywell does not disclose any defect covered by the warranty, the product will be returned or scrapped as instructed by the customer and Honeywell's regular service charges will apply. Products returned to the customer may be sent shipping charges collect.

If you have any questions relative to product returns to Customer Service:

Honeywell Water Controls
65 Access Road
Warwick, RI 02886
(401) 738-4290 option #5

SPECIAL MESSAGE TO INDUSTRIAL USERS AND BUILDING OWNERS

Thank you for using Honeywell Water Controls products.

As a user, when you purchase a Honeywell product from this catalog you should expect performance from the product and, if it fails, replacement of the product by the installing dealer.

Typically, you will have purchased a Honeywell product under the following circumstances:

1. To modernize or refurbish your existing commercial and/or process control system.
2. You have purchased new commercial and/or process heating, cooling, air cleaning or humidification equipment that is furnished with Honeywell controls or components (refer to your owner's manual furnished with the equipment).
3. A control has failed on your existing commercial and/or process heating and/or cooling equipment and is replaced by a Honeywell TRADELINE product.

With few exceptions, you utilize the services of a competent plumbing, heating and/or cooling dealer/contractor for new or replacement work performed.

Although our warranty does not extend to you, Honeywell does extend a warranty to your supplier.

Your supplier can rely on its local Honeywell Wholesaler/Distributor or Honeywell for prompt replacement.

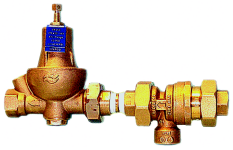
If you have any questions, need additional information or would like to comment on Honeywell's products or services, please write or phone:

Honeywell Water Controls
Customer Service
65 Access Road
Warwick, RI 02886
(401) 738-4290

Honeywell Hydronic Heating and Potable Water Products

- **State-of-the-art hydronic heating and plumbing specalities**
- **Unique engineering features**
- **Highest quality assurance - 100% tested**
- **Easy to install and service**
- **Save energy**

Boiler Feed Valves/Back Flow Preventer



- Controls incoming pressure and allows automatic control of boiler feed water
- Backflow preventer operates under continuous pressure for boiler feed lines and prevents backflow when supply pressure drops below system pressure
- Bronze/brass construction
- Stainless steel filter
- Built-in check valve
- Adjustable 4-60 psi or 7-45 psi (factory set at 12 psi)
- Union connection, sweat or thread

Honeywell Expansion Tanks/Combo Kits

- For use with domestic water or closed heating systems
- Thermal expansion absorber is welded, pressurized expansion tank with butyl diaphragm to control excess pressure build-up
- Protects fixtures and maintains minimum system pressure
- Heavy-duty butyl diaphragm
- Polypropylene liner for potable water
- Prevents water hammer
- Full size range: 2-258 gals. residential and commercial
- Convenient combo packs w/air eliminator

F76 and F74 Water Sediment Filters

A permanent screen, point of entry sediment filter can be backwashed to like new condition manually or automatically with the MV876 actuator.

- User realizes maximum convenience and minimum nuisance.
- Permanent stainless steel screen never needs replacing.
- Effective prefilter for residential and commercial treatment systems.

B200 Ball Valves

A single full port ball valve that can be used for water service up to 600 psi..

- No flow restrictions.
- AGA approved.
- Reduces inventory.

Standard and High Capacity Thermostatic Radiator Valves

HIgh capacity valves dssigned to handle North American radiation capacity requirements. Standard capacity valves matche other European-style valves. A full line product family for water and/or steam radiation systems.

- No worry about enough flow capacity.
- Full line of valve and actuator configurations.
- Can be serviced in line, under pressure without system drain down.
- Offers versatility at a competitive price.
- Can be serviced in line, under pressure without system drain down.
- Competitively priced, full line of valves and actuators.
- Highly styled T200 actuator available.

Thermostatic Radiator Valve Actuators

- T100 Used with V2000 Standard Capacity valves
- T104 Used with V110 High Capacity valves
- Provide comfort and energy savings
- Continually monitors and adjusts room temperature for consistent comfort
- Controls include sensors, setpoint dial and valve actuator
- Components may be integral or connected by capillary tubes

EA122 and EA79 Serviceable Air Vents

Designed to remove unwanted air from water systems up to 150 psi, these vents have the unique feature of a built-in shutoff valve to enable “in-line” service, without system shutdown.

- Saves service time and money.
- “Leakage Guard” feature prevents scale-caused leakage.

MZV Series Zone Valves

- Compact fast acting motorized zone valve
- First linear valve with built-in pre-balancing feature
- Control zoning for residential or commercial hot or chilled water, air conditioning, fan coil units or indirect water heaters
- Patented long life rack and pinion motor design
- Fast acting—10-12 seconds open, 4 seconds to close
- Pre-balance plug allows individual zone balancing
- External position indicator
- Quiet operation, no water hammer
- Sweat connection—3/4 in., 1 in., 1 1/4 in., NPT connection—1/2 in., 3/4 in., 1 in.

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63-8702 T.W. Rev. 05-07

Printed in U.S.A. on recycled paper containing at least 10% post-consumer paper fibers.